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<th>Memory (MB)</th>
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**Positioning Processor**

Mobile Intel® Celeron® 1.7 or 1.8GHz with 400MHz frontside bus or Mobile Intel® Pentium 4 Processor-M 1.8 or 2.2GHz with enhanced Intel SpeedStep™ technology and 400MHz frontside bus

**L2 cache**

Celeron: 256KB; Pentium 4-M: 512KB; All: on die (at processor speed) / ECC

**Memory**

128 or 256MB std / 1GB max / PC100 266MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Diskette drive**

Some: standard / use optional USB-based diskette drive

**Combo**

Some: Combo / 24X/10X/24X8X speed / fixed, not removable

**UltraBay™ 2000**

None

**Disk**

20, 30, or 40GB, 9.5mm high bay / removable and upgradable / 9.5mm high bay

**Display**

Some: 13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

**Graphics**

ATI® RADEON IGP 330M / integrated in northbridge / 16MB DDR1 (DDR-SRAM) / supports up to 1600x1200 at 85Hz (TG)

ATI® RADEON IGP 330M / integrated in northbridge / 16MB DDR1 (DDR-SRAM) / supports up to 1600x1200 at 85Hz (TG)

**Graphics external**

RADEON™ IGP 330M / integrated in northbridge / 16MB DDR1 (DDR-SRAM) / supports up to 1600x1200 at 85Hz (TG)

**SoC**

EV6 + North Bridge (memory controller, northbridge) / southbridge (ATA-100 EIDE, Low Pin Count [LPC] interface, USB, parallel, audio) / PCI2.1, 32-bit 33MHz (T’)

**Port replicator**

Some: No UltraNav™ multi-pointing system

**Docking station**

Some: no port replicator support

**PC Card Std slots**

One Type II or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated in northbridge / 32-bit 33MHz (PC67392 Super I/O for parallel)

**Ports**

Two USB (Version 1.1) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial or infrared port

**Video out**

IEEE 1394

**Wireless antenna**

Some (non-wireless models): None / can upgrade to wireless via PC Card

**Mini PCI**

11b Wi-Fi®²

**CDC**

Some (non-wireless models): UltraConnect CardBus (in hidden protected area)

**Modem**

Some (non-wireless models): No Mini PCI slot (Communications Bay)

**Ethernet**

Some (wireless models): UltraConnect / Broadcom BCM5901 (PHY/MAC) / PXE / Wake on LAN®

**Audio support**

Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; mono) / headphone jack (3.5 mm; stereo) / no line-in jack / Power-on / password / hard disk password / supervisor password / security keyhole

**Security chip**

Some: None / Power-on / hard disk password / supervisor password / security keyhole

**Limited warranty**

1 year - EasyServ™ 19 onsite pickup and delivery courier service

**Service options**

Service upgrades 22 provide up to five years of onsite or depot repair service and 23 years of toll-free support during the warranty via 800-IBM-SERV (426-7378)

**Software**

Microsoft® Windows XP Home Edition 03

Microsoft Windows XP Professional 09

IBM Director Agent

Software Delivery Assistant

System Migration Assistant

License (CD not included)

• Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage.

Universal 72 watt AC adapter PC 2001 and PXE 2.0-compliant

ACPI 1.0b and 400MHz frontside bus

International Warranty Service 17

Post-warranty annual maintenance agreements at ibm.com/services/its/us-source/

maspspleu.pdf

See footnotes for important warranty information.
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</table>

2723 models have a 3 year limited warranty (other 2722 ThinkPad R40 systems have a 1 year limited warranty)

**Positioning**

- Mainstream performance and features; two-spindle system

**Processor**

- ThinkPad® Intel® Pentium® M Processor 1.3, 1.4, or 1.5GHz with enhanced Intel SpeedStep™ technology and 400MHz frontside bus

**L2 cache**

- 1MB / on die (at processor speed) / ECC

**Memory**

- 256MB std / 2GB max / PC2100 / 266MHz DDR1 (DDR-SGRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Disk drive**

- DVD
  - None standard / use optional Ultrabay™-based or USB-based disk drive

**Display**

- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
  - Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
  - Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits

- All: E-is-open-cover to un latch and open with one hand (two latches)

**Graphics**

- Some: ATI® MOBILITY™ RADEON™ AGP 4X / 16MB DDR1 (DDR-SGRAM)

**Graphics external**

- External monitor via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

**Architecture**

- Intel 855PM chipset / 82855PM Memory Controller Hub (MCH-MI) / 82801BBICH M4 I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, firmware Hub) / PCI bus 2.2 32-bit, 33MHz (T16) / PCI ISA CardBus controller, TSB43AB21 1334 (some), PCI ISA CardBus controller, TSB43AB21 1334 (some), Mini PCI, external expansion / LPC bus 33MHz (security chip; Chip87392 Super I/O for diskette, parallel, infrared)

**PC Card Std slots**

- Type I, Type II, or type III / CardBus 32-bit / PNCMAC 2.1 (integrated driver) / Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared
  - Model 11 (modem) / RI 43 (ethernet) / no keyboard / TPM / one 4-pin industry standard connector

**Video out**

- S-video out port (TV out) / one 4-pin industry standard connector

**IEEE 1394**

- Some: 1394 Super I/O for diskette, parallel, infrared

**Wireless antenna**

- UltraConnect™ Antenna built into laptop for display cover optimal wireless signal reception

**Mini PCI**

- Intel Communications Daughter Card (CDC) socket (used by modem) / not accessible

**Modem**

- Some: 56K V.90 (V.92-designed29) modem in CDC / Agere

**Ethernet**

- 10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer) / PXE

**Audio support**

- Soft Audio / ICH AC97 controller / DirectSound™ support / AD1891A codec / stereo speakers / 1 watt / volume up/down, mute buttons / internal mic / microphone input jack (3.5mm) / headphone jack (3.5mm) / no line in jack

**Security**

- Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**

- Embedded Security Subsystem 2.0 (includes key storage / multi-factor authentication / local file encryption / Atmel™ chip / TCG-compliant

**Limited warranty**

- 3 years / 1 year battery - EasyServ™ on-site pickup and delivery

---

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

© Lenovo

US models announced March 12, 2003

US models withdrawn effective October 2003, January 2004, April 2004, or October 2004

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**SOFTWARE**

- Windows XP Professional
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Access Program
  - Access Connections™
  - Rapid Restore™ PC

**Downloadable**

- IBM Director Agent
  - Software Delivery Assistant
  - System Migration Assistant
  - Client Security Software (for security chip)

**License**

- (CD not included)
  - Lotus® Smartsuite™ Millennium
  - Lotus Notes® Stand-alone Client

---

**Other options at ibm.com/services/its/us/source/massppule.pdf**

- ThinkPad Port Replicator II 74P6733
- ThinkPad Mini Dock 287810U
- 72W Slim AC/DC Combo Adapter 20K6699
- USB 2.0 Portable CDRW Drive 25P2977

Post-warranty annual maintenance agreements at

ibm.com/services/its/us/source/massppule.pdf

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Lenovo Training Solutions

Personal Systems Reference (PSREF).

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(R403M) October 2005

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

© Lenovo

US models announced March 12, 2003

US models withdrawn effective October 2003, January 2004, April 2004, or October 2004
### ThinkPad R40 (XP Home) - withdrawn

#### Specifications

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#### Limited warranty

- 1 year - EasyServ
- 3 years - onsite pickup and delivery
- 4 years - service upgrades available

### Preload

- Windows XP Home Edition
- Disk to Disk Recovery (in hidden protected area)

### License

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

### Software

- IBM Lenovo Device drivers
- IBM Lenovo Device utilities
- IBM Lenovo ThinkVantage technologies
- IBM Lenovo ThinkVantage Rescue and Recovery
- IBM Lenovo ThinkVantage Toolbox
- IBM Lenovo ThinkVantage Access Connections

### Other Options

- ThinkPad Utilities
- ThinkPad SmartCard Reader/Writer
- ThinkPad Access Connections
- ThinkPad Personal Systems Reference (PSREF)
### ThinkPad R40 (2682) - October 2003 - withdrawn

#### Type-model
- 2682-NTU
- 2682-NAU
- 2682-PAU

#### Processor
- Pentium 4-526M

#### Graphics
- 3D Now!

#### Mini PCI
- Comm Bay

#### Ethernet on Memory bus
- Modem

#### Audio support
- Modem

#### General warranty
- 3 years limited warranty (other 2681 and 2896 ThinkPad R40 systems have a 1 year limited warranty)

#### Service options
- 2 year warranty (Post-warranty annual maintenance)

#### Workhorse
- Startup Diskette Drive

#### Graphs
- Performance

#### Embedded Security Subsystem 2.0
- Hardware key storage

#### Language
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

#### Processor
- 3.0-Portable FireWire port

#### Memory
- 2GB (2x1GB)

#### Disk
- DVD-ROM

#### Processor
- Pentium 1400 MHz

#### Memory
- 2GB DDR (2x1GB)

#### Graphs
- Performance

#### Software
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

#### Output
- ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

### Technical Specifications

#### Processor
- Intel Celeron 1.5 GHz

#### Memory
- 256MB

#### Hard Disk
- 10GB

#### Display
- 14.1” XGA (1280x1024) TFT color

#### Power
- 140W

#### Product Availability
-顧客へのサービス

#### Warranty
- 3 years limited warranty

#### Processor
- Pentium 4-526M

#### Graphics
- 3D Now!

#### mini PCI
- Comm Bay

#### Ethernet on Memory bus
- Modem

#### Audio support
- Modem

#### General warranty
- 3 years limited warranty (other 2681 and 2896 ThinkPad R40 systems have a 1 year limited warranty)

#### Service options
- 2 year warranty (Post-warranty annual maintenance)

#### Workhorse
- Startup Diskette Drive

#### Graphs
- Performance

#### Embedded Security Subsystem 2.0
- Hardware key storage

#### Language
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

#### Processor
- 3.0-Portable FireWire port

#### Memory
- 2GB (2x1GB)

#### Disk
- DVD-ROM

#### Processor
- Pentium 1400 MHz

#### Memory
- 2GB DDR (2x1GB)

#### Graphs
- Performance

#### Software
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

#### Output
- ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

### Technical Specifications

#### Processor
- Intel Celeron 1.5 GHz

#### Memory
- 256MB

#### Hard Disk
- 10GB

#### Display
- 14.1” XGA (1280x1024) TFT color

#### Power
- 140W

#### Product Availability
-顧客へのサービス

#### Warranty
- 3 years limited warranty (other 2681 and 2896 ThinkPad R40 systems have a 1 year limited warranty)

#### Service options
- 2 year warranty (Post-warranty annual maintenance)

#### Workhorse
- Startup Diskette Drive

#### Graphs
- Performance

#### Embedded Security Subsystem 2.0
- Hardware key storage

#### Language
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

#### Processor
- 3.0-Portable FireWire port

#### Memory
- 2GB (2x1GB)

#### Disk
- DVD-ROM
### ThinkPad® R40 (2682) - Education - withdrawn

#### Key Features
- **3 years/1 year battery - EasyServ warranty with optional pickup and delivery**
- **SOFTWARE**
  - Windows XP Professional
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**:
- Access IBM
- Access Connections™
- Adobe Reader
- Rapid Restore™ PC
- RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (combo mdls)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities

**Downloadable**: IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (models with security chip)

**License**
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Key Specifications

#### Processor
- **Model**: Intel® Pentium® 4-M
- **Speed**: 2.4 GHz
- **Memory**: 256 MB DDR-SDRAM
- **Chipset**: Intel 82845MP Memory Controller Hub
- **Bus**: PCI bus
- **Operating System**: Windows XP Professional

#### Memory
- **Type**: SODIMM
- **Speed**: 266 MHz
- **Capacity**: 256 MB
- **Technology**: DDR-SDRAM

#### Display
- **Type**: TFT color
- **Technology**: Digital Signal Processor
- **Dimensions**: 12.3" x 10.1" x 0.7"
- **Emission**: 150 nits

#### Ethernet
- **Type**: 10/100 Ethernet
- **Technology**: RJ-45
- **Protocol**: Windows XP Professional

#### Audio
- **Type**: PCMCIA Audio
- **Technology**: WB (Wired Bonding)
- **Chipset**: ESS 9010

#### Security
- **Type**: Hardware key storage
- **Technology**: Multi-factor
- **Support**: During the warranty via IBM

#### Power-on password
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Diskette Drive
- **Type**: 1.44 MB FDD
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### USB Port
- **Type**: USB 2.0
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Modem
- **Type**: 56K V.90 (V.92-designed)
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Battery
- **Type**: Lithium Ion 3-cell
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Biometric Authentication
- **Type**: Fingerprint Reader (touchpad)
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Algebraic Security Subsystem
- **Type**: Embedded Security Subsystem 2.0
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Software Preloaded
- **Type**: IBM Director Agent
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### System Migration Assistant
- **Type**: IBM Director Agent
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Asset ID
- **Type**: Asset ID (system-specific info in chip)
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Verification
- **Type**: Windows XP Professional
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Warranty
- **Type**: 3 years/1 year
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Hardware Key Storage
- **Type**: Multi-factor
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Multi-factor Security Key
- **Type**: Embedded Security Subsystem 2.0
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Power-on Password
- **Type**: Hard disk password
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

#### Other options at lenovo.com/options
- **Type**: IBM Director Agent
- **Technology**: IBM Director Agent
- **Chipset**: IBM Director Agent

---

**Note:** For more information on important warranty information, visit the Lenovo website or contact Lenovo Support.
ThinkPad R40 (March 2003) - withdrawn

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<td>XP Pro</td>
<td>2003</td>
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</table>

- **Positioning and Features**: Mainstream performance and features; two-spindle system
- **Processor**: Intel Pentium M Processor 1.3, 1.4, or 1.5GHz with enhanced Intel SpeedStep technology and 400MHz system bus
- **L2 cache**: 1MB (depending on processor speed)
- **Diskette drive**: None standard / use optional UltraBay™-based or USB-based diskette drive
- **CD-ROM**: Some: CD-ROM / 24X/10X speed / bootable / removable from UltraBay 2000
- **USB 2.0**: Combo / removable from UltraBay 2000
- **IEEE 1394**: One bay modular for interchangeable devices / UltraBay Plus compatible (12.7 mm high)
- **Display**: Some: 14.1” (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Battery**: 128 or 256MB std / 2GB max / PC2100 266MHz DDR 1 / non-parity / CL2.5 / 20-pin SO-DIMM sockets / std memory in one socket / one socket available
- **Graphics**: Some: ATI Mobility Radeon™ / AGP 4X / 16MB DDR1 (DDR-SRAM)
- **Keyboard**: 87-key / Access IBM button / palm rest / pitch: 19mm / stroke: 2.7mm (test size keys)
- **Touchpad**: TrackPoint® pointing device, "Press-to-Select", Internet Scroll Bar, magnifying glass
- **Weight**: Color: Black / Aluminyte-Butadiene-Styrene (ABS) plastic
- **Battery**: Lithium Ion 8-cell / intelligent / supports unique 2nd battery in UltraBay 2000
- **Architecture**: Intel 855PM chipset / 82801BM ICH / I/O controller Hub / ATA-100 IDE / Ethernet MAC
- **PC Card Std slots**: Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door / one 150 pin external monitor connector / one 150 pin internal monitor connector

**Limited warranty**: 1 year - EasyServ onsite pickup / service delivery / service upgrades / availability

**Software**:
- IBM Direct Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**: (CD not included)
- Lotus® SmarSuite Millennium and Lotus Notes® Stand-alone Client

**Universal 72 watt AC adapter**: Asset ID™ (system-specific info in chip accessed over network)

**Windows XP Professional**: 24 hour / 7 day toll-free warranty support during the warranty

**Other ServicePac options at ibm.com/services/its/us/source/**
- ThinkPad Port Replicator II 74P6733
- ThinkPad Mini Dock 287810U
- ThinkPad TW AC Adapter 2G6699
- ThinkPad TW DC/DC Converter Adapter 2P9010

**See footnotes for important warranty information**

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Positioning

Mainstream processor features: two-spindle system

Processor

Intel® Celeron® Processor 330 (1.4GHz), 350 (1.5GHz) or 380 (1.6GHz) 400MHz system bus Intel® Pentium® Processor 710 (1.4GHz), 715/715a (1.5GHz), or 725 (1.6GHz) 400MHz system bus

L2 cache

Celeron M 330/340: 512K; Celeron M 350: 1MB; Pentium M 710/725: 2 MB; All: ECC

Memory

256MB or 256MB std/2GB max / PC2700 333MHz DDR1 (memory controller limits speed to 266MHz) / non-CL29 / 2MB two 200-pin SDRAM sockets / std memory in one socket / one socket available

Diskette drive

Standard: none / use optional USB-based diskette drive

CD

Some: CD-ROM / 24x-10x speed / fixed, removable / 12.7 mm high

Combi

Some: DVD-ROM / CD-RW / 24x/24x/24x/8x/5x speed / fixed, removable / 12.7 mm high

UltraBay Enhanced

None / no support for removable UltraBay™ options

Disk

30GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / Hard Disk Drive Shock Absorber

Display

14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Graphics

Integrated Intel Extreme™ Graphics 2 / In 855GM GMCH / uses main memory (up to 64MB) / 200MHz

Graphics external

External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

Keyboard

8-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (state-size keys)

Touchpad

No UltraNav™ multi-pointing system

TouchLight™

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions²

14.1" models (WXxHxD): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm

15.0" models (WXxHxD): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

with optical drive and battery: 14.1" models: 6.0 L (2.7Kg), 15.0" models: 6.8 L (3.0Kg)

Weight³

Color: black / All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery type

Lithium Ion 6-cell / intelligent / supports 9-cell battery

Battery life-10

Celeron M models: up to 3.4 hr; Pentium M models: up to 4.0 hr; Optional High Capacity 9-cell: up to 5.4 hr

Architecture

Intel® 855GM chipset / 82855GM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCIe bus, ethernet MAC, Low Pin Count [LPC] interface, USB) / PCI bus 2.2, 32-bit, 33MHz (TI 13150 CardBus controller, Mini PCI) / LPC bus 33MHz (PC87392 Super I/O for parallel)

Port replicator

No port replicator support

Docking station

No docking station support

PC Card Std slots

One Type I, or one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated dual

Two USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial or infrared port

Wireless antenna

Some: none / can upgrade to wireless via optional PC Cards

Mini PCI

Some: UltraConnect™ Antenna built into the display cover

Some: no Mini PCI slot (Communications Bay)

Some: one Mini PCI slot (Communications Bay) / not customer upgradable

Intel 11b/g²

Some: 11b/g wireless, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset

CD/DVD

Some: Windows XP Pro 1 year IOR 9x5 NBD

Audio

10/100 Ethernet on planar / Intel 82562EZ2 Chipset (physical layer) / Wake on LAN®

Audio support

Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speaker / 1 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5mm) / headphone jack (3.5mm) / no line in jack

Security

Power on password / hard disk password / supervisor password / security keyhole

Security chip

None

Limited warranty²

1 Year - EasyServ™18 onsite pickup and delivery courier service

ServicePack-24 1yr IOR 9x5 NBD

ServicePack 2 year IOR 9x5 NBD

ServicePack 3 year IOR 9x5 NBD

ServicePack 4 year IOR 9x5 NBD

ServicePack 5 year IOR 9x5 NBD

ServicePack 2 year P/L P/U Depot

ServicePack 3 year P/L P/U Depot

ServicePack 4 year P/L P/U Depot

ServicePack 5 year P/L P/U Depot

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US models announced Sept 14, Oct 21, or Dec 21, 2004, or Jan 11, 2005

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<td>Modem</td>
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<td>March</td>
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<td>No</td>
<td>No</td>
<td>19 Jan 2005</td>
<td>March</td>
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</tbody>
</table>

Positioning:
- Processor: Intel® Celeron M Processor 350 (1.3GHz) with 400MHz system bus or Intel Pentium M Processor 735 (1.7GHz) with enhanced Intel® SpeedStep™ technology.
- L2 cache: Celeron M 300: 1MB; Pentium M 735: 2 MB: All: on die (at processor speed) / ECC
- Memory: 256MB std / 2GB max / PC2700 333MHz DDR1 (memory controller limits speed to 266MHz) / non-parity / CL5.2 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive:
- CD: None / standard use optional USB-based diskette drive
- Combo: Some: CD-ROM/DVD-CD-RW / 24X/24X/24X/8X: speed / fixed / removable / 12.7 mm high
- Ultrabay Enhanced: None / no support for removable Ultrabay™ options
- Hard Disk Drive Shock Absorber: Some: 30GB (4200 rpm), 9.5mm high / removable and upgradeable / 9.5mm high bay / Hard Disk Drive Shock Absorber

Display:
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Keyboard:
- Trackpoint® Technology: 8-bit / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
- Touchpad: None
- ThinkLight™: No Ultravisa™ multi-pointing system

Weight:
- 14.1" models: 14.1" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm
- 15.0" models: Some: 15.1" x 10.6" x 1.47-1.58"; 332mm x 289mm x 37-40mm

Architecture:
- Intel® 855GM chipset / 82855GM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M/I O Controller Hub (ATA-100 IDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB) / PCI bus 2.2 32-bit, 33MHz (TI PCI1150 Cardbus controller, Mini PCI) / PCI bus 33MHz (PCI 3792 Super I/O for parallel)

Limited warranty: 3 Year - EasyServ, onsite pickup and delivery courier service

Software:
- Windows XP Professional models:
  - Microsoft Windows XP Professional (Service Pack 2) / Disk-to-Disk Recovery (in hidden protected area)
  - Preloaded (all): Rescue and Recovery™
  - IBM Director
  - Software Delivery Assistant
  - System Migration Assistant

License:
- CD not included
- Lotus® Smartsuite® Millennium and Lotus® Notes™ Stand-alone Client

3 Year - EasyServ, onsite pickup and delivery courier service

ServicePac:
- 24 1yr IOR 9x5 NBD: 30L9188
- 2 yr IOR 9x5 NBD: 30L9195
- 3 yr IOR 9x5 NBD: 30L9196
- 5 yr IOR 9x5 NBD: 30L9197
- 2 yr P/U Depot: 30L9191
- 3 yr P/U Depot: 30L9192
- 4 yr P/U Depot: 30L9193
- 5 yr IOR 9x5 NBD: 30L9198
- 5 yr IOR 9x5 NBD: 30L9199
- 4 yr IOR 9x5 NBD: 30L9200
- 5 yr IOR 9x5 NBD: 30L9201
- 6 yr IOR 9x5 NBD: 30L9202

For more information, visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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(1834M) October 2005
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<th>Type-model</th>
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<th>Screen</th>
<th>Disk GB</th>
<th>Optical</th>
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<th>Security warranty</th>
<th>Limited Workforce (W)</th>
<th>Global (G) Availability date</th>
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<tbody>
<tr>
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<td>256MB</td>
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</table>

**The 1834 has a 1 year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Software

- Windows XP Professional
  - Microsoft Windows XP Professional
  - Disk-to-Disk Recovery
    - (in hidden protected area)
  
#### Preloaded

- Education software from VitalSource Technologies: VitalSource KEY™ and Personal Portable Library™
- Access IBM
- Access Connections™
- Rescue and Recovery™
- Norton AntiVirus (OEIM edition)
- PC-Doctor®
- ThinkPad Utilities
- Adobe Reader
- Update Connectors
- RecordNOW and Drive Letter
- Access powered by Sonic products (combo models)
- InterVideo WinDVD (combo models)

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- License (CD not included)
  - Lotus® SmartSuite® Millennium
  - Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- Asset ID**a** (system-specific info in chip accessed over network)
- PC 2001 and PSE 2.0-compliant
- ACPI 1.0b and 2.0-compliant
- CMI and DoD 1.0-compliant
- ENERGY STAR® 3.0-compliant
- ImageUltra Services available
- International Warranty Service**b**
  - 24 hour x 7 day**c** toll-free warranty support during the warranty**d** via 800-IBM-SERV (426-7378)

**Service Pac,** 1 year IOR 9x5 NBD
- 30L9188
- 30L9189
- 30L9195
- 30L9194
- 30L9195
- 30L9194
- 30L9195
- 30L9194
- 30L9195
- 30L9195
- 30L9197

**Post-warranty annual maintenance agreements** at ibm.com/services/its/us/ourse/masp0sp0.pdf

See footnotes for important warranty information

- Powered by Intel Centrino™ mobile technology
- © Lenovo
- (1834E) October 2005

US models withdrawn effective September or November 2005
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<th>Speed (L2 Cache)</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>PCI Comm Bay</th>
<th>CDC mode</th>
<th>Integrated graphics</th>
<th>SecuritY support</th>
<th>Limited Workhorse (W)</th>
<th>Global (G)</th>
<th>Avail (E)</th>
<th>Entry (E)</th>
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<td>04</td>
<td>04</td>
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</table>

- **These small and medium business (SMB) models are part of the US Think Express Program.**
- **The 1842 has a 1 year limited warranty.**

## Preloaded Software

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional
  - Decy® ar models: Service Pack 2
  - Disk-to-Disk Recovery
  - (in hidden protected area)

- **Preloaded**
  - Access IBM
  - Access Connections
  - Rescue and Restore Recovery
  - Norton AntiVirus ( OEM edition)
  - PC-Doctor™

- **ThinkPad Utilities**
  - Adobe Reader
  - Update Connector™
  - RecordNOW and Drive Letter Access powered by Sonic products
  - InterVideo WinDVD (combo models)

- **Downloadable**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Migration Assistant
  - License (CD not included)
  - Lotus™ SmartSuite™ Millennium and Lotus Notes™ Stand-alone Client

## ThinkPad notebooks

- ThinkVantage™ technologies and design, visit ibm.com/thinkvantage

- Universal 72 watt ac adapter

- Access IBM Asset ID™ (**system-specific info in chip accessed over network**)

PC 2001 and later: DirectX 9, Windows 2000 Service Pack 1, and 1.33GHz Intel Pentium III

- ACPI 1.0b and 2.0-compliant

- CIM and DMI 2.0-compliant

- ENERGY STAR® (in hidden protected area)

- International Warranty Service **13**

- 24 hour x 7 days® toll-free warranty support during the warranty **14** via 800-IBM-SERV (426-7378)

## Limited Warranty

- 1 year - EasyServ™ onsite pickup and delivery courier service

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**See footnotes for important warranty information.**

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**US models announced May 18, July 13, Sept 14, or Dec 21, 2004, or Jan 11, 2005**

**US models withdrawn effective January or September 2005**
ThinkPad® R50e (1842) - TopSeller (June 2005) - withdrawn

Processor

Intel® Celeron M Processor 360J or 370 with Execute Disable Bit and 400MHz bus or Intel Pentium M Processor 720a or 725 (1.66GHz) with Enhanced Intel SpeedStep™ technology¹ and 400MHz system bus

L2 cache

Celeron M: 1MB; Pentium M 725a: 2MB; Pentium M: All: on die (at processor speed) / ECC

Memory

256MB or 512MB std / 2GB max / PC2700 333MHz DDR1

Mini PCI

Modem

Intel 11b/g

CD/DVD drive

40GB ² or 60GB (4200 rpm), 9.5mm high

Diskette drive

None standard / use optional USB-based diskette drive

Audio support

Enhanced Sound Blaster Onboard / AD1981B AC97 codec

Ethernet

10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN

Mini PCI

One Communications Daughter Card (CDC) socket (used by modem) / not accessible

Ports

Two USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial or infrared port

Wireless antenna

UltraConnect² Antenna built into the display cover for optimal wireless signal reception

Display

14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / 51.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Graphics

Integrated Intel Extreme™ Graphics 2 / in 855GM / uses main memory / 200MHz

Battery

Celeron M models: 3.4 hr; Pentium M models: 4.0 hr; Optional 9-cell: up to 5.4 hr

Dimensions

15.0" models (WxHxL): 13.1" x 10.8" x 1.47-1.58"

Weight

333mm x 269mm x 37-40mm with optical drive and battery: 15.0" models: 6.6 lb (3.0kg)

Case material

Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type

Lithium Ion 6-cell / intelligent / supports optional 9-cell battery

Battery - life

11b/g: up to 5.4 hours; 11b/g32: up to 5.4 hours

Docking station

No port replicator or docking station support

PC Card Std slots

One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door

Audio support

Soft audio / ICH9 controller / DirectSound® support / AD1981B AC97 codec / mono speaker, 1 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5mm) / headphone jack (3.5mm) / no line in jack

Security

Power-on password / hard disk password / supervisor password / security keyhole

Limited warranty

1-year - EasyServ® onsite pickup and delivery counter service

SOFTWARE

Windows XP Home models

- Microsoft® Windows® XP Home Edition™ (Service Pack 2)
- Disk-to-Desk Recovery (in hidden protected area)

Windows XP Professional models

- Microsoft Windows XP Professional Edition (Service Pack 2)
- Disk-to-Desk Recovery (in hidden protected area)

Preloaded (all)

- Access Program
- Access Connections™
- Rescue and Recovery™
- Norton AntiVirus (OE edition)
- PC-Doctor™

Some:

- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive

Other options at

ThinkPad Carrying Case - BackPack 41C9174

ThinkPad Carrying Case - Expander 41C9173

ThinkPad Convertible Monitor Stand 41C9168

ThinkPad Multiple Battery Charger II 41C9166

ThinkPad T40/R50 Li-Ion Battery 41C9169

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 1-year LOR 9x5 NBD

ThinkPlus Express 1-year LOR 9x5 NBD

ThinkPlus 5-year P&L P/U Depot

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 3-year P&L P/U Depot

ThinkPlus 2-year P&L P/U Depot

http://www.lenovo.com/thinkpad

Note: some models include the ThinkPlus 1-year LOR 9x5 NBD warranty.

Lenovo

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Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology
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US models announced June 28, August 9, or August 23, 2005

US models withdrawn effective March or October 2006
ThinkPad® R51e (1843) - withdrawn

Type-model | Processor | Speed | L2 cache | Memory | Mini PCI | Secuity chip | Limited warranty | Limited Workhorse
--- | --- | --- | --- | --- | --- | --- | --- | ---
1843-2U | Celeron M 360J | 1.4 | 1MB | 256MB | 40GB | None | Modem | Xpress 200M | No XP Pro 1-yr | No Sep 05
1843-2U | Celeron M 370 | 1.5 | 1MB | 256MB | 40GB | None | Modem | Xpress 200M | No XP Pro 1-yr | No Sep 05
1843-3U | Celeron M 360J | 1.4 | 1MB | 256MB | 40GB | Combo | Modem | Xpress 200M | No XP Pro 1-yr | No Sep 05
1843-3U | Celeron M 370 | 1.5 | 1MB | 256MB | 40GB | Combo | Modem | Xpress 200M | No XP Pro 1-yr | No Sep 05
1843-4U | Pentium M 740 | 1.73 | 2MB | 256MB | 40GB | None | None | No Sep 05
1843-4U | Pentium M 740 | 1.73 | 2MB | 256MB | 40GB | None | None | No Sep 05

**Software**

- **Windows XP Professional models**
  - Microsoft® Windows® XP Professional Service Pack 2
  - Disk-to-Disk Recovery (in hidden protected area)

- **Windows XP Home models**
  - Microsoft Windows XP Home Edition Service Pack 2
  - Disk-to-Disk Recovery (in hidden protected area)

Preloaded (all)
- Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- PCDoctor
- ThinkPad utilities
- Adobe® Reader
- Multimedia Center for Think Offerings
- Sonic RecordNow and Drive
- Letter Access (combo)
- InterVideo WinDVD (combo)

License - CD not included (all)
- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

ThinkPad notebooks implement ThinkVantage technologies and design: thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- PC 2001 and PXE 2.0-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- ENERGY STAR®-compliant
- International Warranty Service17
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ThinkPlus®12 1-year LOR 9x5 NBD
ThinkPlus®2-year LOR 9x5 NBD
ThinkPlus®3-year LOR 9x5 NBD
ThinkPlus®4-year LOR 9x5 NBD
ThinkPlus®5-year LOR 9x5 NBD
ThinkPlus®2-year P&L P/U Depot
ThinkPlus®3-year P&L P/U Depot
ThinkPlus®4-year P&L P/U Depot
ThinkPlus®5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced September 20, 2005
US models withdrawn effective April 2006

© Lenovo (KDB1) April 2006
### ThinkPad R51e (1843) - J January 2006 - withdrawn

#### Type-model | Processor | Speed GHz | L2 cache | Memory | Disk Drive | Optical | Mini PCI | Integrated graphics | CDC | Securi-ty chip | Limited warranty | Global availability |
<table>
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*These models have an EasyServ™ onsite pickup and delivery 1-year limited warranty.

#### Preloaded
- Rescue and Recovery™
- Access Connections
- Think Security Solution
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symanite™ Client Security
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader
- Multimedia Center for Think Offerings
- Sonic RecordNow and Drive
- Letter Access (combo)
- InterVideo WinDVD (combo)

#### License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### Software
- Windows XP Professional models
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

#### Limited warranty
- 1-year EasyServ™ onsite pickup and delivery courier service

### See footnotes for important warranty information

- Lenovo
- US models announced January 10, 2006
- US models withdrawn effective October 2006
### ThinkPad R51e (1843) - Education - withdrawn

**Note: This document contains technical specifications and warranty information for ThinkPad R51e (1843) laptops. It is not visible due to the image provided.**

### Software
- **Windows XP Professional**
  - Microsoft® Windows® XP Professional SP2
  - Microsoft® Windows® XP Professional SP3

### Limited warranty
- **1-year EasyServ™ on-site pickup and delivery service**

### Table:

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<th>Type-model</th>
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<th>Speed</th>
<th>L2 Cache</th>
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*These models have an EasyServ™ on-site pickup and delivery 1-year limited warranty*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operate exclusively for educational purposes for use by qualified students and teachers.

### Preload
- **Education software from Lenovo, available with purchase of a Lenovo computer**
  - Microsoft® Windows® XP Professional SP2
  - Microsoft® Windows® XP Professional SP3

### License
- **CD does not include**
  - Lotus® SmartSuite® Millennium and Lotus Notes™ Stand-alone Client

### ThinkPad notebooks implement ThinkVantage™ technologies and design:
- **thinkpad.com/thinkvantage**

### ThinkPlus™ Offerings
- **4-year P&L P/U Depot**
- **3-year P&L P/U Depot**
- **2-year P&L P/U Depot**

### Universal 72-watt AC adapter
- **ThinkPlus™ 2-year LOR 9x5 NBD**
- **ThinkPlus™ 3-year LOR 9x5 NBD**
- **ThinkPlus™ 4-year LOR 9x5 NBD**

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See footnotes for important warranty information

US models announced January 10, 2006

US models withdrawn effective October 2006
### ThinkPad® R51e (1844) - TopSeller - withdrawn

**Positioning**
- Mainstream performance and features; two-spindle system
  - Intel® Celeron M Processor 360 (1.4GHz) or 370 (1.5GHz) with 400MHz system bus
  - Intel Pentium M Processor 740 (1.73GHz) with Enhanced Intel SpeedStep™ technology
- Execute Disable Bit and 533MHz system bus

**L2 cache**
- Main memory (32MB up to 511MB main memory; 64MB over 511MB)

**Diskette drive**
- None standard / use optional USB-based diskette drive
- **CD/DVD**
  - Some: CD-ROM / 24X 10X speed / fixed, not removable / 12.7mm high
  - Some: DVD-ROM / 16X-8X speed / single-layer / fixed, not removable / 12.7mm thick

**Modem**
- 56K Baud V.90 (V.92-designed) modem in CDC / Conexant

**Wireless Antenna**
- Antenna built into the display cover (models with 802.11 wireless)

**Power Supply**
- Universal 72 watt AC adapter
- AC/DC Combo Adapter

**Specific Models**

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**Software**

- **Windows XP Professional models**
  - Microsoft® Windows® XP Professional2 (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

- **Windows XP Home models**
  - Microsoft® Windows® XP Home Edition (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded (all)**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- PC Doctor
- ThinkPad utilities
- Adobe® Reader
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive Letter Access (combo)
- InterVideoVDIO (combo)

**License - CD not included (all)**
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

**Limited warranty**
- 1-year EasyServ® onsite pickup and delivery service

- Some: one Mini PCI slot (Communications Bay)
- Some: no Mini PCI slot (Communications Bay)
- Mini PCI 11b/g

- **Modem**
  - ThinkPad T40/R50 Li-Ion Battery 9-cell
  - 92P1102

- **Client Security**
  - ThinkVantage Client Security Stand-alone Client
  - Version 3.0.4.2 (Service Pack 2)

- **Anti-Virus**
  - Norton AntiVirus 2004

- **Hardware**
  - ThinkPad 72W Universal AC adapter

- **Security**
  - Security cable

- **Display**
  - 14.1" (358.1mm) XGA (1024x768) TFT color
  - Active Matrix / 200 nits

- **Audio**
  - 17-bit volume control

- **Memory**
  - 128MB SDRAM (533 MHz)
  - 1GB PC2-4200 DDR2 NP CL4 SODIMM
  - 512MB PC2-4200 DDR2 NP CL4 SODIMM
  - 256MB PC2-4200 DDR2 NP CL4 SODIMM

- **Ethernet**
  - 10/100 ethernet on system board

- **Audio**
  - AC97 controller

- **Power Management**
  - ACPI 1.0b and 2.0-compliant

- **Energy Star**
  - ENERGY STAR®-compliant

- **International Warranty Service**
  - 24 hour x 7 day toll-free warranty support during the warranty

- **ThinkPlus**
  - 1-year LOR 9x5 NBD
  - 72W Slim AC/DC Combo Adapter
  - 41C9166

- **ThinkPlus 2-year LOR 9x5 NBD**
  - 41C9167

- **ThinkPlus 3-year LOR 9x5 NBD**
  - 41C9168

- **ThinkPlus 4-year LOR 9x5 NBD**
  - 41C9171

- **ThinkPlus 5-year LOR 9x5 NBD**
  - 41C9173

- **ThinkPlus 2-year P&L P/U Depot**
  - 41C9169

- **ThinkPlus 3-year P&L P/U Depot**
  - 41C9170

- **ThinkPlus 4-year P&L P/U Depot**
  - 41C9172

- **ThinkPlus 5-year P&L P/U Depot**
  - 41C9174

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**See footnotes for important warranty information**

US models announced September 20 or October 18, 2005

US models withdrawn effective April 2006

© Lenovo (K626) April 2006
## ThinkPad R51e (1844) - TopSeller (January 2006) - withdrawn

*Note: This document is a scanned representation of a manual page from Lenovo.

### Limited Warranty

These small and medium business (SMB) models are part of the US TopSeller™ Program.

These models have a 1-year limited warranty.

### SOFTWARE

- **Windows XP Professional models**
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Disk Recovery

- **Windows XP Home models**
  - Microsoft Windows XP Home Edition™ (Service Pack 2)
  - Disk-to-Disk Recovery

- **Preloaded** (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution
  - ThinkVantage Productivity Center
  - ThinkVantage SystemSaver
  - Symantec® Client Security
  - PC-Doctor™
  - Multimedia Center for Think
  - Sonic RecordNOW and Drive Letter Access (combo)
  - InterVideo WinDVD (combo)

### License

- CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client (Notes client not supported on XP Home)

ThinkPad notebooks implement ThinkVantage technologies and design.

© Lenovo

### See footnotes for important warranty information

US models announced January 10, March 21, or April 4, 2006

US models withdrawn effective October 2006

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### Table: Specifications

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### See footnotes for important warranty information

© Lenovo

(K06-5) October 2006
ThinkPad R51 - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

1830 models have a 3-year limited warranty (other 1829/1836 ThinkPad R51 models have a 1-year limited warranty)

Positioning

Processor
Mainstream performance and features; two-spindle system
Intel® Pentium®-M Processor 1.6GHz with Enhanced Intel Speedstep™ technology and 400MHz system bus

Memory
1MB cache / 933MHz DDR1 RAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

Disk drive
Combo drive - standard / not optional
UltraBay Enhanced One modular bay for interchangeable devices / UltraBay Slim-compatible / 12.7 mm high

Display
Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits
Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits /
USB 2.0 ready / display with wide viewing angle and high density using IPS technology

Graphics
Some: ATI® MOBILITY RADEON® 7500 / AGP 4X / 32MB DDR (1 DDR-SDRAM)
Some: ATI® MOBILITY RADEON 9000 / AGP 4X / 32MB DDR (1 DDR-SDRAM)

Software
Windows XP Professional
- Microsoft® Windows® XP Professional
- Disk to Disk Recovery (in hidden protected area)

Preloaded
- Access Program
- Access Connections™
- Rescue and Recovery™
- RecordNow® and Drive
- Letter Access powered by Sonic products (combo models only)
- Intel® Video DVD (combo)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad® Utilities
- Adobe® Reader
- Update Connector™

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Architecture
Intel 855PM chipset / 82855P Memory Controller Hub (MCH-M) / 82801DBMICH4-M / O-Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB, [Bluetooth] / ) PCI bus 2.2 32-bit, 33MHz (F1® / PCI4520A CardBus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PCI87392 Super I/O for parallel, infrared, [docking-based ports])

Video
S-video output (WxH): 12.4" x 10.2" x 1.35-1.46" / 314mm x 260mm x 34-37mm
15.0" (381.0mm) WxH: 13.1" x 10.6" x 1.47-1.58" / 332mm x 269mm x 37-40mm

Weight
Color: black / All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery
15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58" / 332mm x 269mm x 37-40mm
14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46" / 314mm x 260mm x 34-37mm

Security
Security chip accessed over network)

Limited warranty
3-year / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

See footnotes for important warranty information • Powered by Intel® Centrino® mobile technology
US models announced April 6, 2004
US models withdrawn effective January 5, 2005 or February 2007

© Lenovo
(51) February 2007
**ThinkPad® R51 (July 2004) - withdrawn**

**Positioning**

Processor: Mainstream performance and features; two-spindle system

Intel® Pentium® M Processor 725 (1.6GHz) or 735 (1.7GHz) with Enhanced Intel SpeedStep™ technology and 400MHz system bus

L2 cache: 2MB / on die (at processor speed) / ECC Memory

256 or 512MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / 2 two-200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive: None standard / use optional USB-based diskette drive

Audio support: Ultrabay Enhanced

One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high

Disk: 40GB* (4200 rpm) or 40GB (HS 5400 rpm), 9.5mm high / removable and upgradable / 9.5mm high / supports 2 disk with optional 'Second HDD Adapter for Ultrabay Slim'

IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard

Ports: Security chip (PC87392 Super I/O for parallel, infrared, docking-based ports)

- Serial: 10/100/1000Base-T / Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN
- Parallel: Universal 72-watt AC adapter
- Modem: Intel 11b/g 32 Modem Gigabit 1394 Yes XP Pro No Jul 04
- Security: TCG-compliant
- Bluetooth: 802.11a/b/g wireless / Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset
- IEEE 1394: 4-pin connector / 1394a-2000 standard
- PCI: 466MHz 8-bit ISA Bus / LPC bus 33MHz

**Battery - life**

3-year /1-yr battery - EasyServ / 1-yr battery - EasyServ Preload

Hard Disk Drive Shock Absorber / Active Protection System™

**Display**

Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

**Graphics**

Some: ATI® MOBILITY RADEON™ 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) / non-parity

Some: ATIMOBILITY RADEON™ 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)

Graphics external: External monitor via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

**Keyboard**

87-key / Access IBM button / palm rest / pitch: 19mm, stroke: 2.7mm (std-size keys)

**Trackpoint**

ThinkPad UltraNav

Trackpoint pointing device / "press-to-Select" / Internet Scroll Bar / magnifying glass

UltraNav multi-pointing system / touch pad below keyboard / Track Zones illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

14.1" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm

15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

**Weights**

14.1" models: 8.6lbs without PC-Doctor, 9.0lbs with PC-Doctor

15.0" models: 9.0lbs without PC-Doctor, 9.3lbs with PC-Doctor

**Battery**

Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced

**Architecture**

Intel 855PM chipset / 82855PM Memory Controller Hub (MCH-MI).

Intel 8000B Memory Hub (AT-100 EIDE, PCI bus, ethernet MAC),

Low Pin Count (LPC) interface, USB, [Bluetooth] / PCI bus / 2.32-32bit, 33MHz / PI C14520A CardBus and 1394 controller, Mini PCI, external expansion / LPC bus 33MHz (security chip; PC87932 Super I/O for parallel, [docking-based ports])

Modem with Linux: 2.7hr / others: 4.0hr / Optional 9-cell: up to 6.2 hr

Model with SXGA+: up to 3.7 hr; Others: up to 4.0 hr; Optional 9-cell: up to 6.2 hr

Display

Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

**Graphics external**

External monitor via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

**PC Card Std slots**

Two US B (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port

**Video out**

S-video out port (TV out) / one 4-pin industry standard connector

IEEE 1394

IEEE 1394 (Firewire) port / 4-pin connector / 1394a-2000 standard

**Minimum requirements**

Intel 8000B Memory Hub (AT-100 EIDE, PCI bus, ethernet MAC), Low Pin Count (LPC) interface, USB, [Bluetooth] / PCI bus / 2.32-32bit, 33MHz / PI C14520A CardBus and 1394 controller, Mini PCI, external expansion / LPC bus 33MHz (security chip; PC87932 Super I/O for parallel, [docking-based ports])

**Software**

- Windows XP Professional
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery (in hidden-protected area)
  - Preloaded Software
    - Access Program
    - Access Connections™
    - Rescue and Recovery™
    - Norton AntiVirus (OEM edition)
    - PC-Doctor™
    - ThinkPad Utilities
    - Adobe Reader
    - Update Connector™
    - RecordNOW and Drive
    - Letter Access powered by Sonic products (combo models)
    - InterVideo WinDVD (combo)
    - Lenovo Downloadable
      - IBM Director Agent
      - Software Delivery Assistant
      - System Migration Assistant
      - Client Security Software (for security chip)

**License**

- Lenovo (US) Multimedia and Lenovo Notes™ Stand-alone Client
- Lotus Notes™ 7.5 Stand-alone Client

**Limited warranty**

3-year /1-yr battery - EasyServ / 1-yr battery - EasyServ Preload

onset kickup and delivery / service upgrades available

- 256MB PC2700 DDR-SDRAM CL2.5 SOD 31P9830
- 512MB PC2700 DDR-SDRAM CL2.5 SOD 31P9832
- 1GB PC2700 DDR-SDRAM CL2.5 SOD 31P9834
- Second HDD Adapter for Ultrabay Slim 41C9177
- DVD-ROM Ultrabay Enhanced Drive 39K6246
- DVD RW/DVD Combo Ultrabay Enhanced Drive 39K6257
- Super Multi-Burner Ultrabay Enh Drv (curved) 40Y8624
- USB Portable Diskette Drive 05K9276
- USB Fingerprint Reader 41J3167
- USB 2.0 Lenovo Battery 9-cell 4201071
- USB 2.0 Lenovo Battery 9-cell 4201072
- UltraBay Slim Li-Polymer Battery 3-cell 08K8190
- ThinkPad Multiple Battery Charger II 22P9041
- ThinkPad Port replicator II 73P3275
- ThinkPad Convertible Monitor Stand 40Y7620
- ThinkPad Mini Dock 287810U
- ThinkPad ThinkPlus 5-year P&L P/U Depot
- ThinkPad ThinkPlus 4-year LOR 9x5 NBD
- ThinkPad ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 1-yr LOR 9x5 NBD
- ThinkPlus 3-yr LOR 9x5 NBD
- ThinkPlus 5-yr LOR 9x5 NBD
- Post-warranty annual maintenance agreements
  - at lexPad.com/thinkplus/warranty

- ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72-watt AC adapter

Asset ID™14 (system-specific info in chip accessed over network)

PC 2001 and P/2 2.0-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR®-compliant

iSM and ISM technologies and

Post-warranty annual maintenance agreements

Visit thinkpad.com/thinkvantage

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ThinkPad R51 (1830) - Education - withdrawn

See footnotes for important warranty information © Powered by Intel Centroino mobile technology

Limited warranty

3-year/1-year battery - EasyServ™, onsite pickup and delivery / service upgrades available

SOFTWARE

Windows XP Professional - Microsoft® Windows® XP Professional

Preloaded -
- Education software from VitalSource Technologies™: vialsure KEY™ and personal Portable library™
- Access Program
- Access Connections™
- Rescue and Recovery™
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connections™
- RecordNOW and Drive

Downloader -
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)
- Lotus® SmartSuite®: Millennium and Lotus Notes® Stand-alone Client

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers. This model for education is for sale direct from Lenovo or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.

Type-model  Processor  Speed  GHz Memory  Screen  Disk GB  Optical  Mini PCI  Comm Bay  CD/DVD  Ethernet Security  on O/S  Preload  Global (W)  Limited warranty  Workforce (W)

| 1830-AHU | Pentium® M 1.5 | 512MB 14.1"XGA | 40GB Combo | Intel11b/g | Modern Gigabit | Yes | XP Pro | EasyServ | Educ Apr 04 |
| 1830-AJU | Pentium® M 1.5 | 512MB 14.1"XGA | 60GB DVD-RW | Intel11b/g | Modern Gigabit | Yes | XP Pro | EasyServ | Educ Apr 04 |
| 1830-BTU | Pentium® M 1.5 | 512MB 15.0"XGA | 40GB Combo | Intel11b/g | Modern Gigabit | Yes | XP Pro | EasyServ | Educ Apr 04 |
| 1830-8KU | Pentium M 2.2 | 512MB 15.0"XGA | 60GB DVD-RW | Intel11b/g | Modern Gigabit | Yes | XP Pro | EasyServ | Educ Sep 04 |
| 1830-AJU | Pentium® M 1.5 | 512MB 14.1"XGA | 60GB DVD-RW | Intel11b/g | Modern Gigabit | Yes | XP Pro | EasyServ | Educ Sep 04 |

The 1830 has an EasyServ™, onsite pickup and delivery 3-year limited warranty

Positioning

Processor - Mainstream performance and features; two-spindle system

Intel Pentium® M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) with Enhanced Intel Speedstep™ technology

1.5GHz: 1MB; 1.6GHz: 2MB; All: on die (at processor speed) / ECC

Memory - 512MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SDRAM) / non-par / CLK 2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive

- None standard / use optional USB-based diskette drive

Combo

- Some: DVD-ROM/CD-RW / 24X/24X/24X / speed / removable from Ultrabay Enhanced

Memory

- Some CB-SD-RW / DVD-RW Multi-Burner / removable from Ultrabay Enhanced

Ultrabay Enhanced

- Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Enhanced

- One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high 4.9 mm wide 80 mm long / removable and upgradeable / 9.5 mm high bay / supports 2nd disk with optional 3rd HDD Adapter for Ultrabay Slim /

Hard Disk Drive Shock Absorber / Active Protection System™ (shock protection)

Display

- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Graphics

- ATI® MOBILITY™ RADEON™ 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)

Audio support

- Integral 87-key / Access IBM button / palm rest / Pitch: 19mm; Stroke: 2.7mm (std-size keys)

- TrackPoint® pointing device / “Press-to-Select,” Internet Scroll Bar™, magnifying glass

- Ultrabay™ multi-pointing system / touchpad keyboard / Tap Zone

ThinkLight™

- Keyboard in standard layout

- 160 x 102 x 19mm

- 1 watt

- volume up, down, mute buttons / internal microphone

Video output

- S-video output / composite (RCA) / S-video input / 1-pin industry standard connector

IEEE 1394

- IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard

Wireless antenna

- UltraConnect™ Antenna built into the display cover for optimal wireless signal reception

- One Mini PCI type III slot (Communications Bay) / customer upgradable

Mini PCI

- 11b/g wireless™, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82352 chipset

- One Communications Daughter Card (CDC) socket (used by modem) / not accessible

- 56K V.90 (V.92-designed) modem in CDC / Conexant™

CDC

- Modem

- Bluetooth

- None standard

- Ethernet

- Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN®

Audio support

- Soft audio / ICH AC 97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone for microphone jack / no line in jack

Security

- Power-on password / hard disk password / supervisor password / security keyhole

Security chip

- Embedded Security Subsystem 2.0® / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TC-compliant

Limited warranty

3-year/1-year battery - EasyServ™, onsite pickup and delivery / service upgrades available

US models announced April 6 or September 14, 2005

US models withdrawn effective November 2004 or February 2007
### Type-model Processor Speed Memory Screen Disk Mini PCI CardBus Bay Eth Security Workforce Workdate

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>CardBus</th>
<th>Bay</th>
<th>Eth</th>
<th>Security</th>
<th>Workforce</th>
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<td>1.5</td>
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<td>14.1&quot;XGA</td>
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<td>Yes</td>
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<td>XP Pro</td>
<td>Sep 2004</td>
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#### Notes
- **The 1831 has a limited onsite service**
- **3-year limited warranty**

### Positioning

- **Processor:** Mainstream performance and features; two-spindle system
- **Intel Pentium M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) with enhanced Intel SpeedStep technology in 400MHz system bus L2 cache Memory
- **512MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

### Diskette drive

- **Diskette drive Combi**
- **None standard / use optional USB-based diskette drive**
- **Some:** DVD-ROM/CD-RW / 4X / 24X / 24X / 2X1 / speed / removable from Ultrabay Enhanced
- **Some:** CD-RW/CD-RW-DVD / Multi-Burner / removable from Ultrabay Enhanced
- **Ultrabay Enhanced**
- **One modular bay for interchangeable devices / Ultrabay Slim-compatible / 127 mm high / 32 mm deep / 3 mm thick / supports 2 disk with optional 5th Second HDD Adapter for Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System

### Display

- **Display**
- **Some:** 14.1" (358.1mm) XGA (1024x768) TFFT color / Active Matrix / 150 nits
- **Some:** 15.0" (381.0mm) XGA (1024x768) TFFT color / Active Matrix / 200 nits

### Graphics

- **ATI MOBILITY RADEON 9000 / AGP 4X / 32MB DDR1 (DDR-SRAM)**
- **ATI UltraNav multi-pointing system / touch pad below keyboard / Tap Zones
- **Illuminates the keyboard to improve visibility in low-light conditions**

### Architecture

- **Intel 855PM chipset / 82855PM Memory Controller Hub (MCH-M) / 82801DBMICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB, [Bluetooth] / PCI bus 2.2 32-bit, 32MHz (T1) / PCI250 CAN CardBus and 1394 controller, Mini PCI, external expansion / LPC bus 33MHz (security chip / PC87392 Super I/O for parallel, infrared, [docking-based ports] / PC Card Std slots**
- **Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RI / RI-1 (modem) / RI-4 (ethernet) / external monitor**
- **Video out**
- **IEEE 1394**
- **Mini PCI**
- **Audio support**
- **Security chip**
- **Security keyhole**
- **embedded Security Subsystem 2.0 / hard key storage / multi-factor authentication / local file encryption / Atmel chip / TC-3000 chipset**

### Limited warranty

- **3-year-1 battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time**
### ThinkPad® R51 (1836) - TopSeller (September 2004) - withdrawn

#### Positioning
- **Processor**: Mainstream performance and features; two-sindle system
- **Memory**: 256 or 512MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / 2 to 200-pin SI-DIMM sockets / std memory in one socket / one socket available

#### Diskette drive
- **Combi**: None standard / use optional USB-based diskette drive
- **Type**: Some: DVD-ROM / CD-R / DVD-RW / 2X4X2X / 2X4X2X / speed / removable from Ultrabay Enhanced bay
- **Mechanism**: One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high

#### Display
- **Type**: 14.1" (358.1mm) XGA (1024x768) TFFT color / Active Matrix / 150 nits
- **Size**: Some: 15.0" (381.0mm) XGA (1024x768) TFFT color / Active Matrix / 200 nits
- **Color**: Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFFT color / Active Matrix / 200 nits
- **Viewing**: FlexView display with viewable angle and high density using IPS technology

#### Graphics
- **Type**: Some: ATI Mobility RAGE II (9000) 14X / SDRAM / 16MB / 32MB / CL2.5 / 2 to 200-pin SI-DIMM sockets / std memory in one socket / one socket available
- **Type**: Graphics external
- **Type**: ATI Mobility RAMDAC 9000 / SDRAM / 16MB / 32MB / CL2.5 / 2 to 200-pin SI-DIMM sockets / std memory in one socket / one socket available

#### Audio
- **Type**: Some: Intel 82540EP chipset (MAC/PHY) / Wake on LAN
- **Type**: Some: 10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN
- **Type**: Some: 11a/b/g wireless4, ThinkPad 11a/b/g Mini PCI Adapter II, Atheros
- **Type**: One Mini PCI type III slot (Communications Bay) / customer upgradable

#### Security
- **Type**: Antenna built into the display cover for optimal wireless signal reception
- **Type**: Some: Intel 11b/g32 / support / AD1981B AC97 codec / Stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5mm) / headphone jack (3.5mm) / no line in jack

#### Power
- **Type**: Power-on password / hard disk password / supervisor password / security keyhole
- **Type**: Enable Program
- **Type**: Embedded Security Subsystem 2.0
- **Type**: Security Chip
- **Type**: Embedded Security Subsystem 2.0
- **Type**: Security Chip
- **Type**: Embedded Security Subsystem 2.0
- **Type**: Security Chip

#### Other
- **Type**: Embedded Security Subsystem 2.0
- **Type**: Security Chip
- **Type**: Embedded Security Subsystem 2.0
- **Type**: Security Chip
- **Type**: Embedded Security Subsystem 2.0
- **Type**: Security Chip

#### Limited warranty
- **Type**: 1-year - EasyServ™, on-site pickup and delivery / service upgrades2 available
- **Type**: ThinkPad® R51 1-year LOR 9x5 NBD
- **Type**: ThinkPlus® 2-year LOR 9x5 NBD
- **Type**: ThinkPlus® 3-year LOR 9x5 NBD
- **Type**: ThinkPlus® 4-year LOR 9x5 NBD
- **Type**: ThinkPlus® 5-year LOR 9x5 NBD
- **Type**: ThinkPlus® 2-year P&L P/U Depot
- **Type**: ThinkPlus® 3-year P&L P/U Depot
- **Type**: ThinkPlus® 4-year P&L P/U Depot
- **Type**: ThinkPlus® 5-year P&L P/U Depot

#### Software
- **Type**: Windows XP Professional
- **Type**: Microsoft® Windows® XP Professional20
- **Type**: Disk-To-Disk Recovery
- **Type**: (in hidden protected area)

#### Preloaded
- **Type**: Access Program
- **Type**: Access Connections™
- **Type**: Rescue and Recovery™
- **Type**: Norton AntiVirus (OEM edition)
- **Type**: PC-Doctor™
- **Type**: ThinkPad Utilities
- **Type**: Adobe® Reader
- **Type**: Update Connector™
- **Type**: RecordNow® and Drive
- **Type**: Letter Access powered by Sonic products (combo, DVD+R/W)
- **Type**: InterVideo WinDVD (combo, DVD+R/W)
- **Type**: InterVideo WinDVD Creator (DVD+R/W)
- **Type**: Simple Backup (DVD+R/W)

#### Downloadable
- **Type**: IBM Director Agent
- **Type**: Software Delivery Assistant
- **Type**: System Migration Assistant
- **Type**: Client Security Software (for security)

#### License
- **Type**: License (CD not included)
- **Type**: Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- **Type**: Lenovo Training Solutions
- **Type**: ThinkVantage technologies and ThinkPlus®
- **Type**: visit thinkpad.com/thinkvantage

#### See footnotes for important warranty information

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* *Powered by Intel Centrino® mobile technology* © Lenovo

(R5185) February 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory GB</th>
<th>Screen</th>
<th>Disk GB</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>Ethernet</th>
<th>IEEE 1394</th>
<th>Security warranty</th>
<th>Limited Workforce (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2887-4SU</td>
<td>Celeron® M 1.3</td>
<td>128MB</td>
<td>14.1” XGA</td>
<td>20GB CD</td>
<td>Open: wireless upg</td>
<td>Extreme™ 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>E Apr 04</td>
<td></td>
</tr>
<tr>
<td>2887-6TU</td>
<td>Celeron® M 1.3</td>
<td>128MB</td>
<td>15.0” XGA</td>
<td>20GB CD</td>
<td>Open: wireless upg</td>
<td>Extreme 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>Apr 04</td>
<td></td>
</tr>
<tr>
<td>2887-E2U</td>
<td>Celeron® M 1.3</td>
<td>128MB</td>
<td>15.0” XGA</td>
<td>20GB CD</td>
<td>Open: wireless upg</td>
<td>Extreme 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>Dec 04</td>
<td></td>
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<tr>
<td>2887-GWU</td>
<td>Celeron® M 1.3</td>
<td>128MB</td>
<td>15.0” XGA</td>
<td>20GB CD</td>
<td>Open: wireless upg</td>
<td>Extreme 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>Dec 04</td>
<td></td>
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<td>128MB</td>
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<td>Extreme 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>Sep 04</td>
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<tr>
<td>2887-GAU</td>
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<td>128MB</td>
<td>15.0” XGA</td>
<td>20GB CD</td>
<td>Open: wireless upg</td>
<td>Extreme 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>Sep 04</td>
<td></td>
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<tr>
<td>2887-2KU</td>
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<td>128MB</td>
<td>14.1” XGA</td>
<td>20GB CD</td>
<td>* Intel 11b/g</td>
<td>Extreme™ 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>E Apr 04</td>
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<tr>
<td>2887-2LU</td>
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<td>128MB</td>
<td>14.1” XGA</td>
<td>20GB CD</td>
<td>* Intel 11b/g</td>
<td>Extreme™ 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>Apr 04</td>
<td></td>
</tr>
<tr>
<td>2887-2BU</td>
<td>Pentium® M 1.5</td>
<td>128MB</td>
<td>14.1” XGA</td>
<td>20GB CD</td>
<td>* Intel 11b/g</td>
<td>Extreme™ 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Home 1-yr</td>
<td>E July 04</td>
<td></td>
</tr>
<tr>
<td>2887-P2U</td>
<td>Pentium® M 1.5</td>
<td>128MB</td>
<td>14.1” XGA</td>
<td>40GB Combo</td>
<td>* Intel 11b/g</td>
<td>Extreme™ 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Pro 1-yr</td>
<td>Nov 04</td>
<td></td>
</tr>
<tr>
<td>2887-P3U</td>
<td>Pentium® M 1.5</td>
<td>128MB</td>
<td>14.1” XGA</td>
<td>40GB Combo</td>
<td>* Intel 11b/g</td>
<td>Extreme™ 2</td>
<td>10/100</td>
<td>No</td>
<td>Yes</td>
<td>XP Pro 1-yr</td>
<td>Nov 04</td>
<td></td>
</tr>
</tbody>
</table>

### Positioning

**Processor**

- Intel® Celeron® Processor 1.3GHz or 330 (1.5GHz), 340 (1.5GHz) with 400MHz bus or Intel Pentium Processor 1.5GHz or Intel Pentium Processor 710 (1.7GHz) or 715 (1.7GHz) with Enhanced Intel SpeedStep™ technology and 400MHz system bus

**Memory**

- Celeron: 512KB; Pentium: 1MB; Pentium 710/715: 2MB; All: ECC

**Diskette drive**

- None standard; use optional USB-based diskette drive

**Combop**

- Some: CD-ROM / 24X speed / removable from Ultrabay Enhanced

**Disk**

- One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high

**Weight**

- 20GB; 30GB; or 40GB (4200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high / removable and upgradable / 9.5mm high / removable and upgradable

**Battery**

- Lithium Ion 6-cell / Intel / supports unique 2nd battery in Ultrabay Enhanced

### Architecture

**Intel 855GM Chipset** / 82855GME Chipset Memory Controller Hub (MCH/M) / 82801BM CH4-M I/O Controller Hub (ATA-100 IDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB / PCI bus 2.2 32-bit, 33MHz [T-F] PCI4510 CardBus and/or UltraBay Enhanced Mini PCI, external eXtended Memory Type 3 (延伸記憶體模組) / PC87392 Super I/O (SI) for parallel, infrared, [docking-based ports]

### Display

- Some: DVD-ROM/CD-RW / 24X/24X/24X/8X; speed / removable from Ultrabay Enhanced

### Graphics

- Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 250MHz

### SOFTWARE

- Windows XP Home models
  - Microsoft® Windows® XP Home Edition
  - Disk-to-Disk Recovery (in hidden protected area)

### Preloaded

- IBM Director Agent
- IBM WebSphere Personal Web Assistant
- Norton AntiVirus (OE edition)
- PC-Doc™
- ThinkPad Utilities
- Adobe® Reader
- Update Connector
- RecordNOW and Drive Letter Access powered by Sonic products (combo models)
- InterVideo WinDVD (combo)
- Downloadable (all)
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)
- License (CD not included)
- Lenovo ThinkVantage technologies and design

ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- Assisted I/O (system-specific info in chip accessed over network)
- PC 2001 and PCE 2.0 compatible
- ACPI 1.0b and 2.0 compatible
- CIM and DMI 2.0 compatible
- ENERGY STAR®-compatible
- ImageUltra™ Services available
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty period

ThinkPlus™ 3-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 3-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot
- ThinkPlus 4-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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Lenovo
US models announced on April 6, July 13, September 14, November 30, or December 21, 2004
US models withdrawn effective January 5, March 2005, or February 2007

(2887) February 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Mini PCI</th>
<th>Ethernet</th>
<th>Limited warranty</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2888-4AU</td>
<td>Pentium M</td>
<td>1.6</td>
<td>256MB</td>
<td>XGA</td>
<td>30GB CD</td>
<td>* Intel 11b/g</td>
<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr W</td>
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<tr>
<td>2888-47U</td>
<td>Pentium M</td>
<td>1.5</td>
<td>256MB</td>
<td>14.1</td>
<td>XGA</td>
<td>CD 20GB DVD</td>
<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr G</td>
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<tr>
<td>2888-5R</td>
<td>Pentium M</td>
<td>1.6</td>
<td>256MB</td>
<td>14.1</td>
<td>XGA</td>
<td>Combo 40GB</td>
<td>Mod/ 10/100 Yes</td>
<td>Yes XP Pro 3-yr W</td>
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<tr>
<td>2888-48U</td>
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<td>14.1</td>
<td>XGA</td>
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<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr G</td>
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<tr>
<td>2888-6AU</td>
<td>Pentium M</td>
<td>1.6</td>
<td>256MB</td>
<td>15.0</td>
<td>XGA</td>
<td>CD 20GB DVD</td>
<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr W</td>
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<tr>
<td>2888-68U</td>
<td>Pentium M</td>
<td>1.6</td>
<td>256MB</td>
<td>15.0</td>
<td>XGA</td>
<td>CD 11b/g</td>
<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr G</td>
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<tr>
<td>2888-69U</td>
<td>Pentium M</td>
<td>1.6</td>
<td>256MB</td>
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<td>XGA</td>
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<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr W</td>
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<tr>
<td>2888-7J</td>
<td>Pentium M</td>
<td>1.6</td>
<td>256MB</td>
<td>15.0</td>
<td>XGA</td>
<td>Combo 40GB</td>
<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr G</td>
</tr>
<tr>
<td>2888-7U</td>
<td>Pentium M</td>
<td>1.6</td>
<td>256MB</td>
<td>15.0</td>
<td>XGA</td>
<td>Combo 11b/g</td>
<td>Mod/ 10/100 No</td>
<td>Yes XP Pro 3-yr W</td>
</tr>
</tbody>
</table>

**Positioning**
- Mainstream performance and features; two-spindle system
- Intel® Pentium® M Processor (1.5 or 1.6GHz) or Intel Pentium M Processor 725 (1.6GHz) with Enhanced Intel SpeedStep technology
- 400MHz system bus

**Graphics**
- Integrated Intel Extreme™ Graphics 2
- 85GE GMCH / memory main (up to 64MB) / 250MHz

**Video out**
- S-video out port (TV out) / one 4-pin industry standard connector
- IEEE 1394

**Audio**
- RealTek ALC655 codec / analog stereo / 20 Watt / SoundMax (Speaker: multimedia)

**Security**
- Embedded Security Subsystem 2.0
- Hardware key storage / multi-factor authentication / local file encryption / Atmel chip

**Battery**
- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced

**Dimensions**
- 14.1 models: (WxDxH): 12.4 x 10.2 x 1.35-1.46; 314mm x 260mm x 34-37mm
- 15.0 models: (WxDxH): 13.1 x 10.6 x 1.47-1.58; 332mm x 269mm x 37-40mm

**Weight**
- 14.1 models: 6.0 kg (1.271 lbs)
- 15.0 models: 6.6 kg (1.462 lbs)

**Operating System**
- Microsoft® Windows® XP Professional
- ThinkPad Utilities
- Lenovo Rescue and Recovery
- Norton AntiVirus (OEM edition)

**Preloaded Software**
- Acrobat Reader 5.0
- Adobe Acrobat Reader 4.0
- Lotus Notes 6.1
- Microsoft® Office XP
- IBM ThinkVantage® Technology

**External Monitor**
- Uses main memory (up to 64MB) / 250MHz

**Environment**
- Designed for use in low altitude environments
- PC 2001 and PXE 2.0-compliant
- ENERGY STAR®-compliant

**Security Features**
- Power-on password / hard disk password / supervisor password / security keyhole
- Microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack

**Power**
- Power-on password / hard disk password / supervisor password / security keyhole
- Power-on password / hard disk password / supervisor password / security keyhole

**Power Management**
- Power-on password / hard disk password / supervisor password / security keyhole

**Software**
- Windows XP Professional
- Microsoft® Windows® XP Professional
- ThinkPad Utilities
- ThinkVantage® technologies and design
- Software Delivery Assistant
- IBM ThinkVantage® Technology

**Service Options**
- Post-warranty annual maintenance agreements at lenovo/thinkplus/warranty

**Post-warranty Support**
- Post-warranty annual maintenance agreements at lenovo/thinkplus/warranty

See footnotes for important warranty information

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## ThinkPad R51 (2888) - September 2004 - withdrawn

### Positioning

<table>
<thead>
<tr>
<th>Processor</th>
<th>Mainstream performance and features: two-spindle system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Pentium® M Processor 715/715a (1.5GHz) or 735 (1.7GHz)</td>
<td></td>
</tr>
<tr>
<td>Enhanced Intel SpeedStep™ technology and 400MHz system bus</td>
<td></td>
</tr>
</tbody>
</table>

### L2 cache

<table>
<thead>
<tr>
<th>Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2MB / on die (at processor speed) / ECC</td>
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### Diskette drive

<table>
<thead>
<tr>
<th>CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>None standard / use optional USB-based diskette drive</td>
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</table>

### DVD

<table>
<thead>
<tr>
<th>DVD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: DVD-ROM / BX-3.3x speed / single-layer / removible from Ultrabay Enhanced</td>
</tr>
<tr>
<td>Some: DVD-ROM/CD/DVD-RW / 24X/24X/24X/2X3 speed / removible from Ultrabay Enhanced</td>
</tr>
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</table>

### Hard Drive

<table>
<thead>
<tr>
<th>Disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: 3.5&quot;x 11.1x 1.35-1.46&quot; / 341mm x 260mm x 34-37mm</td>
</tr>
<tr>
<td>15.0&quot; models (WxDxH): 12.4&quot; x 10.2&quot; x 1.35-1.46&quot; / 314mm x 260mm x 34-37mm</td>
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</table>

### Weight

<table>
<thead>
<tr>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.0&quot; models: 6.0 lb (2.7kg)</td>
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</table>

### Graphics

<table>
<thead>
<tr>
<th>Graphics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory to 64MB / 250MHz</td>
</tr>
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</table>

### Display

<table>
<thead>
<tr>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: 14.1&quot; (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</td>
</tr>
<tr>
<td>Some: 15.0&quot; (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits</td>
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### Keyboards

<table>
<thead>
<tr>
<th>Keyboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>UltraNav™ multivision system / touchpad below keyboard / Tap Zones</td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® 1394a (SCSI) / 1.3x 1.5 / 1.15 / 1.35 / 1.46</td>
</tr>
<tr>
<td>314mm x 260mm x 34-37mm</td>
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### Weight

<table>
<thead>
<tr>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>14.1&quot; models: 6.0 lb (2.7kg)</td>
</tr>
<tr>
<td>15.0&quot; models: 6.6 lb (3.0kg)</td>
</tr>
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### Power Supplies

<table>
<thead>
<tr>
<th>Power Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal 72 watt AC adapter</td>
</tr>
</tbody>
</table>

### Software

- Windows XP Professional
- Microsoft® Windows® XP Professional
- Pxx models only: Service Pack 2

### Preloaded

- Access Program
- Access Connections™
- Norton SystemWorks
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

### License

- Lotus® Smartsuite® Millennium and Lotus Notes® Stand-alone Client

### Limited Workhorse (W)

<table>
<thead>
<tr>
<th>Limited Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-year/1 year battery - EasyServ™ onsite pickup and delivery / service upgrades available</td>
</tr>
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### Ethernet

<table>
<thead>
<tr>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/100 Ethernet / 10/100/1000 Ethernet / 10/100/1000 Ethernet / Gigabit Ethernet</td>
</tr>
</tbody>
</table>

### Hard Drive

<table>
<thead>
<tr>
<th>Hard Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embedded Security Subsystem 2.0 / Atmel chip / TCG-compliant</td>
</tr>
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</table>

### Security Chip

<table>
<thead>
<tr>
<th>Security Chip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power-on password / hard disk password / supervisor password / security keyhole</td>
</tr>
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### Embedded License

<table>
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<tr>
<th>Embedded License</th>
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<tbody>
<tr>
<td>ThinkPlus® 2-year LR 9x5 NBD 41C9175</td>
</tr>
<tr>
<td>ThinkPlus® 3-year LR 9x5 NBD 41C9176</td>
</tr>
<tr>
<td>ThinkPlus® 4-year LR 9x5 NBD 41C9177</td>
</tr>
<tr>
<td>ThinkPlus® 5-year LR 9x5 NBD 41C9179</td>
</tr>
<tr>
<td>ThinkPlus® 4-year P&amp;L P/U Depot 41C9178</td>
</tr>
<tr>
<td>ThinkPlus® 5-year P&amp;L P/U Depot 41C9180</td>
</tr>
</tbody>
</table>

### Worldwide Warranty14

- Universal 72 watt AC adapter
- Asset ID™, DMI 2.0-compliant
- PC 2001 and PXE 2.0-compliant
- ACPI 1.0b and 2.0-compliant
- ENERGY STAR®-compliant
- Microsoft® Windows® XP Professional system agreement at Lenovo.com |
ThinkPad® R51 (2887/2888) - Education - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

| Type-model | Processor | Speed GHz | Memory | Screen | Disk | Mini PCI | Comm Bay | Codec | Integrated graphics | IEEE Secu- | Limited warranty | Workhorse (W) |
|------------|-----------|-----------|--------|--------|------|---------|----------|-------|--------------------| 1394 port | 1-3 years | Global (G) |
| 2887-2RU   | Celeron M | 1.3       | 256MB | 14.1"XGA | 30GB | CD      | Intel/11b | Modem | Extreme/2           | No       | Yes           | XP Pro Educ |
| 2888-2RU   | Celeron M | 1.3       | 256MB | 14.1"XGA | 30GB | CD      | Intel/11b | Modem | Extreme 2          | No       | Yes           | XP Pro Educ |
| 2888-EVU   | Celeron M | 3.45      | 1536MB| 14.1"XGA | 30GB | CD      | Intel/11b | Modem | Extreme 2          | No       | Yes           | XP Pro Educ |
| 2888-2WU   | Pentium M | 1.5       | 256MB | 14.1"XGA | 40GB | Combo   | Intel/11b | Modem | Extreme 2          | No       | Yes           | XP Pro Educ |
| 2888-EWU   | Pentium M | 1.5       | 256MB | 14.1"XGA | 40GB | Combo   | Intel/11b | Modem | Extreme 2          | No       | Yes           | XP Pro Educ |

- The 2887 has an EasyServ® onsite pickup and delivery 1-year limited warranty
- The 2888 has an EasyServ® onsite pickup and delivery 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Minerals and Metals
- **ThinkPad**: Satellite K8300 series
- **Audio support**: Mini PCI
- **Ethernet**: Intel PRO/1000 MT network adapter
- **Mini PCI**: Integrated graphics
- **Ports**
  - One modular bay for interchangeable devices
  - Ultrabay Slim-compatible
  - 12.7 mm high

- **Display**
  - 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

- **Graphics**
  - Integrated Intel Extreme™ graphics 2 / In 5855GM GMAH / uses main memory (up to 64MB) / 250MHz

- **Keyboard**
  - TrackPoint® pointing device
  - Touchpad

- **Weight**
  - 3.29 lbs

- **Architecture**
  - Intel 855GME Chipset / 82855GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI, bus, Ethernet MAC, USB 2.0, 1.1, 125 MB/s), CPU Interface, USB bus 2 and 3, 32-bit, 33MHz (T1), PCI1450 CardBus and 1394 controller, Mini PCI, external expansion / LPC bus 33MHz (security chip)

- **Card Reader**
  - ThinkPad Card Reader II / CardBus 32-bit / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet)

- **Video**
  - Integrated Intel Extreme Graphics 2 / In 855GME GMCH / ACPI 1.0b and 2.0-compliant

- **Operating System**
  - Windows XP Professional
  - Windows XP Professional®
  - Disk-to-Disk Recovery

- **Post-warranty maintenance agreements**
  - Lenovo Extended Service Plan
  - Lenovo Upgrade on Demand

- **Security**
  - Electronic key lock / Key lock / Kensington lock / Combination lock / Smart Card reader

- **Terminals**
  - 800-IBM-.gateway / 18 hour x 7 day / toll-free warranty

See footnotes for important warranty information
- *Powerd by Intel Centrinbo" mobile technology
- Lenovo®
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Min PCI</th>
<th>Integrated graphics</th>
<th>IEEE Security Chip</th>
<th>Workhorse</th>
<th>Limited Warranty</th>
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<td>Yes</td>
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</tbody>
</table>

- **The 2889 has a limited onsite service**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Software

- Windows XP Professional
- Microsoft Windows XP Professional
- Disk-to-Disk Recovery (in hidden protected area)

### Preloaded

- Access Program
- Access Connections™
- Rescue and Recovery™
- Norton AntiVirus (OEM edition)
- P-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™
- RecordNow! and Drive Letter Access powered by Sonic products (combo model)

### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

### License

- Lotus® SmartSuite® Millennium and Lotus Notes™ Stand-alone Client

### Post-Warranty

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

### 28989: Education - withdrawn

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
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- ThinkPad Utilities
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### License

- Lotus® SmartSuite® Millennium and Lotus Notes™ Stand-alone Client

### Post-Warranty

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

### License

- Lotus® SmartSuite® Millennium and Lotus Notes™ Stand-alone Client

### Post-Warranty

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® R51 (2883) - TopSeller (September 2004) - withdrawn

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The 2883 has a 1-year limited warranty

### Type-model
- **2883-GXU**
- **2883-GHU**
- **2883-GJU**
- **2883-ELU**
- **2883-GKU**

### Processor
- Mainstream performance and features: two-spindle system

### Dimensions
- US models withdrawn effective March 2005 or February 2007
- US models announced September 14 or December 21, 2004

### Keyboard
- Limited warranty
- Security chip
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

### Software

#### Preloaded
- Access Program
- Access Connections™
- Rescue and Recovery™
- RecordNOW and Drive Letter
- Access powered by Sonic products (combo models)
- InterVideo WinDVD (combo models)
- Norton AntiVirus (OE2 version)
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connect™

#### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

### License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### Windows XP Professional
- - Microsoft® Windows® XP Professional
- - Disk-to-Disk Recovery (in hidden-protected area)

### Limited warranty
- 1-year - EasyServ™
- 2-year - EasyServ™ on-site pickup and delivery / service upgrades™

### Features
- Intel® Celeron M Processor 330 (1.4GHz), 340 (1.5GHz) or 350 (1.3GHz) with 400MHz system bus or Intel® Pentium M Processor 755 (1.6GHz) with Enhanced Intel SpeedStep™ technology® and 400MHz system bus

### Diskette drive
- Combo
- Ultrabay Enhanced

### Disk
- 30GB* (4200 rpm), 9.5mm high / removable and upgradable
- 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim'
- Hard Disk Drive Shock Absorber / Active Protection System™

### Display
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

### Graphics
- Integrated Intel® Extreme™ Graphics 2 / in 855GM GECH / uses main Intel® chip (up to 750MHz)
- 28201DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB) / PCI bus 2.2 32-bit, 33MHz TT (TI® PCI4150 945 Cardbus and LAP Link 1394 controller, Mini PCI, external expansion, PC87392 Super I/O) for parallel, infrared (docking-based ports)

### Memory
- Ultrabay Slim Li-Ion Battery / supports 2nd battery in Ultrabay Enhanced
- Pentium M models: up to 4.0 GHz
- Optional Hard Disk 9-Cell: up to 6.2 hr

### Audio
- 11b/g wireless4, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset
- One Mini PCI type III slot (Communications Bay) / customer upgradable
- Optional High Capacity 9-cell: up to 6.2 hr
- Illuminates the keyboard to improve visibility in low-light conditions

### Ethernet
- One 100base Ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®
- Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5mm) / headphone jack (3.5mm) / no line in jack

### Hard Disk Drive
- 2GB native / 32GB native / 4GB native / 64GB native / 8GB native / 16GB native / 32GB native

### Battery - life
- Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

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(2883S) February 2007
This model has a 1 year limited warranty

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller and memory</th>
<th>Disk GB</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>Bluetooth</th>
<th>mini PCI modem</th>
<th>Workhorse or Global Option</th>
<th>Availability</th>
</tr>
</thead>
</table>
| 1846-59U  | Pentium™ M 170 | 1.73 | 256MB | X300 64MB | 40GB Combo | Intel 11b/g/n | Modem No No Yes No Mar 05

- **Positioning**
  - Mainstream performance and features; two-spindle system
- **Processor**
  - Intel® Pentium™ Processor 740 (1.73GHz) with enhanced Intel SpeedStep™ technology; Execute Disable Bit, and 533MHz system bus
- **L2 cache**
  - 2MB / 256MB / 1GB max / ECC
- **Memory**
  - 256MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / 200-pin SO-DIMM sockets
- **Disk drive**
  - None standard / use optional USB-based diskette drive
- **Combination**
  - DVD-ROM/CD-RW / 24X/24X/48X/8X speed / removable from Ultrabay Enhanced
- **Optical**
  - Ultrabay Enhanced
- **Audio**
  - "Press-to-Select," Internet Scroll Bar
- **Modem**
  - 56K V.90 (v.92-enabled)
- **Touchpad**
  - UltraNav™ multi-pointing system
- **Battery**
  - Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
- **Hard Drive**
  - Hard Disk Drive Shock Absorber / Active Protection System (shock protection)
- **Display**
  - 14.1" (358.1mm) XGA
- **Graphics**
  - IBM® Mobility Radeon™ X300 / PCI Express x16 / 64MB GDDR1 memory
- **Music**
  - ThinkLight™
- **Dimensions**
  - 10.4" x 7.5" x .63"
- **Weight**
  - 6.1 lbs (2.8kg)
- **Keyboard**
  - T9-key / 108-key / access IBM button / palm rest / track: 19mm: stroke: 2.5mm (standard keys)
- **TrackPoint**
  - POINTING device, "Press-to-Select," Internet Scroll Bar
- **Touchpad**
  - UltraNav™
- **Battery type**
  - Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
- **Battery - life**
  - Up to 3.5 hours, Optional 9-cell: up to 5.6 hours
- **Architecture**
  - Mobile Intel 915PM Express Chipset / 82801FB ICH6 / 82801BM ICH6 / 82801I MCH / 82801ID / PCI Express x1 / PCI, EIDE, PCI Express x1 / PCI bus, ethernet MAC, USB, Low Pin Count (LPC) interface, [Bluetooth] / PCI bus (Riconel R5C811 CardBus controller, Mini PCI, external expansion) / LPC bus (NS PC 83949T Super I/O for security chip (TPM), Asset ID, hard drive events, log, parallel, infrared, IdentBus-based ports (serial, diskette)
- **PC Card Std slot**
  - One Type I or II slot / CardBus 32-bit / integrated door
- **ExpressCard slot**
  - One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- **Ports**
  - Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / one Type I or II slot / CardBus 32-bit / integrated door
- **Security**
  - Power-on password / hard disk password / supervisor password / security keyhole
- **Security chip**
  - Embedded Security Subsystem 2.0™
- **Fingerprint reader**
  - None

**SOFTWARE**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - 32-bit and 64-bit support during the warranty agreements at lenovo.com/services/its/us/source/69P9197
- **Preloaded**
  - Rescue and Recovery™
  - Access IBM
  - Access Connections
  - Norton AntiVirus
  - PC-Doc™
  - ThinkPad Utilities
  - Adobe Reader
  - Update Connector™
  - RecordNOW and Drive
  - Letter Access powered by Sonic products (combo model)
  - InterVideo WinDVD (combo model)
  - Client Security Software (for security chip)

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

**servicePac**

- 1yr IOR 9x5 NBD
- 3yr IOR 9x5 NBD
- 4yr IOR 9x5 NBD
- 5yr IOR 9x5 NBD
- 6yr IOR 9x5 NBD
- 2yr P/L P/U Depot
- 3yr P/L P/U Depot
- 4yr P/L P/U Depot
- 5yr P/L P/U Depot
- Other ServicePac options at ibm.com/services/its/us/source/warranty/69P9197

**See footnotes for important warranty information**

* Powered by Intel Centrino™ mobile technology

© Lenovo (R) July 2005
**ThinkPad R52 (1846) - August 2005 - withdrawn**

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Graphics controller</th>
<th>Disk type</th>
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<th>Disk drive</th>
<th>Case material</th>
<th>Weight (lbs)</th>
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<tr>
<td>1846-9U</td>
<td>Pentium M 750</td>
<td>1.86</td>
<td>256MB</td>
<td>Intel® SpeedStep™ technology 1</td>
<td>40GB</td>
<td>Mod/Blue</td>
<td>None standard</td>
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<td>6.1 lb (2.8kg)</td>
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<td>256MB</td>
<td>Intel® SpeedStep™ technology 1</td>
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<td>Mod/Blue</td>
<td>None standard</td>
<td>black; Acrylonitrile-Butadiene-Styrene (ABS) plastic</td>
<td>6.1 lb (2.8kg)</td>
</tr>
</tbody>
</table>

- **These models have a 1-year limited warranty**

**Positioning**
- Mainstream performance and features: two-spindle system

**Processor**
- Intel® Pentium®/Celeron® Processor 740x (1.73G to 2.0GHz) with Enhanced Intel SpeedStep™ technology 1
- Execute Disable Bit, and 533MHz system bus

**Cache**
- L2 cache 2MB / on die (at processor speed) / ECC

**Memory**
- 256MB std / 3GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SODIMM sockets / slot for one socket / one socket available

**Display**
- 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

**Graphics**
- ATI Mobility™ Radeon™ X300 / PCI Express x16 / 64MB / GDDR1 memory

**Audio support**
- Embedded Sound Subsystem 2.0

**Preloaded software**
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNow! and Drive Letter Access powered by Sonic products (combo model)
- IntePod DVD (combo model)
- Fingerprint Software (fingerprint models)
- Client-Server Security (for security chip)

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License** (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Limited warranty**
- 1-year - EasyServ™ onsite pickup and delivery / service upgrades available

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology*
ThinkPad R52 (1847) - withdrawn

<table>
<thead>
<tr>
<th>Type/model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
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<th>Comm Bay</th>
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<th>Modem</th>
<th>Security</th>
<th>Workhorse (W)</th>
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<td>1847-22U</td>
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<td>512MB</td>
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<td>Combo</td>
<td>Intel 11a/b/g</td>
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<td>X300 32MB</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
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<td>Mar 05</td>
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<td>512MB</td>
<td>15.0&quot; SXGA</td>
<td>X300 16MB</td>
<td>Combo</td>
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<td>4GB</td>
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<td>No</td>
<td>No</td>
<td>Yes</td>
<td>3-year</td>
<td>Mar 05</td>
</tr>
</tbody>
</table>

Positioning
- Processor: Mainstream performance and features, two-spindle system
- Intel Pentium M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep technology™, Execute Disable Bit, and 533MHz system bus
- L2 cache: 2MB on-die (at processor speed)/ ECC Memory: 256 or 512MB std / 2GB max / PC-24200 (533MHz DDR2) / non-parity / CL4 / dual channel capable
- 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket available
- Diskette drive: No standard / use optional USB-based diskette drive
- DVD-ROM/CD-RW / 24X/24X/8X / speed / removable from Ultrabay Enhanced
- Ultrabay Enhanced: One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm high
- Disk drive: 40GB (4200 rpm), 40GB (HS 3400 rpm), or 60GB (4200 rpm) / 9.5mm high / removable and upgradeable / 8.95mm high bay / supports 2 disk/ drive Hard Disk Drive Shock Absorber / Active Protection System™ (shock protection)
- Display: Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits
- Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits
- Graphics: Some: AMD MOBILITY™ RADEON X300 / PCI Express x16 / 128MB DDR2 / GDDR1 memory
- Some: AMD MOBILITY™ RADEON X300 / PCI Express x16 / 256MB DDR2 / GDDR1 memory
- Keyboard: 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)
- TrackPad: TrackPoint® pointing device, "Press to Select," Intelligent Scroll Bar™, magnifying glass Touchpad
- ThinkPad UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions
- Dimensions: 14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm
- 15.0" models (WxDxH): 15.1" x 10.6" x 1.1-1.37", 381.0mm x 269mm x 37-40mm
- Weight: w/diskette drive: 40.1-41.8 lbs (18.2-19.0kg); w/battery: 36.8-37.3 lbs (16.7-16.9kg)
- Case material: Color: Black; All: Acranilith-Butadiene-Styrene (ABS) plastic
- Battery: type: Lithium Ion 6-cell / intelligent / supports 2nd battery in Ultrabay Enhanced
- Battery: life: Up to 3.6 hr; Optional 9-cell: up to 5.6 hr
- Architecture: Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub / 82801FB IC HM6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCI Express x1, PCI bus, Ethernet, USB, Low Pin Count (LPC) interface, [Bluetooth]) / PCI bus (Riconh® R9C811 CardBus controller, Mini PCI, external expansion) / LPC bus (NS PC8394T Super I/O for security chip (TPM), Asset ID)
- Hardware event log, parallel, infrared, (docking-based ports (serial, diskette))
- PC Card Std slot: One Type I or Type II slot / CardBus 32-bit / integrated door
- ExpressCard slot: One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- Video out: Two USB Version 2.0 (USB 3.0) / external DB-15 monitor / integrated (4mbps) / RJ-45 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)
- IEEE 1394: S-video out port (TV out) / one 4-pin industry standard connector
- Ultrabase TDM Terminal S5 (TDM Terminal B5) / one 4-pin industry standard connector
- Intel 11b/g / Intel 11a/b/g / Intel 11a/b/g
- Intel Centrino® mobile technology
- Wireless antenna: Built into the display cover for optimal wireless signal reception
- LAN: Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCI x1 / PXE
- Audio: soft / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)
- Security: Onboard password / hard disk password / supervisor password / security keyhole
- Security chip: Embedded Security Subsystem™ 2.0 / in NS PC8394T chip / TCG-compliant
- FingerPrint reader: rugged design
- Limited warranty: 3-year / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades@ available

Windows XP Professional
- Microsoft Windows® XP Professional (Service Pack 2)
- Stand-alone Client

License
- Lenovo ThinkVantage® technologies and design
- ThinkPlus™ 22 - 2-year LOR 9x5 NBD 41C175
- ThinkPlus 3-year LOR 9x5 NBD 41C176
- ThinkPlus 4-year LOR 9x5 NBD 41C177
- ThinkPlus 5-year LOR 9x5 NBD 41C179
- ThinkPlus 4-year P&L P/U Depot 41C178
- ThinkPlus 5-year P&L P/U Depot 41C180

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
* Powered by Intel Centro® mobile technology
© Lenovo
US models announced March 1, 2005
US models withdrawn effective September 2005 or February 2007
| Type-model | Processor | Speed and GHz | Memory | Screen | Graphics controller | Disk for | Optical | Mini PCI | Comm Bay | CDC modem | Finger print | Workhorse | Limited Workhorse Global | Avail date |
|------------|-----------|--------------|--------|--------|---------------------|---------|---------|----------|----------|-----------|-------------|------------|------------|---------------|------------|
| 1847-82U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-83U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-92U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-93U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-8FU | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-8G4U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-8HU | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-8FU | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-8G4U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-92U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |
| 1847-93U | Pentium M | 1.86 | 512MB | 14.1" XGA | X300 | 64MB | 40GB | Combo | Intel 11b/g | Modem | No | No | 3-year | W G Aug 05 |

Positioning Processor: Mainstream performance and features; two-spindle system

L2 cache: 2MB / on die (at processor speed) / ECC

Memory: 512MB std / 2GB max / PC/2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

Disk drive: None standard / use optional USB-based diskette drive

Combo: Some: DVD-ROM/DVD-R/W / 24X/24X/24X/24X/24X / speed / removable from UltraBay Enh

DVD/CD: Some: DVD and CD writer /burner / UltraBay Enh

CD: None standard / use optional USB-based drive

Display: Some: up to 3.6 hr; Optional 9-cell: up to 5.6 hr

Battery life: 6-cell

Battery type: Lithium Ion

Weight: Some: 2.2 kg / 4.8 lbs / 2.6 lbs (40GB)

Dimensions: 14.1" x 10.2" x 1.35-146.4; 314mm x 260mm x 34-37mm

Height: 15.0" / 381.0mm

Keyboard Dimensions: AT&T MOBILITY™ RADEON™ X300 / PCI Express x16 / 64MB GDDR1 memory

TrackPoint: 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

Touchpad: UltraNav™ multi-pointer system / touch pad below keyboard / Tap Zones

Weight: 1.50" x 381.0mm x 9.0mm

Battery life: Up to 3.6 hr; Optional: 11-cell: up to 5.6 hr

Architecture: Mobile Intel 915P Express Chipset / 82801BF ICH6-M I/O Controller Hub / 82801FBM ICH6-M I/O Controller Hub / SATA150, ATA-100 EIDE, PCI Express x1, technology1, Execute Disable Bit, and 533MHz system bus

PC Card Std slot: One Type I or Type II slot / CardBus 32-bit / integrated doorknob

ExpressCard slot: One ExpressCard/54 or 44 slot / Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

Video out: S-video out (TV out) / one 4-pin industry standard connector

IEEE 1394: Some: IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard

Wireless antenna: UltraConnect™ antenna built into the display cover for optimal wireless signal reception

Mini PCI: One Mini PCI type Iii slot ( Communications Bay) / customer upgradeable

Wireless upg: Some: wireless upgradable with Mini PCI options

Intel 11b/g: Some: 11b/g wireless; Mini PCI; Intel PRO/Wireless 2200BG; Intel 82532 chip

Intel 11a/g/b: Some: 11a/b/g wireless; Mini PCI; Intel PRO/Wireless 2915ABG, 82533 chipset

CDC: None

Modem: None

Bluetooth: None

Ethernet: Gigabit ethernet on system board / Broadcom BCM5751M (MAC/PHY) / PCl e x1 / PXE soft audio / ICH AC97 controller / DirectSound® support / AD19818 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

Audio support: Power-on password / hard disk password / supervisor password / security keyhole

Security: Enter key

Security Key: Embeddable Security Subsystem 2.0 / in NS P8394T chip / TCG-compliant

Security Chip: ThinkPad Port Replicator II

Limited warranty: 3-year / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

ThinkPad notebooks implement ThinkVantage™ technologies and design;

visit thinkpad.com/thinkvantage

SOFTWARE:

Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery

Preloaded

- Program and Feature Recovery
- Access Program
- Access Connections
- Norton AntiVirus
- PC Doctor
- ThinkPad Utilities
- Adobe® Reader
- RecordNow! and Drive
- Letter Access powered by Sonic products (combo, DVD:RW)
- IntelVideo WinDVD (combo, DVD:RW models)
- Intel-miniWDC VOD Creator (DVD:RW models)
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)

Downloadable:

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included):

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ENERGY STAR® compliant

ENERGY STAR®-qualified International Warranty Service

License support during the warranty period

ThinkPlus22 2-year LOR 9x5 NBD

ThinkPlus3 3-year LOR 9x5 NBD

ThinkPlus4 4-year LOR 9x5 NBD

ThinkPlus5 5-year LOR 9x5 NBD

ThinkPlus4 4-year P&L P/U Depot

ThinkPlus5 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Lenovo

US models announced August 2, 2005

US models withdrawn effective June or November 2006

(J N63) December 2006
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk</th>
<th>L2 cache</th>
<th>Comb model</th>
<th>Limited warranty availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1847-2F</td>
<td>Pentium M 740 1.73 512MB 14.1&quot; XGA</td>
<td>300 64MB 40GB 4200</td>
<td>Combo</td>
<td>11a/b/g</td>
<td>Modem 1394 No</td>
<td>EasyServ Mar 05</td>
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<tr>
<td>1847-2G</td>
<td>Pentium M 740 1.73 512MB 14.1&quot; XGA</td>
<td>300 64MB 40GB 4200</td>
<td>DVD RJW</td>
<td>11a/b/g</td>
<td>EasyServ Mar 05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1847-4B</td>
<td>Pentium M 740 1.73 1GB 15.0&quot; SXGA+</td>
<td>300 64MB 40GB 4200</td>
<td>DVD RJW</td>
<td>11a/b/g</td>
<td>EasyServ Mar 05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1847-2K</td>
<td>Pentium M 740 1.73 512MB 14.1&quot; XGA</td>
<td>300 64MB 40GB 4200</td>
<td>DVD RJW</td>
<td>11a/b/g</td>
<td>EasyServ Aug 05</td>
<td></td>
<td></td>
<td></td>
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<td>1847-2L</td>
<td>Pentium M 740 1.73 1GB 15.0&quot; SXGA+</td>
<td>300 64MB 40GB 4200</td>
<td>DVD RJW</td>
<td>11a/b/g</td>
<td>EasyServ Aug 05</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1847-4K</td>
<td>Pentium M 740 1.73 1GB 15.0&quot; SXGA+</td>
<td>300 64MB 40GB 4200</td>
<td>DVD RJW</td>
<td>11a/b/g</td>
<td>EasyServ Aug 05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1847-8U</td>
<td>Pentium M 750 1.86 512MB 14.1&quot; XGA</td>
<td>300 64MB 40GB 4200</td>
<td>DVD RJW</td>
<td>11a/b/g</td>
<td>EasyServ Aug 05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1847-AJ</td>
<td>Pentium M 750 1.86 1GB 15.0&quot; SXGA+</td>
<td>300 64MB 40GB 4200</td>
<td>DVD RJW</td>
<td>11a/b/g</td>
<td>EasyServ Aug 05</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- **These models have an EasyServ™ on-site pickup and delivery 3-year limited warranty.** They are only available to public or private K-12 (or higher) accredited schools and operated exclusively for educational purposes for use by qualified students and teachers.

### SOFTWARE

#### Windows XP Professional
- Microsoft Windows XP Professional™ (Service Pack 2)
- Disk-To-Disk Recovery (in hidden protected area)

#### Preloaded
- Education software from Vital Source Technologies™: vitalsource KEY™ and Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW models)
- Intel® Video Window (combo, DVD-RW models)
- Intel® Video Window Creator (combo, DVD-RW models)
- Client Security Software (for security chip)

#### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

#### License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- IBM Lotus Notes®®
- IBM Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

#### Universal 72 Watt AC adapter
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CMI and DMI 2.0-compliant
- XE 2.1-compliant

#### ENERGY STAR®-compliant
- International Warranty Service™
- 24 hour x 7 day toll-free warranty support during the warranty period
- 2-year 9x5NBD
- 2-year 9x5NBD
- 5-year LOR 9x5NBD
- 3-year LOR 9x5NBD
- 5-year LOR 9x5NBD
- 4-year P & L Depot
- 4-year P & L Depot

See footnotes for important warranty information  © 2007 Lenovo

US models announced March 1, August 2, or August 16, 2005

US models withdrawn effective November 2005, June 2006, or February 2007

(R4) February 2007

Lenovo
**ThinkPad® R52 (1848) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1848-83U</td>
<td>Pentium® M 750 1.86 512MB 14.1&quot;XGA</td>
<td>1848-93U</td>
<td>Pentium® M 750 1.86 512MB 15.0&quot;XGA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These models have a limited onsite service 24 3-year limited warranty*

<table>
<thead>
<tr>
<th>Diskette drive</th>
<th>None standard / use optional USB-based diskette drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combi Enh and Fingerprint reader</td>
<td>None standard / use optional USB-based diskette drive</td>
</tr>
<tr>
<td>UltraBay Enhanced</td>
<td>None standard / use optional USB-based diskette drive</td>
</tr>
<tr>
<td>Disk</td>
<td>None standard / use optional USB-based diskette drive</td>
</tr>
<tr>
<td>Display</td>
<td>Some: 14.1&quot; (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</td>
</tr>
<tr>
<td>Graphics</td>
<td>ATI MOBILITY™ * RADEON® X300 / PCI Express x16 / 64MB DDR1 memory</td>
</tr>
<tr>
<td>Keyboard</td>
<td>87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)</td>
</tr>
<tr>
<td>TrackPoint®</td>
<td>87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)</td>
</tr>
<tr>
<td>Touch pad</td>
<td>Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Touchpad</td>
<td>1:14.1&quot; models (WXDVH): 12.4&quot; x 10.2&quot; x 1.35-1.46; 314mm x 260mm x 34-37mm</td>
</tr>
<tr>
<td>Weight³</td>
<td>15.0&quot; models (WXDVH): 13.1&quot; x 10.6&quot; x 1.47-1.58; 332mm x 269mm x 37-40mm</td>
</tr>
<tr>
<td>Case material</td>
<td>Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced</td>
</tr>
<tr>
<td>Battery type</td>
<td>Up to 3.6 hr; Optional 9-cell: up to 5.6 hr</td>
</tr>
<tr>
<td>Architecture</td>
<td>Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub</td>
</tr>
<tr>
<td>PC Card Std slot</td>
<td>One Type I or Type II slot / CardBus 32-bit / integrated door</td>
</tr>
<tr>
<td>ExpressCard slot</td>
<td>One ExpressCard 34 or ExpressCard 54 / PCI Express x1 or USB 2.0 / integrated door</td>
</tr>
<tr>
<td>Ports</td>
<td>Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / hardware event log, parallel, infrared, [docking-based ports (serial, diskette)]</td>
</tr>
<tr>
<td>Video out</td>
<td>S-video out port (TV out) / one 4-pin industry standard connector</td>
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<tr>
<td>Wireless antenna</td>
<td>None</td>
</tr>
<tr>
<td>Mini PCI</td>
<td>None</td>
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<tr>
<td>Model 1G/2G</td>
<td>One Communications Daughter Card (CDC) / customer accessible</td>
</tr>
<tr>
<td>Bluetooth®</td>
<td>56K V.92 (V.92-designed®) modem in CDC / Conexant® chipset</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE controller / Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm; pin); headphone jack (3.5 mm; green)</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password / supervisor password / security key / Fingerprint reader / Embedded Security Subsystem 2.0® / in NS PC8394T chip / TCG-compliant</td>
</tr>
<tr>
<td>Security chip</td>
<td>Fingerprint reader on palm rest / swipe sensor / integrated with security chip</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Fingerprint reader on palm rest / swipe sensor / integrated with security chip</td>
</tr>
</tbody>
</table>

**Limited warranty**

- 3-year/1-year battery, limited onsite service 24, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

**SOFTWARE**

- Lenovo Windows XP Professional
- Microsoft Windows® XP Professional (Service Pack 2)  
  • Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo models)
- InterVideo WinDVD (combo models)
- Fingerprint Software (fingerprint models)
- Client Security Software (for security chip)

**License**

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

Lenovo ©

Lenovo (New York, New York) December 2006
### ThinkPad® R52 (1848) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed MHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Mini PCI Comm Bay wireless</th>
<th>CDC modem/ Bluetooth</th>
<th>Finger print reader</th>
<th>Limited warranty</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>1848-2FU</td>
<td>Pentium® M 740</td>
<td>1.73</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>4200</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
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<tr>
<td>1848-2GU</td>
<td>Pentium® M 740</td>
<td>1.73</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>4200</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
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<tr>
<td>1848-4BU</td>
<td>Pentium® M 740</td>
<td>1.73</td>
<td>1GB</td>
<td>15.0&quot; SXGA+/</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>4200</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
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<tr>
<td>1848-2KU</td>
<td>Pentium® M 740</td>
<td>1.73</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>4200</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
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<tr>
<td>1848-2LU</td>
<td>Pentium® M 740</td>
<td>1.73</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
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<td>64MB</td>
<td>40GB</td>
<td>4200</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
</tr>
<tr>
<td>1848-4KU</td>
<td>Pentium® M 740</td>
<td>1.73</td>
<td>1GB</td>
<td>15.0&quot; SXGA+/</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>4200</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
</tr>
<tr>
<td>1848-4MU</td>
<td>Pentium® M 750</td>
<td>1.86</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>5400</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
</tr>
<tr>
<td>1848-8MU</td>
<td>Pentium® M 750</td>
<td>1.86</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>5400</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
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<tr>
<td>1848-ALU</td>
<td>Pentium® M 750</td>
<td>1.86</td>
<td>1GB</td>
<td>15.0&quot; SXGA+</td>
<td>X300</td>
<td>64MB</td>
<td>40GB</td>
<td>5400</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
</tr>
</tbody>
</table>

**These models have a limited onsite service.** 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes by use qualified staff and students.

### SOFTWARE

#### Windows XP Professional

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

#### Preloaded

- Education software from VitalSource Technologies®: VitalSource KEY™ and Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo, DVD-RW)
- InterVideo WinDVD® (combo, DVD-RW models)
- InterVideo WinDVD Creator (DVD-RW models)
- Client Security Software (for security chip)

#### Downloadable

- IBM Direct Agent
- Software Delivery Assistant
- System Migration Assistant

#### License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Limited warranty

3-year limited warranty

### Videos

Screentop port (TV out) on one 4-pin industry standard connector

IEEE 1394 (FireWire) port (4-pin connector)

1394A-2000 standard

UltraConnect™ Antenna built into the display cover for optional wireless signal reception

One Mini PCI type III slot (Communications Bay) / customer upgradable

One Communications Daughter Card (CDC) socket / customer accessible

Gigabit ethernet on system board / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE Soft audio / ICH AC97 controller / DirectSound® support / AD1981 AC97 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

Power-on password / hard disk password / supervisor password / security keyhole (microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

### Security chip

Embedded Security Subsystem 2.0™ / in NS PCI8394T chip / TCG-compliant

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter

PXE 2.1-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR® compliant

International warranty service

24 hour x 7 day toll-free warranty support during the warranty

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® R52 (1849) - Express - withdrawn

### Type/Model Processor Speed GHz Memory Screen Graphics controller Disk controller Color Optical Mini PCI Comm Bay CD/DVD/ROM Comm/Controller Disk control Software
1849-2U  Pentium® M 750 1.86 512MB 14.1”XGA X300 64MB 60GB DVD±RW i± Intel 11a/11b/11g  Mod/Blue 1394 No Yes No Mar 05
1849-3VU M 740 1.73 512MB 15.0” XGA X300 64MB 40GB Combo i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-4VU M 750 1.86 512MB 15.0” SXGA+ X300 64MB 60GB Combo i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-4WU M 750 1.86 512MB 15.0” SXGA+ X300 64MB 80HS DVD±RW i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-5SU M 740 1.73 512MB 14.1” XGA X300 64MB 40GB Combo i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-5UU M 740 1.73 256MB 14.1” XGA X300 64MB 40GB Combo i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-5ZU M 740 1.73 256MB 14.1” XGA X300 64MB 40GB Combo i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-6VU M 750 1.86 512MB 15.0” SXGA+ X300 64MB 80GB Combo i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-73U M 740 1.73 256MB 14.1” XGA X300 64MB 40GB Combo i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05
1849-8QU M 760 2.00 512MB 15.0” SXGA+ X300 64MB 80GB DVD±RW i± Intel 11a/11b/11g Modern 1394 No Yes No Mar 05

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>These small and medium business (SMB) models are part of the US Think Express Program.</em></td>
<td></td>
</tr>
<tr>
<td><em>These 1989 models have a 1 year limited warranty.</em></td>
<td></td>
</tr>
<tr>
<td>Processor</td>
<td>Intel Pentium® M Processor 740 (1.73GHz), 750 (1.86GHz), or 760 (2.00GHz)</td>
</tr>
<tr>
<td>L2 cache</td>
<td>256 or 512MB std / 2GB max / P2C-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two / two-pin 50-DIMM sockets / std mem in 1 socket / 1 socket available</td>
</tr>
<tr>
<td>Memory</td>
<td>250 or 512MB std / 2GB max / P2C-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two / two-pin 50-DIMM sockets / std mem in 1 socket / 1 socket available</td>
</tr>
<tr>
<td>Diskette drive</td>
<td>None standard / use optional USB-based diskette drive</td>
</tr>
<tr>
<td>DVD/CD drive</td>
<td>None standard / use optional USB-based diskette drive</td>
</tr>
<tr>
<td>Ultrabay Enhanced</td>
<td>None standard / use optional USB-based diskette drive</td>
</tr>
<tr>
<td>Disk drive</td>
<td>14.1” models (WxDxH): 12.4” x 10.2” x 1.35-1.46”; 314mm x 260mm x 34-37mm</td>
</tr>
<tr>
<td>Dimensions</td>
<td>14.1” (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</td>
</tr>
<tr>
<td>Weight</td>
<td>1.75kg / 3.87lbs / 82001FBM / net weight / 1024g / 3.6oz</td>
</tr>
<tr>
<td>Case material</td>
<td>Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced</td>
</tr>
<tr>
<td>Battery - life</td>
<td>Up to 3.6 hr; Optional 9-cell: up to 5.6 hr</td>
</tr>
<tr>
<td>Architecture</td>
<td>Mobile Intel 915PM Express Chipset / 82915P Memory Controller Hub / UltraWarp™ multi-pointing system / touch panel / keyboard</td>
</tr>
<tr>
<td>System Migration Assistant</td>
<td>IBM Director Agent / System Migration Assistant / ThinkPad Port Replicator II 73P3599</td>
</tr>
<tr>
<td>Video out</td>
<td>Supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’, Hard Disk Drive Shock Absorber / Active Protection System (shock protection)</td>
</tr>
<tr>
<td>Video out port</td>
<td>S-video out port (TV out) / one 4-pin industry standard connector</td>
</tr>
<tr>
<td>IEEE 1394</td>
<td>Some: 1394 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard</td>
</tr>
<tr>
<td>Security key hole</td>
<td>Power-on password / hard disk password / supervisor password / security keyhole</td>
</tr>
</tbody>
</table>

See footnotes for important warranty information

*Powered by Intel Centrino™ mobile technology

© Lenovo (R3) July 2005
ThinkPad® R52 (1849) - Express (August 2005) - withdrawn

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

US models announced August 2, 2005
US models withdrawn effective June 2006

SOFTWARE

14 Windows XP Professional
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Desk Recovery
  (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo, combo:DRW)
- IntelVideo WinDVD (combo, combo:DRW mode)
- IntelVideo WinDVD Creator (combo:DRW models)
- Fingerprint Software
  (fingerprint models)
- Client Security Software (for security chip)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (not included)
- Lotus® SmartSuite® Millennium
- Lotus Notes® Stand-alone Client

ThinkPad notebooks implement
ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
PC 2001-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant

ENERGY STAR®-compliant
International Warranty Service
24 hour x 7 day 7 toll-free warranty
support during the warranty12

ThinkPlus™ 1-year 9x5 NBD
41C9166
ThinkPlus 2-year 9x5 NBD
41C9167
ThinkPlus 3-year 9x5 NBD
41C9168
ThinkPlus 4-year 9x5 NBD
41C9171
ThinkPlus 2-year P&L P/U Depot
41C9169
ThinkPlus 3-year P&L P/U Depot
41C9170
ThinkPlus 4-year P&L P/U Depot
41C9172
ThinkPlus 5-year P&L P/U Depot
41C9174

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Cache</th>
<th>Memory</th>
<th>Graphics</th>
<th>Mini PCI</th>
<th>CDC modems</th>
<th>Workhorse or Global Avail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1858-22U</td>
<td>Celeron M 360</td>
<td>1.4</td>
<td>256MB</td>
<td>512MB</td>
<td>GMA 900 40GB</td>
<td>Open; upg</td>
<td>No</td>
<td>GML Home Mar 03</td>
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<td>1858-4UU</td>
<td>Celeron M 360</td>
<td>1.4</td>
<td>512MB</td>
<td>512MB</td>
<td>GMA 900 40HS</td>
<td>Open; upg Mod/Blue</td>
<td>No</td>
<td>GML Home Mar 03</td>
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<tr>
<td>1858-3BU</td>
<td>Pentium M 740</td>
<td>1.73</td>
<td>512MB</td>
<td>512MB</td>
<td>Combo * Intel 11b/g/j Mod/Blue</td>
<td>1394 Yes</td>
<td>GM Pro Mar 05</td>
<td></td>
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<tr>
<td>1858-4MU</td>
<td>Pentium M 740</td>
<td>2.00</td>
<td>512MB</td>
<td>512MB</td>
<td>Intel 11a/b/g/j Mod/Blue</td>
<td>1394 Yes</td>
<td>GM Pro Mar 05</td>
<td></td>
</tr>
</tbody>
</table>

**Positioning**

- **Mainstream performance and features:**
  - Two-spindle system
  - Intel® Celeron Processor M 360 (1.4GHz) with 400MHz system bus or Intel® Pentium Processor M 740 (1.73GHz) or 760 (2.00GHz) with enhanced Intel SpeedStep Technology, and an 800MHz system bus
  - Celeron M: 1 MB; Pentium M: 2 MB; All: on die (at processor speed) / ECC

- **L2 cache**
  - 256 or 512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin 5-DIMM sockets / std in 1 socket / 1 socket available

- **Diskette drive**
  - No standard / use optional USB-based diskette drive
  - CD: S-CD-ROM / 4X-10X speed / removable from Ultrabay Enhanced
  - DVD±RW Drive and CD / Burner Multi-Plus / removable from Ultrabay Enhanced
  - Ultrabay EnhancedOne modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm thick
  - 40GB* (4200 rpm), 40GB (HS 5400 rpm), or 80GB (4200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk
  - Hard Disk Drive Shock Absorber / Active Protection System (shock protection)

- **Display**
  - Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
  - Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits
  - Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits

- **Graphics**
  - Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM
  - GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz

- **Keyboard**
  - 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard size)
  - TrackPoint® pointing device, *Press-to-Select,* Internet Scroll Bar®, magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
  - Illustrates the keyboard to improve visibility or position

- **Dimensions**
  - 14.1" models (WxHxD): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm
  - 15.0" models (WxHxD): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm
  - With optical drive and battery: 14.1" models: 6.1 lb (2.8kg); 15.0" models: 6.6 lb (3.0kg)

- **Weight**
  - Color: black; All: ACRYLITONEButadiene-Styrene (ABS) plastic
  - Lithium Ion 6cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
  - Battery life: up to 2.2 hr; Pentium models: up to 3.8 hr; Optional 9-cell: up to 5.8 hr

- **Architecture**
  - Some: Mobile Intel 915GM Express Chipset / 82896GCMS GMCH Mem Cont Hub
  - Some: Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub
  - All: 82801BFM ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth] / PCI bus (TI PCI1510 Cardbus controller, Mini PCI, external expansion)
  - LPC bus (National Semiconductor PC83947 Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, [docking-based ports (serial, diskette)]

- **PC Card Std/Slot ExpressCard slot**
  - One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
  - Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / One Type I or Type II slot / CardBus 32-bit / integrated door

- **Video out**
  - Some: 11b/g wireless, Mini PCI, Intel 11b/g wireless, Centrino wireless, Intel Wi-Fi Link 2230, Intel Pro/Wireless 2230BG, Intel Pro/Wireless 2235BG
  - One Communications Daughter Card (CDC) socket / customer accessible
  - Modem V.92 (5385KBPS) / modem in 915GM

- **Ethernet**
  - Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCI x1 / PXE soft audio / ICH AC97 controller / DirectSound® support / AD1981 AC97 codec / stereo speakers / 1 watt / volume up down, mute buttons / internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

- **Security**
  - Power-on password / hard disk password / supervisor password / security keyhole
  - Embedded Security Subsystem 2.0 / in NS PC83947 chip / TCG-compliant

- **Fingerprint reader**
  - None

**Limited warranty**

- **1 Year:** EasyServ®, on-site pickup and delivery / service upgrades® available

**SOFTWARE**

- **Windows XP Home models**
  - Microsoft Windows® XP Home Edition® (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

- **Windows XP Professional models**
  - Microsoft Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

- **Preloaded (all)**
  - Rescue and Recovery™
  - Access IBM
  - Access Connections
  - Norton AntiVirus
  - Access USB
  - ThinkPad Utilities
  - Adobe Reader
  - Update Connector®
  - RecordNOW and Drive
  - Letter Access provided by Sonic products (combo, DVD±RW)
  - InterVideo WinDVD (combo, DVD±RW models)
  - InterVideo WinDVD Creator (DVD±RW models)
  - Simple Backup (DVD±RW)
  - Client Security Software (for security copy chip)

- **License (CD not included)**
  - ThinkPad notebooks implement ThinkVantage® technologies and design; visit ibm.com/thinkvantage

- **Universal 72 watt AC adapter**
  - P.C. 2001-compliant
  - ACPI 1.0b and 2.0-compliant
  - CMI and DMI 2.0-compliant
  - PXE 2.1-compliant
  - ENERGY STAR®-compliant

- **International Warranty Service**
  - 24 hour 7 day 7x24 toll-free warranty support during the warranty®

- **IBM Director Agent**
  - Software Delivery Assistant
  - System Migration Assistant

- **ServicePack®**
  - 1yr IOR 9x5 NBD
  - 2yr IOR 9x5 NBD
  - 3yr IOR 9x5 NBD
  - 4yr IOR 9x5 NBD
  - 5yr IOR 9x5 NBD
  - 5yr IOR 9x5 NBD
  - Service Pack 3 y r I O R 9 x 5 N B D
  - Service Pack 2 y r P & L / PDU Depots
  - Service Pack 1 y r P & L / PDU Depots
  - Service Pack 1 y r P & L / PDU Depots
  - Service Pack 1 y r P & L / PDU Depots
  - Service Pack 1 y r P & L / PDU Depots
  - Service Pack 1 y r P & L / PDU Depots

See footnotes for important warranty information

*Powered by Intel Centrino™ mobile technology

Lenovo US models announced March 1, 2005

US models withdrawn effective September 2005

© Lenovo

(RY2) july 2005
### ThinkPad R52 (1858) - withdrawn

#### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Main Memory</th>
<th>Graphics</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>Comm Bay</th>
<th>CDC Modem</th>
<th>Modem</th>
<th>Finger Chip</th>
<th>Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1858-9EU</td>
<td>Celeron M 370</td>
<td>256MB</td>
<td>GMA40GB</td>
<td>Open</td>
<td>Modem</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Finger GM</td>
<td>1 year</td>
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<tr>
<td>1858-9FU</td>
<td>Pentium M 740</td>
<td>256MB</td>
<td>GMA40GB</td>
<td>Open</td>
<td>Modem</td>
<td>No</td>
<td>No</td>
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<td>No</td>
<td>Finger GM</td>
<td>1 year</td>
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<tr>
<td>1858-9GR</td>
<td>Pentium M 750</td>
<td>186MB</td>
<td>GMA40GB</td>
<td>Open</td>
<td>Modem</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Finger GM</td>
<td>1 year</td>
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<td>1858-9HU</td>
<td>Pentium M 750</td>
<td>186MB</td>
<td>GMA40GB</td>
<td>Open</td>
<td>Modem</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Finger GM</td>
<td>1 year</td>
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<tr>
<td>1858-9LU</td>
<td>Pentium M 750</td>
<td>186MB</td>
<td>GMA40GB</td>
<td>Open</td>
<td>Modem</td>
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<td>No</td>
<td>Finger GM</td>
<td>1 year</td>
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<tr>
<td>1858-AU9</td>
<td>Pentium M 770</td>
<td>213MB</td>
<td>GMA40GB</td>
<td>Open</td>
<td>Modem</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>Finger GM</td>
<td>1 year</td>
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<tr>
<td>1858-AKU</td>
<td>Pentium M 780</td>
<td>226MB</td>
<td>GMA40GB</td>
<td>Open</td>
<td>Modem</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Finger GM</td>
<td>1 year</td>
</tr>
</tbody>
</table>

#### Software

- **Windows XP Professional**
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-To-Disk Recovery (in hidden protected area)

#### Preloaded

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- RecordNOW and Drive

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Lenovo (CD not included)

#### License

- Lenovo SmartCenter Millennium and Lenovo Notes™ - Stand-alone Client

### Video

- S-video out port (TV out) / one 4-pin industry standard connector
- IEEE 1394
- Gigabit Ethernet on board / Broadcom BCM5751 MAC/PHY / PCIe x1 / PXE
- Power-on password / hard disk password / security keyhole
- Embedded Security Subsystem 2.0
- Finger print reader on palm rest / swivel sensor / integrated with security chip

### Limited warranty

- 1 year
- EasyServ™, onsite pickup and delivery / service upgrades for sale

### Supplier

- Lenovo

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*See footnotes for important warranty information

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## ThinkPad R52 (1859) - Express - withdrawn

### Positioning
- Mainstream performance and features; two-spinle design
- Intel® Celeron® M Processor 350 (1.33GHz) with 400MHz system bus or Intel Pentium® M Processor 740 (1.73GHz) with enhanced Intel SpeedStep™ technology
- Execute Disable Bit, and 533MHz system bus
- L2 cache
  - Celeron® M 1 MB, Pentium® M 2 MB
- All on die (at processor speed) / ECC
- 256 or 512MB standard / 2GB max / PC2-4200 Non-ECC / non-parity / CL4 / dual channel capable / two-200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

### Audio support
- Soft audio / ICH AC97 controller / DirectSound
- Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE
  - None

### Ethernet
- Power-on password / hard disk password / supervisor password / security keyhole
- Embedded Security Subsystem 2.0
- 3rd party SecureBoot
- 3rd party PC-Doctor

### Fingerprint reader
- Power-on password / hard disk password / supervisor password / security keyhole
- Embedded Security Subsystem 2.0
- 3rd party SecureBoot
- 3rd party PC-Doctor

### Hard Disk Drive
- 40GBB (4200 rpm) or 60GB (4200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional Second HDD Adapter for Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System

### System Migration Assistant
- Lenovo PC-Doctor
- Norton AntiVirus
- Microsoft Windows XP Professional
- ThinkVantage technologies
- ThinkVantage Rescue and Recovery™
- Stand-alone Client

### Software
- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery
  - in hidden protected area

## Preloaded
- Rescue and Recovery™
- Access IBM
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™
- RecordNOW and Drive Letter Access powered by Sonic solutions
- Intervideo WinDVD (combo models)
- Client Security Software (for security keyhole)

## Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

### License (CD not included)
- Lotus® SmartSuite® Millennium
- Lotus Notes® Stand-alone Client

#### Universal 72 watt AC adapter
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant

#### ENERGY STAR®-compliant
- International Warranty Service
  - 24 hour x 7 day x 365 day toll-free warranty support during the warranty

### ServicePac
- 1 yr 9x5 NBD
- 24/7/365
- US models announced March 1, 2005
- US models withdrawn effective September 2005

### 1 year - EasyServ™ onsite pickup and delivery / service upgrades available

### 1 year - EasyServ™ onsite pickup and delivery / service upgrades available

### See footnotes for important warranty information

### Lenovo

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<table>
<thead>
<tr>
<th>Type/model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk GB</th>
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<th>Mini PCI Comm Bay</th>
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<td>915GM No</td>
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<td>13949 Yes</td>
<td>915GM No</td>
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</table>

- These small and medium business (SMB) models are part of the US Think Express Program
- These 1859 models have a 1 year limited warranty

---

### Diskette drive
- None standard / use optional USB-based diskette drive
- UltraBay Enhanced
- One modular bay for interchangeable devices / UltraBay Slim compatible / 12.7mm high

### Disk
- 40GB (4200 rpm) or 60GB (4200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional Second HDD Adapter for Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System

### Display
- Some: 14.1” (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

### Dimensions
- 14.1” models (WX/DXH): 12.4” x 10.2” x 1.56-1.67”; 314mm x 260mm x 39-42mm
- 15.0” models (WX/DXH): 13.1” x 10.6” x 1.67-1.74”; 332mm x 269mm x 40-44mm

### Weight
- 14.1” models (WX/DXH): 1.81-1.98 lbs / 0.82-0.89kg
- 15.0” models (WX/DXH): 2.38-2.52 lbs / 1.08-1.14kg

### Case material
- Color: black; All acrylic/or-butilene-Styrene (ABS) plastic

### Battery - type
- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
- Celeron models: 512MB; Pentium: 6-cell: up to 5.8 hr; 512MB: up to 6.6 hr; 1550M: up to 7.5 hr

### Architecture
- Mobile Intel 915GM Express Chipset / 82801GM Graphics Mem Cont Hub
- Some: Mobile Intel 955GM Express Chipset / 82951GM Graphics Mem Cont Hub
- All: 82801ICH6-M / I/O Controller Hub (SAT150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count LPC interface, / Bluetooth) / PCI bus (16xPCI1151 CardBus controller, Mini PCI, external expansion)
- LPC bus (National Semiconductor PC8394T Super I/O for security chip (TPM)
- Asset ID, hardware event log, parallel, infrared, (docking-based ports, serial, diskette)

### PC Card Std slot
- One Type I or Type II slot / CardBus 32-bit / integrated port
- One ExpressCard 54 / CardBus 32-bit / dual wide slot / 1394a

### CardBus slot
- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps)
- RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

### Video out
- 5-video out port (TV out) / one 4-pin industry standard connector
- IBM 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard

### Wireless antenna
- UltraConnect™ or optional wireless signal reception
- One Mini PCI type III slot (Communications Bay) / customer upgradable
- Some: 11b/g wireless®, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip
- Some: 11a/b/g wireless®, Mini PCI, Intel PRO/Wireless 2915ABG, 82353 chip
- One Communications Daughter Card (CDC) socket / customer accessible

### Modem
- 56K / V.90 (2.933Mbps)
- Modem
- Bluetooth
- Fiber optic
- Ethernet
- Audio support
- Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE support
- Soft audio / ICH AC97 controller / DirectSound® support / AD1918B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

### Security
- Power-on password / hard disk password / supervisor password / security keyhole
- Embedded Security Subsystem 2.0
- In NS PC8394T chip
- PC-Doctor

### FingerPrint reader
- None

### Network services
- 3D Acceleration
- No OpenGL
- External memory
- 256MB
- 1GB
- 2GB
- 4GB
- 8GB
- Hard disk
- 5400 rpm
- 40GB
- 60GB
- 80GB
- Memory
- 512MB
- 1GB
- 2GB
- USB 2.0 Portable Multi-Boot Drive
- USB 2.0 Portable Hard Disk
- Multi-Boot Plus UltraBay Enhanced Drive
- EnH Perf Wireless Keyboard and Mouse
- Preferred USB-Fingerprint Reader
- Kensington® MicroSaver Security Cable
- Other options at lenovo.com/options

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*Powered by Intel Centrino™ mobile technology

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(R3Y) July 2005
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk drive</th>
<th>Mini PCI</th>
<th>CDC</th>
<th>IEEE</th>
<th>Security</th>
<th>Workhorse Chipset</th>
<th>Availability</th>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These 1859 models have a 1-year limited warranty.

### Positioning
Mainstream performance and features; two-spindle system

### Processor
- **Intel® Celeron M Processor 360 (1.4GHz) or 370 (1.5GHz)** with 400MHz system bus
- **Celeron M Processor 370: Execute Disable Bit**

### L2 cache
1 MB / on die (at processor speed) / ECC

### Memory
- **256MB std / 2GB max** / **PC2-4200 333MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available**

### Diskette drive
- **None standard**, with optional USB-based diskette drive
- **DVD-ROM/CD-RW / 24X/24X/24X/8X2 (4X) speed / removable from Ultrabay Enhanced**
- **Ultrabay Enhanced**
- **One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm high**
- **40GB (5400 rpm) / 9.5mm high / removable and upgradeable / 9.5mm high bay / supports 2nd disk with optional 5th HDD Adapter for Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System™**

### Display
- **15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits**
- **Graphics: Intel Graphics Media Accelerator 900 (GMA 900)** / integrated graphics in 915GM
- **GMCH uses main memory (up to 128MB with 256MB+) / 200MHz**

### Keyboard
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard size keys)

### Trackpoint®
- **TrackPoint® pointing device** / "Press-to-Select" / "Scroll Click Bar™" magnifying glass

### Touchpad
- **UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones**

### ThinkLight™
- **Illuminates the keyboard to improve visibility in low-light conditions**

### Dimensions
- **15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"** / 332mm x 269mm x 37-40mm
- **With optical drive and battery: 15.0" models: 6.6 lb (3.0kg)**

### Weight
- **Color: black / All: Acrylonitrile-Butadiene-Styrene (ABS) plastic**

### Battery - type
- **Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced**

### Battery - life
- **Optical drive up to 2.2 hr / Optional 9-cell up to 4.2 hr**

### Architecture
- **Mobile Intel 915GM Express Chipset / 82910G Graphics Memory Cont Hub** / **8801BF BCM IC6-M I/O Controller Hub** / **SATA150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count (LPC) interface, [Bluetooth] / PCI bus (T1 PCI1510 CardBus controller, Mini PCI, external expansion) / LPC bus (National Semiconductor chip for security chip (TPM), Asset ID, hardware event log, parallel, infrared, [docking-based ports (serial, diskette)]**

### Video output
- **S-video out port (TV out) / one 4-pin industry standard connector**
- **One Mini PCI type I or II slot** / **Communications Bay** / **customer upgradable**

### Wireless antenna
- **Intel 11b/g / UltraConnect™ Antenna built into the display cover for optimal wireless signal reception**
- **One Mini PCI slot (Communications Bay) / custom upgradable**

### Mini PCI
- **Intel 11b/g**
- **Intel PRO/Wireless 2200BG** / **Intel 82532 chip**

### CDC
- **One Communications Daughter Card (CDC) socket / computer accessible**
- **56K V.90 V.92-94-enabled**

### Modem
- **Modem**
- **Blitzmodem™**

### Audio support
- **Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)**
- **Stereo speakers, 1 watt / volume up, down, mute buttons**

### Security
- **Power-on password / hard disk password / supervisor password / security keyhole**
- **Embedded Security Subsystem 2.0™ / in NS PC8394T chip / TCG-compliant**

### Fingerprints reader
- **None**

### Limited warranty
- **1-year - EasyServ™ 1-year onsite pickup and delivery / service upgrades available**

### Software
- **Windows XP Professional**
- **- Microsoft Windows® XP Professional™ (Service Pack 2)**
- **- Disk-to-Disk Recovery (in hidden protected area)**

### Preloaded
- **- Rescue and Recovery™**
- **- Access Program**
- **- Access Connections™**
- **- Norton AntiVirus**
- **- PC-Doctor™**
- **- ThinkPad Utilities**
- **- Adobe® Reader™**
- **- RecordNOW and Drive**

### Downloadable
- **- IBM Director Agent**
- **- Software Delivery Assistant**
- **- System Migration Assistant**

### License
- **CD (not included)**
- **- Lenovo® SmartOS™ Millennium and Lenovo® Notes™ Stand-alone Client**

### ThinkPad notebooks implement ThinkVantage technologies and design:
- **visit thinkpad.com/thinkvantage**

### Universal 72-watt AC adapter
- **PC 2001-compliant**
- **ACPI 1.0b and 2.0-compliant**
- **DIM and DMI 2.0-compliant**
- **PX 2.1-compliant**

### ENERGY STAR®-compliant
- **International Warranty Service**
- **24 hour 7 days a week toll-free warranty support during the warranty**

*See footnotes for important warranty information*

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(RY7) February 2007

US models announced July 6, 2005

US models withdrawn effective February 2007
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<th>Disk controller</th>
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<th>Mini PCI Card</th>
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<th>IEEE 1394 port</th>
<th>Finger print reader</th>
<th>Limited Workforce warranty or Global Avail date</th>
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<td>Modem</td>
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<td>1-year</td>
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</table>

**SOFTWARE**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional Service Pack 2
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive

**License**

- Letter Access powered by Sonic products (combo models)
- Internet DVD (combo models)
- FingerPrint Software
- FingerPrint models
- Client Security Software (for security chip)

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**ThinkPlus**

visit thinkplus.lenovo.com

**ThinkVantage® technologies and design**

visit thinkpad.com/thinkvantage

**Universal 72 watt ac adapter**

PC 2001-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant

**ENERGY STAR® compliant**

International Warranty Service
24 hour x 7 day toll-free warranty support during the warranty.

**ThinkPlus®**

1-year LOR 9x5 NBD
41C9168

ThinkPlus 2-year LOR 9x5 NBD
41C9167

ThinkPlus 3-year LOR 9x5 NBD
41C9168

ThinkPlus 4-year LOR 9x5 NBD
41C9171

ThinkPlus 5-year LOR 9x5 NBD
41C9173

ThinkPlus 2-year P&amp;L U Depo
41C9169

ThinkPlus 3-year P&amp;L U Depo
41C9170

ThinkPlus 4-year P&amp;L U Depo
41C9174

Post-warranty maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology
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US models withdrawn effective February 2007
## ThinkPad® R52 (1860) - withdrawn

### Type-model
- **1860-2BU** Pentium® M 740 1.73 256MB 14.1" XGA
- **1860-2MU** Pentium M 750 1.86 256MB 14.1" XGA
- **1860-2NU** Pentium M 750 1.86 512MB 14.1" XGA
- **1860-4QU** Pentium M 740 1.73 512MB 15.0" SXGA+
- **1860-5BU** Pentium M 750 1.86 512MB 15.0" XGA
- **1860-5CU** Pentium M 750 1.86 512MB 15.0" XGA

### Processor
- Mainstream performance and features: two-spindle system
  - Intel® Pentium M Processor 740 (1.73GHz) or 750 (1.86GHz) with E enhanced Intel SpeedStep™ technology; Execute Disable Bit, and 533MHz system bus
  - 2MB / 512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / 200-pin SO-DIMM sockets

### Dimensions
- 14.1" models: 14.1" XGA
- 15.0" models: 15.0" XGA

### Graphics
- Integrated graphics Media Accelerator 9000 (GMA 900) / integrated graphics in 915GM

### Keyboards
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard-size keys)

### Touchpad
- TrackPoint® pointing device, "Press-to-Select", Internet Scroll Bar®, magnifying glass

### ThinkLight™
- ENTER, S-SCREEN, F2, F12, DEL, HOME, END

### Diskette drive
- CD-ROM / 24X-10X9 speed / removable from Ultrabay Enhanced

### Display
- 14.1" models: (WxDxH): 314mm x 260mm x 34-37mm
  - 15.0" models: 381.0mm x 358.1mm x 34-37mm

### Processor
- Intel® Pentium M Processor 740 (1.73GHz)
- Intel® Pentium M Processor 750 (1.86GHz)

### Memory
- 512MB std / 2GB max / PC2-4200 533MHz DDR2

### Battery - type
- 12-cell

### Software
- Windows XP Professional
- Microsoft Windows XP Professional (Service Pack 2)

### Preloaded
- Rescue and Recovery™
- Access Program
- System Migration Assistant

### License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Additional software
- IBM Director Agent
- IBM Director Notebook Elements
- IBM Director Active Connections Program
- IBM Director Access Connections Program
- IBM Director Embedded Security Subsystem 2.0
- IBM Director Rescue and Recovery™
- IBM Director Disk-to-Disk Recovery
- IBM Director Preloaded
- IBM Director Update Connector
- IBM Director Intel Active Protection System
- IBM Director Software Update Connector
- IBM Director IBM Mobile Computing Security Subsystem

## Specifications

| Type-model | Processor   | Memory | Screen   | Graphics | Diskette | Optical | Mini PCI | Comm Bay | CDC modem | Bluetooth | IEEE 1394 | Security | Workhorse | Limited or Global (G) | Availability |
|------------|-------------|--------|----------|----------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|------------|----------------------|--------------|
| 1860-2BU   | Pentium® M | 256MB  | 14.1" XGA| GMA 900  | 40GB Comb| Intel 11b/11g| Modem   | No       | 3-year    | W         | G         | Mar 05    | No        | ThinkPlus 4-year LOR | 9x5 NBD      |
| 1860-2MU   | Pentium M   | 256MB  | 14.1" XGA| GMA 900  | 40GB Comb| Intel 11b/11g| Modem   | No       | 3-year    | W         | G         | Mar 05    | No        | ThinkPlus 4-year LOR | 9x5 NBD      |
| 1860-2NU   | Pentium M   | 512MB  | 14.1" XGA| GMA 900  | 40GB Comb| Intel 11b/11g| Modem   | No       | 3-year    | W         | G         | Mar 05    | No        | ThinkPlus 4-year LOR | 9x5 NBD      |
| 1860-4QU   | Pentium M   | 512MB  | 15.0" SXGA+| GMA 900  | 40GB Comb| Intel 11b/11g| Modem   | No       | 3-year    | W         | G         | Mar 05    | No        | ThinkPlus 4-year LOR | 9x5 NBD      |
| 1860-5BU   | Pentium M   | 512MB  | 15.0" XGA| GMA 900  | 40GB Comb| Intel 11b/11g| Modem   | No       | 3-year    | W         | G         | Mar 05    | No        | ThinkPlus 4-year LOR | 9x5 NBD      |
| 1860-5CU   | Pentium M   | 512MB  | 15.0" XGA| GMA 900  | 40GB Comb| Intel 11b/11g| Modem   | No       | 3-year    | W         | G         | Mar 05    | No        | ThinkPlus 4-year LOR | 9x5 NBD      |

### Additional notes
- For more information, visit lenovo.com/thinkplus/warranty
- Lenovo supports the ThinkPlus® 3-year warranty model.
ThinkPad R52 (1860) - August 2005 - withdrawn

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<td>Wireless antenna</td>
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<td>Pentium M 750 1.86 GHz</td>
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<td>Finger 3-year</td>
<td>Wireless antenna</td>
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</tbody>
</table>

Software \(^{14}\):

- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

Preloaded:
- Rescue and Recovery\(^{14}\)
- Access Program
- Embedded Security Subsystem 2.0
- Norton AntiVirus
- PC-Doctor
- ThinkPad Utilities
- Adobe Reader
- RecordNow and Drive

License (CD not included):
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

Available accessories at lenovo.com/accessories

See footnotes for important warranty information

\(^{1}\) Powered by Intel Centrino mobile technology

\(^{2}\) Lenovo

\(^{3}\) US models announced August 2, 2005 or January 17, 2006

\(^{4}\) US models withdrawn effective August 2006, November 2006, or February 2007
### ThinkPad R52 (1860) - Education - withdrawn

#### Created by Lenovo Training Solutions
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*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty. These models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

#### SOFTWARE

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

#### Preloaded

- Education software from Vital Source Technologies®, vitalsource KEY™ and Personal Portable Library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- IBM Reader
- Intel Update Connector
- RecordNOW and Drive Letter Access powered by Sonic products (combo models)
- interVideo WinDVD (combo models)
- Client Security Software (for security chip)

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

#### License

- (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### Post-warranty annual maintenance agreements at

- lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US models announced March 1, June 28, or July 6, 2005

US models withdrawn effective January 2006 or February 2007

- Powered by Intel Centrino® mobile technology

- Lenovo
## ThinkPad R52 (1860) - Education (August 2005) - withdrawn

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*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Processor

- Intel® Celeron M Processor 360 with 400MHz system bus
- Intel Pentium M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz system bus

**L2 cache Memory**

- Celeron M: 1MB; Pentium M: 2MB; All: on-die (at processor speed) / ECC
- 256 or 512MB std / 2GB max / PC-2420 532DHR
- Non-parity / CL4 / dual channel capable, two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

**Diskette drive**

- None standard / use optional USB-based diskette drive
- Some: CD-ROM / 24X-10X speed / removable from Ultrabay Enhanced

**Ultrabay Enhanced**

- Some: DVD-ROM/CD-RW / 24X/24X/24X/24X speed / removable from Ultrabay Enhanced

**Disk**

- 40GBB (4200 or 5400 rpm) / 9.5mm high bay / removable / addable / 9.5mm high bay / supports 2nd disk with optional "Second HDD Adapter for Ultrabay Slim" / Hard Drive Shock Absorber / Active Protection System

**Display**

- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

**Graphics**

- Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM / 82915GM Graphics Mem Cont Hub
- Mobile Intel 910GML Express Chipset / 82915GM Graphics Mem Cont Hub
- Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub

**Keyboard**

- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard keys)
- Some: Power-on password / hard disk password / supervisor password / security keyhole
- Finger print reader / Embedded Security Subsystem / Fingerprint reader
- Some: "Press-to-Select", Internet Scroll Bar13, magnifying glass

**Touchpad**

- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
- Some: Laser light 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
- Battery - type

**Weight**

- 14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm

**Case material**

- Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Battery**

- Some: 6-cell / removable / upgradable / 9.5mm high bay / 9.5mm high bay / 40GB 8.8mm high bay

**Architecture**

- Some: Mobile Intel 910GML Express Chipset / 82910GML Express Chipset / 82915GM Graphics Mem Cont Hub
- Some: Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub
- All: 82801FBM ICH6-M / I/O Controller Hub (SAT105, 100-A EIDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count (LPC) interface, (Bluetooth) / PCI bus (11G) / 10/100 Ethernet / PXE ROM / S.M.A.R.T. / ACPI 2.0 / 2MB L2 cache / PCI 2001-compliant

**Video out**

- S-video out port (TV out) / one 4-pin industry standard connector
- Some: microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

**Software**

- Windows XP Professional
- Preloaded
- Software Delivery Assistant
- System Migration Assistant

**License (CD not included)**

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**ThinkPad notebooks implement**

**ThinkVantage** technologies and design;

- visit thinkpad.com/thinkvantage

- IBM Port Replicator II
- ThinkPad Mini Dock
- ThinkPad Convertible Monitor Stand
- UltraConnect
- 4-pin industry standard connector
- RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- One ExpressCard/54 or ExpressCard x1 or USB 2.0 / integrated door
- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ45 (modem / joystick / ethernet) / no keyboard or mouse or serial ports (use USB)

**Other accessories**

- ThinkPad Port Replicator II
- ThinkPad Mini Dock
- ThinkPad Convertible Monitor Stand
- UltraConnect
- 4-pin industry standard connector
- RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

**Universal 72 watt AC adapter**

- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant

**International Warranty Service**

- 24 hour x 7 days/7 days toll-free warranty support during the warranty

- Some: 2-year LOR 9x5 NBD
- Some: 3-year LOR 9x5 NBD
- Some: 4-year LOR 9x5 NBD
- Some: 3-year LOR 9x5 NBD
- Some: 4-year LOR 9x5 NBD
- Some: 5-year LOR 9x5 NBD
- Some: 5-year LOR 9x5 NBD
- Some: Post-warranty annual maintenance agreements

**See footnotes for important warranty information**

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## ThinkPad R52 (1861) - Education - withdrawn

**Type-model** | **Processor** | **Speed GHz** | **Memory** | **Graphics Controller** | **Disk rpm** | **Optical** | **Mini PCI** | **Comm Bay** | **CD Drive** | **Operating System** | **Limited warranty**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1861-25U | Celeron M 350 | 1.3 | 256MB | 14.1\(^{\text{i}}\) XGA | GMA | 40GB | 4200 | CD | Intel 11b/g\(^{2}\) | 92P1101 | Windows XP Professional | 3-year limited warranty
1861-26U | Celeron M 350 | 1.3 | 512MB | 14.1\(^{\text{i}}\) XGA | GMA | 40GB | 4200 | Combo | Intel 11b/g | 92P1102 | Windows XP Professional | 3-year limited warranty
1861-3U | Celeron M 360 | 1.4 | 256MB | 14.1\(^{\text{i}}\) XGA | GMA | 40GB | 5400 | CD | Intel 11a/b/g | 100P990 | Windows XP Professional | 3-year limited warranty
1861-4U | Pentium M 740 | 1.73 | 512MB | 15.0\(^{\text{i}}\) XGA | GMA | 40GB | 4200 | Combo | Intel 11a/b/g | 120P190 | Windows XP Professional | 3-year limited warranty
1861-5SS | Pentium M 740 | 1.73 | 512MB | 15.0\(^{\text{i}}\) XGA | GMA | 40GB | 4200 | Combo | Intel 11a/b/g | 120P190 | Windows XP Professional | 3-year limited warranty

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### These models have a limited onsite service \(^3\)-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Software \(^4\)

- Windows XP Professional
- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Drive Recovery (in hidden protected area)

### Preloaded

- Education software from Vital Source Technologies\(^{\text{\textregistered}}\) and vitalsource KEY and Personal Portable library\(^{\text{\textregistered}}\)
- Rescue and Recovery\(^{\text{\textregistered}}\)
- Access Program
- Access Connections\(^{\text{\textregistered}}\)
- Norton AntiVirus
- PC-Doctor\(^{\text{\textregistered}}\)
- ThinkPad Utilities
- Adobe Reader
- Update Connector\(^{\text{\textregistered}}\)
- RecordNOW and Drive

### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

### License

- CD not included
- Lotus SmartSuite Millennium and Lotus Notes’ Stand-alone Client

---

### Video

- IEEE 1394
- 3-piece industry standard connector

### Wireless antenna

- UltraConnect\(^{\text{\textregistered}}\)
- Coaxial waveguide (CM100) (in hidden protected area)

### Mini PCI

- Intel 11b/g\(^{2}\)
- Intel 11a/b/g\(^{2}\)

### CDC

- Modem

### Audio

- Stereophonic audio

### Security

- Password access
- Secure disk/partition recovery
- Security keyhole

### FingerPrint reader

- None

---

### Limited warranty\(^{\text{\textregistered}}\)

- 3-year limited warranty
- 1-year battery, limited onsite service\(^{\text{\textregistered}}\)

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See footnotes for important warranty information

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ThinkPad® R52 (1861) — Education (August 2005) — withdrawn

Type-model | Processor | Speed GHz | Control Memory | Graphics | Disk | Optical | Mini PCI | Comm Bay | Default | CDC modem | IEEE 1394 | Chipset | Limited warranty | Availability |
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
1861-C6U Celeron M 360 | Intel® Celeron M Processor 360 with 400MHz system bus | 1.4 GHz | 256 MB | XGA GMA 40GB 5400CD | CD | Intel 11b/g | Modem | 1394 | No | GML | Onsite | Aug 05
1861-C7U Celeron M 360 | Intel® Celeron M Processor 360 with 400MHz system bus | 1.4 GHz | 400 MB | XGA GMA 40GB 5400Combo | CD | Intel 11b/g | Modem | 1394 | No | GML | Onsite | Aug 05
1861-3VU Pentium® M 740 | Intel Pentium® M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology, Intel® Execute Disable Bit, and S3M3 time bus | 1.73 GHz | 512 MB | XGA GMA 40GB 4200Combo | CD | Intel 11b/g | Modem | 1394 | No | GML | Onsite | Aug 05
1861-86U Pentium® M 740 | Intel Pentium® M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology, Intel® Execute Disable Bit, and S3M3 time bus | 1.73 GHz | 512 MB | XGA GMA 40GB 4200Combo | CD | Intel 11b/g | Modem | 1394 | No | GML | Onsite | Aug 05
1861-C9U Pentium® M 740 | Intel Pentium® M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology, Intel® Execute Disable Bit, and S3M3 time bus | 1.73 GHz | 512 MB | XGA GMA 40GB 4200Combo | CD | Intel 11b/g | Modem | 1394 | No | GML | Onsite | Aug 05
1861-CAU Pentium® M 740 | Intel Pentium® M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology, Intel® Execute Disable Bit, and S3M3 time bus | 1.73 GHz | 512 MB | XGA GMA 40GB 4200Combo | CD | Intel 11b/g | Modem | 1394 | No | GML | Onsite | Aug 05
1861-CBU Pentium® M 740 | Intel Pentium® M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology, Intel® Execute Disable Bit, and S3M3 time bus | 1.73 GHz | 512 MB | XGA GMA 40GB 4200Combo | CD | Intel 11b/g | Modem | 1394 | No | GML | Onsite | Aug 05

Processor: Intel® Celeron M Processor 360 with 400MHz system bus or Intel® Pentium Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology, Intel® Execute Disable Bit, and S3M3 time bus. Limited warranty: 3-year limited warranty. These educational models are available only to public or private K-12 (or higher) accredited schools and operated exclusively for educational purposes for use by qualified students and teachers.

SOFTWARE

Windows XP Professional
- Microsoft® Windows® XP Professional21 (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Education software from Vital Source Technologies™, vitalsource KEY™ and Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC Doctor
- ThinkPad Utilities
- Adobe® Reader
- Adobe® Acrobat
- Norton AntiVirus
- PC Doctor
- ThinkPad Utilities

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus®SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information
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Post-warranty annual maintenance agreements at thinkpad.com/thinkplus/warranty
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</table>

**These small and medium business (SMB) models are part of the US TopSeller Program.**

- These models have an EasyServ™ on-site pickup and delivery 3-year limited warranty.

**Positioning**

- Processor: Mainstream performance and features; two-platform system

- Intel® Celeron M Processor 350 (1.3GHz), 360 (1.4GHz) or Pentium M Processor 725A (1.6GHz) with 400MHz system bus or

- Intel® Pentium M Processor 740 (1.73GHz) with Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz system bus

**L2 cache**

- None: standard or optional USB-based drives

**Memory**

- Some: CD-ROM, 4x, 10x speed / removable from Ultrapak Enhanced

- Some: DVD-ROM/CD-RW, 4x/4x/4x/8x speed / removable from Ultrapak Enhanced

- Ultrapak Enhanced: one modular bay for interchangeable devices / Ultrapak slim-compliant / 12.7mm high

**Diskette drive**

- None: standard or optional USB-based drives

**CD**

- Some: CD-ROM, 4x, 10x speed / removable from Ultrapak Enhanced

**Audio support**

- None: standard or optional USB-based drives

**Ethernet**

- None: standard or optional USB-based drives

**Bluetooth**

- None: standard or optional USB-based drives

**Mini PCI**

- None: standard or optional USB-based drives

**IEEE 1394**

- None: standard or optional USB-based drives

**S-video out port (TV out)**

- Some: 4-pin industry standard connector

**S-video out port (TV out)**

- Some: 4-pin industry standard connector

**Video out**

- S-video out port (TV out) / one 4-pin industry standard connector

**IEEE 1394**

- Some: FireWire port / 4-pin connector / 1394A/2000 standard

**Wireless LAN**

- None: standard or optional USB-based drives

**Wireless LAN**

- None: standard or optional USB-based drives

**Wireless LAN**

- None: standard or optional USB-based drives

**Wireless LAN**

- None: standard or optional USB-based drives

**Security chip**

- None: standard or optional USB-based drives

**Security chip**

- None: standard or optional USB-based drives

**Security chip**

- None: standard or optional USB-based drives

**Limited warranty**

- 3-year / 1-year battery - EasyServ™ on-site pickup and delivery / service upgrades available

** Sofware**

- Windows XP Professional:
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Education software from Vital Source Technologies®

- Personal Portable library™

- Rescue and Recovery™

- Access Program

- Access Connections™

- Norton AntiVirus

- PC-Doctor™

- ThinkPad Utilities

- Adobe® Reader

- RecordNOW and Drive

**Downloadable**

- IBM Director Agent

- Software Delivery Assistant

- System Migration Assistant

**License**

- (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Other accessories at lenovo.com/accessories**
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<th>Type-model</th>
<th>Processor</th>
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**SOFTWARE**

Windows XP Professional models:
- Microsoft Windows XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery

Windows XP Home models:
- Microsoft Windows XP Home Edition® (Service Pack 2)
- Disk-to-Disk Recovery

**Preloaded** (all):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- InterVideo WinDVD Creator (DVD:RW models)
- InterVideo WinDVD Driver (combo: DVD:RW models)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

License - CD not included (all)
- Lotus® SmartSuite®

Supports ThinkVantage® technologies

65-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

RoHS-compliant

International Warranty Service®
- 24 hour x 7 day worldwide support during the warranty

ThinkPlus™, 22 1-year LOR 9x5 NBD
41C9166
ThinkPlus 3-year LOR 9x5 NBD
41C9169
Other ThinkPlus services at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Powered by Intel® Centrino® mobile technology
* Powered by Intel® Centrino® Duo mobile technology

| US models announced May 16, 2006, or May 11, 2007 |
| US models withdrawn effective October 2006 or September 2007 |

*Lenovo (PC1-1) September 2007 *
**ThinkPad® R60e (0657) - TopSeller (October 2006) - withdrawn**

**SOFTWARE**
- **Windows XP Professional**
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-To-Disk Recovery (in hidden protected area)

**Preloaded**
- Microsoft Office OneNote® 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think
- Sonic RecordNOW and Drive
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

**CD included**
- Microsoft Office OneNote 2003
- License - CD not included
- Lenovo ThinkVantage Productivity Center (software included)
- Lenovo ThinkPlus Stand-alone Client Security™

**Supports** Lenovo ThinkVantage technologies
- 65-watt AC adapter
- Lenovo ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service (valid worldwide, no expiration)
- 24 hour x 7 days per week toll-free warranty support during the warranty period

---

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- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

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**Display**
- 15.0" (381.0mm) XGA (1024x768) TFT color
- 150 nits / anti-glare / 4:3 aspect ratio

**Graphics**
- Lenovo Graphics Media Accelerator 9500 (GMA 9500)
- in 945GM / 250MHz

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, App keys

**TrackPoint**
- "Point-to-Select," Internet Scroll Bar (no touch pad)

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 15.0" models (WXDH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm

**Weight**
- 3.2kg / 7.05 lbs with dual-core, Intel 64 Technology, D521/Duo mobile technology

**Battery**
- 6-cell / 56Whr / 2500mAh / 11.1V
- 9-cell / 93Whr / 3985mAh / 11.1V

**Battery - type**
- Lithium Ion 6-cell / supports optional 9-cell battery

**Battery - life**
- Up to 7.8 hr / optional / supports optional 9-cell battery

**Power**
- 65-watt AC adapter

**Ports**
- 3 USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / non keyboard, mouse, serial, parallel, infrared, S-video out, or 1394 FireWire port (use USB)

**Software**
- Microsoft Office OneNote 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
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- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

**CD included**
- Microsoft Office OneNote 2003
- License - CD not included
- Lenovo ThinkVantage Productivity Center (software included)
- Lenovo ThinkPlus Stand-alone Client Security™

**Supports** Lenovo ThinkVantage technologies
- 65-watt AC adapter
- Lenovo ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service (valid worldwide, no expiration)
- 24 hour x 7 days per week toll-free warranty support during the warranty period

---

**Preload**
- Microsoft Office OneNote® 2003
- Rescue and Recovery™
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- ThinkVantage Productivity Center with Away Manager
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See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

© Lenovo

(PSREF) August 2007
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<td>DVD</td>
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<td>None</td>
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</tr>
</tbody>
</table>

**Positioning**

- Everyday computing; two spindles

**Processor**

- Intel® Celeron M Processor 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel Core™ Solo processor T1300 or T1400 with single-core. Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz bus, and 2MB L2 cache or Intel Core Duo processor T2300E, T2400, or T2500 with dual-core, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

**Memory**


**Display**

- 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect ratio.

**Graphics**


**Keyboard**

- 89-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, Appl keys

**TrackPoint®**

- TrackPoint® pointing device, "Press-to-Select," Intel Scroll Bar (no touch pad)

**Dimensions³**

- 15.0" models (WXD): 13.1" x 10.6" x 1.47-1.58" / 332mm x 269mm x 37.3-40.2mm with optical drive and battery / up to 6.3 lb (2.8 kg).

**Weight³**

- Color: black; All: Acerionlinitile-Butadiene-Styrene (ABS) plastic

**Battery - type**

- Lithium Ion 6-cell / supports optional 9-cell battery

**Battery - life ³**

- 5-6 cell: up to 5.2 hr; optional 9-cell: up to 7.8 hr.

**Architecture**

- Some: Mobile Intel 940GML Express Chipset / 82940GML Graphics Mem Cont Hub
- Some: Mobile Intel 945GML Express Chipset / 82945GML Graphics Memory Cont Hub
- All: 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface) / PCI bus (PCI1152 CardBus controller) / no Super I/O
- No port replicator or docking station supported

**Docking station**

- No Type I or Type II slot / CardBus / 32-bit / integrated port.

**Ports**

- Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / mini PCIe / keyboard, mouse, serial, parallel, S-video out, or 1394 FireWire port (use USB)

**Wireless antenna**

- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Mini PCIe Express**

- 53U/5HU: no Mini PCIe Express slot / no internal 802.11 wireless upg (use PC Card)

**Intel 11a/b/g³**

- Some: 11a/b/g wireless*, Mini PCIe Express adapter, Intel PRO/Wireless 3945ABG
- Some: 11a/b/g wireless*, ThinkPad 11a/b/g Mobile Technology

**WWAN³**

- None

**Modem**

- 56K V.92 (V.92-designed²) modem in Communications Daughter Card socket

**Bluetooth**

- None

**Ethernet**

- Gigabit ethernet on systemboard / Broadcom® BCM5751M (MAC/PHY) / PCIe x1 / PXE

**Audio support**

- High Definition (HD) Audio / AD19819H CODEC / mono speaker, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

**Security**

- Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**

- None

**Fingerprint reader**

- None

**Limited warranty**

- 1-year - EasyServ® onsite pickup and delivery / service upgrades available

**Software**

- Windows XP Professional models
- Microsoft® Windows® XP Professional (Service Pack 2) / Disk-to-Disk Recovery

- Windows XP Home models
- Microsoft Windows XP Home Edition (Service Pack 2) / Disk-to-Disk Recovery

**Preloaded (all)**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD±RW)
- InterVideo WinDVD (combo, DVD±RW)
- DVD±RW models
- InterVideo WinDVD Creator (DVD±RW models)

**License**

- CD - not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

**Supports ThinkVantage® technologies**

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service²⁷
- 24 hour x 7 day²⁷ toll-free warranty support during the warranty²⁷

**Specifications**

- ThinkPlus®²² 1-year LOR 9x5 NBD
- ThinkPlus® 2-year LOR 9x5 NBD
- ThinkPlus® 3-year LOR 9x5 NBD
- ThinkPlus® 4-year LOR 9x5 NBD
- ThinkPlus® 5-year LOR 9x5 NBD
- ThinkPlus® 2-year P&L P/U Depot
- ThinkPlus® 3-year P&L P/U Depot
- ThinkPlus® 4-year P&L P/U Depot
- ThinkPlus® 5-year P&L P/U Depot

**Note:**

- © Lenovo
- (PC1-2) September 2007

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*See footnotes for important warranty information

*Powered by Intel Centrino® Duo mobile technology

US models announced May 16, March 30, or October 17, 2006

US models withdrawn effective May, July, or September 2007

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**Disclaimer:**

Lenovo Training Solutions
Personal Systems Reference (PSREF)
# ThinkPad R60e (0658) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>0658-5XU</td>
<td>Celeron M 420</td>
<td>1.60</td>
<td>40GB 5400 CD</td>
</tr>
</tbody>
</table>
| 0658-6GU   | Celeron M 420     | 1.66        | 40GB 5400 Combo | Intel 11a/b/g²²

- **This model has an EasyServ™ onsite pickup and delivery 1-year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

## Positioning
- **Processor**
  - Everyday computing; two spindles
  - Intel® Celeron M Processor 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache
  - Intel® Core™ Duo processor T2300E or T2400 with dual-core, Enhanced Intel SpeedStep® technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

## Memory
- 256MB or 512MB standard / 940GM models: 2GB max; 945GM models: 4GB max³³ / PC2-5300 667MHz DDR2 / 940GM models: PC2-5300 memory supported at slower 533MHz (not 667MHz speed) / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / etd memory in one socket / one socket available

## Diskette drive
- None standard / use optional USB-based diskette drive

## Display
- 15.0” (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect ratio

## Graphics
- Some: Intel® Graphics Media Accelerator 950 (GMA 950) / in 940GM/L166MHz / Some: Intel® Graphics Media Accelerator 950 (GMA 950) / in 945GM / 250MHz

## Keyboard
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar® (no touch pad)

## Dimensions²
- 15.0” models (WxDxH): 13.1” x 10.6” x 1.47-1.58”; 332mm x 269mm x 37.3-40.2mm with optical drive and battery; up to 6.3 lb (2.8 kg)

## Weight³
- Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

## Battery - type³
- Lithium Ion 6-cell / supports optional 9-cell battery

## Battery - life³
- 6-cell: up to 5.2 hr; 9-cell: up to 7.8 hr

## Architecture
- Some: Mobile Intel 940GML Express Chipset / 82940GML Graphics Mem Cont Hub
- Some: Mobile Intel 945GML Express Chipset / 82945GML Graphics Memory Cont Hub
- All: 82801GB ICH7-M I/O Controller Hub (SAT300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface) / PCI bus (T1 CI1152 CardBus controller) / no Super I/O port replicator or docking station support / One Type I or Type II slot / CardBus 32-bit / integrated door

## Docking station
- Ports
  - Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial, parallel, infrared, S-video out, or 1394 FireWire port (use USB)

## Wireless antenna
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

## Mini PCI Express
- Intel 11a/b/g²²
- Intel® Wireless LAN 11a/b/g wireles²³

## Modem
- 56K²⁴ V.90 (V.92-designed²⁵) modem in Communications Daughter Card socket

## Security
- Power-on password / hard disk password / supervisor password / security keyhole / security chip

## Fingerprint reader
- None

## Limited warranty¹ - ¹-year EasyServ™ onsite pickup and delivery / service upgrades²² available

## SOFTWARE

### Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-To-Disk Recovery (in hidden protected area)

### Preloaded
- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery³⁶
- Access Connections³⁶
- Client Security Solution³⁶
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security³⁶
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- Windows® XP Embedded (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offers
- Sonic RecordNOW and Drive Letter Access (combo model) / InterVideo WinDVD (combo model)
- CD
- Adobe Photoshop Elements plus Adobe Premiere Elements

### License
- CD
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

## See footnotes for important warranty information

* Powered by Intel® Centrino® Duo mobile technology

## Lenovo

*(PC1-4) September 2007*
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Anti-glare Screen</th>
<th>Graphics Controller</th>
<th>Disk SATA Capacity/Speed</th>
<th>Mini PCIe Slot</th>
<th>Mini PCIe WWAN</th>
<th>Blue-tooth</th>
<th>Finger-print</th>
<th>Limited Warranty</th>
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</table>

**Positioning Processor**

- Everyday computing: two spinels
- Intel Core Duo processor T2300E with dual-core, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache
- Intel Core Duo processor T5500 with dual-core, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

- 512MB std / 4GB max

**Diskette Drive**

- Non standard / use optional USB-based diskette drive

**EIDE Combo**

- DVD-ROM/CD-RW / 24X/24X/24X/8X speed / fixed, not removable / 12.7mm high

**Ultrasound Enhancer**

- None / no support for removable Ultrasound options

**Serial ATA disk**

- 40GB (5400 rpm) or 80GB (5400 rpm) / 9.5mm high / removable, upgradable / 5.25" high bay / Hard Disk Drive Shock Absorber

**Display**

- 15.0" (381.0mm) XGA (1024X768) TFT color / 150 nits / anti-glare / 4:3 aspect ratio

**Graphics**

- Intel Graphics Media Accelerator 950 (GMA 950) / in 945GM / 250MHz

**Keyboard**

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys

**TrackPoint**

- Pointing device, "Press-to-Select," Internet Scroll Bar (no touch pad)

**ThinkLight™**

- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm with optical drive and battery; up to 6.3 lb (2.9 kg)

**Weight**

- Color: all: Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Battery - life**

- 6-cell: up to 7.8 hr; 4-cell: up to 5.2 hr; Lithium Ion

**Battery - type**

- Color: all: Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Case material**

- None / no support for removable Ultrabay options

**Docking station**

- No port replicator or docking station support

**ExpressCard slot**

- Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no

**Ports**

- Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no

**Wireless antenna**

- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Mini PCI Express**

- One Mini PCI Express slot / not customer upgradable

**Intel 11a/b/g**

- Intel PRO/Wireless 3945ABG

**WWAN**

- None

**Modem**

- 56K V.90 (V.92-designed) modem in Communications Daughter Card socket

**Audio support**

- None

**Ethernet**

- Gigabit ethernet on systemboard / Broadcom® BCM5751M (MAC/PHY) / PCIe x1 / PXE

**Audio support**

- None

**Equality**

- None

**Supports ThinkVantage technologies**

- 5-year LOR 9x5 NBD

**Post-warranty annual maintenance**

- 24 hour x 7 day toll-free warranty support during the warranty

**Software**

- Microsoft Windows XP Professional
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec Client Security
- Diskeeper Lite
- PC-Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think
- Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo model)

- CD not included

- Lotus SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**License**

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)

**RoHS-compliant Internation Warranty Service**

- 24 hour x 7 day toll-free warranty support during the warranty

**ThinkPlus**

- 2-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 4-year P/L P/U Depot
- 5-year P/L P/U Depot

**Post-warranty annual maintenance agreements**

- lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

@ Lenovo

(PIC1-3) September 2007
### ThinkPad R60e Accessories - withdrawn

**Partial list of accessories supported on ThinkPad R60e**

**originally announced on May 16, 2006**

#### Memory
- 512MB PC2-5300 DDR2 CL5 SODIMM: 40Y7733, ann 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM: 40Y7734, ann 01/05/06

#### Ultrabay Slim 9.5mm
None (no removable bay options)

#### Ultrabay Enhanced 12.7mm
None (no removable bay options)

#### Storage and removable storage
- 60GB Disk 9.5mm SATA150 (7200 rpm): 41N3012, ann 01/05/06
- 80GB Disk 9.5mm SATA150 (5400 rpm): 41N5662, ann 08/15/06
- 100GB Disk 9.5mm SATA150 (7200 rpm): 41N3013, ann 01/05/06
- 120GB Disk 9.5mm SATA150 (5400 rpm): 41N5691, ann 03/20/07
- 160GB Disk 9.5mm SATA150 (5400 rpm): 41N5692, ann 03/20/07

#### USB 2.0 Essential Memory Key 1GB: 41U4940, ann 01/23/07

#### USB 2.0 Essential Memory Key 2GB: 41U4944, ann 01/23/07

#### USB 2.0 Security Memory Key 1GB: 41U5118, ann 07/17/07

#### USB 2.0 Security Memory Key 2GB: 41U5119, ann 07/17/07

#### USB Portable Diskette Drive: 05K9276, ann 06/05/00

#### USB 2.0 CD-RW/DVD-ROM Combo II Drive: 40Y8637, ann 01/05/06

#### USB 2.0 Portable 80GB Hard Disk: 41N8378, ann 04/17/07

#### USB 2.0 Portable 120GB Hard Disk: 41N8379, ann 04/17/07

#### USB 2.0 Super Multi-Burner Drive: 41N5565, ann 01/23/07

#### Wireless LAN (Mini PCI Express)
- No Mini PCI Express upgrade supported (use PC Card)

#### ThinkPad Expansion
- USB Serial Parallel Adapter: 22P5298, ann 10/09/01
- USB 2.0 Port Replicator with Video: 40Y8132, ann 02/23/06
- ThinkPad Adjustable Notebook Stand: 41N3012, ann 01/05/06

#### External Keyboard
- TrackPoint Cap Collection: 73P2698, ann 12/16/03
- USB Numeric Keypad: 33L3225, ann 05/01/00
- Preferred Pro USB Keyboard: 73P5220, ann 06/21/05
- Enhanced Performance USB Keyboard: 73P5260, ann 03/23/04
- Enhanced Wireless Keyboard and Mouse: 73P4067, ann 12/07/04
- USB Keyboard with UltraNav: 31P9950, ann 01/28/03
- USB Travel Keyboard with UltraNav: 31P9490, ann 04/27/04
- Preferred Pro USB Fingerprint Keyboard: 73P4730, ann 02/22/05

#### External Mouse
- Optical Wheel Mouse: 06P4069, ann 05/21/03
- Optical 3-Button ScrollPoint® Mouse: 31P7405, ann 08/27/02
- Optical 3-Button ScrollPoint Pro Mouse: 31P8700, ann 10/01/02
- Optical 3-Button Travel Wheel Mouse: 31P7410
- Lenovo Laser Mouse (USB, PS/2): 41U3074, ann 01/23/07

#### Multimedia
- USB 2.0 Lenovo Multimedia Headset: 40Y8518, ann 06/27/06
- USB 2.0 Lenovo Webcam: 40Y8519, ann 08/29/06

#### Batteries
- ThinkPad T60/R60 Series Li-Ion Battery: 40Y6799, ann 01/05/06
- ThinkPad Z60m/T60/R60 Li-Ion Battery: 40Y6797, ann 09/20/05
- ThinkPad External Battery Charger: 40Y7625, ann 09/20/05

**42 Requires the ThinkPad 90W AC Adapter 40Y7659.**

ThinkPad 65W AC Adapter: 40Y7696

**43 Only compatible with the 945GM and GM965 chipset models.**

ThinkPad 90W AC Adapter: 40Y7659, ann 09/20/05

ThinkPad 90W AC/DC Combo Adapter: 40Y7630, ann 12/13/05

Belkin 1 Outlet Notebook Surge: 31P7658

Belkin Universal Notebook Travel Surge: 22P7127

Belkin 8-outlet 6-foot Surge Protector: 31P7659

#### Data/Video Projectors
- Lenovo M500 Projector: 0037A05, ann 02/28/06
- Lenovo C500 Projector: 0039A03, ann 07/11/06

#### Carrying Cases
- Lenovo Carrying Case - Messenger Max: 41U5253, ann 05/01/07
- Lenovo Carry Case - Performance Backpack: 41U5254, ann 05/01/07
- ThinkPad Nylon Carrying Case: 10K0207
- ThinkPad Carrying Case - Expander: 73P3597
- ThinkPad Premiere Leather Carrying Case: 10K0209
- ThinkPad Convertible Carrying Case: 22P8860

#### Security
- Kensington® Cable Lock from Lenovo: 73P2582, ann 12/29/03
- USB Gemplus GemPC Smart Card Reader: 41N3040, ann 02/21/06
- PC Card Gemplus Smart Card Reader: 41N3004, ann 12/13/05
- USB Fingerprint Reader: 41J3167, ann 10/24/06

#### Monitors
- Lenovo E75 17" CRT Monitor (16.0" vis) blk: 6307BTN, ann 01/16/07
- Lenovo L151 15" Monitor (black): 9165AB6, ann 02/28/06
- Lenovo L171 17" Monitor (black): 9227AC1, ann 11/07/06
- Lenovo L191 19" Monitor (black): 6135AB6, ann 06/27/06
- Lenovo L192 Wide 19" Monitor (black): 6920AB1, ann 09/19/06
- Lenovo L201p 20.1" Monitor (black): 9419HC2, ann 10/31/06
- ThinkVision® L171p 17" Monitor (black): 9417HC2, ann 10/31/06
- ThinkVision L192p 19" Monitor (black): 9419HC2, ann 10/31/06
- ThinkVision L201p 20.1" Monitor (black): 9220HB1, ann 10/31/06

#### Monitor Accessories
- ThinkVision USB Soundbar: 40Y7616, ann 08/23/05
- Kensington Cable Lock from Lenovo: 73P2582, ann 12/29/03
- ThinkPad Convertible Monitor Stand: 40Y7620, ann 01/05/06
- Radial Arm: 19K4464, ann 05/05/00

**44 Also compatible on selected Lenovo and ThinkVision monitors.**

Other accessories at lenovo.com/accessories

Need to buy accessories no longer marketed by Lenovo? See www.itxchange.com/lenovo for the Options Continuation Program.
### ThinkPad R60 (9455) - withdrawn

| Type-model | Processor | Speed | Onboard Memory | Anti-glare | Graphics | Disk | Mini PCI | Mini PCI | Finger- | 1394/ | Workhorse Global (G) | Availability |
|------------|-----------|-------|----------------|------------|----------|------|----------|----------| print | Video | Date |                           |              |
| 9455-4MC3  | Celeron M 510 | 1.66 256 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4CM2  | Celeron M 520 | 1.66 256 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4UC2  | Core Solo T1300 | 1.66 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4UC5  | Core Solo T1400 | 1.83 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4UC9  | Core Solo T1400 | 1.83 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4UJ2  | Core Duo T2300E | 1.66 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4UJ3  | Core Duo T2400 | 1.83 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4UJ9  | Core Duo T2500 | 1.83 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4UJL  | Core Duo T2500 | 1.83 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |
| 9455-4ULA  | Core Duo T2500 | 1.83 512 15.0" XGA | GMA 800 5400 | 11a/b/g/32 None | /S 06 |       |       |       |       |        |                |              |

### Software

- **Windows XP Professional models**
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

- **Windows XP Home models**
  - Microsoft Windows XP Home Edition (Service Pack 2)
  - Disk-to-Disk Recovery

### ProSupport (all; only some listed)

- Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec Client Security
- Diskeeper Lite
- PC-Doctor diagnostics
- ThinkPad Utilities (Power Manager and Presentation Director)
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive (combo, DVD+RW)
- InterVideo WinDVD (combo, DVD+RW models)
- InterVideo WinDVD Creator (DVD+RW models)

### License

- CD - not included (all)
- Lenovo: SmartSuite Millennium and Lotus Notes Stand-alone Client (Notes client not supported on XP Home)

### Supports ThinkVantage technologies

- 65-watt AC adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant

### International Warranty Service

24 hour x 7 day x 365-day toll-free warranty support during the warranty.

- ThinkPlus™ 2-year LOR 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 2-year P&L/ P/U Depot
- ThinkPlus 3-year P&L/ P/U Depot

### Security Chip

- Trusted Platform Module
- Atmel chip
- TCG 1.2-compliant

### FingerPrint Reader

- FingerPrint reader on palm rest
- Swipe sensor supports the security chip

### Limited warranty

1-year - EasyServ on-site pickup and delivery service upgrades are available

### Note

See footnotes for important warranty information

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US models announced May 16, May 30, or Oct 17, 2006
- Powered by Intel Centrino mobile technology
- Designed and manufactured by Lenovo (R1C1) - September 2007

US models withdrawn effective February, July, or September 2007
## ThinkPad® R60 (9456) - Top-Seller (Core™ Processor) - withdrawn

### Type-model  Processor  Speed (GHz)  Memory  Anti-glare Graphics  Disk  Mini PCIe  Mini PCIe  Finger-  1394/ Bat-
                                              Controller  SATA  WWAN  Firewall  Blue-  S-Video  port  dable
                 802.11  wireless  print-  wireless  reader  tery  Preload  tates

| Type-model | Processor | Speed | Memory | Anti-glare Graphics | Disk  | Mini PCIe  | Mini PCIe  | Finger-  | 1394/ Bat-
<table>
<thead>
<tr>
<th></th>
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<td>9456-54U</td>
<td>Duo T2300E</td>
<td>1.66</td>
<td>512MB</td>
<td>14.1&quot; SXGA+</td>
<td>GMA</td>
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<td>Combo</td>
<td>11a/b/g</td>
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<td>Home May 06</td>
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</table>

### Positioning
- Processor: Everyday computing; two spindles
- Intel® Core™ Solo processor T1300 or T1400 with single-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz bus, and 2MB L2 cache or Intel® Core Duo processor T2300E or T2400 with dual-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Memory
- 256MB, 512MB, or 1GB std / 4Gb max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets
- 1GB: standard memory in both sockets (512MB each socket); no sockets available; Others: standard memory in 1 socket; 1 socket available

### Diskette drive
- None standard / use optional USB-based diskette drive

### Display
- Some: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabay™ Enhance or DVD burner / Super Multi-Burner DL (40Y8624) / removable MultiBay Enhanced
- Ultrabay Enhanced: One bay for removable drives / Ultrabay Slim-compatible / 12.7mm high / curved bezel / 40GB, 60GB, 80GB (5400 rpm) or 100GB (5400 or 7200 rpm) / 9.5mm high / removable and upgradeable / 9.5mm high bay / supports 2nd disk with option / Hard Disk Drive Shock Absorber / Active Protection System

### Graphics
- Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

### Processor
- Mobile Intel 945GM Express Chipset / 82801GMB ICH7M / I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]), [PCI bus] (T1) [PCIx16 CardBus controller] / LPC bus (National Semiconductor® PC7382 Super I/O, Atmel® 975SC302)

### Bluetooth
- Some: Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

### Battery
- Lithium Ion 6-cell or 9-cell / supports unique 2nd battery in Ultrabay Enhanced
- Battery - life: 6-cell: up to 5.2 hours; 9-cell: up to 7.8 hours

### Architecture
- Supports ThinkVantage® technologies

### SOFTWARE
- Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)

### CD included
- CD included
- 01U only: Microsoft Office OneNote 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symanite® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Desktop
- Fingerprint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNow and Drive Letter Access (combo, DVD+RW)
- InterVideo WinDVD (combo, combo, DVD+RW models)
- InterVideo WinDVD Creator (DVD+RW models)

### CD included
- 01U only: Microsoft Office OneNote 2003
- License - CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

### CD included
- Supports ThinkVantage® technologies

### CD included
- 65-watt adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service17 24 hour x 7 day x 7 toll-free warranty support during the warranty

### CD included
- ThinkPlus™ 21 1-year LOR 9x5xNBD
- Other ThinkPlus services at lenovo.com/thinkplus/warranty

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* See footnotes for important warranty information

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US models announced May 16, May 30, July 18, or December 29, 2006

(RC1-3) September 2007

Lenovo

Personal Systems Reference (PSREF)
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<th>Type-model</th>
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<th>Speed (GHz)</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger-print</th>
<th>OneNote preload</th>
<th>Avail date</th>
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<td>9456-FBU Core 2 Duo T5500</td>
<td>Intel® Core™ 2 Duo processor T5500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache</td>
<td>1.66</td>
<td>1GB 15.0&quot; XGA</td>
<td>GMA</td>
<td>800G 5400 Combo</td>
<td>*Intel 11a/b/g™</td>
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<td>9456-FCU Core 2 Duo T5500</td>
<td>Intel® Core™ 2 Duo processor T5500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache</td>
<td>1.66</td>
<td>1GB 15.0&quot; XGA</td>
<td>GMA</td>
<td>100G 5400 DVD±RW</td>
<td>*Intel 11a/b/g™</td>
<td>None</td>
<td>None</td>
<td>Finger 1394/S OneNote Oct 06</td>
<td>Oct 06</td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller Program™
- These models have a 1-year limited warranty*

### Positioning

- Processor: Intel® Core™ 2 Duo processor T5500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache
- Memory: 1GB std, 4GB max**, PC2-5300 667MHz DDR2, non-parity, CL5
- Dual-channel capable / two 200-pin SO DIMM sockets / standard memory in both sockets (512MB each socket) / no sockets available

### Diskette drive

- EIDE Combo: None standard / use optional USB-based diskette drive
- EIDE COMBO: Some: DVD-ROM/CD-RW / 24x/24x/24x/8x speed / removable from Ultrabay™ Enhance

### Ultrabay Enhanced

- Serial ATA disk (SATA150): One bay for removable devices / Ultrabay Slim-compatible / 12.7mm high / curved bezel
- 80GB (5400 rpm) or 100GB (5400 rpm)

### Display

- 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect ratio

### Graphics

- Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

### Keyboard

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

### Touchpad

- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

### Dimensions

- 15.0" models (WX:DX): 13.1" x 10.6" x 1.47-1.58" / 332mm x 269mm x 37.3-40.2mm

### Weight

- 15.0" models: up to 6.8 lb (3.1 kg)

### Case material

- Black / All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

### Battery - type

- Lithium-Ion 6-cell / supports unique 2nd battery in Ultrabay Enhanced

### Battery - life

- 6-cell: up to 7.8 hr; 13.1" x 10.6" x 1.47-1.58" / 332mm x 269mm x 37.3-40.2mm

### Wireless antenna

- Mini PCI Express: UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

### Wireless

- Mini PCI Express: Two Mini PCI Express slots / only 802.11 wireless is customer upgradeable
- 11a/b/g wireless* / WWAN16

### Modem

- 56K V.90 (V.92-designed29) modem in Communications Daughter Card socket

### Ethernet

- Gigabit ethernet on system board / Broadcom® BCM5751M (MAC/PHY) / PCIe x1 / PXE High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack / Communications Daughter Card socket

### Security

- Power-on password / hard disk supervisor / password security / keyhole
- Security chip: Trusted Platform Module / Atmel chip / TCG 1.2-compliant

### Fingerprint reader

- FingerPrint reader: FingerPrint reader on palm rest / swipe sensor / supports the security chip

### Limited warranty

- 1-year / EasyServ™ onsite pickup and delivery / service upgrades available

### Software

- Windows XP Professional
  - Microsoft Office OneNote™ 2003
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper Lite
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)
  - Multimedia Center for Think Offerings
  - Sonic RecordNow! and Drive Letter Access (combo, DVD±RW)
  - InterVideo WinDVD (combo, DVD±RW models)

### CD included

- Microsoft Office OneNote 2003
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Preloaded

- Supports ThinkVantage technologies
- 65-watt AC adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

Lenovo Training Solutions (RC2-1) August 2007 US models announced October 17, 2006
US models withdrawn effective July 2007

Lenovo Training Solutions (RC2-1) August 2007
US models announced October 17, 2006
US models withdrawn effective July 2007

Lenovo

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See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

Lenovo Training Solutions (RC2-1) August 2007
US models announced October 17, 2006
US models withdrawn effective July 2007
Positioning
Everyday computing; two spindles

Processor
Intel® Core™ Solo processor T1300 with single-core. Enhanced Intel SpeedStep™ technology. Execute Disable Bit. 667MHz bus, and 2MB L2 cache or Intel® Core Duo processor T2400 or T2400 with dual-core. Enhanced Intel SpeedStep™ technology. Execute Disable Bit. 667MHz system bus, and 2MB shared L2 cache

Memory
512MB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets - memory in one socket / one socket available

EIDE Combo
Some: DVD-ROM/CD-RW / 24X/2X/4X/24X/8X/5X speed / removable from Ultrabay™ Enhancements

Serial ATA disk
Some: DVD burner / Super Multi-Burner DL (40Y8624) / UltraBay Enhanced one bay for removable devices / Ultrabay Slim-compatible / 12.7mm high / curved bezels

Display
Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect
Some: 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect

Graphics
Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

Touchpad
89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows. App keys

Software
Software Offerings
- ThinkVantage Security Productivity Center
- Client Security Technology
-ThinkVantage System Update
- Symantec® Client Security
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)

License - CD included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

Power-on password / hard disk password / supervisor password / security keyhole

Security
Power-on password / hard disk password / supervisor password / security keyhole

Wireless antenna
UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

Mini PCI Express
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

Intel 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
Some: Wireless WAN, Sierra wireless 1xEV-DO Network Adapter, Mini PCI Adapter. EV-DO/1xRTT. WWAN antenna on display. service contract required with VeriZon® Wireless 56K or V.90 (V.92-designed) modem in Communications Unit (DU). USB modem socket.

Bluetooth™
Some: Bluetooth 2.0 wireless / USB 2.0 interface / ICH7-M / LED indicator

Gigabit ethernet on system board / Broadcom® BCM5751M (MAC/PHY) / PCI/e x1 / PXE support

Audio support
Today's high definition (HD) Audio / AD1981 HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

Security
Power-on password / hard disk password / supervisor password / security keyhole

Security chip
Trusted Platform Module / Atmel chip / TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest / swipes sensor / supports the security chip

Limited warranty
3-year / 1-year battery - EasyServ™ on-site pickup and delivery / service upgrades available

See footnotes for important warranty information

Lenovo

US models announced May 16, 2005, March 30, or Oct. 17, 2006

US models withdrawn effective May, July, or September 2007
### ThinkPad R60 (9457) - October 2006 - withdrawn

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<th>Anti-glare Options</th>
<th>Graphics/Display Options</th>
<th>Disk Drive Options</th>
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<th>1394/USB Options</th>
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<td>Duo T7200 2.00 512M 14.1&quot; XGA</td>
<td>GMA 60GB 5400 Combo</td>
<td>Intel 11a/b/g Wireless</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
<td>3-year Oct 06</td>
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<tr>
<td>9457-G4U</td>
<td>Duo T7200 2.00 1GB 15.0&quot; SXGA+</td>
<td>GMA 80GB 5400 Combo</td>
<td>Intel 11a/b/g Wireless</td>
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<td>3-year Oct 06</td>
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<td>9457-G6U</td>
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<td>GMA 60GB 5400 Combo</td>
<td>Intel 11a/b/g Wireless</td>
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<td>3-year Oct 06</td>
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<tr>
<td>9457-G7U</td>
<td>Duo T5600 1.83 512M 15.0&quot; XGA</td>
<td>GMA 60GB 5400 Combo</td>
<td>Intel 11a/b/g Wireless</td>
<td>None</td>
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<td>Blue</td>
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<tr>
<td>9457-G8U</td>
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<td>GMA 80GB 5400 Combo</td>
<td>Intel 11a/b/g Wireless</td>
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<td>None</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
<td>3-year Oct 06</td>
<td></td>
</tr>
</tbody>
</table>

**Positioning Processor**
- Intel® Core™ 2 Duo processor T5600 or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus;
- T5600: 2MB shared L2 cache; T7200: 4MB shared L2 cache

**Memory**
- 512MB or 1GB std / 4GB max /
- PC2-5300 667MHz DDR2 / non-parity / CL5 /
- dual-channel capable with two 200-pin SO-DIMM sockets
- 512MB models: standard memory in 1 socket; 1 socket available;
- 1GB models: std memory in both sockets (512MB each socket); no sockets avail;

**EIDE Combo**
- Some: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabay™ Enh
- Some: DVD burner / Super Multi-Burner DL (40Y8624) / removable Ultrabay Enhanced

**Serial ATA disk**
- 60GB (5400 rpm), 80GB (5400 rpm), or 100GB (5400 rpm)
- 9.5mm high / removable, upgradeable / 9.5mm high bay
- supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’ /

**Hard Disk Drive Absorber / Active Protection System**

**Display**
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4.3 aspect
- Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare / 4.3
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4.3

**Graphics**
- Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys / anti-glare / 4.3 aspect
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar13, magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

**Touch pad**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34.3-37.2mm
- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 287mm x 37.3-40.2mm

**Weight**
- With optical drive and battery: 4.5 lb (2.06kg); 15.0" models: up to 5.8 lb (2.6kg)

**Case material**
- Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Battery**
- Lithium Ion 6-cell / supports 2nd battery in Ultrabay Enhanced
- 6-cell: up to 5.2 hr; 9-cell: up to 7.8 hr; 9-cell plus Ultrabay battery: up to 10 hr

**Architecture**
- Mobile Intel® 945G Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint], [PCI bus (Tb) PClx512 CardBus controller) / LPC bus (National Semiconductor® PC87382 Super I/O, Atmel® 9753C203)

**PC Card Std slot**
- Type I or Type II slot / CardBus 32-bit / integrated door

**Ports**
- Some ExpressCard/54 / ExpressCard/34 / USB 2.0 / integrated door
- Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / some: 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**
- UltraConnect™

**Mini PCI Express slots**
- Two Mini PCI Express slots / only 802.11 wireless customer upgradable

**WWAN**
- None

**Modem**
- 56K V.90 (V.92-designed) modem in Communications Daughter Card socket

**Bluetooth**
- Some: internal / USB 2.0 wireless / USB 2.0 / Bluetooth 2.0

**Ethernet**
- Gigabit ethernet on systemboard / Broadcom® BCM5751M (MAC/PHY) / PCIe x1 / PXE support

**Audio support**
- High Definition (HD) Audio / AD1981 HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

**Security**
- Power-on password / hard disk password / swipe sensor / security keyhole

**Security chip**
- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**
- Some: Fingerprint reader on palm rest / swipe sensor / supports the security chip

**Limited warranty**
- 3-year / 1-year battery / EasyServ™ on-site pickup and delivery / service upgrades22 avail

**SupportedThinkVantage™ technologies**
- 65 watt AC adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service17
- 24 hour x 7 day18 toll-free warranty support during the warranty12

**License**
- CD not included
- Lenovo L192 Wide 19” Monitor (black) 6920AB1
- ThinkPad Adjustable Notebook Stand  40Y7676
- USB Fingerprint Reader 73P4774
- ThinkPad Convertible Carrying Case 22P8860
- USB 2.0 Dongle Adapter 41N5565
- ThinkPad Advanced Dock 25301U0
- Other accessories on O-R60 sheet

**SOFTWARE**
- Windows XP Professional
  - [Microsoft] Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery
- Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Crunch Software (fingerprint software)
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW and Drive Letter Access (combo, DVD/LRW)
  - InterVideo WinDVD Creator (combo, DVD/LRW models)
- Stand-alone Client Support

**R60 (9457)**

**US models withdrawn effective July 2007**

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*Lenovo* Powered by Intel Centrino® Duo mobile technology

**See footnotes for important warranty information**

US models announced October 17, 2006

US models withdrawn effective July 2007

*Lenovo* August 2007

**For more information visit:** lenovo.com/thinkplus/warranty
### Type-model Processor Speed Memory Anti-glare screen Graphics Controllers Disk AIDA EIDE Mini PCI 802.11 Mini PCI 88WAN Finger-IEEE 802.11b/g/n 3-year 3-year Avail Speed controller SDRAM screen color controller controller controller Mini port out warranty date

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Anti-glare screen</th>
<th>Graphics controller</th>
<th>Disk controller</th>
<th>EIDE controller</th>
<th>Mini PCI 802.11b/g/n</th>
<th>Mini PCI 88WAN</th>
<th>Finger-IEEE 802.11b/g/n</th>
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</thead>
<tbody>
<tr>
<td>9457-74U Core Duo T2400</td>
<td>1.83 GHz</td>
<td>512MB</td>
<td>14.1&quot; SXGA+</td>
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<td>5400 DVD/ RW</td>
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<td>None</td>
</tr>
<tr>
<td>9457-7GL Celeron M 420</td>
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<td>14.1&quot; XGA</td>
<td>GMA 60G</td>
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<td>9457-8JU Core Duo T2400</td>
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<td>512MB</td>
<td>15.0&quot; XGA</td>
<td>GMA 60G</td>
<td>5400 Combo</td>
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<td>9457-8KU Core Duo T2400</td>
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<td>15.0&quot; XGA</td>
<td>GMA 60G</td>
<td>5400 DVD/ RW</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<td>None</td>
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</tbody>
</table>

### SOFTWARE

- **Windows XP Professional**
  - [Microsoft Windows XP Professional](http://www.microsoft.com/windowsxp/professional/)
  - [Disk-to-Disk Recovery](http://www.lenovo.com/thinkpad/warranty)

### Preloaded

- [VitalSource Library](http://www.vitalsource.com/)
- [Adobe Photoshop Elements](http://www.adobe.com/)
- [Adobe Premiere Elements](http://www.adobe.com/)
- [Rescue and Recovery™](http://www.lenovo.com/thinkvantage/warranty)
- [Access Connections™](http://www.lenovo.com/thinkvantage/warranty)
- [Client Security Solution](http://www.lenovo.com/thinkvantage/warranty)
- [ThinkVantage Productivity Center with Away Manager](http://www.lenovo.com/thinkvantage/warranty)
- [ThinkVantage System Update](http://www.lenovo.com/thinkvantage/warranty)
- [Symantec Client Security™](http://www.lenovo.com/thinkvantage/warranty)
- [DiskKeeper Lite](http://www.lenovo.com/thinkvantage/warranty)
- [PC-Doctor™ (diagnostics)](http://www.lenovo.com/thinkvantage/warranty)
- [ThinkPad Utilities (Power Manager and Presentation Director)](http://www.lenovo.com/thinkvantage/warranty)
- [Adobe Reader](http://www.adobe.com/)
- [Google Toolbar](http://www.google.com/)
- [Google Desktop](http://www.google.com/)
- [Picasa from Google](http://www.google.com/)
- [Multimedia Center for Think](http://www.lenovo.com/thinkvantage/warranty)
- [Sonic RecordNOW and Drive](http://www.lenovo.com/thinkvantage/warranty)
- [Letter Agree Software](http://www.lenovo.com/thinkvantage/warranty)
- [InterVideo WinDVD (combo, DVD/ RW models)](http://www.intervideo.com/)
- [InterVideo WinDVD Creator (DVD/ RW models)](http://www.intervideo.com/)
- [CD](http://www.lenovo.com/thinkvantage/warranty)
- [Adobe Photoshop Elements](http://www.adobe.com/)
- [Adobe Premiere Elements](http://www.adobe.com/)

### License

- [CD - not included](http://www.lenovo.com/thinkvantage/warranty)
- [Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client](http://www.lenovo.com/thinkvantage/warranty)

### Limited warranty

- **3-year** - 1-yr battery - EasyServ™ 3-on site pickup and delivery / service upgrades 20 avail

### Post-warranty annual maintenance agreements

- [ThinkPlus™](http://www.lenovo.com/thinkplus/warranty)
- [2-year LOR 9x5 NBD](http://www.lenovo.com/thinkplus/warranty)
- [3-year LOR 9x5 NBD](http://www.lenovo.com/thinkplus/warranty)
- [4-year LOR 9x5 NBD](http://www.lenovo.com/thinkplus/warranty)
- [5-year LOR 9x5 NBD](http://www.lenovo.com/thinkplus/warranty)
- [4-year P&L U/P Depot](http://www.lenovo.com/thinkplus/warranty)
- [5-year P&L U/P Depot](http://www.lenovo.com/thinkplus/warranty)
- [Post-warranty annual maintenance agreements](http://www.lenovo.com/thinkplus/warranty)

### See footnotes for important warranty information

* Powered by Intel Centrino® Dual mobile technology

© Lenovo

US models announced May 16, 2006

US models withdrawn effective May or September 2007

(ROC1-5) September 2007
### ThinkPad R60 (9457) - Education (Vista™) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics</th>
<th>Controller</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger-</th>
<th>S-Video</th>
<th>3-year</th>
<th>Availa-</th>
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<tbody>
<tr>
<td>9457-LSU Core 2 Duo T7200</td>
<td>15.0” XGA</td>
<td>1GB</td>
<td>80GB 5400</td>
<td>Combo</td>
<td>11a/b/g/n</td>
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<td>None</td>
<td>S-Vid</td>
<td>EasyServ</td>
<td>Apr 07</td>
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</tbody>
</table>

* These models have an EasyServ™-on-site pickup and delivery 3-year limited warranty.

These educational models are available only to public or private K-12 (or higher) accredited schools and operated exclusively for educational purposes for use by qualified students and teachers.

### Preloaded operating system
- Vista Basic logo

### Preloaded applications
- K-12 education software
- VitalSource Library School Edition
- Adobe® Instructor Resource Center
- Adobe Digital School Collection
- Photoshop Elements 5 (and CD)
- Premier Elements 3 (and DVD)
- Acrobat 8 Professional (and CD)
- Contribute 4 (and CD)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Picasa from Google

### License
- CD not included
- Lotus® Notes® Stand-alone Client

### Supports ThinkVantage™ technologies
- 65-watt AC adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day 7x24 toll-free warranty support during the warranty

### Lenovo
- lenovo.com
- Other accessories at lenovo.com/accessories

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See notes for important warranty information.

© Lenovo (RC2-3) August 2007

US model announced April 24, 2007

US model withdrawn effective July 2007
**ThinkPad® R60 (9458) - TopSeller and Education - withdrawn**

- **These small and medium business (SMB) models are part of the US TopSeller** Program
- **These models have an EasyServ** onsite pickup and delivery 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**SOFTWARE**
- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery

**Preloaded**
- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think
- Sonic SoundNow and Drive
- Letter Access (combo models)
- InterVideo WinDVD (combo models)

**CD**
- Adobe Photoshop Elements plus Adobe Premiere Elements

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

*Powered by Intel® Centrino® Duo mobile technology*
### ThinkPad R60 (9459) - Education (Vista™) - withdrawn

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Speed</th>
<th>Clock</th>
<th>Memory</th>
<th>Graphics</th>
<th>Controller</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe</th>
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<th>S-Video</th>
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<tbody>
<tr>
<td>9459-LTU</td>
<td>Core 2 Duo T7200</td>
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<td>GMA</td>
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<td>Combo</td>
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<td>None</td>
<td>S-Video</td>
<td>K12</td>
<td>Online</td>
<td>Apr 07</td>
</tr>
</tbody>
</table>

These models have a limited onsite service** 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

Positioning: Everyday computing; two spindles

### Processor

Processor: Intel® Core 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache

### Memory

Memory: 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

### Diskette drive

Diskette drive: None (use optional USB-based diskette drive)

### EIDE Combo

EIDE Combo: DVD-ROM/CD-RW / 24X/24X/24X speed / removable from Ultrabay Enhanced

### Ultrabay Enhanced

Ultrabay Enhanced: One bay for removable devices / Ultrabay Slim-compatible / 12.7mm high / curved bezel

### Serial ATA disk

Serial ATA disk: 80GB (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’

### Hard Disk Drive Shock Absorber

Hard Disk Drive Shock Absorber: ThinkPad Hard Disk Drive Shock Absorber

### Active Protection System

Active Protection System: ThinkPad Hard Disk Drive Shock Absorber

### Display

Display: 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect

### Graphics

Graphics: Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

### Keyboard

Keyboard: 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys / Windows, Appl keys

### TrackPoint

TrackPoint: TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

### Touch pad

Touch pad: UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

### Dimensions

Dimensions: 15.0" models (WXDH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm with optical and 6-cell battery: 14.1" models: up to 5.8 lb (2.6kg); 15": up to 6.3 lb (2.9kg)

### Weight

Weight: Color: black;

### Case material

Case material: Acrylonitrile-Butadiene-Styrene (ABS) plastic

### Battery - type

Battery - type: Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Enhanced

### Battery - life

Battery - life: 7-cell: up to 7 hr; 9-cell plus Ultrabay battery: up to 10 hr

### Architecture

Architecture: Mobile Intel 945GM Express Chipset / 82895GUM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (11e PCix32 CardBus controller) / LPC bus (National Semiconductor PC7682 Super I/O, ATMel® AT97SC3020)

### PC Card Std slot

PC Card Std slot: One Type I or Type II slot / CardBus 32-bit / integrated door

### ExpressCard slot

ExpressCard slot: One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door

### Ports

Ports: Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) / 15" models: S-video out / no keyboard, mouse, serial, parallel, or infrared port (use USB)

### Wireless antenna

Wireless antenna: UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

### Mini PCI Express

Mini PCI Express: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

### Windows®

Windows®: 65-watt AC adapter (GMA graphics) esupport during the warranty

### Preloads

Preloads: Supports ThinkVantage technologies

### Wi-Fi

Wi-Fi: 65-watt AC adapter (GMA graphics) supports ThinkVantage technologies

### RoHS-compliant

RoHS-compliant: International Warranty Service

### Limited warranty

Limited warranty: 3-year/1-year battery, limited onsite service

### Post-warranty annual maintenance

Post-warranty annual maintenance: 22 2-year LOR 9x5 NBD

### Support during the warranty

Support during the warranty: 24 hour x 7 day toll-free warranty support during the warranty

### Preloaded operating system

Preloaded operating system: Microsoft® Windows® Vista™ Business Edition (32-bit)

### Preloaded applications

Preloaded applications: K-12 education software

### License

License: CD not included

### Preload-lead warranty

Preload-lead warranty: 41C9175

### Other accessories

Other accessories: 41C9179

### ThinkPad Access Connections

ThinkPad Access Connections: Lenovo L171p 17" Monitor (black) 9417HC2

### ThinkPlus

ThinkPlus: 22 2-year LOR 9x5 NBD

### ThinkPad Roll Cage

ThinkPad Roll Cage: 41C9175

### ThinkPad Ultrabay Enhanced

ThinkPad Ultrabay Enhanced: 41C9179

### ThinkPlus

ThinkPlus: 4-year LOR 9x5 NBD

### ThinkPad P/U Depot

ThinkPad P/U Depot: 41C9179

### ThinkPad ToGO

ThinkPad ToGO: 41C9180

### Post-warranty annual maintenance agreements

Post-warranty annual maintenance agreements: lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced April 24, 2007

US model withdrawn July 2007

© Lenovo

(R2C-4) August 2007

Personal Systems Reference (PSREF)
### ThinkPad R60 (9460) - ATI graphics - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Anti-glare</th>
<th>Discrete graphics</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Finger-print reader</th>
<th>Battery</th>
<th>Limit-Worked-Out</th>
<th>Year-End date</th>
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<tbody>
<tr>
<td>9460-25U</td>
<td>Core Duo T2400</td>
<td>1.83 GHz</td>
<td>512MB</td>
<td>XGA</td>
<td>64MB</td>
<td>60GB 5400</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g</td>
<td>Finger</td>
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<td>1</td>
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<td>9460-26U</td>
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<td>Combo</td>
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<td>9460-27U</td>
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<td>XGA</td>
<td>64MB</td>
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<td>Intel 11a/b/g</td>
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</tbody>
</table>

**Positioning**

Everyday computing; two spindles

**Processor**

Intel® Core™ Solo processor T1300 with single-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB L2 cache or Intel Core Duo processor T2300e, T2400, or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

**Diskette drive**

None standard / use optional USB-based diskette drive

**EIDE Combo**

Some: DVD-ROM/CD-RW / 24x/24x/24x/8x speed / removable from Ultrabay Enhancer

**EIDE DVD/RW**

Some: DVD burner / Super Multi-Dual Burner (40Y8624) / removable Ultrabay Emergency Bay / one removable bay for Ultrabay Enhanced / 12.7mm high / curvature bezel

**Serial ATA disk (SATA150)**

40GB (5400 rpm), 60GB (5400 rpm), 80GB (5400 rpm), or 100GB (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay supports 2nd disk with optional second HDD Adapter for Ultrabay Slim / Hot Drive Enhance Drive Shock Absorber / Active Protection System

**Display**

Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect

Some: 15.0" (381.1mm) XGA (1400x1050) TFT color / 150 nits / anti-glare / 4:3 aspect

Some: 15.0" (381.1mm) XGA (1400x1050) TFT color / 200 nits / anti-glare / 4:3 aspect

**Graphics**

Some: ATI® MOBILITY® Radeon® X1300 M52 / PCI Express x16 / 64MB GDDR1

Some: ATI® MOBILITY® Radeon® X1300 M52 / PCI Express x16 / 128MB GDDR1

**Keyboard**

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys / TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

**Touch pad**

UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones / ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

14.1" models (WxHxD): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37.32mm

15.0" models (WxHxD): 13.1" x 10.8" x 1.47-1.58"; 332mm x 268mm x 37-40.2mm

Weight

With optical and 6-cell battery: 14.1" models: up to 5.8 lb (2.6kg); 15" models: up to 6.4 lb (2.9kg)

Case material

Color: Black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type

Lithium Ion 6-cell or 9-cell

Battery - life - hr

6-cell: up to 3.1 hr; 9-cell: up to 4.6 hr; 9-cell plus Ultrabay battery: up to 6.6 hr

**Architecture**

Mobile Intel 945PM Express Chipset / 82894PM Memory Controller Hub / 82801GBICH-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (BIOS 11x4512 CardBus controller) / LPY bus (National Semiconductor 83C782 Super I/0, Atmel 975C3020)

**PC Card slot type**

One Type I or Type II CardBus / CardBus 32-bit / integrated door

**ExpressCard slot**

One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or x2, 2.0 / integrated door

Ports

Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / 1394 Firewire 400 (4-pin connector; 1394A-2000 standard) / 15 standard models: video out / no keyboard, mouse, serial, parallel, or infrared port (use USB)

**Wireless antenna**

UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

**Mini PCI Express**

Two Mini PCI Express slots / 502MB (x4) wireless / 512MB (x2) wireless / 512MB (x1) wireless

**Modem**

Some: Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

**Ethernet**

Gigabit ethernet on system board / Broadcom® 80211G (MAC/PHY) / PCI x1 / PXE support / High Definition Audio / AD1981HD codec / stereo speakers, 1 watt / volume up / down, mute buttons / microphone / microphone input jack / headphone jack

**Audio support**

Security

Power-on password / hard disk password / supervisor password / security keyhole

Security chip

Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**

Some: Finger print reader on palm rest supports the security chip

**Limited warranty**

1-year - EasyServ®/15 onsite pickup and delivery / service upgrades/2 available

See footnotes for important warranty information

US models announced May 16 or May 30, 2006

US models withdrawn effective September 2007

* Powered by Intel Centrino® mobile technology

* Powered by Intel® Duo processor technology

© Lenovo

Created by Lenovo Training Solutions

Personal Systems Reference (PSRF)
### ThinkPad R60 (9461) - ATI graphics (TopSeller) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Discrete graphics</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger-print reader</th>
<th>S-Video</th>
<th>Battery</th>
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</table>

- **These small and medium business (SMB) models are part of the US TopSeller Program**
- **These models have a 1-year limited warranty**

### Positioning
- Everyday computing: two spinners
- Intel® Core™ Solo processor T1300 with single-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB L2 cache or Intel® Core™ Duo processor T2300E, T2400, or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache

<table>
<thead>
<tr>
<th>Memory</th>
<th>256MB, 512MB, or 1GB std / 4GB max / 4GB max</th>
<th>4GB (5400 rpm), 60GB (5400 rpm), or 100GB (5400 rpm or 7200 rpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.5mm high / removable, upgradable / 9.5mm high bay</td>
<td>One bay for removable devices / Ultrabay Slim-compatible / 12.7mm high / curved bezel</td>
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</table>

### Diskette drive
- EIDE Combo: Some: DVD-ROM / DVD±RW / 24x/24x/24x speed / removable from Ultrabay™ Enh
- EIDE DVD±RW: Some: DVD burner / Super Multi-Burner DL (40Y6624) / removable Ultrabay Enhanced

### Serial ATA disk (SATA150)
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color |
- Some: 15.0" (381mm) XGA (1024x768) TFT color |
- Some: 15.0" (381mm) SXGA (1024x1050) TFT color |

### Display
- Some: ATI® MOBILITY™ Radeon™ X1300 M52 / PCI Express x16 / 64MB GDDR1 |
- Some: ATI® MOBILITY Radeon™ X1400 M52 / PCI Express x16 / 128MB GDDR1 |

### Software
- **Windows XP Professional models**
  - Microsoft® Windows® XP
  - Professional Service Pack 2
  - Disk-to-Disk Recovery

- **Windows XP Home models**
  - Microsoft Windows XP
  - Home Edition® (Service Pack 2)
  - Disk-to-Disk Recovery

- **Preloaded (all)**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper Lite
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW and Drive
  - Letter Access (combo, DVD±RW models)
  - IntelVideo WinDVD (combo, DVD±RW models)
  - IntelVideo WinDVD Creator (DVD±RW models)

- **License** - CD not included (all)
  - Lenovo™ “SmartSuite” Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

### Power
- 90-watt AC adapter (discretegraphics) ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant

- **International Warranty Service**
  - 24 hour x 7 day® toll-free warranty support during the warranty

- **Lenovo™**
  - 1-year easyServ® on-site pickup and delivery / service upgrades available

**See footnotes for important warranty information**

*Powered by Intel® Centrino® mobile technology*

© Lenovo

US models announced May 16 or May 30, 2006

*Powered by Intel Centrino® Duo processor technology*

ThinkPad® R60 (9461) - ATI® graphics (TopSeller) - Oct 2006 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Anti-glare graphics</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger-S-HSS</th>
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<th>Note</th>
<th>Note</th>
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<tr>
<td>9461-CXU</td>
<td>Core 2 Duo processor T5500 or T7200 with dual-core, Intel 64 Technology. Enhanced Intel SpeedStep™ technology. Execute Disable Bit, and 667MHz bus; T5500; 2MB shared L2 cache; T7200; 4MB shared L2 cache.</td>
<td>1.66GHz</td>
<td>512MB or 1GB std (256MB DDR2 or non-parity) / CL5/ dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available.</td>
<td>CD</td>
<td>64MB G400 5400 CD</td>
<td><em>Intel 11a/b/g/z Verizom</em></td>
<td>HomeOneNote Nov06</td>
<td>Finger S-Vid Pro</td>
<td>OneNote Oct 06</td>
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<tr>
<td>9461-DUO</td>
<td>Core 2 Duo processor T5500 or T7200 with dual-core, Intel 64 Technology. Enhanced Intel SpeedStep™ technology. Execute Disable Bit, and 667MHz bus; T5500; 2MB shared L2 cache; T7200; 4MB shared L2 cache.</td>
<td>1.66GHz</td>
<td>512MB or 1GB std (256MB DDR2 or non-parity) / CL5/ dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available.</td>
<td>CD</td>
<td>40GB G400 5400 CD</td>
<td><em>Intel 11a/b/g/z Verizom</em></td>
<td>HomeOneNote Nov06</td>
<td>Finger S-Vid Pro</td>
<td>OneNote Oct 06</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

Positioning

| Processor | Everyday computing; two spindles Intel® Core 2 Duo processor T5500 or T7200 with dual-core, Intel 64 Technology. Enhanced Intel SpeedStep™ technology. Execute Disable Bit, and 667MHz bus; T5500; 2MB shared L2 cache; T7200; 4MB shared L2 cache. | 1.66GHz | 512MB or 1GB std (256MB DDR2 or non-parity) / CL5/ dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available. | CD     | 64MB G400 5400 CD | *Intel 11a/b/g/z Verizom* | HomeOneNote Nov06 | Finger S-Vid Pro | OneNote Oct 06 |
| Memory    | None standard / use optional USB-based diskette drive | 1.66GHz | 512MB or 1GB std (256MB DDR2 or non-parity) / CL5/ dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available. | CD     | 40GB G400 5400 CD | *Intel 11a/b/g/z Verizom* | HomeOneNote Nov06 | Finger S-Vid Pro | OneNote Oct 06 |

SOFTWARE™

- Windows XP Professional models
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

Windows XP Home models

- Microsoft Windows XP Home Edition (Service Pack 2)
- Disk-to-Disk Recovery

Preloaded (all; only some listed)

- Microsoft Office OneNote 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- FingerPoint Software (fingerprint models)
- Multimedia Center for Think Offersings
- Sonic RecordNOW and Drive
- Letter Access (DVD-ROM models)
- InterVideo WinDVD (DVD-ROM models)
- InterVideo WinDVD Creator (DVD-ROM models)

CD included

- Microsoft Office OneNote 2003

License - CD not included

- Lotus® SmartSuite© Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

*Powered by Intel Centrino® Duo processor technology © Lenovo

US models announced October 17 or November 21, 2006

US models withdrawn effective July 2007

(RC2-A) August 2007

Limited warranty1

1-Year - EasyServ™ on-site pickup and delivery / service upgrades available

12 months limited warranty

- Windows XP Professional models
- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery

Windows XP Home models

- Microsoft Windows XP Home Edition (Service Pack 2)
- Disk-to-Disk Recovery

Preloaded (all; only some listed)

- Microsoft Office OneNote 2003
- Rescue and Recovery™
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- ThinkVantage Productivity Center with Away Manager
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- Adobe® Reader
- Google Toolbar
- FingerPoint Software (fingerprint models)
- Multimedia Center for Think Offersings
- Sonic RecordNOW and Drive
- Letter Access (DVD-ROM models)
- InterVideo WinDVD (DVD-ROM models)
- InterVideo WinDVD Creator (DVD-ROM models)

CD included

- Microsoft Office OneNote 2003

License - CD not included

- Lotus® SmartSuite© Millennium and Lotus Notes® Stand-alone Client
## Type-model

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<tr>
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<th>Speed (GHz)</th>
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<th>Anti-glare</th>
<th>Discrete graphics</th>
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</table>

## Preloaded

- Recovery and Repair
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage Speed Update
- Symantec Client Security
- Diskeeper Lite
- PC-Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for ThinkPad
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD-RW)
- Intel Video DVD Creator (combo, DVD-RW models)
- IntelVideo WinDVD Creator (combo, DVD-RW models)

## License - CD not included

- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

## Support

- 90 watt AC adapter (discrete graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service

## Limited warranty

3-year

## Additional information

- Powered by Intel Centrino mobile technology
- Powered by Intel Centrino Duo mobile technology
## ThinkPad R60 (9462) - ATI graphics (October 2006) - withdrawn

### Type-model  Processor  Speed  Memory  Anti-glare  Discrete graphics  Disk  Mini PCIe  Mini PCIe  Finger-S-Video  Limited
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<th>Battery</th>
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</table>
| 9462-G9U Core 2 Duo T7200   2.00 1GB   14.1" XGA  128MB 80GB Combo • Intel 11a/b/g None 6 3-yr  Gb  Oct 06
| 9462-GAU Core 2 Duo T7200   2.00 512MB  15.0" SXGA+ 128MB 100GB DVD  • Intel 11a/b/g None 9 3-yr  Gb  Oct 06

### Positioning
- **Processor**: Intel® Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology. Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache
- **Memory**: 512MB or 1GB std / 4GB max (*) / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

### Diskette drive
- EIDE Combo
- EIDE DVD RW
- Serial ATA disk (SATA150)
- Ultrabay Enhanced

### Display
- Type: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect
- Size: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / 200 nits / anti-glare / 4:3

### Graphics
- ATI® MOBILITY™ Radeon™ X1400 M5A / PCI Express x16 / 128MB GDDR1

### Keyboards
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys

### Touchpad
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
- Touchpad

### Dimensions
- 14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46" / 314mm x 260mm x 34.3-37.2mm
- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58" / 332mm x 269mm x 37.3-40.2mm

### Weight
- 6-cell: up to 6.6 hr; 9-cell: up to 4.6 hr; 6-cell: up to 4.7 hr; 9-cell: up to 3.9 hr

### Battery - type
- Lithium Ion 6-cell / 9-cell / supports unique 2nd battery in Ultrabay Enhanced
- UltraBay Slim compatible / 12.7mm high / curved bezel

### Battery - life
- 6-cell: up to 3.1 hr; 9-cell: up to 6.6 hr

### Architecture
- Mobile Intel 945PM Express Chipset / 828945PM Memory Controller Hub / 82801GB ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (11th PC4512 CardBus controller) / LPC bus (National Semiconductor PC67548 Super I/O, Atmel® 9753203)
- Intel® 82573EB Gigabit Ethernet Controller / Broadcom® BCM57516 (MAC/PHY) / PCIe x1 / PXE
- Audio support
- High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / microphone / microphone input jack / headphone jack
- Security
- Power-on password / hard disk password / supervisor password / security keyhole
- Security chip
- Trusted Platform Module / Atmel chip / TCG 1.2-compliant
- FingerPrint reader
- FingerPrint reader on palm rest / swipe sensor / supports the security chip

### Limited warranty
- 3-year / 1-year battery - EasyServ™ / onsite pickup and delivery / service upgrades / 2 year available

### Software
- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery
- Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper Lite
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW and Drive
  - Letter Access (combo, DVD:RW)
  - Virtual WinDVD (combo, DVD:RW models)
  - InterVideo WinDVD Creator (DVD:RW models)
- License - CD not included
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Supports ThinkVantage technologies

### Other accessories
- Lenovo Laser Mouse (USB, PS/2)
- Other accessories at lenovo.com/accessories

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See footnotes for important warranty information

*Powered by Intel Centrino® Duo processor technology

© Lenovo

(RC2-B) August 2007
### ThinkPad R60 (9462) - ATI® graphics (Education) - withdrawn

- **Processor**: Intel® Core™ Duo processor T2400 or T2500 with dual core technology. Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

- **Memory**: 512MB or 1GB std / 4GB max1 / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel in one socket / one socket available

- **Diskette drive**: None standard / use optional USB-based diskette drive

- **Fingerprint reader**: on palm rest

- **Audio support**: HD Audio

- **Wireless antenna**: UltraConnect

- **Power supply**: 90-watt AC adapter (discrete graphics)

- **CD**: Adobe Photoshop Elements plus Adobe Premiere Elements

- **Limited warranty**: 3-year limited warranty (3-year limited warranty on-site pickup and delivery)

- **See footnotes for important warranty information**

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<table>
<thead>
<tr>
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<th>Memory</th>
<th>Anti-glare</th>
<th>Discrete graphics</th>
<th>Disk SATA</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Finger-S-Video</th>
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*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty on-site pickup and delivery.*

These models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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**SOFTWARE**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Microsoft® Windows® XP, Office XP Professional, XP Professional, XP Home Edition

- **ThinkPad Utilities** (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Desktop

- **Supports ThinkVantage technologies**
  - Help and Support
  - Stand-alone Client
  - Lenovo® ThinkVantage Productivity Center
  - Lenovo® Stand-alone Client

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**CD**

- **Adobe Photoshop Elements plus Adobe Premiere Elements**

**License** - CD not included

- **Lenovo® Stand-alone Client**

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**Post-support annual maintenance agreements**

- **Lenovo® Stand-alone Client**

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**Virtual Source Learning education software**

- **Adobe® Photoshop® Elements plus Adobe Premiere® Elements**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskkeeper® Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)

- **Adobe® Reader**
  - Google Desktop
  - Google Notebook

**Power-on password**

- **Windows® XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)

**Serial ATA disk**

- **UltraBay Enhancd**
  - EIDE DVD
  - Diskette drive

**Hard Disk Drive - Active Protection System**

- **S-Video**
  - EasyServ

**UltraNav**

- **USB 2.0 Security Memory Key 4GB**
  - 41U5120

**ThinkPad DVD Ultrabay Slim Burner (flat)**

- **USB 2.0 Lenovo Webcam**
  - 40Y8518

**ThinkPad Advanced Mini Dock**

- **ThinkPad Advanced Dock**
  - 250310U
  - Other accessories at lenovo.com/accessories

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**Note:**

- **USB 2.0 Security Memory Key 4GB**
  - 41U5120

**ThinkPad Advanced Dock**

- **ThinkPad Advanced Dock**
  - 250310U
  - Other accessories at lenovo.com/accessories

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**Note:**

- **ThinkPad DVD Ultrabay Slim Burner (flat)**
  - 41N5663
  - Lenovo® 5000 Projector
  - 40Y7825
  - ThinkPad Portable Battery Charger
  - 40Y6799
  - ThinkPad Enhanced Audio Battery Charger
  - 40Y7676

**ThinkPad UltraBay Enhancd**

- **ThinkPad Advanced Mini Dock**
  - 2504110U
  - TrackPoint Cap Collection
  - 73P2698

**ThinkPad Advanced Dock**

- **ThinkPad Advanced Dock**
  - 250310U
  - Other accessories at lenovo.com/accessories
### ThinkPad® R60 (9463) - ATI® graphics (TopSeller and Educ) - withdrawn

#### Type-model | Processor | Speed GHz | Main Memory | Disk graphics | Discrete graphics memory | Disk SATA | EIDE controller | Mini PCIe | Mini PCIe WWAN | Bluetooth | Finger-Sensor | 3-year limited warranty | Availability
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
9463-82U Core Duo T2400 | 1.83 | 512MB | 14.1” XGA | 64MB | 60GB 5400 | Combo | Intel 11a/b/g ✶ | None | None | None | None | EasyServ May 06
9463-75U Core Duo T2400 | 1.83 | 512MB | 15.0” XGA | 64MB | 60GB 5400 | Combo | Intel 11a/b/g ✶ | None | None | None | None | EasyServ May 06

#### Positioning
- Processor: Everyday computing; two spindles
- Memory: 512MB std / 4GB max ✶ / PC2-S300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

#### Diskette drive
- None standard / use optional USB-based diskette drive

#### Display
- Some: 14.1” (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect
- Some: 15.0” (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect

#### Graphics
- ATI® MOBILITY® Radeon™ X1300 M52 / PCI Express x16 / 64MB GDDR1
- Lenovo Laser Mouse (USB, PS/2) 41U3074
- ThinkPad Advanced Mini Dock 250410U
- 11a/b/g Wireless Mini PCI Express Card Adapter 40Y7026
- Lenovo L192p 19” Monitor (black) 9419HC2
- ThinkPad Convertible Monitor Stand 40Y7620
- ThinkPad Adjustable Notebook Stand 40Y7676
- USB Fingerprint Reader 73P4774
- ThinkPad Carrying Case - Organizer 73P3598
- Lenovo C500 Projector 0039A05
- ThinkPad 90W AC Adapter 40Y7659
- T60/R60 Series Li-Ion Battery 6-cell 40Y6799
- Lenovo L192 Wide 19” Monitor (black) 6920AB1
- ThinkPad Convertible Monitor Stand 40Y7620
- ThinkPad Adjustable Notebook Stand 40Y7676
- USB Fingerprint Reader 73P4774
- ThinkPad Carrying Case - Organizer 73P3598
- Lenovo C500 Projector 0039A05
- ThinkPad 90W AC Adapter 40Y7659
- T60/R60 Series Li-Ion Battery 6-cell 40Y6799

#### SOFTWARE
- Windows XP Professional
- - Windows® XP Professional (Service Pack 2)
- - Disk-to-Disk Recovery
- - VitalSource Library education software
- - Adobe® Photoshop® Elements plus Adobe® Premiere® Elements
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center with Away Manager
- - ThinkVantage System Update
- - Symantec® Client Security™
- - Diskeeper Lite
- - PC-Doctor® (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe® Reader
- - Google Toolbar
- - Google Desktop
- - Picasa from Google
- - Multimedia Center for Think
- - Sonic RecordNOW and Drive
- - Lenovo System Update
- - Rescue and Recovery™

#### License
- CD - not included
- - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Supports ThinkVantage® technologies
- 90-watt AC adapter (discreetgraphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty

#### Limited warranty
- 3-year / 1-year battery - EasyServ onsite pickup and delivery / service upgrades avail

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© Lenovo (RC1-D) September 2007
Partial list of accessories supported on ThinkPad R60
originally announced on May 16, 2006

Memory
512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06
1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 ann 01/05/06
2GB PC2-5300 DDR2 CL5 SODIMM 40Y7735 ann 11/28/06

Ultraplay Slim 9.5mm (best to use curved bezel options)
Serial Hard Drive Ultraplay Slim Adapter (flat)** 40Y8725 ann 09/20/05
** Supported, but not recommended because flat bezel.

DVD-ROM Ultraplay Slim Drive (curved bezel) 73P3270 ann 10/07/03
Combo II Ultraplay Slim Drive (flat bezel) 40Y8621 ann 09/20/05
ThinkPad DVD Ultraplay Slim Burner (flat) 41N5643 ann 05/31/07

Ultraplay Enhanced 12.7mm (best to use curved bezel options)
DVD-ROM Ultraplay Enhanced Drive (curved) 39X2642 ann 03/14/06
CD-RW/DVD Ultraplay Enhanced (cur) 73P3275 ann 10/07/03

Storage and removable storage
60GB Disk 9.5mm SATA150 (7200 rpm)** 41N3012 ann 01/05/06
80GB Disk 9.5mm SATA150 (5400 rpm)** 41N5682 ann 08/15/06
100GB Disk 9.5mm SATA150 (7200 rpm)** 41N3013 ann 01/05/06
120GB Disk 9.5mm SATA150 (5400 rpm)** 41N5691 ann 03/20/07
160GB Disk 9.5mm SATA150 (5400 rpm)** 41N5692 ann 03/20/07
** Can be used as the main HDD or with
ThinkPad Serial ATA Hard Drive UltraBay Slim Adapter 40Y8725 in the UltraBay or in the
ThinkPad Advanced Dock 250310U.

USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07
USB 2.0 Essential Memory Key 2GB 41U4944 ann 01/23/07
USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07
USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07
USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07

USB Portable Diskette Drive 05K9276 ann 06/05/00
USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 ann 01/05/06
USB 2.0 Portable 80GB Hard Disk 41N8378 ann 04/17/07
USB 2.0 Portable 120GB Hard Disk 41N8379 ann 04/17/07
USB 2.0 Super Multi-Burner Drive 41N5565 ann 01/23/07

Wireless LAN (Mini PCI Express)
11a/b/g Wireless Mini PCI Express Adp** 40Y7026 ann 09/20/05
Intel PRO/Wireless 3945ABG Mini PCIe Adp** 41N3008 ann 01/05/06
** System must be wireless upgradable.

ThinkPad WiFi Finder Plus 40Y7717

ThinkPad Expansion
USB Serial Parallel Adapter 22P5298 ann 10/09/01
ThinkPad Adjustable Notebook Stand 40Y7676 ann 09/20/05
ThinkPad Essential Port Replicator 250510W ann 09/20/05
ThinkPad Advanced Mini Dock 250410U ann 09/20/05
ThinkPad Advanced Dock** 250310U ann 09/20/05
** ThinkPad Advanced Dock supports dual-head graphics adapters:
- ATI® X1300 256MB Dual Head/TV-out 41U5028
- ATI Radeon™ X300 SE 128MB Dual Head 41U4813

External Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
Enh Perf Wireless Keyboard and Mouse 73P4067 ann 12/07/04
USB Keyboard with UltraNav 31P8950 ann 01/28/03
USB Travel Keyboard with UltraNav 31P9490 ann 04/27/04
Preferred Pro USB FingerPrint Keyboard 73P4730 ann 02/22/05

External Mouse
USB Optical Wheel Mouse 06P4069 ann 05/21/03
Optical 3-Button ScrollPoint® Mouse 31P7405 ann 08/27/02
Optical 3-Button ScrollPoint Pro Mouse 31P8700 ann 10/01/02
Optical 3-Button Travel Wheel Mouse 31P7410
Lenovo Laser Mouse (USB, PS/2) 41U3074 ann 01/23/07

Batteries
T60/R60 Series Li-Ion Battery 6-cell 40Y6799 ann 01/05/06
Z60m/T60/R60 Li-Ion Battery 9-cell 40Y6797 ann 09/20/05
ThinkPad Advanced UltraBay Battery 3-cell** 40Y6789 ann 09/20/05
** Used in UltraBay Enhanced bay.

ThinkPad External Battery Charger** 40Y7625 ann 09/20/05
** Requires the ThinkPad 90W AC Adapter

ThinkPad 65W AC Adapter** 40Y7696
** Only compatible with the 945GM and GM965 chipset models.

ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
ThinkPad 90W AC/DC Combo Adapter 40Y7630 ann 12/13/05
Belkin 1 Outlet Notebook Surge 31P7668
Belkin Universal Notebook Travel Surge 22P7127
Belkin 8-outlet 6-foot Surge Protector 31P7659

Data/Video Projectors
Lenovo M500 Projector 0037A05 ann 02/28/06
Lenovo C500 Projector 0039A05 ann 07/11/06

Carrying Cases
Lenovo Carrying Case - Messenger Max 41U5253 ann 05/01/07
Lenovo Carry Case - Performance Backpack 41U5254 ann 05/07/04
ThinkPad Nylon Carrying Case 10K0207
ThinkPad Carrying Case - Expander 73P3597
ThinkPad Carrying Case - BackPack 73P3599
ThinkPad Premiere Leather Carrying Case 10K0209
ThinkPad Convertible Carrying Case 22P8860

Security
Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03
PC Card Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
ExpressCard Gemplus GemPC Smart Card Reader 41N3004 ann 12/13/05
USB Fingerprint Reader 41U3167 ann 10/24/06

Monitors
Lenovo E75 17" CRT Monitor (16.0'' vis) blk 6307BTN ann 01/16/07
Lenovo L151 15" Monitor (black) 9165AB6 ann 02/28/06
Lenovo L119 19" Monitor (black) 9135AB6 ann 11/07/06
Lenovo L192 Wide 19'' Monitor (black) 6920AB1 ann 09/19/06
Lenovo D221 Wide 22'' Monitor (black) 662H31B ann 11/21/06
ThinkVision L192p 19" Monitor (black) 9419HC2
ThinkVision L201p 20.1'' Monitor (black) 9220HB1 ann 10/31/06

Monitor Accessories**
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03
ThinkPad Convertible Monitor Stand 40Y7620 ann 01/05/06
Radial Arm 19K4464 ann 20/02

Multimedia
USB 2.0 Lenovo Multimedia Headset 40Y8519 ann 06/27/06
USB 2.0 Lenovo Webcam 40Y8518 ann 06/27/06

Other accessories at lenovo.com/accsessories
Need to buy accessories no longer marketed by Lenovo? See www.itxchange.com/lenovo for the Options Continuation Program.
<table>
<thead>
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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
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<th>Mini PCIe</th>
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<td>7650-84U Celeron 540</td>
<td>1.86</td>
<td>512MB</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>80GB</td>
<td>5400</td>
<td>Combo</td>
<td>11b/g</td>
<td>None</td>
<td>6</td>
<td>XP Pro</td>
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<tr>
<td>7650-82U Celeron 540</td>
<td>1.86</td>
<td>512MB</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>80GB</td>
<td>5400</td>
<td>Combo</td>
<td>11b/g</td>
<td>None</td>
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<td>5400</td>
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<td>6</td>
<td>XP Pro</td>
<td>No</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

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<th>Intel AMT</th>
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<th>Modem</th>
<th>Intel 11a/b/g 32</th>
<th>Battery - type</th>
<th>Case material</th>
<th>Weight2</th>
<th>TrackPoint</th>
<th>Keyboard</th>
<th>Graphics</th>
<th>Camera</th>
<th>Display</th>
<th>Chipset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyday computing; two spindles</td>
<td>Intel® Celeron® Processor 540 or 550 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel® Core™ 2 Duo processor T5670 with dual-core, 800MHz system bus, and 2MB L2 cache</td>
<td>512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-ittalic: standard memory in one socket; one socket available</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</tr>
</tbody>
</table>

- Diskette drive: None (use optional USB-based diskette drive)
- IDE Combo: DVD-ROM/CD-RW, 24X/24X/24X/8X2, fixed, not removable, 12.7mm high
- UltraBay Enhanced: None (no support for removable UltraBay™ options)
- Serial ATA disk: 80GB² (5400 rpm) / SATA 1.5Gbps, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™
- Widescreen display: 15.4" (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera: None
- Graphics: Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, no DVI pass-through (no port replicator or docking station support)
- Keyboard: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys
- TrackPoint: TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar² (no touch pad)
- ThinkLight: Illuminates the keyboard to improve visibility in low-light conditions
- Dimensions²: 6-cell 15.4W (WxDxH): 14.1" x 10.2" x 1.39 - 1.52", 359.5 x 260.0 mm x 35.3 - 38.5 mm
- Weight²: 6-cell: starting at 6.4 lb (2.9kg); 9-cell: starting at 6.7 lb (3.1kg)
- Case material: Black color, Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Battery - type: Lithium Ion 6-cell
- Battery - life²: 6-cell: Celeron: up to 2.1 hr
- Chipset: Mobile Intel® GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE; PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], / PCI bus (Ricoh® R5C804 Cardbus)
- PC Card Std slot: None or Type I or Type II slot, CardBus 32-bit
- ExpressCard slot: None
- Smart Card Read: None
- Multicard Reader: None
- Ports: Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet)
- Mini PCI Express: One Mini PCI Express slot / not customer upgradable
- 11b/g²: Some: 11b/g wireless², ThinkPad 11b/g Mini PCIe Adapter II, Atheros AR5007EG
- Intel 11a/b/g³: Some: 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- Intel 4965AG²: Some: 11a/b/g wireless, Mini PCIe adapter, Intel Wireless WiFi Link 4965AG
- WWAN: None
- Modem: 56K V.92² modem, on systemboard, Connect+, CX20548
- Bluetooth²: None
- Ethernet: Gigabit ethernet on systemboard, Broadcom² BCM5787M (MAC/PHY), PCIe x1, PXE
- Intel AMT: None
- Audio support: High Definition (HD) Audio, CX20549 codec / stereo speakers, 1 watt / volume up, down, mute buttons / microphone input jack, headphone jack
- Security chip: None
- Security keyhole: None
- Fingerprint reader: None

  - Vista models: Vista Basic logo

- Preloaded applications²¹ (all OSes) - Rescue and Recovery™ - Access Connections™ - Client Security Solution™ - ThinkVantage Productivity Center - ThinkVantage System Update - System Migration Assistant Norton Internet Security (90 days of virus definitions) - Diskeeper® Home - PC-Doctor™ (diagnostics) - ThinkPad Utilities (Power Manager and Presentation Director) - Adobe® Reader - Windows Live™ Toolbar - Windows Live Search - Picasa from Google - Microsoft Office 2007 Trial (60-day) - Sonic RecordNow and Drive Letter Access (combo, DVD+RW) - Corel® WinDVD² (combo, DVD+RW) - Corel® WinDVD Creator (XP Pro DVD+RW models)

- Supports ThinkVantage® technologies

- 65-watt (GMA graphics) ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day²⁰ toll-free support during the warranty period²⁰ via 800-426-7378

- Lenovo® ThinkPlus® 2-year LOR²⁰ 5x9 NBD
- Lenovo® ThinkPlus 3-year LOR 9x5 NBD
- Lenovo® ThinkPlus 4-year LOR 9x5 NBD
- Lenovo® ThinkPlus 5-year LOR 9x5 NBD

See footnotes for important warranty information

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US models announced July 10 or October 30, 2007; or April 8 or July 9, 2008

US models withdrawn effective December 2007 or November 2008

1. Lenovo® ThinkPad® R61e 15W 7650 (GMA) - withdrawn

2. Lenovo® Centralata processing technology

(KON11-1) November 2008
### ThinkPad R61e 15W (GMA Graphics) - 1-year - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk ATA 6GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Workload (W) Global (G)</th>
<th>Available date</th>
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<tbody>
<tr>
<td>7649-22U T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4'' WXGA GMA 80GB 5400 Combo ✱ Intel 11a/b/g32 None</td>
<td>None 6 Business 32</td>
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</tbody>
</table>

- **This model has a 1-year limited warranty**

### Positioning

**Processor**: Everyday computing: two spindles Intel Core™ 2 Duo processor T7300 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

**Memory**: 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; **Italicics**: standard memory in both sockets; no sockets available.

**Diskette drive**, **IDE Combo**, **Ultrasound Enhanced**: None (use optional USB-based diskette drive)

**Serial ATA disk**: None (no support for removable Ultrabay™ options)

**Widescreen display**: 15.4'' (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio.

**Camera**: None.

**Graphics**:

- **Intel Graphics Media Accelerator X3100 (GMA X3100)**, integrated in GM965, no DVI pass-through (no port replicator or docking station support)

**Keyboard**:

- **TrackPoint**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys
- **ThinkLight**: TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar® (no touch pad)

**Dimensions**:

- **Weight**: 6-cell 15.4''WxHxD: 14.1'' x 10.2'' x 1.39--1.52''; 359.5 x 260.0 mm x 35.3--38.5 mm
- **Cell**: starting at 6.4 lb (2.9kg); 9-cell: starting at 6.7 lb (3.1kg)

**Battery - type**: Black color, Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Battery - life**: 6-cell Celeron: up to 2.1 hr; 6-cell Core 2 Duo: 5.0 hr; 9-cell Core 2 Duo: up to 7.0 hr

**Chipset**:

- **Mobile Intel GM965 Express Chipset** (Graphics Memory Controller Hub);ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth]), / PCI bus (Rico® R5C804 Cardbus) / PC Card Std slot

### Wireless antenna

- **Mini PCI Express**: 11a/b/g32 11a/b/g wireless, Mini PCI card adapter, Intel PRO/Wireless 3945ABG
- **WWAN**: None

**Modem**: 56K V.92™ modem, on systemboard, Conexant® CX20548

**Bluetooth**: None

**Ethernet**: Gigabit ethernet, Broadcom® BCM5787M (MAC/PHY), PCIe x1, PXE

**Intel AMT**: None

**Audio support**: High Definition (HD) Audio, CX20549 codec / stereo speakers, 1 watt / volume up, down, mute buttons, microphone input jack, headphone jack

**Security**:

- **chip**: Power-on password, hard disk password, supervisor password, security keyhole
- **chip**: Security
- **Fingerprint reader**: None

### Limited warranty**

- **1-year - EasyServ™, depot repair service / service upgrades available**

### Preloaded operating system

- **Microsoft Windows Vista™ Business Edition (32-bit)**
- **Vista Premium logo**

### Preloaded applications

- **Rescue and Recovery™**
- **Access Connections™**
- **Client Security Solution™**
- **ThinkVantage Productivity Center**
- **System Migration Assistant**
- **Norton Internet Security** (90 days of virus definitions)
- **Diskeeper™ Home**
- **PC-Doctor™ (diagnostics)**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Adobe® Reader**
- **Windows Live™ Toolbar**
- **Windows Live Search**
- **Picasa from Google**
- **Microsoft Office 2007 Trial (60-day)**
- **SONIC RecordNow and Drive Letter Access (combo)**
- **Core™ WinDVD™ (combo)**

Supports ThinkVantage technologies

### Accessories

- **90W Slim AC/DC Combo Adapter 41N8460**
- **ThinkVision L2440p Wide 24" Monitor 4420HB2**
- **ThinkVision L2240p Wide 22" Monitor 4422HB6**
- **ThinkVision L2040p Wide 20" Monitor 4420HB8**

### Limited warranty

- **1-year - EasyServ™, depot repair service / service upgrades available**

### Post-warranty annual maintenance agreements at

[Thinkpad.com/thinkplus/warranty](http://Thinkpad.com/thinkplus/warranty)

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**See footnotes for important warranty information**

* Intel Centrino™ processor technology

Lenovo

(KON11-2) May 2009

Lenovo

US model announced July 10, 2007

US model withdrawn effective May 2009
Partial list of accessories supported on:

- ThinkPad R61e 15W originally announced on July 10, 2007

**Memory**

- 512MB PC2-5300 DDR2 SODIMM 40Y7733 ann 01/05/06
- 1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999 ann 03/25/08
- 1GB PC2-5300 DDR2 SODIMM 40Y7734 ann 04/05/06
- 2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000 ann 03/25/08
- 2GB PC2-5300 DDR2 SODIMM 40Y7735 ann 11/28/06

**Ultraday Slim 9.5mm**

None (no removable bay options)

**Ultraday Enhanced 12.7mm**

None (no removable bay options)

**Storage and removable storage**

- 160GB Disk 9.5mm SATA 1.5Gb/s (5400 rpm) 41N5692 ann 03/20/07
- 160GB Disk 9.5mm SATA 1.5Gb/s (7200 rpm) 41N5737 ann 10/16/07
- 250GB Disk 9.5mm SATA 1.5Gb/s (5400 rpm) 43R8152 ann 01/15/08
- 250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410 ann 01/20/09
- 320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403 ann 08/05/08
- 320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411 ann 01/20/09
- USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07
- USB 2.0 Essential Memory Key 2GB 41U4942 ann 01/23/07
- USB 2.0 Essential Memory Key 4GB 45J9704 ann 06/24/08
- USB 2.0 Essential Memory Key 8GB 45J9705 ann 07/15/08
- USB 2.0 Essential Memory Key 32GB 45J1258 ann 10/28/08
- USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07
- USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07
- USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07
- USB 2.0 Ultra Secure Memory Key 1GB 45J5915 ann 08/26/08
- USB 2.0 Ultra Secure Memory Key 2GB 45J5916 ann 08/26/08
- USB 2.0 Ultra Secure Memory Key 4GB 45J5917 ann 08/26/08
- USB Portable Diskette Drive 05K9276 ann 06/05/00
- USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8657 ann 01/05/06
- USB Portable 160GB Hard Disk 43R1784 ann 09/23/08
- USB Portable 320GB Hard Disk 45K1689 ann 03/17/09
- USB Portable Secure 160GB Hard Disk 43R2018 ann 11/18/08
- USB Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
- USB 2.0 Super Multi-Burner Drive 41N5565 ann 01/23/07

**Wireless LAN (Mini PCI Express)**

No Mini PCI Express upgrade supported (use PC Card)

**ThinkPad Expansion**

- USB 2.0 Lenovo Enhanced Port Replicator 43R8770 ann 02/26/08
- ThinkPad Adjustable Notebook Stand 40Y7676 ann 09/20/05

**Keyboard**

- TrackPoint Cap Collection 73P2698 ann 12/16/03
- USB Numeric Keypad 33L3225 ann 05/01/00
- Preferred Pro USB Keyboard 73P5220 ann 06/21/05
- Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
- Wireless Kybd & Opt Wheel Mouse (via USB) 73P4067 ann 12/07/04
- USB Keyboard with UltraNav 31P9950 ann 01/22/08
- USB Travel Keyboard with UltraNav 31P9490 ann 04/27/04
- Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
- Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

**Mouse**

- Optical Wheel Mouse (USB) 06P4069 ann 05/21/03
- Optical ScrollPoint® Mouse (USB, PS/2) 31P7405 ann 08/27/02
- Optical Wheel Travel Mouse (USB, PS/2) 31P7410 ann 06/04/02
- LaserTilt Wheel Mouse (USB, PS/2) 41U3074 ann 01/23/07
- Lenovo Wireless Laser Mouse (blk, via USB) 45K1696 ann 11/25/08
- Lenovo Wireless Laser Mouse (red, via USB) 51J0198 ann 11/25/08
- LaserTilt Wheel Mouse (Bluetooth®) 73P4067 ann 12/07/04
- Wireless Kybd & Opt Wheel Mouse (via USB) 73P4067 ann 12/07/04

**Security**

- Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
- PC Card Gemplus Smart Card Reader 41N3004 ann 12/13/05

**Multimedia**

- USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06
- USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06

**Batteries**

- T/R/W/SL Series Li-ion Battery 6-cell 40Y6799 ann 01/05/06
- T/R/W/SL Series Li-ion Battery 9-cell 460Y6797 ann 09/20/05
- ThinkPad External Battery Charger® 40Y7652 ann 09/20/05

**Charging tips for 90W Slim DC/DC Combo Adapter**

- Dual (ThinkPad-Phone) Charging Y-Cable 41R3435 ann 12/18/07
- Palm device charge tip (L7) 41R3435 ann 12/18/07
- BlackBerry charge tip (L8a) 41R4478 ann 12/18/07
- iPod and iPhone charge tip (L10a) 41R4481 ann 12/18/07

**Carring Cases**

Up to 15.4" widescreen models:

- Lenovo Carrying Case - Messenger Max 41U5253 ann 05/01/07
- Lenovo Car Case - Performance BackPack 41U5254 ann 05/01/07
- Lenovo Standard Case 45K1697 ann 11/25/08
- Lenovo Standard Backpack 45K1698 ann 11/25/08
- Checkpoint Friendly Business Topload Case 51J0418 ann 02/24/09
- ThinkPad Business Topload Case 43R2476 ann 05/13/08
- ThinkPad Business Backpack 43R2482 ann 05/13/08
- ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
- ThinkPad Executive Leather Case 43R2480 ann 05/13/08

Up to 17.0" widescreen models:

- ThinkPad 17W Business Topload Case 43R9117 ann 08/12/08

**Monitors**

- ThinkVision® L174 17" Monitor 9227AE1 ann 04/15/08
- ThinkVision L1700p 17" Monitor 9417HE2 ann 09/17/08
- ThinkVision L1800p 19" Monitor 4431HE1 ann 11/17/08
- ThinkVision L1840p Wide 19" Monitor 4434B66 ann 09/17/08
- ThinkVision L200p Wide 20,1" Monitor 4438B66 ann 04/15/08
- ThinkVision L2240p Wide 22" Monitor 4422B66 ann 09/17/08
- ThinkVision L2440p Wide 24" Monitor 4420B66 ann 09/17/08
- ThinkVision L2440x Wide 24" Monitor 4421B66 ann 09/17/08

**Monitor Accessories**

- ThinkVision USB Soundbar 40Y7616 ann 08/23/05
- ThinkVision Soundbar 45K1263 ann 09/16/08
- Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- ThinkPad Convertible Monitor Stand 40Y7620 ann 01/05/06
- 19" T/R/W/SL Series Li-ion Battery 6-cell 40Y6799 ann 01/05/06

**More information at www.lenovo.com/support/monoraces**
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<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe Intel Turbo</th>
<th>Card slot</th>
<th>Battery</th>
<th>Workhorse (W)</th>
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<tbody>
<tr>
<td>7732-19U</td>
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<td>5400 Combo</td>
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</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 1-year limited warranty

Positioning: Everyday computing; two spindles
Processor: Intel® Core™ 2 Duo processor T7100 with dual-core.
EIDE Combo: DVD-ROM/CD-RW (73P3288), 24x/24x/24x/8x, removable UltraBay™ Enhanced
Serial ATA disk: UltraBay Enhanced
Widescreen display: 14.1” (358.1mm) WXGA (1280x800) color

License Agreement: Lenovo Systems Reference (PSREF)

See footnotes for important warranty information
US model announced May 9, 2007
US model withdrawn effective June 2008

Preloaded operating system: Microsoft Windows® Vista™ Business Edition (64-bit)
Preloaded applications: Microsoft Office OneNote® 2007

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<th>Camera</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe Intel Turbo</th>
<th>Card slot</th>
<th>Battery - life10</th>
<th>Workforce (W)</th>
<th>Global (G)</th>
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<td>T7100 1.80</td>
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<td>DVD±RW</td>
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</table>

**Type-models withdrawn effective Dec 2007, June 2008, or Nov 2008**

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty

---

**Positioning**

Everyday computing; two spindles

Intel® Core™ 2 Duo processor T5670, T7100, T7250, or T8100 with dual-core, 800MHz system bus; T5670/T7100/T7250/2MB shared L2 cache; T8100: 3MB L2

**Memory**

1GB or 2GB std / 4GB max (x2) / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

- Non-iliacs: standard memory in 1 socket; 1 socket available

**Diskette drive**

None (use optional USB-based diskette drive)

**EIDE DVD±RW**

DVD burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay™ Enhanced

**Ultrabay Enhanced Serial ATA disk**

One bay for removable devices, Ultrabay Slim-compatible, 1.27mm high, flat or curved

- DVD±RW 1.5GBs, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection™

**Widescreen display**

14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

**Graphics**

Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

**TrackPoint®**

Trackpoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

**Touchpad**

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions³**

Width: 4-cell: starting at 5.2 in (13.2cm)

- Weight: 4-cell (900g)

- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - life**

Battery life: 4-cell: up to 3.6 hr; optional 6-cell: up to 5.7 hr; 6-cell plus Ultrabay: up to 7.2 hr

**Chipset**

Mobile Intel GM965 Express Chipset (Graphics Media Controller Hub);ICH9M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 EID)

**PC Card slot**

One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot**

Some: /54 One ExpressCard/34 or ExpressCard/54

**Smart Card Reader**

None

**Multicard Reader**

Some: 4-in-1 reader (MultiMediaCard, Mem Stick® PRO, Secure Digital, xD-Picture Card®)

**Ports**

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express**

Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**T/R 14W High Capacity Batt**

9-cell

**Portable 160GB Hard Disk**

ThinkPad External Battery Charger 40Y7625

**ThinkPad Business Backpack**

43R2482

**90W Slim AC/DC Combo Adapter**

41N8460

**T/R 14W Enhanced Battery**

6-cell

**Thin Client Solution**


**ThinkPad Utility (Power Manager and Presentation Director)**

Adobe® Reader

Windows Live™ Toolbar

Windows Live Search

Picasa from Google

Fingerprint Software (fingerprint models)

Microsoft Office 2007 Trial (60-day)

Sonic RecordNow and Drive Letter Access (DVD±RW)

Corel® WinDVD® (DVD±RW)

Corel WinDVD Creator (XP Pro DVD±RW models)

**Supports ThinkVantage® technologies**

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service17

24 hour x 7 day toll-free support during the warranty period16

- (and CD)

- Adobe® Reader

- Windows Live™ Toolbar

- Windows Live Search

- Picasa from Google

- Fingerprint Software (fingerprint models)

- Microsoft Office 2007 Trial (60-day)

- Sonic RecordNow and Drive Letter Access (DVD±RW)

- Corel® WinDVD® (DVD±RW)

- Corel WinDVD Creator (XP Pro DVD±RW models)

- Supports ThinkVantage® technologies

- 22-2 year LOR® 9x5 NBD

- 3-year LOR 9x5 NBD

- 4-year LOR 9x5 NBD

- 5-year LOR 9x5 NBD

- 5-year LOR P&L P/U Depot

- 5-year LOR P&L P/U Depot

- 5-year LOR P&L P/U Depot

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

- * Intel Centrino® processor technology

Lenovo

US models announced Aug 7 or Sep 18, 2007; or Jan 8 and Aug 1, 2008

US models withdrawn effective Dec 2007, June 2008, or Nov 2008

(LAG1-2) November 2008

® Lenovo

™ Trademark

®® Registered trademark
**ThinkPad® R61 14W 7734 (GMA) - 3-year (Linux) - TopSeller - withdrawn**

Personal Systems Reference (PSREF)

### Product Information

#### Processor
- **Type**: Core™ 2 Duo processor T7250 with dual-core
- **Intel 64 Technology**: Enhanced Intel SpeedStep technology
- **Intel Dynamic Acceleration**: Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 2MB shared L2 cache

#### Memory
- **1 GB std | 4GB max**
- **Type**: PC2-5300 667MHz DDR2, non-parity, dual-channel capable, 200-pin SO-DIMM sockets
- **Non-ILC**: standard memory in 1 socket; 1 socket available

#### Diskette drive
- **None (optional USB-Based diskette drive)

#### Display
- **14.1" (358.1mm) WXGA (1280x800) color**, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

#### Graphics
- **Intel Graphics Media Accelerator X3100 (GMA X3100)**, integrated in GM965
- **Chipset**: Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICH6M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricochet 53847 Cardbus/1394/3-Multicard)
- **PC Card Std slot**: One Type I or Type II slot, CardBus 32-bit
- **PCMCIA Card Reader**: None
- **Ports**: Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

#### Wireless antenna
- **UltraConnect II antenna**
- **Mini PCI Express**: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- **Intel 11a/b/g 11a/b/g wireless**, Mini PCI adapter, Intel PRO/Wireless 3945AGB
- **WWAN**: None
- **Modem**: 56K V.92 modem in Communications Daughter Card socket
- **Bluetooth**: None
- **Ethernet**: Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC1), PXE
- **Intel AMT**: None
- **Audio support**: High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**: Trusted Platform Module, Atmel chip, TCG 1.2-compliant
- **Fingerprint reader**: **Fingerprint reader on palm rest**, swipe sensor, supports the security chip

#### Limited warranty
- **3-years** / 1-year battery - EasyServ**1** / depot repair service / service upgrades**2** available

---

### Preloaded operating system
- **- SUSLE® Linux® Enterprise Desktop 10 Service Pack 1**

### Preloaded applications
- **None**

### Supported devices (only some listed)
- **HD Audio**
- **Intel 3945ABG wireless**
- **Intel Graphics Media Accelerator X1300 (GMA X3100)**
- **NVIDIA Quadro NVS 140M**
- **Fingerprint reader**
- **Bluetooth**
- **Function keys**
- **ThinkPad Advanced Dock**

### Non-supported devices (only some listed)
- **Intel 4965AGN, Intel ThinkPad T11a/b/g, ThinkPad T11n wireless**
- **WWAN**
- **Active Protection System**
- **ThinkVantage button**
- **Security chip**
- **Intel Turbo Memory**
- **Intel AMT technology**
- **Integrated camera**

### Non-supported applications (only some listed)
- **ThinkPad Utilities**
- **ThinkVantage technologies**
- **Presentation Director**
- **Encrypted DVD playback**
- **Keyboard Customizer**

---

See footnotes for important warranty information

US model announced January 8, 2008

US model withdrawn effective November 2008

*Intel Centriron® processor technology

© Lenovo

(LAG1-8) November 2008
### ThinkPad R61 14W 7733 (GMA) - Linux - withdrawn

<table>
<thead>
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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN or</th>
<th>Card slot</th>
<th>Blue-tooth</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Linux preload</th>
<th>Global (G) Entry</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7733-3BU  T7500 2.2 GHz 1GB 14.1&quot; WXGA GMA 80G5400 Combo</td>
<td>Intel® Core™ 2 Duo processor T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; *-Italics: standard memory in 1 socket; 1 socket available</td>
<td>Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICHOM™ Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE), PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint] / PCI bus (Ricoch® R5847 Cardbus/1394/Multicard) / LPC bus (WCPN385 Super I/O, Atmel® 973C3203 TPM)</td>
<td>One Type I or Type II slot, CardBus 32-bit</td>
<td>8-cell starting at 5.5 lb (2.5kg)</td>
<td>Top: Super-Elastic PolyCarbone (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet); IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
<td>[54]/ One ExpressCard/34 or ExpressCard/54</td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ThinkPad R61 14W 7733 (GMA) - Linux - withdrawn</td>
<td>65-watt (GMA graphics) AC adapter</td>
<td>ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)</td>
<td>RoHS-compliant</td>
<td>International Warranty Service17 24 hour X 7 day18 toll-free support during the warranty period19 via 800-426-7378</td>
<td>ThinkPlus™ 22 2-year LOR™ 9x5 NBD 41C9175</td>
<td>ThinkPlus 3-year LOR 9x5 NBD 45K6021</td>
<td>ThinkPlus 4-year LOR 9x5 NBD 45K6022</td>
<td>ThinkPlus 5-year LOR 9x5 NBD 45K6024</td>
<td>ThinkPlus 4-year P/L P/U Depot 45K6023</td>
<td>ThinkPlus 5-year P/L P/U Depot 45K6025</td>
<td>Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty</td>
<td>Lenovo.com/thinkplus/warranty</td>
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<td>Lenovo.com/thinkplus/warranty</td>
</tr>
</tbody>
</table>

### Supported devices
- (only some listed)
  - HD Audio
  - Intel 3945ABG wireless
  - Intel Graphics Media Accelerator X3100 (GMA X3100)
  - NVIDIA Quadro NVS 140M
  - Fingerprint reader
  - Bluetooth
  - Function keys
  - ThinkPad Advanced Dock

### Non-supported devices
- (only some listed)
  - Intel 4965AG, Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad 11n wireless
  - WWAN
  - Active Protection System™
  - ThinkVantage button
  - Security chip
  - Intel Turbo Memory
  - Intel AMT technology
  - Integrated camera

### Non-supported applications
- (only some listed)
  - ThinkPad Utilities
  - ThinkVantage technologies
  - Presentation Director
  - Encrypted DVD playback
  - Keyboard Customizer

### Preloaded operating system
- SUSE® Linux™ Enterprise Desktop10 Service Pack 1

### Preloaded applications
- None

### See Footnotes for important warranty information

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US model announced January 15, 2008

US model withdrawn effective May 2009

(LAG1-9) May 2009
### Positioning

**Processor**

Intel® Celeron® Processor 540 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or

Intel® Core™ 2 Duo processor T7300 with dual-core Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Accelerate, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory

- **1GB std / 4GB max** / PC2-5300 DDR2
- **non-parity**

- **dual-channel capable**, two 200-pin SO-DIMM sockets;

- **Non-Italian**: standard memory in 1 socket; 1 socket available

### Diskette drive

None (use optional USB-based diskette drive)

### EIDE Combo

- **Some**: DVD-ROM/CD-ROM (7W3P62885), 24X/24X/24X/8X/4X/1X, removable UltraBay™ Enh

### EIDE DVD RW

- **Some**: DVD burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay Enh

### Ultrabay Enhancements

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, 100GB (7200 rpm), or 120GB (5400 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- **Some**: 14.1" (356.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10, 300:1

### Camera

None

### Graphics

- **ThinkPad Graphics Media Accelerator X1300 (GMA X1300)**, integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard

- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys**, integrated in Windows/Apple keys

### Touchpad

- **UltraNav™ multi-pointing system**, touch pad below keyboard, Tap Zones

### ThinkLight™

- **Illuminates the keyboard to improve visibility in low-light conditions**

### Dimensions

- **4-cell: 14.1" (WxDxH): 13.2" x 9.3" x 1.2" - 1.37"; 335mm x 237mm x 30.6 - 34.9mm**

### Weight

- **4-cell: starting at 5.2 lb (2.35kg)**

### Case material

- **Top**: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type

- **Lithium Ion 4-cell or 6-cell**

### Battery - size

- **4-cell**: up to 3.6 hours; 6-cell: up to 5.7 hours; 6-cell plus Ultrabay battery: up to 7.2 hours

### Chipset

**Mobile Intel GM965 Express Chipset** (Graphics Memory Controller Hub);

ICH6M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon: RSC847 Cardbus/1394/Multicard) / LPC bus (Modern: Super I/O, Atmel: 97SC303236 TPM)

### PC Card Std slot

- **One Type I or Type II slot**, CardBus 32-bit

### ExpressCard slot

- **Some**: [5/64] One ExpressCard/34 or ExpressCard/54

### Smart Card Reader

- **Some**: Smart Card Reader

### Multicard Reader Key

- **None**

### Ports

- **Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet); Model 1EU: IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Wireless antenna

- **UltraConnect™ II antenna** / on/off switch for all wireless radios

### Wireless Express

- **Mini PCI Express: Two Mini PCI Express slots** / only 802.11 wireless is custom upgradable

### WWAN

- **11a/b/g/n** / 11a/b/g wireless

### WWAN Turbo Memory

None

### Modem

- **56K V.92** modem in Communications Daughter Card slot

### Bluetooth™

- **Some**: Bluetooth 2.0 wireless, USB 2.0 interface via ICH6M, LED indicator

### Ethernet

- **Gigabit ethernet, Intel 82565MM Nvineh (PHY), PCI-1 (GLC), PXE

### Intel AMT

None

### Audio support

High Definition (HD) Audio, AD1984 HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack, headphone jack

### Security

- **Power-on password, hard disk password, supervisor password, security keyhole**

### Security chip

**Trusted Platform Module**, Atmel chip, TCG 1.2-compliant

### Finger Print reader

**Fingerprint reader on palm rest**, swipe sensor, supports the security chip

### Limited warranty

- **7736: 1-year - EasyServ™, depot repair service / service upgrades available**

- **7733: 3-years/1-year battery - EasyServ depot repair service / srv upgrades available**

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See footnotes for important warranty information

* Intel Centrino® processor technology

© Lenovo (LAG1-3) May 2009

US models announced May 9, June 19, Aug 21, Sept 4, or Nov 20, 2007

US models withdrawn effective May 2008 or May 2009

---
### ThinkPad® R61 14W 7735 (GMA) - Onsite - withdrawn

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<th>Model</th>
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<th>Graphics</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Preload</th>
<th>Limited warranty/GMP (P)</th>
<th>Whose (W)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7735-2UU 540</td>
<td>1.86 GB</td>
<td>14.1&quot; WXGA</td>
<td>80G</td>
<td>5400</td>
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<td>/54</td>
<td>Blue</td>
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<td>7735-1GU T7300</td>
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<td>Smart</td>
<td>Blue</td>
<td>4</td>
<td>XP Pro</td>
<td>3-yr</td>
<td>W G P May 07</td>
</tr>
</tbody>
</table>

### Preloaded operating system.
- Some: Microsoft® Windows® XP Professional
- Some: Microsoft Windows Vista® Business Edition (64-bit)

### Vista models: Vista Basic logo

### Preloaded applications (all O/Ses)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security
  (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software ( fingerprints models)
- Multimedia Center for Think Offerings (XP)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access
- Corel® WinDVD® (combo)

### Limited warranty (GMP) - 3-year limited warranty

### Positioning
- Processor: Everyday computing: two spindles
  - Intel® Celeron® Processor 540 with single-core, Intel 6 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or
  - Intel Core™ 2 Duo processor T7300 with dual-core,
  - Intel 6 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory
- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel, two 200-pin SO-DIMM sockets,
- Non-Volatile: standard memory in 1 socket; 1 socket available

### Diskette drive
- IDE Combo
- None (use optional USB-based diskette drive)

### Ultrabay Enhanced
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

### Dimensions
- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Graphics
- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

### Touchpad
- TouchPoint™ pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

### Ultrabay
- Lithium Ion 4-cell, supports unique 2nd battery in Ultrabay Slim

### Battery - type
- 4-cell: up to 3.6 hr; 4-cell: up to 3.6 hr; 4-cell: up to 3.6 hr; 4-cell: up to 3.6 hr

### Chipset
- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
- ICH8M-Enhanced I/O Controller Hub (SATRA 3.0Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint] / PCI bus (Ricochet® R5C847 Cardbus/1394/Multicard) / LPC bus (WPN385 Super I/O, Atmel® 9785Cardio23 TPM)

### Wireless antenna
- UltraConnect™ II antenna / on-switch for all wireless radios

### Mini PCI Express
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- Mini PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]

### WWAN
- None

### Memory
- None

### Security chip
- Trusted Platform Module

### FingerPrint reader
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- 3-years/1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

### Other accessories
- On R61-14W sheet

### Other accessories on O-R61-14W sheet

### See footnotes for important warranty information

** Intel Centri
cron® processor technology

© Lenovo

(LAG1-11) May 2009
ThinkPad® R61 14W (GMA Graphics) - Education (EasyServ) - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Proc. model</th>
<th>Type</th>
<th>model</th>
<th>processor</th>
<th>memory</th>
<th>Video</th>
<th>Audio</th>
<th>WiFi</th>
<th>Other</th>
<th>Detachable keyboard</th>
<th>Battery</th>
<th>Accessories</th>
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<tr>
<td>7733-1BU</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB 14.1&quot; WXGA</td>
<td>120G 5400</td>
<td>DVD/IR</td>
<td>11a/b/g</td>
<td>6-cell</td>
<td>Turbo</td>
<td>1.1 lb (0.5kg)</td>
<td>6-cell</td>
<td>None</td>
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<tr>
<td>7733-1CU</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB 14.1&quot; WXGA</td>
<td>80G 5400</td>
<td>Combo</td>
<td>11a/b/g</td>
<td>6-cell</td>
<td>Turbo</td>
<td>1.1 lb (0.5kg)</td>
<td>6-cell</td>
<td>None</td>
</tr>
</tbody>
</table>

### Preloaded operating system
- Vista Basic logo

### Preloaded applications
- Microsoft Office OneNote® 2007 (and CD)
- Some (K12): K-12 education software
- Microsoft Office OneNote 2007
- Some (HE): Higher education software
- Microsoft OneNote 2007

### Limited warranty
- 3-year (non-refurbished)
- 1-year (refurbished)

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**These models have an EasyServ™, EasyDepot repair service 3-year limited warranty**

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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**Positioning**

- Everyday computing; two spindles
- Intel® Core™ 2 Duo processor T7100 or T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**

- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-pantry, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket, 1 socket available

**Diskette drive**

- None (use optional USB-based diskette drive)

**EIDE Combo**

- Some: HDD-CD/DVD-RW (73P3288), 24x/24x/48x±, removable Ultrabay™ Enh Ultrabay Enhanced OneBay for removable devices, Ultrabay Slim-compatible, 12.7mm high

**Serial ATA disk**

- 80GB± (5400 rpm) or 120GB (5400 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- 14.1 in (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio

**Printer**

- 300:1 contrast ratio

**Graphics**

- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

- 89-key, ThinkVantage button, multimedia Fn keys, Windows/App keys

**TrackPoint®**

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**ThinkLight™**

- TouchPad: multi-pointing system, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 6-cell 14.1W (WxHxD): 13.2" x 10.2" x 1.2-1.37"; 335 x 261mm x 30.6-34.9mm

**Weight**

- 6-cell: starting at 5.5 lb (2.5kg)

**Battery - type**

- Top: Super-Elastic Polycarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic, supports unique 2nd battery in Ultrabay Slim, up to 7.2 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

**Chipset**

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (R Ricochet® R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 9732C032 TPM)

**Ports**

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394A-2000 standard)

**Wireless antennas**

- UltraConnectTM II antenna / on-off switch for all wireless radios

**Mini PCI Express Slots**

- Two PCI Express slots / only 802.11 wireless is customer upgradeable

**WWAN**

- T-Mobile US models withdrawn effective May 2009

**Modem**

- 11a/b/g

**Audio**

- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1, PCI bus, USB, LPC, [fingerprint]) / Secure Digital, xD-Picture Card™ PRO

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

- Some: Fingerprint reader on palm rest

**Limited warranty**

- 3-year / 1-year battery - EasyServ™, EasyDepot repair service / service upgrades available

<table>
<thead>
<tr>
<th>Processor</th>
<th>Memory</th>
<th>Video</th>
<th>Audio</th>
<th>WiFi</th>
<th>Other</th>
<th>Security</th>
<th>Security chip</th>
<th>Fingerprint reader</th>
<th>Battery</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1GB PC2-5300 DDR2 SODIMM</td>
<td>40Y7735</td>
<td>T/R 14W Standard Battery 4-cell</td>
<td>41U3196</td>
<td>Trusted Platform Module, Atmel chip, TCG 1.2-compliant</td>
<td>Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
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<tr>
<td>ThinkPad DVD Ultrabay Slim Burner (flat)</td>
<td>41N5654</td>
<td>T/R 14W High Capacity Batt 9-cell</td>
<td>43R2499</td>
<td>Rescue and Recovery™ (and DVD)</td>
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<tr>
<td>Serial Hard Drive Ultrabay Slim Adapter (flat)</td>
<td>40Y8725</td>
<td>Advanced Ultrabay Battery II 3-cell</td>
<td>43R9250</td>
<td>Windows Live™ Toolbar</td>
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<tr>
<td>250GB Disk FDE SATA 1.5Gb/s (7200 rpm)</td>
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<td>ThinkPad External Battery Charger</td>
<td>40Y7625</td>
<td>Picasa from Google</td>
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<td>USB 2.0 Essential Memory Key 32GB</td>
<td>43N3410</td>
<td>ThinkPad 90W AC Adapter</td>
<td>45K1258</td>
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<tr>
<td>USB 2.0 Lenovo Enhanced Port Replicator</td>
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<td>ThinkVision® L1940p Wide 19&quot; Monitor</td>
<td>442HBH</td>
<td>Vista Basic logo</td>
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<tr>
<td>ThinkPad Essential Port Replicator</td>
<td>250510W</td>
<td>ThinkVision® L2240p Wide 22&quot; Monitor</td>
<td>442HBH</td>
<td>Adobe Digital School Collection</td>
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<tr>
<td>ThinkPad Advanced Mini Dock</td>
<td>250410U</td>
<td>ThinkVision® L2440x Wide 24&quot; Monitor</td>
<td>442HBH</td>
<td>- Photoshop Elements 5 (and CD)</td>
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<tr>
<td>ThinkPad Advanced Dock</td>
<td>250310U</td>
<td>Windows Live OneNote 2007</td>
<td>442HBH</td>
<td>- Premier Elements 3 (and DVD)</td>
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<td>Other accessories on O-R61-14W sheet</td>
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<td>- Accurat 8 Professional</td>
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</tbody>
</table>

See footnotes for important warranty information

US models announced May 9, 2007
US models withdrawn effective May 2009
## ThinkPad R61 14W (GMA Graphics) - Education (Onsite) - withdrawn

### Key Specifications
- **Processor:** Intel Core™ 2 Duo processor T7100 or T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300: 4MB shared L2 cache
- **Memory:** 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available
- **Wireless Antenna:** 802.11a/b/g
- **Wireless Controller:** 11a/b/g
- **Hard Drive:** 7200 rpm
- **Battery:** 3-cell: 10.8V (98Wh); 6-cell: 14.1V (120Wh)
- **Operating System:** Windows® XP Home Edition (32-bit)/Windows® XP Professional (64-bit)
- **Post-warranty annual maintenance:** 
  - Vista Basic logo
- **Post-warranty accessories:** ThinkPad Business Backpack 43R2482, ThinkPad Business Topload Case 43R2476, ThinkPad External Battery Charger 40Y7625, T/R 14W Enhanced Battery 6-cell 41U3198, T/R 14W High Capacity Battery 9-cell 43R9249, Advanized Ultrabay Battery II 3-cell 43R9250, ThinkPad External Battery Charger 40Y7625, 90W Slim AC/DC Combo Adapter 41N8460, PowerShot SD870IS 90W AC Power Adaptor 43R2476, ThinkPad Business Backpack 43R2482, ThinkVision L1940p Wide 19" Monitor 424HB6, ThinkVision L2240p Wide 22" Monitor 424HB2, Other accessories at lenovo.com/accessories

### Additional Features
- **Fingerprint reader:** on palm rest, supports the security chip
- **Sonic RecordNow and Drive Letter (and CD):** 
  - Adobe Premiere Elements 3 (and DVD)
  - Adobe Digital School Collection
  - Adobe Photoshop Elements 5
- **Microsoft Office 2007 Trial (60-day):** 
  - Windows Live™ Search
  - Windows Live™ Toolbar
  - Microsoft Office 2007 Trial (60-day)
  - Microsoft Office 2007 Trial (60-day)
  - Microsoft Office 2007 Trial (60-day)
  - Windows Live™ Search
  - Windows Live™ Search
  - Microsoft Office 2007 Trial (60-day)

### IMPORTANT: Post-warranty maintenance agreements
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

### Note
- **Post-warranty annual maintenance agreements:**
  - Vista Basic logo
- **Post-warranty accessories:**
  - ThinkPad Business Backpack 43R2482
  - ThinkPad Business Topload Case 43R2476
  - ThinkPad External Battery Charger 40Y7625
  - T/R 14W Enhanced Battery 6-cell 41U3198
  - T/R 14W High Capacity Battery 9-cell 43R9249
  - Advanced Ultrabay Battery II 3-cell 43R9250
  - ThinkPad External Battery Charger 40Y7625
  - 90W Slim AC/DC Combo Adapter 41N8460
  - PowerShot SD870IS 90W AC Power Adaptor 43R2476
  - ThinkPad Business Backpack 43R2482
  - ThinkVision L1940p Wide 19" Monitor 424HB6
  - ThinkVision L2240p Wide 22" Monitor 424HB2
  - Other accessories at lenovo.com/accessories
ThinkPad® R61u 14W 7733 (GMA) - Education (EasyServ) - withdrawn

Personal Systems Reference (PSREF)

ThinkPad® R61u 14W 7733 (GMA) 14.1" WXGA+ (1440x900) color"
ThinkPad R61u 14W 7733 (GMA) - Edu (EasyServ) - Linux - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller Camera</th>
<th>Disk SATA GB</th>
<th>rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11n Card slot</th>
<th>Battery cells</th>
<th>Linux preload</th>
<th>Limited warranty</th>
<th>Workhorse (W) Gb (G)</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>7733-3AU T8100 2.10</td>
<td>1GB</td>
<td>14.1&quot; WXGA</td>
<td>GMA</td>
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<td>80G 5400</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
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<td>/54</td>
<td>6</td>
<td>SLED10</td>
<td>EasyServ</td>
<td>Feb 08</td>
</tr>
</tbody>
</table>

- **This model has an EasyServ™-19 depot repair service 3-year limited warranty**

  Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor
- **Intel® Core™ 2 Duo processor T8100 with dual-core**, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache

Memory
- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

Diskette drive
- None (use optional USB-based diskette drive)

EIDE Combo
- DVD-ROM/CD-RW (73P3288), 24X/24X/24X/6Xv1, removable Ultrabay™ Enhanced Serial ATA disk
- One bay for removable devices, Ultrabay-Slim compatible, 12.7mm high

Ultrabay Enhanced
- 80GBv (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System

Wide screen display
- Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits

Camera
- None

Graphics
- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys

TrackPoint
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Barv12, magnifying glass

Touch pad
- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

ThinkLight
- Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
- 6-cell 14.1"W (WXDDH): 13.2" x 10.2" x 1.2–1.37"; 335 x 261mm x 30.6–34.9mm

Weight
- 6-cell: starting at 5.5 lb (2.5kg)

Case material
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

Battery - type
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life
- 6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

Chipset
- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCIe Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCIe bus (Ricoh® R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel™ 97SC3203 TPM)

PC Card Std slot
- One Type I or Type II slot, CardBus 32-bit

ExpressCard slot
- [54], One ExpressCard34 or ExpressCard/54

Smart Card Read
- None

Multicard Reader
- None

Ports
- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector: 1394a-2000 standard)

Wireless antenna
- UltraConnect™ II antenna / on/off switch for all wireless radios

Mini PCI Express
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

WWAN
- None

Turbo Memory
- None

Modem
- 56K V.92v2 modem in Communications Daughter Card socket

Bluetooth™
- None

Ethernet
- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC1), PXE

Intel AMT
- None

Audio support
- High Definition (HD) Audio, AD1984H codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Power-on password, hard disk password, supervisor password, security keyhole

Depot repair service 3-year limited warranty

Preloaded operating system
- SUSE® Linux™ Enterprise Desktop 10 Service Pack 1

Preloaded applications
- None

Supported devices
- None (only listed)

Intel 4965AG, Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad 11n wireless

WWAN
- Active Protection System™

ThinkVantage® button

Security chip

Keyboard Customizer

Non-supported devices
- None (only listed)

Non-supported applications
- None (only listed)

Preloaded applications
- None

Preloaded operating system
- None

Supports ThinkVantage® technologies

Licenses
- Lenovo

Certifications
- ENERGY STAR® 4.0-compliant

International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US model announced: February 19, 2008

US model withdrawn: May 2009

Lenovo (LAG2-3) May 2009
### ThinkPad R61 14W 7744 (NVIDIA Graphics) - TopSeller - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Intel Turbo</th>
<th>Card slot</th>
<th>Cam. port cells</th>
<th>Workhorse (W) Global (G)</th>
<th>Available date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7744-1AU 77500 2.20 1GB 14.1&quot; WXGA+ 128MB 160GB5400 DVD±RW Intel 11a/b/g/d None 54 Cam 1394 6 Business32 No Sep 07</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty" |

#### Positioning
- Processor: **Intel® Core™ 2 Duo processor T7500 with dual-core.** Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared 2L cache

#### Memory
- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

#### Disk drive
- EIDE DVD±RW None (use optional USB-based diskette drive)
- UltraBay Enhanced DVD burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay™ Enhanced
- Ultrabay Enhanced One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, flat or curved
- Serial ATA disk 160GB (5400 rpm) / SATA 1.5Gb/s. 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

#### Widescreen display
- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

#### Graphics
- NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

#### Keyboard
- TrackPoint® 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys
- Touch pad UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones
- ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions
- 6-cell: 14.1W" (WxDxH): 13.2" x 10.2" x 1.2–1.37"; 335 x 261mm x 30.6–34.9mm
- 6-cell: starting at 5.5 lb (2.5kg)

#### Weight
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

#### Chipset
- Mobile Intel PM965 Express Chipset (Memory Controller Hub)
- LPC bus (WPN385 Super I/O, Atmel® 97SC3203 TPM)
- One Type I or Type II slot, CardBus 32-bit
- One ExpressCard slot or ExpressCard/54, PCI Express x1 or USB 2.0

#### Wireless antenna
- Two Mini PCI Express slots / 802.11 wireless is customer upgradable
- Two Mini PCI Express slots / 802.11 wireless is customer upgradable

#### Preloaded operating system
- Vista Premium logo

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskkeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Windows Live Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD±RW)
- InterVideo WinDVD (DVD±RW)

#### Limited warranty
- 3-years/1-yr battery - EasyServ19 depot repair service / service upgrades20 available

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See footnotes for important warranty information

* Intel Centrino® processor technology

© Lenovo

(LAG1-7) July 2008

US model announced September 18, 2007

US model withdrawn effective June 2008
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>SATA</th>
<th>EIDE</th>
<th>Mini PCIe Turbo</th>
<th>Card slot</th>
<th>Camera</th>
<th>Battery life</th>
<th>Workhorse (W)</th>
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<tbody>
<tr>
<td>7743-1GU T7300</td>
<td>Intel Core™ 2 Duo processor T7300 or T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Intel 11a/b/g</td>
<td>Smart</td>
<td>1394</td>
<td>4</td>
<td>Smart</td>
<td>Business32 W G Jun 07</td>
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<tr>
<td>7743-1HU T7300</td>
<td>Intel Core™ 2 Duo processor T7300 or T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
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<td>5400</td>
<td>Intel 11a/b/g 1G Turbo</td>
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<td>Intel Core™ 2 Duo processor T7300 or T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Intel 11a/b/g</td>
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<td>1394</td>
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<tr>
<td>7743-19U T7300</td>
<td>Intel Core™ 2 Duo processor T7300 or T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Intel 11a/b/g 1G Turbo</td>
<td>Smart</td>
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<tr>
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<td>Intel Core™ 2 Duo processor T7300 or T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Intel 11a/b/g</td>
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<tr>
<td>7743-02U T7300</td>
<td>Intel Core™ 2 Duo processor T7300 or T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Intel 11a/b/g</td>
<td>Smart</td>
<td>1394</td>
<td>6</td>
<td>Business32 W Aug 07</td>
<td></td>
</tr>
<tr>
<td>7743-03U T5700</td>
<td>Intel Core™ 2 Duo processor T7300 or T7500 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Intel 11a/b/g</td>
<td>Smart</td>
<td>1394</td>
<td>6</td>
<td>Business32 W Aug 07</td>
<td></td>
</tr>
</tbody>
</table>

**Positioning:** Everyday computing; two spindles

**Preloaded operating system:**
- Some: Microsoft® Windows® XP Professional
- Some: Microsoft Windows Vista® Business Edition (64-bit)

**Preloaded applications** (all OSes):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Multimedia Center for ThinkOffers (XP)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo, DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

**Chipset:** Mobile Intel PM965 Express Chipset (Memory Controller Hub):
ICH6M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 EIDE, PCI Express x1, USB 2.0, LPC bus, [Bluetooth, (fingerprint)], / PCI bus (Ricochet R5C847 Cardbus/1394/Multicard)
LPC bus (WP7C385 Super I/O, Atmel 97SC3203 TPM)

**wireless antenna:** UltraConnect II antenna on-off switch for all wireless radios

**Mini Wireless Express:** Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**WWAN:** None

**Modem:** 56K V.92 modem in Communications Daughter Card slot

**Bluetooth®:** Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

**Ethernet:** Gigabit ethernet on systemboard, Intel 82566MN Nineve (PHY), PCIe x1 (GLCI), PXE

**Audio:** High Definition (HD) Audio, AD1984H CODEC / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security:** Power-on password, hard disk password, supervisor password, security keyhole

**Security chip:** Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader:** Fingerprint reader on palm rest. swipe sensor, supports the security chip

**Limited warranty:** 3-years/1-yr battery - EasyServ™, 10-yr depot repair service / service upgrades available

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See footnotes for important warranty information

* Intel Centrino® processor technology

US models announced May 9, June 18, Aug 21, or Sept 4, 2007

US models withdrawn effective May or November 2008

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(1AG1-4) November 2008
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCle</th>
<th>Mini PCle</th>
<th>1394 port</th>
<th>934 Hard Drive</th>
<th>Workhorse (W)</th>
<th>Battery (9)</th>
<th>Lim</th>
<th>Support (only listed)</th>
</tr>
</thead>
</table>
| 7743-2JU  | Intel® Core™ 2 Duo processor T7500 with dual-core. Intel 64 Technology. Enhanced Intel SpeedStep technology. Intel Dynamic Acceleration. Execute Disable Bit, Virtualization Technology. 800MHz system bus, and 4MB shared L2 cache. | 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Not-italic: standard memory in 1 socket; 1 socket available | DVD±RW
USB DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | | |
| Memory | 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Not-italic: standard memory in 1 socket; 1 socket available | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Diskette drive | None (use optional USB-based diskette drive) | DVD burner, Super Multi-Burner (40Y8824) dual-layer, removable Ultrabay Enh | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| EIDE DVD±RW | DVD burner, Super Multi-Burner (40Y8824) dual-layer, removable Ultrabay Enh | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Serial ATA disk | 120GB (5400 rpm) / | SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Widescreen display | 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glaire, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Camera | None | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Graphics | NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Keyboard | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| TrackPoint® | TrackPoint® pointing device, ‘Press-to-Select’, ‘Scroll Wheel’, magnifying glass | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| ThinkPad Essential Port Reader | ThinkPad Shock Mounted Hard Drive | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Wireless antenna | UltraConnect™ II antenna / on-off switch for all wireless radios | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| ExpressCard slot | None | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Multicard Reader | None | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Ports | Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard) | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Preloaded operating system | - SUSE® Linux™ Enterprise Desktop10 Service Pack 1 | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Preloaded applications | - None | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Non-supported applications | - None | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
| Limited warranty | 3-years / 1-year battery / EasyServ™ / depot repair service / service upgrades available | DVD±RW | DVD±RW | DVD±RW | DVD±RW | DVD±RW | None | /54 | | | |
ThinkPad® R61 14W 7751 (NVIDIA®) - Onsite - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Proc-essor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe Intel Turbo</th>
<th>Card slot</th>
<th>Blue-1394 port cells</th>
<th>Battery port cells</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Avail date</th>
</tr>
</thead>
</table>
| 7751-1GU T7300 2.00 1GB 14.1" WXGA+ 128MB 80GB | Intel® Core™ 2 Duo processor T7300 with dual-core. | 5400 Combo | Intel 11a/b/g | 2GB | 5400 Combo | Intel Turbo | Smart Blue | 1394 4 Business32 W G P Jun 07 | 12X5630 | 41U3196 | 41N8460 | 41J5918 | 42R2499 | 42R2476 | 42R2490 | 43R1784 | 42H18B6 | 4421HB2 | 97SC3203 TPM | 24 hour x 7 day18 toll-free support | 90-watt (NVIDIA graphics) AC adapter | ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) | ENERGY STAR® 4.0-compliant \( \ast \) | Lenovo International Warranty Service \( \ast \) | 24 hour x 7 day toll-free support during the warranty period \( \ast \) via 800-426-7378 | ThinkPlus \( \ast \ast \) 4-year LOR 9x5 NBD 12X5630 ThinkPlus 5-year LOR 9x5 NBD 42R2162 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

• These models are part of the Global Models Plus program with limited onsite service 3-year limited warranty

Positioning
Processor
Everyday computing; two spinndles

Intel® Core™ 2 Duo processor T7300 with dual-core.

Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory
1GB std / 4GB max \( \ast \) / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-illustrated: standard memory in 1 socket; 1 socket available

Diskette drive None (use optional USB-based diskette drive)

EIDE Combo Ultrabay Enhanced Serial ATA disk

80GB \( \ast \) (5400 rpm)

SATA 1.5Gbps, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System(TM)

Battery - life 10

Battery - type

Weight

Top: 80GB

Touchpad

ThinkLight™ Touchpad

Dimensions

4-cell: 14.1" (WxDxH): 13.2" x 9.3" x 1.2–1.37"; 335mm x 237mm x 30.6–34.9mm

Battery - life

6-cell: up to 5.2 hr; 6-cell plus Ultrabay battery: up to 5.2 hr

Chipset

Mobile Intel PM965 Express Chipset (Memory Controller Hub,ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gbps, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], fingerprint), [PCI] bus (Ricochet(R) R5847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel(R) 9793C3203 TPM) PC Card Std slot

One Type I or Type II slot, CardBus 32-bit

Smart Card Reader

Multicard Reader

None

Ports

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna

UltraConnect(TM) II antenna / on-switch for all wireless radios

Mini PCIe Express Two Mini PCIe Express slots / only 802.11 wireless is customer upgradeable Intel 11a/b/g 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG WWAN

None

1G Turbo Some: Intel Turbo Memory, Mini PCIe adapter, 1GB flash, disk-cache accelerator Modern 56K V92 modem in Communications Daughter Card socket Bluetooth(TM) Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator Ethernet Gigabit ethernet on systemboard, Intel 82566MM Niveau (PHY), PCIxe 1 (GLCI), PXE None Audio support High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack Security

Security chip

Fingerprint reader

Fingerprint reader on palm rest

swipe sensor, supports the security chip

Limited warranty 3-years / 1-year battery, limited onsite service \( \ast \), 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades \( \ast \) available

1GB PC2-5300 DDR2 SODIMM 40Y7734 2GB PC2-5300 DDR2 SODIMM 40Y7735 ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643 Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725 200GB Disk FDE SATA 1.5Gbps (7200 rpm) 41N5738 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 ThinkPad Advanced Mini Dock 250410U Other accessories on O-R61-14W sheet

T/R 14W Standard Battery 4-cell 41U3196 T/R 14W High Capacity Battery 9-cell 43R2499 Advanced Ultrabay Battery II 3-cell 43R2950 90W Slim AC/DC Combo Adapter 41N8460 ThinkPad Business Topload Case 43R2476 ThinkVision® L2240p Wide 22" Monitor 4422H6B ThinkVision L2440x Wide 24" Monitor 4421HB2 Other accessories at lenovo.com/accessories

Does not support ThinkVantage technologies

90-watt (NVIDIA graphics) AC adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service \( \ast \) 24 hour x 7 day \( \ast \) toll-free support during the warranty period \( \ast \) via 800-426-7378

ThinkPlus \( \ast \ast \) 4-year LOR 9x5 NBD 12X5630 ThinkPlus 5-year LOR 9x5 NBD 42R2162 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory (including non-italics)</th>
<th>Disk drive</th>
<th>Mini PCIe</th>
<th>Blue-ray reader</th>
<th>Linux preload</th>
<th>Workhorse (W)</th>
<th>Limited Gbl (G)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7743-3BU T8300</td>
<td>2.40</td>
<td>1GB</td>
<td>4GB max</td>
<td>2.12GHz (T8300)</td>
<td>120GB (5400 rpm)</td>
<td>1GB</td>
<td>6-cell</td>
<td>None</td>
<td>3-years/1-yr battery</td>
<td>EasyServ/Depot repair service 3-year limited warranty</td>
</tr>
</tbody>
</table>

- This model has an EasyServ 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning**

- Everyday computing; two spindles
- Intel® Core™ 2 Duo processor T8300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache.

**Memory**

- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; non-italics: standard memory in 1 socket; 1 socket available.

**Diskette drive**

- None (use optional USB-based diskette drive)

**EIDE DVD drive**

- DVD burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay Enhanced Serial ATA device.

**Ultrabay Enhanced Serial ATA disk**

- 120GB (5400 rpm) | SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

- None

**Graphics**

- NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia keys, Windows/Apps keys

**Touchpad**

- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones, illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 14.1" x 9.7" x 0.75" (358.1 x 246.4 x 19.05 mm), 3.5 lb (1.6 kg)

**Weight**

- 6-cell: starting at 5.5 lb (2.5kg)

**Case material**

- Top: Super-Elastic Polycarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**

- Lithium Ion 6-cell supports unique 2nd battery in Ultrabay Slim

**Battery - life**

- 6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

**Chipset**

- Mobile Intel PM965 Express Chipset (Memory Controller Hub):ICH6M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATAPI-10 EIDE, PCI Express x16), 1GB, 4GB max, 2.12GHz (T8300) | ATAPI-10 EIDE, PCI Express x16, 1GB, 4GB max, 2.12GHz (T8300) | ATAPI-10 EIDE, PCI Express x16, 1GB, 4GB max, 2.12GHz (T8300)

**PC Card Std slot**

- One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot**

- [5]/4 One ExpressCard/34 or ExpressCard/54

**Smart Card Reader**

- None

**Multicard Reader**

- None

**Ports**

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector: 1394a-2000 standard)

**Wireless antenna**

- UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express**

- Two Mini PCI Express slots / only 802.11 wireless is customer upgradeable

**WWAN**

- None

**Turbo Memory**

- None

**Modem**

- 56K V.92 modem in Communications Daughter Card socket

**Bluetooth™**

- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCI Express x16

**Ethernet**

- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

- None

**Limited warranty**

- 3-years/1-yr battery | EasyServ/Depot repair service | service upgrades available

**Preloaded operating system**

- SUSE® Linux™ Enterprise Desktop 10 Service Pack 1

**Preloaded applications**

- None

**Supported devices**

- (only some listed)
  - HD Audio
  - Intel 3945ABG wireless
  - Intel Graphics Media Accelerator X3100 (GMA X3100)
  - NVIDIA Quadro NVS 140M
  - Fingerprint reader
  - Bluetooth
  - Function keys
  - ThinkPad Advanced Dock

**Non-supported devices**

- (only some listed)
  - Intel 4965AGN, Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad T11n wireless
  - WWAN
  - Active Protection System™
  - ThinkVantage button
  - Security chip
  - Intel Turbo Memory
  - Intel AMT technology
  - Integrated camera

**Non-supported applications**

- (only some listed)
  - ThinkPad Utilities
  - ThinkVantage technologies
  - Presentation Director
  - Encrypted DVD playback
  - Keyboard Customizer

**Supplements ThinkVantage® technologies**

- Eastern STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period after via 800-426-7378

**ThinkPlus**

- 22 2-year LOR 9x5 NBD
- 41C9175
- ThinkPlus 3-year LOR 9x5 NBD
- 45K6021
- ThinkPlus 4-year LOR 9x5 NBD
- 45K6024
- ThinkPlus 5-year LOR 9x5 NBD
- 45K6024
- ThinkPlus 4-year P & L Depot
- 45K6023
- ThinkPlus 5-year P & L Depot
- 45K6025
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Partial list of accessories supported on: ThinkPad R61 14W originally announced on May 9, 2007

| Memory | 512MB PC2-5300 DDR2 SODIMM | 40Y7733 | ann 01/05/06 |
|        | 1GB PC2-5300 DDR2 SODIMM (TopSeller) | 43R1999 | ann 03/25/06 |
|        | 1GB PC2-5300 DDR2 SODIMM | 40Y7734 | ann 01/05/06 |
|        | 2GB PC2-5300 DDR2 SODIMM (TopSeller) | 43R2000 | ann 03/25/08 |
|        | 2GB PC2-5300 DDR2 SODIMM | 40Y7735 | ann 11/28/06 |

**Ultrabay Slim 9.5mm** (supports both flat and curved bezel options)

- Serial Hard Drive Ultrabay Slim Adapter (flat)\(^a\) | 40Y8725 | ann 09/20/05 |
- UltraBay Slim 9.5mm device in 12.7mm bay shows gap above the device.

**Ultrabay Enhanced 12.7mm** (supports both flat and curved bezel)

- CD-RW/DVD Combo Ultrabay Enhanced (cur) | 73P3275 | ann 10/07/03 |
- 160GB Disk SATA 1.5Gb/s (5400 rpm)\(^b\) | 41N5692 | ann 03/20/07 |
- 160GB Disk SATA 1.5Gb/s (7200 rpm)\(^b\) | 41N5737 | ann 10/16/07 |
- 250GB Disk SATA 1.5Gb/s (5400 rpm)\(^b\) | 43R8152 | ann 01/15/08 |
- 250GB Disk FDE SATA 1.5Gb/s (7200 rpm)\(^b\) | 43N3410 | ann 01/20/09 |
- 320GB Disk SATA 1.5Gb/s (7200 rpm)\(^b\) | 43N3403 | ann 08/05/08 |
- 320GB Disk SATA 1.5Gb/s (7200 rpm)\(^b\) | 43N3411 | ann 01/20/09 |

\(^a\) Can be used as the main HDD or with ThinkPad Serial ATA Hard Drive Ultrabay Slim Adapter 40Y8725 in the Ultrabay or in the ThinkPad Advanced Dock 250310U.

**Multimedia**

- USB 2.0 Lenovo Multimedia Headset | 40Y8518 | ann 06/27/06 |
- USB 2.0 Lenovo Webcam | 40Y8519 | ann 08/29/06 |

**Batteries**

- T/R 14W Standard Battery 4-cell | 41U3196 | ann 05/09/07 |
- T/R 14W Enhanced Battery 6-cell | 41U3198 | ann 05/09/07 |
- T/R 14W High Capacity Battery 9-cell | 43R2499 | ann 03/04/08 |
- Advanced Ultrabay Battery II 3-cell\(^c\) | 43R9250 | ann 04/22/08 |

\(^c\) Used in Ultrabay Slim bay.

**ThinkPad External Battery Charger\(^d\)**

- 40Y7625 | ann 09/20/05 |

\(^d\) Requires the ThinkPad 90W AC Adapter 40Y7659 (adapter provided with some systems).

**ThinkPad 65W AC Adapter\(^e\)**

- 40Y7696 | ann 01/05/06 |

\(^e\) Only compatible with the 945GM and GM965 chipset models.

**ThinkPad 90W AC Adapter**

- 40Y7659 | ann 09/20/05 |

**ThinkPad 90W Slim AC/DC Combo Adapter**

- 41N8460 | ann 11/27/07 |

**Charging tips for 90W Slim AC/DC Combo Adapter 41N8460**

- Dual (ThinkPad+Phone) Charging Y-Cable | 41R4345 | ann 12/18/07 |
- BlackBerry charge tip (L8a) | 41R4478 | ann 12/18/07 |
- iPod and iPhone charge tip (L10a) | 41R4481 | ann 12/18/07 |

**Carrying Cases**

- Up to 14.1" widescreen models:
  - ThinkPad Expandr Case | 43R9118 | ann 06/24/08 |
  - ThinkPad Women's Microbritle Tote | 22P8855 |
  - ThinkPad Women's Leather Trim Tote | 22P8856 |
  - ThinkPad Convertible Carrying Case | 22P8860 |
  - ThinkPad Women's Executive Leather Tote | 22P8857 |
  - ThinkPad Women's Executive Red Leather Tote | 22P8858 |
- Up to 15.4" widescreen models:
  - Lenovo Carrying Case - Messenger Max | 41U5253 | ann 05/01/07 |
  - Lenovo Carr Case - Performance BackPack | 41U5254 | ann 05/01/07 |
  - Lenovo Standard Case | 45K1697 | ann 11/25/08 |
  - Lenovo Standard Backpack | 45K1698 | ann 11/25/08 |
  - ThinkPad Business Topload Case | 43R2476 | ann 05/13/08 |
  - ThinkPad Business Backpack | 43R2482 | ann 05/13/08 |
  - ThinkPad Deluxe Expander Case | 43R2478 | ann 05/13/08 |
  - ThinkPad Executive Leather Case | 43R2480 | ann 05/13/08 |
- Up to 17.0" widescreen models:
  - ThinkPad 17W Business Topload Case | 43R9117 | ann 08/12/08 |

**Monitors**

- ThinkVision\(^f\) L174 17" Monitor | 9227AE1 | ann 04/15/08 |
- ThinkVision L170p 17" Monitor | 9417HE2 | ann 09/17/08 |
- ThinkVision L1900p 19" Monitor | 4341HE1 | ann 11/11/08 |
- ThinkVision L1940p Wide 19" Monitor | 4424HB6 | ann 09/17/08 |
- ThinkVision L200p Wide 20.1" Monitor | 4438HB6 | ann 09/17/08 |
- ThinkVision L2240p Wide 22" Monitor | 4422HB6 | ann 09/17/08 |
- ThinkVision L2440p Wide 24" Monitor | 4420HB2 | ann 09/17/08 |
- ThinkVision L2440x Wide 24" Monitor | 4421HB2 | ann 09/17/08 |

\(^f\) Compatible on selected Lenovo and ThinkVision monitors.

**Monitor Accessories\(^g\)**

- ThinkVision USB Soundbar | 40Y7616 | ann 08/23/05 |
- ThinkVision Soundbar | 45K1263 | ann 09/16/08 |
- Kensington Cable Lock from Lenovo | 73P2582 | ann 12/29/03 |
- Kensington Twin Head Cable Lock | 45K1620 | ann 09/30/08 |
- ThinkPad Convertible Monitor Stand | 40Y7652 | ann 01/05/06 |
- Radial Arm | 19K4464 | ann 05/05/00 |

\(^g\) More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

More information at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)


© Lenovo

(R-O61-14W) May 2009
### Type-model Processor GHz Memory Wide-screen display Camera Graphics controller Disk SATA rpm EIDE optical Mini PCIe 802.11 wireless Card slot Finger reader Bluetooth teeth preloads Workhorse (W) Workdate

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Graphics controller</th>
<th>Disk SATA rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Card slot</th>
<th>Finger reader</th>
<th>Bluetooth teeth preloads</th>
<th>Workhorse (W)</th>
<th>Workdate</th>
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</thead>
<tbody>
<tr>
<td>8932-ABU</td>
<td>T7100</td>
<td>1.80</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>None</td>
<td>None</td>
<td>5400</td>
<td>None</td>
<td>None</td>
<td>6-cell</td>
<td>5-hour</td>
<td>6-cell</td>
<td>83% (15.4&quot; WXGA)</td>
<td>10.1&quot; 6-cell</td>
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<tr>
<td>8932-CUF</td>
<td>T7100</td>
<td>1.80</td>
<td>2GB</td>
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<td>6-cell</td>
<td>5-hour</td>
<td>6-cell</td>
<td>83% (15.4&quot; WXGA)</td>
<td>10.1&quot; 6-cell</td>
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<tr>
<td>8932-DYU</td>
<td>T7100</td>
<td>1.80</td>
<td>4GB</td>
<td>15.4&quot; WXGA</td>
<td>None</td>
<td>None</td>
<td>5400</td>
<td>None</td>
<td>None</td>
<td>6-cell</td>
<td>5-hour</td>
<td>6-cell</td>
<td>83% (15.4&quot; WXGA)</td>
<td>10.1&quot; 6-cell</td>
</tr>
</tbody>
</table>

#### Limited warranty
- **1-year**: EasyServ™ onsite pickup and delivery / service upgrades available

#### Preloaded operating system
- Microsoft® Windows® Vista™ Business Edition (64-bit)
- Windows® Live™ Basic logo

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Internet Security (90 days of virus definitions)
- Diskeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- InterVideo WinDVD (DVD:RW)

#### License - Code not included
- Lotus® Notes™ Stand-alone Client

### Preloaded software
- Adobe® Reader
- Adobe® Acrobat® Reader
- Microsoft® Office 2007 Trial
- Norton Internet Security
- PC-Doctor® (90 days of virus definitions)
- Diskeeper® Home
- InterVideo WinDVD (DVD:RW)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Client Security Solution™
- Access Connections™
- ThinkVantage Productivity Center
- System Migration Assistant
- ThinkPlus™ 1-year maintenance
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- InterVideo WinDVD (DVD:RW)

#### Post-warranty annual maintenance
- ThinkPlus™ 1-year maintenance
- ThinkPlus™ 2-year maintenance
- ThinkPlus™ 3-year maintenance
- ThinkPlus™ 5-year maintenance
- ThinkPlus™ 6-year maintenance

#### Other accessories
- Advanced Ultrabay Battery 3-cell 40Y6789
- T60/R60 Series Li-Ion Battery 6-cell 40Y76799
- Advanced Ultrabay Battery 3-cell 40Y76799
- ThinkPad External Battery Charger 40Y76725
- ThinkPad 90W AC Adapter 40Y76539
- ThinkPad 90W AC Adapter ICH8M 40Y76729
- ThinkPad Charging Case - Expressor 73P3597
- ThinkPad Charging Case - BackPack 73P3599
- ThinkVision® L171p 17.1" LCD Monitor 9417HC2
- ThinkVision L191p 19.1" LCD Monitor 443HBA2
- Lenovo M500 Projector 433A005
- Other accessories at lenovo.com/accessories
ThinkPad® R61 15W 8934 (GMA) - 3-year (TopSeller) - withdrawn

### Personal Systems Reference (PSREF)

#### Model Type Information

<table>
<thead>
<tr>
<th>Type-code</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Finger print</th>
<th>Battery</th>
<th>Workforce (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8934-ATU</td>
<td>T7100</td>
<td>1.80</td>
<td>1GB 15.4”WXGA</td>
<td>GMA</td>
<td>120GB 5400</td>
<td>DVD+RW</td>
<td>*Intel 11a/b/g/i/54</td>
<td>Fingerprint</td>
<td>6 XP Pro</td>
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<tr>
<td>8934-BTU</td>
<td>T7250</td>
<td>2.00</td>
<td>1GB 15.4”WXGA</td>
<td>GMA</td>
<td>160GB 5400</td>
<td>DVD+RW</td>
<td>*Intel 11a/b/g/i/54</td>
<td>Fingerprint</td>
<td>6 Bus 32</td>
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<tr>
<td>8934-F9U</td>
<td>T8100</td>
<td>2.10</td>
<td>1GB 15.4”WXGA</td>
<td>GMA</td>
<td>160GB 5400</td>
<td>DVD+RW</td>
<td>*Intel 11a/b/g/i/54</td>
<td>Fingerprint</td>
<td>6 XP Pro</td>
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<tr>
<td>8934-FAU</td>
<td>T8300</td>
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<td>1GB 15.4”WXGA</td>
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<td>160GB 5400</td>
<td>DVD+RW</td>
<td>*Intel 11a/b/g/i/54</td>
<td>Fingerprint</td>
<td>6 Bus 32</td>
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<tr>
<td>8934-F9U</td>
<td>T8100</td>
<td>2.10</td>
<td>2GB 15.4”WXGA</td>
<td>GMA</td>
<td>400GB 5400</td>
<td>DVD+RW</td>
<td>*Intel 11a/b/g/i/54</td>
<td>Fingerprint</td>
<td>6 Bus 32</td>
</tr>
</tbody>
</table>

#### Limitations

- These small and medium business (SMB) models are part of the US ThinkPad® Program.
- These models have a 3-year limited warranty.

#### Preloaded operating system®

- **Some:** Microsoft® Windows® XP Professional with Vista® COA
- **Some:** Microsoft® Windows Vista Business Edition (32-bit)

#### Preloaded applications® (all OSes)

- **Some:** Education software
- **Microsoft® Office OneNote® 2007 (and CD)
- **Vista:** Cloud Client Security Solution
- **XP:** ThinkPlus (Power Manager and Presentation Director)
- **Windows Live:** Toolbar
- **Windows Live Search
- **Picasa from Google
- **Fingerprint Software (fingerprint models)
- **Multimedia Center for Think
- **Microsoft® Windows Vista
- **Microsoft® Windows Vista® Business Edition 2007 (and CD)
- **Acrobat® 8 Professional
- **Rescue and Recovery™
- **Access Connections™
- **Client Security Solution
- **ThinkVantage Productivity Center
- **System Migration Assistant
- **Norton Internet Security
- **Microsoft® Windows® Vista
- **Microsoft® Office 2007 Trial (60-day)
- **Sonics RecordNow® and Drive
- **Letter Access (DVD+RW)
- **Corel® WinDVD® (DVD+RW)
- **Corel® WinWireless® (XP Pro DVD+RW models)

### Physical Characteristics

#### Typecode specific hardware

1. **ThinkPad® Roll Cage (one-piece magnesium frame)**
2. **ENERGY STAR® 4.0-compliant**
3. **RoHS-compliant**

#### See Footnotes for important warranty information

* Intel® Centrino® processor technology
* Lenovo US models announced July 10 or September 18, 2007; or January 8, May 9, or August 1, 2008
* US models withdrawn effective December 2007 or May 2009

---

**Footnotes:**

1. © Lenovo
2. ® Lenovo
3. ™ Lenovo

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**Model Type Information**

- **Type-code:** 8934-ATU
- **Processor:** T7100
- **Gigahertz:** 1.80
- **Memory:** 1GB 15.4” WXGA
- **Disk:** GMA
- **Mini PCIe:** 120GB 5400
- **Card slot:** DVD+RW
- **Fingerprint:** *Intel 11a/b/g/i/54
- **Battery:** 6 XP Pro
- **Workforce (W):** July

---

**Positioning Information**

- **Processor:** Intel® Celeron® Processor 550 with single-core, 533MHz system bus, and 1MB L2 cache or Intel Core™ 2 Duo processor T7100, T7250, T8100, or T8300 with dual-core, 800MHz system bus, T7100/T7250: 2MB L2 cache, T8100/T8300: 3MB L2 cache.

---

**Memory**

- **Memory size:** 1GB or 2GB std / 4GB max
- **Memory type:** PC2-5300 DDR2
- **Memory capacity:** 15.4” WXGA
- **Memory speed:** 1000 nits
- **Material:** Black color, Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

---

**Graphics**

- **Product:** Intel® Graphics Media Accelerator X3100
- **Model:** (GMA X3100)
- **Type:** Integrated in GM965
- **Aspect Ratio:** 16:10
- **Contrast Ratio:** 500:1

---

**Ports**

- **Ports:** USB 2.0 Lenovo Enhanced Port Replicator 43R8770
- **Serial ATA Disk:** 15W 8934-GMA
- **3-year (TopSeller) - withdrawn**
- **Official:** Lenovo
- **Preloaded:** Windows Vista
- **Post-warranty annual maintenance agreements** at lenovo.com/thinkplus/warranty
ThinkPad® R61 15W (NVIDIA Graphics) - 3-year (TopSeller) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Graphics controller Memory Key</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Whorse (W)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>8920-8RU T7300</td>
<td>Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>15.4&quot; (391mm) WXSGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
<td>None</td>
<td>6-cell 1.54W (WXDoH): 14.1&quot; x 10.2&quot; x 1.39-1.52&quot;; 358.5 x 260.0 x 35.3-38.5mm</td>
<td>6-cell: up to 6.4 hr (2.9k); 9-cell: starting at 6.7 3(1kg)</td>
<td>9-cell: up to 7.0 hr, 6-cell plus Ultrabay; 8.5 hr</td>
<td>3-years /1-yr battery - EasyServ™22 depot repair service / service upgrades23 available</td>
<td></td>
</tr>
</tbody>
</table>

| 8920-8BU T7500      | Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache | 15.4" (391mm) WXSGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio | None       | 6-cell 1.54W (WXDoH): 14.1" x 10.2" x 1.39-1.52"; 358.5 x 260.0 x 35.3-38.5mm | 6-cell: up to 6.4 hr (2.9k); 9-cell: starting at 6.7 3(1kg) | 9-cell: up to 7.0 hr, 6-cell plus Ultrabay; 8.5 hr | 3-years /1-yr battery - EasyServ™22 depot repair service / service upgrades23 available |

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty12

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Preloaded applications31
- Microsoft Office OneNote® 2007 (and CD)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft® Windows® 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service

90-watt (NVIDIA graphics)
ThinkPad Roll Cage (one-piece magnesium frame)
- Integrated wireless module
- 802.11a/b/g
- Bluetooth
- 1394a-2000 standard
- DVI pass-through support to optional Advanced Mini Dock or Advanced Dock
- UltraNav pointing device, “Press-to-Select,” Internet Scroll Bar
- Multimedia FN keys, Windows/Appl keys
- 89-key, ThinkVantage button
- 11a/b/g wireless
- Mini PCIe adapter

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
• This model has a 1-year limited warranty.

Positioning
Processor
Intel® Core™ 2 Duo processor T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology®, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

Memory
1GB std / 4GB max[1] / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available.

Diskette drive
None (use optional USB-based diskette drive)

EIDE Combo
DVD-ROM/CD-RW (73P3288), 24X/24X/24X/8X[2], removable from Ultrabay Enhanced

Serial ATA disk (SATA150)
80GB[3] (5400 rpm) / 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
15.4" (391mm) WXGA (1280x800) color, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio, anti-glare

Graphics
Intel Graphics Media Accelerator X3100 (GM965 Express Chipset) / Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, 802.11b/g/n Wireless)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

TrackPoint®
ThinkPad Ultrabase, multi-pointing system, touch pad below keyboard,TrackPoint® illuminates the keyboard to improve visibility in low-light conditions

Touchpad
None

ThinkLight™
None

Dimensions³
6-cell 15.4W (WxHxD): 14.1" x 10.2" x 1.39–1.52"; 358.5 x 260.0mm x 35.3–38.5mm

Weight³
6-cell: starting at 6.4 lb (2.9kg); 9-cell: starting at 6.7 lb (3.1kg)

Case material
Black color, Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - type
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced

Battery - life³
6-cell: up to 5.0 hr; 9-cell: up to 7.0 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

Architecture
Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, 802.11b/g/n Wireless)

PC Card Std slot
One Type I or Type II slot, CardBus 32-bit

ExpressCard slot
None

Smart Card Reader
Smart Card Reader

Multicard Reader
4-in-1 reader (MultiMediaCard, Mem Stick PRO, Secure Digital, xD-Picture Card™)

Ports
Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (Ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394A-2000 standard), S-Video out

Wireless antenna
UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express
One Mini PCI Express slot / 802.11 wireless is customer upgradable

Intel 11a/b/g³²
11a/b/g wireless, Intel Pro/Wireless 3945ABG

WWAN[4]
None

Turbo Memory
None

Modem
56K V.90 (V.92-designed[5]) modem, on systemboard, Conexant® CX20548

Bluetooth™
None

Ethernet
Gigabit ethernet on systemboard, Broadcom® BCM5787M (MAC/PHY), PCIe x1, PXE

Audio
High Definition (HD) Audio, CX20549 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
None

Limited warranty³
1-year - EasyServ³¹ nine pickup and delivery / service upgrades³² available

512MB PC2-5300 DDR2 CL5 SODIMM
40Y7733
1GB PC2-5300 DDR2 CL5 SODIMM
40Y7734
2GB PC2-5300 DDR2 CL5 SODIMM
40Y7735
Serial Hard Drive Ultrabay Slim Adapter (flat)
40Y8725
ThinkPad DVD Ultrabay Slim Burner (flat)
41N5643
ThinkPad DVD Ultrabay Slim Burner (black)
41N5672
160GB Disk 9.5mm SATA150 (7200 rpm)
41N5737
200GB Disk FDE SATA150 (7200 rpm)
41N5738
USB 2.0 Super Multi-Burner Drive
41N5662
ThinkPad Convertible Monitor Stand
40Y7670
ThinkPad Essential Port Replicator
250510W
ThinkPad Advanced Mini Dock
250410U
ThinkPad Advanced Dock
250310U
Other accessories on Q-R61-15W sheet

Preloaded operating system³
- Vista Premium logo

Preloaded applications³
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial
- Sonic RecordNow and Drive Letter Access (combo)
- InterVideo WinDVD (combo)

License - CD not included
- Lotus® Notes® Stand-alone Client

Supports ThinkVantage® technologies
65-watt (GMA graphics) ThinkPad Roll Cage (one-piece magnesium frame)

ENERGY STAR® 4.0-compliant
RoHS-compliant

International Warranty Service¹⁷
24 hour x 7 day²¹ toll-free warranty support during the warranty¹²

ThinkPlus™²²
1-year LOR 9x5 NBD
41C9166
ThinkPlus 2-year LOR 9x5 NBD
41C9167
ThinkPlus 3-year LOR 9x5 NBD
41C9168
ThinkPlus 4-year LOR 9x5 NBD
41C9171
ThinkPlus 5-year LOR 9x5 NBD
41C9173
ThinkPlus 2-year P&L P/U Depot
41C9169
ThinkPlus 3-year P&L P/U Depot
41C9170
ThinkPlus 4-year P&L P/U Depot
41C9172
ThinkPlus 5-year P&L P/U Depot
41C9174

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced July 10, 2007
US model withdrawn effective December 2007

* Powered by Intel Centrino® Duo processor technology

© Lenovo (WWK11-3) December 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen controller</th>
<th>Graphics Controller</th>
<th>Disk SATA</th>
<th>EIDE optical</th>
<th>Mini PCIE 802.11</th>
<th>Card slot</th>
<th>Finger print reader</th>
<th>Blue- tooth capability</th>
<th>Workhorse (W)</th>
<th>Vista Global (G)</th>
<th>Availability</th>
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<tbody>
<tr>
<td>8933-22U T7300</td>
<td>Intel® Celeron® Processor 540 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache</td>
<td>2.00</td>
<td>1GB 15.4” WXGA</td>
<td>None</td>
<td>GMA 80GB 5400</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
<td>Smart</td>
<td>Smart</td>
<td>12-month deployment</td>
<td>持ち込み修理</td>
<td>12-month deployment</td>
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<tr>
<td>8933-ACU T7300</td>
<td>Intel® Celeron® Processor 540 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache</td>
<td>2.00</td>
<td>1GB 15.4” WXGA</td>
<td>None</td>
<td>GMA 80GB 5400</td>
<td>Combo</td>
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<td>Smart</td>
<td>Smart</td>
<td>12-month deployment</td>
<td>持ち込み修理</td>
<td>12-month deployment</td>
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<td>8933-B7U 540</td>
<td>Intel® Celeron® Processor 540 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache</td>
<td>1.86</td>
<td>1GB 15.4” WXGA</td>
<td>None</td>
<td>GMA 80GB 5400</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
<td>Smart</td>
<td>Smart</td>
<td>12-month deployment</td>
<td>持ち込み修理</td>
<td>12-month deployment</td>
<td></td>
</tr>
</tbody>
</table>

- These models have a 3-year limited warranty.

### Preloaded operating system
- Some: Microsoft Windows Vista® Business Edition (64-bit)
  - Vista Basic logo

### Preloaded applications
- Acrobat Reader
- Access Connections®
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
  - (90 days of virus definitions)
  - Diskeeper® Home
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo)
- Corel® WinDVD® (combo)

- **ThinkPlus®** 2-year LOR™ 9” 5x9 NB
- **ThinkPlus®** 3-year LOR 9” 5x9 NB
- **ThinkPlus®** 4-year LOR 9” 5x9 NB
- **ThinkPlus®** 5-year LOR 9” 5x9 NB
- **ThinkPlus®** 4-year P&L U Dept
- **ThinkPlus®** 5-year P&L U Dept

- **ENERGY STAR®** 4.0-compliant
- **RoHS-compliant**
- **International Warranty Service**
- **24 hour x 7 day** toll-free support during the warranty period

- **ThinkPad® Roll Cage** (one-piece magnesium frame)
- **ThinkPad® Roll Cage** (one-piece magnesium frame)

- **Intel® Centrino® processor technology**

- **Lenovo® ThinkPlus warranty**

- **Lenovo.com/thinkplus/warranty**

- **Lenovo.com/Thinkpad R61 Setup**
## ThinkPad® R61 15W (NVIDIA Graphics) - 1-year - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>1394 port cells</th>
<th>Battery</th>
<th>Whose (W) Global (G)</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>8914-23U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>128MB</td>
<td>80GB</td>
<td>Combo</td>
<td>802.11 wireless</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>1394</td>
<td>6 Business</td>
<td>G Jun 07</td>
</tr>
</tbody>
</table>

- This model has a 1-year limited warranty.

### Preloaded operating system:
- Microsoft® Windows® Vista™
  - Business Edition (32-bit)
  - Vista Premium logo

### Preloaded applications:
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
  - (90 days of virus definitions)
  - Diskeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial
- Sonic RecordNow and Drive Letter Access (combo)
- InterVideo WinDVD (combo)

### License:
- CD not included
- Lotus® Notes® Stand-alone Client

### Preloaded accessories:
- Lenovo M500 Projector 0037A05
- ThinkVision L194 Wide 19" LCD 4434HB6
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 4.0-compliant
- ROHS-compliant
- International Warranty Service
  - 22 1-year LOR 9x5 NBD
- 41C9166
- 41C9167
- 41C9168
- Post-warranty annual maintenance support during the warranty

### Post-warranty maintenance agreements at:
- lenovo.com/thinkplus/warranty

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See footnotes for important warranty information.

US model announced May 31, 2007

US model withdrawn effective December 2007

*Powered by Intel Centrino® Duo processor technology © Lenovo

(WKK1-1) December 2007
ThinkPad® R61 15W (NVIDIA Graphics) - 3-year - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA</th>
<th>GB/ rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Finger reader</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Avail date</th>
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<tr>
<td>8919-22U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4” WSXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 11a/b/g12</td>
<td>Finger</td>
<td>Blue</td>
<td>1394</td>
<td>6</td>
<td>Business32 W JUN 07</td>
</tr>
</tbody>
</table>

- This model has a 3-year limited warranty2

Positioning

Processor Intel® Core™ 2 Duo processor T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory 1GB std / 4GB max11 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

Diskette drive None (use optional USB-based diskette drive)

EIDE Combo DVD-ROM/CD-RW (73P3288), 24X/24X/24X/8X11, removable Ultrabay™ Enh, curved Intel 11a/b/g32 Finger Blue

Serial ATA disk 80GB8 (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display 15.4” 1280 x 800 (391mm) WSGXA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

Camera None

Graphics NVIDIA Quadro NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys Touchpad None

ThinkLight™ None

Dimensions 6-cell 15.4”W (WxDxH): 14.1” x 10.2” x 1.39–1.52”; 358.5 x 260.0mm x 35.3–38.5mm

Weight 6-cell: starting at 6.7 lb (3.1kg); 9-cell: starting at 6.4 lb (2.9kg); 6-cell: up to 7.0 hr; 9-cell: up to 8.5 hr

Battery - type Lithium ion 6-cell 2.4 Ah, supports unique 2nd battery in Ultrabay Enhanced

Battery - life16 6-cell: up to 5.0 hr; 9-cell: up to 7.0 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

Chipset Mobile Intel PM965 Express Chipset (Memory Controller Hub); ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA 100 EIDE, PCI Express x1, PCI bus, USB, LPC bus [BlueTooth], [Fingerprint] / PCI bus (Ricochet R5847 Cardbus/1394/Multicard) / LPC (WPCN385 Super I/O, Atmel 97SC3203 TPM)

PC Card Slot None

ExpressCard slot None

Smart Card Reader None

Multicard Reader 4-in-1 reader (MultiMediaCard, Memory Stick™ PRO™, Secure Digital, xD-Picture Card™)

Ports Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector: 1394a-2000 standard), S-Video out

Wireless antenna UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express Intel 11a/b/g12 / WWAN

ThinkPad Roll Cage (one-piece magnesium frame)

Modem 56K V.90 (V.92-designed) modem in Communications Daughter Card socket

Bluetooth™ None

Ethernet Gigabit ethernet at systemboard, Intel 82566MC Nineveh (PHY), PCIex1 (GLC), PXE

Audio support High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt up, 1 watt down, mute buttons / internal microphone, microphone input jack, headphone jack

Security None

Security chip ThinkPad Advanced Multi-Burner Drive, Atmel chip, TCG 1.2-compliant

Fingerprint reader None

Limited warranty3 3-years/1-year battery - EasyServ19 / depott repair service / service upgrades20 avail

Supports ThinkVantage technologies

90-watt (NVIDIA graphics) ThinkPad Roll Cage (one-piece magnesium frame) ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 day17 toll-free support during the warranty period12 via 800-426-7378

Preloaded operating system30 - Microsoft® Windows® Vista™ Business Edition (32-bit) - Vista Premium logo

Preloaded applications14 - Rescue and Recovery™ - Access Connections14 - Client Security Solution™ - ThinkVantage Productivity Center - ThinkVantage System Update - System Migration Assistant - Norton Internet Security (90 days of virus definitions) - Diskeeper™ Home - PC-Doctor™ (diagnostics) - ThinkPad Utilities (Power Manager and Presentation Director) - Adobe® Reader - Windows Live™ ToolBar - Windows Live Search - Picasa from Google - FingerPrint Software (fingerprint models) - Microsoft Office 2007 Trial (60-day) - Sonic RecordNow and Drive Letter Access (combo) - InterVideo WindVDVD (combo)

See footnotes for important warranty information

US model announced May 31, 2007

US model withdrawn effective June 2008

* Intel Centrino® processor technology

© Lenovo (WWK1-2) July 2008

References

1 Intel 11a/b/g32 Finger Blue

2 This model has a 3-year limited warranty

3 Preloaded operating system - Microsoft® Windows® Vista™ Business Edition (32-bit) - Vista Premium logo

4 Preloaded applications - Rescue and Recovery™ - Access Connections - Client Security Solution™ - ThinkVantage Productivity Center - ThinkVantage System Update - System Migration Assistant - Norton Internet Security (90 days of virus definitions) - Diskeeper™ Home - PC-Doctor™ (diagnostics) - ThinkPad Utilities (Power Manager and Presentation Director) - Adobe® Reader - Windows Live ToolBar - Windows Live Search - Picasa from Google - FingerPrint Software (fingerprint models) - Microsoft Office 2007 Trial (60-day) - Sonic RecordNow and Drive Letter Access (combo) - InterVideo WindVDVD (combo)

5 Supports ThinkVantage technologies
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery life</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8927-22U T7300</td>
<td>Intel® Core™ 2 Duo processor T7300 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology™, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.</td>
<td>2.00</td>
<td>1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, two-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in one socket; one socket available</td>
<td>128MB</td>
<td>80GB</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 11a/b/g/n</td>
<td>Finger</td>
<td>Blue</td>
<td>1394</td>
<td>6 Business32 W 6 Jun07</td>
</tr>
</tbody>
</table>

- This model is part of the Global Models Plus program with limited onsite service™ 3-year limited warranty

**Positioning Processor**: Everyday computing; two spindles

**Memory**: 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, two-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in one socket; one socket available

**Disk drive EIDE Combo**: None (use optional USB-based diskette drive)

**Ultrabay Enhanced Serial ATA disk**: DVD-ROM/CD-RW (73P3288), 24X/24X/24X/8X21, removable Ultrabay™ Enh, curved

**Widescreen display Camera**: 15.4” (391mm) WSXGA+ (1680x1050) color, anti-glare, 200 nit, 16:10 aspect ratio, 500:1 contrast ratio

**Graphics**: NVIDIA Quadro NVS 140M, PCl Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys

**Touchpad**: TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar13, magnifying glass

**ThinkLight™**: UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones (200 nits, 16:10 aspect ratio, WSXGA+ (1680x1050) color 15.4"")

**Dimensions**: 6-cell 15.4W” (WxDxH): 14.1” x 10.2” x 1.39-1.52”; 358.5 x 260.0 mm x 35.3-38.5 mm

**Weight**: 6-cell: starting at 6.4 lb (2.9kg); 9-cell: starting at 6.7 lb (3.1kg)

**Case material**: Black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Battery - type**: Lithium Ion 6-cell 2.4 Ah, supports 24 hours in battery in Ultrabay Enhanced

**Battery - life**: 6-cell: up to 5.0 hr; 9-cell: up to 7.0 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

**Chipset**: Mobile Intel PM965 Express Chipset (Memory Controller Hub); ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, PCl Express x1, PCl bus, USB, LPC bus, [Blutooth], [fingerprint]) / PCl bus (Ricochet R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel 97SC3203 TPM)

**PC Card Std slot ExpressCard slot**: One Type I or Type II slot, CardBus 32-bit

**Smart Card Reader**: Smart Card Reader (under PCl Card slot)

**Multicard Reader Ports**: One Type I or Type II slot, CardBus 32-bit

**Wireless antenna**: UltraConnect™ II antenna / on/off switch for all wireless radios

**Mini PCI Express slot / 802.11 wireless Live™ system user upgradable 11a/b/g wireless, Mini PCl adapter, Intel PRO/Wireless 3945ABG

**WWAN**: None

**Turbo Memory**: None

**Modem**: 56K V.90 (V.92-designed™) modem in Communications Daughter Card socket

**Bluetooth™**: 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

**Ethernet**: Gigabit ethernet on system board, Intel 82566MC Nineveh (PHY), PCl x1 (GLCI), PXE

**Audio support**: High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**: Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**: Trusted Platform Module™, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**: FingerPrint reader on palm rest, swipe sensor, supported with security chip

**Limited warranty**: 3-years / 1-year battery, limited onsite service™ 3: 8 am - 5 pm, Mon - Fri coverage excluding holidays, 10 business days response time / service upgrades22 available

<table>
<thead>
<tr>
<th>Preloaded operating system20</th>
<th>Preloaded applications24</th>
</tr>
</thead>
</table>

**Supports ThinkVantage technologies**: 3-year limited warranty

**90-watt (NVIDIA graphics)**

ThinkPad Roll Cage (one-piece magnesium frame)

ENERGY STAR® 4.0-compliant

RoHS-compliant International Warranty Service17 24 hour / 7 days toll-free support during the warranty period12 via 800-426-7378

ThinkPlus™ 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

Available at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced May 31, 2007

US model withdrawn effective June 2008

* Intel CentriQ® processor technology

© Lenovo (WKK1-4) July 2008
Partial list of accessories supported on:
- ThinkPad R61 15W originally announced on May 31, 2007

**Memory**
- 512MB PC2-5300 DDR2 SODIMM 40Y7733
- 1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999
- 1GB PC2-6400 DDR2 SODIMM 40Y7734
- 2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000
- 2GB PC2-5300 DDR2 SODIMM 40Y7735

**Ultrabay Slim 9.5mm**
- Supports both flat and curved bezel options
- Serial Hard Drive Ultrabay Slim Adapter (flat)44 40Y8725
- Can be used as the main HDD or with ThinkPad Advanced Ultrabay Slim Adapter 40Y8725

**Ultrabay Enhanced 12.7mm**
- Supports both flat and curved bezel
- CD-RW/DVD Combo Ultrabay Enhanced (cur) 73P3275

**Storage and removable storage**
- 160GB Disk SATA 1.5Gb/s (5400 rpm)41 41N5692
- 160GB Disk SATA 1.5Gb/s (7200 rpm) 41N5737
- 250GB Disk SATA 1.5Gb/s (5400 rpm)41 43R8152
- 250GB Disk SATA 1.5Gb/s (7200 rpm)11 43N3410
- 320GB Disk SATA 1.5Gb/s (5400 rpm)17 43N3403

**USB 2.0 Essential Memory Key 2GB**
- Can be used as the main HDD or with ThinkPad Advanced Dock 250310U.

**ThinkPad Expansion**
- USB 2.0 Essential Memory Key 4GB 41U4944
- USB 2.0 Essential Memory Key 8GB 41J7904
- USB 2.0 Essential Memory Key 16GB 45K1254
- USB 2.0 Security Memory Key 2GB 41U5119
- USB 2.0 Security Memory Key 4GB 41U5120
- USB 2.0 Ultra Secure Memory Key 2GB 45J5916
- USB 2.0 Ultra Secure Memory Key 4GB 45J5917
- USB 2.0 Ultra Secure Memory Key 8GB 45J5918

**ThinkPad Accessories**
- USB Portable Diskette Drive 05K9276
- USB 2.0 CD-RW/DVD-ROM Combo Drive II 40Y8637
- USB 2.0 Portable 160GB Hard Disk 43R1784
- USB 2.0 Portable 320GB Hard Disk 45K1689
- USB 2.0 Portable Secure 160GB Hard Disk 43R2019
- USB 2.0 Portable Secure 320GB Hard Disk 43R2019
- USB 2.0 Super Multi-Burner Drive 41N5565

**ThinkPad Upgrade**
- USB 2.0 Lenovo Enhanced Port Replicator 43R8770
- ThinkPad Adjustable Notebook Stand 40Y7676
- ThinkPad Essential Port Replicator 250510W
- ThinkPad Advanced Mini Dock 250410U
- ThinkPad Advanced Dock 250310U

**Keyboard**
- TrackPoint Cap Collection 73P2698
- USB Numeric Keypad 33L3225
- Preferred Pro USB Keyboard 73P5220
- Enhanced Performance USB Keyboard 73P2620
- Wireless Kybd & Opt Wheel Mouse (via USB) 73P4067
- USB Keyboard with UltraNav 31P9490
- Lenovo® USB Fingerprint Keyboard 73P4730
- Lenovo USB Smartcard Keyboard 51J015

**Mouse**
- Optical Wheel Mouse (USB) 06P4069
- Optical ScrollPoint® Mouse (USB, PS/2) 31P7405
- Optical Wheel Travel Mouse (USB, PS/2) 31P7410
- Laser Tilt Wheel Mouse (USB, PS/2) 41J3074
- Enhanced Performance USB Keyboard 73P2620
- Lenovo Wireless Laser Mouse (bkl, via USB) 45K1696
- Lenovo Wireless Laser Mouse (red, via USB) 41J5198
- Laser Tilt Wheel Travel Mouse (Bluetooth) 41U5008

**Security**
- Kensington® Cable Lock from Lenovo 73P2582
- Kensington Tilt Head Cable Lock 45K1620
- USB Gemplus GemPC Smart Card Reader 41N3040
- PC Card Gemplus GemPC Smart Card Reader 41N3044
- ExpressCard Gemplus Smart Card Reader 41N3043

**Multimedia**
- USB 2.0 Lenovo Multimedia Headset 40Y8518
- USB 2.0 Lenovo Webcam 40Y8519

**Batteries**
- T/RWL/SL Series Li-ion Battery 6-cell 40Y7679
- T/RWL/SL Series Li-ion Battery 9-cell 40Y7679

**Charging tips for 90W Slim AC/DC Combo Adapter 41N8460**
- Dual (ThinkPad+Phone) Charging Y-Cable 41R4345
- Palm device charge tip (L7) 41R4315
- Blackberry charge tip (L8e) 41R4478
- Pod and iPhone charge tip (L10a) 41R4481

**Carrying Cases**
- Lenovo Carrying Case - Messenger Max 41U5253
- Lenovo Carrying Case - Performance BackPack 41U5254
- Lenovo Standard Case 45K1697
- Lenovo Standard Backpack 45K1698
- Checkpoint Friendly Business Topload Case 51J0418
- ThinkPad Business Topload Case 43R2476
- ThinkPad Business BackPack 43R2482
- ThinkPad Deluxe Expander Case 43R2478
- ThinkPad Executive Leather Case 43R2480

**Monitors**
- ThinkVision® L174 17" Monitor 9227AE1
- ThinkVision L1700p 17" Monitor 9417HE2
- ThinkVision L1900p 19" Monitor 4431HE1
- ThinkVision L1940p Wide 19" Monitor 4424HB6
- ThinkVision L2000p Wide 20.1" Monitor 4422HB6
- ThinkVision L2440p Wide 24" Monitor 4420HB2
- ThinkVision L2440x Wide 24" Monitor 4421HB2

**Monitor Accessories**
- ThinkVision USB Soundbar 40Y7616
- ThinkVision Soundbar 45K1263
- Kensington Cable Lock from Lenovo 73P2582
- Kensington Tilt Head Cable Lock 45K1620
- ThinkPad Convertible Monitor Stand 40Y7620
- ThinkPad Convertible Monitor Stand 40Y7624

More information at www.lenovo.com/support/monitoraccessories
These small and medium business (SMB) models are part of the US TopSeller Program

These models have a 1-year limited warranty

Positioning
Everyday computing; two spindles
Intel Pentium® Dual-Core Processor T2300 with dual-core,
Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 533MHz system bus, and 1MB shared L2 cache
Intel Core™ 2 Duo processor T5250 or T5450 with dual-core,
Intel 64 Technology, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Memory
1GB std / 4GB max2, PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-ittalics: standard memory in 1 socket; 1 socket available

Diskette drive
None (use optional USB-based diskette drive)
EIDE DVD±RW
DVD burner, removable drives, Ultrabay Slim-compatible, 9.5mm high, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
Some: 14.1” (358.1mm) WXGA (1280x800) TFT color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio
Some: 14.1” (358.1mm) WXGA (1280x800) TFT color, VibrantView (glossy), 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera
Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

Graphics
Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar, magnifying glass
Touch pad
ThinkLight™ enhances the keyboard to improve visibility in low-light conditions

Dimensions
4-cell: 14.1” (WXxH): 13.2” x 9.3” x 1.2–1.3”; 358.1x237x30.6–34.9mm
Weight
4-cell: starting at 5.2 lb (2.4kg)

Battery - type
li-ion 4-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life
4-cell: up to 3.6 hr; optional 6-cell: up to 5.7 hr; up to 7.2 hr plus Ultrabay battery

Chipset
Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH5M-Enhanced I/O Controller Hub (SATA 2.0 Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB bus, [Bluetooth], [Fingerprint])/ PCI bus (Ricoch® R95847 Cards/1394/Multicard)

Ports
Three USB 2.0, 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

Wireless antenna
UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express slots
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

WWAN
None

Modem
56K via 800-426-7378

Bluetooth™
Bluetooth 2.0 wireless, USB 2.0 interface via ICH5, LED indicator

Ethernet
Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

Audio support
High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty

1-year - EasyServ, depot repair service / service upgrades available
2-year - EasyServ, depot repair service / service upgrades available

See footnotes for important warranty information
© Lenovo

US models announced July 3 or October 2, 2007 or January 8, 2008

Preloaded operating system
- Some: Microsoft Windows® XP Professional

Preloaded applications (all OSes)
- Lenovo Care™ for Think (Oct Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper®
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Multimedia Center for Think Offerings (XP Pro model)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Network Magic™ (Oct Vista models)
- Corel® Studio X, USB Certified by Windows® Experience Office 12 (Oct Vista models)
- QuickBooks Financial Center (Oct Vista models)
- Sonic RecordNow and Drive Letter Access (DVD±RW)
- Corel® WinDVD Creator (XP Pro DVD model)

Supports ThinkVantage® technologies
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus®, 22 1-year LOR® 9x5 NBD
41C9166
ThinkPlus 2-year LOR 9x5 NBD
41C9167
ThinkPlus 3-year LOR 9x5 NBD
41C9168
ThinkPlus 4-year LOR 9x5 NBD
41C9171
ThinkPlus 5-year LOR 9x5 NBD
41C9173
ThinkPlus 2-year P&L P/U Depot
41C9169
ThinkPlus 3-year P&L P/U Depot
41C9170
ThinkPlus 4-year P&L P/U Depot
41C9172
ThinkPlus 5-year P&L P/U Depot
41C9174
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIE</th>
<th>Sata</th>
<th>1394</th>
<th>Workforce (W)</th>
<th>Global (G)</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>7732-2KU</td>
<td>ThinkPad Core</td>
<td>1GB 14.14 WXGA+</td>
<td>Cam</td>
<td>GMA 120G 5400</td>
<td>DVD</td>
<td>Intel 11a/b/g</td>
<td>5/4</td>
<td>1394</td>
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<tr>
<td>7732-B1U</td>
<td>1.86</td>
<td>1GB 14.14 WXGA</td>
<td>Cam</td>
<td>GMA 160G 5400</td>
<td>DVD</td>
<td>Intel 11a/b/g</td>
<td>5/4</td>
<td>1394</td>
<td>Business 32</td>
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*These small and medium business (SMB) models are part of the US TopSeller™ Program*
ThinkPad® R61i 15W 7650 (GMA) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model Processor GHz Memory Wide-screen display Graphics controller Disk Sata GB/rpm Mini PCIle 802.11 wireless Finger print reader Battery Bluetootb cells Workhorse (W) Global (G) Preload Avail date

7650-8CU T5250 1.50 512MB 15.4" WXGA GMA 80GB 5400 Combo * Intel 11a/b/g/3 None 6 XP Pro July 07

7650-8DU T5250 1.50 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 XP Pro July 07

7650-9LU T2330 1.60 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 XP Pro Oct 07

7650-9MU T2330 1.60 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 Business 32 Oct 07

7650-CDU T5450 1.66 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 XP Pro Jan 08

7650-DHU T2370 1.73 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 Business 32 Feb 08

7650-DGU T5550 1.83 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 XP Pro Feb 08

7650-DRU T2390 1.86 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 Business 32 Apr 08

7650-02U T2390 1.86 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 Business 32 May 08

7650-ELU T2390 1.86 1GB 15.4" WXGA GMA 80GB 5400 DVD+RW * Intel 11a/b/g None 6 XP Pro July 08

7650-SU T750 2.00 1GB 15.4" WXGA GMA 160G 7200 DVD+RW * Intel 11a/b/g None 6 Business 32 Aug 08

7650-01U T750 2.00 2GB 15.4" WXGA GMA 160G 7200 DVD+RW * Intel 11a/b/g None 6 Business 32 May 08

7650-6EU T750 2.00 1GB 15.4" WXGA GMA 160G 7200 DVD+RW * Intel 11a/b/g None 6 XP Pro July 08

7650-01U T750 2.00 2GB 15.4" WXGA GMA 160G 7200 DVD+RW * Intel 11a/b/g None 6 Business 32 May 08

7650-6EU T750 2.00 1GB 15.4" WXGA GMA 160G 7200 DVD+RW * Intel 11a/b/g None 6 Business 32 May 08

7650-6EU T750 2.00 1GB 15.4" WXGA GMA 160G 7200 DVD+RW * Intel 11a/b/g None 6 Business 32 May 08

7650-6EU T750 2.00 1GB 15.4" WXGA GMA 160G 7200 DVD+RW * Intel 11a/b/g None 6 Business 32 May 08

Processor Intel Pentium Dual-Core Processor T2330, T2370, or T2390 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 533MHz system bus, and 1MB shared L2 cache or Intel Core™ 2 Duo processor T5250, T5450, T5550, or T5750 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Memory 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available

Diskette drive None (use optional USB-based diskette drive)

EIDE Combo Some: DVD-ROM/CD-RW, 24X/24X/24X/8X fixed, removable, 12.7mm high

EIDE DVD+RW Some: DVD burner, Super Multi-Burner, dual-layer, not removable, 12.7mm high

Ultrasat Enhanced Serial ATA disk 80GB/ (5400 rpm) or 160GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Dimensions 6-cell 15.4" (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 30:1 contrast ratio

Camera None

Graphics Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, no DVI pass-through, no port replicator or docking station support

Keyboard 89-key, ThinkVantage, spill-resistant, multimedia Fn keys, Windows/App keys

TrackPoint® TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar® (no touch pad) Illuminates the keyboard to improve visibility in low-light conditions

Battery type - Lithium Ion 6-cell

Battery life None

Chipset Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, x1 PCI Express bus, [Bluetooth], PCI bus (Ricoch® R5C804 Cardbus) / PC Card Std slot One Type I or Type II slot, CardBus 32-bit

ExpressCard slot None

Multicard Reader None

Ports Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet)

Wireless antenna Mini PCI ExpressIntel 11a/b/g/3 Intel 11n/a/g

Security None

Power-on password, hard disk password, supervisor password, security keyhole

Security key None

Fingerprint reader None

Limited warranty 1-year - EasyServor22,9 depot repair service / service upgrades22 available

1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999
2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000
320GB Sata SATA 3.5Gb/s (7200 rpm) 49N3411
USB 2.0 Lenovo Enhanced Port Replicator 43R8770
Other accessories on O-R61E sheet

T/R/W/SL Series Li-Ion Battery 9-cell 40Y6797
90W Slim AC/DC Combo Adapter 41N8460
ThinkPad Business Toploader Case 49N3411
ThinkVision® L2440p Wide 24" Monitor 4420HB2
Other accessories at lenovo.com/accessories

See footnotes for important warranty information

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US models announced July 10, Oct 2, 2007, Jan 8, Feb 26, April 8, May 5, or July 1, 2008

US models withdrawn effective December 2007 or May 2009

These small and medium business (SMB) models are part of the US TopSeller Program

These models have a 1-year limited warranty


Vista 1GB models: Vista Basic logo

Vista 01U model: Vista Premium logo

Preloaded applications (all OSes; only some listed)


Lenovo Care® for Think (9MU and 2008 models)

Microsoft Office OneNote® 2007 and CD (2002 model)

Network Magic® (9MU and 2008 models)

Corel® Small Business Center™ with WordPerfect® Office 12 (9MU and 2008 models)

QuickBooks Financial Center (9MU and 2008 models)

Corel® WinDVD® (DVD±RW)

Corel® WinDVD Creator (XP Pro DVD±RW model)

Supports ThinkVantage® technologies

65-watt (GMA graphics)

ThinkPad Roll Cage (one-piece magnesium frame)

ENERGY STAR® 4.0-compliant RoHS-compliant

International Warranty Service 24 hour/ 7 day® toll-free support during the warranty period® via 800-426-7378

ThinkPlus™ 1-year LOR® 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 2-year P&L Depot

ThinkPlus 3-year P&L Depot

ThinkPlus 4-year P&L Depot

ThinkPlus 5-year P&L Depot

© Lenovo

(R611)1 1 May 2009
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<td><strong>Type-model</strong></td>
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<td>8932-9WU</td>
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<tr>
<td>8932-9XU</td>
</tr>
<tr>
<td>8932-BWU</td>
</tr>
<tr>
<td>8932-APU</td>
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<tr>
<td>8932-BXU</td>
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<tr>
<td>8932-ANU</td>
</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program.

**These models have a 1-year limited warranty.**

**Preloaded operating system**

- Some: Microsoft® Windows® XP Professional with Vista® COA

**Vista models:** Vista Basic logo

**Preloaded applications**

- Lenovo Care™ for Think (Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper™ Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Multimedia Center for Think offerings (XP Pro model)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Network Magic™ (Oct Vista models)
- Corel® Small Business Center™ with WordPerfect® Office 12 (Oct Vista models)
- QuickBooks Financial Center (Oct Vista models)
- Sonic RecordNow and Drive Letter Access (DVD+RW)
- Corel WinDVD® (DVD+RW)
- Corel WinDVD Creator (XP Pro DVD+RW model)

Supports ThinkVantage™ technologies

65-watt (GMA graphics)

ThinkPad Roll Cage (one-piece magnesium frame)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service

24 hour x 7 day toll-free support

during the warranty period via 800-426-7378

**ThinkPlus™ 1-year LOR®**

- 9x5 NBD

ThinkPlus™ 2-year LOR® 9x5 NBD

ThinkPlus™ 3-year LOR® 9x5 NBD

ThinkPlus™ 4-year LOR® 9x5 NBD

ThinkPlus™ 5-year LOR® 9x5 NBD

ThinkPlus™ 5-year P&L P/U Depot

ThinkPlus™ 5-year P&L P/U Depot

ThinkPlus™ 5-year P&L P/U Depot

**See footnotes for important warranty information**

* Intel Centrino® processor technology

Lenovo (B-WKK11-1) November 2008

US models announced July 10 or October 2, 2007

US models withdrawn effective December 2007 or November 2008
<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>EIDE Disk</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
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<td>T5450 1.66 GHz</td>
<td>1GB 15.4&quot; WXGA</td>
<td>GMA</td>
<td>120G 5400 DVD+RW</td>
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<td>8932-EZU</td>
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<td>1GB 15.4&quot; WXGA</td>
<td>Cam</td>
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<td>* Intel 11a/b/g/n</td>
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<tr>
<td>8932-E9U</td>
<td>T2390 1.73 GHz</td>
<td>1GB 15.4&quot; WXGA</td>
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<td>8932-FXU</td>
<td>T5550 1.83 GHz</td>
<td>1GB 15.4&quot; WXGA</td>
<td>Cam</td>
<td>160G 5400 DVD+RW</td>
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<td>6 X Pro</td>
<td>No Jul 08</td>
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**Product Information**

- **ThinkPad R61i 15W 8932 (GMA) - TopSeller (January 2008) - withdrawn**

**Key Features**

- **Processor:** Intel® Pentium® Dual-Core Processor T2370 or T2390 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit, 533MHz system bus, and 1MB shared L2 cache or Intel® Core™ 2 Duo processor T5450, T5550, or T5750 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

- **Memory:** 1GB or 2GB std / 4GB max / PC2-6300 667MHz DDR2.

- **Operating System:** Windows® XP Professional.

- **Diskette Drive:** None (use optional USB-based diskette drive).

- **Graphics:** Intel® Graphics Accelerator X3100 (GMA X3100), integrated in GM965.

- **Keyboard:** 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys.

- **Widescreen Display:** 15.4" (391mm) WXGA (1280x800) TFT color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio.

- **Audio Support:** Intel® GM965 Express Chipset.

- **Ports:** Mini PCI Express slot / x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint].

- **Chipset:** Mobile Intel® GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE)

- **Warranty:** Various options available.

- **Displays:** 14.1" x 10.2" x 1.39–1.52"; 358.5 x 260.0mm x 35.3–38.5mm

- **Disks:** 6-cell 15.4W (WxDxH): up to 7.0 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

- **Modems:** 56K V.92 modem, on systemboard, Conexant® CX20548.
ThinkPad® R400 7438 (TopSeller) - withdrawn

Positioning
- Mainstream business performance; two spindles
- Two 204-pin SO-DIMM sockets, standard memory in both sockets; no sockets available; *Standard memory in one or two sockets (variable DIMMs)

Processor
- Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache

Memory
- 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; italics: standard memory in both sockets; no sockets available; *Standard memory in one or two sockets (variable DIMMs)

SATA DVD:RW
- DVD burner, SATA 1.5Gb/s, 12.7mm UltraBay Enhanced, removable (43R9149)

SATA disk
- One bay for removable devices, UltraBay Slim-compatible, 12.7mm high

Dimensions
- 6-cell: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera
- Some: camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®

Dimensions
- 6-cell: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Case material
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

Battery - type
- Lithium Ion 6-cell, supports unique 2nd battery in UltraBay Enhanced

Battery - life
- 6-cell: up to 5 hr; 6-cell plus UltraBay battery: up to 6.5 hr; 9-cell: up to 7.5 hr

Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub)

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista®
- Vista logo: None

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee® VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows® Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service
- 24 hour x 7 days a week toll-free support during the warranty period via 800-426-7378

ThinkPlus™
- 3-year LOR® 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 4-year P&L P/U Depot
- 5-year P&L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Updated: August 5, 2008 or March 24, 2009
US models withdrawn effective June or December 2009

Notes:
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have an EasyServ™ depot repair service 3-year limited warranty

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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>Sata</th>
<th>Sata optical</th>
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See footnotes for important warranty information

Intel Centrino® processor technology

© Lenovo
This small and medium business (SMB) model is part of the US TopSeller™ Program
This model has a depot repair service 3-year limited warranty

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<th>Type-model</th>
<th>Processor</th>
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<th>Mini PCIe</th>
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<th>Bluetooth</th>
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<th>Preloaded operating system</th>
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<tr>
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<td>Intel® Core™ 2 Duo processor P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</td>
<td>2GB std / 4GB max*/ PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td>14.1&quot; WXGA</td>
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<td>802.11 wireless</td>
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<td>Blue</td>
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<td>Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32</td>
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<td>ThinkPad Utilities (Power Manager and Presentation Director)</td>
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<td>Windows Live™ Toolbar</td>
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<td>Roxio® Creator® Business Edition (DVD:RW)</td>
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<td>Corel® WinDVD® (DVD:RW)</td>
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<td>Supports ThinkVantage® technologies</td>
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<td>65-watt (GMA graphics) AC adapter</td>
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<td>ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)</td>
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<td>ENERGY STAR® 5.0-compliant</td>
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<td>International Warranty Service</td>
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<td>24 hour x 7 day toll-free support during the warranty period*2 via 800-426-7378</td>
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<td>ThinkPlus™ = 3-year LOR®/ NBD</td>
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<td>ThinkPlus 4-year LOR 9x5 NBD</td>
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<td>ThinkPlus 5-year LOR 9x5 NBD</td>
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<td>ThinkPlus 4-year P&amp;C P/U Depot</td>
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<td>ThinkPlus 5-year P&amp;C P/U Depot</td>
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<td>6</td>
<td>Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty</td>
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</tbody>
</table>

See footnotes for important warranty information
* Intel Centrino® 2 processor technology
© Lenovo
(LAG3-7) August 2010

US model announced October 22, 2009
US model withdrawn effective August 2010

* Limited warranty*2 3-years/1-yr battery - depot repair service / service upgrades*2 available
**ThinkPad R400 7443 (TopSeller) - withdrawn**

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Cam-</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>SATA</th>
<th>Sata optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe Ub/ or Turbo</th>
<th>Finger print reader</th>
<th>Blue-tooth cells</th>
<th>Preload</th>
<th>Avail. date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7443-2HU</td>
<td>T6670</td>
<td>2.20</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>None</td>
<td>GMA</td>
<td>320G</td>
<td>5400</td>
<td>DVD:RW</td>
<td>11n</td>
<td>None</td>
<td>Finger Blue</td>
<td>6</td>
<td>XP Pro</td>
<td>Jul 09</td>
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</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program

Positioning

**Processor**

Mainstream business performance; two spindles

- **Intel® Core™ 2 Duo processor T6670 with dual-core**, Intel HD Boost, 800MHz system bus, 2MB L2 cache

**Memory**

2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

- **Non-Italics**: standard memory in one socket; one socket available

**SATA DVD:RW**

UltraBay Enhanced

- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

**SATA disk**

- **320GB** (5400 rpm) / SATA 1.5GB/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300.1 contrast ratio

**Integrated graphics**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

- **Maximum external resolution**: 2048x1536 @ 75Hz

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

- **TrackPoint**: pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

- **Touch pad**: ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- **Weight**: 6-cell: 14.1" (WxDxH): 13.3" x 9.4" x 1.2–1.4"; 335.5 x 238mm x 31–35mm

**Case material**

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery** - type

- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced

**Battery** - life

- 6-cell: up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard/54**

ExpressCard/54

- One slot (ExpressCard/34, ExpressCard/54)

**PC Card**

- One slot (Type I, Type II), CardBus 32-bit

**Smart Card Read**

None

**Multicard Reader**

None

**Ports**

- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**

Three Mini PCI Express slots

- 11n

- 2G Turbo

- UWb

**Modern**

56K V.92® modem

**Bluetooth™**

Bluetooth 2.0 wireless, LED indicator

- **Ethernet**: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

- **Intel AMT**: None

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 1-year - EasyServ® depot repair service / service upgrades® available

**Preloaded operating system**

- Genuine Windows XP Professional (preinstalled via downgrade rights in Windows Vista® Business)

**Preloaded applications**

- Rescue and Recovery®

- Access Connections®

- Client Security Solution™

- ThinkVantage Productivity Center

- ThinkVantage System Update

- FingerPrint Software (fingerprint models)

- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)

- PC-Doctor® (diagnostics)

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe® Reader®

- Windows Live® Toolbar

- Microsoft® Office 2007 Trial (60-day)

- Roxio® Creator® Business Edition

- Roxio MyDVD® (DVD:RW)

- Corel® WinDVD® (DVD:RW)

**Supports ThinkVantage® technologies**

65-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service®

24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

**ThinkPlus®**

1-year LOR® 9x5 NBD

2-year LOR® 9x5 NBD

3-year LOR® 9x5 NBD

4-year LOR® 9x5 NBD

5-year LOR® 9x5 NBD

**ThinkPlus 2-year P&L P/U Depot**

45K5968

ThinkPlus 3-year P&L P/U Depot

45K5970

ThinkPlus 4-year LOR® 9x5 NBD

45K5973

ThinkPlus 5-year LOR® 9x5 NBD

45K5975

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**

See footnotes for important warranty information

US model announced July 7, 2009

US model withdrawn effective October 2009

© Lenovo (LAG3-6) July 2009
### ThinkPad R400 7443 (TopSeller) - XP with Win 7 License - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7443-31U</td>
<td>T6670 2.20</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>Cam</td>
<td>M-A</td>
<td>1500GB (5400 rpm)</td>
<td>DVD±RW</td>
<td>None</td>
<td>None</td>
<td>11m²³</td>
<td>None</td>
<td>Roll Cage</td>
<td>6</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program

| Positioning Processor | Mainstream business performance: two spindles | **Intel® Core™ 2 Duo processor T6670 with dual-core, Intel HD Boost, 800MHz system bus, and 2MB L2 cache | Preloaded operating system²⁵: - Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32 |
|-----------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------|________________________________________________|
| Memory                | 2GB std / 4GB max / PC3-5800 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets | **Non-italics: standard memory in one socket; one socket available:** Intel AMT | Preloaded applications¹⁴ (only some listed) |
| SATA DVD±RW           | DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43FR149) | One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high | Rescue and Recovery™ |
| Ultrabay Enhancd SATA disk | 250GB² (5400 rpm) | | Access Connections¹⁴ |
| Widescreen display    | 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio | Camera on top of screen, 1.3-megapixel, fixed focus | Client Security Solution™ |
| Camera                | 6-cell: starting at 5.42 lb (2.46kg) | UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label | ThinkVantage Productivity Center |
| Integrated graphics   | Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock | Illuminates the keyboard to improve visibility in low-light conditions | ThinkVantage Productivity Center |
| Keyboard              | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys | Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic | International Warranty Service¹⁷ |
| Trackpad              | TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar¹³, magnifying glass | Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced | 24 hour x 7 day²¹² toll-free service during the warranty period²³ via 800-426-7378 |
| Touchpad             | UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label | 6-cell: up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr | ThinkPlus™: 22 1-year LOR²¹ 9×5 NBD 45K5968 |
| ThinkLight™           | 6-cell: 14.1W (WxHxD): 13.2" x 9.4" x 1.2–1.4"; 335.5 x 238mm x 31–35mm | | ThinkPlus 2-year LOR 9x5 NBD 45K5969 |
| Dimensions³           | 6-cell: starting at 5.42 lb (2.46kg) | 30x5.5 x 204-pin SO-DIMM sockets; | ThinkPlus 3-year LOR 9x5 NBD 45K9700 |
| Weight²              | Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic | | ThinkPlus 4-year LOR 9x5 NBD 45K9737 |
| Case material         | Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced | | ThinkPlus 5-year LOR 9x5 NBD 45K9756 |
| Battery - type        | 6-cell: up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr | | ThinkPlus 2-year P&L P/U Depot 45K971 |
| Battery - life¹⁵      | Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O) | 65-watt (GMA graphics) AC adapter | ThinkPlus 3-year P&L P/U Depot 45K972 |
| Chipset               | One slot (ExpressCard/34, ExpressCard/54) | Supports ThinkVantage technologies | ThinkPlus 4-year P&L P/U Depot 45K9754 |
| ExpressCard/SD        | One slot (Type I, Type II), CardBus 32-bit | ENERGY STAR® 5.0-compliant | ThinkPlus 5-year P&L P/U Depot 45K976 |
| PC Card               | None | RoHS-compliant | Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty |
| Smart Card Reader     | None | International Warranty Service¹⁷ | |
| Ports                 | Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard) | | |
| Mini PCI Express      | Three Mini PCI Express slots | | |
| 11m²³                 | 11b/g/n wireless, Mini-PCI Express Adapter II | | |
| WWAN                  | None | | |
| 2G Turbo              | None | | |
| UWB                   | None | | |
| Modem                 | 56K V.92 modem | | |
| Bluetooth™            | Bluetooth 2.1 wireless, LED indicator | | |
| Ethernet              | Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1 | | |
| Intel AMT             | None | | |
| Audio support         | High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack | | |
| Security              | Power-on password, hard disk password, supervisor password, security keyhole | | |
| Security chip         | Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant | | |

Limited warranty²² 1-year - depot repair service / service upgrades²² available

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See footnotes for important warranty information

US model announced October 22, 2009

US model withdrawn effective August 2010

© Lenovo

(LAG3-8) August 2010
ThinkPad® R400 7439 - withdrawn

See footnotes for important warranty information © Intel® Centrino® 2 processor technology © Lenovo

US models announced Aug 5, Sep 2, Sep 30, October 7, or December 2, 2008
US models withdrawn effective August 2009, October 2009, January 2010 or August 2010

US Govt (TAA) Processor

Intel® Celeron® Processor 575 with single-core, 667MHz system bus, and 1MB L2 cache

Intel Core® 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1600MHz system bus, P8400/P8600: 2MB L2 cache, T9400: 6MB L2 cache

Preloaded operating system®:
- Some: Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

Preloaded applications® (all OSes, only some listed):
- Rescue and Recovery™
- Access Connections©
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
PEAT® Silver rating (except Celeron models)
ENERGY STAR® 5.0-compliant (except Celeron models)
RoHS-compliant
International Warranty Service®
24 hour x 7 day 24 toll-free support during the warranty period® via 800-426-7378

ThinkPlus® 3-year LOR® 4x5 NBD
graphics warranty
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Note: Power-on password, hard disk password, supervisor password, security keyhole

Preloader:
- Some: XP Professional pre-installed through downgrade rights in Genuine Windows Vista Business

Battery - life
- 9-cell: 65-watt (GMA graphics) AC adapter
- Supports ThinkVantage® technologies
- 6-hour battery life

MSI WS710

See footnotes for important warranty information

See footnotes for important warranty information

See footnotes for important warranty information

See footnotes for important warranty information

See footnotes for important warranty information

See footnotes for important warranty information
### ThinkPad R400 7440 (Onsite) - withdrawn

#### Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32

#### Preloaded applications
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creations™ Plus Standard Edition (combo, DVD:RW)
- Roxio® MyDVD® (combo, DVD:RW)

#### Post-warranty maintenance agreements
- Lenovo.com/thinkplus/warranty

### ThinkPad® R400 7440 (Onsite) - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Screen display</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Battery</th>
<th>Whose (W)</th>
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</thead>
<tbody>
<tr>
<td>7440-11U P8400</td>
<td>Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus, P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache</td>
<td>1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in both sockets; no sockets available; Italics: standard memory in one socket; one socket available</td>
<td>WXGA</td>
<td>GMA 80G 5400 Combo</td>
<td>Intel® 5100®</td>
<td>None</td>
<td>PC</td>
<td>Yes</td>
<td>6 Bus 32 G P Aug 08</td>
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<td>7440-12U T9400</td>
<td>Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus, P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache</td>
<td>1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in both sockets; no sockets available; Italics: standard memory in one socket; one socket available</td>
<td>WXGA</td>
<td>GMA 80G 5400 Combo</td>
<td>Intel® 5100®</td>
<td>None</td>
<td>PC</td>
<td>Yes</td>
<td>6 Bus 32 G P Aug 08</td>
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<tr>
<td>7440-17U T9400</td>
<td>Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus, P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache</td>
<td>1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in both sockets; no sockets available; Italics: standard memory in one socket; one socket available</td>
<td>WXGA</td>
<td>GMA 80G 5400 Combo</td>
<td>Intel® 5100®</td>
<td>None</td>
<td>PC</td>
<td>Yes</td>
<td>6 Bus 32 G P Aug 08</td>
</tr>
<tr>
<td>7440-18U T9400</td>
<td>Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus, P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache</td>
<td>1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in both sockets; no sockets available; Italics: standard memory in one socket; one socket available</td>
<td>WXGA</td>
<td>GMA 80G 5400 Combo</td>
<td>Intel® 5100®</td>
<td>None</td>
<td>PC</td>
<td>Yes</td>
<td>6 Bus 32 G P Aug 08</td>
</tr>
</tbody>
</table>

#### These models are part of the Global Models Plus program with limited onsite service3-year limited warranty

### Positioning
- Mainstream business performance; two spindles

### Processor
- Mainstream business performance; two spindles

### Memory
- Mainstream business performance; two spindles

### Screen display
- Mainstream business performance; two spindles

### Camera
- Mainstream business performance; two spindles

### Integrated graphics
- Mainstream business performance; two spindles

### Keyboard
- Mainstream business performance; two spindles

### TrackPoint
- Mainstream business performance; two spindles

### Touch pad
- Mainstream business performance; two spindles

### ThinkLight®
- Mainstream business performance; two spindles

### Dimensions
- Mainstream business performance; two spindles

### Weight
- Mainstream business performance; two spindles

### Case color
- Mainstream business performance; two spindles

### Case material
- Mainstream business performance; two spindles

### Battery - type
- Mainstream business performance; two spindles

### Battery - life
- Mainstream business performance; two spindles

### Chipset
- Mainstream business performance; two spindles

### ExpressCard/54
- Mainstream business performance; two spindles

### PC Card
- Mainstream business performance; two spindles

### Smart Card
- Mainstream business performance; two spindles

### Multicard reader
- Mainstream business performance; two spindles

### Ports
- Mainstream business performance; two spindles

### Mini PCI Express
- Mainstream business performance; two spindles

### WWAN
- Mainstream business performance; two spindles

### 2G Turbo
- Mainstream business performance; two spindles

### UWB
- Mainstream business performance; two spindles

### Modem
- Mainstream business performance; two spindles

### Bluetooth™
- Mainstream business performance; two spindles

### Ethernet
- Mainstream business performance; two spindles

### Intel AMT
- Mainstream business performance; two spindles

### Audio support
- Mainstream business performance; two spindles

### Security
- Mainstream business performance; two spindles

### Security chip
- Mainstream business performance; two spindles

### Fingerprint reader
- Mainstream business performance; two spindles

### Limited warranty
- Mainstream business performance; two spindles

### See footnotes for important warranty information

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US models announced August 5, September 2, or December 2, 2008

US models withdrawn effective August 2009, January 2010 or August 2010
ThinkPad R400 7439 (Education) - EasyServ - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Wide-screen display</th>
<th>Cam-Integrated graphics</th>
<th>Disk</th>
<th>SATAPCSA</th>
<th>Mini PCle WWAN</th>
<th>Mini PCle UWB</th>
<th>Finger Bat- print reader cells</th>
<th>Whose (W)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-E1U Cel 585</td>
<td>2.16 GHz 14.1&quot;WXGA</td>
<td>Cam GMA 80G 5400 Combo Intel 5100® None</td>
<td>2G Turbo 7-in-1</td>
<td>6 Bus 32 W</td>
<td>Sep 08</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7439-E2U T9400</td>
<td>2.53 GHz 14.1&quot;WXGA</td>
<td>Cam GMA 80G 5400 Combo - Intel 5100 None</td>
<td>2G Turbo 7-in-1</td>
<td>6 Bus 32 W</td>
<td>Aug 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7439-E3U T9400</td>
<td>2.53 GHz 14.1&quot;WXGA</td>
<td>Cam GMA 160G-5400 DVD+iRW - Intel 5100 None</td>
<td>2G Turbo 7-in-1</td>
<td>6 Bus 32 W</td>
<td>Aug 08</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7439-E4U T9400</td>
<td>2.53 GHz 14.1&quot;WXGA</td>
<td>Cam GMA 160G-7200 DVD+iRW - Intel 5100 None</td>
<td>2G Turbo 7-in-1</td>
<td>6 Bus 32 W</td>
<td>Oct 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7439-E5U P8700</td>
<td>2.53 GHz 14.1&quot;WXGA</td>
<td>Cam GMA 250G-5400 DVD+iRW - Intel 5100 None</td>
<td>2G Turbo 7-in-1</td>
<td>6 Bus 32 W</td>
<td>Aug 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7439-EAU T9600</td>
<td>2.80 GHz 3GB WXGA</td>
<td>Cam GMA 160G-7200 DVD+iRW - Intel 5100 None</td>
<td>2G Turbo 7-in-1</td>
<td>6 Bus 32 W</td>
<td>Mar 09</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* These models have a depot repair service 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning

Processor

Mainstream business performance: two spindles

Intel® Celeron® Processor 585 with single-core, 667MHz system bus, and 1MB L2 cache

Intel Core™ 2 Duo processor P8600, P8700, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, P8600/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 cache

Memory

1GB, 2GB, or 3GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

Italics: standard memory in both sockets; no sockets available;

Non-italics: standard memory in one socket; one socket available

SATA Combo

Some: DVD-ROM/CD-RW, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43R9148)

Some: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

80GB (5400 rpm), 160GB (5400 or 7200 rpm), or 250GB (5400 rpm)

SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display

Some: 14.1" (358.1mm) WXGA (1280x800 color), anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (358.1mm) WXGA+ (1440x900 color), anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera

Some: camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), In GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock Maximum external resolution; 2048x1536 @ 75Hz

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad

ThinkPad TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

6-cell 14.1" (WxDxH): 13.2" x 9.4" x 1.2–1.4"; 335.5 x 238mm x 31–35mm

Weight

6-cell: starting at 5.42 lb (2.46kg)

Battery - type

Top: Black

Battery - life

6-cell: up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr

Chipset

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

ExpressCard/54

One slot (ExpressCard/34, ExpressCard/54)

PC Card

None

Smart Card read

None

Multicard reader

7-in-1 reader (MMC, Memory Stick, Mem Stick PRO™, SD, SDHC, XD, XD Type H)

Ports

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394A-2000 standard)

Mini PCI Express

Three Mini PCI Express slots

Intel 5100G® WWAN

2G Turbo

UWB

None

56K V.92™ modem

Bluetooth™

Bluetooth 2.1 wireless, LED indicator

Ethernet

Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader阵容

Fingerprint reader on palm rest, swipe sensor, supports multi security chip

Limited warranty

3-years / 1-year battery - depot repair service / service upgrades available

See footnotes for important warranty information

© Lenovo

US models announced Aug 5, Sep 30, or December 2, 2008, or March 24, 2009

US models withdrawn effective August 2009 or August 2010
ThinkPad® R400 7440 (Education) - Onsite - withdrawn

<table>
<thead>
<tr>
<th>Positioning</th>
<th>Processor</th>
<th>Mainstream business performance; two spindles</th>
<th>Intel® Core™ 2 Duo processor P8600 with dual-core.</th>
<th>Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
<td>DVD-ROM/CD-RW, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43R9148) 80GB (5400 rpm) 160GB (5400 or 7200 rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SATA Combo</td>
<td>One buy for removable devices, Ultrabay-Slim compatible, 12.7mm high</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultra bay Enh</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultra bay disk</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widescreen display</td>
<td>14.1” (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300.1 contrast ratio</td>
<td></td>
<td></td>
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<tr>
<td>Camera</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock Max external resolution: 2048x1536@75Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TrackPoint™</td>
<td>TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touch pad</td>
<td>UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>Illuminates the keyboard to improve visibility in low-light conditions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions³</td>
<td>6-cell-14.1W (WxHxD): 13.2” x 9.4” x 1.2–1.4; 335.5 x 238mm x 31–35mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight²</td>
<td>6-cell: starting at 5.1 lb (2.3kg)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case material</td>
<td>Top: Super-Elastic Polycarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery - life¹⁰</td>
<td>6-cell: up to 5 hr; 6-cell Plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr</td>
<td></td>
<td></td>
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<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)</td>
<td></td>
<td></td>
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<tr>
<td>ExpressCard slot</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PC Card Std slot</td>
<td>None</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Smart Card Read</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi card Reader</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)</td>
<td></td>
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</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394A-2000 standard)</td>
<td></td>
<td></td>
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<tr>
<td>Mini PCI Express</td>
<td>Three Mini PCI Express slots</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Intel 5100⁴⁶</td>
<td>11a/b/g/n wireless⁸, Mini PCI Express adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)</td>
<td></td>
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<tr>
<td>WWAN</td>
<td>None</td>
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<tr>
<td>2G Turbo</td>
<td>None</td>
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<tr>
<td>UWB</td>
<td>None</td>
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<tr>
<td>Modern</td>
<td>56K V.92™ modem</td>
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<tr>
<td>Bluetooth™</td>
<td>Bluetooth 2.0 wireless, LED indicator</td>
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<tr>
<td>Ethernet</td>
<td>Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1</td>
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<tr>
<td>Intel AMT</td>
<td>None</td>
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<tr>
<td>Audio</td>
<td>High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finger print reader</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Preloaded operating system²⁰
- Genuine Windows® Vista® Business 32
- Vista Premium logo

Preloaded applications¹⁴
- Education software
  - Microsoft® Office OneNote® 2007 and (CD)
  - VitalSource Library College Edition
  - Adobe® Instructor Resource Cntr
  - Adobe Digital School Collection
  - Photoshop Elements (and CD)
  - Premiere Elements (and DVD)
  - Acrobat 8 Professional
- Adobe Reader
- Windows Live® Toolbar
- Windows Live Search
- Microsoft Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition
- Roxio MyDVD® (DVRd/RW)

• This model has a limited onsite service²≈ 3-year limited warranty

Education models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Limited warranty²≈ 3-years1-year battery, limited onsite service⁶, 8 am - 5 pm, Mon - Fri coverage excludes holidays, next business day response time / service upgrades²² available

Preloaded applications¹⁴
- Education software
- Microsoft® Office OneNote® 2007 and (CD)
- VitalSource Library College Edition
- Adobe® Instructor Resource Cntr
- Adobe Digital School Collection
- Photoshop Elements (and CD)
- Premiere Elements (and DVD)
- Acrobat 8 Professional
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live® Toolbar
- Windows Live Search
- Microsoft Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition
- Roxio MyDVD® (DVRd/RW)

Supports ThinkVantage® technologies

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day® toll-free support during the warranty period¹⁷ via 800-426-7378

See footnotes for important warranty information

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*(LAG3-5) August 2009*
ThinkPad® R400 Accessories - withdrawn

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09

Ultrabay Slim 9.5mm*46
Serial ATA Hard Drive Bay Adapter III 43N3412 ann 06/23/09

Storage and removable storage
16GB Disk SATA 3.0Gb/s (5400 rpm)*41 41N5737 ann 10/16/07
250GB Disk SATA 3.0Gb/s (5400 rpm)*41 43R8152 ann 01/15/08
250GB Disk FDE SATA 3.0Gb/s (7200 rpm)*41 43N3410 ann 01/20/09
320GB Disk SATA 3.0Gb/s (5400 rpm)*41 43N3403 ann 08/05/08
320GB Disk SATA 3.0Gb/s (7200 rpm)*41 43N3411 ann 01/20/09
500GB Disk SATA 3.0Gb/s (7200 rpm)*41 43N3423 ann 01/07/10

*41 Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay

USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk 43R2018 ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 ann 01/07/10
USB 2.0 Portable DVD Burner 43N3264 ann 01/05/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
USB Port Replicator with Digital Video 45K1610 ann 07/28/09

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
Ultralast Wireless Keyboard and Mouse*46 57Y4700 ann 09/15/09
*46 Requires the ThinkPad USB Wireless Card necessary for the wireless system to work.

ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Multimedia
ThinkPad In-Ear Headphones 57Y4488 ann 01/07/10

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
ThinkPad T400/T410/R400 Privacy Filter 43R2472 ann 08/05/08
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
PC Card Gemplus Smart Card Reader 41N3004 ann 12/13/05
ExpressCard Gemplus Smart Card Reader 41N3043 ann 06/27/06

Batteries
ThinkPad Battery 33 (4-cell) 41U3196 ann 05/09/07
ThinkPad Battery 33+ (6-cell) 41U3198 ann 05/09/07
ThinkPad Battery 33++ (9-cell) 43R2499 ann 03/04/08
ThinkPad Battery 42 (3-cell, bay)*43 57Y4536 ann 08/25/09
ThinkPad External Battery Charger*44 40Y7625 ann 09/20/05
*43 Used in Ultrabay Slim bay.
*44 Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alladaycomputing
ThinkPad 65W AC Adapter*45 40Y7696 ann 01/05/06
*45 Only compatible with the integrated graphics models.
ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
90W Ultraslim AC/DC Combo Adapter 41R4493 ann 09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493
•BlackBerry charge tip (L8a) 41R4478 ann 12/18/07
•Pod and iPhone Charge Tip (L10a) 41R4481 ann 12/18/07
•Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases
Up to 14" widescreen models:
ThinkPad 14W Case Sleeve 57Y4294 ann 03/16/10
Up to 15.4" widescreen models:
ThinkPad 15W Case Sleeve 51J0477 ann 08/18/09
Lenovo Business Messenger Case 51J0475 ann 08/18/09
Lenovo Messenger Max 41U5253 ann 05/01/07
Lenovo Performance Backpack 41U5254 ann 05/01/07
CheckPoint Friendly Business Topload Case 51J0418 ann 05/05/09
ThinkPad Business Topload Case 43R2476 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08
Up to 15.6" widescreen models:
Wenger Backpack for Lenovo 57Y4271 ann 01/07/10
Wenger Slim Case for Lenovo 57Y4272 ann 01/07/10
Wenger Deluxe Slim Case for Lenovo 57Y4273 ann 01/07/10

More information at www.lenovo.com/support/cases

Monitors
Lenovo L2230x Wide 21.5" Monitor 5453HB1 ann 06/10/10
ThinkVision® L1711p 17" Monitor 5047HB2 ann 10/20/09
ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08
ThinkVision L1915p Wide 19" Monitor 2448HB6 ann 10/20/09
ThinkVision L2250p Wide 22" Monitor 2572HB6 ann 10/20/09
ThinkVision L2251p Wide 22" Monitor 2572HD6 ann 10/20/09
ThinkVision L2251x Wide 22" Monitor 2578HB6 ann 10/20/09
ThinkVision L2321x Wide 23" Monitor 4014HB6 ann 06/10/10
ThinkVision L2440p Wide 24" Monitor 4402HB2 ann 09/17/08

Monitor Accessories*46
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 46K1263 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09
Radial Arm 19K4464 ann 05/05/00

*46 Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide

© Lenovo (O-R400) August 2010
### ThinkPad® R500 2714 (TopSeller) - withdrawn

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

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<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA GB rpm</th>
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<th>Mini PCIe 802.11 b/g/n</th>
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<td>GMA</td>
<td>250G 5400</td>
<td>DVD±RW</td>
<td>Intel 5100</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Blue 6</td>
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<tr>
<td>2714-A7U</td>
<td>T6670</td>
<td>2.20</td>
<td>15.4&quot; WXGA Cam</td>
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<td>250G 5400</td>
<td>DVD±RW</td>
<td>11th</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Blue 6</td>
<td>XP Pro Jul 09</td>
</tr>
</tbody>
</table>

- **Memory**: 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in one socket; one socket available
- **SATA DVD±RW**: DVD burner, SATA 1.5Gbps, 12.7mm Ultrabay Enhanced, removable (43R9149)
- **Ultrabay Enhanced SATA disk**: One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high 250GB(5400 rpm)
- **SATA 1.5Gbps, 2.5" wide, 9.5mm high, removable, upgradeable, 2nd disk, ThinkPad® Shock Mounted Hard Drive, Active Protection System™**
- **Widescreen display**: 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **Integrated graphics**: Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz
- **Keyboard**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- **TrackPoint®**: TrackPoint® pointing device, “Press-to-Select,” Intel® Scroll Bar®, magnifying glass
- **Touch pad**: UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions**: 6-cell 15.4"WxHxD: 14.1" x 10.2" x 1.4–1.5"; 358.6mm x 260mm x 36–39mm
- **Weight**: 6.0 lbs (2.7kg)
- **Case color**: black
- **Case material**: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- **Battery - type**: Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced
- **6-cell: up to 4.5 hr; 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr**
- **Battery - life**: Intel® 5100 (1.1, GMA 4500MHD, non-parity, processor technology)
- **Chipset**: Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gbps, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, Ethernet MAC), LPC bus (WPCN385 Super I/O)
- **ExpressCard/54**: One slot (ExpressCard/34, ExpressCard/54)
- **PC Card**: One slot (Type I, Type II), CardBus 32-bit
- **Smart Card Read**: None
- **Multicard Reader**: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- **Ports**: Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
- **Mini PCI Express**: Two Mini PCI Express slots
- **Mini PCI Express Intel 5100**: Some: 11b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) 11th
- **WWAN**: None
- **2G Turbo**: None
- **UWB**: None
- **Modem**: 56K V.92 modem
- **Bluetooth**: Bluetooth 2.1 wireless, LED indicator
- **Ethernet**: Gigabit ethernet, Broadcom® BCM5787M (MAC/PHY), PCIe x1, PXE
- **Intel AMT**: None
- **Audio support**: High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- **Fingerprint reader**: Fingerprint reader on palm rest, swipe sensor, supports the security chip

<table>
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<tr>
<th>Mini PCIe Slot</th>
<th>Preloaded operating system$^{20}$</th>
<th>Preloaded applications$^{14}$ (all OSeS, only some listed)</th>
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<td></td>
<td>- Vista models: Vista Premium logo</td>
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</tbody>
</table>

- **65-watt (GMA graphics) AC adapter**
- **ThinkPad Roll Cage (one-piece magnesium frame)**
- **EPEAT® Silver rating**
- **ENERGY STAR® 5.0-compliant RoHS-compliant**
- **International Warranty Service**: 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

| 1GB PC3-8500 DDR3 L-H SODIMM | T/R/W/SL Series Lithium-Ion Battery 6-cell | 40X6799 |
| 2GB PC3-8500 DDR3 L-H SODIMM | T/R/W/SL Series Lithium-Ion Battery 9-cell | 40Y6797 |
| ThinkPad Advanced Dock       | Advanced Ultrabay Battery III              | 57Y4536 |
| Other accessories on O-R500 sheet |                                    |                      |

See footnotes for important warranty information

| US models announced March 17 or July 7, 2009
| US models withdrawn effective December 2009

* Intel Centrino® processor technology

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(WKK3-6) January 2010

$^{12}$ EasyServ$^{TM}$ depot repair service / service upgrades

$^{14}$ Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

$^{20}$ 1-year - EasyServ$^{TM}$ depot repair service / service upgrades available

$^{22}$ 1-year LOR$^{TM}$
This small and medium business (SMB) model is part of the US TopSeller™ Program.

- Mainstream business performance; two spindles
- Intel® Core™ 2 Duo processor T6670 with dual-core, Intel HD Boost, 2.20GHz, 2GB system RAM, 2.5L2 cache
- 2914-AFU T6670 2.20 2GB 15.4" WXGA Cam GMA 2500 5400 DVD±RW 11n 11b/g/n wireless
- Bluetooth 2.1 wireless, LED indicator
- Audio support
- Integrated graphics the keyboard to improve visibility in low-light conditions
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- Media Reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
- Two Mini PCI Express slots
- 11b/g/n wireless, Mini-PCIe Adapter II
- None
- None
- None
- None
- None
- None
- None
- None
- None
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- Fingerpointer reader
- Finger print reader
- None
- Finger Blue 6 XP Pro No Oct 09
- 2714-AFU T6670 2.20 2GB 15.4" WXGA Cam GMA 2500 5400 DVD±RW 11n 11b/g/n wireless
- Desktop repair service / service upgrades available
- Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32
- Preloaded applications (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software
  - Lenovo System Toolbox
  - Adobe®, Reader®
  - Roxio® Creator® Business Edition
  - Roxio MyDVD® (DVD±RW)
  - Corel® WinDVD® (DVD±RW)
- Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC adapter
- Lenovo Roll Cage (one-piece magnesium frame)
- EPEAT™ Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Lenovo

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(WKK3-8) August 2010
### ThinkPad R500 2717 (TopSeller) - withdrawn

#### Positioning

**Processor**

- **Intel® Core™ 2 Duo processor T6570** or **T6670**, Intel HD Boost, 1066MHz system bus; **P8400/P8600 or T9400** with **dual-core**, Intel HD Boost, 1066MHz system bus; **P8400/P8600 or T9400** with **dual-core**, Intel HD Boost, 1066MHz system bus;

**Memory**

- 2GB or 3GB std / 4GB max

**Display**

- 15.4” WXGA (1280x800) color, anti-glare, CCFL backlight,

**Battery**

- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced

**Chipset**

- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub);

**ExpressCard/54**

- One slot (ExpressCard/34, ExpressCard/54)

**PC Card**

- One slot (Type I, Type II), CardBus 32-bit

**Multicard Reader**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Mini PCI Express**

- Two Mini PCI Express slots

**Modem**

- 56K V.92 modem

**Bluetooth**

- Bluetooth 2.1 wireless, LED indicator

**Audio**

- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack, microphone output jack, headphone output jack, microphone mute, microphone volume control

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint Reader**

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Limited warranty**

- 3-years/1-year battery - EasyServ™, depot repair service / service upgrades available

---

### ThinkPad R500 2717 (TopSeller) - withdrawn

#### Workhorse (W)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCI Finger print reader</th>
<th>Battery Turbo</th>
<th>Bluetooth charged cells</th>
<th>Preload operating system</th>
<th>Workforce (W)</th>
</tr>
</thead>
</table>
| 2717-5GU P8400 | 2.26 | 2GB 15.4” WXGA | GMA 160G 5400 | DVD±RW | Intel® 5100™ | None | Finger | 6 XP Pro | Aug 08 | 6-cell plus Ultrabay battery: up to 4.5 hr; 9-cell: up to 7.1 hr | - Some: Windows® XP Professional preinstalled through downgrade rights in Windows Vista® Business | Intel Centri
to processor technology |
| 2717-5HU T9400 | 2.53 | 2GB 15.4” WXGA Cam | GMA 160G 5400 | DVD±RW | Intel® 5100™ | None | Finger | 6 XP Pro | Aug 08 | 6-cell plus Ultrabay battery: up to 4.5 hr; 9-cell: up to 7.1 hr | - Some: Genuine Windows Vista Ultimate 32 | Intel Centri
to processor technology |
| 2717-8VU T6570 | 2.10 | 2GB 15.4” WXGA Cam | GMA 160G 5400 | DVD±RW * Intel® 5100™ | None | Finger | Blue 6 | Ult 2 Educ | Mar 09 | 6-cell plus Ultrabay battery: up to 4.5 hr; 9-cell: up to 7.1 hr | - Vista® WinDVD® (DVD+RW) | Intel Centri
to processor technology |
| 2717-820 T6670 | 2.20 | 3GB 15.4” WXGA Cam | GMA 320G 5400 | DVD±RW | Intel® 5100™ | None | Finger | Blue 6 | Mar 09 | 6-cell plus Ultrabay battery: up to 4.5 hr; 9-cell: up to 7.1 hr | - Core® WinDVD® (DVD+RW) | Intel Centri
to processor technology |
| 2717-7B0 T6870 | 2.20 | 3GB 15.4” WXGA | GMA 320G 5400 | DVD±RW | Intel® 5100™ | None | Finger | Blue 6 | Jul 09 | 6-cell plus Ultrabay battery: up to 4.5 hr; 9-cell: up to 7.1 hr | - Core® WinDVD® (DVD+RW) | Intel Centri
to processor technology |

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**NOTE:** These small and medium business (SMB) models are part of the US TopSeller™ Program. These models have an EasyServ™, depot repair service 3-year limited warranty.

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**Preloaded applications**

- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Core® WinDVD® (DVD+RW)

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**See footnotes for important warranty information**

- US models withdrawn effective June or December 2009

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**Lenovo (WKK3-1) January 2010**

**Lenovo**

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378
- Fixed Windows Vista® Ultimate 32
- Fixed Windows Vista® Business
- Fixed Windows® 7 x 32-bit
depot repair service / service upgrades available

---

**Lenovo plus warranty**

- ThinkPlus™ 3-year LOR 9x5xNBD
- ThinkPlus 4-year LOR 9x5xNBD
- ThinkPlus 5-year LOR 9x5xNBD
- ThinkPlus 4-year P/L P/U Depot
- ThinkPlus 5-year P/L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
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<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
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<th>Disk SATA rpm</th>
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<td>2717-ASU T6670 2.20</td>
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<td>GMA 320G 5400</td>
<td>DVD±RW 11n\textsuperscript{a}</td>
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<td>Finger</td>
<td>Blue 6</td>
<td>XP Pro</td>
<td>No</td>
<td>Oct 09</td>
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<tr>
<td>2717-ATU P8700 2.53</td>
<td>2GB 15.4&quot; WXGA</td>
<td>GMA 250G 5400</td>
<td>DVD±RW</td>
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<td>Blue 6</td>
<td>XP Pro</td>
<td>No</td>
<td>Oct 09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller\textsuperscript{™} Program
- These models have a depot repair service 3-year limited warranty

### Positioning Processor
Mainstream business performance; two spindles

Intel\textsuperscript{®} Core\textsuperscript{TM} 2 Duo processor T6670 with dual-core,
Intel HD Boost, 800MHz system bus, and 2MB L2 cache or
Intel Core 2 Duo processor P8700 with dual-core,
Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

### Memory
2GB or 3GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;

*Italic*: standard memory in both sockets; no sockets available;

*Non-Italic*: standard memory in one socket; one socket available;

**SATA DVD±RW** DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
250GB\textsuperscript{b} (5400 rpm) or 320GB\textsuperscript{c} (5400 rpm) /

SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk,

ThinkPad Shock Mounted Hard Drive, Active Protection System\textsuperscript{™}

**Widescreen display** 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight,

200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera on top of screen, 1.3-megapixel, fixed focus

### Integrated graphics
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45,
digital monitor support via DisplayPort (splits single-link DVI-D via cable 45J7915);

Maximum external resolution: 2048x1536@75Hz

### Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint\textsuperscript{®} pointing device, *Press-to-Select,* Internet Scroll Bar\textsuperscript{™}, magnifying glass

UltraNav\textsuperscript{™}, wide touch pad below keyboard, Tap Zones, scrolling regions label

Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions\textsuperscript{a}

*6-cell 15.4"W (WxDxH): 14.1" x 10.2" x 1.4–1.5", 358.6mm x 260mm x 36–39mm

*6-cell: starting at 6.4 lb (2.93kg)*

### Case color
Black

### Case material
Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

### Battery - type
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced

### Battery - life\textsuperscript{b}
6-cell: up to 4.5 hr, 6-cell plus Ultrabay battery: up to 6.0 hr, 9-cell: up to 7.1 hr

### Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express\textsuperscript{®} 1.1,
PCL 2.3, security chip, ethernet MAC), LPC bus (WPN385 Super I/O)

**ExpressCard\textsuperscript{54}** One slot (ExpressCard34, ExpressCard54)

**PC Card** One slot (Type I, Type II), CardBus 32-bit

**Smart Card Reader** None

**Multicard Reader** 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports** Three USB 2.0, external monitor\textsuperscript{11} (VGA DB-15, DisplayPort), modem (RJ-11),

ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**

*Intel 5100\textsuperscript{c} 11n\textsuperscript{c}:

Two Mini PCI Express slots

*Intel WiFi Link 5100, 1x2 (Shirley Peak)

*Lenovo System Toolbox

*Windows Preloaded operating system\textsuperscript{25} - Windows XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications\textsuperscript{14} (only some listed)

- Rescue and Recovery\textsuperscript{™}
- Access Connections\textsuperscript{22}
- Client Security Solution\textsuperscript{™}
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan\textsuperscript{®} Plus with SiteAdvisor\textsuperscript{™} (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe\textsuperscript{®} Reader\textsuperscript{®}
- Windows Live\textsuperscript{®} Toolbar
- Microsoft\textsuperscript{®} Office 2007 Trial (60-day)
- Roxio\textsuperscript{®} Creator\textsuperscript{®} Business Edition
- WinDVD\textsuperscript{®} Player
- Voxio MyDVD\textsuperscript{®} (DVD±RW)
- Corel\textsuperscript{®} WinDVD\textsuperscript{®} (DVD±RW)

Supports ThinkVantage\textsuperscript{™} technologies

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPET\textsuperscript{™} Silver rating

ENERGY STAR\textsuperscript{®} 5.0-compliant

RoHS-compliant

International Warranty Service\textsuperscript{17} 24 hour x 7 day\textsuperscript{18} toll-free support during the warranty period\textsuperscript{12} via 800-426-7378

ThinkPlus\textsuperscript{®} 3-year LOR\textsuperscript{®} 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD 45K6021

ThinkPlus 5-year LOR 9x5 NBD 45K6024

ThinkPlus 4-year P&L P/U Depot 45K6023

ThinkPlus 5-year P&L P/U Depot 45K6025

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

\textsuperscript{1} Intel Centrino\textsuperscript{®} 2 processor technology

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US models announced October 22, 2009

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<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Camer</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Workhorse</th>
<th>Global (G) Availability</th>
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<td>2.00</td>
<td>2GB</td>
<td>15.4&quot; WXGA</td>
<td>Cam</td>
<td>GMA</td>
<td>160GB 5400 DVD+RW</td>
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<td>Finger Blue</td>
<td>9</td>
<td>Bus 32</td>
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<td>2716-3KU</td>
<td>P8400</td>
<td>2.26</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>Cam</td>
<td>GMA</td>
<td>80GB 5400 Combo</td>
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<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>Cam</td>
<td>GMA</td>
<td>80GB 5400 Combo</td>
<td>Intel P5100</td>
<td>None</td>
<td>Finger Blue</td>
<td>6</td>
<td>XP Pro G</td>
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<tr>
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<td>Cam</td>
<td>GMA</td>
<td>160GB 5400 DVD+RW</td>
<td>Intel P5100</td>
<td>None</td>
<td>Finger Blue</td>
<td>6</td>
<td>XP Pro G</td>
</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty

Positioning Processor: Mainstream business performance; two spindles
Intel® Celeron® Processor 575 with single-core,
667MHz system bus, and 1MB L2 cache
Intel Core™ 2 Duo processor P8400 or T9400 with dual-core, Intel HD Boost,
1066MHz system bus; P8400: 3MB L2 cache; T9400: 6MB L2 cache

Memory
1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Italics: standard memory in both sockets; no sockets available;
Non-italics: standard memory in one socket; one socket available

SATA Combo
Some: DVD-ROM/CD-RW, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43RR18)
Some: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9148)

Ultrabay Enhancd
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

SATA disk
80GB (5400 rpm) or 160GB (5400 rpm)

Widescreen display
15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight,
200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Integrated graphics
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45,
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
Maximum external resolution: 2048x1536@75Hz

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint
TrackPoint® pointing device, *Press-to-Select,* Internet Scroll Bar®,
magnifying glass UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label
Illuminates the keyboard to improve visibility in low-light conditions

Touchpad
ThinkLight™

Dimensions
6-cell 15.4W (WxDxH): 14.1" x 10.2" x 1.4–1.5; 358.6mm x 260mm x 36–39mm
6-cell: starting at 6.4 lb (2.93kg)

Weight
5.0-lb (2.27kg)

Case color
Black

Battery - type
PolyCarbonyl/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - life
6-cell: up to 4.5 hr; 9-cell: up to 6.0 hr; 9-cell: up to 7.1 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

PC Card
One slot (Type I, Type II), CardBus 32-bit

Smart Card Reader
None

Multicard Reader Ports
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RU-11),
eternet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

Mini PCIe Express
Two Mini PCIe Express slots
Intel 5100a
2GB Turbo
WWAN
USB
56K V.92 modem
Bluetooth
Some: Bluetooth 2.1 wireless, LED indicator
Ethernet
Gigabit Ethernet, Broadcom 802.11b/g/n, PCle x1, PXe
Intel AMT
None
Audio
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt /
volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years / 1-yr battery - depot repair service / service upgrades2 available

Supports ThinkVantage technologies

Preloaded operating system
- Some: Windows XP Professional preinstalled through
dowgrade rights in
Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 32

Preloaded applications
- Some: Windows Live™ Toolbar
- Some: Microsoft Office 2007 Trial (60-day)
- Some: Roxio® Creator® Business Edition (combo, DVD+RW)
- Some: Corel® WinDVD® (combo, DVD+RW)

Precluded by ThinkVantage technologies

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage
(picture magnesium frame)

EPET® Silver rating
(except Celeron models)

ENERGY STAR® 5.0-compliant
(except Celeron models)

RoHS-compliant

International Warranty Service
24 hour 7 x 24 toll-free support
during the warranty period via 800-426-7378

ThinkPlus® 3-year LOR® 9x5 NB
ThinkPlus 4-year LOR 9x5 NB
ThinkPlus 5-year LOR 9x5 NB
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
© Lenovo

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<td>Combo</td>
<td>-Intel 5100™</td>
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<td>6400</td>
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<td>DVD+RW</td>
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<td>DVD+RW</td>
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<td>None</td>
<td>Finger</td>
<td>Blue</td>
<td>6</td>
<td>XP Pro</td>
<td>G P Sep 08</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty*

**Positioning**

- **Processor**: Mainstream business performance: two spindles
  - **Intel® Core™ 2 Duo processor P8400** or **T9400** with dual-core, Intel HD Boost, 1066MHz system bus; **P8400**: 3MB L2 cache; **T9400**: 3MB L2 cache

**Memory**

- 1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - **Non-italics**: standard memory in one socket; no sockets available;
  - **Italics**: standard memory in both sockets; no sockets available;

**SATA Combo**

- Some: DVD-ROM/CD-RW, SATA 1.5GB/s, 12.7mm Ultrabay Enh, removable (43R9148)
- Some: DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

**SATA DVD+RW**

- One bay for removable devices, Ultrabay Smart-care, 12.7mm high

**SATA disk**

- 80GB (5400 rpm) or 160GB (5400 rpm) /
- SATA 1.5GB/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

**ThinkLight™**

- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 6-cell 15.4" (WXxDH): 14.1" x 10.2" x 1.4–1.5", 358.6mm x 260mm x 36–39mm

**Weight**

- 6-cell: starting at 6.4 lb (2.93kg)

**Battery**

- PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Battery - life**

- 6-cell: up to 4.5 hr; 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr

**Chipset**

- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gbps, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard/54**

- One slot (ExpressCard/34, ExpressCard/54)

**PC Card**

- One slot (Type I, Type II), CardBus 32-bit Smart Card Read

**Multifunction Reader**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

- USB 2.0, external monitor (VGA DB-15, DisplayPort), modem ( RJ-11), Ethernet ( RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCIe Express**

- Two Mini PCIe Express slots
  - Intel 5100™
    - 2G Turbo: None
    - WWAN: None
    - UWB: None
  - Modern: 56K V.92 modem
  - Bluetooth™: Some: Bluetooth 2.1 wireless, LED indicator
  - Ethernet: Gigabit ethernet, Broadcom® BCM5787M (MAC/PHY), PCIe x1, PXE
  - Intel AMT: None
  - Audio support: High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
  - Power-on power-off, hard disk password, supervisor password, security keyhole
  - Security chip: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
  - Fingerprint reader: Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

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**Preloaded operating system**

- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
  - Some: Genuine Windows Vista Business 32
  - Vista models: Vista Premium logo

**Preloaded applications**

- Rescure and Recovery®
- Access Connections®
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live® Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

**Supports ThinkVantage® technologies**

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service® 24/7 toll-free support during the warranty period®

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See footnotes for important warranty information  ™© Lenovo

US models announced on August 5 or September 2, 2008
US models withdrawn effective August 2009 or August 2010

(WKK3-3) August 2010
ThinkPad R500 2716 (Education) - EasyServ - withdrawn

Personal Systems Reference (PSREF)

**Type-model** | **Processor** | **GHz** | **Memory** | **Wide-screen display** | **Cameras** | **Integrated GB rpm** | **SATA optical** | **Mini PCIe 802.11** | **Mini PCIe Turbo** | **Batteries** | **Workhorse (W)** | **Global (G) Available date**
---|---|---|---|---|---|---|---|---|---|---|---|---|
2716-ECU | Cel 575 | 2.00 | 1GB | 15.4" WXGA | Cam | GMA 5400 | Combo | Intel 5100** | None | Finger | Blue | 6 | Bus 32 | No | Sep 08
2716-5PU | P8400 | 2.26 | 1GB | 15.4" WXGA | Cam | GMA 5400 | 2GB | -Intel 5100 | None | Finger | Blue | 6 | Bus 32 | No | Aug 08
2716-5QU | T9400 | 2.53 | 2GB | 15.4" WXGA | Cam | GMA 5400 | DVD+RW | -Intel 5100 | None | Finger | Blue | 6 | Bus 32 | No | Aug 08
2716-8SU | P8600 | 2.40 | 2GB | 15.4" WXGA | Cam | GMA 5400 | DVD+RW | -Intel 5100 | None | Finger | Blue | 6 | Bus 32 | No | Feb 09
2716-8YU | Cel T1600 | 1.66 | 1GB | 15.4" WXGA | Cam | GMA 160G | 5400 Combo | DVD | -Intel 5100 | None | Finger | Blue | 6 | Bus 32 | No | Mar 09
2716-8ZU | P8700 | 2.53 | 2GB | 15.4" WXGA | Cam | GMA 5400 | DVD+RW | -Intel 5100 | None | Finger | Blue | 6 | Bus 32 | No | Mar 09

- **These models have a depot repair service 3-year limited warranty**
- **Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.**
- **Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.**

**Positioning**

**Processor**
Mainstream business performance; two spindles

**Intel® Celeron® Processor 575 with single-core, 667MHz system bus, and 1MB L2 cache or Intel Celeron Processor T1600 with dual-core, 667MHz system bus, and 1MB L2 cache or Intel Core® 2 Duo processor P8400, P8600, P8700, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600/P8700: 3MB L2 cache; T9400: 6MB L2 cache

**Memory**

1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

*Italics:* standard memory in both sockets; no sockets available;

*Non-italics:* standard memory in one socket; one socket available

**SATA Combo**

Some: DVD-ROM/CD-R/RW, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43R9148)

Some: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

**SATA DVD+R/W Ultraday Enhanc**

80GB (5400 rpm), 160GB (5400 or 7200 rpm), or 250GB (5400rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera on top of screen, 1.3-megapixel, fixed focus

**Integrated graphics**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touch pad**

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**ThinkLight™**

UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

6-cell 15.4"Wx10.2"Hx0.7"T; 366mm x 260mm x 18mm

6-cell: starting at 6.4 lb (2.93kg)

**Weight**

Color: black; Material: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Battery - life**

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced

6-cell: up to 4.5 hr; 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Hub, SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC, LPC bus (WPCC385 Super I/O)

**ExpressCard slot**

One ExpressCard/34 or ExpressCard/54

**PC Card Std slot**

One Type I or Type II slot, CardBus 32-bit

**Smart Card Read**

None

**Multicard Reader**

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro SD, SDHC, XD, XD Type H)

**Ports**

Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**

Two Mini PCI Express slots

Intel 5100**

11a/b/g/n wireless®, Mini PCI adapter, Intel WLAN Link 5000, 1x2 (Shirley Peak)

2G Turbo

None

UWB

None

**Modem**

56K V.92 modem

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Gigabit ethernet, Broadcom® BCM5787M (MAC/PHY), PCIe x1, PXE

**Intel AMT**

None

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codecs / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

Password protection, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years 1-year battery / depot repair service / service upgrades** available

See footnotes for important warranty information - Intel Centrino® processor technology

US models announced August 5 or September 30, 2008, or February 17 or March 24, 2009

US models withdrawn effective August 2009, February 2010, March 2010, or August 2010

Preloaded operating system**

- Some: Genuine Windows® Vista® Business 32
- Some: Genuine Windows Vista Ultimate 32

 Vista Premium logo

Preloaded applications** (all OSe, only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage technologies

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage

(one-piece magnesium frame)

EPEAT® Silver rating

(except Celeron models)

ENERGY STAR® 5.0-compliant (except Celeron models)

RoHS-compliant

International Warranty Service**

24 hour x 7 day toll-free support during the warranty period** via 800-426-7378

ThinkPlus® 3-year LOR**

5-year NBD

45K6021

ThinkPlus® 4-year LOR 9x5 NBD

45K6022

ThinkPlus® 5-year LOR 9x5 NBD

45K6024

ThinkPlus® 4-year P&L P/U Depot

45K6023

ThinkPlus® 5-year P&L P/U Depot

45K6025

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® R500 2718 (Education) - Onsite - withdrawn

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<td>GMA</td>
<td>160G</td>
<td>7200</td>
<td>DVD±RW</td>
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<td>Blue</td>
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</table>

- This model has a limited onsite service³ 3-year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Positioning Processor
Mainstream business performance; two spinndles
Intel® Core™ 2 Duo processor P8600 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache.

Memory
2GB std / 4GB max/² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

SATA DVD±RW
DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

SATA disk
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm height

Dimensions³
6-cell: 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touch pad
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®3, magnifying glass

ThinkLight™
UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions

Weight³
Case: Color: black, Material: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - life³
6-cell: up to 4.5 hr; 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

PC Card
One slot (Type I, Type II), CardBus 32-bit

Smart Card Reader
None

Multicard Reader
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports
Three USB 2.0, external monitor11 (VGA DB-15, DisplayPort), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express
Two Mini PCI Express slots

Intel 5100™
11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

2G Turbo
None

UWB
None

Audio
56K V.92® modem

Bluetooth™
Some: Bluetooth 2.1 wireless, LED indicator

Ethernet
Gigabit ethernet, Broadcom® BCM5787M (MAC/PHY), PCIe x1, PXE

Intel AMT
None

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty²³ 3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades²⁵ available

1GB PC3-8500 DDR3 L-H SODIMM 55Y3706 ThinkPad Battery 41+ (6-cell) 40Y6799
2GB PC3-8500 DDR3 L-H SODIMM 55Y3707 ThinkPad Battery 41+ (9-cell) 40Y6797
ThinkPad Advanced Mini Dock 2G Turbo 57Y4536
Other accessories on O-R500 sheet

Other accessories at lenovo.com/accessories

See footnotes for important warranty information © Lenovo
US model announced February 17, 2009
US model withdrawn effective February 2010

Preloaded operating system²⁰
- Genuine Windows® Vista®
- Ultimate 32
- Vista Premium logo

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections¹⁴
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies
65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷ 24 hour x 7 day© toll-free support during the warranty period¹² via 800-426-7378

ThinkPlus® ²² 4-year LOR 9x5 NBD 45K6038
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

(WKK3-5) February 2010
ThinkPad® R500 Accessories - withdrawn

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 anno 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 anno 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 anno 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 anno 06/23/09

Ultrabay Slim 9.5mm
Serial ATA Hard Drive Bay Adapter III 43N3412 anno 06/23/09

Storage and removable storage
160GB Disk SATA 3.0Gb/s (7200 rpm) 41N5737 anno 10/16/07
250GB Disk SATA 3.0Gb/s (5400 rpm) 43R8152 anno 01/15/08
250GB Disk FDE SATA 3.0Gb/s (7200 rpm) 43N3410 anno 01/20/09
320GB Disk SATA 3.0Gb/s (5400 rpm) 43N3403 anno 08/05/08
320GB Disk SATA 3.0Gb/s (7200 rpm) 43N3411 anno 01/20/09
500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423 anno 01/07/10
41 Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406 anno 08/26/08
USB 2.0 Portable 320GB Hard Disk 45K1689 anno 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 anno 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk 43R2018 anno 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 anno 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 anno 01/07/10
USB 2.0 Portable DVD Burner 43N3264 anno 01/05/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 anno 05/12/09
USB Port Replicator with Digital Video 45K1610 anno 07/28/09

Keyboard
TrackPoint Cap Collection 73P2698 anno 12/16/03
USB Numeric Keypad 33L3225 anno 05/01/00
Preferred Pro USB Keyboard 73P5230 anno 06/21/05
Enhanced Performance USB Keyboard 73P5280 anno 03/23/04
UltraSonic Wireless Keyboard and Mouse 57Y4700 anno 09/15/09
45 Wireless via 2.4GHz technology using a micro-size USB receiver.

ThinkPad USB Keyboard with TrackPoint 55Y9033 anno 08/18/09
Lenovo USB Smartcard Keyboard 51J0155 anno 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 anno 05/21/03
Lenovo Laser Mouse (USB) 41U3074 anno 01/23/07
ThinkPad USB Laser Mouse 57Y4635 anno 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 anno 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 anno 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 anno 01/22/08

Multimedia
ThinkPad In-Ear Headphones 57Y4488 anno 01/07/10

Security
Kensington® MicroSaver® Cable Lock 73P2582 anno 12/29/09
Kensington Twin Head Cable Lock 45K1620 anno 09/30/08
Lenovo Security Cable Lock 57Y4303 anno 08/24/10

ThinkPad 90W AC Adapter 40Y7659 anno 09/20/05
40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter 40Y7696 anno 01/05/06
40Y7696 or the integrated graphics models.

ThinkPad 90W AC Adapter 40Y7659 anno 09/20/05
90W Ultrasmall AC/DC Combo Adapter 41R4493 anno 09/22/09

More info at www.lenovo.com/support/poweraiders

Charging tips for 90W Ultrasmall AC/DC Combo Adapter 41R4493

Palm device charge tip (L7) 41R4315 anno 12/18/07
BlackBerry charge tip (L8a) 41R4478 anno 12/18/07
iPod and iPhone Charge Tip (L10a) 41R4481 anno 12/18/07
Generic Micro USB charge tip (L18) 41R4490 anno 01/06/09

More information at www.lenovopowertips.com

Carrying Cases
ThinkPad 15W Case Sleeve 51J0477 anno 08/19/08
Lenovo Business Messenger Case 51J0475 anno 08/19/08
Lenovo Messenger Max 41U5253 anno 05/01/07
Lenovo Performance BackPack 41U5254 anno 05/01/07
Lenovo Business Topload Case 43R2476 anno 05/13/08

ThinkPad Deluxe Expannder Case 43R2480 anno 05/08/08
ThinkPad Executive Leather Case 43R2480 anno 05/08/08

More information at www.lenovo.com/support/cases

Monitors
Lenovo L2230x Wide 21.5" Monitor 543H81 anno 06/10/10
ThinkVision® L171p 17" Monitor 5047H2 anno 10/20/09
ThinkVision L1951p Wide 19" Monitor 2448H8 anno 10/20/09
ThinkVision L2250p Wide 22" Monitor 2572H6 anno 10/20/09
ThinkVision L2251p Wide 22" Monitor 2572H6 anno 10/20/09
ThinkVision L2321x Wide 23" Monitor 4014H8 anno 06/10/10
ThinkVision L2440p Wide 24" Monitor 4420H2 anno 09/17/08

More information at www.lenovopowertips.com

Monitor Accessories
Lenovo USB-to-DVI Monitor Adapter 45K5296 anno 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4393 anno 08/04/09
DisplayPort to Single-link DVI-D Cable 45J7915 anno 08/05/08
ThinkVision USB Soundbar 40Y7616 anno 09/23/05
ThinkVision Soundbar 45K1263 anno 09/16/08
Kensington MicroSaver Cable Lock 73P2582 anno 12/29/03
Kensington Twin Head Cable Lock 45K1620 anno 09/30/08
Lenovo Security Cable Lock 57Y4303 anno 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 anno 09/22/09

Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Accessories Guide pdf at www.lenovo.com/accessoriesguide
### ThinkPad L412 4403 (TopSeller) - XP with Win 7 License - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk Sata GB</th>
<th>Sata optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
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<tr>
<td>4403-32U</td>
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<td>11b/g/n</td>
<td>WWAN upg</td>
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<td>XP Pro</td>
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<td>Blue</td>
<td>6</td>
<td>XP Pro</td>
<td>Jul 10</td>
</tr>
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</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

**Positioning**

**Processor**  
Intel® Core™ i3 processor i3-350M or i3-370M with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

**Memory**

2GB std / 8GB max† / PC3-10600 1333MHz DD3R3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;  
Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW SATA disk**

DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

**Widescreen display**

14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Integrated graphics**

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;  
Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;  
2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint**

TrackPoint® pointing device, Internet Scroll Bar™, magnifying glass

**Touch pad**

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch,  
**ThinkLight™** None

**Dimensions**

14.0W (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm

**Weight**

4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)

**Case color**

Black

**Case material**

Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

**Chipset**

Mobile Intel HM55 Express Chipset

**ExpressCard/34**

One slot (ExpressCard/34)

**Multicard Reader**

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor port (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCIe Mini Card**

Two PCI Express Mini Card slots  
11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card

**Modem**

None

**Bluetooth**

2.1 wireless, LED indicator

**Ethernet**

Realtek® RTL8111DL Gigabit Network Connection

**Intel AMT**

None

**Audio support**

High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

None

**Limited warranty**

1-year - depot repair service / service upgrades available

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**See footnotes for important warranty information**

**US models announced May 11 or July 6, 2010**

**US models withdrawn effective October 2010**
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Hard Drive</th>
<th>OS</th>
<th>Battery</th>
<th>Weight</th>
<th>Dimensions</th>
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<td>14.0” HD</td>
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<td>160G 7200</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>28 WWAN</td>
<td>None</td>
<td>2GB</td>
<td>Mainstream business performance: two spindles</td>
<td>- Genuine Windows® 7 Professional 64</td>
<td>1-year depot repair service / service upgrades® available</td>
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<td>28 WWAN</td>
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<td>2GB</td>
<td>Intel® Core™ i3 processor i3-350M or i3-370M with dual-core.</td>
<td>- Rescue and Recovery™</td>
<td>- 22</td>
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<td>4403-34U</td>
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<td>2GB</td>
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<td>- Access Connections™</td>
<td>- 22</td>
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<td>Intel® Core™ i5 processor i5-480M or i5-520M with dual-core.</td>
<td>- ThinkVantage Power Manager</td>
<td>- 22</td>
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<td>- ThinkVantage System Update</td>
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<td>2GB</td>
<td>Intel® Core™ i5 processor i5-480M or i5-520M with dual-core.</td>
<td>- Fingerprint Software (fingerprint models)</td>
<td>- 22</td>
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<td>Intel® Core™ i3 processor i3-370M with dual-core.</td>
<td>- ThinkVantage Toolbox</td>
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<td>Intel® Core™ i5 processor i5-480M or i5-520M with dual-core.</td>
<td>- Microsoft Office 2010 preloaded;</td>
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<td>2GB</td>
<td>Intel® Core™ i3 processor i3-370M with dual-core.</td>
<td>- Corel® WinDVD® (DVD-3375)</td>
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<td>Intel 6200®</td>
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<td>2GB</td>
<td>Intel® Core™ i5 processor i5-480M or i5-520M with dual-core.</td>
<td>- Corel® Burn.Now™ Lenovo Edition (DVD:RW)</td>
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<td>2GB</td>
<td>Intel® Core™ i3 processor i3-370M with dual-core.</td>
<td>- Corel® DVD MovieFactory® Lenovo Edition (DVD:RW)</td>
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See footnotes for important warranty information
US models announced May 11, July 6, 2010, or January 11, 2011
US models withdrawn effective June 2011 or January 2012

® Lenovo Limited warranty12
™ ThinkLight
® Display 8
65-watt AC adapter EPEAT Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service17

Preloaded applications14 (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:3375)
- Corel® DVD MovieFactory® Lenovo Edition (DVD:RW)

Supports ThinkVantage® technologies

© Lenovo

See footnotes for important warranty information
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<th>Memory</th>
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<td>Pro 64</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor: Intel® Core™ i3 processor i3-350M or i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory: 2GB std / 8GB max/® PC3-10600 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

SATA DVD:RW DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

SATA disk: 160GB (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System™

Widescreen display: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera: Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics: Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200x1600 (single-link DVI-D via cable 45J7915)

Keyboard: 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint®: TrackPoint® pointing device, Internet Scroll Bar™, magnifying glass

Touchpad: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch support

ThinkLight™: None

Dimensions³: 14.0W (WxDxH): 13.5" x 9.2" x 0.9"; 344mm x 233mm x 22.6mm

Weight³: 4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)

Case color: Black

Case material: Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type: Lithium Ion 6-cell

Battery - life: 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

Chipset: Mobile Intel HM55 Express Chipset

ExpressCard/34: One slot (ExpressCard/34)

Multicard Reader Ports: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Pcie Mini Card 11b/g/n: Two PCI Express Mini Card slots

Intel 6200® WWAN upg: Wireless WAN upgradable

Modem: None

Bluetooth™: Bluetooth 2.1 wireless, LED indicator

Ethernet: Realtek® RTL8111DL Gigabit Network Connection

Intel AMT: None

Audio support: High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security: Power-on password, hard disk password, supervisor password, security keyhole

Security chip: Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

Preloaded operating system²⁰: - Genuine Windows® 7 Professional 64


Supports ThinkVantage® technologies

65-watt AC adapter - EPEAT™ Gold rating - ENERGY STAR® 5.0-compliant - RoHS-compliant - International Warranty Service¹⁷ - 24 hour x 7 day® toll-free support during the warranty period¹³ via 800-426-7378

See footnotes for important warranty information

US models announced May 11 or July 6, 2010

US models withdrawn effective June 2011 or January 2012

Lenovo.com/thinkplus/warranty
**ThinkPad L412 4403 (Discrete) - TopSeller (Windows 7) - withdrawn**

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>Preload</th>
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<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>14.0” HD</td>
<td>2.0M</td>
<td>160G 7200</td>
<td>Intel 6200²⁸ WWAN upg</td>
<td>None</td>
<td>None</td>
<td>Blue</td>
<td>Pro 64</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

| Positioning | Processor | Mainstream business performance: two spindles Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache |
|-------------|-----------|---------------|--------|---------------------|--------|------|----------------|---------------------|-------------------|------------|----------|-----------|
| Memory      | 2GB std / 8GB max² / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Non-italics*: standard memory in one socket; one socket available |
| SATA DVD:RW | DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB²⁷ (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, Active Protection System™ |
| Widescreen display | 14.0” (355mm) HD (1366x768) color, anti-giare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio |
| Camera      | Camera on top of screen, 2.0-megapixel, fixed focus |
| Discrete graphics | ATI® Mobility Radeon™ HD 5145 graphics, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution*: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915) |
| Keyboard    | 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys |
| Trackpad    | TrackPoint™ pointing device, Internet Scroll Bar³, magnifying glass |
| Touchpad    | UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch |
| Dimensions³ | 14.0W* (WxDxH): 13.5” x 9.2” x 1.26–1.42”; 344mm x 233mm x 32–36mm |
| Weight⁴     | 4-cell: from 5.09 lb (2.31kg); 6-cell: from 5.28 lb (2.40kg); 9-cell: from 5.62 lb (2.51kg) |
| Case color  | Black |
| Case material | Acrylonitrile-Butadiene-Styrene (ABS) plastic |
| Battery - type | Lithium Ion 9-cell |
| Battery - life³ | 4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr |
| Chipset     | Mobile Intel HM55 Express Chipset |
| ExpressCard/34 | One slot (ExpressCard/34) |
| Multicard Reader Ports | 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) |
| PCIe Mini Card | Two PCI Express Mini Card slots |
| Intel 6200²⁸ WWAN upg | Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable |
| Modern      | None |
| Bluetooth™ | Bluetooth 2.1 wireless, LED indicator |
| Ethernet   | Realtek® RTL8111DL Gigabit Network Connection |
| Intel AMT   | None |
| Audio support | High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack |
| Security    | Power-on password, hard disk password, supervisor password, security keyhole |
| Security chip | Trusted Platform Module, TCG 1.2-compliant |
| Fingerprint reader | None |

**Preloaded operating system**¹⁰²
- Genuine Windows® 7 Professional 64

**Preloaded applications**¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

Supports ThinkVantage® technologies

- 90-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service¹⁷
24 hour x 7 day²⁶ toll-free support during the warranty period¹² via 800-426-7375

<table>
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<th>Code</th>
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<td>45K5971</td>
<td>ThinkPlus® 3-year LOR 9x5 NBD</td>
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<td>45K5972</td>
<td>ThinkPlus® 2-year LOR 9x5 NBD</td>
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<td>45K5973</td>
<td>ThinkPlus® 1-year LOR 9x5 NBD</td>
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See footnotes for important warranty information
US model announced June 22, 2010
US model withdrawn effective June 2011

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(DMD3-9) June 2011
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<th>Type-model</th>
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<th>Base GHz</th>
<th>Max turbo GHz</th>
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<th>Camera</th>
<th>Disk</th>
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<th>Carrier</th>
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<td>Pro 64</td>
<td>Jun 10</td>
<td></td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor: Mainstream business performance: two spindles
  - Intel® Core™ i3 processor i3-350M or i3-370M with dual-core.
  - DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology: 3MB cache or
  - Intel Core i5 processor i5-520M with dual-core.
  - DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology: 3MB cache

Memory: 2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - Non-italics: standard memory in one socket; one socket available
  - ITALICS: standard memory in both sockets; two sockets available

SATA DVD±RW: DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
  - 160GB (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System™

Widescreen display: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight,
  - 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera: Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics: ATI® Mobility Radeon™ HD 5145 graphics, 512MB memory,
  - external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display,
  - Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
  - 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

Keyboard: 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®: TrackPoint® pointing device, Internet Scroll Bar®, magnifying glass
Touch pad: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

Dimensions: 14.0W" (355mm) L (233mm) D (21mm) H

Weight: 4-cell: from 5.09 lb (2.31kg);
  - 6-cell: from 5.28 lb (2.40kg);
  - 9-cell: from 5.09 lb (2.31kg);
  - 140W± (7200 rpm) or 160GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System™

Battery - type: Lithium Ion 9-cell
Battery - life: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr

Chipset: Mobile Intel HM55 Express Chipset
  - One slot (ExpressCard/34)

Multicard Reader Ports: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

PCle Mini Card: Two PCI Express Mini Card slots
  - Intel 6200™, WWAN upg
  - Gobi™ 2000

Modem: None
Bluetooth: 2.1 wireless, LED indicator

For more information, see the Lenovo website or contact Lenovo support.
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Sata</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
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<td>2.13</td>
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<td>DVD±RW</td>
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<td>6</td>
<td>XP Pro</td>
<td>Apr 10</td>
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Positioning Processor: Mainstream business performance; two spindles
- Intel® Core™ i3 processor i3-330M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

Memory: 2GB std / 8GB max / PC-31060 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

SATA DVD±RW Sata disk: DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
- 160GB*7 (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

Widescreen display Camera: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Integrated graphics: Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;

Keyboard: 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
Touchpad: UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch

Dimensions: 14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm

Weight: 4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)

Battery - type: Lithium Ion 6-cell
Battery - life: 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

Chipset: Mobile Intel HM55 Express Chipset

Preloaded operating system:
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications (only some listed):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Power Manager
- Presentation Director
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage™ technologies

- 65-watt AC adapter
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service:
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7375

See footnotes for important warranty information
US models announced April 20, 2010
US models withdrawn effective July 31, 2010

© Lenovo
(DMD3-2) August 2010
ThinkPad® L412 0530 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

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<tr>
<th>Type-model</th>
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<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Carrier</th>
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<td>Pro 64</td>
<td>Jul 10</td>
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</table>

- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor
Mainstream business performance: two spindles
Intel® Core™ i3 processor i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Not-itals: standard memory in one socket; one socket available

SATA DVD:± RW
SATA disk
DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
160GB™ (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, Active Protection System™

Widescreen display
14.0” (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera
Some: camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint™
6-touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

Touchpad
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

ThinkLight™
None

Dimensions³
14.0”W (WxDxH): 13.5” x 9.2” x 1.26–1.42”; 344mm x 233mm x 32–36mm

Weight³
4-cell: from 5.11 lb (2.32kg); 5-cell: from 5.45 lb (2.47kg); 6-cell: from 5.84 lb (2.65kg)

Case material
Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type
Lithium Ion 6-cell

Battery - life¹⁰
4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

Chipset
Mobile Intel HM55 Express Chipset

ExpressCard/34
One slot (ExpressCard/34)

Multicard Reader
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports
Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 3-in-1 card reader (MMC, Memory Stick, SD, SDHC), 15-pin monitor connector, stereo headphone/microphone jack, RJ-45

PCle Mini Card
Two PCI Express Mini Card slots, one b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2

WWAN upg
Some: Wireless WAN upgradable

Gobi™ 2000
Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

Carrier
Some: AT&T®, contract required with service provider

Modem
None

Bluetooth™
Some: Bluetooth 2.1 wireless, LED indicator

Ethernet
Realtek® RTL8111DL Gigabit Network Connection

Intel AMT
None

Audio support
High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
None

Preloaded operating system²²
- Some: Genuine Windows 7 Professional 64
- Some: Genuine Windows 7 Professional

Preloaded applications¹⁴ (only some listed)
• Rescue and Recovery™
• Access Connections™
• Password Manager
• ThinkVantage Power Manager
• ThinkVantage System Update
• ThinkVantage Toolbox
• Adobe® Reader®
• Microsoft Office 2010 preloaded; purchase product key to activate
• Corel® WinDVD™ (DVD+RW)
• Corel Burn.Now™ Lenovo Edition (DVD+RW)
• Corel DVD MovieFactory® Lenovo Edition (DVD+RW)

Supports ThinkVantage® technologies
65-watt AC adapter
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹³ via 800-426-7378

ThinkPlus™ ²² 1-year LOR 9x5 NBD
ThinkPlus 2-year LOR 9x5 NBD
ThinkPlus 3-year LOR 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 2-year P&L P/U Depot
ThinkPlus 3-year P&L P/U Depot
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced April 20 or July 6, 2010
US models withdrawn effective June 2011 or January 2012

© Lenovo (DMD3-3) January 2012
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
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<td>XP Pro</td>
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</table>

- This model has a depot repair service 3-year limited warranty

Positioning Processor: Mainstream business performance; two spindles

**Intel® Core™ i3 processor i3-330M with dual-core.**

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

Memory

- 2GB std / 8GB max
- PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in one socket; one socket available

SATA DVD±RW

- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
- 160GB± (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

Widescreen display

- 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera

- Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J915) supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
- 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J9715)

Keyboard

- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint®

- TrackPoint® pointing device, Internet Scroll Bar® , magnifying glass

Touch pad

- UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch gesture

Dimensions³

- 14.0"W (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm

Weight²

- 4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)

Battery - type

- Lithium Ion 6-cell

Battery - life¹⁵

- 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

Chipset

- Mobile Intel HM55 Express Chipset

ExpressCard/34

- One slot (ExpressCard/34)

Multicard Reader

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports

- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor¹⁰ (VGA DB-15, DisplayPort), ethernet (RJ-45)

PClé Mini Card

- Two PCI Express Mini Card slots

WWAN upg

- 11b/g/n wireless®, ThinkPad 11b/g/n, PClé Half Mini Card

Modem

- None

Bluetooth®³

- Bluetooth 2.1 wireless, LED indicator

Ethernet

- Realtek® RTL8111DL Gigabit Network Connection

Intel AMT

- None

Audio support

- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security

- Power-on password, hard disk password, supervisor password, security keyhole

Security chip

- Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

- None

Limited warranty²²

- 3-years/1-yr battery - depot repair service / service upgrades²² available

Preloaded operating system²⁰

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications³⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Power Manager
- Presentation Director
- ThinkVantage Productivity Center
- ThinkVantage System Update
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory®
- Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter

- EPET™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service¹⁷

- 24 hour x 7 day²⁰ toll-free support during the warranty period²⁰ via 800-426-7378

See footnotes for important warranty information

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(DMD3-4) August 2010
<table>
<thead>
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<th>Type-model</th>
<th>Processor</th>
<th>Base Turbo (GHz)</th>
<th>Memory</th>
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<th>Camera</th>
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<td>Pro 64</td>
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**Preloaded operating system**
- Some: Genuine Windows 7 Pro Professional 32
- Some: Genuine Windows 7 Professional 64

**Preloaded applications** (only some listed)
- Some: Education software
  - Adobe Digital School Collection
  - Instructor Resources (and DVD)
  - Learning Creative Suite 4 (DVD)
  - Photoshop Elements 7 (DVD)
  - Premiere Elements 7 (and DVD)
  - AcerBrot Professional (DVD)
  - Contribute CS4 (and DVD)
  - Soundbooth CS4 (and DVD)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - ThinkVantage Power Manager
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - ThinkVantage Toolbox
  - Microsoft Office 2010 preloaded: purchase product key to activate

**Supports ThinkVantage™ technologies**

65-watt AC adapter
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service
- 24 hour x 7 days a week toll-free support during the warranty period via 800-426-7378

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor: Mainstream business performance: two spindles
- Intel® Core™ i3 processor i3-350M with dual-core,
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
- Hyper-Threading technology: 3MB cache or
- Intel Core i5 processor i5-520M or i5-540M with dual-core,
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
- Intel Turbo Boost, Hyper-Threading technology: 3MB cache.

Memory:
- 2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity,
- dual-channel capable, two 204-pin SO-DIMM sockets,
- Non-Italics: standard memory in one socket; one socket available

SATA DVD: RW
- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
- SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System™

Widescreen display
- Camera: camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
- ATI™ Mobility Radeon™ HD 5145 graphics, 512MB memory,
- external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715);
supports dual independent display.
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J9715)

Keyboard
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint
- Touchpad: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- None

Dimensions
- 14.0"W (355mm) HD (1366x768) color, anti-glare, LED backlight,
- 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Weight
- black

Chipset
- Mobile Intel HM55 Express Chipset
- One slot (ExpressCard/34)
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port,
- external monitor11 (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCle Mini Card
- Two PCI Express Mini Card slots
- Some: 11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card
- Intel Centrino® Advanced-N 6200, 2x2 WWAN upg
- Gobi 2000

Carrier Modem
- None

Audio support
- High Definition (HD) Audio, Realtek ALC2690 codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader
- Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
- 3-years - 1-year battery - depot repair service / service upgrades22 available

See footnotes for important warranty information

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US models announced June 22, 2010
US models withdrawn effective September 2010 or June 2011

Preloaded operating system
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory™ Lenovo Edition (DVD+RW)

Supports ThinkVantage® technologies

90-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service
- 24 hour 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 3-year LOR24 9x5 NBD
ThinkPlus® 4-year LOR 9x5 NBD
ThinkPlus® 5-year LOR 9x5 NBD

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

Lenovo Edition (DVD+RW)

Lenovo Edition (DVD+RW)
# ThinkPad L412 0585 (Onsite) - Windows 7 - withdrawn

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<th>Processor</th>
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<th>Max turbo (GHz)</th>
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- These models are part of the Global Models Plus program with limited onsite service³ 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**

Mainstream business performance: two spindles

Intel® Core™ i5 processor i5-520M or i5-540M with dual-core,

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),

Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

2GB or 3GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity;
dual-channel capable, two 204-pin SO-DIMM sockets;

Italics: standard memory in both sockets; no sockets available;

Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW**

SATA disk

DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

160GB (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

**Widescreen display**

14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight,

220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Integrated graphics**

Intel HD Graphics in processor,
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;

2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, Internet Scroll Bar™, magnifying glass

**Touch pad**

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

**ThinkLight™**

None

**Dimensions**

14.0"W (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm

4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)

**Weight**

Black

**Case material**

Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

**Chipset**

Mobile Intel HM55 Express Chipset

One slot (ExpressCard/34)

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port,

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**PCle Mini Card**

Two PCI Express Mini Card slots

Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1

Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2

Wireless WAN upgradeable

**Modem**

None

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Realtek® RTL8111DL Gigabit Network Connection

**Intel AMT**

None

**Audio support**

High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years/1-year battery, limited onsite service³ 3, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades²² available

---

See footnotes for important warranty information

US models announced April 20, 2010

US models withdrawn effective October 2011 or January 2012

© Lenovo (DMD3-5) January 2012

Preloaded operating system²⁰

- Genuine Windows® 7 Professional 32

Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter

EPEAT™ Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service¹⁷

24 hour x 7 day²⁰ toll-free support during the warranty period¹²

via 800-426-7378

ThinkPlus® ²² 4-year LOR®© 9x5 NBD

45K6038

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger</th>
<th>Battery tooth cell</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Availability</th>
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<td>0585-6XU</td>
<td>i5-520M</td>
<td>2.40</td>
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<td>14.0” HD 2.0M</td>
<td>160G 7200</td>
<td>Intel 6200a</td>
<td>WWAN upg</td>
<td>Blue 9</td>
<td>Pro 64</td>
<td>W G P Jun 10</td>
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</table>

- These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system®
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications® (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
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- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVDs, RW)
- Corel Burn.Now™ Lenovo Edition (DVDs, RW)
- Corel DVD MovieFactory® Lenovo Edition (DVDs, RW)

Supports ThinkVantage® technologies
- 90-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service® 24 hour 7 days a week toll-free support during the warranty period® via 800-426-7378

ThinkPlus™ 4-year LOR® 8x5 NBD
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced June 22, 2010
US models withdrawn effective September 2010 or June 2011

© Lenovo

(DMD-3-12) June 2011
<table>
<thead>
<tr>
<th><strong>Memory</strong></th>
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<td>2GB PC3-10600 DDR3 L-H SODIMM (25Pack)</td>
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<td>4GB PC3-10600 DDR3 L-H SODIMM</td>
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<th><strong>Storage and removable storage</strong></th>
<th>SL410/510 500GB Disk SATA 3Gb/s (5400 rpm)</th>
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<td>USB 2.0 Portable Secure 320GB Hard Disk</td>
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<td>USB 3.0 Secure 500GB Hard Drive</td>
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<td>USB 3.0 Secure 750GB Hard Drive</td>
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<td>Lenovo Slim USB Portable DVD Burner</td>
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<table>
<thead>
<tr>
<th><strong>Wireless WAN (Mini PCI Express)</strong></th>
<th>Only WWAN upgradable models:</th>
<th>ThinkPad Gobi™ 2000 Broadband Option</th>
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<tr>
<td></td>
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<td>ThinkPad AT&amp;T® 2000 Broadband Option</td>
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<table>
<thead>
<tr>
<th><strong>ThinkPad Expansion</strong></th>
<th>Lenovo® Essential Notebook Stand</th>
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<tr>
<td></td>
<td>ThinkPad Port Replicator Series 3</td>
<td>433610W</td>
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<td></td>
<td>ThinkPad Mini Dock Series 3 - 90W</td>
<td>433710U</td>
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<td></td>
<td>ThinkPad Mini Dock Plus Series 3 - 90W</td>
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<td>Audio ports are inactive, ThinkPad Audio ports are active.</td>
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<td>When docked, ThinkPad Mini Dock Series 3 - 90W (433710U)</td>
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<tr>
<th><strong>Keyboard</strong></th>
<th>TrackPoint Cap Collection</th>
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<td>Preferred Pro USB Keyboard</td>
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<td>Enhanced Performance USB Keyboard</td>
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<td>ThinkPad USB Keyboard with TrackPoint</td>
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<td>Lenovo® USB Fingerprint Keyboard</td>
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<td>Lenovo USB Smartcard Keyboard</td>
<td>51J0155</td>
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| **Mouse** | Lenovo Optical Mouse (USB) | 06P4069 | ann 05/21/03 |
|           | Lenovo Laser Mouse (USB) | 41U3074 | ann 01/23/07 |
|           | ThinkPad USB Laser Mouse | 57Y4635 | ann 12/15/09 |
|           | Lenovo ScrollPoint® Mouse (USB, Optical) | 31P7405 | ann 08/27/02 |
|           | ThinkPad Travel Mouse (USB, Optical) | 31P7410 | ann 06/04/02 |
|           | ThinkPad Bluetooth Laser Mouse | 41U5008 | ann 01/22/08 |

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<tr>
<th><strong>Multimedia</strong></th>
<th>ThinkPad In-Ear Headphones with mic</th>
<th>57Y4488</th>
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| **Modem** | USB 2.0 Lenovo Modem | 43R1814 | ann 02/26/08 |

<table>
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<tr>
<th><strong>Security</strong></th>
<th>Kensington® MicroSaver® Cable Lock</th>
<th>73P2582</th>
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<tbody>
<tr>
<td></td>
<td>Kensington Twin Head Cable Lock</td>
<td>45K1620</td>
<td>ann 09/30/08</td>
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<tr>
<td></td>
<td>Lenovo Security Cable Lock</td>
<td>57Y4303</td>
<td>ann 08/24/10</td>
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<td>USB Gemplus GemPC Smart Card Reader</td>
<td>41N3040</td>
<td>ann 02/21/06</td>
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| **Batteries** | ThinkPad Battery 55+ (6-cell) | 57Y4185 | ann 03/30/10 |
|              | ThinkPad Battery 55++ (9-cell) | 57Y4186 | ann 03/30/10 |
|              | ThinkPad External Battery Charger | 40Y7625 | ann 09/20/05 |
|              | Requires the ThinkPad 90W AC Adapter | 40Y7659 | ann 09/20/05 |

<table>
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<tr>
<th><strong>Carrying Cases</strong></th>
<th>ThinkPad 14W Case Sleeve</th>
<th>57Y4294</th>
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<tbody>
<tr>
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<td>Lenovo Messenger Max</td>
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<td>ThinkPad Business Backpack</td>
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<td>ThinkPad Deluxe Expander Case</td>
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<th><strong>Monitors</strong></th>
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<td>ThinkVision L1951p Wide 19” Monitor</td>
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<td>ThinkVision L2250p Wide 22” Monitor</td>
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<td>ThinkVision L2251p Wide 22” Monitor</td>
<td>2572HD6</td>
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<td>ThinkVision L2440p Wide 24” Monitor</td>
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<th><strong>Monitor Accessories</strong></th>
<th>Lenovo USB-to-DVI Monitor Adapter</th>
<th>45K5296</th>
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<td>ThinkVision Soundbar</td>
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<td>Kensington MicroSaver Cable Lock</td>
<td>73P2582</td>
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<td>Kensington Twin Head Cable Lock</td>
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<td>Lenovo Security Cable Lock</td>
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<td>Lenovo Easy Reach Monitor Stand</td>
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More information at www.lenovopowertips.com

More information at www.lenovo.com/support/monitors

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories: www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovo.com/accessories

More information at www.lenovo.com/alldaycomputing

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a) 41R4481 ann 12/18/07

• Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

More information at www.lenovo.com/support/poweradapters

More information at www.lenovo.com/support/cases

More information at www.lenovo.com/support/montitors

© Lenovo (O-L412) January 2012
## Preloaded operating system

- **Some:** Genuine Windows® 7 Professional 32
- **Some:** Genuine Windows® 7 Professional 64

## Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD+RW)
- Corel® Burn.Now™
- Lenovo Edition (DVD+RW)
- Corel® DVD MovieFactory®

## Preloaded applications (continued)

- Lenovo Edition (DVD+RW)

## Limited warranty

- **1-year - depot repair service / service upgrades** available

---

### ThinkPad® L512 4444 (TopSeller) - Windows 7 - withdrawn

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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Max turbo GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATAt GB</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card</th>
<th>Finger print reader</th>
<th>Blue</th>
<th>Battery</th>
<th>Preload</th>
<th>Avail date</th>
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<td>2GB</td>
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<td>11b/g/n</td>
<td>WWAN upg</td>
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<td>i3-350M</td>
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* These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
ThinkPad® L512 4447 (TopSeller) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

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<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory</th>
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<th>Camera</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
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<td>WWAN upg</td>
<td>Finger</td>
<td>Blue</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor: Mainstream business performance: two spindles

Intel® Core™ i3 processor i3-350M or i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or

Intel Core i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory 2GB std / 8GB max / PC3-10600 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

SATA DVD:RW DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

160GB (7200 rpm) / SATA 3.0Gb/s: 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System™

Widescreen display Camera: 15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics: Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
Maximum external resolution: 2560x1600 @ 60Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

Keyboard 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® TrackPoint® pointing device, Internet Scroll Bar™, magnifying glass

Touchpad UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch gesture

ThinkLight™ None

Dimensions 15.6W (WxDxH): 15.0" x 9.7" x 1.26"–1.42"; 380mm x 247mm x 32–36mm
black

Case material Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type Lithium Ion 6-cell

Battery - life 4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

Chipset Mobile Intel HM55 Express Chipset

ExpressCard/34 One slot (ExpressCard/34)

Multicard Reader 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor™ (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCIe Mini Card Two PCI Express Mini Card slots

11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card

Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 WWAN upg

6-cell: 9-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

Modern None

Bluetooth™ Bluetooth 2.1 wireless, LED indicator

Ethernet Realtek RTL8111DL Gigabit Network Connection

Intel AMT None

Audio support High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty® 3-years/1-yr battery - depot repair service / service upgrades²² available

Preloaded operating system

- Some: Genuine Windows® 7 Professional
- Some: Genuine Windows 7 Professional 64

Preloaded applications® (only some listed)

Adobe® Reader®
Adobe Flash® Player
Microsoft® Office 2010 preloaded; purchase product key to activate
Microsoft Research AutoCollage Touch
Corel® WinDVD® (DVD+RW)
Corel Burn.Now® Lenovo Edition (DVD+RW)
Corel DVD MovieFactory® Lenovo Edition (DVD+RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 3-year LOR® 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&L P/U Depot 45K6023
ThinkPlus 5-year P&L P/U Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced May 11 or July 6, 2010
US models withdrawn effective June or October 2011

(RUB3-6) October 2010

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### ThinkPad L512 2597 (XP with Win 7 License) - withdrawn

**Preload**

- Windows XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Power Manager
- Presentation Director
- Corel® WinDVD™ (DVD ±RW)
- Corel DVD MovieFactory™
- Lenovo Edition (DVD ±RW)

Supports ThinkVantage™ technologies

**Preloaded operating system**

- 65-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

**International Warranty Service**

- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

#### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Sata optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Blue-tooth cells</th>
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<td>XP Pro</td>
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</table>

**Positioning Processor**

- Mainstream business performance: two spindles
- **Intel® Core™ i3 processor i3-330M with dual-core.**
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

**Memory**

- 2GB std / 8GB max7 / PC3-10600 1333MHz DRR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Non-italics:** standard memory in one socket; one socket available

**SATA DVD ±RW**

- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
- **160GB** (7200 rpm) / SATA 3.0Gb/s, 2.5’’ wide, 9.5mm high, removable, upgradable, Active Protection System™

**Widescreen display**

- 15.6” (395mm) HD (1366x768) color, anti-glare, LED backlight, wide 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Keyboard**

- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
- UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch

**TrackPoint™**

- TrackPoint™ pointing device, Internet Scroll Bar™, magnifying glass
- **ThinkLight™**

**Dimensions**

- 15.6W (WxDxH): 15” x 9.7” x 1.26–1.42”; 380mm x 247mm x 32–36mm
- 4-cell: from 5.48 lb (2.49kg); 6-cell: from 5.67 lb (2.57kg); 9-cell: from 6.01 lb (2.73kg)

**Weight**

- Acrylonitrile-Butadiene-Styrene (ABS) plastic
- **Battery - type**
- Lithium Ion **6-cell**
- 4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

**Chipset**

- Mobile Intel HM55 Express Chipset
- One slot (ExpressCard/34)

**Multicard Reader Ports**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor11 (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCIE Mini Card WWAN upg**

- Two PCI Express Mini Card slots
- 11b/g/n wireless®, ThinkPad 11b/g/n, PCie Half Mini Card
- Wireless WAN upgradable

**Modem**

- None

**Bluetooth™**

- Bluetooth 2.1 wireless, LED indicator
- Realtek® RTL8111DL Gigabit Network Connection
- Intel AMT

**Audio support**

- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**
- Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader None

**Limited warranty**

- 1-year - depot repair service / service upgrades available

See footnotes for important warranty information

US model announced April 20, 2010

US model withdrawn effective July 31, 2010

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(RUB3-2) August 2010
<table>
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<th>Type-model</th>
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<th>Max turbo (GHz)</th>
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</table>

- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor

Mainstream business performance: two spindle Intel® Core™ i3 processor i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel® Core i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory

2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

SATA DVD:RW

DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB® (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

SATA disk

15.6" (395mm) color, anti-glace, LED backlight, 220 nits, 16:9 aspect ratio, 500-1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1080 @ 60Hz (single-link DVI-D via cable 45J7915)

Keyboard

6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TouchPad

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch None

Dimensions

15.6"W (WxDxH): 15" x 9.7" x 1.26-1.42"; 380mm x 247mm x 32-36mm 4-cell: from 5.48 lb (2.49kg); 6-cell: from 5.67 lb (2.57kg); 9-cell: from 6.01 lb (2.73kg)

Weight

Black

Case material

Acrylonitrile-Butadiene-Styrene (ABS) plastic

Batteries

Lithium Ion 6-cell 4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

TouchPoint

Pointing device, Internet Scroll Bar®, magnifying glass

TouchPad

ThinkVantage button, spill-resistant, multimedia Fn keys

Preloaded operating system25

- Some: Genuine Windows® 7 Professional 32-bit
- Some: Genuine Windows® 7 Professional 64-bit

Preloaded applications14 (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD+RW)
- Corel® DVD MovieFactory™ Lenovo Edition (DVD+RW)

Chipset

Mobile Intel HM55 Express Chipset One slot (ExpressCard/34)

ExpressCard/34

Multicard Reader

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro SD, SDHC, XD, XD Type H)

Ports

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor™ (VGA DB-15, DisplayPort), ethernet (RJ-45)

Pcie Mini Card

Gobi™ 2000

Two PCI Express Mini Card slots Intel 6200™ WWAN upg

Some: Wireless WAN upgradeable Intel 6200™ WWAN upg

Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

Carrier

Modem

None

Bluetooth™

None

Ethernet

Realtek® RTL8111DL Gigabit Network Connection

Intel AMT

None

Audio support

High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

None

Limited warranty25 1-year - depot repair service / service upgrades26 available

See footnotes for important warranty information

US models announced April 20 or July 6, 2010

US models withdrawn effective June or October 2011

Lenovo.com/thinkplus/warranty

© Lenovo

(RUB3-3) October 2010

Lenovo Systems Reference (PSREF)
ThinkPad® L512 2598 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

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<th>Max turbo frequency (GHz)</th>
<th>Memory</th>
<th>Disk</th>
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<th>Workhorse (W)</th>
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- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory

<table>
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<th>Type-model</th>
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<th>Base turbo frequency (GHz)</th>
<th>Max turbo frequency (GHz)</th>
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<th>Disk</th>
<th>Memory controller</th>
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- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
| Type-model | Processor (GHz) | Base turbo (GHz) | Memory | Wide-screen display | Camera | Disk SATA | GB rpm | PCIe Mini Card | PCIe Mini Card WWAN | Carrier | Finger reader | Bluetooth | Preload Educ | Whorze (W) | Battery | Dimensions | Weight | Case material | Battery | Touchpad | Chipset | ExpressCard/34 | Multicard Reader | Ports | PCIe Mini Card | Intel 6200™ WWAN upg | Gobi™ 2000 | 15.6” (395mm) | TrackPoint® pointing device, Internet Scroll Bar, magnifying glass |
|-------------|-----------------|-----------------|--------|---------------------|--------|-----------|--------|--------------|---------------------|---------|--------------|-----------|-------------|----------|-----------|-----------|----------|----------------|----------|-------------|----------|-----------|-------------|----------|-----------------|--------|---------------|---------------------|-----------------|----------------|--------------------------------|
| 2598-6SU i5-520M | 2.40 2.93 | 2GB | 15.6” HD | 2.0M | 160G | 7200 | 11b/g/n | WWAN upg | Blue | Pro 64 | W G Jun 10 |
| 2598-6TU i5-520M | 2.40 2.93 | 2GB | 15.6” HD | 2.0M | 160G | 7200 | Intel 6200™ | WWAN upg | Blue | Pro 64 | W G Jun 10 |
| 2598-6UU i5-540M | 2.53 3.06 | 2GB | 15.6” HD | 2.0M | 320G | 7200 | Intel 6200 | WWAN upg | Finger | Blue | Pro 64 | W G Jun 10 |
| 2598-6VU i5-540M | 2.53 3.06 | 2GB | 15.6” HD | 2.0M | 320G | 7200 | Intel 6200 | Gobi 2000 AT&T™ | Finger | Blue | Pro 64 | Jun 10 |

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash Player™
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

Supports ThinkVantage® technologies

- 90-watt AC adapter
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour 7 day 10 support free during the warranty period via 800-426-7378

### Limited warranty
- 3-years/1-yr battery - depot repair service / service upgrades available

**Note:** See footnotes for important warranty information.

US models announced June 22, 2010
US models withdrawn effective July, 2010

© Lenovo (RUB3-7) July 2010
ThinkPad® L512 2550 (Onsite) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

| Type-model | Processor | Max turbo (GHz) | Memory | Wide-screen display (GB| rpm) | Disk | PCIe Mini Card | PCIe Mini Card | Finger print reader | Blue-tooth | Workhorse (W) Global (G) | Avail date |
|------------|-----------|----------------|--------|------------------------|--------|----------------|----------------|-------------------|------------|-------------------------|------------|
| 2550-42U   | i5-520M   | 2.40           | 2.93   | 2GB 15.6" HD           | 250G 5400 | 11b/g/n | WWAN upg      | Blue            | Pro 32 W G P       | Apr 10     |
| 2550-43U   | i5-520M   | 2.40           | 2.93   | 2GB 15.6" HD           | 160G 7200 | Intel 6200a | WWAN upg      | Blue            | Pro 32 W G P       | Apr 10     |
| 2550-44U   | i5-540M   | 2.53           | 3.06   | 3GB 15.6" HD           | 320G 7200 | Intel 6200   | WWAN upg      | Finger           | Blue Pro 32 W G P | Apr 10     |
| 2550-6NU   | i5-520M   | 2.40           | 2.93   | 2GB 15.6" HD           | 320G 7200 | Intel 6200   | WWAN upg      | Finger           | Blue Pro 64 W G P | May 10     |

- These models are part of the Global Models Plus program with limited onsite service at 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
- Corel® WinDVD® (DVD+RW)
- Corel® DVD MovieFactory® Lenovo Edition (DVD+RW)

Positioning Processor
Mainstream business performance; two spindles
Intel® Core™ i5 processor i5-520M or i5-540M with dual-core,
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB or 3GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Italics: standard memory in both sockets; no sockets available;
Non-italics: standard memory in one socket; one socket available

SATA DVD+RW
DVD burner: SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
150GB1 (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high,
removable, upgradable, Active Protection System

Widescreen display Camera
15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight,
220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Some: camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
Intel HD Graphics in processor,
external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz;
2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

Keyboard
6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, Internet Scroll Bar™, magnifying glass
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

Touchpad
None

Dimensions
15.6W" (WxDxH: 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm
4-cell: from 5.48 lb (2.49kg); 6-cell: from 5.67 lb (2.57kg); 9-cell: from 6.01 lb (2.73kg)
black

Weight silver

Case color
Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type
Lithium Ion 6-cell

Battery - life15
4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

Chipset
Mobile Intel HM55 Express Chipset
One slot (ExpressCard/34)

Multicard Reader
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports
Three USB 2.0 (one powered), one USB 2.0/eSATA combo port,
One slot (ExpressCard/34)

PCle Mini Card
Two PCI Express Mini Card slots
Some: 11b/g/n wireless4, ThinkPad 11b/g/n, PCIe Half Mini Card
Some: 11a/b/g/n wireless5, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
Wireless WAN upgradable

Modem
None

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Realtek® RTL8111DL Gigabit Network Connection

Intel AMT
None

Audio support
High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, keyboard hotkeys

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty16 3-years/1-year battery, limited onsite service17, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

See footnotes for important warranty information
US models announced April 20 or May 11, 2010
US models withdrawn effective August or October 2011

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(RUB3-4) October 2010

Preloaded applications
- Some: Microsoft Office 2010 Preloaded
- Some: Lenovo Edition (DVD+RW)
- Corel® WinDVD® (DVD+RW)
- Corel® DVD MovieFactory® Lenovo Edition (DVD+RW)

Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

65-watt AC adapter
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service27
24 hour x 7 day28 toll-free support during the warranty period29
via 800-426-7378

ThinkPlus® 4-year LOR24 9x5 NBD
45K6038

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty technologies
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<th>Type-model</th>
<th>Processor Model</th>
<th>Base Speed (GHz)</th>
<th>Turbo Speed (GHz)</th>
<th>Memory</th>
<th>Max Screen Display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
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<th>Global (G)</th>
<th>GMIP (P)</th>
<th>Availability</th>
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<td>7200</td>
<td>11b/g/n</td>
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- These models are part of the Global Models Plus program with limited onsite service. 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**

Mainstream business performance: two spindles

**Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 3MB cache

**Memory**

2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW**

DVD burner, SATA 1.5GB/s, 12.7mm high, fixed, not removable, tray-in

160GB2 (7200 rpm) or 320GB (7200 rpm) / SATA 3.0GB/s, 2.5”, 9.5mm high, removable, upgradeable, Active Protection System

**SATA disk**

- **Disc**
  - **Type-model**: 2550-6UU i5-540M
  - **Processors**: Intel Core i5 520M 2.40 GHz
  - **Memory**: 2GB
  - **Max Screen Display**: 15.6” HD
  - **Camera**: 2.0M
  - **Disk**: 320G
  - **SATA GB rpm**: 7200
  - **PCIe Mini Card**: Intel 6200
  - **Finger print reader**: Blue
  - **Blue-tooth**: Pro 64
  - **Preload**: W G P
  - **Workhorse (W)**: Jun 10
  - **Global (G)**: 0
  - **GMIP (P)**: 0

- **Positioning Processor**: Mainstream business performance: two spindles

- **Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 3MB cache

- **Memory**: 2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

- **SATA DVD±RW**: DVD burner, SATA 1.5GB/s, 12.7mm high, fixed, not removable, tray-in

- **SATA disk**: 160GB2 (7200 rpm) or 320GB (7200 rpm) / SATA 3.0GB/s, 2.5”, 9.5mm high, removable, upgradeable, Active Protection System

- **Widescreen display**: 15.6” (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

- **Camera**: Camera on top of screen, 2.0-megapixel, fixed focus

- **Integrated graphics**: ATI Mobility Radeon HD 5145 graphics, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

**Maximum external resolution**: 2560x1600 (DisplayPort)@60Hz; supports dual independent display;

**Dimensions**: 15.6”W (WxDxH): 15” x 9.7” x 1.26-1.42”; 380mm x 247mm x 32-36mm

**Weight**: 4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.3 hr

- **Keyboard**: 6-row, ThinkVantage button, spill-resistant, multimedia Fv keys

- **TrackPoint®**: pointing device, Internet Scroll Bar™, magnifying glass

- **Touchpad**

- **ThinkLight™**: UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch

- **Battery**

- **Battery - life**: Mobile Intel HM55 Express Chipset

- **ExpressCard/34**: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

- **Multicard Reader**: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor11 (VGA DB-15, DisplayPort), ethernet (RJ-45)

- **PCIe Mini Card**: Two PCI Express Mini Card slots

- **Modem**: Wireless WAN upgradable

- **Ethernet**: Realtek RTL8111DL Gigabit Network Connection

- **Audio support**: High Definition (HD) Audio, Realtek ALC2690 codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

- **Security**: Power-on password, hard disk password, supervisor password, security keyhole

- **Security chip**: Trusted Platform Module, TCG 1.2-compliant

- **Fingerprint reader**: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

- **Limited warranty**: 3-years/1-year battery, limited onsite service®️, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

- **Preloaded operating system**: Genuine Windows 7 Professional 64

- **Preloaded applications** (only some listed)

  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - ThinkVantage Power Manager
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - ThinkVantage Toolbox
  - Norton™ Internet Security 2009 (30 days of virus definitions)
  - Adobe® Reader®️
  - Adobe Flash® Player
  - Skype™ for Windows
  - Windows Live™ Toolbar
  - Microsoft Office 2010 preloaded;
  - purchase product key to activate
  - Microsoft Research AutoCollage Touch
  - Corel® WinDVD® (DVD/D:RW)

- **Supports ThinkVantage® technologies**

  - 90-watt AC adapter
  - EPEAT® Gold rating
  - ENERGY STAR® 5.0-compliant
  - RoHS-compliant

- **International Warranty Service**: 24 hour x 7 day coverage during the warranty period via 800-426-7378

- **ThinkPlus™ 4-year LOR®️ 9x5 NBD 45K6038**: Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced June 22, 2010
US models withdrawn effective July, 2010

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(RUB3-6) July 2010
ThinkPad® L512 Accessories - withdrawn

Memory
- 2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
- 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
- 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10

Storage and removable storage
- SL410/510 500GB Disk SATA 3G/s (5400 rpm) 43N3422 ann 10/22/09
- USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
- USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
- eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 ann 01/07/10
- Lenovo Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Wireless WAN (Mini PCI Express)
- Only WWAN upgradable models:
  ThinkPad Gobi™ 2000 Broadband Option 78Y1398 ann 01/07/10
  ThinkPad At&T Gobi 2000 Broadband Option 78Y1398 ann 01/07/10

ThinkPad Expansion
- Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
- USB 2.0 Port Replicator with Digital Video 0A33942 ann 03/22/11
- ThinkPad Port Replicator Series 3 433610W ann 06/23/09
- ThinkPad Mini Dock Plus Series 3 - 90W (433810U) ann 06/23/09
  When docked, ThinkPad Mini Dock Files 3 - 90W (433710U) ann 06/23/09
- ThinkPad Mini Dock Series 3 - 90W (433710U) ann 06/23/09
  When docked, ThinkPad Mini Dock Series 3 - 90W (433710U) ann 06/23/09
- Lenovo® USB Fingerprint Keyboard 73P2692 ann 01/07/10

Audio ports are inactive, ThinkPad Audio ports are active.

Keyboard
- TrackPoint Cap Collection 73P2698 ann 12/16/03
- USB Numeric Keypad 33L3225 ann 05/01/00
- Preferred Pro USB Keyboard 73P5220 ann 06/21/05
- Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
- ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
- Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
- Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
- Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
- Lenovo Laser Mouse (USB) 41J3074 ann 01/23/07
- ThinkPad USB Laser Mouse 57Y4585 ann 12/15/09
- Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
- ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
- ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Multimedia
- ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Modem
- USB 2.0 Lenovo Modem 43R1814 ann 02/26/08

Security
- Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/09
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

Batteries
- ThinkPad Battery 55+ (6-cell) 57Y1485 ann 03/30/10
- ThinkPad Battery 55++ (9-cell) 57Y4186 ann 03/30/10
- ThinkPad External Battery Charger 40Y7625 ann 09/20/05

46 Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alladaycomputing

Monitors
- More info at www.lenovo.com/support/monitors
- Monitor Accessories 46
- Lenovo USB- to-DVI Monitor Adapter 45K5296 ann 05/12/09
- Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
- ThinkVision USB Soundbar 40Y7616 ann 08/23/05
- ThinkVision Soundbar 45K1263 ann 09/16/08
- Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

46 Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

Carrying Cases
- More information at www.lenovo.com/support/cases
- Carrying Cases
- ThinkPad 15W Case Sleeve 51J0477 ann 08/18/09
- Lenovo Messenger Max 41U5253 ann 05/01/07
- ThinkPad Business Topload Case 43R2476 ann 05/13/08
- ThinkPad Business Backpack 43R2482 ann 05/13/08

Monitors
- ThinkVision® L1711p 17" Monitor 5047HB2 ann 10/20/09
- ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08
- ThinkVision L1951p Wide 19" Monitor 2448HB8 ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor 2572HB6 ann 10/20/09
- ThinkVision L2251p Wide 22" Monitor 2572HD6 ann 10/20/09
- ThinkVision L2251x Wide 22" Monitor 2572HD6 ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor 4014HB6 ann 06/10/10
- ThinkVision L2440p Wide 24" Monitor 4420HB2 ann 09/17/08

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493
- •Pod and iPhone Charge Tip (L10a) 41R4481 ann 12/18/07
- •Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

For more information on accessories:
- www.lenovo.com/accessories
- www.lenovo.com/support/monitors
- www.lenovo.com/accessoriesguide
- Option Compatibility Matrix (OCM) and accessory brochures
- www.lenovopowertips.com

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(O-L512) October 2011
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<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
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<th>Disk drive</th>
<th>OS</th>
<th>L2 cache</th>
<th>Security chip</th>
<th>Battery</th>
<th>Workhorse (W) or Global (G)</th>
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**Notes:**
- Limited warranty 3 years 1yr battery EasyServ
- Powered by Intel Centrino mobile technology
- Lenovo US models announced October 7, 2003

**SOFTWARE**

- **Windows XP Professional**
  - Microsoft Windows XP Professional
  - Disk-to-Disk Recovery
  - (in hidden protected area)

  **Preloaded**
  - Access IBM
  - Access Connections
  - Adobe Reader
  - Cisco 802.11b Ultra
  - RecordNOW and Drive Letter
  - Access (combo models)
  - InterVideo WinDVD (combo models)
  - Norton AntiVirus (OE edition)
  - PC-Doc
  - ThinkPad Utilities
  - Update Connector

  **Downloadable**
  - IBM DirectAgreement
  - Software Delivery Assistant
  - System Migration Assistant
  - Client Security Software (for security chip)

  **License**
  - (CD not included)
  - Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

- Universal 72 watt AC adapter
- Asset ID (system-specific info in access code)
- Access (combo models)
- Intel 82540EP Chipset (MAC/PHY) / PXE
- PXE 2.0-compliant
- IBM Enhanced Services available
  - International Warranty Service
  - 24 hour x 7 day 7 day toll-free warranty support during the warranty

  **ServicePac**
  - 2yrd IOR 9x5 NBD
  - 3rd IOR 9x5 NBD
  - 4yr IOR 9x5 NBD
  - 5yr IOR 9x5 NBD
  - 4yr P&L P/U Depot
  - 5yr P&L P/U Depot
  - 5yr P&L P/U Depot
  - Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/masspsleu.pdf
## ThinkPad T41 (2379) - Express - withdrawn

### Positioning
- **Processor**: Perfect balance of performance and portability; two-spindle system
- **L2 cache Memory**: 1MB or 2MB size (at processor speed) / ECC
- **Diskette drive**: None standard / use optional USB-based diskette drive
- **Display**: Some: 14.1" (358.1 mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Graphics external**: None
- **Keyboard**: TrackPoint® / "Press-to-Select," Internet Scroll Bar®
- **Dimensions**: (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm
- **Weight**: 2.5 lbs or 1 kg
- **Battery warranty**: 3 years / 1 yr battery - EasyServ®

### Software
- **Operating System**: Windows XP Professional
- **Included**: Microsoft® Windows® XP Professional
- **Features**: Disk-to-Disk Recovery

### Video output
- **Wireless antenna**: UltraConnect™ Antenna
- **Mini PCI 11b/Wi-Fi®**: Some: 11b/Wi-Fi® wireless®, Mini PCI, Intel PRO/Wireless 2100 Network Connection
- **LAN**: 10/100 Mbps Ethernet
- **Audio support**: Gigabit ethernet on systemboard / Intel® 82540EP chipset
- **Security**: Power-on password / hard disk password / supervisor password / security keyhole / Embedded Secure Subsystem™ 2.0

### Limited warranty
- **Battery**: 3 years / 1 yr battery - EasyServ®
- **System**: 3 years / 1 year
- **ThinkPad notebooks**: 3 years / 1 year

### Specifications

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### Additional Information
- **ThinkPad notebooks implement**: ThinkVantage™ technologies and design;
  visit thinkpad.com/thinkvantage
- **Universal 72 watt AC adapter**: Power cord and power cord kit for North America
- **Post-warranty annual maintenance**: Other Service Pac options at ibm.com/services/its/us/source/5yr IOR 9x5 NBD
- **Software services available**: IBM Director Agent

---

**Note**: The information provided is subject to change without notice. For the most current information, please visit the official Lenovo website or contact Lenovo support.
**ThinkPad T41p (2373) - withdrawn**

| Type-model | Processor          | Speed | Gitz Memory | Screen                | Graphics controller Disk memory | Disk modems | Ethernet on planar | Security chip | Battery cells | Workhorse (W) | Global (G) | Preload          | Available date |
|------------|--------------------|-------|-------------|-----------------------|---------------------------------|-------------|-------------------|---------------|---------------|---------------|-------------|----------------|----------------|----------------|

**Positioning**
- Perfect balance of performance and portability; two-pin system
- Intel® Pentium M Processor 1.7GHz with enhanced Intel speed step technology and 400MHz system bus
- 1MB / on die (at processor speed) / ECC
- 512MB standard / 2GB max / PC2700 333MHz DDR1 (DDR-SGRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

**Display**
- 14.1” (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits / 200:1 contrast ratio / one latch to unlatch and open with one hand

**Graphics**
- ATI® Mobility FireGL T2 / AGP 4X / 128MB DDR1 / OpenGL support
- External monitor support via analog DB-15 connector / up to 2048x1536 x 16.7M at 75Hz

**Keyboard**
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 25mm (standard-size keys)

**TrackPoint®**
- TrackPoint® pointing device / 4 press-to-select / Internet Scroll Bar® / magnifying glass / UltraNav® multi-pointing system / Touch Zones

**ThinkLight®**
- Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

**Dimensions**
- (WxDxH): 12.2” x 10.0” x 1.1-1.2”; 311mm x 255mm x 26.6-31.4mm

**Memory**
- 512 MB / PC2700 DDR-SDRAM CL2.5 SOD 31P9832
- 128MB / PC2700 DDR-SDRAM CL2.5 SOD 31P9828

**Video out**
- UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
- One Mini PCI type III slot (Communications Bay) / customer upgradable

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole

**Limited warranty**
- 3 years / 1 yr battery - EasyServ19.3 onsite pickup and delivery / service upgrades20 avail

**SOFTWARE**
- Windows XP Professional
  - Microsoft Windows® XP Professional20
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Access IBM
- Access Connections™
- Adobe Reader
- Rapid RestoreUltra
- RecordNOW and Drive Letter Access (combo models)
- InterVideo WinDVD (combo mdls)
- Norton AntiVirus (OEM edition)
- PC-Doctor®
- ThinkPad Utilities
- Update Connector15

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**

**ThinkPad notebooks implement ThinkVantage® technologies and design concepts at visit thinkpad.com/thinkvantage

**Universal 72 watt AC adapter Asset ID™ (system-specific info in chip accessed over network)**

**ServicePacs**
- 2 yr IOR 9x5 NBD - 30L9190
- 3 yr IOR 9x5 NBD - 30L9190
- 4 yr IOR 9x5 NBD - 69P9201
- 5yr IOR 9x5 NBD - 69P9201
- 5yr P&L P/U Depot - 69P9199
- 5yr P&L P/U Depot - 69P9199
- Other ServicePac options at ibm.com/services/its/us/source/

See footnotes for important warranty information
US models announced October 28, 2003
US models withdrawn effective October 2005

* Powered by Intel Centrino™ mobile technology
© Lenovo (T41p) October 2005
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### Software

**Windows XP Professional**
- Microsoft Windows® XP Professional
- Disk-to-Disk Recovery (in hidden protected area)

### Accessories

- Access Program
- Access Connections
- Rescue and Recovery™
- RecordNOW and Drive Letter
- Access powered by Sonic products
- InterVideo WinDVD (combo models)
- Norton AntiVirus (OEM edition)
- PC-Doctor®
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

### Downloadable Software

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)
- License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

### Additional Features

- Universal 72 watt AC adapter
- Asset ID™ (system-specific info in chip accessed over network)
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIIM and DMI 2.0-compliant
- PXE 2.0-compliant
- ENERGY STAR®-compliant
- ImageUltra™ Services available
- International Warranty Service
- 24 hour, 7 X 24 hour, 7-day-per-week support during the warranty period via 800-IBM-SERV (426-7378)

### Additional Options

- The Ultrabay Slim supports:
  - standard or optional CD-R/W-DVD combo drive
  - optional DVD or DVD-ROM drive
  - optional second battery
  - optional HDD adapter (for 2nd disk)
  - optional travel bezel

- ThinkPlus™
  - 2 year LOR 9x5 BND
  - 3 year LOR 9x5 BND
  - 4 year LOR 9x5 BND
  - 5 year LOR 9x5 BND
  - 2 year LOR 9x5 BND
  - 3 year LOR 9x5 BND
  - 4 year LOR 9x5 BND
  - 5 year LOR 9x5 BND

- Lenovo.com: lenovo.com/thinkplus/warranty

### Footnotes

See footnotes for important warranty information.

Powered by Intel Centrino mobile technology

US models announced May 11 or August 17, 2004

US models withdrawn effective August 2005 or October 2006

© Lenovo (T42) October 2006
ThinkPad T42 (14.1" display) - withdrawn

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Positioning

Processor: Intel Pentium M Processor 735 (1.7GHz)

L2 cache: 2MB / on die (at processor speed) / ECC

Memory: 256MB, 512MB or 1GB std / 2GB max / PC2700 333MHz DDR1 / non-parity / CL2.5 / in two 200-pin SO-DIMM sockets / std mem in one / one socket available

Disk drive: None standard / use optional USB-based diskette drive

Bluetooth: Open; wireless upgradable with wireless Mini PCI options

Windows XP Professional

License: (CD not included)

Preload: Lotus Smartsuite Millennium and Lotus Notes Stand-alone Client

Downloadable: IBM Director Agent

SOFTWARE: Lotus Smartsuite Millennium and Lotus Notes Stand-alone Client

Support: during the warranty 12

Limited warranty: 3-year / non-US models withdrawn effective May 2005

See footnotes for important warranty information

* Powered by Intel Centrino mobile technology

US models announced May 11, 2004

US models withdrawn effective May 2005
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<td>9600</td>
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<td>40HS Combo</td>
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<td>Modern</td>
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<td>G</td>
<td>Nov 05</td>
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<td>40HS Combo</td>
<td><em>Intel 11b/g</em></td>
<td>Modern</td>
<td>Finger</td>
<td>Yes</td>
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<td>40HS Combo</td>
<td><em>Intel 11b/g</em></td>
<td>Modern</td>
<td>Finger</td>
<td>Yes</td>
<td>4.2 hr</td>
<td>G</td>
<td>Nov 05</td>
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<td>256MB</td>
<td>14.1&quot; XGA</td>
<td>7500</td>
<td>40HS Combo</td>
<td><em>Intel 11b/g</em></td>
<td>Modern</td>
<td>Finger</td>
<td>Yes</td>
<td>4.2 hr</td>
<td>G</td>
<td>Nov 05</td>
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</table>

**SOFTWARE**

Windows XP Professional - Microsoft Windows XP Professional Service Pack 2

- Disk-to-Disks Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Progeree
- Access Connections
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™
- RecordNOW and Drive Letter
- Access powered by Sonic products (combo models)
- Intel Web WinDVD (combo, DVD)
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design:
visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
Asset ID™, (system-specific info in chip accessed over network)

PC 735 - 2001-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant
ENERGY STAR-compliant
International Warranty Service
24 hour x 7 day x 7 day toll-free warranty support during the warranty

ThinkPlus°, 2° 2-year LOR 9x5 NBD
ThinkPlus 3-year LOR 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 5-year P&B P/U Depot
ThinkPlus 5-year P&B P/U Depot

Limited warranty: 3-year - 1 year battery - EasyServ™ onsite pickup and delivery / service upgrades available
## ThinkPad T42 (15" display) - withdrawn

### Type-model | Processor | Speed (GHz) | Memory (MB) | Screen | Graphics controller | Disk (GB) | Optical | Mini PCI | COMM Bay | Wireless | Security Chip | Software | Workhorse (W) | Preload | Global (G) | (Available) | Reference
2373-6YU | Pentium® M | 1.7 | 512MB | 15.0" XGA | 7500 | 400 HS | Combi *Intel 11b Wi-Fi® | Modem | Yes | XP Pro | W | May 2004
2373-JXU | Pentium® M | 1.7 | 512MB | 15.0" XGA | 9600 | 800 HS | Combi | Mod/Blue | Yes | XP Pro | W | May 2004
2373-CWU | Pentium® M | 1.8 | 512MB | 15.0" SXGA+ | 9600 | 800 HS | Combi | Mod/Blue | Yes | XP Pro | W | May 2004
2373-CXU | Pentium® M | 1.8 | 512MB | 15.0" SXGA+ | 9600 | 800 HS | Combi | Mod/Blue | Yes | XP Pro | W | May 2004
2373-CVU | Pentium® M | 1.8 | 512MB | 15.0" SXGA+ | 9600 | 800 HS | Combi | Mod/Blue | Yes | XP Pro | W | May 2004
2373-CYU | Pentium® M | 1.8 | 512MB | 15.0" SXGA+ | 9600 | 800 HS | Combi | Mod/Blue | Yes | XP Pro | W | May 2004

### Security chip
- **Embedded Security Subsystem 2.0**
- **Hardware key storage**
- **Multi-factor authentication**
- **Local file encryption**
- **Atmel**
- **TGC-compliant**

### Limited warranty
- **3-year** | 1-year battery (EasyServ℠) online pickup and delivery | **Software support** via Lenovo® Training Solutions

### Post-warranty
- Lenovo® Training Solutions

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### Issued By
Lenovo Training Solutions

### © Lenovo (T4251) April 2006

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See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology*

© Lenovo

US models withdrawn effective May 2005 or May 2006
### ThinkPad T42 (15" display) - October 2004 - withdrawn

#### Configuration Specifications

| Type-model | Processor | Speed GHz | Memory | Screen | Graphics controller Disk GB | Optical | Mini PCI Comm Bay | CDC modem/Bluetooth | Finger print reader | Security chip | Battery life | Workhorse (W) or Global (G) Avail. date |
|------------|-----------|-----------|--------|--------|-----------------------------|---------|------------------|------------------|-------------------|--------------|-------------|-------------|----------------------------------|
| 2373-L1U  | Pentium M 735 | 1.7 | 512MB | 15.0" XGA | 7500 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 5.0 hr | W G | Oct 04 |
| 2373-L4U  | Pentium M 735 | 1.7 | 512MB | 15.0" SXGA | 9600 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 5.0 hr | W G | Nov 04 |
| 2373-L5U  | Pentium M 735 | 1.7 | 512MB | 15.0" SXGA | 9600 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 5.0 hr | W G | Oct 04 |
| 2373-L7U  | Pentium M 735 | 1.7 | 512MB | 15.0" SXGA | 9600 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 5.0 hr | W G | Feb 05 |
| 2373-N1U  | Pentium M 745 | 1.8 | 512MB | 15.0" SXGA | 9600 | 80HS Combo | Intel 11a/b/g II | Mod/Blue | Finger | Yes | 3.9 hr | W | Oct 04 |
| 2373-N2U  | Pentium M 745 | 1.8 | 512MB | 15.0" SXGA | 9600 | 80HS Combo | Intel 11a/b/g II | Mod/Blue | Finger | Yes | 3.9 hr | W | Feb 05 |
| 2373-N3U  | Pentium M 745 | 1.8 | 512MB | 15.0" SXGA | 9600 | 80U Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 3.9 hr | W | Oct 04 |
| 2373-L1U  | Pentium M 735 | 1.7 | 512MB | 15.0" XGA | 7500 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 4.1 hr | G | Nov 05 |

#### Software

- **Windows XP Professional**: Microsoft® Windows® XP Professional™ (Service Pack 2)
- **Disk-to-Disk Recovery**: (In hidden protected area)

#### Preloaded Software

- **Rescue and Recovery™**
- **Access Programs**
- **Access Connections™**
- **Norton AntiVirus (with 90 days of virus definitions)**
- **PC-Documents™**
- **ThinkPad Utilities**
- **Adobe® Reader**
- **Update Connections™**
- **RecordNOW and Drive Letter**
- **Client Security Software (for security chip)**

#### Downloadable Software

- **IBM Director Agent**
- **Software Delivery Assistant**
- **System Migration Assistant**

#### License

- CD (Not Included)
- **Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client**

#### Security

- Power-on password / hard disk password / supervisor password / security keyhole

#### Security Chip

- **Embedded Security Subsystem 2.0™** / Atmel® chip / TCG-compliant

#### ThinkPad notebooks implement ThinkVantage® technologies and design;

visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- **Asset ID™** (system-specific info in chip accessed over network)

#### PSC 2001-compliant

ACPI 1.0b and 2.0-compliant

#### CVM and DMI 2.0-compliant

PKEX 2.1-compliant

#### ENERGY STAR®-compliant

International Warranty Service

24 hour x 7 day toll-free warranty support during the warranty via 800-IBM-SEIV (426-7378)

#### ThinkPlus®

- **2-year LOR 9x5 NBD**
- **3-year LOR 9x5 NBD**
- **4-year LOR 9x5 NBD**
- **5-year LOR 9x5 NBD**
- **4-year P&L P/U Depot**
- **5-year P&L P/U Depot**

#### Post-warranty annual maintenance agreements

at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

*Powered by Intel Centrino™ mobile technology

US models announced October 5 or November 30, 2004 or January 11 or November 15, 2005

US models withdrawn effective May 2006

© Lenovo (T42150) April 2006

Lenovo Training Solutions Personal Systems Reference (PSREF)
### ThinkPad T42 (2378) - TopSeller - withdrawn

#### Type-Model | Processor | Speed | Ctrl Memory | Screen | Graphics | Disk Ctrl | Optical | Mini PCI | Comm Bay | Modem/Bluetooth | Security | Workhorse (W) | Global (G) Available |
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<td>XP Pro 1-yr</td>
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<td>Modern</td>
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<td>XP Pro 1-yr</td>
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<td>1-yr, SMP</td>
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</table>

**These small and medium business (SMB) models are part of the US TopSeller™ Program.**

**The 2378 has a 1-year limited warranty (other ThinkPad T42 2379 TopSeller models have a 3-year limited warranty).**

#### SOFTWARE

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery (in hidden protected area)

#### Preloaded

- Access Program
- Access Connections™
- Rescue and Recovery™
- RecordNOW and Drive Letter
- Norton AntiVirus (OE edition)
- PC-DockTools
- ThinkPad Utilities
- Adobe® Reader
- UpdateConnector™

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium
- Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- Asset ID95 (system-specific info in chip access cover network)

PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant

PXE 2.0-compliant
- ENERGY STAR®-compliant

ImageUltra® Services available for International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)

ThinkPlus** | 2-year LOR 9x5 BD | 41C9166
---|---|---
ThinkPlus 2-year LOR 9x5 BD | 41C9167
ThinkPlus 3-year LOR 9x5 BD | 41C9168
ThinkPlus 4-year LOR 9x5 BD | 41C9171
ThinkPlus 5-year LOR 9x5 BD | 41C9173
ThinkPlus 2-year P&L P/U Depot | 41C9180
ThinkPlus 3-year P&L P/U Depot | 41C9192
ThinkPlus 4-year P&L P/U Depot | 41C9193
ThinkPlus 5-year P&L P/U Depot | 41C9174

See footnotes for important warranty information

© Lenovo (T42B) October 2006
### ThinkPad T42 (2378) - TopSeller (October 2004) - withdrawn

#### Type-model | Processor | Speed | GHz | Memory | Screen | Graphics controller | Disk | Optical | Comm/BIOS |本领 | Reader | Security | Battery | Limited | warrioy | Availa
2378-R1U | Pentium M 725 | 1.6 | 256MB | 14.1" XGA | 7500 | 40HS | Combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R2U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R3U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R4U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R5U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R6U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R7U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R8U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-R9U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-RAU | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-RBU | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-RCU | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-RLU | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-RLU | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04
2378-RLU | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 40G | combo | Intel 11b/g | 4yr | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04

* These small and medium business (SMB) models are part of the US TopSeller™ program.

** The 2378 has a 1-year limited warranty (other ThinkPad T42 2379 TopSeller models have a 3-year limited warranty).
### Type-model Processor Speed GHz Memory Graphics Disk Controller Screen Display Graphics Disk Optical Mini PCI Comm Bay DCDC Security chip Workhorse (W) Global (G) Limited warranty
<table>
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<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Graphics</th>
<th>Disk Controller</th>
<th>Screen</th>
<th>Display</th>
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<th>Workhorse (W) Global (G)</th>
<th>Limited warranty</th>
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<td>7500 40HS</td>
<td>Combo</td>
<td>Intel 11b/g Modem</td>
<td>Yes XP Pro</td>
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<td>Yes XP Pro</td>
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<td>Intel 11b/g Modem</td>
<td>Yes XP Pro</td>
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### Diskette drive
- None standard / use optional USB-based diskette drive
- DVD-ROM/CD-RW / 24x24x24x8x" speed / removable from Ultrabay II

### UltraBay Slim

### Disk
- None standard / use optional USB-based diskette drive
- DVD-ROM/CD-RW / 24x24x24x8x" speed / removable from Ultrabay II

### Display
- Some: 14.1" (358.1mm) XGA
- Some: 15.0" (381.0mm) XGA
- Some: 15.0" (381.0mm) SXGA+

### Graphics
- Some: ATI Mobility RADEON 7500 / AGP 4X / 32MB
- Some: ATI Mobility RADEON 9000 / AGP 4X / 64MB
- Some: ATI Mobility RADEON T1000 / AGP 4X / 64MB

### Key Features

### Limited warranty

### Software

### Preloaded Software

### Downloadable Software

### License

### ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.lenovo.com/thinkvantage

### Lenovo

### ThinkPlus™

### ThinkPad Limited warranty

### Security chip

### Workhorse (W) Global (G)

### Limited warranty

### Preloaded Software

### Downloadable Software

### License

### ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.lenovo.com/thinkvantage

### Lenovo

### ThinkPlus™
### ThinkPad T42 (2379) - TopSeller (October 2004) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller Disk controller</th>
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<th>Security chip</th>
<th>Battery life (yrs)</th>
<th>Battery Limited warranty (yrs)</th>
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#### Software

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Disks Compact Disc (3-yr Oct 04)

- **Preloaded**
  - Rescue and Recovery™
  - Access Program
  - Access Connections™
  - Norton AntiVirus (90 days of virus definitions)
  - PC-Doctor™
  - ThinkPad Utilities
  - Adobe® Reader
  - Update Connectors™
  - RecordNOW and Driver Leve
  - Power-assisted by Sonic products (combo models)
  - InterVideo WinDVD (combo models)
  - FingerPrint Software (fingerprint models)
  - Client Security Software (security chip)

- **Downloadable**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Migration Assistant

- **License** (CD not included)
  - Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

#### Limited warranty

- **3-year 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available**

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See footnotes for important warranty information.

*Powered by Intel Centrino™ mobile technology*

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US models announced October 5, 2004, September 13, 2005, or November 15, 2005

US models withdrawn effective May 2006

The 2373 has an EasyServ™ on-site pickup and delivery 3-year limited warranty.

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited school organizations and operated entirely for educational purposes by qualified students and/or teachers. This model for education is for sale direct from Lenovo or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.
### ThinkPad T42 (2374) - Education - withdrawn

#### Software

- Windows XP Professional
  - Microsoft® Windows® XP Professional
  - Disk-To-Disk Recovery

#### Preloaded Software

- Education software from Vital Source Technologies®, vialesource KEY™ and Personal Portable Library™
- Access Program
- Access Connections™
- Rescue and Recovery™
- RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW models)
- InterVideo WinDVD (combo, DVD-RW models)
- InterVideo WinDVD Creator (DVD-RW models)
- Norton AntiVirus (OEM edition)
- PC-Doctor
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™

#### Downloadable Software

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

#### License

- CD (not included)
- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

### Limited Warranty

- **3-year** 1st battery, limited battery service™ ④
- **8 am - 5 pm, Mon - Fri coverage during holidays, next business day response time**

### See footnotes for important warranty information

- Powered by Intel Centrino® mobile technology
- © Lenovo 2006

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<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
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<td>Onsite</td>
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- The 2374 has a limited onsite service™ ③ year limited warranty

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers.
## Type-model Processor Speed GHz Memory Screen Graphics Disk controller 80 Optical Mini PCI Comm Bay wireless CDC modem/Bluetooth Security chip Battery cells Preload or Entry (E) Workhorse (W) or Global (G) (Avail date)
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</table>

## Positioning Processor

- **ThinkPad** Pentium M 745 (1.8GHz) with Enhanced Intel SpeedStep™ technology and 400MHz system bus

## L2 cache Memory

- **2MB** / on die (at processor speed) / ECC
- **512MB or 1GB std** / 2GB max / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL 2.5 / two 200-pin SO-DIMM sockets / slot one socket / one socket available

## Diskette drive None standard / use optional USB-based diskette drive

## DVD-ROM / DVD-RW

- **Combo**: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabay™ Slim

## Ultrabay Slim

- One modular bay for interchangeably devices (right side) / 9.5mm high bay

## Disk

- 60GB Ultra HS (7200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System™

## Display

- 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits

## Graphics Graphics external

- External monitor support via analog DB-15 connector / up to 2048x1536x16.7M / DDC2B

## Keyboard

- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

## Touch pad

- TrackPoint™ pointing device / "Press-to-Select," Internet Scroll Bar, magnifying glass

## ThinkLight™

- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

## Dimensions Weight

- 14.1" 14.1" 1.20"

## Case material

- Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

## Battery - type

- Lithium / rechargeable / intelligent 2nd battery in Ultrabay Slim

## Battery - life10

- up to 6.4 hr / 9-cell plus Ultrabay Slim battery: 8.4 hr

## Architecture

- **Intel 855PM chipset** / 82855PM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet, MAC, Low Pin Count [LPC] interface, USB, I/O Bus) / PCI bus 2.2 32-bit, 33MHz (T1) / TI PCI4620A (on-card controller, PCI bus, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, docking-based ports)

## PC Card Std slots

- 2 Type I, 2 Type II, 1 or 2 Type III / CardBus 32-bit / integrated door

## Ports

- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (USB)

## Video

- S-video out port (TV out) / one 4-pin industry standard connector

## Wireless antenna

- UltraConnect™ Antenna built into the display cover for optimal wireless signal reception

## Video out

- One Mini PCI type III slot (Communications Bay) / customer upgradable

## Audio support

- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

## Security

- Power-on password / hard disk password / supervisor password / security keyhole

## Security chip

- Embedded Security Subsystem 2.0 / hardware key storage / multi-factor authentication / local file encryption / Atmel™ chip / TCGP-compliant

## Limited warranty2 3-year/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades2 available

## Additional Information

- **Universal** 72 watt AC adapter / Asset ID™ (system-specific info in chip accessed over network)

## System requirements

- PC 2001-compliant / ACPI 1.0b and 1.1 compliant / CIM and DMI 2.0-compliant / PXE 2.0-compliant / ENERGY STAR®-compliant / IBM Ultrasaver Services available

## International Warranty Service

- 24 hour x 7 day toll-free warranty support during the warranty

## License

- CD (not included)

## Preload

- IBM Director Agent / Software Delivery Assistant / System Migration Assistant / Client Security Software (for security chip)

## Downloadable

- Lotus SmartSuite® Millennium and Lotus Notes® Stand-alone Client

## Support during the warranty

- 12

## Developers

- ThinkPad notebooks implement ThinkVantage™ technologies and design

## Preload

- Microsoft® Windows® XP Professional

## Diagnostics / Disk Recovery

- POST-vars, SmartDisk Recovery (in hidden protected area)

## Software

- Norton AntiVirus (OEM edition) / Norton AntiVirus (OEM edition)

## Additional Information

- *© Lenovo (T42P14) April 2006*
### SOFTWÆRE

- Windows XP Professional
  - Microsoft Windows XP Professional
  - Disk-to-Disk Recovery
  - See footnotes for important warranty information

### Workhorse (W) or Global (G) Availability

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<th>Type-model</th>
<th>Processor</th>
<th>Speed or MHz</th>
<th>Memory</th>
<th>Hard Disk Drive</th>
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### Limited Warranty

- 3-years/1-year battery - EasyServ™ availability on select models and delivery / service upgrades available

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<th>Processor</th>
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<th>Memory</th>
<th>Hard Disk Drive</th>
<th>Battery Type</th>
<th>Security Chip</th>
<th>Warranty</th>
<th>Date</th>
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<td>256MB PC2700 DDR-SDRAM CL2.5 SOD</td>
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<td>9-cell Li-ion</td>
<td>ThinkPad</td>
<td>Yes</td>
<td>XP</td>
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<td>9-cell Li-ion</td>
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<td>Yes</td>
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<td>ThinkPad Convertible Monitor Stand</td>
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<td>ThinkPad</td>
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<td>XP</td>
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</table>

### See footnotes for important warranty information

* Powered by Intel Centrino mobile technology

© Lenovo (T42P15) April 2006
| Type-model | Processor | Speed | Memory | Screen | Graphics controller | Disk Drive | Mini PCI | Commun Bay | Optical | CDC modem/ | Bluetooth | Finger Secu-Bat- | Workhorse (W) | or Global (G) | or Entry (E) | Availability |
|-----------|-----------|-------|--------|--------|---------------------|------------|----------|------------|---------|-----------|-----------|----------------|--------------|--------------|--------------|--------------|--------------|
| 2373-P1U | Pentium M 765 2.1 GHz | 1 GB | 14.1” SXGA+ | FireGL 60U | DVD-RW | 11a/bg | Mod/Blue | Finger | Yes | 5.8 hr | Oct 2004 | 2373-P2U | Pentium M 765 2.1 GHz | 1 GB | 14.1” SXGA+ | FireGL 60U | DVD-RW | 11a/bg | Mod/Blue | Finger | Yes | 6.0 hr | Oct 2004 | 2373-P3U | Pentium M 765 2.1 GHz | 1 GB | 14.1” SXGA+ | FireGL 60U | DVD-RW | 11a/bg | Mod/Blue | Finger | Yes | 5.9 hr | Jan 2005 | 2373-Q1U | Pentium M 765 2.1 GHz | 1.5” UXGA4 | FireGL 60U | DVD-RW | 11a/bg | Mod/Blue | Finger | Yes | 5.3 hr | Oct 2004 | 2373-Q2U | Pentium M 765 2.1 GHz | 1.5” UXGA4 | FireGL 60U | DVD-RW | 11a/bg | Mod/Blue | Finger | Yes | 5.4 hr | Oct 2004 | 2373-Q4U | Pentium M 765 2.1 GHz | 1.5” UXGA4 | FireGL 60U | DVD-RW | 11a/bg | Mod/Blue | Finger | Yes | 5.3 hr | Jan 2005 |

### SWHand-Hard Disk Drive (HDD) Information
- **Type**: Denotes the type of hard disk drive used in the system.
- **Capacity**: The amount of data that can be stored on the drive.
- **Interface**: The type of connection used to connect the drive to the system. (SATA, IDE, etc.)
- **Speed (RPM)**: The speed at which the drive spins, which affects the read/write speed.
- **Buffer Size**: The amount of memory attached to the drive.

#### System Specifications
- **Processor**: Intel Pentium M 765 2.1GHz
- **Battery**: 9-cell Lithium Ion
- **Dimensions**: 12.2” x 10.0” x 1.0-1.2”
- **Weight**: 5.4 lb (2.4kg)
- **Display**: 14.1” SXGA+ (1600x1200) TFT color
- **Audio**: TCD41B controller with TCS3B sensor
- **Security**: Embedded Security Subsystem 2.0
- **Wireless**: Intel PRO/Wireless 2915ABG Mini PCI
- **Graphics**: FireGL T2
- **Operating System**: Windows XP Professional

#### Additional Features
- **USB Ports**: 2 Type 2, 2 Type 4, 6 Total
- **Ports**: While in sleep mode
- **Network Adapter**: TX-Ethernet (10/100/1000M)
- **Networking**: PXE 2.1-compliant
- **Online Warranty**: 3-year
- **Service Pack**: 2

#### Preloaded Software
- **Lenovo**: 800-IBM-SERV (426-7378)
- **ThinkPad**: 800-IBM-SERV (426-7378)

#### Contact Information
- **Support**: Lenovo Support
- **Website**: lenovo.com
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory (GB)</th>
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<th>CD/DVD Writer</th>
<th>Finger print Security</th>
<th>Preload</th>
<th>Limited warranty (Avail date)</th>
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<td>512MB</td>
<td>15.0&quot; UXGA FireGL 80GB DVD-RW/CD-RW/CD-R</td>
<td>11a/b Wi-Fi</td>
<td>Mod/Blue</td>
<td>ThinkPad R50 1.3GHz 512MB</td>
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**Positioning**
- Perfect balance of performance and portability; two-spindle system

**Processor**
- Intel® Pentium M Processor 745 (1.8GHz) with Enhanced Intel SpeedStep technology
- 400MHz system bus

**L2 cache**
- 2MB / on die (at processor speed) / ECC

**Memory**
- 512MB std / 2GB max / 533MHz DDR-SDRAM / non-parity / CL2.5
- 2-bits-per-pin SO-DIMM sockets / 2GB max memory available

**Diskette drive**
- None standard / use optional USB-based diskette drive

**DVD-RW**
- USB Driver Option / removable from Ultrabay Slim

**Display**
- 15.0" (381.0mm) UXGA (1600x1200) TFT color
- FlexView display with wide viewing angle and high density using IPS technology

**Graphics**
- ATI® Mobility™ FireGL™ U2
- AGP X4 / 128MB DDR-SDRAM 32-bit / OpenGL™

**Keyboard**
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

**Touch pad**
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones illuminates the keyboard to improve visibility in low light conditions

**Dimensions**
- 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm
- with optical drive and battery: 5.9 lb (2.7kg)

**Weight**
- Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

**Battery type**
- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim

**Battery life**
- Up to 3.5 hr: Optional 2-cell / 9.5mm high bay / Ultrabay Slim battery: up to 7.7 hr

**Architecture**
- Intel® 855PM chipset / 82855PM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB, Bluetooth) / PCI bus 2.2 32-bit, 33MHz
- Intel® 855GV Chipset (Wi-Fi and Bluetooth is available)
- 1GB PC2700 DDR-SDRAM CL2.5 SODIMM / std memory in one socket / one socket available
- Two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Video output**
- S-video out port (TV out) / one 4-pin industry standard connector

**Audio support**
- Soft audio / ICH AC97 controller / DirectSound
- Bluetooth wireless technology / in CDC (with modem)
- T2 ® FireGL T2 / T2 / T2 / T2
- CD/DVD Writer / DVR-W / DVD-Video / DVD-RAM / same as optional ThinkPad Multi-Burner
- Client Security Software (for Enhanced Intel SpeedStep technology)

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole
- microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)
- stereo speakers, 1 watt / volume up, down, mute buttons / internal mic

**Preload**
- Windows XP Professional
- Microsoft® Windows® XP Professional
- Optical Drive Recovery (in hidden protected area)

**License**
- License (CD not included)
- Lenovo® SmartSight® Millennium and Lenovo® Notes® Stand-alone Client

**Features**
- ThinkPad notebooks implement the ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

**Limited warranty**
- Some: 1-year / EasyServ™ onsite pickup and delivery / service upgrades available
- Some: 3-year / EasyServ™ onsite pickup and delivery / service upgrades available

**Software**
- Windows XP Professional
- Microsoft® Windows® XP Professional
- Optical Drive Recovery (in hidden protected area)
- Lenovo Director Agent

**Downloadable**
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for Security chip)

**License**
- Lenovo® SmartSight® Millennium and Lenovo® Notes® Stand-alone Client
- Universal 72 watt AC adapter
- Asset ID™ system-specific info in chip accessed over network
- ACPI 1.0 and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.0-compliant
- ENERGY STAR® compliant
- ImageUltra™ Services available
- International Warranty Service 27
- 24 hour x 7 days toll-free warranty support during the warranty
- via 800-IBM-SERV (426-7378)

**Port Replicator**
- Lenovo Port Replicator II 74P6733

**Projector**
- Lenovo C500 Projector 41C9174
- Lenovo M500 Projector 41C9166

**ThinkPlus**
- Lenovo ThinkPlus 3-yr LOR 9x5 NBD 41C9173
- Lenovo ThinkPlus 5-yr P&L P/U Depot 41C9175
- Lenovo ThinkPlus 3-yr P&L P/U Depot 41C9174
- Lenovo ThinkPlus 5-yr LOR 9x5 NBD 41C9175
- Lenovo ThinkPlus 3-yr LOR 9x5 NBD 41C9174
- Lenovo ThinkPlus 3-yr LOR 9x5 NBD 41C9173
- Lenovo ThinkPlus 5-yr P&L P/U Depot 41C9176
- Lenovo ThinkPlus 3-yr LOR 9x5 NBD 41C9170
- Lenovo ThinkPlus 5-yr P&L P/U Depot 41C9175
- Lenovo ThinkPlus 3-yr LOR 9x5 NBD 41C9174
- Lenovo ThinkPlus 5-yr P&L P/U Depot 41C9170
- Lenovo ThinkPlus 3-yr LOR 9x5 NBD 41C9173
- Lenovo ThinkPlus 5-yr P&L P/U Depot 41C9176

**Compliance**
- ENERGY STAR® compliant
- Windows XP Professional
- Microsoft® Windows® XP Professional
- Optical Drive Recovery (in hidden protected area)
- Lenovo Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for Security chip)

**License**
- Lenovo® SmartSight® Millennium and Lenovo® Notes® Stand-alone Client
- Universal 72 watt AC adapter
- Asset ID™ system-specific info in chip accessed over network
- ACPI 1.0 and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.0-compliant
- ENERGY STAR® compliant
- ImageUltra™ Services available
- International Warranty Service 27
- 24 hour x 7 days toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)
ThinkPad T42p (2379) - Express - withdrawn

Type-model: ThinkPad T42p (2379)

- Proudly powered by Intel Centrino™ mobile technology
- These small and medium business (SMB) models are part of the US Think Express Program
- The 2379 has a 3 year limited warranty (other ThinkPad T42p 2378 Express models have a 1 year limited warranty)

Positioning

Processor: Intel® Pentium® M Processor 745 (1.8GHz)

- Small and medium business (SMB) model
- With enhanced Intel SpeedStep™ technology and 400MHz system bus

L2 cache

2MB / on die (at processor speed) / ECC

Memory: 512MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one memory / one socket available

Diskette drive

None standard / use optional USB-based diskette drive


Ultrabay Slim

One modular bay for interchangeable devices (right side) / 9.5mm high bay

Disk

80GB B (5400 rpm) / 9.5mm high / removable / upgradeable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System (shock protection)

Display

15.0” (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

Graphics

ATI® Mobility™ FireGL™ T2 / A2GP AX/128MB DDR1 / OpenGL® support

Graphics external

External monitor support via analog DB-15 connector / up to 2048x1536 at 75Hz / DDC2B

Keyboard

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

Touchpad

UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

Weight: 15.0” models (WxDxH): 13.0” x 10.6” x 1.2-1.4”; 329mm x 268mm x 31-36mm

Battery - type

Lithium Ion 6-cell / intelligent / supports unique 2 battery in Ultrabay Slim

Battery - life

Up to 3.5 hours / Optional 9-cell: up to 5.7 hours / 9-cell plus Ultrabay Slim battery: up to 7.7 hours

Architecture

Intel® 855PM chipset / B8255P Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ICH4-M) / PCI controller MAC low Pin Count (LPC) interface, USB, (Bluetooth®) / PCI bus 2.2 32-bit, 33MHz

Ethernet

Titanium-reinforced CFRP in bottom cover

Audio support

Soft audio / ICH AC97 controller / DirectSound

Security

Embedded Security Subsystem 2.0™

Soup 2001-compliant

Energy Star

PXE 2.0-compliant

CIM and DMI 2.0-compliant

PC 2001-compliant

Post-warranty annual maintenance

Limited warranty: 3 years / 1 year battery - EasyServ™ on-site pickup and delivery / service upgrades / advance replacements

Software

Windows XP Professional

- Microsoft® Windows® XP Professional
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Access IBM
- Access Connections
- Rescue and Recovery™
- RecordNOW and Drive Letter
- Access powered by Sonic products
- InterVideo WinDVD32 (DVI-RW)
- InterVideo WinDVD Creator (DVI-RW)
- Norton AntiVirus (OEOM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connectors™

Downloadable

- IBM Director Agent
- IBM software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License

- Lenovo (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Assistance

ServicePac 5yr IOR 9x5 NBD

- Stand-alone Client
- 2 year IOR 9x5 NBD
- 3 year IOR 9x5 NBD
- 4 year IOR 9x5 NBD
- 5 year IOR 9x5 NBD

International Warranty Service

24 hour 7 day toll-free warranty support during the warranty via BOO-IBM-SERV (426-7378)

Lenovo Training Solutions

Personal Systems Reference (PSREF)

- IBM Director Agent
- IBM software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

ThinkPad notebooks implement ThinkVantage™ technologies and design:

ThinkVantage Technologies

Universal 72 watt adapter

Asset ID™ (system-specific info in chip accessed over network)

PC 2001-compliant

ACPI 1.0b and 2.0-compliant

CIM andDMI 2.0-compliant

XP 2.0-compliant

ENERGY STAR® compliant

ImagelTm Services available

International Warranty Service

24 hour 7 day toll-free warranty support during the warranty via BOO-IBM-SERV (426-7378)

Visit Lenovo Support at lenovo.com/services/its/usgetSource/PSREF

Lenovo Training Solutions

Personal Systems Reference (PSREF)

- IBM Director Agent
- IBM software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)
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<th>Type-model</th>
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**The 2373 has an EasyServ* onsite pickup and delivery 3-year limited warranty**

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers.

**Positioning**

**Processor**

ThinkPad Perfect balance of performance and portability; two-spool device

**L2 cache Memory**

2MB / on die (at processor speed) / ECC

**Disk drive**

None standard / use optional USB-based diskette drive

**Audio support**

ThinkPad® Audio support

**Battery - life**

15.0” (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits

**Display**

15.0” models (WXDH): 13.0” x 10.6” x 1.2-1.4”, 329mm x 268mm x 31-36mm

**Graphics**

ATI®: MOBILITYTM FireGL™ T2 / AGP X4 / 128MB DDR1 / OpenGL™ support

**Dimensions**

Weight: 15.0” models (WXDH): 13.0” x 10.6” x 1.2-1.4”, 329mm x 268mm x 31-36mm

**Battery**

Up to 3.5 hr; Optional 9-cell; up to 7.5 hr; 9-cell plus UltraBay Slim battery: up to 7.7 hr

**Architecture**

Intel® 855PM chipset / B2655PM Memory Controller Hub (MCH-MM)

**PC Card Std slots**

2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door (TI Low Pin Count [LPC] interface, USB, [Bluetooth]) / PCI bus 2.2 32-bit, 33MHz

**Ports**

One Communications Daughter Card (CDC) socket / customer accessible

**Security chip**

Embedded Security Subsystem 2.0 / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant

**Limited warranty**

3-year / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

---

**SOFTWARE**

Windows XP Professional - Microsoft® Windows® XP Professional

**Preloaded**

- Education software from Vital Source Technologies*:
  - vitalsource KEY™ and
  - Personal Portable library™

**License**

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

---

**See footnotes for important warranty information**

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* Powered by Intel Centrino® mobile technology

Lenovo Training Solutions

Personal Systems Reference (PSREF)
This model has a limited onsite service³ 3-year limited warranty

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers. This model for education is for sale direct from Lenovo or through an Authorized Education Reseller. The models or models for education are not available for resale to any other organization or individual.

SOFTWARE⁴

- Windows XP Professional
- Microsoft® Windows® XP Professional²
- Dock-to-Desk Recovery (in hidden protected area)
- Preloaded
  - Education software from Vital Source Technologies:
    - vsaure key™
    - Personal Portable book™
  - Access Program
  - Access Connections⁵
  - Rescue and Recovery⁶
  - RecordNOW and Drive Letter
  - Access powered by Sony products (DVD-ROM models)
  - InterVideo WinDVD (DVD-ROM models)
  - InterVideo WinDVD Creator (DVD-ROM models)
  - Not AntiVirus (OEM edition)
  - PC-Doctor⁷
  - IBM Director Agent
  - ThinkPad Utilities
  - Adobe® Reader
  - Update Connector⁸

License (CD not included)
- Lotus® Smartsuite™ Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage technology and designs and visit thinkpad.com/thinkvantage

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

US model announced May 11, 2004
US model withdrawn effective May 2006

Universal 72 watt AC adapter

Asset ID number (system-specific info in chip accessed over network)

- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.0-compliant

ENERGY STAR®-compliant

ImageUltra® Services available

24 hour x 7 day x 4 trial-free warranty support during the warranty period

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

powered by Centric | mobile technology

Lenovo (2374P) April 2006
**ThinkPad T43 (Entry) - withdrawn**

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<th>CDC modem/Telephony</th>
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<th>Security reader chip</th>
<th>Workhorse (W) or Global (G)</th>
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<td>No</td>
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<td>XP Pro</td>
<td>Entry Feb 05</td>
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</table>

**Positioning**

Processor

Perfect balance of performance and portability: two-spindle systems

Intel® Pentium® III Processor 730 (1.60GHz) with enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz system bus

L2 cache

2MB / on die (at processor speed) / ECC

Memory

256MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 20-pin SO-DIMM sockets / std mem in one socket / one socket available

**Diskette drive**

Some standard / use optional USB-based diskette drive

**DVD drive**

Some: DVD-ROM / 24x-8x speed / single-layer / removable from Ultrabay™ Slim

**USB Travel Keyboard with UltraNav** 31P9490

Enh Perf Wireless Keyboard and Mouse 73P4067

USB Travel Keyboard with UltraNav 31P9490

Optical 3-Button Travel Wheel Mouse 31P7410

Hi-Kingston® MicroSaver® Security cable 73P2582

SonyEricsson® GC83 EDGE PC Card 26K3393

Verizon Wireless V620 WWAN PC Card 40Y9137

Other options at lenovo.com/options

**ThinkPlus**

ThinkPlus notebook implements ThinkVantage™ technologies and displays warnings and error messages. See footnotes for important warranty information

Universal 72 watt AC adapter 2001-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR®-compliant

International Warranty Service 17

24 hour x 7 day toll-free warranty support during the warranty period

ThinkPlus™, 2yr LOR 9x5 NBD

ThinkPlus 3yr LOR 9x5 NBD

ThinkPlus 4yr LOR 9x5 NBD

ThinkPlus 5yr LOR 9x5 NBD

ThinkPlus 4yr P&L P/U Depot

ThinkPlus 5yr LOR P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

**Software**

Windows XP Professional models

- Microsoft® Windows® XP

- Professional Service Pack 2

- Disk-to-Disk Recovery

(in hidden protected area)

Windows XP Home models

- Microsoft® Windows XP

- Home Edition® (Service Pack 2)

- Disk-to-Disk Recovery

(in hidden protected area)

Preloaded (all)

- Rescue and Recovery™

- Access Program

- Access Connections™

- Norton AntiVirus

- PC-Doctor®

- ThinkPad Utilities

- Adobe Reader

- Update Connections™

- RecordNOW and Drive

- Letter Access powered by Sonic products (combo models)

- InterVideo DVD (combo, DVD models)

- FingerPrint Software

- FingerPrint software (security chip)

Downloadable (all)

- IBM Director Agent

- Software Delivery Assistant

- System Migration Assistant

License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Limited warranty: 3 years / 1 year / battery - EasyServ

Lenovo

(T1) January 2006
**ThinkPad® T43 (Entry) - August 2005 - withdrawn**

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**SOFTWARE**

- **Windows XP Professional models**
  - Microsoft® Windows XP® Professional Service Pack 2
  - Disk-to-Disk Recovery (in hidden protected area)

- **Windows XP Home models**
  - Microsoft Windows XP Home Edition® (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor®
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo models)
- interVideo WinDVD (combo, DVD models)
- FingerPrint Software
- Client Security Software (for security chip)

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License**

- (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design: visit thinkpad.com/thinkvantage

Universal 72-watt AC adapter PC 2001-compliant
ACPI 1.0b and 2.0-compliant
CM and DMI 2.0-compliant
PK 2.1-compliant
ENERGY STAR®-compliant
International Warranty Service™
24 hour 7 x 7 day toll-free warranty support during the warranty

ThinkPlus™ 2-2 year LOR 9x5 NBD
41C9175

ThinkPlus 3-year LOR 9x5 NBD
41C9176

ThinkPlus 4-year LOR 9x5 NBD
41C9178

ThinkPlus 5-year LOR 9x5 NBD
41C9180

ThinkPlus 4-year P&L U/P Depot
41C9179

ThinkPlus 5-year P&L U/P Depot
41C9180

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
*Powered by Intel Centrino® mobile technology
© Lenovo

(T2) December 2006
### ThinkPad T43 (14.1" display) - withdrawn

#### Type-model
- **1871-48U**: Pentium M 750 1.86 512MB 14.1" XGA
- **1871-4AU**: Pentium M 750 1.86 512MB 14.1" XGA
- **1871-4BU**: Pentium M 750 1.86 512MB 14.1" XGA
- **1871-4CU**: Pentium M 750 1.86 512MB 14.1" XGA
- **2668-41U**: Pentium M 750 1.86 256MB X300
- **2668-42U**: Pentium M 750 1.86 256MB X300
- **2668-43U**: Pentium M 1.86 256MB X300
- **2668-44U**: Pentium M 750 1.86 256MB X300
- **2668-45U**: Pentium M 750 1.86 256MB X300
- **2668-46U**: Pentium M 750 1.86 256MB X300
- **2668-49U**: Intel 11a/b/g 32 1.86 256MB X300
- **2668-4EU**: Pentium M 750 1.86 256MB X300
- **2668-61U**: Intel 11a/b/g II Mod/Blue Finger 915PM Feb 05
- **2668-71U**: Pentium M 760 2.00 512MB 14.1" SXGA+ X300 80HS Combo
- **2668-72U**: Pentium M 760 2.00 512MB 14.1" SXGA+ X300 80HS Combo
- **2668-74U**: Pentium M 760 2.00 512MB 14.1" SXGA+ X300 80HS Combo
- **2668-75U**: Pentium M 760 2.00 512MB 14.1" SXGA+ X300 80HS Combo
- **2668-76U**: Pentium M 760 2.00 512MB 14.1" SXGA+ X300 80HS Combo

#### Processor
- **Intel Pentium M Processor 750 (1.86GHz) or 760 (2.00GHz)** with Enhanced Intel SpeedStep Technology
- **Intel 11a/b/g II Mod/Blue Finger 915PM Feb 05**
- **Intel 11a/b/g Mod/Blue Finger 915GM Mar 05**

#### Display
- **Some**: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Some**: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits

#### Graphics
- **Some**: Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in Windows XP Professional
- **Some**: Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in Windows XP Professional

#### Memory
- **two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

#### Processor
- **Intel Pentium M Processor 750 (1.86GHz) or 760 (2.00GHz)** with Enhanced Intel SpeedStep Technology
- **Intel 11a/b/g II Mod/Blue Finger 915PM Feb 05**
- **Intel 11a/b/g Mod/Blue Finger 915GM Mar 05**

#### Windows XP Professional
- **ThinkPad Utilities**
- **Adobe Reader**
- **Client Security Software (for fingerprint models)**
- **Norton AntiVirus**

#### DVD Drive
- **Some**: DVD-ROM/CD-RW / 24X/24X/24X/6x speed / single-speed / single-speed from Ultrabay™ Slim

#### Software
- **ThinkPlus 5-year P&L P/U Depot**
- **ThinkPlus 4-year LOR 9x5 NBD**
- **ThinkPlus 3-year LOR 9x5 NBD**
- **ThinkPlus 1-year LOR 9x5 NBD**

#### Internal Modem
- **All**: 82801FB ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE)
- **PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooh], [fingerprint] / PCI bus (CardBus controller, Mini PCI, external expansion) / LPC bus (NS PC8394T Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, [Docking-based ports (serial, diskette)])

#### Security Chip
- **Embedded Security Subsystem 2.0** / in NS PC8394T chip / TCG-compliant

#### Power
- **Power-on password / hard disk drive keyhole / embedded security chip

#### Dimensions
- **14.1" models (WXxDXH): 12.2" x 10.0" x 1.0-1.12", 31mm x 255mm x 26.5-31.4mm with optical drive and battery: up to 5.2 lb (2.3kg)

#### Weight
- **Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

#### Power Adapter
- **ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

#### Battery
- **41C9178**
- **41C9176**

#### Software
- **Windows XP Professional**
- **ThinkPad Utilities**
- **Adobe Reader**
- **Client Security Software (for fingerprint models)**
- **Norton AntiVirus**

#### Universal 72 watt AC adapter
- **PC 2001-compliant**
- **ACP 1.0b and 2.0-compliant**
- **CIM and DMI 2.0-compliant**
- **PKX 2.1-compliant**
- **ENERGY STAR® compliant**

#### International Warranty Service
- **24 hour x 7 day toll-free warranty support during the warranty**

#### Limited warranty
- **3-year/yr battery / EasyServ™-19 onsite pickup and delivery / service upgrades/22 available**

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*See footnotes for important warranty information

**Lenovo US models announced January 19 or March 15, 2005

US models withdrawn effective December 2005 or November 2006

(T3) December 2006

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See footnotes for important warranty information. * Powered by Intel Centrino® mobile technology
© Lenovo
US models announced August 2 or August 30, 2005
US models withdrawn effective November 2006 or August 2007

SOFTWARE
- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™ (button A/B)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)

Downloadable
- IBM Director Agent Software (service and support)
- System Migration Assistant
- License (CD not included)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
PC 2001-compliant
ACPI 1.0 and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant
International Warranty Service  24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus® ˜ 2 year LOR 9x5 NBD
ThinkPlus® 3 year LOR 9x5 NBD
ThinkPlus® 4 year LOR 9x5 NBD
ThinkPlus® 5 year LOR 9x5 NBD
ThinkPlus® 4 year P&L Warranty
ThinkPlus® 5 year P&L Warranty

Lenovo
(13) August 2007
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<th>Type-model</th>
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<th>Memory</th>
<th>Screen</th>
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<th>Optical</th>
<th>Mini PCI Comm Bay</th>
<th>CDC modem/ Bluetooth™</th>
<th>Finger Security chip</th>
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**Software:**

- Windows XP Professional
  - Microsoft Windows XP Professional Service Pack 2
  - Disk-to-Disk Recovery (in hidden protected area)

Preloaded:

- McAfee SecurityScan™
- Access Program
- Access Connections
- Norton AntiVirus
- PC Doctor
- ThinkPad Utilities
- Adobe Reader
- Update Connector
- RecordNow and Drive
- Letter Access powered by Sonic products (combo, combo, RW)
- InteView WinDVD combo (combo, RW)
- InteView WinDVD Creator (DVD combo, RW)
- Simple Backup (DVD combo, RW)
- Fingerprint Software
- Client Security Software (security chip)

**Downloadable:**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**Limited warranty:**

- 3-years/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available...
### General Features

- **Processor**: Intel Pentium M Processor 760 (2.00GHz), 770 (2.13GHz), or 780 (2.26GHz) with Enhanced Intel SpeedStep™ technology. Execute Disable Bit, and 533MHz system bus.
- **Operating System**: Windows XP Professional, Windows XP Professional (Service Pack 2), or 2000 Server.
- **Warranty**: 2 year LOR 9x5 NBD, 3 year ThinkPlus LOR 9x5 NBD, 4 year ThinkPlus LOR 9x5 FEM, or 5 year ThinkPlus LOR 9x5 FOM (varies by region).

### Display

- **Type**: 15.0" (381.0mm) SXGA+ TFT color
- **Resolution**: 1400x1050
- **Technology**: XGA (1024x768)

### Memory

- **RAM**: 1GB or 2GB max. / PC2-4200 533MHz DDR2. Support for up to 2GB max memory. 
- **Architecture**: 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, UltraDMA-100/66, and UDMA/66)

### Connectivity

- **Ports**: PC Card Std slot / 1394 / USB 2.0 / CardBus 32-bit / integrated monitor
- **S-video out port**: (TV out) / one 4-pin industry standard connector
- **Audio**: UltraNav

### Security

- **Security Keyhole**: Supports security keyhole
- **Security Chip**: TCG-compliant

### Power Management

- **Battery**: up to 5.9 hours duration.
- **Power Management**: Enhanced Intel SpeedStep
- **AC Power**: 220V-240V AC/DC adapter

### Multimedia

- **Desktop DVD and CD burner**: Multi-Burner Plus / removable from Ultrabay Slim
- **Sound System**: Stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5mm pin; headphone jack (3.5mm strip)

### Footnotes

- *®* Lenovo Training Solutions
- *™* Microsoft Windows XP Professional 2002, 2003, or 2003 Server
- *©* 2007
- *Unified 72-watt AC adapter PC 2001-compliant*
- *ACPI 1.0b and 2.0-compliant*  
- *CIM and DMI 2.0-compliant*  
- *PXE 2.1-compliant*  
- *International Warranty Service*  
- *24 hour 7 day toll-free warranty support during the warranty*  
- *ThinkPlus™ 2-2 year LOR 9x5 NBD  
- *ThinkPlus 3-year LOR 9x5 NBD  
- *ThinkPlus 4 year LOR 9x5 NBD  
- *ThinkPlus 5 year LOR 9x5 NBD  
- *ThinkPlus 4 year P&L P/U Depot  
- *ThinkPlus 5 year P&L P/U Depot  
- *Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty*  
- *See footnotes for important warranty information*  
- *Powered by Intel Centrino® mobile technology*  
- *Lenovo (T14) August 2007*
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<td>No</td>
<td>Yes</td>
<td>4.8 hr</td>
<td>Apr 05</td>
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</table>

**Positioning**

**Processor**

Perfect balance of performance and portability: two-spindle system

- **Intel® Pentium® M Processor 770 (2.13GHz)** with Enhanced Intel SpeedStep™ technology
- Execute Disable Bit, and 533MHz system bus

- **L2 cache**
  - 2MB on/or die (at processor speed) / ECC

- **Memory**
  - 1GB std / 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DINM sockets / std mem in one socket / one socket available

- **Diskette drive**
  - None standard / use optional USB-based diskette drive

- **DVD**
  - Some: DVD-ROM / 24X/8x speed / single-layer / removable from Ultrabay™ Slim

- **Combi**
  - Some: DVD-ROM/CD-RW / 24X/24X/24X/8x speed / removable from Ultrabay Slim

- **Disk**
  - UltraBay Slim

  - One modular bay for interchangeable devices (right side) / 9.5mm high bay / high

  - One optical device / compatible / 9.5mm high bay / supports 2nd disk / Hard Disk Drive Shock Absorber

**Display**

- Some: 14.1” (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits

- Some: 15.0” (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

**Graphics**

- ATI Mobility™ FireGL™ V3200 / PCl Express x16 / 128MB GDDR1 memory

- **Keyboard**
  - 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

- **Touchpad**
  - UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

  - ThinkLight™

  - Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 14.1” models (WxHxD): 12.2” x 10.0” x 1.0-1.2”

- 14.1” models (WxHxD): 12.2” x 10.0” x 1.0-1.2”

- 14.1” models (WxHxD): 12.2” x 10.0” x 1.0-1.2”

- 14.1” models (WxHxD): 12.2” x 10.0” x 1.0-1.2”

**Weight**

- Battery material

  - Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

  - Lithium ion / intelligent / supports unique 2nd battery in Ultrabay Slim

  - 9-cell: up to 5.2 hr; 9-cell plus Ultrabay Slim battery: up to 7.7 hr

**Architecture**

- Mobile Intel 915PM Express Chipset / 82895PM Memory Controller Hub (MCH-M) / 82801FBR ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCl Express x1, PCl bus, ethernet MAC/Intel), LPC bus (National Semiconductor PC89394T Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, (docking-based ports, serial, diskette))

  - One Type I or Type II slot / CardBus 32-bit slot / CardBus 32-bit / no integrated modem
doctor

  - One ExpressCard34 or ExpressCard54 / PCl Express x1 or USB 2.0 / integrated door

  - Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (usb enterance)

**Video out**

- Wireless antenna

  - S-video out port (TV out) / one 4-pin industry standard connector

  - UltraConnect™ antenna built into the display cover for optimal wireless signal reception

  - One Mini PCI type III slot (Communications Bay) / customer upgradable

  - Some: 11b/g wireless®, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset

  - Some: 11a/b/g wireless®, Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset

  - Some: 11a/b/g wireless®, ThinkPad 11a/b/g Mini PCI Adapter II, Atheros AR500X chipset

  - Some: One Communications Daughter Card (CDC) socket / customer accessible

  - 56K V.90 (V.92-designed™) modem in CDC / Conexant™ chipset

  - Bluetooth wireless technology / in (CDC with modem)

  - Gigabit Ethernet / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

  - Power-on password / hard disk drive lock / security keyhole / security key chip

  - Embedded Security Subsystem 2.0™ / in NS PC89394T chip / TCG-compliant

  - Security chip

  - Fingerprint reader on palm rest / swipe sensor / integrated with security chip

**Limited warranty**

- 3-year / 1yr battery - EasyServ™/on-site pickup and delivery / service upgrades® available

- Universal 72 watt AC adapter / PC 2001-compliant

- ACPI 1.0b and 2.0-compliant

- CIW and DMI 2.0-compliant

- ENERGY STAR®-compliant

- 24 hour x 7 day x 365 day toll-free warranty support during the warranty

- ThinkPlus™ 2-year LOR 9x5 NBD

- ThinkPlus 3-year LOR 9x5 NBD

- ThinkPlus 4-year LOR 9x5 NBD

- ThinkPlus 5-year LOR 9x5 NBD

- ThinkPlus 4-year P&L U Depot

- ThinkPlus 5-year P&L U Depot

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

- *Powered by Intel Centrino® mobile technology

- Lenovo

- (T5) December 2006

- Lenovo

- Personal Systems Reference (PSREF)

- Created by Lenovo Training Solutions

- ThinkPad T43p - withdrawn

- See footnotes for important warranty information
## ThinkPad T43p (August 2005) - withdrawn

**Windows XP Professional**

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

### Preloaded

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW! and Drive Letter Access powered by Sonic products
- InterVideo WinDVD (combo, DVD RW models)
- InterVideo WinDVD Creator DVD RW models
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)

### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Lenovo ThinkVantage Tools

### License (CD not included)

- Lenovo "SmartSuite" Millennium and Lenovo Notes® Stand-alone Client

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### Key Features

- **ThinkPad T43p**
- **Intel® Pentium® M Processor 780 (2.26GHz) with Enhanced Intel SpeedStep™ technology**
- **Active Protection System**
- **Security Subsystem 2.0**
- **ThinkPad Docking Station**
- **ThinkVantage™ Technologies**

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### Technical Specifications

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<th>Speed</th>
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ThinkPad T43 and T43p (1871 and 2668) - Education - withdrawn

See footnotes for important warranty information

* These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

SOFTWARE

- Microsoft® Windows® XP Professional
- Personal Portable Library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus™
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive

Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Limitations:

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
**ThinkPad T43 and T43p (1871 and 2668) - Education (Aug 05) - withdrawn**

**SOFTWARE**

- Windows XP Professional
- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Education software from Vital Source Technologies™
- Vitalsource KEY™ and Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor®
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW! and Driver Letter Access powered by Sonic products (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)
- FingerPrint Software
- Client Security Software (for security chip)

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

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### Tentative Notebook Specifications

**Type-model** | Processor | Speed | Supplier | Graphics | Disk | Mini PCI | CDC modem/ | Finger | Chip set | Limited warranty | Avail date
---|---|---|---|---|---|---|---|---|---|---|---
T43 | T43 1871-CJU Pentium® M 760 | 2.00 | 512MB | XGA | 40HS Combo | *Intel 11a/b/g* | Modem | Finger | 915GM EasyServ Aug 05 | 92P1110
T43 | T43 2668-CJU Pentium M 770 | 2.13 | 512MB | XGA+ | 80HS Combo | *Intel 11a/b/g* | Modem | Finger | 915PM EasyServ Aug 05 | 92P1110
T43 | T43 2668-CLU Pentium M 770 | 2.13 | 512MB | XGA+ | 80HS Combo | *Intel 11a/b/g* | Modem | Finger | 915PM EasyServ Aug 05 | 92P1110
T43 | T43 2668-CMU Pentium M 770 | 2.13 | 512MB | XGA+ | 80HS Combo | *Intel 11a/b/g* | Modem | Finger | 915PM EasyServ Aug 05 | 92P1110
T43p | T43p 2668-CPU Pentium M 780 | 2.26 | 1GB | XGA | 80HS Combo | *Intel 11a/b/g* | Modem | Finger | 915PM EasyServ Aug 05 | 92P1110

*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning Controller**

- Perfect balance of performance and portability; two-spiral system
- Intel® Pentium® M Processor 760 (2.00GHz), 770 (2.13GHz), or 780 (2.26GHz) with Enhanced Intel® SpeedStep™ technology
- Execute Disable Bit, and 533MHz bus

**L2 cache Memory**

- 2MB (1MB per processor speed) / ECC 512MB or 1GB std / 2GB max / *PCI-2420* 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

**Diskette drive Combo DVD:RW**

- None standard / use optional USB-based diskette drive
- Some: DVD-ROM/CD:RW / 24X/24X/24X:8x speed / removable from Ultrabay Slim

**Display**

- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 14.1" (358.1mm) SXGA+ (1080x1050) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) SXGA+ (1080x1050) TFT color / Active Matrix / 200 nits
- FlexView display with wide viewing angle and high density using IPS technology
- FlexView display with wide viewing angle and high density using IPS technology

**Graphics**

- Some: Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GCHC / uses main memory up to 128MB / 256MB / 300MB / 400MB / GDDR4 / GDDR5
- Some: ATI Mobility™ Radeon™ X300 / PCI Express x16 64MB DDR1 memory
- Some: ATI Mobility Radeon™ X300 / PCI Express x16 / 128MB GDDR1 memory

**Keyboard Point**

- 87-key / Access IBM button / palm rest / pitch 0.8mm / stroke: 2.5mm (std-size keys)

**TrackPoint®**

- Pointing device, "press-to-Select", Internet Scroll Bar™, magnifying glass

**Touch pad**

- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

**ThinkLight™**

- UltraCam™ enhancements to improve visibility in low-light conditions

**Dimensions**

- 14.1" models (WX12): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm
- 15.0" models (WX12): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm

**Weight**

- with optical drive and battery: 14.1" models: up to 5.2 lb (2.3kg); 15.0": up to 6.0 lb (2.7 kg)

**Case material**

- Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

**Battery - type**

- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim battery: up to 7.7 hr

**Architecture**

- Some: Intel® 855GM Express Chipset
- Some: Mobile Intel® 915GM Express Chipset
- Some: MBI9660F Graphics Mem Cont Hub
- All: 82801FBM ICH6-M I/O Controller Hub
- All: PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [lPC interface, [bluetooth], [fingerprint], PCI bus (CardBus controller, Mini PCI, external expansion) / LPC bus (NS PC8781 Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, [docking-based ports (serial, desktop)])
- One Type 1 or Type II slot / CardBus 32-bit / integrated dual USB 3.0 / 4x Express Card / 4x ExpressCard
- One ExpressCard or 4x ExpressCard/S4 / PCI Express x1 / USB 2.0 / integrated dual USB 3.0 / integrated dual PCI Express x1 / parallel / external DB-15 monitor / infrared (4Mbps) / - RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

**Video output**

- Video output from Mobile Intel® 95XX Chipset
- Mobile Intel 955X Express Chipset / 82852P5 Memory Controller Hub All: 82801FBM ICH6-M I/O Controller Hub
- All: PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [lPC interface, [bluetooth], [fingerprint], PCI bus (CardBus controller, Mini PCI, external expansion) / LPC bus (NS PC8781 Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, [docking-based ports (serial, desktop)])
- One Type 1 or Type II slot / CardBus 32-bit / integrated dual USB 3.0 / 4x Express Card / 4x ExpressCard/S4 / PCI Express x1 / USB 2.0 / integrated dual USB 3.0 / integrated dual PCI Express x1 / parallel / external DB-15 monitor / infrared (4Mbps) / - RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

**Wireless audio**

- Gigabit ethernet on system board / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE Soft audio / ICH AC97 controller / DirectSound™ support / AD19818 AC97 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

**Security chip**

- Embedded Security Subsystem 2.0™ / in NS PC89349T chip / TCG-compliant

**Handy Snip**

- Hand Snip / Touchpad Snip / Active Matrix / 150 nits (358.1mm)

**FlexView display**

- FlexView display with wide viewing angle and high density using IPS technology

**S-video out port**

- S-video out port (TV out) / one 4-pin industry standard connector

**Power**

- 41C9177 ThinkPlus 4-year LOR 9x5 NBD
- 41C9178 ThinkPlus 3-year LOR 9x5 NBD
- 41C9179 ThinkPlus 2-year LOR 9x5 NBD
- 41C9176 ThinkPlus 4-year LOR 9x5 NBD
- 41C9175 ThinkPlus 3-year LOR 9x5 NBD
- 41C9174 ThinkPlus 2-year LOR 9x5 NBD

**Post-warranty annual maintenance agreements**

- 41C9173 ThinkPlus 4-year P & L P / Depot
- 41C9172 ThinkPlus 3-year P & L P / Depot
- 41C9171 ThinkPlus 2-year P & L P / Depot
- lenovo.com/thinkplus/warranty

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See footnotes for important warranty information  
* © Powered by Intel Centrino® mobile technology  
US models announced August 2, 2005  
US models withdrawn effective May, October, or November 2006

(T16) October 2006
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- **These models have a limited onsite service** 3-year limited warranty

The ThinkPad educational models are only available to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Software**

- Microsoft Windows XP Professional
- Norton AntiVirus
- Intel Mobile Technology
- Norton Personal Firewall

**License** (CD not included)

- Lotus SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Visit [thinkpad.com](http://thinkpad.com) for additional ThinkPad notebook information.

Visit [thinkpad.com/thinkvantage](http://thinkpad.com/thinkvantage) for ThinkVantage™ technologies and design features.

Universal 72 watt AC adapter

- PC 2001-compliant
- ACPI 1.4-compliant
- CMI and DMI 2.0-compliant
- PXE 1.0-compliant

ENERGY STAR®-compliant International Warranty Service

24 hour x 7 day toll-free warranty support.

See footnotes for important warranty information. * Powered by Intel Centrino® mobile technology ©Lenovo

US models announced January 19, 2005 or August 16, 2005

US models withdrawn effective March, October, or November 2006

(T7) October 2006
**ThinkPad T43 and T43p (1872 and 2669) - Education (Aug 05) - withdrawn**

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

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*These models have a limited onsite service 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning
- Processor:
  - Intel® Pentium® M Processor 760 (2.00GHz), 770 (2.13GHz), or 780 (2.26GHz) with Enhanced Intel SpeedStep™ technology
  - Execute Disable Bit, and 533MHz bus
- Memory:
  - 2MB / on die (at processor speed) / ECC
  - L2 cache
  - 512MB or 1GB std / 2GB max / 128MB or 256MB / non-parity / CL4 / dual channel capable / two 200-pin SODIMM sockets / std in 1 socket / 1 socket avail

### Diskette drive
- None standard / use optional USB-based diskette drive
- DVD/HD:
  - Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim
- Ultrabay Slim:
  - One modular bay for interchangeable devices (right side) - 9.5mm high bay
- Disk:
  - 40GB BS (5400 rpm), 60GB BS (5400 rpm), or 80GB HS (5400 rpm)
  - 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk

### Hard Disk Drive Shock Absorber / Active Protection System
- FlexView display with wide viewing angle and high density using IPS technology

### Display
- Some:
  - 14.1'' (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
  - 14.1'' (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits
  - 15.0'' (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

### Graphics
- Some: Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main memory (up to 128MB with 256MB+ / 200MHZ
- Some:
  - ATI® MOBILITY RADEON® X300 / PCI Express x16 / 64MB / GDDR1 memory
  - Some:
  - ATI® MOBILITY RADEON® X300 / PCI Express x16 / 128MB / GDDR1 memory

### Software
- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery
- Preloaded
  - Education software from Vital Source Technologies:
  - vitalsource KEY™ and VitalSource Complete
  - Rescue and Recovery™
  - Access Program
  - Access Connections™
  - Norton AntiVirus
  - PC-Doctor™
  - ThinkPad Utilities
  - Adobe® Reader
  - RecordNOW and Drive
  - Letter Access powered by Sonic products (combo, DVD/HD)

### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Management
- License (CD not included)
  - Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

### Service
- Post-warranty annual maintenance upgrade

### ThinkPad notebooks implement ThinkVantage™ technologies and design:
- visit thinkpad.com/thinkvantage

### Universal 72 watt AC adapter
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CSM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant
- International Warranty Service

| Limited warranty* | 3-year 1-year battery, limited onsite service | 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time |

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology
© Lenovo (T17) October 2006
**ThinkPad® T43 (1875) - TopSeller - withdrawn**

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<td>1-year TopSeller</td>
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<td>Jul 05</td>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These 1875 models have a 1-year limited warranty (other ThinkPad T43/T43p 2687 TopSeller models have a 3-year limited warranty)

**Software**

- Windows XP Professional
  - Microsoft® Windows® XP Professional22 (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Adobe Reader
- Access Program
- Access Connections
- Norton AntiVirus
- PC Doctor®
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License**

- CD (not included)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72-watt AG adapter/ PC 2001-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant
International Warranty Service17
24 hour x 7 days²² toll-free warranty support during the warranty12

ThinkPlus²², 1-year LOR 9x5 NB
41C9166
ThinkPlus 2-year LOR 9x5 NB
41C9167
ThinkPlus 3-year LOR 9x5 NB
41C9168
ThinkPlus 4-year LOR 9x5 NB
41C9169
ThinkPlus 5-year LOR 9x5 NB
41C9171

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

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US models announced January 19, June 7, or August 9, 2005

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Cache</th>
<th>Graphics</th>
<th>Diskette drive</th>
<th>Mini PCI</th>
<th>CDC modem</th>
<th>Finger/sec</th>
<th>Chip set</th>
<th>Limited warranty</th>
<th>Avail date</th>
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<td>No</td>
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<td>No</td>
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<td>Yes</td>
<td>3-yr EasyServ</td>
<td>Mar 05</td>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These models have a 3-year limited warranty (other ThinkPad T43 1875 TopSeller models have a 1-year limited warranty).
- These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty.

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<thead>
<tr>
<th>Positioning and Processor</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Graphics</th>
<th>Mini PCI</th>
<th>Diskette drive</th>
<th>Combos</th>
<th>Ultrabay Slim</th>
<th>Battery</th>
<th>Touchpad</th>
<th>Software</th>
<th>Licenses</th>
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<tbody>
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<td>512MB std / 2GB max</td>
<td>PC2-4200 533MHz DDR2</td>
<td>200-pin SOD-5IMM sockets</td>
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<td>DVD-ROM/CD-RW / 24X/24X/24X/24X</td>
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<td>Yes</td>
<td>3-yr EasyServ MAR 05</td>
<td>Software</td>
<td>License</td>
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<tr>
<td>Intel® Pentium® M Processor 750 (1.86GHz) or 760 (2.00GHz) with enhanced Intel® SpeedStep™ technology</td>
<td>Intel SpeedStep™ technology</td>
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<td>DVD-ROM/CD-RW / 24X/24X/24X/24X</td>
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<td>Yes</td>
<td>3-yr EasyServ MAR 05</td>
<td>Windows XP Professional</td>
<td>Lenovo Training Solutions</td>
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</table>

- Preloaded
  - Education software from Vital Source Technologies™: VitalSource KEY™ and Personal Portable Library™
  - Rescue and Recovery™
  - Access Program
  - Access Connections™
  - Norton AntiVirus
  - ThinkPad Utilities
  - Adobe® Reader
  - Update Connector™
  - RecordNOW and Drive
  - Client Security Software (for security chip)

- Downloadable
  - IBM DirectAgent
  - Software Delivery Assistant
  - System Migration Assistant

- License (CD not included)
  - Lenovo SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

- Limited warranty
  - 3-year/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

- Limited warranty
  - Powered by Intel Centrino® mobile technology

- US models announced January 19, 2005

- US models withdrawn effective October 2006

- Lenovo (T10) December 2006

- See footnotes for important warranty information

- © Lenovo

- Lenovo Training Solutions Personal Systems Reference (PSREF)

- Software

  - Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-To-Disk Recovery (in hidden protected area)

- Preloaded

  - Education software from Vital Source Technologies™: VitalSource KEY™ and Personal Portable Library™
  - Rescue and Recovery™
  - Access Program
  - Access Connections™
  - Norton AntiVirus
  - ThinkPad Utilities
  - Adobe® Reader
  - Update Connector™
  - RecordNOW and Drive
  - Client Security Software (for security chip)

- Downloadable

  - IBM DirectAgent
  - Software Delivery Assistant
  - System Migration Assistant

- License (CD not included)

  - Lenovo SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

- Limited warranty

  - 3-year/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available
ThinkPad T43 (2686) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Discrete graphics</th>
<th>GB &amp; rpm</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>CDC modem/ Bluetooth</th>
<th>Finger print reader</th>
<th>Battery limited warranty availability date</th>
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<td>1.73</td>
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<td>Modern</td>
<td>Finger 6-cell</td>
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<td>7200</td>
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<td>DVD:RW</td>
<td>* Intel 11b/g</td>
<td>Modern</td>
<td>Finger 6-cell</td>
</tr>
</tbody>
</table>

**Processor**

- **Intel® Pentium® M Processor 740 (1.73GHz), 750 (1.86GHz), or 760 (2.00GHz)** with Enhanced Intel SpeedStep™ technology.
- **Execute Disable Bit**, and 533MHz system bus
  - **L2 cache**: 2MB / on die (at processor speed) / ECC
  - **Memory**: 512MB std / 2GB max / PCIe-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

**Diskette drive**

- **Combi**
- **USB Portable Diskette Drive 05K9276**
- **USB 2.0 Super Multi-Burner Drive 40Y8638**

**Graphics**

- **ATI® MOBILITY RADEON® X300 / PCI Express x16 / 64MB GDDR3 DRAM**
- **Display**: Some: 14.1" (358.1mm) XGA (1024x768) / TFT color / Active Matrix / 150 nits
  - Some: 14.1" (381.0mm) SXGA+ (1400x1050) / TFT color / Active Matrix / 150 nits
  - Some: 15.0" (381.0mm) SXGA+ (1400x1050) / TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

**Software**

- **Windows XP Professional**
  - Microsoft® Windows XP Professional®** (Service Pack 2)
  - **Disk-to-Disks**
  - **in (hidden protected area)**

**Preloaded**

- **Rescue and Recovery™**
- **Access Program**
- **Access Connections™**
- **Norton AntiVirus**
- **PC-Doctor®**
- **ThinkPad Utilities**
- **Adobe® Reader**
- **RecordNOW and Drive Letter Access supported by Sonic products (combo, DVD:RW)**
- **InterVideo WinDVD (combo, DVD:RW models)**
- **InterVideo WinDVD Creator (DVD:RW models)**
- **Simple Backup (combo, DVD:RW)**
- **Fingerprint Software**
- **Client Security Software**

**Downloadable**

- **IBM Director Agent**
- **Software Delivery Assistant**
- **System Migration Assistant**

**Limited warranty**

- **1-year EasyServ™**
- **2nd year EasyServ™**
- **3rd year EasyServ™**

- **1-year EasyServ™**
  - EasyServ™one year LOR 9x5 NBD
  - ThinkPlus® 2-year LOR 9x5 NBD
  - ThinkPlus 3-year LOR 9x5 NBD
  - ThinkPlus 4-year LOR 9x5 NBD
  - ThinkPlus 5-year LOR 9x5 NBD

**Post-warranty annual maintenance**

- **2-year Post-warranty annual maintenance**
  - ThinkPlus® 2-year P&L P/U Depot
  - ThinkPlus 3-year P&L P/U Depot
  - ThinkPlus 4-year P&L P/U Depot
  - ThinkPlus 5-year P&L P/U Depot

**US models withdrawn effective May, October, or December 2006**
ThinkPad T43 and T43p (2687) - TopSeller - withdrawn

These small and medium business (SMB) models are part of the US TopSeller™ Program.

These models have a 3-year warranty limit (other ThinkPad T43 1875 TopSeller models have a 1-year warranty limit).

Positioning

Processor: Perfect balance of performance and portability; two spindles

L2 cache: 2MB / on die (at processor speed); ECC

Wireless: One Mini PCI type III slot (Communications Bay) / customer upgradable

Bluetooth: UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

Airborne: Software Delivery Assistant (optional)

Display

Some: 14.1” (356.8mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 14.1” (356.8mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits

Some: 15.0” (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

Graphics: Supports ThinkVantage® technologies; visit thinkpad.com/thinkvantage

Keyboard

Docking: Supports ThinkPlus 5-year P&L P/U Depot

PC Card Std slot: 22 2-year LOR 9x5 NBD

ExpressCard slot: International Warranty Service

Ports: Power-on password / hard disk password / supervisor password / security keyhole

Audio support: One RJ-11 (modem) / RJ-45 (ethernet) / no key on some or mouse or serial ports (use USB)

Security chip: Embedded Security Subsystem 2.0

Fingerprint reader: FingerPrint reader on palm rest / swipe sensor / supports the security chip

Security: Supports ThinkPlus 3-year 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades™ available

Limited warranty: 3-year / 1-year battery

Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)

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<th>Disk</th>
<th>Controller</th>
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**SOFTWARE**

- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disco Recovery

License - not included

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Firefox Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo)
- InterVideo WinDVD (combo, combo, combo)
- Lenovo Technical Support Agreement @ lenovo.com/thinkplus/warranty

**Preloaded**

- Recovery and Repair™
- Access Connections
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Live
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)

**Security**

- Trusted Platform Module
- Power-on password / hard disk password / supervisor password / security keyhole
- DVI pass-through support

**Audio Support**

- High Definition (HD) Audio / AD1981HD codec / stereo speaker, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack

**Ports**

- Three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- One Type I or Type II slot / CardBus 32-bit / integrated door

**Exit Strategy**

- 3-years / 1-yr battery - EasyServ
- 65-watt (1951) or 90-watt (2007) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour / 7 days of toll-free warranty support during the warranty period

- ThinkPlus™ 22 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 4-year P&L Depot
- ThinkPlus 5-year P&L Depot
- Post-warranty annual maintenance agreements @ lenovo.com/thinkplus/warranty
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Positioning Processor: Premiere performance; two spindles

Memory: 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

Diskette drive: None standard / use optional USB-based diskette drive

EIDE DVD: Some: DVD-ROM / 24X-8X speed / single-layer / removable from Ultrabay™ Slim

EIDE Combo: Some: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabay Slim

Ultrabay Slim: One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel

Serial ATA disk (SATA150): 60GB (5400 or 7200 rpm) / 9.5mm high / removable/upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive

Display: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare

Graphics: Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Wireless antenna: UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

Mini PCI Express: Two Mini PCI Express slots / only 80.211 wireless is customer upgradable

Wired upgradable: Some: wireless upgradable with wireless Mini PCI Express options

Intel 11a/b/g: Some: 11a/b/g wireless; Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

WWAN™: Some: wireless WAN, GPRS/EDGE/UMTS/HSDPA support, Mini PCI adapter and SIM, WWAN service on demand, service contract required with AT&T

Modem: 56K V.90 (V.92-designed) modem in Com Daughter Card socket / Connectix chipset

Bluetooth™: Some: Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

Audio: High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / jack

Security chip: Power-on password / hard disk password / supervisor password / security keyhole

Supports ThinkVantage technologies

Limited warranty: 3-years / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

SOFTWARE

- Windows XP Professional
- Professional(2) / Service Pack 2
- Disk-to-Disk Recovery
- (in hidden protected area)

Preloaded

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Awareness
- ThinkVantage System Update
- Symantec Client Security™
- Diskeeper™ Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo models)
- InterVideo WinDVD (combo, DVD, models)

License: CD not included
- Lotus’ SmartSuite™ Millennium and Lotus Notes’ Stand-alone Client

See footnotes for important warranty information.

*Powered by Intel Centrino™ Duo mobile technology

Lenovo US models announced Jan 5, Jan 31, May 16, June 20, or August 1, 2006

Lenovo US models withdrawn effective September 2007

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Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)

DV1-2 September 2007
## ThinkPad T60 (2007) - 14.1" display - withdrawn

### Personal Systems Reference (PSREF)

- **Windows XP Professional**
  - Microsoft Windows XP Professional
  - Disk-to-Disk Recovery
  - Preloaded
- **SOFTWARE**
  - Windows XP Professional
  - Microsoft Windows XP Professional
  - Disk-to-Disk Recovery
  - Preloaded
- **Preload**
  - (only some listed)
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage Software Update
  - System Migration Assistant
  - Symantec® Client Security™
  - Diskeeper®
  - PC-Doctor®
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - PulseAudio (software, 512MB)
  - Multimedia Center for Think
  - Professional Stand-alone Client

### Type-model Processor Graphics controller memory Disk SATA EIDE SATA Mini PCIe WWAN Wireless Bluetooth Finger print reader Workhorse (W) or Global (G) (date)

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### Positioning Processor
- **ThinkPad** Core™ Duo processor T2400 (1.83GHz) or T2500 (2.00GHz) with dual-core, Enhanced Intel SpeedStep™ technology³, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache.

### Memory
- **512MB or 1GB std** / **4GB max²** / **PC2-5300 667MHz DDR2** / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

### Diskette drive
- None standard / use optional USB-based diskette drive

### EIDE DVD
- Some: DVD-ROM / 24X-8X9 speed / single-layer / removable from Ultrabay™ Slim
- Some: DVD-ROM/CD-RW / 24X/24X2 speed / removable from Ultrabay Slim
- Some: DVD Burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

### Ultrabay Slim
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel

### Serial ATA disk (SATA150)
- 60GB² (5400 or 7200 rpm), 80GB (5400 rpm), or 100GB (5400 or 7200 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk / supports 2nd disk

### Display
- **14.1** / **14.1**
- **1024x768** TFT color / 150 nits / anti-glare
- **14.1** / **14.1**
- **1024x768** TFT color / 150 nits / anti-glare

### Graphics
- **ATI MOBILITY™ Radeon™ X1300 M52** / PCI Express x16 / 64MB GDDR1
- **ATI MOBILITY Radeon X1400 M54** / PCI Express x16 / 128MB GDDR1
- All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- **99-key** / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys / TrackPoint® pointing device / Scroll Bar / "Press-to-Select" magnifying glass

### Touchpad
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

### Dimensions
- **14.1** models (WxDxH): 12.4" x 10.0" x 1.0-1.2"; 316mm x 255mm x 26.6-31mm
- With optical drive and battery: up to 5.5 lb (2.5kg)

### Weight
- Magnesium composite top cover, Carbon Fiber Reinforced Plastic (CFRP) bottom cover

### Battery
- Battery - life10
- **Lithium Ion 6-cell** / supports unique 2nd battery in Ultrabay Slim
- **6-cell**: up to 6.0 hr; opt 9-cell: up to 9.0 hr; 9-cell plus Ultrabay battery: up to 11.5 hr

### Architecture
- **Mobile Intel 950PM Express Chipset** / 82945PM Memory Controller Hub / 82801GB ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint], [PCI bus (16-bit 51512 Cardbus controller), [LPC bus (National Semiconductor® PC87582 Super I/O, Atmel® 9753C203))

### PC Card Std slot
- One Type I or II slot / CardBus 32-bit / integrated door
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- Three USB 2.0 ports, external DB-15 monitor / infrared (4Mbps), RJ-11 (modem) / RJ-45 (Ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

### Ports
- **Wireless Mini PCIe Express Slot**
- **Wireless upg²²**
- **Intel 11a/b/g wireless**
- **WWAN³³**

### Specifications
- **802.11b/g/WLAN**
- **90-watt AC adapter (discrete graphics)**
- **ThinkPad Roll Cage (one-piece)**
- **RoHS-compliant**
- **International Warranty Service**
- **Support during the warranty**

### Support
- Lenovo training solutions
- Lenovo.com/thinkplus/warranty
### ThinkPad T60 (1951 and 2007) - 14.1" display - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Core Memory</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk SATA</th>
<th>WWAN</th>
<th>Mini PCIe A/G</th>
<th>Mini PCIe B/G</th>
<th>Blue-tooth</th>
<th>Finger print reader</th>
<th>Bat-Whose (W)</th>
<th>Gbi (G)</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>1951-4GU Core T2500 2.00</td>
<td>Intel Core Duo</td>
<td>1GB</td>
<td>14.1&quot; XGA</td>
<td>GMA</td>
<td>60GB</td>
<td>5400 Combo</td>
<td>*Intel 11a/b/g*</td>
<td>GM</td>
<td>6</td>
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<td>7200 Combo</td>
<td>*Intel 11a/b/g*</td>
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<td>14.1&quot; XGA</td>
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<td>*Intel 11a/b/g*</td>
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<td>14.1&quot; SXGA+</td>
<td>X1400</td>
<td>80GB</td>
<td>5400 DVD</td>
<td>*Intel 11a/b/g*</td>
<td>GM</td>
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<td>5400 Combo</td>
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<td>5400 DVD</td>
<td>*Intel 11a/b/g*</td>
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<td>6</td>
<td>W</td>
<td>0</td>
<td>July 06</td>
<td></td>
</tr>
</tbody>
</table>

**Positioning**
- Processor: **Intel Core™ Duo processor T2400, T2500 or T2600** with dual-core, Enhanced Intel SpeedStep™ technology,Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache
- Memory: 512MB or 1GB std / 4GB max\* / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / 4G4, 4MU, 4HU, 4KU, 4LU: standard memory in both sockets; no sockets available; Others: standard memory in 1 socket; 1 socket available
- Diskette drive: None standard / usable USB-based diskette drive
- EIDE DVD:RW: Some: DVD burner / Super Multi-Burner (40Y6823) dual-layer, removable Ultrabay Slim
- Ultrabay Slim: One modul bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
- Serial ATA disk: SATA150

**Display**
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare
- Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare

**Graphics**
- Some: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- Some: ATi Mobility Radeon X1300 M52 / PCI Express x16 / 64MB GDDR1
- Some: ATi MOBILITY Radeon X1400 M54 / PCI Express x16 / 128MB GDDR1
- All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apk keys
- Touch pad: UltraNav™ multi-pointing system / touchpad below keyboard / Tap Zones

**Processor**
- Intel Centrino® powered by Intel Centrino®
- Enhanced Intel SpeedStep™ technology
- Execute Disable Bit
- 667MHz system bus
- 2MB shared L2 cache
- Intel 11a/b/g

**Software**
- Windows XP Professional
  - Microsoft Windows® XP Professional\* (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution
- ThinkVantage® Personal Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diaker™ Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Firmware Software (fingerprints)
- Multimedia Center for Think
- Sonic RecordNOW® and Drive Letter Access (combo, combo, DVD, combo, DVD)
- InterVideo WinDVD (DVD, combo, combo, DVD)
- InterVideo WinDVD Creator (DVD, DVD models)

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Wireless antenna**
- Mini PCI Express
- Wireless upg
- WWAN\*

**Fingerprint reader**
- FingerPrint reader
- FingerPrint reader on palm rest
- Swipe sensor
- supports the security chip

**Limited warranty**
- 3-years / 3-years / 3-years / 3-years / 3-years / 3-years
- 1-year / battery EasyServ™ on-site pickup and delivery / service upgrades available

**See foottnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

**Lenovo**
ThinkPad® T60 (1951 and 2007) - 14.1" display (October 2006) - withdrawn

ThinkPad Carrying Case - Expander 73P3597
ThinkPad 90W AC/DC Combo Adapter 40Y7630
Advanced Ultrabay Battery 3-cell 40Y6789
Z60m/T60/R60 Li-Ion Battery 9-cell 40Y6797
L193p 19" LCD Monitor 4431HB2
ThinkPad 5745 14.1" LCD Monitor 43R6222
ThinkPlus 4-yr P&L P/U Depot 41C9176
ThinkPlus 3-yr LOR 9x5 NBD 41C9175
ThinkPlus 5-yr LOR 9x5 NBD 41C9177

SOFTWARE:

Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery
- (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage ThinkPlus®
- System Migration Assistant
- Symantec® Client Security™
- Diskeeper®
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint module)
- Multimedia Center for Think Offerings
- Sonic RecordNOW® and Drive Letter Access (combo, DVD+RW)
- InterVideo WinDVD® (combo, DVD+RW models)
- InterVideo WinDVD® Creator (DVD+RW models)

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client Support

See footnotes for important warranty information

© Lenovo

US models announced October 17 or November 28, 2006
US models withdrawn effective September or December 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>GHz</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk</th>
<th>SATA</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>WWAN</th>
<th>Bluetooth</th>
<th>Finger</th>
<th>Bat-Worse (W)</th>
<th>Avail</th>
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</thead>
<tbody>
<tr>
<td>2007-5SU</td>
<td>Core Duo T2400</td>
<td>1.83</td>
<td>512M</td>
<td>15.0” SXGA+</td>
<td>X1300</td>
<td>60G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 11a/b/g*</td>
<td>Finger</td>
<td>PM</td>
<td>6</td>
<td>W</td>
<td>G</td>
<td>Feb 06</td>
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</tr>
<tr>
<td>2007-5BU</td>
<td>Core Duo T2500</td>
<td>1.83</td>
<td>512M</td>
<td>15.0” XGA</td>
<td>X1300</td>
<td>60G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 11a/b/g*</td>
<td>Finger</td>
<td>GM</td>
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<td>Feb 06</td>
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<td>Core Duo T2400</td>
<td>1.83</td>
<td>512M</td>
<td>15.0” SXGA+</td>
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<td>60G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 11a/b/g*</td>
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<td>6</td>
<td>W</td>
<td>G</td>
<td>Feb 06</td>
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<td>2007-5RU</td>
<td>Core Duo T2500</td>
<td>2.00</td>
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<td>Feb 06</td>
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</table>

SOFTWARE**

Windows XP Professional
- Microsoft® Windows® XP Professional** (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage™ Productivity Center with Away Manager
- ThinkVantage™ System Update
- Symantec® Client Security™
- Diiskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for ThinkPad
- Sonic RecordNOW and Drive Letter Access (combo, DVD+RW)
- InterVideo WinDVD (combo, DVD+RW)
- InterVideo WinDVD Creator (DVD+RW models)

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- ThinkPlus® technologies
- 65-watt (1951) or 90-watt (2007) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service**
  - 24 hour x 7 day toll-free warranty support during the warranty**

| DVI-1 | September 2007 |

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

** Lenovo

US models announced January 31 or July 11, 2006

US models withdrawn effective October 6, 2006 and July 11, 2007
## ThinkPad T60 (15.0" display) - October 2006 - withdrawn

### Type-model

<table>
<thead>
<tr>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Core™ 2 Duo T5600, T7200, or T7400</td>
<td>1.83 GHz</td>
<td>2 GB/4 GB DDR2</td>
<td>15.0&quot; XGA</td>
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<tr>
<td>Intel® Core™ 2 Duo T5600</td>
<td>1.83 GHz</td>
<td>2 GB/4 GB DDR2</td>
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<td>Intel® Core™ 2 Duo T7200</td>
<td>2.00 GHz</td>
<td>2 GB/4 GB DDR2</td>
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<tr>
<td>Intel® Core™ 2 Duo T7400</td>
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### Graphics

<table>
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<tr>
<th>Graphics controller</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN Blue-tooth reader</th>
<th>WiMAX</th>
<th>Battery-to-workhorse</th>
<th>Global Available Entry date</th>
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</thead>
<tbody>
<tr>
<td>Intel® Graphics Media Accelerator 950</td>
<td>Integrated in 945GM</td>
<td>250MHz</td>
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<td>82945GM Graphics Memory Cont Hub</td>
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### Diskette drive

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<th>Ultrabay Slim</th>
<th>Serial ATA disk (SATA150)</th>
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<td>/ use optional USB-based diskette drive</td>
<td>/ use optional USB-based diskette drive</td>
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### Memory

<table>
<thead>
<tr>
<th>Memory</th>
<th>512MB or 1GB 2 GB/4 GB max² / PCI-22-5200 66MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SOP/SIMM sockets / std memory in 1 socket / 1 socket available</th>
</tr>
</thead>
</table>

### Software

#### Windows XP Professional

- Microsoft® Windows® XP Professional² (Service Pack 2)
- Disk-to-Disk Recovery

### Preloaded

- Rescue and Recovery™
- Access Connectionsᵀᴹ
- Client Security Solutionᵀᴹ
- ThinkVantage Productivity Center with Award Warranty
- ThinkVantage System Update
- Symantec® Client Securityᵀᴹ
- Driver Navigatorᵀᴹ
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

#### License

- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

## Specifications

### Processor

- Core™ 2 Duo processor with dual-core technology
- Intel® 64 Technology, Enhanced Intel SpeedStepᵀᴹ technology
- Execute Disable Bit, and 667MHz system bus

### Memory

- 512MB or 1GB standard 2 GB/4 GB max² / PCI-22-5200 66MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SOP/SIMM sockets / std memory in 1 socket / 1 socket available

### Display

- 15.0" (308.7mm) XGA (1024x768) TFT color
- 15.0" (308.7mm) SXGA (1280x1024) TFT color
- 15.0" (390x1050) TFT color
- FlexView display with wide viewing angle and high density using IPS technology

### Graphics

- Intel® Graphics Media Accelerator 950
- Mobile Intel 945GM Express Chipset
- 82945GM Memory Controller Hub

### Dimensions

- Weight: 1.6 kg (3.48 lbs)
- Height: 32.5 mm (1.27"
- Depth: 360.4 mm (14.17"
- Width: 270.2 mm (10.62"

### Warranty

- 1-year battery - EasyServ
- 1-year battery - QuickServ
- 1-year battery - EasyServ

### Accessories

- Keyboard (UltraNavᵀᴹ)
- Touchpad (ThinkPad TouchPad)
- ThinkPad Roll Cage (one-piece)

### Preinstalled Applications

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

### Support

- Supports ThinkVantage technologies
- 65-watt (1951) or 90-watt (2007) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service²²

### License

- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Security

- Power-on password / hard disk password / supervisor password / security keyhole
- Trusted Platform Module
- Atmel chip
- ThinkVantage™ Access Connections
- ThinkVantage™ ThinkVantage Task Manager
- Google Toolbar
- Windows® Vista® Business

### Battery

- 6-cell: 40Y6789
- 9-cell: 40Y6791
- 12-cell: 40Y6793

### WWAN

- None
- 802.11a/b/g wireless
- 802.11a/b/g32
- 802.11a/b/g None
- 802.11a/b/g None

### Bluetooth

- None
- None
- None
- None

### Audio

- High Definition (HD) Audio
- AD1981HD codec
- Stereo speakers, 1 watt
- Volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack

### Security Chip

- Security chip
- Security chip
- Security chip
- Security chip

### FingerPrint Reader

- FingerPrint reader
- FingerPrint reader
- FingerPrint reader
- FingerPrint reader

### Wireless antenna

- Wireless antenna
- Wireless antenna
- Wireless antenna
- Wireless antenna

### Mini PCI Express

- 11a/b/g wireless
- 11a/b/g wireless
- 11a/b/g wireless
- 11a/b/g wireless

### AC adapter

- 65-watt (1951) or 90-watt (2007)
- 65-watt (1951) or 90-watt (2007)
- 65-watt (1951) or 90-watt (2007)
- 65-watt (1951) or 90-watt (2007)

### Other Accessories

- Lenovo C500 Projector
- Lenovo M500 Projector
- Lenovo ThinkPad Essential Port Replicator
- Lenovo ThinkPad Advanced Dock

### Post-Warranty

- Post-warranty maintenance agreements
- Post-warranty maintenance agreements
- Post-warranty maintenance agreements
- Post-warranty maintenance agreements

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*Lenovo®

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(DV-2-4) September 2007

See footnotes for important warranty information

US models announced October 17 or November 28, 2006

US models withdrawn effective September 2007
| Type-model | Processor | Speed | GHz | Memory | Graphics controller memory | Disk | GB | EIDE optical | Mini PCIe | WWAN wireless | Blue-tooth | Finger print reader | Workhorse | Global or Entry | Available |
|------------|-----------|-------|-----|--------|-----------------------------|------|----|-------------|-----------|----------------|----------|------------------|-----------|------------------|-----------|------------------|
| 2007-6LU Core™ 2 Duo T7400 | 2.16 | 2GB | 11.1 | SXGA+ | 256MB | 1000G | 7200 | DVD±RW | None | Blue | Finger | Gbl | Nov 06 | Gbl | Nov 06 |
| 2007-8LU Core™ 2 Duo T7600 | 2.33 | 2GB | 14.1 | SXGA+ | 256MB | 1000G | 7200 | DVD±RW | None | Blue | Finger | Gbl | Oct 06 | Gbl | Nov 06 |

**Positioning**
- Premiere performance; two spindles

**Processor**
- Intel® Core™ 2 Duo processor T7400 or T7600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache

**Memory**
- 1GB or 2GB or 4GB max! / non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Models 8LU/8HU: PC2-4200 533MHz DDR2; Others: PC2-5300 667MHz DDR2;
- Non-Italics: standard memory in one socket; one socket available

**Disk drive**
- None standard / use optional USB-based diskette drive
- DVD burner / Super Multi-Burner (40Y8462) dual-layer, removable Ultrabay Slim
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
- 100GB (7200 rpm) 9.5mm high / removable, upgradable, 9.5mm high bay / supports 2nd dock / ThinkPad Shock Mounted Hard Drive / Active Protection System™

**Display**
- 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare

**Graphics**
- ATI® MOBILITY™ FireGL™ V5250 M66GL-256 / PCI Express x16 / 256MB memory / DVI pass-through support to optional Advanced Dock or Advanced Dock

**Keyboard**
- 99-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

**TrackPoint”**
- Touchpad
- UltraNav™ multi-pointing system / touchpad below keyboard / Tap Zones
- ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 14.1" models (WxDxH): 12.4" x 10.0" x 1.0-1.2"; 316mm x 255mm x 26.6-31mm with optical drive and battery; 14.1" models: up to 5.5 lbs (2.5kg)

**Weight**
- 14.1" magnesium composite in top cover, CFRP bottom cover

**Battery**
- Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim
- 9-cell: up to 6.9 hours; 3-cell plus Ultrabay battery: up to 7.8 hours

**Architecture**
- Mobile Intel 945PM Express Chipset / 82945PM Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SAT300, ATA-100, EIDE PCI Express x1, PCI bus, USB, IP interface, [Bluetooth], [fingerprint], [PCI] bus / TI PC1512 CardBus controller / LPC bus (National Semiconductor) / 1394 Super I/O, Atmel 97SC3203
- One Type I or Type II slot / CardBus 32-bit / integrated door
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- ThinkPad USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

**Wireless antenna**
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
- None

**Modem**
- 56K V.90 (V.92-designated) modem in Com Daughter Card socket / Conexant® chipset

**Bluetooth™**
- Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

**Ethernet**
- Gigabit ethernet on system board / Intel 82573L (MAC/PHY) / PCIe x1 / PXE

**Audio support**
- High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole
- Security chip
- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**
- FingerPrint reader on palm rest / swipe sensor / supports the security chip

**Limited warranty**
- 3-years / 1-year / EasyServ™ vs. onsite pickup and delivery / service upgrades vs. avail

**Software**
- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Symantec® Client Security
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offersings
- Sonic RecordNOW and Drive Letter Access (DVD±RW models)
- InteVideo WinDVD/DVD±RW
- InterVideo WinDVD Creator (DVD±RW models)

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Supports ThinkVantage technologies**
- 90-watt AC adapter (discrete graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service™
- 24 hour x 7 days toll-free warranty support during the warranty

**ThinkPlus® 22 2-year LOR 9x5 NBD
**
**ThinkPlus 3-year LOR 9x5 NBD
**
**ThinkPlus 4-year LOR 9x5 NBD
**
**ThinkPlus 5-year LOR 9x5 NBD
**
**Post-warranty annual maintenance agreements at
**
**lenovo.com/thinkplus/warranty

See footnotes for important warranty information. © Lenovo

US models announced October 17 or November 28, 2006

US models withdrawn effective September 2007
ThinkPad® T60p (Linux-ready) - withdrawn

Type-model | Processor | Speed | GHz | Memory | Screen | Graphics | Disk | Mini PCIe | Mini PCIe | Finger Workhorse (W) | Power-on password / hard disk password / supervisor password / security keyhole
---|---|---|---|---|---|---|---|---|---|---|---
2007-8ZU Core Duo T2700 | 2.33 | 1GB | 14.1" SXGA+ | 256MB | 100G 7200 | DVD:RW | Intel 11a/b/g | None | Blue | Qbi | Aug 06
2007-9ZU Core Duo T2700 | 2.33 | 1GB | 15.0" UXGA | 256MB | 100G 7200 | DVD:RW | Intel 11a/b/g | None | Blue | Qbi | Aug 06

- Linux-ready with DOS entitlement

Positioning Processor: Premier performance; two spindles
Intel® Core™ Duo processor T2700 with dual-core.
Enhanced Intel SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache
Memory

Diskette drive
EIDE Combo
IDE DVD/DRW
UltraBay Slim
Serial ATA disk (SATA150)

None standard / use optional USB-based disk drive
Some: DVD-ROM/CD-RW / 24X/24X/24X/8X* speed / removable from Ultrabay Slim
Some: DVD-ROM/CD-DVD / DVI
Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim
One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
100GB (7200 rpm) / 9.5mm high, removable, upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System™

Display

Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare
Some: 15.0" (381.0mm) UXGA (1600x1200) TFT color / 200 nits / anti-glare / FlexView display with wide viewing angle and high density using IPS technology

Graphics

ATI® MOBILITY™ FireGL® V5200 M56 / PCI Express x16 / 256MB GDDR3 / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apk keys
TrackPoint®
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
Touchpad
Ultrabay™ multi-pointing system / touch pad below keyboard / Tap Zones

ThinkLight™

Dimensions

14.1" models (WXDXH): 12.4" x 10.0" x 1.0-1.2"; 316mm x 255mm x 26.6-31mm
15.0" models (WXDXH): 13.2" x 10.6" x 1.2-1.4"; 334mm x 288mm x 31-36mm

Weight

UltraBay Slim display cover / on-off switch for all wireless radios

Case material

Battery - type

9-cell: 5-cell plus Ultrabay battery: up to 6.9 hr
14.1" magnesium composite in top cover, CFRP bottom cover;
15": CFRP in top/bottom

Battery - life (hr)

ThinkPad Advanced Dock 250310U
ThinkPad Advanced Mini Dock 250410U
ThinkPad Adjustable Notebook Stand 40Y7676
ThinkPad Convertible Monitor Stand 40Y7620
ThinkPad Essential Port Replicator 250510W
ThinkPad Advanced Mini Dock 250410U
ThinkPad Advanced Dock 250310U

Other accessories on O-T60 sheet

See notes for important warranty information
* Powered by Intel Centrino® Duo mobile technology
US models announced August 15, 2006
US models withdrawn effective December 2006 or September 2007

SOFTWARE

There is no preloaded software on these Linux-ready systems.

Linux operating system and software applications are provided by the customer.
Although these systems have hardware for the following security features, the Linux operating system does not support them:
- Fingerprint reader
- Active Protection System
- Client Security Solution

See lenovo.com/linux for more information

90-watt AC adapter
ThinkPad Fabric Case (one-piece magnesium frame)
RoHS-compliant
International Warranty Service
24 hour 7 day 24 hour toll-free warranty support during the warranty

ThinkPlus™ 22 2-year LOR 9x5 NBD
41C9175
ThinkPlus 3-year LOR 9x5 NBD
41C9178
ThinkPlus 4-year LOR 9x5 NBD
41C9180
ThinkPlus 5-year LOR 9x5 NBD
41C9179
ThinkPlus 4-year P/L & U Depot
41C9178
ThinkPlus 5-year P/L & U Depot
41C9180
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

LIMITED WARRANTY

See footnotes for important warranty information

2007-8ZU Core Duo T2700
2007-9ZU Core Duo T2700

612MB PC2-5300 DDR2 CLS SODIMM
1GB PC2-5300 DDR2 CLS SODIMM
2GB PC2-5300 DDR2 SODIMM
Serial/Parallel Port Bay Adapter (flat bezel)
Serial Hard Drive Ultrabay Slim Adapter (flat)
DVD-ROM Ultrabay Slim Drive (curved)
Combo UltraBay Slim drive (flat bezel)
ThinkPad DVD Ultrabay Slim Burner (flat)
160GB Disk 9.5mm SATA150 (5400 rpm)
USB Fingerprint Reader
11a/b/g Wireless Mini PCI Express Adp
ThinkPad Adjustable Notebook Stand
ThinkPad Convertible Monitor Stand
ThinkPad Essential Port Replicator
ThinkPad Advanced Mini Dock
ThinkPad Advanced Dock
Other accessories on O-T60 sheet

See notes for important warranty information

* Powered by Intel Centrino® Duo mobile technology
US models announced August 15, 2006
US models withdrawn effective December 2006 or September 2007

** Lenovo

(DV11-2) September 2007
## ThinkPad T60p (Linux-ready) - TopSeller - withdrawn

### Type-model
- Processor: 2623-8YU Core Duo T2500 2.00 GHz
- Memory: 1GB 14.1" SXGA+ 256MB
- Screen: 100G 7200 DVD/DRW
- Wireless: Intel 11a/b/g
- WWAN: None
- Blue-Tooth: None
- Finger Print Reader: None
- Workhorse or Global Entry: Oct 06

### Positioning
- Processor: Premier performance; two spindles
- Intel® Core™ Duo processor T2500 with dual-core.
- Enhanced Intel SpeedStep® technology,
- Execute Disable Bit, 667MHz system bus,
- 2MB shared L2 cache

### Memory
- 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / dual-channel capable / two 200-pin SO-DIMM sockets / std memory in 1 slot / 1 socket available

### Diskette Drive
- EIDE Combo RW
- EIDE DVD/RW
- Ultrabay Slim

### Serial ATA disk
- (SATA150)
- 7200 (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System™

### Display
- 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare

### Graphics
- ATI® MOBILITY™ FireGL® V5200 M56 / PCI Express x16 / 256MB GDDR3 / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
- Illuminates the keyboard to improve visibility in low-light conditions

### Architecture
- Mobile Intel 945PM Memory Controller Hub / 82801GBM ICH7-M / Mobile Intel 945PM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1)
- Serial Hard Drive Ultrabay Slim Adapter (flat) / 9.5mm high bay / flat bezel

### Wireless antenna
- WiFi (IEEE 802.11b/g/n) / Bluetooth 2.0 wireless
- Wi-Fi certified

### Security
- Finger Print Reader / privacy shutter (latent)
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel

### Limited warranty
- 3-years / post-warranty annual maintenance

### Software
- There is no preloaded software on this Linux-ready system.
- Linux operating system and software applications are provided by the customer.

### Post-warranty annual maintenance
- 2-year LOR 9x5 NB
- 4-year LOR 9x5 NB
- 5-year LOR 9x5 NB

### Other accessories
- See lenovo.com/thinkplus/warranty for more information

### Footnotes
- *Powered by Intel Centriq™ Duo mobile technology
- US model announced October 17, 2006
- US model withdrawn effective September 2007

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

See footnotes for important warranty information

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(DV11-3) September 2007
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* These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty. These models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
Type-model | Processor | Speed GHz | Memory | Screen | Graphics Controller | Disk Controller | Mini PCIe Card | BlueTooth | Finger Bat- Canopy | Chip Set | Limited warranty | Avail date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
T60 1952-C2U Core™ Duo T2400 1.83 | 512M | 14.1" XGA | GMA | 60G 5400 | Combo | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Feb 06
T60 2008-C2U Core Duo T2400 1.83 | 512M | 14.1" XGA | X1300 80G 5400 | Combo | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Feb 06
T60 2008-C3U Core Duo T2400 1.83 | 512M | 14.1" SXGA+| X1300 80G 5400 | Combo | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Feb 06
T60 2008-C4U Core Duo T2500 2.00 | 512M | 14.1" SXGA+| X1300 80G 5400 | Combo | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Feb 06
T60 2008-C5U Core Duo T2500 2.00 | 512M | 14.1" SXGA+| X1300 80G 5400 | Combo | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Feb 06
T60 2008-C6U Core Duo T2500 2.00 | 512M | 14.1" SXGA+| X1300 80G 5400 | Combo | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Feb 06
T60 2008-C7U Core Duo T2500 2.00 | 512M | 14.1" SXGA+| X1300 80G 5400 | Combo | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Feb 06
T60p 2008-C8U Core Duo T2600 2.16 | 1GB | 15.0" UXGA+| V5200 100G 7200 | DVD | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Apr 06
T60 2008-C9U Core Duo T2600 2.16 | 1GB | 15.0" UXGA+| V5200 100G 7200 | DVD | Intel 11a/b/g | Blue Finger | 6 GM | Onsite | Apr 06

These models have a limited onsite service® 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor
Premiere performance; two spindles
Intel® Core™ Duo processor T2400 (1.83GHz), T2500 (2.0GHz), or T2600 (2.16GHz) with dual-core, Enhanced Intel SpeedStep® technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache
Memory
512MB or 1GB std / 4GB maxexistent / PCIe-S300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

Diskette drive EIDE Combo
None standard / use optional USB-based diskette drive Some: DVD-ROM/CD-WR / 24x/24x/24x/24x speed / removable from Ultrabay Slim EIDE DVD+RW
Some: DVD burner / Super Multi-Burn / Ultrabay Slim Ultrabay Slim
One modular bay for interchangeable devices (right side) / 9.5 mm high bay / flat bezel Serial ATA disk (SATA150)
60GB (5400 rpm), 80GB (5400 rpm), or 100GB (5400 or 7200 rpm) / 9.5mm high / removable, upgradeable / 9.5 mm high bay / supports 2nd disk

ThinkPad Shock Mounted Hard Drive / Action Protection System™
Display
Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare
Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare
Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / 200 nits / anti-glare
FlexView display with wide viewing angle and high density using IPS technology
FlexView display with wide viewing angle and high density using IPS technology

Graphics
Some: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
Some: ATI® Mobility Radeon™ X1300 M52 / PCI Express x16 / 64MB GDDR1
Some: ATI® Mobility Radeon X1400 M54 / PCI Express x16 / 128MB GDDR1
Some: ATI Mobility FireGL™ V5200 M66 / PCI Express x16 / 256MB GDDR3
All: DVII pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
99-key / ThinkVantage button / spill-resistant / multimediaFn keys / Windows, App keys
Trackpoint®
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar13, magnifying glass
Touch pad
UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

ThinkLight™
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31mm
15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 339mm x 268mm x 31-36mm

Weight
15.0" models (WxDxH): 15.0" x 10.6" x 1.2-1.4"; 339mm x 268mm x 31-36mm

Case material
Lithium foils 6- or 8-cell / supports unique UltraBay Slim
Battery - life
6-cell: up to 6.0 hr; T609 9-cell: up to 5.2 hr; T609 9-cell plus Ultrabay battery: up to 11.5 hr

Architecture
Some: Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Cont Hub
Some: Mobile Intel 945PM Express Chipset / 82945PM Memory Controller Hub
Some: 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPR interface / Bluetooth, [fingerprint] / PCI bus (T it) PCI1512 CardBus controller) / LPC bus (NS PCI87362 Super I/O, Atmel® AT9734303)
All: One Type I or Type II slot / CardBus 32-bit / integrated door
One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / USB 3.0 / ultraDMA 133 / 33 / 100 / 66 / 33 / 50 MHz

Ports
USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet) / microphone / stereo output / microphone / line input and / line output / modem / LAN / USB 3.0 / ultraDMA 133 / 33 / 100 / 66 / 33 / 50 MHz

Wireless antenna
Mini PCI Express / Intel 11a/b/g

Network
Gigabit ethernet on system board / Intel 82573L (MAC/PHY) / PCIe x1 / PXE

High Definition (HD) Audio / AD1981 HD codec / stereo speaker / 1 watt / volume up, down, mute buttons / internal microphone / external microphone / V-1 headset jack / headphone jack

Security
Power-on password / hard disk password / supervisor password / security keyhole

Security chip
Trusted Platform Module / Atmel chip / TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest / swipe sensor / supports the security chip

Limited warranty
3-year / 1-year battery, limited onsite service 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time24

SOFTWARE®

Windows XP Professional
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Desk Recovery (in hidden protected area)

Preloaded
- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe® Premiere Elements
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- DiSSeeker™ Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive (both Audio / CD and D/A)
- InterVideo WinDVD (combo, DVD+RW)
- InterVideo WinDVD Creator (combo, DVD+RW)
- CD
- Adobe Photoshop Elements plus Adobe Premiere Elements

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Stand-alone Client

Supports ThinkVantage® technologies

65-watt (1952) or 90 watt (2008)

AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
RoHS-compliant

International Warranty Service17
24 hour x 7 day® toll-free warranty support during the warranty12

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

US models announced January 31 or April 4, 2006
US models withdrawn effective September 2007
**ThinkPad T60 (2007) - Education (Vista™) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>802.11 wireless</th>
<th>Mini PCIe</th>
<th>Finger Battery reader</th>
<th>Chip set</th>
<th>Edu preload</th>
<th>Limited warranty</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>T60</td>
<td>2007-QXU Core 2 Duo processor T7200</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
<td>X1400</td>
<td>100G</td>
<td>7220 DVDxRW</td>
<td>11a/b/g</td>
<td>Finger 9</td>
<td>PM</td>
<td>EasyServ Apr 07</td>
<td></td>
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</tbody>
</table>

- **This model has an EasyServe™ onsite pickup and delivery 3-year limited warranty**

This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use qualified students and teachers.

Positioning Processor: Premiere performance; two spindles

Intel® Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache

Memory 1GB std / 4GB max2 / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

Diskette drive None standard / use optional USB-based diskette drive

UltraBay Slim DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

Serial ATA disk (SATA150) One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel / 100GB® (7200 rpm) / 9.5mm high / removable / upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System™

Display 14.1" (358.1mm) SXGA+ / 1400x1050 / TFT color / 150 nits / anti-glare

Graphics ATI® MOBILITY™ Radeon™ X1400 M54 / PCI Express x16 / 128MB GDDR1 / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

Touchpad TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

ThinkLight™ UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

Dimensions10 Weight8 Case material Battery - type Battery - life®

14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31mm

Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

6-cell: up to 6.0 hr; 9-cell: up to 6.8 hr; 9-cell plus Ultrabay battery: up to 11.5

Architecture Mobile Intel 945PM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE)

PC Card Std slot One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door

Ports One Type I or Type II slot / CardBus 32-bit / integrated door

PC Card Std slot One Modular Bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System™

Wireless antenna None standard / use optional USB-based wireless antenna

Mini PCI Express 11a/b/g 2 11a/b/g Mini PCI Express Adapter, Atheros AR5006EX

WWAN® None

Modem 56K V.90 (V.92-designed®) modem in Com Daughter Card slot / Conexant® chipset Bluetooth 2.0 wireless / 2.0 service via ICH7-M / LED indicator

Ethernet Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE

Audio support High Definition (HD) Audio / AD1981HD codec / stereo speaker / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack

Security Security chip Power-on password / hard disk password / supervisor password / security keyhole

Security reader None

Fingerprint reader FingerPrint reader on palm rest / swipe sensor / supports the security chip

Limited warranty® 3-years / 1-year battery / EasyServe™ onsite pickup and delivery / service upgrades22 avail

Preloaded operating system®

- Microsoft® Windows® Vista™
- Business Edition (32-bit)
- Vista Basic logo

Preloaded applications®

- Higher education software
- VitalSource Library College Edition
- Adobe Photoshop Elements 5 (and CD)
- Adobe Premiere Elements 3 (and DVD)
- Rescue and Recovery™
- Access Connections®
- Client Security Solution™
- ThinkVantage Technology Center with Away Manage
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities
- Adobe Reader
- Picasa from Google
- FingerPrint Software

License - CD not included

- Lotus® Notes® Stand-alone Client

Supports ThinkVantage® technologies

90 watt (2007)AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

RoHS-compliant

International Warranty Service®17

24 hour x 7 day18 toll-free warranty support during the warranty12

See footnotes for important warranty information

US model announced April 17, 2007

US model withdrawn effective September 2007

© Lenovo (DV2-6) September 2007
ThinkPad® T60 (2008) - Education (Vista™) - withdrawn

This model has a limited onsite service12 3-year limited warranty

This educational model is available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning
Processor Premier performance; two spindles

Memory
1GB std / 4GB max14 / PC2-5300 DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

Diskette drive / EIDE DVD±RW / Ultrabay Slim
Serial ATA disk (SATA150)

Display 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare

Graphics ATI® MOBILITY™ Radeon™ X1400 M4 / PCI Express x16 / 128MB DDR1 / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
9-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

Touchpad
ThinkLight™

Dimensions15
Weight15
Case material
Battery - type
Battery - life15

Architecture
Mobile Intel 945PM Express Chipset / 82801GBM ICH7-M I/O Controller Hub / 82945PM Memory Controller Hub / PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint] / PCI bus (TI 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (TI 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]))

PC Card Std slot
ExpressCard slot
Ports

Wireless antenna
Mini PCI Express

Modem
Bluetooth™
Ethernet
Audio support

Security
Security chip

Fingerprint reader

Fingerprint reader on palm rest / swipe sensor / supports the security chip

Limited warranty12 3-year/1-year battery, limited onsite service. 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time24

See footnotes for important warranty information
US model announced April 17, 2007
US model withdrawn effective September 2007
ThinkPad® T60 (1953 and 2623) - TopSeller - withdrawn

Type-model | Processor | Speed | Memory | Screen | Graphics controller memory | Disk | EIDE | Mini PCIe | Mini PCIe | Battery | Weight | Dimensions | Limited Available
table

| T60 | 1953-DDU | Core™ 2 Duo processor T5500, T5600, or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit, and 667MHz system bus; T5500/T5600: 2MB shared L2 cache; T7200: 4MB shared L2 cache | 1.66 – 2.20GHz | 1GB – 2GB DDR2 SDRAM | 14.1” XGA (1024x768) TFT color | 352MB | 40Y7734 | 802.11 wireless | Blue Chip | 6-cell | up to 7.8 hr | 12.2” x 10.0” x 1.0-1.2”; 311mm x 255mm x 26.6-31mm | 3 year warranty
| T60 | 2623-KEU | Core™ 2 Duo processor T5500, T5600, or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit, and 667MHz system bus; T5500/T5600: 2MB shared L2 cache; T7200: 4MB shared L2 cache | 1.66 – 2.20GHz | 1GB – 2GB DDR2 SDRAM | 14.1” XGA (1024x768) TFT color | 352MB | 40Y7734 | 802.11 wireless | Blue Chip | 6-cell | up to 7.8 hr | 12.2” x 10.0” x 1.0-1.2”; 311mm x 255mm x 26.6-31mm | 3 year warranty

* These small and medium business (SMB) models are part of the US TopSeller® Program

** These models have a 1-year or 3-year limited warranty

Positioning
Premiere performance; two spindles

Processor
Intel® Core™ 2 Duo processor T5500, T5600, or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit, and 667MHz system bus; T5500/T5600: 2MB shared L2 cache; T7200: 4MB shared L2 cache

Memory

| Ultrabay Slim | One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel |
| Serial ATA disk (SATA150) | 60GB* (5400 rpm), 80GB (5400 rpm), or 120GB (5400 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high / bay supports 2nd disk |

Display

| 14.1” (358.1mm) XGA (1024x768) TFT color | 150 nits / anti-glare |
| 14.1” (358.1mm) SXGA+ (1400x1050) TFT color | 200 nits / anti-glare |

Graphics

- ThinkVantage Media Accelerator 950 / integrated in 945GM / 250MHz
- ATI Mobility Radeon™ X1100 M54 / PCI Express x16 / 64MB memory

Keyboard

98-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

TrackPoint®
Pointing device; “Press-to-Select”; Internet Scroll Bar™; magnifying glass

ThinkPad UltraNav™ multi-touch pointing system / touch pad button below keyboard / Tap Zones

Dimensions³

- 14.1” models (WXDH): 12.2” x 10.0” x 1.0-1.2”; 311mm x 255mm x 26.6-31mm with optical drive and battery, 14.1” models: up to 5.9 lb (2.6kg) / 14.1” - magnesium composite cover, CRP bottom cover
- Battery - type Battery - life |

- Lithium Ion 6-cell or 9-cell / supports unique 2nd battery in Ultrabay Slim 6-cell: up to 6.3 hr; 9-cell: up to 6.8 hr; 9-cell plus Ultrabay Slim battery: up to 7.8 hr

Architecture

- Mobile Intel® 945GM Express Chipset / 82945GM Graphics Memory Content Hub
- Mobile Intel® 945PM Express Chipset / 82945PM Memory Controller Hub
- All: 82801GBMICH-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1 or ExpressCard/34, PCI Express x16 / PCI Express x16 / PCI Express x16 / PCI Express x16 / PCI Express x16)

PC Card Std slot

- One ExpressCard slot / CardBus 32-bit / integrated dock
- One ExpressCard/x1 or USB 2.0 / integrated dock
- One ExpressCard/x1 or USB 2.0 / external DB-15 monitor / infrared (4Mfps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

Wireless antenna

UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

Mini PCIe Express

- Intel® 11a/b/g wireless adapter, Mini PCIe ExpressCard 34/PC-Card 68/Mini PCIe ExpressCard 34 / thinkpad Mini PCIe Express Card Adp
- Wireless: THINKWIRELESS S945ABC

WWAN®

- Some: Wireless LAN, Sierra Wireless xEV-DO Network Adapter, Mini PCIe Adapter
- Some: THINKWIRELESS S945ABC

Modem

56K® V90 (V32-designated) modem in Com Daughter Card socket / Compaq® C5200

Bluetooth™

- Bluetooth 2.0 wireless / USB 2.0 interface / iCH7-M / LED indicator
- Ethernet
- Gigabit Ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE
- Security
- Power-on password / hard disk password / supervisor password / security keyhole

Security chip

Trusted Platform Module / Atmel chip / TCG 1.2-compliant

Fingerprint reader

Fingerprint reader on palm rest / swipe sensor / supports the security chip

Limited warranty⑰

- 3 year battery / EasyServ™, onsite pickup and delivery / service upgrades available
- 2623: 3-year/1-year battery / EasyServ onsite pickup and delivery / service upgrades available

Other accessories at lenovo.com/accessories

See footnotes for important warranty information

⑰ Lenovo warranty terms and conditions at lenovo.com/warranty

⑯ US models announced October 17, 2006

US models withdrawn effective September 2007

SOFTWARE®

Windows XP Professional

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Microsoft Office OneNote® 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Maintenance Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad® Utility (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software
- Multimedia Center for Think
- Sonic RecordNow and Drive Letter Access (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW model)
- InterVideo WinDVD Creator (DVD:RW models)

CD included

- Microsoft Office OneNote 2003

License - CD not included

- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

Supports ThinkVantage technologies

- 90-watt AC adapter (discrete graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- ROHS-compliant
- International Warranty Service®
- 24 hour x 7 day® toll-free warranty support during the warranty

ThinkPlus® options at lenovo.com/thinkplus/warranty

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Lenovo (DV-2) September 2007
These small and medium business (SMB) models are part of the US TopSeller™ Program.

These models have a 1-year or 3-year limited warranty.

Preloading operating system:
- 2623-P2U: Vista Basic logo
- Others: Vista Premium logo

Preloading applications (all):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Norton Internet Security® (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial

License - CD not included (all)
- Lotus® Notes® Stand-alone Client

**Preloaded operating system**
- Some: Microsoft® Windows
- Vista™ Edition (32-bit)
- 2623-P2U: Vista Basic logo
- Others: Vista Premium logo

**Preloaded applications** (all):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Norton Internet Security® (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial

License - CD not included (all)
- Lotus® Notes® Stand-alone Client
## ThinkPad T60 and T60p (2623) - TopSeller - withdrawn

### Personal Systems Reference (PSREF)

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<th>Screen</th>
<th>Graphics controller memory</th>
<th>Mini PCIe WWAN11 wireless</th>
<th>Mini PCIe WWAN11 Bluetooth</th>
<th>Battery warranty date</th>
<th>Limited warranty</th>
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<td>80GB 5400</td>
<td>DVD-RW</td>
<td>11a/b/g22</td>
<td>Verizon</td>
<td>9-cell 3-yrs Feb 06</td>
<td>3-years/1-year</td>
<td>EasyServ29 onsite pickup and delivery / service upgrades22 avail</td>
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<tr>
<td>T60 2623-D3U</td>
<td>Core Duo T2500 2.00 1GB</td>
<td>15.0&quot; SXGA+ 128MB</td>
<td>100G 5400</td>
<td>DVD-RW</td>
<td>Intel 11a/b/g23</td>
<td>Verizon</td>
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<td>DVD-RW</td>
<td>* Intel 11a/b/g</td>
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<td>80GB 5400</td>
<td>DVD-RW</td>
<td>* Intel 11a/b/g</td>
<td>Verizon</td>
<td>6-cell 3-yrs Feb 06</td>
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<td>T60 2623-D7U</td>
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<td>DVD-RW</td>
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<td>80GB 5400</td>
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<td>15.0&quot; SXGA+ 128MB</td>
<td>100G 5400</td>
<td>DVD-RW</td>
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<td>15.0&quot; SXGA+ 128MB</td>
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<td>DVD-RW</td>
<td>* Intel 11a/b/g</td>
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<td>9-cell 3-yrs Feb 06</td>
<td>3-years/1-year</td>
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</tr>
</tbody>
</table>

### Limited warranty

- These small and medium business (SMB) models are part of the US TopSeller20 Program
- *These 263 models have a 3-year limited warranty

### SOFTWARE

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional(22) (Service Pack 2)
- **Disk-to-Desk Recovery**
  - (in hidden protected area)

### Preloaded

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Maintenance Manager
- ThinkVantage System Update
- System Migration Assistant
- Symantec® Client Security
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software
- Multimedia Center for Think Offers
- Sonic RecordNow! and Drive Letter Access (combo, DVD-RW)
- InteVideo WinDVD (combo, DVD-RW models)
- InteVideo WinDVD Creator (DVD-RW models)

### License

- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Supports ThinkVantage® technologies

- 90-watt AC adapter (discrete graphics)
- ThinkPad Roll Cage (one piece magnesium frame)

### ReRoHS-compliant

- International Warranty Service17
- 24 hour x 7 day16 toll-free warranty support during the warranty12

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<td>5/5 NBD</td>
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### Footnotes

- Powered by Intel Centrino® Duo mobile technology

### Lenovo.com

- thinkplus/warranty

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© Lenovo

(DV1-9) December 2007

See footnotes for important warranty information

US models announced January 31, 2006
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<td>14.1&quot; SXGA+ 64MB</td>
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<td></td>
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</tbody>
</table>

**Positioning**

- Premier performance; two spindles
- Intel® Core™ Duo processor T2300, T2300e, or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

- 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

**Diskette drive**

- None standard / use optional USB-based diskette drive
- Some: DVD-ROM/CD-W, 2X24X/24X8/32X speed / removable from Ultrabook Slim

**Display**

- Some: DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabook Slim
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel 60GB (5400 rpm), 100GB (7200 rpm), 120GB (5400 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk

**Graphics**

- Some: ATI® MOBILITY™ Radeon™ X1100 M52
- Some: ATI MOBILITY Radeon X1400 M54 / PCI Express x1 / 128MB GDDR1
- Some: ATI MOBILITY Radeon X1400 M56 / PCIE GL Int. / VGA GL Int. / Super I/O, Atmel 9753C3203
- All: DVI pass-through support to optional advanced mini Dock or Advanced Dock

**Keyboard**

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apk keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar, magnifying glass
- Touchpad
- UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 14.1" models (WXD): 12.0" x 10.0" x 1.0-1.2"; 305mm x 254mm x 25-31mm
- 15.0" models (WXD): 13.0" x 10.0" x 1.2-1.4"; 330mm x 254mm x 31-36mm

**Weight**

- 14.1" magnesium composite in top cover, CFRP bottom cover; 15" CFRP in top/bottom
- Lithium Ion 6- or 9-cell / supports unique 2nd battery in Ultrabook Slim
- 6-cell: up to 6.0 hr / 9-cell up to 9.0 hr / 9-cell plus Ultrabook battery: up to 11.5 hr

**Architectures**

- Mobile Intel 945PM Express Chipset / 82801GMB ICH7-M I/O Controller Hub / SATA30A, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint], [PC/SC], [Cardbus] / PCI bus (T75152 Cardbus controller) / PCI bus (Super I/O, Atmel 9753C3203)

**Wireless antenna**

- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- Two Mini PCI Express slots: only 80.22 MB is customer upgradable
- Some: 11a/b/g wireless 4, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
- Some: 11a/b/g wireless 4, ThinkPad 11a/b/g Mini PCI Adapter, Atheros AR5006EX
- Some: Wireless WAN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI Adapter, EV-DO/1xRTT, WWAN antenna on display, service contract reqd with Verizon®
- WWAN®
  - Some: Wireless WAN, GPRS/EDGE/UMTS/HSDPA support, Mini PCI adapter and SIM, WWAN antenna on display, service contract required with AT&T
  - 56K V.90 (V.92-designed®) modem in Com Daught Card socket / ConnectX® chipset
  - Some: Bluetooth 2.0 wireless / USS 2.0 interface via ICH7-M / LED indicator
  - Ethernet
    - Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE
    - High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack
  - Power on password / hard disk password / supervisor password / security keyhole
  - Security
    - Security chip
      - Trusted Platform Module / Atmel chip / TCG 1.2-compliant
      - Fingerprint reader
        - Fingerprint reader on palm rest / swipe / sensor supports the security chip

**Limited warranty**

- 3-years / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

**SOFTWARE**

- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in protected area)

- Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Management Manager
  - ThinkVantage System Update
  - Symantec® Client Security
  - Diskeeper® Lite
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Fingerprint Software
  - Multimedia Center for Think
  - Sonic RecordNOW and Drive
  - Letter Access (combo, DVD:RW)
  - InterVideo WinDVD (combo, DVD:RW)
  - InterVideo WinDVD Creator (DVD:RW models)

- License
  - CD not included
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information
ThinkPad T60 15W - withdrawn

### Specifications

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Bat-Whorse (W)</th>
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<tr>
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<td>1.66</td>
<td>512M</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>40G</td>
<td>5400 DVD</td>
<td>*Intel®/a/b/g</td>
<td>3-years/1yr battery</td>
<td>EasyServ</td>
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<td>GMA</td>
<td>80G</td>
<td>5400 Combo</td>
<td>*Intel®/a/b/g</td>
<td>3-years/1yr battery</td>
<td>EasyServ</td>
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<td>8741-85U Core 2 Duo T2720</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>X1400</td>
<td>80G</td>
<td>5400</td>
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</tbody>
</table>

### Positioning

Premiere performance; two spindles

Intel® Core™ 2 Duo processor T5600, T7200, T7400, or T7600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus / T5600: 2MB L2 cache (shared); Others: 4MB L2 cache (shared)

### Memory

512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

### Diskette drive

None standard / use optional USB-based diskette drive

### EIDE DVD

Some: DVD-ROM/CD-RW / 24X/24X/8X/9X speed / single layer / removable from Ultrabay™ Slim

### EIDE Combo

Some: DVD-ROM/CD-RW / 24X/24X/8X/9X speed / removable from Ultrabay Slim

### EIDE DVD RW

Some: DVD burner / Multi Super-Burner (40Y8623) dual-layer, removable Ultrabay Slim

### Ultrabay Slim

One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel / supports mini PCI Express slots / supports 2nd disk / ThinkPad Shot Mounted Hard Drive / Action Protection System™

### Disk drive

Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio

Some: 15.4" (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio

### Graphics

Some: Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

Some: ATI® Mobility™ Radeon™ X1400 / PCI Express x16 / 128MB memory

### Processor

Premiere performance; two spindles

Intel® Core™ 2 Duo processor T5600, T7200, T7400, or T7600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus / T5600: 2MB L2 cache (shared); Others: 4MB L2 cache (shared)

### Memory

512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

### Diskette drive

None standard / use optional USB-based diskette drive

### EIDE DVD

Some: DVD-ROM/CD-RW / 24X/24X/8X/9X speed / single layer / removable from Ultrabay™ Slim

### EIDE Combo

Some: DVD-ROM/CD-RW / 24X/24X/8X/9X speed / removable from Ultrabay Slim

### EIDE DVD RW

Some: DVD burner / Multi Super-Burner (40Y8623) dual-layer, removable Ultrabay Slim

### Ultrabay Slim

One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel / supports mini PCI Express slots / supports 2nd disk / ThinkPad Shot Mounted Hard Drive / Action Protection System™

### Disk drive

Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio

Some: 15.4" (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio

### Graphics

Some: Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

Some: ATI® Mobility™ Radeon™ X1400 / PCI Express x16 / 128MB memory

### Processor

Premiere performance; two spindles

Intel® Core™ 2 Duo processor T5600, T7200, T7400, or T7600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus / T5600: 2MB L2 cache (shared); Others: 4MB L2 cache (shared)

### Memory

512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

### Diskette drive

None standard / use optional USB-based diskette drive

### EIDE DVD

Some: DVD-ROM/CD-RW / 24X/24X/8X/9X speed / single layer / removable from Ultrabay™ Slim

### EIDE Combo

Some: DVD-ROM/CD-RW / 24X/24X/8X/9X speed / removable from Ultrabay Slim

### EIDE DVD RW

Some: DVD burner / Multi Super-Burner (40Y8623) dual-layer, removable Ultrabay Slim

### Ultrabay Slim

One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel / supports mini PCI Express slots / supports 2nd disk / ThinkPad Shot Mounted Hard Drive / Action Protection System™

### Disk drive

Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio

Some: 15.4" (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio

### Graphics

Some: Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

Some: ATI® Mobility™ Radeon™ X1400 / PCI Express x16 / 128MB memory

### Processor

Premiere performance; two spindles

Intel® Core™ 2 Duo processor T5600, T7200, T7400, or T7600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus / T5600: 2MB L2 cache (shared); Others: 4MB L2 cache (shared)

### Memory

512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

### Diskette drive

None standard / use optional USB-based diskette drive
SOFTWARE**

Windows XP Professional
- Microsoft® Windows® XP Professional** (Service Pack 2)
• Disk-to-Disk Recovery (in hidden protected area)

Preloaded
• Rescue and Recovery**
• Access Connections**
• Client Security Solution**
• ThinkVantage Productivity Center with Away Manager
• ThinkVantage System Update
• System Migration Assistant
• Symantec® Client Security™
• Diskkeeper® Lite
• PC-Doctor™ (diagnostics)
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader
• Google Desktop
• Google Desktop
• Picasa from Google
• FingerPrint Software (fingerprint models)
• Multimedia Center for Think

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
ThinkPad T60 and T60p 15W (6369 and 8741) - Education - withdrawn

Type-model        Processor        GHz       Memory        Screen        Graphics        Disk          Mini PCIe        Mini PCIe        Battery        Limited warranty
T60 6369-6BU       Core 2 Duo T2200 2.00 GHz 1GB 15.4" WXGA 40GB/5400 Combo - Intel 11a/b/g        None        Blue GM 6 EasyServ Dec 06
T60 8741-48U       Core 2 Duo T2200 2.00 GHz 1GB 15.4" WXGA+X1400 100G 7200 DVD/RW+ Intel 11a/b/g        None        Blue P M 6 EasyServ Dec 06
T60 8741-4BU       Core 2 Duo T2200 2.00 GHz 1GB 15.4" WXGA+X1400 100G 7200 DVD/RW+ Intel 11a/b/g        None        Blue P M 9 EasyServ Dec 06
T60 8741-4PU       Core 2 Duo T4700 2.16 GHz 1GB 15.4" WXGA+X1400 100G 7200 DVD/RW+ Intel 11a/b/g        None        Blue P M 9 EasyServ Dec 06
T60p 6369-6BU Core 2 Duo T6700 2.33 GHz 1GB 15.4" WXGA+ V5250 100G 7200 DVD/RW+ Intel 11a/b/g        None        Blue GM 6 EasyServ Dec 06

• These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty
These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes by qualified students and teachers.

Positioning       Processor        Performance premier; two spindles
Intel Core™ 2 Duo processor T2200, T7200, or T7600 with dual-core,
Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit,
and 667MHz system bus / 4MB L2 cache (shared)

Memory          1GB std / 4GB max/ PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

Diskette drive   None standard / use optional USB-based diskette drive

Battery - life   3-years

Preloaded          • Microsoft Office OneNote 2003
• VitalSource Library education software
• Adobe Photoshop Elements plus Adobe Premiere Elements
• Rescue and Recovery™
• Access Connections
• Client Security Solution™
• ThinkVantage Productivity Center with Away Manager
• ThinkVantage System Update
• Symantec® Client Security
• Diskkeeper® Lite
• PC-Doctor® (diagnostics)
• ThinkPad Utilities (Power Manager and Presentation Director)
• Multimedia Center for Think Offers
• Sonic RecordNOW and Drive
• Letter Access (combo, DVD+RW)
• Internet Video FileMaker (combo, DVD+RW models)
• InterVideo WinDVD Creator (DVD+RW models)

CD included       • Adobe Photoshop Elements plus Adobe Premiere Elements
• Microsoft Office OneNote 2003

License            - CD not included

Warranty          • Lenovo’s SmartSuite Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information
US models announced November 28, 2006
US models withdrawn effective September 2007

* Powered by Intel Centrino Duo mobile technology

Limitations: 2 - year LOR 9x5 NBD

Supports ThinkVantage technologies

65-watt (GMA graphics) or 90-watt (ATI graphics) AC adapter

RoHS-compliant

International Warranty Service
24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus™ 2 - year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD
ThinkPad Roll Cage (one-piece magnesium frame)

ThinkPlus 4-year LOR 9x5 NBD

ThinkPad 5-year LOR 9x5 NBD

ThinkPlus 4-year P&L U/P Depot

ThinkPlus 5-year P&L U/P Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Lenovo

(CR2-4) September 2007
**ThinkPad T60 and T60p 15W (6370 and 8742) - Education withdrawn**

- **Type-model**
- **Processor**
- **Ghz**
- **Memory**
- **Graphics chipset**
- **Mini PCIe**
- **Mini PCIe WWAN**
- **Battery**
- **Limited warranty**

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<tr>
<th>Type-model</th>
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<th>Memory</th>
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<th>Mini PCIe WWAN</th>
<th>Battery</th>
<th>Limited warranty</th>
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<td>T60 8742-49U</td>
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<td>2.00</td>
<td>1GB 15.4&quot; WXSGA-X1400</td>
<td>1000G 7200 DVD/RW</td>
<td>*Intel 11a/b/g</td>
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<td>None</td>
<td>Blue PM</td>
<td>9 Onsite Dec 06</td>
</tr>
</tbody>
</table>

- **These models have a limited onsite service 24 3-year limited warranty**

- **Positioning Processor**
  - Premier performance; two spindles
  - *Intel® Core™ 2 Duo processor T7200, T7400, or T7600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology*, Execute Disable Bit, and 866MHz system bus / 4MB L2 cache (shared)

- **Memory**
  - 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

- **Diskette drive**
  - None standard / use optional USB-based diskette drive

- **EIDE Combo**
  - Some: DVD-ROM/CD-RW / 24X24X24X/6X<sup>2</sup> speed / removable from Ultrabay Slim
  - Slim line, removable, Ultrabay Slim
  - Some: DVD Drive / Super Multi-Be burner / 40Y8623 dual-layer, removable Ultrabay Slim

- **Serial ATA disk (SATA150)**
  - One modular bay for interchangeable devices (right side) / 9.5 mm high bay / flat bezel

- **Widescreen display (anti-glare)**
  - Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16.10 aspect ratio
  - Some: 15.4" (391mm) WSXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect All: stainless steel hinges / one hand activates dual latches

- **Graphics**
  - Some: Intel Graphics Media Accelerator 9500 / integrated in 945GM / 250MHz
  - Some: ATI<sup>®</sup> MOBILITY™ Radeon® X1400 / PCI Express x16 / 128MB memory
  - Some: ATI<sup>®</sup> MOBILITY™ FireGL® V5250 / PCI Express x16 / 256MB memory
  - All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

- **Keyboard**
  - 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple keys

- **Touchpad**
  - UltraNav<sup>™</sup> multi-pointing system / touch pad below keyboard / Tap Zones

- **Dimensions<sup>3</sup> Weight<sup>4</sup>**
  - 15.4" (391mm) (WxH): 14.1" x 10.0" x 1.3-1.7 cm
  - 357.5mm x 255mm x 28.7-34mm with optical drive and battery / up to 6.05 lb (2.75kg)

- **Battery - type**
  - Carbon-Fiber Reinforced Plastic (CFRP) in top/bottom
  - Lithium Ion 6-cell / or 9-cell / supports unique 2nd battery in Ultrabay Slim

- **Battery - life<sup>4</sup>**
  - 6-cell: up to 5.2 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 7.5 hr

- **Airport**
  - Bluetooth<sup>™</sup> / PCI Express x1 / PCI bus / USB / LPC interface / [Bluetooth], [fingerprint], [PC card]

- **Wireless antenna**
  - UltraConnect<sup>™</sup> Antenna built into the display cover / on/off switch for all wireless radios

- **Modem**
  - 56K V.90 (V.92-designed) modem in Com Daughtor Card / Conexant® chipset

- **Audio support**
  - High Definition (HD) Audio / AD1981/91HC codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack

- **Security**
  - Trusted Platform Module / Atmel chip / TCG 1.2-compliant

- **Limited warranty**
  - 3-year / 1-year battery, limited onsite service<sup>8</sup> / 4 - 8 am - 5 pm / Franchise excluding holidays, next business day response time

- **SOFTWARE**
  - **Windows XP Professional**
    - - Microsoft® Windows® XP Professional<sup>2</sup> (Service Pack 2)
    - - Disk-to-Disk Recovery (in hidden protected area)

- **CD included**
  - - Adobe Photoshop Elements plus Adobe Premiere Elements
  - - Microsoft Office OneNote<sup>®</sup> 2003

- **License**
  - - Lotus<sup>®</sup> SmartSuite® Millennium and Lotus Notes<sup>®</sup> Stand-alone Client

See footnotes for important warranty information

US models announced November 28, 2006
US models withdrawn effective September 2007

*Powered by Intel Centroino® Duo mobile technology*
These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
### ThinkPad T60 15W (8742) - Education (Vista™) - withdrawn

These models have a limited onsite service⁴ 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

<table>
<thead>
<tr>
<th>Feature</th>
<th>T60 8742-HHU Core 2 Duo T7200 2.00 1GB 15.4&quot; WXGA+ X1400</th>
<th>T60 8742-HJJ Core 2 Duo T7200 2.00 1GB 15.4&quot; WXGA+ X1400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type-model</td>
<td>8742-HHU</td>
<td>8742-HJJ</td>
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<tr>
<td>Processor</td>
<td>Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB L2 cache (shared)</td>
<td>Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB L2 cache (shared)</td>
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<tr>
<td>Memory</td>
<td>1GB</td>
<td>1GB</td>
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<tr>
<td>Mini PCIe 802.11</td>
<td>wireless</td>
<td>wireless</td>
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<tr>
<td>WWAN</td>
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<td>None</td>
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<td>Chiptetery cells</td>
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<tr>
<td>Limited warranty</td>
<td>3-year</td>
<td>3-year</td>
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<tr>
<td>Availability</td>
<td>HE Apr 07</td>
<td>K12 Apr 07</td>
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**Positioning**
- Processor: Premiere performance; two spindles
- Intel® Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB L2 cache (shared)

**Memory**
- 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SOP-DIMM sockets / standard memory in 1 socket / 1 socket available

**Diskette drive**
- None (use optional USB-based diskette drive)

**UltraTrak Slim**
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel

**Serial ATA disk (SATA150)**
- 100GB² (7200 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System

**Widescreen display**
- 15.4" (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect / stainless steel hinges / one hand activates dual latches

**Graphics**
- ATI® MOBILITY™ Radeon™ X1400 / PCI Express x16 / 128MB memory / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple keys

**Trackpoint**
- Touchpad / pointing device, "Press-to-Select," Internet Scroll Bar³, magnifying glass

**UltraNav® multi-pointing system**
- Touch pad below keyboard / Tap Zones

**Touchpad**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions³**
- 15.4" models (WxDxH): 14.1" x 10.0" x 1.13-1.34"; 357.5mm x 255mm x 28.7-34mm with optical drive and battery: up to 6.05 lb (2.75kg)

**Weight³**
- Carbon-Fiber Reinforced Plastic (CFRP) in top/bottom

**Battery - type**
- Lithium Ion 9-cell / supports unique 2nd battery in UltraTrak Slim

**Battery - life³**
- 9-cell: up to 6.0 hr; 9-cell plus UltraTrak battery: up to 7.5 hr

**Architecture**
- Mobile Intel 945PM Express Chipset / 82801GMB ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCIe bus (T¹)PC1512 CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel® 7SC3203)

**PC Card Std slot**
- ExpressCard slot / ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door

**Ports**
- One Type I or Type II slot / CardBus 32-bit / integrated door

**USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

**Wireless antenna**
- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Mini PCI Express**
- Two Mini PCI Express slots / 11a/b/g wireless, ThinkPad 11a/b/g Mini PCI Adapter, Atheros AR5006EX None

**Modem**
- 56K V.90 (V.92-designed) modem in Com Daughter Card socket / Conexant chipset

**Bluetooth™ ethernet**
- Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

**Audio support**
- Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**
- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**
- Fingerprint reader on palm rest / swipe sensor / supports the security chip

**Limited warranty⁴**
- 3-year / 1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time²⁴

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See footnotes for important warranty information

US models announced April 17, 2007

US models withdrawn effective September 2007

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(CR2-8) September 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk SATAB GB</th>
<th>EIDE controller</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Blue-tooth</th>
<th>Battery cells</th>
<th>Limited warranty</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>T60</td>
<td>1.66 MHz 4MB 15.4&quot; WXGA</td>
<td>16060</td>
<td>WXGA 5200</td>
<td>100GB 5400</td>
<td>DVD:RW</td>
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<td>Blue</td>
<td>PM</td>
<td>3-yr Dec 06</td>
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<tr>
<td>T60p</td>
<td>1.66 MHz 4MB 15.4&quot; WXGA</td>
<td>16060</td>
<td>WXGA 5200</td>
<td>100GB 5400</td>
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<td>Blue</td>
<td>PM</td>
<td>3-yr Dec 06</td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year or 3-year limited warranty

**Positioning Processor**
Premiere performance; two spindles

**Intel® Core™ Duo processor T2300e with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB L2 cache (shared) or Intel® Core™ Duo processor T5500 or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus / T5500: 2MB L2 cache (shared); T7200: 4MB L2 cache (shared)

**Memory**
512MB, 1GB, or 2GB (4x2) pair / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / 200-pin SO-DIMM sockets / C9U: standard memory in both sockets; no sockets available; Others: standard memory in 1 socket; 1 socket available

**Diskette drive**
None standard / use optional USB-based diskette drive

**EIDE Combo**
Some: DVD-ROM/CD-RW-DUO / 24X/24X/24X/8X speed / removable from Ultrabay Slim

**Ultrabay Slim**
Some: DVD burner / Multi Burner (40Y8623) dual-layer, removable Ultrabay Slim
One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel 80GB (640GB) (7200 rpm), or 120GB (5400 rpm); 8.9mm high removable, upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System

**Gigabit ethernet on systemboard**
/ Intel 82573L (MAC/PHY) / PCIe x1 / PXE

**Bluetooth**
2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

**UltraNav™**
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable / UltraConnect™in both built into the display cover / on-off switch for all wireless radios

**Battery - life**
Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio
Some: 15.4" (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio

**Security**
Fingerprint Software (fingerprint reader) / swipe sensor / supports the security chip

**Client Security Solution™**

**Internal Warranty Service**
1 year / 3 years / 3 years / Dec 06

**Lenovo Warranty Service**
24 hour / 7 day / 365 day / 365 day / 3 years / Post-warranty support agreements

See footnotes for important warranty information. *Powered by Intel Centrino® Duo mobile technology

US models announced November 28, 2006 or March 27, 2007

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(CR2-3) September 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>GB</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Vesta preload</th>
<th>Limited warranty</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>T60</td>
<td>Core 2 Duo processor T5500, T5600, or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit, and 667MHz system bus / [T5600/T7200: Virtualization Technology not supported] / T5500/T5600: 2MB L2 cache (shared); T7200: 4MB L2 cache (shared)</td>
<td>1.66-2.00</td>
<td>15.4&quot; WXGA</td>
<td>GMA 800GB Combo</td>
<td>*Intel 11a/b/g</td>
<td>GM 6</td>
<td>Business</td>
<td>1-yr</td>
<td>Jan 07</td>
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</tr>
<tr>
<td>T60</td>
<td>Core 2 Duo processor T5500, T5600, or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit, and 667MHz system bus / [T5600/T7200: Virtualization Technology not supported] / T5500/T5600: 2MB L2 cache (shared); T7200: 4MB L2 cache (shared)</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 1-year or 3-year limited warranty

## Software

Preloaded operating system:
- E5U: Vista Basic logo
- Others: Vista Premium logo

Preloaded applications (all)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Norton Internet Security™
- (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Pcicsa from Google
- Microsoft Office 2007 Trial

License - CD not included (all)
- Lotus® Notes® Stand-alone Client

## Dimensions

<table>
<thead>
<tr>
<th>Weight†</th>
<th>Case material</th>
<th>Battery - type</th>
<th>Battery - life (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.4” models (Wx DxH): 14.1” x 10.9” x 1.13–1.34”</td>
<td>Carbon-Fiber Reinforced Plastic (CFRP) in top/bottom</td>
<td>Lithium Ion 6-cell or 9-cell</td>
<td>6-cell: up to 5.2 hr; 9-cell: up to 6.0 hr; 9-cell Plus Ultrabay battery: up to 7.0 hr</td>
</tr>
</tbody>
</table>

## Wireless antenna

- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

## Modem

- None

## Multimedia

- None

## Security

- None

## Security chip

- Trusted Platform Module

## Other accessories on O-T60 sheet

- Other accessories at lenovo.com/accessories

See footnotes for important warranty information

*Powered by Intel Centrino® Duo mobile technology

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US models announced January 30 or March 27, 2007

US models withdrawn effective September 2007
Partial list of accessories supported on ThinkPad T60 and T60p originally announced on January 5, 2006

### Memory
- 512MB PC2-5300 DDR2 CL5 SODIMM: 40Y7733
- 1GB PC2-5300 DDR2 CL5 SODIMM: 40Y7734
- 2GB PC2-5300 DDR2 SODIMM: 40Y7735

### Ultrabay Slim 9.5mm (best to use flat bezel options)
- Serial/Parallel Port Bay Adapter (flat bezel): 40Y8121
- Serial Hard Drive Ultrabay Slim Adapter (flat): 40Y8726
- DVD-ROM Ultrabay Slim Drive (curved): 73P2730
- Combo II Ultrabay Slim Drive (flat bezel): 40Y8621
- ThinkPad DVD Ultrabay Slim Burner (flat): 41S5643

### Ultrabay Enhanced 12.7mm
None

### Storage and removable storage
- 80GB Disk 9.5mm SATA150 (5400 rpm): 41S5662
- 100GB Disk 9.5mm SATA150 (7200 rpm): 41S5631
- 120GB Disk 9.5mm SATA150 (5400 rpm): 41S5691
- 160GB Disk 9.5mm SATA150 (5400 rpm): 41S5692
- 160GB Disk 9.5mm SATA150 (7200 rpm): 41S5737

### USB 2.0
- Lenovo Webcam 40Y8519
- ExpressCard Gemplus Smart Card Reader 41N3043
- USB Fingerprint Reader 41U3167

### Batteries
- T60/R60 Series Li-Ion Battery 6-cell: 40Y6799
- Z60m/T60/R60 Li-Ion Battery 9-cell: 40Y6797
- ThinkPad Advanced Ultrabay Battery 3-cell: 40Y6789

### Carrying Cases
- Lenovo Carrying Case - Messenger Max: 41U5253
- Lenovo Carry Case - Performance Backpack: 41U5254
- ThinkPad Nylon Carrying Case: 10K0270
- ThinkPad Carrying Case - Organizer: 73P3598
- ThinkPad Carrying Case - BackPack: 73P3599
- ThinkPad Carrying Case - Leather Attaché: 73P3600
- ThinkPad Premiere Leather Carrying Case: 10K0209
- ThinkPad Women’s MicroTote: 22P8855
- ThinkPad Women’s Leather Tote: 22P8856
- ThinkPad Women’s Executive Leather Tote: 22P8857
- Women’s Executive Red Leather Tote: 22P8858
- ThinkPad Convertible Carrying Case: 22P8860
- ThinkPad Convertible Back Pack: 22P8859

### Monitors
- Lenovo E75 17” CRT Monitor (16.0” vis) bk: 6307BTN
- ThinkVision L151 15” LCD Monitor: 9165AC6
- ThinkVision L171 17” LCD Monitor: 9227AD1
- ThinkVision L171p 17” LCD Monitor: 9417HC2
- ThinkVision L190x 19” LCD Monitor: 4439HB2
- ThinkVision L193p 19” LCD Monitor: 4439HB2
- ThinkVision L220x Wide 22” LCD Monitor: 4439HB2

### Other accessories at lenovo.com/accessories
- Need to buy accessories no longer marketed by Lenovo? See lenovo.com/accessories

---

**Partial list of accessories supported on ThinkPad T60 and T60p originally announced on January 5, 2006**

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<thead>
<tr>
<th>Memory</th>
<th>Model Number</th>
<th>Release Date</th>
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<tbody>
<tr>
<td>512MB PC2-5300 DDR2 CL5 SODIMM</td>
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<tr>
<td>1GB PC2-5300 DDR2 CL5 SODIMM</td>
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<tr>
<td>2GB PC2-5300 DDR2 SODIMM</td>
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<table>
<thead>
<tr>
<th>Ultrabay Slim 9.5mm (best to use flat bezel options)</th>
<th>Model Number</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial/Parallel Port Bay Adapter (flat bezel)</td>
<td>40Y8121</td>
<td>01/31/06</td>
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<tr>
<td>Serial Hard Drive Ultrabay Slim Adapter (flat)</td>
<td>40Y8726</td>
<td>09/20/05</td>
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<tr>
<td>DVD-ROM Ultrabay Slim Drive (curved)</td>
<td>73P2730</td>
<td>10/07/03</td>
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<td>Combo II Ultrabay Slim Drive (flat bezel)</td>
<td>40Y8621</td>
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<td>ThinkPad DVD Ultrabay Slim Burner (flat)</td>
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<table>
<thead>
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<th>Ultrabay Enhanced 12.7mm</th>
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<table>
<thead>
<tr>
<th>Storage and removable storage</th>
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<tr>
<td>80GB Disk 9.5mm SATA150 (5400 rpm)</td>
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<td>05/15/06</td>
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<td>100GB Disk 9.5mm SATA150 (7200 rpm)</td>
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<td>01/05/06</td>
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<td>120GB Disk 9.5mm SATA150 (5400 rpm)</td>
<td>41S5691</td>
<td>03/20/07</td>
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<td>160GB Disk 9.5mm SATA150 (5400 rpm)</td>
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<td>160GB Disk 9.5mm SATA150 (7200 rpm)</td>
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<tr>
<td>Essential Memory Key 1GB</td>
<td>41U4940</td>
<td>01/23/07</td>
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<td>Essential Memory Key 2GB</td>
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<td>Security Memory Key 1GB</td>
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<td>Security Memory Key 4GB</td>
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<th>USB Portable Diskette Drive</th>
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<tbody>
<tr>
<td>USB 2.0 CD-RW/DVD-ROM Combo II Drive</td>
<td>40Y8637</td>
<td>05/25/05</td>
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<td>USB 2.0 Portable 80GB Hard Disk</td>
<td>41N8378</td>
<td>04/17/07</td>
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<td>USB 2.0 Portable 120GB Hard Disk</td>
<td>41N8379</td>
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<td>USB 2.0 Super Multi-Burner Drive</td>
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<table>
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<tr>
<th>Wireless LAN (Mini PCI Express)</th>
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<tbody>
<tr>
<td>11a/b/g Wireless Mini PCI Express Adp</td>
<td>40Y7026</td>
<td>09/20/05</td>
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<tr>
<td>Intel PRO/Wireless 3945ABG Mini PCI Adapter</td>
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<tr>
<th>ThinkPad Expansion</th>
<th>Model Number</th>
<th>Release Date</th>
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<tbody>
<tr>
<td>ThinkPad Adjustable Notebook Stand</td>
<td>40Y7676</td>
<td>09/20/05</td>
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<tr>
<td>ThinkPad Essential Port Replicator</td>
<td>250510W</td>
<td>09/20/05</td>
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<tr>
<td>ThinkPad Advanced Mini Dock</td>
<td>250410U</td>
<td>09/20/05</td>
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<td>250310U</td>
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<th>Model Number</th>
<th>Release Date</th>
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<tr>
<td>TrackPoint Cap Collection</td>
<td>73P2698</td>
<td>12/16/03</td>
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<tr>
<td>USB Numeric Keypad</td>
<td>33L3225</td>
<td>05/01/00</td>
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<tr>
<td>Enhanced Performance USB Keyboard</td>
<td>73P2620</td>
<td>03/24/04</td>
</tr>
<tr>
<td>Enhanced Perf Wireless Keyboard and Mouse</td>
<td>73P4067</td>
<td>12/07/04</td>
</tr>
<tr>
<td>USB Keyboard with UltraNav</td>
<td>31P9050</td>
<td>01/28/03</td>
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<tr>
<td>USB Travel Keyboard with UltraNav</td>
<td>31P9490</td>
<td>04/27/04</td>
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<tr>
<td>Preferred Pro USB FingerPrint Keyboard</td>
<td>73P4730</td>
<td>02/22/05</td>
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<thead>
<tr>
<th>External Mouse</th>
<th>Model Number</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical 3-Button ScrollPoint® Mouse</td>
<td>31P7405</td>
<td>08/27/02</td>
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<tr>
<td>Optical 3-Button Travel Wheel Mouse</td>
<td>31P7410</td>
<td>09/03/02</td>
</tr>
<tr>
<td>Lenovo Laser Mouse (USB, PS/2)</td>
<td>41U3074</td>
<td>01/23/07</td>
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<thead>
<tr>
<th>Security</th>
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<th>Release Date</th>
</tr>
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<tr>
<td>Kensington® Cable Lock from Lenovo</td>
<td>73P2582</td>
<td>12/29/03</td>
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<tr>
<td>Gemplus GemPC Smart Card Reader</td>
<td>41N3040</td>
<td>02/21/06</td>
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<tr>
<td>USB 2.0 Portable USB Smart Card Reader</td>
<td>41N3004</td>
<td>12/07/05</td>
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<tr>
<td>ExpressCard Gemplus Smart Card Reader</td>
<td>41N3043</td>
<td>06/27/06</td>
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<td>Lenovo Laser Mouse (USB, PS/2)</td>
<td>41U3074</td>
<td>01/23/07</td>
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<tr>
<td>USB 2.0 Lenovo Multimedia Headset</td>
<td>40Y8518</td>
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<tr>
<td>USB 2.0 Lenovo Webcam</td>
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<table>
<thead>
<tr>
<th>Data/Video Projectors</th>
<th>Model Number</th>
<th>Release Date</th>
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<tr>
<td>Lenovo M500 Projector</td>
<td>0037A05</td>
<td>02/08/06</td>
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© Lenovo (O-T60) December 2007
**ThinkPad® T61 8895 (GMA Graphics) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe WWAN/Turbio</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
<th>Batteries</th>
<th>Global (G)</th>
<th>Workhorse (W)</th>
<th>Preloaded operating system</th>
<th>Preloaded applications</th>
<th>Recovery options</th>
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<tbody>
<tr>
<td>8895-2FU</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; XGA</td>
<td>GMA 80GB/5400</td>
<td>Combo</td>
<td>Intel 4965AG</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>80GB</td>
<td>5400</td>
<td>Multi-bay</td>
<td>None</td>
<td>ThinkPad Mobile Center</td>
<td>Windows Vista</td>
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<tr>
<td>8895-01U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; XGA</td>
<td>GMA 80GB/5400</td>
<td>Combo</td>
<td>Intel 4965AG</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>100GB</td>
<td>7200</td>
<td>Multi-bay</td>
<td>None</td>
<td>ThinkPad Mobile Center</td>
<td>Windows Vista</td>
</tr>
<tr>
<td>8895-02U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; XGA</td>
<td>GMA 80GB/5400</td>
<td>Combo</td>
<td>Intel 4965AG</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>100GB</td>
<td>7200</td>
<td>Multi-bay</td>
<td>None</td>
<td>ThinkPad Mobile Center</td>
<td>Windows Vista</td>
</tr>
</tbody>
</table>

**Positioning**
- ThinkPad Core™ 2 Duo processor T7300 or T7500 with dual-core.
  - Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

**Memory**
- 1GB std / 4GB max
- PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets.
- Non-Italian: standard memory in 1 socket, 1 socket available.

**Diskette drive**
- None (use optional USB-based diskette drive)

**EIDE Combo**
- DVD-ROM/CD-RW, 24X/24X/24X/8X speed, removable from Ultrabay Slim

**EIDE DVD:RW Ultrabay Slim**
- DVD burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim
  - One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel slim

**Serial ATA disk (SATA150)**
- 80GB (5400 rpm) or 100GB (7200 rpm)
  - 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Display**
- 14.1" (358.1mm) XGA (1024x768) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glare

**Camera**
- None

**Graphics**
- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**
- TrackPoint®
  - 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys

**Touchpad**
- TrackPoint®

**ThinkLight™**
- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones
  - Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- Top: 313mm x 255mm x 27.5-32.4mm
  - 14.1" models (WxDxH): 12.3" x 10.0" x 1.1-1.3"; 313mm x 255mm x 27.5-32.4mm
  - with optical drive and battery: 5.3 lb (2.4kg)

**Weight**
- Top: Super-Elastic PolyCarbone (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**
- Lithium Ion 6-cell
  - up to 8.6 hr; 9-cell plus Ultrabay battery: up to 10.1 hr

**Battery - life**
- 6-cell: up to 5.7 hr; 9-cell: up to 8.6 hr

**Chipset**
- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI Express x16, USB 2.0, i2C interface)

**Wireless antenna**
- UltraConnect™ II antenna

**Modem**
- 56K V.90 (V.92-designed) modem in Communications Daughter Card socket

**Bluetooth™**
- Bluetooth 2.0, wireless, USB 2.0 interface viaICH6M

**Ethernet**
- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

**Audio**
- High Definition (HD) Audio, AD1984ACP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Ports**
- Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (etherent)

**Storage**
- 60GB (SATA150) / 80GB (5400 rpm) / 100GB (7200 rpm)

**Battery**
- Advanced Ultrabay Slim Battery II 3-cell
- Advanced Ultrabay Slim Battery II 3-cell

**Advanced Ultrabay Slim Battery II 3-cell**
- 2-cell: up to 8.6 hr; 3-cell: up to 10.1 hr

**Accessories**
- Other accessories at lenovo.com/accessories

**Preloaded operating system**
- Some: Microsoft® Windows® XP Professional

**Preloaded applications**
- ThinkPad Mobile Center

**Recovery options**

**Supports ThinkVantage technologies**
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service
- 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**

**Notes**
- Preloaded operating system:
  - None
  - Windows Vista™ Business Edition
- Preloaded applications:
  - None

**Limited warranty**
- 3-5 years 1-year battery - EasyServ™ depot repair service / service upgrades available

**See footnotes for important warranty information**

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US models announced May 31 or September 5, 2007

US models withdrawn effective May 2008
ThinkPad® T61 (GMA Graphics) - Education (EasyServ) - withdrawn

This model has an EasyServ™ depot repair service 3-year limited warranty.

Supported ThinkVantage™ technologies

- ENERGY STAR® 4.0-compliant
- Windows 7
- Windows Vista®
- Mobile Broadband (WWAN)
- Windows Live Toolbar
- Mobile High Definition Link (MHL)
- Windows Live Search
- Intel vPro technology
- Intel Wireless Bluetooth®
- Bluetooth 2.0 wireless
- Intel Active Management Technology (iAMT)
- Intel AMT
- Intel® 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE
- Gigabit ethernet on systemboard
- Intel 82566MM Nineveh (PHY)
- Intel 82566MM Nineveh (PHY)
- Intel 82566MM Nineveh (PHY)
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- Intel 82566MM Nineve...
### ThinkPad T61 (GMA Graphics) - Education (Onsite) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller</th>
<th>Disk controller</th>
<th>IDEE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Card slot</th>
<th>Battery cells</th>
<th>Edu-preload</th>
<th>Limited warranty</th>
<th>Vista preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>8896-2BU</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; XGA</td>
<td>GMA 120GB 5400 DVD+RW 11a/b/g 2</td>
<td>None</td>
<td>/54</td>
<td>9</td>
<td>/</td>
<td>K12</td>
<td>Onsite</td>
<td>Business32 Jun 07</td>
<td></td>
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</table>

* This model has a limited onsite service 3-year limited warranty

This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Preloaded operating system
- Vista Basic logo

### Preloaded applications
- Microsoft Office OneNote 2007 (and CD)
- (K12), K-12 education software
- VitalSource Library School Edition
- Adobe Instructor Resource Center
- Adobe Digital School Collection
- Photoshop Elements 5 (and CD)
- Premier Elements 3 (and DVD)
- Acrobat 8 Professional (and CD)
- Contribute 4 (and CD)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD+RW)
- InterVideo WinDVD (DVD+RW)

### Limitations
- This model has a limited onsite service 3-year limited warranty

### Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Down, mute buttons / internal microphone, microphone input jack, headphone jack
- A/B Battery - life 3

### Configuration
- This educational model has a limited onsite service 3-year limited warranty

### Wireless antenna
- UltraConnect™ II antenna / on/off switch for all wireless radios

### Preloaded applications
- Norton Internet Security
- System Migration Assistant
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD+RW)
- InterVideo WinDVD (DVD+RW)

### Post-warranty annual maintenance agreements

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See footnotes for important warranty information
US model announced May 31, 2007
US model withdrawn effective May 2008

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(DV3-3) May 2008 Lenovo

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
ENERGY STAR® 4.0-compliant
RoHS-compliant
International Warranty Service 24 hour x 7 day toll-free support during the warranty period
via 800-426-7378

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
## ThinkPad T61 8889 (NVIDIA Graphics) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Disk SATA GB</th>
<th>EIDE controller</th>
<th>Mini PCIe WWAN/Turbo</th>
<th>Mini PCIe Card slot</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Avatar (Y)</th>
<th>Global (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8889-26U</td>
<td>T7300 2.00 1GB 14.1&quot; SXGA+ 128MB 80GB 5400 Combo</td>
<td># Intel 4965AG &amp;</td>
<td>None</td>
<td>Smart /54</td>
<td>Blue 6</td>
<td>Business 32 G W2 5 July 07</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8889-01U</td>
<td>T7300 2.00 1GB 14.1&quot; SXGA+ 128MB 80GB 5400 Combo</td>
<td># Intel 4965AG</td>
<td>None</td>
<td>None</td>
<td>Blue 6</td>
<td>XP Pro 41C9179 5 Sep 07</td>
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<td></td>
<td></td>
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<tr>
<td>8889-02U</td>
<td>T7500 2.50 1GB 14.1&quot; SXGA+ 128MB 100G 7200 DVD</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Blue 9</td>
<td>XP Pro 41C9180 5 Sep 07</td>
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<tr>
<td>Italic MTM: not a base model for building a custom model</td>
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</tr>
</tbody>
</table>

### Preloaded operating system
- Some: Microsoft® Windows® XP Professional
- Vista models: Vista Premium logo

### Preloaded applications (all OSes)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper®
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RestoreNow and Drive Letter Access (combo, DVD/RW)
- IntelVideo WinDVD (combo, DVD/RW)
- IntelVideo WinDVD Creator (XP Pro DVD/DVD models)

### ThinkPad T61 8889 (NVIDIA Graphics) - withdrawn

**Specifications**

- **Display**: 14.1" (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4:3 aspect ratio, 200:1 contrast ratio, anti-glare
- **Battery**: 6-cell: up to 6.0 hr; 9-cell: up to 9.0 hr
- **Graphics**: NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock
- **Keyboard**: 95-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys
- **Touchpad**: UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions**: 14.1" models (WxDxH): 12.3" x 10.0" x 1.1-1.3"; 313mm x 255mm x 27.5-32.4mm with optical drive and battery; 6-cell: 5.3: 5.2 (4kg); 9-cell: 5.6: 5.2 (5.5kg)
- **Weight**: Top: Super-Elastic Polycarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- **Battery - type**: Lithium Ion 6-cell / 9-cell / supports unique 2nd battery in Ultrabay Slim
- **Battery - life**: 6-cell: up to 4.0 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr
- **Wireless antenna**: UltraConnect™ II antenna / on-off switch for all wireless radios
- **Mini PCI Express**: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- **Modem**: 56K V.90 (V.92-designed) modem in Communications Daughter Card socket
- **Bluetooth**: Bluetooth 2.0 wireless, 2.0 USB interface viaICH8M, LED indicator
- **Ethernet**: Gigabit Ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE technology
- **Audio support**: High Definition (HD) Audio, AD1984JP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**: Trusted Platform Module, Atmel chip, TCG 1.2-compliant
- **Fingerprint reader**: Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty** - 3-years/1-year battery - EasyServ™ / depot repair service / service upgrades available

- 1GB PC2-5300 DDR2 SODIMM 40Y7734 T60/R60 Series Li-Ion Battery 6-cell 40Y67799
- 2GB PC2-5300 DDR2 SODIMM 40Y7732 Z60m/T60/R60 Series Li-Ion Battery 9-cell 40Y67976
- ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643 Advanced Ultrabay Battery II 3-cell 43R8250
- Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y7825 ThinkPad External Battery Charger 40Y7625
- 160GB Disk 9.5mm SATA150 (7220 rpm) 41N5737 ThinkPad 90W AC Adapter 40Y7659
- 200GB Disk FDE SATA150 (7200 rpm) 41N5738 ThinkPad 90W Slim AC/DC Combo Adapter 41N8480
- 250GB Disk 9.5mm SATA150 (5400 rpm) 43R8152 ThinkPad Business Topload Case 43R2476
- USB 2.0 Security Key 4GB 41N5120 ThinkPad Business Backpack 43R2482
- USB 2.0 Multi-Burner Drive 41N5665 ThinkPad Business Cardbus/1394/Multicard) 43R2487
- USB 2.0 Lenovo Enhanced Port Replicator 43R8770 ThinkPad Executive Leather Case 43R2480
- ThinkPad Adjustable Notebook Stand 40Y7676 ThinkVision™ L171 17" LCD 9227AE1
- ThinkPad Convertible Monitor Stand 40Y7820 ThinkVision L17ip 17" LCD Monitor 4914H2C
- ThinkPad Essential Port Replicator 250510W ThinkVision L190x 19" LCD Monitor 443HB2
- ThinkPad Advanced Mini Dock 250410U ThinkVision L193p 19" LCD Monitor 443HB2
- ThinkPad Advanced Dock 250310U ThinkVision L220x Wide 22" LCD 443HB2
- Other accessories on O-T61 sheet

See footnotes for important warranty information

© Lenovo

(DV3-4) May 2008

US models withdrawn effective May 2008
### ThinkPad T61 (NVIDIA Graphics) - Education (EasyServ) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller memory</th>
<th>Disk</th>
<th>SATA</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Battery cells</th>
<th>Educ. preload</th>
<th>Limited warranty¹²</th>
<th>Vista preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8889-24U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>SXGA+</td>
<td>128MB</td>
<td>1203G 5400</td>
<td>DVD:RW</td>
<td>11a/b/g²</td>
<td>None</td>
<td>/54</td>
<td>9 HE</td>
<td>EasyServ Business 32 July 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*This model has an EasyServ⁴⁶ depot repair service 3-year limited warranty*

This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

---

### Preloaded operating system²⁰
- Vista Premium logo

### Preloaded applications¹⁴
- Microsoft Office OneNote® 2007 (and CD)
- [HE]: Higher education software
- [V]: Virtual Library College Edition
- Adobe® Instructor Resource Center
- Adobe® Photoshop Elements 5 (and CD)
- Adobe® Premiere Elements 3 (and DVD)
- Rescue and Recovery™
- Access Connections⁴⁶
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Norton Internet Security
- Norton AntiVirus
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- InterVideo WinDVD (DVD:RW)

---

### Limited warranty¹²
- 3-years/3-years/3-years 1-year battery - EasyServ⁴⁶ depot repair service / service upgrades²² available

---

**See footnotes for important warranty information**

© Lenovo

(DV3-5) May 2008
ThinkPad® T61 (NVIDIA Graphics) - Education (Onsite) - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics memory controller</th>
<th>Mini PClE</th>
<th>Mini PClE W/LAN</th>
<th>Card slot</th>
<th>Battery cells</th>
<th>Educ pre-load</th>
<th>Vista pre-load</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8890-24U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; SXGA+ 128MB 120G 5400 DVD RW</td>
<td>11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>HE</td>
<td>Onsite</td>
<td>Business32</td>
<td>July 07</td>
</tr>
</tbody>
</table>

- **This model has a limited onsite service** 3-year limited warranty

This educational model is available only to public or private K-12 or other accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning Processor**

- Premiere performance; two spindles: Intel® Core™ 2 Duo processor T7300 with dual-core
- Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**

- 1GB std / 4GB max® / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italic®: standard memory in 1 socket; 1 socket available
- DVD burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim

**Diskette drive EIDE DVD±RW Ultrabay Slim Serial ATA disk (SATA150)**

- None (use optional USB-based diskette drive)
- 120GB® (5400 rpm)

**Display**

- 14.1" (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4:3 aspect ratio, 200:1 contrast ratio, anti-glare

**Camera**

- None

**Graphics**

- NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI passthrough support to optional Advanced Mini Dock or Advanced Dock
- Intel 64 Technology, Enhanced Intel SpeedStep® technology®, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys
- Pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**Dimensions**

- 14.1" models (WxHxD): 12.3" x 10.0" x 1.1-1.3"; 313mm x 255mm x 27.5-32.4mm
- with optical drive and battery: 5.6 lb (2.55kg)
- Top: Super-Elemental PolyCarionate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim
- 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr

**Chipset**

- Mobile Intel PM965 Express Chipset (Memory Controller Hub);
- ICH9M-Enhanced I/O Controller Hub (SATA300, ATA-100 EIDE)
- PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint] /
- PCI bus (Rico® R5C804 Cardbus/1394/Multocard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TMP)

**PC Card Std slot**

- One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot**

- [54] One ExpressCard/34 or ExpressCard/54, PCI Express x1 or USB 2.0

**Smart Card Read**

- None

**Multicard Reader**

- None

**Ports**

- Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (ethermet)

**Wireless antenna Chipset**

- UltraConnect™ II antenna / on/off switch for all wireless radios
- Mobile Intel PM965 Express Chipset (Memory Controller Hub);
- ICH9M-Enhanced I/O Controller Hub (SATA300, ATA-100 EIDE)
- PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint] /
- One ExpressCard/34 or ExpressCard/54, PCI Express x1 or USB 2.0

**Mini PCI Express**

- 11a/b/g®, WWAN
- 9-cell battery

**Turbo Memory**

- None

**Modem**

- 56K V.90 (V.92-designed®) modem in Documents Daugher Card socket
- Bluetooth® wireless, 2.0 USB interface via ICH8, LED indicator

**Ethernet**

- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1, P oke
- High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up,
- Down, mute buttons / internal microphone, microphone input jack, headphone jack

**Audio support**

- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Security chip**

- Fingerprint reader / on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-years /1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

**Preloaded operating system**

- Vista Premium logo

**Preloaded applications**

- Microsoft Office OneNote® 2007 (and CD)
- [HE]: Higher education software
- - VitalSource Library College Edition
- - Adobe® Instructor Resource Center
- - Adobe Photoshop Elements 5 (and CD)
- - Adobe Premier Elements 3 (and DVD)
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center
- - ThinkVantage System Update
- - System Migration Assistant
- - Norton Internet Security
- - (90 days of virus definitions)
- - Diskkeeper™ Home
- - PC-Doctor™ (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe® Reader
- - Windows Live™ Toolbar
- - Windows Live Search
- - Picasa from Google
- - FingerPrint Software
- - Microsoft Office 2007 Trial (60-day)
- - Sonic RecordNow and Drive Letter Access (DVD+RW)
- - InterVideo WinDVD® (DVD+RW)

**See footnotes for important warranty information**

US model announced July 10, 2007
US model withdrawn effective May 2008

(© Lenovo (DV3-6) May 2008)
## ThinkPad® T61 8892 (NVIDIA Graphics) - TopSeller - withdrawn

### Personal Systems Reference (PSREF)

#### Type-model Processor GHz Memory Display Graphics controller memory Disk SATA EIDE Mini PCIe Mini PCIe WWAN/Turbo Card slot Bluetooth cells Battery life Workhorse (W) Global (G) Entry (E) Avail date

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller memory</th>
<th>Disk SATA</th>
<th>EIDE</th>
<th>Mini PCIe 802.11n</th>
<th>Mini PCIe WWAN/Turbo</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
<th>Battery life Preload</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8892-01U</td>
<td>T7100</td>
<td>1.80</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
<td>128MB 100G 7200 DVD±RW</td>
<td><em>Intel 11a/b/g</em></td>
<td>None</td>
<td>/54</td>
<td>Blue 6</td>
<td>XP Pro</td>
<td>No Sep07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8892-02U</td>
<td>T7500</td>
<td>2.20</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
<td>128MB 100G 7200 DVD±RW</td>
<td><em>Intel 11n</em></td>
<td>None</td>
<td>/54</td>
<td>Blue 9</td>
<td>XP Pro</td>
<td>No Sep07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty.

### Preloaded operating system
- Microsoft Windows® XP Professional

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNOW and Drive Letter Access (DVD±RW models)
- InterVideo WinDVD (DVD±RW)
- InterVideo WinDVD Creator (DVD±RW)

### Limited warranty
- 3-years/1-year battery + EasyServ™, depot service + service upgrades available

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td><em>Intel Core® 2 Duo processor T7100 or T7500 with dual-core.</em></td>
</tr>
<tr>
<td>Main Memory</td>
<td>1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italic: standard memory in 1 slot, If applicable: second or spare memory slot available</td>
</tr>
<tr>
<td>Disk drive</td>
<td>None (use optional USB-based diskette drive)</td>
</tr>
<tr>
<td>Power</td>
<td>200-1 count contrast ratio, anti-glare</td>
</tr>
<tr>
<td>Graphics</td>
<td>NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI passthrough support to optional Advanced Mini Dock or Advanced Dock</td>
</tr>
<tr>
<td>Keybord</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia F keys, Windows/App keys</td>
</tr>
<tr>
<td>Touchpad</td>
<td>UltraNav™ multi-touch pointing system, tap pad below keyboard, Tap Zones</td>
</tr>
<tr>
<td>Display</td>
<td>14.1&quot; (358.1mm) SXGA+ (1400x1050) color, 150 nits, 43 aspect ratio, anti-glare</td>
</tr>
<tr>
<td>Camera</td>
<td>None</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub);ICH6M-Enhanced I/O Controller Hub (SATA300, ATA-100 EIDE) PCI Express x1, PCI bus, LPC bus, [Bluetooth], fingerprint (i54)</td>
</tr>
<tr>
<td>ExpressCard slot</td>
<td>[54] One ExpressCard/34 or ExpressCard/54, PCI Express x1 or USB 2.0</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (ethernet)</td>
</tr>
<tr>
<td>Wireless antenna</td>
<td>UltraConnect™ II antenna / on/off switch for all wireless radios</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Two Mini PCI Express slots / only 802.11 wireless is upgradable</td>
</tr>
<tr>
<td>Intel 11a/b/g</td>
<td>Some: 11a/b/g wireless®, Mini PCIe adapter, Intel PRO/Wireless 3945AGB</td>
</tr>
<tr>
<td>Intel 11n</td>
<td>Some: 11n/b/g wireless®, Mini PCIe adapter, Intel Wireless WiFi Link 4965AGN, MIMO 2x3 (Kedron)</td>
</tr>
<tr>
<td>WWAN</td>
<td>None</td>
</tr>
<tr>
<td>Turbo Memory</td>
<td>None</td>
</tr>
<tr>
<td>Modern</td>
<td>56K V.90 (V.92-designed) modem in Communications Daughter Card socket</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Gigabit ethernet on systemboard, Intel 82566EM6 802.11g/802.11 b/g PCI (GLC, Pxe)</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, AD1984/JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, Atmel chip, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Power management</td>
<td>ThinkPad Utilities (Power Manager and Presentation Director)</td>
</tr>
<tr>
<td>Preloaded software</td>
<td>Supports ThinkVantage® technologies</td>
</tr>
<tr>
<td>ENERGY STAR® 4.0-compliant</td>
<td>90-watt (NVIDIA graphic) AC adapter</td>
</tr>
<tr>
<td>ThinkPad Roll Cage and Top Cover</td>
<td>Roll Cage (one-piece magnesium)</td>
</tr>
<tr>
<td>RoHS-compliant</td>
<td>22 2-year LOR 9x5 NBD</td>
</tr>
<tr>
<td>International Warranty Service</td>
<td>24 hour / 7 day 24 toll-free support during the warranty period via 800-426-7378</td>
</tr>
<tr>
<td>Lenovo backup support</td>
<td>Lenovo backup support</td>
</tr>
</tbody>
</table>

### Additional information

- [ThinkPlus® z2 2-year LOR 9x5 NBD](41C9175)
- [ThinkPlus® 3-year LOR 9x5 NBD](41C9176)
- [ThinkPlus® 4-year LOR 9x5 NBD](41C9177)
- [ThinkPlus® 5-year LOR 9x5 NBD](41C9179)
- [ThinkPlus® 5-year P&L P/U Depot](41C9187)
- [Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty](lenovo.com/thinkplus/warranty)

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* Intel Centrino® processor technology
* Lenovo

US models announced September 4, 2007
* US models withdrawn effective May 2008

© Lenovo (D3V-8) May 2008
### ThinkPad T61 8890 (NVIDIA) - Onsite - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Display</th>
<th>Graphics controller memory</th>
<th>Disk SATA RPM</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
<th>Preload</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8890-26U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
<td>128MB</td>
<td>80GB</td>
<td>5400 Combo</td>
<td>None</td>
<td>Smart</td>
<td>Blue</td>
<td>6</td>
<td>Business32</td>
</tr>
</tbody>
</table>

*This model is part of the Global Models Plus program with limited onsite service*²³, 3-year limited warranty

### Positioning

Processor: 
Premiere performance; two spindles
- **Intel® Core™ 2 Duo processor T7300 with dual-core**
- Intel® 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory

1GB std / 4GB max²⁴ / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 socket, 1 socket available

### Diskette drive

- EIDE Combo
- Ultrabay Slim
- Serial ATA disk (SATA150)

**80GB** (5400 rpm) /
9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk,
ThinkPad Mounted Hard Drive, Active Protection System™

### Display

14.1" (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4.3 aspect ratio,
200:1 contrast ratio, anti-glare

### Graphics

**NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache**, 
- DivX passes-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

### Touchpad

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

### ThinkLight

Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 14.1" models (WxDxH): 12.3" x 10.0" x 1.1-1.3";
  - 313mm x 255mm x 27.5-32.4mm
- With optical drive and battery: 6-cell: 5.3 lb (2.4kg);
  - 9-cell: 5.6 lb (2.55kg)

### Weight

- Top: Super-Elastic PolyCarbonate (SEPC);
  - Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type

- Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Slim

### Battery - life

- 6-cell: up to 4.0 hr;
  - 9-cell: up to 8.0 hr;
  - 9-cell plus Ultrabay battery: up to 8.0 hr

### Chipset

- Mobile Intel P965 Express Chipset (Memory Controller Hub);
  -ICH9M-Enhanced I/O Controller Hub (SATA300, ATA-100 EIDE PCI Express x1, bus, LPC bus, [Bluetooth], [fingerprint]) /
  - PCI bus (Riconh R5C804 Cardbus/1394/Multicard) /
  - LPC bus (WPCN385 Super I/O, Atmel 97SC3203 TPM)

### PC Card Std slot

- One Type I or Type II slot, CardBus 32-bit

### ExpressCard slot

- None

### Smart Card Reader

- Smart Card Reader

### Multicard Reader

- None

### Ports

- Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (ethernet)

### Wireless antenna

- UltraConnect™ II antenna / on/off switch for all wireless radios

### Mini PCI Express

- Two Mini PCI Express slots / only 8011 wireless is customer upgradable

### Preload

**Intel 4965AG**

### WWAN

- **NVIDIA graphic** AC adapter

### WWAN

- **NVIDIA graphic** AC adapter

### Wired antenna

- **Antenna**

### Security

- Power-on password, hard disk password, supervisor password, security keyhole

### Preloaded operating system²⁰


### Preloaded applications¹⁴

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
  - 20 days of virus definitions
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- SonicReadyNow and Drive Letter Access (combo)
- InterVideo WinDVD (combo)

### Limited warranty: 3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades²² available

### Accessories

- **Lenovo.com/accessories**

See footnotes for important warranty information

© Lenovo

US model announced July 10, 2007
US model withdrawn effective May 2008

**NVIDIA** with vPro™ technology

**ENERGY STAR®** 4.0-compliant

**RoHS-compliant**

**International Warranty Service**¹⁷
24 hour x 7 day²⁰ tof-free support during the warranty period²² via 800-426-7378

**ThinkPlus**²² 4-year LOR 9x5 NBD
12X5630
ThinkPlus 5-year LOR 9x5 NBD
43R2162
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
## ThinkPad® T61 8897 (GMA) - TopSeller - withdrawn

### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN/Turbo</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Avail Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8897-01U</td>
<td>T7100</td>
<td>1.80</td>
<td>1GB</td>
<td>14.1&quot; XGA</td>
<td>GMA 100G</td>
<td>7200</td>
<td>DVD/RW *</td>
<td>Intel 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>None</td>
<td>XP Pro</td>
</tr>
<tr>
<td>8897-02U</td>
<td>T5270</td>
<td>1.40</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>GMA 80G</td>
<td>5400</td>
<td>Combo *</td>
<td>Intel 11a/b/g</td>
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<td>/54</td>
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<td>XP Pro</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty[2]

### Positioning

- Premiere performance: two spindles

### Processor

- Intel® Core™ 2 Duo processor T7250 with dual-core.
- Intel 64 Technology, Enhanced Intel SpeedStep technology. Intel Dynamic Acceleration, Execute Disable Bit, 800MHz system bus, and 2MB shared L2 cache or Intel Core 2 Duo processor T7100 with dual-core.
- Intel 64 Technology, Enhanced Intel SpeedStep technology. Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 2MB shared L2 cache

### Memory

- 512MB or 1GB std / 4GB max[1] / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Non-Tamper: standard memory in 1 socket; 1 socket available

### Diskette drive

- None (use optional USB-based diskette drive)

### EIDE Combo

- Some: DVD burner, Ultrabay Burner (41N5643), dual-layer, removable from Ultrabay

### Ultrabay Slim

- Some: One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel Ultrabay Slim (5400 rpm) / (7200 rpm)
- Some: 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, Ultrabay Mini

### Serial ATA disk (SATA150)

- ThinkPad Mini Hard Drive, Active Protection System™

### Display

- Some: 14.1" (358.1mm) XGA (1024x768) color, 150 nits, 4,3, 200:1, anti-glare
- Some: 14.1" (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4,3, 200:1, anti-glare

### Camera

- None

### Graphics

- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965,
- DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys

### Trackpoint

- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar[13], magnifying glass

### Touch pad

- UltraNav® multi-pointing system, touch pad below keyboard, Tap Zones

### TouchLight™

- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 14.1" models (WxDxH): 12.3" x 10.0" x 1.1-1.3"; 313mm x 255mm x 27.5-32.4mm with optical drive and battery; 5.3 lb (2.4kg)
- 14" models: WxDxH: 13.2" x 9.5" x 0.7-0.8"; 335mm x 241mm x 18-20mm with optical drive and battery; 5.3 lb (2.4kg)

### Weight[1]

- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Top: Super-Elastic Polycarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type

- Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Slim
- Lithium Ion 6-cell / supports 2nd battery in Ultrabay Slim
- Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Slim

### Battery - life[5]

- None (use optional 6-cell battery in Ultrabay Slim)
- None (use optional 6-cell battery in Ultrabay Slim)
- None (use optional 6-cell battery in Ultrabay Slim)

### Chipset

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
- ICH6M-Enhanced I/O Controller Hub (SATAC300, ATAC-100 EIDE, PCI Express x1, PCi bus, USB, LPC bus, [Bluetooth], [fingerprint]) /
- PCI bus (Riconh R5C804 Cardbus/1394/Multicard) /
- LPC bus (WPCN385 Super I/O, Atmel 9732303 TPM)

### Card Reader Slot

- One Type I or Type II slot, CardBus 32-bit

### ExpressCard Slot

- [54] One ExpressCard/34 or ExpressCard/54, PCI Express x1 or USB 2.0

### MultiCard Reader

- None

### Ports

- Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (ethernet)

### Wireless antenna

- UltraConnect™ II antenna / on-off switch for all wireless radios

### Mini PCI Express

- Two Mini PCI Express slots / 802.11n wireless is customer upgradeable
- Intel 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

### WWAN

- None

### Turbo Memory

- None

### Modem

- 56K V.90 (V.92-designed)[2] modem in Communications Daughter Card socket

### Ethernet

- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PCIe x4 (BCM, Intel AMT)

### Audio

- High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security

- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

- Trusted Platform Module, Atmel chip, TPM 1.2-compliant

### Fingerprint reader

- Fingerprint reader / palm rest, swipe sensor, supports the security chip

**Preloaded operating system**

- Microsoft® Windows® XP Professional

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live® Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNOW and Drive Letter Access (combo, DVD/RW models)
- InterVideo WinDVD (combo, DVD/RW)
- InterVideo WinDVD Creator (DVD/RW)

**Supports ThinkVantage technologies**

**65-watt (GMA graphics) AC adapter**

**ThinkPad Roll Cage and Top Cover**

**ENERGY STAR® 4.0-compliant**

**RooHS-compliant**

**International Warranty Service**

24 hour x 7 day x 365 day toll-free support during the warranty period² eleven via 800-426-7378

**ThinkPlus™ 22** 1-year LOR 9x5 NBD

**ThinkPlus 2-year LOR 9x5 NBD**

**ThinkPlus 3-year LOR 9x5 NBD**

**ThinkPlus 4-year LOR 9x5 NBD**

**ThinkPlus 5-year LOR 9x5 NBD**

**ThinkPlus 2-year P&L P/U Depot**

**ThinkPlus 3-year P&L P/U Depot**

**ThinkPlus 4-year P&L P/U Depot**

**ThinkPlus 5-year P&L P/U Depot**

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**

See footnotes for important warranty information

* Intel Centrino® processor technology

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(DV3-7) May 2008
### ThinkPad T61 8896 (GMA) - Onsite - withdrawn

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<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
<th>Preload</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Entry (E)</th>
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<td>6</td>
<td>Business32</td>
<td>W</td>
<td>G June 07</td>
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</table>

- This model is part of the Global Models Plus program with limited onsite service13 3-year limited warranty

### Positioning
- Premiere performance; two spindles

### Processor
- Intel® Core™ 2 Duo processor T7300 with dual-core
- Intel® 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory
- 1GB std / 4GB max** / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Illiac™: standard memory in 1 socket, 1 socket available

### Diskette drive
- None (use optional USB-based diskette drive)

### EIDE Combo
- None

### Ultrabay Slim
- 80GB14 (5400 rpm) /
- 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk

### Display
- 14.1" (358.1mm) XGA (1024x768) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glare

### Camera
- None

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys
- Touchpad
- UltrNav™ multi-pointing system, touch pad below keyboard, Tap Zones

### Weight
- 14.1" models (WxDxH): 12.3" x 10.0" x 1.1-1.3", 313mm x 255mm x 27.5-32.4mm
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type
- Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Slim

### Battery - life
- 6-cell: up to 5.7 hr; 9-cell: up to 6.6 hr; 11-cell plus Ultrabay battery: up to 10.1 hr

### Chipset
- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub; ICH7M-Enhanced I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])) / PCI bus (Ricoh R5C804 Cardbus/1394/Multicard) / LPC bus (WPN3385 Super I/O, Atmel 97SC3203 TPM)

### PC Card Std slot
- One Type I or Type II slot, CardBus 32-bit

### ExpressCard slot
- None

### Smart Card Reader
- Smart Card Reader

### Multicard Reader
- None

### Ports
- Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (ethernet)

### Wireless antenna
- UltraConnect™ II antenna / on-off switch for all wireless radios

### Mini PCI Express
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

### WWAN
- 11a/b/g wireless®, Mini PCIe adapter, Intel Wireless WiFi Link 9456AG

### Toner Memory
- None

### Modem
- 56K V.90 (V.92-designed®) modem in Communications Daughter Card socket

### Bluetooth™
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Ethernet
- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1, PCIe bus

### Audio support
- High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- 3-years/1-year battery, limited onsite service14, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades22 available

### Other accessories
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium) ENERGY STAR® 4.0-compliant RoHS-compliant
- International Warranty Service17 24 hour x 7 day toll-free support during the warranty period17 via 800-426-7378
- ThinkPlus® 4-year LOR 9x5 NBD 12X5630
- ThinkPlus 5-year LOR 9x5 NBD 43R2162
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
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<th>Global (G)</th>
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See footnotes for important warranty information

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(DV3-10) May 2008
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<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Memory</th>
<th>Disk</th>
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<td>6-cell</td>
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**Positioning**

**Processor**

Premiere performance; two spindles

Intel® Core™ 2 Duo processor T7500 with dual-core

Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz of system bus, and 4MB shared L2 cache

**Memory**

1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Non-analytics: standard memory in one socket; one socket available

**Diskette drive**

EIDE DVD+RW

UltraSlim

Serial ATA disk

100GB (7200 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

**Widescreen display**

14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Graphics**

NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

TrackPoint®

Touchpad

ThinkLight™

9-cell, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

6-cell 14.1W (WxDxH): 13.2" x 10.2" x 1.09–1.26"; 335 x 261mm x 27.6–31.9mm

Weight

6-cell: starting at 5.3 lb (2.4kg)

**Case material**

Battery - type

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life**

Not published

**Chipset**

Mobile Intel PM965 Express Chipset (Memory Controller Hub);

ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [flingerpoint]) / PCI bus (Ricochet® R5C847 Cardbus/1394/Multicard)/ LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)

**PC Card Slot**

One Type I or Type II slot, CardBus 32-bit

**Smart Card Reader**

None

**Multicard Reader**

None

**Ports**

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Wireless antenna**

UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express**

Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**Intel 11a/b/g**

11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG

**WWAN**

None

**Turbo Memory**

None

**Modem**

56K V.92 modem in Communications Daughter Card slot

**Bluetooth**

Bluetooth 2.0 wireless, USB 2.0 interface via Ich8m, LED indicator

**Ethernet**

Gigabit ethernet on systemboard, Intel 82556/699N (PHY), PCIe x1 (GLCX), PXE

Not supported

**Audio support**

High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security chip**

Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**

Fingerprint reader on palm rest, swipe supports the security chip

**Limited warranty**

3-yr year /1-year battery - EasyServTM, depot repair service / service upgrades available

**Preloaded operating system**

- SUSE® Linux™ Enterprise Desktop/10 Service Pack 1

**Preloaded applications**

- None

**Supported devices**

(only some listed)

- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Fingerprint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

**Non-supported devices**

(only some listed)

- Intel 4965AGN, Intel 4965AGN, ThinkPad 11a/b/g
- ThinkPad 11n wireless
- WWAN
- Active Protection System
- ThinkVantage button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

**Non-supported applications**

(only some listed)

- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

**Preloaded operating system**

- SUSE® Linux™ Enterprise Desktop/10 Service Pack 1

**Preloaded applications**

- None

**Supported devices**

(only some listed)

- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Fingerprint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

**Non-supported devices**

(only some listed)

- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

**Preloaded operating system**

- SUSE® Linux™ Enterprise Desktop/10 Service Pack 1

**Preloaded applications**

- None

**Supported devices**

(only some listed)

- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Fingerprint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

**Non-supported devices**

(only some listed)

- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer
ThinkPad T61 14W 7658 (GMA) - Top-Seller - withdrawn

**Processor**
- Intel® Core™ 2 Duo processor T5270 with dual-core.

**Memory**
- 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Standard memory in one socket; one socket available;
- Non-italics: standard memory in both sockets; no sockets available;
- Italics: standard memory in one socket; one socket available.

**Keyboard**
- 99-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys

**Touchpad**
- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**Dimensions**
- 14.1” (358.1mm) WXGA (1280x800) color

**Weight**
- 4-cell: 2.95 lbs (1.34 kg); 2.4 lbs; 185 nits, 16:10 aspect ratio,
- 6-cell: 3.6 hr; 185 nits, 16:10 aspect ratio,
- 4-cell: up to 3.6 hr, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Chipset**
- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
-ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, Ultra ATA disk)

**Battery**
- 65-watt (GMA graphics) AC adapter

**Supports ThinkVantage technologies**
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Intel® Core™ 2 Duo processor T5270 with dual-core
- ENERGY STAR® 4.0-compliant
- RoHS-compliant

**International Warranty Service**
- 24 hour x 7 day toll-free support during the warranty period

**Preloaded operating system**
- Some: Microsoft® Windows® XP Professional with Vista® COA
  - 02U/17U/19U: Vista Basic logo
  - 05U/15U/NKU/NLU: Vista Premium logo

**Preloaded applications**
- (all OSes; only some listed)
  - Microsoft Office 2007 and CD (OJS model)
  - Some: education software
  - Some: USB Library Edition
  - Some: Basic logo
  - Acer®: Windows 7 64-bit only listed

**Security**
- Intel® AMT
- Bluetooth
- Modem
- 1G Turbo

**Ports**
- Three: 140-pin connection; 1394a-2000 standard
- 3g: 5400 rpm)
- 100GB (7200 rpm), 120GB (5400 rpm), or 160GB (5400 rpm)
- SATA 1.5Gb/s, 9.5mm high, removable, upgraded, 9.5mm high, bay supports 2nd disk
- Supports ThinkVantage technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period
- 800-426-7378

**Post-warranty annual maintenance agreements**
- lenovo.com/thinkplus/warranty

See footnotes for important warranty information
- * Intel Centrino® processor technology
- US models announced May 9, July 6, October 30, or December 6, 2007; * Intel Centrino with vPro™ technology
- or January 8, April 8, or May 15, 2008
- US models withdrawn effective December 7, 2008, or May 9, 2009

- Lenovo

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**Processor**

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<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics Controller</th>
<th>Disk</th>
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<th>Mini PCIe WWAN or Turbo</th>
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<th>Battery</th>
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<td>2.00</td>
<td>1GB 14.1”WXGA GMA</td>
<td>100G 7200 Combo</td>
<td>* Intel 11a/b/g</td>
<td>/</td>
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<tr>
<td>7658-17U</td>
<td>T7500</td>
<td>2.20</td>
<td>1GB 14.1”WXGA GMA</td>
<td>160G 5400 DVD±RW</td>
<td>* Intel 11a/b/g</td>
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<td>1GB 14.1”WXGA GMA</td>
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<td>* Intel 11a/b/g</td>
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<td>7658-RU1</td>
<td>T8100</td>
<td>2.10</td>
<td>1GB 14.1”WXGA GMA</td>
<td>120G 5400 DVD±RW</td>
<td>* Intel 11a/b/g</td>
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<td>7658-RUU</td>
<td>T8100</td>
<td>2.10</td>
<td>1GB 14.1”WXGA GMA</td>
<td>120G 5400 DVD±RW</td>
<td>* Intel 11a/b/g</td>
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</tbody>
</table>

**Limited warranty**
- 1 Year - EasyServ™ depot repair service / service upgrades available
ThinkPad T61 14W 7664 (NVIDIA®) - TopSeller - withdrawn

See footnotes for important warranty information. © Lenovo
US models announced May 9, July 6, October 30, or December 6, 2007; or January 8, April 8, or August 1, 2008

Personal Systems Reference (PSREF)

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty

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**Processor**

Intel® Core™ 2 Duo processor T5670, T7300, T7500, T7700, T8100, or T8300
dual-core, 800-MHz system bus, T5670: 2MB shared L2 cache;
T7300/T7500/T7700: 4MB shared L2 cache;
T8100/T8300: 3MB shared L2 cache

**Memory**

1GB or 2GB std / 4GB max / PC2-5300 DDR2 SODIMM (TopSeller) 43R2000

**Diskette drive**

None (use optional USB-based diskette drive)

**EIDE Combo**

Some: DVD-CD-ROM-CU-DVD/CD-RW 24X/24X/24X/8X; speed, removable from Ultrabay Slim

**EIDE DVD/RW Ultrabay Slim**

Some: burner, Multi-Burner (40Y8623) dual-layer, removable from Ultrabay Slim

**Serial ATA disk**

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 100GB (7200 rpm), 120GB (5400 rpm), or 120G± (5040 rpm), SATA 1.5GB/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Display screen**

14.1” (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, some: camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

**Graphics**

NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

**Touchpad**

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar 12, magnifying glass

**ThinkLightTM**

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

6-cell 14.1W (WxDxH): 13.2” x 10.2” x 1.09–1.26”; 335 x 261mm x 27.6–31.9mm

**Weight**

6-cell 14.1W: 6.7 lbs (3kg)

**Battery - life**

6-cell: up to 3.8 hr; 6-cell plus Ultrabay battery: up to 5.3 hr

**Chipset**

Mobile Intel PM965 Express Chipset (Memory Controller Hub);
ICH9M-Enhanced I/O Controller Hub (SA1110-Gb, 0.8GB/s, ATI EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]),
PCI bus (Rичес R5C847 Cardbus/1394/Multicast) / LPC bus (WPCN385 Super I/O, Atmel 97SC3203 TMP)

**PC Card**

One slot (Type I, Type II), CardBus 32-bit

**ExpressCard®/54 Smart Card Read Ports**

None

**Multicard Reader Ports**

Some: 4-in-1 reader (MultiMediaCard, Mem Stick® PRO, Secure Digital, xD-Picture Card®)
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

UltraConnect® II antenna / on-off switch for all wireless radios

**Mini PCI Express**

Two Mini PCI Express slots / only 802.11iw is customer upgradable

**Intel 4965AGN®**

Some: 11a/b/g wireless®, Mini PCIe adapter, Intel Wireless WiFi Link 4965AGN
Some: 11b/g/n wireless®

**Intel 11n**

Some: 11a/b/g wireless®, Mini PCIe adapter, Intel Wireless WiFi Link 4965AGN, MIMO 2x3 (Kedron)

**Verizon®**

Some: Wireless LAN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCIe adapter, EV-DO Rev. A, service contract req’d with Verizon® Wireless

**1G Turbo**

Some: Intel Turbo Memory, Mini PCIe adapter, 1GB flash, disk-cache accelerator

**Modem**

56K V.92® modem in Communications Daughtercard socke

**Bluetooth™**

Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

**Ethernet**

Gigabit ethernet, Intel 82586MM Nineveh (PHY), PCI x1 (GLC1), PXE

**Intel AMT**

Intel Active Management Technology (IAMT)

**Audio support**

High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

Password-on-power, hard disk password, supervisor password, security keyhole

**Security Key chip**

Intel Trusted Platform Module, Atmel chip, TCG-1.2 Ready 43R2499

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years - 1-year battery - EasyServ depot repair service / service upgrades2 available

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Supports ThinkVantage® technologies

90-watt (NVIDIA) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
ENERGY STAR® 4.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7737

ThinkPlus® 22 2-year LOR® 9x5 NBD
ThinkPlus 3-year LOR 9x5 NBD
41C9175
ThinkPlus 4-year LOR 9x5 NBD
45K6021
ThinkPlus 5-year LOR 9x5 NBD
45K6024
ThinkPlus 4-year P&L P/U Depot
45K6023
ThinkPlus 5-year P&L P/U Depot
45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® T61 14W 7659 (GMA Graphics) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor/Chipset</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe WWAN</th>
<th>Finger Battery WA1000 Card slot</th>
<th>Workhorse (W)</th>
<th>Preloaded operating system</th>
<th>Preloaded applications (all Oses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7659-1OU</td>
<td>Intel® Core™ 2 Duo processor T7100, T7300, or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300/T7500: 4MB shared L2 cache</td>
<td>SATA 3.5GB 5400 rpm, 100GB (7200 rpm), or 120GB (5400 rpm) / SATA 1.5GB/s, 9.5mm, high-speed, high-speed, 9.5mm high bay, supports 2nd disk, ThinkPad Hard Drive, Active Protection System™</td>
<td>None / Non-italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in 1 socket; 1 socket available</td>
<td>None / Non-italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in 1 socket; 1 socket available</td>
<td>None / Non-italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in 1 socket; 1 socket available</td>
<td>24 hour x 7 day 24/7 toll-free support via 800-426-7378</td>
<td>4 Business32 W</td>
<td>- Some: Microsoft® Windows® XP Professional</td>
<td>- Some: Microsoft Windows Vista® 11U/1: Vista Premium logo 12U/02U/25U: Vista Basic logo</td>
</tr>
</tbody>
</table>

See footnotes for important warranty information

US models announced May 9, Jun 5, Aug 21, or Sept 4, 2007 or Jan 2008

US models withdrawn effective May or November 2008

* Intel Centrino® processor technology
* Intel Centrino with vPro technology

© Lenovo (MLT-1) 3 November 2008

Other accessories at lenovo.com/accessories
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN/Turbo</th>
<th>Card slot</th>
<th>Blue-tooth</th>
<th>Finger Print reader</th>
<th>Linux preload</th>
<th>Workhorse</th>
<th>Launch</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7659-2UU</td>
<td>T7500</td>
<td>2.2</td>
<td>1GB</td>
<td>14.1&quot; WXGA GMA</td>
<td>80G 5400 Combo</td>
<td>None</td>
<td>/54 Blue</td>
<td>Finger 6 SLED10</td>
<td>W G</td>
<td>Jan 08</td>
<td></td>
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</tr>
</tbody>
</table>

**Positioning Processor**
- Premier performance; two spindles
- Intel® Core™ 2 Duo processor T7500 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep technology®, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**
- 1GB std / 4GB max26 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italic: standard memory in 1 socket; 1 socket available

**Diskette drive**
- None (use optional USB-based diskette drive)

**EIDE Combo Ultrabay Slim**
- Serial ATA disk

**Widescreen display**
- None

**Graphics**
- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appi keys

**Touch pad**
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®

**Security chip**
- Intel AMT technology

**Audio support**
- Intel Audio BLUETOOTH®

**Ethernet**
- Intel 11a/b/g wireless4, Mini PCIe adapter, Intel PRO/Wireless 3945ABG

**Modem**
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**Preloaded operating system**
- SUSE® Linux™ Enterprise desktop10 Service Pack 1

**Preloaded applications**
- None

**Supported devices**
- (only some listed)
  - HD Audio
  - Intel 3945ABG wireless
  - Intel Graphics Media Accelerator X3100 (GMA X3100)
  - NVIDIA Quadro NVS 140M

**Non-supported devices**
- (only some listed)
  - Intel 4965AG, Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad 11n wireless

**Non-supported applications**
- (only some listed)
  - ThinkPad Utilities
  - ThinkVantage technologies
  - Presentation Director
  - Encrypted DVD playback
  - Keyboard Customizer

**Post-warranty annual maintenance agreements at lenovo.com/accessories**
- ThinkPlus™ 2-year LOR 9x5 NBD 41C9175
- ThinkPlus 3-year LOR 9x5 NBD 41C9176
- ThinkPlus 4-year LOR 9x5 NBD 41C9177
- ThinkPlus 5-year LOR 9x5 NBD 41C9179
- ThinkPlus 4-year P&L P/U Depot 41C9180
- ThinkPlus 5-year P&L P/U Depot 41C9181
- Post-warranty annual maintenance agreements at lenovo.com/accessories

See footnotes for important warranty information

Lenovo (M1-12) November 2008

* Intel Centrino® processor technology

**Note:** The above table contains detailed specifications for the ThinkPad T61 14W 7659 (GMA) - Linux model, including processor, memory, storage options, and other key features.

For more detailed specifications and warranty information, please refer to the Personal Systems Reference (PSREF) document.
### ThinkPad® T61 14W 7661 (GMA) - Onsite - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Mini PCI</th>
<th>Card slot</th>
<th>Camera</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Available date</th>
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<tbody>
<tr>
<td>7661-11U</td>
<td>T7100</td>
<td>1.80</td>
<td>1GB 14.1&quot; WXGA GMA</td>
<td>80G</td>
<td>Combo</td>
<td>None</td>
<td>Smart</td>
<td>None</td>
<td>None</td>
<td>Blue</td>
<td>Business32</td>
<td>W G P May07</td>
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<tr>
<td>7661-12U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB 14.1&quot; WXGA GMA</td>
<td>80G</td>
<td>Combo</td>
<td>None</td>
<td>Smart</td>
<td>None</td>
<td>None</td>
<td>Blue</td>
<td>Business32</td>
<td>W G P May07</td>
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<tr>
<td>7661-28U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB 14.1&quot; WXGA GMA</td>
<td>80G</td>
<td>Combo</td>
<td>None</td>
<td>Smart</td>
<td>None</td>
<td>None</td>
<td>Blue</td>
<td>4 XP Pro</td>
<td>W G P Sep07</td>
</tr>
<tr>
<td>7661-25U</td>
<td>T7500</td>
<td>2.20</td>
<td>1GB 14.1&quot; WXGA GMA</td>
<td>120G</td>
<td>Combo</td>
<td>None</td>
<td>4-in-1 Cam</td>
<td>Cam</td>
<td>None</td>
<td>Blue</td>
<td>Business32</td>
<td>W G P Jan08</td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service in U.S. models withdrawn effective May or November 2008. The 3-year limited warranty on these models will not expire until May or November 2008.

### Preloaded operating system
- Some: Microsoft® Windows® XP Professional
- Vista models: Vista Premium logo

### Preloaded applications (all OSes)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Sonic RealOne and Drive Letter Access (Combo)
- Corel® WinDVD® (Combo)

### Positioning Processor
- Intel® Core™ 2 Duo processor T7100, T7300, or T7500 with dual-core Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300/T7500: 4-in-1 Cam; T7500: 80GB shared L2 cache
- **Note:** These models are part of the Global Models Plus program with limited onsite service in U.S. models withdrawn effective May or November 2008. The 3-year limited warranty on these models will not expire until May or November 2008.

### Memory
- 1GB std / 4GB max
- PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets
- *Non-Italics:* standard memory in one socket; one socket available
- *Italics:* standard memory in both sockets; no sockets available

### Diskette drive
- EIDE Combo
- Ultrabay Slim
- Serial ATA disk
- 80GB (5400 rpm) or 120GB (5400 rpm)
- SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display
- 14.1" (356.1mm) WXGA (1280x800) color; anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera
- Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Graphics
- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI-pass through support to optional Advanced Mini Dock or Advanced Dock

### Chipset
- Mobile Intel PM965 Express Chipset (Memory Controller Hub);ICHDM-Enhanced I/O Controller Hub (SATA 3.0Gbps, ATA-100 EIDE, PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint], [PCI bus (Ricoch R5C847 Cardbus/1394/Multicard)] / LPC bus (WPCN385 Super I/O, Intel® 97SC3203 TPM)

### PC Card Std slot
- One Type I or Type II slot, CardBus 32-bit

### Smart Card Reader
- Some: Smart Card Reader

### MultiCard Reader
- Some: 4-in-1 reader (MultiMediaCard, Mem Stick PRO, Sec Digital, XD-Picture Card)

### Ports
- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), 4-in-1 reader (MultiMediaCard, Mem Stick PRO, Sec Digital, xD-Picture Card)

### Wireless antenna
- UltraConnect™ II antenna / on-off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradeable
- 11a/b/g wireless®, Mini PCIe adapter, Intel Wireless WiFi Link 4965AG
- WWAN None
- Turbo Memory None
- 56K V.92 modem in Communications Daughter Card socket

### Bluetooth™
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator
- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC1), PXE Interface

### Audio support
- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip Trusted Platform Module
- Trusted Platform Module
- FingerPrint reader
- FingerPrint reader on palm rest, swipe sensor, supports the security chip
- Limited warranty 3-years/1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

### 1GB PC2-5300 DDR2 SODIMM
- 40Y7734
- T/R 14W Standard Battery 4-cell
- T/R 14W Enhanced Battery 6-cell
- T/R 14W High Capacity Batt 9-cell
- Advanced UltraBay II battery 3-cell
- 90W Slim AC/DC Combo Adapter
- ThinkPad Roll Cage and Top Cover
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### 2GB PC2-5300 DDR2 SODIMM
- 40Y7734
- T/R 14W Standard Battery 4-cell
- T/R 14W Enhanced Battery 6-cell
- T/R 14W High Capacity Batt 9-cell
- Advanced UltraBay II battery 3-cell
- 90W Slim AC/DC Combo Adapter
- ThinkPad Roll Cage and Top Cover
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### ThinkPad DVD Ultrabay Slim Burner (flat)
- 41N5643
- T/R 14W High Capacity Batt 9-cell
- 43R9250
- 43R9250
- 90W Slim AC/DC Combo Adapter
- ThinkPad Roll Cage and Top Cover
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### 64GB SSD SATA 3.0Gbps (1.8” (2.5” cover)
- 43N4006
- 90W Slim AC/DC Combo Adapter
- ThinkPad Roll Cage and Top Cover
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### 200GB Disk FDE SATA 1.5Gbps (7200 rpm)
- 41N5738
- ThinkPad Business Topload Case
- 43R2467
- 43R2162
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

### See footnotes for important warranty information
* Intel® Centrino® with vPro technology
© Lenovo
US models announced May 9 or September 4, 2007 or January 8, 2008
US models withdrawn effective May or November 2008

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**Personal Systems Reference (PSREF)**

**See footnotes for important warranty information**

* Intel® Centrino® with vPro technology
© Lenovo

US models announced May 9 or September 4, 2007 or January 8, 2008
US models withdrawn effective May or November 2008
## ThinkPad® T61 14W 7663 (NVIDIA® Graphics) - withdrawn

### Processor
- **Intel Core™ 2 Duo processor**
- Intel 64 Technology
- Enhanced Intel SpeedStep® technology
- Intel Dynamic Acceleration
- Execute Disable Bit
- Virtualization Technology
- 800MHz system bus
- T7100: 2MB shared L2 cache
- T7300/T7500: 2MB shared L2 cache

### Memory
- 1GB std / 4GB max18
- PC2-5300 667MHz DDR2, non-parity
- 1GB (T7300/T7500: 2MB shared L2 cache)
- 2GB (T7100: 2MB shared L2 cache)

### Diskette drive
- None (no special USB-based diskette drive)

### Graphics controller
- NVIDIA Quadro® NVS 140M, PCI Express® x16, 128MB memory

### Display
- 14.1" WXGA+ 1280x800 color
- anti-glare, 185 nits, 16:10, 300:1 contrast

### Graphics memory
- NVIDIA® Quadro® NVS 140M, 128MB memory

### Preloaded operating system43
- Some: Microsoft® Windows® XP Professional

### Vista models: Vista Premium logo

### Preloaded applications**
- (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - System Migration Assistant
  - Norton Internet Security™
  - Norton AntiVirus™
  - Diskeeper® Home
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Windows Live™ Toolbar
  - Windows Live Search
  - Sonic RecordNOW and Drive Access Connections
  - Norton 360°
  - Norton Internet Security™
  - Power Manager
  - Norton Security Essentials
  - Norton AntiVirus™

### Supported ThinkVantage technologies
- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- Compliant with ROHS (Restrictions on Hazardous Substances)

### International Warranty Service17
- 24 hour x 7 day20 toll-free support during the warranty period21 via 800-426-7378

### US models withdrawn May or November 2008

### Mini PCI Express Slots
- Two Mini PCI Express slots

### Orbiter Technologies
- UltraConnect™ II antenna / on-off switch for all wireless radios
- ThinkVantage® technologies

### Card slots
- Smart Card Reader
- ExpressCard slot

### CardBus slot
- CardBus 32-bit

### Mouse ports
- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

### Limited warranty
- 3-years / 1-year battery - EasyServ®19 depot repair service / service upgrades20 available

---

### See footnotes for important warranty information
- * Intel Centrino® processor technology
- * Intel Centrino® with vPro technology
- Lenovo (ML1-4) November 2008
**ThinkPad T61 14W 7663 (NVIDIA®) - Linux - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk Controller (GB)</th>
<th>IDR optical</th>
<th>MINI PCIE 802.11 wireless</th>
<th>MINI PCIE WIFI or Turbo</th>
<th>Card slot</th>
<th>Blue-tooth cells</th>
<th>Linux preload</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Estimated (E)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7663-3LU T7500</td>
<td>2.20</td>
<td>2GB</td>
<td>14.1&quot; WXGA+ 128MB</td>
<td>120G/5400 DDR2/SDRAM</td>
<td>Intel 11a/b/g</td>
<td>None</td>
<td>54</td>
<td>Blue</td>
<td>6-cell</td>
<td>SLED10</td>
<td>W</td>
<td>G</td>
<td>Jan 08</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Positioning Processors: Premier performance; two spindles.

**Intel® Core™ 2 Duo processor T7500 with dual-core.**

Intel 64 Technology, Enhanced Intel SpeedStep technology. Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

**Memory**

<table>
<thead>
<tr>
<th>2GB standard / 4GB max</th>
<th>PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 20-pin SODIMM sockets;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top: Carbon-Fiber Reinforced Plastic Bottom: Super-Elastic PolyCarbonate (SEPC);</td>
<td></td>
</tr>
<tr>
<td>Starting at 5.3 lb (2.4kg)</td>
<td></td>
</tr>
</tbody>
</table>

**Diskette drive**

None (use optional USB-based diskette drive)

**UltraBay Slim Drive**

DVD burner, Super Multi-Burner (40Y6223) dual-layer, removable Ultrabay Slim

**Serial ATA disk drive**

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel, 120GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

**Widescreen display**

14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Graphics**

NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Dock or Advanced Mini Dock

**Keyboard**

98-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

**TrackPoint®**

TrackPoint® pointing device, "Press-to-Select," Improved Scroll Wheel, Magnifying glass

**Touchpad**

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

6-cell 14.1" (WXD:14) 13.2" x 10.2" x 1.09–1.26", 335 x 261mm x 27.6–31.9mm

**Weight**

6-cell: starting at 3.5 lb (2.4kg)

**Battery - type**

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life**

Not published

**Chipset**

Mobile Intel PM965 Express Chipset (Memory Controller Hub):ICH9M-Enhanced I/O Controller (SATA 1.5Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [Fingerprint]) / PCI bus (Ricon® R85C474 Cardbus/1394/MultiCard) / LPC bus (WP1038 Super I/O, Atmel® AT93SC3203 TPM)

**PC Card Std socket**

One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot**

[54] One ExpressCard/34 or ExpressCard/54

**Smart Card Reader**

None

**Multicard Reader**

None

**Ports**

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

UltraConnect™ II antenna on-off switch for all wireless radios

**Mini PCI Express**

Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**Intel 11a/b/g**

11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG

**WWAN**

None

**Modem**

56K V.92 modem

**Bluetooth™**

Bluetooth 2.0 wireless, USB 2.0 interface via IC6HM, LED indicator

**Ethernet**

Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

**Intel ADM**

Not supported

**Audio support**

High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security Chip**

Security chip

**Fingerprint reader**

Fingerprint reader on palm rest, supports the security chip

Limited warranty:

3-years/1-year battery - EasyServTM, depot repair service / service upgrades available

Preloaded system:

- SUSE® Linux Enterprise Desktop10 Service Pack 1

Preloaded applications:

- None

Supported devices (only some listed):

- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Fingerprint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

Non-supported devices (only some listed):

- Intel 4965AGN, Intel 4965AGN
- ThinkPad 11a/b/g
- ThinkPad 11n wireless
- WWAN
- Active Protection System™
- ThinkVantage® button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

Non-supported applications (only some listed):

- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

Unlockable features:

- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- RoHS-compliant
- International Warranty Service: 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Preload:

ThinkPlus™: 22-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P/L P/U Depot

ThinkPlus 5-year P/L P/U Depot

ThinkPlus 4-year P/L P/U Depot
## ThinkPad T61 14W 7665 (NVIDIA) - Onsite - withdrawn

### Preloaded operating system
- **Some:** Microsoft® Windows® XP Professional
- **Some:** Microsoft® Windows® Vista Business Edition (32-bit)

## Vista models: Vista Premium logo

### Preloaded applications (all OSEs)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskkeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Multimedia Center for Think Offers (XP Pro models)
- Sonic RecordNow and Drive Letter Access (Combo, DVD:RW)
- Corel® WinDVD® (Combo, DVD:RW)
- Corel® WinDVD Creator (XP Pro DVD:RW models)

## Limited warranty
- 3-years/1-year battery, limited onsite service™, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen controller</th>
<th>Disk SATA GB</th>
<th>EIDE controller</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe GBE-0</th>
<th>Card slot</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7665-11U</td>
<td>T7100</td>
<td>1.80 1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 4965AGA™</td>
<td>T7500</td>
<td>Blue</td>
<td>6 Business32 W G P May 07</td>
</tr>
<tr>
<td>7665-12U</td>
<td>T7300</td>
<td>2.00 1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>80G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 4965AGA™</td>
<td>T7500</td>
<td>Blue</td>
<td>6 Business32 W G P May 07</td>
</tr>
<tr>
<td>7665-13U</td>
<td>T7500</td>
<td>2.20 1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>120G</td>
<td>5400</td>
<td>DVD:RW</td>
<td>Intel 4965AGA™</td>
<td>T7500</td>
<td>Blue</td>
<td>6 Business32 W G P May 07</td>
</tr>
<tr>
<td>7665-25U</td>
<td>T7300</td>
<td>3.00 1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>256G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 4965AGA™</td>
<td>T7500</td>
<td>Blue</td>
<td>6 Business32 W G P Sep 07</td>
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<tr>
<td>7665-2EU</td>
<td>T7500</td>
<td>2.20 1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>120G</td>
<td>5400</td>
<td>DVD:RW</td>
<td>Intel 4965AGA™</td>
<td>T7500</td>
<td>Blue</td>
<td>6 Business32 W G P Sep 07</td>
</tr>
<tr>
<td>7665-3UI</td>
<td>T7500</td>
<td>3.00 1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>256G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel 4965AGA™</td>
<td>T7500</td>
<td>Blue</td>
<td>6 Business32 W G P Jan 08</td>
</tr>
</tbody>
</table>

### Positioning Processor
- **Intel® Core™ 2 Duo processor T7100, T7300, or T7500 with dual-core.** Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300/T7500: 4MB shared L2 cache

### Memory
- **1GB** std / **4GB max** 8± PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

### Diskette drive/EIDE Combo
- None (optional USB-based diskette drive)
- Some: DVD burner, Super Multi-Burner (40Y6823) dual-layer, removable UltraSlim Bay
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- **80GB** (5400 rpm) or **120GB** (5400 rpm)
- **SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen/Display/ThinkPad Roll Cage
- **14.1" (358.1mm) WXGA+ (1440x900) color,** anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **Integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0**

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps key
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass
- **UltraNav™** multi-pointing system, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions

### Weight
- **4-cell:** 1.41 lb (643g) or **1.09 lb (495g)**
- **6-cell:** 1.82 lb (828g) or **1.26 lb (572g)**

### Case material
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Lithium Ion 4-cell or 6-cell, supports unique 2nd battery in UltraSlim Bay
- **4-cell:** up to 2.5 hr; **6-cell:** up to 3.8 hr; **6-cell plus UltraBay battery: up to 5.3 hr**

### Chipset
- Mobile Intel® PM965 Express Chipset (Memory Controller Hub);
- ICH8M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / LPC bus (WPCN385 Super I/O, Atmel® 97C3203 TPM)

### PC Card Std slot
- One Type I or Type II slot, CardBus 32-bit

### Smart Card Reader
- Some: Smart Card Reader

### Multicard Reader Ports
- Some: 4-in-1 reader (MultiMediaCard, Mem Stick PRO, Sec Digital, xD Picture-card™)
- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

### Wireless antenna
- UltraConnect™ II antenna / on-off switch for all wireless radios
- Intel 2126AGN™, 2127AGN™, 2128AGN™, 2129AGN™, 2130AGN™, 2132AGN™, 2133AGN™
- Two Mini PCI Express slots / only 802.11n is customer upgradable
- 11a/b/g wireless, Mini PCIe adapter, Intel Wireless WiFi Link 4965AG
- **WWAN**
- **None**
- **ThinkPad Roll Cage**
- **None**
- **Modem**
- **56K V.92** modem in Communications Daughter Card socket
- **Bluetooth™**
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator
- **Ethernet**
- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PXE
- **Intel AMT**
- Intel Active Management Technology (IAMT)
- **Audio support**
- High Definition (HD) Audio, AD1849AD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack
- **Security**
- Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**
- Trusted Platform Module™, Atmel chip, TCG 1.2-compliant
- **Fingerprint reader**
- FingerRest reader on palm rest, supports the security chip

### Limited warranty
- 3-years/1-year battery, limited onsite service™, 8 am - 5 pm Mon / Fri coverage excluding holidays, next business day response time / service upgrades available

### 1GB PC2-5300 DDR2 SODIMM
- 40Y7734 T/R 14W Standard Battery 4-cell
- 41U3196 T/R 14W Enhanced Battery 6-cell
- 41U3198 T/R 14W High Capacity Batt 9-cell
- 43R2499 T/R 14W Standard Battery 4-cell
- 43R9250 T/R 14W Enhanced Battery 6-cell
- 43R8460 T/R 14W Standard Battery 4-cell
- 43R8461 T/R 14W Standard Battery 4-cell
- 43R8462 T/R 14W Standard Battery 4-cell
- 43R8463 T/R 14W Standard Battery 4-cell
- 43R8464 T/R 14W Standard Battery 4-cell

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See footnotes for important warranty information. © Lenovo

US models announced May 9 or September 4, 2007 or January 8, 2008

US models withdrawn effective May or November 2008
**ThinkPad T61 14W (GMA Graphics) - Education (EasyServ) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe Card</th>
<th>Blue-tooth</th>
<th>Vista preload</th>
<th>Educ preload</th>
<th>Limited warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>7659-1NU T7300</td>
<td>Core™ 2 Duo processor T7300 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>Intel® GMA X3100, integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock</td>
<td>Sata</td>
<td>11a/b/g</td>
<td>Tablet Slot</td>
<td>None</td>
<td>Business32</td>
<td>K12 EasyServ W</td>
<td>May07</td>
</tr>
</tbody>
</table>

- These models have an EasyServ™19 depot repair service 3-year limited warranty These educational models are available only to public or private K-12 or higher accredited schools organized and operate exclusively for educational purposes for use by qualified students and teachers.

**Positioning**

- Processor: Premiere performance; two spindles
- Memory: 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in one socket; one socket available

**Diskette drive**

- None (use optional USB-based diskette drive)

**EIDE Combo**

- Some: DVD-ROM/CD-RW, 24x/24x/24x/8x speed, removable from Ultrabay Slim

**EIDE DVD/RW**

- Some: DVD burner, Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

**Ultrabay Slim**

- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

**Serial ATA disk**

- 80GB (5400 rpm) / 120GB (5400 rpm)

**Widescreen display**

- Some: 14.1” (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10, 300:1
- Some: 14.1” (358.1mm) WXGA+ (1440x930) color, anti-glare, 200 nits, 16:10, 300:1

**Camera**

- None

**Graphics**

- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys

**TrackPoint®**

- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

**Touchpad**

- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**ThinkLight™**

- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 6-cell: 14.1W (WXDoH): 13.2” x 10.2” x 1.09–1.26”; 335 x 261mm x 27.6–31.9mm
- 6-cell: starting at 5.3 lb (2.4kg)

**Weight**

- Case material: Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Battery: Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
- Battery: 6-cell: up to 5.7 hr, 6-cell plus Ultrabay battery: up to 7.2 hr

**Chipset**

- Mobile Intel® GM965 Express Chipset (Graphics Memory Controller Hub);ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, x1 PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon™ R-8487 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)

**PC Card Slot**

- ExpressCard slot

**Smart Card Reader**

- None

**Multicard Reader**

- 4-in-1 reader (MultimediaCard, Mem Stick PRO, Sec Digital, x-DPicture Card™)

**Ports**

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a/2000 standard)

**Wireless antenna**

- Mobile Intel® Pro/Wireless 4225™ II a/b/g/n and Mobile Media Center 4225™ II a/b/g/n Antennas

**Power**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security**

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

- None

**Limited warranty**

- 3-years/1-year battery; EasyServ™19 depot repair service / service upgrades available

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**Supports ThinkVantage® technologies**

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service17 24 hour x 7 day toll-free support during the warranty period12 via 800-425-7378

**Preloaded operating system**

- - Microsoft® Windows® Vista® Business Edition (32-bit)
- - Vista Basic logo

**Preloaded applications**

- - Microsoft Office OneNote® 2007 (and CD)

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**See footnotes for important warranty information**

US models announced on May 9, 2007

US models withdrawn effective June or November 2008

© Lenovo (ML1-5) November 2008
**ThinkPad T61u 14W 7659 (GMA) - Education (EasyServ) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proc-essor</th>
<th>GHz</th>
<th>Memory</th>
<th>Graphics</th>
<th>Cam-era</th>
<th>Display</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Vista</th>
<th>Workhorse (W)</th>
<th>Limited warranty (Gbl G)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7659-N2U</td>
<td>T8300</td>
<td>2.40</td>
<td>1GB</td>
<td>14.1&quot; WXGA</td>
<td>GMA</td>
<td>Cam 80G</td>
<td>5400 Combo</td>
<td>11a/b</td>
<td>None</td>
<td>4-in-1 Blue</td>
<td>Business3</td>
<td>EasyServ No Feb 08</td>
<td></td>
</tr>
<tr>
<td>7659-N2U</td>
<td>T9300</td>
<td>2.50</td>
<td>1GB</td>
<td>14.1&quot; WXGA</td>
<td>GMA</td>
<td>Cam 100G</td>
<td>7200 DVD RW</td>
<td>11a/b</td>
<td>None</td>
<td>4-in-1 Blue</td>
<td>Business3</td>
<td>EasyServ No Feb 08</td>
<td></td>
</tr>
<tr>
<td>7659-05U</td>
<td>T8300</td>
<td>2.50</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>GMA</td>
<td>Cam 160G</td>
<td>7200 DVD RW</td>
<td>11a/b</td>
<td>None</td>
<td>4-in-1 Blue</td>
<td>Business3</td>
<td>EasyServ No Apr 08</td>
<td></td>
</tr>
</tbody>
</table>

**These models have an EasyServ**

*ThinkPad T61u 14W 7659 (GMA) - Education (EasyServ) - withdrawn*

- These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use for qualified students and teachers.

---

**Positioning Processor**

- **Premiere performance; two spindles**
- Intel® Core™ 2 Duo processor T8300 or T9300 with dual-core.
- Intel 64 Technology. Enhanced Intel SpeedStep technology™, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus:
  - T8300: 3MB L2 cache; T9300: 6MB shared L2 cache

**Memory**

- 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket, one socket available

**Diskette drive**

- None (use optional USB-based diskette drive)

**EIDE Combo**

- Some: DVD-ROM/CD-RW, 24X/24X/24X/8X speeds, removable from Ultrabay Slim
- Some: DVD burner, Multi-Burner (40Y6623) dual-layer, removable Ultrabay Slim
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- 5400 rpm (7200 rpm), or 10000 rpm (7200 rpm) / SATA 1.5GB/s, 9.5mm, high removable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**EIDE DVD:RW**

- Ultrabay Slim

**Serial ATA disk**

- One slot (Type I, Type II), CardBus 32-bit, integrated door

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**Battery - type**

- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
- 6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

---

**Chipset**

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
- ICH8M-Enhanced I/O Controller Hub 0.5GB/s, ATAPI EIDE;
- PCI Express x1, PCI bus, USB bus, LPC bus, [Bluetooth], [fingerprint] / PCI bus (Rico® R5C847 Cardbus/1394/1394), LPC bus (WPCN385 Super I/O, Atmel® 973203 TPM)

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**Wireless antenna**

- UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express**

- Two Mini PCI Express slots / only 802.11wireless is customer upgradable
- 11a/b/g/5GHz

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**Operating systems**


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**Preloaded applications**

- Microsoft Office OneNote® 2007 (and CD)
- Education software
- VirtualSource Library College Edition
- Adobe® Instructor Resource Cntnr
- Adobe Digital School Collection
- Photoshop Elements (and CD)
- Premier Elements (and DVD)
- Acrobat 8 Professional
- IBM Lotus Notes
- Windows Live Search
- Picasa from Google
- Some: Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo, DVD:HW) ± Corel® WinDVD® (combo, DVD:RW)

---

**Other accessories on O-T61 sheet**

- ThinkVision L2440x Wide 24" Monitor
- 90W Slim AC/DC Combo Adapter
- T/R 14W High Capacity Batt 9-cell
- ThinkPad Shock Mounted Hard Drive, Active Protection System™
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day worldwide toll-free support during the warranty period via 800-426-7378

---

**Preloaded operating systems**

- IBM Lotus Notes
- Windows Live Search
- Picasa from Google
- Some: Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo, DVD:HW) ± Corel® WinDVD® (combo, DVD:RW)

---

**Limited warranty**

- 3-years/1-year battery - EasyServ*¹¹™ depot repair service / service upgrades available

---

**Supported ThinkVantage technologies**

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- 24 hour x 7 day nationwide toll-free support during the warranty period via 800-426-7378

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**See footnotes for important warranty information**

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© Lenovo (ML-2)-May 2009

US models withdrawn effective May 2009
ThinkPad® T61 14W (NVIDIA® Graphics) - Education (EasyServ) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor T7300 with dual-core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1GB std / 4GB max‡ / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, 200-pin SO-DIMM sockets; non-Ilacis: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>Widescreen Display</td>
<td>14.1&quot; (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
</tr>
<tr>
<td>Graphics</td>
<td>NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock</td>
</tr>
<tr>
<td>Keyboard</td>
<td>6-cell, 14.1W (WxHxD): 13.2&quot; x 10.2&quot; x 1.09-1.26&quot;; 335 x 261mm x 27.6-31.9mm 6-cell; starting at 5.3(2.4kg)</td>
</tr>
<tr>
<td>Weight‡</td>
<td>6-cell: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim 6-cell: up to 3.8 hr; 6-cell plus Ultrabay battery; up to 5.3 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub);ICH5M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [finger print]) / PCI bus (Ricoh® R5347 Cardbus/1394/Multicard)</td>
</tr>
<tr>
<td>Port</td>
<td>Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)</td>
</tr>
<tr>
<td>Wireless Antenna</td>
<td>UltraConnect II™ antenna / on-off switch for all wireless radios</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Two Mini PCI Express slots / service upgrades²² avail</td>
</tr>
<tr>
<td>WWAN</td>
<td>None</td>
</tr>
<tr>
<td>Turbo Memory</td>
<td>None</td>
</tr>
<tr>
<td>Modem</td>
<td>56K V.92 modem in Communications Daughter Card socket</td>
</tr>
<tr>
<td>Bluetooth™</td>
<td>Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Gigabit ethernet on systemboard, Intel 82556MEM Nineveh (PHY), PCI x1 (GLCX), PXE</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (AMT)</td>
</tr>
<tr>
<td>Audio Support</td>
<td>High Definition (HD) Audio, AD1984 HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security Chip</td>
<td>Trusted Platform Module, Atmel chip, TCG 1.2-compliant</td>
</tr>
<tr>
<td>FingerPrint Reader</td>
<td>FingerPrint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
</tbody>
</table>

Limited warranty ³ - 3-years/1-year battery - EasyServ⁴,²¹ depot repair service / service upgrades²² avail

Preloaded operating system³⁰
- Vista Premium logo

Preloaded applications¹⁴
- Microsoft Office OneNote® 2007 (and CD)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions) 
- Diskkeeper® Home
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DvD=RW)
- Corel® WinDVD® (DvD=RW)

Supports ThinkVantage® technologies

90-watt (NVIDIA) AC adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day²² toll-free support during the warranty period²² via 800-426-7378

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See footnotes for important warranty information
US model announced on May 9, 2007
US model withdrawn effective November 2008
### ThinkPad T61u 14W 7663 (NVIDIA) - Education (EasyServ) - withdrawn

#### Personal Systems Reference (PSREF)

- **Processor**: Intel® Core™ 2 Duo processor T9300 with dual-core
- **Memory**: 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- **Graphics**: NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI-D-pass through support to optional Advanced Mini Dock or Advanced Dock
- **Disk**: UltraBay Slim Drive (SSD)
- **Battery**: 10 cell, supports unique 2nd battery in Ultraslim Bay
- **Display**: WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio
- **Dimensions**: 14.1" x 9.5" x 0.9" (358.1 mm x 241.9 mm x 23.1 mm)
- **Weight**: 6.6 lbs (3.0 kg)
- **Post-warranty annual maintenance agreements** at lenovo.com/thinkplus/warranty

#### Workhorse (W)

- **Limited warranty**: 3-years / 1-year battery - EasyServ® 2010 [depot service / service upgrades available]

#### Processor Compatibility

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Graphics controller</th>
<th>Cam-ERA</th>
<th>Mini PCI</th>
<th>Mini PCI</th>
<th>WWAN</th>
<th>Card slot</th>
<th>Blue-TOOTH</th>
<th>Vista</th>
<th>Preloaded operating system</th>
<th>Limited warranty**</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T9300</td>
<td>Intel 64 Technology, Enhanced Intel SpeedStep technology¹, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 6MB shared L2 cache</td>
<td>2.50</td>
<td>1GB 14.1&quot; WXGA+ 128MB</td>
<td>Cam 100G 7200 DVD-RW</td>
<td>11a/b</td>
<td>None</td>
<td>None</td>
<td>4-in-1 Blue</td>
<td>None</td>
<td>None</td>
<td>Business32 EasyServ</td>
<td>Feb 08</td>
<td>EasyServ Business32 EasyServ No Apr 08</td>
<td></td>
</tr>
<tr>
<td>T930U</td>
<td>Intel 64 Technology, Enhanced Intel SpeedStep technology¹, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 6MB shared L2 cache</td>
<td>2.50</td>
<td>2GB 14.1&quot; WXGA+ 128MB</td>
<td>Cam 160G 7200 DVD-RW</td>
<td>11a/b</td>
<td>None</td>
<td>None</td>
<td>4-in-1 Blue</td>
<td>None</td>
<td>None</td>
<td>Business32 EasyServ</td>
<td>Feb 08</td>
<td>EasyServ Business32 EasyServ No Apr 08</td>
<td></td>
</tr>
</tbody>
</table>

#### Diskette drive

- **EIDE DRIVE:RW**: DVD burner, Super Multi-Burner (40Y6823) dual-layer, removable UltraBay Slim
- **UltraBay Slim Drive**: One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- **Serial ATA disk**: 100GB (7200 rpm) or 160GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

#### Widescreen display

- **Camera**: Camera on top of screen, 3-megapixel, fixed focus, USB 2.0
- **Touchpad**: UltraNav™ multi-input pointing system, touch pad below keyboard, Tap Zones

#### Chipset

- **Mobile Intel PM965 Express Chipset**: Mobile Memory Controller Hub;ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch® R5C847 Cardbus/1394/Multicard)
- **PC Card**: One slot (Type I, Type II), CardBus 32-bit
- **Porta**: 4-in-1 reader (MultiMediaCard, Memory Stick PRO, Secure Digital, xD-Picture Card™)
- **Wireless antenna**: UltraConnect™ II antenna / on-off switch for all wireless radios
- **Mini PCI Express**: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

#### Limited warranty

- **3-years / 1-year battery - EasyServ® 2010** [depot service / service upgrades available]

#### Features

- These models have an EasyServ™ depot repair service 3-year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

#### Preloaded applications

- **Microsoft Office OneNote® 2007** (and CD)
- **Education software**: VitalSource Library Edition
- **Adobe® Instructor Resource Cntr**: Adobe Digital School Collection
- **Photoshop Elements (and CD)**: – Premier Elements (and DVD)
- **Acrobat® Professional**: – Contributed

- **Rescue and Recovery™**
- **Access Connections™**
- **Client Security Solution™**
- **ThinkVantage Productivity Center
- **System Migration Assistant
- **Norton Internet Security™** (90 days of virus definitions)
- **Diskeeper® Home
- **PC-Doctor™ (diagnostics)**
- **ThinkPad Utilities (Power Manager and Presentation Director)
- **Windows Live™ Toolbar
- **Windows Live Search
- **Picassa from Google
- **Some**: FingerPrint Software
- **Microsoft Office 2007 Trial (60-day)**
- **Sonic RecordNow and Drive Letter Access (DVD-R/W)
- **Corel® WinDVD™ (DVD-R/W)

#### Post-warranty annual maintenance agreements

- **ThinkPlus® 22 2-year LOR® 9x5 9B 41C9175**
- **ThinkPad Roll Cage and Top Cover**
- **Roll Cage (one-piece magnesium)**
- **ENERGY STAR® 4.0-compliant**
- **RoHS-compliant**
- **International Warranty Service**
- **24 hour x 7 day™ toll-free support during the warranty period**

#### Details

- **Supporns ThinkVantage® technologies**

#### Additional Resources

- **Lenovo® ThinkVantage Productivity Center
- **System Migration Assistant
- **Norton Internet Security™**
- **FingerPrint Reader**

#### Accessories

- **Lenovo® ThinkPad Advanced Dock     250310U
- **Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725
- **2GB PC2-5300 DDR2 SODIMM 40Y7734
- **ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643
- **Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725
- **128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406
- **250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410
- **USB 2.0 Security Memory Key 4GB 4I1U5120
- **USB 2.0 Ultra Secure Memory Key 8GB 45I5918
- **USB 2.0 Super Multi-Burner Drive 41N5655
- **USB 2.0 Lenovo Enhanced Burner Drive 43R8770
- **ThinkPad Adjustable Notebook Stand 40Y7676
- **ThinkPad Integrated Port Replicator 43R2476
- **ThinkPad Advanced Mini Dock 2504101
- **ThinkPad Advanced Dock 250310U
- **Other accessories at O-T61 sheet

#### Notes

- **Lenovo® Personal Systems Reference (PSREF)**
- **See footnotes for important warranty information**
- **US models announced February 19 or April 10, 2008**
- **US models withdrawn effective May 2009**
### ThinkPad T61u 14W 7659 (GMA) - Education (Linux) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics</th>
<th>Optical</th>
<th>Wireless</th>
<th>WWAN</th>
<th>Bluetooth</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Workhorse</th>
<th>Global (G)</th>
<th>Entry (E)</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>7659-3AU</td>
<td>Intel® Core™ 2 Duo processor T8300 with dual-core</td>
<td>1GB</td>
<td>WXGA 14.1” (1280x800) color</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6-cell, supports unique 2nd battery in Ultrabay Slim</td>
<td>Not published</td>
<td>3-year/1yr battery - EasyServ, depot repair service, service upgrades available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Preloaded operating system**
  - SUSE® Linux® Enterprise Desktop® 10 Service Pack 1

- **Preloaded applications**
  - None

### Supported devices
- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Finger print reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

### Non-supported devices
- (only some listed)
  - Intel Centrino®
  - Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad 11n wireless
  - WWAN
  - Active Protection System™
  - ThinkVantage® button
  - Security chip
  - Intel Turbo Memory
  - Intel AMT technology
  - Integrated camera

### Non-supported applications
- (only some listed)
  - ThinkPad Utilities
  - ThinkVantage technologies
  - Presentation Director
  - Encrypted DVD playback
  - Keyboard Customizer

### Other accessories at lenovo.com/thinkplus/warranty

- **ThinkPlus™**
  - 2-year LOR™ 9x5 NBD
  - 5-year LOR 9x5 NBD
  - 4-year P&L P/U Depot
  - 5-year LOR 9x5 NBD
  - 4-year P&L P/U Depot

- **ThinkPad Roll Cage and Top Cover**
  - Roll Cage (one-piece magnesium)

- **RoHS-compliant International Warranty Service**
  - 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

- **See footnotes for important warranty information**
  - *Intel Centri™n® processor technology
  - © Lenovo
  - (ML2-3) May 2009
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Blue-tooth cells</th>
<th>Battery type</th>
<th>Card slot</th>
<th>Workhorse (W)</th>
<th>Workbench Local Entry (G)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7663-3MU T8300</td>
<td>2.40</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>120G 5400 DVD±RW</td>
<td>11a/b/g</td>
<td>None</td>
<td>54</td>
<td>Blue</td>
<td>6-cell</td>
<td>SLED</td>
<td>Nov</td>
<td>Feb 08</td>
<td></td>
</tr>
</tbody>
</table>

Positioning Processor
Premiere performance; two spindles
Intel® Core™ 2 Duo processor T8300 with dual-core,
Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-italics: standard memory in 1 socket; 1 socket available

Diskette drive
EIDE DVD±RW
UltraBay Slim
Serial ATA disk
None (use optional USB-based diskette drive)
DVD burner, Super Multi-Burner (40Y6823) dual-layer, removable Ultrabay Slim
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 120GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

Widescreen display
14.1" (358.1mm) WXGA+ (1440x900) color, anti-glares, 200 nits, 16:10, 300:1, 300:1 contrast ratio

Graphics
NVIDIA® Quadro™ NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys
Touchpad
UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

Dimensions
6-cell 14.1W (WxDxH): 13.2" x 10.2" x 1.09—1.26", 335 x 261mm x 27.6—31.9mm

Weight
6-cell: starting at 5.3 lb (2.4kg)

Wireless antenna
UltraConnect™ 2 on/off switch for all wireless radios

Mini PCI Express
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

WWAN
None

Modem
56K V.92 modem in Communications Daughter Card socket

Bluetooth
Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Ethernet
Gigabit ethernet, Intel 82566EM Nineveh (PHY), PCI x1 (GLCI), PXE

Audio support
High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack, headphone plug

Security
Power-on password, hard disk password, supervisor password, security keylock

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Preloaded operating system
- SUSE® Linux™ Enterprise DeskTop10 Service Pack 1

Preloaded applications
None

Supported devices
(only some listed)
- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Bluetooth reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

Non-supported devices
(only some listed)
- Intel 4965AG, Intel 4965AGN, ThinkPad 11a/b/g
- ThinkPad 11n wireless
- WWAN
- Active Protection System™
- ThinkVantage® button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

Non-supported applications
(only some listed)
- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

Limited warranty
3-years / 1-year battery - EasyServ™, 19 depot repair service / service upgrades available

1GB PC2-5300 DDR2 SODIMM | 40Y7734 | T/R 14W Standard Battery 4-cell | 41U3196 | 1GB PC2-5300 DDR2 SODIMM | 40Y7735 | T/R 14W Enhanced Battery 6-cell | 41U3198 |
128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) | 43N3406 | ThinkPad External Battery Charger | 40Y7625 |
ThinkPad DVD Ultrabay Slim Burner (flat) | 41NS643 | 90W Slim AC/DC Combo Adapter | 41N8460 |
14W High Capacity Batt 9-cell | 43R2499 | ThinkPad Business Topload Case | 43R2476 |
120GB Sata 5400 rpm | 43NS430 | ThinkPad Business Backpack | 43R2482 |
ThinkPad Essential Port Replicator | 43K9250 | ThinkVision® L2240p Wide 22" Monitor | 442HB6 |
ThinkPad Advanced Mini Dock | 250410U | ThinkVision L2440p Wide 24" Monitor | 442HB2 |
ThinkPad Advanced Dock | 250310U | Other accessories at lenovo.com/accessories |
Check Linux compatibility for other accessories | | | |

See footnotes for important warranty information
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(ML2-4) May 2009
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Blue-tooth</th>
<th>Vista</th>
<th>Educ</th>
<th>Limited warranty</th>
<th>Workhorse (W)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7661-1NU T7300</td>
<td>2.00</td>
<td>1GB 14.1&quot;WXGA GMA</td>
<td>80G 5400 Combo</td>
<td>11a/b/g</td>
<td>None</td>
<td>4-in-1</td>
<td>Blue</td>
<td>Business32 K12</td>
<td>W</td>
<td>May07</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>7661-1PU T7300</td>
<td>2.00</td>
<td>1GB 14.1&quot;WXGA GMA</td>
<td>80G 5400 Combo</td>
<td>11a/b/g</td>
<td>None</td>
<td>4-in-1</td>
<td>Blue</td>
<td>Business32 HE</td>
<td>W</td>
<td>May07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7661-XAU T7300</td>
<td>2.00</td>
<td>1GB 14.1&quot;WXGA+ GMA</td>
<td>120G 5400 DVD RW</td>
<td>11a/b/g</td>
<td>None</td>
<td>4-in-1</td>
<td>Blue</td>
<td>Business32 HE</td>
<td>W</td>
<td>May07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These models have a limited onsite service² - 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use for students and teachers.

### Preloaded operating system
- Microsoft Windows Vista®
- - 64-bit
- Vista Basic logo

### Preloaded applications²
- Microsoft Office OneNote® 2007 (and CD)
- Some (K12): K-12 education software
- - VitalSource Library School Edition
- - Adobe Instructor Resource Center
- - Adobe Digital School Collection
- - - Photoshop Elements 5 (and CD)
- - - Premiere Elements 3 (and DVD)
- - Acrobat 8 Professional (and CD)
- - - Contribute 4 (and CD)
- - Some (HE): Higher education software
- - - VitalSource Library College Edition
- - - Adobe Instructor Resource Center
- - - Adobe Photoshop Elements 5 (and CD)
- - - Adobe Premier Elements 3 (and DVD)
- - - Rescue and Recovery™
- - Access Connections⁵
- - Client Security Solution⁷
- - ThinkVantage Productivity Center
- - ThinkVantage System Update
- - System Migration Assistant
- - Norton Internet Security™ (90 days of virus definitions)
- - - Diskeeper® Home
- - - PC-Doctor® (diagnostics)
- - - ThinkPad Utilities (Power Manager and Presentation Director)
- - - Picasa from Google
- - - Microsoft Office 2007 Trial (60-day)
- - - Sonic RecordNow and Drive Letter Access (combo, DVD RW)
- - - Corel® WinDVD® (combo, DVD RW)

### Preloaded applications³
- Microsoft Windows Vista®
- - 32-bit
- - Vista Basic logo

### Limited warranty
- 3-years/1-year battery, limited onsite service² - 3-year limited warranty
- 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

See footnotes for important warranty information

US models announced May 9, 2007
US models withdrawn effective June or November 2008

© Lenovo (ML1-7) November 2008
This model has a limited onsite service\(^2\) of 3-year limited warranty

This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor
Premiere performance; two spindles
Intel® Core™ Duo processor T7300 with dual-core,
Intel 64 Technology, Enhanced Intel SpeedStep® technology\(^1\), Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory
1 GB std / 4 GB max\(^\circ\) / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sock/s, not-illacs: standard memory in one socket; one socket available

Diskette drive
None (use optional USB-based diskette drive)

EIDE DVD±RW
None

Serial ATA disk
SATA 1.5GB/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Battery - life
6-cell: up to 3.8 hr; 6-cell plus Ultrabay battery: up to 3.5 hr

Battery type
Lithium Ion

Weight
1.09-1.26 lbs (200g-542g)

Dimensions
13.2" x 10.2" x 1.09–1.26"; 335 x 261mm x 27.6–31.9mm

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys

TrackPoint®
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar\(^2\), magnifying glass

Touchpad
UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

ThinkLight™
Illuminates the keyboard to improve visibility in low-light conditions

Chipset
Mobile Intel PM965 Express Chipset (Memory Controller Hub):ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus ([Ricoh® R9C847 Cardbus/1394/Multicard] / PCI bus (WPON385 Super I/O, Atmel® 97SC3203 TPM)

PC Card Std slot
One Type I or Type II slot, CardBus 32-bit

ExpressCard slot
None

Smart Card Reader
None

Multicard Reader
4-in-1 reader (MultiMediaCard, Memory Stick PRO™, Secure Digital, xD-Picture Card™)

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna
UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

WWAN
None

Turbo Memory
None

Modem
56K V.92 modem in Communications Daughter Card socket

Bluetooth™
Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Ethernet
Gigabit ethernet on systemboard, Intel 82556/57/Athlon (PHY), PCI x1 (GLC), PXE

Intel AMT
Intel Active Management Technology (AMT)

Audio support
High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-year battery, limited onsite service\(^2\), 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

Preloaded operating system

Preloaded applications
- Microsoft Office OneNote 2007 (and CD)
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager / Power Director)
- Adobe® Reader
- Windows Live® Toolbar
- Windows Live Search
- Picasa from Google
- Windows Media Player
- Adobe Premiere Elements 3
- Adobe Photoshop Elements 5
- Adobe Instructor Resource Center
- VitalSource Library Edition
- Norton Norton Internet Security
- Microsoft Office Access (DVD +RW)
- Adobe Reader
- Sonic RecordNow and Drive Letter (and CD)
- ThinkVantage System Update
- Microsoft Office OneNote 2007
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced May 9, 2007
US model withdrawn effective November 2008

© Lenovo (ML1-8) November 2008

\(^1\) See note footnotes for important warranty information
\(^2\) This model has a limited onsite service of 3-year limited warranty

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US model announced May 9, 2007

US model withdrawn effective November 2008
### ThinkPad T61 15W 6463 (GMA) - Education (EasyServ) - withdrawn

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*This model has an EasyServ™/19 depot repair service 3-year limited warranty*

This educational model is available only to public or private K-12 or higher accredited schools operated exclusively for educational purposes for use by qualified students and teachers.

### Preloaded operating system

- Vista Basic logo

### Preloaded applications

- Microsoft Office OneNote® 2007
- Some (K12): K-12 education software
- VitalSource Library School Edition
- Adobe Instructor Resource Center
- Adobe Digital School Collection
- Photoshop Elements 5 (and CD)
- Premier Elements 3 (and DVD)
- Acrobat 8 Professional (and CD)
- Contribute 4 (and CD)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- InterVideo WinDVD (DVD:RW)

**Supports ThinkVantage technologies**

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**Lenovo thinkplus/warranty agreements**

See footnotes for important warranty information

US model announced on May 31, 2007

US model withdrawn effective June 2008

© Lenovo (CR3-3) July 2008
This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning

Processor: Premier performance; two spindles

Memory: 1GB std / 4GB max / PC2-5300 667Mz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Diskette drive: None (use optional USB-based diskette drive)

UltraBay Slim: One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

Dimensions: 15.4” (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera: None

Graphics: Intel Graphics Media Accelerator X3100, integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Chipset: None (Half-Mini PCI Express slot)
## ThinkPad T61 15W 6465 (GMA) - TopSeller - withdrawn

**Processor**

Intel® Core™ 2 Duo processor T5270 with dual-core technology, Intel Dynamic Acceleration, Execute Disable Bit, 800MHz system bus, and 2MB shared L2 cache or

* Intel Core 2 Duo processor T7100, T7250, T7500, T8100, or T8300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtex-II Pro GT Technology, 800MHz system bus; T7100/T7250/2MB cache; T7500: 4MB L2 cache; T8100/T8300: 3MB L2 cache

**Memory**

- 512MB or 1GB std / 4GB max

Diskette drive

None (use optional USB-based diskette drive)

**Graphics**

Intel Media Graphics Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

TrackPoint® touchpad

Touch pad

ThinkLight™

* Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

15.4" (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Chipset**

Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH6M-Enhanced I/O Controller Hub SATAM-100 IDE, PCI Express x1, PCI bus, USB bus, LPC bus, [Bluetooth], [fingerprint] / PCI bus (Ricoch R5C847 Cardbus/1394/Multicard) / LPC bus (Windows 98 Super I/O, Atmel 9757SC3203 TPM)

**Wireless antenna**

UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express

Three Mini PCI Express slots / only 802.11 wireless is customer upgradable

**Modem**

- 56K V.92 modem in Communications Daughter Card slot

**Bluetooth**

5.0 Some: Bluetooth 2.0 wireless, USB 2.0 interface viaICH® 8, LED indicator

**Power**

- 11a/b/g wireless, Mini PCIe adapter, Intel Wireless WiFi Link 4965AG

**Security**

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

1-year - EasyServ®/7 warranty / depot repair service / service upgrades available

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### Preloaded operating system

- Some: Microsoft Windows Vista Business (32-bit)

### Preloaded applications

- Adobe Acrobat Reader
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- PC-Doctor® (diagnostics)
- FingerPrint Software (fingerprint models)
- Microsoft Office OneNote® 2007 and CD-ROM
- Microsoft Office 2007 Trial (60-day)
- Multimedia Center for Think Offerings (XP Pro models)
- Sonic RecordNow and Drive Letter Access (Combo, DVD+RW)
- Corel® WinDVD Creator (XP Pro DVD+RW models)

Supports ThinkVantage technologies

65-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant

ROHS-compliant

International Warranty Service17 24 hour x 7 day toll-free support during the warranty period12 via 800-426-7378

ThinkPlus® 1-year LOR 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 2-year P&L U Depo

ThinkPlus 3-year P&L U Depo

ThinkPlus 4-year P&L U Depo

ThinkPlus 5-year P&L U Depo

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See footnotes for important warranty information

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US models announced May 31, July 10, October 3, November 2007

* Intel Centrino® processor technology

* Intel Centrino with vPro® technology

October 30, or December 6, 2007; or January 8 or May 13, 2008

| Type-model | Processor | Memory | Disk S tying | Mini PCI Express | Mini PCI Express | Card slot | Bluetooth | Finger | Battery | Preload | Avali date |
|------------|-----------|--------|--------------|-----------------|-----------------|-----------|-----------|----------------------------|---------|--------|----------|-----------------|
| 6465-9ZU T5270 | 1.40 GHz | 1 GB | 15.4" WXGA | GMA | 80GB | 4500 | Combo | None | 54 | 6 | Business32 Apr 08 |
| 6465-A2U T8100 | 2.10 GHz | 2 GB | 15.4" WXGA | GMA | 160GB | 5400 | DVD/RW | None | 54 | 6 | Business32 Apr 08 |
| 6465-ASU T8300 | 2.40 GHz | 2 GB | 15.4" WXGA | GMA | 100GB | 7200 | DVD/RW | None | 54 | Blue | Business32 Apr 08 |

* These small and medium business (SMB) models are part of the US TopSeller™ Program
* These models have a 1-year limited warranty**

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| Positioning Processor | Premiere performance; two spindles
| Intel® Core™ 2 Duo processor T5270 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology1, Intel Dynamic Acceleration, Execute Disable Bit, 800MHz system bus, and 2MB shared L2 cache or Intel Core 2 Duo processor T8100 or T8300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology1, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache |

| Memory | 1GB or 2GB 4GB standard / 4GB max17 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 20-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available

| Diskette drive | None (use optional USB-based diskette drive)
| EIDE Combo DVD:RW | Some: DVD-ROM/CD-RW, 24X/24X/24X/1X speed, removable from Ultrabay Slim
| Ultrabay Slim | DVD burner, Ultrabay Slim Burner (41NS643), dual-layer, removable from Ultrabay Slim
| Serial ATA disk | One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 80GB (5400 rpm), or 160GB (5400) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™ |
| Widescreen display | 15.4" (391mm) WXGA (1280x800) color, anti-glares, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio |
| Camera | None |
| Graphics | Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock |
| Keyboard | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys
| TrackPoint® | TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar,13 magnifying glass
| Touch pad | UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions |
| ThinkLight™ | 15.4" models (WxDxH): 14.1" x 10.0" x 1.2"-1.4", 358.4mm x 255mm x 29.8-34.5mm with optical drive and battery; starting at 5.9 lb (2.7kg) |
| Weight | Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic |
| Battery - type | Lithium Ion 6-cell supports unique 2nd battery in Ultrabay Slim |
| Battery - life | 6-cell: up to 5.5 hr; 9-cell: up to 6.5 hr; 9-cell Plus Ultrabay battery: up to 9.8 hr |
| Chipset | Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon® R5C847 CardBus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM) |
| PC Card Slot | One Type I or Type II slot, CardBus 32-bit |
| ExpressCard Slot | One ExpressCard/34 or ExpressCard/54 |
| Multicard Reader | In-1 reader (MultimediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card™) |
| Ports | Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a/2000 standard) |
| Wireless antenna | UltraConnect™ II antenna / on-off switch for all wireless radios |
| Mini PCI Express | Three Mini PCI Express slots / only 802.11 wireless is customer upgradable |
| Intel® 11a/b/g/n | Some: 11a/b/g wireless, Mini PCI adapter, Intel PRO/Wireless 3945ABG |
| Intel® 11n | Some: 11a/b/g/n wireless, Mini PCI adapter, Intel Wireless WiFi Link 4965AGN, MIMO 2x2 (Kedron) |
| WWAN | None |
| Turbo Memory | None |
| Ultra-Wideband | None (uses Half-Mini PCI Express slot) |
| Modem | 56K V.92 modem in Communications Daughter Card socket |
| Bluetooth™ | Some: Bluetooth 2.0 wireless, USB 2.0 interface via ICH6M, LED indicator |
| Ethernet | Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE support |
| Intel AMT | Intel Active Management Technology (IAMT) |
| Audio support | High Definition (HD) Audio, AD19844CJP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack support |
| Security | Power-on password, hard disk password, supervisor password, security keyhole |
| Security chip | Trusted Platform Module, Atmel chip, TC 1.2-compliant |
| Finger print reader | Some: Finger print reader on palm rest, swipe sensor, supports the security chip |
| Limited warranty14 | 1-year - EasyServ15,16 depot repair service / service upgrades12 available |

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* Rescue and Recovery™ • Access Connections™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • System Migration Assistant • Norton Internet Security™ (90 days of virus definitions) • Diskeeper® Home • PC-Doctor™ (diagnostics) • ThinkPad Utilities (Power Manager and Presentation Director) • Adobe® Reader • Windows Live™ Toolbar • Windows Live Search • Picasa from Google • FingerPrint Software (fingerprint models) • Microsoft Office 2007 Trial (60-day) • Sonic RecordNow and Drive Letter Access (Combo, DVD:RW) • Corel® WinDVD® (Combo, DVD:RW) • Supports ThinkVantage® technologies

65-watt (GMA graphics) AG adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 day toll-free support during the warranty period12 via 800-426-7378

ThinkPlus®: 1-year LOR® 9x5 NBD
ThinkPlus 2-year LOR 9x5 NBD 41C9167
ThinkPlus 3-year LOR 9x5 NBD 41C9168
ThinkPlus 4-year LOR 9x5 NBD 41C9171
ThinkPlus 5-year LOR 9x5 NBD 41C9173
ThinkPlus 2-year P&L P/U Depot 41C9169
ThinkPlus 3-year P&L P/U Depot 41C9170
ThinkPlus 4-year P&L P/U Depot 41C9172
ThinkPlus 5-year P&L P/U Depot 41C9174

See notes for important warranty information
* Powered by Intel® Centrino® processor technology
* Powered by Intel® Centrino® with vPro™ technology
© Lenovo (CR4-3) November 2008
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**ThinkPad T61 15W (GMA Graphics) - withdrawn**

### Preloaded operating system
- Some: Microsoft® Windows® XP Professional
- 6463-4VU/4XU: Vista Basic logo

### Preloaded applications
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)

### Limited warranty
- 3-years/1-year battery - EasyServ™ 10 depot service / upgrade services available
- Some: Diskeeper®
- Some: Norton Internet Security
- Windows Live™ Mail
- Windows Live™ Movie Maker
- Windows Live™ Photo Gallery
- Windows Live™ Search
- Windows Live™ Messenger
- Windows Live™ Movie Maker
- Windows Live™ Photo Gallery
- Windows Live™ Search
- Windows Live™ Messenger
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- Windows Live™ Movie Maker
- Windows Live™ Photo Gallery
- Windows Live™ Search
- Windows Live™ Messenger

See footnotes for important warranty information.

* Intel Centrino® with vPro™ technology

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US models announced May 31, 2007

US models withdrawn effective May 2007 or May 2009

(CR3-2) May 2009
ThinkPad T61 15W 6464 (GMA) - Onsite - withdrawn

Personal Systems Reference (PSREF)

Type-model Processor GHz Memory Screen display Graphics controller Disk SATA GHz / rpm EIDE optical Mini PCIe 802.11n Mini PCIe WWAN or Turbo Card slot Bluetooth cards Battery cells Vista preload Workhorse (W) GMP (P) Avail date

6464-4YU T7300 2.00 1GB 15.4” WXGA GMA 80GB 5400 Combo None Smart Blue 6 Business32 W G P Jun 07

• This model is part of the Global Models Plus program with limited onsite servicea 3-year limited warranty

Positioning Processor
Premiere performance; two spindles
Intel® Core™ 2 Duo processor T7300 with dual-core.
Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-italics: standard memory in 1 socket; 1 socket available

Diskette drive
None (use optional USB-based diskette drive)
EIDE Combo
DVD-ROM/CD-RW, 24x/24x/24x/8x speed, removable from Ultrabay Slim
Serial ATA disk
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
ATA 10GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Wireless Broadband
15.4” (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 300-1 contrast ratio
Camera
None

Graphics
Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apply keys
Touch pad
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®; magnifying glass
ThinkLight™
None (uses Half-Mini PCI Express slot)

Dimensions
15.4” models (WxDxH): 14.1” x 10.0” x 1.2–1.4”; 358.4mm x 255mm x 29.8–34.5mm with optical drive and battery; starting at 5.9 lb (2.7kg)
Weight
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
Battery - type 8-cell / supports unique 2nd battery in Ultrabay Slim
Battery - life* 6-cell: up to 5.5 hr; 9-cell: up to 8.3 hr; 9-cell plus Ultrabay battery: up to 9.8 hr

Chipset
Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) /
PCI bus (Roch®/ R8C474 Cardbus/1394/MultiCard) /
LPC bus (WPNC835 Super I/O, Atmel™ 97SC3203 TPM)

PC Card
One slot (Type I, Type II), CardBus 32-bit
ExpressCard slot
None
Smart Card Reader
None
Multicard Reader
4-in-1 reader (MultiMediaCard, Memory Stick PRO™, Secure Digital, xD-Picture Card™)

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet),
IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna
UltraConnect™ II antenna on-off switch for all wireless radios

Mini PCI Express
Three Mini PCI Express slots / only 802.11n wireless is customer upgradable

Intel 4965AG™ 11a/b/g wireless, Mini PCIe adapter, Intel Wireless WiFi Link 4965AG

WWAN
None

Turbo Memory
None

USB
None (uses Half-Mini PCI Express slot)

Modem
56K V.92 modem in Communications Daughter Card socket

Bluetooth™
Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Ethernet
Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PXE

Audio
High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader fingerprint on palm rest, swivel sensor, supports the security chip

Limited warranty* 3-years/1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades** available

1GB PC2-5300 DDR2 SODIMM 40Y7734 T/R/W/Series Li-ion Battery 6-cell 40Y6799
2GB PC2-5300 DDR2 SODIMM 40Y7735 T/R/W/Series Li-ion Battery 9-cell 40Y6797
ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643 Advanced Ultrabay Battery II 3-cell 43R8250
Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725 ThinkPad External Battery Charger 40Y7625
128GB SSD SATA 3.0Gb/s 1.8” (2.5” cover) 43N4060 ThinkPad 90W AC Adapter 40Y7659
160GB Disk 9.5mm SATA 1.5Gb/s (7200 rpm) 41N5737 90W Slim AC/DC Combo Adapter 41N8460
250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410 ThinkPad Business Topload Case 43R2476
320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411 ThinkPad Business Backpack 43R2482
USB 2.0 Ultra Secure Memory Key 8GB 45J5918 ThinkPad Deluxe Expander Case 43R2478
USB 2.0 Super Multi-Burner Drive 41N5565 ThinkPad Executive Leather Case 43R2480
ThinkPad Convertible Monitor Stand 40Y7620 ThinkVision L1700p 17” Monitor 9417HE2
ThinkPad Port Replicator 250510W ThinkVision L1940p Wide 19” Monitor 4424H86
ThinkPad Advanced Mini Dock 250301U ThinkVision L2240p Wide 22” Monitor 4422H86
ThinkPad Advanced Dock 250301U Other accessories on O-T61 sheet

Supports ThinkVantage® technologies

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service17 24 hour x 7 x 24 toll-free support during the warranty period16 via 800-426-7378
- ThinkPlus™ 22 4-year LOR® 95x NBD
- ThinkPlus 5-year LOR 95x NBD
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
* Intel Centrino® with vPro™ technology
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US model announced May 31, 2007
US model withdrawn effective May 2009

(CR3-14) May 2009

Lenovo

Preloaded operating system
- Vista Basic logo

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
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- Picasa from Google
- Printer Software
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- Sonic RecordNow and Drive Letter Access (combo)
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* These small and medium business (SMB) models are part of the US TopSeller™ Program

## Processor

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* These small and medium business (SMB) models are part of the US TopSeller™ Program

## Preloaded operating system

- Some: Microsoft® Windows® XP Professional with Vista® COA

* Vista models: Vista Premium logo

## Preloaded applications

- Some: Microsoft Office OneNote® 2007 and CD (66U, 05U, 06U models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Norton Internet Security
- PC-Doctor® (diagnostics)
- ThinkPad Utilities
- Windows Live™ Toolbar
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Multimedia Center for Think Offers (XP Pro DVD:Rw models)
- Sonic RecordNow and Drive Letter Access (DVD:Rw)
- Corel® WinDVD® (DVD:Rw)
- Corel WinDVD Creator (XP Pro DVD:Rw models)

## 90-watt (NVIDIA®) AC adapter

ThinkPad Roll Cage and Top Cover

Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant

International Warranty Service 12-hour x 7 day toll-free support during the warranty period via 800-426-7372

ThinkPlus™ 2-year LOR™ 9x5 NB

41C9175

ThinkPlus® 3-year LOR 9x5 NB

45K6021

ThinkPlus® 4-year LOR 9x5 NB

45K6022

ThinkPlus® 5-year LOR 9x5 NB

45K6024

ThinkPlus® 4-year P&L P/U Depot

45K6023

ThinkPlus® 5-year P&L P/U Depot

45K6025

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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CRS-3 May 2009

US models announced Jul 10, Dec 6, 2007, Jan 8, Apr 15, May 13, Aug 1, Aug 28, 2008

US models withdrawn effective December 2007, May 2008 or May 2009
**ThinkPad T61 15W (NVIDIA Graphics) - withdrawn**

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</table>

**Preloaded operating system**
- Some: Microsoft Windows XP Professional
- Vista models: Vista Premium logo

**Preloaded applications** (all OSe)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Rescue Center
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate models)
- Sonic RecordNow and Drive Letter Access (combo, DVD+RW)
- Corel® WinDVD® (combo, DVD+RW)
- Corel® WinDVD Creator (XP Pro DVD+RW models)

**Fingerprint reader**
- FingerPrint Software (fingerprint models)
- Fingerprint reader on palm rest
- Touch Pad (WPCN385 Super I/O, Atmel chip, TCG 1.2-compliant)

**Limited warranty**
- Coalesced 3-years/1-year battery - EasyServ® onsite pickup and delivery / service upgrades® available

**Supplements** ThinkVantage® technologies
- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant International Warranty Service®
- 24 hour x 7 days toll-free support during the warranty period® via 800-426-7378

**Post-warranty annual maintenance agreements**
- ThinkPlus® 2-year LOR® 9x5 NBD® 41C9175
- ThinkPlus® 3-year LOR® 9x5 NBD® 45K6021
- ThinkPlus® 4-year LOR® 9x5 NBD® 45K6022
- ThinkPlus® 5-year LOR® 9x5 NBD® 45K6023
- ThinkPlus® 4-year P&L P/U Depot 45K6025
- ThinkPlus® 5-year P&L P/U Depot 45K6026

See footnotes for important warranty information

US models announced July 10, 2007 or March 25, 2008
US models withdrawn effective May 2008 or May 2009

* Intel Centrino® processor technology
* Intel Centrino with vPro™ technology

CR3-5 May 2009

Lenovo

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- These models are part of the Global Models Plus program with limited onsite service** 3-year limited warranty.

** Positioning Processor
Premiere performance; two spindles Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core.
Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

** Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket, 1 socket available.

** Diskette drive
None (use optional USB-based diskette drive)

** EIDE Combo
Some: DVD-ROM/CD-RW, 24x24x24x24x8X speed, removable from Ultrabay Slim
Some: DVD burner, Super Multi-Burner (40Y6863) dual-layer, removable Ultrabay Slim
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
80GB (5400 rpm) or 120GB (5400 rpm)

** Ultrabay Slim

** Serial ATA disk
SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

** Widescreen display
15.4" (391mm) WXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

** Camera
None

** Graphics
NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

** Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

** Trackpoint
Touchpad pointing device, "Press-to-Select," Internet Scroll Bar†, magnifying glass

** Touchpad
UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

** ThinkLight
Illuminates the keyboard to improve visibility in low-light conditions

** Dimensions
15.4" models (WxDxH): 14.1" x 10.0" x 1.2–1.4"; 358.4mm x 255mm x 29.8–34.5mm

** Weight
with optical drive and battery: starting at 5.9 lb (2.7kg)

** Battery
Lithium Ion 6-cell or 9-cell / supports unique 2nd battery in Ultrabay Slim

** Life
6-cell: up to 3.9 hr; 9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

** Chipset
Mobile Intel PM965 Express Chipset (Memory Controller Hub);
ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB LPC, [B]lue[tt], [f]ingerprint)[] / PCI bus (Ricoh® R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)

** PC Card
One slot (Type I, Type II), CardBus 32-bit

** Smart Card Reader
Smart Card Reader

** Multicard Reader
4-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card®)

** Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector: 1394a-2000 standard)

** Wireless antenna
UltraConnect™ II antenna / on-off switch for all wireless radios

** Mini PCI Express
Three Mini PCI Express slots / only 802.11 wireless is customer upgradable

** WWAN
ThinkPad Roll Cage and Top Cover

** Turbo Memory
None

** UWB
None (uses Half-Mini PCI Express slot)

** Modem
56K V92* modem in Communications Daughter Card socket

** Bluetooth
Bluetooth 2.0 wireless, USB 2.0 interface via ICH9M, LED indicator

** Ethernet
Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCI1 x (GLC), PXE

** Intel AMT
Intel Active Management Technology (IAMT)

** Audio support
High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

** Security
Power-on password, hard disk password, supervisor password, security keyhole

** Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

** Finger print reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

** Device combinations

** Limited warranty
3-years / 1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades** available

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** Preloaded operating system**
- Vista Premium logo

** Preloaded applications**
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- System Migration Assistant
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- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate models)
- Sonic RecordNow and Drive Letter Access (combo)
- Corel® WinDVD™ (combo)

** Supports ThinkVantage™ technologies**
- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service17
- 24 hour x 7 day® toll-free support during the warranty period22 via 800-426-7378

** ThinkPlus™**
- 4-year LOR20 9x5 NB

** Lenovo.com**
- 5-year LOR 9x5 NB
- 9x5 Business
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

* Intel Centrino® with vPro™ technology

© Lenovo

(CR3-12) May 2009
ThinkPad T61 15W 6457 (NVIDIA) - Education (EasyServ) - withdrawn

Personal Systems Reference (PSREF)

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</table>

- This model has an EasyServ<sup>TM</sup> depot repair service 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools operated and exclusively educational for uses by qualified students and teachers.

Preloaded operating system<sup>20</sup>
  - Vista Premium logo

Preloaded applications<sup>14</sup>
- Microsoft Office OneNote 2007 (and CD)
- (HE): Higher education software
  - VitalSource Library College Edition
  - Adobe<sup>®</sup> Instructor Resource Center
  - Adobe Photoshop Elements 5 (and CD)
  - Adobe Premier Elements 3 (DVD)
  - Rescue and Recovery™
  - Access Connections<sup>TM</sup>
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - System Migration Assistant
  - Norton Internet Security™ (90 days of virus definitions)
  - Diskeeper<sup>®</sup> Home
  - PC-Doctor<sup>™</sup> (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe Reader
  - Windows Live™ Toolbar
  - Windows Live Search
  - Picasa from Google
  - Firmware Software (fingerprint models)
  - Microsoft Office 2007 Trial (60-day)
  - Sonic RecordNow and Drive Letter Access (DVD±RW)
  - Corel® WinDVD® (DVD±RW)

Wireless antenna and Mini PCI Express:
11a/b/g/n WWAN
- UltraConnect<sup>®</sup> II antenna / on-off switch for all wireless radios
- Three Mini PCI Express slots / only 802.11 wireless is customer upgradable
- ThinkPad 11a/b/g wireless, ThinkPad 11a/b/g Mini PCI Express Adapter, Atheros AR5006EX

Other accessories at lenovo.com
- ThinkVision L1940p Wide 19" Monitor
- ThinkVision L2440x Wide 24" Monitor
- ThinkPad Deluxe Expander Case
- ThinkPad Business Backpack
- ThinkPad Business Topload Case
- 90W Slim AC/DC Combo Adapter
- ThinkPad 90W AC Adapter
- ThinkPad External Battery Charger
- ThinkPad Business Topload Case
- ThinkPad Business Backpack
- ThinkPad Deluxe Expander Case
- ThinkPad L1940p Wide 19" Monitor
- ThinkPad L2440x Wide 24" Monitor
- Other accessories at lenovo.com/Accessories

90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover
  - ENERGY STAR<sup>®</sup> 4.0-compliant RoHS-compliant
  - International Warranty Service
  - 24 hour x 7 day<sup>TM</sup> toll-free support during the warranty period<sup>17</sup> via 800-426-7378

See footnotes for important warranty information
© Lenovo
US model announced July 10, 2007
US model withdrawn effective May 2009
ThinkPad® T61 15W (NVIDIA Graphics) - Education (Onsite) - withdrawn

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- This model has a limited onsite service° - 3-year limited warranty

  Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning

Processor: Premier performance; two spindles

Intel® Core™ 2 Duo processor T7300 with dual-core

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory

1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

-N/A: standard memory in 1 socket; 1 socket available

Diskette drive

None (use optional USB-based diskette drive)

EIDE DVD:RW

DVD burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim

Ultrabay Slim

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

Serial ATA disk

100GB⁰ (7200 rpm)

SATA 1.5Gb/s, 8.95mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Drive, Active Protection System™

Wide-screen display

15.4" (391mm) WSXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

Graphics

NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

TrackPoint®

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar¹¹, magnifying glass

Touch pad

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions³

15.4" models (WxDxH): 14.1" x 10.9" x 1.2", 1.4", 35.4mm x 255mm x 29.8-34.5mm

Weight⁴

with optical drive and battery: starting at 5.9 lb (2.7kg)

Top:

Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

Battery - type

Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

Battery - life⁴

9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

Chipset

Mobile Intel PM965 Express Chipset (Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100), EIDE PCI Express x1, PCI Bus, USB, LPC bus, [Bluetooth], (fingerprint) / PCI bus (Rico® R5C847 Cardbus/1394/Multicard) / LPC bus (WPN385 Super I/O, Atmel® 9773C3203 TPM)

PC Card ExpressCard/54

One slot (ExpressCard/34, ExpressCard/44)

PC Card ExpressCard/44

One slot (ExpressCard/34, ExpressCard/44)

Smart Card Read

None

Multicard Reader

4-in-1 reader (MultiMediaCard, Memory Stick PRO™, Secure Digital, xD-Picture Card™)

Ports

Three USB 2.0, DB-15 (external monitor/VGA, RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna

UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCIe Express

Three Mini PCIe Express slots / only 802.11 wireless is customer upgradable

WWAN

11a/b/g⁰

None /54

WWAN

None /54

UWB

None (uses Half-Mini PCI Express slot)

Modem

56K V.92 modem in Communications Daughter Card socket

Bluetooth™

Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Ethernet

Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

Intel AMT

Intel Active Management Technology (IAMT)

Audio support

High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty¹³ - 3-years - 1-year battery, limited onsite service° - 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

1GB PC2-5300 DDR2 SODIMM

40Y7734

T/W/WSL Series Li-ion Battery 6-cell

40Y6979

2GB PC2-5300 DDR2 SODIMM

40Y7735

T/W/WSL Series Li-ion Battery 9-cell

Advanced Ultrabay Battery II 3-cell

43R9250

Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725

ThinkPad External Battery Charger 40Y7625

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 34N3406

ThinkPad 90W AC Adapter 40Y7659

250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 34N3407

ThinkPad AC/DC Combo Adapter 41N8870

250GB Disk 9.5mm high bay / supports unique 2nd battery in Ultrabay Slim

ThinkPad Business Topload Case 43R2476

320GB Disk SATA 1.5Gb/s (7200 rpm) 34N3411

ThinkPad Business Backpack 43R2482

USB 2.0 Ultra Secure Memory Key 8GB 45J5918

ThinkPad Deluxe Expander Case 43R2478

USB 2.0 Lenovo Enhanced Port Replicator 41N5656

ThinkVision L1700p 17" Monitor 9417HE2

USB 2.0 Lenovo Enhanced Port Replicator 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

ThinkVision L2440x Wide 24" Monitor 4421HB2

ThinkPad Essential Port Replicator 3417HE3

ThinkPad Advanced Mini Dock 250140U

ThinkVision L2240p Wide 22" Monitor 4422HB6

ThinkPad Advanced Dock 250310U

ThinkVision L2440x Wide 34" Monitor 4424HB6

Other accessories on O-T61 sheet

ThinkPad External Battery Charger 43R8142

ThinkPad Deluxe Expander Case 43R8472

ThinkPad Roll Cage and Top Cover 43R8144

ThinkPad Roll Cage and Top Cover 43R8144

ThinkPad Deluxe Expander Case 43R8472

ThinkPad Roll Cage and Top Cover 43R8144

ThinkPad Roll Cage and Top Cover 43R8144

Fingerprint Software (fingerprint models)

Microsoft Office 2007 Trial (60-day)

Sonic RecordNow and Drive Letter Access (DVD:RW)

Corel® WinDVD™ (DVD:RW)

Supports ThinkVantage® technologies

90-watt (NVIDIA) AC adapter

ThinkPad Roll Cage and Top Cover

Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service¹⁷

24 hour x 7 day⁰ toll-free support during the warranty period¹³ via 800-426-7378

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced July 10, 2007

US model withdrawn effective May 2009

© Lenovo (CR3-8) May 2009
## ThinkPad T61u 15W 6463 (GMA) - Education (EasyServ) - withdrawn

### Personal Systems Reference (PSREF)

#### Positioning

- **Processor**
  - Premier performance; two spindles
  - Intel Core 2 Duo processor T8300 or T9300 with dual-core.
  - Intel 64 Technology, Enhanced Intel SpeedStep technology.
  - Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus; T8300: 3MB L2 cache; T9300: 6MB L2 cache.

- **Memory**
  - 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
  - **Italics:** standard memory in both sockets; no sockets available;
  - **Non-italics:** standard memory in 1 socket; 1 socket available.

- **Diskette drive**
  - None (use optional USB-based diskette drive)

- **EIDE Combo**
  - Some: DVD-ROM/CD-RW, 24X/24X/24X/8X*1 speed, removable from Ultrabay Slim
  - Some: DVD burner, Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim

- **Serial ATA disk**
  - One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
  - 80GB @ 5400 rpm / 100GB @ 7200 rpm / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

- **Widescreen display**
  - 15.4” (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 100% contrast ratio

- **Graphics**
  - Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965.
  - DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

- **Keyboard**
  - 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys
  - Touchpad:
    - ThinkLight™
    - Illuminates the keyboard to improve visibility in low-light conditions.

- **Dimensions**
  - 15.4” models (WxDxH): 14.1” x 10.0” x 1.2-1.4”, 358.4mm x 255mm x 29.8-34.5mm with optical drive and battery; starting at 5.9 lb (2.7kg)

- **Weight**
  - Top: Super-Elastic PolyCarbonate (SEPC);
  - Bottom: Carbon-Fiber Reinforced Plastic

- **Battery - type**
  - Lithium Ion 9-cell
  - supports unique 2nd battery in Ultrabay Slim

- **Battery - life**
  - 9-cell up to 8.3 hr; 9-cell plus Ultrabay battery: up to 9.8 hr

- **Chipset**
  - Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
  -ICH6M-Enhanced I/O Controller Hub (SATa 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]);
  - LPC bus (WPCN385 Super I/O, Atmel 97SC3203 TPM)

- **PC Card**
  - One slot (Type I, Type II), CardBus 32-bit
  - One slot (ExpressCard34, ExpressCard/54)

- **Smart Card Read**
  - None

- **Multicard Reader**
  - 8-in-1 reader (MultiMediaCard, Mem Stick PRO, Secure Digital, xD-Picture Card™)

- **Ports**
  - Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet),
  - IEEE 1394 FireWire 400 (4-pin connector; 1394A-2000 standard)

- **Wireless antenna**
  - UltraConnect® I1 antenna / on/off switch for all wireless radios
  - Mini PCI Express 11a/b/g
  - None

- **Modem**
  - 56K V.92 modem in Communications Daughter Card socket

- **Bluetooth™**
  - Some: Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

- **Ethernet**
  - Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PXE

- **Audio support**
  - High Definition (HD) Audio, AD1984CJP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

- **Security**
  - Power-on password, hard disk password, supervisor password, security keyhole

- **Security chip**
  - Trusted Platform Module™, Atmel chip, TCG 1.2-compliant

- **Preloaded operating system**
  - - Microsoft Windows Vista Business Edition (32-bit)
  - - Vista Basic logo

- **Preloaded applications**
  - - Microsoft Office OneNote 2007 (and CD)
  - - Education software
    - VitalSource Library Edition
    - Adobe Instructor Resource Cnt
    - Adobe Digital School Collection
    - Photoshop Elements (and CD)
    - Norton Internet Security
    - Acrobat 8 Professional
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center
    - System Migration Assistant
    - Mobile Mark IV

- **Memory**
  - Operating RAM: 1GB or 2GB / 2GB or 4GB / 8GB / 16GB
  - **Non-italics:** standard memory in 1 socket; 1 socket available
  - **Italics:** standard memory in both sockets; no sockets available

- **Display**
  - WXGA+ (1280x800), anti-glare, 120 nits, WXGA (1280x800) color
  - WXGA+ (1920x1200)

- **Limited warranty**
  - - 3-years / 1-year battery - EasyServ™, 3-depot repair service / maintenance agreements at lenovo.com/thinkplus/warranty
  - - 5-year P&L P/U Depot
  - - 4-year LOR 9x5 NBD
  - - 2-year LOR 9x5 NBD

- **Additional warranty**
  - - Enhanced Warranty (1 year)
  - - DEF Warranty (1 year)
  - - 3- years / 1-year battery - EasyServ™, 3-depot repair service / maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information.

US models announced February 19, or April 10, 2008

US models withdrawn effective May 2009
ThinkPad® T61u 15W 6457 (NVIDIA) - Education (EasyServ) - withdrawn

Personal Systems Reference (PSREF)

Type-model

• These models have an EasyServ™, depot repair service 3-year limited warranty

Positioning Processor
Premiere performance; two spindles
Intel® Core™ 2 Duo processor T9300 with dual-core

Memory
1GB or 2GB std / 4GB max / PC2-6300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-italics: standard memory in 1 socket; 1 socket available

Diskette drive None (use optional USB-based diskette drive)
EIDE DVD±RW Drive burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim Slot
Serial ATA One modular bay for interchangeable devices (right side), 9.5mm high bay, fail bezel 100GB (7200 rpm) or 160GB (7200 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Wide screen display 15.4” (391mm) WXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

Camera None

Graphics NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard TrackPoint® 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys Touchpad None

Weight Dimensions3 15.4” models (WxDxH): 14.1” x 10.0” x 1.2-1.4”; 358.4mm x 255mm x 29.8-34.5mm with optical drive and battery; starting at 5.9 lb (2.7kg)

Battery - type Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
Battery - life ± 9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

Chipset Mobile Intel PM965 Express Chipset (Memory Controller Hub);
ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetrace], [fingerprint]) / PCI bus (Ricoh® R5C847 Cardbus/1394/MultiCard) / LPC bus (WPN3C585 Super I/O, Atmel® 75SC3203 TPM)

Multicard Reader 4-in-1 reader (MultiMediaCard, Memory Stick®, PRO™, Secure Digital, x-D Picture Card™)

Ports Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a/2000 standard)

Wireless antenna UltraConnect™ II antenna / on-off switch for all wireless radios
Mini PCI Express Three Mini PCI Express slots / only 211 wireless is upgradable customer support
WWAN None

Smart Card Reader None

Security Power-on password, hard disk password, supervisor password, security keyhole Security chip None

Fingerprint reader Fingerprint reader on palm rest, supports swipe, supports the software chip

Limited warranty 3-years/1-year battery - EasyServ™, depot repair service / service upgrades available

See footnotes for important warranty information
US models announced February 19, or April 10, 2008
US models withdrawn effective May 2009

Preloaded operating system
- Vista Premium logo

Preloaded applications
- Microsoft Office OneNote® 2007 (and CD)
- Education software
  - VitalSource Library Edition
  - Adobe® Instructor Resource Cntr
  - Adobe Digital School Collection
    - Photoshop Elements (and CD)
    - Premiere Elements (and DVD)
    - Acrobat® 8 Professional
    - Contribute 4
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center
    - System Migration Assistant
    - Norton Internet Security1
    - Diskeeper® Home
    - PC-Doctor™ (diagnostics)
    - ThinkPad Utilities (Power Manager and Presentation Director)
    - Adobe Reader
    - Windows Live™ Toolbar
    - Windows Live Search
    - Picasa from Google
    - FingerPrint Software
    - Microsoft Office 2007 Trial (60-day)
    - Sonic RecordNow and Drive Letter Access (DVD:RW)
    - Corel® WinDVD™ (DVD:RW)

Supports ThinkVantage® technologies
90-watt (NVIDIA) AC adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 days toll-free support during the warranty period4 via 800-426-7378

ThinkPlus™, 2-year LOR™ 9x5 NBD 41C9175
ThinkPlus 3-year LOR 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&L Depot 45K6023
ThinkPlus 5-year P&L Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Specifications

Type-model Processor GHz Memory Wide screen display Graphics controller memory Disk SATA rpm EIDE optical Mini PCIe Mini PCIe Card Blue slot tooth Battery cell Limited warranty Vista preload Available
6457-DSU T9300 2.50 1GB 15.4” WSXGA+ 128MB 100G 7200 DVD±RW/±R DL/±RW 11a/b/g2 None /54 Blue
Fing 9 EasyServ Business32 Feb 08
6457-OSU T9300 2.50 2GB 15.4” WSXGA+ 128MB 160G 7200 DVD±RW/±R DL/±RW 11a/b/g2 None /54 Blue
Fing 9 EasyServ Business32 Apr 08

Lenovo

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### ThinkPad T61p 15W 6460 (NVIDIA) - TopSeller - withdrawn

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<td>Blue 9 XP Pro No</td>
<td>45K6021</td>
<td>45K6022</td>
<td>407699</td>
</tr>
</tbody>
</table>

### Positioning
- **Processor**: Intel® Core™ 2 Duo processor T7500, T7700, or T9300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, T7500/T7700/7700 4MB shared L2 cache; T9300 8MB shared L2 cache.

### Memory
- **2GB or 4GB std / 4GB max**: PC2-6300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; **Ifailos**: standard memory in both sockets; no sockets available

### Diskette drive
- None (use optional USB-based diskette drive)

### EIDE DVD:RW
- UltraBay Slim Burner (41N5643), 4MB layered, removable from Ultrabay Slim

### Serial ATA disk
- 100GB (7200 rpm), 160GB (7200 rpm), or 200GB Full Disk Encryption [FDE] (7200 rpm) / SATA 1.5Gbps, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display
- **Some**: 15.4" (391mm) WXGA+ (1680x1050) color, anti-glare, 200 nits, 16.7.1, 500:1
- **Some**: 15.4" (391mm) WUXGA (1920x1200) color, anti-glare, 176 nits, 16.7.1, 500:1

### Camera
- **None**

### Graphics
- NVIDIA® Quadro FX 570M, PCI Express® x16, 256MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

### TrackPoint®
- Touchpad/multi-pointing system, touch pad below keyboard, Tap Zone invokes the keyboard to improve visibility in low-light conditions

### Dimensions
- **15.4" models** (WxDxH): 14.1" x 10.0" x 1.2 - 1.4"; 35.844mm x 255mm x 29.2 - 34.3mm with optical drive and battery: starting at 5.9 lb (2.7kg)

### Weight
- Top Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Case material
- **Lithium Ion 9-cell** / supports unique 2mb battery: 9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

### Microcard Reader
- None

### Ports
- USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector, 1394a/2000 standard)

### Wireless antenna
- UltraConnect™ II antenna / on/off switch for all wireless radios

### mini PCI Express slots / only 802.11 b/g/n wireless
- Three Mini PCI Express slots / only 802.11 b/g/n wireless

### Battery - life
- 11a/b/g/n wireless, Mini PCIe adapter, Intel Wireless WiFi Link 4965AGN, MIM0 2x3 (Kedron)

### Printer reader
- **Fingerprint reader**: FingerPrint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- **3-years/1-year battery - EasyServ® depot repair service / service upgrades available**

---

**Preloaded operating system**
- **Some**: Microsoft® Windows® XP Professional with 32-bit or 64-bit
- **Some**: Microsoft Windows Vista Ultimate Edition (32-bit) and (64-bit)
- **Some**: Windows Vista Business Edition (64-bit)
- **Vista models**: Vista Premium technology

**Preloaded applications**
- **All O/Ses**: Microsoft Office OneNote® 2007 and CD (Vista models)
- **Some**: Rescue and Recovery™ Access Connections™
- **Client Security Solution™**: ThinkVantage Productivity Center
- **System Migration Assistant Norton Internet Security (90 days of virus definitions)
- **Diskkeeper™ Home**: PC-Doctor (diagnostics)
- **ThinkPad Utilities (Power Manager and Presentation Director)
- **Adobe® Reader**: Windows Live™ Toolbar
- **Windows Live Search**: Picasa from Google
- **Fingerprint Software (fingerprint models)
- **Microsoft Office 2007 Trial (60-day)
- **Multimedia Center for Think Offerings (XP Pro DVD:RW models)
- **SoundRecNow and Drive Letter Access (DVD:RW models)
- **Corel® WinDVD® (DVD:RW)
- **Corel® WinDVD Creator (XP Pro DVD:RW models)

---

**Supports ThinkVantage technologies**
- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**ThinkPlus**
- 2-year LOR 9x5 NBD 41C9175
- 3-year LOR 9x5 NBD 45K6021
- 4-year LOR 9x5 NBD 45K6022
- 5-year LOR 9x5 NBD 45K6024
- 4-year P/L P/U Depot 45K6023
- 5-year P/L P/U Depot 45K6025

---

**Post warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**
ThinkPad® T61p 15W (NVIDIA Graphics) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk configuration</th>
<th>EIDE optical</th>
<th>Mini PCI Card slot</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Entry (E)</th>
<th>Available date</th>
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<td>2GB</td>
<td>15.4&quot; WUXGA</td>
<td>DVD-ROM</td>
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<td>Ultimate 23 G</td>
<td>July07</td>
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<td>6457-8LU T7700</td>
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<td>DVD-ROM</td>
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<td>Smart</td>
<td>Blue</td>
<td>9</td>
<td>Ultimate 23 G</td>
<td>Sept07</td>
<td></td>
</tr>
</tbody>
</table>

Positioning: Performance and two spindles.

Processor: Intel Core™ 2 Duo processor T7700 with dual-core.

Memory: 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-Italics: standard memory in 1 socket; 1 socket available.

Diskette drive: None (use optional USB-based diskette drive).

EIDE DVD:RW Ultrabay Slim Drive

Ultrabay Slim Serial ATA disk

Serial ATA 1.5GB/s, 9.5mm high, removable, upgradeable. 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™.

Widescreen display: Some: 15.4" (391mm) WUXGA+ (1680x1050) color, anti-glare, 200 nits, 16.10, 500:1.

Battery: 9-cell: up to 7.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr.

Chipset: Mobile Intel PM965 Express Chipset.

PC Card std slot: One Type I or Type II slot, CardBus 32/64-bit.


Smart Card Reader: None.

Multicard Reader: 4-in-1 reader (MultiMediaCard, Memory StickPRO™, Secure Digital, xD-Picture Card™).


Wireless antenna: UltraConnect™ II antenna / on-off switch for all wireless radios.

Mini PCI Express: Three Mini PCI Express slots / only 802.11 wireless is customer upgradable.

Intel 4965AGN® Wireless Card:

WWAN: None.

Turbo Memory: None.

UWB: None (uses Half-Mini PCI Express slot).

Modem: 56K V.92 modem in Communications Daughter Card socket.

Bluetooth™: Bluetooth 2.0 wireless, USB 2.0 interface via 1ICH6, LED indicator.

Ethernet: Gigabit Ethernet on systemboard, Intel 82566MMM Ieee802.11g, PCle x1 (GLC1), Pxe.

Intel AMT: Intel Active Management Technology (IAMT).

Audio support: High Definition (HD) Audio, AD1984, JPC codec / stereo speakers, 1 watt / volume up, down, mute button / internal microphones.


Fingerprint reader: Fingerprint reader on palm rest, swipe sensor, supports the security chip.

Limited warranty: 3-years / 1-year battery - EasyServ upgradeable.

Preloaded operating system:

- Windows Vista Premium logo

Preloaded applications:

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live® Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage technologies.

90-watt (NVIDIA) AC adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service17 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinksPlus™ 2-5 year LOR 9x5 BD

41C9175

ThinksPlus™ 3-year LOR 9x5 BD

41C9176

ThinksPlus™ 4-year LOR 9x5 BD

41C9177

ThinksPlus™ 5-year LOR 9x5 BD

41C9178

ThinksPlus™ 4-year P&L U Depot

41C9180

Post-warranty annual maintenance agreements at lenovo.com/thinksplus/warranty

See footnotes for important warranty information.

* Intel Centrino® with vPro™ technology

© Lenovo

US models announced July 10 or September 18, 2007

US models withdrawn effective November 2008

(CR3-6) November 2008

CR3-6 Lenovo
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB</th>
<th>rpm</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Batteries</th>
<th>Preloaded operating system</th>
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<tbody>
<tr>
<td>6458-5KU  T7700</td>
<td>2.40</td>
<td>2GB</td>
<td>15.4&quot;</td>
<td>WUXGA</td>
<td>256MB</td>
<td>100G 7200</td>
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<td>None</td>
<td>Smart Blue</td>
<td>9 Ultimate 32</td>
<td>6P July07</td>
<td></td>
</tr>
</tbody>
</table>

- This model is part of the Global Models Plus program with limited onsite service \(^3\) 3-year limited warranty

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- (90 days of virus definitions)
- Diskkeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel® WinDVD® (DVD:RW)

### Preloaded operating system
- Vista Premium logo

### Limited warranty
- 3-years 1-year battery, limited onsite service \(^2\) 8 pm - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades \(^8\) available

### See footnotes for important warranty information

- \(^*\) Intel Centrino® with vPro™ technology
- \(^\dagger\) Lenovo
- \(^\dagger\dagger\) CR3-13 November 2008
# ThinkPad T61p 15W 6457 (NVIDIA) - Education (EasyServ) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 WWAN or Turbo</th>
<th>Mini PCIe UWB</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Vista preload</th>
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<td>15.4&quot; WXGA+ 256MB 520G 5400 DVD:RW</td>
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<td>Blue</td>
<td>Fing</td>
<td>9</td>
<td>Business 32</td>
<td>Apr 08</td>
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</tbody>
</table>

*Italic MTM: not a base model for building a custom model*

- **This model has an EasyServ** depot repair service 3-year limited warranty
  - Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

## Positioning and Processor

- **Premiere performance: two spindles**
  - Intel® Core™ 2 Duo processor T9300 with dual-core.
  - Intel 64 Technology, Enhanced Intel SpeedStep™ technology.
  - Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 6MB shared L2 cache.

## Memory

- 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, 200-pin SO-DIMM sockets.

Non-italics: standard memory in 1 socket; 1 socket available

## Diskette drive

- None (use optional USB-based diskette drive)

## EIDE DVD:RW

- Ultrabay Slim Burner (41N643).

## Serial ATA disk

- 250GB / (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™.

## Widescreen display

- 15.4" / (391mm) WXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

## Graphics

- NVIDIA® Quadro® FX 570M, PCI Express® x16, 256MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

## Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys.

## Touchpad

- TrackPoint® pointing device,
- "Press-to-Select," Internet Scroll Bar™,
- magnifying glass
- UltraNav™ multi-pointing system, touch pad below keyboard.

## Pointing device

- Top: Super-Elastic PolyCarbonate (SEPC);
- Bottom: Carbon-Fiber Reinforced Plastic

## Lithium Ion battery

- 9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

## Ports

- Three Mini PCI Express slots / only 802.11 wireless is customer upgradable
- UltraConnect™ II antenna / on-off switch for all wireless radios
- IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

## Wireless antenna

- UltraConnect™ II antenna / on-off switch for all wireless radios

## Battery - type

- Lightweight: Carbon-Fiber Reinforced Plastic
- Top: Roll Cage (one-piece magnesium)
- Carbon-Fiber Reinforced Plastic

## Battery - life

- 9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

## Chipset

- Mobile Intel PM965 Express Chipset (Memory Controller Hub);
- ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) /
- PCI bus (Ricochet® R5C847 Cardbus/1394/Multicard) /
- LPC bus (WPCN385 Super I/O, Atmel® 9732C303 TPM)

## PC Card

- One slot (Type I, Type II), CardBus 32-bit

## Smart Card Reader

- None

## Multicard Reader

- 4-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card™)

## ExpressCard/54

- One slot (ExpressCard/34, ExpressCard/54)

## Ports

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394A-2000 standard)

## Wireless antenna

- UltraConnect™ II antenna / on-off switch for all wireless radios

## Mini PCI Express

- Three Mini PCI Express slots / only 802.11 wireless is customer upgradable

## Modem

- 56K V.92.5 modem in Communications Daughter Card socket

## Audio support

- High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

## Security

- Power-on password, hard disk password, supervisor password, security keyhole

## Security chip

- Trusted Platform Module, Atmel chip, TPM 2.0, 128-bit compliant

## Finger print reader

- Finger print reader on palm rest, swipe sensor, supports the security chip

## Limited warranty

- 3-years/1-year battery - EasyServ® depot repair service / service upgrades® available

## Preloaded operating system

- Microsoft® Vista® Business Edition (32-bit)
  - Vista Premium logo

## Preloaded applications

- Microsoft Office OneNote® 2007 (and CD)
  - Education software
    - VitalSource Library Edition
    - Adobe® Instructor Resource Ctr
    - Adobe® Digital School Collection
    - Photoshop Elements (and CD)
    - Premier Elements (and DVD)
    - Acrobat® Professional
    - Contribute® 4
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center
    - System Migration Assistant
    - Norton Internet Security (90 days of virus definitions)
    - Diskkeeper® Home
    - PC-Doctor™ (diagnostics)
    - ThinkPad Utilities (Power Manager and Presentation Director)
    - Adobe® Reader
    - Windows Live™ Toolbar
    - Windows Live Search
    - Picasa from Google
    - FingerPrint Software
    - Microsoft Office 2007 Trial (60-day)
    - Sonic RecordNow and Drive Letter Access (DVD:RW)
    - Corel® WinDVD™ (DVD:RW)

## Supports

- ThinkVantage technologies
  - 90-watt (NVIDIA) AC adapter
  - ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
  - ENERGY STAR® 4.0-compliant RoHS-compliant
  - International Warranty Service®
  - 24 hour x 7 day® toll-free support during the warranty period®
  - VeriSign®

## Limited availability

- 3-years/1-year battery - EasyServ® depot repair service / service upgrades® available

<table>
<thead>
<tr>
<th>1GB PC2-5300 DDR2 SODIMM</th>
<th>40Y7734</th>
<th>T/R/W/LS Series Li-Ion Battery 6-cell</th>
<th>40Y6799</th>
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<td>ThinkPad External Battery Charger</td>
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<td>ThinkPad 90W AC Adapter</td>
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<td>ThinkVision® L1940p Wide 19” Monitor</td>
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<td>ThinkVision L2240p Wide 22” Monitor</td>
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<td>Other accessories on O-T61 sheet</td>
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<td>Other accessories at lenovo.com/ae</td>
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</table>
Partial list of accessories supported on:

- **ThinkPad T61** originally announced on May 31, 2007
- **ThinkPad T61 14W** originally announced on May 9, 2007
- **ThinkPad T61 15W** originally announced on May 9, 2007

### Memory
- 512MB PC2-5300 DDR2 SODIMM 40Y7733
- 1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999
- 1GB PC2-5300 DDR2 SODIMM 40Y7734
- 2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000
- 2GB PC2-5300 DDR2 SODIMM 40Y7735

### Ultrabay Slim 9.5mm
- (best to use flat bezel options)
- Serial/Parallel Port Bay Adapter (flat bezel) 40Y8121
- Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725
- ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643

### Storage and removable storage
- 160GB Disk SATA 1.5Gb/s (7200 rpm) 41N5692
- 160GB Disk SATA 1.5Gb/s (7200 rpm) 41N5737
- 250GB Disk SATA 1.5Gb/s (5400 rpm) 43R8152
- 250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410
- 320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3403
- 320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411
- Can be used as the main HDD or with ThinkPad Serial ATA Hard Drive Ultrabay Slim Adapter 40Y8725

### Batteries
- Only 14W (14.1" widescreen) and 15W (15.4" widescreen) models:

- **128GB SSD SATA 3.0Gb/s/1.8" 2.5" cover** 43N3406
- **USB 2.0 Essential Memory Key 8GB** 45J7905
- **USB 2.0 Essential Memory Key 32GB** 45K1258
- **USB 2.0 Security Memory Key 4GB** 45J9591
- **USB 2.0 Ultra Secure Memory Key 4GB** 45J9591
- **USB 2.0 Ultra Secure Memory Key 8GB** 45J9598
- **USB 2.0 Portable Diskette Drive** 05K9276
- **USB 2.0 CD-RW/DVD-ROM Combo II Drive** 40Y8637
- **USB 2.0 Portable 160GB Hard Disk** 43R1784
- **USB 2.0 Portable 320GB Hard Disk** 45K1689
- **USB 2.0 Portable Secure 160GB Hard Disk** 43R2018
- **USB 2.0 Portable Secure 320GB Hard Disk** 43R2019
- **USB 2.0 Super Multi-Burner Drive** 41N5565

### ThinkPad Expansion
- **USB 2.0 Lenovo Enhanced Port Replicator** 43R8770
- **ThinkPad Adjustable Notebook Stand** 40Y7659
- **ThinkPad Advanced Dock** 250310U
- **ThinkPad Advanced Mini Dock** 250410U

### ThinkPad Accessories
- **ThinkPad Advanced Dock** 250310U
- **ThinkPad Advanced Dock** 250410U
- **ThinkPad Advanced Dock** 250310U
- **ThinkPad Advanced Mini Dock** 250410U
- **ThinkPad Adjustable Notebook Stand** 250310U

### Batteries
- Only 14W models (14.1" widescreen):
  - T/R 14W Standard Battery 4-cell 41U3196
  - T/R 14W Enhanced Battery 6-cell 41U3198
  - T/R 14W High Capacity Battery 9-cell 43R2499
- Only 15W models (15.4" widescreen):
  - T/R/W/SL Series Li-Ion Battery 6-cell 40Y6799
  - T/R/W/SL Series Li-Ion Battery 9-cell 40Y6797

### Carrying Cases
- **ThinkPad Expanders Expander Case** 43R9118
- **ThinkPad Women’s Microfiber Tote** 22P8855
- **ThinkPad Women’s Leather Tote** 22P8856
- **ThinkPad Convertible Carrying Case** 22P8860
- **ThinkPad Women’s Executive Leather Tote** 22P8857
- **Women’s Executive Red Leather Tote** 22P8858

### ThinkPad Series
- **Lenovo Carrying Case - Messenger Max** 41U5253
- **Lenovo Carrying Case - Performance Pack** 41U5258
- **Lenovo Standard Case** 45K1697
- **Lenovo Standard Case** 45K1698
- **ThinkPad Business Backpack** 43R2476
- **ThinkPad Business Backpack** 43R2482
- **ThinkPad Deluxe Expander Case** 43R2478
- **ThinkPad Executive Leather Case** 43R2480

### Monitor Accessories
- **ThinkVision L2440p Wide 24" Monitor** 4420HB2
- **ThinkVision L200p Wide 20.1" Monitor** 4438HB6
- **ThinkVision L1900p 19" Monitor** 4431HE1
- **ThinkVision L174 17" Monitor** 9227AE1
- **ThinkVision L1700p 17" Monitor** 9417HE2
- **ThinkVision L1900p 19" Monitor** 4424HB8
- **ThinkVision L200p Wide 20.1" Monitor** 4438HB8
- **ThinkVision L2240p Wide 22" Monitor** 4424HB8
- **ThinkVision L2440p Wide 24" Monitor** 4420HB2
- **ThinkVision L2440x Wide 24" Monitor** 4412HB2

### Lenovo Accessories
- **ThinkVision USB Soundbar** 40Y7616
- **ThinkVision Soundbar** 45K1263
- **Kensington Cable Lock from Lenovo** 73P5828
- **ThinkPad Convertible Monitor Stand** 40Y7620
- **Radial Arm** 19K4464

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More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Lenovo® ThinkPad T400

PC3-8500 DDR3 Low-Halogen SODIMM
1GB 55Y3706
2GB 55Y3707
4GB 55Y3708

Lenovo ThinkPad T400 with
ThinkPad T400/T410/R400 Privacy Filter
43R2472

Lenovo ThinkPad T400
**ThinkPad® T400 6473 (GMA) - TopSeller - withdrawn**

**Positioning**

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<thead>
<tr>
<th>Processor</th>
<th>Premier performance: two spindles Intel® Core™ 2 Duo processor P8400 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</th>
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**Memory**

<table>
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<tr>
<th>Type-model</th>
<th>Proc-essor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Cam-Integrated</th>
<th>Graphics</th>
<th>Disk</th>
<th>SATa</th>
<th>Mini PCle</th>
<th>Mini PCle</th>
<th>Mini PCle</th>
<th>Finger print</th>
<th>Blue-Card</th>
<th>Whorse (W)</th>
<th>Global (G)</th>
<th>Available date</th>
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<tbody>
<tr>
<td>6473-P1U  P8400</td>
<td>2.26</td>
<td>2GB</td>
<td>14.1* WXGA</td>
<td>GMA 1600G-5400 DVD+RW ±Intel 5100²⁰ ²¹</td>
<td>None</td>
<td>None</td>
<td>Finger</td>
<td>PC</td>
<td>XP Pro</td>
<td>Sep 08</td>
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<td></td>
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<tr>
<td>6473-E1U  P8700</td>
<td>2.53</td>
<td>2GB</td>
<td>14.1* WXGA</td>
<td>GMA 2500G-5400 DVD+RW ±Intel 5100²⁰ ²¹</td>
<td>None</td>
<td>None</td>
<td>Finger</td>
<td>Blue 7-in-1 Ult 32</td>
<td>Edu Mar 09</td>
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<tr>
<td>6473-PVU P8700</td>
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<td>2GB</td>
<td>14.1* WXGA</td>
<td>LED Cam GMA 320G-7200 DVD±RW ±Intel 5100²⁰ ²¹</td>
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<td>None</td>
<td>Finger</td>
<td>Blue PC</td>
<td>XP Pro</td>
<td>Jul 09</td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller Program

**Integrated graphics**

- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz

**Chipset**

- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gbs, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WP CPN385 Super I/O)

**ExpressCard/54**

- One slot (ExpressCard/34, ExpressCard/54)

**Card Reader**

- None

**Ports**

- 1.1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Limited warranty**

- 3-years/1-year battery - EasyServ™ is a depot repair service / service upgrades available

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See footnotes for important warranty information

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US models withdrawn effective June or December 2009
### ThinkPad T400 6473 (GMA) - TopSeller (XP with Win 7 COA) - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCle</th>
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<th>Finger print</th>
<th>UWB</th>
<th>Blue-Card reader</th>
<th>Slot Preload</th>
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<td>6473-41U</td>
<td>P8700</td>
<td>2.53 2GB 14.1&quot; WXGA LED Cam</td>
<td>GMA</td>
<td>320G 7200</td>
<td>DVD±RW</td>
<td>-Intel 5100</td>
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<td>P8700</td>
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<td>128G SSD</td>
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<td></td>
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</tr>
</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

### Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

### Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPETATM Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 5 years inclusive 65-watt AC adapter
- 24-hour x 7-day 24/7 support during the warranty period via 800-426-7378

### Others
- ThinkPlus® 3-year LOR 9x5 NBD 45K6021
- ThinkPlus 4-year LOR 9x5 NBD 45K6022
- ThinkPlus 5-year LOR 9x5 NBD 45K6024
- ThinkPlus 4-year P&L P/U Depot 45K6023
- ThinkPlus 5-year P&L P/U Depot 45K6025
- Post-warranty annual maintenance agreements available at lenovo.com/thinkplus/warranty

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**Note:** See footnotes for important warranty information. 

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<sup>●</sup> Intel Centrino® 2 processor technology
**ThinkPad T400 6473 (GMA) - TopSeller (Windows 7) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proc- essor GHz</th>
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<td>- Intel 5100</td>
<td>Verizon™</td>
<td>Finger Blue PC Pro 32 Nov 09</td>
</tr>
</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

- **Positioning Processor**
  - Intel® Core™ 2 Duo processor P8700 with dual-core.
  - Intel HD Boost, 1066MHz system bus, and 3MB L2 cache.

- **Memory**
  - 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - Non-Intel™: standard memory in one socket: one socket available.

- **SATA DVD±RW Ultrabay Slim SATA disk**
  - DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
  - One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
  - 320GB™ (7200 rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

- **Widescreen display Camera**
  - 14.1” (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight
  - Camera on top of screen, 1.3-megapixel, fixed focus

- **Integrated graphics**
  - Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;
  - Maximum external resolution: 2048x1536@75Hz

- **Chipset**
  - Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WP/CN385 Super I/O)

- **Mini PCI Express**
  - Three Mini PCI Express slots
  - 11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) 
  - Some™: Wireless WAN, Qualcomm Gobi 1000 chipset, Mini PCIe adapter, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, service contract required with Verizon™

- **2G Turbo**
  - None

- **Modem**
  - 56K V.92™ modem

- **Bluetooth™**
  - Bluetooth 2.1 wireless, LED indicator

- **Ethernet**
  - Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1

- **Audio support**
  - High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

- **Security**
  - Security chip: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

- **Limited warranty**
  - 3-years/1 yr battery - EasyServ™ depot repair service / service upgrades™ available

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See footnotes for important warranty information © Lenovo

See notes and reference [ML3-18] August 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<td>7417-T1U</td>
<td>P8400</td>
<td>2.26 2GB</td>
<td>14.1” WXGA</td>
<td>GMA 160G 5400</td>
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<td>AT&amp;T</td>
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<td>AT&amp;T</td>
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<td>14.1” WXGA Cam</td>
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<td>Intel 5100</td>
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<td>AT&amp;T 2G Turbo</td>
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<td>Blue</td>
</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program

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**Note:**
- Preloaded operating system:
  - Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
  - Some: Genuine Windows Vista Business
  - Some: Genuine Windows Vista Ultimate
  - Vista models: Vista Premium logo

**Preloaded applications:**
- Rescue and Restore™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Roxio Creator® Business Edition (combo, DVD:RW)
- Roxio MyDVD™ (combo, DVD:RW)

Supports ThinkVantage technologies

---

**Environmental:**
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover (Roll Cage is one-piece magnesium)
- Climate Savers® certified
- Energy Star® 5.0-compliant
- RoHS-compliant
- International Warranty Service
  - 24 hour x 7 day® toll-free support during the warranty period via 800-426-7375

**ThinkPlus®**
- 1-year LOR® 9x5 NBD
- 2-year LOR® 9x5 NBD
- 3-year LOR® 9x5 NBD
- 4-year LOR® 9x5 NBD
- 5-year LOR® 9x5 NBD
- 3-year P&L P/U Depot
- 4-year P&L P/U Depot
- 5-year P&L P/U Depot

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See footnotes for important warranty information

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ThinkPad T400 7417 (GMA) - TopSeller (XP with Win 7 COA) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCLF or LED Camera</th>
<th>Integrated graphics GB</th>
<th>Disk Sata</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Mini PCIe Finger</th>
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<tbody>
<tr>
<td>7417-21U</td>
<td>Core™ 2 Duo processor P8600 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-little: standard memory in one socket; one socket available</td>
<td>14.1&quot; WXGA LED</td>
<td>GMA</td>
<td>250G 5400</td>
<td>DVD±RW</td>
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<td>None</td>
<td>PC XP Pro Oct 09</td>
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<td>7417-23U</td>
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<td>14.1&quot; WXGA LED</td>
<td>GMA</td>
<td>320G 5400</td>
<td>DVD±RW</td>
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<td>None</td>
<td>PC XP Pro Oct 09</td>
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</tbody>
</table>

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Processor
- Intel® Core™ 2 Duo processor P8600
  - Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

Memory
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-little: standard memory in one socket; one socket available

SATA DVD±RW
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable (43N3214)
  - One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
  - 250GB (5400 rpm) or 320GB (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
- Camera: camera on top of screen, 1.3-megapixel, fixed focus
  - Some: camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;
  - Maximum external resolution: 2048x1536@75Hz (VGA DB-15)

Keyboard
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label
  - Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
- 6-cell 14.1" (WXxDxH): 13.2" x 10.6" x 1.1—1.3"; 335.5 x 270mm x 28—32mm

Warranty
- 1-year
  - Customer: 1 year, parts: 1 year, labor: 1 year

Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)
  - One slot (ExpressCard/34, ExpressCard/54)
  - One slot (Type I, Type II), CardBus 32-bit

Mini PC Express
- Three Mini PC Express slots
  - 11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications
- Only some listed
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software
  - Lenovo System Toolbox
  - Adobe® Reader®
  - Roxio® Creator® Business Edition (DVDr±RW)
**ThinkPad T400 7417 (GMA) - TopSeller (Windows 7) - withdrawn**

<table>
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<th>Processor GHz</th>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program

**Processor**
- Intel® Core™ 2 Duo processor P8600 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

**Memory**
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Non-italics: standard memory in one socket; one socket available*

**SATA DVD±RW Ultrabay Slim SATA disk**
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 250GB1 (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display Camera**
- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Integrated graphics**
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; *Maximum external resolution: 2048x1536@75Hz (VGA DB-15)*

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® TouchPad**
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®2, magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 6-cell 14.1" (WxH): 13.2" x 10.6" x 1.1–1.3"; 335.5 x 270mm x 28–32mm

**Weight**
- 6-cell: up to 9.8 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr

**Chipset**
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard/54 Card**
- One slot (ExpressCard/34, ExpressCard/54)

**Smart Card read/Smart Card Slot**
- None

**Multicard reader**
- None

**Ports**
- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**
- Three Mini PCI Express slots

**Intel 5100**
- Some: Intel WiFi Link 5100, 1x2 (Shirley Peak)

**WIMAX**
- Some: Intel WIMAX wireless, Mini PCI Express adapter, Mini PCI Express adapter, Intel WIMAX/WiFi Link 5100, 1x2 (300Mbps) WiFi + 1x2 WIMAX (Echo Peak)

**WWAN upg**
- None

**UWB**
- None

**Modem**
- 56K.9.92 modem

**Bluetooth™**
- None

**Ethernet**
- Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio support**
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**
- Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**
- 1-year - depot repair service / service upgrades2 available

Preloaded operating system20
- Genuine Windows 7 Professional 32

Preloaded applications14 (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Skype™ for Windows
- Roxio Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service17
- 24 hour x 7 day18 toll-free support during the warranty period12 via 800-426-7378

ThinkPlus™ 12 1-year LOR19 9x5 NBD
ThinkPlus 2-year LOR 9x5 NBD 45K9569
ThinkPlus 3-year LOR 9x5 NBD 45K9570
ThinkPlus 4-year LOR 9x5 NBD 45K9573
ThinkPlus 5-year LOR 9x5 NBD 45K9575
ThinkPlus 2-year P/L P/U Depot 45K9571
ThinkPlus 3-year P/L P/U Depot 45K9572
ThinkPlus 4-year P/L P/U Depot 45K9574
ThinkPlus 5-year P/L P/U Depot 45K9576

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

© Lenovo (ML3-20) August 2010
ThinkPad T400 7417 (GMA) - TopSeller (April 2009) - withdrawn

Personal Systems Reference (PSREF)

See footnotes for important warranty information

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor P8400, P8600, P8700 or T9400 with dual-core, 1066MHz system bus, P8400/P8600/P8700: 3MB L2 cache; T9400: 6MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1GB, 2GB, or 3GB std / 8GB max¹ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD:RW</td>
<td>DVD burner, SATA 1.5gb/s, 9.5mm Ultrabay slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel Some: 80GB² dual-128GB² Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8&quot; wide, 8mm high Some: 160GB² (7400 or 7200 rpm), 250GB² (5400 rpm) or 320GB² (5400 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high, Active Protection System³ / All: removable, upgradable, supports 2nd dock, Shock Mounted Hard Drive</td>
</tr>
<tr>
<td>WideScreen: Display</td>
<td>14.1&quot; (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Same: camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz (VGA DB-15)</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>Touchpad</td>
<td>TrackPoint² pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar³, magnifying glass UltraNav⁴, wide touch pad below keyboard, Tap Zones, scrolling regions label illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions²</td>
<td>6-cell: 14.1W (WxDxH): 13.2&quot; x 10.6&quot; x 1.1–1.3&quot;; 335.5 x 270mm x 28–32mm 6-cell: starting at 5.0 lb (2.3kg) 6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 6-cell: up to 9.8 hr</td>
</tr>
<tr>
<td>Weight²</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
</tr>
<tr>
<td>Battery - type</td>
<td>6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 6-cell: up to 9.8 hr</td>
</tr>
<tr>
<td>Battery - life⁵</td>
<td>Supports ThinkVantage technologies</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Media Controller Hub), Intel E7500™/E7550™/E7560™ Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, 1.3/2.5Gbps Ethernet MAC), PCIe bus (WPCN58S Super I/O) One slot (ExpressCard/34, ExpressCard/54) One slot (Type I, Type II), CardBus 32-bit Mobile Intel GM45 Express Chipset (Graphics Media Controller Hub), Intel E7500™/E7550™/E7560™ Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, 1.3/2.5Gbps Ethernet MAC), PCIe bus (WPCN58S Super I/O) One slot (ExpressCard/34, ExpressCard/54) One slot (Type I, Type II), CardBus 32-bit</td>
</tr>
<tr>
<td>ExpressCard/54 Card</td>
<td>None</td>
</tr>
<tr>
<td>Smart Card read</td>
<td>None</td>
</tr>
<tr>
<td>Multicard reader</td>
<td>None</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Three Mini PCI Express slots</td>
</tr>
<tr>
<td>Intel 5100⁹ WIMAX</td>
<td>Some: 11a/b/g/n wireless¹, Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) Some: 11a/b/g/n and WIMAX wireless¹, Mini PCI adapter, Intel WIMAX/WiFi Link 5350, 3x3 (450Mbps) WiFi + 1x2 WIMAX (Echo Peak)</td>
</tr>
<tr>
<td>WWAN upg</td>
<td>None</td>
</tr>
<tr>
<td>2G Turbo UWB</td>
<td>None</td>
</tr>
<tr>
<td>Modem</td>
<td>56K V.92 modem</td>
</tr>
<tr>
<td>Bluetooth™ Ethernet</td>
<td>Some: Bluetooth 2.1 wireless, LED indicator Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>None</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty¹⁰¹¹</td>
<td>1-year - EasyServ¹⁰¹¹ depot repair service / upgrades¹² available</td>
</tr>
<tr>
<td>1GB PC3-8500 DDR3 L-H SODIMM</td>
<td>55Y3706 TR/R 14W Standard Battery 4-cell 41U3196</td>
</tr>
<tr>
<td>2GB PC3-8500 DDR3 L-H SODIMM</td>
<td>55Y3707 TR/R 14W Enhanced Battery 6-cell 41U3198</td>
</tr>
<tr>
<td>4GB PC3-8500 DDR3 L-H SODIMM</td>
<td>55Y3708 TR/R 14W High Capacity Battery 9-cell 43R2499</td>
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<tr>
<td>ThinkPad Advanced Dock</td>
<td>250301U Advanced Ultrabay Battery III 57Y4536</td>
</tr>
<tr>
<td>Other accessories on O-T400 sheet</td>
<td>Other accessories at lenovo.com/accessories</td>
</tr>
</tbody>
</table>

Footnotes:

1. See footnotes for important warranty information
2. Intel® Centrino™ 2 processor technology
3. Limited warranty¹¹
4. EasyServ¹¹ depot repair service / upgrades¹² available
5. These small and medium business (SMB) models are part of the US TopSeller™ Program
6. Preloaded operating system²⁰
7. Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
8. Vista models: Vista Premium logo
9. Preloaded applications¹⁴ (all OSes; only some listed)
10. Rescue and Recovery™
11. Access Connections³
12. Client Security Solution™
13. ThinkVantage Productivity Center
14. ThinkVantage System Update
15. ThinkVantage Software (fingerprint models)
16. Lenovo System Toolbox
17. ThinkPad Utilities (Power Manager and Presentation Director)
18. Adobe® Reader®
20. Roxio MyDVD® (DVD:R/W)
21. Corel® WinDVD® (DVD:R/W)
22. Supports ThinkVantage technologies
23. 65-watt (GMA graphics) AC adapter
24. ThinkPad Roll Cage and Top Cover
25. Roll Cage (one-piece magnesium)
26. Climate Savers® certified
27. EPEAT™ Gold rating
28. ENERGY STAR® 5.0-compliant
29. RoHS-compliant
30. International Warranty Service¹⁷
31. 24 hour x 7 day²² toll-free support during the warranty period²² via 800-426-7378
32. ThinkPlus® ²² 1-year LOR²² 9x5 NBD
33. ThinkPlus 2-year LOR 9x5 NBD
34. ThinkPlus 3-year LOR 9x5 NBD
35. ThinkPlus 4-year LOR 9x5 NBD
36. ThinkPlus 5-year LOR 9x5 NBD
37. ThinkPlus 2-year P&P UD Depot
38. ThinkPlus 3-year P&P UD Depot
39. ThinkPlus 4-year P&P UD Depot
40. ThinkPlus 5-year P&P UD Depot
41. Lenovo.com/thinkplus/warranty

US models announced April 21, June 2, or July 7, 2009
US models withdrawn effective September or December 2009

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**ThinkPad T400 2764 (Switchable) - TopSeller - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Switchable graphics</th>
<th>Disk SATA GB</th>
<th>Mini PCIe 802.11n</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Battery or Turbo</th>
<th>Whose (W) Global (G) Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2764-EAU T9400 2.53</td>
<td>3GB 14.1&quot; WXGA+Cam GMA, HD 3470 160G 7200 DVD±RW</td>
<td>3GB-8500 1066MHz DDR3</td>
<td>non-parity</td>
<td>204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available;</td>
<td>DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB (7200 rpm)</td>
<td></td>
<td>Intel AMT</td>
<td>Bluetooth™</td>
<td>Preloaded 8.1 (all models)</td>
</tr>
</tbody>
</table>

**Positioning**

Premiere performance: two spindles

**Processor**

Intel® Core™ 2 Duo processor T9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**

3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available;

SATA DVD±RW

Ultrabay Slim

SATA disk

DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB (7200 rpm)

SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Wide-screen display**

14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera

Camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**

Switches between discrete and integrated graphics (Vista only), Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon™ HD 3470, PCI Express x16, 256MB memory, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® and Touch pad

ThinkLight™

UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

6-cell 14.1W (WxDxH): 13.2" x 10.6" x 1.1–1.3"; 335.5 x 270mm x 28–32mm

**Weight**

9-cell: starting at 5.4 lb (2.4kg)

**Case material**

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**

Lithium Ion

Lithium Ion (7200 rpm) / 8 processor technology

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

ExpressCard slot

One ExpressCard/34 or ExpressCard/54

PC Card Std slot

None

Smart Card Read

None

MultiCard Reader

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports

Three USB 2.0, external monitor (VGA DB-15), modern (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express

Three Mini PCI Express slots

Integrated WLAN, requires wireless networking card/adapter

Intel WiFi Link 1000, 1x2 (Shirley Peak)

Intel 5100™ Wi-Fi Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)

2GB Turbo

None

2G Turbo

None

Modem

56K V.92 modem

Bluetooth™

Bluetooh 2.1 wireless, LED indicator

Ethernet

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel AMT

None

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

1-years - EasyServ®/B2B depot service / service upgrades® available

1GB PC3-8500 DDR3 L-H SODIMM

55Y3706

T/R 14W Standard Battery 4-cell

41U3196

2GB PC3-8500 DDR3 L-H SODIMM

55Y3707

T/R 14W Enhanced Battery 6-cell

41U3198

4GB PC3-8500 DDR3 L-H SODIMM

55Y3708

T/R UltraBay Battery 9-cell

43R2499

ThinkPad Advanced Dock

250310U

Advanced UltraBay Battery III

57Y4536

Other accessories on T-O400 sheet

Other accessories at lenovo.com/accessories

**Preloaded operating system**

- Genuine Windows® Vista® Ultimate 32

- Vista Premium logo

**Preloaded applications**

- only listed on corporate and SMB models

- Rescue and Recovery™

- Access Connections™

- Client Security Solution™

- ThinkVantage Productivity Center

- ThinkVantage System Update

- Fingerprint Software (fingerprint models)

- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)

- Lenovo System Toolbox

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe® Reader®

- Windows Live® Toolbar

- Microsoft® Office 2007 Trial (60-day)

- Roxio® Creator® Business Edition (DVD+RW)

- Roxio MyDVD® (DVD+RW)

- Corel® WinDVD® (DVD+RW)

- Supports ThinkVantage® technologies

- 90-watt (ATI graphics) AC adapter

- ThinkPad Roll Cage and Top Cover (one-piece magnesium)

- Climate Savers® certified

- EPEAT® Silver rating

- ENERGY STAR® 5.0-compliant

- RoHS-compliant

- International Warranty Service (IWS) 24 hour x 7 day® toll-free support within the warranty period via 1-800-426-7378

- Lenovo® ThinkPlus® 2-year LOR 9x5 NBD

- Lenovo® ThinkPlus® 3-year LOR 9x5 NBD

- Lenovo® ThinkPlus® 5-year LOR 9x5 NBD

- Lenovo® ThinkPlus® 2-year P/L P/U Depot

- Lenovo® ThinkPlus® 3-year P/L P/U Depot

- Lenovo® ThinkPlus® 5-year P/L P/U Depot

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

- Intel® Centrino® 2 processor technology

- Microsoft® Windows® Vista Business Edition (358.1mm)


- Preloaded applications: All models of T400 have the same preloaded applications.
### ThinkPad® T400 2765 (Switchable) - TopSeller - withdrawn

#### Positioning
- Processor: Premier performance; two spindles, Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache

#### Memory
- 2GB or 3GB std / 8GB max / PC3-8500 DDR3, non-parity, dual-channel capable, two-25pin-SO-DIMM sockets; Intel®-based: standard memory in both sockets; non sockets available; Non-Intel: standard memory in one socket; one socket available

#### SATA DVD:RW
- Ultrabay Slim SATA disk: DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable

#### Widescreen display
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

#### Camera
- Some: camera on top of screen, 1.3-megapixel, fixed focus

#### Switchable graphics
- Switches between discrete and integrated graphics (Vista only), Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon™ HD 3470, PCI Express x16, 256MB memory, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz (VGA)

#### Keyboard
- 99-key, ThinkVantage button, spill-resistant, multimedia Fn keys

#### Touchpad
- ThinkPad™ Touchpad (pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

#### Dimensions
- 6-cell 14.1W (WX/DX): 13.2 x 10.6 x 1.1 - 1.3, 335.5 x 270mm x 28 - 32mm

#### Weight
- 9-cell: starting at 5.4 lb (2.4kg)

#### Battery type
- Battery - life 1**: Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

#### Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.0a, secure chipset), (WPN385 Super I/O)

#### ExpressCard/S4
- One slot (ExpressCard/34, ExpressCard/S4)

#### PC Card
- Some: One slot (Type I, Type II), CardBus 32-bit

#### Multicard Reader
- None

#### Ports
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

#### Mini PCI Express
- Three Mini PCI Express slots

#### WWAN upg
- None

#### Modem
- 56K V.92 modem

#### Bluetooth™
- Bluetooth 2.1 wireless, LED indicator

#### Ethernet
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Audio support
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up down, mute buttons / digital microphone, mic input jack, headphone jack

#### Security
- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

#### FingerPrint reader
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

#### Limited warranty
- 3-years/1-year battery - EasyServ™ depot repair service / service upgrades, available

#### Preloaded operating system
- Some: Windows® XP Professional downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Ultimate 32

#### Preloaded applications
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Corel® WinDVD® (DVD+RW)

#### Supports
- ThinkVantage® technologies
- Climate Savers® certified EPEAT® Gold rating (LED models)
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service 17
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- Lenovo Guaranty agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US models announced Aug 5, Sep 2, or October 7, 2008 or March 24, 2009

US models withdrawn effective September 8, 2009, or June 30, 2009

(M3-2) January 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Disk Sata GB rpm</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo slot</th>
<th>Preload</th>
<th>Availability</th>
</tr>
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<tbody>
<tr>
<td>2765-81U</td>
<td>P8700 2.53</td>
<td>3GB</td>
<td>320G 7200 DVD:RW</td>
<td>None</td>
<td>PC</td>
<td>XP Pro</td>
<td>Oct 09</td>
</tr>
<tr>
<td>2765-82U</td>
<td>P8700 2.53</td>
<td>3GB</td>
<td>320G 7200 DVD:RW</td>
<td>AT&amp;T</td>
<td>None</td>
<td>XP Pro</td>
<td>Oct 09</td>
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<tr>
<td>2765-83U</td>
<td>T9600 2.80</td>
<td>4GB</td>
<td>320G 7200 DVD:RW</td>
<td>None</td>
<td>None</td>
<td>XP Pro</td>
<td>Oct 09</td>
</tr>
<tr>
<td>2765-84U</td>
<td>P8700 2.53</td>
<td>3GB</td>
<td>320G 7200 DVD:RW</td>
<td>None</td>
<td>None</td>
<td>XP Pro</td>
<td>Nov 09</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program.

Positioning Processor
Premiere performance; two spindles Intel® Core™ 2 Duo processor P8700 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus; P8700: 3MB L2 cache, T9600: 6MB L2 cache

Memory 3GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available

SATA DVD:RW
DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable

SATA Ulitrbay Slim SATa disk
One modular bay for interchangeable devices (right side), 9.5mm high, flat bezel

SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Snap Mounted Hard Drive, Active Protection System™

SATA disk

Widescreen display

Camera

Switchable graphics
Switches between discrete and integrated graphics (Windows 7 only), Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon™ HD 3470, PCI Express x16, 256MB memory, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz (VGA)

Oracle VM DVD±RW

ThinkPlus System Update
•••

ThinkPlus 5-year P&L P/U Depot
45K6023

ThinkPlus 5-year LOR 9x5 NBD
45K6024

ThinkPlus 5-year LOR 9x5 NBD
45K6025

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information © Intel CentriQ® 2 processor technology

US models announced October 22 or November 3, 2009

US models withdrawn effective August 2010

© Lenovo (ML3-16) August 2010
### ThinkPad T400 (GMA) - withdrawn

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Storage</th>
<th>Operating System</th>
<th>Battery</th>
<th>Ports</th>
<th>WWAN</th>
<th>Other Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>6474-11U P8400</td>
<td>Intel Core™ 2 Duo</td>
<td>1GB</td>
<td>WXGA</td>
<td>160GB (5400 rpm)</td>
<td>Windows XP Professional</td>
<td>6</td>
<td>PC</td>
<td>B32 G Oct 08</td>
<td>Intel Active Management</td>
</tr>
<tr>
<td>6474-11U P8400</td>
<td>Intel Core™ 2 Duo</td>
<td>2GB</td>
<td>WXGA</td>
<td>160GB (5400 rpm)</td>
<td>Windows XP Professional</td>
<td>6</td>
<td>PC</td>
<td>B32 G Oct 08</td>
<td>Intel Active Management</td>
</tr>
<tr>
<td>6474-R3U T6400</td>
<td>Intel Core™ 2 Duo</td>
<td>2GB</td>
<td>WXGA</td>
<td>160GB (5400 rpm)</td>
<td>Windows XP Professional</td>
<td>6</td>
<td>PC</td>
<td>B32 G Oct 08</td>
<td>Intel Active Management</td>
</tr>
<tr>
<td>6474-T6400</td>
<td>Intel Core™ 2 Duo</td>
<td>3GB</td>
<td>WXGA</td>
<td>160GB (5400 rpm)</td>
<td>Windows XP Professional</td>
<td>6</td>
<td>PC</td>
<td>B32 G Oct 08</td>
<td>Intel Active Management</td>
</tr>
</tbody>
</table>

### Personal Systems Reference (PSREF)

#### Widescreen Display
- Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight, high brightness 680 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

#### Camera
- Some: camera on top of screen, 1.3-megapixel, fixed focus

#### Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32

#### Preloaded applications
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Pre栽ated Business Edition (combo, DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

#### Support
- Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

#### Limited warranty
- 3-years/1-year battery - EasyServ™ depot repair service / service upgrades available
<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor P8400 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
</tr>
<tr>
<td>SATA DVD±RW</td>
<td>Non-Italics: standard memory in both sockets; no sockets available; Italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N2314) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
</tr>
<tr>
<td>Sata disk</td>
<td>Some: 80GB* Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8&quot; wide, 8mm high Some: 160GB (5400 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high.</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive</td>
</tr>
<tr>
<td>Camera</td>
<td>Some: camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>TrackPoint</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass</td>
</tr>
<tr>
<td>Touch pad</td>
<td>UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>6-cell 14.1&quot; (WxOxD): 13.2&quot; x 10.6&quot; x 1.1-1.3&quot;, 335.5 x 270mm x 28-32mm 6-cell: starting at 5.0 lb (2.3kg); 9-cell: starting at 5.4 lb (2.4kg)</td>
</tr>
<tr>
<td>Case color</td>
<td>Black</td>
</tr>
<tr>
<td>Case material</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim 6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim 6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr</td>
</tr>
<tr>
<td>Battery - life15</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim 6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), IHOMH-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCl 2.3, security chip, ethernet MAC), LPC bus (WPCN585 Super I/O)</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard/54)</td>
</tr>
<tr>
<td>PC Card</td>
<td>One slot (Type I, Type II), CardBus 32-bit</td>
</tr>
<tr>
<td>Smart Card read</td>
<td>None</td>
</tr>
<tr>
<td>Multicard reader</td>
<td>None</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a/2000 standard)</td>
</tr>
</tbody>
</table>
| Mini PCI Express | Three Mini PCI Express slots Intel 5100** Intel 11n** IBM WWAN upg 2G Turbo UWB Modem 56K V.92 modem Bluetooth™ Bluetooth 2.1 wireless, LED indicator Ethernet Non-vPro model: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1 vPro model: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1 Intel Active Management Technology (AMT) Audio support High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, integrated in ICH9M, TCG 1-2-compliant Security chip Security chip Finger print reader Finger print reader on palm rest, swipe sensor, supports the security chip Limited warranty7 3-years/1-yr battery - depot repair service / service upgrades25 available Preloaded operating system20 - Genuine Windows® Vista® - Business 32 - Vista Premium logo Preloaded applications14 (only some listed) - Rescue and Recovery™ - Access Connections1c - Client Security Solution™ - ThinkVantage Productivity Center - ThinkVantage System Update - Fingerprint Software (fingerprint models) - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions) - Lenovo System Toolbox - ThinkPad Utilities (Power Manager and Presentation Director) - Adobe® Reader® - Windows Live™ Toolbar - Microsoft® Office 2007 Trial (60-day) - Roxio® Creator® Business Edition (DVD+RW) - Roxio MyDVD® (DVD±RW) - Corel® WinDVD® (DVD±RW) Supports ThinkVantage® technologies - 65-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) Climate Savers® certified ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 day toll-free support during the warranty period12 via 800-426-7378 ThinkPlus™ 3-year LOR24 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6024 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

*These models have a depot repair service 3-year limited warranty
### Type-model

<table>
<thead>
<tr>
<th>Processor</th>
<th>Mem-ory display</th>
<th>Switchable graphics</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Battery</th>
<th>Whose (W)</th>
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<tbody>
<tr>
<td>2767-11U</td>
<td>P6600 2.40 1GB WXGA+</td>
<td>GMA, 3470 80G 5400 Combo</td>
<td>Intel 5100®/WWAN upg</td>
<td>Yes</td>
<td>6</td>
<td>PC</td>
<td>B32</td>
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<tr>
<td>2767-12U</td>
<td>T9400 2.50 2GB WXGA+</td>
<td>GMA, 3470 160G 5400 DVD+RW</td>
<td>Intel 5100 WWAN upg</td>
<td>Yes</td>
<td>7</td>
<td>1-in-7</td>
<td>B32 W</td>
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<tr>
<td>2767-13U</td>
<td>T9400 2.53 2GB WXGA+</td>
<td>GMA, 3470 160G 7200 DVD+RW</td>
<td>Intel 5100®/WWAN upg</td>
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<td>1-in-7</td>
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<td>2767-14U</td>
<td>T9600 2.80 2GB WXGA+</td>
<td>GMA, 3470 160G 7200 DVD+RW</td>
<td>Intel 5100®/WWAN upg</td>
<td>Yes</td>
<td>7</td>
<td>1-in-7</td>
<td>B32 W</td>
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<tr>
<td>2767-21U</td>
<td>T9400 2.53 2GB WXGA+</td>
<td>GMA, 3470 160G 7200 DVD+RW</td>
<td>Intel 5100 WUW</td>
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<td>6</td>
<td>PC</td>
<td>XP</td>
</tr>
<tr>
<td>2767-25U</td>
<td>T9400 2.53 2GB WXGA+</td>
<td>GMA, 3470 160G 7200 DVD+RW</td>
<td>Intel 5100 WUW</td>
<td>Yes</td>
<td>6</td>
<td>PC</td>
<td>XP</td>
</tr>
<tr>
<td>2767-27U</td>
<td>T9400 2.53 2GB WXGA+</td>
<td>GMA, 3470 160G 7200 DVD+RW</td>
<td>Intel 5100 WUW</td>
<td>Yes</td>
<td>6</td>
<td>PC</td>
<td>XP</td>
</tr>
</tbody>
</table>

### Memory
- 1GB or 2GB std / 8GB max / PC3-8500 1066MHz
- 2GB or std / 8GB max / PC3-8500 1066MHz
- 2GB or std / 8GB max / PC3-8500 1066MHz
- 2GB or std / 8GB max / PC3-8500 1066MHz

### SATA Combo
- Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm UltraBay Slim, removable bay only
- Some: DVD burner only, Sata 1.5Gb/s, max. 2.124"
- One modular bay for interchangeable devices (right side), 9.5mm high, flat bezel
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
- Some: 8GB (5400 rpm), 160GB (5400 or 7200 rpm), or 250GB (5400 rpm)
- Some: 8GB (5400 rpm), 160GB (5400 or 7200 rpm), or 250GB (5400 rpm)

### ATA disk
- 64GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
- Some: 80GB (5400 rpm), 160GB (5400 or 7200 rpm), or 250GB (5400 rpm)

### Ultrabay Slim
- All: removable, upgradable, supports 2nd disk, shock mounted storage
- Some: 1GB or 2GB std / 8GB max / PC3-8500 1066MHz
- Some: 1GB or 2GB std / 8GB max / PC3-8500 1066MHz
- Some: 1GB or 2GB std / 8GB max / PC3-8500 1066MHz
- Some: 1GB or 2GB std / 8GB max / PC3-8500 1066MHz

### Display
- Some: 14.1" (358.1mm) WXGA+ color, anti-glare, CCFL backlight, 185 nits, 16.1 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16.1 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16.1 aspect ratio, 300:1 contrast ratio

### Camera
- Camera: on top of screen, 1.3-megapixel, fixed focus

### Switchable graphics
- Switches between discrete and integrated graphics (Vista only)

### Preloaded operating system
- Some: Windows XP Professional preinstalled through ThinkPad Setup (in English and French)
- Some: Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 32-bit
- Some: Genuine Windows Vista Business 64-bit
- Vista models: Vista Premium logo

### Preloaded applications
- All OSes: Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Windows Live Toolbar
- Microsoft Windows Media Center Edition (60-day trial)
- Roxio Creator Business Edition (combo, DVD+RW
- Roxio MyDVD® (DVD+RW)
- Corel WinDVD® (combo, DVD+RW)

### Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub)
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC, LPC bus (WPCN385 Super I/O)

### ExpressCard slot
- One ExpressCard/34 or ExpressCard/54

### PC Card Slot
- Some: One Type I or Type II slot, CardBus 32-bit

### Smart Card Reader
- Some: Smart Card Reader
- Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

### Multimedia Reader Ports
- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-45), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

### Mini PCI Express
- Three Mini PCI Express slots
- Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5300, 3x3
- Some: Wireless WAN: 802.11a/b/g/n, AT&T (43951915), or AT&T (43951912)
- Some: Wireless WAN, Qualcom Gobi 1000 chipset, Mini PCIe adapter, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, service contract required with Verizon
- 2G Turbo
- Some: Intel Turbo Memory, Half-Mini PCIe adapter, 2GB flash, disk-cache accelerator
- None

### Modem
- 56K V.92 modem

### Bluetooth
- Bluetooth: version 2.1 wireless, LED indicator

### Ethernet
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

### Audio support
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Some: Trusted Platform Module (TPM) 1.2, integrated in IBM CPG, TCG 1.1 compliant

### FingerPrint reader
- Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- 3-years/1-year battery - EasyServ®/EasyServ® depot repair service / service upgrades available

See footnotes for important warranty information © Lenovo

US models withdrawn effective August 2009, February 2010, or August 2010

(ML3-4) August 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Mem-</th>
<th>LED</th>
<th>Mini PCI</th>
<th>Mini PCI</th>
<th>Battery</th>
<th>Whose (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1U/T2U</td>
<td>Intel Core™ 2 Duo processor P8600, P8700, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8600/P8700: 3MB L2 cache; T9400: 6MB L2</td>
<td>1GB, 2GB, or 3GB std / 8GB max² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td>non-italics: standard memory in both sockets; no sockets available;</td>
<td>non-italics: standard memory in both sockets; no sockets available;</td>
<td>non-italics: standard memory in both sockets; no sockets available;</td>
<td>non-italics: standard memory in both sockets; no sockets available;</td>
<td>non-italics: standard memory in both sockets; no sockets available;</td>
</tr>
<tr>
<td>Memory</td>
<td>Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable</td>
<td>Some: DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)</td>
<td>Some: 8GB on Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8&quot; wide, 8mm high</td>
<td>Some: 80GB (7200 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high</td>
<td>All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sata Combo</td>
<td>Some: 14.1&quot; (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
<td>Some: 14.1&quot; (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
<td>Some: 14.1&quot; (358.1mm) WXGA (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
<td>Some: camera on top of screen, 1.3-megapixel, fixed focus</td>
<td>Switches between discrete and integrated graphics (Vista only), Windows USB based on Ultra-Wideband (UWB), Half-Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widescreen display</td>
<td>6-cell 14.1W (WxD:H): 13.2&quot; x 10.6&quot; x 1.1-1.3&quot;, 335.5 x 270mm x 28-32mm</td>
<td>6-cell: starting at 5.0 lb (2.3kg); 9-cell: starting at 5.4 lb (2.4kg)</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>Switchable graphics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight²</td>
<td>6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
<td>One slot (ExpressCard/34, ExpressCard/54)</td>
<td>One slot (Type I, Type II), CardBus 32-bit</td>
<td>Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 4 (4 pin connector, 19384-2000 standard)</td>
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<td>ExpressCard/54</td>
<td>Some: one slot, two slots, three slots, four slots</td>
<td>Some: one slot, two slots, three slots, four slots</td>
<td>Some: one slot, two slots, three slots, four slots</td>
<td>Some: one slot, two slots, three slots, four slots</td>
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<td>PC Card</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Smart Card read</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Multicard reader</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Ports</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Mini PCI Express</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<tr>
<td>Intel 5100®</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<tr>
<td>Intel 5300®</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>WWAN upg</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>2G Turbo</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Modem</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Bluetooth™</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Audio support</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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<td>Security</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN3SS Super I/O)</td>
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See footnotes for important warranty information

Intel Centrino® 2 with vPro™ technology

US models announced October 7, November 4, or December 2, 2008 or June 2, 2009

US models withdrawn effective August 2009 or August 2010

Preloaded operating system²
- Genuine Windows Vista® Business 32
- Vista Premium logo

Preloaded applications¹ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center and Presentation Director
- Adobe Reader®, Adobe Acrobat®, Adobe Reader®
- Windows Live® Toolbar
- Microsoft Office 2007 Trial (60-day)
- Roxio Creator® Business Edition (combo, DVD RW)
- Corel WinDVD® (combo, DVD RW)

Supports ThinkVantage® technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- EPEAT Silver rating (other models)
- ENERGY STAR® 5.0-compliant
- Rohs compliant
- International Warranty Service¹⁷
- 24 hour x 7 day¹ fare-free support during the warranty period¹² via 800-426-7378
- ThinkPlus® ², 3-year LOR ⁹x5 NBD
- ThinkPlus ⁴-year LOR ⁹x5 NBD
- ThinkPlus ⁵-year LOR ⁹x5 NBD
- ThinkPlus ³-year LOR ⁹x5 NBD
- ThinkPlus ³-year LOR ⁹x5 NBD
- ThinkPlus ³-year LOR ⁹x5 NBD
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad T400 2767 (Switchable) - July 2009 - withdrawn

#### Processor
- **Intel® Core™ 2 Duo processor P8400, P8700, or T9400 with dual-core**
- Intel HD Boost, 1066MHz system bus; P8400/P8700: 3MB L2 cache; T9400: 6MB L2

#### Memory
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

#### SATA/DVD:RW
- DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

#### UltraSlim SATA disk
- 160GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high. Active Protection System™ All:
- removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

#### Ultrawide display
- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

#### Switchable graphics
- Switches between discrete and integrated graphics (Vista only)

#### Keyboard
- 99-key, ThinkVantage button, spill-resistant, multimedia Fn keys

#### TrackPoint
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

#### ThinkLight™
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

#### Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub,ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus)

#### ExpressCard/54
- One slot (ExpressCard/34, ExpressCard/54)

#### PC Card
- Some: One slot (Type I, Type II), CardBus 32-bit

#### Smart Card read
- Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, Type X), climate savers certified

#### Multicard reader ports
- Three 2.0 USB, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

#### Mini PCI Express
- Three Mini PCI Express slots

#### WWAN upgradable
- 2G Turbo
- Wireless WAN upgrade, requires Verizon® (43R9151) or AT&T® (43R9152)

#### MBD
- None

#### Bluetooth
- Bluetooth 2.1 wireless, LED indicator

#### Ethernet
- Non-vPro model: Intel 82576FL Gigabit Network Connection (Boazman), PHY, PCIe x1
- vPro model: Intel 8257LM Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Intel AMT
- Intel Active Management Technology (AMT) II

#### Audio support
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

#### Security
- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

#### Fingerprint reader
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- 3-years / 1-yr battery - depot repair service / service upgrades available

### Preloaded system
- Genuine Windows Vista Business 32
- Vista Premium logo

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVP/DW)
- Roxio MyDVD® (DVP/DW)
- Corel® WinDVD® (DVP/DW)

### Support
- Supports ThinkVantage® technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- Climate Savers certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

### International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Lenovo.com
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information
- © Lenovo

### US models announced July 7, 2009

### US models withdrawn effective March or August 2010

(ML3-15) August 2010
Type-model  | Processor GHz | Memory | Disk | Mini PCI Express | Mini PCI Express WWAN | Mini PCI Express Battery Life | Whose (W) Pre- | GMP (P) Avail date |
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>6475-11U P8400 2.26 1GB 14.1&quot; WXGA</td>
<td>Intel® Core™ 2 Duo processor P8400 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400: 3MB L2 cache; 6475-4L2 cache</td>
<td>1GB, 2GB, or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available</td>
<td>CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable</td>
<td>DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)</td>
<td>Some: 6-cell, Top Cover</td>
<td>6 Yes PC</td>
<td>B32 GP Aug08</td>
<td></td>
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<tr>
<td>6475-11U P8400 2.26 2GB 14.1&quot; WXGA</td>
<td>GMA 80G 5400 Combo</td>
<td>Intel® 1000™ WWAN upg</td>
<td>9 6 Yes PC</td>
<td>B32 GP Aug08</td>
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<tr>
<td>6475-R2U T9400 2.53 2GB 14.1&quot; WXGA</td>
<td>Cam GMA 160G 5400 Combo</td>
<td>Intel® 1000™ WWAN upg</td>
<td>2G Turbo 9 Yes PC</td>
<td>B32 GP Aug08</td>
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<tr>
<td>6475-P1U T9400 2.53 2GB 14.1&quot; WXGA</td>
<td>GMA 160G 5400 DVD+RW</td>
<td>Intel® 1000™ WWAN upg</td>
<td>6 Yes PC</td>
<td>XP GP Sep08</td>
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<td>6475-44U P8400 2.26 3GB 14.1&quot; WXGA</td>
<td>Cam GMA 160G 5400 Combo</td>
<td>Intel® 1000™ WWAN upg</td>
<td>7-11 Yes PC</td>
<td>B32 GP Nov08</td>
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<td>6475-45U T9400 2.53 3GB 14.1&quot; WXGA</td>
<td>Cam GMA 160G 5400 DVD+RW</td>
<td>Intel® 1000™ WWAN upg</td>
<td>6 Yes PC</td>
<td>B32 GP Nov08</td>
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<tr>
<td>6475-P8U P8600 2.40 2GB 14.1&quot; WXGA+ LED</td>
<td>GMA 160G 5400 DVD+RW</td>
<td>Intel® 1000™ WWAN upg</td>
<td>6 Yes PC</td>
<td>B32 GP Dec08</td>
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<td>6475-P9U P8600 2.40 2GB 14.1&quot; WXGA+ LED</td>
<td>GMA 160G 7200 DVD+RW</td>
<td>Intel® 1000™ WWAN upg</td>
<td>9 Yes PC</td>
<td>B32 GP Dec08</td>
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</table>

* These models are part of the Global Models Plus program with limited onsite service2 3-year limited warranty

Positioning Processor
Premiere performance: two spindles Intel® Core™ 2 Duo processor P8400 or T9400 with dual-core, Intel HD Boost,

Memory
1GB, 2GB, or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

SATA Combo
Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable | DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)

Widescreen display
Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera
Some: camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label illuminates the keyboard to improve visibility in low-light conditions

Dimensions
6-cell 14.1" (WXDH): 13.2" x 10.6" x 0.9"-1.1"; 335.5 x 270mm x 28–32mm

Weight
Black

Battery - type
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

Battery - life
6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Media Controller Hub), Intel GM45 Express Chipset (Graphics Media Controller Hub), Intel Express I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O), Intel® 5100 WWAN upg 6 Y Y PC B32 W G P Aug 08

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

PC Card
Some: one slot (Type I, II), CardBus 32-bit

Smart Card reader
None

Multi cardiac reader
Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Mini PCI Express
Three Mini PCI Express slots

Intel 5100® WWAN upg 2G Turbo

Modem
56K V.92 modem

Bluetooth
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security keyhole
Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response / service upgrades** available

Preloaded operating system
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista™ Business
- Some: Genuine Windows Vista Business 32

Preloaded applications (all OSes, only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update Tool
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio Creator® Business Edition (combo, DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (combo, DVD+RW)

Preloaded operating system
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista™ Business
- Some: Genuine Windows Vista Business 32

Preloaded applications
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio Creator® Business Edition (combo, DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (combo, DVD+RW)

65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378
- Lenovo thinkplus@lenovo.com
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Intel Centrino® 2 with vPro™ technology

** Lenovo (ML3-5) August 2010
Preloaded operating system:
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business

Preloaded applications:
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (finger print models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (combo, DVD:RW)
- Roxio® MyDVD® (DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

Supports ThinkVantage® technologies

90-watt (ATI graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
Climate Savers® certified
EPEAT® Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service®
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 4-year LOR 9x5 NBD
45K6038
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® T400 6474 (GMA) - Education - withdrawn

Personal Systems Reference (PSREF)

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<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Cam-Integrated graphics GB</th>
<th>Disk</th>
<th>SATA interface</th>
<th>Mini PCIe 802.11n</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Battery/Blue/Card slot</th>
<th>Workhorse (W)</th>
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<tr>
<td>6474-E1U</td>
<td>P8400 2.26</td>
<td>1GB</td>
<td>14.1&quot; WXGA</td>
<td>Cam GMA 80G 5400</td>
<td>Combo</td>
<td>Intel 5100</td>
<td>WWAN upg</td>
<td>2G Turbo 6</td>
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<td>6474-E4U</td>
<td>P8700 2.53</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>Cam GMA 250G 5400</td>
<td>DVD+RW Intel 5100 WWAN upg</td>
<td>6</td>
<td>7-in-1</td>
<td>Mar 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6474-E9U</td>
<td>T9600 2.80</td>
<td>3GB</td>
<td>14.1&quot; WXGA+</td>
<td>Cam GMA 160G 7200</td>
<td>DVD+RW Intel 5100 WWAN upg</td>
<td>9</td>
<td>7-in-1</td>
<td>Mar 09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning

Processor

Premiere performance; two spindles

Intel® Core™ 2 Duo processor P8400, P8700, T9400, or T9600 with dual-core, 1066MHz system bus; P8400/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 cache

Memory

1GB, 2GB, or 3GB std / 8GB max\(^7\) / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

Italics: standard memory in both sockets; no sockets available;

Non-italics: standard memory in one socket; one socket available

SATA Combo

Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable

Some: DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)

Ultrabay Slim

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

80GB\(^8\) (5400 rpm), 160GB (7200 rpm), or 250GB (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display

Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera

Camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics

Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;

Maximum external resolution: 2048x1536@75Hz

SATA DVD-iRW

None

Ultrabay Slim

Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable

Some: DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)

Battery - life\(^9\)

6-cell: 14.1W (WxDxH): 13.2" x 10.6" x 1.1-1.3", 335.5 x 270mm x 28-32mm

6-cell: starting at 5.0 lb (2.3kg); 9-cell: starting at 5.4 lb (2.4kg)

Weight\(^9\)

Top: Super-Elastic PolyCarbonate (SEPC), Bottom: Carbon-Fiber Reinforced Plastic

Core: 1.1, Lithium Ion 6-cell or 9-cell, supports unique 2nd battery in Ultrabay Slim

6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr

Chipset

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express\(^1\) 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)\(^1\), one ExpressCard/C4 or ExpressCard/C4

ExpressCard slot

One ExpressCard/C4 or ExpressCard/C4

PC Card Slot

Some: One Type I or Type II slot, CardBus 32-bit

Smart Card Reader

None

MultiCard Reader

Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express

Three Mini PCI Express slots

Intel 5100\(^\text{th}\) WWAN upg

2G Turbo

UWB

Modem

56K V.92 modem

Bluetooth\(^\text{th}\)

Bluetooth 2.1 wireless, LED indicator

Ethernet

Intel® 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel AMT

Intel Active Management Technology (AMT)

Audio support

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty\(^3\)

3-years/1-yr battery - depot repair service / service upgrades\(^2\) available

Preloaded operating system\(^2\)

- Genuine Windows® Vista Business 32

- Vista Premium logo

Preloaded applications\(^1\) (only some listed)

- Rescue and Recovery™

- Access Connections™

- Client Security Solution™

- ThinkVantage Productivity Center

- ThinkVantage System Update

- FingerPrint Software (fingerprint models)

- McAfee VirusScan® Plus with SiteAdvisor\(^8\) (30 days of virus definitions)

- Lenovo System Toolbox

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe® Reader®

- Windows Live® Toolbar

- Microsoft® Office 2007 Trial (60-day)

- Roxio® Creator® Business Edition (combo, DVD+RW)

- Roxio MyDVD® (DVD+RW)

- Corel® WinDVD® (combo, DVD+RW)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage and Top Cover

Roll Cage (one-piece magnesium)

Climate Savers® certified

EPEAT® Silver rating

ENERGY STAR® 5.0-compliant

International Warranty Service\(^7\)

24 hour x 7 day\(^7\) toll-free support during the warranty period\(^2\) via 800-426-7378

ThinkPlus\(^{\text{TM}, 23}\) 3-year LOR\(^{\text{TM}}\) 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US models announced August 5, 2008 or March 24, 2009

US models withdrawn effective August 2009 or August 2010

(ML3-7-3) August 2010
ThinkPad T400 2767 (Switchable) - Education - withdrawn

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<th>Wide-screen display</th>
<th>Camera</th>
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<th>Disk</th>
<th>Mini PCle</th>
<th>Mini PCle</th>
<th>Mini PCle</th>
<th>Whorse (W)</th>
<th>Global (G)</th>
<th>Availability</th>
</tr>
</thead>
</table>
| 2767-E1U T9400 | 2.53 2GB 14.1” WXGA+ Cam GMA, HD 3470 160G 5400 DVD±RW | Intel 2 Duo processor T9400 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, channel capable, two 204-pin SO-DIMM sockets, Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket available | DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB7 (5400 or 7200rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™ | 14.1”14 (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio | 6-cell 7-in-1 U32 W Aug 08
| 2767-E2U T9400 | 2.53 2GB 14.1” WXGA+ Cam GMA, HD 3470 160G 7200 DVD±RW | Intel Core™ 2 Duo processor T9400 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, channel capable, two 204-pin SO-DIMM sockets, Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket available | DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB7 (5400 or 7200rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™ | 14.1”14 (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio | 6-cell 7-in-1 U32 W Aug 08
| 2767-E7U T9400 | 2.53 2GB 14.1” WXGA+ Cam GMA, HD 3470 160G 7200 DVD±RW | Intel Core™ 2 Duo processor T9400 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, channel capable, two 204-pin SO-DIMM sockets, Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket available | DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB7 (5400 or 7200rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™ | 14.1”14 (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio | 6-cell 7-in-1 U32 W Feb 09
| 2767-E8U T9600 | 2.80 3GB 14.1” WXGA+ Cam GMA, HD 3470 160G 7200 DVD±RW | Intel Core™ 2 Duo processor T9400 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, channel capable, two 204-pin SO-DIMM sockets, Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket available | DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB7 (5400 or 7200rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™ | 14.1”14 (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio | 6-cell 7-in-1 U32 W Aug 08

**Limited warranty**12 3-years/1-year battery - depot repair service / service upgrades22 available

- **These models have a depot repair service 3-year limited warranty**
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

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See footnotes for important warranty information. *Intel Centrino® 2 with vPro™ technology
© Lenovo

US models announced August 5, 2008, February 17, 2009, or March 24, 2009

US models withdrawn effective February or August 2010
**ThinkPad T400 2768 (Switchable) - Education (Onsite) - withdrawn**

**Positioning**
- Processor: Premier performance; two spindles
  - Intel® Core™ 2 Duo processor T9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**
- 2GB std / 8GB max
- PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- Non-Italics: standard memory in one socket; one socket available

**SATA DVD:RW UltraBay Slim SATA disk**
- DVD burner, SATA 1.5Gb/s, UltraBay Slim, removable (43N3214)
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- 160GB (7200 rpm)
- SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**
- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**
- Camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**
- Switches between discrete and integrated graphics (Vista only)
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon HD 3470, PCI Express x16, 256MB memory, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz (VGA)

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touch pad**
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

**Dimensions**
- 6-cell 14.1" (358.1mm) WXGA+ (1440x900) color, wide touch pad below keyboard, Tap Zones, scrolling regions label

**Weight**
- 6-cell: starting at 5.0 lb (2.3kg); 9-cell: starting at 5.4 lb (2.4kg)

**Case material**
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**
- Lithium-Ion 6-cell, supports unique 2nd battery in UltraBay Slim
- 6-cell: up to 6.5 hr; 6-cell plus UltraBay battery: up to 8.0 hr;
- 9-cell: up to 9.8 hr; 9-cell plus UltraBay battery: up to 11.8 hr

**Chipset**
- Intel Mobile GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)
- One slot (ExpressCard/34, ExpressCard/54)

**ExpressCard/54 Card**
- None

**Smart Card read**
- None

**Multicard reader**
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**
- Three USB 2.0, external monitor (VGA-15), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Mini PCI Express**
- Intel 5100™
- Intel 5300™
- WWAN upg
- Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)

**Modem**
- 56K V.92® modem

**Bluetooth**
- Bluetooth 2.1 wireless, LED indicator

**Ethernet**
- Intel 82567LM Gigabit Network Connection (Bozam, PHY, PCIe x1

**Audio support**
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Security keyhole**
- Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**
- Fingerprint Software (fingerprint reader)

**Limited warranty**
- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

**Preloaded operating system**
- Genuine Windows® Vista® Ultimate 32
- Vista Premium logo

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerPrint technology)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

**Battery**
- up to 11.3 hr
- up to 9.8 hr;
- 6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr;
- 9-cell: up to 9.8 hr; 9-cell plus UltraBay battery: up to 11.8 hr

**See footnotes for important warranty information**

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© Lenovo (ML3-11) February 2010

**US model announced February 17, 2009**

**US model withdrawn effective February 2010**
## ThinkPad T400 Accessories - withdrawn

**Memory**
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
- 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
- 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386
- 4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708

**Ultraslim Slim 9.5mm**
- Serial ATA Hard Drive Bay Adapter III 43N3412

**Storage and removable storage**
- 160GB Disk SATA 3.0Gb/s (7200 rpm)\(^{(1)}\) 41N5737
- 250GB Disk SATA 3.0Gb/s (5400 rpm)\(^{(1)}\) 43R8152
- 250GB Disk FDE SATA 3.0Gb/s (7200 rpm)\(^{(1)}\) 43N3410
- 320GB Disk SATA 3.0Gb/s (5400 rpm)\(^{(1)}\) 43N3403
- 500GB Disk SATA 3.0Gb/s (7200 rpm)\(^{(1)}\) 43N3423
- Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultraslim.
- 128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406
- 256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover) 43N3417
- USB 2.0 Portable 320GB Hard Disk 45K1689
- USB 2.0 Portable 500GB Hard Disk 45K1690
- USB 2.0 Secure 160GB Hard Disk 43R2018
- USB 2.0 Secure 320GB Hard Disk 43R2019
- eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400
- USB 2.0 Portable DVD Burner 43N3264

**Wireless WAN (Mini PCI Express)**
- Only WWAN upgradable models:
- Verizon® WWAN UNDP Broadband Mini PCl\(^{(2)}\) 43R9151
- AT&T® WWAN HSPA Broadband Mini PCl\(^{(2)}\) 43R9152

**ThinkPad Expansion**
- Lenovo® Essential Notebook Stand 45J9292
- USB Port Replicator with Digital Video 45K1610

**Keyboard**
- TrackPoint Cap Collection 73P2698
- Preferred Preferred USB Keyboard 73P5220
- Enhanced Performance USB Keyboard 73P2620
- Ultralight Wireless Keyboard and Mouse\(^{(2)}\) 57Y4700
- ThinkPad USB Keyboard with TrackPoint 55Y9003
- Lenovo® USB Fingerprint Keyboard 73P4730
- Lenovo USB Smartcard Keyboard 51J0155

**Mouse**
- Lenovo Optical Mouse (USB) 06P4069
- ThinkPad USB Laser Mouse 57Y4635
- Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405
- ThinkPad Travel Mouse (USB, Optical) 31P7410
- ThinkPad Laser Mouse 41U5008

**Multimedia**
- ThinkPad In-Ear Headphones 57Y4488

**Security**
- Kensington® MicroSaver® Cable Lock 73P2582
- Kensington Titan Head Cable Lock 45K1620
- USB Gemplus GemPc Smart Card Reader 41N3040
- ThinkPad T400/T410/R400 Privacy Filter 43R2472
- Note: ThinkPad T400/T410/R400 Privacy Filter (43R2472) is not supported on T400s or T410s.
- PC Card Gemplus Smart Card Reader 41N3004
- ExpressCard Gemplus Smart Card Reader 41N3043

**Batteries**
- ThinkPad Battery 33 (4-cell) 41U3196
- ThinkPad Battery 33+ (6-cell) 41U3198
- ThinkPad Battery 33++ (9-cell) 43R2499
- ThinkPad Battery 42 (3-cell, bay)\(^{(3)}\) 57Y4536
- Used in Ultraslim Slim bay.
- ThinkPad External Battery Charger\(^{(4)}\) 40Y7625

More information at www.lenovo.com/alldaycomputing

**Carrying Cases**
- Up to 14" widescreen models:
  - ThinkPad 14W Case Sleeve 57Y4294
  - ThinkPad 15.4" widescreen models:
    - ThinkPad 15W Case Sleeve 51J0477
    - Lenovo Business Messenger Case 41U5255
    - Lenovo Messenger Max 41U5256
    - Lenovo Performance BackPack 41U5254
- Checkpoint Friendly Business Topload Case 51J0418
- ThinkPad Business Topload Case 43R2476
- ThinkPad Business BackPack 43R2482
- ThinkPad Deluxe Expander Case 43R2478
- ThinkPad Executive Leather Case 43R2480

More information at www.lenovopowertips.com

**Monitors**
- Lenovo L2230x Wide 21.5" Monitor 5433HB1
- ThinkVision® L171p 17" Monitor 5047HB2
- ThinkVision L1900p 19" Monitor 43R2471
- ThinkVision L1951p Wide 19" Monitor 2448HB6
- ThinkVision L2250p Wide 22" Monitor 2572HB6
- ThinkVision L2251p Wide 22" Monitor 2572HD6
- ThinkVision L2251x Wide 22" Monitor 2576HB6
- ThinkVision L2321x Wide 23" Monitor 4014HB6
- ThinkVision L2440p Wide 24" Monitor 4420HB2

More information at www.lenovo.com/support/cases

**Batteries**
- ThinkPad Battery 33 (4-cell) 41U3196
- ThinkPad Battery 33+ (6-cell) 41U3198
- ThinkPad Battery 33++ (9-cell) 43R2499
- ThinkPad Battery 42 (3-cell, bay)\(^{(3)}\) 57Y4536
- Used in Ultraslim Slim bay.
- ThinkPad External Battery Charger\(^{(4)}\) 40Y7625

More information at www.lenovo.com/alldaycomputing

**Monitor Accessories**
- Lenovo USB-to-DVI Monitor Adapter 45K5296
- ThinkVision USB Soundbar 40Y7616
- ThinkVision Soundbar 46K1263
- Lenovo USB MicroSaver Cable Lock 73P2582
- Lenovo Easy Reach Monitor Stand 55Y9258
- Radial Arm

More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit: www.lenovo.com/support/accessories

www.lenovo.com/support/notebookaccessories

www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

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(O-T400) August 2010
**ThinkPad T400s 2808 (GMA) - TopSeller - withdrawn**

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<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB</th>
<th>Mini PCIe Speed</th>
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<th>Limited warranty</th>
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<td>2GB 14.1&quot;, WXGA+</td>
<td>512MB DDR3</td>
<td>4-cell</td>
<td>120GB, 5400, DVD±RW</td>
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<td>Intel Core™ 2 Duo processor SP9400</td>
<td>Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business</td>
<td>Intel Centri® 2 with vPro™ technology</td>
<td>3-years/1-year battery - EasyServ™/12</td>
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<td>Intel Core™ 2 Duo processor SP9600</td>
<td>Some: Genuine Windows Vista Business 32</td>
<td>Some: Vista models: Vista Premium logo</td>
<td>6-years/1-year battery - EasyServ™/12</td>
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<td>2808-CZU SP9400 2.40</td>
<td>2GB 14.1&quot;, WXGA+</td>
<td>512MB DDR3</td>
<td>4-cell</td>
<td>80GB, SSD, DVD±RW</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<td>None</td>
<td>None</td>
<td>Intel Core™ 2 Duo processor SP9400</td>
<td>Some: Genuine Windows Vista Business 32</td>
<td>None</td>
<td>6-years/1-year battery - EasyServ™/12</td>
<td>2GB PC3-8500 DDR3 1.0GHz</td>
<td>55Y3708</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

- Positioning
  - Processor: Performance and upportability; two spindles
  - Memory: 2GB std / 8GB max
  - SATA DVD:RW
  - Ultrabay Slim
  - Display: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 600:1 contrast ratio
  - Camera: Some: camera on top of screen, 2.0-megapixel, fixed focus
  - Graphics: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2560x1600 (DisplayPort)@60Hz, 2048x1536 (VGA)@75Hz, 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
  - Keyboard: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
  - TrackPoint: pointing device, “Press-to-Select,” Internet Scroll Bar, magnifying glass
  - Touchpad: wide touch pad below keyboard, Track Zones, scrolling regions label, multi-touch
  - Widescreen display: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 600:1 contrast ratio
  - Case: Magnesium alloy, glass-fi ber reinforced plastic (side walls); Carbon-fi ber reinforced plastic (top), Display cover: Magnesium alloy, LED backlighting indicator: LED
  - Battery: 6-cell, up to 5.5 hr; 6-cell plus Ultrabay battery: up to 8.5 hr
  - Software:
    - Preloaded operating system
    - Supporting software
    - Drivers
    - Support:
      - On-site service
      - Depot service

**Other accessories on O-T400-S sheet**
- 2GB PC3-8500 DDR3 1.0GHz: 55Y3706
- 4GB PC3-8500 DDR3 1.0GHz: 55Y3708
- Other accessories on O-T400-S sheet

**See footnotes for important warranty information**

US models announced June 23 or July 7, 2009
US models withdrawn effective December 2009

© Lenovo (SN1-1) January 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Cam-eras</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>SATA optical</th>
<th>Mini PCIe UWB</th>
<th>Finger print reader</th>
<th>Blue-ooth</th>
<th>Card slot</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2808-DHUSP9400 2.40</td>
<td>14.1&quot; WXGA+</td>
<td>2GB</td>
<td>GMA 120G 5400</td>
<td>DVD±RW</td>
<td>Intel 5100™iH WWAN upg</td>
<td>None</td>
<td>None</td>
<td>Fingerprint</td>
<td>Blue-tooth</td>
<td>Card slot</td>
<td>Preload</td>
<td>Avail date</td>
<td></td>
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<tr>
<td>2808-DJUSP9400 2.40</td>
<td>14.1&quot; WXGA+</td>
<td>2GB</td>
<td>GMA 250G 5400</td>
<td>DVD±RW</td>
<td>Intel 5100™iH WWAN upg</td>
<td>None</td>
<td>None</td>
<td>Fingerprint</td>
<td>Blue-tooth</td>
<td>Card slot</td>
<td>Preload</td>
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<tr>
<td>2808-DKUSP9400 2.40</td>
<td>14.1&quot; WXGA+</td>
<td>2GB</td>
<td>GMA 128G SSD</td>
<td>DVD±RW</td>
<td>Intel 5100™iH WWAN upg</td>
<td>None</td>
<td>None</td>
<td>Fingerprint</td>
<td>Blue-tooth</td>
<td>Card slot</td>
<td>Preload</td>
<td>Avail date</td>
<td></td>
</tr>
</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Lenovo (SN1-S) July 2010
ThinkPad T400s 2808 (GMA) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Cam-eras</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>Sata</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>Card slot</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>2808-DLU SP9600 2.53</td>
<td>4GB</td>
<td>14.1&quot; WXGA+</td>
<td>Cam GMA 128GB SSD DVD±RW</td>
<td>Intel 5100®</td>
<td>AT&amp;T®</td>
<td>None</td>
<td>Fing</td>
<td>Blue</td>
<td>Express</td>
<td>Pro 64</td>
<td>Nov 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program

Preloaded operating system®:
- Genuine Windows® 7 Professional 64

Preloaded applications® (only some listed):
- Rescue and Recovery™
- Access Connections®
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio® MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service®
- 24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378

See footnotes for important warranty information © Lenovo

US model announced November 3, 2009

US model withdrawn effective July 2010

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<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GbG (Avail date)</th>
<th>Warranty (W)</th>
<th>Preloaded operating system</th>
<th>Preloaded applications</th>
<th>US Govt (TAA) Processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>2815-2U SP9400</td>
<td>2.40</td>
<td>3GB 14.1&quot; WXGA+</td>
<td>None Express B32 Jun 09</td>
<td>-</td>
<td>-</td>
<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
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<tr>
<td>2815-23U SP9600</td>
<td>2.53</td>
<td>4GB 14.1&quot; WXGA+</td>
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<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
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<td>2815-24U SP9600</td>
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<td>4GB 14.1&quot; WXGA+</td>
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<td>2.53</td>
<td>2GB 14.1&quot; WXGA+</td>
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<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
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<td>2815-2YU SP9400</td>
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<td>2815-32U SP9400</td>
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<td>2GB 14.1&quot; WXGA+</td>
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<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
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<tr>
<td>2815-3YU SP9400</td>
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<td>4GB 14.1&quot; WXGA+</td>
<td>None Express B32 Jun 09</td>
<td>-</td>
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<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
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<tr>
<td>2815-3ZU SP9400</td>
<td>2.40</td>
<td>2GB 14.1&quot; WXGA+</td>
<td>None Express B32 Jun 09</td>
<td>-</td>
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<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
</tr>
<tr>
<td>2815-62U SP9400</td>
<td>2.40</td>
<td>4GB 14.1&quot; WXGA+</td>
<td>None Express B32 Jun 09</td>
<td>-</td>
<td>-</td>
<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
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<tr>
<td>2815-64U SP9400</td>
<td>2.53</td>
<td>4GB 14.1&quot; WXGA+</td>
<td>None Express B32 Jun 09</td>
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<td>-</td>
<td>Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
</tr>
</tbody>
</table>

**Memory**
- 2GB, 3GB, or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Italics: standard memory in both sockets; no sockets available;
- Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW UltraSlim**
- DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side). 9.5mm high, bottom access
- Some: 80GB or 120GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high
- Some: 120GB (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 8mm high, Active Protection System™
- All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**
- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display.
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Intel Scroll Bar™, magnifying glass
- UltraNav™ wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

**Dimensions²**
- 14.1W (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241mm x 21.1–25.9mm
- 6-cell: starting at 3.9 lb (1.77kg)

**Weight³**
- Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy
- Battery - type Battery - life ⁴
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
- 6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

**Chipset**
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub); ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC)

**ExpressCard/34 Smart Card Read**
- One slot (ExpressCard/34)
- None

**Multicard Reader**
- None

**Ports**
- Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**Mini PCI Express**
- Three Mini PCI Express slots
- Intel® 5100™ WWAN upgrade
- Verizon®
- AT&T™
- 2G Turbo
- UWB
- None

**Security**
- Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole, Trusted Platform Module, Integrated in ICH9M, TCG 1.2-compliant
- FingerPrint reader
- Some: FingerPrint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty³**
- 3-years/1-yr battery - depot repair service / service upgrades² available

See footnotes for important warranty information © Lenovo

US models announced June 23, 2009
US models withdrawn effective July 2010

Preloaded operating system²
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

Preloaded applications¹ (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage technologies
### ThinkPad T400s 2815 (GMA) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk Sata</th>
<th>Mini PCIe WWAN</th>
<th>Limited warranty</th>
</tr>
</thead>
</table>
| 2815-5UX  | Intel® Core™ 2 Duo processor SP9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache | 2GB or 4GB std / 8GB max  | WXGA+/ MultiTouch Cam GMA 120G 5400 DVD±RW  | Intel 5100 DST  | 802.11 a/b/g wireless | 3-years/1-yr battery, depot repair service | 3-year limited warranty
|           | SP9400 2.40 GHz | 2 GB or 4 GB | 14.1" WXGA+ | 1.5GB/s, 9.5mm Ultrabay slim, removable | Solid State Drive (SSD) / Sata 3.0Gb/s, 1.8" wide, 5mm high | Express Pro | Preloaded operating system

**Preloaded operating system:**
- Some: Genuine Windows® 7 Professional
- Some: Genuine Windows® 7 Professional 64

**Preloaded applications**: (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

**Chipset**
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub); ICH9M-SFF-Enhanced I/O Controller Hub (Sata 3.0Gb/s, USB 2.0, Pci Express® 1.1, Pci 2.3, security chip, ethernet MAC)

**ExpressCard/34**
- One slot (ExpressCard/34)

**Smart Card Reader**
- None

**Multicard Reader**
- Two USB 2.0 (one powered), one USB 2.0/eSata combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**Mini PCI Express**
- Intel 5100 WWAN upg
- 2G Turbo
- UWB on TurboFing slot

**Modem**
- Bluetooth™

**Ethernet**
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**
- Intel Active Management Technology (AMT)

**Audio support**
- High Definition (HD) Audio, Conexant CX20285 codec / stereo speakers, 1 watt / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**
- Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**
- Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**: 3-years/1-yr battery - depot repair service / service upgrades available

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*These models have a depot repair service 3-year limited warranty*
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>SATa optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe Finger print Blue- readertooth slot Card</th>
<th>Whorse (W)</th>
<th>Pre-GMP (P)</th>
<th>Available date</th>
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</thead>
<tbody>
<tr>
<td>2823-22U SP9400 2.40</td>
<td>2GB, 8GB, or 4GB</td>
<td>14.1&quot; WXGA+</td>
<td>GMA 120G</td>
<td>DVD-RW + Intel 5100® WWAN upg</td>
<td>None</td>
<td>Fingerprint reader</td>
<td>Blue- readertooth slot</td>
<td>Card</td>
<td>B32 G Jul 09</td>
<td>2823-23U SP9600 2.53</td>
<td>GMA 250G</td>
<td>2GB</td>
<td>Fingerprint reader</td>
</tr>
<tr>
<td>2823-23U SP9600 2.53</td>
<td>3GB</td>
<td>14.1&quot; WXGA+</td>
<td>Cam GMA 250G</td>
<td>DVD-RW + Intel 5100® WWAN upg</td>
<td>None</td>
<td>Fingerprint reader</td>
<td>Blue- readertooth slot</td>
<td>Card</td>
<td>B32 G Jul 09</td>
<td>2823-24U SP9600 2.53</td>
<td>GMA 128G SSD</td>
<td>DVD-RW + Intel 5300® WWAN upg</td>
<td>None</td>
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<td>2823-25U SP9600 2.53</td>
<td>2GB</td>
<td>14.1&quot; WXGA+</td>
<td>Cam GMA 80G</td>
<td>DVD-RW + Intel 5100® WWAN upg</td>
<td>None</td>
<td>Fingerprint reader</td>
<td>Blue- readertooth slot</td>
<td>Card</td>
<td>B32 G Jul 09</td>
<td>SP9600</td>
<td>DVD-RW + Intel 5100® WWAN upg</td>
<td>None</td>
<td>Fingerprint reader</td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service† 3-year limited warranty

Positioning Processor: 
Premiere performance and ultra-portability; two spindles
Intel® Core™2 Duo processor SP9400 or SP9600 with dual-core.
Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory: 
2GB, 3GB, or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Italics: standard memory in both sockets; no sockets available;
Non-italics: standard memory in one socket; one socket available

SATA DVD±RW, USB models withdrawn effective July 2010
SATA disk: DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
Some: 80GB or 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high
Some: 120GB (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 8mm high, Active Protection System™
All: removable, upgradeable, supports 2nd disk, Shock Mounted Hard Drive

Widescreen display: 
Camera:
14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight,
380 nits, 16:10 aspect ratio, 300:1 contrast ratio
Some: camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics: 
Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display
Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz;
2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

Keyboard: 
Trackpoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
UltraNav™ wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions³
Weight³
Case material
Battery - type life³
Battery - life³

Chipset: 
Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub);
ICHOM-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.9, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

ExpressCard/34
Smart Card Read None
Multicard Reader
Ports
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort, RJ-45)

Mini PCI Express
Intel 5100th
Intel 5300th
WWAN upg
2G Turbo
UWB
Modem
Bluetooth™
Ethernet
Intel AMT
Audio support
Security
Security chip
Fingerprint reader
Limited warranty³: 3-years/1-year battery, limited onsite service³: 8 am - 5 pm, Mon - Fri coverage
excluding holidays, next business day response time/ service upgrades available

Preloaded operating system²:
- Some: Windows® XP Professional preinstalled through downgrade rights in
  Genuine Windows Vista® Business
  - Some: Genuine Windows Vista Business 32
  ✧ Vista models: Vista Premium logo

Preloaded applications¹ (all OSes; only some listed): 
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD-R/DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day²⁰ toll-free support during the warranty period²° via 800-426-7378

ThinkPlus™ th 4-year LOR 9x5 NBD 45K6038 Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information...
### ThinkPad T400s 2815 (GMA) - Education - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>Sata optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe UWB</th>
<th>Finger print reader</th>
<th>Blue tooth</th>
<th>Card slot</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2815-52U SP9400 2.40</td>
<td>2GB 14.1” WXGA+ Cam</td>
<td>2GB 14.1” WXGA+ Cam</td>
<td>GMA 120G 5400 DVD±RW</td>
<td>Intel 5100® WWAN upg</td>
<td>None</td>
<td>None</td>
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<tr>
<td>2815-53U SP9400 2.40</td>
<td>2GB 14.1” WXGA+ Cam</td>
<td>2GB 14.1” WXGA+ Cam</td>
<td>GMA 128G SSD DVD±RW</td>
<td>Intel 5100® WWAN upg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>June 09</td>
</tr>
</tbody>
</table>

* These models have a depot repair service 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- **Processor**: Premiere performance and ultra portability; two spindles Intel® Core™ 2 Duo processor SP9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory

- **2GB std / 8GB max** / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

### SATA DVD±RW Ultrabay Slim SATA disk

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- **Some**: 128GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high
- **Some**: 120GB (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 8mm high, Active Protection System™

### Widescreen display

- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display
- **Maximum external resolution**: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Considerations

- Supports ThinkVantage™ technologies
- Preloaded operating system
  - Genuine Windows® Vista® Business 32
  - Vista Premium logo
- Preloaded applications
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Microsoft Windows Media Player
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Manager)
  - Adobe® Reader®
  - Windows Live™ Toolbar
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition
  - Intel® Active Management Technology (iAMT)

- Supports ThinkVantage® technologies
  - 65-watt (GMA graphics) AC adapter
  - EPEAT® Gold rating
  - ENERGY STAR® 5.0-compliant
  - RoHS-compliant
  - Energy Saver

- 24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

**See footnotes for important warranty information**

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US models announced June 23, 2009

US models withdrawn effective July 2010

(SN1-3) July 2010
Lenovo® ThinkPad T410

ThinkPad triple external monitor configuration using NVIDIA’s Optimus technology

ThinkPad Mini Dock Series 3 - 90W
433710U
### ThinkPad T410 2516 (TopSeller) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Disk</th>
<th>PClle Mini Card</th>
<th>PClle Mini Card WWAN</th>
<th>Finger print reminder</th>
<th>Blue- tooth Preload</th>
<th>Intel Trademark Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2516-ADU</td>
<td>i5-520M</td>
<td>2.40 2.93</td>
<td>2GBx1 1066</td>
<td>14.1&quot; WXGA 2.0M</td>
<td>250G 5400 11b/g/n</td>
<td>None</td>
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<td>6 No Pro 32 Jan 11</td>
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<tr>
<td>2516-DCU</td>
<td>i5-560M</td>
<td>2.66 3.20</td>
<td>2GBx1 1066</td>
<td>14.1&quot; WXGA 2.0M</td>
<td>320G 7200 11b/g/n</td>
<td>None</td>
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</tr>
<tr>
<td>2516-F9U</td>
<td>i5-480M</td>
<td>2.66 3.20</td>
<td>4GBx1 1333</td>
<td>14.1&quot; WXGA 2.0M</td>
<td>320G 7200 Intel 1000 WWAN upg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6 No Pro 64 Jan 11</td>
<td></td>
</tr>
</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program
*These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**
- Premiere performance; two spindles
- Intel® Core™ i5 processor i5-480M, i5-520M, or i5-560M with dual-core.
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 3MB cache

**Memory**
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD±RW Ultrabay Slim SATA disk**
- DVD burner, SATA 1.5Gb/s, 9.5mm UltraBay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display Camera**
- 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard TrackPoint®**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar® magnifying glass

**Touchpad ThinkLight™**
- UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions Weight®**
- 14.1W" (WXxDxH): 13.2" x 9.4" x 1.3–1.8; 335.5 x 239mm x 33.6–31.9 mm
- 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)
- Black

**Case color**
- Top: High Elasticity Polycarbonate (HEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type Battery - life**
- Lithium Ion 6-cell; supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 2-cell plus Slice battery: up to 22 hr
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**Chipset ExpressCard/34 Smart Card read Multicard reader**
- One slot (ExpressCard/34)
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a standard)

**PCle Mini Card 11b/g/n WWAN upg**
- Two PCI Express Mini Card slots
- Some: 11b/g/n wireless®, ThinkPad 11b/g/n, PCle Half Mini Card
- Some: Wireless WAN upgradable
- 56K V.92® modem
- None

**Ethernet Intel AMT Audio support**
- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCle x1
- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- Security Power-on password, hard disk password, supervisor password, security keyhole
- Security chip Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader None

**Limited warranty**
- 1-year - depot repair service / service upgrades available

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See footnotes for important warranty information
US models announced January 7 or September 28, 2010, or January 11, 2011
US models withdrawn effective June 2011

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(NZ1-1) June 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Memory</th>
<th>Max turbo clock (GHz)</th>
<th>Wide screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Disk</th>
<th>PCl Card Mini Card</th>
<th>PCl Card Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Blue-</th>
<th>Intel AMT</th>
<th>vPro</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2518-C3U</td>
<td>i5-540M</td>
<td>2GB</td>
<td>2.53</td>
<td>14.1&quot; WXGA</td>
<td>LED</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>11b/g/h</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
<td>6</td>
<td>XP Pro</td>
<td>Jan 10</td>
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<tr>
<td>2518-F4U</td>
<td>i5-540M</td>
<td>3GB</td>
<td>2.53</td>
<td>14.1&quot; WXGA+</td>
<td>LED</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
<td>6 vPro</td>
<td>XP Pro</td>
<td>Jan 10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These models have a depot repair service 3-year limited warranty

Positioning
Processor: Premier performance; two spindles
Intel® Core™ i5 processor i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory: 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket; one socket available

SATA DVD±RW, Ultrabay Slim SATA disk
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB™ (7200 rpm)
SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display:
Some: 14.1\(^\text{\prime\prime}\) (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
Some: 14.1\(^\text{\prime\prime}\) (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera:
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics:
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) at 60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard:
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, “Press-to-Select,” Internet Scrolling Bar\(\text{\texttrademark}\), magnifying glass

Dimensions\(^3\)

Weight\(^4\)

Case color: Black

Battery - type: Lithium Ion 6-cell, supports optional Sliceh battery (57Y4545) as 2nd battery at bottom

Chipset:
Mobile Intel QM57 Express Chipset

Preloaded operating system\(^20\):
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications\(^14\) (only some listed):
- Rescue and Recovery™
- Access Connections\(\text{\texttrademark}\)
- Client Security Solution™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton\(\text{\textregistered}\) Internet Security 2009

Some:
220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Chipset ExpressCard/34
None

Multicard reader Ports:
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Preloaded operating system\(^20\):
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications\(^14\) (only some listed):
- Rescue and Recovery™
- Access Connections\(\text{\texttrademark}\)
- Client Security Solution™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton\(\text{\textregistered}\) Internet Security 2009

Some:
11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card
Some:
11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 WWAN upgradable

Secure boot support

Secure boot supports

Supported technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT\(\text{\textregistered}\) Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service\(^17\)
24 hour x 7 day\(\text{\textregistered}\) toll-free support during the warranty period\(^13\)

ThinkPlus™ 3-year LOR\(\text{\textregistered}\) 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&D P/U Depot 45K6023
ThinkPlus 5-year P&D P/U Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Limited warranty\(^2\) 3-years/1-yr battery - depot repair service / service upgrades\(^22\) available

See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective October 2010

Lenovo (NZ-1-2) October 2010

© Lenovo

![ThinkPad T410 2518 (TopSeller) - XP with Win 7 License - withdrawn](image_url)
Type-model    Processor   Base   max turbo   Wide-   Disk   PCIe   PCIe   Finger   Blue-   Bat-   Preload   Avail
         (GHz) (GHz) Memory   screen   SATA   Mini Card   Mini Card   print   tery   Intel   date
            Frequency   2518-C2U  2.40  2.93  2GB  14.1" WXGA  20M  250G  5400  AT&T/3G
            GHz   2518-F3U  2.40  2.93  2GB  14.1" WXGA  20M  250G  5400  11b/g/n
            520M   2518-F6U  2.40  2.93  4GB  14.1" WXGA+  20M  80G  SSD  Intel 6200
            520M   2518-H4U  2.40  2.93  2GB  14.1" WXGA  20M  320G  7200  WWAN upg
            520M   2518-QBU  2.53  3.06  4GB  14.1" WXGA  20M  160G  7200  WWAN upg
            540M   2518-AHU  2.66  3.20  2GB  14.1" WXGA  20M  320G  7200  WWAN upg
            560M

Positioning
Processor
Premiere performance; two spindles
Intel® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core,
       DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
       Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
      Italics: standard memory in both sockets; no sockets available;
      Non-Italics: standard memory in one socket; one socket available

SATA DVD:±RW
UltraBay Slim
SATA disk
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
       One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
       Some: 80GB 160GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
       Some: 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
       All: removable, upgradeable 2nd disk, Shock Mounted Hard Drive

Widescreen display
Some: 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight,
       16:10 aspect ratio, 300:1 contrast ratio
       Some: 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight,
       220 nits, 16:10 aspect ratio, 300:1 contrast ratio
Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
Intel HD Graphics in processor,
external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
       Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
       2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
TrackPoint®
Touchpad
ThinkLight™
9-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar13, magnifying glass
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions3
Weight8
Case color
Case material
Top: High Elasticity Polycarbonate (HEPC);
Bottom: Carbon-Fiber Reinforced Plastic

Battery - type
Battery - life16
Lithium Ion 6-cell or 9-cell, supports optional Slic Battery (57Y4545) as 2nd battery
6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slice Battery: up to 22 hr

Chipset
ExpressCard/34
Smart card reader
MultiCard reader
Ports
Mobile Intel GM57 Express Chipset
One slot (ExpressCard/34)
None
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
Four USB 2.0 (one powered, eSATA port, external monitor (VGA DB-15, DisplayPort),
       modern (RJ-11), ethernet (RJ-45),
       IEEE 1394 FireWire 4 (pin-connector; 1394a-2000 standard)

PCle Mini Card
PCIe Mini Card
11b/g/n
Some: 11b/g/n wireless®, ThinkPad 11b/g/n, PCIe Half Mini Card
Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
Some: Wireless WAN upgradeable
Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A,
       GPS, WCDMA/HSPA, GPS, contract required with service provider
Some: AT&T/3G, contract required with service provider

Carrier
Modem
Bluetooh™
Ethernet
Some: Bluetooth 2.1 wireless, LED indicator
Some: Bluetooth 2.1 wireless, LED indicator
Intel AMT
Audio support
High Definition (HiD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 /
       speaker volume up, down and mute buttons / dual array microphone, mic mute button,
       combo audio/mic jack
Security
Security chip
Power-on password, hard disk password, supervisor password, security keyhole
Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader
Some: UPEK, Fingerprint reader on palm rest, swipe sensor, LED indicator,
       Power On Authentication, supports the security chip

Limited warranty2
3-years/1-year battery - depot repair service / service upgrades22 available

Preloaded operating system25
• Some: Genuine Windows 7
• Professional 32
• Some: Genuine Windows 7 Professional 64

Preloaded applications24 (only some listed)
• Rescue and Recovery™
• Access Connections™
• Password Manager
• FingerPrint Software (fingerprint models)
• ThinkVantage System Update
• ThinkVantage Power Manager
• ThinkVantage Toolbox
• Norton™ Internet Security 2011
• Adobe Reader
• Adobe Flash Player
• Windows Live™ Toolbar
• Skype™ for Windows
• Microsoft Office 2010 preload;
• purchase product key to activate
• Microsoft Research AutoCollage Touch
• Roxio® Creator™ Business Edition
• (DVR+RW)
• Roxio MyDVD® (DVR+RW)
• Corel® WinDVD® (DVR+RW)

Supports ThinkVantage® technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service17
24 hour x 7 day27 toll-free support during the warranty period27
via 800-426-7378

ThinkPlus™ 3-year LOR® 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P/L P/U Depot
ThinkPlus 5-year P/L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad T410 2518 (TopSeller) - Windows 7 (January 2011) - withdrawn

**Personal Systems Reference (PSREF)**

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<tr>
<td>2518-BJU</td>
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<td>6</td>
<td>65W</td>
<td>vPro</td>
<td>Pro 64</td>
<td>Jan 11</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (Q10PKR)

### Positioning and Processor

- **Premiere performance; two spindles**
  - Intel® Core™ i5 processor 5520M with dual-core, or Intel Core i7 processor i7-620M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; i5-620M 3MB cache; i7-620M 4MB cache

### Memory

- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### SATA DVD/ RW

- Ultrabay Slim Sata Disk
  - DVD burner, SATA 1.5Gbps, 9.5mm Ultrabay slim, removable
  - One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
  - 320GB (7200 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display: Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard and Touchpad

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling region labels, multi-touch navigation
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 14.1" (358mm) WXGA+(1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Weight

- Top: Carbon-Fiber Reinforced Plastic
- Bottom: Carbon-Fiber Reinforced Plastic
- Battery - type: Lithium ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
- Battery - life (hr): 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slice battery: up to 22 hr

### Chipset

- ExpressCard/34
- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)
- None

### MultiCard reader

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 4 (4-pin connector; 1394a-2000 standard)

### Preloaded operating system

- Genuine Windows 7 Professional 64

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
- (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Supports ThinkVantage technologies

- 65-watt or 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 17
- 24 hour x 7 day VIP toll-free support during the warranty period via 800-426-7378

### Limited warranty

- 3-years/1-yr battery - depot repair service / service upgrades available

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See footnotes for important warranty information

US models announced January 11, 2011

US models withdrawn effective June 2011

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(NZ1-19) June 2011
### ThinkPad® T410 2518 (Optimus) - TopSeller (Windows 7) - withdrawn

#### Preload

- **Genuine Windows**™ 7 Professional 64

#### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage 
- Roxio® Creator™ Business Edition (DVR+RW)
- Roxio MyDVD® (DVR+RW)
- Corel® WinDVD® (DVR+RW)

### Key features

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Positioning Processor

Premiere performance; two spindles

- **Intel® Core™ i5 processor i5-560M with dual-core, DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache**

### Memory

- **2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics:** standard memory in one socket; one socket available

### SATA DVD±RW

- **ULTRABAY SLIM DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable**
- **One modular bay for interchangeable devices (right side), 9.5mm high, bottom access**
- **SATA 3.OGb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™**

### Widescreen display

- **14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight. 220 nits, 16:10 aspect ratio, 300:1 contrast ratio**

### Optimus graphics

- **® NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel® HD Graphics in processor, and NVIDIA® NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)**

### Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint

- **TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions along multi-touch** Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- **14.1"W (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm**

### Weight

- **6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)**

### Battery - type

- **Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.5 hr; 9-cell: up to 10.9 hr; 9-cell plus Slice battery: up to 21.9 hr**

### Chipset

- **Mobile Intel QM57 Express Chipset**
- **One slot (ExpressCard/34)**
- **Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)**

### PCle Mini Card

- **Two PCI Express Mini Card slots**
- **11a/b/g/n wireless, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable**

### Modem

- **56K V.92® modem**

### Bluetooth

- **Bluetooth 2.1 wireless, LED indicator**

### Ethernet

- **Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1**

### Audio support

- **High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack**

### Security

- **Power-on password, hard disk password, supervisor password, security keyhole**

### Support services

- **24 hour x 7 day toll-free support during the warranty period** via 800-426-7378

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See footnotes for important warranty information

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US model announced September 28, 2010
US model withdrawn effective June 2011

(NZ1-17) June 2011

Preload

- **22 3-year LOR24 9x5 NBD**
- **ThinkPlus 5-year P&L P/U Depot**
- **ThinkPlus 4-year P&L P/U Depot**
- **ThinkPlus 3-year P&L P/U Depot**
- **ThinkPlus 5-year P&L P/U Depot**
- **ThinkPlus 4-year P&L P/U Depot**
- **ThinkPlus 3-year P&L P/U Depot**
- **ThinkPlus 2-year P&L P/U Depot**

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Turbo</th>
<th>Max Memory</th>
<th>Wide-screen</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Disk SATA</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger</th>
<th>Bluetooth</th>
<th>Battery</th>
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<tr>
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<td>None</td>
<td>Blue</td>
<td>9</td>
<td>No</td>
<td>Pro 32</td>
<td>Jan 10</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning
- Processor: **Intel® Core™ i5 processor i5-520M with dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; **Non-illuminated**: standard memory in one socket; one socket available

### SATA DVD±RW
- DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- **ThinkPad Shock Mounted Hard Drive, Active Protection System™**

### Widescreen display
- 14.1" (358mm) WXGA (1280x800) color, anti-glare, **LED backlight**
- 220 nits, 16:10 aspect ratio; 300:1 contrast ratio

### Discrete graphics
- NVIDIA® NVS™ 3100M, PCI Express® x16, 256MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 85Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

### Touchpad
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- **14.1”W x 9.4”D x 1.1–1.3”H:** 3.55 x 239mm x 27.6–31.9mm

### Weight
- **6-cell:** starting at 5.35 lb (2.43kg)
- **9-cell:** starting at 5.0 lb (2.27kg)

### Battery
- Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
- **6-cell:** up to 5.0 hr; **9-cell:** up to 8.3 hr; **9-cell plus Slice battery:** up to 16.6 hr

### Chipset
- Mobile Intel GM57 Express Chipset
- One slot (ExpressCard/34)

### Ports
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

### PciE Mini Card
- Two PCI Express Mini Card slots
- 11b/g/n wireless®, ThinkPad 11b/g/n, PCle Half Mini Card

### Modem
- 56K V.92 modem

### Bluetooth™
- Bluetooth 2.1 wireless, LED indicator

### Ethernet
- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

### Intel AMT
- Intel Active Management Technology (AMT)

### Audio support
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Finger print reader
- None

### Limited warranty
- 1-year - depot repair service / service upgrades available

See footnotes for important warranty information
US model announced January 7, 2010
US model withdrawn effective June 2011

© Lenovo (NZ1-4) June 2011
ThinkPad® T410 2518 (Discrete) - TS (XP with Win 7 License) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo dGHz (GHz)</th>
<th>DDR3 Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED Camera</th>
<th>Disk</th>
<th>SATA controller</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger Battery reader</th>
<th>Intel Pro Preload</th>
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<td>i5-540M</td>
<td>2.53</td>
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<td>14.1&quot; WXGA+</td>
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<td>128G SSD</td>
<td>DVD±RW</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>vPro</td>
<td>Oct 2010</td>
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<tr>
<td>2518-JU</td>
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<td>2GB</td>
<td>14.1&quot; WXGA+</td>
<td>LED 2.0M</td>
<td>320G 7200</td>
<td>DVD±RW</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>vPro</td>
<td>Oct 2010</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty

Positioning Processor
Premiere performance; two spindles
Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

SATA DVD±RW
DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
Some: 128GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high
Some: 320GB® (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, Active Protection System™
All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

Widescreen display
Camera
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
NVIDIA® Quadro® NVS3100M, PCI Express® x16, 256MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
TrackPoint® pointing device, "Press-to-Select,” Internet Scroll Bar™, magnifying glass
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions
Weight
Case color
Black
Top: High Elasticity PolyCarbonate (HEPC); Bottom: Carbon-Fiber Reinforced Plastic
Battery - type
Lithium Ion 9-cell, supports optional Slick battery (57Y4545) as 2nd battery at bottom
Battery - life
6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell plus Slick battery: up to 16.6 hr

Chipset
Mobile Intel QM57 Express Chipset

ExpressCard/Smart Card read
One slot (ExpressCard/34)
None

Multicard reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports
Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCIe Mini Card
Two PCI Express Mini Card slots

Intel 6200™ WWAN upg
56K V.92™ modem
Bluetooth™ wireless, LED indicator
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
Intel Active Management Technology (AMT)
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
Power-on password, hard disk password, supervisor password, security keyhole
Trusted Platform Module, TCG 1.2-compliant
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty
3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced January 7 or March 2, 2010
US models withdrawn effective October 2010

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications (only some listed)
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• Fingerprint Software (fingerprint models)
• ThinkVantage System Update
• ThinkVantage Power Manager
• ThinkVantage Presentation Director
• ThinkVantage Productivity Center
• Lenovo System Toolbox
• Lenovo Online Data Backup
• Norton® Internet Security 2009 (30 days of virus definitions)
• Adobe® Reader®
• Adobe Flash® Player
• Windows Live™ Toolbar
• Skype™ for Windows
• Microsoft® Office 2007 Trial (60-day)
• Roxio® Creator® Business Edition (DVD±RW)
• Roxio® MyDVD® (DVD±RW)
• Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies
90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service (only some)
24 hour x 7 day@ toll-free support during the warranty period via 800-426-7378

Lenovo.com/thinkplus/warranty
### ThinkPad T410 2518 (Discrete) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor Base turbo (GHz)</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>Pcie</th>
<th>Pcie Mini Card</th>
<th>Finger</th>
<th>Blue-</th>
<th>Intel</th>
<th>Preload</th>
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<td>i5-520M 2.40 2.93 GB</td>
<td>14.1” WXGA+ 2.0M</td>
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<td>2518-FSU</td>
<td>i5-540M 2.53 3.06 GB</td>
<td>14.1” WXGA+ 2.0M</td>
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<td>14.1” WXGA+ 2.0M</td>
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<td></td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

#### Positioning

- **Processor**
  - Intel® Core™ i5 processor i5-520M or i5-540M with dual-core
  - DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

- **Memory**
  - 2GB or 4GB std / 8GB max / 16GB peak

- **SATA DVD±RW Ultrabay Slim SATA disk**
  - DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable
  - One optional bay for interchangeable devices (right side), 9.5mm high, bottom access
  - **Non-italics:** standard memory in both sockets; no sockets available;
  - **Italics:** standard memory in one socket; one socket available

- **Dimensions**
  - 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
  - Camera on top of screen, 2.0-megapixel, fixed focus

- **Chipset**
  - **Mobile Intel GHz Express Chipset**
  - One slot (ExpressCard/34)
  - 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
  - Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15 display), 6-cell, starting at 5.5 lb (2.49kg)

- **Security**
  - Intel® AMT
  - WPA/WPA2 and WPA/WPA3 supported
  - Secure boot
  - Trusted Platform Module, TCG 1.2-compliant
  - Fingerprint reader
  - Power-on password, hard disk password, supervisor password, security keyhole
  - Trusted Platform Module, TCG 1.2-compliant
  - Fingerprint reader
  - Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

- **Warranty**
  - **Limited warranty**
  - 3-years 1-yr battery - depot repair service / service upgrades available

- **Preloaded operating system**
  - **Some:** Genuines Windows 7 Professional 32-bit
  - **Some:** Genuine Windows 7 Professional 64-bit

- **Preloaded applications**
  - **Some:** Rescue and Recovery™
  - **Some:** Access Connections™
  - **Some:** Password Manager
  - **Some:** FingerPrint Software (fingerprint models)
  - **Some:** ThinkVantage System Update
  - **Some:** ThinkVantage Power Manager
  - **Some:** ThinkVantage Toolbox
  - **Some:** Norton™ Internet Security 2011 (30 days of virus definitions)
  - **Some:** Adobe® Reader®
  - **Some:** Adobe Flash® Player
  - **Some:** Windows Live™ Toolbar
  - **Some:** Skype™ for Windows
  - **Some:** Microsoft Office 2010 preloaded; purchase product key to activate
  - **Some:** Microsoft Research AutoCollage
  - **Some:** Roxio® Creator™ Business Edition (DVD±RW)
  - **Some:** Roxio MyDVD® (DVD±RW)
  - **Some:** Corel® WinDVD® (DVD±RW)

- **Supports ThinkVantage® technologies**
  - 90-watt AC adapter
  - ThinkPad Roll Cage (one-piece magnesium frame)
  - EPEAT® Gold rating
  - ENERGY STAR® 5.0-compliant
  - RoHS-compliant
  - International Warranty Service
  - 24-hour 7x24 toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

© Lenovo

- US models announced January 7, March 2, or July 6, 2010
- US models withdrawn effective February or June 2011

(NZ1-6) June 2011

lenovo.com/thinkplus/warranty
Positioning Processor

Premiere performance: two spin-dles
Intel® Core™ i5 processor i5-520M with dual-core,
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory

2GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Non-Italy: standard memory in one socket; one socket available

SATA DVD±RW

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
250GB® (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk,
ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display

14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight,
220 nits, 16:10 aspect ratio, 300:1 contrast ratio
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel HD Graphics in processor,
externa1 analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

14.1"W (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm
6-cell: starting at 6.6 lb (2.99kg); 6-cell: starting at 5.35 lb (2.43kg)

Battery - type

Lithium Ion 6-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
6-cell: up to 6.6 hr; 6-cell: up to 11 hr; 6-cell plus Slice battery: up to 22 hr

Chipset

ThinkPad Mobile OMS7 Express Chipset
One slot (ExpressCard/34)

Smart Card reader

None

Multicard reader ports

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

PCIE Mini Card

Two PCIE Express Mini Card slots
InteI 6200™ WWAN upg
11a/b/g/n wireless; 5G; Hall Mini Card, Intel Centrino® Advanced-N 6200, 2x2
Modem

56K V.92® modem
BlUetooth®

2.1 wireless, LED indicator
Ethernet

Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
Audio support

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader

None

Limited warranty2 1-year - depot repair service / service upgrades2 available

Preloaded operating system20

- Genuine Windows® 7 Professional 32

Preloaded applications14 (only some listed)

- Rescue and Recovery®
- Access Connections®
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch®
- Roxio® Creator® Business Edition (DVDr:RW)
- Roxio® MyDVD® (DVDr:RW)
- Corel® WinDVD® (DVDr:RW)

Supports ThinkVantage™ technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service17 24 hour x 7 day18 toll-free support
during the warranty period12 via 800-426-7378

ThinkPlus™ 1-year LOR4 9x5 NBD
ThinkPlus 2-year LOR 9x5 NBD
ThinkPlus 3-year LOR 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 6-year LOR 9x5 NBD
ThinkPlus 7-year LOR 9x5 NBD
ThinkPlus 8-year LOR 9x5 NBD
ThinkPlus 9-year LOR 9x5 NBD
ThinkPlus 10-year LOR 9x5 NBD

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced January 7, 2010
US model withdrawn effective June 2011

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(NZ1-7) June 2011
ThinkPad® T410 2522 (Windows 7) - withdrawn

ThinkPad T410 2522 (Windows 7) - withdrawn

Preloaded operating system:
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections®
- Password Manager
- Fingerprint Software (fingerprint device)
- Thinvantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2010 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+R/RW)
- Roxio MyDVD® (DVR/RW)
- Corel® WinDVD® (DVR/RW)

Supports ThinkVantage® technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
© Lenovo
US models announced January 7, March 2, or April 6, 2010
US models withdrawn effective June 2011

Personal Systems Reference (PSREF)
### ThinkPad® T410 2522 (Windows 7) - July 2010 - withdrawn

| Type-model | Processor | Base turbo clock (GHz) | Memory (MHz) | Wide-screen display | Camera | Disk SATA GB | Mini Card WWAN | Mini Card WWAN | Finger print | Battery type | Intel technology | Availability |
|------------|-----------|------------------------|-------------|---------------------|--------|--------------|---------------|---------------|--------------|---------------|-----------------|----------------|--------------|
| 2522-KGU   | i5-520M   | 2.40                    | 2.93        | 2GBx2               | 1066   | 14.1" WXGA  | 2.0M 160G 7200 | Intel 6200+7 | 2522-KGU     | Finger Blue | 9 yr vPro Pro | 64 Jul 10       |
| 2522-KHU   | i5-540M   | 2.53                    | 3.06        | 2GBx2               | 1066   | 14.1" WXGA  | 2.0M 160G SSD  | Intel 6200   | 2522-KHU     | Finger Blue | 9 yr vPro Pro | 64 Jul 10       |
| 2522-57U   | i5-560M   | 2.66                    | 3.20        | 2GBx2               | 1066   | 14.1" WXGA  | 2.0M 320G 7200 | Intel 6200   | 2522-57U     | Finger Blue | 6 yr vPro Pro | 64 Jan 11       |

* These models have a depot repair service 3-year limited warranty
* These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service
  - 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

- ThinkPlus® 3-year LOR 8x5 NBD
- ThinkPlus® 4-year LOR 9x5 NBD
- ThinkPlus® 5-year LOR 9x5 NBD
- ThinkPlus® 4-year P&L P/U Depot
- ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced July 6, 2010 or January 11, 2011
US models withdrawn effective February or June 2011
ThinkPad T410 2522 (Optimus) - Windows 7 - withdrawn

**Personal Systems Reference (PSREF)**

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<th>Max turbo (GHz)</th>
<th>Memory (MHz)</th>
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<th>Graphics controller memory</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
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<td>WWAN upg</td>
<td>None</td>
<td>vPro</td>
<td>Pro 64</td>
<td>Sep 10</td>
</tr>
</tbody>
</table>

- This model has a depot repair service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**

Premiere performance; two spindles

Intel® Core™ i5 processor i5-560M with dual-core.

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

2GB std / 8GB max / PC3-8500 1066MHz DDR3

non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD±RW Ultrabay Slim SATA disk**

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

320GB² (7200 rpm) / SATA 3.0Gb/s, 2.5'' wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System®¹⁶

**Widescreen display Camera**

14.1'' (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera on top of screen, 2.0-megapixel, fixed focus

**Optimus graphics**

NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA NVS® 3100M. PCE Express x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

**Keyboard TrackPoint®**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar²⁷, magnifying glass

UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Touchpad ThinkLight™**

**Dimensions²³**

14.1''W (WxDxH): 13.2’’ x 9.4’’ x 1.1–1.3’’; 335.5 x 239mm x 27.6–31.9mm

6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.5 lb (2.43kg)

**Weight²³**

Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery

6-cell: up to 6.5 hr; 9-cell: up to 10.9 hr; 9-cell plus Slice battery: up to 21.9 hr

**Battery - type**

Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery

6-cell: up to 6.5 hr; 9-cell: up to 10.9 hr; 9-cell plus Slice battery: up to 21.9 hr

**Battery - life**

Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery

6-cell: up to 6.5 hr; 9-cell: up to 10.9 hr; 9-cell plus Slice battery: up to 21.9 hr

**Chipset ExpressCard/34 Smart Card read Multicard reader Ports**

Mobile Intel QM57 Express Chipset

One slot (ExpressCard/34)

None

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

**PCle Mini Card WWAN upg**

Two PCI Express Mini Card slots

11a/b/g/n wireless⁸, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable

**Modem Bluetooth™ Ethernet Intel AMT Audio support**

56K V.92 modem

Bluetooth 2.1 wireless, LED indicator

Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel Active Management Technology (iAMT)

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume, up, down and mute buttons / dual array microphones, mic mute button, combo audio/mic jack

**Security Security chip Finger print reader**

Power-on password, hard disk password, supervisor password, security keyhole

Trusted Platform Module, TCG 1.2-compliant

None

**Limited warranty²²**

3-years/1-yr battery - depot repair service / service upgrades²² available

0, 1, 2 years at Lenovo’s discretion⁷

There is no warranty on the battery or battery parts.

*See footnotes for important warranty information

US model announced September 28, 2010

US model withdrawn effective June 2011

Preloaded operating system²⁰

- Genuine Windows® 7 Professional 64

Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPETATM Gold rating

ENERGY STAR®️ 5.0-compliant

RoHS-compliant

International Warranty Service¹⁷

24 hour x 7 day²⁰ toll-free support during the warranty period²⁰ via 800-426-7378

ThinksPlus™️ 3-year LOR²⁴ 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P/L P/U Depot

ThinkPlus 5-year P/L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Lenovo 2011

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NZ1-18) June 2011
Positioning Processor: Premiere performance; two spindles
Intel® Core™ i5 processor i5-520M with dual-core.

Memory: 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available.

SATA DVD±RW Ultrabay Slim SATA disk: DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk,
ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display: 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight,
220 nits, 16:10 aspect ratio, 300:1 contrast ratio
Camera: Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics: NVIDIA® NVS™ 3100M, PCI Express® x16, 256MB memory,
external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint™ pointing device, “Press-to-Select,” Internet Scroll Bar™;
magnifying glass

Dimensions³: 14.1"W (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm
Weight²: 6-cell: starting at 5.0 lb (2.27kg);
9-cell: starting at 5.35 lb (2.43kg)

Chipset: Mobile Intel QM57 Express Chipset
ExpressCard/34: One slot (ExpressCard/34)
Smart Card reader: None
Multicard reader: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
Ports: Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort,
modem (RJ-11), ethernet (RJ-45),
IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCIE Mini Card Intel 6200® WWAN upg
Modem: 56K V.92® modem
Bluetooth™: Bluetooth 2.1 wireless, LED indicator
Ethernet: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIE x1
Intel AMT: Intel Active Management Technology (AMT)
Audio support: High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 /
speaker volume up, down and mute buttons / dual array microphone, mic mute button,
combo audio/mic jack
Security: Power-on password, hard disk password, supervisor password, security keyhole
Security chip: Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator,
Power On Authentication, supports the security chip

Limited warranty: 1-year - depot repair service / service upgrades available

Preloaded operating system: Genuine Windows® 7 Professional 32
Preloaded applications: (only some listed)
• Rescue and Recovery™
• Access Connections™
• Password Manager
• Fingerprint Software
• ThinkVantage System Update
• ThinkVantage Power Manager
• ThinkVantage Toolbox
• Adobe® Reader®
• Adobe Flash® Player
• Skype™ for Windows
• Microsoft Office 2010 preloaded;
purchase product key to activate
• Microsoft Research AutoCollage
• Roxio Creator® Business Edition (DVD±RW)
• Roxio MyDVD® (DVD±RW)
• Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies
90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service:
24 hour x 7 day² four-toll-free support
during the warranty period via 800-426-7378

See footnotes for important warranty information
US model announced January 7, 2010
US model withdrawn effective June 2011

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(NZ1-9) June 2011

• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)
### ThinkPad® T410 2522 (Discrete) - Windows 7 - withdrawn

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<th>Disk</th>
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<th>Battery</th>
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<td>14.1&quot; WXGA</td>
<td>Intel 6200™</td>
<td>WWAN upg</td>
<td></td>
<td>vPro Pro 32</td>
<td>G</td>
<td>Jan 10</td>
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</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

See footnotes for important warranty information

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US models announced January 7, March 2, April 6, or July 6, 2010
US models withdrawn effective February or June 2011
<table>
<thead>
<tr>
<th>Type-model Processor</th>
<th>Base turbo display Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card WWAN</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Intel vPro</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Available date</th>
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service
  - 24 hour x 7 day toll-free support during the warranty period
  - 12期间
  - 9x5 NBD

See footnotes for important warranty information
US models announced May 4, 2010
US models withdrawn effective June 2011
## ThinkPad T410 2537 (Onsite) - Windows 7 - withdrawn

### Systems and configuration

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Processor GHZ</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card WWAN</th>
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</table>

These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty

### General specifications

- **Positioning Processor**: Premier performance; two spindles
- **Memory**: 2GB or 4GB sd / 8GB max /
  - PC3-8500 1066MHz or PC3-10600 1333MHz DDR3,
  - non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- **SATA DVD±RW**: DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- **SATA disk**: One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
  - 160GB (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or
  - 250GB (7200 rpm) Full Disk Encryption [FDE] / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System®
- **Widescreen display**: Some: 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
  - Some: 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **Camera**: Some: camera on top of screen, 2.0-megapixel, fixed focus
- **Integrated graphics**: Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
- **Keyboard**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
  - TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Nav®, magnifying glass
- **Touchpad**: UltraNav®, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions**: 14.1W" (WXDH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm
- **Weight**: 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)
- **Battery - type**: Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
- **Battery - life**: 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slice battery: up to 22 hr
- **Chipset**: Mobile Intel GM57 Express Chipset
  - One slot (ExpressCard/34)
- **Smart Card read**: None
- **Multicard reader Ports**: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- **Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modern (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
- **PCIe Mini Card**: Two PCI Express Mini Card slots
  - 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable
- **Modem**: 56K V92 modem
- **Bluetooth**: Bluetooth 2.1 wireless, LED indicator
- **Ethernet**: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- **Intel AMT**: Intel Active Management Technology (iAMT)
- **Audio support**: High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**: Trusted Platform Module, TCG 1.2-compliant
- **Fingerprint reader**: Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
- **Limited warranty**: 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

See footnotes for important warranty information

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US models announced January 7, March 2, or April 6, 2010
US models withdrawn effective June 2011

(NZ-11-1) June 2011
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Max Turbo GHz</th>
<th>Wide-screen Display Type</th>
<th>Disk Type</th>
<th>PCIe Mini Card</th>
<th>Battery Type</th>
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<td>2.93</td>
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<td>9-cell</td>
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<td></td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service and 3-year limited warranty.
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR).

**Positioning Processor**

Premiere performance; two spindles
Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim SATA disk**

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
Some: 80GB or 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high
Some: 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, Active Protection System™
All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Wide-screen display**

Some: 14.1” (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
Some: 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

Some: camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics**

NVIDIA® NVS™ 3100M, PCI Express® x16, 256MB memory, digital display, integrated memory controller and support for dual-link DVI-D via cable 45J9715; supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J9715)

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

14.1”Wx(13.2”DxH): 13.2” x 9.4” x 1.1–1.3”; 335.5 x 239mm x 27.6–31.9mm
6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

**Weight**

14.1”Wx(13.2”DxH): 13.2” x 9.4” x 1.1–1.3”; 335.5 x 239mm x 27.6–31.9mm
6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

**Battery type**

Lithium Ion 6-cell or 9-cell, supports optional Slici Battery (5Y4545) as 2nd battery
6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell Plus Slici battery: up to 16.6 hr

**Chipset**

Mobile Intel GM965 Express Chipset
One slot (ExpressCard/34)

**Multicard reader**

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**PCle Mini Card**

Intel 6200® WWAN uwp

**Audio support**

High Definition (HD) Audio, Conexant 20885 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, microphone, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**

UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**

3-years/1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective June 2011

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(NZ1-12) June 2011

Lenovo.com/thinkplus/warranty
## ThinkPad T410 (Education) - Windows 7 - withdrawn

**Preloaded operating system**
- Genuine Windows 7 Professional 32

**Preloaded applications** (only some listed)
- 54U model: Education software
- Microsoft® Office Ultimate 2007 Academic Edition (and CD)
- Education software
- Microsoft® Office OneNote® 2007 (and CD)
- Adobe Digital School Collection
- Learning Creative Suite 4 (DVD)
- Photoshop Elements 7 (DVD)
- Premiere Elements 7 (and DVD)
- Acrobat 9 Professional (DVD)
- Contribute CS4 (and DVD)
- Soundbooth CS4 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Skype™ for Windows
- Microsoft Office 2010 preloaded: purchase product key to activate
- Roxio® Creator® Business Edition (DVD:8xRW)
- Roxio MyDVD® (DVD:8xRW)

Supports ThinkVantage® technologies

### Features
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

| Type-model | Processor | Base turbo (GHz) | Memory | Wide-screen display | CCFL or LED Camera | Disk SATA GB rpm | PCIe Mini Card 8211 | PCIe Mini Card WWAN | Finger print reader | Battery - type | Intel® vPro™ Preload | Available date |
|------------|-----------|------------------|--------|---------------------|-------------------|------------------|------------------|------------------|------------------|--------------|------------------|----------------|---------------|
| 2522-52U   | i5-520M   | 2.40             | 2GB    | 14.1" WXGA          | LED               | 250G             | 5400             | Intel 6200™     | Finger Blue      | 6-cell       | g50                  | Jan 10         |
| 2522-53U   | i5-520M   | 2.40             | 2GB    | 14.1" WXGA          | LED               | 320G             | 5400             | Intel 6200™     | Finger Blue      | 6-cell       | g50                  | Jan 10         |
| 2522-54U   | i5-520M   | 2.40             | 3GB    | 14.1" WXGA+         | LED               | 320G             | 7200             | Intel 6200      | Finger Blue      | 6-cell       | g50                  | Jan 10         |

See footnotes for important warranty information.
### ThinkPad T410 2522 (Discrete) - Education (Windows 7) - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>CCFL or LED Camera</th>
<th>Disk SATA</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Battery Life</th>
<th>Preload</th>
<th>Availability</th>
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<tbody>
<tr>
<td>2522-55U</td>
<td>i5-520M</td>
<td>2.40</td>
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<td>Finger Blue 9</td>
<td>9 hours</td>
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<td>Jan 10</td>
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</tbody>
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- **These models have an depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (010PKR)**
- **Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.**
- **Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.**

### Preloaded operating system**
- Genuine Windows® 7 Professional 32

### Preloaded applications** (only some listed)
- 56U model: Education software
  - Microsoft® Office Ultimate 2007 Academic Edition (and CD)
- Education software
  - Microsoft® Office OneNote® 2007 (and CD)
  - Adobe Digital School Collection
  - Learning Creative Suite 4 (DVD)
  - Photoshop Elements 7 (DVD)
  - Premiere Elements 7 (and DVD)
  - Acrobat 9 Professional (DVD)
  - Contribute CS4 (and DVD)
  - Soundbooth CS4 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Skype™ for Windows
- Microsoft Office 2010 preloaded;
- purchase product key to activate
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour 7 x 365 toll-free support during the warranty period via 866-426-2378

### See footnotes for important warranty information

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### Footnotes

1. **WBX/DX:** 13.2" x 8.4" x 1.1–1.3"; 335.5 x 208.6 x 27.6–31.9 mm
2. **Cell:** 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)
3. **Battery:** 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell Plus Batteries: up to 22 hr
4. **Intel Turbo Boost, Hyper-Threading technology; 3MB cache**
5. **Genuine Windows® 7 Professional 32**
6. **Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**
7. **Lenovo Personal Systems Reference (PSREF)**
8. **Limited warranty**
9. **3-years/1-yr battery - depot repair service / service upgrades available**
10. **Windows® 7 Professional 32**
11. **Microsoft Office Ultimate 2007**
12. **Academic Edition**
13. **and CD**
14. **only some listed**
15. **45K6023**
16. **45K6024**
17. **45K6022**
18. **45K6025**
19. **45K6021**
20. **45K6022**
21. **45K6024**
22. **45K6023**
23. **45K6025**
24. **Avail date**
25. **Lenovo**
26. **© 2007**
27. **WinDVD**
28. **Avail date**
29. **Lenovo**
30. **© 2007**
31. **WinDVD**
### ThinkPad T410i 2516 (TopSeller) - XP with Win 7 License - withdrawn

#### Personal Systems Reference (PSREF)

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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
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<th>GB rpm</th>
<th>PClé Mini Card WWAN</th>
<th>PClé Mini Card</th>
<th>Finger print reader</th>
<th>Battery - life</th>
<th>Battery - type</th>
<th>Case material</th>
<th>Case color</th>
<th>Weight</th>
<th>Dimensions</th>
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<th>Keyboard</th>
<th>Operating system</th>
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<td>i3-330M</td>
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<td>Finger Blue</td>
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<tr>
<td>2516-BQU</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>14.1&quot; WXGA LED</td>
<td>2.0M</td>
<td>250G</td>
<td>5400</td>
<td>Intel 1000</td>
<td>AT&amp;T</td>
<td>6 No XP Pro Apr 10</td>
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</tr>
</tbody>
</table>

**ThinkingPad** is a trademark of Lenovo. All other product and brand names are trademarks and/or registered trademarks of their respective companies.

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

Preloaded operating system:
- Windows® XP Professional preinstalled downgrad e rights in Genuine Windows 7 Professional 32-bit.

Preloaded applications (only some listed):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Roxio® Creator® Business Edition (DVDR/W)
- Roxio® MyDVDR® (DVDR/W)
- Corel® WinDVD® (DVDR/W)

SUPPORTS THINKVANTAGE® TECHNOLOGIES

65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service

24-hour hour x 7 day® toll-free support during the warranty period via 800-426-7378

Lenovo System Toolbox

ThinkPlus™ 1-year LOR 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 2-year P&L P/U Depot

ThinkPlus 3-year P&L P/U Depot

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced February 2 or April 6, 2010

US models withdrawn effective July 31, 2010

© Lenovo (NZ1-1) August 2010
### ThinkPad T410i 2516 (TopSeller) - Windows 7 - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Battery</th>
<th>Intel vPro Preload</th>
<th>Avail date</th>
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<tr>
<td>2516-AQU</td>
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<td>2.13</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
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<td>250G 5400</td>
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<td>14.1&quot; WXGA</td>
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<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 1000</td>
<td>None</td>
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<td>6 No Pro</td>
<td>64 Jul 10</td>
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<tr>
<td>2516-74U</td>
<td>i3-370M</td>
<td>2.40</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 1000</td>
<td>Gobi 2000</td>
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<td>None</td>
<td>6 No Pro</td>
<td>64 Jul 10</td>
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<tr>
<td>2516-FBU</td>
<td>i3-390M</td>
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<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
<td>None</td>
<td>6 No Pro</td>
<td>64 Jul 10</td>
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</tr>
</tbody>
</table>

#### Notes
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Memory</th>
<th>SATA DVD:RW</th>
<th>Ultrabase Slim</th>
<th>SATA disk</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Keyboard</th>
<th>TrackPoint®</th>
<th>Touchpad ThinkLight™</th>
<th>Preloaded operating system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premier performance; two spindles Intel® Core™ i3 processor i3-330M, i3-370M, or i3-390M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
<td>DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high, bottom access</td>
<td>SATA 3.0Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td>14.1&quot; (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
<td>89-key, TrackPoint® button, spill-resistant, multimedia Fn keys</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
<td>Black</td>
<td>Mobile Intel GM57 Express Chipset</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight</th>
<th>Case color</th>
<th>Case material</th>
<th>Battery - type</th>
<th>Battery - life</th>
<th>Chipset</th>
<th>ExpressCard/Cardread Multicard reader</th>
<th>Ports</th>
<th>PCl e Mini Card</th>
<th>Intel WWAN upg</th>
<th>Gobi™ 2000</th>
<th>Carrier</th>
<th>Modern</th>
<th>Bluetooth®</th>
<th>Ethernet</th>
<th>Intel AMT</th>
<th>Audio support</th>
<th>Security</th>
<th>Security chip</th>
<th>Finger print reader</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1&quot; (Wx Dx H): 13.2&quot; x 9.4&quot; x 1.1-1.3&quot;; 335.5 x 229mm x 27.8-31.9mm</td>
<td>6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)</td>
<td>Top: High Elasticity PolyCarbonate (HEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>Lithium Ion 6-cell, supports optional Slick battery (57Y4545) as 2nd battery at bottom 6-cell; up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slick battery; up to 22 hr</td>
<td>Mobile Intel GM57 Express Chipset</td>
<td>One slot (ExpressCard/34)</td>
<td>5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)</td>
<td>Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
<td>Two PCI Express Mini Card slots 11b/g/n wireless, PCiE Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2</td>
<td>Some: Wireless WAN upgradable</td>
<td>Some: Wireless WAN, Qualcomm chipset, PCiE Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSIA, GPS</td>
<td>User selectable at first boot, AT&amp;T®, Verizon®, or Sprint®, contract required with service provider</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Trusted Platform Module, TCG 1.2-compliant</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

#### Additional Information
- **Limited warranty**: 1-year - depot repair service / service upgrades available

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See footnotes for important warranty information
US models announced February 2 or July 6, 2010, or January 11, 2011
US models withdrawn effective July 2010 or June 2011

© Lenovo

(NZ1i-2) June 2011
## ThinkPad® T410i 2518 (TopSeller) - Windows 7 - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>rpm</th>
<th>PCIe Mini Card</th>
<th>Mini Card</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2518-JWU</td>
<td>i3-370M</td>
<td>2.40</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>2.0M</td>
<td>320G</td>
<td>7200</td>
<td>Intel 1000</td>
<td>Gobi WWAN upg</td>
<td>selectible</td>
<td>Blue</td>
<td>9</td>
<td>No</td>
<td>Pro 64</td>
<td>Jul 10</td>
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<tr>
<td>2518-JXU</td>
<td>i3-370M</td>
<td>2.40</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>2.0M</td>
<td>250G</td>
<td>5400</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>9</td>
<td>No</td>
<td>Pro 64</td>
<td>Jul 10</td>
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<tr>
<td>2518-MHU</td>
<td>i3-370M</td>
<td>2.40</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>2.0M</td>
<td>250G</td>
<td>5400</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>9</td>
<td>No</td>
<td>Pro 64</td>
<td>Jul 10</td>
<td></td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (Q10PKR)

### Positioning

- Processor: Premiere performance; two spindles
- Intel® Core™ i3 processor i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache
- Memory: 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available
- SATA DVD:RW Ultrabay Slim SATA disk: DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™
- Widescreen display Camera: 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight. Camera on top of screen, 2.0-megapixel, fixed focus
- Integrated graphics: Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display: Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)
- Keyboard: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass
- ThinkLight™: UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions
- Dimensions³: 14.1W (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm
- Weight¹: 6-cell: at starting 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)
- Case color: Black
- Case material: Top: High Elasticity PolyCarbonate (HEPC);
- Bottom: Carbon-Fiber Reinforced Plastic
- Battery - type: Lithium ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
- Battery - life: 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slicе battery: up to 22 hr

### Chipset

- ExpressCard/34: Mobile Intel QM57 Express Chipset
- Smart Card read: None
- Multicard reader ports: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)
- Two PCI Express Mini Card slots
- Intel 1000 WWAN upg: Gobi™ 2000
- Some: Wireless WAN upgradable
- Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS
- Carrier: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
- Modern: 56K V.92 modem
- Bluetooth™: Some: Bluetooth 2.1 wireless, LED indicator
- Ethernet: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCI-e x1
- Intel Active Management Technology (IAMT)
- Audio support: High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- Security: Power-on password, hard disk password, supervisor password, security keyhole
- Security chip: Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty²: 3-years/1-yr battery - depot repair service / service upgrades²² available

### Preloaded operating system³⁰

- Genuine Windows® 7 Professional 64

### Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD®:RW)
- Roxio MyDVD® (DVD®:RW)
- Corel® WinDVD® (DVD®:RW)

### Supports ThinkVantage® technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷
- 24 hour x 7 day toll-free support during the warranty period¹² via 800-426-7378
- Lenovo.com/thinkplus/warranty
- Lenovo.com/thinkplus/warranty

### See footnotes for important warranty information

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(N21i-3) June 2011
### ThinkPad T410i 2518 (Discrete) - TopSeller (Windows 7) - withdrawn

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>Carrier</th>
<th>Blue/</th>
<th>Fing/</th>
<th>Intel</th>
<th>Preload</th>
<th>Preload date</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2518-JYU</td>
<td>Intel® Core™ i3 processor i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology: 3MB cache</td>
<td>2.40</td>
<td>2GB</td>
<td>14.1” WXGA+</td>
<td>LED</td>
<td>2.0M</td>
<td>320G</td>
<td>7200</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>No</td>
<td>Pro 64</td>
<td>Jul 10</td>
<td></td>
</tr>
</tbody>
</table>

- **Preloaded operating system**
  - Genuine Windows® 7 Professional 64

- **Preloaded applications** (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - FingerPrint Software (fingerprint models)
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox
  - Norton® Internet Security 2011 (30 days of virus definitions)
  - Adobe Reader®
  - Adobe Flash® Player
  - Windows Live® Toolbar
  - Skype® for Windows
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Microsoft Research AutoCollage Touch
  - Roxio® Creator® Business Edition (DVD±RW)
  - Roxio MyDVD® (DVD±RW)
  - Corel® WinDVD® (DVD±RW)

- **Supports ThinkVantage technologies**

- 90-watt AC adapter

<table>
<thead>
<tr>
<th>ThinkPad Roll Cage (one-piece magnesium frame)</th>
<th>ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 day toll-free support during the warranty period12 via 800-426-7378</th>
</tr>
</thead>
</table>

See footnotes for important warranty information

US model announced July 6, 2010

US model withdrawn effective June 2011
ThinkPad® T410 Accessories - withdrawn

Personal Systems Reference (PSREF)

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 ann 06/23/09

Ultrabay Slim 9.5mm
Serial ATA Hard Drive Bay Adapter III 43N3412 ann 06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5/G/s 43N3292 ann 08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5/G/s 43N3229 ann 06/23/09

Storage and removable storage
500GB Disk SATA 3.0Gbps (7200 rpm)\(^{41}\) 43N3423 ann 01/07/10
500GB FDE SSD SATA 3-Gbps 1.8"(2.5" cover) 43N3417 ann 06/23/09
USB 2.0 Portable 320GB Hard Disk 45K1669 ann 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 ann 01/07/10
USB 2.0 Portable DVD Burner 43N3264 ann 01/05/10
Lenovo Slim USB Portable DVD Burner 0A3988 ann 06/14/11

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
ThinkPad Gobi™ 2000 Broadband Option 78Y1399 ann 01/07/10
Lenovo AT&T® Gobi 2000 Broadband Option 78Y1398 ann 01/07/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
USB 2.0 Port Replicator with Digital Video 0A33942 ann 03/22/11
ThinkPad Port Replicator Series 3 433610W ann 03/23/09
ThinkPad Mini Dock Series 3 - 90W 433710W ann 03/23/09
ThinkPad Mini Dock Plus Series 3 - 90W 433810U ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 135W 433820U ann 01/07/10

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
ThinkPad Wireless Keyboard and Mouse\(^{32}\) 57Y4700 ann 09/15/09
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB FingerPrint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P0469 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

Batteries
ThinkPad Battery 55+ (6-cell) 57Y4185 ann 03/30/10
ThinkPad Battery 55++ (9-cell) 57Y4186 ann 03/30/10
ThinkPad Battery 27++ (9-cell, slice)\(^{43}\) 57Y4545 ann 01/07/10

\(^{41}\) Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

\(^{43}\) To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

More information at www.lenovo.com/alladaycomputing
ThinkPad 65W AC Adapter\(^{45}\) 40Y7696 ann 01/05/06

\(^{45}\) Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub 57Y4400 ann 09/20/07
90W Ultraslim AC/DC Combo Adapter 41R4493 ann 09/22/09

More info at www.lenovo.com/support/poweradapters
Charging tips for 90W Ultrason AC/DC Combo Adapter 41R4493

More information at www.lenovopowertips.com

Carrying Cases
Up to 14” widescreen models:
ThinkPad 14W Case Sleeve 57Y4294 ann 03/16/10

Up to 15.6” widescreen models:
ThinkPad 15W Case Sleeve 51J0477 ann 08/18/09

Lenovo Business Messenger Case 51J0475 ann 08/18/09
Lenovo Messenger Max 41U5253 ann 05/01/07
Lenovo Performance BackPack 41U5254 ann 05/01/07
ThinkPad Business Topload Case 43R2476 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08
Wenger Backpack for Lenovo 57Y4271 ann 01/07/10
Wenger Slim Case for Lenovo 57Y4273 ann 01/07/10
Wenger Deluxe Slim Case for Lenovo 57Y4272 ann 01/07/10

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17” Monitor 5047HB2 ann 10/20/09
ThinkVision L1900p 19” Monitor 4431HE1 ann 11/11/08
ThinkVision L1951p Wide 19” Monitor 2572HB ann 10/20/09
ThinkVision L2251p Wide 22” Monitor 2572HB ann 10/20/09
ThinkVision L2251p Wide 22” Monitor 2572HBH ann 10/20/09
ThinkVision L2251x Wide 22” Monitor 2578HBH ann 10/20/09
ThinkVision L2321x Wide 23” Monitor 4014HB ann 06/10/10

More information at www.lenovo.com/support/monitors

Monitor Accessories\(^{44}\)
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-D Cable 45J7915 ann 08/05/08
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

\(^{44}\) Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories
Purchase Lenovo accessories
www.lenovo.com/support/accessories
Product specifications on Lenovo Support
www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures
www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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(O-T410) June 2011
Lenovo® ThinkPad T410s

ThinkPad Battery 42 (3-cell, bay)
57Y4536

ThinkPad Battery 59+ (6-cell)
51J0497

ThinkPad triple external monitor configuration using NVIDIA’s Optimus technology

Lenovo ThinkPad T410s
<table>
<thead>
<tr>
<th>Type/Model</th>
<th>Processor</th>
<th>Max Turbo Frequency (GHz)</th>
<th>Memory</th>
<th>Wide-screen Display</th>
<th>Camera</th>
<th>Disk Drive</th>
<th>SATA optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Fingerprint Reader</th>
<th>Battery</th>
<th>Weight</th>
<th>Dimensions</th>
<th>Positioning Technology</th>
<th>Security Features</th>
<th>Preloaded Operating System</th>
<th>Preloaded Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2901-A3U</td>
<td>Intel® Core™ i5-520M with dual-core</td>
<td>2.40 GHz</td>
<td>2GB</td>
<td>14.1&quot; WXGA+</td>
<td>20M</td>
<td>250G</td>
<td>5400</td>
<td>DVD±RW</td>
<td>11b/g/n</td>
<td>WWAN upgradable</td>
<td>Express</td>
<td>2.0M</td>
<td>8.5lb</td>
<td>None</td>
<td>13.3&quot; x 9.5&quot; x 0.83-1.02&quot;; 337 x 241.5mm x 21.1-25.9mm</td>
<td>Windows 7 Professional 32</td>
<td></td>
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<tr>
<td>2901-A4U</td>
<td>Intel® Core™ i5-520M with dual-core</td>
<td>2.40 GHz</td>
<td>2GB</td>
<td>14.1&quot; WXGA+</td>
<td>20M</td>
<td>80G SSD</td>
<td>5400</td>
<td>DVD±RW</td>
<td>Intel® 6200™ WWAN</td>
<td>Yes</td>
<td>2.0M</td>
<td>6.0lb</td>
<td>None</td>
<td>13.3&quot; x 9.5&quot; x 0.83-1.02&quot;; 337 x 241.5mm x 21.1-25.9mm</td>
<td>Windows 7 Professional 32</td>
<td></td>
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</tr>
</tbody>
</table>

**See footnotes for important warranty information**

US models announced January 7, 2010

US models withdrawn effective October 2010

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- These small and medium business (SMB) models are part of the US TopSeller™ Program

- Preloaded operating system:
  - Windows® XP Professional preinstalled through downgrade rights in the Windows 7 Professional 32-bit or 64-bit editions (only some listed)

- Preloaded applications:
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - Fingerprint Software
  - ThinkVantage Power Manager
  - ThinkVantage Presentation Director
  - ThinkVantage Productivity Center
  - Roxio MyDVD™
  - Corel® WinDVD®

- Supports ThinkVantage® technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service (24 hour x 7 day toll-free support during the warranty period)
  - via 800-426-7378

- Lenovo.com/thinkplus/warranty

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**Note:**

- ThinkPlus™ 22 1-year LOR™ 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 2-year P&L Depo
- ThinkPlus 3-year P&L Depo
- ThinkPlus 4-year P&L Depo
- ThinkPlus 5-year P&L Depo
This small and medium business (SMB) model is part of the US TopSeller™ program.

Positioning Processor
Premiere performance and ultraportability; two spindles

Intel® Core™ i5 processor i5-560M with dual-core.

Memory
2GB std / 8GB max

SATA DVD: RW
DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable

SATA disk
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

Widescreen display Camera
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®,
magnifying glass

Touchpad
UltraNav

Dimensions
14.1W (WxDxH): 13.9" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm

Weight
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery; up to 7.9 hr

Battery - type
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery

Battery - life
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery

Chipset
Mobile Intel QS57 Express Chipset

Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
None

Limited warranty
1-year - depot repair service / service upgrades available

See footnotes for important warranty information

US model announced September 28, 2010
US model withdrawn effective June 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo</th>
<th>Max turbo</th>
<th>Processor</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Blue tooth</th>
<th>Card slot</th>
<th>Intel vPro Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>2904-CFU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>SATA 5400</td>
<td>11b/g/n</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Exp</td>
<td>XP Pro</td>
<td>Feb 10</td>
<td></td>
</tr>
<tr>
<td>2904-CGU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>SATA 5400</td>
<td>11b/g/n</td>
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<td>Blue</td>
<td>XP Pro</td>
<td>Feb 10</td>
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<tr>
<td>2904-FPU</td>
<td>i5-520M</td>
<td>2.40</td>
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<td>4GB</td>
<td>SATA 5400</td>
<td>11b/g/n</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Blue</td>
<td>Exp VPro</td>
<td>XP Pro Feb 10</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty

### Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator™ Business Edition (DVD+V)
- Roxio MyDVD® (DVD+RW)

### Prepaid offer(s)
- 24 hour x 7 day18 toll-free support
- 3-years/1-yr battery - depot repair service / service upgrades22 available

### Post-warranty service
- Lenovo support
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator™ Business Edition (DVD+V)
- Roxio MyDVD® (DVD+RW)

### Battery
- Up to 4.8 hr; 6-cell: up to 7.9 hr
- Lithium Ion, supports unique 2nd battery in Ultrabay Slim
- 3-years/1-yr battery - depot repair service / service upgrades22 available

### Display
- 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

### Memory
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Standard memory in both sockets; no sockets available;
- Standard memory in one socket; one socket available

### Processor
- Premier performance and ultra-portability; two spindles; Intel® Core™ i3 processor 1520M with dual-core.
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Security
- Finger print reader
- Security chip
- Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader

### Support
- THINKPLUS 3-year LOR4, 3-year LOR1
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced January 7 or February 2, 2010
US models withdrawn effective October 2010
**ThinkPad® T410s 2904 (TopSeller) - Windows 7 - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base</th>
<th>Max turbo</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Card slot</th>
<th>Power Adapter</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<tr>
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<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>4GB</td>
<td>14.1&quot; WXGA+</td>
<td>128G SSD</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Express</td>
<td>65W vPro</td>
<td>Pro 64</td>
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<td>i5-520M</td>
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<td>2.93</td>
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<td>14.1&quot; WXGA+</td>
<td>250G 5400</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Express</td>
<td>90W vPro</td>
<td>Pro 64</td>
<td>May 10</td>
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<tr>
<td>2904-HCU</td>
<td>i5-560M</td>
<td>2.66</td>
<td>3.20</td>
<td>4GB</td>
<td>14.1&quot; WXGA+</td>
<td>128G SSD</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Express</td>
<td>65W vPro</td>
<td>Pro 64</td>
<td>Sep 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Positioning Processor**
Premiere performance and ultra portability; two spindles Intel® Core™ i5 processor i5-520M or i5-560M with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; **Italics:** standard memory in both sockets; no sockets available; **Non-italics:** standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim SATA disk**
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable. One modual bay for interchangeangeable devices (right side), 9.5mm high, bottom access **Some:** 128GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high **Some:** SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™ **All:** removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display Camera**
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight. Camera on top of screen, 2.0-megapixel, fixed focus

**Integarted graphics**
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz: 2048x1536 (VGA)@75Hz: 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard TrackPoint® Touchpad ThinkLight™**
89-key, ThinVantage button, spill-resistant, multimedia Fn keys **TrackPoint®** pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass **UltraNav™**, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
14.1W (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm 6-cell: starting at 3.94 lb (1.79kg)

**Chipset ExpressCard/34 Multicard Reader Ports**
Mobile Intel QS57 Express Chipset One slot (ExpressCard/34) None Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card Intel 6200® WWAN upg**
Two PCI Express Mini Card slots 11a/b/g/n wireless®, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable

**Microsoft® Bluetooth® Ethernet Intel AMT Audio support**
None Bluetooth 2.1 wireless, LED indicator Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1 Intel Active Management Technology (AMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security Security chip Fingerprint reader**
Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinVantage System Update
- ThinVantage Power Manager
- ThinVantage Toolbox
- Adobe® Reader®
- Adobe Flash Player®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate (Microsoft frame)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

**Certifications**
SUPPORTS ThinkVantage® technologies
65-watt or 90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service 24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

**Limited warranty**
3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced March 2, May 4, or September 28, 2010
US models withdrawn effective June 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Base memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>2904-G2U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>4GB</td>
<td>14.1&quot; WXGA+</td>
<td>2.0M</td>
<td>128G SSD</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
<td>3-in-1</td>
<td>vPro Pro</td>
<td>May 10</td>
<td>2010</td>
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<td>250G 5400</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
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<td>vPro Pro</td>
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<td>Finger Blue</td>
<td>3-in-1</td>
<td>vPro Pro</td>
<td>May 10</td>
<td>2010</td>
<td>2010</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system
- Genuine Windows® 7
- Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader™
- Adobe Flash Player™
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVR±RW)
- Roxio® MyDVD® (DVR±RW)
- Corel® WinDVD® (DVR±RW)

**Positioning Processor**
Premiere performance and ultraportability; two spindle Intel Core™ i5 processor i5-520M or i5-540M with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Intel: standard memory in both sockets; no sockets available; Non-Intel: standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim SATA disk**
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable. One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
• Some: 128GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high
• Some: 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™ All: removable, upgradable, supports 2nd disk, shock Mounted Hard Drive

**Widescreen display**
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Switchable graphics**
Dynamic switching between discrete and integrated graphics (use selectable), Intel HD Graphics in processor, and NVIDIA® NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2048x1536 (VGA®) @75Hz(integrated) or 85Hz(discrete); 1920x1200@60Hz (single-link DVI-D via cable 45J7915); 2560x1600 (DP) @60Hz

**Keyboard**
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® Touchpad ThinkLight™**
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Dimensions**
14.1"W (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm
6-cell: starting at 3.94 lb (1.79kg)
6-cell plus Ultrabay battery: up to 7.9 hr

**Weight**
6-cell: starting at 3.94 lb (1.79kg)
6-cell plus Ultrabay battery: up to 7.9 hr

**Battery - type**
Lithium-Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

**Chipset**
Mobile Intel QS57 Express Chipset

**ExpressCard/34 Multicard Reader Ports**
None
3-in-1 reader (MMC, SD, SDHC)
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCIe Mini Card**
Two PCI Express Mini Card slots
11a/b/g/n wireless®, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable

**WWAN upg**
None

**Modem**
Bluetooth 2.1 wireless, LED indicator

**Ethernet**
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Intel AMT Audio support**
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**
Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator,
Power On Authentication, supports the security chip

**Limited warranty**
3-years / 1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced March 30 or May 4, 2010
US models withdrawn effective June 2011

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<table>
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<tr>
<th>Type-model Processor</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
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<th>Intel vPro</th>
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<td>2904-HDU i5-560M</td>
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<td>2.0M</td>
<td>128GB SSD</td>
<td>Intel 6200™</td>
<td>WWAN upg</td>
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<td>Blue</td>
<td>3-in-1</td>
<td>vPro</td>
<td>Pro 64</td>
<td>Sep 10</td>
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</table>

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Preloaded operating system
- Genuine Windows® 7
- Professional 64

### Preloaded applications
- (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - Fingerprint Software (fingerprint models)
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox
  - Adobe® Reader®
  - Adobe Flash® Player
  - Skype™ for Windows
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Microsoft Research AutoCollage Touch
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

### Positions & Processor

- Premieres performance and ultra-portability; two spindles Intel® Core™ i5 processor i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory

- 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available

### SATA DVD±RW Ultrapay Slim SATa disk

- DVD burner, SATA 1.5Gb/s, 9.5mm UltraBay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- 128GB™ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high, removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

### Widescreen display

- 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

### Optimus graphics

- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA NVS™ 3100M, PCI Express x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915); 2560x1600 (DP)@60Hz

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint™ pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 14.1”W (WxDxH): 13.3” x 9.5” x 0.83–1.02”; 337 x 241.5mm x 21.1–25.9mm
- Case material: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); **Base:** Magnesium alloy
- Lithium Ion 6-cell, supports unique 2nd battery in UltraBay Slim
- 6-cell: up to 4.7 hr; 6-cell plus UltraBay battery: up to 7.8 hr

### Chipset

- Mobile Intel QS57 Express Chipset
- ExpressCard/34
- Multicard Reader
- Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
- None
- 3-in-1 reader (MMC, SD, SDHC)
- Two PCI Express Mini Card slots
- 11a/b/g/n wireless®, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- Wireless WAN upgradable
- None
- Bluetooth 2.1 wireless, LED indicator
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (IAMP)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TCG 1.2-compliant
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

- 3-years / 1-yr battery - depot repair service / service upgrades available

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See footnotes for important warranty information

US model announced September 28, 2010
US model withdrawn effective June 2011

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(SN2-12) June 2011
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<td>XP Pro</td>
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</table>

- These models have a depot repair service 3-year limited warranty

**Positioning Processor**

Premiere performance and ultra portability; two spindles

**Intel® Core™ i5 processor i5-520M with dual-core.**

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *italics*: standard memory in both sockets; no sockets available

**SATA DVD±RW Ultrabay Slim SATA disk**

DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable

One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

120GB* (5400 rpm) or 250GB (5400 rpm) / SATA 3.0GB/s, 1.8" wide, 9.5mm high, removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive, Active Protection System™

**Widescreen display Camera**

14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Integrated graphics**

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass.**

**Touchpad**

UltraNav®, wide touchpad below keyboard, Tap Zones, scrolled regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

14.1W" (WXxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm

**Weight**

6-cell: starting at 3.94 lb (1.79kg)

**Battery - type**

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life**

6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

**Chipset**

Mobile Intel QS57 Express Chipset

**ExpressCard/34 Multi Card Reader**

None

**Ports**

Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card**

11b/g/n wireless, ThinkPad 11b/g/n, PCle Half Mini Card

**Wireless WAN upgradable**

None

**Bluetooth**

None: Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCle x1

**Intel AMT**

Intel Active Management Technology (iAMT)

**Audio support**

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**

3-years / 1-yr battery - depot repair service / service upgrades available

---

See footnotes for important warranty information

US models announced January 7, 2010

US models withdrawn effective August or October 2010
**ThinkPad T410s 2912 (Windows 7) - withdrawn**

**Positioning**
Premiere performance and upgradability; two spindle

**Processor**
Intel® Core™ i5 processor i5-250M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
2GB, 3GB, or 4GB std / 8GB max /
- PC3-8500 1066MHz or PC3-10600 1333MHz DDR3,
- non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD RW**
- Blu-ray player
- Premium playback
- USB 8GB, 128GB, or 160GB Solid State Drive (SSD) /
- SATA 3.0Gbps, 1.8" wide, 5mm high
- 120GB (5400 rpm) or 250GB (5400 rpm) /
- SATA 3.0Gbps, 1.8" wide, 9.5mm high, Active Protection System™
- All: removable, upgradable, supports 2nd drive, shock, or Mobile Hard Drive

**Wide screen display**
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio,
- Some: MultiTouch (touchscreen supports two-finger touch)
- Some: camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display,
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Touchpad**
- UltraNav™, wide touchpad below keyboard, ZType Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
14.1" (WxDxH): 13.3" x 9.5" x 0.83–1.02; 337 x 241.5mm x 24.2–29.0mm

**Weight**
- 6-cell: starting at 3.94 lb (1.79kg); 19.2x1516 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)
- 6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

**Chipset**
Mobile Intel GL57 Express Chipset
- One slot (ExpressCard/34)
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**Pcie Mini Card**
Two PCI Express Mini Card slots
- Some: 11b/g/n wireless, ThinkPad 11b/g, PCi Half Mini Card
- Some: 11b/g/n wireless, PCi Half Mini Card, Intel Centrino®-Advanced-N 6200, 2x2
- Some: 11a/b/g/n wireless, PCi Half Mini Card, Intel Centrino Advanced-N + WIMAX 6250, 2x2 AGN + 1x2 WIMAX
- Some: Wireless WAN, Qualcomm chipset, PCi Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider
- Some: 21U/2DU models: Verizon®, contract required with service provider

**Carrier Modern**
None

**Bluetooth**
Some: Bluetooth 2.1 wireless, LED indicator

**Ethernet**
Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Some: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel AMT
- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, ConnectX 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**
Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information.

US models withdrawn effective August 2010 or June 2011.

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<th>Camera</th>
<th>Disk</th>
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<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability date</th>
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<tr>
<td>T410s 2912 (Windows 7) - January 2011 - withdrawn</td>
<td>Intel Core i5-560M with dual-core, Full Intel Turbo Boost, Hyper-Threading technology, 3MB cache</td>
<td>2.66</td>
<td>4GB x 1 1333</td>
<td>14.1&quot; WXGA+</td>
<td>2.0M</td>
<td>128G SSD</td>
<td>Intel 6200™ WWAN upg</td>
<td>Fingerprint reader, ting Blue-tooth, Card slot</td>
<td>Pro 64</td>
<td>Jan 11</td>
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</tr>
</tbody>
</table>

- This model has a depot repair service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system:
- Genuine Windows® 7 Professional 64

### Preloaded applications (only some listed):
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

#### Lenovo Warranty:
- 3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information
US model announced January 1, 2011
US model withdrawn effective June 2011

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(SN2-14) June 2011
ThinkPad® T410s 2912 (Switchable) - Windows 7 - withdrawn

Preloaded operating system:
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications (only some listed):
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded: purchase product key to activate
- Microsoft Research AutoCollage Touch™
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVR+RW)

See footnotes for important warranty information
US models announced March 30 or May 4, 2010
US models withdrawn effective June 2011

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(SN2-9) June 2011
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<th>Wide-screen display</th>
<th>Disk SATA GB rpm</th>
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<td>Blue</td>
<td>vPro</td>
<td>Pro 64</td>
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- This model has a depot repair service 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service

24 hour 7 day/24 toll-free support during the warranty period

via 800-426-7378

ThinkPlus™ 3-year LOR® 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced September 28, 2010

US model withdrawn effective June 2011
ThinkPad® T410s 2924 (Onsite) - Windows 7 - withdrawn

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<td></td>
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</table>

* These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty
* These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor

Premiere performance and ultra portability; two spindles

Intel® Core™ i5 processor or i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory

2GB, 3GB, or 4GB std / 8GB max! / 8GB max

PC3-8500 1066MHz or PC3-10600 1333MHz DDR3.

non-partly, dual-channel capable, two 204-pin SO-DIMM sockets

SATA DVD±RW UltraBay Slim

SATA disk

DVD burner, SATA 1.5Gb/s, 9.5mm UltraBay slim, removable

One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

Some: 80GB Sata 3.0Gb/s, 1.8” wide, 5mm high

Some: 120GB (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 5.9mm high, Active Protection System™

All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

Widescreen display

14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio.

Some: MultiTouch (touchscreen supports two-finger touch)

Integrated graphics

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TouchPad™

Multi-Touch (touchscreen supports two-finger touch)

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

14.1W (WxDxH): 13.3”x 9.5” x 0.83–1.02”

337 x 241.5mm x 21.1–25.9mm

MultiTouch models: 13.3”x 9.5” x 0.95–1.14”

337 x 241.5mm x 24.2mm–29.0mm

Weight

6-cell: starting at 3.94 lb (1.79kg); 6-cell (MultiTouch): starting at 4.51lb (2.05kg)

Battery cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Uniform: Magnesium alloy

Lithium Ion 6-cell: supports the unique 2nd battery in UltraBay Slim

6-cell: up to 4.8 hr; 6-cell plus UltraBay battery: up to 7.9 hr

Chipset

Mobile Intel Q557 Express Chipset

ExpressCard/34 Multicard Reader Ports

One slot (ExpressCard/34)

No two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

Pcie Mini Card

11b/g/n Wireless

Intel 6200® or WWAN upg

Modem

Bluetooth® Ethernet

Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT Audio support

Intel Active Management Technology (AMT)

High Definition (HD) Audio, Comexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty®

3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

Preloaded operating system®

- Some: Genuine Windows® 7 Professional 32
- Some: Professional 64
- Some: Microsoft® Windows 7 Professional 64

Preloaded applications® (only some listed)

- Rescue and Recovery™
- Access Connections®
- Password Manager
- Fingerprint Software (fingerprints models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Preloaded software®

- Adobe Reader®
- Adobe Flash Player
- Windows Live Toolbar
- Skype for Windows
- Norton Internet Security 2011 (30 days of virus definitions)
- Roxio Creator Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel WinDVD® (DVD+RW)

Preloaded system®

- Some: Genuine Windows® 7 Professional
- Some: Professional 64

Personal Systems Reference (PSREF)
ThinkPad T410s 2924 (Switchable) - Onsite (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model Processor</th>
<th>Base turbo memory (GHz)</th>
<th>Max turbo memory (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Blue-tooth Card slot</th>
<th>Intel vPro</th>
<th>Workhorse (W) Gb (G)</th>
<th>Available date</th>
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<tbody>
<tr>
<td>2924-24U i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>3GB</td>
<td>14.1&quot; WXGA+</td>
<td>2.0M</td>
<td>250G</td>
<td>WWAN upg</td>
<td>None</td>
<td>Blue</td>
<td>3-in-1</td>
<td>vPro</td>
<td>32 G P</td>
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<tr>
<td>2924-3WU i5-540M</td>
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<td>3.06</td>
<td>2GB</td>
<td>14.1&quot; WXGA+</td>
<td>2.0M</td>
<td>250G</td>
<td>WWAN upg</td>
<td>None</td>
<td>Blue</td>
<td>3-in-1</td>
<td>vPro</td>
<td>32 G P</td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service and 3-year limited warranty.
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR).

Positioning Processor
- Premiere performance and ultra portability: two spindles
  - Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DRR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
- 2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - Italics: standard memory in both sockets; no sockets available;
  - Non-italics: standard memory in one socket; one socket available

SATA DVD±RW
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, Shock Mounted Hard Drive, Active Protection System

Widescreen display
- 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

Switchable graphics
- Dynamic switching between discrete and integrated graphics (user selectable), Intel HD Graphics in processor, and NVIDIA® NVS™ 3100M, PCI Express®, x16, 128MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J915); supports dual independent display;
  - Maximum external resolution: 2048x1536 (VGA)@75Hz(integrated) or 85Hz(discrete);
  - 1320x1200@60Hz (single-link DVI-D via cable 45J915); 2560x1600 (DP)@60Hz

Keyboard TrackPoint
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnesium glass

Dimensions
- 14.1W (WxDxH): 13.3" x 9.5" x 0.83~1.02"; 337 x 241.5mm x 21.1–25.9mm
- 6-cell: starting at 3.94 lb (1.79kg)
- 6-cell plus Ultrabay battery: up to 7.9 hr

Chipset
- Mobile Intel QS57 Express Chipset
- None

Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Battery - life
- 6-cell: up to 4.0 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

See footnotes for important warranty information

US models announced March 30 or May 4, 2010
US models withdrawn effective June 2011

© Lenovo

(SN2-10) June 2011
ThinkPad T410s 2912 (Education) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Turbo Speed (GHz)</th>
<th>Max Turbo Speed (GHz)</th>
<th>Memory</th>
<th>Wide-screen SSD</th>
<th>Multi-touch Screen</th>
<th>Camera</th>
<th>Display</th>
<th>Graphics</th>
<th>Bluetooth</th>
<th>Operating System</th>
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<tr>
<td>2912-52U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>14.1&quot; WXGA+</td>
<td>Multi</td>
<td>Finger reader</td>
<td>ThinkLight™</td>
<td>Intel HD Graphics</td>
<td>Windows 7</td>
<td></td>
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<tr>
<td>2912-53U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>3GB</td>
<td>14.1&quot; WXGA+</td>
<td>Multi</td>
<td>Finger reader</td>
<td>ThinkLight™</td>
<td>Intel HD Graphics</td>
<td>Windows 7</td>
<td></td>
</tr>
</tbody>
</table>

#### Software
- **Microsoft Office Ultimate 2007 Academic Edition**: Only valid for sale to students, faculty and staff of listed educational institutions.
- **ThinkVantage Software**: ThinkVantage Power Manager
- **ThinkVantage Toolbox**: Available in the United States and Canada
- **ThinkPlus**: Enhanced warranty options

#### Limited warranty
- 3-years/1-year battery - depot repair service / service upgrades available

#### Optional Accessories
- **ThinkPad Roll Cage**: One-piece magnesium frame
- **EPEAT Gold rating**: ENERGY STAR 5.0-compliant RoHS-compliant
- **International Warranty Service**: 24 hour x 7 day toll-free support during the warranty period

See footnotes for important warranty information

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US models announced January 7, 2010

US models withdrawn effective June 2011
**ThinkPad® T410si 2901 (TopSeller) - Windows 7 - withdrawn**

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
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<tr>
<th>Type-model Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA rpm</th>
<th>SATAl optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Blue-tooth supplement</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<td>2GB</td>
<td>14.1” WXGA+</td>
<td>2.0M</td>
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<td>5400</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
<td>Blue</td>
<td>Express</td>
<td>No</td>
<td>Pro</td>
<td>32</td>
<td>Mar 10</td>
</tr>
</tbody>
</table>

**Positioning Processor**
Premiere performance and ultraportability; two spindles

**Intel® Core™ i3 processor i3-330M with dual-core.**
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Hyper-Threading technology; 3MB cache

**Memory**
2GB std / 8GB max² / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

**SATA DVD:±RW Ultrabay Slim SATA disk**
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
250GB³ (5400 rpm) /
SATA 3.0Gb/s, 1.8” wide, 9.5mm high, removable, upgradable, supports 2nd disk,
Shock Mounted Hard Drive, Active Protection System™

**Widescreen display Camera**
14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.
300 nits, 16.10 aspect ratio, 300:1 contrast ratio
Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
Intel HD Graphics in processor,
external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard TrackPoint®**
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Touchpad ThinkLight™**
UltraNav™, wide touchpad below keyboard,
Tap Zones, scrolling regions label, multi-touch
illuminates the keyboard to improve visibility in low-light conditions

**Dimensions³**
14.1W” (WxDxH): 13.3” x 9.5” x 0.83–1.02”; 337 x 241.5mm x 21.1–25.9mm
6-cell: starting at 3.94 lb (1.79kg)

**Weight³**
Case material
Display cover: Carbon-fiber reinforced plastic (top),
glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

**Battery - type**
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life³
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

**Chipset ExpressCard/34**
Mobile Intel QS57 Express Chipset
One slot (ExpressCard/34)

**Multicard Reader**
None

**Ports**
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port,
external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCIe Mini Card**
Two PCI Express Mini Card slots
Intel 1000 WWAN upg

**Modem**
None

**Bluetooth™**
None

**Ethernet**
Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Intel AMT**
None

**Audio support**
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 /
speaker volume up, down and mute buttons / dual array microphone, mic mute button,
combo audio/mic jack

**Security Security chip**
Power-on password, hard disk password, supervisor password, security keyhole
Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
None

**Limited warranty²**
1-year - depot repair service / service upgrades²² available

See footnotes for important warranty information
US model announced March 2, 2010
US model withdrawn effective July 31, 2010

Preloaded operating system²⁰
- Genuine Windows® 7 Professional 32

Preloaded applications²¹ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support
during the warranty period¹³ via 800-426-7378

ThinkPlus™¹⁴ 1-year LOR²¹ 9x5 NBD
ThinkPlus 2-year LOR 9x5 NBD
ThinkPlus 3-year LOR 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 2-year P&L P/U Depot
ThinkPlus 3-year P&L P/U Depot
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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(SN2-2) August 2010
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<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
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<th>PCIe Mini Card</th>
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<th>Bluetooth</th>
<th>Card slot</th>
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<td>Blue</td>
<td>Express</td>
<td>No</td>
<td>Pro 64</td>
<td>Aug 10</td>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These system are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**
Premiere performance and ultra portability; two spindles
Intel® Core™ i3 processor i3-370M with dual-core,
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Hyper-Threading technology; 3MB cache

**Memory**
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim**
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
Some: 128GB8 Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high
Some: 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™
All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight,
300 nits, 16:10 aspect ratio, 300:1 contrast ratio
Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
Intel HD Graphics in processor,
external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J9715)

**Keyboard**
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® Touchpad**
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch
Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions³**
14.1W" (WxDxH): 13.3" x 9.5" x 0.83-1.02"; 337 x 241.5mm x 21.1-25.9mm

**Battery**
6-cell: starting at 3.94 lb (1.79kg)
Power-on password, hard disk password, supervisor password, security keyhole

**Chipset**
Mobile Intel QS57 Express Chipset
One slot (ExpressCard/34)

**Multicard Reader**
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card**
Two PCI Express Mini Card slots
Some: 11b/g/n wireless, ThinkPad 11b/g/n, PCle Half Mini Card
Some: 11a/b/g/n wireless, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2

**Modem**
None

**Bluetooth™**
Bluetooth 2.1 wireless, LED indicator

**Ethernet**
Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Audio support**
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**
Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator,
Power On Authentication, supports the security chip

**Limited warranty**
1-year - depot repair service / service upgrades available
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced August 3, 2010
US models withdrawn effective June 2011
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<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Multi-Touch Screen area</th>
<th>Camera</th>
<th>Blue/Fin</th>
<th>Card slot</th>
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<th>Avail date</th>
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<tr>
<td>2904-CUU</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>WXGA+</td>
<td>2.0M 250G 5400</td>
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<td>Express</td>
<td>No</td>
<td>Pro 32</td>
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<td>No</td>
<td>Pro 32</td>
<td>Feb 10</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

| Positioning Processor | Premiere performance and ultra portability; two spindles
|-----------------------|-------------------------------------------------------------------
| Memory                | 2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
| 
| SATA DVD±RW Ultrabay Slim | DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
| SATA disk            | One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
| 
| Widescreen display   | 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.
| Camera               | Camera on top of screen, 2.0-megapixel, fixed focus
| 
| Integrated graphics  | Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)
| 
| Keyboard              | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
| TrackPoint Touchpad  | TrackPoint™ pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass
| ThinkLight™           | UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Multi-Touch Screen area</th>
<th>Camera</th>
<th>Blue/Fin</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<tr>
<td>2904-CUU</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>WXGA+</td>
<td>2.0M 250G 5400</td>
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<td>Yes</td>
<td>Express</td>
<td>No</td>
<td>Pro 32</td>
<td>Feb 10</td>
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<td>Express</td>
<td>No</td>
<td>Pro 32</td>
<td>Feb 10</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

| Preloaded operating system| Genuine Windows® 7 Professional 32
| Preloaded applications| Rescue and Recovery™
| | Access Connections™
| | Password Manager
| | Fingerprint Software (fingerprint models)
| | ThinkVantage System Update
| | ThinkVantage Power Manager
| | ThinkVantage Toolbox
| | Norton® Internet Security 2009 (30 days of virus definitions)
| | Adobe® Reader®
| | Adobe Flash® Player
| | Windows Live™ Toolbar
| | Skype™ for Windows
| | Microsoft Office 2010 preloaded; purchase product key to activate
| | Microsoft Research AutoCollage Touch
| | Roxio® Creator® Business Edition (DVD±RW)
| | Roxio® MyDVD® (DVD±RW)
| | Corel® WinDVD® (DVD±RW)

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
ThinkPad T410si 2904 (TopSeller) - Windows 7 (August 2010) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<td>250G</td>
<td>5400</td>
<td>11b/g</td>
<td>WWAN upg</td>
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<td>Blue</td>
<td>Express</td>
<td>No</td>
<td>Pro 64</td>
<td>Aug 10</td>
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<td>2.0M</td>
<td>160G</td>
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<td>Intel</td>
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<td>Blue</td>
<td>Express</td>
<td>No</td>
<td>Pro 64</td>
<td>Aug 10</td>
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</tbody>
</table>

• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These models have a depot repair service 3-year limited warranty
• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Processor
Premiere performance and ultraportability; two spindles Intel® Core™ i3 processor I3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

Memory
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italic: standard memory in one socket; one socket available

SATA DVD: RW
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
Some: 160GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high
Some: 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 9.5mm high, Active Protection System™/All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

Ultrabay Slim
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
Some: 160GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high
Some: 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 9.5mm high, Active Protection System™

Widescreen display
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio

Integrated graphics
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

Dimensions
14.1W” (357mm) x 9.5” (242mm) x 0.83–1.02” (21.1–25.9mm)

Weight
3.94 lb (1.79kg)

Chips
Mobile Intel Q55 Express Chipset

ExpressCard/34 Multicard Reader
None

Ports
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45) and one combo audio/mic jack

PCle Mini Card
Two PCI Express Mini Card slots
Some: 11b/g/n wireless®, ThinkPad 11b/g/n, PCIe Half Mini Card
Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable

Modem
None

Bluetooth®
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty
3-years / 1-yr battery - depot repair service / service upgrades available

Preloaded operating system
- Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live Toolbar
- Skype™ for Windows
- Windows Office 2010 preloaded: purchase product key to activate
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 3-year LOR 9x5 24x7, 3-year LOR 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced August 3, 2010
US models withdrawn effective June 2011
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(SN2i-4) June 2011
Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 ann 06/23/09

UltraBay Slim 9.5mm
Serial ATA Hard Drive Bay Adapter III 43N3412 ann 06/23/09
DVD-ROM UltraBay Slim Drive II SATA 1.5G/s 43N3292 ann 08/03/10
DVD Burner UltraBay Slim Drive II SATA 45N3229 ann 06/23/09

Storage and removable storage
1.8” 250GB Disk SATA 3.0Gb/s (5400 rpm) 43N3418 ann 06/23/09
500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423 ann 01/07/10
“ Can be used with Serial ATA Hard Drive Bay Adapter III 43N3412 in the UltraBay
256GB FDE SSD SATA 3Gb/s (2.5” cover)43N3417 ann 06/23/09
“ Can be used as the main HDD or
with Serial ATA Hard Drive Bay Adapter III 43N3412 in UltraBay via the removable adaptive cover provided with the drive

Wireless WAN (Mini PCI Express)
ThinkPad Gobi™ 2000 Broadband Option 78Y1399 ann 01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option 78Y1398 ann 01/07/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
USB 2.0 Port Replicator with Digital Video 0A33942 ann 03/22/11
ThinkPad Port Replicator Series 3 436310W ann 06/23/09
ThinkPad Mini Dock Series 3 - 90W 433710U ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W 433810U ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 135W 433820U ann 01/07/10

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P8260 ann 03/23/04
Ultralight Wireless Keyboard and Mouse“ Wireless via 2.4GHz technology using a micro-size USB receiver. 57Y4700 ann 09/15/09
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0195 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/04
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Modem
USB 2.0 Lenovo Modem 43R1814 ann 02/26/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

Batteries
ThinkPad Battery 59+ (6-cell) 51J0497 ann 06/23/09
ThinkPad Battery 42 (3-cell, bay)“ Used in Ultrabay Slim bay.
ThinkPad External Battery Charger““ Requires the ThinkPad 90W AC Adapter
40Y7625 ann 09/20/05

More information at www.lenovo.com/alldaycomputing

Carrying Cases
Up to 14” widescreen models:
ThinkPad 14W Case Sleeve 57Y4294 ann 03/16/10

Up to 15.6” widescreen models:
ThinkPad 15S Case Sleeve 51J0475 ann 08/18/09

Lenovo Business Messenger Case 51J0475 ann 08/18/09
Lenovo Messenger Max 41U5253 ann 05/01/07
Lenovo Performance BackPack 41U5254 ann 05/01/07
ThinkPad Business Topload Case 43R2476 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2487 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08
Wenger Backpack for Lenovo 57Y4271 ann 01/07/10
Wenger Slim Case for Lenovo 57Y4273 ann 01/07/10
Wenger Deluxe Slim Case for Lenovo 57Y4272 ann 01/07/10

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17” Monitor 5047HB2 ann 10/20/09
ThinkVision L1900p 19” Monitor 4431HE1 ann 11/11/08
ThinkVision L1951p Wide 19” Monitor 2448HB6 ann 10/20/09
ThinkVision L2250p Wide 22” Monitor 2572HD6 ann 10/20/09
ThinkVision L2251p Wide 22” Monitor 2572HD6 ann 10/20/09
ThinkVision L2251x Wide 22” Monitor 2578HB6 ann 10/20/09
ThinkVision L2321x Wide 23” Monitor 4014HB6 ann 06/10/10

More information at www.lenovo.com/support/monitors

Monitor Accessories“ Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-D Cable 45J7915 ann 05/05/08
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 40Y7625 ann 09/16/09
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09
“ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories
www.lenovo.com/support/monitoraccessories
www.lenovo.com/products
www.lenovo.com/accessoriesguide
www.lenovopowertips.com
www.lenovoquickpick.com
An Options Compatibility Matrix (OCM) and accessory brochures

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(O-T410-S) July 2011
### ThinkPad T420i 4177 (TopSeller) - withdrawn

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<th>Type-model</th>
<th>Processor</th>
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<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB rpm</th>
<th>PCIe Mini Card WLAN</th>
<th>PCIe Mini Card WWAN/mSATA</th>
<th>Modem</th>
<th>IEEE 1394</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Intel AMT</th>
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<td>Modem</td>
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<td>None</td>
<td>None</td>
<td>None</td>
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- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning
- Processor: Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology

### Memory
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical
- DVD burner, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive

### mSATA™ SSD
- None

### Widescreen display Camera
- 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight
- 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

### Graphics
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
- 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### TrackPoint®
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Touchpad
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

### ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions³
- 14.0W" (WaDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
- 4-cell: from 4.60 lb (2.09kg); 6-cell: from 4.79 lb (2.17kg); 9-cell: from 5.17 lb (2.35kg)

### Weight³
- 6-cell: up to 9.0 hr; 9-cell: up to 15.0 hr; 9-cell plus Spare battery: up to 30.0 hr

### Battery - type
- Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Spare battery (57Y4545) as 2nd battery

### Battery - life³
- 6-cell: up to 9.0 hr; 9-cell: up to 15.0 hr; 9-cell plus Spare battery: up to 30.0 hr

### Chipset
- Mobile Intel QM67 Express Chipset

### ExpressCard
- One slot (ExpressCard/34)

### Smart Card read
- None

### Multicard reader
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

### Ports
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PClé Mini Card
- Two PClé Express Mini Card slots
- 11b/g/n, PClé Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
- WWAN
- Wireless WAN upgradable
- 56K V.92® modem
- IEEE 1394

### Bluetooth™
- None

### Ethernet
- Non-vPro model: Intel 82579LFM Gigabit Network Connection (Lewisville), PHY, PClé x1
- vPro model: Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PClé x1

### Intel AMT
- None

### Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 /
- volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Finger print reader
- None

### Limited warranty¹⁴ - 1-year - depot repair service / service upgrades²⁰ available

---

**Preloaded operating system²⁰**
- Genuine Windows® 7 Professional 64

**Ready to install applications¹⁴**
- (all OSes; only some listed)
  - Norton™ Internet Security 2011 (30 days of virus definitions)
  - Adobe® Reader®
  - Skype™ for Windows
  - Windows Live™ Essentials
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Corel® WinDVD® (DVD:RW)
  - Corel® Burn:Now™ Lenovo Edition (DVD:RW)
  - Corel® DVD MovieFactory® Lenovo Edition (DVD:RW)

**Preloaded applications¹⁴**
- (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Fingerprint Software (fingerprint models)
  - Password Manager (fingerprint models)
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox
  - Lenovo SimpleTap

**Preloaded applications¹⁴**
- (all OSes; only some listed)
  - Norton™ Internet Security 2011 (30 days of virus definitions)
  - Adobe® Reader®
  - Skype™ for Windows

**Preloaded applications¹⁴**
- (all OSes; only some listed)
  - Norton™ Internet Security 2011 (30 days of virus definitions)
  - Adobe® Reader®
  - Skype™ for Windows

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See footnotes for more detailed information
© Lenovo
US model announced March 1, 2011
US model withdrawn effective June 2011

(NZ3i-1) June 2011
<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>MHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCLF or Cam-Integrated</th>
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<td>DVD+RW</td>
<td>- Intel 5100&lt;sup&gt;20&lt;/sup&gt;</td>
<td>AT&amp;T&lt;sup&gt;23&lt;/sup&gt;</td>
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<td>Cam GMA 160G 7200</td>
<td>DVD+RW</td>
<td>- Intel 5100</td>
<td>AT&amp;T</td>
<td>Fing</td>
<td>Bus 32 Aug 08</td>
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<td>2242-EU</td>
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<td>2.26</td>
<td>1GB</td>
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<td>Combo GMA 160G</td>
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<td>- Intel 5100</td>
<td>AT&amp;T</td>
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<td>Blue X Pro Jan 09</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller<sup>11</sup> Program.

Preloaded operating system<sup>12</sup>:
- Vista models: Vista Premium logo.

Preloaded applications<sup>14</sup> (all OSes; only some listed):
- Rescue and Recovery<sup>14</sup>
- Access Connections<sup>14</sup>
- Client Security Solution<sup>14</sup>
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DV<sup>+</sup>RV)
- Roxio® MyDVD® (DV<sup>+</sup>RD)
- Corel® WinDVD® (DV<sup>+</sup>RD)

Preloaded applications:<sup>14</sup> Gold rating (LED models)
- Energy Star certified
- ENERGY STAR<sup>15</sup> 5.0-compliant
- RoHS-compliant

International Warranty Service:<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>19</sup> via 800-426-7378.

Mini PCIe Express
- Three Mini PCIe Express slots
- Intel 5100<sup>16</sup> Hot Plug

WiMAX
- Three Mini PCIe Express slots
- Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Intel WiFi Link 5150, 2x5 (AT&T)
- Intel WiFi Link 5350, 3x5 (Intel 5100)
- Intel Mii Link 5100, 1x2 (Shirley Peak)

WWAN upg
- None
- Intel Turbo Memory, Half-Mini PCIe adapter, 2GB flash, disk-cache accelerator required with AT&T.
- 2G Turbo
- None

Modem
- 56K V.92 modem
- Bluetooth™
- None
- High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader
- Fingerprint reader on palm rest, swipe sensor, supports the security chip

Other accessories on T-500 sheet

See notes for important warranty information.

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(CRS-1) January 2010


US models withdrawn effective September 2008 or June, August, or December 2009
ThinkPad T500 2242 (GMA) - TopSeller (March 2009) - withdrawn

### Processor
- **Model**: Intel Core™ 2 Duo processor P8400, P8600, P8700 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus, P8400/P8600/P8700: 3MB L2 cache, 79400: 6MB L2

### Memory
- 1GB, 2GB, or 3GB std / 8GB max: 3PC-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets. Additional memory can be added up to 8GB min, 10GB max.

### SATA DVD±RW
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable (43N3214)

### Other accessories on O-T500 sheet
- 4GB PC3-8500 DDR3 L-H SODIMM 55Y3708

### Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some:葚 thinking Windows Vista Business 32 Vista models: Vista Premium logo

### Preloaded applications
- (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

### Preloaded applications
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EnergySTAR® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day® toll-free support during the warranty period
- 800-426-7378

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### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe Finger</th>
<th>Preload</th>
<th>Availability</th>
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<tr>
<td>2242-6YU</td>
<td>P8600</td>
<td>2.40</td>
<td>1GB</td>
<td>15.4&quot; WXGA LED</td>
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<td>DVD±RW</td>
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<td>P8600</td>
<td>2.40</td>
<td>2GB</td>
<td>15.4&quot; WXGA LED</td>
<td>GMA 160G 7200</td>
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<td>None</td>
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<td>DVD±RW</td>
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<td>None</td>
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</table>

### See footnotes for important warranty information

© Lenovo (CR5-12) January 2010

US models announced March 24, June 2, or July 7, 2009
US models withdrawn effective August or December 2009

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### Footnotes

1. **EasyServ®** - 1-year EasyServ® depot repair service / service upgrades available

2. **ThinkPlus** - 1-year LOR® 5x5 BD

3. **ThinkPlus** - 2-year LOR 9x5 BD

4. **ThinkPlus** - 3-year LOR 9x5 BD

5. **ThinkPlus** - 4-year LOR 9x5 BD

6. **ThinkPlus** - 5-year LOR 9x5 BD

7. **ThinkPlus** - 2-year P&L P/U Depot

8. **ThinkPlus** - 3-year P&L P/U Depot

9. **ThinkPlus** - 4-year P&L P/U Depot

10. **ThinkPlus** - 5-year P&L P/U Depot
These small and medium business (SMB) models are part of the US TopSeller™ Program

These models have a depot repair service 1-year limited warranty

<table>
<thead>
<tr>
<th>Processor Model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen Display</th>
<th>CCLF</th>
<th>LED</th>
<th>Cam-Integrated Graphics</th>
<th>Integrated Graphics</th>
<th>Sata3</th>
<th>Mini PCI Express</th>
<th>Mini PCI Express Finger Print Reader</th>
<th>Preload</th>
<th>Avail date</th>
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<tr>
<td>2242-8RU P8600</td>
<td>Intel® Core™ 2 Duo processor P8600 with dual-core. Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</td>
<td>2.40</td>
<td>2GB</td>
<td>15.4&quot; WXGA LED</td>
<td>GMA</td>
<td>250G</td>
<td>5400</td>
<td>DVD±RW</td>
<td>Intel 5100</td>
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<td>2242-8RU P8600</td>
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<td>2.40</td>
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<td>GMA</td>
<td>320G</td>
<td>5400</td>
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<td>Intel 5100</td>
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<td>None</td>
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See footnotes for important warranty information *Intel Centrino® 2 processor technology © Lenovo (CR5-15) September 2010
This small and medium business (SMB) model is part of the US TopSeller™ Program

<table>
<thead>
<tr>
<th>Type- model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide- screen display</th>
<th>CCFL or LED</th>
<th>Cam- Integrated graphics</th>
<th>Disk SATA GB rpm</th>
<th>SAT I optical</th>
<th>Mini PCIe 802.11b/g wireless</th>
<th>Mini PCIe WWAN UWB or Turbo</th>
<th>Blue- tooth Finger print reader</th>
<th>Pre- load</th>
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<td>2242-8SU P8600</td>
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<td>Cam</td>
<td>GMA</td>
<td>320G 5400</td>
<td>DVD±RW</td>
<td>∗ Intel 5100®</td>
<td>None</td>
<td>None</td>
<td>Fing</td>
<td>Blue</td>
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</table>

Processor: Intel® Core™ 2 Duo processor P8600 with dual-core.

Memory: 2GB std / 8GB max² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-Italicics: standard memory in one socket; one socket available

SATA DVD±RW Ultrabay Slim SATA disk
DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable (43N3214)
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel320 GB² (5400 rpm) / SATA 1.5GB/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
15.4" (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio
Camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45,
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
Maximal external resolution: 2048x1536 @75Hz

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touch pad
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®2 or Turbo,
magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

Dimensions²
6-cell 15.4" (WxDxH): 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm
6-cell: starting at 5.9 lb (2.7kg)
6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 7.8 hr; 9-cell: up to 9.4 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

PC Card
One slot (Type I, Type II), CardBus 32-bit

Smart Card read
None

Multicard reader
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Three USB 2.0, external monitor¹¹ (VGA DB-15, DisplayPort), modem (RJ-11),
eternet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express
Three Mini PCI Express slots

11a/b/g/n wireless, 3 mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

2G Turbo
None

USB
None

Modem
56K V.92® modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty¹² 1-year depot repair service / service upgrades¹² available

Preloaded operating system²⁰
- Genuine Windows® 7 Professional 32

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software
- ThinkVantage Toolbox
- Skype™ for Windows
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies
65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
Climate Savers® certified
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant

International Warranty Service¹⁷ 24 hour x 7 day²⁷ toll-free support during the warranty period²² via 800-426-7378

ThinkPlus™¹² 1-year LOR²² 9x5 NBD
45K5968
ThinkPlus 2-year LOR 9x5 NBD
45K5969
ThinkPlus 3-year LOR 9x5 NBD
45K5970
ThinkPlus 4-year LOR 9x5 NBD
45K5973
ThinkPlus 5-year LOR 9x5 NBD
45K5974
ThinkPlus 2-year P&L P/U Depot
45K5971
ThinkPlus 3-year P&L P/U Depot
45K5972
ThinkPlus 4-year P&L P/U Depot
45K5974
ThinkPlus 5-year P&L P/U Depot
45K5976

Post-warranty annual maintenance agreements available at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(CR5-16) September 2010
### ThinkPad T500 2243 (GMA) - TopSeller - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger</th>
<th>Print reader</th>
<th>Blue-tooth</th>
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<th>Availability</th>
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<tr>
<td>2243-56U</td>
<td>Intel^®^ Core™ 2 Duo processor P8400 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</td>
<td>2GB std / 8GB max^7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italycals: standard memory in one socket, one socket available</td>
<td>SATA DVD:RW</td>
<td>† Intel 5100^®^ None</td>
<td>None</td>
<td>None</td>
<td>Finger</td>
<td>None</td>
<td>X Pro Sep 08</td>
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<tr>
<td>2243-7WU</td>
<td>Intel^®^ Core™ 2 Duo processor P8400 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</td>
<td>2GB std / 8GB max^7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italycals: standard memory in one socket, one socket available</td>
<td>SATA HDD:0</td>
<td>† Intel 5100^®^ None</td>
<td>None</td>
<td>None</td>
<td>Finger</td>
<td>None</td>
<td>X Pro Jul 09</td>
<td></td>
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</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

### Preloaded software systems

- Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Vista logo: None

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage™ technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
Climate Savers certified
EPEAT® Gold rating (LED models)
EPEAT Silver rating (other models)
ENERGY STAR 5.0-compliant
RoHS-compliant
International Warranty Service17 24 hour x 7 day18 toll-free support during the warranty period^12 via 800-426-7378

ThinkPlus^®^ 3-year LOR^14 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(CR5-11) January 2010

US models announced September 23, 2008 or July 7, 2009
US models withdrawn effective June or December 2009

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### Preloaded operating system

- Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Vista logo: None

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage™ technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
Climate Savers certified
EPEAT® Gold rating (LED models)
EPEAT Silver rating (other models)
ENERGY STAR 5.0-compliant
RoHS-compliant
International Warranty Service17 24 hour x 7 day18 toll-free support during the warranty period^12 via 800-426-7378

ThinkPlus^®^ 3-year LOR^14 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(CR5-11) January 2010

US models announced September 23, 2008 or July 7, 2009
US models withdrawn effective June or December 2009

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### Preloaded operating system

- Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Vista logo: None

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage™ technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
Climate Savers certified
EPEAT® Gold rating (LED models)
EPEAT Silver rating (other models)
ENERGY STAR 5.0-compliant
RoHS-compliant
International Warranty Service17 24 hour x 7 day18 toll-free support during the warranty period^12 via 800-426-7378

ThinkPlus^®^ 3-year LOR^14 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(CR5-11) January 2010

US models announced September 23, 2008 or July 7, 2009
US models withdrawn effective June or December 2009

---

### Preloaded operating system

- Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Vista logo: None

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
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- Roxio MyDVD® (DVD:RW)
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ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(CR5-11) January 2010

US models announced September 23, 2008 or July 7, 2009
US models withdrawn effective June or December 2009

---

### Preloaded operating system

- Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Vista logo: None

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
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ENERGY STAR 5.0-compliant
RoHS-compliant
International Warranty Service17 24 hour x 7 day18 toll-free support during the warranty period^12 via 800-426-7378

ThinkPlus^®^ 3-year LOR^14 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

© Lenovo

(CR5-11) January 2010

US models announced September 23, 2008 or July 7, 2009
US models withdrawn effective June or December 2009
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Battery - life</th>
<th>Preloaded operating system</th>
</tr>
</thead>
<tbody>
<tr>
<td>2243-93U</td>
<td>Intel® Core™ 2 Duo processor P8700 with dual-core.</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Intel: standard memory in one socket; one socket available</td>
<td>≤ 6.3 hr</td>
<td>Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32</td>
</tr>
<tr>
<td>2243-95U</td>
<td>Intel® Core™ 2 Duo processor P8700 with dual-core.</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Intel: standard memory in one socket; one socket available</td>
<td>≤ 6.3 hr</td>
<td>Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32</td>
</tr>
</tbody>
</table>

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24-hour 7 day toll-free support during the warranty period via 800-426-7378

**See footnotes for important warranty information**

*Intel Centrino® 2 processor technology*

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(CRS-17) September 2010

For more information, visit lenovo.com/thinkplus/warranty

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**These small and medium business (SMB) models are part of the US TopSeller™ Program**

**Processor**

- Intel® Core™ 2 Duo processor P8700 with dual-core.
- Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

**Memory**

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Intel: standard memory in one socket; one socket available

**SATA DVD:RW Ultrabay Slim SATA disk**

- DVD burner, SATA 1.5Gb/s, 9.5mm UltraBay slim, removable (43N3214)
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- Some: 80GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 6mm high
- Some: 320GB® (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high,

**Active Protection System™**

- All:

**Widescreen display**

- 15.4" (391mm) WXGA (1280X800) color, anti-glare, LED backlight, 200 nits, 16.10 aspect ratio, 400:1 contrast ratio

**Camera**

- Camera on top of screen, 1.3-megapixel, fixed focus

**Integrated graphics**

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Trackpoint®**

- TrackPoint® pointing device, *Press-to-Select*, Internet Scroll Bar®, magnifying glass

**Touchpad**

- 2.8" X 2.0" wide touchpad below keyboard, Tap Zones, scrolling regions label illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm

**Weight®**

- 6-cell: 5.4Wx (Wx2xH): 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm

**Case color**

- Black

**Case material**

- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**

- Lithium Ion

**Battery - life**

- 6-cell: up to 6.3 hr; 6-cell plus UltraBay battery: up to 7.8 hr; 8-cell: up to 9.4 hr

**Chipset**

- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard/54**

- One slot (ExpressCard34, ExpressCard54)

**PC Card**

- One slot (Type I, Type II), CardBus 64-bit

**Smart Card read**

- None

**Multicard reader**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

- Three USB 2.0, external monitor11 (VGA DB-15, DisplayPort), modem (RJ-11), network (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**

- Intel 5100®

**WWAN upg**

- None

**2G upg**

- None

**UWB**

- None

**Modem**

- 56K V.92 modem

**Bluetooth™**

- Bluetooth 2.1 wireless, LED indicator

**Ethernet**

- Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCix 1

**Audio support**

- High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

- Finger point device, “Press-to-Select,” Internet Scroll Bar13, magnifying glass

**Limited warranty**

- 3-years / 1-year battery - depot repair service / service upgrades22 available
**ThinkPad® T500 2243 (GMA) - TopSeller (Windows 7) - withdrawn**

**Personal Systems Reference (PSRF)**

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD:RW</td>
<td>DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay, slim, removable (4332124) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel Some: 128GB 4 Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8&quot; wide, 8mm high Some: 320GB (7200 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high, Active Protection System™ All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>15.4&quot; (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz</td>
</tr>
<tr>
<td>Keyboard</td>
<td>UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label</td>
</tr>
<tr>
<td>Touch pad</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>TouchThinkLight</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass</td>
</tr>
<tr>
<td>Weight</td>
<td>6-cell: starting at 5.9 lb (2.7kg)</td>
</tr>
<tr>
<td>Laptop battery</td>
<td>6-cell: up to 6.3 hr; 6-cell plus Ultrabay: up to 7.8 hr; 9-cell: up to 9.4 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, Pci Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPNC385 Super I/O)</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard/54) One slot (Type I, Type II), CardBus-32 bit</td>
</tr>
<tr>
<td>PC Card</td>
<td>None</td>
</tr>
<tr>
<td>Smart Card reader</td>
<td>None</td>
</tr>
<tr>
<td>Multicard reader</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external monitor 111 (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
</tr>
<tr>
<td>Mini PCi Express</td>
<td>Three Mini PCI Express slots</td>
</tr>
<tr>
<td>Intel 5100®</td>
<td>None</td>
</tr>
<tr>
<td>Verizon®</td>
<td>None</td>
</tr>
<tr>
<td>2G Turbo</td>
<td>56K V.92® modem</td>
</tr>
<tr>
<td>Bluetooth®</td>
<td>Bluetooth 2.1 wireless, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Intel 82567FL Gigabit Network Connection (Boazman), PHY, Pcie x1</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>None</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-year battery - EasyServ™, depot repair service / service upgrades available</td>
</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program

<table>
<thead>
<tr>
<th>Preloaded operating system</th>
<th>- Genuine Windows® 7 Professional 32</th>
</tr>
</thead>
</table>
| Preloaded applications     | - Rescue and Recovery™
|                           | - Access Connections™
|                           | - Password Manager
|                           | - ThinkVantage Power Manager
|                           | - ThinkVantage System Update
|                           | - Fingerprint Software (fingerprint models)
|                           | - ThinkVantage Toolbox
|                           | - Lenovo Online Data Backup
|                           | - Norton™ Internet Security 2009
|                           | (30 days of virus definitions)
|                           | - Adobe® Reader®
|                           | - Adobe Flash® Player
|                           | - Skype™ for Windows
|                           | - Microsoft® Office 2007 Trial (60-day)
|                           | - Microsoft Research AutoCollage Touch
|                           | - Roxio® Creator® Business Edition (DVD:RW)
|                           | - Roxio MyDVD® (DVD:RW)
|                           | - Corel® WinDVD® (DVD:RW) |

Supports ThinkVantage technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
Climate Savers® certified
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service 17 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

- © Lenovo

US models announced October 22, 2009 or November 3, 2009
US models withdrawn effective September 2010

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Sata DVD:RW</th>
<th>SATA optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Finger print reader</th>
<th>Blue-tooth</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2243-94U</td>
<td>P8700</td>
<td>2.53</td>
<td>2GB 15.4&quot; WXGA LED Cam GMA 320G 7200 DVD:RW</td>
<td>DVDr:RW</td>
<td>♦ Intel 5100®&lt;sup&gt;®&lt;/sup&gt;</td>
<td>None</td>
<td>Finger Blue Pro 32 Oct 09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2243-9MU</td>
<td>P8700</td>
<td>2.53</td>
<td>2GB 15.4&quot; WXGA LED Cam GMA 320G 7200 DVD:RW</td>
<td>DVDr:RW</td>
<td>♦ Intel 5100®&lt;sup&gt;®&lt;/sup&gt;</td>
<td>None</td>
<td>Finger Blue Pro 32 Nov 09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2243-9PU</td>
<td>P8700</td>
<td>2.53</td>
<td>2GB 15.4&quot; WXGA LED Cam GMA 128G SSD DVD:RW</td>
<td>DVDr:RW</td>
<td>♦ Intel 5100®&lt;sup&gt;®&lt;/sup&gt;</td>
<td>None</td>
<td>Finger Blue Pro 32 Nov 09</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## ThinkPad® T500 2082 (Switchable) - TopSeller - withdrawn

### Personal Systems Reference (PSREF)

**Type-model** | **Processor** | **GHz Memory** | **Wide-screen display** | **Camera** | **Switchable graphics** | **Disk SATA GB rpm** | **SATA optical** | **Mini PCIe/GPU Mini PCIe or Turbo cells Preload** | **Avail date**
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2082-26U | P8400 | 2.26 | 2GB | 15.4” WSXGA+ | GMA, HD 3650 | 160G 7200 | DVD±RW | Intel 5100 | AT&T | 9 Bus 32 Aug 08
2082-27U | T9400 | 2.53 | 2GB | 15.4” WSXGA+ | GMA, HD 3650 | 160G 7200 | DVD±RW | Intel 5100 | AT&T | 9 XP Pro 08 Aug
2082-3GU | T9400 | 2.53 | 2GB | 15.4” WSXGA+ | GMA, HD 3650 | 160G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 Bus 32 Aug 08
2082-3HU | P8400 | 2.26 | 2GB | 15.4” WSXGA+ | GMA, HD 3650 | 160G 7200 | DVD±RW | Intel 5100 | AT&T | 9 XP Pro 08 Aug
2082-5XU | T9400 | 2.53 | 2GB | 15.4” WSXGA+ | GMA, HD 3650 | 160G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 XP Pro 08 Aug
2082-7YU | P8600 | 2.40 | 2GB | 15.4” WSXGA+ | GMA, HD 3650 | 320G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 Bus 32 Jan 09
2082-8ZU | P8600 | 2.40 | 3GB | 15.4” WSXGA+ | GMA, HD 3650 | 320G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 XP Pro 09 Mar
2082-92U | P8600 | 2.40 | 3GB | 15.4” WSXGA+ | GMA, HD 3650 | 320G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 XP Pro 09 Mar
2082-93U | T9400 | 2.53 | 3GB | 15.4” WSXGA+ | GMA, HD 3650 | 320G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 XP Pro 09 Mar
2082-94U | T9400 | 2.53 | 3GB | 15.4” WSXGA+ | GMA, HD 3650 | 320G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 XP Pro 09 Mar
2082-95U | T9400 | 2.53 | 3GB | 15.4” WSXGA+ | GMA, HD 3650 | 320G 7200 | DVD±RW | Intel 5100 | AT&T | 2G Turbo | 9 XP Pro 09 Mar

### Positioning

- **Processor:** Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache

### Memory

- **2GB or 3GB std / 8GB max** / PC3-8500 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Intel® DDR3L-1333 dual-channel memory**;
- **Non-Intel**: standard memory in both sockets; no sockets available;
- **Non-Intel**: standard memory in one socket; one socket available

### Widescreen display

- **15.4” (391mm) WSXGA+ (1680x1050) color**, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- **Some:** camera on top of screen, 1.3-megapixel, fixed focus

### Switchable graphics

- **Switches between discrete and integrated graphics (Vista only).**

### Preloaded operating system

- **Some:** Windows® XP Professional preinstalled through downgrades in Genuine Windows Vista Business
- **Some:** Genuine Windows Vista Business

### Preloaded applications

- **Vista Models:** Vista Premium logo

### Limited warranty

- **3-years** / 1 yr battery - EasyServ®1.15 depot repair service 3-year limited warranty

---

### ThinkPad® Utilities (Power Manager and Presentation Director)

- **Adobe Reader®**
- **Windows Live® Toolbar**
- **Microsoft® Office 2007 Trial (60-day)**
- **Roxio® MyDVD® (DVD+RW)**

### Preloaded system tools

- **Lenovo System Toolbox**
- **ThinkPad Utilities (Power Manager and Presentation Director)**

### Post-warranty annual maintenance

- **45K6023**
- **45K6025**

### ThinkPlus 5-year LOR 9x5 NBD

### ENERGY STAR® Silver rating

### Climate Savers® certified

### ENERGY STAR® 5.0-compliant

### RoHS-compliant

### International Warranty Service

- **24 hour x 7 day**

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See footnotes for important warranty information © Lenovo (C52-1) January 2010

US models announced August 5, September 23, 2008, January 6, 2009 or March 24, 2009

US models withdrawn effective September 2008, June 2009, or December 2009

Lenovo.com/thinkplus/warranty
• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These models have an EasyServ™, 15 depot repair service 3-year limited warranty

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Cam-era</th>
<th>Switchable graphics</th>
<th>Disk SATA GB</th>
<th>SATa optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN UWB or Turbo cell Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2082-BKU P8700</td>
<td>2.53</td>
<td>3GB</td>
<td>15.4&quot; WXGA+</td>
<td>Cam GMA, HD 3650</td>
<td>320G 7200 DVD±RW</td>
<td>Intel 5100™</td>
<td>AT&amp;T™</td>
<td>None</td>
<td>9</td>
<td>XP Pro Oct 09</td>
</tr>
<tr>
<td>2082-BMU P8700</td>
<td>2.53</td>
<td>4GB</td>
<td>15.4&quot; WXGA+</td>
<td>Cam GMA, HD 3650</td>
<td>320G 7200 DVD±RW</td>
<td>Intel 5100™</td>
<td>AT&amp;T™</td>
<td>None</td>
<td>9</td>
<td>XP Pro Oct 09</td>
</tr>
<tr>
<td>2082-BNU T9600</td>
<td>2.80</td>
<td>4GB</td>
<td>15.4&quot; WXGA+</td>
<td>Cam GMA, HD 3650</td>
<td>320G 7200 DVD±RW</td>
<td>Intel 5100™</td>
<td>AT&amp;T™</td>
<td>None</td>
<td>9</td>
<td>XP Pro Oct 09</td>
</tr>
</tbody>
</table>

Preloaded operating system™ - Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications™ (only some listed)
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center
• ThinkVantage System Update
• FingerPrint Software (fingerprint models)
• McAfee VirusScan® Plus with SiteAdvisor™ (30 days of definitions)
• Lenovo System Toolbox
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader
• Windows Live™ Toolbar
• Microsoft® Office 2007 Trial (60-day)
• Roxio® Creator® Business Edition (DVD±RW)
• Roxio® MyDVD® (DVD±RW)
• Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies
90-watt (ATI graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
Climate Savers® certified
EPEAT® Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service™ 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
US models announced October 22, 2009
US models withdrawn effective September 2010

ň Intel Centrino® 2 processor technology
© Lenovo
(CRS-14) September 2010

笋 ThinkPlus™ 3-3-year LOR® 9x5 NBD
笋 ThinkPlus 4-year LOR 9x5 NBD
笋 ThinkPlus 5-year LOR 9x5 NBD
笋 ThinkPlus 4-year P&L U Depo
笋 ThinkPlus 5-year P&L U Depo
笋 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad T500 2089 (GMA) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>DDR Memory</th>
<th>Hard Drive</th>
<th>Graphic Memory</th>
<th>Mini PCle</th>
<th>Mini PCle WWAN</th>
<th>Mini PCle Battery</th>
<th>Whose (W) Gbl (G) Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2089-2LU</td>
<td>T9400 2.53</td>
<td>2GB 15.4&quot; WXGA</td>
<td>Cam GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 Classic</td>
<td>2G Turbo</td>
<td>9</td>
<td>PC B32  W Aug 09</td>
<td></td>
</tr>
<tr>
<td>2089-2MU</td>
<td>T9400 2.53</td>
<td>2GB 15.4&quot; WXGA</td>
<td>Cam GMA 160G 7200 DVD:RW</td>
<td>Intel 5100</td>
<td>2G Turbo</td>
<td>9</td>
<td>PC B32 W Aug 09</td>
<td></td>
</tr>
<tr>
<td>2089-3LU</td>
<td>T9400 2.53</td>
<td>2GB 15.4&quot; WXGA</td>
<td>Cam GMA 160G 5400 DVD:RW</td>
<td>Intel 5100</td>
<td>2G Turbo</td>
<td>9</td>
<td>PC B32 W Aug 09</td>
<td></td>
</tr>
<tr>
<td>2089-3MU</td>
<td>T9400 2.53</td>
<td>2GB 15.4&quot; WXGA</td>
<td>Cam GMA 160G 7200 DVD:RW</td>
<td>Intel 5100</td>
<td>2G Turbo</td>
<td>9</td>
<td>PC B32 W Aug 09</td>
<td></td>
</tr>
<tr>
<td>2089-4LU</td>
<td>T9400 2.53</td>
<td>2GB 15.4&quot; WXGA LED Cam</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100</td>
<td>2G Turbo</td>
<td>9</td>
<td>PC B32 W Aug 09</td>
<td></td>
</tr>
<tr>
<td>2089-5LU</td>
<td>T9400 2.53</td>
<td>2GB 15.4&quot; WXGA</td>
<td>Cam GMA 160G 5400 DVD:RW</td>
<td>Intel 5100</td>
<td>2G Turbo</td>
<td>9</td>
<td>PC B32 W Aug 09</td>
<td></td>
</tr>
<tr>
<td>2089-6LU</td>
<td>T9400 2.53</td>
<td>2GB 15.4&quot; WXGA</td>
<td>Cam GMA 160G 7200 DVD:RW</td>
<td>Intel 5100</td>
<td>2G Turbo</td>
<td>9</td>
<td>PC B32 W Aug 09</td>
<td></td>
</tr>
</tbody>
</table>

#### Preloaded operating system
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Basic
- Vista models: Vista Premium logo

#### Preloaded applications
- Some: All OSEs, only listed
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (finger print models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (combo, DVD:RW)
- Roxio® MyDVD® (DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

#### Supports ThinkVantage technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Cover Roll Cage (one-piece magnesium)
- Climate Savers certified
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service 24 hour x 7 days, toll-free support during the warranty period until 2010
- EPEAT® Gold rating (LED models)
- EPEAT Silver rating (other models)

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See footnotes for important warranty information.

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US models announced Aug 5, Sep 23, October 7, December 2, 2008 or June 2, July 7, 2009

US models withdrawn effective August 2009, March 2010 or September 2010

[CRS-3] September 2010

lenovo.com/thinkplus/warranty
### ThinkPad ® T500 2055 (Switchable) - withdrawn

#### Type-model

| Type-model | Processor | Memory | Wide-screen display | CCFL or LED | Camera | Switchable graphics | Disk | Mini PCIe | Mini PCIe | Mini PCIe | Mini PCIe | Card | Workhorse (W) | Global (G) | Avalibility Preload?
|------------|-----------|--------|--------------------|------------|--------|---------------------|------|------------|------------|------------|------------|------|---------------|-----------|----------------|
| 2055-2BU T9400 2.53 2GB 15.4" WXGA+ | Intel Core™ 2 Duo processor P8600, P8700, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus: P8600/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 | 2GB, 3GB or 4GB std / 8GB max \textsuperscript{7} / PC3-8500 1066MHz | GMA, 3650 80G 5400 Combo | \textbullet Intel 5100\textsuperscript{20} WWAN upg | PC | 6 | Yes | B32 | G Aug 08 | | 2055-2CU T9400 2.53 2GB 15.4" WXGA+ | Intel Core™ 2 Duo processor P8600, P8700, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus: P8600/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 | 2GB, 3GB or 4GB std / 8GB max \textsuperscript{7} / PC3-8500 1066MHz | GMA, 3650 80G 5400 Combo | \textbullet Intel 5100\textsuperscript{20} WWAN upg | PC | 6 | Yes | B32 W Aug 08 | | 2055-2EU T9400 2.53 2GB 15.4" WXGA+ | Intel Core™ 2 Duo processor P8600, P8700, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus: P8600/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 | 2GB, 3GB or 4GB std / 8GB max \textsuperscript{7} / PC3-8500 1066MHz | GMA, 3650 80G 5400 Combo | \textbullet Intel 5100\textsuperscript{20} WWAN upg | PC | 6 | Yes | B32 W Aug 08 | | 2055-2CU T9400 2.53 2GB 15.4" WXGA+ | Intel Core™ 2 Duo processor P8600, P8700, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus: P8600/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 | 2GB, 3GB or 4GB std / 8GB max \textsuperscript{7} / PC3-8500 1066MHz | GMA, 3650 80G 5400 Combo | \textbullet Intel 5100\textsuperscript{20} WWAN upg | PC | 6 | Yes | B32 W Aug 08 | | 2055-2EU T9400 2.53 2GB 15.4" WXGA+ | Intel Core™ 2 Duo processor P8600, P8700, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus: P8600/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 | 2GB, 3GB or 4GB std / 8GB max \textsuperscript{7} / PC3-8500 1066MHz | GMA, 3650 80G 5400 Combo | \textbullet Intel 5100\textsuperscript{20} WWAN upg | PC | 6 | Yes | B32 W Aug 08 |"
## ThinkPad T500 2055 (Switchable) - July 2009 - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor P8400, P8700, or T9400 with dual-core Intel® HD Boost, 1066MHz system bus; P840/P870: 3MB L2 cache; T9400: 6MB L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max* / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD:RW</td>
<td>DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>One modular bay for interchangeable drives (right side), 9.5mm high bay, flat bezel 160GB* (7200 rpm) or 250GB (7200 rpm) Full Disk Encryption [FDE] / Acrobat Reader®</td>
</tr>
<tr>
<td>SATA disk</td>
<td>Intel® Centrino® 2 with vPro™ technology</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>Some: 15.4&quot; (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
<tr>
<td>Switchable graphics</td>
<td>Switches between discrete and integrated graphics (Vista only).</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>TrackPoint*</td>
<td>TrackPoint* pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar*, magnifying glass UltraNav*, wide touch pad below keyboard, Tap Zones, scrolling regions label</td>
</tr>
<tr>
<td>Touch pad</td>
<td>Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>6-cell 15.4&quot; (WXxH): 14.1&quot; x 10.2&quot; x 1.3&quot;; 357.5mm x 255mm x 30-34mm</td>
</tr>
<tr>
<td>Dimensions</td>
<td>6-cell: starting at 5.9 lb (2.7kg); 9-cell: starting at 6.2 lbs (2.8kg)</td>
</tr>
<tr>
<td>Weight*</td>
<td>Black</td>
</tr>
<tr>
<td>Case color</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
</tr>
<tr>
<td>Case material</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
</tr>
<tr>
<td>Battery - type</td>
<td>6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 7.8 hr; 9-cell: up to 9 hr</td>
</tr>
<tr>
<td>Battery - life*</td>
<td>Supports ThinkVantage technologies</td>
</tr>
<tr>
<td>MINI PCI EXPRESS</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® x1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard/54)</td>
</tr>
<tr>
<td>PC Card</td>
<td>One slot (Type I, Type II), CardBus 32-bit</td>
</tr>
<tr>
<td>Smart Card read</td>
<td>None</td>
</tr>
<tr>
<td>Multicard reader</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick PRO™, SD, SDHC, XD, XD Type H)</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external monitor* (VGA DB-15, DisplayPort), modem (RJ-11), Ethernet (45K6021, 45K6023, 45K6024)</td>
</tr>
<tr>
<td>MINI PCI EXPRESS USB</td>
<td>None</td>
</tr>
<tr>
<td>WWAN upg</td>
<td>Three Mini PCI Express slots</td>
</tr>
<tr>
<td>Gobi 2000 Wireless</td>
<td>Some: 11a/b/g/n wireless; Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)</td>
</tr>
<tr>
<td>11a/b/g/n</td>
<td>Some: 11a/b/g/n wireless; Mini-PCIe Adapter II</td>
</tr>
<tr>
<td>USB Turbo</td>
<td>None</td>
</tr>
<tr>
<td>UWB</td>
<td>None</td>
</tr>
<tr>
<td>Modern</td>
<td>56K V.92 modem</td>
</tr>
<tr>
<td>Bluetooth*</td>
<td>Bluetooth 2.1 wireless, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Non-vPro model: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1 vPro model: Intel 82567LM Gigabit Network Connection, PHY, PCIe x1</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (AMT)</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HDMI) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TC1 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Fingerprint reader on palm rest, swipe sensor, supports security key</td>
</tr>
</tbody>
</table>

**Limited warranty** 3-years/1-yr battery - depot repair service / service upgrades\* available

**Preloaded operating system**
- Genuine Windows® Vista
- Vista Premium logo

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPoint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVR/RW)
- Roxio MyDVD® (DVR/RW) 90-watt (ATI graphics) AC adapter

**ThinkPad Roll Cage and Top Cover (Roll Cage—case for active battery) Climate Savers® certified EPEAT® Gold rating (LED models) EPEAT Silver rating (other models) ENERGY STAR® 5.0-compliant RoHS-compliant**

**International Warranty Service** 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

**ThinkPlus™** 3-year LOR® 9x5 NBD
45K6021 4-year LOR 9x5 NBD 45K6022 5-year LOR 9x5 NBD 45K6024

**ThinkPlus 3-year P/U Depot** 45K6023 4-year P/U Depot 45K6025

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**

See footnotes for important warranty information © Lenovo

US models announced July 7, 2009

US models withdrawn effective March or September 2010

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(CR5-13) September 2010
ThinkPad T500 2241 (GMA) - Onsite - withdrawn

Type-model  Processor GHz Memory Wide-screen display Memory Cam Integrated graphics Disk Sata Sata optical Mini PCIe 802.11 wireless Mini PCIe WWAN Mini PCIe Battery Whore (W) GMP (P) Availability
2241-3WU P8400 2.26 1GB 15.4” WXGA GMA 80G 5400 Combo ✪ Intel 1200® WWAN upg 6 Blue Bus 32 GP Aug08
2241-3XU T9400 2.53 2GB 15.4” WXGA Cam GMA 160G 5400 DVD:RW ✪ Intel 5100 WWAN upg 2G Turbo 6 Blue Bus 32 GWP Aug08
2241-3YU T9400 2.53 2GB 15.4” WXGA Cam GMA 160G 5400 DVD:RW ✪ Intel 5100 WWAN upg 6 Blue Bus 32 GP Aug08
2241-4XU T9400 2.53 2GB 15.4” WXGA LED Cam GMA 160G 5400 DVD:RW ✪ Intel 5100 WWAN upg 6 Blue Bus 32 GWP Sep08
2241-5ZU P8600 2.40 2GB 15.4” WXGA LED 5400 DVD:RW ✪ Intel 5100 WWAN upg 6 Blue XP Pro GP Sep08
2241-58U T9400 2.53 2GB 15.4” WXGA GMA 160G 5400 DVD:RW ✪ Intel 5100 WWAN upg 6 Blue Bus 32 GWP Dec08

Positioning Processor Premiere performance; two spindles Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache
Memory 1GB or 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available
SATA Combo Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm UltraBay Slim, removable SATA; DVD burner, SATA 1.5Gb/s, Ultraslim removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 80GB® (5400 rpm), 160GB® (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™
Widescreen display Some: 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio Some: 15.4" (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio Camera Some: camera on top of screen; 3-megapixel, fixed focus
Integrated graphics Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 457J915); Maximum external resolution: 2048x1536@75Hz
Chipset Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gbs, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCM385 Super I/O) One slot (ExpressCard/34, ExpressCard/54) One slot (Type I, Type II), CardBus 32-bit
Mini PCI Express Three Mini PCI Express slots Intel 5100® WWAN upg 11a/b/g/n wireless*, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) Wireless WAN upgradeable, requires Vista® (43R9151) or AT&T® (43R9152) Some: Intel Turbo Memory, Half-Mini PCIe adapter, 2GB flash, disk-cache accelerator None
Modem 56K V.92 modem
Bluetooth™ BlueTooth 2.1 wireless, LED indicator Ethernet Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1
Audio support High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole Security Biometric fingerprint scanner, integrated in ICH9M, TCG 1.2-compliant Security Fingerprint reader FingerPrint reader on palm rest, swipe sensor, supports the security chip
Limited warranty 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

See footnotes for important warranty information ✪ Intel Centrino® 2 with vPro™ technology US models announced August 5, September 23, 2008, or December 2, 2008 US models withdrawn effective March 2010

Preloaded applications® (all OSes, only some listed) - Rescue and Recovery™ - Access Connections™ - Client Security Solution™ - ThinkVantage Productivity Center - ThinkVantage System Update - FingerPrint Software (fingerprint models) - McAfee VirusScam™ Plus with SiteAdvisor™ (30 days of virus definitions) - Lenovo System Toolbox - ThinkPad Utilities (Power Manager and Presentation Director) - Adobe® Reader® - Windows Live™ Toolbar - Microsoft® Office 2007 Trial (60-day) - Roxio® Creator® Business Edition (combo, DVD:RW, 6 Blue Bus 32 W G P Sep08) - Roxio MyDVD™ (DVDr:RW) - Corell WinDVD™ (combo, DVD:RW)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) Climate Savers® certified EPEAT® Gold rating (LED models) EPEAT Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service® (all OSes, only some listed) during the warranty period® via 800-426-7378

ThinkPlus™ 4-year LOR 9x5 NBD 45K6038 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad T500 2056 (Switchable) - Onsite - withdrawn

| Type-model  | Processor | Memory | Wide-screen display | CCFL or LED | Camera | Switchable graphics | Disk | SATA optical | Mini PCIe WWAN | Mini PCIe UWB | Mini PCIe Battery or Turbo cells | Whorse (W) GMP (P) | Availability |
|-------------|-----------|--------|---------------------|-------------|--------|--------------------|------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
| T9400       | Intel® Core™ 2 Duo processor P8600, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus; P9600: 5MB L2 cache; T9400/T9600: 6MB L2 cache | 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italic*: standard memory in both sockets; *Non-italic*: standard memory in one socket; one socket available | Some: CD-RW/DVD-ROM, SATA 1.5GB/s, 9.5mm Ultrabay Slim, removable | Some: DVD burner, SATA 1.5GB/s, Ultrabay Slim, removable (43N3214) | Some: CD-RW/DVD-ROM, SATA 1.5GB/s, 9.5mm Ultrabay Slim, removable | Intel HD graphics GMA, 3650 160GB DVD±RW | Intel 5100 WWAN upg | Intel 5100 WWAN upg | 6 | 2B3 G P Aug 08 | 6 | 2B3 WGP Aug 08 | 9 | 2B3 G P Aug 08 | 9 | B3 GP Sep 08 | 9 | B3 GP Sep 08 | 9 | B3 GP Sep 08 |

*These models are part of the Global Models Plus program with limited onsite service^2 3-year limited warranty

**Processor**
- Intel® Core™ 2 Duo processor P8600, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus; P9600: 5MB L2 cache; T9400/T9600: 6MB L2 cache

**Memory**
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- *Italic*: standard memory in both sockets; *Non-italic*: standard memory in one socket; one socket available

**SATA combo**
- SATA DVD:R/W
- Ultrabay Slim
- SATA disk: Some: CD-RW/DVD-ROM, SATA 1.5GB/s, 9.5mm Ultrabay Slim, removable
- Some: DVD burner, SATA 1.5GB/s, Ultrabay Slim, removable (43N3214)

**Wide-screen display**
- Some: 15.4" (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16.10 aspect ratio, 400:1 contrast ratio
- Some: 15.4" (391mm) WXGA (1680x1050) color, anti-glare, CCFL backlight, 200 nits, 16.10 aspect ratio, 500:1 contrast ratio

**Camera**
- Some: camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**
- Dynamic switching between discrete and integrated graphics (user selectable), Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI® Mobility Radeon™ HD 3650, PCI Express x16, 256MB memory

**Dimensions^3**
- Weight^4
- Case color
- Case material
- Battery type - bottom^7
- Battery - life^7

**Chipset**
- Mobile Intel® GM45 Express Chipset
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard/54**
- Some: ExpressCard/34, ExpressCard/54
- Some: CardBus 32-bit

**PC Card**
- None

**MultiCard reader**
- 7-in-1 reader (MMC, Memory Stick, Mem Stick PRO™, SD, SDHC, XD, XD Type H)

**ExpressPort**
- Three USB 2.0, external monitor^11 (VGA DB-15, DisplayPort), modem (RJ-11), Ethernet (RJ-45), Adobe® Reader^®

**Mini PCI Express**
- Three Mini PCI Express slots
- Some: 11a/b/g/n wireless®, Mini PCI Express adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Some: 11a/b/g/n wireless®, Mini PCI Express adapter, Intel Ultimate N WiFi Link 5300, 5x3 Wireless WAN upgradeable, requires Verizon® (43R9151) or AT&T® (43R9152)

**Audio support**
- 56K V.92 modem
- Bluetooth^™ wireless 2.1, LED indicator
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Security**
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- Powerful password management, 64-bit encryption

**Limited warranty^8** 3-years/1-year battery, limited onsite service^8, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades^9 available

See footnotes for important warranty information © Lenovo

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**Preloaded operating system^25**
- *Some*: Genuine Windows Vista Business 32

**Preloaded applications^14** (all OSes, only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (combo, DVD±R)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (combo, DVD±RW)

**Supports ThinkVantage technologies**
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- EPEAT Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- 24 hour x 7 day toll-free support during the warranty period^17 via 800-426-7378

**ThinkPlus** 4-year LOR 9x5 NB 45R6038

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### Preloaded operating system
- Genuine Windows Vista Business 32-bit
- Vista Premium logo

### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

### Integrated graphics
- Intel Graphics Media Accessor 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715)
- Maximum external resolution: 2048x1536@75Hz

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Touchpad
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

### Dimensions
- 6-cell 15.4"W (11.4" x 8.3")
- 5.6" thick
- Weight:
- Case color:
- Top: Super-Elastic PolyCarbonate (SPEC); Bottom: Carbon-Fiber Reinforced Plastic
- Weight: Black

### Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

### ExpressCard/54
- One slot (ExpressCard/34, ExpressCard/54)

### Card Reader
- One slot (Type I, Type II), CardBus 32-bit

### MultiCard reader
- 7-in-1 reader (MMC, Memory Stick, Mem Stick PRO™, SD, SDHC, XD, XD Type H)

### Mini PCI Express
- Three Mini PCI Express slots

### Limited warranty
- 3-years/1-yr battery - depot repair service - service upgrades available

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*These models have a depot repair service 3-year limited warranty*

These educational models are available exclusively to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
**ThinkPad T500 2055 (Switchable) - Education - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Switchable graphics</th>
<th>Disk SATA GB</th>
<th>SATA optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Battery</th>
<th>Workhorse (W) Global (G) Available date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2055-E1U T9400</td>
<td>2.53 2GB 15.4&quot; WSXGA+ Cam GMA, HD 3650 160G 7200 DVD±RW † Intel 5100® WWAN upg</td>
<td>None</td>
<td>6-cell 15.4&quot; (391mm) WXSGAX (1680x1050) color</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
<td>Switchable graphics: Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italicics: standard memory in both sockets; no sockets available; Non-Italicics: standard memory in one socket; one socket available</td>
<td>DVD burner, SATA 1.5Gb/s, UltraBay Slim, removable (43N2314) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
<td>160GB® (7200 rpm) or 250GB (5400 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td>15.4&quot; (391mm) WXSGAX (1680x1050) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
<td>200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
<td>10.9 hr; 9-cell plus UltraBay battery: up to 9.4 hr; 9-cell: up to 8.5 hr; 6-cell: up to 7.5 hr</td>
</tr>
<tr>
<td>2055-E2U T9400</td>
<td>2.53 2GB 15.4&quot; WSXGA+ Cam GMA, HD 3650 250G 5400 DVD±RW † Intel 5100® WWAN upg</td>
<td>None</td>
<td>6-cell 15.4&quot; (391mm) WXSGAX (1680x1050) color</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
<td>Switchable graphics: Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italicics: standard memory in both sockets; no sockets available; Non-Italicics: standard memory in one socket; one socket available</td>
<td>DVD burner, SATA 1.5Gb/s, UltraBay Slim, removable (43N2314) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
<td>160GB® (7200 rpm) or 250GB (5400 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td>15.4&quot; (391mm) WXSGAX (1680x1050) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
<td>200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
<td>10.9 hr; 9-cell plus UltraBay battery: up to 9.4 hr; 9-cell: up to 8.5 hr; 6-cell: up to 7.5 hr</td>
</tr>
<tr>
<td>2055-E3U T9600</td>
<td>2.80 3GB 15.4&quot; WSXGA+ Cam GMA, HD 3650 160G 7200 DVD±RW † Intel 5100® WWAN upg</td>
<td>None</td>
<td>6-cell 15.4&quot; (391mm) WXSGAX (1680x1050) color</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
<td>Switchable graphics: Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italicics: standard memory in both sockets; no sockets available; Non-Italicics: standard memory in one socket; one socket available</td>
<td>DVD burner, SATA 1.5Gb/s, UltraBay Slim, removable (43N2314) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
<td>160GB® (7200 rpm) or 250GB (5400 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td>15.4&quot; (391mm) WXSGAX (1680x1050) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
<td>200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
<td>10.9 hr; 9-cell plus UltraBay battery: up to 9.4 hr; 9-cell: up to 8.5 hr; 6-cell: up to 7.5 hr</td>
</tr>
</tbody>
</table>

*These models have a depot repair service 3-year limited warranty*

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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**Preloaded operating system**
- Genuine Windows Vista Business 32
- Vista Premium logo

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerPrint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

90-watt (ATI graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
Climate Savers® certified
EPEAT® Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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**See footnotes for important warranty information**

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US models announced August 6, 2008 or March 24, 2009

US models withdrawn effective September 2010
## ThinkPad T500 2241 (GMA) - Education (Onsite) - withdrawn

### Personal Systems Reference (PSREF)

### Type-model Proces-sor GHz Memory Wide-screen display CCFL or LED Cam-Integrated Graphics Disk SATA rpm SATA optical Mini PCIe WWAN Mini PCIe Battery Blue-Toque or Turbo cells or lead Preload Workhorse (W)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Cam-Integrated Graphics</th>
<th>Disk</th>
<th>SATA rpm</th>
<th>SATA optical</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Battery</th>
<th>Blue-Toque or Turbo cells or lead Preload</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2241-E1U P8400 2.26 2GB 15.4&quot; WXGA Cam GMA 160G 5400 DVD±RW Intel 5100 6 WWAN upg</td>
<td>None 6 Blue Bus 32 No Aug 08</td>
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</tr>
<tr>
<td>2241-E2U T9400 2.53 2GB 15.4&quot; WXGA Cam GMA 250G 5400 DVD±RW Intel 5100 6 WWAN upg</td>
<td>None 6 Blue Bus 32 No Aug 08</td>
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</tr>
<tr>
<td>2241-E3U T9400 2.53 2GB 15.4&quot; WXGA Cam GMA 160G 5400 DVD±RW Intel 5100 6 WWAN upg</td>
<td>None 9 Blue Bus 32 No Aug 08</td>
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</tr>
<tr>
<td>2241-E4U P8600 2.40 2GB 15.4&quot; WXGA LED Cam GMA 160G 5400 DVD±RW Intel 5100 6 WWAN upg</td>
<td>None 6 Blue Bus 32 No Dec 08</td>
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</tr>
<tr>
<td>2241-E5U T9400 2.53 2GB 15.4&quot; WXGA Cam GMA 160G 5400 DVD±RW Intel 5100 6 WWAN upg</td>
<td>None 6 Blue Bus 32 No Mar 09</td>
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</tr>
</tbody>
</table>

* These models have a limited onsite service® 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning Processor

<table>
<thead>
<tr>
<th>Positioning</th>
<th>Processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premier performance; two spindles</td>
<td>Intel® Core™ 2 Duo processor P8400, P8600, P8700, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600/P8700: 3MB L2 cache; T9400: 6MB L2 cache</td>
</tr>
</tbody>
</table>

### Memory

| Memory | 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; **Italics:** standard memory in both sockets; no sockets available; **Non-italics:** standard memory in one socket; one socket available |

### SATA DVD±RW Ultrabay Slim SATA disk

| SATA DVD±RW Ultrabay Slim SATA disk | DVD burner, SATA 1.5GB/s, Ultrabay Slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB (5400 or 7200 rpm) or 250GB (5400 rpm) / SATA 1.5GB/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™ |

### Widescreen display

| Widescreen display | Some: 15.4" (391mm) WXGA (1280x800) color, anti-glide, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio |
|--------------------| Some: 15.4" (391mm) WXGA (1280x800) color, anti-glide, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio |

### Camera

| Camera | Camera on top of screen, 1.3-megapixel, fixed focus |

### Integrated graphics

| Integrated graphics | Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715); Maximum external resolution: 2048x1536@75Hz |

### Keyboard

| Keyboard | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions |

### Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight³</th>
<th>Case color</th>
<th>Battery - type</th>
<th>Battery - life ³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight³</td>
<td>6-cell 15.4&quot;WXGA (WXDxH): 14.1&quot; x 10&quot; x 1.2–1.3&quot;; 357.5mm x 255mm x 30–34mm 6-cell: starting at 5.9 lb (2.7kg); 9-cell: starting at 6.2 lbs (2.8kg)</td>
<td>Black</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium Ion 6-cell or 9-cell, supports unique 2nd battery in Ultrabay Slim 6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 7.8 hr; 9-cell: up to 9.4 hr</td>
<td></td>
</tr>
<tr>
<td>Case color</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery - type</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Battery - life ³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Chipset

<table>
<thead>
<tr>
<th>Chipset</th>
<th>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® x11, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard/54)</td>
</tr>
<tr>
<td>PC Card</td>
<td>One slot (Type I, Type II), CardBus 32-bit 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro™, SD, SDHC, XD, XD Type H) Three USB 2.0, external monitor¹¹ (VGA DB-15, Displayport), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)</td>
</tr>
<tr>
<td>Smart card reader</td>
<td>None</td>
</tr>
<tr>
<td>Multicard reader</td>
<td>None</td>
</tr>
<tr>
<td>Ports</td>
<td>ExpressCard/54</td>
</tr>
</tbody>
</table>

### Mini PCI Express

<table>
<thead>
<tr>
<th>Mini PCI Express Intel 5100 WWAN upg 2G Turbo USB</th>
<th>Three Mini PCI Express slots 11a/b/g/n wireless; Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Pearl) Wireless WAN upgradable, requires Veriizon® (43R19151) or AT&amp;T® (43R19152)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWAN upg</td>
<td>None</td>
</tr>
</tbody>
</table>

### Power

| Power | 56K V.92™ modem Bluetooth™ Ethernet Intel AMT Audio support | 56K V.92™ modem Bluetooth 2.1 wireless, LED indicator Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1 Intel Active Management Technology (AMT) High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, integrated in ICH9M, TC2 1.2-compliant FingerPrint reader Trusted FingerPrint reader on palm rest, swipe sensor, supports the security chip |

### Limited warranty³ 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades² available

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See footnotes for important warranty information © Lenovo

US models announced August 5, December 2, 2008, or March 24, 2009

US models withdrawn effective March or September 2010

(CRS-9) September 2010

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Preloaded operating system²

- Genuine Windows Vista Business 32
- Vista Premium logo

Preloaded applications* (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerPrint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

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65-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) Climate Savers® certified EPEAT® Silver rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day²⁴ toll-free support during the warranty period²⁴ via 800-426-7378

ThinkPlus® 4-year LOR 9x5 NBD 45K6038 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad T500 2056 (Switchable) - Education (Onsite) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Switchable graphics</th>
<th>Disk</th>
<th>Mini PCIe WWAN upg</th>
<th>Mini PCIe UD Band-Half Workhorse (W) Global (G)</th>
<th>Available date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2056-E1U T9400</td>
<td>2.53</td>
<td>2GB 15.4&quot; WXGA+</td>
<td>GMA, HD 3650</td>
<td>160G 7200 DVD±RW</td>
<td>Intel 5100®</td>
<td>WWAN upg</td>
<td>None</td>
<td>9</td>
<td>No</td>
</tr>
<tr>
<td>2056-E2U T9400</td>
<td>2.53</td>
<td>2GB 15.4&quot; WXGA+</td>
<td>GMA, HD 3650</td>
<td>250G 5400 DVD±RW</td>
<td>Intel 5100®</td>
<td>WWAN upg</td>
<td>None</td>
<td>9</td>
<td>No</td>
</tr>
<tr>
<td>2056-E3U T9600</td>
<td>2.80</td>
<td>3GB 15.4&quot; WXGA+</td>
<td>GMA, HD 3650</td>
<td>160G 7200 DVD±RW</td>
<td>Intel 5100®</td>
<td>WWAN upg</td>
<td>None</td>
<td>9</td>
<td>No</td>
</tr>
</tbody>
</table>

- **These models have a limited onsite service**: 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- **Processor**: Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory

- **2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3**, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Non-Italics**: standard memory in both sockets; no sockets available;
- **Italics**: standard memory in one socket; one socket available

### SATA DVD±RW

- **UltraBay Slim**
- **SATA disk**
  - DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)
  - One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
  - 160GB (7200 rpm) or 250GB (5400 rpm)
  - SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- **15.4" (391mm) WXGA+ (1680x1050) color, anti-glare, CCFL backlight**, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

### Switchable graphics

- Switches between discrete and integrated graphics (Vista only),
- **Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD)**, in GM45, and **ATI™ Mobility Radeon™ HD 3650**, PCI Express x16, 256MB memory, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- **Maximum external resolution**: 2048x1536@75Hz

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Touchpad

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touch pad below keyboard, Tap zones, scrolling regions label

### Dimensions

- **6-cell 15.4"WxHxD**: 14.1" x 10.0" x 1.2--1.3"; 357.5mm x 255mm x 30--34mm
- **9-cell**: starting at 6.2 lb (2.8kg)

### Battery

- **Battery - type**
  - Top: Super-Elastic Polycarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
  - Lithium Ion
- **Battery - life**
  - 6-cell: up to 9.4 hr; 9-cell plus UltraBay battery: up to 10.9 hr

### Chipset

- **Mobile Intel GM45 Express Chipset** (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gbps, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

### ExpressCard slot

- One ExpressCard/34 or ExpressCard/54

### PC Card Std slot

- One Type I or Type II slot, CardBus 32-bit

### Smart Card Read

- None

### Multicard Reader Ports

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

### Mini PCI Express

- **Intel 5100® WWAN upg** Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)
- **2G Turbo** None
- **UWB** None
- **Modem** 56K V.92 modem
- **Bluetoth™** Bluetooth 2.1 wireless, LED indicator
- **Ethernet** Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIex1
- **Intel AMT** Intel Active Management Technology (IAMT)
- **Audio support** High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
- **Security** Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip** Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- **Fingerprint reader** Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty

- **3-years / 1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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See footnotes for important warranty information

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CRS-10 (September 2010)
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Switchable graphics</th>
<th>Disk</th>
<th>Switchable SATA GB1 rpm</th>
<th>SATA</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB</th>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Power-packaged engineering with Open GL graphics and ISV certifications

Positioning
Processor
Mobile workstation; two spindles
Intel® Core™ 2 Duo processor T9600 or T9900 with dual-core,
Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory
3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Italics: standard memory in both sockets; no sockets available;

SATA DVD±RW
UltraBay Slim
SATA disk
DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
320GB² (7200 rpm) /
SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports second disk,
ThinkPad Shock Mounted Hard Drive, Active Protection System³

Widescreen display
Some: 15.4" (391mm) WXGA+ (1680x1050) color, anti-glare, CCFL backlight,
200 nits, 16:10 aspect ratio, 500:1 contrast ratio
Some: 15.4" (391mm) WUXGA (1920x1200) color, anti-glare, CCFL backlight,
175 nits, 16:10 aspect ratio, 500:1 contrast ratio

Camera
On top of screen, 1.3-megapixel, fixed focus

Switchable graphics
Switches between discrete and integrated graphics (Windows 7 only)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint³
Pointing device, "Press-to-Select," Internet Scroll Bar³, magnifying glass

Touchpad
UltraNav³, wide touch pad below keyboard, Touch Zone, scrolling regions label

Dimensions³
6-cell 15.4"WxHxD: 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm
9-cell: up to 9.4 hr; 9-cell plus Ultrabay battery: up to 10.6 hr

Weight³
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
Lithium Ion 9-cell, supports unique 2nd battery in Ultrabay Slim
9-cell: up to 9.4 hr; 9-cell plus Ultrabay battery: up to 10.6 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
ICH9M-Enhanced I/O Controller Hub (SATA 3Gb/s, USB 2.0, PCI Express¹ 1.1,
PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)
ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)
PC Card
One (Type I, Type II), CardBus 32-bit
Smart Card Reader
None
Multicard Reader
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Ports
Three USB 2.0, external monitor¹¹ (VGA DB-15, DisplayPort), modem (RJ-11),
ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express
Three Mini PCI Express slots
Intel 5100²
11a/b/g/n wireless, Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
Intel 5100²
Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)
Intel 5100²
None
2G Turbo
None
UWB
None
Modem
56K V.92 modem
Bluetooth²
2.1 wireless, LED indicator
Ethernet
Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1
Intel AMT
None
Audio support
High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume
up, down, mute buttons / digital microphone, microphone input jack, headphone jack
Security
Power-on password, hard disk password, supervisor password, security keyhole
Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty² 3-years/1-yr battery - depot repair service / service upgrades² available

See footnotes for important warranty information
• Intel Centrino² 2 processor technology

Personal Systems Reference (PSREF)
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US models announced October 22, 2009
US models withdrawn effective September 2010

Preloaded operating system²⁰
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications²¹ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor³⁰ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

90-watt (ATI graphics) AC adapter
ThinkPad Roll Cage and Top Cover
ThinkPlus®Roll Cage (one-piece magnesium)
Climate Savers®-certified
EPEAT® Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁷ toll-free support during the warranty period¹⁷ via 800-426-7378

ThinkPlus²² 3-year LOR⁹ 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L/P U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad W500 4062 (Swatchable) - TopSeller (Windows 7) - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Switchable graphics</th>
<th>Disk SATA GB rpm</th>
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</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Power-packed engineering with Open GL graphics and ISV certifications**

#### Preloaded operating system
- **Genuine Windows® 7 Professional 64**

#### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader™
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2007 Trial (60-day)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers™ certified
- ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

#### See footnotes for important warranty information

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CR5W-5 September 2010
**ThinkPad W500 4061 (Switchable) - withdrawn**

<table>
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<td>160G 7200 DVD+RW</td>
<td>Intel 5100 WWAN upg</td>
<td>9</td>
<td>Bus 32</td>
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</tbody>
</table>

**Power-packed engineering with Open GL graphics and ISV certifications**

**Positioning**
- Mobile workstation; two spindles

**Processor**
- Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core,
- Intel HD Boost, 1066MHz systen bus, and 6MB L2 cache

**Memory**
- 2GB, 3GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets,
- Italics: standard memory in both sockets; no sockets available;
- Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim SATA disk**
- DVD burner, SATA 1.5gb/s, Ultrabay Slim, removable (43N3214)
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- Some: 80GB (7200 rpm), 160GB (7200 rpm), 200GB (7200 rpm)
- Some: 160GB (2GB Turbo)

**Widescreen display**
- Some: 15.4" (391mm) WXSWXGA+ (1680x1050) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- Some: 15.4" (391mm) WXUXGA (1920x1200) color, anti-glare, CCFL backlight, 175 nits, 16:10 aspect ratio, 500:1 contrast ratio

**Camera**
- Some: camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**
- Switches between discrete and integrated graphics (Vista only)
- Intel Graphics Media Accelerator 4500MHD (GM4500MHD), in GM45, and ATI® Mobility FireGL® V5700, PCI Express x16, 512MB memory, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), Maximum external power: 2048x1536@75Hz

**Keyboard**
- TrackPoint®, Touch pad
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label

**Dimensions**
- Weight: 6.8 lbs (3.1kg), 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm
- 9-cell: up to 9.4 hr; 9-cell plus Ultrabay battery: up to 10.9 hr

**Chipset**
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.1, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)
- One ExpressCard/34 or ExpressCard/54
- One ExpressCard slot

**Mini PCI Express**
- Three Mini PCI Express slots
- Some: 11a/b/g wireless, Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Some: 11a/b/g wireless, Mini PCI adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless WWAN upgradeable, requires Verizon® (4391915) or AT&T® (4391952)

**Audio support**
- High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Lenovo**
- Lenovo.com Agreements at lenovo.com

See footnotes for important warranty information

* Intel Centrino® 2 with vPro™ technology
* US models announced August 5, September 23, 2008 or June 2, 2009
* US models withdrawn effective August 2009, February 2010 or September 2010

Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 64

Vista models: Vista Premium logo

Preloaded applications
- Some: Rescue and Recovery™
- Some: Access Connections™
- Some: Client Security Solution™
- Some: ThinkVantage Productivity Center
- Some: ThinkVantage System Update
- Some: FingerPrint Software (finger print models)
- Some: McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Some: Lenovo System Toolbox (Power Manager and Presentation Director)
- Some: Adobe® Reader®
- Some: Windows Live™ Toolbar
- Some: Roxio® Creator® Business Edition (DvD+Rw)
- Some: Roxio MyDVD® (DvD+Rw)
- Some: Corel® WinDVD® (DvD+Rw)

Supports ThinkVantage® technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- PBEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

ThinkPlus™ 3-year LOR® 9x5 NBD 41C9176
ThinkPlus 4-year LOR 9x5 NBD 41C9177
ThinkPlus 5-year LOR 9x5 NBD 41C9179
ThinkPlus 4-year P&L P/U Depot 41C9178
ThinkPlus 5-year P&L P/U Depot 41C9180
• Some models are part of the Global Models Plus program with limited onsite service\cite{footnote:1} 3-year limited warranty
• Power-packed engineering with Open GL graphics and ISV certifications

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<tr>
<th>Type/model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Switchable graphics</th>
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<th>Mini PCIe 802.11n</th>
<th>Mini PCIe WWAN</th>
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Preloaded operating system\cite{footnote:20}:
- Some: Genuine Windows Vista® Business 32
- Some: Genuine Windows Vista Business 64
- Vista Premium logo

Preloaded applications\cite{footnote:14} (all OSes; only some listed):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Downloadable software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Desktop Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Switchable graphics:
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI® Mobility FireGL® V5700, PCI Express x16, 128MB memory, digital monitor output via DisplayPort (supports single-link DVI-D via cable 45J7915; 1280x1024 @ 75Hz)

Dimensions\cite{footnote:9}:
- Height: 0.9" (23 mm)
- Width: 14.1" (358 mm)
- Depth: 10" (254 mm)

Battery - life\cite{footnote:10}:
- 15.4" (391mm) WXGUA: (1600x1050) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio;
- 15.4" (391mm) UWXGA (1920x1200) color, anti-glare, CCFL backlight, 175 nits, 16:10 aspect ratio, 500:1 contrast ratio

Switchable Camera:
- Touchpad on top of screen, 1.3-megapixel, fixed focus

Chipset:
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 2.0, PCI 2.3, security chip, ethernet MAC, LPC bus (WPCN385 Super I/O))

Multicard Reader
- 7-in-1 reader (MMC, Memory Stick, Memory Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0 external monitor (VGA DB-15, DisplayPort), modem (RJ-11, ethernet RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express
- Some: 11a/b/g/n wireless®, Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Some: 11a/b/g wireless®, Mini PCI adapter, Intel WiFi Link 5100, 3x3 Wireless WAN upgradable, requires Venuron® (43R9151) or AT&T® (43R9512)

Modem
- 3G UMTS, 3G HSDPA, 3G EVDO
- HSPA+ 21 Mbps, 21 Mbps, 31 Mbps, 7.2 Mbps, 14.4 Kbps

Security
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

Limited warranty\cite{footnote:11}:
- 3-years/1-year battery, limited onsite service\cite{footnote:12}, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades\cite{footnote:13} available

See footnotes for important warranty information \* Intel Centrino® 2 with vPro™ technology
© Lenovo
CRSW-3 September 2010

US models announced September 23, 2008
US models withdrawn effective February or September 2010
| Memory | 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 | ann 06/23/09 |
|        | 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 | ann 06/23/09 |
|        | 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 | ann 06/23/09 |
|        | 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 | ann 06/23/09 |
|        | 4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 | ann 06/23/09 |

| Ultrabay Slim 9.5mm | Serial ATA Hard Drive Bay Adapter III 43N3412 | ann 06/23/09 |

| Storage and removable storage | 160GB Disk SATA 3.0Gb/s (7200 rpm) | 41N5737 | ann 10/16/07 |
|                               | 250GB Disk FDE SATA 3.0Gb/s (5400 rpm) | 43R8152 | ann 01/15/08 |
|                               | 250GB Disk FDE SATA 3.0Gb/s (7200 rpm) | 43N3410 | ann 01/20/09 |
|                               | 320GB Disk SATA 3.0Gb/s (5400 rpm) | 43N3403 | ann 08/05/08 |
|                               | 320GB Disk SATA 3.0Gb/s (7200 rpm) | 43N3411 | ann 01/20/09 |
|                               | 500GB Disk SATA 3.0Gb/s (7200 rpm) | 43N3423 | ann 01/20/09 |
|                               | Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay. |
|                               | 128GB SSD SATA 3.0Gb/s 1.8” (2.5” cover) | 43N3406 | ann 08/26/08 |
|                               | 256GB FDE SSD SATA 3Gb/s 1.8” (2.5” cover) | 43N3417 | ann 08/26/08 |

| USB 2.0 Portable 320GB Hard Disk | 45K1689 | ann 03/17/09 |
| USB 2.0 Portable 500GB Hard Disk | 45K1690 | ann 05/26/09 |
| USB 2.0 Secure 160GB Hard Disk | 43R2018 | ann 11/18/08 |
| USB 2.0 Secure Secure 320GB Hard Disk | 43R2019 | ann 11/18/08 |
| eSATA/USB 2.0 Secure 500GB Hard Drive | 57Y4400 | ann 01/17/07 |
| USB 2.0 Portable DVD Burner | 43N3264 | ann 01/05/10 |

| Wireless WAN (Mini PCI Express) | Only WWAN upgradable models. | 43R9151 | ann 08/05/08 |
|                                 | Verizon® WWAN UNDP Broadband Mini PCIe | 43R9152 | ann 08/26/08 |

| ThinkPad Expansion | Lenovo® Essential Notebook Stand | 45J9292 | ann 05/12/09 |
|                    | USB Port Replicator with Digital Video | 45K1610 | ann 07/28/09 |

| Keyboard | TrackPoint Cap Collection | 73P2698 | ann 12/16/03 |
|          | USB Numeric Keypad | 33L3225 | ann 05/01/00 |
|          | Preferred Pro USB Keyboard | 73P2220 | ann 06/21/05 |
|          | Enhanced Performance USB Keyboard | 73P2620 | ann 03/23/04 |
|          | Ultrasmall Wireless Keyboard and Mouse | 57Y4700 | ann 09/15/09 |
|          | Wireless via 2.4GHz technology using a micro-size USB receiver. | 55Y9003 | ann 08/18/09 |
|          | ThinkPad USB Keyboard with TrackPoint | 55Y4730 | ann 02/22/05 |
|          | Lenovo® USB Fingerprint Keyboard | 51J0155 | ann 03/24/09 |

| Mouse | Lenovo Optical Mouse (USB) | 06P4069 | ann 05/21/03 |
|       | Lenovo Laser Mouse (USB) | 41U3074 | ann 01/23/07 |
|       | ThinkPad USB Laser Mouse | 57Y4635 | ann 12/15/09 |
|       | Lenovo ScrollPoint® Mouse (USB, Optical) | 31P7405 | ann 08/27/02 |
|       | ThinkPad Travel Mouse (USB, Optical) | 31P7410 | ann 06/04/02 |
|       | ThinkPad Bluetooth Laser Mouse | 41U5008 | ann 02/22/08 |

| Multimedia | ThinkPad In-Ear Headphones | 57Y4488 | ann 01/10/07 |

| Security | Kensington® MicroSaver® Cable Lock | 73P2582 | ann 12/29/03 |
|          | Kensington Twin Head Cable Lock | 45K1620 | ann 09/03/08 |
|          | Lenovo Security Cable Lock | 57Y4303 | ann 08/24/10 |
|          | T500/R600/W500 Series 15W Privacy Filter | 43R2474 | ann 08/05/08 |
|          | USB Gmpleus GmpC Smart Card Reader | 41N3040 | ann 02/21/06 |
|          | PC Card Gmpleus Smart Card Reader | 41N3024 | ann 12/13/05 |
|          | ExpressCard Gmpleus Smart Card Reader | 41N3043 | ann 06/27/06 |

| Batteries | ThinkPad Battery 41+ (6-cell) | 40Y7699 | ann 01/05/06 |
|          | ThinkPad Battery 41++ (9-cell) | 40Y7697 | ann 09/20/05 |
|          | ThinkPad Battery 42 (3-cell, bay) | 57Y4536 | ann 08/25/09 |
|          | Used in Ultrabay Slim bay. | 40Y7689 | ann 09/20/05 |
|          | Requires the ThinkPad 90W AC Adapter | 40Y7659 | ann 09/20/05 |
|          | ThinkPad External Battery Charger | 40Y7625 | ann 09/20/05 |

| Carrying Cases | ThinkPad 15W Case Sleeve | 51J0477 | ann 08/19/08 |
|                | Lenovo Business Messenger Case | 51J0475 | ann 08/19/08 |
|                | Lenovo Messenger Max | 41US523 | ann 05/01/07 |
|                | Lenovo Performance BackPack | 41US524 | ann 05/01/07 |
|                | ThinkPad Business Topload Case | 43R1247 | ann 05/13/08 |
|                | ThinkPad Business Backpack | 43R1248 | ann 05/13/08 |
|                | ThinkPad Deluxe Expander Case | 43R1247 | ann 05/13/08 |
|                | ThinkPad Executive Leather Case | 43R1240 | ann 05/13/08 |

| Monitors | Lenovo L2230x Wide 21.5” Monitor | 543HB1 | ann 06/10/10 |
|          | ThinkVision® L171p 17” Monitor | 504HB2 | ann 10/20/09 |
|          | ThinkVision L1951p Wide 19” Monitor | 2448HB6 | ann 10/20/09 |
|          | ThinkVision L2250p Wide 22” Monitor | 2572HB6 | ann 10/20/09 |
|          | ThinkVision L2251p Wide 22” Monitor | 2572HD6 | ann 10/20/09 |
|          | ThinkVision L2321x Wide 23” Monitor | 4014HB6 | ann 06/10/10 |
|          | ThinkVision L2440p Wide 24” Monitor | 4420HB2 | ann 09/17/08 |

| Monitor Accessories | Lenovo USB-to-DVI Monitor Adapter | 45K5296 | ann 05/12/09 |
|                     | Lenovo DisplayPort to VGA Monitor Cable | 57Y4393 | ann 08/04/09 |
|                     | DisplayPort to Single-link DVI-D Cable | 45J7915 | ann 08/05/08 |
|                     | ThinkVision USB Soundbar | 40Y7616 | ann 08/23/05 |
|                     | ThinkVision Soundbar | 45K1263 | ann 09/16/08 |
|                     | Kensington MicroSaver Cable Lock | 73P2582 | ann 12/29/03 |
|                     | Kensington Twin Head Cable Lock | 45K1620 | ann 09/30/08 |
|                     | Lenovo Security Cable Lock | 57Y4303 | ann 08/24/10 |
|                     | Lenovo Easy Reach Monitor Stand | 55Y2958 | ann 09/22/09 |
|                     | Compatible on selected Lenovo and ThinkVision monitors. | 45K5296 | ann 05/12/09 |

More information at www.lenovo.com/support/monitoraccessories

| More info | For more information on ThinkPad accessories, please visit: | www.lenovo.com/support/monitoraccessories |
|           | www.lenovo.com/support/accessories | www.lenovo.com/support/accessories |
|           | More infoOther accessories at www.lenovo.com/accessories | www.lenovo.com/accessoriesguide |

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ThinkPad Mini Dock Plus Series 3 - 90W
433810U

ThinkPad Battery 27++ (9-cell, slice)
57Y4545

ThinkPad triple external monitor configuration using NVIDIA’s Optimus technology
## ThinkPad T510 4313 (TopSeller) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor (GHz)</th>
<th>Base Turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>SATA optical</th>
<th>PCi Express Mini Card (SN)</th>
<th>PCi Express Mini Card (WAN)</th>
<th>Finger Print Reader</th>
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<th>Battery (Type)</th>
<th>Intel Turbo Boost Technology</th>
<th>Availability</th>
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<td>15.6’ HD</td>
<td>2.0M</td>
<td>3250G</td>
<td>5400</td>
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<td>DVD±RW</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (D/DW)
- Roxio MyDVD® (D/DW)
- Corel® WinDVD® (D/DW)

Supports ThinkVantage® technologies

- Supports ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Chipset
- Mobile Intel® GM75 Express Chipset
- One slot (ExpressCard/34)
- Smart Card read
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Pcie Express Mini Card
- Two Pcie Express Mini Card slots
- 11b/g/n wireless®, ThinkPad 11b/g/n, Pcie Half Mini Card

### Security Chip
- Trusted Platform Module, TCG 1.2-compliant

### Limited warranty
- 1-year - depot repair service / service upgrades available

See footnotes for important warranty information

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US models announced January 7 or September 28, 2010
US models withdrawn effective June 2011
ThinkPad® T510 4313 (TopSeller) - Windows 7 (January 2011) - withdrawn

Personal Systems Reference (PSREF)

<table>
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<th>Type-model</th>
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<th>Base turbo frequency (GHz)</th>
<th>Memory (MHz)</th>
<th>Max screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>SATA optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Battery cells</th>
<th>Intel Processor vPro</th>
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<td>1066</td>
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<td>32GB 7200</td>
<td>DVD+RW</td>
<td>Intel 1000</td>
<td>WWAN</td>
<td>6 No</td>
<td>Pro 64</td>
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<tr>
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<td>WWAN</td>
<td>6 No</td>
<td>Home P 64</td>
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<td></td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor

Processor: Intel® Core™ i5 processor i5-480M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory

2GB or 4GB std / 8GB max  / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

SATA DVD±RW

DVD burner, SATA 1.5Gb/s, 12.7mm Ultraslim Enhanced, removable

One bay for removable devices, Ultraslim Slim-compatible, 12.7mm high, bottom access 320GB² (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System³

Widescreen display

Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera

Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent displays;

Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint®

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar², magnifying glass UltraNav², wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions²

Weight²

15.6W" (WxDxH): 14.68" x 9.65" x 1.26-1.41", 372.8mm x 245.1mm x 32-35.8mm

6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)

Case material

Display cover: Glass-fiber reinforced plastic; Base: Carbon-fiber reinforced plastic

Battery - type

Lithium Ion 6-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slice battery: up to 20.8 hr

Battery - life²²

65-watt AC adapter

Preloaded operating system²²

- Some: Genuine Windows® 7 Home Premium 64
- Some: Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections²⁴
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator™ Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service²⁷

24 hour x 7 day²² toll-free support during the warranty period via 800-426-7378

Chipset

Mobile Intel QM57 Express Chipset

ExpressCard/34

One slot (ExpressCard/34)

Smart Card read

None

Multicard reader

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports

Four USB 2.0, 2 USB 3.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCle Mini Card

Two PCI Express Mini Card slots

Intel 1000 WWAN upg

11b/g/n wireless, lPCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradeable

Modern

56K V.92™ modem

Bluetooth®

None

Ethernet

Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT

Intel Active Management Technology (AMT)

Audio support

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

None

Limited warranty²² 1-year - depot repair service / service upgrades²² available

lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced January 11, 2011

US models withdrawn effective June 2011
• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These models have a depot repair service 3-year limited warranty

Positioning Processor
Premiere performance; two spindles
Intel® Core™ i5 processor i5-520M or i5-540M with dual-core
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3,
non-parity, dual-channel capable, two 204-pin SO-DIMM sockets,

SATA DVD±RW UltraBay Enhanced SATA disk
DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
320GB (7200 rpm) / 15.6" HD (1366x768) color, anti-glare, LED backlight,
220 nits, 16.9 aspect ratio, 500:1 contrast ratio

Integrated graphics
Intel HD Graphics in processor,
external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
supports dual independent display;
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915)

Keyboard TrackPoint® Touchpad
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

Dimensions Weight
15.6" (WxDxH): 14.68" x 9.65" x 1.26-1.41", 372.8mm x 245.1mm x 32.35-38.5mm
6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)

Chips ExpressCard/34 Smart Card read Multicard reader
Mobile Intel QM57 Express Chipset
One slot (ExpressCard/34)
None
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Carries
Two PCI Express Mini Card slots
Intel 1000
Dave Wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6200, 2x2
Some: Wireless WAN upgradable
Intel WWAN upgo
Gobi™ 2000

Carrier
Modem
Bluetooth™ Ethernet
56K V.92 modem
Non-VPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIex1
vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIex1

Security
Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator,
Power On Authentication, supports the security chip

Limited warranty™ 3-years/1-yr - battery depot repair service / service upgrades available

See footnotes for important warranty information
US models announced January 7 or March 2, 2010
US models withdrawn effective October 2010

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32-bit

Preloaded applications
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• FingerPrint Software (fingerprint models)
• ThinkVantage System Update
• ThinkVantage Power Manager
• ThinkVantage Presentation Director
• ThinkVantage Productivity Center
• Lenovo System Toolbox
• Lenovo Online Data Backup
• Norton™ Internet Security 2009
(30 days of virus definitions)
• Adobe® Reader®
• Adobe Flash® Player
• Windows Live™ Toolbar
• Skype™ for Windows
• Microsoft® Office 2007 Trial (60-day)
• Roxio® MyDVD® (DVD+RW)
• Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service:
24 hour x 7 day toll-free support during the warranty period (except holidays)

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### Type-model Processor Base Max Memory Wide-screen Disk PClle Mini Card PClle Mini Card Finger print reader Battery Power Adapter Intel vPro Preload Avail date
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base</th>
<th>Max</th>
<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>802.11</th>
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<th>WWAN upg</th>
<th>Reader</th>
<th>cells (watt)</th>
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<td>65W</td>
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### Positioning
- Processor: Intel® Core™ i7 processor 620M, 520M, or i5 processor with dual-core, or Intel Core i7 processor 620M with dual-core, or Intel Core i7 processor. DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, i5-206M/i5-204M/i5-200M: 3MB cache; i5-202M/i5-201M/i5-200M: 4MB cache, Intel Turbo Boost, Hyper-Threading technology, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), with i7 processor

### Memory
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### SATA DVD:RW UltraBay Enhanced SATA disk
- DVD burner, SATA 1.5Gb/s, 12.7mm UltraBay Enhanced, removable
- One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, bottom access (Single-Link) with spare drive (SSD) / SATA 3Gb/s, 1.8" wide, 8mm high
- Some: 160GB (7200 rpm), 500GB (7200 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / Sata 3Gbps, 2.5" wide, 9.5mm high, Active Protection System™
- All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

### Widescreen display
- Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

### Camera
- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics
- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz

### Keyboard
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 15.6W" (396mm)HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

### Weight
- 6.2lbs (2.8Kg)

### Battery - type
- Lithium Ion, supports optional Slice battery (57Y4545) as 2nd battery

### Battery - life
- 9-cell: up to 20.8 hr; 9-cell: up to 10.4 hr; 6-cell: up to 6.2 hr; 6-cell: up to 2.9 hr; 6-cell plus Slice battery: up to 20.8 hr

### Chipset
- Mobile Intel GM957 Express Chipset

### Preloaded operating system
- Some: Genuine Windows 7 Professional 64-bit
- Some: Genuine Windows 7 Professional 64-bit

### Preloaded applications
- Some: Rescue and Recovery™
- Some: Access Connections™
- Some: Power Manager
- Some: ThinkVantage Power Manager
- Some: ThinkVantage Toolbox
- Some: Norton™ Internet Security 2011
- Some: Windows Live™ Toolbar
- Some: Microsoft Office 2010 preloaded; purchase product key to activate
- Some: Microsoft Research AutoCollage Touch
- Some: Roxio® Creator® Business Edition (DVD:RW)
- Some: Roxio MyDVD® (DVD:RW)
- Some: Corel® WinDVD® (DVI:RW)

### Support ThinkVantage technologies
- 65-watt or 90-watt AC adapter
- ThinkVantage Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Limited warranty
- 3-years / 1-yr battery depot repair service / service upgrades available

---

**See footnotes for important warranty information**

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US models announced January 7, May 4, July 6, September 28, 2010, or January 11, 2011

US models withdrawn effective June 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PClE Mini Card</th>
<th>PClE Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Intel vPro</th>
<th>Preload</th>
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<td>3.20</td>
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<td>15.6” HD+</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 6200®</td>
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<td>9</td>
<td>vPro</td>
<td>Pro 64</td>
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</table>

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Preloaded applications (only some listed)
- Rescue and Recovery®
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
- (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus™ 3-year LOR 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&L P/U Depot 45K6023
ThinkPlus 5-year P&L P/U Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced September 28, 2010
US model withdrawn effective June 2011

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(KN1-14) June 2011
ThinkPad® T510 4313 (Discrete) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

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<td>9</td>
<td>No</td>
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</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor
Premiere performance; two spindles
Intel® Core™ i5 processor i5-520M with dual-core,
DMM (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB std / 8GB max* / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets,
Non-italsics: standard memory in one socket; one socket available

SATA DVD±RW
DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA 320GB‡ (7200 rpm) / SATA 320Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk,
ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
15.6" (396mm) HD (1366x768) color, anti-glares, LED backlight,
220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
NVIDIA® NVS™ 3100M, PCI Express x16, 512MB memory,
external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar‡, magnifying glass

Touchpad
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
illuminates the keyboard to improve visibility in low-light conditions

Dimensions³
15.6W (WxDxH): 14.68" x 9.85" x 1.26-1.41"; 372.8mm x 245.1mm x 32.5-38.5mm
6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)

Battery - type
Lithium ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
6-cell: up to 4.7 hr; 9-cell: up to 7.8 hr; 9-cell plus Slice battery: up to 15.6 hr

Preloaded operating system²⁰
- Genuine Windows® 7 Professional 32
Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Chipset
Mobile Intel QM57 Express Chipset

ExpressCard/34
One slot (ExpressCard/34)

Smart Card reader
None

Multicard reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA 15-pin)

_PCIE Mini Card
Two PCI Express Mini Card slots
11b/g/n wireless*, ThinkPad 11b/g/n, PCIe Half Mini Card

_PCIE Mini Card WWAN upg
None

Modem
56K V.92* modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT
Internal Active Management Technology (iAMT)

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button,
combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
None

Limited warranty²² 1-year - depot repair service / service upgrades²² available

See footnotes for important warranty information
© Lenovo
US model announced July 1, 2010
US model withdrawn effective June 2011
## Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
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<th>Turbo (GHz)</th>
<th>Memory</th>
<th>Disk</th>
<th>PClé Mini Card</th>
<th>PClé Mini Card (WWAN)</th>
<th>Finger reader</th>
<th>Bluetooth</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<td>4314-2NU</td>
<td>i5-520M</td>
<td>2.40</td>
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<td>2GB</td>
<td>15.6” HD</td>
<td>Intel 6200</td>
<td>Gobi 2000</td>
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<td>Blue</td>
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<td>XP Pro</td>
<td>Mar 10</td>
<td></td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These models have a depot repair service 3-year limited warranty.

### Positioning Processor
- Premier performance: two spindles
- Intel® Core™ i5 processor i5-520M with dual-core,
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-Italics: standard memory in one socket; one socket available

### SATA DVD:RW
- Ultrabay Enhanced
- SATA disk
- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable drives, Ultrabay Slim-capacitive, 12.7mm high, bottom access 320GB

### Widescreen display
- 15.6” (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: 15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

### Camera
- Camera on top of screen, 2.0-megapixel, fixed focus

### Discrete graphics
- NVIDIA® Quadro® NVS3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 85Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass
- UltraNav®, wide touchpad below keybdr, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 15.6W” (WxDxH): 14.68” x 9.65” x 1.26-1.41”, 372.8mm x 245.1mm x 32-35.8mm
- 6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)

### Weight
- Display cover: Glass-fiber reinforced plastic; Base: Carbon-fiber reinforced plastic
- Lithium Ion 9-cell, supports optional Slicie battery (57Y4545) as 2nd battery at bottom
- 6-cell: up to 7.8 hr; 9-cell: up to 15.6 hr

### Chipset
- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)
- Smart Card read
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Three USB 2.0 (one powered), one USB 2.0 eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RRJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### PClé Mini Card
- Two PClé Express Mini Card slots
- 11a/b/g/n wireless® , PClé Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- Some: Wireless WAN upgradable
- Some: Wireless WAN, Qualcomm chipset, PClé Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider
- Some: Verizon®, contract required with service provider
- 56K V.92® modem

### Carrier
- 56K V.92® modem
- Bluetooth 2.1 wireless, LED indicator
- Ethernet
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PClé x1
- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader™
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Supports
- Supports ThinkVantage® technologies

- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service®

### Limited warranty
- 3-years 1-yet - battery depot repair service / service upgrades available

See footnotes for important warranty information
US models announced January 7 or March 2, 2010
US models withdrawn effective October 2010

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(KN1-5) October 2010

ThinkPlus® 3-year LOR® 4x5 NBD 45K6201
ThinkPlus® 4-year LOR® 9x5 NBD 45K6222
ThinkPlus® 5-year LOR® 9x5 NBD 45K6224
ThinkPlus® 4-year P&L P/U Depot 45K6203
ThinkPlus® 5-year P&L P/U Depot 45K6225
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
## ThinkPad T510 4314 (Discrete) - TopSeller (Windows 7) - withdrawn

### Personal Systems Reference (PSREF)

#### Type-model

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<thead>
<tr>
<th>Name</th>
<th>Processor Preload</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Hard drive</th>
<th>Camera</th>
<th>Disk Drive</th>
<th>Battery</th>
<th>Ports</th>
<th>Multimedia</th>
<th>Connect.</th>
<th>Fan</th>
<th>Chassis</th>
<th>Weight</th>
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<td>Intel Core i5</td>
<td>2GB or 4GB</td>
<td>15.6” HD+</td>
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<td>1560</td>
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</table>

**Note:** These small and medium business (SMB) models are part of the US TopSeller program. These models have a depot repair service 3-year limited warranty. These systems are Microsoft Office 2010 Product Ready (O10PKR).

**Positioning:**
- Premier performance: two spindles
- DMi (Direct Mini Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory:**
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD±RW Ultrabay Enhanced SATA disk:**
- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
- Some: 128GB or 160GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high
- Some: 160GB (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, Active Protection System
- All: removable, upgradeable, supports 2nd disk, shock Mounted Hard Drive

**Widescreen display:**
- Some: 15.6” (396mm) HD (1366x768) color, anti-glare, LED backlight
- Some: 15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight

**Camera:**
- Camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics:**
- NVIDIA® NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.

**Keyboard:**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad:**
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar, magnifying glass

**ThinkLight™**
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions:**
- 15.6”W (396mm) x 12.7”H (322mm) x 0.8”D (20mm) / Weight: 4.41 lb (2.01kg)

**Chipset:**
- Mobile INTEL® QM57 Express Chipset

**Ports:**
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**Power On Authentication, supports the security chip**

**Security:**
- Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader:**
- Trusted Platform Module, TCG 1.2-compliant

**Limited warranty:**
- 3-years/1-yr battery depot repair service / service upgrades available

See footnotes for important warranty information.
US models announced January 7, March 2, May 4, or July 6, 2010
US models withdrawn effective June 2011

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**Preloaded operating system:**
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

**Preloaded applications** (only some listed):
- Rescue and Recovery™
- Access Connections™
- ThinkVantage Notebook Manager
- ThinkVantage Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011

**Supports ThinkVantage technologies:**
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service™
- 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

**Lenovo warranty information:**
- 3-year Limited Warranty (9x5 NBD), 24/7 toll-free support during the warranty period

**Lenovo.com/thinkplus/warranty**
| Type-model | Processor Base | Max turbo (GHz) | Memory | Wide-screen display | Camera | Disk | Personal Card | WWAN | Finger print | Blue-tooth Ethernet | Audio support | Security | Security chip | Fingerprint | Power | Adapter | Battery | Workhorse | Availability |
|------------|----------------|----------------|--------|---------------------|--------|------|--------------|-------|--------------|-------------------|--------------|----------|--------------|-------------|-------|----------|-------------|-----------|-------------|-----------|
| 4349-3U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD 2.0M | 250G7540 6200® Gobi AT&T | Finger Blue | 90W vPro Pro 32 | Jan 10 |
| 4349-3U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi Verizon® | Finger Blue | 90W vPro Pro 32 | Jan 10 |
| 4349-2U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | Jan 10 |
| 4349-2U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | Feb 10 |
| 4349-1U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | Jan 10 |
| 4349-1U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | G Feb 10 |
| 4349-4VU  | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | G Feb 10 |
| 4349-7U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | Apr 10 |
| 4349-4XU  | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | G Apr 10 |
| 4349-5U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | G Apr 10 |
| 4349-5U   | i5-520M        | 2.40 2.93      | 2GBx1 1066 15.6" HD+ 2.0M | 320G7200 6200 | Gobi AT&T | Finger Blue | 65W Pro 32 | G Apr 10 |

Limited warranty: 3-years/1-year battery depot repair service / service upgrades available

Preloaded operating system:
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications (only some listed):
- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (finger print adapter)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD-ROM)
- Roxio MyDVD® (DVD-RW)
- Corel® WinDVD® (DVD-RW)

Supports ThinkVantage® technologies
- 65-watt or 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- Internal Worldwide Warranty 17

24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced January 7, March 2, April 8, or May 4, 2010

US models withdrawn effective June 2011
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<th>UltraBay</th>
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<td>15.6 H+</td>
<td>320GB</td>
<td>WWAN upg</td>
<td>Finger Blue vPro</td>
<td>3-years/3-year limited warranty</td>
</tr>
</tbody>
</table>

**These models have a depot repair service 3-year limited warranty**

**These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

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### Positioning Processor
- **Premiere performance; two spindles**
- **Intel® Core™ i5 processor i5-540M** or **i5-560M with dual-core**
- **DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz)**
- **Intel Turbo Boost, Hyper-Threading technology; 3MB cache**

### Memory
- **4GB std / 8GB max**
- **PC3-8500 1066MHz or PC3-10600 1333MHz DDR3**
- **non-parity, dual-channel capable, two 204-pin SO-DIMM sockets**

### SATA DVD:RW
- **DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable**
- **Ultrabay Slim-compatible, 12.7mm high, bottom access**
- **Some: 160GB* Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high**
- **Some: 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, Active Protection System™**
- **All:**
  - removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

### Widescreen display
- **15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight**
- **220 nits, 16:9 aspect ratio, 500:1 contrast ratio**
- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics
- **Intel HD Graphics**
- **Premiere performance; support via VGA DB-15 connector and digital monitor support via DisplayPort**
- **supports single-link DVI-D via cable 45J7915**
- **supports dual independent display**
- **Maximum external resolution:** 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys**
- **TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™,** magnifying glass
- **UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions**

### Dimensions3
- **15.6W" (Wx Dx H):** 14.68” x 9.65” x 1.26-1.41”; 372.8mm x 245.1mm x 32-35.8mm
- **Weight1:**
  - **Lithium Ion 6-cell:** supports optional Slicef battery (57Y4545) as 2nd battery at 6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slicef battery: up to 20.8 hr

### Chipset
- **Mobile Intel QM57 Express Chipset**
- **One slot (ExpressCard/34**
- **5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)**
- **Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), PCI Express Mini Card (50mm)**
- **IEEE 1394a-2000 standard (4-pin connector)**

### Pcle Mini Card
- **Two PCI Express Mini Card slots**
- **11a/b/g/n wireless**, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- **Wireless WAN upgradeable**
- **Modem:** 56K V.92® modem
- **Bluetooth®:** Bluetooth 2.1 wireless, LED indicator
- **Ethernet:** Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- **Intel AMT:** Intel Active Management Technology (IATM)
- **Audio support:** High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- **Security:** Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip:** Trusted Platform Module, TCG 1.2-compliant
- **Fingerprint reader:** UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Battery - life10
- **9-cell plus Slice battery:** up to 6.2 hr; 6-cell:** up to 10.4 hr

### Preloaded operating system20
- **Genuine Windows® 7 Professional 64**

### Preloaded applications14 (only some listed)
- **Rescue and Recovery™**
- **Access Connections™**
- **Password Manager**
- **Fingerprint Software (fingerprint models)**
- **ThinkVantage System Update**
- **ThinkVantage Power Manager**
- **ThinkVantage Toolbox**
- **Norton™ Internet Security 2011**
- **Microsoft Office 2010 preloaded:**
  - purchase product key to activate
  - **Microsoft Research AutoCollage**
  - **Roxio MyDVD® (DVD+RW)**
  - **Corel® WinDVD® (DVD+RW)**

### Supports ThinkVantage® technologies
- **56-watt AC adapter**
- **ThinkPad Roll Cage (one-piece magnesium frame)**
- **EPEAT™ Gold rating**
- **ENERGY STAR® 5.0-compliant RoHS-compliant**
- **International Warranty Service**
- **24 hour x 7 day toll-free support during the warranty period via 800-426-7378**

### Limited warranty22
- **3-years/1yr battery depot repair service / service upgrades available**
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Intel vPro</th>
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<th>Availability date</th>
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<td>i5-560M</td>
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<td>2GBx1</td>
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<td>15.6” HD+</td>
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<td>Blue</td>
<td>vPro</td>
<td>Pro 64</td>
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- This model has a depot repair service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

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<th>Positioning</th>
<th>Processor</th>
<th>Memory</th>
<th>SATA DVD:RW</th>
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<th>Sata disk</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Optimus graphics</th>
<th>Keyboard</th>
<th>TrackPoint</th>
<th>Touchpad</th>
<th>ThinkLight™</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>i5-560M</td>
<td>2GB std</td>
<td>DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable</td>
<td>2GB</td>
<td>15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight</td>
<td>Camera</td>
<td>NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA® NVS™ 3100M, PCI Express™ x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
<td>TrackPoint™ pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
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<td>4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets</td>
<td>1GB</td>
<td>One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
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<tr>
<td></td>
<td></td>
<td>2GBx1</td>
<td>DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable</td>
<td>2GB</td>
<td>15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight</td>
<td>Camera</td>
<td>NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA® NVS™ 3100M, PCI Express™ x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
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</table>

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+R)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- 24 hour x 7 day 10 toll-free support during the warranty period17 via 800-426-7378

- ThinkPlus® 3-year LOR® 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 4-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced September 28, 2010
US model withdrawn effective June 2011

(17) Lenovo (KN1-15) June 2011

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**Specifications**
- **Dimensions**: 15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight
- **Camera**: Camera on top of screen, 2.0-megapixel, fixed focus
- **Audio support**: Intel AMT
- **Bluetooth**: Bluetooth 2.1 wireless, LED indicator
- **Ethernet**: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- **Intel AMT**: Intel Active Management Technology (IAMT)
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**: Trusted Platform Module, TCG 1.2-compliant
- **Touchpad**: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions
- **Keyboard**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- **TrackPoint**: TrackPoint™ pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions
- **Battery**: Lithium Ion 9-cell, supports optional Slick battery, (57Y4545) as 2nd battery up to 6.1 hr; 9-cell: up to 10.3 hr; 9-cell plus Slick battery: up to 20.7 hr
- **Chipset**: Mobile Intel GM57 Express Chipset
- **ExpressCard/34**: One slot (ExpressCard/34)
- **Multicard reader**: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- **Ports**: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)
- **PCle Mini Card**: Two PCI Express Mini Card slots 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradeable
- **Modem**: 56K V.92® modem
- **Bluetooth**: Bluetooth 2.1 wireless, LED indicator
- **Internet**: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- **Intel AMT**: Intel Active Management Technology (IAMT)
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**: Trusted Platform Module, TCG 1.2-compliant

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Lenovo (KN1-15) June 2011
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<th>Processor</th>
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<th>Wide-screen display</th>
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<th>Battery life</th>
<th>Workhorse (W)</th>
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<td>Pro 64</td>
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</table>

*These models have a depot repair service 3-year limited warranty*

*These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

Preloaded operating system:
- Some: Genuine Windows® 7 Professional
- Some: Genuine Windows® 7 Professional 64

Preloaded applications:
- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint readers)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash Player®
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (Dvd+Rw)
- Roxio® Professional 32
- Corel® WinDVD® (Dvd+Rw)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Lenovo® ThinkPlus® 3-year LOR 4x5 NBD
Lenovo® ThinkPlus 4-year LOR 9x5 NBD
Lenovo® ThinkPlus 5-year LOR 9x5 NBD
Lenovo® ThinkPlus 4-year P&L P/U Depot
Lenovo® ThinkPlus 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced January 7, March 2, April 6, May 4, or July 6, 2010

US models withdrawn effective June 2011

(KN1-8) June 2011

Lenovo®
ThinkPad T510 4349 (Education) - Windows 7 - withdrawn

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<tr>
<th>Type-model</th>
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<th>Base turbo/ (GHz) Memory</th>
<th>Max turbo (GHz) Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCl e Mini Card WWAN</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Blueto-oth</th>
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<th>Preload</th>
<th>Avail date</th>
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<tr>
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<td>i5-520M</td>
<td>2.40 2.93 2GB 15.6&quot; HD</td>
<td>2.0M 250G 6400 11b/g/n</td>
<td>11b/g/n</td>
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<td>Finger</td>
<td>Blue vPro</td>
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<td>Intel 8200</td>
<td>Gobi 2000</td>
<td>AT&amp;T</td>
<td>Finger vPro</td>
<td>Pro 32</td>
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<td>2.0M 320G 7200</td>
<td>Intel 6200</td>
<td>Gobi 2000</td>
<td>AT&amp;T</td>
<td>Finger vPro</td>
<td>Pro 32</td>
<td>Jan 10</td>
<td></td>
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</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use for qualified students and teachers.
- Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Positioning Processor: Premier performance; two spindles
Intel Core i5 processor i5-520M or i5-540M with dual-core.

Memory

- 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz
- 3-channel capable, two 204-pin SO-DIMM sockets;
- Standard memory in one socket; one socket available

SATA DVD:RW

- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

SATA disk

- SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System®

Widescreen display

- Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera

- Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.
- Maximum external resolution: 2560x1600 (DisplayPort@60Hz: 2048x1536 (VGA)@75Hz: 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard

- 89-key, ThinkVantage button, spill-resistant, multidimensional Fn keys

TrackPoint®

- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®
- Magnifying glass UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Touchpad

- ThinkLight™

Dimensions³

- 15.6W” (396mm) : 14.8“ x 9.65“ x 1.26-1.41“; 372.8mm x 245.1mm x 32-35.8mm

Weight³

- 3-cell: 3.9 lb (1.77kg)
- 6-cell: 5.66 lb (2.57kg); 9-cell: 8.16 lb (3.70kg)

Battery - type: Li-ion 6-cell

- Battery - life: up to 10.8 hr; 9-cell: up to 20.8 hr

Chipset

- Mobile Intel QM57 Express Chipset

ExpressCard/34

- One slot (ExpressCard/34)

Smart Card read

- None

Multicard reader

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports

- Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RF-11), ethernet (RF-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCLe Mini Card

- 11b/g/n, wireless, Intel Centrino Advanced-N 6200, 2x2

PCl e Mini Card WWAN

- 11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6200, 2x2

IPv6 Support

- Bluetooth 2.1 wireless, LED indicator

Ethernet

- Non-VA pro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 vPro model; Intel 8257LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT

- Intel Active Management Technology (iAMT)

Audio support

- Intel Hi-Fi

Security

- Power-on password, hard disk password, supervisor password, security keyhole

Security chip

- Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty³

- 3-years/1-yt - battery depot repair service / service upgrades22 available

Preloaded operating system²⁵

- Genuine Windows 7

Preloaded applications³⁴

- E3I/E4U models: Education software
- Microsoft Office Ultimate 2007 Academic Edition (and CD)
- Education software
- Adobe Digital School Collection
- Canon Creative Suite 4 (DVD)
- Photoshop Elements 7 (DVD)
- Premiere Elements 7 (and DVD)
- Acrobat 9 Professional
- Contribute CS4 (and DVD)
- SoundEcho CS4 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Firewall Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio Creator Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies

65-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service17

24 hour x 7 day 24/7 toll-free support during the warranty period17 via 800-426-7378

Lenovo Limited Warranty

© Lenovo (KN1-11) April 2011

See footnotes for important warranty information

US models announced January 7, 2010
US models withdrawn effective April 2011
ThinkPad® T510 4349 (Discrete) - Education (Windows 7) - withdrawn

See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective April 2011

Positioning
Processor: Premier performance; two spindles

Memory: 2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

SATA DVD:RW
DDRW: standard memory in both sockets; no sockets available;

DDDR3: standard memory in one socket; one socket available

Dimensions3
Width: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight,

Camera: 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Battery - life10
14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm

Some: 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Chipset
ExpressCard/34
Smart Card reader
Multicard reader
Ports

PCle Mini Card Intel 6200™ Gobi™ 2000

Carrier
Modem
Bluetooth™
Ethernet
Intel AMT
Audio support
Security
Security chip
Fingerprint reader

Limited warranty3 3-years/1-yr - battery depot repair service / service upgrades22 available

See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective April 2011

Preloaded operating system25
- Genuine Windows® 7 Professional 32

Preloaded applications14 (only some listed)
- Education software - Microsoft® Office OneNote® 2007 (and CD)
- Adobe Digital School Collection
- Instructor Resources (and DVD)
- Photoshop Elements 7 (DVD)
- Premiere Elements 7 (DVD)
- Acrobat 9 Professional (DVD)
- Soundbooth CS4 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service17
24 hour x 7 day17 toll-free support during the warranty period17 via 800-426-7378

ThinkPlus® 3-year LOR14 8x5 NBD 45K6021

ThinkPlus® 4-year LOR14 9x5 NBD 45K6022

ThinkPlus® 5-year LOR 9x5 NBD 45K6024

ThinkPlus® 4-year P&L P/U Depot 45K6025

ThinkPlus® 5-year P&L P/U Depot 45K6029

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Lenovo
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(KN1-12) April 2011

Preempted by Lenovo

See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective April 2011

Preempted by Lenovo

These models have a depot repair service 3-year limited warranty
These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.
### Table: ThinkPad T510 4384 (Onsite) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor (GHz)</th>
<th>Cache</th>
<th>Memory</th>
<th>Display</th>
<th>Hard Disk</th>
<th>OS</th>
<th>Warranty</th>
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<tbody>
<tr>
<td>4384-2MU</td>
<td>i5-520M</td>
<td>3MB</td>
<td>4GB</td>
<td>15.6&quot; HD</td>
<td>500GB 7200</td>
<td>Windows 7</td>
<td>3-year limited warranty</td>
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<td>4384-3AU</td>
<td>i5-520M</td>
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<td>4GB</td>
<td>15.6&quot; HD</td>
<td>320GB 5400</td>
<td>Windows 7</td>
<td>3-year limited warranty</td>
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<td>4384-4BU</td>
<td>i5-520M</td>
<td>3MB</td>
<td>1GB</td>
<td>15.6&quot; HD</td>
<td>80GB SSD</td>
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<td>3-year limited warranty</td>
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<td>i5-520M</td>
<td>3MB</td>
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<td>160GB SSD</td>
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<td>160GB SSD</td>
<td>Windows 7</td>
<td>3-year limited warranty</td>
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<td>1GB</td>
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<td>i5-520M</td>
<td>3MB</td>
<td>1GB</td>
<td>15.6&quot; HD</td>
<td>160GB SSD</td>
<td>Windows 7</td>
<td>3-year limited warranty</td>
</tr>
</tbody>
</table>

*Some models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty.

*These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded: purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio® MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

### Chipset

- Mobile Intel GM57 Express Chipset
- One slot (ExpressCard/34)
- None

### Smart Card reader Ports

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modern (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

### PCIe Mini Card

- Supports ThinkVantage® technologies
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service® 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Security

- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

- Trusted Platform Module, TCG 1.2-compliant

### FingerPrint reader

- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator

### Post-warranty availability agreements

- Lenovo.com/thinkplus/warranty

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See footnotes for important warranty information.

US models announced January 7, April 6, May 4, July 6, 2010, or January 11, 2011

US models withdrawn effective June 2011

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(KN1-9) June 2011
### Type-model  Processor  Base turbo Memory  Wide-screen display Camera  Disk  PClé Mini Card  PClé Mini Card  Finger reader  Battery  Workhorse (W)  Availability
4384-2RU  i7-620M  2.66  3.33  2GB  15.6" HD+  2.0M  320G  7200  Intel 6200  Finger Blue  9  vPro  Pro  32  W  G  P  Feb 10
4384-3BU  i5-520M  2.40  2.93  3GB  15.6" HD  2.0M  320G  7200  Intel 6200  Finger Blue  0  vPro  Pro  32  W  G  P  Feb 10
4384-H2U  i5-540M  2.53  3.06  4GB  15.6" HD+  2.0M  160G  SSD  Intel 6200  Finger Blue  0  vPro  Pro  64  G  P  May 10
4384-H2U  i5-540M  2.53  3.06  4GB  15.6" HD+  2.0M  160G  SSD  Intel 6200  Finger Blue  0  vPro  Pro  64  G  P  July 10

[Some models are part of the Global Models Plus program with limited onsite service; 3-year limited warranty]
[These systems are Microsoft Office 2010 Product Key Ready (010PKR)]

### Positioning
Processor
- Premier performance; two spindles
- Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, or
- Intel Core i7 processor i7-620M with dual-core,
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
- Intel Turbo Boost, Hyper-Threading technology;

Memory
- 2GB, 3GB, or 4GB std / 8GB max / PC3-8500 1066MHz, or
- 2GB, 4GB, or 8GB std / 8GB max / PC3-10600 1333MHz;

Battery - life
- 12 hours,
- 9-cell plus Slice battery: up to 4.7 hr; supports optional Slice battery (57Y4545) as 2nd battery;

Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- Multimedia keyboard;

Discrete graphics
- NVIDIA® NVS™ 3000M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);

Dimensions
- 15.6"WxHxD: 14.68" x 9.65" x 1.26-1.41";
- 372.8mm x 245.1mm x 32-35.8mm;

Chipset
- Mobile Intel QM57 Express Chipset;
- Supports ThinkVantage technologies;

Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Fingerpoint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011

See footnotes for important warranty information

© Lenovo

ThinkPad T510 4384 (Discrete) - Onsite (Windows 7) - withdrawn
Personal Systems Reference (PSREF)

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PClé Mini Card</th>
<th>PClé Mini Card</th>
<th>Finger reader</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Availability</th>
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<tbody>
<tr>
<td>4384-2RU</td>
<td>i7-620M</td>
<td>2.66</td>
<td>3.33</td>
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<td>15.6&quot; HD+</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 6200™</td>
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<td>vPro</td>
<td>Pro 32 W G P</td>
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<td>160G SSD</td>
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**ThinkPad T510i 4313 (TopSeller) - XP with Win 7 License - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA optical</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Preload</th>
<th>Avail date</th>
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<td>2GB</td>
<td>15.6&quot; HD</td>
<td>2.0M</td>
<td>250G</td>
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<td>Intel 1000</td>
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<td>320G</td>
<td>7200</td>
<td>Intel 1000</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
<td>6</td>
<td>XP Pro</td>
<td>Feb 10</td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Memory</th>
<th>SATA DVD±RW UltraBay Enhanced SATA disk</th>
<th>Widescreen display</th>
<th>Camera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>2GB std</td>
<td>DVD burner, SATA 1.5Gb/s, 12.7mm UltraBay Enhanced, removable</td>
<td>15.6&quot; (396mm) HD (1366x768) color, anti-glare, LED backlight.</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
</tr>
<tr>
<td></td>
<td>std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets</td>
<td>One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, bottom access</td>
<td>220 nits, 16:9 aspect ratio, 500:1 contrast ratio</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-italics: standard memory in one socket; one socket available</td>
<td>Supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
<td></td>
</tr>
</tbody>
</table>

**Integrated graphics**

- **Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715), supports dual independent display, **Maximum external resolution**: 2560x1600 (DisplayPort) @60Hz, 2048x1536 (VGA) @75Hz, 1920x1200 @60Hz (single-link DVI-D via cable 45J9715)

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint" pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- **Height**: 15.6W (WxDxH): 2048x1536 (VGA) @75Hz, 1920x1200 @60Hz (single-link DVI-D via cable 45J9715)
- **Weight**: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight. 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- **Battery**: the keyboard to improve visibility in low-light conditions

**Chipset**

- Mobile Intel GM965 Express Chipset
- One slot (ExpressCard/34)
- Smart Card reader
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45)
- IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Limited warranty**

- **1-year** - depot repair service / service upgrades available

See footnotes for important warranty information

© Lenovo

US models announced February 2, 2010

US models withdrawn effective March 2010

(KNI-1) March 2010

Lenovo.com/thinkplus/warranty
**ThinkPad T510i 4313 (TopSeller) - Windows 7 - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display screen</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB rpm</th>
<th>Optical</th>
<th>Mini Card</th>
<th>Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4313-7EU</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>15.6'' HD</td>
<td>2.0M</td>
<td>250G</td>
<td>5400</td>
<td>DVD±RW</td>
<td>Intel 1000</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6</td>
<td>Feb 10</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program

### Preloaded operating system
- Genuine Windows® 7 Professional 32

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Roxio® Creator™ Business Edition (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- Next Generation ThinkPad Roll Cage (in display cover)
- EPEAT® Golden rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service™
- 24 hour x 7 day18 toll-free support during the warranty period 12 via 800-426-7378

### Limited warranty
- 1-year - depot repair service / service upgrades20 available

See footnotes for important warranty information
US model announced February 2, 2010
US model withdrawn effective March 2010

© Lenovo (KN1i-2) March 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>SATa optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4313-C2U</td>
<td>i3-370M</td>
<td>2.40 Gb</td>
<td>15.6&quot; HD</td>
<td>2.0M</td>
<td>250G</td>
<td>5400</td>
<td>DVD±RW</td>
<td>Intel 1000</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
<td>6</td>
<td>No</td>
<td>Pro 64</td>
<td>Jul 10</td>
</tr>
<tr>
<td>4313-C3U</td>
<td>i3-370M</td>
<td>2.40 Gb</td>
<td>15.6&quot; HD</td>
<td>2.0M</td>
<td>320G</td>
<td>7200</td>
<td>DVD±RW</td>
<td>Intel 1000</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
<td>6</td>
<td>No</td>
<td>Pro 64</td>
<td>Jul 10</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Preloaded operating system&lt;sup&gt;20&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Core™ i3 processor i3-370M with dual-core,</td>
<td>- Genuine Windows® 7 Professional 64</td>
</tr>
<tr>
<td>DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td></td>
</tr>
<tr>
<td>2GB std / 8GB max&lt;sup&gt;7&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>SATA-600</td>
<td></td>
</tr>
<tr>
<td>DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable</td>
<td></td>
</tr>
<tr>
<td>Ultrabay Enhanced</td>
<td></td>
</tr>
<tr>
<td>SATA disk</td>
<td></td>
</tr>
<tr>
<td>One bay for removable Ultrabay, Slim-supportable, 12.7mm high, bottom access</td>
<td></td>
</tr>
<tr>
<td>One bay for removable Ultrabay, Slim-supportable, 12.7mm high, bottom access; SATA 3.0Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td></td>
</tr>
<tr>
<td>Widescreen display</td>
<td></td>
</tr>
<tr>
<td>16.5&quot; (396mm) HD (1366x768) color, anti-glare, LED backlight,</td>
<td></td>
</tr>
<tr>
<td>Camera on top of screen, 2-megapixel, fixed focus</td>
<td></td>
</tr>
<tr>
<td>Integrated graphics</td>
<td></td>
</tr>
<tr>
<td>Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)</td>
<td></td>
</tr>
<tr>
<td>Dimensions&lt;sup&gt;8&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>15.6W (WxDxH): 14.65&quot; x 9.65&quot; x 1.26-1.41&quot;, 372.8mm x 245.1mm x 32.35-38.5mm</td>
<td></td>
</tr>
<tr>
<td>Case material</td>
<td></td>
</tr>
<tr>
<td>Battery - type</td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td></td>
</tr>
<tr>
<td>Lithium ion 6-cell, supports optional Slide battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slide battery: up to 20.8 hr</td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td></td>
</tr>
<tr>
<td>ExpressCard/34</td>
<td>Mobile Intel QM57 Express Chipset</td>
</tr>
<tr>
<td>Smart Card read</td>
<td>One slot (ExpressCard/34)</td>
</tr>
<tr>
<td>Multicard reader Ports</td>
<td>None</td>
</tr>
<tr>
<td>Two 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)</td>
<td></td>
</tr>
<tr>
<td>PCle Mini Card</td>
<td></td>
</tr>
<tr>
<td>Intel 1000 WWAN upg</td>
<td>Two PCI Express Mini Card slots</td>
</tr>
<tr>
<td>Intel Centrino® Wireless-N 1000, 1x2</td>
<td></td>
</tr>
<tr>
<td>Modern</td>
<td></td>
</tr>
<tr>
<td>56K V.92 modem</td>
<td></td>
</tr>
<tr>
<td>Bluetooth&lt;sup&gt;™&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Bluetooth 2.1 wireless, LED indicator</td>
<td></td>
</tr>
<tr>
<td>Ethernet</td>
<td></td>
</tr>
<tr>
<td>Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCle x1</td>
<td></td>
</tr>
<tr>
<td>Intel Active Management Technology (AMT)</td>
<td></td>
</tr>
<tr>
<td>Audio support</td>
<td></td>
</tr>
<tr>
<td>High Definition (HD) Audio, Conexant 2056 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack</td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td></td>
</tr>
<tr>
<td>Power-on password, hard disk password, supervisor password, security key, security chip</td>
<td></td>
</tr>
<tr>
<td>Security chip</td>
<td></td>
</tr>
<tr>
<td>Trusted Platform Module, TCG 1.2-compliant</td>
<td></td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty&lt;sup&gt;®&lt;/sup&gt; 1-year - depot repair service / service upgrades&lt;sup&gt;22&lt;/sup&gt; available</td>
<td></td>
</tr>
</tbody>
</table>

See footnotes for important warranty information
US models announced July 6, 2010
US models withdrawn effective June 2011

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(KN1i-3) June 2011

ThinkPad™, ThinkPad Roll Cage, ThinkPlus™, EPEAT® Gold rating, ENERGY STAR® 5.0-compliant, International Warranty Service™, 24 hour x 7 day toll-free support during the warranty period "as shipped" via lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Mobile workstation; two spindles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel® Core™ i7 processor i7-720QM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 6MB cache</td>
</tr>
<tr>
<td>Memory</td>
<td>2GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets</td>
</tr>
<tr>
<td>SATA DVD+RW</td>
<td>DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable</td>
</tr>
<tr>
<td>Ultrabay Enhanced</td>
<td>One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradeable, supports second disk, Shock Mounted Hard Drive, Active Protection System</td>
</tr>
<tr>
<td>SATA disk</td>
<td>320GB (7200 rpm) / SATA 3.0Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradeable, supports second disk, Shock Mounted Hard Drive, Active Protection System</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>15.6&quot; (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut</td>
</tr>
<tr>
<td>Color calibration</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
</tr>
<tr>
<td>Discrete graphics</td>
<td>NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>TrackPoint</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar® magnifying glass</td>
</tr>
<tr>
<td>Touchpad</td>
<td>UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions labeled, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>Supports ThinkVantage technologies</td>
</tr>
<tr>
<td>Dimensions^3</td>
<td>15.6&quot;W (WxDxH): 14.68&quot; x 9.65&quot; x 1.26-1.41&quot;; 372.8mm x 245.1mm x 32-35.8mm</td>
</tr>
<tr>
<td>Weight^4</td>
<td>6-cell: starting at 5.66 lb (2.57kg); 9-cell: up to 5.1 hr; 9-cell plus slice battery: up to 10.5 hr</td>
</tr>
<tr>
<td>Case material</td>
<td>Glass-fiber reinforced plastic</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 9-cell, supports optional Slic battery (57Y4545) as 2nd battery at bottom 6-cell: up to 3.0 hr; 9-cell: up to 5.1 hr; 9-cell plus slice battery: up to 10.5 hr</td>
</tr>
<tr>
<td>Battery - life - type</td>
<td>135-watt AC adapter</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel QM57 Express Chipset</td>
</tr>
<tr>
<td>ExpressCard/34</td>
<td>One slot (ExpressCard/34)</td>
</tr>
<tr>
<td>Smart Card Read</td>
<td>None</td>
</tr>
<tr>
<td>Multicard Reader Ports</td>
<td>5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)</td>
</tr>
<tr>
<td>Ports</td>
<td>Two USB 3.0, one Powered USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)</td>
</tr>
<tr>
<td>PCIe Mini Card slots</td>
<td>Two PCI Express Mini Card slots 11a/b/g/n wireless®, PCIe Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3 Wireless WAN upgradable</td>
</tr>
<tr>
<td>Modern</td>
<td>56K V.92® modem</td>
</tr>
<tr>
<td>Bluetooth®</td>
<td>Bluetooth 2.1 wireless, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (iAMT)</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>UPEK FingerPrint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty^2</td>
<td>3-years/1-yr battery - depot repair service / service upgrades^2 available</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- Power-packed engineering with Open GL graphics and ISV certifications

**Preloaded operating system**
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+R)
- Roxio MyDVD® (DVD+R)
- Corel® WinDVD® (DVD+R)

**Supports ThinkVantage technologies**

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant RoHS-compliant

International Warranty Service 24 hour x 7 day toll-free support during the warranty period^19 via 800-426-7378

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

© Lenovo

US model announced February 2, 2010

US model withdrawn effective October 2010
**ThinkPad W510 4319 (TopSeller) - Windows 7 - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo GHz</th>
<th>Display Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Multi-Touch Screen</th>
<th>Disk</th>
<th>SATA GB</th>
<th>RAID</th>
<th>PCle Mini Card WWAN</th>
<th>PCle Mini Card WWAN</th>
<th>Carrier</th>
<th>Color calib</th>
<th>Intel vPro Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4319-2NU</td>
<td>i7-720QM</td>
<td>1.60 2.80</td>
<td>2GBx1 1066</td>
<td>15.6&quot; HD+</td>
<td>32GB 7200</td>
<td>None</td>
<td>Intel 6300™</td>
<td>WWAN upg</td>
<td>vPro Pro 32 Jan 10</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>4319-2PU</td>
<td>i7-720QM</td>
<td>1.60 2.80</td>
<td>2GBx2 1066</td>
<td>15.6&quot; FHD</td>
<td>32GB 7200</td>
<td>None</td>
<td>Intel 6300™</td>
<td>WWAN upg</td>
<td>vPro Pro 64 Jan 10</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4319-2OU</td>
<td>i7-720QM</td>
<td>1.60 2.80</td>
<td>2GBx2 1066</td>
<td>15.6&quot; FHD</td>
<td>32GB 7200</td>
<td>None</td>
<td>Intel 6300™</td>
<td>Gobi 2000</td>
<td>vPro Pro 64 Jan 10</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4319-2RU</td>
<td>i7-820QM</td>
<td>1.73 3.06</td>
<td>2GBx2 1066</td>
<td>15.6&quot; FHD Multi</td>
<td>32GB 7200</td>
<td>None</td>
<td>Intel 6300™</td>
<td>WWAN upg</td>
<td>X-Rite vPro Pro 64 Jan 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4319-4BU</td>
<td>i7-720QM</td>
<td>1.60 2.80</td>
<td>2GBx2 1066</td>
<td>15.6&quot; FHD</td>
<td>32GB 7200</td>
<td>None</td>
<td>Intel 6300™</td>
<td>Gobi 2000</td>
<td>AT&amp;T vPro Pro 64 Feb 10</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4319-4MU</td>
<td>i7-720QM</td>
<td>1.60 2.80</td>
<td>2GBx2 1066</td>
<td>15.6&quot; HD+</td>
<td>32GB 7200</td>
<td>None</td>
<td>Intel 6300™</td>
<td>AT &amp; T</td>
<td>vPro Pro 64 Mar 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4319-64U</td>
<td>i7-720QM</td>
<td>1.60 2.80</td>
<td>2GBx2 1066</td>
<td>15.6&quot; HD+</td>
<td>32GB 7200</td>
<td>None</td>
<td>Intel 6300™</td>
<td>WWAN upg</td>
<td>vPro Pro 64 Sep 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Power-packed engineering with Open GL graphics and ISV certifications**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

**Positioning**
- Mobile workstation; two spindles
- Intel® Core™ i7 processor i7-720QM or i7-820QM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; i7-720QM: 6MB cache; i7-820QM: 8MB cache

**Memory**
- 2GB or 4GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

**SATA DVD/RW UltraBay Enhanced SATA disk**
- DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
- 320GB (7200 rpm)
- SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**
- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16.9 aspect ratio, 500:1 contrast ratio, 60% Gain
- Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16.9 aspect ratio, 500:1 contrast ratio, 95% Gain
- Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 242 nits, 16.9 aspect ratio, 500:1 contrast ratio, 95% Gain, MultiTouch (touchscreen supports two-finger touch)

**Color calibration Camera**
- Some: huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest
- Camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics**
- NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions (WxDxH)™**
- HD+: 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm
- FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32-38.6mm
- MultiTouch: 14.68" x 9.65" x 1.35-1.57"; 372.8mm x 245.1mm x 34-39.8mm
- 6-cell: starting at 5.56 lb (2.5kg); 9-cell: starting at 6.01 lb (2.72kg)

**Battery - type Battery - life™**
- Case material: Glass-fiber reinforced plastic, Base: Carbon-fiber reinforced plastic
- Lithium Ion 9-cell, supports optional Slice battery (574545S) as 2nd battery at bottom
- 6-cell: up to 3.0 hr; 9-cell: up to 5.1 hr; 9-cell plus Slicebattery: up to 10.5 hr

**Chipset**
- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)

**Smart Card Read Multicard Reader Ports**
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Two USB 3.0, one Powered USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**PCle Mini Card Intel 6300™ WWAN upg**
- Two PCI Express Mini Card slots
- Some: Wireless WAN upgradable
- Intel 6300™ WWAN upgradable
- Gobi™ 2000

**Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support Security chip Fingerprint reader Limited warranty™**
- Some: Wireless WAN, Qualcomm chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider
- Some: AT&T, contract required with service provider
- 59K V92 modem
- Bluetooth 2.1 wireless, LED indicator
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant 20865 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TCG 1.2-compliant
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
- 3-years/1-yr battery - depot repair service / service upgrades™ available

**Preloaded operating system™**
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

**Preloaded applications™**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader™
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator™ Business Edition (DVD:RW)
- Roxio MyDVD™ (DVD:RW)
- Corel® WinDVD™ (DVD:RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite®

**Supports ThinkVantage™ technologies**
- 135-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service™
- 24 hour x 7 day™ toll-free support during the warranty period via 800-426-7378

**See footnotes for important warranty information**

US models announced January 7, February 2, March 2, or September 28, 2010
US models withdrawn effective February 2010 or June 2011

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(KN1W-1) June 2011
These small and medium business (SMB) models are part of the US TopSeller™ Program
Power-packed engineering with Open GL graphics and ISV certifications
These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system²⁰
- Genuine Windows® 7 Professional 64

Preloaded applications²¹ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- Norton™ Internet Security 2011
- Adobe® Reader
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
135-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service²² 24 hour x 7 day²⁴ toll-free support during the warranty period²² via 800-426-7378

Limited warranty²³ 3-years/1-yr battery - depot repair service / service upgrades²² available

See footnotes for important warranty information
© Lenovo
US models announced July 13 or September 28, 2010
US models withdrawn effective February or June 2011

(KN1W-5) June 2011
ThinkPad® W510 4389 (Windows 7) - July 2010 - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA (GB)</th>
<th>RAID</th>
<th>Mini Card</th>
<th>Smart Card</th>
<th>Finger print</th>
<th>Blue- tooth</th>
<th>Intel Pref load Gbi</th>
<th>Workhorse (W)</th>
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</table>

- Power-packed engineering with Open GL graphics and ISV certifications
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning

Processor

Intel® Core™ i5 processor i5-520M with dual-core, or Intel® Core™ i7 processor i7-620M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; i5-2M: 3MB cache; i7-620M: 4MB cache

Memory

2GB, 4GB, or 8GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

SATA DVD:RW UltraBay Enhanced Sata disk

DVD burner, SATA 1.5GB/s, 12.7mm UltraBay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

160GB (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, removable, upgradable, supports second disk, Shock Mounted Hard Drive, Active Protection System™

Widescreen display

Some: 15.6" (396mm) HD (1366x768) color, anti-glace, LED backlight, 220 nits, 16.9 aspect ratio, 50:1 contrast ratio, 60% Gamut

Some: 15.6" (396mm) HD+ (1600x900) color, anti-glace, LED backlight, 220 nits, 16.9 aspect ratio, 50:1 contrast ratio, 60% Gamut

Some: 15.6" (396mm) HD+ (1600x900) color, anti-glace, LED backlight, 270 nits, 16.9 aspect ratio, 50:1 contrast ratio, 95% Gamut

Color calibration

Camera

None

Some: camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics

NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

Mobile workstation; two spindles

Intel® Core™ i5 processor i5-520M with dual-core, or Intel® Core™ i7 processor i7-620M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology;

Mobile Intel QM57 Express Chipset

Up to 3.0 hr; 9-cell plus slice battery: up to 5.1 hr; 9-cell: up to 10.5 hr

Battery - life

ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

Illuminates the keyboard to improve visibility in low-light conditions, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions

Illuminates the keyboard to improve visibility in low-light conditions, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch

Chipset

Mobile Intel GM57 Express Chipset

Select (One ExpressCard/34)

Some: Smart card reader

Some: Smart card reader

Multicard Reader Ports

2 in 1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Two USB 3.0, one Powered USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

PCle Mini Card

Two PCI Express Mini Card slots

11a/b/g/n wireless®, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradeable

Modem Bluetooth™

56K V.92 modem

Some: Bluetooth 2.1 wireless, LED indicator

Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel Active Management Technology (iAMT)

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty

3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information

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US models announced July 13, 2010

US models withdrawn effective February or June 2011

Preloaded operating system22

- Some: Genuine Windows® 7
- Some: Genuine Windows 7 Professional 64

Preloaded applications14 (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio® MyDVD® (32:32:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies

135-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service25

24 hour x 7 day10 toll-free support during the warranty period19 via 800-426-7378

ThinkPlus™ 3-year LOR® 9x5 NBD 41C9176

ThinkPlus 4-year LOR 9x5 NBD 41C9177

ThinkPlus 5-year LOR 9x5 NBD 41C9178

ThinkPlus 4-year P&L P/U Depot 41C9187

ThinkPlus 5-year P&L P/U Depot 41C9180

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad W510 4391 (Onsite) - Windows 7 - withdrawn

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base/Max turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>RAID</th>
<th>PCle Mini Card</th>
<th>Blue/</th>
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<th>Battery</th>
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<td>i7-720QM</td>
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- These models are part of the Global Models Plus program with limited onsite service^3 3-year limited warranty
- Power-packed engineering with Open GL graphics and ISV certifications
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor

Mobile workstation; two spindles

Intel® Core™ i7 processor i7-720QM or i7-820QM with quad-core.

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology;

i7-720QM: 6MB cache; i7-820QM: 8MB cache

Memory

2GB or 4GB std / 16GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3,

non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

SATA DVD±RW

UltraBay Enhanced

SATA disk

DVD burner, SATA 1.5Gb/s, 12.7mm UltraBay Enhanced, removable

One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, bottom access

250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports second disk, Shock Mounted Hard Drive, Active Protection System™

Widescreen display

Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlit, 220 nits, 16.9 aspect ratio, 500:1 contrast ratio, 60% Gamut

Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlit, 220 nits, 16.9 aspect ratio, 500:1 contrast ratio, 60% Gamut

Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlit, 270 nits, 16.9 aspect ratio, 500:1 contrast ratio, 95% Gamut

Color calibration

Camera

some: camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics

NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory, analog external monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display

Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TouchPoint™

TouchPoint™ pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions (WxDxH)^3

HD & HD+: 14.68 x 9.65 x 1.26-1.41", 372.8mm x 245.1mm x 32-35.8mm

6-cell: starting at 6.01 lb (2.72kg); 9-cell: starting at 6.01 lb (2.72kg)

Weight^3

Case material

Battery - type

Battery - life^2

6-cell: up to 3.0 hr; 9-cell: up to 5.1 hr; 9-cell plus slice battery: up to 10.5 hr

Chipset

Mobile Intel GM57 Express Chipset

ExpressCard/34

Smart Card Reader

None

Multicard Reader

Ports

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Two USB 3.0, one USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modular (RJ-11, Ethernet, IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

PCIe Mini Card

Inte 6200^2

Intel 6300^2

WWAN upg

Modem

56K V.92 modem

Some: Bluetooth 2.1 wireless, LED indicator

Ethernet

Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel Active Management Technology (AMT)

High Definition (HD) Audio, Conexant 20586 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Some:

Security Chip

Fingerprint reader

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty^4 3-years/1-year battery, limited onsite service^3, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades^3 available

Preloaded operating system^2

- Some: Genuine Windows® 7 Professional
- Some: Genuine Windows® 7 Professional 64

Preloaded applications^4 (only some listed)

- Rescue and Recovery®
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live® Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

ENERGY STAR®

EPEAT® Gold rating

Certifications

135-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPETM Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service^17 24 hour x 7 day® toll-free support during the warranty period^18 via 800-426-7378

ThinkPlus® 4-year LOR 9x5 NBD

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US models announced on January 7 or August 3, 2010

US models withdrawn effective June 2011

(KN1W3-June 2011)
### Preloaded operating system

- **Some**: Genuine Windows® 7 Professional 32
- **Some**: Genuine Windows 7 Professional 64

### Preloaded applications

- Rescue and Recovery®
- Access Connections®
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Limited warranty

- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time/service upgrades® available

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**Positioning**

**Processor**

- **Mobile workstation; two spindles**
  - **Intel® Core™ i5 processor i5-520M with dual-core,** or
  - **Intel Core i7 processor i7-620M with dual-core,**
  - **DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
  - **Turbo Boost, Hyper-Threading technology,**
  - **i5-520M: 3MB cache; i7-620M: 6MB cache**

**Memory**

- **2GB, 4GB, or 8GB std / 8GB max**, or
  - **PC3-8500 1066MHz or PC3-10600 1333MHz DDR3,** or
  - **non-callable, both 204-pin SO-DIMM sockets**

**SATA DVD:RW Ultrabay Enhanced SATA disk**

- **One bay for removable devices,** Ultrabay Slim-compatible, 12.7mm high, bottom access
  - **160GB** (7200 rpm), **250GB** (5400 rpm), **320GB** (7200 rpm) / **500GB** (7200 rpm) / **SATA 3.0Gb/s,** or
  - **2.5" wide, 9.5mm high, removable, upgradable, supports second disk,** or
  - **Shock Mounted Hard Drive, Active Protection System**

**Widescreen display**

- **15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight,** or
  - **220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut**

**Color calibration**

- **None**

**Discrete graphics**

- **NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory,** or
  - **external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915),** or
  - **supports dual independent display,** or
  - **Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)**

**Keyboard**

- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys**

**TrackPoint® Touchpad**

- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys,** or
  - **TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass**

**ThinkLight™**

- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys,** or
  - **UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions**

**Chipset**

- **Mobile Intel GM57 Express Chipset**
  - **One slot (ExpressCard/34)**
  - **Some**: Smart Card reader
  - **Multicard Reader**

**Ports**

- **Two USB 3.0, one Powered USB 2.0, one USB 2.0eSATA combo port,** or
  - **external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45),** or
  - **IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)**

**PCIe Mini Card**

- **Two PCIe Express Mini Card slots**
  - **11a/b/g/n wireless®, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2**
  - **Wireless WAN upgradable**
  - **56K V.92® modem**

**Bluetooh®**

- **Some**: Bluetooth 2.1 wireless, LED indicator
  - **Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1**
  - **Intel Active Management Technology (AMT)**
  - **High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2**
  - **power-on password, hard disk password, supervisor password, security keyhole**

**Security**

- **Trusted Platform Module, TCG 1.2-compliant**
  - **Some**: UPEK fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

See footnotes for important warranty information

US models withdrawn effective February or June 2011

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ThinkPad® W510 4391 (Onsite) - Windows 7 (July 2010) - withdrawn

Personal Systems Reference (PSREF)

### Preloaded operating system

- **Some**: Genuine Windows® 7 Professional 32
- **Some**: Genuine Windows 7 Professional 64

### Preloaded applications

- Rescue and Recovery®
- Access Connections®
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Limited warranty

- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time/service upgrades® available

See footnotes for important warranty information

US models withdrawn effective February or June 2011

© Lenovo (KN1W-7) June 2011

ThinkPad® W510 4391 (Onsite) - Windows 7 (July 2010) - withdrawn

Personal Systems Reference (PSREF)
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Discrete graphics</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Color calibration</th>
<th>Battery cells</th>
<th>Intel vPro</th>
<th>Preload</th>
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<tbody>
<tr>
<td>4270-26U</td>
<td>i7-2620M</td>
<td>4GBx1</td>
<td>15.6&quot; HD 1000</td>
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<td>5000G</td>
<td>7200</td>
<td>Intel 6205™</td>
<td>WWAN upg</td>
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<td>Blue</td>
<td>None</td>
<td>9</td>
<td>vPro</td>
<td>Pro 64</td>
</tr>
</tbody>
</table>

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **Power-packed engineering with Open GL graphics and ISV certifications**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Positioning
- Mobile workstation: two spindle

### Memory
- **Dual-core model:** 16GB max, two 204-pin SO-DIMM sockets
- **Quad-core model:** 32GB max, four 204-pin SO-DIMM sockets
- **All:** PC3-10600 1333MHz DDR3, non-parity, dual-channel capable

### Optical Ultrabay
- DVD burner, 12.7mm Ubray Enhanced, removable
- One bay for removable devices. Ultrabay Slim-compatible, 12.7mm high, bottom access
  - **Some:** Solid State Drive (SSD) / SATA 3.0Gbps, 2.5" wide, 7mm high
  - **Some:** HDD / SATA 3.0Gbps, 2.5" wide, 7mm or 9.5mm high, Active Protection System™
  - **All:** removable, upgradeable, supports the second disc, Shock Mounted Hard Drive

### Widescreen display
- **Color:** 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

### Graphics
- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics,
- **NVIDIA Quadro** 1000M or 2000M, PCI Express® x16, 2GB memory,
- External analog monitor support via VGA 15-connector and digital monitor support via DisplayPort (supports single-link DVI-D via cables 45J7915);
  - **Supports:** three independent displays;
    - **Maximum external resolution:** 2560x1600 (DisplayPort) @60Hz;
    - 2048x1536 (VGA) @85Hz;
    - 1920x1200 @60Hz (single-link DVI-D via cables 45J7915)

### Keyboard
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint®
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

### ThinkLight™
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions (WxDxH)³
- **HD & HD+:** 14.68" x 9.65" x 1.25-1.40";
  - 372.8mm x 245.1mm x 31.8-36.6mm
- **FHD:** 14.68" x 9.65" x 1.29-1.44";
  - 372.8mm x 245.1mm x 32.8-36.6mm

### Weight²
- **6-cell:** starting at 5.40 lb (2.45kg);
  - **9-cell:** starting at 5.75 lb (2.61kg)

### Case material
- **Display cover:** Carbon-fiber / Glass-fiber hybrid;
- **Bottom:** Glass-fiber reinforced plastic without paint

### Battery - type
- Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom

### Battery - life¹⁰
- 6-cell: up to 6.5 hr;
  - 9-cell: up to 10.8 hr;
  - 9-cell plus slice battery: up to 21.6 hr

### Chipset
- Mobile Intel GM67 Express Chipset

### ExpressCard
- One slot (ExpressCard/34)

### Smart Card Reader
- None

### MultiCard Reader
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

### Ports
- Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort, ethernet (RJ-45)
- IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### PCle Mini Card WWAN¹⁴
- Two PCI Express Mini Card slots
  - 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2

### WWAN
- Wireless WWAN upgradable

### Modern
- 56K V92 modem

### Bluetooth™
- Bluetooth 3.0 wireless, LED indicator

### Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

### Intel AMT
- Intel Active Management Technology (iAMT)

### Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Fingerprint reader
- None

### Limited warranty⁰¹
- 1-year - depot repair service / service upgrades⁰² available

---

See footnotes for more detailed information

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US model announced February 22, 2011

US model withdrawn effective January 2012

KN3W-1 January 2012
### ThinkPad® W520 4276 (Optimus) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Discrete graphics</th>
<th>Camera</th>
<th>Disk</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card</th>
<th>Smart Card Reader</th>
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<th>Color calibration</th>
<th>Battery cells</th>
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<td>9 IAMT</td>
<td>vPro</td>
<td>Pro 64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Positioning**

- Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
- Intel Core® i7-2630QM processor (quad-core, 2.20GHz, 6MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology
- Intel Core® i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
- Intel Core® i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
- Intel Core® i7-2920XM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

**Memory**

- dual-core model: 16GB max, two 204-pin SO-DIMM sockets
- quad-core model: 32GB max, four 204-pin SO-DIMM sockets

**Optical Ultrabay SATA disk**

- DVD burner, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0 Gb/s, 2.5" wide, 7mm high
- Some: HDD / SATA 3.0 Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™

**Widescreen display**

- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glide, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
- Some: 15.6" (396mm) FHD (1920x1080) color, anti-glide, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut

**Color calibration**

- Some: hueyPRO Monitor Colorimeter by X-Rite color calibration sensor in palm rest
- HD720p resolution, wider view angle, low light sensitive, fixed focus

**Graphics**

- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M, PCi Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort® @ 60Hz; 2048x1536 (VGA @ 85Hz; 1366x768 @ 60Hz) (single-link DVI-D via cable 45J7915)

**Keyboard**

- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® Touchpad**

- TrackPoint® pointing device, *Press-to-Select,* Intelligent Scroll Bar®, magnifying glass
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions (WxDxH)**

- HD & HD+: 14.68 x 9.65 x 1.25-1.40; 372.8mm x 245.1mm x 32.8-36.6mm
- FHD: 14.68 x 9.65 x 1.29-1.44; 372.8mm x 245.1mm x 32.8-36.6mm
- 6-cell: starting at 5.40 lb (2.45kg)
- 9-cell: starting at 6.50 lb (2.96kg)

**Battery - type**

- Lithium Ion 6-cell or 9-cell, supports optional Slice battery
- 57Y4545 as 2nd battery at bottom
- 6-cell: up to 6.5 hr; 9-cell: up to 10.8 hr; 9-cell plus slice battery: up to 21.6 hr

**Chipset**

- Mobile Intel QM67 Express Chipset
- ExpressCard
- Smart Card Reader
- Multicard Reader
- Ports
  - Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Preloaded operating system**

- Genuine Windows® 7 Professional 64

**Ready to install applications**

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Skype® for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel® DVD MovieFactory® Lenovo Edition (DVD:RW)
- hueyPRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

**Power On Authentication**

- supports the security chip
- supports the second disk, Shock Mounted Hard Drive

**Battery - Technology**

- Supports ThinkVantage® technologies

- 170-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service (24 hour x 7 day) toll-free support during the warranty period via 800-426-7378

**Limited warranty**

- 3-years/1-yr battery - depot repair service / service upgrades available

---

See footnotes for more detailed information
US models announced February 22, March 1, or June 21, 2011
US models withdrawn effective November 2011 or January 2012

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(KN3W-2) January 2012
ThinkPad W700 2758 (TopSeller) - withdrawn

**Type-model | Processor | GHz Memory | Wide-screen display area | Cam-era style | Discrete graphics memory | Disk(s) (GB) | RAID | SATA | Mini PCIe or Turbo | Card slot | Color calib | Digitizer | Preload | Avail date**

2758-28U T9400 2.53 GHz 17" WXGA+ Cam 1GB 2x160G 7200 0 DVD±RW +Intel 5300a
2758-4SU T9600 2.80 GHz 17" WXGA+ Cam 512MB 2x160G 7200 2 DVD±RW +Intel 5300 2G Turbo
2758-29U X9100 3.06 GHz 17" WXGA+ Cam 1GB 2x250G 5400 1 DVD±RW Intel 5300
2758-MP9 Q9000 2.00 GHz 17" WXGA+ Cam 1GB 180G SSD DVD±RW +Intel 5300 /54
2758-MWU P8700 2.53 GHz 17" WXGA+ Cam 512MB 1x320G DVD±RW +Intel 5300 /54
2758-MXU T9900 3.06 GHz 17" WXGA+ Cam 512MB 2x320G DVD±RW +Intel 5300

- These small and medium business (SMB) models are part of the US TopSeller™ Program

**Positioning Processor**

- Mobile workstation: three spindles
- Intel® Core™ 2 Duo processor P8700 with dual-core.
- Intel HD Boost, 1066MHz system bus, and 3MB L2 cache or
- Intel Core 2 Duo processor T9400, T9600 or T9900 with dual-core.
- Intel HD Boost, 1066MHz system bus, and 6MB L2 cache or
- Intel Core 2 Quad processor Q9000 with quad-core.
- Intel HD boost, 1066MHz system bus, and 6MB L2 cache or
- Intel Core 2 Extreme processor X9100 with dual-core.

**Memory**

- 1GB, 3GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- Italics: standard memory in both sockets; no sockets available;
- Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Enhanced SATA disks**

- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- Some: One disk, 80GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
- Some: One disk, 320GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
- Some: Two disks, 160GB (7200 rpm), 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
- All: removable, upgradable, supports three disks max, Shock Mounted Hard Drive

**Wide-screen display**

- Some: 17.0" (431.8mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio, 45% color gamut
- Some: 17.0" (431.8mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut
- Camera on top of screen, 1.3-megapixel, fixed focus

**Discrete graphics**

- Some: NVIDIA® Quadro® FX2700M, PCI Express® x16, 512MB memory
- Some: NVIDIA Quadro FX3700M, PCI Express X16, 1GB memory
- Max external resolution: 2048x1536 (VGA DB-15 port); 2048x1536 (DisplayPort)

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- Touch pad
- Numic keypad
- Digitizer
- Some: Wacom digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side
- 2 LEDs illuminate the keyboard to improve visibility in low-light conditions

**Dimensions**

- 9-cell 17" (Wx Dx H): 16.1" x 12.2" x 1.6"; 410mm x 310mm x 41mm
- 9-cell: starting at 8.4 lb (3.8kg)
- 9-cell: up to 2.3 hr

**Chipset**

- Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, 2.3 security chip, ethernet MAC), LPC bus
- ExpressCard/34
- ExpressCard/54
- Compact Flash
- None
- Smart Card Reader
- Multicard Reader
- Ports
- Five in 1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Five USB 2.0, external monitor11 (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**

- Three Mini PCI Express slots
- 11a/b/g/n wireless® Mini PCI Express adapter, Intel Ultimate N WiFi Link 5300, 3x3
- Some: Intel Turbo Memory, Mini PCI Express slot, 2GB flash, disk-cache accelerator
- Used (Half-Mini PCI Express slot)

**Modem**

- 56K V.92 modem in Communications Daughter Card socket

**Bluetooth®**

- Bluetooth 2.1 wireless, LED indicator

**Ethernet**

- Non-Intel® Pro model: Intel 825767LF Gigabit Network Connection (Boazman), PHY, PCIe x1
- Intel Pro model: Intel 825767LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**

- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant CX30161 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Audio support**

- Trusted Platform Module, integrated in ICH9M, TC1 1.2-compliant

**Limited warranty**

- 3-year - depot repair service / service upgrades available

---

**Preloaded operating system**

- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista™ Business
- Some: Genuine Windows Vista Business 64

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Applications Center
- FingerPrint Software
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)
- huey® PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

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**ThinkPad W700 Mini Dock 2.0**

- Provides desktop expansion and cable management for W700 Series

**Features**

- Security key lock
- Security cable lock slot
- External monitor ports
- - Analog VGA DB-15
- - Dual-link DVI-D
- - DisplayPort
- - Four USB 2.0 ports
- - eSATA port
- - Gigabit ethernet port
- - Microphone in and headphone out
- - S/PDIF (RCA coaxial digital output)
- - Requires 170 watt AC adapter

**ThinkPlus®**

- 3-year LOR® 9x5 NBD
- 41C9176
- 4-year LOR® 9x5 NBD
- 41C9177
- 5-year LOR® 9x5 NBD
- 41C9179
- 4-year P&L P/U Depot
- 41C9178
- 5-year P&L P/U Depot
- 41C9180

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**Personal Systems Reference (PSREF)**

**ISV software certifications**

- Supports ThinkVantage™ technologies

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**Post-warranty annual maintenance agreements at**

- lenovo.com/thinkplus/warranty

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**See footnotes for important warranty information**

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[3] Only some listed

[4] Security key lock

[5] Security cable lock slot


[8] Dual-link DVI-D

[9] DisplayPort

[10] Four USB 2.0 ports


[12] Gigabit ethernet port


[14] S/PDIF (RCA coaxial digital output)

[15] Requires 170 watt AC adapter

[16] 3-year LOR® 9x5 NBD

[17] 41C9176

[18] 4-year LOR® 9x5 NBD

[19] 41C9177

[20] 5-year LOR® 9x5 NBD

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[22] 4-year P&L P/U Depot

[23] 41C9178

[24] 5-year P&L P/U Depot

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<td>DVD+RW + Intel 5300 54</td>
<td>Yes</td>
<td>X-Rite</td>
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<td>2752-3HU</td>
<td>2.80 4GB 17&quot; WUXGA Cam 1GB</td>
<td>2x200G 5400 0</td>
<td>DVD+RW + Intel 5300 54</td>
<td>Yes</td>
<td>X-Rite</td>
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<td>2x200G 5400 0</td>
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<td>X-Rite</td>
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<td>DVD+RW</td>
<td>Yes</td>
<td>X-Rite</td>
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</tbody>
</table>

*First 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks*

**Positioning Processor**
- Mobile workstation; three spindles
  - Intel® Core™ 2 Duo processor T9600 with dual-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache

**Memory**
- 2GB, 3GB or 4GB std / 8GB max / PC3-8500 DDR3 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA Drive**
- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43RF149)

**Ultrabay Enhanced SATA disk**
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

**Widescreen display**
- 17.0" (431.8mm) WXGA (1440x900) color, anti-glare, CCFL backlight, 200 nits, 120 Hz refresh rate, 400:1 contrast ratio, 45% color gamut

**Battery - type & life**
- 9-cell (17" WxHxD): 16.1" x 12.2" x 1.6", 410mm x 310mm x 41mm
- 9-cell: up to 2.3 hr

**Preloaded operating system**
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 64
- Vista Premium logo

**ISV software certifications**
- Supports ThinkVantage technologies

**ThinkPad W700 Mini Dock 2.0**
- Provides desktop expansion and cable management for W700 Series

**Features**
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

**Limited warranty**
- 3-year - EasyServ 19 depot repair service / service upgrades 22 available
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

**See footnotes for important warranty information**

© Lenovo

US models announced on August 12, 2008 or June 2, 2009

US models withdrawn effective August 2009, February 2010 or June 2010

(AIC-1) June 2010
### ThinkPad W700 2752 (Quad-Core Extreme) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Discrete graphics memory</th>
<th>Disk(s)</th>
<th>SATa</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card Blue/ Fing</th>
<th>Workhorse</th>
<th>Global (G)</th>
<th>Available date</th>
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<tbody>
<tr>
<td>2752-3KU XQ9300</td>
<td>Intel® Core™2 Extreme processor XQ9300 with quad-core, Intel HD boost, 1066MHz system bus, and 12MB L2 cache</td>
<td>2.53</td>
<td>4GB</td>
<td>17&quot; WUXGA Cam</td>
<td>1GB</td>
<td>2x320G 5400</td>
<td>0</td>
<td>BD burner</td>
<td>Intel 5300®</td>
<td>/54</td>
<td>Yes</td>
<td>Wacom Bus64</td>
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</tbody>
</table>

- First 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks
- Select models include digitizer on palm rest and dual-link DVI-D and DisplayPort ports

#### Positioning

**Processor**

Mobile workstation; three spindles

Intel® Core™2 Extreme processor XQ9300 with quad-core, Intel HD boost, 1066MHz system bus, and 12MB L2 cache

- **Memory**

  4GB std / 8GB max / PC3-8500 1066MHz DDRA3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available; standard memory in one socket; one socket available

- **SATA BD burner**

  Ultrabay Enhanced

- **SATA disk**

  Two disks, 320GB (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 3rd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System

- **Widescreen display**

  Blu-ray® burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9150)

  One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

- **Audio support**

  Two disks, 320GB (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 3rd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System

- **Ethernet**

  UltraBay Enhanced

- **Bluetooth**

  Ultrabay Enhanced

- **UWB**

  Ultrabay Enhanced

- **Battery - type**

  Lithium Ion

- **Case material**

  Top: magnesium alloy; Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

- **Dimensions³**

  9-cell: 17W (WxHxD): 16.1" x 1.2" x 1.6"; 410mm x 310mm x 41mm

- **Weight²**

  9-cell: starting at 6.4 lb (3.8kg)

- **Case material**

  Top: magnesium alloy; Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

- **Battery - type**

  Lithium Ion 9-cell

- **Battery - life¹⁵**

  up to 2.3 hr

- **Chipset**

  Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus

- **ExpressCard/34**

  One ExpressCard/34

- **ExpressCard/54**

  One ExpressCard/34 or ExpressCard/54

- **Compact Flash**

  None

- **Smart Card Read**

  None

- **Multicard Reader**

  Five-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

- **Ports**

  Five USB 2.0, external monitor11 (VGA DB-15 port); 2048x1536@85Hz (VGA DB-15 port); 2048x1536 (DisplayPort), modem (RJ-11), Gigabit ethernet port, eSATA port, Gigabit ethernet port, Microphone in and headphone out, S/PDIF (RCA coaxial digital out), 170-watt AC adapter

- **Mini PCIe Express slots**

  Three Mini PCIe Express slots

- **2G Turbo**

  UWB

- **Modem**

  56K V.92 modem in Communications Daughter Card socket

- **Bluetooth™**

  Bluetooth 2.1, wireless LED indicator

- **Ethernet**

  Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe X1

- **Audio support**

  High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

- **Security**

  Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

- **Digitizer**

  Fujitsu Wacom Digital Pen Kit, supports the security chip

- **Limited warranty¹³ - Year - EasyServ¹⁹ - depot repair service / service upgrades²² available**

  3-year

  1GB PC3-8500 DDR3 L-H SODIMM | 55Y3706 | ThinkPad Battery 37++ (9-cell) | 45J7914

  2GB PC3-8500 DDR3 L-H SODIMM | 55Y3707 | ThinkPad 170W AC Adapter | 41R4421

  4GB PC3-8500 DDR3 L-H SODIMM | 55Y3708 | ThinkPad W700 Mini Dock 2.0 | 57Y4345

  Other accessories on Q-W700 sheet | | Other accessories at lenovo.com/accessories |

- **See footnotes for important warranty information**

- **US model announced August 12, 2008**

- **US model withdrawn effective January 2010**

- **Preloaded operating system²⁰**

  - Genuine Windows Vista Business 64

  - Vista Premium logo

- **Preloaded applications¹⁴ (only some listed)**

  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)
  - huey® Monitor Color Correction by Pantone®/X-Rite®

  ISV software certifications

  Supports ThinkVantage technologies

- **ThinkPad W700 Mini Dock**

  Provides desktop expansion and cable management for W700 Series

- **Features**

  Security key lock
  Security cable lock slot
  External monitor ports
  Analog VGA DB-15
  Dual-link DVI-D
  DisplayPort
  Four USB 2.0 ports
  eSATA port
  Gigabit ethernet port
  Microphone in and headphone out
  S/PDIF (RCA coaxial digital out)
  Requires 170 watt AC adapter

  170-watt AC adapter

  ENERGY STAR® 5.0-compliant

  RoHS-compliant

  International Warranty Service¹⁷
  24 hour x 7 day⁸ toll-free support during the warranty period¹³

  ThinkPlus® 3-year LOR 24 9x5 NBD

  ThinkPlus® 4-year LOR 9x5 NBD

  ThinkPlus® 5-year LOR 5x2 NBD

  ThinkPlus® 4-year P/L P/U Depot

  ThinkPlus® 5-year P/L P/U Depot

  Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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### Processor

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz Memory</th>
<th>Wide-screen display memory</th>
<th>Camera</th>
<th>Discrete graphics memory</th>
<th>Disk(s) Sata</th>
<th>RAID</th>
<th>SATA optical</th>
<th>Mini PCIe</th>
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</table>

*Some models are part of the Global Models Plus program with limited onsite service‡, 3-year limited warranty*

### First 17” widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks

- **Processor**: Intel Core™ 2 Duo processor T9400 or T6600 with dual-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache or Intel Core 2 Extreme processor X9100 with dual-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache

- **Memory**: 1GB or 4GB std / 8GB max™ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - **Italics**: standard memory in both sockets; no sockets available;
  - **Non-italics**: standard memory in one socket; one socket available

- **SATA Combo**: Some: DVD-ROM/CD-RW, SATA 1.5GB/s, 12.7mm Ultrabay Enh, removable (43R9148)
  - Some: DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enh, removable (43R9149)
  - One bay for removable devices, Ultrabay Slim-compatible, 12.7mm height

- **SATA disk**: Two disks, 160GB (7200 rpm) / SATA 1.5GB/s, 2.5” wide, 9.5mm high, removable, upgradable, supports 3rd disk, ThinkPad Shock Mounted Drive Hard Drive, Active Protection System

- **Widescreen display**: 17.0” (431.8mm) WUXGA (1920x1200) color, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut hue™/PRO Colorimeter by X-Rite® color calibration sensor in palm rest

- **Keyboard**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

- **TrackPoint®**: TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

- **Touch pad**: UltraNav™, wide touch pad below keyboard, Taps, scrolling regions label

- **Numeral keypad**: 10-key numeric keypad on right side of keyboard

- **Digitizer**: Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side

- **ThinkLight™**: Two LEDs illuminate the keyboard to improve visibility in low-light conditions

- **Dimensions**:
  - Weight:
    - 9-cell 17W” (WxDxH): 16.1” x 12.2” x 1.6”; 410mm x 310mm x 41mm
  - 9-cell: starting at 8.4 lb (3.8kg)

- **Battery - type**: Lithium Ion 9-cell

- **Battery - life**: up to 2.3 hr

- **Chipset**: Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M/ICH9M Enhanced I/O Control Hub (ICH9M, 800MHz, RAID 0 or 1 support, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), LPC bus

- **ExpressCard/34**: One ExpressCard/34

- **ExpressCard/54**: Some: [154] One ExpressCard/34 or ExpressCard/54

- **Compact Flash**: Some: [CF] One Type I slot

- **Multicard Reader**: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

- **Ports**: Five USB 2.0, external monitor11 (VGA DB-15 port), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

- **Mini PCI Express**: Three Mini PCI Express slots

- **Internal Battery**: 11a/b/g/n wireless®, Mini PCI slots adapter, Intel Ultimate N WiFi Link 5300, 3x3

- **External Battery**: None (uses Half-Mini PCI slot)

- **Modem**: 56K V.92; modem in Communications Daughter Card socket

- **Bluetooth™**: Bluetooth 2.1 wireless, LED indicator

- **Ethernet**: Intel vPro model: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIex x1

- **Intel AMT**: Intel Active Management Technology (AMT)

- **Audio support**: High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / Intel HD boost, 1066MHz system bus, and 6MB L2 cache

- **Security**: Power-on password, hard disk password, supervisor password, security keyhole

- **Security chip**: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

- **Fingerprint reader**: Fingerprint reader on palm rest, swipe sensor, supports the security chip

- **Limited warranty**: 3-years/1-year battery, limited onsite service‡, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades² available

### Preloaded operating system²⁵

- **ThinkPad W700 Mini Dock 2.0**

- **Features**:
  - Four USB 2.0 ports
  - eSATA port
  - Gigabit ethernet port
  - Microphone in and headphone out
  - S/PDIF (RCA coaxial digital out)
  - Requires 170 watt AC adapter

- **Preloaded applications**¹⁴ (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections¹¹
  - Client Security Solution¹³
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)
  - hue™/PRO Monitor Color Correction by Pantone®/X-Rite®

- **ISV software certifications**

- **Personal Systems Reference (PSREF)**

### ThinkPad W700 Mini Dock 2.0

- **Provides desktop expansion and cable management for W700 Series**

- **Features**:
  - Discreet key lock
  - Security cable lock slot
  - External monitor ports
  - Analog VGA DB-15
  - Dual-link DVI-D
  - DisplayPort
  - Four USB 2.0 ports
  - eSATA port
  - Gigabit ethernet port
  - Microphone in and headphone out
  - S/PDIF (RCA coaxial digital out)
  - Requires 170 watt AC adapter

- **ENERGY STAR® 5.0-compliant**

- **RoHS-compliant**

- **International Warranty Service¹⁷**
  - 24 hour x 7 day¹⁷ toll-free support during the warranty period¹² via 800-426-7378

- **ThinkPlus™ ²² 4 year LOR® 65x NBD 12x5630**

- **Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**
### ThinkPad W700 2752 - Education - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Discrete graphics memory</th>
<th>Disk(s)</th>
<th>SATA</th>
<th>SATA optical</th>
<th>Mini PCIe UWB</th>
<th>Mini PCIe Card slot</th>
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<th>Digitizer</th>
<th>Workhorse (W)</th>
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<td>WUXGA</td>
<td>Cam</td>
<td>512MB</td>
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<td>None</td>
<td>Intel 5300®</td>
<td>None</td>
<td>/54</td>
<td>Yes</td>
<td>None</td>
<td>Bus32 W</td>
<td>Mar 09</td>
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</tbody>
</table>

- **First 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks**
- **This model has an EasyServ™ depot repair service 3-year limited warranty**
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

**Positioning:**
- Mobile workstation: three spindles
- Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus

**Memory:**
- 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; **italic:** standard memory in both sockets; no sockets available;
- SATA DVD RW: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149), One bay for removable drives, 12.7mm height
- SATA disk: Two disks, **160GB** (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 3rd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™
- **Widescreen display:** 17.0" (431.8mm) WUXGA (1920x1200) color, anti-glare, CCFL backlight, 1042 nits, 16:10 aspect ratio, 72% color gamut, huey™/PRO Colorimeter by X-Rite® color sensor in palm rest
- **Color calibration:** Camera on top of screen, 1.3-megapixel, fixed focus

**Discrete graphics:**
- NVIDIA® Quadro® FX2700M, PCI Express™ x16, 512MB memory

**Keyboard:**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys
- **TrackPoint®** pointing device, "Press-to-Select," Internet Scroll Bar™, Magnifying glass
- **Touchpad:** UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label
- **Numerical keypad:** 10-key numeric keypad on right side of keyboard
- **Digitizer:** None

**Chipset:**
- Mobile Intel PM54 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus

**ExpressCard/Card4/54:**
- One ExpressCard/34 or ExpressCard/54

**Compact Flash:**
- None

**Smart Card Read:**
- None

**Multicard Reader:**
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports:**
- Five USB 2.0, external monitor11 (VGA DB-15 port), DisplayPort, modem (RJ-11), Ethernet (RJ-45), IEEE 1394 Firewire® 4-pin connector, 1920x1200 standard

**Mini PCI Express slots:**
- Three Mini PCI Express slots
- 11a/b/g/n wireless®, Mini PCIle adapter, Intel Ultimate N WiFi Link 5300, 3x3

**Hard Disk Drive (HDD):**
- 56K V.92 modem in Communications Daughter Card socket
- Bluetooth® 2.1 wireless, LED indicator
- Intel 82566LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio:**
- High Definition (HDI) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security:**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security Chip:**
- Trusted Platform Module included, iCH9, TCG 1.2 compliant

**Fingerprint reader:**
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty:**
- 3-year - EasyServ™ depot repair service / service upgrades25 available

**Other accessories:**
- on W700 sheet

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See footnotes for important warranty information

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*US model announced March 24, 2009
US model withdrawn effective February 2010

- Intel Centrino 2 with vPro™ technology

Energy Star® 5.0-compliant
RoHS-compliant
International Warranty Service®

- ThinkPlus™ 3-year LOR 24 9x5 NBD

- ThinkPlus 4-year LOR 9x5 NBD

- ThinkPlus 5-year LOR 9x5 NBD

- ThinkPlus 4-year P&L P/U Depot

- ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

For more information, visit Lenovo.com/thinkplus/warranty
Table 1: ThinkPad W700ds 2758 (TopSeller) - withdrawn

| Type-model | Processor | GHz Memory | Primary display | Secondary display | Camera | Disk(s) | SATA 802.11 | Mini PCIe UWB | Mini PCIe Card Blue/ Fing. Digitizer | Workhorse (W) Global (G) Availability | Preloaded system | Preloaded applications |
|------------|-----------|------------|----------------|-------------------|--------|---------|-------------|----------------|-------------------------------|----------------------|----------------------|
| 2758-MMU Q9000 | Intel Core2 Duo 2 Quad processor Q9000 with quad-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache | 2.00 | 4GB | WUXGA (1920x1200) color, widescreen, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut; | | | | | | | | |
| 2758-MYU Q9000 | Intel Core2 Duo 2 Quad processor Q9000 with quad-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache | 2.00 | 4GB | WUXGA (1920x1200) color, widescreen, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut; | | | | | | | | |

- 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks
- Select models include digitizer on palm rest
- Preloaded operating system:
  - Genuine Windows Vista Business 64
  - Vista Premium logo
- Preloaded applications (only some listed): Rescue and Recovery, Access Connections, Client Security Solution, ThinkVantage Productivity Center, ThinkVantage System Update, Fingerprint Software (fingerprint module), Lenovo System Toolbox, ThinkPad Utilities (Power Manager and Presentation Director), Adobe Reader, Windows Live Toolbar, Microsoft Office 2007 Trial (60-day), Roxio Creator Business Edition (DVD:RW), Roxio MyDVD (DVD:RW), Corel WinDVD (DVD:RW), Wrl DVD Player, Microsoft 3D Studio Max 7, Acrobat Reader 6, S/PDIF (RCA coaxial digital out), Requires 170 watt AC adapter

Leading global manufacturer of

- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA ports
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

ThinkPad W700 Mini Dock 2.0
Provides desktop expansion and cable management for W700 Series
Features:
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA ports
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service: 24 hour x 7 days toll-free support during the warranty period

ThinkPlus*: 3-year LOR 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 5-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US models announced on March 24, 2009 or October 22, 2009
US models withdrawn effective December 2009 or June 2010

(NIC15-5) June 2010
- ThinkPad W700ds 2752 - withdrawn

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<th>Memory (GB)</th>
<th>Primary display</th>
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<th>Disk(s)</th>
<th>Mini PCIe</th>
<th>Workhorse (W)</th>
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<td>2752-EPUQ9100</td>
<td>Intel Core™ 2 Quad processor Q9100</td>
<td>2.26</td>
<td>WUXGA 10.6&quot; WXGA Cameroon 2x160GB</td>
<td>None</td>
<td>DVD:RW</td>
<td>Intel 5300®</td>
<td>Bus64</td>
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<tr>
<td></td>
<td></td>
<td>2752-E7UQX3900</td>
<td>2.53</td>
<td>WUXGA 10.6&quot; WXGA Cam 2x160GB</td>
<td>None</td>
<td>DVD:RW</td>
<td>Intel 5300®</td>
</tr>
</tbody>
</table>

- *ds = dual screen*
- *17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks*
- *Select models include digitizer on palm rest*

**Positioning**

- Mobile workstation; three spindles
- Intel® Core™ 2 Quad processor Q9100 with quad-core
- Intel HD boost, 1606MHz system bus, and 12MB L2 cache
- Intel Core 2 Extreme processor X9300 with quad-core
- Intel HD boost, 1606MHz system bus, and 12MB L2 cache

**Memory**

- 4GB std / 8GB max / PC3-8500 1066MHz DDR3
- Non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- *Italicics:* standard memory in both sockets; no sockets available
- *Non-Italic:* standard memory in one socket; one socket available

**SATA DVD:RW**

- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43RF149)
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- Two disks, **160GB** (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports third disk, ThinkPad Shot Mounted Hard Drive, Active Protection System™

**Displays**

- Primary: 17.0" * (431.8mm) WUXGA (1920x1200) color, widescreen, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut
- Secondary: 10.6" * (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230 nits, 9:15 aspect ratio, 190:1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30° tilt, 40% of primary screen size
- Color calibration: huey™PRO Colorimeter by X-Rite™ color calibration sensor in palm rest
- Camera: Camera on top of screen, 1.3-megapixel, fixed focus

**Discrete graphics**

- NVIDIA® Quadro® FX3700M, PCI Express* x16, 1GB memory
- Max external resolution: 2048x1536@86Hz (VGA DB-15 port); 2048x1536 (DisplayPort)

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- Touch pad: UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label
- Numeric keypad: 10-key numeric keypad on right side of keyboard
- Digitizer: Some: Wacom™ digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side
- ThinkLight™: Two LEDs illuminate the keyboard to improve visibility in low-light conditions

**Dimensions**

- 9-cell 17"W (WxHxD): 16.1" x 12.2" x 2.1"; 410mm x 310mm x 52.2mm
- Weight: 9-cell: starting at 10.9 lb (4.96kg)
- Case color: Black
- Case material: Top: magnesium alloy; Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Battery - type: Lithium Ion 9-cell
- Battery - life*: up to 2.1 hr

**Chipset**

- Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICHOM-H Enhanced I/O Controller Hub (I/O Controller Hub (ICHOM, 3.0Gb/s, RAID 0 or 1 support), USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus
- ExpressCard/34: One slot (ExpressCard/34)
- ExpressCard/54: Some: One slot (ExpressCard/34, ExpressCard/54)
- Compact Flash: None
- Smart Card read: None
- Multicard reader: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Ports: Five USB 2.0, external monitor* (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin conn; 1394a/2000 standard)

**Mini PCI Express**

- Three Mini PCI Express slots
- Intel 5300® 2.2 Turbo
- None
- UWB None (uses Half-Mini PCIe slot)
- Bluetooth™ None
- Ethernet Non-vPro model: Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1
- Intel AMT Intel Active Management Technology (AMT)
- Audio support: High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
- Security: Power-on password, hard disk password, supervisor password, security keyhole
- Security chip: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- Finger print reader: Finger print reader on palm rest, swipe sensor, supports the security chip

**Preloaded operating system**

- Genuine Windows® Vista® Business 64
- Vista Premium logo

**Preloaded applications** (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Finger print Software (fingerprint models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite®

**ISV software certifications**

- Supports ThinkVantage™ technologies

**ThinkPad W700 Mini Dock 2.0**

- Provides desktop expansion and cable management for W700 Series

**Features:**

- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone output
- S/PDIF (RCA coaxial digital output)
- Requires 170 watt AC adapter

**ThinkPad W700ds 2752 - withdrawn**

- Requires 170 watt AC adapter

**ThinkPlus®**

- 3-year LOR 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 4-year P&L P/U Depot
- 5-year P&L P/U Depot

**Post-warranty annual maintenance agreements**

- lenovo.com/thinkplus/warranty
### ThinkPad W700ds 2753 (Onsite) - withdrawn

**Personal Systems Reference (PSREF)**

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<th>Mini PCIe</th>
<th>Workhorse (W)</th>
<th>Global (G) Aval- date</th>
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<tr>
<td>2753-E7U X9300</td>
<td>2.53 GHz</td>
<td>4GB std / 8GB max</td>
<td>ThinkPad 2 Extreme processor X9300 with quad-core, Intel HD boost, 1066MHz system bus, and 12MB L2 cache</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</tbody>
</table>

- **ds = dual screen**
- **17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks**
- **Select models include digitizer on palm rest**
- **This model is part of the Global Models Plus program with limited onsite service**
- **3-year limited warranty**

#### Preloaded operating system
- Genuine Windows Vista® Business 64
- Vista Premium logo

#### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator™ Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)
- huey® Monitor Color Correction by Pantone®/X-Rite®

#### ISV software certifications
- Supports ThinkVantage® technologies

---

**ThinkPad W700 Mini Dock 2.0**

Provides desktop expansion and cable management for W700 Series

- **Features:**
  - Security key lock
  - Security cable slot
  - External monitor ports
    - Analog VGA DB-15
    - Dual-link DVI-D
  - Four USB 2.0 ports
  - eSATA port
  - Gigabit ethernet port
  - Microphone in and headphone out
  - S/PDIF (RCA coaxial digital out)
  - Requires 170 watt AC adapter

- **170-watt AC adapter**
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service

- **ThinkPlus® 4-year LOR 9x5 NBD**
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
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<td>Kensington® MicroSaver® Cable Lock 73P2582</td>
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<td>1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385</td>
<td>Kensington Twin Head Cable Lock 45K1620</td>
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<td>2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707</td>
<td>ann 09/30/08</td>
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<td>2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386</td>
<td>USB Gemplus GemPC Smart Card Reader 41N3040</td>
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<td>256GB FDE SSD SATA 3.0Gb/s 1.8” (2.5” cover)</td>
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<td>Blu-ray™ Burner Ultrabay Enh SATA 1.5Gb/s</td>
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<td>ThinkPad 170W AC Adapter 41R4421</td>
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<tr>
<td>41U5008 ann 01/22/08</td>
<td>ThinkPad 170W AC Adapter 41R4421</td>
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</table>

For more information on ThinkPad accessories, please visit: www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory (MHz)</th>
<th>Widescreen display</th>
<th>Discrete graphics</th>
<th>Disk(s)</th>
<th>SATA</th>
<th>RAID</th>
<th>SATA optical</th>
<th>PCle Mini Card</th>
<th>Card slot</th>
<th>Color calib/ Digitizer</th>
<th>Power Adapter &amp; vPro Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>2500-3AU</td>
<td>i7-720QM</td>
<td>2GBx1</td>
<td>1066 17&quot; WXGA+</td>
<td>FX2800M</td>
<td>1x320G</td>
<td>7200</td>
<td>No DVD±RW</td>
<td>Intel 6300</td>
<td>Exp 54</td>
<td>Smart</td>
<td>230W vPro Pro 64</td>
<td>Mar 10</td>
<td></td>
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<tr>
<td>2500-3BU</td>
<td>i7-820QM</td>
<td>2GBx2</td>
<td>1066 17&quot; WUXGA</td>
<td>FX2800M</td>
<td>1x320G</td>
<td>7200</td>
<td>No DVD±RW</td>
<td>Intel 6300</td>
<td>Exp 54</td>
<td>Smart</td>
<td>230W vPro Pro 64</td>
<td>Mar 10</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

---

### Preloaded operating system
- Genuine Windows 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- Fingerprint Software
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded: purchase product key to activate
- Corel® WinDVD® (DVD±RW)

ISV software certifications

Supports ThinkVantage technologies

---

### ThinkPad W700 Mini Dock 2.0
Provides desktop expansion and cable mgmt for W700 and W700i Series

Features:
- Security key lock
- Security cable lock slot
- External monitor ports
  - Analog VGA DB-15
  - Dual-link DVI-D
  - DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 230 watt AC adptr

230-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service
24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

---

See footnotes for important warranty information

© Lenovo

US models announced February 23, 2010

US models withdrawn effective February 2011

(NIC3-1) February 2011
ThinkPad® W701 2541 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

See footnotes for important warranty information

US models announced February 23, 2010

US models withdrawn effective August 2010 or February 2011

Type-model | Processor | Memory (MHz) | Widescreen display | Discrete graphics | Disk (SATA RAID | Card slot | Color calibration | Power Adapter | Intel vPro | Workhorse (W) | Global (G) | Available date
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>2541-25U</td>
<td>i7-920XM</td>
<td>2GBx2 1066 17&quot; WUXGA</td>
<td>FX3800M</td>
<td>320G 7200 x 2</td>
<td>0 CF</td>
<td>Yes</td>
<td>230W</td>
<td>Pro 64</td>
<td>Mar 10</td>
<td></td>
<td></td>
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<tr>
<td>2541-28U</td>
<td>i7-920XM</td>
<td>4GBx2 1333 17&quot; WUXGA</td>
<td>2.0M FX3800M</td>
<td>128G SSD + 320G 5400</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>2541-29U</td>
<td>i7-920XM</td>
<td>2GBx2 1066 17&quot; WUXGA</td>
<td>2.0M FX3800M</td>
<td>320G 5400</td>
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<tr>
<td>2541-4HU</td>
<td>i7-820QM</td>
<td>2GBx2 1066 17&quot; WUXGA</td>
<td>FX3800M</td>
<td>500G 7200 x 2</td>
<td>Smart</td>
<td>Yes</td>
<td>230W</td>
<td>Pro 64</td>
<td>W Mar 10</td>
<td></td>
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<tr>
<td>2541-4KU</td>
<td>i7-820QM</td>
<td>4GBx1 1333 17&quot; WUXGA</td>
<td>2.0M FX2800M</td>
<td>320G 5400 x2</td>
<td>0 Smart</td>
<td>Yes</td>
<td>230W</td>
<td>Pro 64</td>
<td>W Mar 10</td>
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<tr>
<td>2541-58U</td>
<td>i7-720QM</td>
<td>2+1GB 1066 17&quot; WXGA</td>
<td>FX2800M</td>
<td>320G 5400</td>
<td>Exp 54</td>
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<td>2541-4KU</td>
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<td>4GBx1 1333 17&quot; WUXGA</td>
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<tr>
<td>2541-29U</td>
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</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning

Processor: Mobile workstation; three spindles

Intel® Core™ i7 processor i7-720QM, i7-820QM, or i7-920XM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Hyper-Threading technology, i7-720QM: 1.6GHz, 6MB cache; i7-820QM/ i7-920XM: 1.73GHz/2.0GHz, 8MB cache

Memory

3GB, 4GB, or 8GB std / 16GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, four 24-pin SO-DIMM sockets

SATA DVD:\*RW

Ultrabay Enhanced SATA disk(s)

DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

Some: One disk, 320GB (5400 or 7200 rpm) or SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ (APS)

Some: Two same disks, 320GB (5400 or 7200 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, APS

Some: Two disks, 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high and 320GB (5400 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, APS

All: removable, upgradeable, supports three disks max, Shock Mounted Hard Drive

Widescreen display

Some: 17.0" (433.0mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 45% color gamut

Some: 17.0" (433.0mm) WXGA (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut

Color calibration

Camera

Some: huey™Pro Colorimeter by X-Rite® color calibration sensor in palm rest

Some: camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics

Some: NVIDIA® Quadro® FX2800M, PCI Express® x16, 1GB memory

Some: NVIDIA Quadro FX3800M, PCI Express x16, 1GB memory supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort or dual-link DVI-D) @60Hz; 2048x1536 (VGA) @85Hz

Keyboard

TrackPoint®

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touch pad

Numic keypad

Digitizer

ThinkLight™

Dimensions3

Weight4

Case material

Battery - type

Battery - life5

Chipset

Mobile Intel QM57 Express Chipset

ExpressCard/54

Some: 1GB ExpressCard/54 or ExpressCard/34

Most: Some: [CF] One Type I slot

Smart Card Read

Multicard Reader

Ports

USB 3.0 Slot: Three USB 3.0 USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor17 (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a/2000 standard)

PCle Mini Card

Intel 6300™

One PCI Express Half Mini Card slot

Intel Centrino® Ultimate-N 6300, 3x3

Modem

Voice

Bluetooth™

Ethernet

Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel Active Management Technology (iAMT)

Audio support

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security

Security chip

Fingerprint reader

UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty3 - 3-year - depot repair service / service upgrades6 available

Preloaded operating system25 - Genuine Windows® 7 Professional 64

Preloaded applications14 (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software
- ThinkVantage Toolbox
- Adobe® Reader
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVR:RW)

ISV software certifications

Supports ThinkVantage® technologies

ThinkPad W700 Mini Dock 2.0

Provides desktop expansion and cable mgmt for W700 and W701 Series

Features:

- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 230 watt AC adpt

170-watt or 230-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant RoHS-compliant

International Warranty Service17 24 hour x 7 day18 toll-free support during the warranty period12 via 800-426-7378

ThinkPlus™,22 3-year LOR® 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad W701 2542 (Onsite) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective August 2010 or February 2011

Type-model Processor Memory (MB) Widescreen display Camera Discrete graphics Disk(s) SATA RAID Color callib/ Digitizer Power Adapter (watt) Intel vPro Workhorse (W) Global (G) (P) Avail date
2542-5BU i7-720QM 2x1GB 1066 17" WXGA+ FX2800M 32GB 7200 None None 170W vPro Pro 64 W G P Mar 10
2542-59U i7-820QM 2GBx2 1066 17" WUXGA 2.0M FX2800M 500G 7200 x 2 None None 230W vPro Pro 64 W G P Mar 10
2542-5BU i7-820QM 2GBx2 1066 17" WUXGA 2.0M FX3800M 128G SSD + 500G 7200 None None 230W vPro Pro 64 W G P Mar 10

- These models are part of the Global Models Plus program with limited onsite service3 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor Mobile workstation; three spindles Intel® Core™ i7 processor i7-720QM or i7-820QM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology, i7-720QM: 1.60GHz, 6MB cache; i7-820QM: 1.73GHz, 8MB cache

Memory 3GB or 4GB std / 16GB max / FC-8300 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

SATA DVD:RW Ultradry Enhanced SATA disk(s) DVD burner, SATA 1.5Gb/s, 12.7mm Ultradry Enhanced, removable One bay for removable devices, Ultradry Slim-compatible, 12.7mm high Some: One disk, 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ (APS) Some: Two same disks, 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, APS Some: Two disks, 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high and 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, APS

Wide screen display. Color calibration Camera: Some: 17.0" (433.0mm) WXGA+ (1440x900) color, anti-glace, LED backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio, 45° color gamut Some: 17.0" (433.0mm) WXGA+ (1280x1200) color, anti-glace, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100° color gamut

Discrete graphics Some: NVIDIA® Quadro® FX2800M, PCI Express x16, 1GB memory Some: NVIDIA Quadro FX3800M, PCI Express x16, 1GB memory Supports dual independent display, Maximum external resolution: 2560x1600 (DisplayPort or dual-link DVI-D)@60Hz; 2048x1536 (VGA)@85Hz

Keyboard TrackPoint® Touch pad Numeric keypad Digitizer 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys 44-key, ThinkVantage button, spill-resistant, multimedia Fn keys 10-key numeric keypad on right side of keyboard

ThinkLight™ LED Indicator Two LEDs illuminate the keyboard to improve visibility in low-light conditions

Dimensions3 9-cell 17"W (WxDxH): 16.1" x 12.2" x 1.60-1.63"; 410mm x 310mm x 40.6-41.4mm

Battery - type Battery - life® 4 Lithium Ion 9-cell: up to 2.0 hr

Chipset Mobile Intel QM57 Express Chipset One ExpressCard/34 None
ExpressCard/54 None
Compact Flash None
Smart Card Read None
Multicard Reader Ports 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

PCle Mini Card Intel 6300a® One PCI Express Half Mini Card slot
Modem None
Bluetooth® None
Ethernet Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
Intel Active Management Technology (iAMT)
Audio support High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down! (VGA DB-15, audio jack / microphone input jack, headphone jack)
Security Security chip Security key lock
Fingerprint reader UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty® 3-years 1-year - battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades° available

ThinkPad W701 Mini Dock 2.0 Provides desktop expansion and cable mgmt for W700 and W701 Series

Features:
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15 - Dual-link DVI-D
- USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 230 watt AC adapter

Preloaded operating system20 - Genuine Windows® 7 Professional 64
Preloaded applications14 (only some listed)
- Rescue and Recovery™
- Access Connections14
- Password Manager
- ThinkVantage WorkSpace Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Adobe® Reader
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)

ISV software certifications
Supports ThinkVantage technologies

ThinkPad W701 2542 (Onsite) - Windows 7 - withdrawn

See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective August 2010 or February 2011

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(NIC3-3) February 2011

° Lenovo.com/thinkplus/warranty
## ThinkPad W701ds 2500 (TopSeller) - Windows 7 - withdrawn

### Personal Systems Reference (PSREF)

#### Type-model  Processor  Memory (MHz)  Primary display  Secondary display  Camera  Discrete graphics  Disk(s)  Color  RAID  Adapter  Intel  Preload  Avail date

<table>
<thead>
<tr>
<th>2500-2XU</th>
<th>i7-820QM</th>
<th>4GBx2</th>
<th>1333</th>
<th>17&quot; WUXGA</th>
<th>10.6&quot; WXGA</th>
<th>FX3800M</th>
<th>128G SSD + 320G 5400</th>
<th>None</th>
<th>Yes</th>
<th>230W</th>
<th>vPro Pro 64</th>
<th>Mar 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>2500-3CU</td>
<td>i7-820QM</td>
<td>2GBx2</td>
<td>1066</td>
<td>17&quot; WUXGA</td>
<td>10.6&quot; WXGA</td>
<td>FX3800M</td>
<td>500G 7200</td>
<td>None</td>
<td>Yes</td>
<td>230W</td>
<td>vPro Pro 64</td>
<td>Mar 10</td>
</tr>
</tbody>
</table>

- da = dual screen
- 17" widescreen ThinkPad workstation with two RAID-capable disks
- Select models include integrated color calibration and digitizer on palm rest
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

#### Positioning  Processor  Memory  SATA DVD: RW  Ultrabay Enhance Sata disk  Displays  Color calibration Camera  Discrete graphics  Keyboard  TrackPoint  Touch pad  Numeric keypad  Digitizer  Dimensions  Weight  Case material  Battery - type  Battery - life  Chipset  ExpressCard/34  ExpressCard/54  Compact Flash  Smart Card  Multicard reader Ports  PCIe Mini Card  Intel 6300a  Modem  Bluetooth  Ethernet  Intel AMT  Audio support  Security  Security chip  Finger print reader  Limited warranty  3-year - depot repair service / service upgrades

#### Preloaded operating system
- Genuine Windows® 7 Professional 64

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded: purchase product key to activate
- Corel® WinDVD® (DVD: RW)
- Corel Burn®Now™ Lenovo Edition (DVD: RW)

#### ISV software certifications
- Supports ThinkVantage® technologies

#### ThinkPad W700 Mini Dock 2.0
- Provides desktop expansion and cable mgmt for W700 and W701 Series
- Features:
  - Security key lock
  - Security cable lock slot
  - External monitor ports
  - Analog VGA DB-15 - Dual-link DVI-D - DisplayPort
  - Four USB 2.0 ports
  - eSATA port
  - Gigabit ethernet port
  - Microphone in and headphone output
  - S/PDIF (RCA coaxial digital out)
  - Requires 170 or 230 watt AC adptr

#### 230-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
  - 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

#### Lenovo Warranty
- 3-year - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective August 2010 or February 2011

© Lenovo (NIC3D-1) February 2011
### ThinkPad W701ds 2541 (Windows 7) - withdrawn

**Personal Systems Reference (PSREF)**

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Adobe® Reader®
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD+RW)
- Corel Burn™ Lenovo Edition (DVD+RW)

**ISV software certifications**
- Supports ThinkVantage™ technologies

#### Positioning

<table>
<thead>
<tr>
<th>Processor</th>
<th>Mobile workstation; three spindles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Core™ i7</td>
<td>Intel® Core™ i7-820QM or i7-920XM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading Technology; 8MB cache</td>
</tr>
</tbody>
</table>

#### Memory

<table>
<thead>
<tr>
<th>S/N</th>
<th>Ultrabay Enhanced SATA disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>SATA DVD:RW</td>
<td>DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable one bay for removable devices, Ultrabay Slim-compatible, 12.7mm high</td>
</tr>
<tr>
<td>Some</td>
<td>One disk, 500GB (7200 rpm) / SATA 3.0GB/s, 2.5&quot; wide, 9.5mm high, Active Protection System™ (APS)</td>
</tr>
<tr>
<td>Some</td>
<td>Two same disks, 320GB (7200 rpm) / SATA 3.0GB/s, 2.5&quot; wide, 9.5mm high, APS</td>
</tr>
<tr>
<td>All</td>
<td>removable, upgradable, supports three disks max, Shock Mounted Hard Drive</td>
</tr>
</tbody>
</table>

#### Displays

| Display | Primary: 17.0" (433.0mm) WUXGA (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut; Secondary: 10.6" (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230 nits, 16:10 aspect ratio, 190:1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30° tilt, 40% of primary screen size |

#### Color calibration

<table>
<thead>
<tr>
<th>Camera</th>
<th>huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
</tr>
</tbody>
</table>

#### Discrete graphics

| NVIDIA® Quadro FX2800M, PCI Express x16, 1GB memory, supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort or dual-link DVI-D)@60Hz; 2048x1536 (VGA)@85Hz |

#### Keyboard

| TrackPoint® | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys |
| TrackPad™ | TrackPoint® pointing device, *Press-to-Select,* Internet Scroll Bar®, magnifying glass UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label 10-key numeric keypad on right side of keyboard |
| Digitizer | Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side |
| Digitizer | Two LEDs illuminate the keyboard to improve visibility in low-light conditions |

#### Dimensions

| Weight | 9-cell 17W (WxHxD): 16.1" x 12.2" x 2.1"; 410mm x 310mm x 52.2mm |
| Weight | 9-cell starting at 11.43 lb (5.23kg) |
| Top | magnesium alloy; Bottom | Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic |

#### Battery - type

| Battery - life | Lithium ion 9-cell |
| Battery - life | up to 2.0 hr |

#### Chipset

| Mobile Intel QM57 Express Chipset | One ExpressCard/34 |
| ExpressCard/34 | Some: [54] One ExpressCard/34 or ExpressCard/54 |
| ExpressCard/54 | None |
| Compact Flash | Some: Smart Card Reader |
| Smart Card read | 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) |
| Multicard reader | One USB 3.0, Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor® (VGA DB-15, dual-link DVI-D), DisplayPort, (RoJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) |

#### PCl® Mini Card

| One PCI Express Half Mini Card slot |
| Intel 6300® Modem | 11a/b/g/n wireless, PCl® Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3 |
| Intel 6300® Modem | 56K V.92® modem |
| Bluetooth™ | Bluetooth 2.1 wireless, LED indicator |
| Ethernet | Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCl® x1 vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCl® x1 |
| Intel AMT | Intel Active Management Technology (AMT) |
| Audio support | High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack |
| Security | Power-on password, hard disk password, supervisor password, security keyhole |
| Security chip | Trusted Platform Module, TCG 1.2-compliant |
| Fingerprint reader | UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip |

#### Limited warranty

- 3-year - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective February 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo frequency (GHz)</th>
<th>Memory (MHz)</th>
<th>Primary display</th>
<th>Secondary display</th>
<th>Camera</th>
<th>Disk(s)</th>
<th>Card slot</th>
<th>Power</th>
<th>Adapter (watt)</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Preloaded applications</th>
<th>Preloaded operating system</th>
</tr>
</thead>
<tbody>
<tr>
<td>2542-5AU i7-820QM</td>
<td>Intel Core™ i7 processor i7-820QM with quad-core.</td>
<td>1.73</td>
<td>3.06</td>
<td>2GBx2</td>
<td>1066</td>
<td>17” WUXGA</td>
<td>10.6” WXGA</td>
<td>2.0M</td>
<td>500G</td>
<td>7200</td>
<td>x 1</td>
<td>No</td>
<td>Smart</td>
<td>230W</td>
</tr>
</tbody>
</table>

- ds = dual screen
- 17” widescreen ThinkPad workstation with two RAID-capable disks
- Select models include integrated color calibration and digitizer on palm rest
- This system is Microsoft® Office 2010 Product Key Ready (010PKR)

### Positioning
Processor: Mobile workstation; three spindles Intel® Core™ i7 processor i7-820QM with quad-core.

### Memory
- 4GB std / 16GB max / PC3-8500 1066MHz DDR3.
- non-pallet, dual-channel capable, four 204-pin SO-DIMM sockets
- SATA DVD RW
- Ultra Bay Enhanced
- SATA disk

#### Displays
- Primary: 17.0” (433.0mm) WXGA (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut.
- Secondary: 10.6” (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230 nits, 9:15 aspect ratio, 190:1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30 tilt, 40% of primary screen size.

### Color calibration
Camera: hueyPRO Colorimeter by X-Rite color calibration sensor in palm rest.

### Discrete graphics
NVIDIA® Quadro® FX2800M, PCI Express® x16, 1GB memory, supports dual independent display.

### Keyboard
- TrackPoint®: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys.
- Touch pad: UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label.
- Numeric keypad: 10-key numeric keypad on right side of keyboard.
- Digitizer: Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side.

### Dimensions
9-cell 17W (WxHxD): 16.1” x 12.2” x 2.1”, 410mm x 310mm x 52.2mm.

### Battery - type
Lithium Ion 9-cell.

### Chipset
Mobile Intel® QM57 Express Chipset.

### ExpressCard/34
One ExpressCard/34.

### ExpressCard/54
None

### CompactFlash
None

### Smart Card reader
Smart Card Reader

### Multicard reader Ports
- 5-in-1 reader (MMC, Memory Stick, SD, SDHC)
- Other USB 3.0, Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor11 (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), Intel® 82545GM Gigabit Network Connection (Hanksville), PHY, PCIe x1

### PCle Mini Card
One PCI Express Half Mini Card slot

<table>
<thead>
<tr>
<th>Model</th>
<th>Modem</th>
<th>Bluetooth™</th>
<th>Ethernet</th>
<th>Intel AMT</th>
<th>Audio support</th>
<th>Security</th>
<th>Security chip</th>
<th>Fingerprint reader</th>
<th>Limited warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>6300</td>
<td>x</td>
<td>56K V.92</td>
<td>modem</td>
<td>Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1</td>
<td>High Definition (HDP) Audio, Codec/RT 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
<td>Trusted Platform Module, TCG 1.2-compliant</td>
<td>UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator</td>
<td>3-years/1-year - battery, limited onsite service4, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades22 available</td>
</tr>
</tbody>
</table>

See footnotes for important warranty information

US model announced February 23, 2010

US model withdrawn effective February 2011

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(NIC3D-3) February 2011
ThinkPad® W701, W701ds Accessories

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25Pack) 57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25Pack) 57Y4386 ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 ann 06/23/09
1GB PC3-10600 DDR3 L-H SODIMM 55Y3709 ann 03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4415 ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10

Ultrabay Slim 9.5mm
Serial ATA Hard Drive Bay Adapter III® 43N3412 ann 06/23/09
4® Slim 9.5mm device in 12.7mm bay shows gap above the device.

Ultrabay Enhanced 12.7mm
Blu-ray Reader / DVD Burner Ultrabay Enh 43N3264 ann 01/07/10

Storage and removable storage
160GB Disk SATA 3.0Gb/s (7200 rpm)® 41N5737 ann 10/16/07
250GB Disk SATA 3.0Gb/s (5400 rpm)® 43R8152 ann 01/05/08
250GB Disk FDE SATA 3.0Gb/s (7200 rpm)® 43N3410 ann 01/20/09
250GB Disk SATA 3.0Gb/s (5400 rpm)® 43N3403 ann 08/25/08
320GB Disk SATA 3.0Gb/s (7200 rpm)® 43N3411 ann 01/20/09
500GB Disk SATA 3.0Gb/s (7200 rpm)® 43N3423 ann 01/07/10
50® Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay
128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)® 43N3406 ann 08/26/08
256GB FDE SSD SATA 3Gb/s 1.8"(2.5" cover)® 43N3417 ann 06/23/09
ThinkPad 160GB Intel X25-M SSD® 43N3435 ann 06/22/10
USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4406 ann 01/07/10
USB 2.0 Portable DVD Burner 43N3264 ann 01/05/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
USB Port Replicator with Digital Video 45K1610 ann 07/28/09
ThinkPad W700 Mini Dock 2.0 57Y4345 ann 09/29/09

More information at www.lenovo.com/support/W700minidock

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P6260 ann 03/23/04
UltraSonic Wireless Keyboard and Mouse® 57Y4700 ann 09/15/09
5 Wireless via 2.4GHz technology using a micro-size USB receiver.
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
ExpressCard Gemplus Smart Card Reader® 41N3043 ann 06/27/06
5® Only compatible with the models having 54mm Express card slot.

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Batteries
ThinkPad Battery 37++ (9-cell) 45J7914 ann 08/12/08
ThinkPad 230W AC Adapter 55Y9333 ann 02/23/10
More information at www.lenovo.com/alldaycomputing

Carrying Cases
Up to 17.0” widescreen models:
ThinkPad 17W Business Topload Case 43R9117 ann 08/12/08
More information at www.lenovo.com/support/cases

Monitors
Lenovo L2230x Wide 21.5” Monitor 5453HB1 ann 06/10/10
ThinkVision® L1711p 17” Monitor 5047HB2 ann 10/20/09
ThinkVision L1900p 19” Monitor 4431HE1 ann 11/11/08
ThinkVision L1951p Wide 19” Monitor 4248HB6 ann 10/20/09
ThinkVision L2250p Wide 22” Monitor 2572HB6 ann 10/20/09
ThinkVision L2251p Wide 22” Monitor 2572HD6 ann 10/20/09
ThinkVision L2251x Wide 22” Monitor 2578HB6 ann 10/20/09
ThinkVision L2321x Wide 23” Monitor 4014HB6 ann 06/10/10
ThinkVision L2440p Wide 24” Monitor 4420HB2 ann 09/17/08

Monitor Accessories®
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4383 ann 08/04/09
DisplayPort to Single-link DVI-D Cable 45J7915 ann 08/05/08
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1265 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09
4® Compatible on selected Lenovo and ThinkVision monitors.

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/security
Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide

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(O-W701) February 2011
## Type-model

<table>
<thead>
<tr>
<th>Processor/GHz</th>
<th>Memory</th>
<th>Disk</th>
<th>Optical in</th>
<th>Mini PCI</th>
<th>SEC</th>
<th>Ethernet</th>
<th>WH (G)</th>
<th>Avail</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2672-27U</strong></td>
<td>Pentium M 1.4</td>
<td>256MB</td>
<td>12.1&quot; XGA</td>
<td>20GB</td>
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<td>Optional</td>
<td>Open</td>
<td>wireless upg</td>
<td>Yes</td>
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<tr>
<td><strong>2672-2BU</strong></td>
<td>Pentium M 1.4</td>
<td>256MB</td>
<td>12.1&quot; XGA</td>
<td>20GB</td>
<td>None</td>
<td>Optional</td>
<td><em>Intel 11b Wi-Fi</em></td>
<td></td>
<td>Modern</td>
</tr>
<tr>
<td><strong>2672-7NU</strong></td>
<td>Pentium M 1.6</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None</td>
<td>Optional</td>
<td>Open</td>
<td>wireless upg</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>2672-P7U</strong></td>
<td>Pentium M 1.6</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None</td>
<td>Optional</td>
<td><em>Intel 11b Wi-Fi</em></td>
<td></td>
<td>Modern</td>
</tr>
<tr>
<td><strong>2672-PBU</strong></td>
<td>Pentium M 1.6</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None</td>
<td>Optional</td>
<td><em>Intel 11b Wi-Fi</em></td>
<td></td>
<td>Modern</td>
</tr>
<tr>
<td><strong>2672-PXU</strong></td>
<td>Pentium M 1.6</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None</td>
<td>Optional</td>
<td>Cisco®</td>
<td>802.11b</td>
<td>Modern</td>
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<tr>
<td><strong>2672-REU</strong></td>
<td>Pentium M 1.6</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None</td>
<td>Optional</td>
<td><em>Intel 11b Wi-Fi</em></td>
<td></td>
<td>Modern</td>
</tr>
<tr>
<td><strong>2672-RHU</strong></td>
<td>Pentium M 1.6</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None</td>
<td>Optional</td>
<td><em>Intel 11b Wi-Fi</em></td>
<td></td>
<td>Modern</td>
</tr>
</tbody>
</table>

### Software

#### Windows XP Professional

- Microsoft® Windows® XP Professional
- Disk-to-Recup (in hidden protected area)

### Preloaded

- Access IBM
- Access Connections™
- Adobe Reader
- MobileTech (1 watt)
- Rapid Restore™ Ultra
- Norton AntiVirus ( OEM edition)
- PC-Doctor
- ThinkPad Utilities
- Update Connector™

### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

### License (CD not included)

- Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

### ThinkPad X3 UltraBase™

Right bay of X3 UltraBase supports most UltraBase 2000 options:

- Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo
- Optional HDD adapter for 2nd disk
- UltraBase Plus-compatible

### UltraBase 2000 accessories:

- CD-RW/DVD Combo IV UltraBase 2000
- Second HDD Adapter for UltraBase 38K6668
- UltraBase 2000 Li-ion battery 22K446
- ThinkPad Multi-Burner UltraBase 2000 Drive
- Enhanced Drive Adapter for UltraBase 2000
- ThinkPad X3 UltraBase bottom contains:

  - Bay for X30 battery (same as X31)

#### Additional features:

- Second battery support (for UltraBase battery or second 6-cell battery)
- Stereo speakers (1 watt)
- Security keyhole, UltraBase lock
- Serial and parallel ports
- PS/2 mouse port
- Analog DB-15 monitor port
- One USB port (Ver 2.0 only on X31)
- Ethernet port and modem port
- Retractable feet; 1.41 lb; 638g

#### Limited warranty

- 3 years/1 yr battery - EasyServ™/onsite pickup and delivery / service upgrades available

- 56 watt Ac Adapter
- Access IBM CD, (system-specific info in chip accessed over network)

#### PC 2001-compliant

ACPI 1.0b and 2.0-compliant
- P6x (1.5GHz-1.7GHz)
- MDM 24/7: IBM System Migration Assistant
- IBM USB 2.0 Peripheral Driver 2.0
- International Warranty Service

24 hour x 7 day toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)
### ThinkPad X31 (2884) - Express (February 2004) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>Optical</th>
<th>ThinkPad X3 UltraBase^\textsuperscript{m}</th>
<th>Mini PCI wireless</th>
<th>CD: modem/Security</th>
<th>Ethernet</th>
<th>Planar</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2884-6U</td>
<td>Pentium M 1.5</td>
<td>256MB 12.1&quot; XGA 20GB^\textsuperscript{m}</td>
<td>Optional</td>
<td>Open; wireless up^\textsuperscript{d}</td>
<td>Modem</td>
<td>Yes 100/100 XP Pro</td>
<td>Feb 2004</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2884-6DU</td>
<td>Pentium M 1.5</td>
<td>256MB 12.1&quot; XGA 20GB</td>
<td>Optional</td>
<td>Intel 11b Wi-Fi^\textsuperscript{d}</td>
<td>Modem</td>
<td>Yes 100/100 XP Pro</td>
<td>Feb 2004</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2884-6LU</td>
<td>Pentium M 1.5</td>
<td>256MB 12.1&quot; XGA 20GB</td>
<td>Optional</td>
<td>Intel 11b Wi-Fi^\textsuperscript{d}</td>
<td>Modem</td>
<td>Yes 100/100 XP Pro</td>
<td>Feb 2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Technical Specifications

- **Processor**: Intel Pentium M 1.5 or 1.7 GHz
- **Memory**: 256MB or 512MB std / 2GB max / PC2700 333MHz DDR1 (memory controller limits speed to 266MHz) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
- **Display**: 12.1" (308mm) XGA (1024x768) / TFT color / Active Matrix / 150 nits
- **Keyboard**: Standard-size\^\textsuperscript{e} keys / 97% size of T Series / 87-key / 18.5mm pitch / 25mm stoke / Access IBM button / palm rest / TrackPoint, "Press-to-Select," Internet Scroll Bar\^\textsuperscript{f} / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap
- **Dimensions\^\textsuperscript{g}**: without X3 UltraBase: 10.7" x 8.8" x .98-1.19"; 273mm x 223mm x 24.9-30.2mm with X3 UltraBase and optical: 10.8" x 8.7" x 2.0-2.3"; 273mm x 227mm x 51-58mm
- **Travel weight\^\textsuperscript{h}**: with battery: 3.6 lb (1.65kg); with X3 UltraBase and optical: 5.6 lb (2.54kg)
- **Battery**: Li-Ion 6-cell / intelligent / supports opt Extended Life Battery on base (for two batteries)
- **Battery life\^\textsuperscript{i}**: Up to 5.5 hrs; with standard battery and optional Extended Life Battery: up to 10 hrs on battery

### Key Features

- **ThinkPad X3 UltraBase\^\textsuperscript{m}**: (standard with some models)
  - Right bay of X3 UltraBase supports most Ultrabay 2000 options
  - Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo
  - Optional HDD adapter; for 2nd disk
  - Ultrabay Plus-compatible
  - Second HDD Adpdr for Ultrabay 2000, 08K6068
  - ThinkPad Multi-Burner Ultrabay 2000 Drive, 22P7015
  - Ultrabay 2000 Li-Ion battery22K6646

### Warranty

- **Limited warranty**: 1 year - EasyServ\^\textsuperscript{a} on-site pickup and delivery / service upgrades available

---

\^\textsuperscript{m} These small and medium business (SMB) models are part of the US Think Express Program.

\^\textsuperscript{d} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{e} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{f} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{g} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{h} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{i} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{a} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{b} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{c} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{d} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{e} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{f} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{g} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{h} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{i} The \( * \) indicates that the option is available only on selected models.

\^\textsuperscript{a} The \( * \) indicates that the option is available only on selected models.
**SOFTWARE**

- Windows XP Professional
- - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery
    - (in hidden protected area)

---

**Preloaded**
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

---

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**
- (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**ThinkPad X3 UltraBase**
- Right bay of X3 UltraBase supports most UltraBay 2000 options
  - Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo
  - Optional HDD adapter for 2nd disk
  - Ultrabay Plus-compatible

---

**Textures**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Optical in</th>
<th>ThinkPad UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/ Bluetooth™</th>
<th>Sec Ethernet chip</th>
<th>Planar</th>
<th>Preload Entry TAA</th>
<th>WH (W) Gbl (G) Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2672-KBU</td>
<td>Pentium® M 755 2.0</td>
<td>512MB</td>
<td>12.1&quot; XGA 60H</td>
<td>None</td>
<td>Optional</td>
<td>* Intel 11a/b/g</td>
<td>Mod/Blue</td>
<td>Yes Gigabit XP Pro W</td>
<td>Apr 05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2672-M2U</td>
<td>Pentium® M 755 1.8</td>
<td>256MB</td>
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<td>Optional</td>
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<td>Mod/Blue</td>
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<td>* Intel 11a/b/g</td>
<td>Modem</td>
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</table>

---

**Positioning**

- Ultimate mobility in a versatile ultraportable; one spindle

**ThinkPad X3 UltraBase**

- Right bay of X3 UltraBase supports most UltraBay 2000 options
  - Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo
  - Optional HDD adapter for 2nd disk
  - Ultrabay Plus-compatible

---

**UI (TAA)**

- Model LIU: US Government model (Trade Act Agreement-compliant)

**Processor**

- Intel® Pentium® III Processor 750 (1.06GH), 725 (1.10GH), 745 (1.08GH), or 755 (2.00GH) with Enhanced Intel SpeedStep™ technology and 400MHz system bus

**L2 cache**

- 2MB / on die (at processor speed) / ECC

**Memory**

- 256 or 512MB std / 2GB max / PC/7300 333MHz DDR1 (memory controller limits memory speed to 266MHz) / non-parity / CL 2.5 / 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Diskette drive**

- None standard / use optional UltraBay™-based in(x3) or USB-based diskette drive

**Ultrabay™ 2000**

- Supports UltraBay 2000 devices in optional X3 UltraBase (or optional ThinkPad Dock II)

**Display**

- 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

---

**Graphics controller**

- ATI® MOBILITY™ RAGEONE™ / AGP 4X / 16MB DDR1 (DDR-SDRAM)

**Graphics - external**

- External Monitor support via analog DB-15 connector / up to 1280x1024x16.7M at 85Hz

**Keyboard**

- Standard-size™ keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke / Access IBM button / palm rest / TrackPoint™, "Press-to-Select," Intel® Internet Security Solution™ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap

**ThinkLight™**

- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 10.7" x 8.8" x .91-1.19"; 273mm x 223mm x 24.9-30.2mm with X3 UltraBase and optical: 10.8" x 8.9" x 2.0-2.3"; 273 x 227 x 51-58mm

**Travel weight**

- Battery - life: Up to 5.7 hr; with standard battery and Optional Extended Life Battery: up to 10.0 hr

**Architecture**

- Intel® 855PM chipset / 128MB Memory Controller Hub (MCH-M) / 82801DBICH4-M / I/O Controller Hub (ATA-100 EIDE, PCI) bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth®] / Intel® 82802AC Firmware Hub / PCI bus 2.2-32 bit, 33MHz (Ricoh® R5C54 Cardbus/1394 combo controller, Mini PCI, ext. expansion) / LPC bus 33MHz (PC87392 Super I/O)

**Media slot**

- Optional X3 UltraBase media slot (see right side)

**Compact Flash slot**

- Compact Flash slot / 1 CF+ Type II / supports optional Microdrive™

**PC Card Std slot**

- One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door

**Ports**

- One USB port (Ver 2.0 only on X31)

**Wireless antenna**

- Bluetooth™ / wireless upgradable with wireless Mini PCI option

**Audio support**

- Soft audio / ICH AC97 controller / DirectSound™ / AD1981B AC97 codec / mono speaker, 0.5 watt / volume down, mute button / internal mic / microphone input jack (pink) / headphone jack (green) / mic in (blue) / all 3.5mm

**Security chip**

- Embedded Security Software 2.0™ / ATmel™ / TC-G (TG)

---

**Limited warranty**

- 3-year / 1-year battery - EasyServ™™ on-site pickup and delivery / service upgrades® available

---

See footnotes for important warranty information

© Lenovo

US models announced April 5, 2005
US models withdrawn effective November 5, 2006, or October 2006
## ThinkPad X32 (2884) - Express - withdrawn

### Type-model Processor GHz Memory Screen Disk Optical in UltraBase ThinkPad X3 UltraBase Mini PCI wireles DCi: modem/ Bluetooth Sec chipt Ethernet planar Preload warranty date

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Optical in</th>
<th>UltraBase</th>
<th>ThinkPad X3 UltraBase</th>
<th>Mini PCI wireles</th>
<th>DCi: modem/ Bluetooth</th>
<th>Sec chipt</th>
<th>Ethernet planar</th>
<th>Preload warranty date</th>
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</thead>
<tbody>
<tr>
<td>2884-A2U</td>
<td>Pentium M 725 1.6</td>
<td>256MB</td>
<td>12.1&quot; XGA 40HS</td>
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<td>* Modem</td>
<td>Yes Gigabit XP Pro</td>
<td>1 year Apr 05</td>
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<td>512MB</td>
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<td>Combo X3 UltraBase</td>
<td>* Intel11b/g</td>
<td>* Modem</td>
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<td>1 year Apr 05</td>
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<td>1 year Apr 05</td>
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<td>1 year Apr 05</td>
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</tbody>
</table>

- **These small and medium business (SMB) models are part of the US Think Express Program**
- **The ThinkPad has a 1 year warranty**

### Positioning

**Ultimate mobility in a versatile ultraportable: one spindle**

**L2 cache** 256MB / 512MB / 2GB max / **PC2700 333MHz DDR1** (memory controller limits memory speed to 266MHz) / non-parity / **CL2.5** / 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Diskette drive** None standard / use optional UltraBay™-based (in X3) or USB-based diskette drive

**Software**

- **Microsoft Windows XP Professional** (Service Pack 2)
- **Preloaded**
  - **Recall and Recovery™**
  - **Access IBM**
  - **Access Connections™**
  - **Norton AntiVirus**
  - **PC-Doctor™**
  - **ThinkPad Utilities**
  - **Adobe Reader**
  - **Update Connectors™**

### Downloadable

- **IBM Director Agent**
- **Software Delivery Assistant**
- **System Migration Assistant**
- **Client Security Software (for security chip)**

### License

- **CD (not included)**
- **Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client**

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit [thinkpad.com/thinkvantage](http://thinkpad.com/thinkvantage)

## System Information

### Processor

- **Intel Pentium M Processor 735 (1.70GHz), 745 (1.80GHz), or 755 (2.00GHz)**
- With enhanced Intel SpeedStep™ technology and 400MHz system bus speed

### L2 cache

- **256MB** / **512MB** / **2GB max** / **PC2700 333MHz DDR1** (memory controller limits memory speed to 266MHz) / non-parity / **CL2.5** / 200-pin SO-DIMM sockets / std memory in one socket / one socket available

### Diskette drive

- **None standard** / use optional UltraBay™-based (in X3) or USB-based diskette drive

### Audio support

- **Soft audio** / **ICH AC97 controller** / **DirectSound**
- **SonicWave® AD1981B AC97 codec** / **ADI1981B AC97 codec**
- **Soft audio** / **ICH AC97 controller** / **DirectSound**

### Ethernet

- **Intel 11b/g32 Modem** / **Yes Gigabit XP Pro**
- **Intel 11b/g Modem** / **Yes Gigabit XP Pro**

### Software

- **Windows XP Professional**
- **Microsoft Windows XP Professional** (Service Pack 2)
- **Preloaded**
  - **Recall and Recovery™**
  - **Access IBM**
  - **Access Connections™**
  - **Norton AntiVirus**
  - **PC-Doctor™**
  - **ThinkPad Utilities**
  - **Adobe Reader**
  - **Update Connectors™**

## Limited warranty

- **1 year** - EasyServ®/™ onsite pickup and delivery / service upgrades®/™ available

### Additional features

- **Batteries - life 10**
  - **Ultrabay 2000** supports Ultrabay 2000 devices in std or optional X3 UltraBase (or optional Dock II)
  - **40GB** / **(HS 5400 rpm)** or **60GB** / **(HS 5400 rpm)**, 9.5mm, ATA-100, removable and upgradable / 9.5mm high bay

- **Battery - life 10**
  - **Up to 5.7 hr** / with standard battery and optional Extended Life Battery / up to 10.0 hr

### Additional features

- **USB 2.0** commands / **USB 3.0** commands
- **Intel 11b/g** / **Intel 11a/b/g**

### Optical in

- **Ultrabay 2000** supports Ultrabay 2000 devices in std or optional X3 UltraBase (or optional Dock II)

### Diskette drive

- **None standard** / use optional UltraBay™-based (in X3) or USB-based diskette drive

### Display

- **12.1" (308mm)** XGA **(1024x768)** TFT color / **Active Matrix** / **115 nits**

### Graphics controller

- **ATI Mobility RADEON™** / **AGP** / **4X 16MB DRR1 (DDR-SDRAM)**

### USB 2.0

- **USB 2.0 Memory Key** / **22P9230**
- **USB 2.0 Portable Diskette Drive** / **05K9276**

### Ultrabay

- **Ultrabay 2000 22P6991**
- **Ultrabay 2000 22P6992**
- **Ultrabay 2000 22P6993**

### Ultrabay Plus

- **Ultrabay Plus-compatible**
- **Ultrabay 2000 accessories**
- **Ultrabay 2000 22P7015**
- **ThinkPad Multi-Burner Ultrabay 2000 Drive**
- **X3 UltraBase bottom contains**
- **Bay for X30 battery (same as X31)**

### Additional features

- **Software Delivery Assistant**
- **System Migration Assistant**
- **Client Security Software (for security chip)**

### License

- **CD (not included)**
- **Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client**

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit [thinkpad.com/thinkvantage](http://thinkpad.com/thinkvantage)
### ThinkPad X32 (2885) - Express - withdrawn

- **Processor**: Intel Pentium M 745 (1.80GHz) or 755 (2.00GHz) with enhanced Intel SpeedStep technology and 400MHz system bus
- **L2 cache**: 2MB/4MB (on die processor speed)/ECC
- **Memory**: 256 or 512MB std/2GB max/PC 2700 333MHz DDR1 (memory controller limits memory speed to 266MHz)
- **Display**: XGA (1024x768) TFT color/Active Matrix/110 nits
- **Keyboard**: ATI Mobility Radeon/AGP 4x/16MB DDR1 (DDR-SRAM)
- **Graphics**: External monitor port via analog DB-15 connector/to 1280x1024x16.7M at 85Hz
- **Audio**: Soft audio / ICH AC97 controller / DirectSound (ext expansion) / LPC bus 33MHz (PC87392 Super I/O) / 56K6 V.90 (V.92-designed)
- **Battery**: Li-Ion 6-cell/intelligent/supports opt Extended Life Battery on base (for two batteries)

#### Limited warranty
- **3 years**/1 yr battery - EasyServ options/upgrade service

#### Software
- **Windows XP Professional**: Microsoft Windows XP Professional (Service Pack 2)

#### Preloaded
- Rescue and Recovery
- Access IBM
- Access Connections
- Norton AntiVirus
- PC-Doctor
- ThinkVantage Utilities
- Adobe Reader
- Update Connector

#### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

#### License
- (CD not included)
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

---

### Positioning

<table>
<thead>
<tr>
<th>Processor</th>
<th>Ultimate mobility in a versatile ultraportable: one spindle</th>
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</thead>
<tbody>
<tr>
<td>Intel® Pentium® M Processor</td>
<td>745 (1.80GHz) or 755 (2.00GHz)</td>
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</table>

### Diskette drive

- **Combo**: None standard / use optional Ultrabay™-based (in X3) or USB-based diskette drive
- **12.1" (308mm) XGA (1024x768)** TFT color / Active Matrix / 110 nits

### Keyboard

- **M-1070 keys** / 97% size of T Series / 125 key / 18.5mm pitch / 2.5mm stroke / Access IBM button / palm rest / TrackPoint / "Press-to-Select," InternetScroll Bar / soft dome Trackpoint cap / shipping with classic dome and soft rim TrackPoint cap

### Display

- **X3 UltraBase media media slice** (see right side)
- **Compact Flash slot**
- **PC Card Slot**
- **IEEE 1394**

### Ports

- Two USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / parallel / IEEE 1394 (4-pin) / no serial, keyboard, or mouse ports

### Wireless antenna

- **UltraConnect**™ antenna built into the display cover for optimal wireless signal reception
- **Intel 11b/g**
- **Intel 11a/b/g**
- **CDC**
- **Modem**
- **Bluetooth**

### Ethernet

- Gigabit Ethernet on systemboard / Intel 82540EP chip (MAC/PHY) / PXE

### Audio support

- Soft audio / ICH AC97 controller / DirectSound support / AD1981 AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal mic / microphone input jack (pink) / headphone jack (headphone) / mic in (blue) / [all 3.5mm]

### Security chip

- Power-on password / dual hard disk password / supervisor password / security keyhole

### Security keyhole

- UltraBase lock

### Other features:

- Second battery support (for Ultrabay 2000)
- 6-cell battery (for two batteries)
- Second battery lock (for Ultrabay 2000)
- One USB port (Ver 2.0 only on X31)
- Ethernet port and modem port
- Retractable feet; 1.41 lb; 638g

### Preloaded software

- Stand-alone Client
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software

### License

- (CD not included)
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

### Additional features:

- Second battery support (for Ultrabay 2000)
- 6-cell battery (for two batteries)
- Second battery lock (for Ultrabay 2000)
- One USB port (Ver 2.0 only on X31)
- Ethernet port and modem port
- Retractable feet; 1.41 lb; 638g

### Limited warranty

- **3 years**/1 yr battery - EasyServ options / onsite pickup and delivery / service upgrades

---

**See footnotes for important warranty information**

* © Lenovo (X323) October 2005

US models announced April 5, 2005

US models withdrawn effective November 2005
 conferred to Lenovo (2004)
### ThinkPad X40 UltraBase

<table>
<thead>
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<th>Cache Memory</th>
<th>Screen</th>
<th>Optical Disk Drive</th>
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<th>Mini PCI</th>
<th>L2 Cache</th>
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<th>Bluetooth</th>
<th>USB</th>
<th>Limited Warranty</th>
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<td></td>
<td>Modern Yes 4 3 years W Oct 04</td>
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<td>None</td>
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<td>Modern Yes 3 years W Oct 04</td>
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</table>

### Software

- Windows XP Professional
  - Microsoft Windows XP
  - Professional 32-bit (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

### Preloaded

- Rescue and Recovery™
- Access Program
- Access Connections
- Norton AntiVirus (QEM edition)
- PC-Doctor
- ThinkPad Utilities
- Adobe Reader
- Update Connector

### Downloadable

- IBM DirectAgent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security purposes)
- License (CD not included)
  - Lotus® SmartSuite® Millennium
  - Lotus Notes® Stand-alone Client

The X40 supports ThinkVantage technologies.

### ThinkPad X4 UltraBase

- Provides desktop expansion and cable management for the X40/X41
- Enables easy connections to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional UltraBaseSlim devices in left side:
  - UltraBase Slim Li-Polymer Battery
  - 3-cell Battery

### Mobile Media Base

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Cache Memory</th>
<th>Screen</th>
<th>Optical Disk Drive</th>
<th>ThinkPad X4 UltraBase</th>
<th>Mini PCI</th>
<th>L2 Cache</th>
<th>Mini PCI wireless</th>
<th>Bluetooth</th>
<th>USB</th>
<th>Limited Warranty</th>
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<tr>
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<td>Intel 11b/g32 Modem</td>
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<td>8</td>
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<td>73P3432</td>
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</tbody>
</table>

Other features:

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog (DB-15) monitor ports
- Input/Output ports (external DB-15)

### Security

- Power-on password / dual hard disk password / supervisor password / security keyhole / Embedded Security Subsystem 2.0

### Limited warranty

- 3-years/1-year battery - EasyServ/Warranty on-site pickup and delivery / service upgrades available
### ThinkPad X40 (2371) - February 2005 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
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### Positioning
- **US Govt (TAA)**: KZU: US Government model (Trade Act Agreement-compliant)
- **Audio support**: CDC
- **Wireless antenna**: PC Card Std slot
- **Secure Digital slot**: Secure Digital Card slot
- **Mobile media base**: Supports optional X4 UltraBase (see right side) and X4 Dock
- **Travel weight**: 4-cell without X4 UltraBase: 10.5 x 8.3 x 0.81-1.06; 268mm x 211mm x 20.6-26.5mm

### Display
- **12.1" (308mm)** XGA (1024x768) TFT color / Active Matrix / 150 nits

### Graphics
- Integrated Intel Extreme™ Graphics 2 / in 855GM GEMCH / uses main memory up to 866MHz / 266MHz
- **Graphics external**: External monitor support via analog DB-15 connector / up to 1600x1200x16.7 at 85MHz

### Keyboard
- Standard US layout / keys / 97-key size / 15.8mm pitch / 2.5mm stroke / Access IBM buttons / palm rest / TrackPoint / "Press-to-Select," Internet Scroll Bar / soft dome TrackPoint cap / ships with classic dome and soft trim TrackPoint cap

### Travel weight
- 4-cell without X4 UltraBase: 10.5 x 8.3 x 0.81-1.06; 268mm x 211mm x 20.6-26.5mm
- 8-cell without X4 UltraBase: 10.5 x 9.3 x 0.81-1.06; 268mm x 227mm x 20.6-26.5mm

### Battery - type
- Li-ion / 4- or 8-cell / optional Extended Life Battery for (two batteries) / supports optional battery in X4 UltraBase (for two batteries)
- **Battery - life**: with 4-cell: up to 3.25 hr; with 8-cell: up to 7.0 hr; and with optional Extended Life Battery: up to 10 hr

### Architecture
- **Intel 855GME chipset** / 82852GME Memory Controller Hub (MCH-M) / 82801DBM IO/M-4 I/O Controller Hub: ATA-100 EIDE, PCI bus, Low Pin Count (LPC) Interface, USB [Bluetooth] / Intel X82852AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (ethernet, Ricoh R5C511 Cardbus controller, Mini PCI) / LPC bus 33MHz (PC87392 Super I/O for infrared [dock-based ports])

### Built-in features
- **ThinkLight™**: Illuminates the keyboard to improve visibility in low-light conditions
- **ThinkVision UltraConnect™**: UltraConnect™ antenna built into the display cover for optimal wireless signal reception
- **Mini PCI Wireless upg**: Intel 11b/g 11a/b/g 11i/11g
- **Ethernet**: Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN
- **Audio support**: Soft audio / ICH AC97 controller / DirectSound™ / AD19818 AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)
- **Security**: Power-on password / dual hard disk password / supervisor password / security keyhole / Embedded Security Subsystem 2.0 / Atmel™ / TC- compliant
- **Limited warranty**: 3-year / 1-year battery - EasyServ™ / onsite pickup and delivery / service upgrades available

### Software
- **Windows XP Professional**: - Microsoft Windows XP Professional™ (Service Pack 2)
- **ThinkPad X4 UltraBase™**: - Provides desktop expansion and cable management for the X40/X41
- **ThinkPad X4 Dock™**: - Easy connects to the bottom of the X40/X41 for traveling
- **ThinkPad X4 UltraBase Slim Drive**: - Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: Ultrabay Slim Li-Polymer Battery 3-cell
- **ThinkPad X4 Dock™**: - Second HDD Adapter for Ultrabay Slim 62P4554

### Additional features
- **Parallel, keyboard/mouse ports (use X4 UltraBase)**: No serial, parallel, keyboard/mouse ports
- **PS/2 port for keyboard or mouse**: Analog DB-15 monitor port
- **IEEE 1394 port**: No IEEE 1394 port
- **ThinkPad X4 Dock™**: - UltraBase Slim Drive 73P3288
- **ThinkPad X4 Dock™**: - Multi-Bezel Ultrabay Slim Drive (boxed bezel) 1906Y622
- **ThinkPad X4 Dock™**: - Second HDD Adapter for Ultrabay Slim Drive 62P4545
- **Disks supported**: - 40GB HS Hard Disk 09K8916
- **Disks supported**: - 60GB HS Hard Disk 73P3357
- **Disks supported**: - 80GB HS Hard Disk 09N4273

### Security Features
- Power button (front) / Stereo speakers (1 watt) / Security key lock / security keyhole / optical security screw
- Serial and parallel ports / PS/2 port for keyboard or mouse / Analog DB-15 monitor port / Three USB 2.0 ports (via USB hub) / Ethernet port (Gigabit Ethernet) / Modem port
- **Retractable feet**: 1.3 lb; 580g

---

**Note:** Powered by Intel Centrino™ mobile technology

**Created by Lenovo Training Solutions Personal Systems Reference (PSREF)**

**© Lenovo 2005**

**Lenovo US models announced February 15 or March 22, 2005**

**Lenovo US withdrawn effective July 2005 or April 2006**

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**See footnotes for important warranty information**

* Powered by Intel Centrino™ mobile technology

**SOFTWARE**

**Windows XP Professional**

- Microsoft Windows XP Professional™
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery
- Access Program
- Access Connections™
- Norton AntiVirus (OEM edition)
- PC-Doctor
- ThinkVantage Utilities
- Adobe Reader
- Update Connector™

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License** (CD not included)

- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

**Supports ThinkVantage™ technologies**

**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Easy connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: Ultrabay Slim Li-Polymer Battery 3-cell
- Second HDD Adapter for Ultrabay Slim Drive 62P4545

**Other features:**

- Power button (front) / Stereo speakers (1 watt) / Security key lock / security keyhole / optical security screw
- Serial and parallel ports / PS/2 port for keyboard or mouse / Analog DB-15 monitor port / Three USB 2.0 ports (via USB hub) / Ethernet port (Gigabit Ethernet) / Modem port
- **Retractable feet**: 1.3 lb; 580g

**65 watt AC Adapter**

**Asset ID**™ (system-specific info in chip a second generation over network) / ACPI 1.0 and 2.0-compliant / ENERGY STAR™-compliant / International Warranty Service 27

**24-hour x 7-day year** warranty support during the warranty period via 800-IBM-SEVR (426-7378)
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**SOFTWARE**

Windows XP Professional

- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery™
- Access Connections™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- PC Doctor®
- ThinkPad Utilities
- Adobe Reader
- Client Security Solution™ (for security only chip)

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License** (CD not included)

- Lenovo® SmartSuite® Millennium
- Lenovo® Notes® Stand-alone Client

**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional USB eSATA ports
- UltraBay Slim accessories in left side:
  - UltraBay Slim Li-Polymer Battery
  - CD-ROM/DVD Combo II
  - Ultrabay Slim Drive
  - Ultrabay Slim USB Drive
- Supports ThinkVantage technologies

**Limited warranty**

- 3-year 1-year entry - EasyServ™ onsite pickup and delivery / service upgrades™ available

**Advanced Power Management**

- IBM ThinkPad® system employs the ACPI 1.0b and 2.0-compliant Advanced Configuration and Power Interface (ACPI)
- Supports the ACPI 1.0b and 2.0-compliant operating systems
- Supports Standalone Client
- Client Security Solution™ (for security only chip)

**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- PS/2 port for keyboard or mouse
- Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

**Security**

- Power-on password / dual hard disk password / supervisor password / security keyhole
- Embedded Security Subsystem™ 2.0

**SPECS**

- Pentium M Processor (1.7GHz)
- XGA 12.1" XGA 40GB
- Optional: 11a/b/g Wireless Mini PCI Adapter II, Atheros
- Wireless upgradable with wireless Mini PCI options

**Software**

- ThinkPad X4 UltraBase™
- Software Delivery Assistant
- System Migration Assistant
- Client Security Solution™ (for security only chip)

**License** (CD not included)

- Lenovo® SmartSuite® Millennium
- Lenovo® Notes® Stand-alone Client

**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
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**Other features:**

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- Pentium M Processor (1.7GHz)
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- Lenovo® Notes® Stand-alone Client

**Other features:**

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**SPECS**

- Pentium M Processor (1.7GHz)
- XGA 12.1" XGA 40GB
- Optional: 11a/b/g Wireless Mini PCI Adapter II, Atheros
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- Software Delivery Assistant
- System Migration Assistant
- Client Security Solution™ (for security only chip)

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- Lenovo® Notes® Stand-alone Client

**Other features:**

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- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- PS/2 port for keyboard or mouse
- Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

**Security**

- Power-on password / dual hard disk password / supervisor password / security keyhole
- Embedded Security Subsystem™ 2.0

**SPECS**

- Pentium M Processor (1.7GHz)
- XGA 12.1" XGA 40GB
- Optional: 11a/b/g Wireless Mini PCI Adapter II, Atheros
- Wireless upgradable with wireless Mini PCI options

**Software**

- ThinkPad X4 UltraBase™
- Software Delivery Assistant
- System Migration Assistant
- Client Security Solution™ (for security only chip)

**License** (CD not included)

- Lenovo® SmartSuite® Millennium
- Lenovo® Notes® Stand-alone Client

**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- PS/2 port for keyboard or mouse
- Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)
### ThinkPad X40 (2382) - TopSeller - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

#### Specifications

**Processor**
- Intel Pentium M 1.0/1.2/1.3GHz
- Intel Celeron 1.1/1.2GHz

**Memory**
- 256MB, 512MB, or 1GB SDRAM

**Screen**
- XGA (1024x768)

**Disk**
- 40GB or 60GB hard drive

**Battery**
- 6-cell or 8-cell battery

**Dimensions**
- 10.5 x 8.3 x 0.63 (267 x 210 x 16mm)

**Weight**
- 2.8 lbs (1.27kg)

**Operating System**
- Microsoft Windows XP Professional

**Software**
- IBM Director
- Softalk
- 24 hour x 7 day toll-free warranty

**Limited warranty**
- 3-year limited warranty

**See footnotes for important warranty information**

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**These small and medium business (SMB) models are part of the US TopSeller Program**

**The 2382 has a 3-year limited warranty**

### Performance

- **ThinkPad Utility**: Integrated into Windows XP Professional
- **Access Pro**: Supports Ultrabay Plus and ThinkPad X4 Dock
- **Embedded Security Subsystem 2.0**: Supports Intel's Secure Boot technology
- **McAfee®️ Software Delivery Assistant**: Provides desktop expansion and cable management for the X40/X41
- **ThinkPad Utilities**: Easily connects to the bottom of the X40/X41 for traveling
- **InterVideo WinDVD combo models**: Converts the X40 to a two-spindle system by supporting optional Ultrabay Slimline in the left side:
  - Ultrabay Slim Li-Polymer Battery 3-cell: 08K9190
  - CD-RW/DVD Combo II Ultrabay Slim Drive: 73P3288
  - ThinkPad DVD-ROM Ultrabay Drive: 73P3270
  - Second HD Adapter for Ultrabay Slim: F1U14264

**Limited warranty**
- 3-year battery - EasyServ on-site pickup and delivery / service upgrades available

**Other features**
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet: 1.3 lbs, 580g

**65-watt AC Adapter**
- Asset ID™️, (system-specific info in chip accessed over network)
- ACPI 1.0b and 2.0-compliant
- International Warranty Service
- 24 hours 7 day toll-free warranty support during warranty

See footnotes for important warranty information

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US models announced February 10, 2005, or October 5, 2004 or February 15, 2005

US models withdrawn effective January 2005, 2005, or December 2006

(X40B3) December 2006
| Type-model        | Processor          | GHz cacheMemory | Screen | Disk       | Optical in UltraBase | ThinkPad X4 UltraBase | Mini PCI wireless | CDC: modem/ Bluetooth | Sec chip | Battery | Limited warranty | Availability |
|-------------------|--------------------|-----------------|--------|------------|---------------------|-----------------------|---------------------|--------------------|-----------------------|------------|----------|------------------|--------------|
| 2382-QDU Pentium™ M 7781.6 MB 512MB 12.1" XGA 40GB Combo | X4 UltraBase     | Intel 11b/g/32  | 8-cell | 3-year Oct 05 |                     |                       |                    |                    |                       |            |          |                   |              |
| 2382-RFU Pentium™ M 7781.6 MB 512MB 12.1" XGA 60GB DVD RW X4 UltraBase | Intel 11b/g/32  | Intel 11b/g/32  | 8-cell | 3-year Oct 05 |                     |                       |                    |                    |                       |            |          |                   |              |

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The 2382 has a 3-year limited warranty

Positioning Processor
Ultimate mobility in a versatile ultraportable one spindle
Intel Pentium M Processor Low Voltage 771 (1.6GHz)
with Enhanced Intel SpeedStep™ technology, XD bit, and 400MHz bus

L2 cache 2MB / on die (at processor speed) / ECC

Memory 512MB std (28 to 1.539GB max / PC2700 333MHz DDR1 (DDR-SRAM) / CL1.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available

Diskette drive None standard / use optional USB-based diskette drive

Combi DVD RW Supports Ultrabay Slim devices in standard X4 UltraBase

Travel weight 40GB & 60GB (4200 rpm), 9.5mm, ATA-100 / 1.18” platter / removable and upgradable / 9.5mm high bay / Active Protection System™ (shock protection)

Display 12.1” (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Graphics Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 266MHz

Architecture Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH-M I/O Controller Hub (ATA-100 EIDE, PCI bus, Low Pin Count (LPC) interface, USB [Bluetooth]) / Intel 82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (ethernet, Ricoh R5C511 CardBus Controller, Mini PCI) / LPC bus 33MHz (PCI78392 Super I/O) for infrared [dock-based ports]

Mobile media bay X4 UltraBase (see right side) / optional X4 Dock supported

Secure Digital slot One Secure Digital Card slot / supports SD memory cards used in consumer devices

Ports PC Card Std slot / Two Type I or One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door

Wireless antenna UltraConnect™ antenna built into the display cover for optional wireless signal reception

Mini PCI One Mini PCI type III slot (Communications Bay) / customer upgradable

Modem One Communications Daughter Card (CDC) socket / customer accessible

Bluetooth® Some: Bluetooth wireless technology / in CDC (with modem)

Ethernet Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541G1 MAC/PHY / Wake on LAN

Audio Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

Security Power-on-password / dual hard disk password / supervisor password / security keyhole

Security chip Embedded Security Subsystem 2.0™ / Atmel™ chip / TCG-compliant

SOFTWARE™

- Windows XP Professional
- - Microsoft® Windows® XP Professional Service Pack 2
- - Disk-to-Disks Recovery (in hidden protected area)
- Preloaded
- - Rescue and Recovery™
- - Access Connections™
- - ThinkVantage Productivity Center
- - ThinkVantage System Update
- - Symantec Client Security
- - PC-Doc™
- - ThinkPad Utilities
- - Adobe Reader
- - Client Security Solution™ (for security enhanced ports)
- - Sonic RecordNOW and Drive Letter Access (combo, DVD RW)
- - InterVideo WinDVD (combo, DVD RW models)
- - InterVideo WinDVD Creator (DVD RW models)
- - Simple Backup (DVD RW)
- License (CD not included)
- - Lenovo’s SmartStart® and Lenovo’s Stand-alone Client

ThinkPad X4 UltraBaseline

- Provides desktop expansion and cable management for the X40/X41
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side
- - Ultrabay Slim Li-Polymer Battery 3-cell 08K8190
- - CD RW/DVD Combo II Ultrabay Slim Drive 08P3288
- - Super Multi-Burner Ultrabay Slim Drive (curved bezel) 40Y8622
- - Second HDD Adapter for Ultrabay Slim 62P4554

Other features
- - Power button (front)
- - Speaker buttons (1 watt)
- - Security key lock, security keyhole, and optical security screw
- - Security key lock
- - Serial and parallel ports
- - PS/2 port for keyboard or mouse
- - Analog DB-15 monitor port
- - Secure Digital Card
- - ThinkPad Utilities
- - USB 2.0 (2.0 port) / USB 2.0 (USB hub)
- - Ethernet port
- - Retractable feet: 1.3 lb; 580g

Limited warranty 3-year / 1-year battery / EasyServ™ onsite pickup and delivery / service upgrades available

56 watt AC Adapter

Asset ID™ (system-specific info in ThinkPad™ service access point)

ACPI 1.0b and 2.0-compliant ENERGY STAR® (for built-in models)

International Warranty Service

Lotus SmartStart® Millennium and Lotus SmartStart® Stand-alone Client

- ThinkVantage technologies

See footnotes for important warranty information

Supported: Intel Centrino® mobile technology

© Lenovo (3P359M2) April 2006

US models announced October 4, 2005

US models withdrawn effective May 2006
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X4 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/ Bluetooth™</th>
<th>Sec chip</th>
<th>Battery</th>
<th>Limited warranty</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>2386-4AU</td>
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<td>1.1MB</td>
<td>256MB</td>
<td>12.1&quot;</td>
<td>XGA</td>
<td>20GB</td>
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<td>*Intel®/ Intel®</td>
<td>*Intel®/ Intel®</td>
<td>Yes</td>
<td>8 year</td>
<td>Oct 04</td>
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</table>

- **These small and medium business (SMB) models are part of the US Think Express Program**
- **The 2386 has a 1 year limited warranty**

### Software

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
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<tbody>
<tr>
<td>Windows XP Professional</td>
<td>- Microsoft Windows® XP Professional (Service Pack 2)</td>
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<td></td>
<td>- Disk-to-Disk Recovery (in dedicated protected area)</td>
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</table>

### Preloaded

- Rescue and Recovery™
- Access IBM
- Access Connections
- *Lotus®* Notes (OEM edition)
- PC-Doctor™
- Adobe Reader
- Update Connector™
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X4 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/ Bluetooth</th>
<th>Battery cells</th>
<th>Limited warranty</th>
<th>Avail date</th>
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<td>2386-JBU</td>
<td>Pentium M 755 1.5</td>
<td>2MB</td>
<td>256MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
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<td>2386-KLU</td>
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<td>Yes</td>
<td>1-year</td>
<td>Mar 05</td>
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<td>12.1&quot; XGA</td>
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<td>Modern</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The 2386 has a 2-year limited warranty

### SOFTWARE

#### XP Professional
- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

### Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™
- Internet Explorer (OEM edition)
- PC-Doctor™
- Adobe Reader
- Update Connector™
- Intel Video/Display (combo models)
- RecordNow and DLA (combo)

### Downloadable
- IBM Director Assistant
- Software Delivery Assistant
- System Management Assistant
- Client Security Software (for security chip)

### License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### ThinkPad notebooks implement ThinkVantage® technologies

### ThinkPad X4 UltraBase™ (standard with JCU/KMU)
- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Active Protection System
- Three USB 2.0 ports (via USB hub)
- 12-hour battery life
- Heater (on cold or at high altitude)
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modem port
- Retractable feet: 1.13 lb; 530g

### Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- Serial port for keyboard or mouse
- Analog DB-15 monitor port
- ThinkVantage™ Smart Capture
- ENERGY STAR®- compliant
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty period via 800-IBM-SEIRV (426-7378)

### ThinkPad X40 Series

#### Limited warranty
- 1-year - EasyServ™ onsite pickup and delivery / service upgrades available

#### See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

© Lenovo (X4X) December 2006
## Type-model | Processor | GHz cacheMemory | Screen | Optical in UltraBase | ThinkPad X4 UltraBase* | Mini PCI wireless | CDC: modem/BT Sc | Battery cells | Battery warranty | Limited warranty | Availability |
<table>
<thead>
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<tbody>
<tr>
<td>2386-MCU Pentium® M 7531.2 2MB 256MB 12.1&quot; XGA 40GB</td>
<td>None</td>
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<td>* Intel 11/b</td>
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<td>Yes</td>
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<td>Yes</td>
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<td>Yes</td>
<td>8-cell</td>
<td>1-year</td>
<td>Oct 05</td>
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<td>2386-REU Pentium M 778 1.6 2MB 512MB 12.1&quot; XGA 60GB</td>
<td>Combo</td>
<td>X4 UltraBase</td>
<td>* Intel 11/b</td>
<td>Modern</td>
<td>Yes</td>
<td>8-cell</td>
<td>1-year</td>
<td>Oct 05</td>
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<td>2388-REU Pentium M 778 1.6 2MB 512MB 12.1&quot; XGA 60GB</td>
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<td>X4 UltraBase</td>
<td>* Intel 11/b</td>
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<td>8-cell</td>
<td>1-year</td>
<td>Oct 05</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller® Program

- The 2386 has a 1-year limited warranty

---

### Software

- Windows XP Professional
  - Microsoft® Windows® XP Professional(TM) (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

#### Preloaded

- Rescue and Recovery™
- Access Connections™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader® Portable
- Client Security Solution™ (for security chip)

#### Downloadable

- IBM Director Agent
- Embedded Security Assistant
- System Migration Assistant
- License (CD not included)
  - Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

Supports ThinkVantage™ technologies

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for travel
- Converts the X40 to a two-spindle system by supporting optional Ultrabay and accessories in left side
  - Ultrabay Slim Li-Polymer Battery
    - 3-cell: 08K8190
    - 4-cell: 08K8191
    - CD/RW/DVD Combo II Ultrabay Slim Drive
      - 73P3288
    - Super-Multi-Burner Ultrabay Slim Drive (curved bezel)
      - 40Y6622
  - Second HDD Adapter for Ultrabay
    - 62P4544

- Disks supported:
  - 40GB HS Hard Disk: 08K9816
  - 60GB HS Hard Disk: 73P3357
  - 80GB HS Hard Disk: 09N4273

- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optical security screw
  - Serial and parallel ports
  - PS/2 port for keyboard or mouse
  - Analog DB-15 monitor port
  - Three USB 2.0 ports (via USB hub)
  - Ethernet port (Gigabit Ethernet)
  - Modern port
  - Retractable feet: 1.3 lb; 580g

- 56 watt AC Adapter

- Asset ID™ (system-specific info in chip accessed over network)
  - ACAPI 1.0b and 2.0-compliant
  - ENERGY STAR®-compliant
  - International Warranty Service

- 24 hour x 7 day x 365 day worldwide customer support during the warranty via 800-IBM-SERV (426-7378)
### ThinkPad X40 (2371) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Optical in</th>
<th>ThinkPad UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC:</th>
<th>modem/</th>
<th>Sec</th>
<th>chip</th>
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**The 2371 has an EasyServ™ on-site pickup and delivery 3-year limited warranty.**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- **Processor:** Ultimate mobility in a versatile ultraportable; one spindle
- **Memory:** Intel® Pentium M Processor Low Voltage 1.2GHz, 738 (1.4GHz), 758 (1.5GHz), or 778 (1.6GHz) with Enhanced Intel SpeedStep technology and 400 MHz system bus
- **L2 cache:** 1.2GHz: 1MB; 1.4GHz: 1.5MB; 1.6GHz: 2MB; all on die (at processor speed) / ECC
- **L2 cache Speed:** 512MB std / 1.53GB max / PC2700 333MHz DDR1 / non-parity / CL2 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available
- **Diskette drive:** None standard / use optional USB-based diskette drive
- **Ultrabay Slim:** Supports Ultrabay Slim devices in optional X4 UltraBase
- **Disk:** 40GB (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / Active Protection System™ (shock protection)
- **Display:** 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Graphics:** Integrated Intel Extreme™ Graphics 2 / in 855GM GECH / uses main memory (up to 64MB) / 266MHz
- **Graphics external:** External monitor may be used via analog DB-15 connector / up to 1600x1200x16.7M at 85Hz
- **Keyboard:** Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke / Access IBM button / palm rest / TrackPoint™ / "Press-to-Select", Intel Screen Bar® / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap
- **ThinkLight™:** Illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions:** 4-cell without X4 UltraBase: 10.5"x8.3"x1.1"-1.6"; 268mm x 211mm x 20.6-26.9mm
- **Weight:** 2.7lb (1.2kg)
- **Color:** Black / Al: magnesium alloy
- **Batteries:** Li-Ion 4-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase (for two batteries) / with 4-cell: up to 3.25 hr; with optional 8-cell: up to 7 hr; with cell and optional Extended Life Battery: up to 10 hr
- **Architecture:** Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DM ICH4-M I/O Controller Hub (ATA-100 IDE), PCI bus, Low Pin Count (LPC) interface, USB (Bluetooh) / Intel 82802AC Firmware Hub / PCI 2.2, 32-bit, 33MHz, (ethernet, UltraBus controller, Mini PCI) / LPC bus 33MHz (PC87392 Super I/O for infrared i (dock-based ports)
- **Mobile media base:** Optional X4 UltraBase (see right side) and X4 Dock
- **Secure Digital slot Magnet:** One Secure Digital Card slot / supports SD memory cards used in consumer devices
- **PC Card Std slot:** One Type I or Type II CardBus 32-bit / PCMCIA 2.1 / integrated door
- **Ports:** Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor / infrared (4MBps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4 UltraBase) / no IEEE 1394 port
- **Wireless**: UltraConnect™ antenna built into the display cover to cover optional wireless network reception / Mini PCI Type III slot (Communications Bay) / customer upgradable / Intel 11b/g/n / 802.11a, b, g, n / 802.11ac / 433 Mbps / Baseband: Intel 8265 / CAC-2 compliant
- **CDC:** One Communications Daughter Card (CDC) socket / customer accessible
- **Modem:** 56Kv.90 (V.92-Designed)™ modem in CDC / Conexant® chipset
- **Ethernet:** Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN™
- **Audio:** Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal mic / 800Hz key (5.3mm / green)
- **Security chip:** Power-on password / dual hard disk password / supervisor password / security keyhole
- **Security:** Embedded Security Subsystem™ / hardware key storage / multi-factor authentication / local encryption / AcerChip™ / TCG-compliant

See footnote for important warranty information

### SOFTWARE

- **Windows XP Professional:** - Microsoft® Windows® XP Professional
- **GE/UK/I/J/U/O/B only:** Service Pack 2
- **CDC: modem/Bluetooth**:
- **Software Delivery Assistant**
- **Software Delivery Assistant**
- **Client Security Software** (for security chip)

### Downloadable

- **IBM Direct:** 1-800-493-4705
- **Software Delivery Assistant**
- **System Migration Assistant**

### License

- **CD not included:**
  - Lenovo® ThinkVantage™ Millenium
  - Lenovo® ThinkVantage™ Rescue and Recovery

### ThinkPad X4 UltraBase™

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spin disk system by supporting optional Ultrabay Slim accessories in left side:
  - Ultrabay Slim Li-Polymer Battery 3-cell: 08K9190
  - CD-RW/DVD Combo II Ultrabay Slim Drive: 73P3288
  - ThinkPad DVD-ROM Ultrabay: 73P3270
  - Second HDD Adapter for Ultrabay Slim: 62P5455

- Disks supported:
  - 40GB HS Hard Disk: 08K9816
  - 60GB HS Hard Disk: 73P3357
  - 80GB HS Hard Disk: 09N4273

### Other features:

- Power button (front)
- Speaker stereo (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog/DVI ports
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modem port
- Retractable feet: 1.3 lb / 580g

### 56 watt AC Adapter

- Astrolite® AC adapter with multi-factor-specific info in chip accessed over network
- ACP11.0 and 2.0 compliant
- International Warranty Service
- 2-Year limited warranty support during the warranty

---

*Footnote:* Some features powered by Intel Centino® mobile technology

*Lenovo® US models announced: April 6 or October 5, 2004 or February 15 or October 4, May 2005


*Lenovo® US models announced: April 6 or October 5, 2004 or February 15 or October 4, May 2005

# ThinkPad X40 (2372) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X4 UltraBase™</th>
<th>Mini PCI</th>
<th>Sec</th>
<th>Limited warranty</th>
<th>Education software</th>
<th>Avail date</th>
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<tr>
<td>2372-9EU</td>
<td>Pentium® M</td>
<td>1.2 MB</td>
<td>512MB</td>
<td>12.1&quot; XGA 40GB</td>
<td>None</td>
<td>Optional</td>
<td>Intel 11b/g/a</td>
<td>Modern</td>
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<td>Onsite</td>
<td>No</td>
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<tr>
<td>2372-GAU</td>
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<tr>
<td>2372-KUJ</td>
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<td>Optional</td>
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<td>2372-QGU</td>
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<td>Modern</td>
<td>Yes</td>
<td>Onsite</td>
<td>May 2005</td>
</tr>
</tbody>
</table>

*The ThinkPad X40 has a limited onsite service13 - 3-year limited warranty*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

## SOFTWARE

**Windows XP Professional**
- Microsoft® Windows® XP Professional14
- G4U/KKU/Q9U only: Service Pack 2
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License**
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage® technologies

**ThinkPad X4 UltraBase™**
- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: Ultrabay Slim Li-Polymer Battery 3-cell 08K190
- CD-R/DVD Combo II Ultrabay Slim Drive 73P3288
- Super Multi-Burner Ultrabay Slim Drive (curved bezel) 40Y6262
- Second HDD Adapter for Ultrabay Slim 62P4554

**Disks supported:**
- 60GB HS Hard Disk 73P3357
- 80GB HS Hard Disk 09N4273

**Other features:**
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- modem port
- Retractable feet; 1.3 lb; 580g

56 watt AC Adapter

See footnotes for important warranty information  
*Powered by Intel Centrino® mobile technology

US models announced April 6 or October 5, 2004 or February 15 or October 4, 2005


© Lenovo (2372) April 2006

Updated: 24/07/2005

**Note:** Lenovo only supports the computer models with the "®" symbol.

**Disclaimer:** Lenovo is not responsible for any matrices or links that may appear on the website other than those provided by Lenovo in connection with the Lenovo ThinkPad X40. These matrices or links are solely based upon the Lenovo ThinkPad X40’s matrix and are not created by Lenovo. Lenovo is not responsible for any changes or updates to these matrices or links.

**派出所:** ThoughtPad X40 UltraBase

See footnotes for important warranty information  
*Powered by Intel Centrino® mobile technology

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© Lenovo (2372) April 2006

Updated: 24/07/2005

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ThinkPad X4 UltraBase Dock

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side:
  - Slim Li-Polymer Battery: 3-cell, 8-cell
  - CD-RW/DVD Combo II Ultrabay Slim Drive: 73P3288
  - ThinkPad DVD-ROM UltraBase Slim Drive: 73P3270
  - Super Multi-Burner Ultrabay Slim Drive (curved bezel): 40Y6622
  - Second HDD Adapter for Ultrabay Slim: 62P4554

Disks supported:
- 40GB HS Hard Disk: 08K9816
- 80GB HS Hard Disk: 73P3857
- 80GB HS Hard Disk: 09N4273

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog Display A/V output (S-video port)
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet: 1.3 lb; 580g

56 watt AC Adapter

Asset ID**: (system-specific info in chip accessed over network)

ACPI 1.0b and 2.0-compliant

ENERGY STAR®-compliant

International Warranty Service

24 hour x 7 days toll-free warranty support during the warranty via 800-IBM-SEVR (426-7378)
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Optical in Disk UltraBase</th>
<th>ThinkPad UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/ Bluetooth™</th>
<th>FingerPrint Limited warranty</th>
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<tbody>
<tr>
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<td>Modern Finger</td>
<td>3-yr</td>
<td>W G Oct 05</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Positioning**
- **US Govt (TAA)³ Processor**: Ultimate mobility in a versatile upgradable; one spindle
- **L2 cache Memory**: None
- **Intel® Pentium® M Processor Low Voltage 778 (1.6GHz)** with Enhanced Intel® SpeedStep™ technology³, Execute Disable Bit and 400MHz system bus 2MB; on die (at processor speed) / ECC
- **ThinkLight**: Enhanced Keyboard
- **Battery - type**: 8-cell without X4 UltraBase: 10.5" x 9.3" x .81-.106"; 268mm x 237mm x 20.6-26.9mm
- **Dimensions³**: 8-cell or 60GB (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / Active Protection System™ (shock protection)
- **Display**: 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Graphics**: Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM
- **Keyboard**: Standard-size[5] keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke / Access IBM button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar®
- **ThinkLight**: Blue; left/middle/right buttons
- **Performance**
  - **Dimensions³**: 8-cell or 60GB (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / Active Protection System™ (shock protection)
- **Display**: 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Graphics**: Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM
- **Keyboard**: Standard-size[5] keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke / Access IBM button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar®
- **ThinkLight**: Blue; left/middle/right buttons
- **Performance**
  - Table

---

**SOFTWARE**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
- **Disk-2-Desk Recovery** (in hidden protected area)
- **Preloaded**
  - Rescue and Recovery™
  - Access Connections³
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symantec® Client Security
  - PC-Doctor™
  - ThinkPad Utilities
  - Adobe Reader
  - Update Connector³,³³
  - Client Security Solution™ (for security options)
- **Downloadable**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Migration Assistant
- **License (CD not included)**
  - Lenovo® System Software and Lenovo® Notes™ Stand-alone Client

**Supports ThinkVantage technologies**

**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the ThinkPad X40/X41
- Converts the X41 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side
  - Ultrabay Slim Li-Polymer Battery 3-cell: 08K8180
  - CD-RW/DVD Combo II Ultrabay Slim: 73P2288
  - ThinkPad DVD-ROM Ultrabay Slim Drive: 73P3270
  - Super Multi-Burner Ultrabay Slim Drive (curved bezel): 40Y6622
  - Second HDD Adapter for Ultrabay Slim: 41U3148
- Disks supported:
  - 40GB HS Hard Disk: 08K9816
  - 60GB HS Hard Disk: 39W9106
  - 80GB HS Hard Disk: 09N4273
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optical security screw
  - Serial and parallel ports
  - PS/2 port for keyboard or mouse
  - Analog DB-15 monitor port
  - Three USB 2.0 ports (via USB hub)
  - Ethernet port (Gigabit Ethernet)
  - USB 2.0 (via USB hub)
  - Serial: 9-pin DB-9 or X4000 9-pin DB-9
  - Network: 10/100/1000Base-TX or GbE
  - Parallel: 25-pin DB-25 or X4000 25-pin DB-25

**See footnotes for important warranty information**

For more information, visit lenovo.com/options
ThinkPad X41 (2527) - Express - withdrawn

### Type-model | Processor | GHz | L2 cache | Memory | Screen | Disk | Optical in UltraBay | ThinkPad X4 UltraBase™ | Mini PCI wireless | CDC: modem/ Bluetooth/ Fingerprint reader | Limited warranty | Available date
---|---|---|---|---|---|---|---|---|---|---|---|---|---
2527-5SU | Pentium® M 758 1.5 | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional ≠ Intel 11a/b/g | Modern | Finger | Yes | 1 year | Apr 05
2527-6NU | Pentium M 758 1.5 | 2MB | 512MB | 12.1" XGA | 60GB | None | Optional ≠ Intel 11a/b/g | Mod/Blue | Finger | Yes | 1 year | Apr 05
2527-8PU | Pentium M 758 1.5 | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional ≠ Intel 11a/b/g | Intel/Mod | Finger | Yes | 1 year | Apr 05

#### These small and medium business (SMB) models are part of the US Think Express Program

#### The X41 has a 3 year limited warranty

### Positioning

- **ThinkPad US Govt (TAA) ≠**
- **ThinkPad US Govt (GSA) ≠**

### Processor

- None

### L2 cache

- 512MB slot 1 / 1.3Gbps QM7 / PC-2-4200 533MHz DDR2 (limited to 400MHz by low voltage processor) / 4-channel capable / std memory soldered to systemboard / one 200-pin SO-DIMM socket available

### Memory

- None standard / or optional USB-based diskette drive

### Diskette drive

- Some: DVD-ROM/CD-20 / 24X/24X/1X / speed / removable from X4 UltraBase

### Combo Ultrabay™ Slim

- Power over UltraBay-SLIM devices in optional or standard UltraBay

### Disk

- 40GB 60GB (4200 rpm) / 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / **Active Protection System** (shock protection)

### Display

- 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

### Graphics

- Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM / GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz

### Keyboard

- Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch / 2.5mm stroke / Access IBM button / palm rest / TrackPoint / Active Protection System / Active Matrix / 150 nits

### ThinkPad

- Intel® Pentium® M Processor Low Voltage 758 (1.5GHz) with enhanced Intel SpeedStep™ technology / Execute Disable Bit and 400MHz system bus 2MB / on die (at processor speed) / ECC

### Dimensions

- 8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06" / 268mm x 237mm x 20.8-26.5mm

### Weight

- 3.3 lb (1.49kg)

### Battery type

- Li-Ion 8-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase (for two batteries) / with 8-cell: up to 7.6 hr

### ThinkPad X4 UltraBase™

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X41 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: Ultrabay Slim Li-Polymer Battery 3-cell
- CD-ROM/DVD Combo II Ultrabay Slim Drive 73P3288
- ThinkPad DVD-ROM Ultrabay Slim Drive 73P3290
- Multi-Brush Plus Ultrabay Slim Drive 73P3342
- Second HDP Adapter for Ultrabay Slim

### Mobile media base

- Some: X4 UltraBase (see right side) / optional X4 Dock supported

### Secure Digital slot

- One Secure Digital Card slot / supports SD memory cards used in consumer devices

### PC Card Std slot

- One Type I or one Type II / CardBus Plus 32 bit / PCMCIA 2.1 / integrated door

### Ports

- Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet)

### Connector

- None standard / or optional USB-based diskette drive

### Default system card

- Intel 11a/b/g 32 Modem Finger Yes 1 year Apr 05

### Software

- **ThinkPad X4 UltraBase™**
  - Preloaded
    - Rescue and Recovery™
    - Access Program
    - PC-Doctor™
    - Norton AntiVirus (OEM edition)
    - Client Security Software (for security chip)

### Downloadable

- IBM Direct Agent
- Software Delivery Assistant
- System Migration Assistant

### License

- CD (not included)
  - Lenovo®’s Stand-alone Client

### ThinkPad X4 UltraBase™

- ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

---

See footnotes for important warranty information

*Powered by Intel Centriomo™ mobile technology © Lenovo

US models announced April 5, 2005

US models withdrawn effective November 2005

(X2) Q2 2005
### Specifications:

#### Processor:
- **Model**: Intel Pentium M Processor
- **Speed**: Low Voltage 778 (1.6GHz)
- **Networking**: Embedded Security Subsystem 2.0 (SESP)

#### Memory:
- **Type**: 533MHz DDR2 (limited to 400MHz PC2-4200)
- **Capacity**: 512MB to 4GB

#### Display:
- **Type**: 12.1" XGA
- **Resolution**: 150 nits

#### Audio:
- **Controller**: Intel Graphics Media Accelerator 900 (GMA 900)

#### Security:
- **Security Chip**: Intel 11a/b/g Wireless Chip
- **Antivirus**: Enhanced Intel SpeedStep technology
- **Privacy**: Embedded Security Subsystem 2.0 (SESP)

#### Ports:
- **USB**: 2
- **Parallel**: 1
- **Serial**: 1
- **Audio**: Jacks for headphone, microphone, multimedia input, and microphone input

#### Optional Accessories:
- **Diskette Drive**: Optional USB-based drive
- **Display**: ThinkVision L201p 20.1" Monitor (black)
- **Batteries**: 8-cell battery or optional battery in X4 UltraBase

#### Limited Warranty:
- **Type**: 1-year
- **Coverage**: On-site pickup and delivery

---

### Note:
- The 2527 has a 1-year limited warranty.
- These small and medium business (SMB) models are part of the US TopSeller Program.

---

### Windows XP Professional:
- **Software**
  - Microsoft Windows XP Professional
  - 3-year LOR 9x5 NBD 41C9168

### ThinkPad notebooks implement:
- ThinkVantage technologies and de-sign
- visit thinkpad.com/thinkvantage

---

### Security:
- **Firewall**: ThinkVantage System Update
- **Client Security**: Preloaded
- **Preloaded**: Rescue and Recovery
- **Virus Protection**: Access Connections

### Preloaded:
- **Office 2003**: ThinkPlus
- **Utilities**: ThinkPad
- **Adobe Reader**: Adobe Reader

### Hardware:
- **Graphics**: Intel Media Accelerator 3D Graphics (M3D)
- **Audio**: Intel 11a/b/g Wireless Chip
- **Network**: Embedded Security Subsystem 2.0 (SESP)

### Key Features:
- **Privacy**: Embedded Security Subsystem 2.0 (SESP)
- **Processing**: Intel Pentium M Processor
- **Networking**: Embedded Security Subsystem 2.0 (SESP)
- **Security**: Intel 11a/b/g Wireless Chip
- **Antivirus**: Enhanced Intel SpeedStep technology

---

### Product Details:
- **Processor**: Intel Pentium M Processor Low Voltage 778 (1.6GHz)
- **Memory**: 512MB to 4GB DDR2
- **Display**: 12.1" XGA
- **Audio**: Intel 11a/b/g Wireless Chip
- **Security**: Embedded Security Subsystem 2.0 (SESP)

---

### Additional Features:
- **Security**: Intel 11a/b/g Wireless Chip
- **Networking**: Embedded Security Subsystem 2.0 (SESP)
- **Privacy**: Enhanced Intel SpeedStep technology
- **Antivirus**: Embedded Security Subsystem 2.0 (SESP)

---

### Conclusion:
- **Productivity**: Enhanced Intel SpeedStep technology
- **Security**: Embedded Security Subsystem 2.0 (SESP)
- **Networking**: Embedded Security Subsystem 2.0 (SESP)
- **Privacy**: Enhanced Intel SpeedStep technology
- **Antivirus**: Embedded Security Subsystem 2.0 (SESP)
**Type-model**  | **Processor** | **GHz** | **L2 cache** | **Memory** | **Screen** | **Optical Drive** | **ThinkPad X4 UltraBase** | **Mini PCI wireless** | **CDC**: **modem** | **Bluetooth** | **Fingerprint Sec Key** | **Limited warranty**
---|---|---|---|---|---|---|---|---|---|---|---|---|---|
2528-55U  | Pentium M 758 1.5  | 2MB | 512MB  | 12.1” XGA  | 40GB  | None | Optional  | Intel 11a/b/g  | Modem  | Finger  | Yes  | 3 years Apr 05
2528-65U  | Pentium M 758 1.5  | 2MB | 512MB  | 12.1” XGA  | 60GB  | None | Optional  | Intel 11a/b/g  | Modem  | Finger  | Yes  | 3 years Apr 05
2528-75U  | Pentium M 758 1.5  | 2MB | 512MB  | 12.1” XGA  | 60GB  | None | Optional  | Intel 11a/b/g  | Modem  | Finger  | Yes  | 3 years Apr 05

*These small and medium business (SMB) models are part of the US Think Express Program.*

**The 2528 has a 3 year limited warranty.**

**SOFTWARE**

- **Windows XP Professional**
  - Microsoft Windows XP Professional
  - Disk-To-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery™
- Access Program
- ThinkVantage Technologies
- Norton AntiVirus™
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™
- Client Security Software (for security chip)

**Downloadable**

- IBM DirectAG
t
- Software Delivery Assistant
- System Migration Assistant

**License** (CD not included)

- Lotus® SmartSuite® Millennium
- Lotus Notes® Stand-alone Client

ThinkPad X4 UltraBase™

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X41 to a two-spindle system by supporting optional Ultraslim accessories in left side: Ultraslim Li-Polymer Battery 3-cell
- CD-RW/DVD Combo II UltraSlim Drive 73P3288
- ThinkPad DVD-ROM UltraSlim Drive 73P3270
- Multi-Burner Plus UltraSlim Drive 73P3342
- Second HDD Adapter for UltraSlim Drive 62P4354

Disks supported:

- 40GB HS Hard Disk 08K9816
- 80GB HS Hard Disk 73P3357
- 80GB HS Hard Disk 09N4273

Other features:

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB 15 monitor port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet; 1.3 lb; 580g

56 watt AC Adapter

Asset ID™ (system-specific info in chip accessed over network)

ACPI 1.0b and 2.0-compliant

ENERGY STAR®-compliant

International Warranty Service 17

24 hour 7 day toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)
### THINKPAD X41 (2528) - TopSeller (October 2005) - withdrawn

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<th>Processor</th>
<th>GHz</th>
<th>L2 cache Memory</th>
<th>Screen</th>
<th>Optical In UltraBase</th>
<th>X4 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/ Bluetooth™</th>
<th>FingerPrint Sec reader</th>
<th>Limited warranty</th>
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<tr>
<td>2528-ELU</td>
<td>Pentium® M 771.6 2MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None Optional *</td>
<td>Intel 11a/b/g/</td>
<td>Modem Finger Yes</td>
<td>3-year Oct 05</td>
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<td>2528-FPU</td>
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<td>60GB</td>
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<tr>
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<td>Intel 11a/b/g/</td>
<td>Modem Finger Yes</td>
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<td>Modem Finger Yes</td>
<td>3-year Oct 05</td>
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</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program

The X41 has a 3-year limited warranty.

**SOFTWARE**

- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Investor (in hidden protected area)
- Preloaded
  - Rescue and Recovery™
  - Access Connections™
- Converts the X41 to a twospindle system by supporting optional Ultradok Slim accessories in left side
- UltraBase Slim Li-Polymer Battery
- CD Card/RW/DVD Combo Slim Drive
- ThinkرDok™
- ThinkPad Utilities
- Adobe Reader
- Update Connectors™
- Client Security Solution™ (for security of data)
- Lenovo M500 Projector

**License** (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design sign: visit thinkpad.com/thinkvantage

### ThinkPad X4 UltraBase™

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X41 to a two-spindle system by supporting optional Ultradok Slim accessories in left side
- UltraBase Slim Li-Polymer Battery
- CD Card/RW/DVD Combo Slim Drive
- ThinkPad ROM-DVD UltraBase
- ThinkPad DVD-ROM UltraBase

Disks supported:

- 40GB HS Hard Disk 08K9816
- 60GB HS Hard Disk 73P3357
- 80GB HS Hard Disk 09N4273

Other features:

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- ThinkPad X4 UltraBase

### ThinkPad Carrying Case - BackPack

- 24 hour x 7 day 100% toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

Lenovo US models announced October 4, 2005
Lenovo US models withdrawn effective May 2006

© Lenovo (SP535A) April 2006
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/Fingerprint reader</th>
<th>Battery</th>
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<td>Intel 11b/g</td>
<td>Yes</td>
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</table>

**Positioning**

- Convertible tablet: ultimate mobility in a versatile ultraportable: one spindle
- 3FU: US Government model (Trade Act Agreement-compliant)

**Processor**

- Intel® Pentium® M Processor Ultra Low Voltage 753 or Low Voltage 758 with Enhanced Intel SpeedStep technology, Execute Disable Bit, and 400MHz system bus
- 2MB / on die (at processor speed) / ECC

**Memory**

- 256 or 512MB std / 1.25 to 1.53GB max / PC-24200 533MHz DDR2 (limit to 400MHz because of low voltage processor): non-parity / CL4 / dual channel capable / standard memory sold to systemboard / one 200-pin SO-DIMM socket available

**Display**

- Supports Ultrabay Slim devices in optional ThinkPad X4 Dock
- 40GB or 60GB (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable
- 9.5mm high bay / Active Protection System (shock protection)

**Graphics**

- Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 1515GM / GMCH uses memory up to 128MB (64MB + 1 x 64MB)
- 2MB Low Voltage 758

**Security chip**

- One Communications Daughter Card (CDC) socket / customer accessible
- Some: 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 2915ABG, Intel 82532 chipset

**Other features**

- 56 watt AC adapter / Power button
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and Ultrabay Slim security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Gigabit Ethernet (RJ-45)
- Modem port (RJ-11)

- 32-bit / PCMCIA 2.1 / integrated drive

- Mini PCI: Type II socket / supports SD memory cards used in consumer devices
- One Mini PCI type III slot (Communications Bay) / customer upgradable

- Gigabit ethernet on systemboard: Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE Support
- Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5mm; pink) / headphone jack (3.5mm; green)

- Power-on password / dual hard disk password / supervisor password / security keyhole / Embedded Security Subsystem 2.0 / Atmel chip / TCG-compliant

- Embedded Security Subsystem 2.0
- Security key lock, security keyhole, and Ultrabay Slim security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Gigabit Ethernet (RJ-45)
- Modem port (RJ-11)

- 2.4 lb; 1.1kg

- ACPI 1.0b and 2.0-compliant
- ACPI 1.0b and 2.0—compliant

- ThinkPad X4 Dock
- Provides desktop expansion and cable management for X40/X41 Tablet
- Connects to the bottom of notebook
- Supports optional Ultrabay Slim accessories in left side:
  - ThinkPad-CD-ROM Ultrabay Slim Drive
  - CD-RW/DVD Combo II Ultrabay Slim Drive
  - Super Multi-Burner Ultrabay Slim Drive (curved bezel)
  - Second HDD Adapter for Ultrabay Slim

- Disks supported:
  - 40GB HS Hard Disk 08K9278
  - 80GB HS Hard Disk 09N4273

- Other features:
  - 56 watt AC adapter
  - Power button
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and Ultrabay Slim security screw
  - Serial and parallel ports
  - PS/2 port for keyboard or mouse
  - Analog DB-15 monitor port
  - Three USB 2.0 ports (via USB hub)
  - Gigabit Ethernet (RJ-45)
  - Modem port (RJ-11)

- 2.4 lb; 1.1kg

- 256MB PC2-4200 DDR2 NP CL4 SOD 73P3840
- 512MB PC2-4200 DDR2 NP CL4 SOD 73P3842
- 1GB PC2-4200 DDR2 NP CL4 SOD 73P3844
- USB 2.0 CD-RW/DVD-R/DVD+R Combo Drive 73P6837
- USB 2.0 Memory Key 1GB 4077421
- 60GB Mini Hard Disk 9.5mm (4200 rpm) 73P3358
- Intel PRO/Wireless 2915ABG Mini PCI 41N2990
- ThinkPad X4 Tablet Battery 41C9176
- ThinkPad X2 Tablet 3-year LOR 9x5 41C9176

- ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

See footnotes for important warranty information

* Powered by Intel Centrino mobile technology

**Lenovo**

US models announced June 7, June 28, or August 30, 2005

US models withdrawn effective April or September 2006

(PH1) August 2006

2560x1600x72dpi

Windows XP Tablet - Microsoft Windows XP Tablet PC Edition 2005
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery
- Access Program
- Access Connections
- Norton AntiVirus (OEe edition)
- PC-Doctor
- ThinkPad Utilities
- Adobe Reader
- Update Connector
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)
- Integrated VirtualDrive

**Free trial**

- Alias Sketchbook Pro
- Zino Reader
- FranklinCovey PlanPlus (30 day trial)

- ThinkPad X4 Dock
  - Provides desktop expansion and cable management for X40/X41 Tablet
  - Connects to the bottom of notebook
  - Supports optional Ultrabay Slim accessories in left side:
    - ThinkPad-CD-ROM Ultrabay Slim Drive 73P5270
    - CD-RW/DVD Combo II Ultrabay Slim Drive 73P5288
    - Super Multi-Burner Ultrabay Slim Drive (curved bezel) 40Y8622
    - Second HDD Adapter for Ultrabay Slim 41U3148

- Disks supported:
  - 40GB HS Hard Disk 08K9276
  - 80GB HS Hard Disk 09N4273

- Other features:
  - 56 watt AC adapter
  - Power button
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and Ultrabay Slim security screw
  - Serial and parallel ports
  - PS/2 port for keyboard or mouse
  - Analog DB-15 monitor port
  - Three USB 2.0 ports (via USB hub)
  - Gigabit Ethernet (RJ-45)
  - Modem port (RJ-11)

- 2.4 lb; 1.1kg

- 2560x1600x72dpi

Windows XP Tablet - Microsoft Windows XP Tablet PC Edition 2005
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery
- Access Program
- Access Connections
- Norton AntiVirus (OEe edition)
- PC-Doctor
- ThinkPad Utilities
- Adobe Reader
- Update Connector
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)
- Integrated VirtualDrive

**Free trial**

- Alias Sketchbook Pro
- Zino Reader
- FranklinCovey PlanPlus (30 day trial)
### Type-model
- **1866-9MU Pentium M 778 1.6**
- **1866-9GU Pentium M 778 1.6**
- **1866-BGU Pentium M 778 1.6**
- **1866-8GU Pentium M 778 1.6**
- **1866-CHU Pentium M 778 1.6**
- **1866-9RU Pentium M 778 1.6**
- **1866-CU Pentium M 778 1.6**
- **1866-CRU Pentium M 778 1.6**
- **1866-AEU Pentium M 778 1.6**
- **1866-ADU Pentium M 778 1.6**
- **1866-CGU Pentium M 778 1.6**
- **1866-BFU Pentium M 778 1.6**

### Processor
- **ThinkPad X41 Tablet**
- **ThinkPad X41 Tablet Sleeve**
- **ThinkPad X41 Tablet Digitizer Pen**
- **ThinkPlus**

### Display
- **12.1” (307mm) Super Wide Angle FFS XGA (1024x768)**
- **TFT Color (anti-reflective and anti-glare protective coatings)**
- **180 nits**

### Weight
- **4-cell: 2.6 lb; 1.2kg**
- **8-cell: 4.0 lb; 1.84kg**

### Battery
- **4-cell: 1.89 lbs; 0.86kg**
- **8-cell: 2.4 lbs; 1.1kg**

### Architecture
- **Mobile Intel 915GM Express Chipset**
- **82915GM Graph Mem Cont Hub (GMCH-M)**
- **82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint])**
- **PCB bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]**
- **ThinkPad X4 Dock**
- **ThinkPad X4 Dock**
- **ThinkPad X4 Dock**

### Secure Digital slot
- **One Secure Digital Card slot / supports Slot II card / one or two Type I or Type I cards**
- **Two USB (version 2.0), plus one powered USB port for select options**
- **no serial, parallel, keyboard/mouse ports (use X4 Dock) / No IEEE 1394 port**

### Wireless antenna
- **Internal antenna connector built-in**
- **Mini PCI Type III slot (Communications Bay) / customer upgradable**

### Security keylock, security keyhole
- **Security key lock, security keyhole, and Ultrabay Slim security screw**

### Audio support
- **Soft audio / ICH AC97 controller / DirectSound support / AD1981B AC97 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)**

### Security chip
- **Embedded Security Subsystem 2.0**
- **Atmel chip / TCG-compliant**

### FingerPrint reader
- **FingerPrint reader on right base of display / 2-way swipe sensor**

### Power options
- **12-15V DC input (shock protection)**
- **CD-RW/DVD Combo II Ultrabay**
- **Second HDD Adapter for Ultrabay**

### USB ports
- **Three USB 2.0 ports (via USB hub)**
- **Gigabit Ethernet Port (RJ-45)**
- **Modem port (RJ-11)**

### Supported models
- **1866-CHU Pentium M 778 1.6**
- **1866-CRU Pentium M 778 1.6**
- **1866-AEU Pentium M 778 1.6**
- **1866-ADU Pentium M 778 1.6**
- **1866-CGU Pentium M 778 1.6**
- **1866-BFU Pentium M 778 1.6**

### Other features:
- **56-watt AC adapter**
- **Power button**
- **Stereo speakers (1 watt)**
- **Security key lock, security keyhole, and Ultrabay Slim security screw**
- **Serial and parallel ports**
- **PS/2 port for keyboard or mouse**
- **Analog DB-15 monitor port**
- **Three USB 2.0 ports (via USB hub)**
- **Gigabit Ethernet Port (RJ-45)**
- **Modem port (RJ-11)**

### Available software
- **Microsoft Windows XP Tablet PC Edition 2005**
- **ThinkVantage Productivity Center with Away Manager**
- **ThinkVantage System Update**
- **Symantec Client Security**
- **Diskkeeper**
- **PC-Doctor (diagnostics)**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Adobe Reader**
- **Fingerprint Software (fingerprint models)**
- **InterVideo VirtualDrive CD/DVD Emulator**
- **Freescale**
- ** Alias SketchBook Pro**
- **Zino Reader**
- **FranklinCovey TabletP enner**

### Limited warranty
- **3-years / 1-year battery / EasyServ**

### See footnotes for important compatibility information

*Powered by Intel Centrino mobile technology*
### ThinkPad X41 Tablet (1866) - Education - withdrawn

#### Type-model Processor GHz cache Memory Screen Disk L2 Mini PCI wireless CDC/ modem/ Fingerprint reader Sec chip Limited warranty OneNote Education Avail date

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<th>GHz</th>
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**The 1866 has an EasyServ on-site pickup and delivery 3-year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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#### Positioning

- **Processor**: Convertible tablet; ultimate mobility in a versatile ultraportable; one spindle
- **Intel® Pentium® M Processor Ultra Low Voltage 753 (1.2GHz) or Low Voltage 758 (1.5GHz) or Low Voltage 778 (1.6GHz)** with Enhanced Intel SpeedStep® technology,
- **Execute Disable Bit, and 400MHz system bus
- **L2 cache**: 2MB or on (at processor speed) / ECC
- **UCP 24200 533MHz DDR2 (limited to 400MHz because of low voltage processor) / non-parity / CL4 / dual channel capable / system memory soldered to system board to one 200-pin SO-DIMM socket available
- **UltraBay™ Slim Disk**
  - Supports UltraBay™ Slim devices in optional ThinkPad X4 Dock
  - 40GB or 60GB (4200rpm, 9.5mm, ATA-100 / 1.8" platter / removable and upgradeable / 9.5mm high bay / **Active Protection System™** (shock protection)

**Display**

- **12.1" (307mm) Super Wide Angle FFS XGA (1024x768)** TFT color
  - anti-reflective and anti-glare protective coatings / 180 nits
- **write on screen with standard digitizer pen** / pen holder in front base
  - rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user)
  - 8 buttons on display bottom (power, reboot, rotation, utility, Esc, enter, page up/down)

**Graphics**

- **Intel Graphics Media Accelerator 900 (GMA 900)** / integrated graphics in 915GM GMCH / uses main memory (up to 128MB) for graphics

**Keyboard**

- **Standard-size keys** / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke
  - **Execute Disable Bit, and 400MHz system bus**

**Dimensions**

- **Weight**
  - 2.4 lb; 1.1kg

**Security**

- **Battery type**: Li-Ion 8-cell / supports Optional Extended Life Battery on base for (two batteries)
  - with 4-cell: 2.6 hr; with 8-cell: up to 6.3 hr.
- **with 8-cell and Optional Extended Life Battery**: up to 8.5 hr

**Architect**

- **Mobile Intel 915GM Express Chipset** / 82801FBM ICH6-M / I/O Controller Hub (SATA150, 100 / EIDE, PCI Express x1, PCI bus, Ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (Ricochet® R5SC11 CardBus Plus controller, Mini PCI, external expansion) / LPC bus (PC87392 Super I / O for infrared (dock-based ports), Atmel® security chip)

**Docking station**

- **Optional ThinkPad X4 Dock** (see right side)

**Card reader**

- **Secure Digital slot** / supports SD memory cards used in consumer devices

**PC Card Std slot**

- One Type I or one Type II / **CardBus Plus** 32-bit / PCMCIA 2.1 / integrated door

**Ports**

- Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor / infrared (400MHz / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard / X4 Dock (no USB) / no IEEE 1394 port)

**Wireless hardware**

- **UltraConnect™ antenna** built into the display cover for optional wireless signal reception

**Mini PCI**

- **Intel 11b/g/w**

**CD/CDC**

- One Communications Daughter Card (CDC) socket / customer accessible

**Modem**

- 56K V.90 / 92-designd® modem in CDC/CONEXANT™ chipset

**Audio**

- **Some**: Bluetooth wireless technology / in CDC (with modem)

**Power**

- **Thinkpad Ultraportable 56W AC Adapter** / 80GB HS Hard Disk / 56-watt AC adapter / 41N5643

**Security**

- **Power-on password / hard disk password / supervisor password / security keyhole**

**Security option**

- **Embedded Security Subsystem 2.0**
  - **Atmel® chip / TCG-compliant**

**Fingerprint reader**

- Some: Fingerprint reader on right base of display / 2-way swipe sensor

**Limited warranty**

- **3-years / 1-year battery - EasyServ on-site pickup and delivery / service upgrades available

**Software**

- Windows XP Tablet
  - Microsoft® Windows® XP Tablet PC Edition 2005
  - Disk-to-Recyky

**Preloaded**

- **VitalSource Library education software**
- **Adobe® Photoshop® Elements plus Adobe Premiere® Elements**
- **Rescue and Recovery™**
- **Model A7U/CXU: Microsoft Office OneNote 2003**
- **Model A7U/CXU: Microsoft Office OneNote 2003**
- **Access Connections™**
- **Client Security Solution™**
- **ThinkVantage Productivity Center**
- **ThinkVantage Software**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Fingerprint Software (fingerprint)**
- **Lenovo VirtualDrive CD/DVD Emulator**

**CD included**

- **Model 4GU/A7U/CXU: Microsoft Office OneNote 2003**
- **Adobe Photoshop Elements plus Adobe Premiere Elements**

**Free trial**

- **Alias Sketchbook Pro**
- **Zino Reader**
- **FranklinCovey TabletPlanner**

**Supports**

- ThinkVantage technologies
  - **ThinkPad X4 Dock**
    - Provides desktop expansion and cable mgmt for X40/X41/X41 Tablet
    - Connects to the bottom of notebook
    - Supports optional Ultrabay Slim accessories
      - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y9621
      - ThinkPad DVD Ultrabay Slim
      - Second HDD Adapter for Ultrabay Slim 41U3148
      - Disks supported (some listed): 80GB HS Hard Disk 09N4273

**Other features**

- **56-watt AC adapter**
- **Power button**
- **Stereo speakers (1 watt)**
- **Security key lock, security keyhole, and Ultrabay Slim security screw**
- **Serial and parallel ports**
- **PS/2 port for keyboard or mouse**
- **Analog DB-15 monitor port**
- **Three USB 2.0 ports (via USB hub)**
- **Gigabit Ethernet port (RJ-45)**
- **Model RPM (RJ-7)**
- **2.4 lb; 1.1kg**

- **56-watt AC Adapter**
- **ThinkPad X4 Dock**
- **Optima 1.0b and 2.0-compliant**
- **International Warranty Service**
- **24 hour x 7 day toll-free warranty support during the warranty**

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See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

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US models announced on June 7, 2005 or March 14, 2006

US models withdrawn effective August 2006 and August 2007
ThinkPad X41 Tablet (1867) - Education - withdrawn

Windows XP Tablet
- Microsoft Windows XP Tablet PC Edition 2005™
- Disk-to-Disk Recovery

Preloaded
- VitalSource Library software
- Adobe® Photoshop Elements plus Adobe Premiere Elements
- Model AGU: Microsoft Office OneNote 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities Power Manager and Presentation Director
- InterVideo VirtualDrive CD/DVD Emulator

CD included
- Model AGU: Microsoft Office OneNote 2003
- Adobe Photoshop Elements plus Adobe Premiere Elements

Free trial
- Alias Sketchbook Pro
- Zino Reader
- FranklinCovey TabletPlanner

See footnotes for important warranty information
Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Lenovo

Windows XP Tablet
- Microsoft Windows XP Tablet PC Edition 2005™
- Disk-to-Disk Recovery

Preloaded
- VitalSource Library software
- Adobe® Photoshop Elements plus Adobe Premiere Elements
- Model AGU: Microsoft Office OneNote 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
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- ThinkPad Utilities Power Manager and Presentation Director
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CD included
- Model AGU: Microsoft Office OneNote 2003
- Adobe Photoshop Elements plus Adobe Premiere Elements

Free trial
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See footnotes for important warranty information
Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Lenovo
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* These small and medium business (SMB) models are part of the US TopSeller™ Program

The 1869 has a 3-year limited warranty

Positioning:
- Processor: Converted table: ultimate mobility in a versatile ultraportable: one spindle Intel Pentium® Processor Low Voltage 77W
- L2 cache: Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 400MHz system bus
- Memory: 2MB / on die (at processor speed) / ECC
- Dimensions: 512MB std / 1.53GB max / PC2-4200 533MHz DDR2 (limited to 400MHz because of low voltage processor), non-parity / CL4 / 200-pin SO-DIMM std memory soldered to systemboard / one 200-pin SO-DIMM socket available

UltraBay™ Slim:
- Disk: Supports UltraBay™ Slim devices in optional ThinkPad X4 Dock
- Ultrabay Card: 4+0GB or 60GB (4200 rpm), 9.5mm, ATA-100 / 1.8” platter / removable and upgradable / 9.5mm high bay / Active Protection System™ (shock protection)

Display:
- Graphics: Intel Graphics Media Accelerator 990 (GMA 990) / integrated graphics in 915GM GMCH / 1024MB to 2GB memory (up to 128MB with 256MB) / 1280 x 800 x 8-bit color / 200kHz

Weight:
- Case material: 4-cell battery models: 1.61kg; 8-cell battery models: 1.84kg
- Life: 4-cell: 2.5hr; with 8-cell: up to 6.3 hr; with 8-cell and optional Extended Life Battery: up to 8.5 hr

Architecture:
- Mobile Intel 915GM Express Chipset / 82815GM Graph Mem Cont Hub (GMCH-M) / 82815FM ICH6 M I/O Controller Hub (SATATA, ATA-100 EIDE, PCI Express x1, bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]), [PCI bus (Ricon® R5871 CardBus plus controller, PCI Mini, external expansion)], / LPC bus (PC87392 Super I/O for infrared (dock-based ports), Atmel® security chip)

Docking station:
- Serial Digital slot: One Secure Digital Card slot / supports SD memory cards used in consumer devices
- PC Card Std slot: One Type I or One Type II / CardBus Plus 32-bit / PCMCIA 2.1 / integrated door
- Ports: Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor port / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4 Dock) / no IEEE 1394 port

Security chip: 
- Embedded Security Subsystem 2.0™
- ATmel® chip / TCG-compliant

Fingerprint reader: 
- Fingerprint reader on right base of display / use in tablet or notebook mode / 2-way swipe sensor / integrated with security chip

Limited warranty: 
- 3-years / 1-yr battery - EasyServ™ / onsite pickup and delivery / service upgrades available

Wireless antenna:
- Mini PCI: UltraConnect™ antenna built into the display cover for optional wireless signal reception

License:
- Windows XP Tablet

Other features:
- 56 watt AC adapter
- Power button
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and Ultrabay Slim security screw
- Serial and parallel ports
- PS/2 port (keyboard or mouse)
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Gigabit Ethernet port (RJ-45)
- Optional ThinkPad X4 Dock

Supports ThinkVantage technologies

ThinkPad X4 Dock:
- Provides desktop expansion and cable mgmt for X40/X41/X41 Tablet
- Connects to the bottom of notebook
- Supports optional UltraBay™ Slim accessories in left side: - ThinkPad DVD-ROM Ultrabay - ThinkPad DVD-ROM Ultrabay - ThinkPad DVD-ROM Ultrabay
- Supports optional UltraBay™ Slim accessories in left side: - ThinkPad DVD-ROM Ultrabay - ThinkPad DVD-ROM Ultrabay
- Supports optional UltraBay™ Slim accessories in left side: - ThinkPad DVD-ROM Ultrabay - ThinkPad DVD-ROM Ultrabay

Other options at lenovo.com/options

See footnotes for important warranty information * Powered by Intel Centrino™ mobile technology © Lenovo

US models withdrawn: June 7, 2005 or March 14, 2006

US models withdrawn: December 2006

SOFTWARE

Windows XP Tablet
- Microsoft® Windows® XP Tablet PC Edition 2005™
- Disk-To-Disk Recovery (in hidden protected area)

Preloaded:
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec™ Client Security™
- Diskeeper Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Fingerprint Software (fingerprint models)
- ThinkPad VirtualDrive CD/DVD Emulator

Free trial:
- Alias Sketchbook Pro
- Zino Reader
- FranklinCovey TabletPlanner

License (CD not included):
- Lenovo SmartSuite® Millennium and Lenovo Notes® Stand-alone Client

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- Microsoft® Windows® XP Tablet PC Edition 2005™
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License (CD not included):
- Lenovo SmartSuite® Millennium and Lenovo Notes® Stand-alone Client

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## ThinkPad X60 (1706) - withdrawn

### Type-model | Processor | GHz | Memory | Screen | Disk | Optical in UltraBase | ThinkPad X6 UltraBase | 802.11 wireless | WWAN wireless | Blue- | Fingerprint Battery reader | Workhorse Available | Preload | Date
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
1706-5DU Core Duo T2400 | 1.83 | 512MB | 12.1" | XGA | 60GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08
1706-7AU Core Duo T2400 | 1.83 | 512MB | 12.1" | XGA | 60GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08
1706-85U Core Duo T2400 | 1.83 | 512MB | 12.1" | XGA | 80GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08
1706-86U Core Duo T2400 | 1.83 | 512MB | 12.1" | XGA | 80GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08
1706-8DU Core Duo T2400 | 1.83 | 512MB | 12.1" | XGA | 80GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08
1706-AFU Core Duo T2300E | 1.66 | 512MB | 12.1" | XGA | 80GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08
1706-ABU Core Duo T2300E | 1.66 | 512MB | 12.1" | XGA | 40GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08
1706-A7U Core Duo T2300E | 1.66 | 512MB | 12.1" | XGA | 60GB | None | Optional | *Intel 11a/b/g| Blue | 3-cell XP Pro | *Global*<sup>8</sup> | Feb 08

### Positioning
- Thinnest and lightest: one spindle
- EIDE Combo
- ThinkPad X6 UltraBase

### Diskette drive
- EIDE Combo
- ThinkPad X6 UltraBase

### Display
- 12.1" (308mm) XGA (1024x768) TFT color
- ThinkPad X6 UltraBase

### Media slice
- Secure Digital slot
- ThinkPad X6 UltraBase

### Graphics controller
- Intel Graphics Media Accelerator 950 (GMA 950)
- ThinkPad X6 UltraBase

### Keyboard
- 89-key
- ThinkPad X6 UltraBase

### Weight
- 512MB std: 4GB max*<sup>1</sup> or / PC2-5300 667MHz DDR2 / non-parity / CLS / dual channel capable / two 200-pin SO-DIMM sockets / std memory in 1 socket / one socket available

### Processor
- Intel® Core™ Duo processor T2300E or T2400 with dual-core, Enhanced Intel® SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Architecture
- Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GBMICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1)

### Battery
- UltraBase
- ThinkPad X6 UltraBase

### Ultrabay™ Slim
- Supports Ultrabay Slim devices in optional or standard X6 UltraBase

### Serial ATA disk (SATA150)
- 40, 60, or 80GB* (5400 rpm) / 9.5mm high / removable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System3 / supports and disk in optional X6 UltraBase

### Graphics
- Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz
- ThinkPad X6 UltraBase

### Display
- 12.1" (308mm) XGA (1024x768) TFT color
- ThinkPad X6 UltraBase

### Graphics controller
- Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz
- ThinkPad X6 UltraBase

### Display
- 12.1" (308mm) XGA (1024x768) TFT color
- ThinkPad X6 UltraBase

### Keyboard
- 89-key / spill-resistant / multimedia Fn keys / Windows, Appl keys
- ThinkPad X6 UltraBase

### Weight
- 512MB std: 4GB max*<sup>1</sup> or / PC2-5300 667MHz DDR2 / non-parity / CLS / dual channel capable / two 200-pin SO-DIMM sockets / std memory in 1 socket / one socket available

### Processor
- Intel® Core™ Duo processor T2300E or T2400 with dual-core, Enhanced Intel® SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Architecture
- Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GBMICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1)

### Battery
- UltraBase
- ThinkPad X6 UltraBase

### Ultrabay™ Slim
- Supports Ultrabay Slim devices in optional or standard X6 UltraBase

### Serial ATA disk (SATA150)
- 40, 60, or 80GB* (5400 rpm) / 9.5mm high / removable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System3 / supports and disk in optional X6 UltraBase

### Graphics
- Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz
- ThinkPad X6 UltraBase

### Display
- 12.1" (308mm) XGA (1024x768) TFT color
- ThinkPad X6 UltraBase

### Graphics controller
- Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz
- ThinkPad X6 UltraBase
## ThinkPad X60 (1706) - October 2006 - withdrawn

### Type-model \ Processor \ GHz \ Memory \ Screen \ Optical in UltraBase \ ThinkPad X6 UltraBase \ 802.11 wireless \ WANW wireless \ Blue- tooth \ Fingerprint reader \ Battery \ Battery cells \ EW \ 9-month \ Avail date
| 1706-BSU | Core Duo T2500 | 2.00 | 512MB | 12.1" | XGA 60GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 4-cell | EW Gbl | Oct 06 |
| 1706-CBU | Core Duo T2500 | 2.00 | 1GB | 12.1" | XGA 80GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 4-cell | EW | Oct 06 |
| 1706-CEU | Core Duo T2500 | 2.00 | 2GB | 12.1" | XGA 120GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 8-cell | EW | Oct 06 |
| 1706-BBU | Core Duo T2500 | 2.00 | 1GB | 12.1" | XGA 60GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 8-cell | EW Gbl | Oct 06 |
| 1706-AUU | Core Duo T2300E | 1.66 | 1GB | 12.1" | XGA 60GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 8-cell | EW Gbl | Oct 06 |
| 1706-5VU | Core Duo T2400 | 1.83 | 1GB | 12.1" | XGA 60GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 8-cell | EW Gbl | Oct 06 |
| 1706-E3U | Core Duo T2500 | 2.00 | 1GB | 12.1" | XGA 80GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 4-cell | EW | Oct 06 |
| 1706-KEU | Core Duo T5500 | 1.66 | 1GB | 12.1" | XGA 80GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 8-cell | EW Gbl | Oct 06 |
| 1706-MBU | Core Duo T5600 | 1.83 | 1GB | 12.1" | XGA 100GB | None | Optional | Intel i1a/b/g32 | Blue | Finger | 8-cell | EW Gbl | Oct 06 |

### Positioning Processor
Thinnest and lightest; one spindle Intel® Core™ Duo processor T2300E, T2400, or T2500 with dual-core, Enhanced Intel SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache or Intel® Core™ 2 Duo processor T5500 or T5600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Memory

| 512MB, 1GB, or 2GB std | 4GB max | PCI-5300 667MHz DDR2 | non-parity | CL5 | dual-channel capable | 200-pin SO-DIMM sockets | 9UBU/8AU/SVU: std mem in both sockets (512MB each socket); no sockets avail; Others: standard memory in 1 socket; 1 socket available |

### Diskette drive

None standard or optional USB-based diskette drive

### Ultrabay™ Slim

Sustains Ultrabay Slim devices in optional or standard X6 UltraBase

### SATA disk

60. 80, 100 or 120GB (5400 rpm) 9.5mm high bay, removable, upgradeable, 9.5mm high bay /

### ThinkPad Shock Mounted Hard Drive

Active Protection System™ / supports 2nd disk in optional X6 UltraBase

### Display
12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / anti-glare

### Graphics controller

Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz Graphics - external/external Monitor support via analog DB-15 connector / no DVI-out support

### Keyboad

99-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apk keys standard-size keys / 25% size of 1 Series / 15.5m option / 25% stroke

### TrackPoint

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar23, magnifying glass

### ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

3-years /1-yr battery - EasyServ

### Weight

3.15 lb (1.43 kg) / 60GB (5400 rpm) 9.5mm high bay

### Battery life - 9-month

ThinkPad Shock Mounted Hard Drive / Active Protection System™ / supports 2nd disk in optional X6 UltraBase

### Architecture

Mobile Intel 945GM Express Chipset / 82306GM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (Ricoh® R82801GBM ICH7-M I/O Controller Hub / PCI bus (PC87382 Super I/O, Atmel® 97C3203))

### Graphics Card Slot

Optional X6 UltraBase media slice (see right side)

### Secure Digital Card

One Secure Digital Card slot / supports SD memory cards used in consumer devices

### One Type I or one Type II / CardBus Plus (34mm ExpressCard via adapter) / door IEEE 1394 (FireWire) port (4-pin)

### Ports

Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet) / no serial, parallel, keys / IEEE 1394 (4-pin) / mouse / optional Security key lock / keyboard lock / mouse lock / power button / volume down, up, mute buttons / internal microphone / mic input jack (pink) / headphone jack (green)

### Audio support

Power-on power / hard disk password / supervisor password / security keyhole

### Security chip

Trusted Platform Module / Atmel chip / TCG 1.2-compliant

### Fingerprints reader on palm rest

Remote support / supports the security chip

### Limited warranty

3-years /1-year battery - EasyServ™ / onsite pickup and delivery / service upgrades22 / warranty support during the warranty

512MB PC2-5300 DDR2 CLS SODIMM 40Y7773
1GB PC2-5300 DDR2 CLS SODIMM 40Y7774
2GB PC2-5300 DDR2 CLS SODIMM 40Y7775
160GB Disk 9.5mm SATA150 (7200 rpm) 41N5757
USB 2.0 Lenovo Multimedia Headset 40Y8518
USB 2.0 Security Memory Key 4GB 41U120
USB 2.0 Super Multi II Ultrabay Slim 61N9663
11a/b/g Wireless Mini PCI Express Adapter 40Y7026
ThinkPad Adjustable Notebook Stand 40Y7676
ThinkPad Convertible Monitor Stand 40Y7620
ThinkPad X6 UltraBase 40Y8116
Lenovo M50 Projector 0037A05
Other accessories on X-O60 sheet

### SOFTWARE

Windows XP Professional / Microsoft® Windows® XP Professional22 (Service Pack 2)

Preloaded (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Maintenance Manager
- ThinkVantage System Update
- System Migration Assistant
- Symantec® Client Security
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- ThinkPad utilities
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think

License - CD not included

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### ThinkPad X6 UltraBase™

Provides desktop expansion and cable management for X60 Series

Easily connects to the bottom of the X60 Series for traveling

Converts ThinkPad to a two-spindle system with optional flat bezel

UltraBay Slim options in left side:

- ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y7678
- CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y8621
- ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5643
- Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725
- Disks supported (only some listed)

- 120GB Disk 5400 rpm 41N5691
- 160GB Disk 5400 rpm 41N5692
- 160GB Disk 7200 rpm 41N5737

Other features:

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security switch
- Serial and parallel ports
- Analog DB-15 monitor port
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Required 65 or 90 watt AC adapter
- Retractable feet; 1.48 lb; 670g

65-watt AC Adapter

ROHS-compliant

International Warranty Service17

24 hour x 7 day toll-free warranty support during the warranty12
ThinkPad X60 (1708) - TopSeller - withdrawn

See footnotes for important warranty information

* Powered by Intel Centrino™ Duo mobile technology

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Type-model | Processor | MHz | Screen | Disk | Optical drive | Wireless | Blue-tooth | Fingerprint Battery | Limited warranty
---|---|---|---|---|---|---|---|---|---
1708-5MU | Core Duo T2400 | 1.83 | 12.1" XGA | X6 UltraBase | None | None | 4-cell | XP Pro 3-yr Feb 06

This small and medium business (SMB) model is part of the US TopSeller™ Program

This 1708 model has a 3-year limited warranty

Positioning
- Thinnest and lightest; one spindle
- Intel® Core™ Duo processor T2400 (1.83GHz) with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Memory
- 512MB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / std memory in 1 socket / one socket available

Diskette drive
- None standard / use optional USB-based diskette drive

EIDE Combo
- DVD-ROM/CD-RW / 24X/24X/24X/2X speed / removable from X6 UltraBase

USB Slim
- Supports Ultrabay Slim devices in optional or standard X6 UltraBase

Serial ATA disk (SATA150)
- 60GB (5400 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System® / supports 2nd disk in optional X6 UltraBase

ThinkPad X6 UltraBase

Display
- 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / anti-glare

Graphics controller
- Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

Keyboard
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple key standard-size keys / 97% size of T Series / 18.5mm pitch; 2.5mm stroke / TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touch pad
- None

ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
- 334mm (13") wide / 230mm (9") high / 18mm (0.7") deep

Weight
- Color: black; All: magnesium alloy

Battery - type
- Li-Ion 6-cell / supports optional Extended Life Battery on base (for two batteries); supports optional Ultrabay Slim battery in optional X6 UltraBase (for two bays) / 8-cell: up to 7.8 hr; with std 8-cell battery and Extended Life Battery: up to 10.7 hr

Architecture

Mobile Intel 945GM Graphics Memory Controller Hub / 82801GBMICH-M I/O Controller Hub (SATA300, ATA-100 IDE, EIDE, PCI Express x1, PCI Express x4 combo controller, ECC, LPC interface, [Firewire], [IEEE 1394], [USB], [LAN]/RJ-45)

Media slot
- Some: X6 UltraBase media slot (see right side) / Secure Digital slot / Secure Digital card slot / supports SD memory cards used in consumer devices

PC Card slot
- One Type I or one Type II / CardBus Plus (34mm ExpressCard via adapter) / door

IEEE 1394
- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

Ports
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable / 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

Mini PCI Express
- Intel 11a/b/g

WLAN™
- None

Modem
- 56K V.92 (V.92-designed) modem in Comm Daughter Card / Conexant chipset

Bluetooth™
- None

Ethernet
- Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE

Audio support
- High Definition (HD) Audio / AD1981HD codec / mono speaker 0.5 watt / volume down, mute buttons / internal microphone / mic input jack (pink) / headphone jack (green)

Security chip
- Power-on password / hard disk password / supervisor password / security keyhole

Security keyhole
- Security chip

Fingerprint reader
- FingerPrint reader on palm rest / swipe sensor / supports the security chip

Limited warranty
- 3-years / 1-year battery / EasyServ™ on-site pickup and delivery / service upgrades available

SOFTWARE

Windows XP Professional
- Microsoft® Windows® XP Professional(3) (Service Pack 2)

Preloaded
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Maintenance Manager
- ThinkVantage TechCenter
- Symantec™ Client Security™
- Diskeeper Lite
- PC-Dox™ (diagnostics)
- ThinkPad utilities
- Adobe® Reader
- Google Toolbar
- Lenovo Rescue and Recovery™
- Lenovo SupportCenter
- Lenovo Morpheus X60
- Sonic RecordNow! and Drive
- Letter Access (combo model)

License - CD not included (all)
- Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage™ technologies

ThinkPad X6 UltraBase™
- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel Ultrabay Slim options in left side:
- ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y6789
- CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6861
- ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41NS643
- ThinkPad DVD Ultrabay Slim Adapter (flat bezel) 40Y8725

Disks supported:
- 80GB Disk 5400 rpm 41NS662
- 100GB Disk 7200 rpm 41NS301
- 120GB Disk 5400 rpm 41NS569
- 160GB Disk 5400 rpm 41NS592

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security keylock, optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out

Atari PCE 6500 games

65-watt AC Adapter

ROHS-compliant

International Warranty Service
- 24 hour x 7 day 10th-party toll-free warranty support during the warranty

See footnotes for important warranty information

US models announced January 31, 2006

US models withdrawn effective August 2007

Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)
**Type**: ThinkPad X60 (1709) - TopSeller - withdrawn

**Processor**
- Core Solo T1300 (1.66 GHz)
- Core Duo T2400 (1.83 GHz or 1.6 GHz)
- Core 2 Duo T2300 (1.66 GHz or 1.6 Hz)
- Core 2 Duo T2090 (1.66 GHz)
- Core 2 Duo T2300E (1.66 GHz)

**Operating System**
- Windows XP Professional
- Microsoft Windows XP Professional (Service Pack 2)
- ThinkVantage System Update

**Software**
- Disk-to-Disk Recovery
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security™
- Disk2Disk Utility
- PC-Doctor (diagnostics)
- FingerPrint Software
- Multimedia Center for Thinkpad

**Chipset**
- Intel 945GM Express Chipset
- Intel 11a/b/g32 Mini PCI Express
- Intel Graphics Media Accelerator 950 (GMA 950)

**Memory**
- 512MB or 1GB std / 4GB max
- 1GB high capacity: up to 7.8 hr
- 512 MB or 1GB std / 4/8GB max

**Battery**
- 60GB or 80GB 60GB
- 100GB Disk 7200 rpm
- 100GB Disk 5400 rpm

**Dimensions**
- 10.5" x 8.3" x 0.8"
- 268mm x 211mm x 20-35mm

**Weight**
- 3.15 lb (1.43kg)
- 1.48 lb

**Display**
- 12.1" (308mm) XGA (1024x768) TFT color
- Active Matrix / 150 nits / anti-glare

**Graphics Controller**
- Intel 945GM Express Chipset
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apel keys standard-size keys / 97% size of T Series / 18.5mm pitch / 2.5mm stroke

**Keyboard**
- ThinkPad keyboard
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

**Ports**
- Three USB (version 2.0) / external DB-15 monitor / infrared (4xPBI) / RJ-11 (modem) / RJ-45 (ethernet) / IEEE 1394 (4-pin) / no serial, parallel, keyboard or mouse ports

**Network**
- Wireless LAN: 802.11a/b/g
- Bluetooth
- Wired LAN: Gigabit Ethernet

**Other Features**
- IBM Enhanced FingerPrint Software + Fingerprint Reader
- Google Desktop
- Adobe Reader
- Microsoft Windows XP Professional
- ThinkPlus

**时期的**
- The X60 series offers a wide range of features and options that support the needs of small and medium businesses.
This small and medium business (SMB) model is part of the US TopSeller™ Program

This 1709 model has a 1-year limited warranty

ThinkPad X60 UltraBase

Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery

Preloaded (only some listed)
- Microsoft Office OneNote™ 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Maintenance Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad utilities
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offersings
- Sonic RecordNOW and Drive
- Greater Access (DVD:RW)
- InterVideo WinDVD (DVD:RW)
- InterVideo WinDVD Creator (DVD:RW models)

CD included
- Microsoft Office OneNote 2003
- "Loterus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage™ technologies

- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle solution with external flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y6789
  - ThinkPad DVD Ultrabay Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

Disks supported:
- 80GB Disk 5400 rpm 41N5662
- 100GB Disk 7200 rpm 41N5013
- 120GB Disk 5400 rpm 41N5691
- 180GB Disk 5400 rpm 41N5692

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone output
- Requires 65 or 90 watt AC adapter
- Refractable feet: 1.48 lb; 670g

65-watt AC Adapter
- ROHS-compliant
- International Warranty Service

24 hour x 7 days toll-free warranty support during the warranty

See footnotes for important warranty information

* Powered by Intel® Centrino® Duo mobile technology

© Lenovo

Personal Systems Reference (PSREF) (SM2-2) August 2007

US model withdrawn effective August 2007
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<th>GHz</th>
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<th>Disk</th>
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</table>

**Software**

- **Windows XP Professional**
  - *Microsoft Windows XP Professional* (Service Pack 2)
  - **Disk-to-Disk Recovery**

**Preloaded**

- **Rescue and Recovery**
- **Access Connections**
- **Client Security Solution**
- **ThinkVantage Productivity Center**
- **ThinkVantage System Update**
- **System Migration Assistant**
- **Personal Systems Reference (PSREF)**
- **Diskeeper Lite**
- **PC-Doctor** (diagnostics)
- **Google Toolbar**
- **Google Desktop**
- **Picasso from Google**
- **Fingerprint Software** (fingerprint models)
- **Multimedia Center for Think Offerings**
- **Sonnic RecordNow! and Drive Letter Access (combo, DVD:RW)**
- **InterVideo WinDVD (combo, DVD:RW models)**
- **InterVideo WinDVD Creator (DVD:RW model)**

Supports ThinkVantage® technologies

**ThinkPad X6 UltraBase**

- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad X6 UltraBase Battery 3-cell (flat bezel) 40Y6789
  - 40Y6821
  - ThinkPad X6 UltraBase Ultrabay Slim Burner (flat bezel) 41NS643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

Disks supported (some listed):
- 160GB Disk 7200 rpm 41N5737

Other features:
- **Power button (front)**
- **Stereo speakers (1 watt)**
- Secure key lock, secure keyhole, and optional security screw
- **Serial and parallel ports**
- **Analog DB-15 monitor port**
- Four USB 2.0 ports
- **Gigabit ethernet port**
- **Modem port**
- **Gigabit ethernet port**
- **Microphone in and headphone out**
- Requires 65 or 60 watt AC adapter
- **Retractable feet:** 1.48 lb; 670g
- **65-watt AC Adapter**

ROHS-compliant

International Warranty Service

24 hour x 7 day toll-free warranty support during the warranty.

See footnotes for important warranty information.

* Powered by Intel Centrino® Duo mobile technology

US models announced January 5, January 31, or February 26, 2006

US models withdrawn effective November 2006, August 2007, or October 2007

© Lenovo (KB1-1) October 2007
## Specifications

### General Specifications

- **Dimensions**: L220 x W162 x H30 mm (8.66 x 6.42 x 1.18 inches)
- **Weight**: 1.48 lb (670 g)
- **Battery**: 4-cell, supports optional Extended Life Battery on base (for two batteries)
- **Display**: 12.1" XGA (1024x768) TFT color, 150 nits, anti-glare

### Processor

- **Type**: Intel® Core™ Duo processor L7400 or L7500 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology
- **Frequency**: 1.50 GHz or 1.83 GHz
- **Memory**: 512MB or 1GB, standard memory in 1 socket, 1GB models

### Connectors

- **USB**: 2.0
- **USB Ports**: 4
- **Ethernet**: RJ-45 (ethernet)
- **IEEE 1394**: 4-pin

### Audio Support

- **Voice**: Microphone-in (monaural)
- **Speaker**: Mono speaker 0.5 watt
- **Volume**: Volume down
- **Decoding**: Enhanced Intel SpeedStep™ technology, Execute Disable Bit

### Security

- **Security**: Security key lock, security keyhole, and optional security screw
- **Keyboard**: Fingerprint Software, Fingerprint reader on palm rest
- **Software**: ThinkVantage System Update, Rescue and Recovery, System Migration Assistant

### Storage

- **Diskette Drive**: Optional
- **Hard Disk**: Up to 1TB

### Other Features

- **Windows**: Windows XP Professional or Windows Vista® Professional (Service Pack 2)
- **Preloaded Software**: Rescue and Recovery, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center with Away Manager, ThinkVantage System Update, System Migration Assistant, Symantec Client Security™, Diskeeper® Lite, PC-Doctor® (diagnostics), ThinkPad Utilities (Power Manager and Presentation Director), Adobe® Reader, Google Toolbar, Google Desktop, Plea from Google, Fingerprint Software

### Supported Disks

- **UltraBay Slim**: Ultrabay Slim options in left side:
  - Burner (flat bezel) 41N5643
  - X6 UltraBase

### Limited warranty

- **3-year**: 1-year battery - EasyServ® 31 on-site pickup and delivery, service upgrades available
  - 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733
- **65-watt AC Adapter**: ROHS-compliant
- **International Warranty Service**
  - 24 hour x 7 day toll-free warranty support during the warranty period

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**Lenovo**

US models announced October 17, 2006 or April 3, 2007
US models withdrawn effective July or October 2007

See footnotes for important warranty information

*Powered by Intel® Centrino® Duo mobile technology*
ThinkPad X60s (1704) - TopSeller - withdrawn

Personal Systems Reference (PSREF) © Lenovo

Windows XP Professional - Microsoft Windows XP Professional32 (Service Pack 2) Preloaded (only some listed)  
• Model G3U: Microsoft Office OneNote2003  
• Rescue and Recovery™  
• Access Connections™  
• Client Security Solution™  
• ThinkVantage Productivity Center  
• System Migration Assistant  
• Symantec endpoint Security™  
• Diskeeper® Lite  
• PC-Doctor® (diagnostics)  
• Fingerprint Software (fingerprint models)  
• Multimedia Center for Think Offerings  
• Sonic RecordNOW and Drive Letter Access (combo, DVD-ROM)  
• InterVideo WinDVD (combo, DVD-ROM)  
• InterVideo WinDVD Creator (combo, DVD-ROM models)  
• CD included (Model G3U only)  
• Microsoft Office OneNote 2003  
• License - CD not included  
• Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client  

Safe and reliable, fast and capable, the ThinkPad X60s provides exceptional mobility performance and is designed for maximum productivity. ThinkPad X60s is ideal for business or personal users who demand the best performance, features, and compatibility.

The ThinkPad X60s provides a Windows XP Professional™ operating system, but it is also a good choice as a thin client or thin server. With its compact size and advanced features, the ThinkPad X60s is perfect for users who need a powerful solution that is easy to carry and use.

The ThinkPad X60s comes with a variety of connectivity options, including a wireless WAN adapter and a wireless LAN adapter. It also has a built-in microphone and a headphone jack, making it ideal for use in a variety of environments.

The ThinkPad X60s is designed to provide maximum performance and reliability for business or personal users. It's a great choice for those who need a powerful, reliable, and portable computer that can handle everyday tasks and more demanding applications.
### ThinkPad X6 UltraBase™

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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
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<th>ThinkPad X6 UltraBase</th>
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<td>5400</td>
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<td>Blue</td>
<td>Finger 8-cell</td>
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<td>T675-K2U</td>
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<td>XGA 120GB</td>
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<td>Finger 8-cell</td>
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</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program

### Additional Features

- **Positioning**
  - Thinnest and lightest: one spindle

- **Processor**
  - Intel® Core™ 2 Duo processor T7250, T7300, T7500, T8100, or T8300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz bus; T7250: 2MB L2 cache, 73700/7500: 4MB L2 cache; T8100/T8300: 4MB L2 cache

- **Memory**
  - 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
  - Standard memory in both sockets; no sockets available;
  - Standard memory in 1 socket; 1 socket available

- **Diskette drive**
  - None (use optional USB-based diskette drive)

- **Graphics controller**
  - Mobile Intel GM965 Express Chipset

- **Battery**
  - 1000mAh (7200 rpm), 1200mAh (5400 rpm), or 1600mAh (7200 rpm / SATA 1.5GB/s, 9.5 mm high, non-removable, supports 2nd disk in std or optional X6 UltraBase, ThinkPad Shock Mounted Hard Drive, Active Protection System™

- **Display**
  - 12.1" (308mm) XGA (1024x768) TFT color, anti-glare, 150 nits, 4:3 aspect ratio, 800:1 contrast ratio

- **Graphics controller**
  - Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

- **Graphics Card**
  - External VGA monitor support via analog DB-15 connection / no DVI-out support

- **Keyboard**
  - 89-key, ThinkVantage button, spill-resistant, multimedia F keys, Windows/Apple keys, standard-size 84 keys 97% size of T Series, 18.5 mm pitch, 2.5 mm stroke

- **Touchpad**
  - TrackPoint® pointing device, "Press-to-Select," Internal Scroll Bar®, magnifying glass

- **Chips**
  - Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
  - Intel® Enhanced I/O Control Hub (SA3 3.0 logic);
  - PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoh® RSC847 Cardbus/1394/Multicard) / LPC bus (PCB3873 Super IO, Atmel® AT97C3203 TMP)

- **Media slice**
  - Secure Digital slot
  - PC Card slot
  - Ports: One Secure Digital Card slot, supports SD memory cards used in consumer devices
  - One Type I or one Type II, CardBus Plus (34mm ExpressCard via adapter), door
  - Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (etherernet), IEEE 1394 Firewire 400 (4-pin connector, 1394a-2000 standard)

- **Wireless antenna**
  - Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
  - Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
  - One Secure Digital Card slot, supports SD memory cards used in consumer devices

- **Security**
  - Security key lock, security keyhole, security keyhole, and optional security screw
  - Serial and parallel ports
  - Analog VGA monitor port (no DVI)
  - Analog VGA monitor port (no DVI)
  - Security keyhole, security keyhole, and optional security screw
  - Serial and parallel ports
  - Analog VGA monitor port (no DVI)

- **Security chip**
  - Trusted Platform Module, ATG chip, TCG 1.2-compliant

- **Limited warranty**
  - 1-year - EasyServ™ depot repair service / service upgrades available

---

**Preloaded operating system**
- Some: Microsoft® Windows® XP Professional with Vista® COA
- 7FU/7KU/8P/U92/U1: Vista Basic logo
- Other Vista models: Vista Premium logo

**Preloaded applications**
- Some: Rescue and Recovery™
- Some: Access Connections™
- Some: Client Security Solution™
- Some: ThinkVantage Productivity Center
- Some: Diskeeper® Home
- Some: PC-Doctor™ (diagnostics)
- Some: ThinkPad Utilities
- Some: Microsoft Office 2007 Trial (60-day)
- Some: Sonic Recording and Drive Letter Access (combo, DVI-RW)
- Some: Corel® WinDVD® (combo, DVI-RW)

**ThinkPad X6 UltraBase™**
- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series models
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad Advanced Ultrabay Battery II-3 cell (flat) 43R9250
  - ThinkPad DVD Ultrabay Slim (flat bezel)
  - Ultrabay Slim Adapter (flat bezel)
  - Ultrabay Slim Adapter (flat bezel)
  - Ultrabay Slim Adapter (flat bezel)
  - Ultrabay Slim Adapter (flat bezel)
- Disks supported:
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

**Other features:**
- Power button (front)
- Stereo speakers (1 watt)
- Security lock, security keyhole, and optional security screw
- Stereo and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Refractile feet: 1.48 lb; 670g

**ENERGY STAR®**
- 65-watt (GMA graphics) AC Adapter
- 4.0-compliant RoHS-compliant

**International Warranty Service**
- 24 hour x 7 day x 365 day toll-free support during the warranty period via 800-426-7378

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* Lenovo
* © Lenovo

**See notes for important warranty information**

1. Intel Centrino® processor technology
2. Intel Centrino® with vPro™ technology
3. US models announced May 31 or September 4, 2007;
4. or January 8 or March 25, 2008
5. US models withdrawn effective August or December 2007, or May 2009
<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor T7100, T7250, T7300, T7500, T8100, or T8300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz bus; T7100/T7250: 2MB L2 cache; T7300/T7500: 4MB L2; T8100/T8300: 3MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1GB or 2GB std / 4GB max7 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM slots</td>
</tr>
<tr>
<td>Display</td>
<td>12.1&quot; (308mm) XGA (1024x768) TFT color, anti-glare, 150 nits, 4:3 aspect ratio, 900:1 contrast ratio</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooh], [fingerprint]) / PCI bus (Ricoh R5C847 Cardbus/1394/Multicard) / LPC bus (PC87385 Super I/O, Atmel TM97SC3203 TFM)</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 4-cell or 8-cell; supports optional Extended Life Battery on base (for two batteries); supports optional Ultrabay Slim battery in optional X6 UltraBase (for two batteries)</td>
</tr>
<tr>
<td>Power</td>
<td>Enhanced 4-cell battery: from 3.11 lb (1.41kg); 8-cell: from 3.59 lb (1.63kg)</td>
</tr>
<tr>
<td>Wireless antenna</td>
<td>UltraConnect™ II Antenna / on/off switch for all wireless radios</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Two Mini PCI Express slots / 802.11 and WWAN are customer upgradeable</td>
</tr>
<tr>
<td>Modem</td>
<td>None</td>
</tr>
<tr>
<td>Audio support</td>
<td>Bluetooth™ 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator</td>
</tr>
<tr>
<td>Security chip</td>
<td>Power-on-password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1yr battery - EasyServ depot repair service / service upgrades available</td>
</tr>
</tbody>
</table>

**ThinkPad X6 UltraBase™**
- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel Ultrabay Slim options in left side: ThinkPad Advanced Ultrabay Battery II 3-cell (flat) 4392950
- ThinkPad UltraBay Slim Burner (flat bezel) 41N5643
- Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725
- Discs supported: 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411
- Other features:
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optional security screw
  - Serial and parallel ports
  - Analog VGA monitor port (no DVI)
  - Four USB ports
  - Gigabit ethernet port
  - Modern port
  - Microphone in and headphone out
  - Requires 65 or 90 watt AC adapter
  - Refractile feet: 1.48 lb; 670g

65-watt (GMA graphics) AC Adapter 4.0-compliant RoHS-compliant
International Warranty Service
24 hours x 7 days customer support during the warranty period via 800-426-7378
### ThinkPad® X61 (7674) - Onsite - withdrawn

#### Personal Systems Reference (PSREF)

#### Type-model

<table>
<thead>
<tr>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X6 UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Blue-tooth</th>
<th>Finger print reader</th>
<th>Preload</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>GMP (P)</th>
<th>Availability</th>
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<tbody>
<tr>
<td>7674-65U</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>80GB</td>
<td>Optional</td>
<td>* Intel 4965AG</td>
<td>None</td>
<td>Blue</td>
<td>Fing</td>
<td>8</td>
<td>Business 32</td>
<td>W G P Jun 07</td>
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<td>7674-74U</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>80GB</td>
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<td>Blue</td>
<td>Fing</td>
<td>8</td>
<td>XP Pro</td>
<td>W G P Jun 07</td>
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<td>Blue</td>
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<td>Blue</td>
<td>Fing</td>
<td>8</td>
<td>Business 32</td>
<td>W G P Jun 07</td>
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</table>

#### Positions

- **Processor**: Thinnest and lightest; one spindle
- **Intel Core™ 2 Duo processor T7300 with dual-core.
- **Fingerprint reader**: Security
- **Audio support**: Ethernet
- **Battery - life**: 10
- **Case material**: 12
- **Keyboard**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Api keys, standard-size® keys 97% size of T Series, 18.5mm pitch, 2.5mm stroke
- **Display**: 12.1" (308mm) XGA (1280x768) TFT color, anti-glare, 510 nits, 4:3 aspect ratio, 400:1 contrast ratio.
- **Chipset**: Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);

#### Diskette drive

- **EIDE DVD+RW**

#### Preloaded operating system

- **Some: Microsoft® Windows® XP Professional**
- **Vista 1GB models: Vista Basic logo**
- **2GB models: Vista Premium logo**

#### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solutions™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Norton Internet Security™
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Prepstation Director)
- Adobe® Reader
- Some: FingerPrint Software
- Microsoft Office 2007 Trial (60-day)

#### Graphics controller

- **Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965**

#### Graphics - external

- **External monitor support via analog DB-15 connector / no DVI-out support**

#### Chipset

- **Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);**
- **ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooh], [fingerprint]) /**
- **TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass**
- **Touchpad**: None
- **ThinkLight™**: Illuminates the keyboard to improve visibility in low-light conditions

#### Display

- **12.1" (308mm) XGA (1280x768) TFT color, anti-glare, 510 nits, 4:3 aspect ratio, 400:1 contrast ratio.**

#### Preloadable operating system

- **Some: Microsoft® Windows® XP Professional**
- **Vista 1GB models: Vista Basic logo**
- **2GB models: Vista Premium logo**

#### Preloaded applications (all OEMs; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solutions™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Norton Internet Security™
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Prepstation Director)
- Adobe® Reader
- Some: FingerPrint Software
- Microsoft Office 2007 Trial (60-day)

#### Supports ThinkVantage™ technologies

- **ThinkPad X6 UltraBase™**
- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay Slim options in left side: — ThinkPad Advanced Ultrabay Battery II 5-cell (flat)
- ThinkPad DVD Ultrabay Slim Burner (flat bezel)
- Serial Hard Drive Ultrabay Slim Adapter (flat bezel)

#### Other features:

- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- Modern port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Retractable feet: 1.48 lb; 670g

#### Limited warranty

- **3-years/1-year battery, limited onsite service***
- **8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available**

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### Footnotes

1. ThinkCentro with vPro™ technology
2. © Lenovo
3. (SM3-3) November 2008
4. See footnotes for important warranty information
5. US models announced May 31, 2007
6. US models withdrawn effective May or November 2008
7. 65-watt (GMA graphics) AC Adapter ENERGY STAR® 4.0-compliant RoHS-compliant
8. International Warranty Service
9. 24 hour x 7 day 17 toll-free support during the warranty period** via 800-426-7378

---

### Technical Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X6 UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Blue-tooth</th>
<th>Finger print reader</th>
<th>Preload</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>GMP (P)</th>
<th>Availability</th>
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<td>Business 32</td>
<td>W G P Jun 07</td>
<td></td>
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</tr>
</tbody>
</table>

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### Additional Notes

- 2GB PC2-5300 DDR2 SODIMM 40Y7735 200GB Disk FDE SATA 1.5Gb/s (7200 rpm) 41N5738 ThinkPad X6 UltraBase 40Y8116
- Other accessories at lenovo.com/accessories

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*Lenovo*
### ThinkPad X61s (7669) - TopSeller - withdrawn

#### Low Power processor

<table>
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<th>Type-model</th>
<th>Local Low Power processor</th>
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<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Finger reader</th>
<th>Battery</th>
<th>Vista</th>
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<td>L7500 LV 1.60 2GB 12.1&quot; XGA 100G 7200 DVD:RW UltraBase</td>
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<tr>
<td>7669-7DU</td>
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<td>Finger 8-cell</td>
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<tr>
<td>7669-8DU</td>
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<td>Finger 8-cell</td>
<td>Home Basic 32</td>
<td>June 07</td>
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<td>7669-85U</td>
<td>L7500 LV 1.60 1.40 12.1&quot; UL XGA160 5400 DVD:RW UltraBase</td>
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<td>Finger 8-cell</td>
<td>Business 32</td>
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<td>7669-3GU</td>
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<td>* Intel 11n(^\d)</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller\_) Program.
- These models have a 3-year limited warranty\(^\d\).
<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor L7300, L7500, or L7700 with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>512MB, 1GB, or 2GB, standard-size (74x74x74), non-parity, dual-channel capable, two-pin SO-DIMM interfaces.</td>
</tr>
<tr>
<td>Diskette drive</td>
<td>None (use optional USB-based diskette drive)</td>
</tr>
<tr>
<td>IDE DVD drive</td>
<td>Supports UltraBay Slim drives in optional or standard X6 UltraBase</td>
</tr>
<tr>
<td>Ultrabay™ Slim Serial ATA disk</td>
<td>Supports UltraBay Slim drives in optional or standard X6 UltraBase</td>
</tr>
<tr>
<td>Display</td>
<td>Some: 12.1” (308mm) XGA (1024x768) TFT color, anti-glare, 150 nits  Some: [UL] 12.1” (308mm) UltraLight XGA (1024x768) TFT color, anti-glare, 180 nits All: 4:3 aspect ratio, 300:1 contrast ratio</td>
</tr>
<tr>
<td>Graphics controller</td>
<td>Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965 Graphics</td>
</tr>
<tr>
<td>Graphics card</td>
<td>External VGA monitor support via analog DB-15 connector / no DVI-out support</td>
</tr>
<tr>
<td>Keyboard</td>
<td>99-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys, standard-size keys (97%), 25% size of T Series, 18.5mm pitch. 2.5mm connector</td>
</tr>
<tr>
<td>TrackPoint®</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass</td>
</tr>
<tr>
<td>Touch pad</td>
<td>None</td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions</td>
<td>without X6 UltraBase: Slim 4-cell: 10.5” x 8.3” x 0.8-1.1”; 268mm x 211mm x 20-23mm  without X6 UltraBase: Enth 4-cell: 10.5” x 8.3” x 0.8-1.1”; 268mm x 211mm x 20-23mm  without X6 UltraBase: X6 UltraBase: 8-cell: 10.5” x 9.4” x 0.8-1.4”; 268mm x 238mm x 20-23mm Slim 4-cell: from 2.73 lb (1.2kg); Enth 4-cell: from 2.83 (1.28kg); 8-cell: 3.3lb (1.50kg)</td>
</tr>
<tr>
<td>Weight</td>
<td>Case material: black, all-magnesium alloy  Battery - type: Lithium Ion Slim Line Battery 4-cell (prismatic) or Lithium Ion 8-cell; supports optional Extended Life Battery on base (for two batteries); supports optional UltraBay Slim battery in optional X6 UltraBase (for two batteries); Slim 4-cell: up to 3.5 hr; 8-cell: up to 9.0 hr; 8-cell and Extended Life Battery: up to 12.5 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH4BI-Enhanced I/O Controller Hub (SATA 3Gb/s, ATAPI-100 EIDE PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint], / PCI bus (RiChoc® R8547 Cardbus/1394/Multicard) / LPC bus (PC87395 Super I/O, Atmel 97SC3203 TPM)</td>
</tr>
<tr>
<td>Media slice</td>
<td>Some: X6 UltraBase media slice (see right side)  Some: One Secure Digital slot, supports SD memory cards used in consumer devices  Some: One Type I or one Type II CardBus Plus (34mm ExpressCard via adapter), door Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector, 1394a-2000 standard)</td>
</tr>
<tr>
<td>PC Card slot</td>
<td>Some: Two Mini PCI Express slots, SD memory card slot, supports SD memory cards used in consumer devices  Some: One PCI Express x1, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint], / PCI bus (RiChoc® R8547 Cardbus/1394/Multicard) / LPC bus (PC87395 Super I/O, Atmel 97SC3203 TPM)</td>
</tr>
<tr>
<td>Ports</td>
<td>Some: Wireless WAN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI adapter, EV-DO Rev. A, rod antenna, service contract req'd with Verizon  Some: Wireless WAN, GPRS/EDGE/UMTS/HSUPA support, Mini PCI adapter and CDMA, rod antenna, service contract req'd with AT&amp;T 1GHz Turbo Modem</td>
</tr>
<tr>
<td>Bluetooth® Audio support</td>
<td>Gigabit ethernet, Intel 82566MM Memo (PHY), PCI Express x1, PXE</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (IATM)</td>
</tr>
<tr>
<td>Security</td>
<td>Security chip</td>
</tr>
<tr>
<td>Security chip</td>
<td>Security chip</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3 years</td>
</tr>
<tr>
<td>Preloaded applications</td>
<td>All (OSes, only some listed)  - Rescue and Recovery™  - Access Connections™  - Client Security Solution™  - ThinkVantage Productivity Center  - Norton Internet Security™  - Diskeeper® Home  - PC-Doctor™ (diagnostics)  - Some: Fingerprint Software  - Microsoft Office 2007 Trial (60-day)  - Sonic RecordNow and Drive Letter Access (DVD:RW)  - Corel® WinDVD® (DVD:RW)  - Supports ThinkVantage® technologies</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH4BI-Enhanced I/O Controller Hub (SATA 3Gb/s, ATAPI-100 EIDE PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint], / PCI bus (RiChoc® R8547 Cardbus/1394/Multicard) / LPC bus (PC87395 Super I/O, Atmel 97SC3203 TPM)</td>
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</tr>
<tr>
<td>Ports</td>
<td>Some: Wireless WAN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI adapter, EV-DO Rev. A, rod antenna, service contract req'd with Verizon  Some: Wireless WAN, GPRS/EDGE/UMTS/HSUPA support, Mini PCI adapter and CDMA, rod antenna, service contract req'd with AT&amp;T 1GHz Turbo Modem</td>
</tr>
<tr>
<td>Bluetooth® Audio support</td>
<td>Gigabit ethernet, Intel 82566MM Memo (PHY), PCI Express x1, PXE</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (IATM)</td>
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<tr>
<td>Security</td>
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<tr>
<td>Fingerprint reader</td>
<td>Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3 years</td>
</tr>
</tbody>
</table>

See footnotes for important warranty information  
US models announced May 31, October 30, 2007 or February 19, 2008  
US models withdrawn effective Sept 2007, Jan, May 2008 or May 2009  

* Intel Centrino® technology  
* Intel Centrino with vPro™ technology  

Lenovo (KB3-2) May 2009
## ThinkPad X61s (7667) - Onsite - withdrawn

### Processor
- **Intel® Core™ 2 Duo processor L7500** with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

### Memory
- 1GB std / 4GB max
- PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets

### Diskette drive
- None (use optional USB-based diskette drive)

### Graphics controller
- Intel® 945GM Express Chipset

### Display
- 12.1" (308mm) XGA (1024x768) TFT color

### Optical drive
- None

### Modem
- 56K V.92 modem in Communications Daughter Card

### Other features:
- Speaker stereo (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- RS-232C serial port
- UltraBase media slice
- XM HD receiver
- UltraConnect™ 3-year limited warranty

### Preloaded operating system
- Some: Microsoft® Windows® XP Professional
- Vista models: Vista Basic logo

### Preloaded applications
- Some: ThinkPad Utilities (Power Manager and Presentation Director)
- Some: FingerPrint Software
- Microsoft Office 2007 Trial (30-day)

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### Table: System Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X6 UltraBase</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Finger Reader</th>
<th>Workhorse (W) Global (G) GMP (P) Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7667-34U</td>
<td>L7500</td>
<td>1.60</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>80GB</td>
<td>5400</td>
<td>Optional</td>
<td># Intel 4965AG™ None</td>
<td>None</td>
<td>Finger 8 Business 32 W G P Jun 07</td>
<td></td>
</tr>
<tr>
<td>7667-3FU</td>
<td>L7500</td>
<td>1.60</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>80GB</td>
<td>5400</td>
<td>Optional</td>
<td># Intel 4965AG™ None</td>
<td>None</td>
<td>Finger 8 Pro W G P Jun 07</td>
<td></td>
</tr>
<tr>
<td>7667-3EU</td>
<td>L7500</td>
<td>1.60</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>120GB</td>
<td>5400</td>
<td>Optional</td>
<td># Intel 4965AG™ None</td>
<td>None</td>
<td>Finger 8 Pro W G P Jun 07</td>
<td></td>
</tr>
</tbody>
</table>

### Notes
- These models are part of the Global Models Plus program with limited onsite service and 3-year limited warranty.
- Preloaded operating system:
  - Some: Microsoft® Windows® XP Professional
- Preloaded applications:
  - Some: ThinkPad Utilities (Power Manager and Presentation Director)
  - Some: FingerPrint Software

---

### Contact Information
- Post-warranty annual maintenance agreements at 800-426-7378 during the warranty period
- 85-watt (GMA graphics) AC Adapter
- ENERGY STAR® 4.0-compliant
- ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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*Lenovo* 2008

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US models announced May 31, 2007

US models withdrawn effective May 2008 or May 2009
Partial list of accessories supported on:
- ThinkPad X60 originally announced January 5, 2006
- ThinkPad X60s originally announced January 5, 2006
- ThinkPad X61 originally announced May 31, 2007
- ThinkPad X61s originally announced May 31, 2007

**Memory**
- 512MB PC2-5300 DDR2 SODIMM 40Y7733
- 1GB PC2-5300 DDR2 SODIMM 40Y7734
- 2GB PC2-5300 DDR2 SODIMM 40Y7735

**ThinkPad X60 originally announced January 5, 2006**
- USB 2.0 Lenovo Webcam 40Y8519
- PC Card Gemplus Smart Card Reader 41N3004
- USB Gemplus GemPC Smart Card Reader 41N3040
- Kensington Twin Head Cable Lock 43R2000
- USB 2.0 Lenovo Webcam 40Y8519
- USB 2.0 Lenovo Webcam 40Y8519

**Ultrabay Slim 9.5mm** (best to use flat bezel options)
- Most Ultrabay Slim options supported in X6 Ultrabase

**Ultrabay Enhanced 12.7mm**
- None

**Storage and removable storage**
- 160GB Disk SATA 1.5Gb/s (5400 rpm) 41N6992
- 160GB Disk SATA 1.5Gb/s (7200 rpm) 41N7557
- 250GB Disk SATA 1.5Gb/s (5400 rpm) 43R6182
- 250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410
- 320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403
- 320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411

**X60s only:**
- X60 Slim Line Battery 4-cell (prismatic) 40Y6999

**All models:**
- X60 Enhanced Cap Battery 4-cell (cylindrical) 40Y7001
- X60 High Capacity 8-cell (cylindrical) 40Y7002
- X60 Extended Life Battery 40Y7005
- ThinkPad External Battery Charger 44Y7625

**44 Requires the ThinkPad 90W AC Adapter 40Y7659**

- USB 2.0 Essential Memory Key 2GB 41U4944
- USB 2.0 Essential Memory Key 4GB 4S7904
- USB 2.0 Essential Memory Key 8GB 4S7905
- USB 2.0 Security Memory Key 2GB 41U5119
- USB 2.0 Security Memory Key 4GB 41U5120
- USB 2.0 Ultra Secure Memory Key 2GB 45S5916
- USB 2.0 Ultra Secure Memory Key 4GB 45S5917
- USB 2.0 Ultra Secure Memory Key 8GB 45S5918
- USB Portable Diskette Drive 05K9276
- USB CD-RW/DVD-ROM Combo II Drive 40Y8637
- USB Portable 160GB Hard Disk 43R1874
- USB Portable 320GB Hard Disk 45K1689
- USB Portable Secure 160GB Hard Disk 43R2018
- USB Portable Secure 320GB Hard Disk 43R2019
- USB Super Multi-Burner Drive 41N5565

**ThinkPad Expansion**
- ThinkPad X60 Enhanced Port Replicator 43R8770
- ThinkPad Adjustable Notebook Stand 40Y7674
- ThinkPad X6 UltraBase 40Y8116

**Keyboards**
- ThinkPad Cap Collection 73P2698
- Preferred Pro USB Keyboard 33L3225
- Enhanced Performance USB Keyboard 73P2620
- USB Keyboard with UltraNav 31P8950
- Lenovo® USB Fingerprint Keyboard 73P4730
- Lenovo USB Smartcard Keyboard 51J0155

**Mouse**
- Optical Wheel Mouse (USB) 06P4069
- Optical ScrollPoint® Mouse (USB, PS/2) 31P7405
- Optical Wheel Travel Mouse (USB, PS/2) 31P7406
- Laser Tilt Wheel Mouse (USB, PS/2) 41U3074
- Lenovo Wireless Laser Mouse (blk, via USB) 45K1696
- Lenovo Wireless Laser Mouse (red, via USB) 51J0198
- Laser Tilt Wheel Travel Mouse (Bluetooth) 41U5008
- Wireless Keyboard & Optical Wheel Mouse (USB) 73P4677

**Security**
- Kensington® Cable Lock from Lenovo 73P2582
- Kensington Twin Head Cable Lock 45K1620
- USBGemplus GemPC Smart Card Reader 41N3040
- PC Card Gemplus Smart Card Reader 41N3020

**Multimedia**
- USB 2.0 Lenovo Multimedia Headset 40Y8518
- USB 2.0 Lenovo Webcam 40Y8519

**Carrying Cases**
- ThinkPad Ultraportable Case 41U5062
- ThinkPad Expandor Case 43R9118
- ThinkPad Women’s Microfiber Tote 22P8855
- ThinkPad Women’s Leather Trim Tote 22P8856
- ThinkPad Convertible Carrying Case 22P8860
- ThinkPad Women’s Executive Leather Tote 22P8577
- ThinkPad Women’s Executive Red Leather Tote 22P8858

**Up to 15.4” widescreen models:**
- Lenovo Carrying Case - Messenger Max 41U5253
- Lenovo Carr Case - Performance BackPack 41U5254
- Lenovo Standard Case 45K1697
- Lenovo Standard Backpack 45K1698
- ThinkPad Business Topload Case 43R2476
- ThinkPad Business Backpack 43R2482
- ThinkPad Deluxe Expandar Case 43R2478
- ThinkPad Executive Leather Case 43R2480

**Up to 17.0” widescreen models:**
- ThinkPad 17W Business Topload Case 43R9117

**Monitors**
- ThinkVision® L174 17” Monitor 9227AE1
- ThinkVision L1700p 17” Monitor 9417HE2
- ThinkVision L1900p 19” Monitor 4431HE1
- ThinkVision L1940p Wide 19” Monitor 4434HB6
- ThinkVision L200p Wide 20.1” Monitor 4435HE3
- ThinkVision L2240p Wide 22” Monitor 4434HB6
- ThinkVision L2440p Wide 24” Monitor 4421HB2

**Monitor Accessories**
- ThinkVision USB Soundbar 40Y7616
- ThinkVision Soundbar 45K1263
- ThinkPad Convertible Monitor Stand 40Y7620
- ThinkPad Business Topload Case 43R2476
- ThinkPad Executive Leather Case 43R2480

**More information at www.lenovo.com/support/monitoraccessories**
## ThinkPad® X60 Tablet (6363) - withdrawn

### Type-model Processor GHz Memory Screen SATA disk Optical in UltraBase X6 Tableul Base 802.11 wireless WWAN wireless Blue-tooth FingerTrnt Battery WH Gbl cells WH Gbl TAA Avail date

| Type-model | Processor | GHz Memory | Screen | SATA disk | Optical in UltraBase | X6 Tableul Base | 802.11 wireless | WWAN wireless Blue-tooth | FingerTnt Battery | WH Gbl cells | WH Gbl | TAA | Avail date |
|------------|-----------|------------|--------|----------|---------------------|----------------|----------------|-------------------|------------------|---------------|-----------|-------|------|----------|
| 6363-46U  | Core Duo L2400 1.66 1GB 12.1" XGA | 80GB | * Intel 11a/b/g | None | Finger 8-cell WH Gbl Dec 06 |
| 6363-54U  | Core Duo L2500 1.83 1GB 12.1" XGA | 80GB | * Intel 11a/b/g | None | Finger 8-cell WH Gbl Dec 06 |
| 6363-64U  | Core Duo L2500 1.83 1GB 12.1" XGA | 80GB | * Intel 11a/b/g | None | Finger 8-cell WH Gbl Dec 06 |
| 6363-A7U | Core Duo L2500 1.83 1GB 12.1" SXGA+ | 80GB | * Intel 11a/b/g | None | Finger 8-cell WH Gbl Dec 06 |
| 6363-85U | Core Duo L2500 1.83 1GB 12.1" XGA Touch | 80GB | * Intel 11a/b/g | None | Finger 8-cell WH Gbl Dec 06 |
| 6363-34U | Core Duo L2400 1.66 512MB 12.1" XGA | 60GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-4BU | Core Intel Duo L2400 1.66 1GB | 60GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-86U | Core Duo L2500 1.83 1GB 12.1" XGA Touch | 100GB | * Intel 11a/b/g | None | Finger 8-cell WH Dec 06 |
| 6363-2BU | Core Duo L2500 1.83 1GB 12.1" SXGA+ | 120GB DVD±RW UltraBase | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-64U | Core Duo L2500 1.83 1GB 12.1" XGA 80GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-5BU | Core Intel Duo L2400 1.66 1GB 12.1" XGA Touch | 60GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-3BU | Core Intel Duo L2400 1.66 12.1" XGA | 60GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-8BU | Core Duo L2500 1.83 1GB 12.1" XGA Touch | 100GB | * Intel 11a/b/g | None | Finger 8-cell WH Dec 06 |
| 6363-64U | Core Duo L2500 1.83 1GB 12.1" XGA 80GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-5BU | Core Intel Duo L2400 1.66 1GB 12.1" XGA Touch | 60GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |
| 6363-3BU | Core Intel Duo L2400 1.66 12.1" XGA | 60GB | * Intel 11a/b/g | None | Finger 4-cell WH Dec 06 |

### Windows XP Tablet

- **Operating systems**: Windows XP Tablet PC Edition 2005
- Disk-to-Disk Recovery
- **Preloaded Software** (only some listed)
  - **Model 34U**: Microsoft Office OneNote 2003
  - **Model 34U**: Microsoft Education Pack
  - **Model 34U**: Microsoft Experience Pack
  - **Model 34U**: Rescue and Recovery
  - **Model 34U**: Access Connections
  - **Model 34U**: Client Security Solution
  - **Model 34U**: ThinkVantage Productivity Center
  - **Model 34U**: ThinkVantage System Update
  - **Model 34U**: Symantec Client Security
  - **Model 34U**: PC-Doctor (diagnostics)
  - **Model 34U**: ThinkVantage Access Connections
  - **Model 34U**: ThinkVantage Client Security
  - **Model 34U**: ThinkVantage Rescue and Recovery

### Free trial
- **Zino Reader**
- **CD included**: Model 34U: Microsoft Office OneNote 2003

### Supported ThinkVantage technologies

**ThinkPad X6 Tablet UltraBase**
- Provides desktop expansion and cable mgmt for X6 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel UltraBase Slim options in right side:
  - ThinkPad Advanced UltraBase Battery 3-cell (flat bezel) 40Y7689
  - CD-RW/DVD Combo II UltraBase Slim Drive (flat bezel) 40Y6621
  - ThinkPad X6 Tablet UltraBase Burner (flat bezel) 41N5643
  - Serial Hard Drive UltraBase Slim Adapter (flat bezel) 40Y6725
  - SATA disks supported (some):
    - 100GB Disk 7200 rpm 41N3013
    - 160GB Disk 7200 rpm 41N5737
    - 250GB Disk 5400 rpm 43R8152

**Other features**
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security key and biometric security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit Ethernet port (RJ-45)
- Modern port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb 670g
## ThinkPad X60 Tablet (6363) - February 2007 - withdrawn

### Type-model | Processor | GHz | Memory | Screen | SATA disk | Optical in UltraBase | X6 Tablet Base | 802.11 wireless | WAN wireless | Blue-tooth | Finger print | Battery | WH | Gb | Avail date
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
6363-38U | Core Duo L2400 | 1.66 | 1GB | 12.1" XGA | 60GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Mar 07
6363-4JU | Core Duo L2400 | 1.66 | 1GB | 12.1" XGA | 80GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Mar 07
6363-2AU | Core Duo L2400 | 1.66 | 1GB | 128MB/667MHz | 80GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Mar 07
6363-5AU | Core Duo L2400 | 1.66 | 1GB | 12.1" XGA Touch | 80GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Mar 07
6363-9CU | Core 2 Duo L7400 | 1.50 | 1GB | 12.1" XGA | 60GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Apr 07
6363-J3U | Core 2 Duo L7400 | 1.50 | 1GB | 12.1" XGA | 80GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Apr 07
6363-P3U | Core 2 Duo L7400 | 1.50 | 1GB | 12.1" XGA | 60GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Apr 07
6363-9CU | Core 2 Duo L7400 | 1.50 | 1GB | 12.1" XGA Touch | 80GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Apr 07
6363-C7U | Core 2 Duo L7400 | 1.50 | 1GB | 12.1" SXGA+ | 80GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Apr 07
6363-PSU | Core 2 Duo L7400 | 1.50 | 1GB | 12.1" XGA | 60GB | Intel 11a/b/g None | Finger 8-cell | WH Gbl Apr 07

- **These models have a 3-year limited warranty**

### Positioning Processor
- Convertible tablet: one spindle
- **Intel® Core™ Duo processor** L2400 with low voltage, dual-core, Enhanced Intel SpeedStep technology**, Execute Disable Bit, 667 MHz system bus, and 2MB shared L2 cache or
- **Intel Core 2 Duo processor** L7400 with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology**, Execute Disable Bit, 667 MHz system bus, and 4MB shared L2 cache.

### Memory
- 1GB std / 4GB max** / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets /
- **PSU standard memory in both sockets (512MB each socket); no sockets available:** Others: standard memory in 1 socket; 1 socket available

### Ultrabay™ Slim IDE Combo
- Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

### UltraBay™ IDE Combo
- Some: DVD-ROM/CD-RW / 24X/24X/24X/8X** speed / removable from X6 UltraBase

### Serial ATA disk (SATA150)
- 60GB** / 5400 rpm / 80GB / 5400 rpm / 9.5mm high / removable and upgradable /
- 5mm high bay / **ThinkPad Shock Mounting Drive**

### Display
- **Active Protection System™** / supports 2nd disk in optional X6 Tablet UltraBase

### Graphics
- **Intel Graphics Media Accelerator 950 (GMA 950)** / integrated in 945GM / 200MHz external memory support via analog DB-15 connector / no DVI-out support

### Keyboard
- 89-key / **ThinkVantage button** / spill-resistant / multimedia Fn keys / Windows, Apex keys /

### TrackPoint
- **TrackPoint® pointing device** / "Press-to-Select," Internet Scroll Bar**, magnifying glass

### Dimensions
- 4-cell: 10.8" x 9.6" x 1.3", 274mm x 244mm x 27.4-33.1mm
- 8-cell: 10.8" x 10.5" x 1.1-1.3", 274mm x 287mm x 27.4-33.1mm
- 8-cell battery models: 3.7 to 4.1 lb (1.7 to 1.9kg)
- 8-cell battery models: 4.2 to 4.6lb (1.9 to 2.1kg)

### Case material
- **Color:** black; **Magnesium alloy**

### Battery type - life
- Li-ion 4-cell or 8-cell / supports optional Extended Life Battery on base (for two batteries); supports optional Ultrabay Slim battery on optional X6 Tablet UltraBase (for two batteries)
- 4-cell: up to 3.3 hr; 8-cell: up to 7.5 hr; with 8-cell and Ultrabay Slim: up to 8.5 hr; with 8-cell and optional Extended Life Battery: up to 9.5 hr

### Architecture
- **Mobile Intel 945GM Express Chipset** / 89245GM Graphics Memory Controller Hub / 82801GBMICH-M I/O Controller Hub (SATA300, AT100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (Riconh® R5C843 CardBus/1394/SD controller) / LPC bus (PC87382 Super I/O, Atmel® 9753203 TPM)

### Media slice
- Secure Digital slot One **Secure Digital Card slot** / supports SD memory card devices in consumer uses

### PC Card Std slot
- One Type I or one Type II / **CardBus Plus** (34mm ExpressCard via adapter) / door

### Ports
- Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / IEEE 1394 firewire / S-198 (parallel, keyboard/mouse ports)

### Wireless antenna
- **UltraConnect™** / **Antenna built into the display cover** / on-off switch for all wireless radios

### Mini PCI Express
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradeable

### WWAN
- None

### Modem
- 56K V.90 (V.92-designed**) modem in Communication Daughter Card

### Bluetooth
- Some: Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

### Ethernet
- Gigabit ethernet on system board / Intel 82573L (M/I PHY) / PCIe x1 / PXE

### Audio support
- High Definition (HD) Audio / AD1981 HD codec / mono speaker 0.5 watt / volume down, up, mute buttons / internal microphone / headphone jack (pink) / headphone jack (green)

### Security
- Power-on password / hard disk password / supervisor password / security keyhole

### Security keyhole
- **Trusted Platform Module** / Atmel chip / TCG 1.2-compliant

### Finger print reader
- **Fingerprint reader** on right base of display / use in tablet or notebook mode

### Limited warranty
- **3-years/1-year battery** / EasyServ** onsite pickup and delivery / service upgrades** available

---

**See footnotes for important warranty information**

*Powered by Intel Centroino® Duo mobile technology*

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(1L-8) October 2007

US models announced 27 or April 3, 2007

US models withdrawn effective July or November 2007

---

**Software**

### Windows XP Tablet
- Microsoft® Windows® XP Tablet PC Edition 2005**

### Preloaded
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections**
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper®Lite
- PC-Documents (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Some: Fingerprint Software
- InterVideo VirtualDrive CD/DVD Emulator

### Free trial
- Zino Reader

### License (CD not included)
- **Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client**

---

### ThinkPad X6 Tablet UltraBase
- Provides desktop expansion and cable mgmt for X60 Tablet
- **Connects to the bottom of the tablet**
- Converts tablet to a two-pane system with optional flat bezel
- Ultrabay Slim options in right-side:
  - ThinkPad Advanced Ultrabay
  - Battery 3-cell (flat bezel) 40Y6789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y8621
  - ThinkPad DVD Ultrabay Slim
  - Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

### SATA disks supported (some):
- 80GB Disk 7200 rpm 41N3012
- 80GB Disk 5400 rpm 41N5662
- 100GB Disk 7200 rpm 41N3013

### Other features:
- Power button (front)
- Stereo speaker (1 watt)
- Security key lock / security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- **Modern port (RJ-11)**
- Microphone and headphone output
- Requires 65- or 90-watt AC adapter
- 1.48 lb; 670g

### 65-watt AC Adapter
## ThinkPad X60 Tablet (6363) - Education withdrawn

### Type-model | Processor | GHz | Memory | Screen | SATA disk (UltraBase/UltraBase) | 802.11 wireless | WWAN wireless | Blue-tooth | Fingerprint reader | Limited warranty | Gb | Qtd | Avail date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
6363-R3U | Core Duo L2400 1.66 | 1GB | 12.1” TN XGA Touch | Optional | Optional | Intel 11a/b/g | None | Blue | FingerEasyServ WH Apr 07
6363-G4U | Core Duo L2400 1.66 | 1GB | 12.1” TN XGA Touch | Optional | Optional | Intel 11a/b/g | None | Blue | FingerEasyServ WH Apr 07
6363-ADU | Core Duo L2500 1.83 | 1GB | 12.1” XGA Touch | Optional | Optional | Intel 11a/b/g | None | Blue | FingerEasyServ WH Dec 06
6363-8DU | Core Duo L2500 1.83 | 1GB | 12.1” XGA Touch | Optional | Optional | Intel 11a/b/g | None | Blue | FingerEasyServ WH Dec 06
6363-D6U | Core Duo L2500 1.83 | 1GB | 12.1” XGA Touch | Optional | Optional | Intel 11a/b/g | None | Blue | FingerEasyServ WH Dec 06

- **These models have an EasyServ™ on-site pickup and delivery 3-year limited warranty**
- These educational models are available only to private or public K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning Processor
- Convertible tablet: one spindle
- Intel® Core™ Duo processor L2400 or L2500 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Memory
- 1GB std / 4GB max2 / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket, 1 socket available

### Ultrabay™ Slim Serial ATA disk (SAT150)
- Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase
- 80GB (5400 rpm) / 9.5mm high / removable and upgradeable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System™ / supports 2nd disk in optional X6 Tablet UltraBase

### Display
- Some: 12.1” (307mm) TN XGA (1024x768) TFT color / 4/3 / 190 nits / 100° viewing
- Some: 12.1” (307mm) SXGA+ (1400x1050) TFT color / 4/3 / 185 nits / 170° viewing
- ThinkPad X6 Tablet (6363) - Education - withdrawn
- and operated exclusively for educational purposes for use by qualified students and teachers.
- These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Graphics
- Intel® Graphics Media Accelerator 950 (GMA 950)
- Intel® Graphics Media Accelerator 950 (GMA 950)

### Keyboards
- 89-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, App keys / TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar13, magnifying glass
- 8-cell: up to 7.5 hr; with optional Extended Life Battery: up to 9.5 hr

### Dimensions
- 8-cell: 10.8” x 10.5” x 1.1-1.3” / 274mm x 267mm x 27.4-33.1mm
- 8-cell: 4.2 to 4.6 lb (1.9 to 2.1kg)

### Battery - type
- Color: black; All: magnesium alloy
- Li-Ion 8-cell / supports optional Extended Life Battery on base (for two batteries); supports optional Ultrabay Slim battery in optional X6 Tablet UltraBase (for two batteries)

### Battery - life
- 8-cell: up to 7.5 hr; with optional Extended Life Battery: up to 9.5 hr

### Architecture
- Mobile Intel 945GM Express Chipset / 82804GM Graphics Memory Controller Hub / 82801QBBM I/O Controller Hub (SAT300, ATAPI/USB host controller, multi-standard system I/O controller
- Cardbus, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint], / PCI bus (Ricoh® R5C843 Cardbus/1394/SD controller) / LPC bus (PC87382 Super I/O, Atmel™ 975S3203 TP)

### Media slice
- ThinkPad X6 Tablet UltraBase
- Secure Digital slot / One Secure Digital slot / supports SD cards used in consumer devices
- PC Card Std slot / One Type I or One II / Cardbus Plus (34mm ExpressCard adapter) / door
- Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / IEEE 1394 port (4-pin) / no serial, parallel, keyboard/mouse ports

### Wireless antenna
- Mini PCI Express: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- 11a/b/g wireless5, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

### Software
- Windows XP Tablet
- - Microsoft® Windows® XP Tablet PC Edition 2005
- - Disk-to-Desk Recovery

### Preloaded
- (only some listed)
- - Microsoft Office OneNote® 2003
- - VitalSource Library education software
- - Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- - Microsoft Education Pack
- - Microsoft® Microsoft Office Pro Pack
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - Diskette Lite
- - PC Doctor™ (diagnostics)
- - Fingerprint Software
- - InterVideo VirtualDrive CD/DVD Emulator

### Free trial
- Zino Reader

### CD included
- - Adobe Photoshop Elements plus Adobe Premiere Elements
- - Microsoft Office OneNote 2003

### License
- (CD not included)
- - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Supports ThinkVantage™ technologies

### ThinkPad X6 Tablet UltraBase
- Provides desktop expansion and cable mgmt for X60 Tablet
- Connects to the bottom of tablet
- Converts to a two-socket system with optional flat bezel
- Ultrapbay Slim options in right side:
  - ThinkPad Advanced UltraBay
  - Battery 3-cell (flat bezel) 40Y6789
  - ThinkPad DVD UltraBay Slim
  - Burner (flat bezel) 41NS5634
  - Serial Hard Drive UltraBay Slim Adapter (flat bezel) 40Y6725
  - SATA disks supported (some):
    - 60GB Disk 7200 rpm 41N3012
    - 80GB Disk 5400 rpm 41N5662
    - 100GB Disk 7200 rpm 41N3013
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optional security screw
  - Serial and parallel ports
  - Analog DB-15 monitor port (no DVI)
  - Four USB 2.0 ports
- Other features:
  - Gigabit ethernet port (RJ-45)
  - Modern port (RJ-11)
  - Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
  - 1.48 lb 670g
- 65-watt AC Adapter
### ThinkPad® X60 Tablet (6363) - Education (Vista™) - withdrawn

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<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>SATA disk UltraBase</th>
<th>Wi-Fi/Bluetooth</th>
<th>Fingerpr. reader</th>
<th>Limited warranty</th>
<th>Description</th>
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<td>6363-G6U</td>
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<td>None</td>
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</table>

- These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty.

#### Positioning

- **Converterable tablet**: one spindle
- **Intel® Core™ Duo processor L2400 with low voltage, dual-core**
- **Enhanced Intel SpeedStep™ technology**, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

#### Memory

- 1GB std / 4GB max/² | ²/² PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / std mem in both sockets

#### Ultrabay™ Slim

- Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

#### Display

- **ThinkPad Shock Mounted Hard Drive** / **Active Protection System** / supports 2nd disk in optional X6 Tablet UltraBase

#### Graphics

- **Intel Graphics Media Accelerator 950 (GMA 950)** / Integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

#### Keyboard

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apex keys

#### Media slot

- Optional **ThinkPad X6 Tablet UltraBase** (see right side)

#### Wireless antenna

- **Mini PCI Express**: 11a/b/g/³

#### Audio support

- **ThinkPad Advanced Ultrabay**: 3-cell (flat bezel) 40Y8789
- **ThinkPad DVD Ultrabay Slim**: Burner (flat bezel) 41N5643
- **ThinkPad Shock Mounted Hard Drive**: Optional

#### Security

- **ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel)** 40Y6789
- **ThinkPad DVD Ultrabay Slim**: Burner (flat bezel) 41N5643
- **ThinkPad Shock Mounted Hard Drive**: Optional

#### License

- CD not included / Lotus® Notes® Stand-alone Client

#### Other accessories

- **ThinkPad External Battery Charger** 40Y7625
- **ThinkPad X60 Tablet Digitizer Pen** 41U3143
- **ThinkPad X6 Tablet UltraBase** 41U3120
- **ThinkPad Carrying Case - Expander** 73P3597
- **ThinkPad Carrying Case - BackPack** 73P3599
- **ThinkPad X60 Tablet Sleeve** 41U3142
- **ThinkPlus 3-year LOR 9x5 NBD** 41C9176

## Operating System

- **Microsoft® Windows® Vista™ Business Edition** (32-bit)

## Preloaded applications

- **Some (K12)**: K-12 educ software
  - **VitalSource Library School Edition**
  - **Adobe® Instructor Resource Center**
  - **Adobe Digital School Collection**
  - **Photoshop Elements 5 (and CD)**
  - **Premier Elements 3 (and DVD)**
  - **Acrobat 8 Professional (and CD)**
  - **Contribute 4 (and CD)**
  - **High Definition (HD) Audio**
  - **Adoobe Photoshop Elements 5 (and CD)**
  - **Premier Elements 3 (and DVD)**
  - **Microsoft Education Pack**
  - **Microsoft Experience Pack**
  - **Rescue and Recovery™**
  - **Access Connections™**
  - **Client Security Solution™**
  - **ThinkVantage Productivity Center**
  - **ThinkVantage System Update**
  - **Lenovo Multimedia Center**
  - **Norton Internet Security**
  - **Diskeeper™ Home**
  - **PC-Doctor™ (diagnostics)**
  - **InterVideo VirtualDrive CD/DVD Emulator**

## Notes

- **Stand-alone Client**
- **ThinkVantage™ technologies**

## Preloaded system

- Provides desktop expansion and cable management for tablet
- Connects to the bottom of the tablet
- Converts tablet to a two-spindle system with optional flat bezel Ultrabay slim option in right side:
  - ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y6789
  - ThinkPad DVD Ultrabay SlimBurner (flat bezel) 41N5643
  - ThinkPad Shock Mounted Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725
  - SATA disks supported (some):
    - 80GB Disk 7200 rpm 41N3012
    - 80GB Disk 5400 rpm 41N5662
    - 100GB Disk 7200 rpm 41N3013

## Other features:

- **Power button (front)**
- **Security key lock, security keyhole, and optional security screw**
- **Serial and parallel ports**
- **Analog DVI 15-pin monitor port (no DVI)**
- **Four USB 2.0 ports**
- **Gigabit ethernet port (RJ-45)**
- **Modem port (RJ-11)**
- **Microphone in and headphone out**
- **requires 65- or 90-watt AC adapter**
- **1.48 lb; 670g**

## Limited warranty

- **3-years/1-year battery - EasyServ™ onsite pickup and delivery - service upgrades available**

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(DL1-11) August 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
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<td>120GB DVD±RW UltraBase</td>
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</table>

**Positioning Processor**

Convertible tablet: one spindle

Intel® Core™ Duo processor L2400 or L2500 with low voltage, dual-core, enhanced Intel SpeedStep® technology 1, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

1GB std / 4GB max 2 / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets

Some: (Italics) standard memory in both sockets; no sockets available; Some: standard memory in 1 socket; 1 socket available

**UltraBay™Slim EIDE DVD±RW Serial ATA disk (SATA150)**

Supports UltraBay™Slim devices in optional ThinkPad X6 Tablet UltraBase

- Some: DVD burner / Super Multi-Burner (40Y8623) / dual-layer / removable from X6
- Some: 80GB (5400 rpm), 100GB (5400 rpm), or 120GB (5400 rpm) / 9.5mm height / removable and upgradable / 9.5mm high / ThinkPad Shock Mounted Hard Drive / Active Protection System™ / supports 2nd disk in X6 Tablet UltraBase

**Display**

- Some: 12.1" (307mm) XGA (1024x768) TFT color / 4.3 / 185 nits / 170° viewing
- Some: 12.1" (307mm) SXGA+ (1400x1050) TFT color / 4.3 / 180 nits / 170° viewing

**Chipset**

Mobile Intel 945GM Express Chipset / 82894GM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint] / PCI bus [Ricoch: R8C84, Nividia], [motherboard controller] / LPC bus [PCI7382, I/O, Amel: 975C3203 TMP]

**Media slice**

Some: ThinkPad X6 Tablet UltraBase (see right side)

**PC Card Std slot**

One Secure Digital Card slot / supports SD memory cards used in consumer devices

**Ports**

One Type I or Type II / CardBus Plus (34mm ExpressCard/adapter) / door Three USB (version 2.0) / infrared (infra-red) / RJ-11 (modem) / RJ-15 (ethernet) / IEEE 1394 port (4-pin) / no serial, parallel, keyboard/mouse ports

**Modem**

56K V.90 (V.92-designed) modem in Communication Daughter Card

**Bluetooth™**

Some: Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator

**Ethernet**

Gigabit ethernet on system board / Intel 82573L (MAC/PHY) / PCIe x1 / PXE

**Audio support**

High Definition (HD) Audio / AD1981HD codec / mono speaker, 0.5 watt / volume down, up, mute buttons / internal microphone / wired jack (pin) / headphone jack (green)

**Security**

Power-on/hard disk password / password-activated / security keyhole / key security

**Security chip**

Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on right base of display / use in tablet or notebook mode / 2-way swipe sensor / supports the security chip

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**SOFTWARE**

Windows XP Tablet

- Microsoft® Windows® XP Tablet PC Edition 2005 2
- Disk-to-Desk Recovery

**Preloaded**

- Some: Microsoft Office OneNote® 2003
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Symantec® Client Security
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- InterVideo VirtualDrive CD/DVD Emulator

Free trial

Zino Reader

**CD included**

- Microsoft Office OneNote 2003

**ThinkPad X6 Tablet UltraBase**

- Provides desktop expansion and cable manager for X60 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel
- Ultrabay Slim options in right side:
  - ThinkPad X6 Tablet Slim Battery 3-cell (flat bezel) 40Y6789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6821
  - DVD-ROM Ultrabay Slim Drive (curved bezel) 73P3270
  - ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

SATA disks supported (some):

- 100GB Disk 7200 rpm 41N503
- 160GB Disk 7200 rpm 4IN573
- 250GB Disk 5400 rpm 43R8152

**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Free USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- Modern port (RJ-11)
- Microphone in and headphone out
- Requires 40 or 90-watt AC adapter
- 1.48 lb; 670g

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**Limited warranty**

- 3-years/1-year battery - EasyServ® depot repair service / service upgrades available

- See footnotes for important warranty information

**Lenovo** (DL-1-2) April 2008

US models announced November 14, 2006 or February 22, 2007

US models withdrawn effective July 5, 2007 or April 30, 2008

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* Think Centrino® processor technology
<table>
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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
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**Positioning Processor**
- Convertible tablet: one spindle
- Intel® Core™ Duo processor L2400 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology
- Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**
- 1GB std / 4GB max
- PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

**UltraBay™ Slim Serial ATA disk (SATA150)**
- Supports UltraBay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

**Display**
- Some: 12.1" (307mm) XGA (1024x768) TFT color / 4.3 / 185 nits / 170° viewing
- Some: 12.1" (307mm) SXGA+ (1400x1050) TFT color / 4.3 / 180 nits / 170° viewing
- Touch: 12.1" (307mm) XGA (1024x768) TFT color / 4.3 / 185 nits / 170° viewing / MultiView (indoor/outdoor), MultiTouch (touchscreen via finger and pen)
- All: Super Wide Angle FFS / anti-reflective / anti-glimmer protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and move bottom of display / MultiView (middle / portrait or landscape) / frame picture mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, rotation, utility, Esc, NavDial/enter)

**Graphics**
- Intel Graphics Media Accelerator 950 (QMA 950) / integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

**Dimensions**
- 8-cell: 10.8" x 10.5" x 1.1-1.3"; 274mm x 267mm x 27.4-33.1mm
- 8-cell: 4.2 to 4.6lb (1.9 to 2.1kg)

**Wireless**
- Bluetooth™
- 60GB Disk 7200 rpm 41N3012
- 80GB Disk 5400 rpm 41N5662
- 80GB Disk 5400 rpm 41N6662
- 100GB Disk 7200 rpm 41N3013

**Limited warranty**
- 3-year / 1-year battery, limited onsite service
- 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

US models announced February 27, 2007

US models withdrawn effective November 2007

---

**SOFTWARE**

**Windows XP Tablet**
- Microsoft® Windows® XP Tablet PC Edition 2005
- Disk-to-Disk Recovery

**Preloaded**
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Some: Fingerprint Software
- InterVideo VirtualDrive CD/DVD Emulator

**Firmware**
- Zinio Reader

**License (CD not included)**
- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client

**ThinkPad X6 Tablet UltraBase**
- Provides desktop expansion and cable mgmt for X6 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel Ultrabay Slim options in right side:
  - ThinkPad Advanced Ultrabay
  - Battery 3-cell (flat bezel) 40Y5789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6261
- ThinkPad DVD Ultrabay Slim
- Burner (flat bezel) 41N5643
- Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725
- SATA disks supported (some):
  - 60GB Disk 7200 rpm 41N3012
  - 80GB Disk 5400 rpm 41N6662
  - 100GB Disk 7200 rpm 41N3013
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optional security screw
  - Serial and parallel ports
  - Analog DB-15 monitor port (no DVI)
  - Four USB 2.0 ports
  - Gigabit ethernet port (RJ45)
  - Modern port (RJ1)
  - Microphone in and headphone output
  - Requires 65- or 90-watt AC adapter
  - 1.48 lb; 670g
**ThinkPad X6 Tablet (6364) - Education - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
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</table>

*These models have a limited onsite service 3-year limited warranty*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning Processor**

- Convertible tablet: one spindle
- Intel® Core™ Duo processor L2400 or L2500 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology
- Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

- 1GB std / 4GB max
- PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

**Ultrabay™ Slim Serial ATA disk (SATA150)**

- Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase
- 80GB (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System

**Display**

- Super Wide Angle FFS or Twisted Nematic (TN) / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) / picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, rotation, utility, Esc, Nav/Dial/enter)

**Graphics**

- Intel® Graphics Media Accelerator 9500 (GMA 9500) / integrated in 950GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

**Software**

- Microsoft® Windows® XP Tablet PC Edition 2005
- Disk-to-Disk Recovery

**Preloaded (only some listed)**

- Microsoft Office OneNote® 2003
- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Microsoft Education Pack
- Microsoft gold Microsoft Partner
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security™
- PC-Doctor™ (diagnostics)
- Fingerprint Software
- InterVideo VirtualDrive CD/DVD Emulator

**Features**

- Zino Reader

**CD included**

- Adobe Photoshop Elements plus Adobe Premiere Elements
- Microsoft Office OneNote 2003

**License (CD not included)**

- Lenovo® SmartSuite® Millennium and Lenovo Notes® Stand-alone Client

**Supported ThinkVantage technologies**

- Provides desktop expansion and cable mgmt for X6 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel
- ThinkPad X6 Tablet UltraBase

**Ultrabay Slim options in right side:**

- ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y6789
- ThinkPad X64 Ultrabay Slim Burner (flat bezel) 41N5643
- Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725
- SATA disks supported (some):
  - 60GB Disk 7200 rpm 41N3012
  - 80GB Disk 5400 rpm 41N5662
  - 100GB Disk 7200 rpm 41N3013

**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- Modem port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- Requires 1.48 lb, 670g

**512MB PC2-5300 DDR2 CL5 SODIMM**

- ThinkPad X6 Tablet UltraBase 41U3120
- ThinkPad X60 Tablet Digitizer Pen 41U3120
- ThinkPad X60 Tether (3-pack) 41U3120
- ThinkPad X60 Carrying Case - Adapter 73P3597

**See footnotes for important warranty information**

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US models announced November 14, 2006 or April 10, 2007

US models withdrawn effective July 2007
**ThinkPad X60 Tablet (6364) - Education (Vista™) - withdrawn**

- **These models have a limited onsite service**: 3-year limited warranty
  These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning Processor
- **Convertible tablet**: one spindle
- **Intel® Core™ Duo processor L2400** with low voltage, dual-core, Enhanced Intel SpeedStep™ technology¹, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Memory
- **1GB std / 4GB max**: / PC2-5300 667MHz DDR2 / non-parity / CL5 /
  dual-channel capable / two 200-pin SO-DIMM sockets / std mem in both sockets (512MB each socket); no sockets available

### Ultrabay™ Slim
- **Serial ATA disk (SATA150)**
  Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase
- **80GB (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay**

### Display
- **ThinkPad Shock Mounted Hard Drive / Active Protection System** / supports 2nd disk in optional X6 Tablet UltraBase
- **12.1" (307mm) TN XGA (1024x768)**
  TFT color / 430 / 110 nits / 100" viewing
  [**Touch**: 12.1" (307mm) TN XGA (1024x768)]
  TFT color / 435 / 115 nits / 100" viewing
- **MultiView** (indoor/outdoor), MultiTouch (touchscreen via finger and pen)

### Graphics
- **Intel Graphics Media Accelerator 950 (GMA 950)** / integrated in 945GM / 200MHz /
  external monitor support via analog DB-15 connector / no DVI-out support

### Keyboard
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
- **TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar**, magnifying glass

### Dimensions³
- **8-cell**: 10.8" x 10.5" x 1.1-1.3"; 274mm x 267mm x 27.4-33.1mm
- **8-cell**: 4.2 to 4.6lb. (1.9 to 2.1kg)

### Battery type
- **Li-ion 8-cell** / supports optional Extended Life Battery on base (for two batteries);
  supports optional Ultrabay Slim battery in opt X6 Tablet UltraBase (for two cells)
- **Li-life** / up to 7.5 hr, with optional Extended Life Battery: up to 9.5 hr

### Architecture
- **Mobile Intel 945GM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1)**
  / PCI bus, USB, LPC interface, [Bluetooth], [front panel] / PCI bus (Ricoch® R5C483)
- **CardBus/1394/SD controller)** / LPC bus (PC87382 Super I/O, Atmel® 77C3203 TPM)

### Multimedia
- **Optional ThinkPad X6 Tablet UltraBase** (see right side)
- **One Secure Digital Card slot / supports SD memory cards used in consumer devices**
- **PC Card Slot Slot**
- **Ports**
  - Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem)
  - RJ-45 (ethernet) / IEEE 1394 port (4-pin) / no serial, parallel, keyboard/mouse ports

### Wireless antenna
- **Mini PCI Express**: 11a/b/g / WWAN
- **Ethernet**
- **Bluetooth™ 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator**

### Audio support
- **High Definition (HD) Audio / AD1981HD codec / mono speaker 0.5 watt**
  / volume down, mute buttons / internal microphone / mic input jack (pink) / headphone jack (green)

### Security
- **Fingerprint reader / 2-way swipe sensor / supports the security chip**

### Warranty³
- **3-year / 1-year battery, limited onsite service², 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time**

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**Preloaded operating system**

**Preloaded applications** (only some listed)
- **Some (K12)**:
  - K-12 educ software
  - VitalSource Library School Edition
  - Adobe® Instrucet Source Center
  - Adobe Digital School Collection
  - Photoshop Elements 5 (and CD)
  - Premier Elements 3 (and DVD)
  - Acrobat 8 Professional (and CD)
  - Contribut 4 (and CD)

**License** - CD not included
- **Lenovo L191 19" Monitor (black) 6135AB1**
- **ThinkCarrying Case - BackPack 73P3599**

**Supports ThinkVantage® technologies**
- **ThinkPad X6 Tablet UltraBase**
  - Provides desktop expansion and cable management for tablet
  - Converts to a two-spindle system with optional flat bezel
  - Provides full connectivity to the system

**Other features**
- **Power button (front)**
- **Security key lock, security keyhole, and optional security screw**
- **Serial and parallel ports**
- **Analog DVI-15 monitor port (no DVI)**
- **Four USB 2.0 ports**
- **Gigabit ethernet port (RJ-45)**
- **Modem port (RJ-11)**
- **Microphone and headphone outlet**
- **Requires 65- or 90-watt AC adapter**
- **1.48 lb; 670g**

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**(DL1-10) August 2007**
### ThinkPad X6 Tablet (6366) - TopSeller - withdrawn

#### Type-model | Processor | GHz Memory | Screen | SATA disk | Optical in UltraBase | X6 Tablet UltraBase | 802.11 wireless | WWAN wireless | Blue-Fingerprint Battery Limited Avail | reader | cells warranty date
---|---|---|---|---|---|---|---|---|---|---|---
6366-4DU Core Duo L2400 1.66 1GB 12.1" XGA 80GB | *Intel 11a/b/g 132 | Finger | 4-cell | 3-yr Dec 06
6366-AJU Core Duo L2500 1.83 2GB 12.1" SXGA+ 100GB DVD±RW UltraBase | *Intel 11a/b | Blue | 8-cell | 3-yr Dec 06
6366-6AU Core Duo L2500 1.83 2GB 12.1" XGA Touch 100GB Combo UltraBase | *Intel 11a/b | Blue | 4-cell | 3-yr Dec 06
6366-8KU Core Duo L2500 1.83 1GB 12.1" XGA Touch 100GB Thinkpad 11" | *Intel 11a/b | Blue | 8-cell | 3-yr Dec 06
6366-98U Core Duo L2500 1.83 2GB 12.1" XGA Touch 120G DVD±RW UltraBase | *Intel 11a/b | Verizon | Blue | 8-cell | 3-yr Dec 06

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty

#### Positioning

**Processor**
Convertible tablet: one spindle

**Intel® Core™ Duo processor L2400 or L2500 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

#### Memory

- 1GB or 2GB std / 4GB max
- 2GB std / 4GB max31 / PC2-5300 667MHz DDR2 / non-parity / CL5 / or 2MB shared L2 cache

#### Ultradyn™ Slim IDE Combo

- Supports Ultradyn™ Slim devices in optional ThinkPad X6 Tablet UltraBase
- Some: DVD-ROM/CD-RW / 2X/4X/24X/24X/8X speed / removable from X6 UltraBase
- Some: DVD burner / Super Multi-Burner (40Y8623) / dual-layer / removable from X6 UltraBase

#### Display

- Some: 12.1" (307mm) XGA (1024x768) TFT color / 4.3 / 115 nits / 170° viewing
- Some: 12.1" (307mm) SXGA+ (1400x1050) TFT color / 4.3 / 180 nits / 170° viewing
- Touch: 12.1" (307mm) XGA (1024x768) TFT color / 6.9 / 170° viewing
- MultiView (indoor/outdoor), MultiTouch (touchscreen via finger and pen)
- All: Super Wide Angle FFS / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and un-hinge het in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, rotation, utility, Esc, Nav/Dial/enter)

#### Graphics

- Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

#### Keyboad & TrackPoint®

- 89-key / ThinkVantage button / spill-resistant / multimedia fn keys / Windows, App keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®3, magnifying glass

#### Dimensions²

- 4-cell: 10.8" x 6.9" x 1.1-1.3" / 274mm x 244mm x 27.4-33.1mm
- 8-cell: 10.8" x 10.5" x 1.1-1.3" / 274mm x 267mm x 27.4-33.1mm

#### Weight²

- 4-cell: 3.7 to 4.1 lb (1.7 to 1.9kg)
- 8-cell: 4.2 to 4.6 lb (1.9 to 2.1kg)

#### Battery & type

- Li-Ion 4-cell or 8-cell / supports optional Extended Life Battery on base (for two batteries; supports optional Ultrabay Slim battery in optional X6 Tablet UltraBase for two batteries)
- with 4-cell: up to 3.3 hr; with 8-cell: up to 7.5 hr; and Ultrabay Slim: up to 8.5 hr with 8-cell and optional Extended Life Battery: up to 9.5 hr

#### Architecture

- Mobile Intel 945GM Express Chipset / 82845GM Graphics Memory Controller Hub / 82801GB ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth, (fingerprint)]) / PCI bus (Ricochet® RSC843 CardBus/1394/SATA socket) / LPC bus (PC2-400MHz I/O, Atmel® 97C3230 2TPM)

#### Docking station

- Security Digital slot

#### Secure Digital slot

- Secure Digital Card slot / supports SD memory cards used in consumer devices

#### PC Card Std slot

- One Type I or one Type II / CardBus Plus (34mm ExpressCard via adapter) / door
- Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet) / IEEE 1394 port (4-pin) / no serial, parallel, keyboard/mouse ports

#### Wireless antenna

- Mini PCI Express
- ThinkPad 11" UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- Some: 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
- Some: 11a/b/g/n wireless, ThinkPad 11"i/bi/n Mini PCI Express Adapter, Atheros AR5008 chipset, MIMO 2x2

#### WWAN²

- Some: Wireless WLN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI Adapter, EV-DO/1xRTT, WAN antenna on display, service contract reqd with Verizon Wireless
- Some: Bluetooth wireless / 2.5 USB interface via [ICH7-M / LED indicator
- Ethernet

#### Audio support

- High Definition (HD) Audio / AD1981HD codec / mono speaker 0.5 watt / volume down, up, mute buttons / internal microphone / mic input jack (pink) / headphone jack (green)

#### Security

- Power-on password / hard disk password / supervisor password / security keyhole / Security chip

#### Security chip

- Trusted Platform Module / Atmel chip / TCG 1.2-compliant
- FingerPrint reader

#### FingerPrint reader

- FingerPrint reader on right base of display / use in tablet or notebook mode / 2-way swipe sensor / supports the security chip

#### Limited warranty²

- 3-years / 1-year battery / EasyServ™ onsite pickup and delivery / service upgrades available

#### Other features:

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, 4-cell security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Four USB 2.0 ports
- 2-way swipe sensor / supports the security chip
- Modern port (RJ-11)
- Modern port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb 670g
- 65-watt AC Adapter

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**Windows XP Tablet**

- Microsoft® Windows® XP Tablet PC Edition 2005®
- Disk-to-Disk Recovery

**Preloaded (only some listed):**

- Microsoft Office OneNote® 2003
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections™
- Client Security Solution
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (Diagnostic)
- Fingerprint Software
- InterVideo VirtualDrive CD/DVD Emulator

**Free trial:**

- Zino Reader

**Companion:**

- CD included
- Microsoft Office OneNote 2003

**License (CD not included):**

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

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See footnotes for important warranty information

*Powered by Intel Centri® Duo mobile technology

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(DL1-4) August 2007

US models announced November 14, 2006

US models withdrawn effective July 2007

PSREF

Personal Systems Reference
**ThinkPad X6 Tablet (6366) - TopSeller (January 2007) - withdrawn**

**Personal Systems Reference (PSREF)**

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<th>SATA disk</th>
<th>Optical in UltraBase</th>
<th>X6 Tablet UltraBase</th>
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**These small and medium business (SMB) models are part of the US TopSeller Program**

**These models have a 3-year limited warranty**

Positioning Processor

Convertible tablet: one spindle Intel® Core™ Duo processor L2400 with low voltage, dual-core. Enhanced Intel SpeedStep® technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Memory

1GB or 2GB std / 4GB max¹ / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in both sockets / no sockets available

Ultrabay Slim IDE Combo WWAN

Some: Supports Ultrabay Slim devices in optional ThinkPad X6 Tablet UltraBase

Some: DVD/Burner / Super Multi-Burner (40Y6623) / multi-layer / removable from X6 UltraBase

Some: 80GB (5400 rpm), 100GB (5400 rpm), or 120GB (5400 rpm) / 8.95mm high / removable and upgradable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System² / supports 2nd disk in optional X6 Tablet UltraBase

Display

Some: 12.1" (307mm) XGA (1024x768) TFT color / 430 nits / 170° viewing

Some: 12.1" (307mm) SXGA+ (1400x1050) TFT color / 430 nits / 170° viewing

Touch: 12.1" (307mm) XGA (1024x768) TFT color / 430 nits / 170° viewing / DualView (indoor/outdoor) touchscreen via finger and pen

All: Super Wide Angle / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, utility, Esc, Nav/Dial/enter)

Graphics Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

Keyboard TrackPoint

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apex keys / TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar², magnifying glass

Dimensions³

4-cell: 10.8 x 9.6 x 1.1-1.3 / 274mm x 244mm x 27.4-33.1mm

8-cell: 10.8 x 10.5 x 1.1-1.3 / 274mm x 267mm x 27.4-33.1mm

Weight³

4-cell: 3.7 to 4.1 lb (1.7 to 1.9kg)

8-cell: 4.2 to 4.6 lb (1.9 to 2.1kg)

Case material

Color: black / Al: magnesium alloy

Battery - type

Li-Ion 4-cell or 8-cell / supports optional Extended Life Battery on base (for two batteries) / supports optional Ultrabay Slim battery in optional X6 Tablet UltraBase (for two batteries)

Battery - life¹⁰

with 4-cell: up to 3.3 hr / with 8-cell: up to 7.5 hr / Ultrabay Slim: up to 8.5 hr with 8-cell and optional Extended Life Battery up to 9.5 hr

Chipset Mobile Intel 945GM Express Chipset / 82895GMA Graphics Memory Controller Hub / 82801GBGM ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoch R5C843 / CardBus/1394/SD controller) / LPC bus (PC87382 Super I/O, Atmel 9753C203 TPM) / Mobile Intel 945GM / PRISM 2 wireless / Mobile Intel 945GM Express Chipset

Docking station Secure Digital slot

One Secure Digital slot / supports SD memory cards in consumer devices

One Type I or one Type II / CardBus Slot Plus (34mm ExpressCard via adapter) / door

Three USB (version 2.0) / external DB-15 monitor / internal (4Mbps) / RJ-45 (ethernet) / 100MHz high bay / XGA (1024x768) / 18.5" viewing / Super Wide Angle FFS / anti-reflective and anti-glare protective coatings

Ports

Power button (front)

Modem port (RJ-11)

Microphone in and headphone out

Gigabit ethernet port (RJ-45)

Serial and parallel ports

USB 2.0 / secure card slot

Firewire (IEEE 1394)

Supports ThinkVantage technologies

- Microsoft Office OneNote 2003
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections⁴
- Client Security Solution⁴
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security⁴
- Diskeeper® Home
- PC Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Picasa from Google
- Diskeeper® Home
- Fingerprint Software (fingerprint models)

Chief Technology

Intel Core Duo processor L2400 / 1.66GHz / 1MB 2nd level cache / Enhanced Intel SpeedStep technology / 100% Active Protect Technology

Other features

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45)
- Modern port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lbs. (670g)

Limited warranty¹²

3-yr / 1-year battery / EasyServ™ depot repair service / service upgrades available

- Microsoft Office OneNote 2003
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections⁴
- Client Security Solution⁴
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security⁴
- Diskeeper® Home
- PC Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Picasa from Google
- Diskeeper® Home
- Fingerprint Software (fingerprint models)

CD Included

- Microsoft Office OneNote 2003

Preloaded operating system¹⁰

- Microsoft Windows Vista Business Edition (64-bit)

Preloaded applications¹⁴

- Microsoft Office OneNote 2003
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections⁴
- Client Security Solution⁴
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security⁴
- Diskeeper® Home
- PC Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Picasa from Google
- Diskeeper® Home
- Fingerprint Software (fingerprint models)

Supports ThinkVantage technologies

- ThinkPad X6 Tablet UltraBase
- Provides desktop expansion and cable mgmt for X6 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel Ultrabay Slim options in right side:
  - ThinkPad Advanced Ultrabay Slim Drive (flat bezel) 40Y6789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6621
  - DVD-ROM Ultrabay Slim Drive (curved bezel) 73P3270
  - ThinkPad DVD Ultrabay Slim Drive (flat bezel) 40N5643
- Serial Hard Drive Ultrabay Slim Drive (flat bezel) 40Y8725
- SATA disks supported (some): 100GB Disk 7200 rpm 41N3013
- 160GB Disk 7200 rpm 41N3013
- 250GB Disk 5400 rpm 43R8152
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, optional security screw
  - Serial and parallel ports
  - Analog DB-15 monitor port (no DVI)
  - Four USB 2.0 ports
  - Gigabit ethernet (RJ-45)
  - Modern port (RJ-11)
  - Microphone in and headphone out
  - Requires 65- or 90-watt AC adapter
  - 1.48 lbs. (670g)
- 65-watt AC Adapter

See footnotes for important warranty information

Lenovo (DL-1-7) April 2008

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US models announced January 30 or February 22, 2007

US models withdrawn effective July 2007 or April 2008

* Intel Centrino® processor technology

Some small and medium business (SMB) models are part of the US TopSeller Program

These models have a 3-year limited warranty
ThinkPad® X61 Tablet (7762) - withdrawn
Low Voltage
procType-model esssor GHz Memory

7762-54U
7762-95U
7762-D6U
7762-B6U
7762-58U
7762-44U
7762-H7U
7762-98U
7762-BEU
7762-99U
7762-63U
7762-9CU

L7500
L7500
L7500
L7500
L7500
L7500
L7700
L7500
L7500
L7500
L7500
L7500

1.60
1.60
1.60
1.60
1.60
1.60
1.80
1.60
1.60
1.60
1.60
1.60

1GB
1GB
2GB
1GB
2GB
2GB
2GB
2GB
2GB
2GB
1GB
2GB

Display

12.1" XGA
12.1" SXGA+ SV
12.1" XGA Touch
12.1" XGA Touch
12.1" XGA
12.1" XGA
12.1" XGA
12.1" SXGA+ SV
12.1" XGA Touch
12.1" SXGA+ SV
12.1" XGA
12.1" SXGA+ SV

Disk
Optical
SATA
in
X6 Tablet
GB8 rpm UltraBase UltraBase

80GB
80GB
160G
120G
120G
120G
100G
160G
160G
120G
80GB
120G

Personal Systems Reference (PSREF)

Mini PCIe
802.11
wireless

Mini PCIe Finger BatWorkhorse (W)
WWAN print tery
Global (G) Avail
or Turbo reader cells Preload
date
TAA

5400
✽ Intel 4965AG32
5400
✽ Intel 4965AG
5400 DVD±RW UltraBase ✽ Intel 11n28
5400
✽ Intel 4965AG
5400
✽ Intel 4965AG
5400 Combo UltraBase
7200
✶ Intel 11a/b/g32
5400
✽ Intel 4965AG 1G Turbo
7200
✽ Intel 4965AG
5400
✶ Intel 11a/b/g
5400
✽ Intel 4965AG
5400
✶ Intel 11a/b/g

US Govt (TAA)5
Processor

44U/99U/9CU: US Government model (Trade Act Agreement-compliant)
Intel® Core™ 2 Duo processor L7500 and L7700 with low voltage, dual-core,
Intel 64 Technology, 800MHz system bus, and 4MB shared L2 cache
Memory
1GB or 2GB std / 4GB max7 / PC2-5300 667MHz DDR2, non-parity,
dual-channel capable, two 200-pin SO-DIMM sockets;
Italics: standard memory in both sockets; no sockets available;
Non-italics: standard memory in one socket; one socket available
Ultrabay™ Slim
Supports Ultrabay Slim devices in optional or standard ThinkPad X6 Tablet UltraBase
EIDE Combo
Some: DVD-ROM/CD-RW / 24X/24X/24X/8X21 speed / removable from X6 UltraBase
EIDE DVD±RW
Some: DVD burner, Super Multi-Burner (40Y8623), dual-layer, removable from X6
Serial ATA disk
80GB8 (5400 rpm), 100GB (7200 rpm), 120GB, or 160GB (5400 or 7200 rpm) /
SATA1.5Gb/s, 9.5mm high, removable, upgradable, supports 2nd disk in std or optional
X6 Tablet UltraBase, ThinkPad Shock Mounted Hard Drive, Active Protection System™
Some: 12.1" (307mm) XGA (1024x768) TFT color, 185 nits, 4:3, 500:1, 170° viewing
Display
Some: 12.1" (307mm) SXGA+ (1400x1050) color, 190 nits, 4:3, 500:1, 170° viewing,
direct bonding panel (SuperView) for improved outdoor viewability
Touch: 12.1" (307mm) XGA (1024x768) TFT color, 4:3, 150 nits, 170° viewing /
MultiView (indoor/outdoor), MultiTouch (touchscreen via finger and pen)
All:
Super Wide Angle FFS / anti-reflective and anti-glare protective coatings /
write on screen with standard digitizer pen / pen holder in front base /
rotate and swivel hinge in middle bottom of display for tablet mode (portrait or
landscape) or picture frame mode (keyboard faces away from user) / buttons on
display bottom (power, lock, reboot, rotation, utility, Esc, NavDial/enter)
Graphics controller Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965
Graphics - external External VGA monitor support via analog DB-15 connector / no DVI-out support
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, 18.5mm pitch
Keyboard
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar13, magnifying glass
TrackPoint®
3
Dimensions
without X6 UltraBase: 4-cell: 10.8" x 9.6" x 1.1-1.3"; 274mm x 244mm x 27.4-33.1mm
without X6 UltraBase: 8-cell: 10.8" x 10.5" x 1.1-1.3"; 274mm x 267mm x 27.4-33.1mm
2
Weight
4-cell: starting at 3.77 lb (1.71kg); 8-cell: starting at 4.25 lb (1.93kg)
Case material
Color: black; All: magnesium alloy
Battery - type
Li-Ion 8-cell;
supports optional Extended Life Battery on base (for two batteries);
supports optional Ultrabay Slim battery in optional X6 Tablet UltraBase (for 2 batteries)
10
Battery - life
with 4-cell: up to 3.0 hr; with 8-cell: up to 7.0 hr; 8-cell and Ultrabay Slim: up to 9.0 hr
with 8-cell and optional Extended Life Battery: up to 9.5 hr
Chipset
Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE,
PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) /
PCI bus (Ricoh® R5C847 Cardbus/1394/Multicard) /
LPC bus (PC87385 Super I/O, Atmel® 97SC3203 TPM)
Media slice
Some: ThinkPad X6 Tablet UltraBase (see right side)
Secure Digital slot One Secure Digital Card slot, supports SD memory cards used in consumer devices
PC Card
One slot (Type I, Type II), CardBus Plus (34mm ExpressCard via adapter), door
Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet),
IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Mini PCI Express Two Mini PCI Express slots
Intel 11a/b/g32 Some: 11a/b/g wireless4, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
Intel 4965AG32 Some: 11a/b/g wireless4, Mini PCIe adapter, Intel Wireless WiFi Link 4965AG
Intel 11n28
Some: 11a/b/g/n wireless4, Mini PCIe adapter, Intel Wireless WiFi Link 4965AGN,
MIMO 2x3 (Kedron)
WWAN upg
None
1G Turbo
Some: Intel Turbo Memory, Mini PCIe adapter, 1GB flash, disk-cache accelerator
Modem
56K V.926 modem in Communications Daughter Card
Bluetooth™
All except 44U/99U/9CU: Bluetooth 2.0 wireless, USB 2.0 via ICH8M, LED indicator
Ethernet
Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE
Intel AMT
Intel Active Management Technology (iAMT)
Audio support
High Definition (HD) Audio, AD1984 codec / mono speaker, 0.5 watt / volume up, down,
mute buttons / internal microphone, mic input jack (pink), headphone jack (green)
Security
Power-on password, hard disk password, supervisor password, security keyhole
Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant
Fingerprint reader Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip
Limited warranty12 3-years/1-yr battery - EasyServ™,19 depot repair service / service upgrades22 available
See footnotes for important warranty information
✶ Intel Centrino® processor technology
US models announced
✽ Intel Centrino with vPro™ technology

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Business32
Business32
Ultimate 32
Business32
Ultimate 32
XP Tablet
Business32
Business32
Business32
XP Tablet
Business 32
Business 32

W G Jun 07
W G Jun 07
Jun 07
W G Jun 07
W G Jun 07
TAA Jun 07
W
Oct 07
W
Oct 07
W
Oct 07
TAA Nov 07
Feb 08
TAA Jun 08

Preloaded operating system20
- Some: Microsoft® Windows® Vista®
Business Edition (32-bit)
- Some: Microsoft Windows Vista
Ultimate Edition (32-bit)
- Some: Microsoft Windows XP
Tablet PC Edition 2005
✧ 2GB Vista D6U/H7U/98U/BEU/9CU:
Vista Premium logo
✧ Other Vista models:
Vista Basic logo
Preloaded applications14 (all OSes;
only some listed)
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center
• Norton Internet Security™
• PC-Doctor™ (diagnostics)
• Fingerprint Software
• Corel VirtualDrive CD/DVD
Emulator

Supports ThinkVantage® technologies
ThinkPad X6 Tablet UltraBase
• Provides desktop expansion and
cable mgmt for X60/X61 Tablet
• Connects to the bottom of tablet
• Converts tablet to a two-spindle
system with optional flat bezel
Ultrabay Slim options in right side:
− ThinkPad Advanced Ultrabay
Battery II 3-cell (flat)
43R9250
− ThinkPad DVD Ultrabay Slim
Burner (flat bezel)
41N5643
− Serial Hard Drive Ultrabay Slim
Adapter (flat bezel)
40Y8725
SATA disks supported (some):
• 250GB FDE 7200 rpm 43N3410
• 250GB Disk 5400 rpm 43R8152
• 320GB Disk 7200 rpm 43N3411
Other features:
• Power button (front)
• Stereo speakers (1 watt)
• Security key lock, security
keyhole, and optional security screw
• Serial and parallel ports
• Analog VGA monitor port (no DVI)
• Four USB 2.0 ports
• Gigabit ethernet port (RJ-45)
• Modem port (RJ-11)
• Microphone in and headphone out
• Requires 65- or 90-watt AC adapter
• 1.48 lb; 670g
65-watt (GMA graphics) AC Adapter
ENERGY STAR® 4.0-compliant
RoHS-compliant
International Warranty Service17
24 hour x 7 day18 toll-free support
during the warranty period12
via 800-426-7378
© Lenovo
(DL2-2) May 2009


### ThinkPad X6 Tablet (7763) - Onsite - withdrawn

**Personal Systems Reference (PSREF)**

#### Type-model | Low Voltage processor | GHz | Memory | Display | Disk SATA GB rpm | Optical in UltraBase | X6 Tablet UltraBase | Mini PCIe 802.11 wireless | Mini PCIe WWAN or Turbo | Finger print reader cells | Vista preload | Workhouse (W) | Global (G) GMP (P) | Avail date
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
7763-54U | L7500 | 1.60 | 1GB 12.1” XGA+ | 80GB 5400 Optional | Optional | #Intel 4965AG® | None | Fing | 8 | Business 32 W G P Jun 07 | 8 | 32 | 32 | 8
7763-75U | L7500 | 1.60 | 1GB 12.1” XGA+ | 5400 Optional | Optional | #Intel 4965AG® | None | Fing | 8 | Business 32 W G P Jun 07 | 8 | 32 | 32 | 8
7763-B6U | L7500 | 1.60 | 1GB 12.1” XGA Touch | 120G 5400 Optional | Optional | #Intel 4965AG® | None | Fing | 8 | Business 32 W G P Jun 07 | 8 | 32 | 32 | 8
7763-B8U | L7500 | 1.60 | 2GB 12.1” XGA | 80GB 5400 Optional | Optional | #Intel 4965AG® | None | Fing | 8 | Ultimate 32 W G P Jun 07 | 8 | 32 | 32 | 8

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These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty

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#### Positioning
- **Processor**: Convertible tablet: one spindle
  - Intel® Core™ 2 Duo processor L7500 with low voltage, dual-core, Intel 64 Technology, EIST®, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology. 800MHz system bus, and 4MB shared L2 cache
- **Memory**: 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets:
  - **Non-italics**: standard memory in one socket; one socket available

#### Ultrabay™ Slim EIDE DVD+RW Serial ATA disk
- Supports Ultrabay Slim devices in optional or standard ThinkPad X6 Tablet UltraBase
- Option for ThinkPad X6 Tablet UltraBase

#### Display
- **Some**: 12.1” (307mm) XGA (1024x768) TFT color, 185 nits, 4:3, 500:1, 170° viewing
- **Some**: 12.1” (307mm) SXGA+ (1400x1050) color, 190 nits, 4:3, 500:1, 170° viewing, direct bonding panel (SuperView) for improved outdoor visibility
- **Touch**: 12.1” (307mm) XGA (1024x768) TFT color, 4.3, 150 nits, 170° viewing / MultiView (indoor/outdoor), MultiTouch (touchscreen via finger and pen)
- **All**: Super Wide Angle FFS / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or frame picture mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, utility, Esc, NavDial/enter)

#### Graphics controller
- **Intel Graphics Media Accelerator X3100 (GMA X3100)**, integrated in GM965
- **Graphics - external External VGA monitor support via analog DB-15 connector / no DVI-out support**

#### Chipset
- **Mobile Intel GM965 Express Chipset** (Graphics Memory Controller Hub):
  - ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon® RCS847 Cardbus/1394/Multicard) / LPC bus (PC23785 Super I/O, Atmel® 97C390 I²C I²C)
- **Media slot Secure Digital slot PC Card slot**
  - One **Secure Digital Card slot** supports SD memory cards used in consumer devices
  - One Type I or One Type II, CardBus Plus (34mm ExpressCard via adapter), door
  - Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

#### Wireless antenna
- **Mini PCI Express WWAN**: UltraConnect™ II Antenna / on/off switch for all wireless radios
  - Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
  - 11a/b/g wireless®, Mini PCIe adapter, Intel WiFiLink 4965AG®
  - None
- **Modem**: 56K V.92 modem in Communications Daughter Card
  - Bluetooth® 2.0 wireless, USB 2.0 via ICH8M, LED indicator
- **Ethernet**: Gigabit Ethernet, Intel 82566MMi Nineveh (PHY), PCI Express, GLC
- **Audio support**: High Definition (HD) Audio, AD1984 codec / mono speaker 0.5 watt / volume up, down, mute buttons / internal microphone, mic input jack (pink), headphone jack (green)
- **Security chip**: Power-on password, hard disk password, supervisor password, security keyhole
  - Intel Active Management Technology (IAMT)
  - Trusted Platform Module, Atmel chip, TCG 1.2-compliant
- **Fingerprint reader**: Finger print reader on palm rest, swipe sensor, supports the security chip

#### Limited warranty
- **3-years/1-year battery, limited onsite service®**: 8 am - 5 pm, Mon - Fri coverage
  - Excluding holidays, next business day response time / service upgrades® available

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*See footnotes for important warranty information

© Lenovo (DL2-6) May 2009
**ThinkPad® X6 Tablet (7767) - TopSeller (3-year) - withdrawn**

**Personal Systems Reference (PSREF)**

| Type-model | Low Voltage processor | GHz | Memory | Display | Disk S/W | Optical in UltraBase | X6 Tablet UltraBase | Mini PCIe WWAN or Turbo | Finger Bat- | Workhorse (W) |
|------------|-----------------------|-----|--------|---------|----------|----------------------|---------------------|-----------------------| print |-------------|
| 7767-59U | L7500 LV 1.60 | 1GB | 12.1” XGA | 120G 5400 | SATA 6Gb/s | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-5AU | L7500 LV 1.60 | 1GB | 12.1” XGA | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-96U | L7500 LV 1.60 | 2GB | 12.1” SXGA+ SV | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-B7U | L7500 LV 1.60 | 2GB | 12.1” XGA | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-C3U | L7500 LV 1.60 | 1GB | 12.1” XGA | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-C4U | L7500 LV 1.60 | 1GB | 12.1” XGA | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-01U | L7500 LV 1.60 | 1GB | 12.1” XGA | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-02U | L7500 LV 1.60 | 1GB | 12.1” XGA | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |
| 7767-5CU | L7500 LV 1.60 | 2GB | 12.1” XGA | 120G 5400 | DVD-RW UltraBase | *Intel 11a/b/g* | 1GB Turbo | Fingerprint | Business 32 |

**Positioning**

- **Processor**: Convertible tablet; one spindle
- **Memory**: 1GB or 2GB std / 4GB max7 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- **Ultradyn Slim EIDE DVD+RW Serial ATA disk**: Supports Ultrabay Slim devices in optional or standard ThinkPad X6 Tablet UltraBase
- **Display**: Some: 12.1” (307mm) XGA (1024x768) TFT color, 155 nits, 4:3, 170° viewing / MultiTouch (touchscreen via finger and pen)

**Chipset**

- **Mobile Intel GM965 Express Chipset** (Graphics Memory Controller Hub) /ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, EIDE Express X1, PCI bus, USB, LPC bus: Bluetooth®, [fingerprint] / PCI bus: Ricoh® RSC847 Cardbus/1394/Multicard) / LPC bus (PC87835 Super I/O, Atmel® 9753203 TMP)

**Graphics controller** Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

**Graphics - external EVA monitor support** with analog DB-15 connector / no DVI-out support

**Radios**

- **Wireless antenna**
  - Mini PCI Express: UltraConnect™ II Antenna / on-off switch for all wireless radios
  - Mini PCI Express: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
  - Mini PCI Express: 11a/b/g wireless®, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
  - Mini PCI Express: 11a/b/g wireless®, Mini PCI Celer adapter, Intel Wireless WiFi Link 4965AGN, MIMO 2x3 (Kedron)

**Security**

- **Security chip** Trusted Platform Module

**Fingerprint reader**

- **Fingerprint reader on palm rest**-swipe sensor, supports the security chip

**Limited warranty**

- **3-years/1-year battery - EasyServ™/EasyServ™ depot repair service, service upgrades** available

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**Supports ThinkVantage® technologies**

- Provides desktop expansion and cable mgmt for X60/X61 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel Ultrabay Slim options in right side:
  - ThinkPad Advanced Ultrabay Battery (flat) / 4 cell: 310WHr / 310WHr
  - ThinkPad DVD Ultrabay Slim (flat bezel) 4115643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bez MOVX725 SATABased disks supported (some):
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

**Other features**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- 14.8 lb: 670g

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**Presales operating system**


- Cxx: Vista Basic logo
- Other Vista: Vista Premium logo

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**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Norton Internet Security (90 days of virus definitions)
- PC-Doctor™ (diagnostics)
- Keyboard Software
- Microsoft Office 2007 Trial (60-day)
- Core VirtualDrive CD/DVD Emulator

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**See footnotes for important warranty information**

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* © Intel Corporation 2009
* © Intel Corporation with vPro technology
* US models announced May 31, June 12, August 14, or September 4, 2007
* US models withdrawn effective May 2009
### ThinkPad X6 Tablet (Education) - EasyServ - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz Memory</th>
<th>Display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>X6 Tablet UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WAN or Turbo</th>
<th>Vista preload</th>
<th>Edu preload</th>
<th>Limited warranty/Avail date</th>
</tr>
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<tbody>
<tr>
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<td>11a/b/g None</td>
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<td>Business 32 HE EasyServ W 65W 60 Day</td>
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<td>Business 32 K2 EasyServ W 7 July 07</td>
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</tbody>
</table>

- These models have an EasyServ™ depot repair service 3-year limited warranty.

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Preloaded operating system
- Vista Basic logo

### Preloaded applications
- Only some listed
  - 01U202: Microsoft Office OneNote® 2007 (and CD)
  - Some (K12): K-12 education software
  - Adobe Acrobat Reader
  - Adobe Flash Player
  - Adobe Reader
  - Adobe Reader (Professional and CD)
  - Business 32 65-Watt AC Adapter
  - Business 32 65-Watt AC Adapter (for DVD drives)
  - Business 32 65-Watt AC Adapter (for X6 UltraBase)

### Supports ThinkVantage® technologies
- EasyServ W 65W 60 Day
- Business 32 HE EasyServ W 65W 60 Day
- Business 32 K2 EasyServ W 65W 60 Day
- Business 32 K2 EasyServ W 65W 60 Day

### Ultrabay™ Slim EIDE DVD±RW Serial ATA disk
- Supports Ultrabay Slim devices in optional or standard ThinkPad X6 Tablet UltraBase
- Option for ThinkPad X6 Tablet UltraBase
- 120GB (5400 rpm) or 100GB (7200 rpm) / SATA 1.5Gbps, 9.5mm high, removable, upgradable, supports 2nd disk in std or optional ThinkPad X6 Tablet UltraBase, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Display
- Some: 12.1” (307mm) XGA (1024x768) TFT color, 185 nits, 4:3, 500:1, 170° viewing
- Touch: 12.1” (307mm) XGA (1024x768) TFT color, 4:3, 150 nits, 170° viewing / MultiTouch (touchscreen + fingerprint and pen)

### Graphics controller
- Intel Graphics Media Accelerator X3100 (GMA X3100)

### Keyboard
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

### Dimensions
- without X6 UltraBase: 4-cell: 10.8” x 9.6” x 1.1-1.3”; 274mm x 244mm x 27.4-33.1mm
- with X6 UltraBase: 8-cell: 10.8” x 10.5” x 1.1-1.3”; 274mm x 267mm x 27.4-33.1mm
- 4-cell: starting at 3.77 lb (1.71kg); 8-cell: starting at 4.25 lb (1.93kg)

### Chipset
- Mobile Intel GM965 Express Chipset (Graphics Media Controller Hub); ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])

### Media slice
- Secure Digital slot

### Ports
- Three USB 2.0, DB-15 (external VGA monitor), RJ-45 (modem), RJ-45 (ethernet)
- IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

### Wireless antenna
- Two Mini PCI Express slots; only 802.11 wireless is customer upgradable

### Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Secure key lock, security keyhole, and optional security screw

### Limited warranty
- 3-years/1-year battery - EasyServ™ depot repair service / service upgrades available
- 65-watt (GMA graphics) AC Adapter ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service™ 24x7 x 7-day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

© Lenovo

US models announced May 31 or July 16, 2007

US models withdrawn effective May 2009

(DECL 2-4) May 2009
**ThinkPad X6 Tablet (Education) - Onsite - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz Memory</th>
<th>Display</th>
<th>Disk (SATA GB rpm)</th>
<th>Optical in UltraBase</th>
<th>X6 Tablet UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Vista preload</th>
<th>Educ preloads</th>
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- These models have a limited onsite service warranty:

  - 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning and Processor

- **ThinkPad® Core™ 2 Duo processor L7500** with low voltage, dual-core.
- Intel® 64 Technology, Enhanced Intel SpeedStep® technology.
- Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.
- Intel® 802.11a/b/g wireless.
- ThinkPad 11a/b/g Mini PCIe Adapter, Atheros AR5006EX
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- II Antenna / on-off switch for all wireless radios
- CPU: Low Voltage proc-

#### Graphics controller

- **Intel® Graphics Media Accelerator X3100 (GM X3100)**, integrated in GM965 Express Chipset
- Mobile Intel® GM965 Express Chipset
- Device: TrackPoint® point device, 4-Press-to-Select, Internet Scroll Bar®.
- Magnifying glass lens

#### Display

- **Some:** 12.1" (307mm) XGA (1024x768) TFT color, 185 nits, 4-3, 500:1, 170° viewing angle
- **Touch:** 12.1" (307mm) XGA (1024x768) TFT color, 4-3, 150 nits, 170° viewing angle
- **MultiView:** (indoor/outdoor)
- **MultiTouch:** (touchscreen via finger and pen)
- All Super Wide Angle FFS / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, rotation, utility, Esc, NavDial/enter)

#### Chipset

- Mobile Intel® GM965 Express Chipset
- (PC87385 Super I/O, Atmel chip, TCG 1.2-compliant
- Power-on password, hard disk password, supervisor password, security keyhole
- Intel Active Management Technology (iAMT)
- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

#### Wireless antenna

- UltraConnect™ II Antenna / on/off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- 11a/b/g wireless*, ThinkPad 11a/b/g Mini PCIe Adapter, Atheros AR5006EX
- None

#### Modem

- 56K V.92 modem in Communications Daughter Card
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator
- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE
- Intel Active Management Technology (iAMT)
- High Definition (HD) Audio, AD1982 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal microphone, mic input jack (pink), headphone jack (green)
- Power-on password, hard disk password, optional security keyhole
- Security keyhole
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

#### Other features:

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- Modem port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb, 670g

#### 65-watt (GMA graphics) AC Adapter ENERGY STAR® 4.0-compliant

- RoHS-compliant
- International Warranty Service
- 24 hour 7x7 toll-free support during the warranty period via 800-426-7378

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*See footnotes for important warranty information

US models announced May 31, or July 16, 2007

US models withdrawn effective May 2009
Partial list of accessories supported on:

- ThinkPad X60 Tablet originally announced on Nov 14, 2006
- ThinkPad X61 Tablet originally announced on May 31, 2007

**Memory**
- 512MB PC2-5300 DDR2 SODIMM 40Y7733 ann 01/05/06
- 1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999 ann 03/25/08
- 1GB PC2-5300 DDR2 SODIMM 40Y7734 ann 01/05/06
- 2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000 ann 03/25/08
- 2GB PC2-5300 DDR2 SODIMM 40Y7775 ann 11/28/06

**Ultraportable Slim 9.5mm**
None (Ultraportable Slim on optional ThinkPad X6 Tablet Ultrade Base)

**Ultraportable Enhanced 12.7mm**
None

**Storage and removable storage**
- 160GB Disk SATA 1.5GB/s (5400 rpm) 41N5692 ann 03/20/07
- 160GB Disk SATA 1.5GB/s (7200 rpm) 41N5737 ann 10/16/07
- 250GB Disk SATA 1.5GB/s (5400 rpm) 43R8152 ann 01/15/08
- 250GB Disk SATA 1.5GB/s (7200 rpm) 43N3410 ann 01/20/09
- 320GB Disk SATA 1.5GB/s (5400 rpm) 43N3403 ann 08/08/08
- 320GB Disk SATA 1.5GB/s (7200 rpm) 43N3411 ann 01/20/09

* Can be used as the main disk or with ThinkPad Personal ATAPI Hard Drive Ultrabay Slim Adapter.40Y8725 in the optional ThinkPad X6 Tablet Ultrabay 41U1320.

- 128GB SSD SATA 3.0Gb/s 1.8” (2.5” cover) 43N3406 ann 08/26/08

**USB 2.0**
- Essential Memory Key 4GB 45J7904 ann 06/24/08
- Essential Memory Key 8GB 45J7905 ann 07/15/08
- Security Memory Key 4GB 45K1258 ann 10/28/08
- Security Memory Key 2GB 41U5119 ann 07/17/07
- Security Memory Key 4GB 41U5120 ann 07/17/07
- Ultra Secure Memory Key 2GB 45J5916 ann 08/26/08
- Ultra Secure Memory Key 4GB 45J5917 ann 08/26/08
- Ultra Secure Memory Key 8GB 45J5918 ann 08/26/08

**USB 2.0 Diskette Drive**
- Portable Diskette Drive 05K9276 ann 06/05/08
- 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 ann 01/05/06

**USB 2.0 Hard Disk Drive**
- Portable 160GB Hard Disk 43R1784 ann 09/23/08
- Portable 320GB Hard Disk 45K1689 ann 03/17/09
- Portable Secure 160GB Hard Disk 43R2018 ann 11/18/08
- Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
- Super Multi-Burner Drive 41N5565 ann 01/23/07

**ThinkPad Expansion**
- Enhanced Port Replicator 43R8770 ann 02/26/08
- Adjustable Notebook Stand 40Y7676 ann 09/20/05
- ThinkPad X6 Tablet Ultrade Base 41U1320 ann 11/14/06

**Keyboard**
- TrackPoint Cap Collection 73P2698 ann 12/16/03
- Numeric Keypad 33L3225 ann 05/01/00
- Preferred Pro USB Keyboard 73P5220 ann 06/21/05
- Enhanced Performance USB Keyboard 73P2620 ann 03/22/04
- Wireless Kybd & Opt Wheel Mouse (via USB) 73P4067 ann 12/07/04
- USB Keyboard with UltraNav 31P8950 ann 01/28/03
- USB Travel Keyboard with UltraNav 31P9490 ann 04/27/04
- Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
- Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

**Mouse**
- Optical Wheel Mouse (USB) 06P4069 ann 05/21/03
- Optical ScrollPoint® Mouse (USB, PS/2) 31P7045 ann 08/27/02
- Optical Wheel Travel Mouse (USB, PS/2) 31P7410 ann 06/04/04
- Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 ann 01/23/07
- Laser Tilt Wheel Mouse (red, via USB) 51J0198 ann 11/25/08
- Laser Tilt Wheel Travel Mouse (Bluetooth) 41U5008 ann 01/22/08
- Wireless Kybd & Opt Wheel Mouse (via USB) 73P4067 ann 12/07/04

**Security**
- Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- USB Gem WS Plus Card Reader 41N3040 ann 02/21/08
- PC Card Gemplus Smart Card Reader 41N3004 ann 12/13/05

**Multimedia**
- USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06
- USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06

**Batteries**
- X60 Tablet Li-Ion 4-cell 40Y8314 ann 11/14/06
- X60 Tablet Li-Ion 8-cell 40Y8318 ann 11/14/06
- X60 Extended Life Battery 40Y7005 ann 01/05/06

**Carrying Cases**
- ThinkPad X6 Tablet Sleeve 41U3142 ann 11/14/06
- ThinkPad Executive Case 43R9118 ann 06/24/08
- ThinkPad Women’s Microbrief Tote 22P8855
- ThinkPad Convertible Carrying Case 22PB8860
- ThinkPad Women’s Executive Leather Tote 22PB8857
- ThinkPad Executive Leather Case 43R4280 ann 05/12/08

**Monitors**
- ThinkVision L174 17” Monitor 9227AE1 ann 04/15/08
- ThinkVision L1700p 17” Monitor 9417HE2 ann 09/17/08
- ThinkVision L1900p 19” Monitor 4431HE1 ann 11/11/08
- ThinkVision L1940p Wide 19” Monitor 442H86E ann 09/17/08
- ThinkVision L2000p Wide 20.1” Monitor 443H86E ann 04/15/08
- Kensington Twin Head Cable Lock 73P2582 ann 12/29/03
- ThinkPad Convertible Monitor Stand 40Y7620 ann 01/05/06
- Radial Arm 19K4644 ann 05/05/00

**Monitor Accessories**
- ThinkVision USB Soundbar 40Y7616 ann 08/23/05
- ThinkVision Soundbar 48K1263 ann 09/16/08
- ThinkVision L2000p Wide 20.1” Monitor 443H86E ann 04/15/08
- Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03
- ThinkPad Convertible Monitor Stand 40Y7620 ann 01/05/06

**Medialess License Key (MLK)**
- Microsoft Office 2007 Basic, English 43R1528 ann 01/31/07
- Microsoft Office 2007 Small Business, English 43R1534 ann 01/31/07
- Microsoft Office Professional, English 43R1531 ann 01/31/07

More information at www.lenovo.com/support/monitoraccessories

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide
**ThinkPad X100e (3508) - TopSeller (XP Home) - withdrawn**

<table>
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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>SATA GB</th>
<th>SATA optical</th>
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<th>PCIe Mini Card WWAN</th>
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<td>None</td>
<td>None</td>
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</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program

### Preloaded operating system
- Genuine Windows® XP Home Edition

### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)

Supports ThinkVantage® technologies

- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**ThinkPlus™**: 1-year LOR® 9x5 NBD
- 1-year LOR® 9x5 NBD: 45K968
- 2-year LOR® 9x5 NBD: 46K968
- 3-year LOR® 9x5 NBD: 45K970
- 4-year LOR® 9x5 NBD: 45K973

**ThinkPlus™**, 2-year P&L P/U Depot
- 2-year P&L P/U Depot: 45K971
- 3-year P&L P/U Depot: 45K972
- 4-year P&L P/U Depot: 45K974

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced January 12, 2010

US model withdrawn effective October 2010

© Lenovo

(MNK1-4) October 2010
ThinkPad® X100e (3508) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

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<th>Type-model</th>
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<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
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<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA GB</th>
<th>rpm</th>
<th>Mini Card 802.11</th>
<th>Mini Card WWAN</th>
<th>Carrier</th>
<th>Top color</th>
<th>Blue-tooth</th>
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<td>WWAN upg</td>
<td>black</td>
<td>Home P</td>
<td>32</td>
<td>Jul 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3508-9DU L335</td>
<td>1.60</td>
<td>2GB</td>
<td>11.6” HD LED</td>
<td>0.3M HD 3200</td>
<td>250GB 5400</td>
<td>11b/g/n</td>
<td>WWAN upg</td>
<td>black</td>
<td>Home P</td>
<td>32</td>
<td>Jul 10</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3508-9DU L335</td>
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<td>11b/g/n</td>
<td>WWAN upg</td>
<td>black</td>
<td>Home P</td>
<td>32</td>
<td>Jul 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor
Entry ultraportable for excellent usability and reliability; one spindle
AMD Athlon™ Neo Processor for Ultrathin Notebooks MV-40 with single-core, virtualization technology, integrated DDR2 memory controller, and 512KB L2 cache or AMD Athlon Neo X2 Processor for Ultrathin Notebooks L335 with dual-core, virtualization technology, integrated DDR2 memory controller, and 512KB L2 cache

Memory 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; "Non-italics: standard memory in one socket; one socket available

SATA DVD/CD RW
- None (use optional USB-based optical drive)
- SATA 3.0Gb/s, 9.5mm high, Active Protection System™, upgradable

SATA disk Widescreen display
- 11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive

Integrated graphics ATI™ Radeon™ HD 3200 graphics, in M780G, external analog monitor support via VGA DB-15 connector; Maximum external resolution: 2048x1536@60Hz

Keyboard Full-size, 6-row, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, Internet Scroll Bar®, magnifying glass

Touch pad Two-button touch pad, supports multi-touch function

ThinkPad® ThinkLight™

Dimensions³
- 6-cell: 11.1” x 8.2” x 0.6-1.2”; 282mm x 209mm x 16-30mm

Weight³
- 6-cell: from 3.3 lb (1.5kg)

Case Color: black or red;
Material: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - type Lithium 6-cell
- 6-cell: up to 5 hr

Battery - life³

Chipset AMD M780G Chipset, SB710 south bridge

Multicard reader
- 4-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital Card)
- None

ExpressCard/54
- Three USB 2.0 (one powered), external monitor (VGA DB-15), ethernet (RJ-45)

Ports PCIe Mini Card 11b/g/n
- Two PCI Express Mini Card slots
- 11b/g/n wireless², ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x2

11a/b/g/n
- 11a/b/g/n wireless, ThinkPad 11a/b/g/n, PCIe Half Mini Card, Broadcom® chipset, 2x2

WWAN upg
- Wireless WAN upgradable

Gobi™ 2000
- Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS

Carrier
- Some: AT&T®, contract required with service provider
- Some: User selectable at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider

Modem None

Bluetooth®
Some: Bluetooth 2.1 wireless

Ethernet Realtek RT8111DL Gigabit Network Connection, PHY, PCIe x1

Audio support
- High Definition (HD) Audio, Conexant CX20582-11Z codec / SoundMAX AC'97 audio, 1.5 watt x 2 / combo audio/mic jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Security chip None

Fingerprint reader None

Limited warranty² 1-year - depot repair service / service upgrades² available

See footnotes for important warranty information

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US models announced January 5, March 30, April 6, July 6, July 27, or September 21, 2010
US models withdrawn effective June 2011

Preloaded operating system²²
- Some: Genuine Windows® 7
- Some: Genuine Windows® 7 Professional

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

Supports ThinkVantage® technologies

65-watt AC Adapter
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁷ toll-free support during the warranty period¹² via 800-426-7378

ThinkPlus™²⁰ 1-year LOR9 9x5 NBD
ThinkPlus™²⁰ 2-year LOR9 9x5 NBD
ThinkPlus™²⁰ 3-year LOR9 9x5 NBD
ThinkPlus™²⁰ 4-year LOR9 9x5 NBD
ThinkPlus™²⁰ 2-year P&L P/U Depot
ThinkPlus™²⁰ 3-year P&L P/U Depot
ThinkPlus™²⁰ 4-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
# ThinkPad X100e (2876) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>PClé Mini Card</th>
<th>PClé Mini Card WWAN</th>
<th>Carrier</th>
<th>Top color</th>
<th>Battery</th>
<th>Blue-tooth Preload</th>
<th>Workhorse (W) Global (G) Availability</th>
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</thead>
<tbody>
<tr>
<td>2876-2JU</td>
<td>MV-40</td>
<td>1.60</td>
<td>2GB</td>
<td>11.6” HD</td>
<td>0.3M HD 3200</td>
<td></td>
<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
<td>None</td>
<td>black</td>
<td>6</td>
<td>Pro 32</td>
<td>G</td>
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<tr>
<td>2876-6RU</td>
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<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
<td>None</td>
<td>black</td>
<td>6</td>
<td>Pro 32</td>
<td>G</td>
<td>Mar 10</td>
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<tr>
<td>2876-73U</td>
<td>MV-40</td>
<td>1.60</td>
<td>2GB</td>
<td>11.6” HD</td>
<td>0.3M HD 3200</td>
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<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
<td>None</td>
<td>black</td>
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<td>Pro 32</td>
<td>G</td>
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<td>MV-40</td>
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<td>2GB</td>
<td>11.6” HD</td>
<td>0.3M HD 3200</td>
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<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
<td>None</td>
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<td>6</td>
<td>Pro 32</td>
<td>G</td>
<td>Mar 10</td>
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<td>2876-95U</td>
<td>MV-40</td>
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<td>2GB</td>
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<td>0.3M HD 3200</td>
<td></td>
<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
<td>None</td>
<td>black</td>
<td>6</td>
<td>Pro 32</td>
<td>G</td>
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<td>1.60</td>
<td>2GB</td>
<td>11.6” HD</td>
<td>0.3M HD 3200</td>
<td></td>
<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
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<td>black</td>
<td>6</td>
<td>Pro 32</td>
<td>G</td>
<td>May 10</td>
</tr>
<tr>
<td>2876-AHU</td>
<td>L335</td>
<td>1.60</td>
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<td>11.6” HD</td>
<td>0.3M HD 3200</td>
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<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
<td>None</td>
<td>black</td>
<td>6</td>
<td>Pro 32</td>
<td>G</td>
<td>Mar 10</td>
</tr>
<tr>
<td>2876-AJU</td>
<td>L625</td>
<td>1.60</td>
<td>2GB</td>
<td>11.6” HD</td>
<td>0.3M HD 3200</td>
<td></td>
<td></td>
<td>160GB 5400 11b/g/n</td>
<td>WWAN upg</td>
<td>None</td>
<td>black</td>
<td>6</td>
<td>Pro 32</td>
<td>G</td>
<td>Jul 10</td>
</tr>
</tbody>
</table>

- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

## Preloaded operating system
- Genuine Windows 7
- Professional 32

## Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

## Chipset
- AMD 7870G Chipset, SB710 south bridge

## Multicard reader
- ExpressCard/54
- 4-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital)

## Ports
- Three USB 2.0 (one powered), external monitor (VGA DB-15), ethernet (RJ-45)

## PClé Mini Card
- Two PCI Express Mini Card slots
- Some: 11b/g/n wireless, ThinkPad 11b/g/n, PClé Half Mini Card, Realtek® chipset, 1x2
- Some: 11a/b/g wireless, ThinkPad 11a/b/g/n, PClé Half Mini Card, Broadcom® chipset, 2x2

## WiMAX
- Some: 12a/g/n and WiMAX wireless, PClé Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX
- Gobi™ 2000

## WWAN upg
- Some: Wireless WAN upgradable
- Some: Wireless WAN, Qualcomm chipset, PClé Mini Card, EV-DO Rev. A, GPS, contract required with service provider

## Carrier
- None

## Modem
- None

## Bluetooth™
- Some: Bluetooth wireless

## Ethernet
- Realtek RT8111DL Gigabit Network Connection, PHY, PClé x1

## Audio support
- High Definition (HD) Audio, Conexant CX20882-11Z codec, stereo speakers, 1.5 watt x 2 / combo audio/mic jack

## Security
- Power-on password, hard disk password, supervisor password, security keyhole

## Security chip
- None

## Finger print reader
- None

## Limited warranty
- 1-year - depot repair service / service upgrades available

See footnotes for important warranty information

US models announced January 5, March 2, March 30, May 4, or July 27, 2010
US models withdrawn effective April 2011 or June 2011

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(© Lenovo)(MNK1-1) June 2011
**ThinkPad X100e (3508) - Education (Windows 7) - withdrawn**

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Entry ultraportable for excellent usability and reliability; one spindle AMD Athlon Neo Processor for Ultrathin Notebooks MV-40 with single-core, virtualization technology, integrated DDR2 memory controller, and 512KB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD RW</td>
<td>None (use optional USB-based optical drive)</td>
</tr>
<tr>
<td>SATA disk</td>
<td>250GB® (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™, upgradable</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>11.6&quot; (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio, Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive</td>
</tr>
<tr>
<td>Camera</td>
<td>ATI™ Radeon HD 3200 graphics, in M780G, external analog monitor support via VGA DB-15 connector; Maximum external resolution: 2048x1536@60Hz</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Full-size, 6-row, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>TrackPoint</td>
<td>TrackPoint pointing device, Internet Scroll Bar®, magnifying glass</td>
</tr>
<tr>
<td>Touch pad</td>
<td>Two-button touch pad, supports multi-touch function</td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>None</td>
</tr>
<tr>
<td>Dimensions3</td>
<td>6-cell: 11.1&quot; x 8.2&quot; x 0.6-1.2&quot;; 282mm x 209mm x 16-30mm</td>
</tr>
<tr>
<td>Weight6</td>
<td>6-cell: from 3.3 lb (1.5kg)</td>
</tr>
<tr>
<td>Case</td>
<td>Color: black; Material: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell</td>
</tr>
<tr>
<td>Battery - life15</td>
<td>6-cell: up to 5 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>AMD M780G Chipset, SB710 south bridge</td>
</tr>
<tr>
<td>Multicard reader</td>
<td>4-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital)</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>None</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0 (one powered), external monitor (VGA DB-15), ethernet (RJ-45)</td>
</tr>
<tr>
<td>PCIe Mini Card</td>
<td>Two PCI Express Mini Card slots 11b/g/n wireless®, ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x2</td>
</tr>
<tr>
<td>WWAN upg</td>
<td>None</td>
</tr>
<tr>
<td>Gobi™ 2000</td>
<td>None</td>
</tr>
<tr>
<td>Carrier</td>
<td>None</td>
</tr>
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<td>Modem</td>
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<tr>
<td>Bluetooth™</td>
<td>None</td>
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<tr>
<td>Ethernet</td>
<td>Realtek RT8111DL Gigabit Network Connection, PHY, PCIe x1</td>
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<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant CX20682-11Z codec / stereo speakers, 1.5 watt x 2 / combo audio/mic jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>None</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>None</td>
</tr>
</tbody>
</table>

**Preloaded operating system**
- Genuine Windows® 7 Professional 32

**Preloaded applications** (only some listed)
- Education software
- VitalSource Library College Edition
- Adobe® Instructor Resource Cntr
- Adobe Digital School Collection
  - Photoshop Elements (and CD)
  - Premiere Elements (and DVD)
  - Acrobat 8 Professional
  - Contribute 4
- Rescue and Recovery™
- Access Connections
- Password Manager
- Microsoft Office 2010 preloaded; purchase product key to activate

**Supports**
- ThinkVantage® technologies
- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ERHS-compliant
- International Warranty Service™
- 24 hour x 7 day toll-free support during the warranty period
  - 800-426-7378

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**
- Lenovo® 1-year LOR 9x5 NBD 45K968
- ThinkPlus™ 2-year LOR 9x5 NBD 45K969
- ThinkPlus 3-year LOR 9x5 NBD 45K970
- ThinkPlus 4-year LOR 9x5 NBD 45K973
- ThinkPlus 2-year P&L P/U Depot 45K971
- ThinkPlus 3-year P&L P/U Depot 45K972
- ThinkPlus 4-year P&L P/U Depot 45K974

See footnotes for important warranty information

US model announced January 5, 2010
US model withdrawn effective June 2011

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Memory
- 1GB PC2-5300 DDR2 SODIMM: 40Y7734, 01/05/06
- 1GB PC2-5300 DDR2 SODIMM (25-Pack): 51J0502, 03/17/09
- 2GB PC2-5300 DDR2 SODIMM: 40Y7735, 11/28/06
- 2GB PC2-5300 DDR2 SODIMM (25-Pack): 51J0548, 03/17/09

Storage and removable storage
- USB 2.0 Portable 500GB Hard Disk: 45K1689, 03/17/09
- USB 2.0 Portable 500GB Secure Hard Disk: 43R2019, 11/18/08
- eSATA/USB 2.0 Secure 500GB Hard Drive: 57Y4400, 01/07/10
- USB 2.0 Portable DVD Burner: 43N3264, 01/02/10

Wireless WAN (Mini PCI Express)
- ThinkPad AT&T: www.lenovo.com/alldaycomputing

ThinkPad Expansion
- Lenovo® Essential Notebook Stand: 45J9292, 05/12/09
- USB Port Replicator with Digital Video: 45K1610

Keyboard
- TrackPoint Cap Collection: 73P2698, 12/16/03
- USB Numeric Keypad: 33L3225, 05/01/00
- Preferred Pro USB Keyboard: 73P9220, 08/21/05
- Enhanced Performance USB Keyboard: 73P2620, 03/23/04
- Ultraslim Wireless Keyboard and Mouse: 57Y4700, 09/19/09
- Wireless via 2.4GHz technology using a micro-size USB receiver.
- ThinkPad USB Keyboard with TrackPoint: 55Y9003, 08/18/09
- Preferred Pro USB Fingerprint Keyboard: 73P4730, 02/22/05
- Lenovo Smartcard Keyboard: 51J0155, 03/24/09

Mouse
- Lenovo Optical Mouse (USB): 06P4069, 05/21/03
- Lenovo Laser Mouse (USB): 41U3074, 01/23/07
- ThinkPad USB Laser Mouse: 57Y4635, 12/15/09
- Lenovo ScrollPoint® Mouse (USB, Optical): 31P7405, 08/27/09
- ThinkPad Travel Mouse (USB, Optical): 31P7410, 06/04/02
- ThinkPad Bluetooth Laser Mouse: 41U5008, 01/22/08
- Lenovo Wireless Laser Mouse - Black: 45K1696, 11/25/08
- Lenovo Wireless Laser Mouse - Red/Black: 51J0196, 11/25/08

Security
- Kensington® MicroSaver® Cable Lock: 73P2582, 12/29/06
- Kensington Twin Head Cable Lock: 45K1620, 09/30/08
- Lenovo Security Cable Lock: 57Y4303, 08/24/10
- Lenovo Gemplus GemPC Smart Card Reader: 41N3040, 02/21/06

Multimedia
- ThinkPad In-Ear Headphones with mic: 57Y4488, 01/07/10

Modem
- USB 2.0 Lenovo Modem: 43R1814, 02/26/08

Batteries
- ThinkPad Battery 17+ (6-cell): 57Y4559, 01/05/10
- ThinkPad External Battery Charger: 40Y7625, 09/20/05

Carrying Cases
- ThinkPad 11W Case Sleeve: 57Y4286, 01/05/10
- ThinkPad 11W Sling Case: 57Y4299, 01/05/10

Monitors
- ThinkVision® L1711p 17" Monitor: 5047HB2, 10/20/09
- ThinkVision L1900p 19" Monitor: 40Y7696, 11/11/08
- ThinkVision L1951p Wide 19" Monitor: 2448HB6, 10/20/09
- ThinkVision L2250p Wide 22" Monitor: 5728H6, 10/20/09
- ThinkVision L2251p Wide 22" Monitor: 2572H6, 10/20/09
- ThinkVision L2251x Wide 22" Monitor: 2587H6, 10/20/09
- ThinkVision L2321x Wide 23" Monitor: 4014HB6, 06/10/10

Monitor Accessories
- ThinkVision USB Soundbar: 40Y7659, 08/23/05
- ThinkVision Soundbar: 40Y7616, 09/20/05
- Kensington MicroSaver Cable Lock: 73P2582, 12/29/09
- Kensington Twin Head Cable Lock: 45K1620, 09/30/08
- Lenovo Security Cable Lock: 57Y4303, 08/24/10
- Lenovo Easy Reach Monitor Stand: 55Y9258, 09/22/09

For more information on accessories:
- www.lenovo.com/accessories
- www.lenovo.com/support/accessories
- www.lenovo.com/accessoriesguide
- www.lenovopowertips.com
- www.lenovocomputeraccessories.com
- www.lenovoinformationcenter.com
- www.lenovoworld.com
- www.lenovoworld.com/support
- www.lenovoworld.com/support/files

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(O-X100-E) June 2011
### ThinkPad® X120e (0596) - TopSeller - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>Carrier</th>
<th>Bluetooth</th>
<th>Batteries</th>
<th>Preload</th>
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<tbody>
<tr>
<td>0596-2UU</td>
<td>E-350</td>
<td>1.60</td>
<td>2GBx1</td>
<td>11.6&quot; HD 0.3M</td>
<td>6310</td>
<td>320G 7200</td>
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<td>TP 11b/g/n</td>
<td>Gobi 2000</td>
<td>Blue</td>
<td>6</td>
<td>Pro 64</td>
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<td>0596-2TU</td>
<td>E-240</td>
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<td>320G 7200</td>
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<td>0596-2SU</td>
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<td>1.50</td>
<td>2+1GB</td>
<td>11.6&quot; HD 0.3M</td>
<td>6310</td>
<td>320G 7200</td>
<td>None</td>
<td>TP 11b/g/n</td>
<td>WWAN upg</td>
<td>Blue</td>
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</table>

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

#### Positioning

**Processor**
- Entry ultraportable for excellent usability and reliability; one spindle
- AMD Accelerated Processor E-350 with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache
- AMD Accelerated Processor E-240 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache

**Memory**
- 4GB max
- PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- System automatically clocks down for processors with 1066MHz DDR3 memory controller

**Optical**
- None (use optional USB-based optical drive)
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradeable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradeable, Active Protection System™

**Widescreen display**
- 11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

**Camera**
- Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

**Graphics**
- **AMD Radeon™ HD 6310M graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display
- **Maximum external resolution:** 2048x1536 (VGA) @60Hz; 1920x1200 (HDMI) @60Hz

**Keyboard**
- Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys

**TrackPoint®**
- TrackPoint pointing device, Internet Scroll Bar™, magnifying glass

**Touchpad**
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrollings regions, multi-touch

**ThinkLight™**
- None

**Dimensions**
- 3-cell: 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm
- 6-cell: 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm

**Weight**
- 3-cell: from 2.93 lb (1.33kg); 11.1" x 7.4" x 0.6-1.2"
- 6-cell: from 3.31 lb (1.5kg)

**Case**
- Matte black (top)
- PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: Magnesium alloy

**Battery type**
- Lithium Ion 3-cell or 6-cell

**Battery life**
- up to 3 hr; 6-cell: up to 6 hr

**Chipset**
- **AMD A50M FCH Chipset**

**Multicard reader**
- 4-in-1 reader (MMC, SD, Memory Stick, Memory Stick Pro)

**ExpressCard® Ports**
- None

**PCIe Mini Card**
- Two PCI Express Mini Card slots
- ThinkPad 11b/g/n, PCIe Half Mini Card, Realekt™ chipset, 1x1
- Some: Wireless WAN upgradeable
- Some: User selectable carrier at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider

**Modem**
- None

**Bluetooth™**
- Some: Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)

**Ethernet**
- Realekt RTL8111DL Gigabit Network Connection, PHY, PCIe x1

**Audio support**
- High Definition (HD) Audio, Conexant CX20582 codec
- Stereo speakers, 1 watt x 2 / digital mono microphone, combo audio/mic jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- None

**Fingerprint reader**
- None

**Limited warranty**
- 1-year - depot repair service / service upgrades20 available

---

See footnotes for more detailed information

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US model(s) announced February 15, May 3, or November 29, 2011

US models withdrawn effective November 2011 or January 2012

(MNK2-1) January 2012
<table>
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<th>Type-model</th>
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<th>Integrated graphics</th>
<th>Disk</th>
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<th>PCIe Mini Card WLAN</th>
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<th>Carrier</th>
<th>Bluetooth options</th>
<th>Battery cells</th>
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- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning Processor
Entry ultraportable for excellent usability and reliability; one spindle
AMD Accelerated Processor E-240 with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache
AMD Accelerated Processor E-350 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache

### Memory
4GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
System automatically clock down for processors with 1066MHz DDR3 memory controller

### Optical SATA disk
None (use optional USB-based optical drive)
Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradeable
Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradeable, Active Protection System™

### Widescreen display
11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

### Camera
Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

### Graphics
AMD Radeon™ HD 6310M graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Maximum external resolution: 2048x1536 (VGA)@60Hz; 1920x1200 (HDMI)@60Hz

### Keyboard
Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys

### TrackPoint
TrackPoint pointing device, Internet Scroll Bar™, magnifying glass

### UltraNav™
Wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

### Dimensions
3-cell: 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm
6-cell: 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm

### Weight
3-cell: from 2.93 lb (1.33kg); 6-cell: from 3.31 lb (1.5kg)

### Case color
Matte black (top)

### Touchpad material
Top: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: Magnesium alloy

### Battery - type
Lithium 3-cell or 6-cell

### Battery - life
3-cell: up to 3 hr; 6-cell: up to 6 hr

### Chipset
AMD A55M FCH Chipset
**ThinkPad® X120e Accessories - withdrawn**

**Personal Systems Reference (PSREF)**

**Memory**
- 2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
- 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
- Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

**Wireless WAN (Mini PCI Express)**
- Only WWAN upgradable models:
  - ThinkPad Gobi™ 2000 Broadband Option 78Y1398
  - ThinkPad AT&T 2000 Broadband Option 78Y1399

**Storage and removable storage**
- USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
- USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
- USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
- USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11
- USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11
- Lenovo Slim USB Portable DVD Burner 0A33988 ann 11/29/11
- Lenovo USB Secure 750GB Hard Disk 45K1690 ann 06/14/11

**Batteries**
- Battery 17+ (6-cell) ThinkPad Battery 57Y4559 ann 01/05/10
- ThinkPad External Battery Charger 40Y7625 ann 09/20/05

**Memory controller.**
- 64 System automatically clocks down for processors with 1066MHz DDR3

**Modem**
- ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10
- ThinkPad USB Modem 43R1814 ann 02/26/08

**Carrying Cases**
- ThinkPad 11W Case Sleeve 57Y4286 ann 01/05/10
- ThinkPad 11W Sling Case 57Y4287 ann 01/05/10

**Monitor Accessories**
- Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
- ThinkVision Soundbar 45K1263 ann 09/16/08
- Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

**Cables**
- 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
- Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

**Carrying Cases**
- Lenovo LS2421p Wide 23.6” (VGA, HDMI) 4015LS1 ann 09/22/09
- ThinkVision LT2452p Wide 24” (VGA, DP, DVI-D) 4420MB2 ann 09/13/11

**Modem**
- ThinkPad USB Modem 43R1814 ann 02/26/08

**Carrying Cases**
- ThinkPad 11W Case Sleeve 57Y4286 ann 01/05/10
- ThinkPad 11W Sling Case 57Y4287 ann 01/05/10

**Monitor Accessories**
- Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
- ThinkVision Soundbar 45K1263 ann 09/16/08
- Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

**Carrying Cases**
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- ThinkPad 11W Sling Case 57Y4287 ann 01/05/10

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- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

**More information at www.lenovo.com/alldaycomputing**

**Modem**
- ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

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- Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

**For more information on accessories:**

- www.lenovo.com/accessories
- Purchase Lenovo accessories
- www.lenovo.com/support/accessories
- Product specifications on Lenovo Support

**www.lenovo.com/accessoriesguide**
- Option Compatibility Matrix (OCM) and accessory brochures

**www.lenovoquickpick.com**
- An Options Compatibility Configurator for Lenovo systems

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(O-X120-E) January 2012
Lenovo ThinkPad X200

Lenovo ThinkPad X200 with X200/X200s (WXGA), X201 12W Privacy Filter 55Y9264

Lenovo ThinkPad X200 with ThinkPad X200 UltraBase 43R8781

ThinkPad 65W AC Adapter 40Y7696
## ThinkPad X200 (7454) - TopSeller - withdrawn

### Preloaded operating system

- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Ultimate 32
- Vista models: Vista Premium logo

### Preloaded applications

(all OSes; only listed)
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software
- Lenovo System Toolbox

**Supports ThinkVantage® technologies**

**ThinkPad X200 UltraBase™**

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spinle system with optional Ultrabay Slim accessories in right side

**CD-RW/DVD-ROM Ultrabay Slim**

- SATA 1.5Gb/s
- SATA 1.5Gb/s, 2.5" wide, 9.5mm high

**Business**

- CD-RW/DVD-Rom Ultrabay Slim 43N3213
- DVD Burner Ultrabay Slim 43N3214
- Serial ATA Hard Drive 43N3214
- Bay Adapter III 43N3412
- Disks supported (some):
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

### Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 connector / DisplayPort via UltraBase:
  - 1.1, 2.0, 2.0
  - DVI-D via cable (45J7915)
  - DisplayPort (supports single-link 2048x1536@75Hz)

### Graphics controller

- Intel Graphics Media Accelerator 4500HM (GMA 4500HM), in GM45

- Supports ThinkVantage® technologies

### Memory

- 2GB, 3GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SODIMM sockets; no sockets available; non-ITLs: standard memory in 1 socket available

### Diskette drive

- None (use optional USB-based diskette drive)

### Widescreen display

- 12.1" (308mm) WXGA (1280x800) TFT color
- anti-glare, CCFL backlight, 250:1 contrast ratio, 250 nits, 16:10 aspect ratio
- Some: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 250:1 contrast ratio

### Camera

- Camera on top of screen, 1.3-megapixel, fixed focus

### Graphics - external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase:

- Maximum external resolution: 2048x1536@75Hz

### Keyboard

- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

### Touchpad

- None

### ThinkLight™

- Illuminates the keyboard to improve visibility in low-light conditions

### Battery

- Lithium Ion 4-cell or 6-cell
- 4-cell: up to 3.3 hr; 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

### Chipset

- Mobile Intel GM45 Express Chipset
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

### Media slice

- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

### Multicard reader ExpressCard/54

- One slot (ExpressCard/34, ExpressCard/54)

### Ports

- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

### Mini PCI Express

- Intel 5100®
- Intel 5300®
- WIMAX

### WWAN upg

- AT&T

### 2G Turbo UWB

- WIA

### Modem

- 54M V.92 modem

### Bluetooth™

- Bluetooth 2.1 wireless, LED indicator

### Ethernet

- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

### Audio support

- High Definition (HD) Audio, Conexant CX20661 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

### Security chip

- Power-on password, hard disk password, supervisor password, security keyhole

### Limited warranty

- 1-year - EasyServ™ depot repair service / service upgrades™ available

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**See footnotes for important warranty information**

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US models announced August 5 or September 2, 2008 or June 8, 2008
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US models announced effective September 2008 or June, October, December 2009

(MOC1-1) January 2010

Lenovo
### ThinkPad X200 (7454) - TopSeller (XP with Win 7 License) - withdrawn

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<th>Wide-screen display</th>
<th>CCL or LED Camera</th>
<th>Disk SATA GB rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program

### Positioning

**Processor**

Intel® Core™ 2 Duo processor P8600, P8700, or P8800 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache

**Memory**

2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

*Italics:* standard memory in both sockets; no sockets available;

*Non-italics:* standard memory in 1 socket; 1 socket available

**SATA DVD:RW Ultrabay Slim SATA disk**

Some: DVD burner (43N3214), SATA 1.5Gb/s, removable from X200 UltraBase

Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)

160GB (5400 or 7200 rpm) or 250GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, Active Protection System™, removable, upgradeable, Shock Mounted Hard Drive, supports second disk in optional or standard X200 UltraBase

**Widescreen display**

12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Camera**

Some: camera on top of screen, 1.3-megapixel, fixed focus

**Graphics controller**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45

**Graphics - external**

External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;

*Maximum external resolution:* 2048x1536@75Hz

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

TrackPoint®

Touch pad

None

ThinkVantage™

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

without X200 UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm

without X200 UltraBase; 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 21-35mm

4-cell: from 2.98 lb (1.35kg); 6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)

**Weight**

Black

Magnesium alloy

Lithium Ion 6-cell

4-cell: up to 3.3 hr; 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

**Battery - life**

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI-2.3, security chip, ethernet MAC)

**Media slice**

Some: X200 UltraBase media slice (see right side)

**Multicard reader**

5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

ExpressCard/54

One slot (ExpressCard/34, ExpressCard/54)

Ports

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), Ethernet (RJ-45)

**Mini PCI Express WWAN upg 2G Turbo UWB**

Three Mini PCI Express slots

None

None

None

56K V.92™

Bluetooth™ 2.1, wireless, LED indicator

**Ethernet**

Non-vPro model: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1

vPro model: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**

Some: Intel Active Management Technology (IATM)

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security chip**

Power-on password, hard disk password, supervisor password, security keyhole

**Security key lock, security keyhole**

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Security support**

Supports ThinkVantage™ technologies

**Other features:**

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

**Limited warranty**

1-year - depot repair service / service upgrades available

**See footnotes for important warranty information**

© Lenovo (MOC2-1) June 2010

US models announced on October 22 or December 15, 2009

US models withdrawn effective June 2010

---

**Preloaded operating system**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update

Supports ThinkVantage™ technologies

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III

Disks supported (some):

- 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411

Other features:

- Intel Centrino® 2 processor technology
- Intel Centrino 2 with vPro™ technology
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

International Warranty Service17

24 hour x 7 day 10-f calling support during the warranty period via 800-426-7378

65-watt (GMA graphics) AC Adapter

Climate Savers® certified

PEET™ Gold rating

ENERGY STAR® 5.0-compliant

Rohs-compliant
### ThinkPad X200 (7454) - TopSeller (Windows 7) - withdrawn

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<th>Memory</th>
<th>Disk</th>
<th>Optical Drive</th>
<th>ThinkPad DVD</th>
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### Widescreen Display

- **12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight**
- **200 nits, 16:10 aspect ratio, 250:1 contrast ratio**

### Graphics controller

- **Intel Graphics Media Accelerator 4500MHD**

### Media slice

- **Some:** X200 UltraBase media slice (see right side)

### Keyboard

- **Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys**

### Touchpad

- **ThinkPad Pointing device, "Press-to-Select," Internet Scroll Bar**, magnifying glass

### Dimensions

- **11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm**

### Weight

- **Lithium Ion Battery**
- **4-cell:** up to 3.6 hr; **6-cell:** up to 6.5 hr; **9-cell:** up to 9.8 hr

### Chipset

- **Mobile Intel GM45 Express Chipset**

### Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D) via cable 45J7915
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### Options:

- Second battery charger
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### Limited warranty

- **1-year - depot repair service / service upgrades** available

---

**These small and medium business (SMB) models are part of the US TopSeller™ Program**
### ThinkPad X200 (7455) - TopSeller - withdrawn

**Processor**
- An ultraportable for the executive on the move; one spindle
- **Intel Core™ 2 Duo processor P8600** with dual-core,
- Intel HD boost, 1066MHz system bus, and 3MB L2 cache

**Memory**
- 2GB std / 4GB max
- PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Non-italics:** standard memory in 1 socket; 1 socket available

**Diskette drive**
- None (use optional USB-based diskette drive)

**SATA DVD:±RW**
- Option for ThinkPad X200 UltraBase

**Ultrabase S6P:**
- Supports Ultrabase Slim devices in optional or standard X200 UltraBase (43R8781)
- 160GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, Active Protection System™, removable, upgradeable, Shock Mounted Hard Drive, supports second disk in optional or standard X200 UltraBase

**Widescreen display**
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Camera**
- Camera on top of screen, 1.3-megapixel, fixed focus, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Graphics controller**
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45
- **Maximum external resolution:**
  - 1280x1024 using 64MB (GM45)
  - 1440x900 using 128MB (GM45)
  - 1600x1200 using 256MB (GM45)
  - 1920x1200 using 512MB (GM45)

**Keyboard**
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

**Touch pad**
- None

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- **Without X200 UltraBase:**
  - 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm
  - **Without X200 UltraBase:**
  - 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 21-35mm
  - 4-cell: from 2.98 lb (1.35kg); 6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)

**Weight**
- Black

**Case material**
- Magnesium alloy

**Battery - type**
- Lithium Ion 6-cell

**Battery - life**
- 4-cell: up to 3.3 hr; 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

**Chipset**
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC)

**Preloaded operating system**
- **Genuine Windows Vista® Ultimate 32
- Vista Premium logo**

**Preloaded applications**
- **(only some listed)**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - Lenovo System Toolbox
  - Adobe® Reader®

**Supports ThinkVantage® technologies**

**Preloaded software**
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - CD-RW/DVD-ROM Ultrabay Slim SATA 1.5Gb/s
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III

**Disks supported (some):**
- SATA 1.5Gb/s
- SATA 1.5Gb/s
- Bay Adapter III
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
- Option:
  - Bay Adapter I

**Ports**
- Four USB 2.0 ports
- DVI-D via cable 45J7915
- Microphone in and headphone out
- Microphone input jack, headphone jack
- Two 2.5-watt stereo speakers
- Power button (front)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- Intel Centrino® 2 processor technology
- Lenovo On-Site Service
- 9-32 Educ Mar 09
- 3-year limited warranty
- 2 processor technology
- 65-watt (GMA graphics) AC Adapter
- 24 hour x 7 day toll-free support during the warranty period
- via 800-426-7378

**Limited warranty**
- **3-years/1-year battery - EasyServ™ depot repair service / service upgrades available**

---

**Notes:**
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has an EasyServ™ depot repair service 3-year limited warranty

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**See footnotes for important warranty information**

© Lenovo (MOC-1-7) January 2010
ThinkPad X200 (7458) - withdrawn

Personal Systems Reference (PSREF)

### Product Specifications

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<th>Memory</th>
<th>Disk</th>
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#### Preloaded operating system
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 32

#### Preloaded applications
- Vista models: Vista Premium logo
- All OSes: only some listed
- Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center
- Fingerprint Software (fingerprint models)

**Supports ThinkVantage technologies**

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle option with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s

**Other features:**
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPorts (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Battery charger
- Requires 60 or 90 watt AC adapter
- 1.6 lb; 730g

#### Limited warranty®
- 3-years/1-year battery - depot repair service - service upgrades® available

---

See footnotes for important warranty information

---

© Lenovo

US models announced on August 5 or September 2, 2008

US models withdrawn effective August 2008 or June 2010

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Some of the information in this document is dated, such as US Govt (TAA)®

Intel Centrino® 2 with vPro® technology

Intel AMT

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service®

EPEAT® Silver rating

Lenovo (MOC1-2) June 2010
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<td>Intel Core™ 2 Duo processor P8600 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache</td>
<td>2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <em>Non-italic</em>: standard memory in 1 socket, 1 socket available</td>
<td>CD-ROM/DVD-ROM, SATA 1.5Gbps removable from X200 UltraBase</td>
<td>An ultraportable for the executive on the move, one spindle</td>
<td>Intel® Core™ 2 Duo processor P8600 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache</td>
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<td><em>Some</em>: 128GB Solid State Drive (SSD) / SATA 3GB/s, 1.8&quot; wide, 8mm high</td>
<td><em>Some</em>: 160GB (7200 rpm) / SATA 1.5Gbps, 2.5&quot; wide, 9.5mm high, Active Protection System™ All: removable, upgradable, shock mounted storage, 2nd disk in optional or standard X200 UltraBase</td>
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### Graphics controller

Intel® Graphics Media Accelerator 4500MHD, in GM4S

### Graphics - external

External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; in GM4S Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD)

### Camera

200 nits, 16:10 aspect ratio, 250:1 contrast ratio, anti-glare, 12.1" (308mm) Widescreen display

### Battery - life

Lithium ion 6-cell or 9-cell 4-cell: up to 3.3 hr; 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

### Chipset

Mobile Intel GM4S Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced IO Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, ECC 2.3, security chip, Ethernet MAC)

### Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### Preloaded operating system

- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Ultimate 32

### Preloaded applications

- Rescue and Recovery™
- Access Connections™

### Other:

- 24 hour x 7 day toll-free support via 800-426-7378
- Climate Savers® certified
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service® during the warranty period
- ROHS-compliant
- 65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- Limited warranty: 3-years/1-yt battery - depot repair service / service upgrades available

### Footnotes:

- *som* Intel Centrino® 2 with vPro™ technology
- See footnotes for important warranty information
- US models withdrawn effective February or June 2010
- © Lenovo (MOC1-6) June 2010
### ThinkPad X200 (7459) - Onsite - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo</th>
<th>Finger Battery reader cells</th>
<th>Whose (W) Gbl (G) Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>7459-M2U P8600 2.40 GHz WXGA</td>
<td><strong>Intel</strong> Core™ 2 Duo processor P8600 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache</td>
<td>2GB std / 4GB max7</td>
<td>12.1&quot; WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio</td>
<td><strong>Some:</strong> camera on top of screen, 1.3-megapixel, fixed focus</td>
<td><strong>Some:</strong> support for Intel High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / microphone input jack, headphone jack</td>
<td><strong>Some:</strong> supports ThinkVantage Productivity Center</td>
<td><strong>Some:</strong> supports ThinkPad Privacy Solution</td>
<td><strong>Some:</strong> supports ThinkPad Bluetooth wireless technology</td>
<td><strong>Some:</strong> supports ThinkPad Ethernet + WiMAX WWAN upgrade, requires Verizon</td>
<td><strong>Some:</strong> supports ThinkPad Security KeyLock, security keyhole, password</td>
<td><strong>Some:</strong> WiFi + Bluetooth on/off switch</td>
<td><strong>Some:</strong> fingerprint reader (see right side), converts ThinkPad to a two-spindle X200 Series for traveling</td>
</tr>
</tbody>
</table>

**Preloaded operating system:10**

- **Some:** Genuine Windows Vista Business 32
- **Some:** Genuine Windows Vista Ultimate 32
- **Vista** Premium logo

**Preloaded applications:14** (all OSes; only some listed)

- **Some:** Rescue and Recovery™
- **Some:** Access Connections™
- **Some:** Client Security Solution™
- **Some:** ThinkVantage Productivity Center
- **Some:** ThinkPad Bluetooth wireless technology
- **Some:** supports ThinkPad Privacy Solution

**Other features:**

- **Some:** Power button (front)
- **Some:** Stereo speakers (2 watt)
- **Some:** Security key lock, security keyhole, and optional security screw
- **Some:** Analog DB-15 monitor port
- **Some:** DisplayPort (supports single-link DVI-D via cable 45J9715)
- **Some:** Four USB 2.0 ports
- **Some:** Gigabit ethernet port
- **Some:** Microphone in and headphone out
- **Some:** Second battery charger
- **Some:** Requires 65 or 90 watt AC adapter
- **Some:** 1.6 lb; 730g

**Note:**

- **Lenovo**
- **US models announced August 5 or October 14, 2008**
- **US models withdrawn effective February 2010 or June 2010**
- **Intel Centrino® 2 with vPro™ technology**
- **Intel® Centrino® 2 with vPro™ technology**
- **Intel® AMT**
- **Intel Active Management Technology (IAMT)**
- **Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1**
- **High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack**
- **Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant**
- **Fingerprint reader:** fingerprint reader on palm rest, swipe sensor, supports the security chip
- **24 hour x 7 day toll-free support during the warranty period via 800-426-7378**

---

*Some models are part of the Global Models Plus program with limited onsite service10 - 3-year limited warranty*
This model has a depot repair service 3-year limited warranty

- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning  An ultraportable for the executive on the move; one spindle
Processor  Intel® Core™ 2 Duo processor P8600 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache
Memory  2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available
SATA DVD-LRW  Option for ThinkPad X200 UltraBase
Ultrabay Slim  Supports Ultrabay Slim devices in optional ThinkPad X200 UltraBase (43R8781)
SATA disk  160GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase
Widescreen display  12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
Camera  Camera on top of screen, 1.3-megapixel, fixed focus
Graphics controller - Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45
Graphics - external  External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase
Keyboard  Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
TrackPoint®  TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
TouchPad™  Illuminates the keyboard to improve visibility in low-light conditions
Dimensions³  without X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm
Weight³  6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)
Battery - type  Lithium Ion 6-cell
Battery - life⁴  6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr
Chipset  Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)
Memory slice  Option: ThinkPad X200 UltraBase media slice (see right side)
Multicard Reader  5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
ExpressCard slot  One ExpressCard/34 or ExpressCard/54
Ports  Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)
Mini PCI Express Intel 5100⁴  Three Mini PCI Express slots
WWAN upg  11a/b/g/n wireless¹, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
WWAN UWB  Wireless WAN upgradable, requires Verizon (43R9151) or AT&T (43R9152)
Modern  56K V.92 modem
Bluetooth™  Bluetooth 2.1 wireless, LED indicator
Ethernet  Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1
Intel AMT  Intel Active Management Technology (IAMT)
Audio support  High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
Security  Power-on password, hard disk password, supervisor password, security keyhole
Security chip  Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
Fingerprint reader  Fingerprint reader on palm rest, swipe sensor, supports the security chip
Limited warranty²³  3-years/1-yr battery - depot repair service / service upgrades²² available

Preloaded operating system²⁰  - Genuine Windows® Vista® Business 32
  - Vista Premium logo

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)

Supports ThinkVantage® technologies
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for travel
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim Sata 1.5Gb/s: 43N3214
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 320GB Disk 7200 rpm 43N3411

Other features:
  - Power button (front)
  - Stereo speakers (2 watt)
  - Security key lock, security keyhole, and optional security screw
  - Analog DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet port
  - Microphone in and headphone out
  - Second battery charger
  - Requires 65 or 90 watt AC adapter
  - 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter
Climate Savers® certified
EPEAT® Silver rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service
24 hour x 7 day, toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information  © Lenovo
US models announced August 5, 2008 or March 24, 2009
US models withdrawn effective June 2010
(MOC1-4) June 2010

intel Centrino® 2 with vPro™ technology 

Intel® Core™ 2 Duo processor P8600 with dual-core,
ThinkPad® X200 (7459) - Education (Onsite) - withdrawn

Positioning
An ultraportable for the executive on the move; one spindle

Processor
Intel Core 2 Duo processor P8600 with dual-core,

Memory
2GB std / 4GB max* / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets; 2
Non-italics: standard memory in 1 socket; 1 socket available

SATA/DVD:RW
Option for ThinkPad X200 UltraBase

UltraBase disk
Supports UltraBay Slim devices in optional ThinkPad X200 UltraBase (43R8781)

Widescreen display
12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight,
200 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera
ThinkLight® illuminates the keyboard to improve visibility in low-light conditions

Graphics controller
Intel Graphics Media Accelerator 4500MHD (MDA 4500MHD), in GM45

Keyboard
Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

TrackPoint®
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®¹⁰, magnifying glass

Touchpad
None

Dimensions³
without X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm

Weight³
6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)

Battery - type
Lithium Ion 6-cell

Battery - life³
6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

Media slice
Option: ThinkPad X200 UltraBase media slice (see right side)

Multicard Reader
5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

ExpressCard slot
One ExpressCard/34 or ExpressCard/54

Ports
Three USB 2.0, external monitor (VGA DB-15) connector / DisplayPort via UltraBase

Mini PCI Express
Three Mini PCI Express slots

Intel 5100³
11a/b/g/n wireless¹¹, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

WWAN upg
Wireless WAN upgrade, requires Verizon® (43R9151) or AT&T® (43R9152)

Intel AMT
None

Modem
56K V.92 modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
None

Preloaded operating system²⁰
- Genuine Windows® Vista® Business 32
- Vista Premium logo

Preloaded applications³⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Lenovo System Toolbox

Other features:
- Power button (front)
- Power-on password (not available)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

See footnotes for important warranty information ✧行ThinkCentrino® 2 with vPro™ technology

P6600 2.40 2GB 12.1" WXGA Cam 160GB 5400 Optional Optional Intel 5100 WWAN upg None None 6 Bus32 W Aug08

7459-E3U

Personal Systems Reference (PSREF)

Limited warranty¹²
3-years/1-year battery, limited onsite service⁶, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades⁸ available

© Lenovo

US model announced August 5, 2008

US model withdrawn effective June 2010
This small and medium business (SMB) model is part of the US TopSeller™ Program

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>An ultraportable for the executive on the move; one spindle Intel® Celeron® Processor 733 with single-core, 800MHz system bus, and 1MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 4GB max® / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available</td>
</tr>
<tr>
<td>Diskette drive SATA DVD±RW UltraBay Slim SATA disk</td>
<td>None (use optional USB-based diskette drive) Option for ThinkPad X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB® (5400 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradeable, ThinkPad Shock Mounted Hard Drive, Active Protection System®, supports 2nd disk in optional or std X200 UltraBase</td>
</tr>
<tr>
<td>Widescreen display Camera</td>
<td>12.1&quot; (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio None</td>
</tr>
<tr>
<td>Graphics controller</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45 Graphics - external Monitor port via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Full-size, 99-key, ThinkVantage button, spill-resistant, multimedia Fn keys trackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass None</td>
</tr>
<tr>
<td>Touch pad ThinkLight™</td>
<td>Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions Weight® Case material</td>
<td>without X200 UltraBase; 4-cell: 11.6&quot; x 8.3&quot; x 0.8-1.1&quot;; 295mm x 210mm x 21-29mm without X200 UltraBase; 9-cell: 11.6&quot; x 9.2&quot; x 0.8-1.4&quot;; 295mm x 234mm x 21-35mm 4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg) Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy black</td>
</tr>
<tr>
<td>Battery - type Battery - life² Chipset</td>
<td>Lithium Ion 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced IO Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)</td>
</tr>
<tr>
<td>Media slice</td>
<td>Option: ThinkPad X200 UltraBase media slice (see right side) 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC) Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)</td>
</tr>
<tr>
<td>Multicard Reader ExpressCard/54 Ports</td>
<td>320GB Disk 7200 rpm 43N3411</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Intel 5100™ WWAN upg</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (iAMT)</td>
</tr>
<tr>
<td>Limited warranty² 1-year</td>
<td>EasyServ®/™ depot repair / service upgrades available</td>
</tr>
<tr>
<td>Preloaded operating system²</td>
<td>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business - Vista logo: None</td>
</tr>
<tr>
<td>Preloaded applications¹ (only some listed)</td>
<td>- Rescue and Recovery™ - Access Connections™ - Client Security Solution™ - ThinkVantage Productivity Center - ThinkVantage System Update - Finger print Software</td>
</tr>
<tr>
<td>ThinkPad X200 UltraBase™</td>
<td>Provides desktop expansion and cable management for X200 Series Easily connects to the bottom of the X200 Series for traveling Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – CD-RW/DVD-R/ROM Ultrabay Slim SATA 1.5Gb/s 43N3213 – DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): – 250GB FDE 7200 rpm 43N3410 – 320GB Disk 7200 rpm 43N3411 Other features: – Power button (front) – Stereo speakers (2 watt) – Security key lock, security keyhole, and optional security screw – Analog DB-15 monitor port – DisplayPort (supports single-link DVI-D via cable 45J7915) – Four USB 2.0 ports – Gigabit ethernet port – Microphone in and headphone out – Second battery charger – Requires 65 or 90 watt AC adapter – 1.6 lb; 730g</td>
</tr>
</tbody>
</table>
## ThinkPad X200s (7466) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide screen display</th>
<th>Disk</th>
<th>SATA GB</th>
<th>rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>UWB</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Global (G) Available</th>
<th>Preload</th>
</tr>
</thead>
<tbody>
<tr>
<td>7466-3GU SL9400 1.86</td>
<td>4GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB 7200</td>
<td>DVD: RW UltraBase</td>
<td>Intel 5100</td>
<td>None</td>
<td>2G Turbo</td>
<td>Yes</td>
<td>9 Bus 32</td>
<td>No</td>
<td>Sep 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7466-3HU SL9400 1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB 7200</td>
<td>RW UltraBase</td>
<td>Intel 5100</td>
<td>None</td>
<td>2G Turbo</td>
<td>Yes</td>
<td>6 XP Pro</td>
<td>No</td>
<td>Sep 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Compared to the X200, the X200s has lighter weight, low voltage processors, LED backlight displays, and roll cage in display cover.
- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These models have a 3-years limited warranty

**Positioning Processor**

<table>
<thead>
<tr>
<th>Processor</th>
<th>An ultraportable for the executive on the move; one spindle Intel® Core™ 2 Duo processor SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</th>
</tr>
</thead>
</table>

**Memory**

| 2GB or 4GB std | 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; |
| Non-italics: standard memory in both sockets; no sockets available; |
| Non-italics: standard memory in 1 socket; 1 socket available |

**Diskette drive**

| None (use optional USB-based diskette drive) |

**SATA DVD: RW Ultrabay Slim**

| Supports Ultrabay Slim drives in optional or standard X200 UltraBase (4387B1) |
| 160GB (7200 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase |

**Widescreen display**

| 12.1" (308mm) WXGA++ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio |

**Camera**

| None |

**Graphics controller**

| Intel® Graphics Media Accelerator 4500MH (GMA 4500MH), in GS45 |

**Graphics - external**

| External monitor support via VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @75Hz |

**Keyboard**

| Full-size, 99-key, ThinkVantage button, spill-resistant, multimediaFN keys |

**TrackPoint®**

| TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass |

**Touch pad**

| None |

**ThinkVantage™**

| Illuminates the keyboard to improve visibility in low-light conditions |

**Dimensions**

| without X200 UltraBase; 4-cell: 11.6" x 8.3” x 0.8-1.1”; 295mm x 210mm x 21-29mm |
| without X200 UltraBase; 9-cell: 11.6” x 9.2” x 1.4”-1.9”; 295mm x 234mm x 21-35mm |
| 4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg) |

**Weight**

| black |

**Case material**

| Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy |

**Battery - type**

| Lithium Ion 6-cell or 9-cell |

**Battery - life**

| 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr |

**Chipset**

| Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), IntelICH9M-Enhanced I/O Controller Hub (SATA 3.0Gbs, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC) |

**Media slice**

| Some: X200 UltraBase media slice (see right side) |

**Multicard Reader ExpressCard/54**

| 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC) |

**Ports**

| One slot (ExpressCard/34, ExpressCard/54) |

**Mini PCI Express**

| Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45) |

**Intel 5100th® WWAN upg**

| Silver 2 with vPro™ technology |

**Mobile WiMax enabled**

| WiMax enabled, 3G, 4G, LTE, and Wi-Fi capabilities |

**USB 2.0**

| 4-port, USB 2.0 port, Hi-Speed, compliant with USB 2.0 specification |

**SATA 1.5Gb/s**

| 43N3214 |

**Other features:**

- Power button (front) |
- Stereo speakers (2 watt) |
- Security key lock, security keyhole, and optional security screw |
- Analog DB-15 monitor port |
- DisplayPort (supports single-link DVI-D via cable 45J7915) |
- Four USB 2.0 ports |
- Gigabit ethernet port |
- Microphone in and headphone out |
- Second battery charger |
- Requires 65 or 90 watt AC adapter |
- 1.6 lb / 730g |

**ENERGY STAR®**

| 5.0-compliant |

**Lenovo®**

| Next Generation ThinkPad Roll Cage | 9-cell: 16.1" x 10.3" x 0.7"; 405mm x 260mm x 18mm |

**ThinkPad X200 UltraBase™**

| Provides desktop expansion and cable management for X200 Series |
| Easily connects to the bottom of the X200 Series for traveling |
| Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side |
| - CD-RW/DVD-ROM Ultrabay Slim SATA 1.5Gbs |
| - DVD Burner Ultrabay Slim |
| - SATA 1.5Gbs |
| - Serial ATA Hard Drive |
| - Bay Adapter III |

**Ports**

| 250GB FDE 7200 rpm 43N3410 |
| 520GB Disk 7200 rpm 43N3411 |

**Other ports:**

- Power port (front) |
- Two USB 2.0 ports |
- Gigabit Ethernet port |
- Microphone in and headphone out |
- Second battery charger |
- Requires 65 or 90 watt AC adapter |
- 4-cell: 14.6" x 10.3" x 0.8"; 370mm x 260mm x 20mm |

See footnotes for important warranty information

| Intel Centrino® 2 with vPro™ technology |

**US models announced September 23, 2008**

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(PDC1-1) December 2008
Compared to the X200, the X200s has lighter weight, low voltage processors, LED backlight displays, and roll cage design in display cover.

This small and medium business (SMB) model is part of the US TopSeller™ Program.

This model has a 3-years limited warranty.

Positioning
An ultraportable for the executive on the move; one spindle processor

Processor
Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory
2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-Italics: standard memory in 1 socket; 1 socket available

SATA DVD+RW Ultrabay Slim
DVD burner (43N3214); SATA 1.5Gb/s, removable from X200 UltraBase

SATA disk
160GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

Widescreen display
12.1" (308mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera
Camera on top of screen, 1.3-megapixel, fixed focus

Graphics controller
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45 Graphics - external
External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
Maximum resolution: 2048x1536 @ 75Hz

Keyboard
Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Track pad
ThinkPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

Touch pad
None

ThinkLight™
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
without X200 UltraBase; 4-cell: 11.6” x 8.3” x 0.8-1.1”; 295mm x 210mm x 21-29mm
without X200 UltraBase; 9-cell: 11.6” x 9.2” x 0.8-1.4”; 295mm x 234mm x 21-35mm
4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)

Weight

Case color
black

Case material
Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

Battery - type
Lithium Ion 6-cell

Battery - life
4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: fixed focus

Chipset
Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

Media slice
X200 UltraBase media slice (see right side)

Multicard Reader
5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

Ports
Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

Mini PCI Express
Three Mini PCI Express slots

Intel 5100® WWAN upg
11a/b/g/n wireless®, Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

Intel 802.11 wireless upgrade, requires Verison® (43R9151) or AT&T® (43R9152)

None

UWB
None

Modem
56K V.92® modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel AMT
Intel Active Management Technology (AMT)

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information

Intel Centrino®2 with vPro™ technology

Lenovo
(PEC2-1) June 2010

US model announced October 22, 2009

US model withdrawn effective June 2010

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software

Supports ThinkVantage™ technologies

ThinkPad X200 UltraBase™

Provides desktop expansion and cable management for X200 Series

Easily connects to the bottom of the X200 Series for traveling

Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
- DVD Burner Ultrabay Slim

SATA 1.5Gb/s
43N3214
- Serial ATA Hard Drive

Bay Adapter III (43N3412)
Disks supported (some):
- 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter
Climate Savers™ certified EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378
ThinkPad® X200s (7466) - TopSeller (Windows 7) - withdrawn

Positioning
Processor: An unaportalable for the executive on the move; one spindles
Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory
4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; 2GB UDIMM standard memory in both sockets; no sockets available

SATA DVD±RW Ultrabay Slim Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

Widescreen display
12.1" (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

Graphics controller
ThinkPad Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

Keyboard
Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touch pad
None

Dimensions
without X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.1"; 259mm x 210mm x 21-29mm
without X200 UltraBase: 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 21-35mm

Weight
4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)

Case material
Display cover: Carbon-fiber reinforced plastic (top), black glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

Battery - type
Lithium Ion 9-cell

Battery - life
4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr

Chipset
Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub),ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

Media slice
X200 UltraBase media slice (see right side)

Multicard Reader
5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

Ports
Three USB 2.0, external monitor (VGA DB-15), Ethernet Port, DVI-D via cable 45J7915)

Mini PCI Express
Three Mini PCI Express slots

Intel 5100™ WWAN upg
11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

2G Turbo
None

UWB
None

Modem
56K V.92 modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel AMT
Intel Active Management Technology (IATM)

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone / microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-yr battery - EasyServ™ depot repair service / service upgrades available

1GB PC3-8500 DDR3 L-H SODIMM 55Y3706 55Y3707
2GB PC3-8500 DDR3 L-H SODIMM 55Y3707
ThinkPad X200 UltraBase 43R8781

ThinkPad Battery 47 (4-cell) 43R9253
ThinkPad Battery 47+ (6-cell) 43R9254
ThinkPad Battery 47++ (9-cell) 43R9255

Other accessories on O-X200 sheet
Other accessories at lenovo.com/accessories

Preloaded operating system
- Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)

ThinkPad X200 UltraBase™
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s 43N3214
  - Serial ATA Hard Drive 43N3212
  - Bay Adapter III 43N3412

Disks supported (some):
250GB FDE 7200 rpm 43N3410
320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- USB 2.0 ports 4
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

ENERGY STAR® 5.0-compliant
Climate Savers® certified
International Warranty Service during the warranty period 12
24 hour x 7 day toll-free support within the warranty period via 800-426-7378

Intel® Centrino® 2 with vPro™ technology
© Lenovo (PEC2-2) June 2010
**ThinkPad X200s (7469) - withdrawn**

| Type-model | Processor | Memory | Disk | Optical | Disk | ThinkPad X200 | Mini PCIe | Mini PCIe | Mini PCIe | Battery | Workhorse | WinChip | Global | Avail. |
|------------|-----------|--------|------|---------|------|-------------|----------|----------|----------|---------|----------|---------|--------|--------|-------|
| 7469-5GU SL9400 | 1.86 | 2GB | 12.1” WXGA+ | 80GB SSD | None | None | None | None | None | None | Yes | 6 | Bus 32 | G W | 5 Oct 08 |
| 7469-59U SL9400 | 1.86 | 2GB | 12.1” WXGA+ | 80GB SSD | None | None | None | None | None | None | Yes | 6 | XP Pro | W | 5 Oct 08 |
| 7469-74U SL9400 | 1.86 | 2GB | 12.1” WXGA+ | 80GB SSD | None | None | None | None | None | None | Yes | 4 | XP Pro | 6 Dec 08 |
| 7469-77U SL9300 | 1.60 | 2GB | 12.1” WXGA+ | 128GB SSD | None | None | None | None | None | None | Yes | 6 | Bus 32 | Dec 08 |
| 7469-78U SL9300 | 1.60 | 2GB | 12.1” WXGA+ | 28GB SSD | None | None | None | None | None | None | 6 | XP Pro | Dec 08 |
| 7469-82U SL9400 | 1.86 | 3GB | 12.1” WXGA+ | 160GB 5400 | None | None | None | None | None | None | Yes | 6 | Bus 32 | G W | Mar 09 |

**Positioning**

- An ultraportable for the executive on the move; one spindle
- Intel Core™ 2 Duo processor SL9300 or SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**

- 2GB or 3GB std / 4GB max7 / PC3-8500 1066MHz
- 3GB or 4GB max7 / PC3-10600 1333MHz

**SATA Combo UltraBay slim**

- Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, removable from X200 UltraBase
- Supports UltraBay slim devices in optional or standard X200 UltraBase (43R8781)
- Some: 80GB or 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high
- Some: 160GB (5400 or 7200 rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, Active Protection System™
- All: removable, upgradeable, shock mounted storage, supports 2nd disk in optional or standard X200 UltraBase

**Widescreen display**

- 12.1” (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Graphics controller**

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

**Graphics - external**

- External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD)

**Keyboard**

- Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

**Dimensions**

- without X200 UltraBase: 4-cell: 11.6” x 8.3” x 0.8-1.1”; 295mm x 210mm x 21-29mm
- without X200 UltraBase: 9-cell: 11.6” x 9.2” x 0.4-1.9”; 295mm x 234mm x 21-35mm
- 4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)

**Weight**

- 2.43 lb; 1.1kg

**Battery - type**

- Lithium Ion 4-cell or 6-cell
- 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr

**Chipset**

- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), Intel 945GZ, 945V, Intel 8500, Intel 8500E, Intel 8500GM, Intel 945GM, Intel 945/946/947

**Media slice**

- Some: ThinkPad X200 UltraBase media slice (see right side)

**Multicard reader**

- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

**Ports**

- One slot (ExpressCard/34, ExpressCard/54)
- One USB 3.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**Mini PCI Express**

- Three Mini PCI Express slots
- Intel 5100 None None Yes 6 Bus 32 G Win 5 Oct 08
- Intel 5300 None None Yes 6 Bus 32 G Win 5 Oct 08
- WiMAX None None None None None None None

**WWAN upg**

- None None None None None None

**USB**

- None None None None None

**Modem**

- 56K V.92 modem

**Bluetooth™**

- Bluetooth 2.1 wireless, LED indicator
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1
- Intel AMT
- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
- Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Limited warranty**

- 3-years 1-yr battery - depot repair service / upgrade services available

**Preloaded operating system**

- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Fingerprint Software (fingerprint models)

**ThinkPad X200 UltraBase™**

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional UltraBay Slim accessories in right side:
  - DVD Burner UltraBay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter II
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

**Other features**

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone output
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

**ENERGY STAR® Gold rating**

- 65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-406-7378

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See footnotes for important warranty information

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US models announced on September 23 or December 9, 2008, or March 10, 2009

US models withdrawn effective September 2009 or June 2010

(PEC-1-2) June 2010

Intel Centrino® 2 with vPro™ technology

(thanks to... with vPro™ technology)
### Preloaded operating system
- Genuine Windows® Vista Business 32

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- Lenovo System Toolbox
- Adobe® Reader™

#### Supports ThinkVantage® technologies
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter II
  - Disks supported (some):
    - 250GB FDE 7200 rpm
    - 320GB Disk 7200 rpm

#### Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter ROHS-compliant

60-watt (GMA graphics) AC Adapter ROHS-compliant

International Warranty Service
- 24 hour x 7 day x 365 day toll-free support during the warranty period

60-watt (GMA graphics) AC Adapter ROHS-compliant

International Warranty Service
- 24 hour x 7 day x 365 day toll-free support during the warranty period

### See footnotes for important warranty information

US models announced on April 14 or May 12, 2009

US models withdrawn effective June 2010

(PEC1-4) June 2010

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<td>None</td>
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<tr>
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<td>Celeron</td>
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<td>Yes</td>
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</tr>
</tbody>
</table>

### Footnotes
- These models have a depot repair service 3-year limited warranty
- Preloaded operating system - Genuine Windows® Vista Business 32
- Vista Premium logo
- Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- Lenovo System Toolbox
- Adobe® Reader™
ThinkPad® X200s (7470) - On site - withdrawn

### ThinkPad® X200s (7470) - On site - withdrawn

#### Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

#### Preloaded applications
- (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - Lenovo System Toolbox
  - Adobe® Reader®

#### Supports ThinkVantage® technologies
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side – DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214
- Serial ATA Drive
- Bay Adapter III
- 43N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411
- Other features:
  - Power button (front)
  - Stereo speakers (2 watt)
  - Security key lock, security keyhole, and optional security screw
  - Analog DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)

### ThinkPad® X200 UltraBase™

#### Power-on password, hard disk password, supervisor password, security keyhole
- Volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

#### Security
- A - uniform, removable, upgradable, shock mounted storage, supports 2nd disk in optional or standard X200 UltraBase

#### Battery - type
- For some: 250 nits, 16:10 aspect ratio, 300:1 contrast ratio
- For others: 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

#### Graphics controller
- Intel Graphics Media Accelerator 4500MHD (MHA 4500MHD), in GS45

#### I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express ICH9M-SFF-Enhanced)
- Dual-channel capable, two 204-pin SO-DIMM sockets; 1 socket available
- Standard memory in both sockets; no sockets available;
- dual-channel capable, two 204-pin SO-DIMM sockets; 1 socket available

#### Bluetooth
- Bluetooth 2.1 wireless, LED indicator

#### Ethernet
- Non-vPro model: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1
- vPro model: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Intel (AMT)
- Intel Active Management Technology (AMT)

#### Audio support
- High Definition (HD) Audio, Conexant CX20561 cdcoc / mon speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone jack

#### Intel AMT
- Intel Active Management Technology (AMT)

#### Security
- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

#### Fingerprint reader
- Fingerprint reader on palm rest, swipe sensor, supports the security chip

#### Limited warranty
- 3-years/1-year battery, limited onsite service®

See footnotes for important warranty information

© Lenovo (PEC1-3) June 2010

US models announced on September 23 or December 9, 2008, or March 10, April 14, or May 12, 2009

US models withdrawn effective September 2009 or June 2010
ThinkPad® X200s (7469) - Education - withdrawn

### Positioning
- An ultraportable for the executive on the move; one spindle
  - Intel® Celeron® Processor 723 with single-core, 800MHz system bus, and 1MB L2 cache

### Memory
- 2GB std / 4GB max† / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available

### SATA Combo
- Option for ThinkPad X200 UltraBase
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive. Active Protection System™ supports 2nd disk in optional or standard X200 UltraBase

### Ultrabay Slim
- 160GB (5400 /)
- SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive. Active Protection System™ supports 2nd disk in optional or standard X200 UltraBase

### Display
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

### Camera
- Camera on top of screen, 1.3-megapixel, fixed focus

### Graphics - external
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

### Keyboard
- Full-size, 89-key; ThinkVantage button, spill-resistant, multimedia Fn keys

### Trackpad
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®13, magnifying glass None

### ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- without X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 21-29mm
- without X200 UltraBase: 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 21-35mm

### Weight
- 4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)

### Case color
- Black

### Case material
- Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

### Battery - type
- Lithium Ion 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr

### Battery - life (tm)
- 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr

### Chipset
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gbs, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

### Media slice
- Option: ThinkPad X200 UltraBase media slice (see right side)

### Multicard reader
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

### Ports
- One slot (ExpressCard/34, ExpressCard/54)

### Mini PCI Express
- Three Mini PCI Express slots

### WWAN upg
- 2G Turbo
- UWB None

### Modern
- 56K V.92™ modem

### Bluetooth™
- None

### Ethernet
- Gigabit Network Connection (Boazman), PHY, PCIe x1

### Intel AMT
- Intel Active Management Technology (iAMT)

### Audio support
- High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole, Security key lock, security keyhole, and optional security screw

### Security chip
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

### Fingerprint reader
- None

### Limited warranty
- 3-years/1-yr battery - depot repair service / service upgrades available

### Preloaded operating system
- Genuine Windows® Vista® Business 32

### Preloaded applications
- Vista Premium logo

### Preloaded Microsoft technologies
- Supports ThinkVantage™ technologies

### ThinkPad X200 UltraBase™
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s - 43N3214
  - Serial ATA Hard Drive Bay Adapter III - 43N3412

### Disks supported (some):
- 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411

### Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone output
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### Limited warranty
- 3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information
US model announced April 14, 2009
US model withdrawn effective June 2010

© Lenovo (PEC1-5) June 2010

### Footnotes
- 7469-E2U Cel 723 1.20 2GB 12.1" WXGA 160GB 5400 Optional Optional Intel 5100® WWAN upg None None 6 Bus 32 W Apr 09
ThinkPad® X200, X200s Accessories - withdrawn

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09

Ultrabay Slim 9.5mm
Most Ultrabay Slim accessories supported in ThinkPad X200 UltraBase

Storage and removable storage
160GB Disk SATA 1.5Gb/s (5400 rpm) 41N5692 ann 03/20/07
160GB Disk SATA 1.5Gb/s (7200 rpm) 41N5737 ann 10/16/07
250GB Disk SATA 1.5Gb/s (5400 rpm) 43R8158 ann 01/15/08
250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410 ann 01/20/09
320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403 ann 08/05/08
320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411 ann 01/20/09
500GB Disk SATA 1.5Gb/s (5400 rpm) 43N3420 ann 06/23/09
500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423 ann 01/07/10

Almost can be used as the main HDD or with Serial ATA Hard Drive Adapter (43R9412) in X200 UltraBase (43R8781) ann 07/28/09

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406 ann 08/26/08
256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover) 43N3417 ann 06/23/09

USB 2.0 Essential Memory Key 4GB 45J7904 ann 06/24/08
USB 2.0 Essential Memory Key 8GB 45J7905 ann 07/15/08
USB 2.0 Ultra Secure Memory Key 2GB 45J5914 ann 08/26/08
USB 2.0 Ultra Secure Memory Key 4GB 45J5917 ann 08/26/08
USB 2.0 Ultra Secure Memory Key 8GB 45J5918 ann 08/26/08
USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk 43R2018 ann 11/18/08
USB 2.0 Secure 320GB Hard Disk 43R2019 ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 ann 01/07/10
USB 2.0 Portable DVD Burner 43N3264 ann 01/05/10

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
Verizon® WWAN UNDP Broadband Mini PCIe 43R9151 ann 08/05/08
AT&T® WWAN HSPA Broadband Mini PCIe 43R9152 ann 08/06/08

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9129 ann 05/12/09
ThinkPad X200 UltraBase 43R8781 ann 08/05/08

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
2nd Wireless via 2.4GHz technology using a micro-size USB receiver. 57Y4700 ann 06/15/09
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB FingerPrint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 5J1055 ann 03/24/09

Mouse
Lenovo Mini Optical Mouse - Black (USB) 55Y9308 ann 05/19/09
Lenovo Mini Optical Mouse - White (USB) 55Y9309 ann 05/19/09
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 09/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/09
X200s (WXGA+), X201s 12W Privacy Filter 43R2470 ann 09/05/08
X200/X200s (WXGA), X201 12W Privacy Filter 55Y9264 ann 09/27/08
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
ExpressCard Gemplus Smart Card Reader 41N3043 ann 06/27/06

Multimedia
ThinkPad In-Ear Headphones 57Y4488 ann 01/07/10

Batteries
ThinkPad Battery 47 (4-cell) 43R9253 ann 08/05/08
ThinkPad Battery 47+ (6-cell) 43R9254 ann 08/05/08
ThinkPad Battery 47++ (9-cell) 43R9255 ann 08/05/08
ThinkPad External Battery Charger 40Y7625 ann 09/20/05

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

More info at www.lenovo.com/support/poweradapters
Charging tips for 90W Ultrasonic AC/DC Combo Adapter 41R4493
• iPod and iPhone Charge Tip (L10a) 41R4481 ann 12/18/07
• Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

More information at www.lenovowopertips.com

Carrying Cases
Up to 12" widescreen models:
ThinkPad 12W Case Sleeve 51J4076 ann 08/18/09

Up to 13.3" widescreen models:
ThinkPad Ultraportable Case 41U5062 ann 05/13/08

Up to 15.4" widescreen models:
Lenovo Business Messenger Case 51J4075 ann 08/18/09
Lenovo Performance BackPack 41U5253 ann 05/01/07
CheckPoint Friendly Business Topload Case 51J0418 ann 05/05/09
ThinkPad Business Topload Case 43R4756 ann 03/15/08
ThinkPad Deluxe Expander Case 43R4748 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors
ThinkVision® L1711p 17" Monitor 5047HB2 ann 10/20/09
ThinkVision L1990p 19" Monitor 431E1H ann 11/11/08
ThinkVision L1951p Wide 19" Monitor 248HBH ann 10/20/09
ThinkVision L2250p Wide 22" Monitor 257HBE ann 10/20/09
ThinkVision L2251x Wide 22" Monitor 257HBE ann 10/20/09
ThinkVision L2440p Wide 24" Monitor 4420HB2 ann 09/17/08

Monitor Accessories46
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable46 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-D Cable46 45J7915 ann 08/05/08
DisplayPort to Single-link DVI-D Cable46 can only be used via ThinkPad X200 UltraBase (43R8781)
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Easy Reach Monitor Stand 55Y9258 ann 02/22/09
Radial Arm 19K4464 ann 05/05/00

Multi compatible on selected Lenovo and ThinkVision monitors.

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide

© Lenovo (O-X200) June 2010
ThinkPad® X200 Tablet (7448) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Cam</th>
<th>Disk</th>
<th>Sata GB/ rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Workhorse Global (G)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7448-2QU SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>Cam</td>
<td>160G</td>
<td>S400</td>
<td>Optional</td>
<td>Intel 5100® WWAN upg</td>
<td>8</td>
<td>Ultimate 32</td>
<td>Educ</td>
<td>Mar 09</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has an EasyServ™,™ depot repair service 1-year limited warranty

### Positioning
- Processor: Convertible tablet ultraportable; one spindle
- Memory: 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available
- Diskette drive: None (use optional USB-based diskette drive)

### Widescreen display
- Dimensions: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 1060 nits, 16:10 aspect ratio, F5S, framesless design, WideView, anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)
- Camera: Camera on top of screen, 1.3-megapixel, fixed focus

### Graphics controller
- Intel® Media Accelerator 4500MHD, in GS45

### Graphics - external
- External display: Optional: 2048x1536@75Hz (VGA)
- External display: External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; in GS45

### Media slice
- Optional: X200 UltraBase media slice (see right side)

### Mini PCI Express
- Intel® 5100® WWAN upg
- X200 Tablet Li-Ion Battery 4-cell

### Modem
- 56K V.92 modem

### Bluetooth™
- Bluetooth 2.1 wireless, LED indicator

### Security
- Security chip: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- Fingerprint reader: FingerPrint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- 1-year - EasyServ™,™ depot repair service / service upgrades available

### Other accessories
- 1GB PC3-8500 DDR3 L-H SODIMM 55Y3706
- 2GB PC3-8500 DDR3 L-H SODIMM 55Y3707
- Other accessories on O-X200-T sheet

See footnotes for important warranty information

© Lenovo (CML1-7) January 2010
### ThinkPad X200 Tablet (7449) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™2 Duo processor SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 404-pin SO-DIMM sockets; standard memory in both sockets; no sockets available; standard memory in 1 socket; 1 socket available</td>
</tr>
<tr>
<td>Diskette drive</td>
<td>None (use optional USB-based diskette drive)</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>None</td>
</tr>
<tr>
<td>Graphics controller</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45</td>
</tr>
<tr>
<td>Dimensions</td>
<td>without X200 UltraBase: 4-cell: 11.6&quot; x 9&quot; x 1.13&quot;; 295mm x 228mm x 28.5-33mm</td>
</tr>
<tr>
<td>Weight</td>
<td>3.9 lbs (1.8kg)</td>
</tr>
<tr>
<td>Battery</td>
<td>Lithium-Ion 6-cell or 8-cell</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub)</td>
</tr>
<tr>
<td>Media slice</td>
<td>Some: X200 UltraBase media slice (see right side)</td>
</tr>
<tr>
<td>Multicard Reader ExpressCard/54 Ports</td>
<td>Three Mini PCIe Express slots</td>
</tr>
<tr>
<td>Mini PCI Express UWB</td>
<td>Three Mini PCIe Express slots</td>
</tr>
<tr>
<td>Ethernet</td>
<td>802.11a/b/g/n wireless, Mini PCI e adapter, Intel 8257LM Gigabit Network Connection (Bozeman), PHY, PCIe x1</td>
</tr>
<tr>
<td>Audio support</td>
<td>Intel High Definition (HD) Audio, Conexant CX20461 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Finger print reader on palm rest, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-year battery - EasyServ™/™ depot repair service / service upgrades available</td>
</tr>
</tbody>
</table>

### Preloaded operating system

- Some: Genuine Windows Vista Business 32 |
- Some: Genuine Windows Vista Business 64 |
- Some: Genuine Windows Vista Ultimate 32 |

### Other features:

- Power button (front) |
- Speaker (2 watt) |
- Security key lock, security keyhole, and optional security screw |
- Analog DB-15 monitor port |
- Microphone in and headphone out |
- Second battery charger |
- Requires 65 or 90 watt AC adapter |
- 1.6 lb; 730g |

### EPEAT Silver rating (other models)

- Climate Savers® 65-watt (GMA graphics) AC Adapter |
- ROHS-compliant |

### See footnotes for important warranty information

- Intel Centrino® 2 with vPro™ technology |
- US models announced September 23, 2008, October 14, 2008, or March 24, 2009 |
- US models withdrawn December 2009

### Lenovo support:

- 24 hour x 7 day toll-free support during the warranty period
- via 800-426-7378

### See footnotes for important warranty information
**ThinkPad® X200 Tablet (7449) - TopSeller (XP with Win 7 License)**

**Type-model** | **Processor** | **Ghz Memory** | **Widescreen display** | **Disk Sata GB rpm** | **Optical in UltraBase** | **ThinkPad X200 UltraBase** | **Mini Pcie 802.11 wireless** | **Mini Pcie Mini Pcie Bat- tery or Turbo cells Preload** | **Avail date**
---|---|---|---|---|---|---|---|---|---
7449-43U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13GHz 12GB 12.1" WXGA Entry | Cam 160G 5400 | DVD/RW UltraBase | None | Intel 5100™ WWAN upg | None | 4 XP Tab Oct 09 | 
7449-45U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13GHz 12GB 12.1" WXGA Entry | Cam 160G 7200 DVD/RW UltraBase | Intel 5100™ WWAN upg | None | 8 XP Tab Oct 09 | 
7449-47U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13GHz 12GB 12.1" WXGA Entry | Cam 160G 7200 DVD/RW UltraBase | AT&T™ | None | 8 XP Tab Oct 09 | 
7449-49U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13GHz 12GB 12.1" WXGA MultiTouch | Cam 160G 7200 DVD/RW UltraBase | Intel 5100™ WWAN upg | None | 8 XP Tab Oct 09 | 
7449-4AU SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13GHz 12GB 12.1" WXGA MultiTouch | Cam 160G 7200 DVD/RW UltraBase | Intel 5100™ WWAN upg | None | 8 XP Tab Oct 09 | 

**Footnotes:**

1. These small and medium business (SMB) models are part of the US TopSeller™ Program.


3. Preloaded applications™ (only some listed)
   - Rescue and Recovery™
   - Access Connections™
   - Client Security Solution™
   - ThinkVantage Productivity Center
   - ThinkVantage System Update
   - FingerPrint Software
   - Lenovo System Toolbox
   - ThinkPad Utilities (Power Manager and Presentation Director)
   - Adobe® Reader™
   - Windows Live™ Toolbar
   - Microsoft® Office 2007 Trial (60-day)
   - Roxio® Creator® Business Edition
   - DVD/RW
   - Roxio MyDVD™
   - Corel® WinDVD™
   - Dual core Pentium® M 755 or Centrino® 2 with vPro™ technology

5. Supports ThinkVantage™ technologies
   - Provides desktop expansion and cable management for X200 Series
   - Easily connects to the bottom of the X200 Series for traveling
   - Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
     - DVD Burner Ultrabay Slim
     - Serial ATA Hard Drive
     - Bay Adapter III
   - 32GB Disk 7200 rpm 343N3141

6. Other features:
   - Power button (front)
   - Speaker and microphones (left & right)
   - Security key lock, security keyhole, and optional security screw
   - Analog DB-9 monitor port
   - DisplayPort (supports dual-link DVI-D via cable 45J7915)
   - Security key lock
   - Security keyhole
   - Second battery charger
   - Requires 65 or 90 watt AC adapter
   - 1.6 lb; 730g

7. Other features:
   - Power button (front)
   - Speaker and microphones (left & right)
   - Security key lock, security keyhole, and optional security screw
   - Analog DB-9 monitor port
   - DisplayPort (supports single-link DVI-D via cable 45J7915)
   - Four USB 2.0 ports
   - Gigabit ethernet port
   - Microphone in and headphone out
   - Second battery charger
   - Requires 65 or 90 watt AC adapter
   - 1.6 lb; 730g

8. 65-watt (GMA graphics) AC Adapter
   - Climate Savers® certified
   - EPEAT® Gold rating
   - ENERGY STAR® 5.0-compliant
   - ROHS-compliant
   - International Warranty Service 17
   - 24 hour x 7 day 10-hour toll-free support during the warranty period 11 via 800-426-7378

9. See footnotes for important warranty information

10. IBM's processor. 

11. Centrino® 2 with vPro™ technology

12. Lenovo® US models announced October 22, 2009

13. Lenovo® US models withdrawn effective June 2006

(CML2.3-3) June 2010
ThinkPad X200 Tablet (7449) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Widescreen display</th>
<th>Cam</th>
<th>Disk SATA GB rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe UWB or Turbo cells</th>
<th>Preload date</th>
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</thead>
<tbody>
<tr>
<td>7449-44U SL9600</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2.13</td>
<td>2GB 12.1&quot; WXGA Entry</td>
<td>160G 5400</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 5100® WWAN upg</td>
<td>None 4 Pro 32 Oct 09</td>
<td></td>
</tr>
<tr>
<td>7449-4KU SL9600</td>
<td>Intel® Core™ 2 Duo processor SL9600</td>
<td>2.13</td>
<td>2GB 12.1&quot; WXGA MultiTouch</td>
<td>160G 7200</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>None 8 Pro 32 Oct 09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

- Processor
  - Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

- Memory
  - 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available

- SATA DVD±RW Ultrabay Slim SATA disk
  - None
  - Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
  - 160GB (5400 or 7200 rpm) / SATA 1.5Gbps, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

- Widescreen display
  - Entry: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, frameless screen
  - MultiTouch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support pen & two-finger touch)
  - WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotateable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

- Camera
  - Some: camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)

- Graphics controller
  - Intel® Graphics Media Accelerator 4500MHD (GM45MHD), in GS45
  - External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz (VGA)

- Keyboard
  - Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
  - TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

- Touchpad
  - None
  - ThinkLight™

- Dimensions
  - without X200 UltraBase; 4-cell: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33mm
  - without X200 UltraBase; 8-cell: 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 26.5-33mm

- Weight
  - 4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

- Case
  - Color: black; Material: magnesium alloy

- Battery - type
  - Lithium Ion 4-cell or 8-cell

- Battery life (h)
  - 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

- Chipset
  - Mobile Intel GS45 Express Chipset (Graphics Media Controller Hub), Intel® GM965/1000-M/950-M/500-M/496-Chipset Hub (SATA 3.0Gbps, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

- Media slice
  - Optional: X200 UltraBase media slice (see right side)
  - 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
  - One slot (ExpressCard/34, ExpressCard/54)

- Ports
  - Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

- Mini PCI Express
  - Intel® 5100™ WWAN upg
  - 2G Turbo UWB
  - None
  - Modern
  - None

- Bluetooth™
  - 2.1 wireless, LED indicator

- Ethernet
  - Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

- Audio support
  - High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

- Security
  - Power-on password, hard disk password, supervisor password, security keyhole
  - Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

- Security chip
  - Fingerprint reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip

- Limited warranty
  - 3-years/1-yr battery - EasyServTM™ depot repair service / service upgrades available

- 1GB PC3-8500 DDR3 L/H SODIMM 55Y3706
  - ThinkPad Battery 12 (4-cell)
  - 2GB PC3-8500 DDR3 L/H SODIMM 55Y3707
  - ThinkPad Battery 12++ (8-cell)

- Other accessories on O-X200-T sheet

- 1.6 lb; 730g

- 65-watt (GMA graphics) AC Adapter

- Energy Star® 5.0-compliant

- ROHS-compliant

- International Warranty Service

- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

© Lenovo (CML2-4) June 2010

US models announced October 22, 2009

US models withdrawn effective June 2010
ThinkPad X200 Tablet (7450) - withdrawn

Type-model Processor GHz Memory Widescreen display CCFL or LED Cam Disk SATA Feature in UltraBase ThinkPad X200 UltraBase Mini PCIe 802.11 wireless Mini PCIe WWAN Mini PCIe UWB or Turbo Workhorse (W) Global (G) Availability
7450-2CU SL9400 1.86 2GB 12.1" WXGA 160G 5400 Optional Opt Intel 5100 WWAN upg Bus 32 W G Opt 08
7450-2DR SL9400 1.86 2GB 12.1" WXGA Cam 160G 5400 Optional Opt Intel 5100 WWAN upg 2G Turbo Yes Bus 32 W G Oct 08
7450-EDUSL9400 1.86 2GB 12.1" WXGA Touch LED 160G 7200 Optional Opt Intel 5100 WWAN upg 160G 7200 Optional Opt Yes Bus 32 W G Oct 08
7450-8HU SL9400 1.86 2GB 12.1" WXGA LED Cam 160G 7200 Optional Opt Intel 5100 WWAN upg Yes Bus 32 W G Oct 08
7450-9GU SL9400 1.86 2GB 12.1" WXGA Cam 160G 7200 Optional Opt Intel 5300 WWAN upg Yes XP Tab W G Oct 08
7450-EVUSL9300 SL9400 1.86 2GB 12.1" WXGA Cam 160G 7200 Optional Opt Intel 5300 WWAN upg Yes XP Tab W G Oct 08
7450-FDUSL9400 1.86 2GB 12.1" WXGA Touch Cam 160G 7200 Optional Opt Intel 5100 WWAN upg Yes Bus 32 W G Opt 08

Positioning Processor
Convertible tablet ultraportable; one spindle
Intel® Core™ 2 Duo processor SL9300 or SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory
2GB standard/4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets:
Not-Italics: standard memory in 1 socket; 1 socket available

SATA DVD: RW Ultrabay Slim SATA disk
None
Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)

Widescreen display
Some: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 190 nits, 16:10 aspect ratio, 500:1 contrast ratio, FPS, grayscale screen

Weight
Some: without X200 UltraBase: 4-cell: 11.6" x 9" x 1.3," 295mm x 228mm x 26.5-33mm without X200 UltraBase: 8-cell: 11.6" x 10.1" x 1.3," 295mm x 257mm x 26.5-33mm

Battery - type Battery - life
4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

Chipset
Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC)

Media slice Multicard Reader
Optional: X200 UltraBase media slice (see right side)
5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

Ports
One slot (ExpressCard/34, ExpressCard/54), 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

Mini PCI Express Intel 5100 WWAN upg
Three Mini PCI Express slots

Intel 5300 WWAN upg
Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

2G Turbo UWB
Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless UWB upgradable, requires Verizons (43R9152)

Modern
56K V.92 modem

Ethernet Intel AMT
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

Security
Trusteed Platform Module, integrated in ICH9M, TCG 1.2-compliant

Secure
Fingerprint reader
Some: Fingerprint reader on right base of display / used in tablet or notebook mode

Security chip
Some: 2-way swipe sensor, LED indicator / supports the security chip

Limited warranty
3-years/1-year battery - EasyServ® depot repair service / service upgrades available

5-year limited warranty for parts and labor
65-watt (GMA graphics) AC Adapter
Climate Savers® certified
EPEAT® Gold rating (LED models)
EPEAT Silver rating (other models)
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service 24 hour x 7 day x 365 toll-free support during the warranty period via 800-426-7378

Other features:
Power button (front)
Stereo speakers (2 watt)
Security key lock, security keyhole, and optional security screw
Analog DB-15 monitor port
DisplayPort (supports single-link DVI-D via cable 45J7915)
Four USB 2.0 ports
Gigabit ethernet port
Microphone in and headphone out
Second battery charger
Requires 65 or 90 watt AC adapter
1.6 lb; 730g

Preloaded operating system
- Some: Genuine Windows Vista Business 32

 Vista models: Vista Premium logo

Preloaded applications
- All OSes; only some listed:
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint reader)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®

Supports ThinkVantage® technologies
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214
  - Serial ATA Hard Drive Bay Adapter I 43N3412
  - Other features:
    - Power button (front)
    - Stereo speakers (2 watt)
    - Security key lock, security keyhole, and optional security screw
    - Analog DB-15 monitor port
    - DisplayPort (supports single-link DVI-D via cable 45J7915)
    - Four USB 2.0 ports
    - Gigabit ethernet port
    - Microphone in and headphone out
    - Second battery charger
    - Requires 65 or 90 watt AC adapter
    - 1.6 lb; 730g

ThinkPad X200 UltraBase
- Preloaded operating system
- Preloaded applications
- Supports ThinkVantage® technologies

See footnotes for important warranty information

US models announced September 23, 2008
US models withdrawn effective September 2009, December 2009, or June 2010

● Lenovo (CML1-2) June 2010

Intel Centrino® 2 with vPro™ technology

FingerPrint Software (fingerprint reader)
<table>
<thead>
<tr>
<th>ThinkPad® X200 Tablet (7450) - December 2008 - withdrawn</th>
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### Specifications

<table>
<thead>
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<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Disk</th>
<th>Optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Battery</th>
<th>Preload</th>
<th>Availability</th>
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<tbody>
<tr>
<td>7450-8UU SL9400.1.86 2GB 12.1&quot; WXGA</td>
<td>LED Cam 80GB SSD DVD±RW UltraBase</td>
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<td>LED Cam 128GB SSD</td>
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<td>Yes</td>
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<td>LED Cam 128GB SSD</td>
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<td>Yes</td>
<td>8 Bus 32 Jan 09</td>
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</table>

**Preloaded operating system**
- Genuine Windows® Vista Business 32
- Vista Premium logo

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center and optional security software
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presenter Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

**Supports ThinkVantage technologies**
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 250GB IDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

**Other features:**
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optical drive slot
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone output
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

**56-watt (GMA graphics) AC Adapter**
- Intel Centrino® 2 with vPro™ technology
## ThinkPad X200 Tablet (7450) - April 2009 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Widescreen display CCFL or LED Cam</th>
<th>Disk SATA rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB</th>
<th>Blue/tery Finger cells</th>
<th>Battery - type</th>
<th>Case color</th>
<th>Weight2</th>
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<td>2GB</td>
<td>12.1&quot; WXGA LED Cam 160GB 7200</td>
<td>DVD:RW UltraBase</td>
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<td>2GB</td>
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<td>¥Intel 5100</td>
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<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB 5400</td>
<td>¥Intel 5100</td>
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</tbody>
</table>

### Positioning
- Convertible tablet ultraportable; one spindle

### Processor
- Intel® Core™  2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory
- 2GB std / 4GB max / PCI-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available

### SATA DVD:RW UltraBay Slim Disk
- Some: DVD burner (43N3214), SATA 1.5GB/s, removable from X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8761)
- Some: 12GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8\" wide, 8mm high
- Some: 160GB (5400 or 7200 rpm) / SATA 1.5Gb/s, 2.5\" wide, 9.5mm high, Active Protection System™
- All: removable, upgradable, Shock Mounted Hard Drive, supports second disk in optional or std X200 UltraBase

### Widescreen display
- Some: 12.1\" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 190 nits, 16:10 aspect ratio, 500:1 contrast ratio, FFS, frameless screen
- Some: 12.1\" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 285 nits, 16:10 aspect ratio, 500:1 contrast ratio, IP65, frameless screen
- All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, ***write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)***

### Camera
- Some: camera on top of screen, 1.3-megapixel, fixed focus

### Graphics controller
- Intel® Graphics Media Accelerator 4500MHD (4500MHD), in G4S5 Graphics - external External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz

### Keyboard
- Full-size, 99-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- Touch pad None
- TouchThink™ None

### Dimensions¹
- **without X200 UltraBase**: 4-cell: 11.6\" x 9\" x 1.1\"; 295mm x 228mm x 26.5-33mm without X200 UltraBase, 8-cell: 11.6\" x 10.1\" x 1.1\"; 295mm x 257mm x 26.5-33mm

### Weight²
- 4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

### Case color
- Black

### Case material
- Magnesium alloy

### Battery - type
- Lithium Ion 8-cell
- 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

### Battery - life³
- **4-cell**: 6-8 hours, **8-cell**: 3-4 hours

### Chipset
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub),ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

### Media slice
- **Some: X200 UltraBase media slice** (see right side)

### Multicard reader
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

### ExpressCard/54 Ports
- One slot (ExpressCard34, ExpressCard54)
- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

### Mini PCI Express WWAN upg
- Three Mini PCI Express slots
- **11a/b/g wireless**, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

### Secure Socket
- **Some: Wireless WAN**: Linux, WinCE,.Truecrypt, Secure crypt, Intel® Active Management Technology (iAMT), LED indicator

### Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

### Finger print reader
- Finger print reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip

### Limited warranty² ³
- **3-years**/1-year battery - EasyServ™ / depot repair service / service upgrades² available

### See footnotes for important warranty information

### Preloading operating system³
- Genuine Windows® Vista Business 32
- Vista Premium logo

### Preloaded applications³
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Finger print Software
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Supports ThinkVantage® technologies

#### ThinkPad X200 UltraBase™
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 250GB IDE 7200 rpm 43N3410
    - 320GB IDE 7200 rpm 43N3411

### Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security feature
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### 65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- EPAT Silver rating (other models)
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

### International Warranty Service¹
- 24 hour x 7 day 24 hour toll-free support during the warranty period via 800-426-7378

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US models withdrawn April 28, 2009

US models withdrawn effective June 2010
ThinkPad® X200 Tablet (7450) - September 2009 - withdrawn

**Positioning**
- Convertible tablet ultraportable; one spindle
- Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 8MB L2 cache

**Memory**
- 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- Non-Italics: standard memory in 1 socket; 1 socket available

**SATA DVD:RW Ultrabay Slim**
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase
- 160GB (5400 or 7200 rpm), 250GB (5400 rpm) or 320GB (7200 rpm)
- Some: AT&T vPro model
- Intel 82567LM Gigabit Network Connection (Boazman), PHY , PCIe x1

**WideScreen display**
- Outdoor: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflection layers, IPS
- MultiTouch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support pen & two-finger touch)
- All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotational dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power, with slide-lock, reset, rotation, menu, all button lock)

**Camera**
- Some: camera on top of screen, 1.3-megapixel, digital zoom (range: 33 - 330cm)

**Graphics controller**
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45
- External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz

**Keyboard**
- Full-size, 99-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Dimensions**
- without X200 UltraBase: 4-cell; 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33mm
- with X200 UltraBase: 8-cell, 11.6" x 10.1" x 1-1.3", 295mm x 257mm x 26.5-33mm
- Weight:
  - 4-cell: from 3.5 lb (1.6kg)
  - 8-cell: from 3.5 lb (1.6kg)
- Color: black
- Material: magnesium alloy

**Battery - type**
- Lithium Ion 8-cell

**Battery - life**
- 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

**Chipset**
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub)
- ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, Pcie Express® 1.1, PCIE 2.3, security chip, ethernet MAC)

**Media slice**
- Some: X200 UltraBase media slice (see right side)
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)
- Cee USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**Mini PCI Express**
- Three Mini PCI Express slots
  - Some: 11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
  - Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3
  - Some: 11a/b/g/n wireless, Mini-Pcie Adapter II
- Wireless WAN upgrade
  - Some: Wireless WAN upgradable, requires Verizon® (439R9151) or AT&T® (439R9152)
  - Some: Wireless WAN, Qualcomm Gobi 1000 chipset, Mini PCIe adapter, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, service contract required with Verizon
  - Some: Wireless WAN, Ericsson chipset, Mini PCIe adapter and SIM
  - GPRS/WCDMA/HSPA, GPS, service contract required with AT&T
  - 2G Turbo: None
  - UWB: None
  - Modem: 56K V.92 modem
  - Bluetooth®: None
  - Ethernet: Non-vPro model: Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1
  - vPro model: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1
  - Intel® Active Management Technology (AMT)
  - Audio support
    - High Definition (HD) Audio, Conexant CX20540 codec / stereos, speakers 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack
  - Power-on password, hard disk password, supervisor password, security keyhole
  - Security
  - Fingerprint reader: Fingerprint reader on right base of display / used in tablet or notebook mode
  - 2-way swipe sensor, LED indicator / supports the security chip

**Limited warranty**
- 3-years/1-yi battery - depot repair service / service upgrades available

---

**Preloaded operating system**
- Some: Genuine Windows Vista Business 32

**Preloaded applications**
- (all OSes; only some listed)
  - Rescue and Recovery
  - Access Connections
  - Client Security Solution
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - McAfee VirusScan Plus with SiteAdvisor (30 days of virus definition updates)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Roxio Creator® Business Edition (DVD:RW)

**Supports ThinkVantage® technologies**
- ThinkPad X200 UltraBase
  - Provides desktop expansion and cable management for X200 Series
  - Easily connects to the bottom of the X200 Series for traveling
  - Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
    - DVD Burner Ultrabay Slim
    - 43N3214
    - Serial ATA Hard Drive
    - Bay Adapter III 43N3412
    - Disks supported (some):
      - 250GB FDE 7200 rpm 43N3410
      - 320GB Disk 7200 rpm 43N3411

**Other features:**
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7815)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone output
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

**ENERGY STAR Gold rating**
- Sustains ENERGY STAR® 5.0-compliant ROHS-compliant
- International Warranty Service 24 hour x 7 day x 7 toll-free support during the warranty period via 800-426-7378

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See footnotes for important warranty information

- Intel Centrino® 2 with vPro™ technology
- Lenovo (CML2-1) June 2010

US models announced September 15, 2009
US models withdrawn effective June 2010
### ThinkPad X200 Tablet (7450) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1.0666GHz system bus, and 6MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 4GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; non-italic: standard memory in 1 socket; 1 socket available</td>
</tr>
<tr>
<td>SATA/DVD:RW</td>
<td>Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>160GB (7200 rpm) / SATA 1.5gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>12.1&quot; (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support pen &amp; two-finger touch), WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)</td>
</tr>
<tr>
<td>Graphics controller</td>
<td>Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45</td>
</tr>
<tr>
<td>Graphics - external</td>
<td>External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @75Hz (VGA)</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys</td>
</tr>
<tr>
<td>TrackPoint™</td>
<td>TrackPoint™ pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar™, magnifying glass</td>
</tr>
<tr>
<td>Touch pad</td>
<td>None</td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>None</td>
</tr>
<tr>
<td>Dimensions</td>
<td>11.6” x 9” x 1.3-3.37; 295mm x 228mm x 26.5-33mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4-cell: 3-3.5 lb (1.6kg); 8-cell: 3-3.8 lb (1.76kg)</td>
</tr>
<tr>
<td>Case</td>
<td>Color: blue; Material: magnesium alloy</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 8-cell</td>
</tr>
<tr>
<td>Battery - life</td>
<td>4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gbs, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC)</td>
</tr>
<tr>
<td>Media slice</td>
<td>Optional: X200 UltraBase media slice (see right side)</td>
</tr>
<tr>
<td>Multicard Reader</td>
<td>5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard/54)</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Three Mini PCI Express slots 11a/b/g/n wireless, Mini PCI Express adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless WAN upgradable, requires Visiton™ (43R9151) or AT&amp;T™ (43R9152) Some: None</td>
</tr>
<tr>
<td>Intel® 5300™ WWAN upg</td>
<td>None</td>
</tr>
<tr>
<td>Modem</td>
<td>56K V.92 modem</td>
</tr>
<tr>
<td>Bluetooth™</td>
<td>Bluetooth 2.1 wireless, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1</td>
</tr>
<tr>
<td>Intel® AMT</td>
<td>Intel Active Management Technology (iAMT)</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security key hole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Fingerprint reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-yr battery - EasyServ™, 10-yr depot repair service / service upgrades available</td>
</tr>
</tbody>
</table>

---

**ThinkPad X200 Tablet™**

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5GBs 43N3214
  - Serial ATA Hard Drive Bay Adapter III 43N3412
- Disks supported (some):
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

**Other features:**
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter
- Climate Savers™ certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service17
- 24 hour x 7 day18 toll-free support during the warranty period via 800-426-7378

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**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton® Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader
- Skype™ for Windows

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(CML2-5) June 2010

See footnotes for important warranty information
ThinkPad X200 Tablet (7453) - Onsite - withdrawn

Positioning
- Convertible tablet up to 360° rotation; one spindle
- Intel® Core™ i2 Duo processor SL9400 or SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory
- 2GB std / 4GB max / PC3-8500 DDR3 L-H SODIMM 55Y3707
- 1GB PC3-8500 DDR3 L-H SODIMM 55Y3706

Camera
- Camera on top of screen, 1.3-megapixel, fixed focus

Preloaded operating system
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

Preloaded applications
- (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®
  - Microsoft® Office 2007 Trial (60-day)

Supports ThinkVantage™ technologies
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB FDE 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

ThinkPad X200 Tablet Base
- 65-watt (GMA graphics) AC Adapter
- Climate Savers certified
- EPEAT Gold rating (LED models)
- EPEAT Silver rating (other models)
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service (all OSes; only some listed)

See footnotes for important warranty information

Lenovo
US model announced September 23, 2008 or April 28, 2009
US models withdrawn effective December 2009 or June 2010
(CML1-3) June 2010
## ThinkPad X200 Tablet (7453) - Onsite (September 2009) - withdrawn

### Technical Specifications (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz Memory</th>
<th>Widescreen display</th>
<th>CCFL or LED</th>
<th>Disk SATA rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe WWAN</th>
<th>Workhorse (W)</th>
<th>Global (G) Availability date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7453-6BU SL9600 2.13 2GB 12.1&quot; WXGA MultiTouchLED</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache</td>
<td>160G 7200 Optional</td>
<td>160G 7200 Optional</td>
<td>11b/g/n wireless</td>
<td>Yes</td>
<td>Bus 32 G P Sep 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7453-6AU SL9600 2.13 2GB 12.1&quot; WXGA MultiTouchLED</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache</td>
<td>160G 7200 Optional</td>
<td>160G 7200 Optional</td>
<td>11b/g/n wireless</td>
<td>Yes</td>
<td>Bus 32 G P Sep 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7453-6BU SL9600 2.13 2GB 12.1&quot; WXGA Outdoor LED</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache</td>
<td>160G 7200 Optional</td>
<td>160G 7200 Optional</td>
<td>11b/g/n wireless</td>
<td>Yes</td>
<td>Bus 32 G P Sep 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Preloaded operating system
- Some: Genuine Windows Vista Business

### Preloaded applications†
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®

**Supports ThinkVantage® technologies**

**ThinkPad X200 UltraBase™**
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214
  - Serial ATA Hard Drive
  - Bay Adapter II 34N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headset out
- Second battery charger
- Requires 6S or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMACs) AC Adapter Climate Savers® certified EPEAT® Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service™
- 24 hour x 7 day 7/24 toll-free support during the warranty period† via 800-426-7378

### Limited warranty†
- 3-years/1-year battery, limited onsite service†, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades‡ available

### See footnotes for important warranty information

- † Intel Centrino® 2 with vPro™ technology
- ‡ Lenovo (CML2-2) June 2010

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#### Additional Details

- **Positioning Processor**: Convertible tablet upgradable; one spindle Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache

- **Memory**:
  - 2GB std / 4GB max / PC3-8500 1066MHz non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
  - Non-italics: standard memory in 1 socket; 1 socket available

- **SATA DVD:RW Ultrabay Slim SATA disk**: None

- **Widescreen display**:
  - Outdoor: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflective layers, IPS
  - MultiTouch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support pen & two-finger touch)

- **Case Dimensions**: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33mm

- **Camera**:
  - Some: camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)

- **Graphics controller**: Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45 Graphics - external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @ 75Hz

- **Keyboard Trackpoint**: Full-size, 9-key, ThinkVantage button, spill-resistant, mm Fn keys

- **Touch pad**: ThinkLight™

- **Dimensions**:
  - without X200 UltraBase: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33mm
  - without X200 UltraBase: 8-cell
  - 11.6" x 1.0" x 1-1.3"; 295mm x 257mm x 26.5-33mm

- **Weight**:
  - Case: 3.5 lb (1.6kg); Battery: 3.88 lb (1.76kg)

- **Battery - type**: Lithium Ion 8-cell

- **Chipset**: Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, 1.1, PCI 2.3, security chip, ethernet MAC)

- **Media slice Multicard Reader ExpressCard/54**: Optional: X200 UltraBase media slice (see right side)

- **Ports**: Three Mini PCI Express slots

- **Mini PCI Express Intel 5300**: None

- **UWB**: None

- **Modern**: 56K V.92 modem

- **Bluetooth**: Bluetooth 2.1 wireless, LED indicator

- **Ethernet**: Non-vPro model: Intel® 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1

- **Intel MTM**: Intel Active Management Technology (AMT)

- **Audio support**: Intel® Centrino® Wireless-N 3160

- **Security features**:
  - Power-on password, hard disk password, supervisor password, security keyhole

- **Security key**: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

- **Fingerprint reader**: Fingerprint reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip

- **Limited warranty**: 3-years/1-year battery, limited onsite service†, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades‡ available

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© Lenovo
ThinkPad X200 Tablet (7453) - Onsite (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Widescreen display</th>
<th>Disk Sata GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini Pcie WWAN</th>
<th>Mini Pcie UWB or Turbo cell</th>
<th>Workhorse (W)</th>
<th>Global (G) Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>7453-DDU SL9600</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>None</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1&quot; WXGA MultiTouch 160G 7200</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 5300™ WWAN upg</td>
<td>None</td>
<td>8 Pro 64</td>
</tr>
</tbody>
</table>

- This model is part of the Global Models Plus program with limited onsite service 3-year limited warranty

**Processor**
- Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**
- 2GB std / 4GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 socket; 1 socket available

**SATA DVD: RW Ultrabay Slim SATA disk**
- None
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 160GB (7200 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

**Widescreen display**
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support touch & two-finger touch), WideView (170° viewing), anti-reflective and glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

**Camera**
- Camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)

**Graphics controller**
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

**Keyboard**
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

**TrackPoint™**
- TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

**Touch pad**
- None

**ThinkLight™**
- None

**Dimensions**
- without X200 UltraBase: 4-cell: 11.6" x 9" x 1.1-1.3"; 295mm x 228mm x 26.5-33mm
- without X200 UltraBase: 8-cell: 11.6" x 10.1" x 1.1-1.3"; 295mm x 257mm x 26.5-33mm
- 4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

**Weight**
- Color: black; Material: magnesium alloy

**Case**
- Lithium Ion 8-cell
- 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

**Chipset**
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub)
-ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

**Media slice**
- Optional: X200 UltraBase media slice (see right side)

**Multicard Reader ExpressCard/54 Ports**
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0, external monitor (VGA DB-15) (maximum external resolution: 2048x1536@75Hz (VGA))

**Mini PCI Express Intel 5300™ WWAN upg**
- Three Mini PCl Express slots
- 11a/b/g/n wireless¹, Mini PClie adapter, Intel Ultimate N WiFi Link 5300, 3x3
- Wireless WAN upgradeable, requires Verizon® (43R9151) or AT&T® (43R9152)
- None

**Modem**
- 56K V.92 modem

**Bluetooth™**
- Bluetooth 2.1 wireless, LED indicator

**Ethernet**
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**
- Intel Active Management Technology (IATM)

**Audio support**
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, integrated inICH9M, TCG 1.2-compliant

**Fingerprint reader**
- Fingerprint reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip

**Limited warranty**
- 3-years/1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time (service upgrades available)

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Skype® for Windows
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (DVD-ROM)

- Supports ThinkVantage® technologies

**ThinkPad X200 UltraBase™**
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III

**Disks supported (some):**
- 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411

**Other features:**
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb, 730g

**ENERGY STAR® Gold rating**
- 65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**See footnotes for important warranty information**

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(CML2-6) June 2010

US model announced October 22, 2009

US model withdrawn effective June 2010
| Type-model | Processor | GHz | Memory | Display | Cam | Disk | Optical | ThinkPad | Mini PCIe | Mini PCIe | Mini PCIe | Battery | Workhorse (W) | Availability |
|------------|-----------|-----|--------|---------|------|------|---------|----------|-----------|-----------|-----------|----------|---------|-----------|-------------|
| 7450-2DU  | SL9400    | 1.86| 2GB    | 12.1" WXGA | Cam | none | Optional | Optional | Intel 5100 | None      | Yes       | 8 bit     | None      | 32 W      | Oct 06 |
| 7450-2PU  | SL9400    | 1.86| 2GB    | 12.1" WXGA | Cam | none | Optional | Optional | Intel 5100 | None      | Yes       | 8 bit     | None      | 32 W      | Feb 09 |

- These models have an EasyServ™ depot repair service 3-year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Positioning
- Convertible tablet ultraportable; one spindle

Processor
- Intel® Core™ 2 Duo processor SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory
- 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 socket; 1 socket available

SATA DVD:RW
- UltraBay Slim

SATA disk
- Supports UltraBay Slim devices in optional or standard X200 UltraBase (43R8781)
- 160GB@ (5400 or 7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

Display
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 190 nits, 16:10 aspect ratio, 500:1 contrast ratio, FFS, frameless screen, WideView (170° viewing), anti-reflection and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

Camera
- Camera on top of screen, 1.3-megapixel, fixed focus

Graphics controller
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45
- External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @ 75hz

Keyboard
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

Touchpad
- TouchPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- None

ThinkLight™
- None

Dimensions²
- Without X200 UltraBase: 4-cell: 11.6" x 9" x 1.3", 295mm x 228mm x 26.5-33mm
- Without X200 UltraBase: 8-cell: 11.6" x 10.1" x 1.3", 295mm x 257mm x 26.5-33mm

Weight²
- 4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

Case
- Color: black; Material: magnesium alloy

Battery - type
- Lithium Ion

Battery - life
- 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

Chipset
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub),ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC)

Media slice
- Optional: X200 UltraBase media slice (see right side)

Multicard Reader ExpressCard slot
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
- Three ExpressCard/ExpressCard/moe

Mini PCI Express
- Intel 5100 WWAN upg
- WiFi Link 5100, 1x2 (Shirley Peak)
- Wireless WAN upgradable, requires Verizon™ (43R9151) or AT&T™ (43R9152)

Modem
- 3G USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

Other features:
- 85-watt (GMA graphics) AC Adapter
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

Limited warranty³
- 3-years/1-year battery - EasyServ™ depot repair service / service upgrades⁴ available

See footnotes for important warranty information

© Lenovo (CML-1-4) June 2010

US models announced September 23, 2008, February 17, 2009, or March 24, 2009
US models withdrawn effective September 2009, December 2009, or June 2010

Preloaded operating system²
- Some: Genuine Windows® Vista® Business 32
- Some: Genuine Windows Vista Ultimate 32
- Vista Premium logo

Preloaded applications³ (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)

Supports ThinkVantage™ technologies
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214
  - Serial ATA Hard Drive
- Bay Adapter III 43N3412

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

ENERGY STAR® 5.0-compliant
- Climate Savers® certified
- EPEAT Silver rating

24 hour x 7 day¹⁰ toll-free support during the warranty period¹⁷ via 800-426-7378

lenovo.com/psref
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Widescreen display</th>
<th>Cam</th>
<th>Disk SATA GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN upg</th>
<th>Mini PCIe UWB or Turbo Fing</th>
<th>Battery cells</th>
<th>Workhorse (W) Global (G)</th>
<th>Availability</th>
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<tr>
<td>7453-2DU SL9400</td>
<td>1.86</td>
<td>2GB 12.1&quot; WXGA Cam</td>
<td>160G 5400</td>
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<td>Optional</td>
<td>Intel 5100n</td>
<td>WWAN upg</td>
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<td>Yes</td>
<td>8 U3 32</td>
<td>W</td>
<td>Feb 09</td>
<td></td>
</tr>
</tbody>
</table>

- These models have a limited onsite service® 3-year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools operated exclusively for educational purposes by qualified school and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Preloaded operating system®
- Some: Genuine Windows® Vista™ Business 32
- Some: Genuine Windows Vista Ultimate 32
- Vista Premium logo

Preloaded applications® (all OSes; only some listed)
- Restore and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®

ThinkPad X200 UltraBase™
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter Climate Savers® certified EPEAT Silver rating
ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service 17
24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
- Intel Centrino® 2 with vPro™ technology
- US model announced September 23, 2008 or February 17, 2009
- US model withdrawn effective June 2010

© Lenovo (CML-1-5) June 2010
## ThinkPad® X200 Tablet Accessories - withdrawn

### Memory
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM (2-Pack) 57Y4386

### Storage and removable storage
- 160GB Disk SATA 1.5Gb/s (5400 rpm) 41N5692
- 160GB Disk SATA 1.5Gb/s (7200 rpm) 41N5737
- 250GB Disk SATA 1.5Gb/s (5400 rpm) 43R8152
- 250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410
- 320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403
- 500GB Disk SATA 1.5Gb/s (5400 rpm) 43N3420
- 500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423

**Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 45N9412 in X200 UltraBase (43R8781)**

### USB
- 128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406
- 256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover) 43N3423
- USB 2.0 Essential Memory Key 4GB 45J7904
- USB 2.0 Essential Memory Key 8GB 45J7905
- USB 2.0 Ultra Secure Memory Key 1GB 45J9515
- USB 2.0 Ultra Secure Memory Key 2GB 45J9516
- USB 2.0 Ultra Secure Memory Key 4GB 45J9517
- USB 2.0 Secure Secure 320GB Hard Disk 45K1689
- USB 2.0 Portable 320GB Hard Disk 45K1688
- USB 2.0 Portable 500GB Hard Disk 45K1690
- USB 2.0 Portable Secure 160GB Hard Disk 43R2018
- USB 2.0 Portable Secure 320GB Hard Disk 43R2019
- eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400
- USB 2.0 Portable DVD Burner 43N3264

### Wireless WAN (Mini PCI Express)
- Verizon® WWAN UNDP Broadband Mini PCI Card 43R9151
- AT&T® WWAN HSPA Broadband Mini PCI Card 43R9152

### ThinkPad Expansion
- Lenovo® Essential Notebook Stand 45J2992
- USB Port Replicator with Digital Video 45K1610
- ThinkPad X200 UltraBase 43R8781

### Keyboard
- TrackPoint Cap Collection 73P2698
- Preferred Pro USB Keyboard 73P5220
- Enhanced Performance USB Keyboard 73P2620
- Ultrasonic Wireless Keyboard and Mouse 57Y4700
- ThinkPad USB Keyboard with TrackPoint 55Y9003
- Lenovo® USB Fingerprint Keyboard 73P4730
- Lenovo USB Smartcard Keyboard 51J0155

### Mouse
- Lenovo Mini Optical Mouse - Black (USB) 55Y9308
- Lenovo Mini Optical Mouse - White (USB) 55Y9309
- Lenovo Optical Mouse (USB) 6P4069
- Lenovo Laser Mouse (USB) 41U3074
- ThinkPad USB Laser Mouse 57Y4635
- Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405
- ThinkPad Travel Mouse (USB, Optical) 31P7410
- ThinkPad Bluetooth Laser Mouse 41U5008

### Security
- Kensington® MicroSaver® Cable Lock 73P2582
- Kensington Twin Head Cable Lock 45K1620
- USB Gemplus GemPC Smart Card Reader 41N3040
- ExpressCard Gemplus Smart Card Reader 41N3043

### Multimedia
- ThinkPad In-Ear Headphones 57Y4488

### Tablet
- ThinkPad Digitizer Pen 41U3143
- ThinkPad Tablet Tether (3-pack) 41U4820

### Batteries
- ThinkPad Battery 12 (4-cell) 43R9256
- ThinkPad Battery 12++ (8-cell) 43R9257

More information at www.lenovo.com/alladaycomputing

### Carrying Cases
- ThinkPad X200 Tablet Sleeve 43R9115
- Up to 13.3" wide screen models:
  - ThinkPad Ultrarprotable Case 41U5062
  - Lenovo Business Messenger Case 51J0475
  - Lenovo Performance BackPack 41U5254
  - ThinkPad Business Topload Case 43R2476
  - ThinkPad Deluxe Expander Case 43R2478
  - ThinkPad Executive Leather Case 43R2480

More information at www.lenovopowertips.com

### Monitors
- Lenovo L2230x Wide 21.5" Monitor 545H81
- ThinkVision® L1711p 17" Monitor 504H82
- ThinkVision L1900p 19" Monitor 443H83
- ThinkVision L1951p Wide 19" Monitor 244H86
- ThinkVision L2250p Wide 22" Monitor 257H86
- ThinkVision L2251p Wide 22" Monitor 257H86
- ThinkVision L2251x Wide 22" Monitor 257H86
- ThinkVision L2440p Wide 24" Monitor 442H82

More information at www.lenovoluxurycases.com

### Monitor Accessories
- Lenovo USB-to-DVI Monitor Adapter 45K5296
- Lenovo DisplayPort to VGA Monitor Cable 57Y4393
- Lenovo USB-to-DVI Monitor Adapter 45J7915
- ThinkPad USB Soundbar 40Y7659
- ThinkPad USB Soundbar 40Y7659
- ThinkPad USB Soundbar 40Y7659

More information at www.lenovo.com/support/monitoraccessories

### Batteries
- ThinkPad Battery 12 (4-cell) 43R9256
- ThinkPad Battery 12++ (8-cell) 43R9257

More information at www.lenovo.com/support/batteries

### Security
- Kensington® MicroSaver® Cable Lock 73P2582
- Kensington Twin Head Cable Lock 45K1620
- USB Gemplus GemPC Smart Card Reader 41N3040
- ExpressCard Gemplus Smart Card Reader 41N3043

More information at www.lenovo.com/support/security

### Other accessories
- ThinkPad In-Ear Headphones 57Y4488

More information at www.lenovocom/accessories

### Accessories Guide
- www.lenovo.com/support/accessories
- www.lenovo.com/support/notebookaccessories
- www.lenovo.com/support/security
- www.lenovoluxurycases.com
- www.lenovopowertips.com
- www.lenovocom/alldaycomputing

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(O-X200-T) November 2010
### ThinkPad X201 TopSeller (XP with Win 7 License) - withdrawn

#### Technical Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo</th>
<th>Max turbo</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
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<th>ThinkPad X200 UltraBase</th>
<th>PCIe Mini Card</th>
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<td>i5-540M</td>
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<td>5400</td>
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<td>Intel 6200® WWAN upg</td>
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<td>XP Pro</td>
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<td>DVD:RW UltraBase</td>
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<td>vPro</td>
<td>XP Pro</td>
<td>Mar 10</td>
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<td>Intel 6200</td>
<td>vPro</td>
<td>XP Pro</td>
<td>Apr 10</td>
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</tr>
</tbody>
</table>

#### Positioning
- Processor: An ultraportable for the executive on the move; one spindle
- Memory: 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.

#### Memory
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- Intel Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache.

#### SATA DVD:RW Ultrabay Slim
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 250GB (5400 rpm) / 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

#### Widescreen display
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display.
- Maximum external resolution: 2560x1600 (DP)@60Hz: 2048x1536 (VGA)@75Hz

#### Keyboard
- Full-size, 99-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®11, magnifying glass
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions
- without UltraBase: 46.6/6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
- without UltraBase: 8-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 233.8mm x 20.7-35.3mm

#### Weight
- Case: from 2.89 lb (1.31kg); 2-cell: from 3.18 lb (1.60kg)

#### Battery
- Type: Lithium Ion 6-cell
- Life: 6-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr

#### Chipset
- Mobile Intel® QM57 Express Chipset
- Media slice: Some: ThinkPad X200 UltraBase media slice (see right side)
- Multicard reader: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- ExpressCard/54: One slot (ExpressCard/34, ExpressCard/54)
- Port/Port: Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)
- PCIe Mini Card: Two PCI Express Mini Card slots
- Intel 6200®: 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- WWAN upg: Some: Wireless WAN upgradable
- Carrier: Some: AT&T, contract required with service provider

#### Modem
- 56K V.92® modem

#### Bluetooth
- Bluetooth 2.1 wireless, LED indicator

#### Ethernet
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

#### Audio support
- High Definition (HD) Audio, Conexant 20585 codec / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

#### Security
- Power-on password, hard disk password, security keyhole
- Security chip: Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

#### Limited warranty
- 1-year - depot repair service / service upgrades available

---

**Notes:**
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- Intel Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache.

**Other features:**
- Power button (front)
- Stereo speakers (2 watts)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out

**Preloaded operating system:** Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications:** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update

**Supports ThinkVantage™ technologies**

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See footnotes for important warranty information

US models announced March 2 or April 6, 2010

US models withdrawn effective October 2010

(MOC3-7) October 2010

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service17

24 hour x 7 day toll-free support during the warranty period12

via 800-426-7378
### ThinkPad X201 (3249) - TopSeller (Windows 7) - withdrawn

See footnotes for important warranty information

US models announced February 23, March 2, April 20, or September 28, 2010

US models withdrawn effective August 2011

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<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Secure Boot</th>
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<td>Intel Core™ i5 processor IS-540M, or IS-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache</td>
<td>2.53 3.06</td>
<td>4GB</td>
<td>12.1&quot; WXGA</td>
<td>250G</td>
<td>4500</td>
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<tr>
<td>3249-C2U i5-520M</td>
<td>Intel Core™ i5 processor IS-520M, or IS-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache</td>
<td>2.53 3.06</td>
<td>4GB</td>
<td>12.1&quot; WXGA</td>
<td>2.0M</td>
<td>600G</td>
<td>7200</td>
<td>0.5</td>
<td>2MB</td>
<td>6200</td>
<td>WWAN upg</td>
<td>Intel 802.11n</td>
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<td>4GB</td>
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<td>600G</td>
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<td>6200</td>
<td>WWAN upg</td>
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<td>22 Mar 10</td>
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<td>Intel Core™ i5 processor IS-560M, or IS-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache</td>
<td>2.66 3.20</td>
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<td>12.1&quot; WXGA</td>
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<td>Intel 802.11n</td>
<td>22 Mar 10</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded Operating System
- Some: Genuine Windows 7™ Professional 32
- Some: Genuine Windows 7™ Professional 64

### Preloaded Applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Norton™ Internet Security 2009
- Adobe Reader™
- Adobe Flash Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

### Chipset
Mobile Intel QM57 Express Chipset

### Media slice
- Some: ThinkPad X200 UltraBase media slice (see right side)

### Multicard reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

### ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

### Ports
Three USB 2.0 (one powered), external monitor support (VGA DB-15), modem (RU-11), ethernet (RU-45)

### PCIe Mini Card
- Intel 6200™ (only some)
- Intel Centrino™ Advanced-N + WiMAX

### WWAN upg
- Gobi™ 2000
- Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPS, contract required with service provider

### Carrier
- Some: AT&T or Verizon™, contract required with service provider

### Modem
56K V.92™ modem

### Bluetooth™
Bluetooth 2.1 wireless, LED indicator

### Ethernet
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

### Audio
Intel Active Management Technology (IAME)

### Security
Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
Trusted Platform Module, TCG 1.2-compliant

### Biometric reader
UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
1-year - depot repair service / service upgrades available

- 24 hour x 7 day toll-free support during the warranty period

Supports ThinkVantage technologies

- 65-watt AC Adapter
- EPEAT Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

International Warranty Service

© Lenovo

MOC3-1 August 2011
### ThinkPad X201 (3249) - TopSeller (Windows 7) - Jan 2011 - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Intel vPro</th>
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<td>Intel 1000</td>
<td>No</td>
<td>Pro 64</td>
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</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

| Positioning Processor | An ultraportable for the executive on the move; one spindle
|-----------------------|--------------------------------------------------
| Memory                | 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available
| SATA DVD±RW Ultrabay Slim | Option for ThinkPad X200 UltraBase
| SATA disk             | 160GB(7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive. Active Protection System™, supports second disk in opt or std X200 UltraBase
| Widescreen display Camera | 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
| Camera                | Camera on top of screen, 2.0-megapixel, fixed focus
| Integrated graphics   | Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display;
|                       | Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz
| Keyboard              | Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
| TrackPoint®           | TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®12, magnifying glass
| Touchpad              | UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
| ThinkLight™           | Illuminates the keyboard to improve visibility in low-light conditions
| Dimensions³           | 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
| Weight²               | 2.66lbs (1.2kg) / 2.89lbs (1.3kg) / 3.18lbs (1.5kg) / 3.52lbs (1.1kg)
| Case                  | Lithium Ion 6-cell
| Battery - type        | 4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr
| Battery - life²       | up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr
| Chipset               | Mobile Intel QM57 Express Chipset
| Media slice           | Option: ThinkPad X200 UltraBase media slice (see right side)
| Multicard reader      | 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
| ExpressCard/54        | One slot (ExpressCard34, ExpressCard54)
| Ports                 | Three USB 2.0 (one powered), external monitor (VGA DB-15),
|                       | modem (PU-11), ethernet (RU-46)
| PCIe Mini Card        | Two PCI Express Mini Card slots
| Intel 1000            | 11b/g/n wireless®, PCIe Mini Card, Intel Centrino® Wireless-N 1000, 1x2
| WWAN upg              | Wireless WAN upgradable
| Modern                | 56K V.92® modem
| Bluetooth®            | None
| Ethernet              | Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
| Intel AMT             | None
| Audio support         | High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
| Security              | Power-on password, hard disk password, supervisor password, security keyhole
| Security chip         | Trusted Platform Module, TCG 1.2-compliant
| Fingerprint reader    | None
| Limited warranty²     | 1-year - depot repair service / service upgrades² available

See footnotes for important warranty information
US model announced January 11, 2011
US model withdrawn effective August 2011

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Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

Supports ThinkVantage® technologies
- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
### ThinkPad X201 (3626) - Windows 7 - withdrawn

#### Personal Systems Reference (PSREF)

| Type-model | Processor | Base Memory (GB) | Max Memory (GB) | SATA Disk (GB) | Optical Drive | ThinkPad X200 | ThinkPad X200 Card | ThinkPad UltraBase | ThinkPad UltraBase Card | Finger print reader | Preloaded operating system | Preloaded applications |
|------------|-----------|------------------|-----------------|----------------|---------------|---------------|---------------|-------------------|----------------------|---------------------|-------------------|-----------------------|------------------------|
| 3626-R3U  | i5-540M   | 2.53            | 3.06            | 12.1" WXGA     | 320G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | 30 days of virus definitions | Adobe Reader      |
| 3626-F2U  | i5-540M   | 2.53            | 3.06            | 12.1" WXGA     | 320G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Adobe Reader Player   | Windows Vista        |
| 3626-F6U  | i5-540M   | 2.53            | 3.06            | 12.1" WXGA     | 320G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Adobe Reader Player   | Internet Security    |
| 3626-F8U  | i5-540M   | 2.53            | 3.06            | 12.1" WXGA     | 320G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-HVU  | i5-540M   | 2.53            | 3.06            | 12.1" WXGA     | 320G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F9U  | i5-540M   | 2.53            | 3.06            | 12.1" WXGA     | 320G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-FAU  | i5-540M   | 2.53            | 3.06            | 12.1" WXGA     | 320G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-FBU  | i5-540M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F7U  | i5-540M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F6U  | i5-540M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F5U  | i5-520M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F4U  | i5-520M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F3U  | i5-540M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F2U  | i5-540M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F1U  | i5-540M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |
| 3626-F0U  | i5-540M   | 2.40            | 2.93            | 2GB            | 250G          | Intel 6200   | upg            | Blue              | 6 vPro              | Blue                | Internet Security     | Microsoft Office      |

**Positioning Processor**
- An ultraportable for the executive on the move; one spindle
- Intel® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology and 3MB cache

**Memory**
- 2GB, 3GB, or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- **Italics:** standard memory in both sockets; no sockets available
- **Non-italics:** standard memory in 1 socket; 1 socket available

**SATA DVD±RW Ultrabay Slim**
- SATA disk
  - **Some:** DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase
  - **Some:** 128GB® Solid State Drive (SSD) / SATA 3.Gb/s, 1.8", 8mm high
  - **Some:** 160GB (7200 rpm), 250GB (5400 rpm), or 320GB (5400 rpm or 7200 rpm) / SATA 3.Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
  - **All:** removable, upgradable, shock mounted storage, 2nd disk in optional or standard X200 UltraBase

**Widescreen display**
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Integrated graphics**
- Intel HD Graphics in processor
- external monitor supports analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

**Keyboard**
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- Ultraview™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- without UltraBase: 46-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
- without UltraBase: 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 233.8mm x 20.7-35.3mm

**Weight**
- 4-cell: from 2.89 lb (1.31kg); 6-cell: from 3.18 lb (1.44kg); 9-cell: from 3.52 lb (1.60kg)

**Battery**
- Lithium Ion 4-cell, 6-cell, or 9-cell
- 4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr

**Chipset**
- Mobile Intel QM57 Express Chipset

**Media slice**
- Some: ThinkPad X200 UltraBase media slice (see right side)
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**Multicard reader**
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)

**PCIe Mini Card**
- Two PCI Express Mini Card slots
  - Intel 6200®
  - Intel 6300®
  - W-WAN upg
  - Gobi™ 2000

**ExpressCard/54 ports**
- Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

**Carrier modem**
- 3G/3.75G models: Verizon®, contract required with service provider
- 56K V.92 modems
- Bluetooth®

**Ethernet**
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Audio support**
- Intel Active Management Technology (I AM T)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TOG 1.2-compliant

**Fingerprint reader**
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-year battery - depot repair service / service upgrades available
- US models announced February 23, April 6, April 20, or September 28, 2010
- US models withdrawn effective June 2010 or August 2011

*See footnotes for important warranty information
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(MOC3-3) August 2011*
### ThinkPad X201 (3626) - Education (Windows 7) - withdrawn

| Type-model | Processor | Max Turbo (GHz) | Memory | Disk | Optical | ThinkPad X200 | PCIe Mini Card | PCIe Mini Card | Blue/ Fling | Intel vPro | Preload | Availability |
|------------|-----------|----------------|--------|------|---------|--------------|---------------|---------------|-------------|------------|---------|---------|--------------|
| 3626-N2U i5-540M | 2.53 | 3.06 | 2GB | 12.1" WXGA | 2.0M | 250G | 5400 | Optional | Optional | Intel 6200™ WWAN upg | Yes | vPro | Pro 32 | Mar 10 |

- This model has a depot repair service 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use by qualified students and teachers.

#### Positioning
- Processor: An ultraportable for the executive on the move; one spindle DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

#### Memory
- **SATA DVD±RW Ultrabay Slim SATA disk**
  - 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity; DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

#### Preloaded operating system
- **ThinkPad X200 UltraBase**: 1.5Gbps / 4Gbps / 8Gbps
- **Preloaded applications**: (only some listed)
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Supports ThinkVantage technologies

#### Widescreen display
- **Camera**: Camera on top of screen, 2.0-megapixel, fixed focus

#### Integrated graphics
- **Intel HD Graphics** in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display

#### Keyboard
- **Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys**

#### Preloaded software
- **Microsoft Office 2010 Product Key Ready (O10PKR)**
- **Microsoft Office OneNote**
- **Rescue and Recovery**
- **EPEAT Gold rating**
- **ENERGY STAR**

#### Media slice
- **Option: ThinkPad X200 UltraBase media slice**

#### Multicard reader
- **ExpressCard/54 (see right side)**

#### Ports
- **Two PCI Express Mini Card slots**
- **Two PCI Express Mini Card slots**
- **IEEE 802.11a/b/g/n wireless**, **PCMCIA Card**
- **Ethernet**: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- **Audio**: Intel Active Management Technology (AMT)
- **Device**: Intel Active Protection System

#### TrackPoint
- **Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys**

#### Chipset
- **Mobile Intel QM7 Chipset**

#### Other features:
- **Power button (front)**
- **Stereo speakers (2 watt)**
- **Security key lock, security keyhole, and optional security screw**
- **Analog DB-15 monitor port**
- **DisplayPort (supports single-link DVI-D via cable 45J7915)**
- **Four USB 2.0 ports**
- **Gigabit ethernet port**
- **Microphone in and headphone out**
- **Second battery charger**
- **Requires 65 or 90 watt AC adapter**
- **1.6 lb; 730g**

### Limited warranty
- **3-years/1-year battery - depot repair service / service upgrades available**

See footnotes for important warranty information

US model announced February 23, 2010
US models withdrawn effective April 2011

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### ThinkPad X201 (3680) - Onsite (Windows 7) - withdrawn

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<th>Wide-screen display</th>
<th>Disk type</th>
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<th>ThinkPad X200</th>
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<th>PCIe Mini Card</th>
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<td>2.93</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>SATA 320GB</td>
<td>7200</td>
<td>upgradable Intel 6200™</td>
<td>Yes</td>
<td>6</td>
<td>vPro</td>
<td>Professional 32</td>
<td>Apr 10</td>
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<tr>
<td>3680-PLU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
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<td>12.1&quot; WXGA</td>
<td>SATA 320GB</td>
<td>7200</td>
<td>upgradable Intel 6200™</td>
<td>Yes</td>
<td>6</td>
<td>vPro</td>
<td>Professional 32</td>
<td>Apr 10</td>
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<td>2.93</td>
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<td>7200</td>
<td>upgradable Intel 6200™</td>
<td>Yes</td>
<td>9</td>
<td>vPro</td>
<td>Professional 64</td>
<td>Apr 10</td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service &ndash; 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

### Positioning Processor
An upportable for the executive on the move; one spindle Intel Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory
2GB or 4GB std / 8GB max² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; 

*Italics:* standard memory in both sockets; no sockets available; 

*Non-italics:* standard memory in 1 socket; 1 socket available

### SATA DVD±RW UltraBay Slim

*Some:* DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase

(*Some:* Supports UltraBay Slim devices in optional or standard X200 UltraBase (43R871), 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

### Widescreen XGA Display Camera
12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio, 

*Some:* camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display.

### Keyboard

**TrackPoint®**

Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

**TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass UltraNav™,** wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

**without UltraBase:** 46/4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm

**without UltraBase:** 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 233.8mm x 20.7-35.3mm

**Weight** 4-cell: from 2.89 lb (1.31kg); 6-cell: from 3.18 lb (1.44kg); 9-cell: from 3.52 lb (1.60kg)

**Color:** black; **Material:** magnesium alloy

### Battery - type

Lithium ion 4-cell, 6-cell, or 9-cell

**4-cell:** up to 4.3 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr

### Chipset

Mobile Intel NM57 Express Chipset

### Media slice

Some: ThinkPad X200 UltraBase media slice (see right side)

### Multicard reader

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

### ExpressCard/54

One slot (ExpressCard/34, ExpressCard/54)

### Ports

Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)

### PCle Mini Card

Two PCI Express Mini Card slots

**Some:** 11a/b/g/n wireless™, PCle Mini Card, Intel Centrino® Advanced-N 6200, 2x2

**Some:** 11a/b/g/n wireless, PCle Mini Card, Intel Centrino Ultimate-N 6300, 3x3

### WWAN upg

**Some:** Wireless WAN upgradable

**Modem:** 56K V.92 modem

**Some:** Bluetooth 2.1 wireless, LED indicator

### Ethernet

Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

### Intel AMT

Intel Active Management Technology (AMT)

### Audio support

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up down, mute buttons / digital microphone, microphone input jack, headphone jack

### Security

Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

Trusted Platform Module, TCG 1.2-compliant

### FingerPrint reader

Some: UPEX FingerPrint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

3-years/1-year battery, limited onsite service³⁸, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades¹² available

---

### Preloaded operating system¹⁰

- **Some:** Genuine Windows 7
- **Some:** Genuine Windows 7 Professional 64

### Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

---

See footnotes for important warranty information

US models announced February 23, April 6, or April 20, 2010

US models withdrawn effective August 2011

(MOC3-4) August 2011

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¹⁰ Preloaded operating system

¹¹ Preloaded applications

³⁸ Limited warranty
ThinkPad X201 (3680) - Education (Onsite) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

| Type-model | Processor | Max turbo (GHz) | Base (GHz) | Memory | Camera | Disk | Optical | ThinkPad | PCIe | PCIe | Blue/ | Intel | Preload | Avail date |
|------------|-----------|----------------|------------|--------|--------|------|---------|----------|------|------| Fing/| vPro | Pro | date |
| 3680-N2U  | i5-540M  | 2.53 | 3.06 | 2GB | 12.1" WXGA | 2.0M | 250G | 5400 | Optional | Optional | Intel 6200 | WWAN upg | Yes | vPro | Pro 32 | Mar 10 |

- This model has a limited onsite service³ 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Preloaded operating system²⁰
- Genuine Windows 7 Professional 32

Preloaded applications¹⁴ (only some listed)
- Education software
- Microsoft Office OneNote 2007 (and CD)
- Adobe Digital School Collection
- Rescue and Recovery™
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage™ technologies

ThinkPad X20 UltraBase™
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II
  - Sata 1.5G/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

International Warranty Service¹⁷ 24 hour x 7 day²⁴ toll-free support during the warranty period¹⁷ via 800-426-7378

See footnotes for important warranty information
US model announced February 23, 2010
US model withdrawn effective April 2011

© Lenovo (MOC3-6) April 2011
### ThinkPad X201i (3249) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>3249-J2U</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
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<td>250G</td>
<td>5400 rpm</td>
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<td>Optional</td>
<td>Intel 1000</td>
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<td>No</td>
<td>Pro 32 Mar 10</td>
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<td>160G</td>
<td>7200 rpm</td>
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<td>Optional</td>
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<td>7200 rpm</td>
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<td>i3-390M</td>
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<td>160G</td>
<td>7200 rpm</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>No</td>
<td>Pro 64 Jan 11</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

#### Positioning
- Processor: An ultra-compact for the executive on the move; one spindle drive, DMI (Direct Memory Interface), integrated standard DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

#### Memory
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 slot available

#### SATA DVD±RW Ultrabay Slim SATA disk
- Option for ThinkPad X200 UltraBase
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB (7200 rpm) or 250GB (5400 rpm) / SATA 3,0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

#### Widescreen display Camera
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
- Camera: None

#### Integrated graphics
- Intel HD Graphics, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536 (VGA) @75Hz

#### Keyboard
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

#### TrackPoint
- TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

#### Touchpad
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch mouse

#### Dimensions
- without UltraBase: 4/6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
- 11.6" x 8.2" x 0.8-1.4"; 295mm x 210mm x 203.8mm

#### Weight
- 4-cell: from 2.89 lb (1.31kg); 6-cell: from 3.18 lb (1.44kg); 9-cell: from 3.52 lb (1.60kg)

#### Battery - life
- 4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr

#### Chipset
- Mobile Intel QM57 Express Chipset

#### Media slice
- Option: ThinkPad X200 UltraBase media slice (see right side)

#### Multicard/ExpressCard/54 Ports
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)

#### PCIe Mini Card
- Two PCI Express Mini Card slots
- 11b/g/n wireless®, PCIe Mini Card, Intel Centrino® Wireless-N 1000, 1x2

#### WWAN upg
- Wireless WAN upgradable

#### Modem
- 56K V.92 modem

#### Bluetooth™
- None

#### Ethernet
- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

#### Intel AMT
- None

#### Audio support
- High Definition (HD) Audio, Conexant 20685 code / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

#### Security
- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip
- Trusted Platform Module, TCG 1.2-compliant

#### Fingerprint reader
- None

#### Limited warranty
- 1-year - depot repair service / service upgrades available

See footnotes for important warranty information

US models announced February 23, April 20, or July 6, 2010, or January 11, 2011

US models withdrawn effective July or August 2011

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(MOC3i-1) August 2011
### ThinkPad X201s (5143) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>PCIe Mini Card</th>
<th>PCIe Card WWAN</th>
<th>Battery cells</th>
<th>Intel vPro</th>
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<td>2.13</td>
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<td>4GB</td>
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<td>Optional</td>
<td>Optional</td>
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<td>None</td>
<td>Yes</td>
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<td>Pro 32</td>
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<td>5143-4KU</td>
<td>i5-520UM</td>
<td>1.06</td>
<td>1.86</td>
<td>4GB</td>
<td>12.1&quot; WXGA+</td>
<td>SATA</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 6200</td>
<td>None</td>
<td>Yes</td>
<td>6</td>
<td>vPro</td>
<td>Pro 32</td>
</tr>
</tbody>
</table>

- Compared to the X201, the X201s has lighter weight, low voltage processors, and roll cage in display cover.
- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These models have a depot repair service 3-year limited warranty.
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR).

| Positioning Processor | An ultraportable for the executive on the move; one spindle

Intel® Core™ i5 processor i5-520UM with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache or Intel Core i7 processor i7-640LM with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

| Memory | 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Standard memory in both sockets; no sockets available

| SATA DVD(s): RW Ultrabay Slim | Option for ThinkPad X200 UltraBase

| Ultrabay Slim SATA disk | Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 320GB (7200 rpm) / SATA 3,0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second hard drive; Drive, Active Protection System™, supports second hard drive in opt or std X200 UltraBase

| Widescreen display | 12.1" (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

| Camera | None

| Integrated graphics | Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP) @60Hz; 2048x1536(VGA) @75Hz

| Keyboard | Full-size, 99-key, ThinkVantage button, spill-resistant, multimedia Fn keys

| TrackPoint™ Touchpad | TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

| ThinkLight™ | Illuminates the keyboard to improve visibility in low-light conditions

| Dimensions³ | without UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 20.7-28.7mm

| Weight⁴ | without UltraBase; 6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm

| Case color | without UltraBase; 8-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 20.7-35.3mm

| Case material | 4-cell: from 2.51 lb (1.1kg); 6-cell: from 2.79 lb (1.23kg); 9-cell: from 3.13 lb (1.39kg)

| Battery - type | Lithium Ion 4-cell: up to 3.7 hr; 6-cell: up to 7.4 hr; 9-cell: up to 12.3 hr

| Battery - life³⁶ | These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

| Chipset | Mobile Intel QM57 Express Chipset

| Media slice Multicard Reader ExpressCard/54 Ports | Option: ThinkPad X200 UltraBase media slice (see right side)

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

| One slot (ExpressCard/34, ExpressCard/54) | Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

| PCIe Mini Card | Two PCI Express Mini Card slots 11a/b/g/n wireless, PCIe Mini Card, Intel CentriQ® Advanced-N 6200, 2x2

| Intel 6200⁴³ | None

| Modem | 56K V.92 modem

| Bluetooth™ | Bluetooth 2.1 wireless, LED indicator

| Ethernet | Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

| Intel AMT Audio support | High Definition (HD) Audio, Conexant 20585 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphones jack

| Security | Power-on password, hard disk password, supervisor password, security keyhole

| Security chip | Trusted Platform Module, TCG 1.2-compliant

| FingerPrint reader | UPEK FingerPrint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

| Limited warranty³⁸ | 3-years/1-year battery - depot repair service / service upgrades³⁸ available

---

See footnotes for important warranty information

US models announced February 23, 2010 or May 25, 2010

US models withdrawn effective July 2010

(PEC3-2) July 2010

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## Preloaded operating system¹⁰

- Genuine Windows® 7 Professional 32

## Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies

ThinkPad X200 UltraBase™

- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3216
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 250GB IDE 7200 rpm 43N3410
    - 320GB IDE 7200 rpm 43N3411

Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Four USB 2.0 ports
- DVI-D via cable 45J7915)
- DisplayPort (supports single-link DVI-D via cable 45J7915)
### ThinkPad X201s (5397) - Windows 7 - withdrawn

**Preloaded operating system**
- Some: Genuine Windows 7 Professional
- Some: Genuine Windows 7 Professional 64

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerpad)
- Microsoft Office 2010 preloaded; purchase product key to activate

**Supports ThinkVantage® technologies**
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5 Gb/s
- Serial ATA Hard Drive
- Bay Adapter III 43N3412
- Disks supported (some):
  - 250GB FDE 7200 rpm
  - 320GB Disk 7200 rpm
- Other features:
  - Power button (front)
  - Stereo speakers (2 watt)
  - Security key lock, security keyhole, and optional security screw
  - Analog DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet port
  - Microphone in and headphone out
  - Second battery charger
  - Requires 65 or 90 watt AC adapter
  - 1.6 lb; 730g

### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Disk</th>
<th>Optical drive</th>
<th>Optical drive in UltraBase</th>
<th>UltraBase</th>
<th>PCIe Mini Card</th>
<th>PCIe Card Blue-ray</th>
<th>Battery</th>
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- **Compared to the X201, the X201s has lighter weight, low voltage processors, and roll cage in display cover**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**
### ThinkPad® X201s (5413) - Onsite (Windows 7) - withdrawn

- **Preloaded operating system**: Some: Genuine Windows® 7 Professional 32
- **US models announced**: February 23, 2010 or May 25, 2010
- **US models withdrawn effective**: July 2010

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<th>Type-model</th>
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<th>Memory</th>
<th>Widescreen display</th>
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</table>

### Related Models
- **Compared to the X201, the X201s has lighter weight, low voltage processors, and roll cage in display cover**
- **These models are part of the Global Models Plus program with limited onsite service**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Specifications
- **Processor**: Intel® Core™ i5 processor i5-520UM with dual-core.
- **Memory**: 2GB, 3GB, or 4GB std / 8GB max7 / PC3-8500 1066MHz, 2GB dual-core, Intel Core with Intel Turbo Boost, Hyper-Threading technology; 3MB cache or Intel Core i7 processor i7-640LM with dual-core.
- **Display**: WXGA+ 1280x800 color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **Keyboard**: Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- **Dimensions**: Without UltraBase: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
- **Battery**: Includes 6-cell or 9-cell Lithium Ion or 4-cell, 6-cell, or 9-cell
- **Chipset**: Mobile Intel GM57 Express Chipset
- **Media slice**: ThinkPad X200 UltraBase media slice (see right side)
- **Multicard Reader**: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- **Ports**: Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)
- **PCle Mini Card**: Two PCI Express Mini Card slots
- **Modem**: 56K V.92 modem
- **Bluetooth**: Bluetooth 2.1 wireless, LED indicator
- **Ethernet**: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- **Audio support**: High Definition (HD) Audio, Conexant 20585 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Fingerprint reader**: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
- **3-years/1-year - battery, limited onsite service**: 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available via 800-426-7378
ThinkPad® X201, X201s Accessories - withdrawn

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 ann 06/23/09

UltraBay Slim 9.5mm
Most UltraBay Slim accessories supported in ThinkPad X200 UltraBase
Serial ATA Hard Drive Bay Adapter III 43N3412 ann 06/23/09
DVD-ROM UltraBay Slim Drive II SATA 1.5Gb/s 43N3292 ann 08/03/10
DVD Burner UltraBay Slim II Drive SATA 1.5Gb/s 43N3229 ann 06/23/09

Storage and removable storage
500GB Disk SATA 3.0Gb/s (7200 rpm)41 43N3423 ann 01/07/10
USB FDD UltraBay removable drive 57Y4374
USB Flash Drive Adapter 57Y4373
USB FDD UltraBay 57Y4375
USB Zip Drive Adapter 57Y4376

Wireless WAN (Mini PCI Express)
Only X201 WHAN upgradable models:
ThinkPad Gobi™ 2000 Broadband Option 78Y1399 ann 01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option 78Y1398 ann 01/07/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
USB 2.0 Port Replicator with Digital Video 0A33942 ann 03/22/11

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
Ultraslim Wireless Keyboard and Mouse42 57Y4700 ann 09/15/09
Wireless via 2.4GHz technology using a micro-size USB receiver.
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/19/09
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/20/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 02/07/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
ExpressCard Gemplus Smart Card Reader 41N3043 ann 06/27/06

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Batteries
ThinkPad Battery 47 (4-cell) 43R9253 ann 08/05/08
ThinkPad Battery 47+ (6-cell) 43R9254 ann 08/05/08
ThinkPad Battery 47++ (9-cell) 43R9255 ann 08/05/08
ThinkPad External Battery Chargert 40Y7625 ann 09/20/05

More information at www.lenovo.com/alldaycomputing

Carrying Cases
Up to 12” widescreen models:
ThinkPad 12W Case Sleeve 51J0476 ann 08/19/08
Up to 13.3” widescreen models:
ThinkPad Ultraportable Case 41U5062 ann 05/13/08
Up to 15.6” widescreen models:
Lenovo Messenger Max 41U5253 ann 05/01/07
Lenovo Performance BackPack 41U5254 ann 01/23/07
ThinkPad Business Topload Case 43R2476 ann 05/13/08
ThinkPad Deluxe Backpack 43R2482 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17” Monitor 5047HB2 ann 10/20/09
ThinkVision L1900p 19” Monitor 4331HE1 ann 11/11/08
ThinkVision L1951p Wide 19” Monitor 2448HB6 ann 10/20/09
ThinkVision L2250p Wide 22” Monitor 2572HB6 ann 10/20/09
ThinkVision L2251p Wide 22” Monitor 2572HD6 ann 10/20/09
ThinkVision L2321x Wide 23” Monitor 4014HB6 ann 06/10/10
ThinkVision L2440p Wide 24” Monitor 4420HB2 ann 09/17/08

More information at www.lenovo.com/support/monitors

Monitor Accessories43
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable44 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-D Cable45 45J7915 ann 05/08/08
Can only be used via ThinkPad X200 UltraBase 43P8791

ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/09
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories
Purchase Lenovo accessories
www.lenovo.com/support/accessories
Product specifications on Lenovo Support
www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures
www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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(O-X201) August 2011
ThinkPad X201 Tablet (2985) - TopS (XP with Win 7 License) - withdrawn

Personal Systems Reference (PSREF)

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<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base frequency (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
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<th>Camera</th>
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*These small and medium business (SMB) models are part of the US TopSeller™ Program*

Positioning Processor

Convertable tablet ultraportable; one spindle

Intel® Core™ i7 processor i7-640LM with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

Memory

2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in 1 socket; 1 socket available

SATA DVD±RW Ultrabay Slim

Supports SATA 1.5Gb/s, removable from X200 UltraBase

Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)

SATA disk

250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System², supports second disk in opt or std X200 UltraBase

Widescreen display

Entry: 12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless

WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

Camera

Some: camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

Keyboard

Full-size, 99-key, ThinkVantage button, spill-resistant, mm Fn keys

TrackPoint

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®; magnifying glass UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

Touchpad

ThinkLight™

None

Dimensions³

without UltraBase; 4-cell: 11.6” x 9” x 1-1.3”; 295mm x 228mm x 26.5-33.3mm

without UltraBase; 8-cell: 11.6” x 10.1” x 1-1.3”; 295mm x 257mm x 26.5-33.3mm

Weight⁴

4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)

Case

Color: black; Material: magnesium alloy

Battery - type

Lithium Ion 4-cell or 8-cell

Battery - life¹⁰

4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

Chipset

Mobile Intel GM57 Express Chipset

Media slice

Some: ThinkPad X200 UltraBase media slice (see right side)

Multicard Reader

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

ExpressCard/54

One slot (ExpressCard/34, ExpressCard/54)

Ports

Four USB 2.0 ports

PClé Mini Card

Intel 6200⁰³

WWAN upg Gobi™ 2000

Two PCI Express Mini Card slots

Some: Wireless WAN upgradable

Some: Wireless LAN, Qualcomm chipset, PClé Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

Carrier

Some: AT&T®, contract required with service provider

Modem

56K V.92® modem

Bluetooth™

Bluetooth 2.1 wireless, LED indicator

Intel AMT

Intel Active Management Technology (iAMT)

Audio support

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty²⁰

3-years/1-yr battery & digitizer pen - depot repair service / service upgrades¹² available

Preloaded operating system²⁰

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections²⁰
- Client Security Solution™
- ThinkVantage Power Manager
- Presentation Director
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software
- Lenovo System Toolbox

Supports ThinkVantage® technologies

ThinkPad X200 UltraBase™

- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive
  - Bay Adapter III 43N3412
  - Disks supported (some): 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

Other features

- Power button (front)
- Stereo speakers (2 Watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Reserves 65 or 90 watt AC adapter
- 1.6 lb; 730g

ENERGY STAR® Gold rating

International Warranty Service¹⁷

24 hour x 7 day® toll-free support during the warranty period¹² via 800-426-7378

See footnotes for important warranty information

US models announced March 2, 2010

US models withdrawn effective October 2010

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(CML3-7) October 2010
ThinkPad X201 Tablet (2985) - TopSeller (Windows 7) - withdrawn

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<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera (Mega-pixel)</th>
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</table>

Positioning Processor
Convertible tablet ultraportable; one spindle
Intel® Core™ i7 processor i7-640LM with dual-core
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1606MHz),
Intel Turbo Boost, Hyper-Threading technology; 4MB cache

Memory
2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Italics: standard memory in both sockets; no sockets available;
Non-italics: standard memory in 1 socket; 1 socket available

SATA DVD:±RW

UltraBay Slim SATA disk
Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase
Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

Widescreen display
Entry: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless
Outdoor: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multi-anti-reflection layers, PVA or IPS, MultiTouch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch)
All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side right (right), rotational dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

Camera
Some: camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
Integrated

Keyboard
TrackPoint® Touchpad
ThinkLight™

Dimensions³
without UltraBase: 4-cell: 11.6" x 9" x 1-1.3": 295mm x 228mm x 26.5-33.3mm
with UltraBase: 8-cell: 11.6" x 10.1" x 1.3": 295mm x 257mm x 26.5-33.3mm

Weight⁴
Case
Battery - type
Battery - life⁵

Chipset
Mobile Intel® GM57 Express Chipset

Media slice
Multicard Reader
ExpressCard/54
Ports

PClε Mini Card
Intel® 5300™ WWAN upg
Gobi™ 2000

Carrier
Modem
Bluetooth™
Ethernet
Intel AMT
Audio support
Security chip
Security finger reader

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Lenovo SimpleTap (Multi-touch models)
- Adobe® Reader®
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVd:RW)
- Corel Brock Now™ Lenovo Edition (DVd:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVd:RW)

Supports ThinkVantage technologies
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories on right side—DVd-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292—Serial ATA Hard Drive Bay Adapter III 43N3412
- Disks supported (some): 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb, 730g

65-watt AC Adapter
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service¹⁷ 24 hour x 7 day¹⁰ toll-free support during the warranty period¹⁰ via 800-426-7378

Limited warranty¹² 3-years/1-yr battery & digitizer pen - depot repair service / service upgrades²² available

See footnotes for important warranty information

© Lenovo
US models announced February 23 or March 2, 2010
US models withdrawn effective January 2011 or June 2011

(CML3-1) June 2011
### ThinkPad X201 Tablet (2985) - TopSeller (Win 7) - April 2010 - withdrawn

#### Positioning

**Converter**
- Convertible tablet upgradable: one spindle

**Processor**
- Intel® Core™ i7 processor i7-620LM with dual-core.

**Memory**
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- *Non-Italics:* standard memory in 1 socket; 1 socket available

**SATA HDD/SSD**
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System®, supports second disk in opt or std X200 UltraBase

**Widescreen display**
- **Entry: 12.1" (308mm) WXGA (1280x800) TFT color, anti-giare, LED backlight**
  - 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless
- **Outdoor: 12.1" (308mm) WXGA (1280x800) TFT color, anti-giare, LED backlight**
  - 460 nits, 16:10 aspect ratio, 1600:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, PVA or IPS
- **MultiTouch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-giare, LED backlight**
  - 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch)
- **All:** WideView™ (170° viewing), anti-reflective and anti-giare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual-sivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

**Camera**
- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display.
- Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

**Keyboard**
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

**Touchpad**
- Touchpoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- ThinkLight™ None

**Dimensions**
- **without UltraBase, 4-cell:** 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm
- **without UltraBase, 8-cell:** 11.6" x 10.1" x 1.1-1.3"; 295mm x 257mm x 26.5-33.3mm
- **Weight:**
  - 4-cell: from 3.57 lb (1.62kg);
  - 8-cell: from 3.96 lb (1.8kg)
- **Case**
- Color: black; Material: magnesium alloy
- **Battery**
  - Lithium Ion 8-cell
  - **life:**
    - 4-cell: up to 3.5 hr;
    - 8-cell: up to 7.9 hr

**Chipset**
- Mobile Intel GM57 Express Chipset

**Media slice**
- **Some:** ThinkPad X200 UltraBase media slice (see right side)
- **Multicard Reader**
  - 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
  - One slot (ExpressCard/34, ExpressCard/54)
  - Ports
    - Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)

**PCIe Mini Card**
- **Intel 6200™ WWAN upg**
  - Two PCI Express Mini Card slots
  - 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2
  - **Some:** Wireless WAN upgradable
  - **Some:** Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/CDMA/NSPA, GPS, contract required with service provider

**Carrier**
- **Some:** Verizon®, contract required with service provider

**Modem**
- **56K V.92** modem

**Bluetooth™**
- Bluetooth 2.1 wireless, LED indicator

**Ethernet**
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Audio support**
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
- UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-yr battery & digitizer pen - depot repair service / service upgrades¹² available

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### Preloaded operating system
- **Genuine Windows 7 Professional 64**

### Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- AMD™ technologies
- *Password Manager*
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- *Sky™ for Windows*
- *Windows Live™ Toolbar*
- Microsoft Office 2010 preloaded; purchase product key to activate
- *Microsoft Research AutoCollage Touch*

### Supports ThinkVantage™ technologies
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II
  - SATA 1.5 Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 500GB Disk 7200 rpm

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### Other features:
- Power button (front)
- Stereo speakers (2 watts)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

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(CML3-8) June 2011

See footnotes for important warranty information

US models announced April 20, 2010

US models withdrawn effective January or June 2011

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### Footnotes:
- Limited warranty: 3-years/1-yr battery & digitizer pen - depot repair service / service upgrades available
- See footnotes for important warranty information
- US models announced April 20, 2010
- US models withdrawn effective January or June 2011

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<th>Memory</th>
<th>Widescreen display</th>
<th>Camera (Mega-pixel)</th>
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## ThinkPad X201 Tablet (2985) - TopSeller (Win 7) - June 2010 - withdrawn

**Personal Systems Reference (PSREF)**

### Specifications

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### Positioning

- **Converter tablet ultraportable:** one spindle
  - **Intel** Core(tm) processor i5-520UM with dual-core.
  - **Intel** Turbo Boost, Hyper-Threading technology: 3MB cache or Intel Core i5 processor i5-560M with dual-core.
  - **Intel** Direct Media Interface, integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology: 3MB cache.

### Memory

- **2GB** or 4GB/SD, 8GB max/PC/2-8500 1066MHz DDR3, non-parity, dual-channel capable, 204-pin SO-DIMM sockets: **Italics:** standard memory in both sockets; no sockets available; **Non-italics:** standard memory in 1 socket; 1 socket available.

### SATA DVD:RW

- **SATA disk:** Some: DVD burner, SATA 1.5Gbps, removable from X200 UltraBase.
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase: 160GB (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm).
- SATA 3.0Gbps, 2.5" wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System; supports second disk in opt or std X200 UltraBase.

### Widescreen display

- **Entry:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS.
- **Outdoor:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, PVA or IPS.
- **Multi Touch:** 2.1 (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch).
- **All:** WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotation of tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock).

### Camera

- **Some:** camera on top of screen, 2.0-megapixel, fixed focus.

### Integrated graphics

- **Intel HD Graphics processor:** external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP) @ 60Hz; 2048x1536(VGA) @ 75Hz.

### Keyboard

- **TrackPoint:** Touchpad: Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys.
- **ThinkLight:** TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass UltraNav, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch None.

### Dimensions

- **Width:** without UltraBase: 4-cell: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm.
- **Height:** with UltraBase: 8-cell: 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 26.5-33.3mm.
- **Depth:** 4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg).
- **Color:** black: Material: magnesium alloy.
- **Battery:** lithium Ion 4-cell or 8-cell: up to 3.5 hr; 8-cell: up to 7.9 hr.

### Chipset

- **Mobile Intel QM57 Express Chipset.**

### Media slice

- **Multicard Reader:** ExpressCard/54.
- **Ports:** 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC).
- **One slot:** (ExpressCard/34, ExpressCard/54).
- **Three USB 2.0:** (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45).
- **Two PCI Express Mini Card slots:** Intel 6200th.
- **WWAN ugg:** Wireless WAN upgradable.
- **56K V.92 modem.**
- **Bluetooh:** 2.1 wireless, LED indicator.
- **Ethernet:** Gigabit Network Connection (Hansville), PHY, PCIe x1.
- **Audio support:** High Definition (HD) Audio, Codec, 20058 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack.
- **Security:** Power-on password, hard disk password, supervisor password, security keyhole, Trusted Platform Module.
- **Location:** UPEK fingerprint reader (right base of display), used in tablet/notebook mode.
- **Limited warranty:** 3-years 1-year battery & digitizer pen - depot repair service / service upgrades available.

### Additional Features

- **Preloaded system:**
  - Some: Genuine Windows 7 Professional 32.
  - Some: Genuine Windows 7 Professional 64.

- **Preloaded applications:** (only some listed)
  - Rescue and Recovery.
  - Access Connections.
  - Password Manager.
  - ThinkVantage Power Manager.
  - ThinkVantage System Update.
  - Fingerprint Software (fingerprint models).
  - ThinkVantage Toolbox.
  - Lenovo Simple Tap (Multi-Touch models).
  - Adobe Reader.
  - Adobe Flash Player.
  - Skype.
  - Microsoft Office 2010 preloaded; purchase product key to activate.
  - Microsoft Research AutoCollage Touch.

**Supports ThinkVantage technologies:**

- Provides desktop expansion and cable management for X200 and X201 Series.
- Easily connects to the bottom of the X200 or X201 Series for traveling.
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DD-ROM Ultrabay Slim Drive II.
  - SATA 1.5Gbps.
  - Serial ATA Hard Drive.
  - Bay Adapter.
  - Disks supported (some):
    - 500GB Disk 7200 rpm.

**Other features:**

- Power button (front).
- Stereo speakers (2 watt).
- Security key lock, security keyhole, and optional security screw.
- Analog DB-15 monitor port.
- DisplayPort (supports single-link DVI-D via cable 45J7915).
- Four USB 2.0 ports.
- Gigabit ethernet port.
- Microphone in and headphone out.
- Battery charger.
- Requires 65 or 90 watt AC adapter.
- 1.6 lb; 730g.
- 65-watt AC Adapter.
- ENERGY STAR 5.0-compliant.
- ROHS-compliant.
- International Warranty Service.
- 4 hour 7 day toll-free support during the warranty period via 800-426-7378.

**Note:** See footnotes for important warranty information.

US models announced May 25 or September 28, 2010.

US models withdrawn effective January or June 2011.

(CML3-9) June 2011.
ThinkPad X201 Tablet (3093) - Windows 7 - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200</th>
<th>PCle Mini Card</th>
<th>Workhorse (W)</th>
<th>Gb (G)</th>
<th>Avail date</th>
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| 3093-RSU  | i7-620LM  | 2.00 2.80 | 2GB 12.1" WXGA Entry | 160G 5400 | Intel 6200® upg vPro Pro 32 30 Mar 10
| 3093-RSEU | i7-640LM  | 2.00 2.93 | 2GB 12.1" WXGA 2.0M | 320G 7200 | Intel 6200® upg vPro Pro 32 W G 30 Mar 10
| 3093-92U  | i7-640LM  | 2.13 2.93 | 2GB 12.1" WXGA Entry | 2.0M 320G 7200 | Intel 6200® upg vPro Pro 32 W G 30 Mar 10
| 3093-93U  | i7-640LM  | 2.13 2.93 | 4GB 12.1" WXGA Entry | 250G 5400 | Intel 6200® upg vPro Pro 32 W G 30 Mar 10
| 3093-94U  | i7-640LM  | 2.13 2.93 | 4GB 12.1" WXGA Outdoor | 2.0M 320G 7200 | Intel 6200® upg vPro Pro 32 W G 30 Mar 10
| 3093-95U  | i7-640LM  | 2.13 2.93 | 4GB 12.1" WXGA Entry | 250G 5400 | Intel 6200® upg vPro Pro 32 W G 30 Mar 10
| 3093-96U  | i7-640LM  | 2.13 2.93 | 4GB 12.1" WXGA Multi | 2.0M 320G 7200 | Intel 6200® upg vPro Pro 32 W G 30 Mar 10

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 32

### Preloaded applications
- (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - ThinkVantage Power Manager
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - ThinkVantage Toolbox
  - Lenovo SimpleTap (Multi-Touch models)
  - Adobe Reader®
  - Adobe® Reader Player
  - Skype™ for Windows
  - Microsoft Office 2010 preloaded
  - purchase product key to activate
  - Corel® WinDVD® (DVD:RW)

### Supports ThinkVantage™ technologies

**ThinkPad X201 UltraBase™**
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III 43N3412
  - Disks supported (some):
    - 500GB Disk 7200 rpm 43N3423
  - Other features:
    - Power button (front)
    - Stereo speakers (2 watts)
    - Security key lock, security keyhole, and optional security screw
    - Analog DB-15 monitor port
    - DisplayPort (supports single-link DVI-D via cable 45J97915)
    - Four USB 2.0 ports
    - Gigabit ethernet port
    - Microphone in and headphone out
    - Second battery charger
    - Requires 65 or 90 watt AC adapter
    - 1.6 lb; 730g

65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period
- via 800-426-7378

See footnotes for important warranty information
© Lenovo
(CML3-2) June 2011
US models announced February 23, 2010
US models withdrawn effective March 2010, January 2011, or June 2011
ThinkPad X201 Tablet (3093) - Windows 7 (February 2010) - withdrawn

Personal Systems Reference (PSREF)

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<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Display</th>
<th>Battery - type</th>
<th>Workhorse (W)</th>
<th>Blue/ tery</th>
<th>UltraBase</th>
<th>UltraBase</th>
<th>Card</th>
<th>Mini Card</th>
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</tbody>
</table>

- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

**Positioning Processor** Convertible tablet upgradable: one spindle Intel® Core™ i7 processor i7-620LM or i7-640LM with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

**Memory** 2GB, 3GB, or 4GB std / BGB max*/7 / PC3-8500 1066MHz DDR3, non-partly, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD±RW Ultrabay Slim** Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase

**SATA disk** Some: 128GB* Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high

Some: 100GB (7200 rpm), 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, Active Protection System™

All: removable, upgradable, Shock Managed Hard Drive, supports second disk in opt or std X200 UltraBase

**Widescreen display** Entry: 12.1” (308mm) WXGa (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless

Outdoor: 12.1” (308mm) WXGa (1280x800) TFT color, anti-glare, LED backlight, 360 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch)

All: WideView (170” viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotateable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keystone faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

**Camera** Some: camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics** Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display

**Maximal external resolution** 2560x1600 (DP)@60Hz: 2048x1536(VGA)@75Hz

**Keyboard** Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass ThinLight™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch Touchpad None

**Dimensions** without UltraBase; 4-cell: 11.6” x 9” x 1-1.3”; 295mm x 228mm x 26-35.33mm

without UltraBase; 8-cell: 11.6” x 10.1” x 1-1.3”; 295mm x 257mm x 26-35.33mm

**Weight**

**Case** Color: black; Material: magnesium alloy

**Battery - type** Lithium Ion 4-cell or 8-cell

**Battery - life** 4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

**Chipset** Mobile Intel GM75 Express Chipset

**Media slice** Some: ThinkPad X200 UltraBase media slice (see right side)

**Multicard Reader** 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**ExpressCard/54** One slot (ExpressCard/34, ExpressCard/54)

**Ports** Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)

**PCle Mini Card** Two PCI Express Mini Card slots

**Intel 6200/640/640W** WWAN upg

**Gobi™ 2000**

**Carrier** Some: ThinkPad X200 UltraBase

**Modem** 56K V.92 modem

**Bluetooth** Some: Bluetooth 2.1 wireless, LED indicator

**Intel AMT** Intel Active Management Technology (AMT)

**Audio support** High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / microphone input jack / headphone jack

**Security** Power-on password, hard disk password, supervisor password, security keyhole

**Security chip** Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader** Same: UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power on Authentication, supports the security chip

**Limited warranty** 3-years/1-yr battery & digitizer pen - depot repair service / service upgrades available

Preloaded operating system® - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows® 7 Professional 64


- **ThinkPad X201 UltraBase**

- Provides desktop expansion and cable management for X200 and X201 Series

- Easily connects to the bottom of the X200 or X201 Series for traveling

- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:

  - DVD-ROM Ultrabay Slim Drive II SATA 1.5Gb/s
  - Serial ATA Hard Drive

- Bay Adapter II

- Disks supported (some):

  - 500GB Disk 7200 rpm

Other features:

- Power button (front)

- Stereo speakers (2 watt)

- Security key lock, security keyhole, and optional security screw

- Analog DB-15 monitor port

- DisplayPort (supports single-link DVI-D via cable 45J7915)

- Four USB 2.0 ports

- Gigabit ethernet port

- Microphone in and headphone out

- Second battery charger

- Requires 65 or 90 watt AC adapter

- 1.6 lb; 730g

- 65-watt AC Adapter

- EPEAT® Gold rating

- ENERGY STAR® 5.0-compliant

- ROHS-compliant

- International Warranty Service

24 hour x 7 day x 7 toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information © Lenovo

US models announced February 23 or April 20, 2010

US models withdrawn effective March 2010, January 2011, or June 2011

(CML3-3) June 2010
ThinkPad® X201 Tablet (3093) - Windows 7 (June 2010) - withdrawn

| Type-model | Processor | Base Turbo (GHz) | Max Turbo (GHz) | Memory | Disk | Optical in UltraBase | ThinkPad X200 UltraBase | PClé Mini Card | Battery Cells | Intel vPro | Workhorse (W) | Gb (G) | Avail date |
|------------|-----------|-----------------|----------------|--------|------|----------------------|------------------------|------------------|--------------|-------------|-------------|------------|--------|-----------|
| 3093-45U   | i5-520UM  | 1.06            | 1.86           | 4GB    | Multi| Entry                | 2.0M                    | 320G            | 7200         | upg          | Yes         | vPro Pro 32| Jun 10     |
| 3093-46U   | i5-520UM  | 1.06            | 1.86           | 4GB/2G | Multi| Entry                | 2.0M                    | 320G            | 7200         | upg          | Yes         | vPro Pro 32| Jun 10     |
| 3093-47U   | i5-520UM  | 1.06            | 1.86           | 2GB    | Entry| Entry                | 2.0M                    | 320G            | 7200         | DVD±RW UltraB| Yes         | vPro Pro 32| Jun 10     |
| 3093-48U   | i5-520UM  | 1.06            | 1.86           | 2GB    | Entry| Entry                | 2.0M                    | 320G            | 7200         | upg          | Yes         | vPro Pro 32| Jun 10     |
| 3093-4A4   | i5-520UM  | 1.06            | 1.86           | 2GB    | Entry| Entry                | 2.0M                    | 320G            | 7200         | upg          | Yes         | vPro Pro 32| Jun 10     |
| 3093-4C4   | i5-520UM  | 1.06            | 1.86           | 2GB    | Entry| Entry                | 2.0M                    | 320G            | 7200         | upg          | Yes         | vPro Pro 32| Jun 10     |
| 3093-4D4   | i5-520UM  | 1.06            | 1.86           | 2GB    | Entry| Entry                | 2.0M                    | 320G            | 7200         | DVD±RW UltraB| Yes         | vPro Pro 32| Jun 10     |
| 3093-4E4   | i5-520UM  | 1.06            | 1.86           | 2GB    | Entry| Entry                | 2.0M                    | 320G            | 7200         | DVD±RW UltraB| Yes         | vPro Pro 32| Jun 10     |
| 3093-4FU   | i5-520UM  | 1.06            | 1.86           | 2GB    | Entry| Entry                | 2.0M                    | 320G            | 7200         | DVD±RW UltraB| Yes         | vPro Pro 32| Jun 10     |

Positioning
Processor
Convertible tablet upgradable; one spindle Intel® Core™ i5 processor i5-520UM with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB or 4GB std / 8GB max / PCI-C 8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available; Non-Italics: standard memory in 1 socket; 1 socket available

SATA DVD±RW
Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase

Ultrabay Slim
SATA disk
Some: 250GB (7200 rpm), 320GB (7200 rpm)

Widescreen display
Entry: 12.1" (306mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IFS, frameless

Keyboard
Full-size, 99-key, ThinkVantage button, spill-resistant, mm Fk keys

TrackPoint
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

ThinkPad
ThinkPad X200 UltraBase media slice

Dimensions
without UltraBase: 4-cell: 1.16" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm
without UltraBase: 8-cell: 1.16" x 10.1" x 1-1.3", 295mm x 257mm x 26.5-33.3mm

Weight
4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)

Battery - type
Lithium Ion 4-cell or 8-cell

Battery - life
4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

Chipset
Mobile Intel QM57 Express Chipset

Media slice
Some: ThinkPad X200 UltraBase media slice (see right side)

Multicard Reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro SD, SDHC)

ExpressCard/54
One slot (ExpressCard34, ExpressCard54)

Ports
Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RF-11), ethernet (RU-45)

PClé Mini Card
Two PCI Express Mini Card slots

Intel 6200™ WWAN upg
Some: Wireless WAN, Qualcomm chipset, PClé Mini Card, EV-DO Rev. A, 1.6Gbps 1x1, HSPA, GPS, contract required with service provider

Gobi™ 2000
Some: Wireless WAN, Qualcomm chipset, PClé Mini Card, EV-DO Rev. A, 1.6Gbps 1x1, HSPA, GPS, contract required with service provider

Carrier
Some: Verizon®, contract required with service provider

Modem
56K V.92 modem

Bluetooth
Some: Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT
Intel Active Management Technology (IATM)

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusteed Platform Module, TCG 1.2-compliant

Fingerprint reader
Some: UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty
3-years/1-yr battery & digitizer pen - depot repair service / service upgrades® available

Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox Lenovo SimpleTap (Multi-Touch models)
- Adobe® Reader™
- Adobe Flash Player
- Skype® for Windows
- Microsoft Office 2010 preloaded
- purchase product key to activate
- Corel® WinDVD® (DV±RW)

Supports ThinkVantage® technologies
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-sidable system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II
  - SATA 1.5G/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
  - 1.6 lb; 730g

ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service
EPEAT® Gold rating
5.0-compliant

See footnotes for important warranty information
© Lenovo
US models announced May 25, 2010
US models withdrawn effective January or June 2011
### ThinkPad® X201 Tablet (3093) - Windows 7 (October 2010) - withdrawn

This product has been withdrawn.

### Personal Systems Reference (PSREF)

### Type-model, Processor, and Memory

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Turbo (GHz)</th>
<th>Max Turbo (GHz)</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk SATA rpm</th>
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*These models have a depot repair service 3-year limited warranty
*These systems are Microsoft® Office 2010 Product Key Ready (010PKR)

### Positioning Processor

- **Convertible tablet upgradable: one spindle**
- **Intel® Core™ i5 processor i5-560M with dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory

- **2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity**, dual-channel capable; two 204-pin SO-DIMM sockets;
- **Non-italics:** standard memory in both sockets; no sockets available;
- **Italics:** standard memory in 1 socket; 1 socket available

### Widescreen display

- **Entry:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless WideView (70° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotateable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

### Camera

- **Integrated graphics**
- **Intel HD Graphics** in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display;
- **Maximum external resolution:** 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

### Key Features

- **Keyboard**
- **TrackPoint®:** pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- **Touchpad ThinkLight™**
- **ThinkPad® UltraBase**
- **Supports Ultrabay Slim**
- **SATA DVD:RW**

### Preloaded operating system

- **Some:** Genuine Windows® 7 Professional 32
- **Some:** Genuine Windows® 7 Professional 64

### Preloaded applications

- **Rescue and Recovery™**
- **Access Connections™**
- **Password Manager**
- **ThinkVantage Power Manager**
- **ThinkVantage System Update**
- **Fingerprint Software**
- **ThinkVantage Toolbox**
- **Skype® for Windows**
- **Microsoft Office 2010 preloaded; purchase product key to activate**

### Additional Features

- **Ports**
- **Two PCI Express Mini Card slots**
- **One Slot ExpressCard/34, ExpressCard/54**
- **Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)**

- **PCle Mini Card**
- **Two PCI Express Mini Card slots**
  - **Intel 82577LM Gigabit Network Connection (Hanksville) PHY, PCIe x1**

- **Audio support**
  - **Intel Active Management Technology (IAMT)**
  - **High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack**

- **Security**
  - **Power-on password, hard disk password, supervisor password, security keyhole, volume up, down, mute buttons / dual array mic, mic input jack, headphone jack**

- **Security Chip**
  - **Trusted Platform Module, TCG 1.2-compliant**

- **Fingerprint reader**
  - **2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip**

### Limited warranty

- **3-years/1-year battery & digitizer pen - depot repair service / service upgrades available**

---

See footnotes for important warranty information
US models announced September 28
US models withdrawn effective June 2011
The ThinkPad X201 Tablet (3093) - Education (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>Optical</th>
<th>Display</th>
<th>Camera</th>
<th>Ultrabay Slim</th>
<th>Sata disk</th>
<th>Widescreen display</th>
<th>Camera</th>
</tr>
</thead>
<tbody>
<tr>
<td>3093-N2U</td>
<td>i7-640LM</td>
<td>2.13</td>
<td>2.93</td>
<td>320G</td>
<td>7200</td>
<td>2.0M</td>
<td>302G</td>
<td>7200</td>
<td>Entry</td>
<td></td>
</tr>
<tr>
<td>3093-N3U</td>
<td>i7-640LM</td>
<td>2.13</td>
<td>2.93</td>
<td>320G</td>
<td>7200</td>
<td>2.0M</td>
<td>302G</td>
<td>7200</td>
<td>Entry</td>
<td></td>
</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty.
- These systems are certified by Microsoft® Office 2010 Product Key Ready (O10PKR).
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Preloaded operating system
- Genuine Windows 7 Professional 32

### Preloaded applications
(only some listed)
- N2U model: Education software
- Microsoft® Office OneNote® 2007 (tand CD)
- N3U model: Education software
- Microsoft® Office Ultimate 2007 Academic Edition (and CD)
- Educational software
- Adobe Digital School Collection
- Microsoft Office 2010 preloaded; purchase product key to activate

These systems are Microsoft® Office 2010 Product Key Ready (O10PKR).

### Positioning Processor
Conversion of tablet ultraportable; one spindle

- **Intel® Core™ i7 processor i7-640LM with dual-core**
- **DMI (Direct Media Interface)**, integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

### Memory
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

- **Non-italics:** standard memory in 1 socket; 1 socket available

### SATA DVD/ RW
Option for ThinkPad X200 UltraBase

- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- Sata 3.0GB/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

### Widescreen display
Entry: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, Frameless; Widescreen (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

### Camera
Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics
Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display.

- **Maximum external resolution:** 2560x1600 (DP) @ 60Hz; 2048x1536(VGA) @ 75Hz

### Keyboard
Full-size, 94-key, ThinkVantage button, spill-resistant, mm Fn keys

- **TrackPoint®** pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- **UltraNav**, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

### Dimensions

- **Height:** from 1.7 to 1.9mm (504-519)
- **Width:** 338mm (13.3")
- **Depth:** 22 mm (0.87"")

### Weight

- **Color:** black; **Material:** magnesium alloy
- **Battery - type Gravity:** Lithium Ion
- **Battery - life:** 4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

### Chipset
Mobile Intel GM96 Express Chipset

### Media slice
Option: ThinkPad X200 UltraBase media slice (see right side)

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (FU-11), ethernet (RL-45)

### Preloaded mini card

- Two PCI Express Mini Card slots
- 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2

### Power adapter

- 65-watt AC Adapter
- EPEAT® Gold rating

### Software

- **Lenovo**: lenovo.com
- **Microsoft Office OneNote® 2007**: onenote.com
- **Adobe Digital School Collection**: adobe.com
- **Microsoft Office Ultimate 2007 Academic Edition (and CD)**: office.microsoft.com
- **Microsoft software** preloaded; purchase product key to activate

### Other features

- **Power button (front)**
- **Stereo speakers (2 watt)**
- **Security key lock, security keyhole, and optional security screw**
- **Analog DB-15 monitor port**
- **DisplayPort (supports single-link DVI-D via cable 45J7915)**
- **Four USB 2.0 ports**
- **Gigabit ethernet port**
- **Microphone in and headphone out**
- **Second battery charger**
- **Requires 65 or 90 watt AC adapter**
- **1.6 lb; 730g**

### Additional features

- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

### Limited warranty

- 3-years/1-year battery & digitizer pen - depot repair service / service upgrades available

See footnotes for important warranty information

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(CML-3-5) January 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Max</th>
<th>Widescreen Display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in</th>
<th>ThinkPad X200 UltraBase</th>
<th>Battery Type</th>
<th>Workhorse (W)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3113-92U</td>
<td>i7-640LM 2.13 GHz</td>
<td>2.39 GHz</td>
<td>2GBx1</td>
<td>12.1&quot; WXGA</td>
<td>Entry</td>
<td>2.0M</td>
<td>320G</td>
<td>DVD+RW UltraB</td>
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<tr>
<td>3113-88U</td>
<td>i7-640LM 2.3 GHz</td>
<td>2.87 GHz</td>
<td>2GBx1</td>
<td>12.1&quot; WXGA</td>
<td>Entry</td>
<td>2.0M</td>
<td>540G</td>
<td>DVD+RW UltraB</td>
<td>Yes</td>
<td>8</td>
</tr>
<tr>
<td>3113-84U</td>
<td>i7-640LM 2.5 GHz</td>
<td>3.08 GHz</td>
<td>2GBx1</td>
<td>12.1&quot; WXGA</td>
<td>Entry</td>
<td>2.0M</td>
<td>540G</td>
<td>DVD+RW UltraB</td>
<td>Yes</td>
<td>8</td>
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<tr>
<td>3113-95U</td>
<td>i7-640LM 2.7 GHz</td>
<td>3.36 GHz</td>
<td>2GBx2</td>
<td>12.1&quot; WXGA</td>
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<td>320G</td>
<td>DVD+RW UltraB</td>
<td>Yes</td>
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<tr>
<td>3113-96U</td>
<td>i7-640LM 2.93 GHz</td>
<td>3.54 GHz</td>
<td>2GBx2</td>
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<td>320G</td>
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<td>3113-42U</td>
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<td>2.8 GHz</td>
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<td>600G</td>
<td>DVD+RW UltraB</td>
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<td>8</td>
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<tr>
<td>3113-32U</td>
<td>i7-620LM 2.2 GHz</td>
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<td>2.0M</td>
<td>600G</td>
<td>DVD+RW UltraB</td>
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<tr>
<td>3113-98U</td>
<td>i5-520UM 2.0 GHz</td>
<td>2.9 GHz</td>
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<td>2.0M</td>
<td>600G</td>
<td>DVD+RW UltraB</td>
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<td>i5-520UM 2.2 GHz</td>
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<td>2GBx1</td>
<td>12.1&quot; WXGA</td>
<td>Entry</td>
<td>2.0M</td>
<td>600G</td>
<td>DVD+RW UltraB</td>
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<td>4</td>
</tr>
<tr>
<td>3113-96U</td>
<td>i5-520UM 2.2 GHz</td>
<td>3.1 GHz</td>
<td>2GBx1</td>
<td>12.1&quot; WXGA</td>
<td>Multi</td>
<td>2.0M</td>
<td>600G</td>
<td>DVD+RW UltraB</td>
<td>Yes</td>
<td>8</td>
</tr>
<tr>
<td>3113-92U</td>
<td>i5-520UM 2.3 GHz</td>
<td>3.2 GHz</td>
<td>2GBx1</td>
<td>12.1&quot; WXGA</td>
<td>Outdoor</td>
<td>2.0M</td>
<td>600G</td>
<td>DVD+RW UltraB</td>
<td>Yes</td>
<td>8</td>
</tr>
<tr>
<td>3113-90U</td>
<td>i5-520UM 2.3 GHz</td>
<td>3.2 GHz</td>
<td>2GBx1</td>
<td>12.1&quot; WXGA</td>
<td>Entry</td>
<td>2.0M</td>
<td>600G</td>
<td>DVD+RW UltraB</td>
<td>Yes</td>
<td>8</td>
</tr>
</tbody>
</table>

- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Preloaded operating system

- **Some:** Genuine Windows® 7
- **Some:** Genuine Windows® 7
- **Professional 32**
- **Professional 64**

### Preloaded applications

- **Some:** Rescue and Recovery™
- **Some:** Access Connections™
- **Some:** Password Manager
- **Some:** ThinkVantage® Task Manager
- **Some:** ThinkVantage System Update
- **Some:** FingerPrint Software (fingerprint models)
- **Some:** ThinkVantage Toolbox
- **Some:** Lenovo SimpleTap (Multi-Touch models)
- **Some:** Adobe Reader®
- **Some:** Adobe Flash® Player
- **Some:** Skype™ for Windows®
- **Some:** Microsoft Office 2010 preloaded; purchase product key to activate
- **Some:** Microsoft Research AutoCollage Touch

Supports ThinkVantage® technologies

ThinkPad X200 UltraBase™

- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories:
  - DVD-ROM Ultrabay Slim Drive II
  - SATA 1.5 Gb/s
  - Serial ATA Hard Drive
- Bay Adapter III 43N3412
- Disks supported (some):
  - 500GB Disk 7200 rpm 43N3423

Other features:

- Power button (front)
- Speaker/microphone (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

**ENERGY STAR® 5.0-compliant**

**ROHS-compliant**

**International Warranty Service**

24 hour x 7 day toll-free support during the warranty period via 800-426-7378
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Dual-core</th>
<th>Disk Sata</th>
<th>Optical Drive</th>
<th>ThinkPad X200 UltraBase</th>
<th>PCIe Mini Card</th>
<th>Workhorse (W) Global (G) Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>3113-N2U</td>
<td>i7-640LM</td>
<td>2GB</td>
<td>2.13-2.93</td>
<td>320G</td>
<td>7200</td>
<td>Opt Intel 6200®</td>
<td>vPro</td>
<td>Pro 32  W  Mar 10</td>
</tr>
<tr>
<td>3113-N3U</td>
<td>i7-640LM</td>
<td>2GB</td>
<td>2.13-2.93</td>
<td>320G</td>
<td>7200</td>
<td>Opt Intel 6200®</td>
<td>vPro</td>
<td>Pro 32  W  Mar 10</td>
</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft Office 2010 Preloaded (v01P9R)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel® Core™ i7 processor i7-640LM with dual-core</td>
</tr>
<tr>
<td>Memory</td>
<td>2GB / 8GB max / PC-38500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available</td>
</tr>
<tr>
<td>SATA DVD RW</td>
<td>Option for ThinkPad X200 UltraBase</td>
</tr>
<tr>
<td>Ultrabay Slim Sata Disk</td>
<td>Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 320GB (7200 rpm) / Sata 3.0GB/s, 2.5&quot; wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System®, supports second disk in opt or std X200 UltraBase</td>
</tr>
<tr>
<td>Widescreen Display</td>
<td>Entry: 12.1&quot; (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
</tr>
<tr>
<td>Integrated Graphics</td>
<td>Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP) @60Hz: 2048x1536(VGA) @75Hz</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys</td>
</tr>
<tr>
<td>TrackPoint</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass</td>
</tr>
<tr>
<td>Touchpad</td>
<td>UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch None</td>
</tr>
<tr>
<td>Dimensions</td>
<td>without UltraBase; 4-cell: 11.6&quot; x 9&quot; x 1-1.3; 295mm x 228mm x 26.5-33.3mm</td>
</tr>
<tr>
<td>Weight</td>
<td>without UltraBase; 8-cell: 11.6&quot; x 10.1&quot; x 1-1.3; 295mm x 257mm x 26.5-33.3mm</td>
</tr>
<tr>
<td>Case</td>
<td>Color: black; Material: magnesium alloy</td>
</tr>
<tr>
<td>Battery</td>
<td>Lithium Ion 8-cell</td>
</tr>
<tr>
<td>Battery Life</td>
<td>4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel QM57 Express Chipset</td>
</tr>
<tr>
<td>Media Slice</td>
<td>Option: ThinkPad X200 UltraBase media slice (see right side)</td>
</tr>
<tr>
<td>MultiCard Reader ExpressCard/54</td>
<td>5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)</td>
</tr>
<tr>
<td>Ports</td>
<td>One slot (ExpressCard/34, ExpressCard/54)</td>
</tr>
<tr>
<td>PCIe Mini Card Intel 6200® WWAN upg</td>
<td>Two PCI Express Mini Card slots 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2</td>
</tr>
<tr>
<td>Modern</td>
<td>Wireless WAN upgradeable</td>
</tr>
<tr>
<td>Bluetooth®</td>
<td>56K V.92® modem, Bluetooth 2.1 wireless, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>802.11n, 3G WWAN, LTE (4G) Ready, 65-watt AC Adapter PEAT® Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service 24 hour during the warranty period via 800-426-7378</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security Chip</td>
<td>Trusted Platform Module, TG 1.2-compliant</td>
</tr>
<tr>
<td>FingerPrint Reader</td>
<td>UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years-1-year - battery &amp; digitizer pen, limited onsite service®, 8 am - 5 pm, Mon - Fri, excluding holidays, next business day response / service upgrades® available</td>
</tr>
</tbody>
</table>

See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective January 2011
ThinkPad® X201 Tablet Accessories - withdrawn

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 ann 06/23/09

Ultrabay Slim 9.5mm
Most Ultrabay Slim accessories supported in ThinkPad X200 UltraBase
- Serial ATA Hard Drive Bay Adapter III 43N3412 ann 06/23/09
- DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 ann 08/03/10
- DVD Burner Ultrabay Slim Drive II SATA 1.5G/s 43N3299 ann 06/23/09

Storage and removable storage
- 500GB Disk SATA 3.0Gbps (7200 rpm) 43N3423 ann 01/07/10
  - Can be used as the main HDD or with Serial ATA Hard Drive
- Bay Adapter III 43N3412 in X200 UltraBase (43R8781)
- 256GB FDE SSD SATA 3Gbps 1.82.5" cover 43N3417 ann 06/23/09

USB
- 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
- 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
- 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
- eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 ann 01/07/10

USB Fingerprint Keyboard 73P4730 ann 03/24/09

ThinkPad Expansion
- Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
- USB 2.0 Port Replicator with Digital Video 0A33942 ann 03/22/11

USB
- ThinkPad X200 UltraBase 43R8781 ann 08/05/08

Keyboard
- TrackPoint Cap Collection 73P2698 ann 12/16/03
- USB Numeric Keypad 33L3225 ann 01/01/00
- Preferred Pro USB Keyboard 73P5220 ann 06/21/05
- Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
- Ultrasonic Wireless Keyboard and Mouse 57Y4700 ann 09/15/09
  - Wireless via 2.4GHz technology using a micro-size USB receiver.
- Lenovo® USB FingerPrint Keyboard 73P4730 ann 02/22/05
- Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
- Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
- Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
- ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
- Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
- ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
- ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Security
- Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
- ExpressCard Gemplus Smart Card Reader 41N3043 ann 06/27/06

Multimedia
- ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Tablet
- ThinkPad Digitizer Pen 41U3143 ann 11/14/06
- ThinkPad Tablet Tether (3-pack) 41U4820 ann 11/14/06

Batteries
- ThinkPad Battery 12 (4-cell) 43R9256 ann 09/23/08
- ThinkPad Battery 12+ (8-cell) 43R9257 ann 09/23/08

More information at www.lenovo.com/alladaycomputing

ThinkPad 65W AC Adapter 40Y7696 ann 01/05/06
ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub 57Y4600 ann 09/07/10
90W Ultrasilim AC/DC Combo Adapter 41R4493 ann 09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultrasilim AC/DC Combo Adapter 41R4493
- iPod and iPhone Charge Tip (L10a) 41R4481 ann 12/18/07
- Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases
ThinkPad X200 Tablet
- ThinkPad X200 Tablet Sleeve 43R9115 ann 09/23/08

Up to 13.3" widescreen models:
ThinkPad Ultraportable Case 41U5062 ann 05/13/08

Up to 15.6" widescreen models:
- Lenovo Business Messenger Case 51J0475 ann 08/18/09
- Lenovo Business Messenger Max 41U5253 ann 05/11/07
- Lenovo Performance Backpack 41U5254 ann 05/01/07
- ThinkPad Business Topload Case 43R2476 ann 05/13/08
- ThinkPad Business Backpack 43R2482 ann 05/13/08
- ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
- ThinkPad Executive Leather Case 43R2480 ann 05/13/08

More information at www.lenovo.com/support/cases

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors
- ThinkVision® L1711p 17" Monitor 5047HB2 ann 10/20/09
- ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08
- ThinkVision L1951p Wide 19" Monitor 2448HB6 ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor 2572HB6 ann 10/20/09
- ThinkVision L2251x Wide 22" Monitor 2578HB6 ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor 4014HB6 ann 06/10/10
- ThinkVision L2440p Wide 24" Monitor 4420HB2 ann 09/17/08

More information at www.lenovo.com/support/monitors

Monitor Accessories"^c
- Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
- Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
- DisplayPort to Single-link DVI-D Cable 45K7915 ann 08/05/08
  - Can only be used via ThinkPad X200 UltraBase (43R8781)
- ThinkVision USB Soundbar 40Y7616 ann 08/23/05
- ThinkVision Soundbar 45K1263 ann 09/16/08
- Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 12/18/07

More information at www.lenovo.com/support/monitoraccesories

For more information on accessories:
www.lenovo.com/accessories
Purchased Lenovo accessories
www.lenovo.com/support/accessories
Product specifications on Lenovo Support
www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures
www.lenovoluxurycases.com
An Options Compatibility Configurator for Lenovo systems
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad UltraBase Series 3</th>
<th>PCIe Mini Card WLAN</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Battery Blue-tooth cells</th>
<th>Intel vPro</th>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Ready to install applications
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

### Preloaded applications
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)

### Supports ThinkVantage® technologies
**ThinkPad UltraBase Series 3**
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s
  - Serial ATA Hard Drive
- Bay Adapter III
- Disks supported (some):
  - 128GB 2.5" SSD II 0A39894
  - 500GB Disk 7200 rpm 43N4323

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb (630g)

65-watt AC Adapter

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service™
24 hour x 7 day™ toll-free support during the warranty period via 800-426-7378

See footnotes for more detailed information

US models announced March 22, 2011
US models withdrawn effective November 30, 2011

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(CMT11-1) December 2011
ThinkPad X300 (6478) - TopSeller - withdrawn

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<tr>
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<th>Mini PCIe WWAN or Turbo</th>
<th>Mini PCIe UWB wireless</th>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Thinnest (starting at .75") and lightest (starting at 2.83 lb) notebook
- Latest connectivity options including WLAN, WAN, UWB, and GPS
- Cutting edge technologies including LED backlight, Solid State Drive, and ultra thin display
- Environmentally-friendly EPEAT Gold rating

Positioning Processor
ThinkPad® Core™ 2 Duo processor SL7100 with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets.

- Non-Italics: standard memory in one socket; one socket available

Diskette drive None (use optional USB-based diskette drive)

EIDE DVD±RW Ultrathin DVD burner, 7mm high, removable from Option Bay, tray-in

Opton Bay None

Serial ATA disk 64GB® Solid State Drive (SSD) / SATA 3.0 Gb/s (system limited to SATA 1.5 Gb/s).

- 1.8" wide, 8mm high, removable, upgradable, shock mounted storage

Widescreen display 13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera Camera on top of screen, 3.3-megapixel, fixed focus, USB 2.0

Graphics Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GS965, external monitor support via analog VGA DB-15 connector, no DVI-out support

Keyboard 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)

- Touchpad

- ThinkPad® TouchPad pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

- Ultraware™, wide touch pad below keyboard, Tap Zones, scrolling regions label

- Illuminates the keyboard to improve visibility in low-light conditions

Dimensions3 3-cell: (WxDxH): 12.5" x 9.9" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm

- 6-cell: (WxDxH): 12.5" x 9.9" x 0.85-0.92"; 318mm x 231mm x 18.6-25.9mm

Weight4 Case material 

- Color: black; Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

- Lithium Polymer 3-cell or Lithium Ion 6-cell

- Supports optional O/Bay 3-cell battery (for two batteries)

- Battery: up to 4.3 hr; 6-cell: up to 6.5 hr; 6-cell and O/Bay battery: up to 10 hr

Chipset Mobile Intel GS965 Express Chipset (Graphics Memory Controller Hub): ICH8M-SFF-Enhanced I/O Controller Hub (SATA 1.5Gb/s, ATA-100 EIDE, PCI Express x1, USB, LPC bus, Bluetooth, fingerprint) / LPC bus (Atmel® 97SC3203 TPM)

ExpressCard slot None

Multimedia Reader None

Ports

- Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)

Wireless antenna Mini PCIe Express Intel 11n5

- UltraConnect™ II Antenna / on/off switch for all wireless radios

- Three Mini PCIe Express slots / 802.11 and WWAN are customer upgradable

- Some: Wireless WAN with GPS, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI adapter, Intel Wireless WiFi Link 4965AGN, MIMO 2x3 (Kedron)

- None

WWAN upg Verizon+GPS™

- Some: Wireless WAN with GPS, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI adapter, Intel WiFi Link 4965AGN, MIMO 2x3 (Kedron)

- None

WWAN upg

- None

Turbo Memory UWB

- None

Modem None

Bluetooth™ None (use optional USB-based modem)

- Bluetooth 2.0 wireless, USB 2.0 interface via ICH, LED indicator

Ethernet Intel AMT

- Gigabit ethernet on systemboard, Intel 82566ME Nineveh (PHY), PCIe x1, PXE

Audio support

- Intel Active Management Technology (IAMT)

- High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security

- Power-on password, hard disk password, supervisor password, security keyhole

- Security chip

- Fingerprint reader

Fingerprint reader

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Limited warranty2 3-years/1-year battery - EasyServ™ depot repair service / service upgrades2 available

- 1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999

- 2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000

- 128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406

- USB 2.0 Portable Secure 32GB Hard Disk Drive 43R2019

- USB 2.0 Multi-Burner Drive 41N5655

- USB 2.0 Lenovo Enhanced Port Replicator 3 43R8770

- ThinkPad Adjustable Notebook Stand 40Y7676

Other accessories on O/X300 sheet

- X300 LiPolymer Battery 3-cell 43R1965

- X300 Li-Ion Battery 6-cell 43R1967

- X300 LiPolymer Battery Bay 3-cell 43R1966

- Non-italics: 2GB PC2-5300 or Turbo

- ThinkPad Expressive Leather Case 43R2840

- ThinkPad Ultraportable Case 41U0562

- ThinkVision® L2440p Wide 24" Monitor 420H8290

See footnotes for important warranty information

* Intel Centrioon with vPro™ technology

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US models announced February 26, 2008

US models withdrawn May 2009

Preloaded operating system20

- Some: Microsoft® Windows® XP Professional with Vista™ COA


- Vista models: Vista Basic logo

Preloaded applications14 (all O/Ses)

- Rescue and Recovery™

- Access Connections™

- Client Security Solution™

- ThinkVantage Productivity Center

- System Migration Assistant

- Norton Internet Security

- (90 days of virus definitions)

- Diskeeper® Home

- PC-Doctor™ (diagnostics)

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe® Reader

- Windows Live™ Toolbar

- Windows Live Search

- Picasa from Google

- FingerPrint Software (fingerprint models)

- Microsoft Office 2007 Trial (60-day)

- Sonic RecordNow and Drive Letter Access (DVD±RW)

- Corel® WinDVD™ (DVD±RW) or Turbo

- Corel® WinDVD Creator (XP Pro DVD±RW models)

• Supports ThinkVantage® technologies

65-watt (GMA graphics) AC Adapter Next Generation ThinkPad Roll Cage (in display cover)

- ENERGY STAR® 4.0-compliant

- RoHS-compliant

- International Warranty Service17

- 24 hour x 7 day18 toll-free support during the warranty period12

- via 800-426-7378

- ThinkPlus® 22 2-year LOR24 9x5 NBD 41C1975

- ThinkPlus 3-year LOR 9x5 NBD 41C1976

- ThinkPlus 4-year LOR 9x5 NBD 41C1977

- ThinkPlus 5-year LOR 9x5 NBD 41C1978

- ThinkPlus 5-year P&L P/U Depot 41C1980

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
**ThinkPad X300 (6477) - withdrawn**

<table>
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<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
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<td>6-cell</td>
<td>Finger</td>
<td>Business 32 Feb 08</td>
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</tbody>
</table>

**Preloaded operating system**

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security
- (90 days of virus definitions)
- Diskeeper®
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Visa Ultimate model)
- Sonic RecordNow and Drive Letter Access (DVD±RW)
- Corel® WinDVD® (DVD±RW)
- Corel® WinDVD® (XP Pro DVD±RW models)

**Limited warranty**
- 3-years/1-year battery - EasyServ™ depot repair service / service upgrades available

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**Positioning**
- Thinnest (starting under .75") and lightest (starting at 2.93 lb) notebook
- Latest connectivity options including WLAN, WWAN, UWB, and GPS
- Cutting edge technologies including LED backlight, Solid State Drive, and ultradVD
- Environmentally-friendly EPEAT Gold rating

**Thinnest and lightest; two spindles**

**Intel® Core™2 Duo processor SL7100 with low voltage, dual-core,** Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**
- 2GB or 4GB std / 4GB max† / PC2-5300 DDR2 SODIMM sockets
- Standard memory in one socket; one socket available

**Diskette drive**
- None (use optional USB-based diskette drive)

**EIDE DVD±RW Option Bay**
- Ultrathin DVD burner, 7mm high, removable from Option Bay, tray-in

**Serial ATA disk**
- Lite On 8 Solid State Drive (SSD) / SATA 3.0Gb/s (system limited to SATA 1.5Gb/s), 1.8" wide, 8mm high, removable, upgradable, shock mounted storage

**Widescreen display**
- Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

**Graphics**
- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GS965, external monitor support via analog VGA DB-15 connector, no DVI-out support

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLk)

**TrackPoint® Touchpad**
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

**Intel® Centrino® with vPro™ technology**

**Ports**
- Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)

**Wireless antenna**
- UltraConnect™ II Antenna / on-off switch for all wireless radios

**Mini PCI Express**
- None

**Mini PCIe adapter**
- None

**Vista Basic logo**
- 2GB Vista models:

**WorldCom modem**
- None

**Client Service Solution™**
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Visa Ultimate model)
- Sonic RecordNow and Drive Letter Access (DVD±RW)
- Corel® WinDVD® (DVD±RW)
- Corel® WinDVD® (XP Pro DVD±RW models)

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**See footnotes for important warranty information**

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US models announced February 26 or April 14, 2008

US models withdrawn effective May 2009
This model is part of the Global Models Plus program with limited onsite service\(^7\) 3-year limited warranty

Thinnest (starting at under .75") and lightest (starting at 2.93 lb) notebook

Latest connectivity options including WLAN, WWAN, UWB, and GPS

Cutting edge technologies including LED backlight, Solid State Drive, and ultrathin DVD

Environmentally-friendly EPEAT Gold rating

Positioning

ThinkPad X300 (4052) - Onsite - withdrawn

Preloaded operating system\(^8\)

- Microsoft® Windows® Vista®
  - Business Edition (32-bit)
  - Vista Basic logo

Preloaded applications\(^4\)

- Rescue and Recovery™
- Access Connections\(^6\)
- Client Security Solution\(^7\)
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security
  - (90 days of virus definitions)
  - Diskeeper\(^\circ\) Home
  - PC-Doctor\(^\circ\) (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial

(Vista Ultimate model)

- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Core\(^\circ\) WinDVD\(^\circ\) (DVD:RW)

Supports ThinkVantage\(^\circ\) technologies

- 65-watt (GMA graphics) AC Adapter
- Next Generation ThinkPad Roll Cage (in display cover)
- EPEAT\(^\circ\) Gold rating
- ENERGY STAR\(^\circ\) 4.0-compliant
- RoHS-compliant
- International Warranty Service\(^7\)
  - 24 hour x 7 day\(^\circ\) toll-free support during the warranty period\(^7\)
  - via 800-426-7378

ThinkPlus™\(^\circ\) 2-year LOR\(^\circ\) 9x5 NBD
41C9175

ThinkPlus 3-year LOR 9x5 NBD
41C9179

ThinkPlus 4-year LOR 9x5 NBD
41C9180

ThinkPlus 5-year LOR 9x5 NBD
41C9182

ThinkPlus 5-year P & L P/U Depot
41C9189

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information

\(^\ast\) Intel Centriino with vPro™ technology

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(KOD1-3) May 2009
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<td>Bus 64 Nov 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2776-TKU SU9400</td>
<td>1.40 2GB 13.3&quot; WXGA+</td>
<td>4GB</td>
<td>Cam 64GB SSD</td>
<td>DVD:RW</td>
<td>Intel 5300® AT &amp;</td>
<td>Yes</td>
<td>3</td>
<td>Bus 64 Nov 08</td>
<td></td>
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<tr>
<td>2776-56U SU9400</td>
<td>1.40 2GB 13.3&quot; WXGA+</td>
<td>4GB</td>
<td>Cam 64GB SSD</td>
<td>DVD:RW</td>
<td>Intel 5300® AT &amp;</td>
<td>Yes</td>
<td>3</td>
<td>Bus 64 Nov 08</td>
<td></td>
<td></td>
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<tr>
<td>2776-H1U SU9400</td>
<td>1.40 2GB 13.3&quot; WXGA+</td>
<td>4GB</td>
<td>Cam 120GB 5400</td>
<td>DVD:RW</td>
<td>Intel 5100® AT &amp;</td>
<td>Yes</td>
<td>3</td>
<td>Bus 64 Nov 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2776-27U SU9600</td>
<td>1.60 2GB 13.3&quot; WXGA+</td>
<td>6GB</td>
<td>Cam 128GB SSD</td>
<td>DVD:RW</td>
<td>Intel 5100® AT &amp;</td>
<td>Yes</td>
<td>3</td>
<td>Bus 64 Nov 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Positioning**
- Thin and light; two spindles
- Intel® Core™ 2 Duo processor SU9400 or SU9600 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache

**Memory**
- 2GB or 4GB std / 4GB max (PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets)
- Italics: standard memory in both sockets; no sockets available;
- Non-italics: standard memory in 1 socket; 1 socket available

**Disk drive**
- None (use optional USB-based diskette drive)
- EIDE DVD:RW
- Option Bay

**Display**
- 13.3" (336mm) WXGA+ (1440x900) TFT color
- anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Integrated graphics**
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45
- External monitor support via analog VGA DB-15 connector or DisplayPort (supports single-link DVI-D via cable 45J9715)
- Maximum external resolution: 2048x1536@75Hz (VGA, DisplayPort)

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Touchpad**
- Ultrathin touchpad, 7mm high, removable from Option Bay, tray-in

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions³**
- 3-cell: (WxHxD): 12.5" x 9.09" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm
- 6-cell: (WxHxD): 12.5" x 9.09" x 0.85-1.26", 318mm x 231mm x 18.6-25.9mm

**Weight³**
- 3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 (1.52kg)

**Case color**
- Black

**Battery type**
- Lithium Polymer 3-cell or Lithium Ion 6-cell

**Battery - life¹⁰**
- 3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

**Chipset**
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub)
- ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC, Marvell® SATA-to-EIDE bridge (for optical)

**ExpressCard**
- None

**All-in-one card reader**
- None

**Ports**
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**Wireless antenna**
- UltraConnect™ II Antenna / on-off switch for all wireless radios
- Intel 5100® AT&T® WWAN upg

**Mini PCIe**
- Three Mini PCIe Express slots / 802.11 and WWAN are customer upgradeable
- Some: 11a/b/g wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 3x3 (Shirley Peak)

**Turbo Memory UWB**
- Some: Intel Turbo Memory, Half-Mini PCIe adapter, 2GB flash, disk-cache accelerator
- None

**Modem**
- None (use optional USB-based modem)

**Bluetooth®**
- Bluetooth 2.1 wireless, USB 2.0 interface via ICH, LED indicator

**Ethernet**
- Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIe x1

**Audio**
- High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up,
- muting buttons / digital microphone, mic input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, Security chip

**Fingerprint reader**
- Supports ThinkVantage® technologies

**Limited warranty¹¹**
- 3-years/1-year battery - EasyServ® service repair service / service upgrades¹² available

**Preloaded operating system¹²**
- Some: Windows® XP Professional preinstalled through Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 64

**Preloaded applications¹⁴**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

**Lenovo System Toolbox**
- Supports ThinkVantage® technologies

**Other accessories**
- Other accessories at lenovo.com/accessories

See footnotes for important warranty information

iPhone® 2 with vPro™ technology

US models announced Aug 26, Sep 2, Oct 14, Nov 18, Nov 25, or December 2, 2008 or April 21, 2009

US models withdrawn effective July, September or December 2009
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo</th>
<th>Blue/ Fi ng cells Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>2776-32U</td>
<td>SU9600</td>
<td>1.6</td>
<td>2GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>250GB</td>
<td>5400</td>
<td>DVD:RW</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6 XP Pro Jul 09</td>
</tr>
<tr>
<td>2776-33U</td>
<td>SU9600</td>
<td>1.6</td>
<td>2GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>64GB</td>
<td>SSD</td>
<td>DVD:RW</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6 Bus 32 Jul 09</td>
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<tr>
<td>2776-34U</td>
<td>SU9600</td>
<td>1.6</td>
<td>2GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>64GB</td>
<td>SSD</td>
<td>DVD:RW</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6 XP Pro Jul 09</td>
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<tr>
<td>2776-35U</td>
<td>SU9600</td>
<td>1.6</td>
<td>2GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>80GB</td>
<td>SSD</td>
<td>DVD:RW</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6 Bus 64 Jul 09</td>
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<tr>
<td>2776-36U</td>
<td>SU9600</td>
<td>1.6</td>
<td>4GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>128GB</td>
<td>SSD</td>
<td>DVD:RW</td>
<td>Intel 5100™ AT&amp;T™</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>6 XP Pro Jul 09</td>
</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program

### Preloaded operating system

- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista™ Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 64
  - Vista models: Vista Premium logo

### Preloaded applications

14 (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Business Edition (DVD:RW)
- Roxio® MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

## See footnotes for important warranty information

* Lenovo

US models announced July 7, 2009

US models withdrawn effective December 2009
These small and medium business (SMB) models are part of the US TopSeller™ Program

<table>
<thead>
<tr>
<th>Positioning</th>
<th>Processor</th>
<th>Low Voltage processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB RPM</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo</th>
<th>Battery or Turbo</th>
<th>Battery Bluel/ Fingerprint cells Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2776-5AU</td>
<td>SU9600</td>
<td>1.60</td>
<td>2GB</td>
<td>13.3&quot; WXGA</td>
<td>Cam</td>
<td>250GB 5400</td>
<td>DVD±RW</td>
<td>Intel 5100® Wireless</td>
<td>WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>6 XP Pro Oct 09</td>
<td></td>
</tr>
<tr>
<td>2776-3BU</td>
<td>SU9600</td>
<td>1.60</td>
<td>2GB</td>
<td>13.3&quot; WXGA</td>
<td>Cam</td>
<td>80GB SSD</td>
<td>DVD±RW</td>
<td>Intel 5100® Wireless</td>
<td>WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>6 XP Pro Oct 09</td>
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</tr>
<tr>
<td>2776-3CU</td>
<td>SU9600</td>
<td>1.60</td>
<td>4GB</td>
<td>13.3&quot; WXGA</td>
<td>Cam</td>
<td>128GB SSD</td>
<td>DVD±RW</td>
<td>Intel 5100® Wireless</td>
<td>WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>6 XP Pro Oct 09</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program

Preloaded operating system:
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional

Preloaded applications (only some listed):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (Fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio® MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies

See footnotes for important warranty information
| 2776-3DU | SU9600 1.60 GHz | 4GB | 13.3" WXGA+ | Cam 128GB SSD | Mini PCIe 802.11 wireless | Mini PCIe WWAN | Mini PCIe UWB | None | None | Yes | 6 | Pro | 64 | Oct 09 |
| 2776-3PU | SU9600 1.60 GHz | 2GB | 13.3" WXGA+ | Cam 128GB SSD | Mini PCIe 802.11 wireless | Mini PCIe WWAN | Mini PCIe UWB | None | None | Yes | 6 | Pro | 64 | Nov 09 |

- **ThinkPad® X301 (2776) - TopSeller (Windows 7) - withdrawn**

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Thin and light; two spindles Intel® Core™ 2 Duo processor SU9600 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italic: standard memory in both sockets; no sockets available; Non-italic: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>EIDE DVD:RW</td>
<td>Ultrathin DVD burner, 7mm high, removable from Option Bay, tray-in</td>
</tr>
<tr>
<td>Option Bay Serial ATA disk</td>
<td>Modular bay for devices (DVD burner, battery), 7mm high</td>
</tr>
<tr>
<td>Widescreen display Camera</td>
<td>13.3&quot; (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio</td>
</tr>
<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHDD (GMA 4500MHDD), in GS45</td>
</tr>
<tr>
<td>ExpressCard</td>
<td>Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical)</td>
</tr>
<tr>
<td>Multicard reader Ports</td>
<td>None</td>
</tr>
<tr>
<td>Wireless antenna Mini PCI Express Intel 5100™ WIMAX</td>
<td>UltraConnect™ II Antenna / on-off switch for all wireless radios</td>
</tr>
<tr>
<td>WIFI</td>
<td>Three Mini PCI Express slots / 802.11 and WWAN are customer upgradable</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell, supports optional Option Bay 3-cell battery (for two batteries)</td>
</tr>
<tr>
<td>Battery - life</td>
<td>3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical)</td>
</tr>
</tbody>
</table>

- **Preloaded operating system** |
  - Some: Genuine Windows® 7 Professional 32 |
  - Some: Genuine Windows® 7 Professional 64 |

- **Preloaded applications** |
  - Rescue and Recovery™ |
  - Access Connections™ |
  - Password Manager |
  - ThinkVantage Power Manager |
  - ThinkVantage System Update |
  - Fingerprint Software (fingerprint models) |
  - ThinkVantage Toolbox |
  - Lenovo Online Data Backup |
  - Norton™ Internet Security 2009 (30 days of virus definitions) |
  - Adobe® Reader® |
  - Adobe Flash® Player |
  - Skype™ for Windows |
  - Microsoft Office 2010 preloaded; purchase product key to activate models |
  - Microsoft Research AutoCollage Touch |
  - Roxio® Creator® Business Edition (DVD:RW) |
  - Roxio MyDVD® (DVD:RW) |
  - Corel® Creator® (DVD:RW) |

- **Supplies ThinkVantage technologies** |

- **See footnotes for important warranty information** |

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US models announced October 22 or November 3, 2009

US models withdrawn effective September 2010
Positioning Processor
Thin and light; two spindles

ThinkPad Core 2 Duo processor SU9400 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache

Memory

2GB or 4GB std / 4GB max / PC3-8500 1066Mhz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

* Italics: standard memory in both sockets; no sockets available;

* Non-italics: standard memory in 1 socket; 1 socket available

EIDE DVD+RW

Option Bay battery

Some:

Option Bay

Some:

Serial ATA disk

464GB ± 80GB, or 128GB Solid State Drive (SSD) /

SATA 3.0Gbps, 1.8" wide, 8mm high, removable, upgradeable, shock mounted storage

Wide screen display

Camera

13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight,

300 nits, 16:10 aspect ratio, 250:1 contrast ratio

Built-in camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

Integrated graphics

Intel Graphics Media Accelerator 4500HD (AGP4500HD), in GS45

External monitor support via analog VGA DB-15 connector or DisplayPort (supports single-link DVI-I via cable 45J7915);

Maximum external resolution: 2048x1536@75Hz

Keyboard

89-key, ThinVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinVantage, Mute, and CapsLock)

TrackPoint®

Touchpad

ThinkLight™

Dimensions²

3-cell: (WxDxH): 12.5" x 9.09" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm

6-cell: (WxDxH): 12.5" x 9.09" x 0.85-0.92"; 318mm x 231mm x 18.6-25.9mm

Weight³

3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 lb (1.52kg)

Case color

Black

Case material

Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium Alloy

Battery - type

Lithium Polymer 3-cell or Lithium Ion 6-cell

Battery - life⁴

3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

Chipset

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);

ICH9M-SFF-Enhanced I/O Controller Hub (SAT 3.0Gbps, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical)

ExpressCard

None

Multicard reader

None

Ports

Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

Wireless antenna

Mini PCI Express Intel 5100a/b, WIMAX

Some:

Mini PCI Express slots / 802.11 and WWAN are customer upgradable

11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

Some:

11a/b/g/n and WiMAX wireless®, Mini PCIe adapter, Intel WMiMAX/ WiLink 5350, 3x3 (450Mbps) Wi-Fi + 1x2 WiMAX (Echo Peak)

WWAN upg

Verizon®

Some:

Wireless WAN upgradeable, requires Verizon® (43R9151) or AT&T® (43R9152)

Some:

Wireless WAN, Qualcomm chipset, Mini PCIe adapter and SIM, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, service contract required with Verizon

Turbo Memory

None

Universal USB

None (some USB-based modem)

Bluetooth™

None (use optional USB-based modem)

Ethernet

Integrate Ethernet via ExpressCard or Mini PCIe

Intel AMT

Intel Active Management Technology (I AMT)

Audio support

High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security

Power-on password, hard disk password, supervisor password, security keyhole, down, mute buttons / digital microphone, mic input jack, headphone jack

Security chip

Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty²

3-years/1-year battery - EasyServ™ depot repair service / service upgrades available

1GB PC3-8500 DDR3 L-8 SODIMM

55Y3706

ThinkPad Battery 49 (3-cell)

43R1965

ThinkPad Battery 49+ (6-cell)

43R1967

Other accessories on X-000 sheet

Other accessories at lenovo.com/accessories

See footnotes for important warranty information

Intel Centrino® with vPro™ technology

US models announced Aug 26, Sep 2, Nov 25 or Dec 2, 2008

US models withdrawn effective July 2009 or March 2010

Preloaded operating system¹⁰

- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business

- Some: Genuine Windows Vista Business 32

- Vista models: Vista Premium logo

Preloaded applications¹¹ (all OSes; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC Adapter

Next Generation ThinkPad Roll Cage (in display cover)

PEPATE™ Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service¹⁷

24 hour 7 days a week toll-free support during the warranty period¹¹ via 800-426-7378

ThinkPlus™, 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 5-year P&L P/U Depot

Post-warranty maintenance agreements at lenovo.com/thinkplus/warranty

Lenovo (KOD2-2) 2010
**ThinkPad X301 (2774) - Education - withdrawn**

**Positoning Processor**

Thin and light; two spindles

**Intel® Core™ 2 Duo processor SU9400 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache**

**Memory**

2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

*Non-Italics:* standard memory in 1 socket; 1 socket available

**EIDE DVD±RW**

None

**Option Bay battery**

None

**Option Bay**

Modular bay for devices (DVD burner, battery), 7mm high

**Serial ATA disk**

64GB® Solid State Drive (SSD)

SATA 3.0Gb/s, 1.8" wide, 8mm high, removable, upgradable, shock mounted storage

**Widescreen display**

13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight.

300 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

**Integrated graphics**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

External monitor support via analog VGA DB-15 connector or DisplayPort (supports single-link DVI-D via cable 45J7915);

Maximum external resolution: 2048x1536@75Hz

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and Caps Lock)

**TrackPoint®**

Pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Touch pad**

UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

3-cell: (WxDxH): 12.5" x 9.09" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm

6-cell: (WxDxH): 12.5" x 9.09" x 0.85-0.92"; 318mm x 231mm x 18.6-25.9mm

**Weight**

3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 (1.52kg)

**Case color**

Black

**Case material**

Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls);

Base: Magnesium alloy

**Battery - type**

Lithium Polymer 3-cell

supports standard or optional Option Bay 3-cell battery (for two batteries)

3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

**Chipset**

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);
ICH9M-SPF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, 1.1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical)

**ExpressCard Multicard reader ports**

Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**Wireless antenna Mini PCI Express**

Intel 5300® WWAN upg

Turbocell

UltraConnect™ II Antenna / on-off switch for all wireless radios

Three Mini PCI Express slots / 802.11 and WWAN are customer upgradable

11a/b/g/n wireless®; Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3

Wireless WAN upgrade, requires Verizon® (43R9151) or AT&T® (43R9152)

None

**Modem**

None

**Bluetooth™**

Bluetooth 2.1 wireless, USB 2.0 interface viaICH, LED indicator

**Ethernet**

Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIe x1

**Audio support**

High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Security chip**

Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years/1-yr battery - EasyServ™ depot repair service / service upgrades available

1GB PC3-8500 DDR3 L-H SODIMM  55Y3706  ThinkPad Battery 49 (3-cell)  43R1965

2GB PC3-8500 DDR3 L-H SODIMM  55Y3707  ThinkPad Battery 49+ (6-cell)  43R1967

USB Port Replicator with Digital Video  45K1610  ThinkPad Battery 50 (3-cell)  43R1966

Other accessories on O-X300 sheet  Other accessories at lenovo.com/accessories

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- These models have an EasyServ™,™ depot repair service 3-year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

See footnotes for important warranty information

US model announced February 17, 2009

US model withdrawn effective March 2010

Intel Centrino® 2 with vPro™ technology

Lenovo

(KOD2-4) March 2010

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## ThinkPad® X301 (4057) - Onsite - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Low Voltage processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>SSD</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Mini PCIe UBW</th>
<th>Blue/Fin</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Gb (G)</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>4057-17U SU9400</td>
<td>1.40</td>
<td>2GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>64GB SSD</td>
<td>DVD:RW</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>3</td>
<td>Bus 32</td>
<td>G P Aug08</td>
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<td>4057-18U SU9400</td>
<td>1.40</td>
<td>4GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
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<td>DVD:RW</td>
<td>Intel 5100™ WWAN upg</td>
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<td>Yes</td>
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<td>Bus 32</td>
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<td>4057-LDU SU9400</td>
<td>1.40</td>
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<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>64GB SSD</td>
<td>DVD:RW</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>3</td>
<td>XP Pro</td>
<td>G P Aug08</td>
<td></td>
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</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service¹ - 3-year limited warranty
- Largest connectivity options including WLAN, WWAN, UWB, and GPS
- Cutting edge technologies including LED backlight, Solid State Drive, and ultraThin DVD
- Environmentally-friendly EPEAT Gold rating

Positioning

**Thin and light; two spindles**

**Processor**

Intel® Core™ 2 Duo processor SU9400 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache

**Memory**

2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both memory; no sockets available;

**Diskette drive**

None (use optional USB-based diskette drive)

**EIDE DVD:RW Option Bay**

UltraThin DVD burner, 7mm high, removable from Option Bay, tray-in

**Serial ATA disk**

64GB⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high, removable, upgradeable, shock mounted storage

**Widescreen display**

13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Camera**

Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

**Integrated graphics**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45 External monitor support via analog VGA DB-15 connector or DisplayPort; Maximum external resolution: 2048x1536@75Hz

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)

**TrackPoint™**

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Touchpad**

UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions²**

3-cell: (Wx Dx H): 12.5" x 9.09" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm

**Weight²**

3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.54 lb (1.52kg)

**Color**

black; Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

**Battery - type**

Lithium Polymer 3-cell or Lithium Ion 6-cell

**Battery - life¹⁰**

3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

**Chipset**

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub); ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical)

**ExpressCard slot**

None

**Multicard Reader**

None

**Ports**

Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**Wireless antenna**

UltraConnect™ II Antenna / on-off switch for all wireless radios

**Mini PCI Express slots**

Three Mini PCI Express slots / 802.11 and WWAN are customer upgradeable (no built/in wireless); Mini PCi adapter, Intel WIFI Link 5100, 1x2 (Shirley Peak Wireless WAN upgrade, requires Verizon® (43R9151) or AT&T® (43R9152)

**Turbo Memory**

None

**USB upg**

None

**Modem**

None (use optional USB-based modem)

**Bluetooth®**

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Ethernet**

Intel Active Management Technology (I AMT)

**Audio support**

High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up / down, mute buttons / digital microphone, mic input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years/1-year battery, limited onsite service¹, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades² available

**Preloaded operating system²⁹**

- Some: Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)
- Some: Genuine Windows Vista Business 32

- Vista models: Vista Premium logo

**Preloaded applications¹¹ (all OSes)**

- Rescue and Recovery™
- Access Connections¹²
- Client Security Solution¹³
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (finger print models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition
- Roxio MyDVD® (DVD:RW)

**Supports ThinkVantage® technologies**

65-watt (GMA graphics) AC Adapter Next Generation ThinkPad Roll Cage (in display cover) EPEAT® Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day²⁸ toll-free support during the warranty period²⁸ via 800-426-7378

ThinkPlus® ²² 3-year LOR² 9x5 NBD 41C9176

ThinkPlus 4-year LOR 9x5 NBD 41C9177

ThinkPlus 5-year LOR 9x5 NBD 41C9179

ThinkPlus 4-year P&L PIU Depot 41C9178

ThinkPlus 5-year P&L PIU Depot 41C9180

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Intel Centrino® 2 with vPro™ technology

Lenovo

(KOD2-3) July 2009

US models announced August 26, 2008

US models withdrawn effective July 2009
ThinkPad® X301 (4057) - Education (Onsite) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB SSD</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Mini PCIe UWB wireless</th>
<th>Blue/ Fingerprint reader</th>
<th>Battery - life</th>
<th>Workhorse (W)</th>
<th>Available date</th>
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<td>4057-E1U SU9400</td>
<td>1.40</td>
<td>2GB</td>
<td>13.3” WXGA+ Cam</td>
<td>64GBSSD</td>
<td>Blank bezel</td>
<td>Intel 5300™WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>3</td>
<td>Ult 32</td>
<td>No</td>
<td>Feb 09</td>
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</table>

- **This model has a limited onsite service** 3-year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Positioning Processor
- Intel® Core™ 2 Duo processor SU9400 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache

Memory
- 2GB std / 4GB max / PC3-8500 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

Diskette drive
- None (use optional USB-based diskette drive)

Option Bay
- Modular bay for devices (DVD burner, battery), 7mm high

Serial ATA disk
- 64GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high, removable, upgradable, shock mounted storage

Widescreen display
- 13.3” (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera
- Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

Integrated graphics
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)

TrackPoint®
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®12, magnifying glass

Touch pad
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

Dimensions²³
- 3-cell: (WxDxH): 12.5” x 9.09” x 0.73-0.92”; 318mm x 231mm x 18.6-23.4mm
- 6-cell: (WxDxH): 12.5” x 9.09” x 0.85-0.92”; 318mm x 231mm x 18.6-25.9mm

Weight²³
- 3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 lb (1.52kg)

Case material
- Color: black; Display cover: Carbon-fiber reinforced plastic (side walls); Base: Magnesium alloy

Battery - type
- Lithium Polymer 3-cell;
- supports optional Option Bay 3-cell battery (for two batteries)

Battery - life²⁴
- 3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

Chipset
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub):

ExpressCard® slot
- None

Multicard Reader
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

Wireless antenna
- UltraConnect™ II Antenna / on-off switch for all wireless radios

Mini PCIe Express
- Intel 5300™ WWAN upg

WWAN upg
- Three Mini PCIe Express slots / 802.11 and WWAN are customer upgradable

Turbo Memory
- UWB

Modem
- None (use optional USB-based modem)

Bluetooth®
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH, LED indicator

Ethernet
- Intel 82567LM Gigabit Network Connection (Bozman), PHY, PCIx1

Intel AMT
- Intel Active Management Technology (IAMT)

Audio support
- High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Security chip
- Trusted Platform Module, integrated in ICH9, TCG 1.2-compliant

Fingerprint reader
- Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty²²
- 3-years/1-year battery, limited onsite service²⁵, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades²⁶ available

Preloaded operating system²⁷
- Genuine Windows® Vista® Ultimate 32

Preloaded applications²⁸
- - Microsoft® Office Ultimate 2007 Academic Edition (and CD)
- - Rescue and Recovery²⁹
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center
- - ThinkVantage System Update
- - FingerPrint Software (fingerprint models)
- - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- - PC-Doctor (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe® Reader
- - Windows Live™ Toolbar
- - Windows Live Search
- - Roxio® Creator® Business Edition

See footnotes for important warranty information

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US model announced February 17, 2009

US model withdrawn effective July 2009

.resources/kod2-5/KOD2-5.docx

Scrolling regions label

UltraConnect™

Next Generation ThinkPad Roll Cage

International Warranty Service¹⁷

RoHS-compliant

Next Generation ThinkPad Roll Cage

65-watt (GMA graphics) AC Adapter

Toll-free support during the warranty period¹⁰

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service¹⁷

2008-04-26 00:00

lenovo.com/thinkplus/warranty

Post-warranty annual maintenance agreements at

Post-warranty annual maintenance agreements at

Post-warranty annual maintenance agreements at

Post-warranty annual maintenance agreements at
ThinkPad® X300, X301 Accessories - withdrawn

Memory
X300:
1GB PC2-5300 DDR2 SODIMM 40Y7734 ann 01/05/06
1GB PC2-5300 DDR2 SODIMM (25-Pack) 51J0502 ann 03/17/09
2GB PC2-5300 DDR2 SODIMM 40Y7735 ann 11/28/06
2GB PC2-5300 DDR2 SODIMM (25-Pack) 51J0548 ann 03/17/09

X301:
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)57Y4386 ann 06/23/09

Storage and removable storage
X301:
1.8" 250GB Disk SATA 3.0Gb/s (5400 rpm) 43N3418 ann 06/23/09
All:
128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406 ann 08/26/08
256GB FDE SSD SATA 3Gb/s 1.8"(2.5" cover) 43N3417 ann 06/23/09
USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk 43R2018 ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 ann 01/07/10
USB 2.0 Portable DVD Burner 43N3264 ann 01/05/10

Wireless WAN (Mini PCI Express)
X301 WWAN upgradable models:
Verizon® WWAN UNDP Broadband Mini PCIe 43R9151 ann 08/05/08
AT&T® WWAN HSPA Broadband Mini PCIe 43R9152 ann 08/26/08

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J0292 ann 05/12/09
USB Port Replicator with Digital Video 45K1610 ann 07/28/09

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
UltraSlim Wireless Keyboard and Mouseâ© 57Y4700 ann 09/15/09
â© Wireless via 2.4GHz technology using a micro-size USB receiver.
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/09
Kensington Twin Head Cable Lock 45K1620 ann 03/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10

Multimedia
ThinkPad In-Ear Headphones 57Y4488 ann 01/07/10

Modem
USB 2.0 Lenovo Modem 43R1814 ann 02/26/08

Batteries
ThinkPad Battery 49 (3-cell) 43R1965 ann 02/26/08
ThinkPad Battery 49+ (6-cell) 43R1967 ann 02/26/08
ThinkPad Battery 50 (3-cell, bay) 43R1966 ann 02/26/08
ThinkPad External Battery Charger 40Y7625 ann 09/20/05

More information at www.lenovo.com/aidaycomputing

X300, X301 Accessories - withdrawn

Carrying Cases
Up to 13.3" widescreen models:
ThinkPad Ultraportable Case 41US602 ann 05/13/08
Up to 15.4" widescreen models:
ThinkPad 15W Case Sleeve 51JO477 ann 08/18/09
Lenovo Business Messenger Case 51JO475 ann 08/18/09
Lenovo Messenger Max 41U5253 ann 05/01/07
ThinkPad BusinessBackPack 41U524 ann 01/23/07
ThinkPad BusinessTopload Case 43R2476 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08

More information at www.lenovopowertips.com

Monitors
Lenovo L2230x Wide 21.5" Monitor 5453H81 ann 06/10/10
ThinkVision® L1711p 17" Monitor 5047H82 ann 10/20/09
ThinkVision L1900p 19" Monitor 4431H81 ann 11/11/08
ThinkVision L1951p Wide 19" Monitor 2448H86 ann 10/20/09
ThinkVision L2250p Wide 22" Monitor 2572H86 ann 10/20/09
ThinkVision L2251p Wide 22" Monitor 2572H86 ann 10/20/09
ThinkVision L2251x Wide 22" Monitor 2578H86 ann 10/20/09
ThinkVision L2321x Wide 23" Monitor 4014H86 ann 06/10/10
ThinkVision L2440p Wide 24" Monitor 4420H82 ann 09/17/08

Monitor Accessories®
X301:
Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-D Cable 45J7915 ann 08/05/08
All:
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1253 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 03/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09
® Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide

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(O-X300) September 2010
ThinkPad G40 (January 2004) - withdrawn

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Hard Disk</th>
<th>Display</th>
<th>Video</th>
<th>Audio</th>
<th>Ethernet</th>
<th>Battery</th>
<th>Workhorse Operating System</th>
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<tbody>
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<td>Celeron®</td>
<td>2.4</td>
<td>128MB</td>
<td>320G CD</td>
<td>20G XGA</td>
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<td>Jan 2004</td>
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</table>

Limitied warranty 1 year - EasyServ™ onsite pickup and delivery

SOFTWARE

- Microsoft® Windows® XP Professional
- Microsoft® Windows® XP Professional x64 Edition
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Access Connections
- Adobe Reader
- Norton AntiVirus (OEM edition)
- Norton SystemWorks
- Norton SystemWorks
- PC-Doctor
- TrackPoint Cap Collection
- ThinkPad Utilities
- Update Connector

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License
- Lotus® SmartSuite® Millennium
- Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage technologies and facilities

Visit thinkpad.com/thinkvantage

Universal 120 watt AC adapter

Windows XP Professional

Preloaded
- Access IBM
- Access Connections
- Adobe Reader
- Rapid Restore™ PC
- RecordNOW and Drive Letter Access (combo models)
- ThinkPad Security
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Visit thinkpad.com/thinkvantage

Universal 120 watt AC adapter
ThinkPad G40 (Express) - withdrawn

These small and medium business (SMB) models are part of the US Think Express Program

### Positioning
- Powerful desktop replacement; three-spindle system

### Processor
- **Intel® Celeron® 2.0 or 2.2GHz** with 400MHz system bus or
- **Intel Pentium 4 at 2.2, 2.4, 2.6, or 3.0GHz** with 400MHz system bus

### L2 cache
- **Celeron:** 128MB
- **Pentium:** 512KB
- All: on die (at processor speed) / ECC

### Memory
- 256MB std / 1GB max / PC2100 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two-200-pin SO-DIMM sockets / std memory in one socket / one socket available

### Diskette drive
- 3.5" 1.44MB / fixed, not removable / 12.7mm high

### Audio support
- Soft audio / ICH AC97 controller / DirectSound

### Display
- **Celeron:** 14.1" XGA / 1024x768 / 1400 nits
- **Pentium:** 15.0" XGA / 1024x768 / 150 nits
- All: one latch to unlatch and open with one hand

### Graphics
- **Integrated Intel Extreme™ Graphics / Intel® GMA AGP / in 852GM GCHC / uses main memory / 8 to 32MB with 128MB memory / 8 to 64MB with 256MB + 133MHz DMAT / DMVT
- **External:** Graphics external
- **EasyPivot:** base allows smooth positioning for a comfortable viewing angle

### Keyboard
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
- **ThinkPad ComfortLast keyboard with built-in incline provides maximum typing comfort**
- **TrackPoint® pointing device:** "Press-to-Select," Internet Scroll Bar 13, magnifying glass / soft dome / TrackPoint cap / ships with classic dome and soft rim TrackPoint cap

### Touchpad
- No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™

### Dimensions
- 12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters

### Weight
- Lithium Ion 12-cell / intelligent / removable
- 89U: 3.0; 32U: 33.3; 33U: 3.0; Others: 3.0 hrs

### Architecture
- **Intel 852GM chipset / 82852GM Graphics Memory Controller Hub (GMCH) / 82801DB ICH4 M I/O Controller Hub (ATA-100 IDE, PC1 bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (T1® PCI1410A CardBus controller, Mini PCI) / LPC bus 33MHz (PCB7393F Super/I/O for diskette, parallel, PS/2)

### Video out
- No video output port

### Wireless antenna
- Some: wireless (model): UltraConnect™ Antenna built into the display cover
- **Mini PCI:** None

### Modem
- **C модем:** None
- **11b Wi-Fi®**
- **11a/b Wi-Fi®**

### Software
- **Windows XP Professional**
- **Access Connections**
- **Adobe Reader**
- **Rapid Restore™ PC**
- **RecordNOW and DLA by Veritas (combo models)**
- **InterVideo WinDVD (combo, DVD)**
- **Norton AntiVirus (OEM edition)**
- **PC-Dock - Anytime**
- **ThinkPad Utilities**
- **Update Connector™️**

### License (CD not included)
- **Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client**

### Optical drive
- Dual: DVD-ROM/CD-RW / 24X/10X/24X/8X21 speed / fixed, not removable / 12.7mm high

### Battery
- Lithium Ion 12-cell
- **ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle**

### Service upgrade22 provide up to five years of onsite or depot repair service coverage during the warranty12 via 800-IBM-SERV (426-7378)

### Other ServicePac options at ibm.com/services/its/oursource/wamomxeu.pdf

### Technical Support
- Access to IBM support during the warranty12 via 800-IBM-SERV (426-7378)

### Other ServicePac options at ibm.com/services/its/oursource/masspleupdf.pdf

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*See footnotes for important warranty information*

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US models announced May 6, 2003, September 10, 2003

US models withdrawn effective October 2003, April 2004, January 2005, or December 2005

(G40B) October 2005
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<td>12-cell</td>
<td>XP Pro</td>
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SOFTWARE

- **Windows XP Home models**
  - Microsoft® Windows® XP Home Edition® (Service Pack 2)
  - Disk-to-Desk Recovery (in hidden protected area)

- **Windows XP Professional models**
  - Microsoft Windows® XP Professional (Service Pack 2)
  - Disk-to-Desk Recovery (in hidden protected area)

**Preloaded (all)**
- Rescue and Recovery™
- Access IBM
- Access Connections
- Norton AntiVirus (OEM edition)
- PC-Doctor®
- ThinkPad utilities
- Adobe Reader
- Update Connectors™
- RecordNow! and Drive Letter Access powered by Sonic products (combo models)
- InterVideo WinDVD (combo, DVD)

**Downloadable (all)**
- IBM Director Assistant
- Software Delivery Assistant
- System Migration Assistant

**License (CD not included) (all)**
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Universal 120 watt AC adapter**
- PC 2001 and PKE 2.0-compliant
- ACPI 1.0b and 2.0-compliant
- CMI and DMI 2.0-compliant
- ENERGY STAR® compliant
- ImageUltra™ Services available
- International Warranty Service

- 24 hour x 7 days toll-free warranty support during the warranty

**Limited warranty**
- 1 year - EasyServ™ on-site pickup and delivery / service upgrades available

See footnotes for important warranty information

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US models announced October 19, 2004
US models withdrawn effective January or December 2005

(4G) October 2005
### ThinkPad G41 (November 2004) - withdrawn

#### Type-model | Processor | Speed GHz | L2 cache | Memory | Screen | Diskette | Disk Drive | Optical | Graphics | Mini PCI Comm Bay | Ethernet on planar | Battery | Workload (W) | Global (G) | Available date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2881-2CU | Celeron® D 320 | 2.40 | 256K | 256MB | 15.0" XGA | Yes | 40GB Combo | Extreme™ 2 | 11b/g | 10/100 | 6-cell | XP Pro | No | Nov 04
2881-2PU | Celeron® D 320 | 2.40 | 256K | 256MB | 14.1" XGA | Yes | 30GB Combo | Extreme™ 2 | None | 10/100 | 12-cell | XP Pro | No | Nov 04
2881-2OU | Celeron® D 325 | 2.53 | 256K | 256MB | 14.1" XGA | Yes | 30GB Combo | Extreme™ 2 | None | 10/100 | 12-cell | XP Pro | No | Nov 04
2881-2RU | Celeron® D 330 | 2.66 | 256K | 256MB | 14.1" XGA | Yes | 30GB Combo | Extreme™ 2 | 11b | 10/100 | 12-cell | XP Pro | No | Nov 04
2881-3GU | Celeron® D 335 | 2.80 | 256K | 256MB | 14.1" XGA | No | 30GB CD | None | None | 10/100 | 12-cell | XP Pro | No | Jan 05
2881-3FU | Celeron® D 335 | 2.80 | 256K | 256MB | 15.0" XGA | Yes | 40GB Combo | Extreme™ 2 | 11b | 10/100 | 12-cell | XP Pro | No | Nov 04
2881-5PU | Pentium® 4 3.10 | 3.06 | 1MB | 256MB | 14.1" XGA | Yes | 40GB Combo | Extreme™ 2 | 11b | 10/100 | 12-cell | XP Pro | No | Nov 04

### Positioning

- Security chip
- Security
- Audio support
- Ethernet
- CDC
- Wireless antenna
- IEEE 1394
- Video out or in
- PC Card Std slots
- Battery - life
- Weight
- TrackPoint
- ComfortSlant
- Keyboard
- EasyPivot
- Graphics
- Disk
- Combo
- Memory
- L2 cache
- Positioning Processor

#### Software

- Windows XP Professional
- - Microssoft® Windows® XP Professional
- - Disk-to-Disk Recovery

#### Preloaded

- - Rescue and Recovery
- - Access IBM
- - Access Connections
- - Norton AntiVirus
- - PC-Doctor
- - ThinkPad Utilities
- - Adobe Reader
- - Update Connect

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

#### License

- CD not included
- Lotus® SmartSuite® Millennium
- Lotus Notes® Stand-alone Client

#### Architecture

- Intel 852GME chipset
- 82852GME Graphics Memory Controller Hub
- USB 2.0/1.1
- PCI bus
- Ethernet on planar
- Broadcom
- PC 2001
- PXE 2.0
- PXE 2.0

#### Video

- No internal video / vga analog DB-15 / 1600x1200 at 85Hz / DDC2B
- ThinkPad EasyPoint base allows smooth positioning for a comfortable viewing angle

#### Keyboard

- ThinkPad ComfortPoint with built-in incline provides maximum comfort

#### Display

- 12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters

#### Keyboad shortcuts


#### Security

- Power-on password / hard disk password / supervisor password / security keyhole

#### ESDS

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

#### Warranty

- Post-warranty annual maintenance agreements at ibm.com/services/its/pdf/ maspspleu.pdf

See footnotes for important warranty information
## ThinkPad G41 (NVIDIA Graphics) - withdrawn

<table>
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<th>Processor</th>
<th>Speed</th>
<th>L2 Cache</th>
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See footnotes for important warranty information
US models announced October 19, 2004 or January 11, 2005
US models withdrawn effective December 2005
ThinkPad G41 (Education) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

SOFTWare

Windows XP Professional
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- ASU only: Education software from Virtual Source Technologies™:
  - vialsource Key™ and
  - Personal Portable Library™
- Rescue and Recovery™
- Access IBM®
- Access Connections
- Norton AntiVirus (OE CM)
- PC-Doctor™
- ThinkPad® Utilities
- Lenovo Remailer
- Update Connector™
- RecordNOW and Drive Letter Access powered by Sonic™ products (combo model)
- InterVideo WinDVD (combo model)

Downloadable
- IBM Director Agent
- Software Delivery Assistant System Migration Assistant

License (CD not included)
- Lotus® SmartSuite Millennium and Lotus Notes™ Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design.
Visit thinkpad.com/thinkvantage

Universal 120 watt AC adapter
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
ENERGY STAR®-compliant
ThinkVantage™ Software Services available
International Warranty Service

24 hour x 7 day®-toll free warranty support during the warranty®
ServicePack® 2-3 year IOR 9x5 NBD
ServicePack 3 IOR 9x5 NBD
ServicePack 4 IOR 9x5 NBD
ServicePack 4 2 yr IOR 9x5 NBD
ServicePack 4 2 yr IOR 9x5 NBD
ServicePack 5 IOR 9x5 NBD
ServicePack 5 IOR 9x5 NBD

See footnotes for important warranty information
US models announced October 2004 or January 11, 2005
US models withdrawn effective December 2005

© Lenovo (G6) October 2005
The small and medium business (SMB) models are part of the US TopSeller™ Program

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See footnotes for important warranty information

US models announced on October 19 or November 23, 2004
US models withdrawn effective October 2006

SOFTWARE

- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)
- Preloaded
  - Rescue and Recovery™
  - Access Program
  - Access Connections™
  - Norton AntiVirus (OEM edition)
  - PC-Doctor®
  - ThinkVantage™ utilities
  - Adobe® Reader
  - Update Connector™
  - RecordNow!® and Drive Letter Access
  - Sustained performance products (combo, DVD-RW models)
- InterVideo WinDVD (combo, DVD, DVD-RW models)
- InterVideo WinDVD Creator (DVD-RW models)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License
- CD (not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage™ technologies; visit thinkpad.com/thinkvantage

Universal 120 watt AC adapter for the Power-on password / hard disk password / supervisor password / security keyhole

ENERGY STAR®-compliant ImageUltra™ Services available International Warranty Service17

Limited warranty1-year EasyServ™ on-site pickup and delivery / service upgrades™ available

See footnotes for important warranty information

US models announced or withdrawn effective October 2004

© Lenovo (G7) October 2006
## ThinkPad® G41 (Entry) - withdrawn

### Type-model | Processor | Speed L2 cache Memory Screen Diskette drive Disk GB Optical Graphics Mini PCI Comm Bay Ethernet on battery Workhorse Global (G) Avail date
|-----------|-----------|-------------|----------|-----------------|---|-----------------|----------------|------------------|-------------|-------------|

2881-22U Celeron® D 320 2.40 GHz 256K 128MB 14.1’’ XGA No 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-2AU Celeron® D 320 2.40 GHz 256K 128MB 14.1’’ XGA No 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Nov 04
2881-2BU Celeron® D 320 2.40 GHz 256K 128MB 14.1’’ XGA Yes 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-2BV Celeron® D 320 2.40 GHz 256K 128MB 14.1’’ XGA Yes 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-32U Celeron® D 2.53 GHz 256K 128MB 14.1’’ XGA Yes 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-32U Celeron® D 2.53 GHz 256K 128MB 14.1’’ XGA Yes 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-3BU Celeron® D 2.53 GHz 256K 128MB 14.1’’ XGA No 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-3BU Celeron® D 2.53 GHz 256K 128MB 14.1’’ XGA No 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-47U Celeron® 4 3.06 1GB 128MB 14.1’’ XGA Yes 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04
2881-57U Pentium® 4 3.06 1MB 128MB 14.1’’ XGA No 30GB CD Extreme™ 2 None 10/100 6-cell XP Home Entry Oct 04

### SOFTWAR®

Windows XP Home models
- Microsoft Windows® XP Home E edition® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Windows XP Pro models
- Microsoft Windows XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded (all)
- Rescue and Recovery™
- Access IBM
- Norton AntiVirus (OEM edition)
- PC-Doctor®
- SoftKey Utilities
- Adobe Reader
- Update Connector™
- InterVideo WinDVD (DVD)

Downloadable (all)
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (not included) (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 120 watt AC adapter
- 220-240V AC adapter (Global (G) October 2005)
- 24 hour x 7 day toll-free warranty support during the warranty

ServicePac 5 yr IOR 9x5 NBD Available
- IBM Director Agent
- Access IBM
- Norton AntiVirus (OEM edition)
- PC-Doctor®

Post-warranty annual maintenance
### ThinkPad Z60m (2529) - TopSeller - withdrawn

| Type-model | Top cover color | Processor | Memory | Widescreen Display | Graphics controller | Disk SATA | Mini PCI | Mini PCIe | WWAN16 | Blue- tooth | Battery - life | Battery - type | Weight2 | Positioning | Finger print reader | USB | Bluetooth | Finger print reader on palm rest | Bat- tery warranty | Pre- loaded software | Limited availability date |
|------------|----------------|-----------|--------|--------------------|---------------------|----------|----------|----------|--------|-----------|---------------|----------------|-------------|---------|-------------|------------------|-------|-----------|---------------------|-----------------|------------------------|------------------------|
| 2529-E1U  | Black         | Celeron M 360 J 1.5 | 128MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-E2U  | Black         | Celeron M 360 J 1.4 | 256MB | WXGA 15.4" | GMA 60G | DVD∩RW | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
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| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
| 2529-3U   | Black         | Pentium M 745 J 1.7 | 256MB | WXGA 15.4" | GMA 40G | Combo | Intel 11a/b/g| None | None | Blue     | 10            | Lithium Ion | 9-cell | 640 g          | Trusted (some) | 2.0 USB | 1-year | EasyServ 1-year | 3-year | Windows XP Professional | 2006 |
## ThinkPad Z60m (2529) - TopSeller (November 2005) - withdrawn

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<th>Graphics</th>
<th>SATA Disk</th>
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<th>Finger print reader</th>
<th>Battery life</th>
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### Positioning
- **Stylish notebooks for work and life; widescreen display; two-spindle system**
- **These 2529 models have a 1-year limited warranty**

### Software
- **Windows XP Professional models**
  - Microsoft Windows XP Professional (Service Pack 2)
- **Windows XP Home models**
  - Microsoft Windows XP Home Edition (Service Pack 2)
- **Preloaded (all; only some listed)**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symantec® Client Security
  - Diskeeper® Lite
  - PC-Doctor™
  - Fingerprint Software (some)
  - Multimedia Center for Think Offers
  - Sonic RecordNOW and Drive
  - Letter Access (combo, DVD:RW)
  - InterVideo WinDVD (combo, DVD:RW model)
  - InterVideo WinDVD Creator (DVD:RW models)
- **License - CD not included (all)**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

### ThinkPad notebooks implement ThinkVantage™ technologies and design visit thinkpad.com/thinkvantage

### Universal 90 watt AC adapter
- ThinkPad Roll Cage
- AC/DC-compliant
- ACPI 1.0b and 2.0-compliant
- CMI and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 days toll-free warranty support during the warranty period

### Audio
- InterVideo WinDVD (combo, DVD:RW model)
- InterVideo WinDVD Creator (DVD:RW models)

### Limited warranty
- **1-year** - EasyServe® onsite pickup and delivery / service upgrades available

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*See footnotes for important warranty information*
### ThinkPad Z60m (2529) - TopSeller (January 2006) - withdrawn

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### Software

- Windows XP Professional edition
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery
- Windows XP Home edition
  - Microsoft® Windows XP Home Edition (Service Pack 2)
  - Disk-to-Disk Recovery

### Preloaded Software

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- Diskeeper Lite
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader
- Personal Software (some)
- Multimedia Center for ThinkPad
- Sonic RecordNOW and Drive Better Access
- InterVideo WinDVD (some)
- InterVideo WinDVD Creator (some)
- Universal 90 watt AC adapter
- ThinkPad Roll Cage
- Emergency 1-yr 9x5 NBD
- Post Warranty 3-yr 9x5 NBD
- ThinkPlus 3-yr 9x5 NBD
- Other ThinkPlus services at lenovo.com/thinkplus/warranty
### ThinkPad Z60m (2530) - withdrawn

See footnotes for important warranty information  
* Powered by Intel Centrino® mobile technology

**US models withdrawn effective June, September, or October 2006**

#### Software

- **Windows XP Professional models**
  - Microsoft® Windows® XP Professional (Service Pack 2)

- **Windows XP Home models**
  - Microsoft Windows XP Home Edition (Service Pack 2)

- **Preloaded (all)**
  - Rescue and Recovery™
  - Access Connections
  - Client Security Solution
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symantec® Client Security
  - Diskeeper® Lite
  - P-Doctor®
  - FingerPrint Software (some)
  - Multimedia Center for ThinkPad
  - Sonic RecordNow® and Drive
  - InterVideo WinDVD (combo, DVD+RW models)
  - InterVideo WinDVD Creator (DVD+RW models)

- **License - CD not included (all)**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

- **Stand-alone Client Security**
  - Internet Security Services (ISS)

- **International Warranty Service**
  - 24 hour x 7 day toll-free warranty support during the warranty

- **ThinkPlus**
  - 1-year LOR 9x5 NBD
  - 22 1-yr LOR 9x5 NBD
  - 22 1-yr LOR 9x5 NBD

- **ThinkPlus 3-yr P&L P/U Depot**
  - 41C9174

- **ThinkPlus 4-yr LOR 9x5 NBD**
  - 41C9168

- **ThinkPlus 4-yr LOR 9x5 NBD**
  - 41C9166

#### Specifications

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<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics</th>
<th>Disk SAVAT</th>
<th>EIDE controller</th>
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<th>Battery - life</th>
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<th>Weight</th>
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See footnote for important warranty information  
* © Lenovo

(W2R) October 2006
# ThinkPad Z60m (2531) - withdrawn

## Specifications

### Processor

| Type-model | Speed | Memory | Wide-screen display | Disk | Mini PCI | Mini PCI Express | Finger print reader | Battery | Workhorse (W) | Limited Gb (G) | Avail.
|------------|-------|--------|---------------------|------|----------|-----------------|-------------------|--------|---------------|----------------|---------|
| 2531-4HU | Black Pentium M 740 1.73 GHz | X300 60G | Combo | Intel 11b/g | PM 6 3-yr | Oct 05
| 2531-4OU | Black Pentium M 740 1.73 GHz | X300 60G | Combo | Intel 11a/b/g | PM 6 3-yr | W Oct 05
| 2531-6HU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | W Oct 05
| 2531-6OU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | W Oct 05
| 2531-8HU | Silver Pentium M 760 2.00 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | W Oct 05
| 2531-8OU | Silver Pentium M 760 2.00 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | W Oct 05
| 2531-9HU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-9OU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-BHU | Black Pentium M 740 1.73 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-BOU | Black Pentium M 740 1.73 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-EHU | Black Celeron M 656 1.20 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-EOU | Black Celeron M 656 1.20 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-FHU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-FOU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-6GU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-6GU | Black Pentium M 750 1.86 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-8GU | Black Pentium M 760 2.00 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05
| 2531-8GU | Black Pentium M 760 2.00 GHz | X300 60G | DVD+RW | Finger GM 6 3-yr | Oct 05

### Software

- Preloaded: Rescue and Recovery™, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center, ThinkVantage System Update, Symantec® Client Security, Diskeeper Lite™, PC-Doctor®, ThinkPad utilities, Adobe® Reader, Microsoft® Windows XP Professional (Service Pack 2) and ThinkPlus® agreements at lenovo.com

### Limited warranty

- 3-year/1-year battery - EasyServ™ onsite pickup and delivery - software upgrades available
- 3-year Limited Warranty on parts and labor
- 1-year Limited Warranty on batteries

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*Powered by Intel Centrino® mobile technology*
ThinkPad Z60m (2531) - Education - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

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<th>Top cover color</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
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* This model has an EasyServ onsite pickup and delivery 3-year limited warranty

These educational models are only available to public or private K-12 (or higher) accredited schools or school districts and are operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning:**
- Processor: Intel® Pentium M Processor 750 or 760 with Enhanced Intel SpeedStep™ technology
- L2 cache: Execute Disable Bit
- Memory: 512MB/1GB/2GB RAM
- Diskette drive: None
- EIDE Combo: DVD/CD-RW/802.11a/b/g
- EIDE DVD/CD-RW: DVD/CD-RW/802.11a/b/g
- Bluetooth: Mini PCI Express
- Mini PCI Express: CardBus 32-bit
- Security: Fingerprint reader on palm rest

**Dimensions:**
- Weight: 6.0 lbs or 800g
- Case material: Black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Battery: 6-cell or Lithium Ion
- Battery - type: 6-cell or Lithium Ion
- Battery - life: 6-cell: up to 4.0 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr

**Architecture:**
- Some: Mobile Intel 955GM Express Chipset
- Some: Mobile Intel 955PM Express Chipset
- Some: Mobile Intel PM 850MN Express Chipset
- Some: Mobile Intel PM 850M Express Chipset
- Some: Mobile Intel PM 850M Express Chipset

**Graphics:**
- Some: Intel Graphics Media Accelerator 900 (GMA 900) integrated in 915GM
- Some: ATI® MOBILITY™ RADEON™ X300 PCI Express x16 64MB memory
- Some: RADEON X600 128MB 16x PCI Express x16 64MB memory
- Some: RADEON X600 128MB 16x PCI Express x16 64MB memory
- Some: Intel 97SC3201TPM

**Keyboard:**
- UltraNav multi-pointing system (touchpad)
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

**Wireless:**
- UltraConnect™ antenna built into the display cover (on/off switch for all wireless radios
- UltraConnect™ built into the display cover (on/off switch for all wireless radios
- ThinkPad® 11a/b/g wireless
- ThinkPad® 11a/b/g Wireless
- ThinkPad® 11a/b/g Wireless
- ThinkPad® 11a/b/g Wireless
- ThinkPad® 11a/b/g Wireless

**Security:**
- Power-on password
- Hard disk password
- Support for security keyhole
- Trusted Platform Module
- Atmel chip

**Limited warranty:**
- 3-year/1-year battery - EasyServ onsite pickup and delivery - service upgrades 2nd available

**SOFTWARE:**
- Windows XP Professional
- Microsoft® Windows® XP Professional
- Microsoft® Windows® XP Professional
- Microsoft® Windows® XP Professional

**License:**
- Lenovo Software Offerings
- Lenovo License Manager
- Lenovo License Manager
- Lenovo License Manager
- Lenovo License Manager
- Lenovo License Manager
- Lenovo License Manager

**See footnotes for important warranty information**

* *Powered by Intel Centrino™ mobile technology
* *Lenovo US models announced September 20, 2005 or January 31, 2006
* *Lenovo US models withdrawn effective June 1 or October 2006

© Lenovo
(WR) October 2006
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory MB</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk ATA</th>
<th>EIDE</th>
<th>Mini PCI Express</th>
<th>WWAN</th>
<th>Bluetooth</th>
<th>Finger print reader</th>
<th>Battery Chip set</th>
<th>Limited warranty</th>
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<td>Black</td>
<td>Pentium M 750</td>
<td>1.86</td>
<td>512</td>
<td>15.4 WXGA</td>
<td>X300GB</td>
<td>DVD±RW <em>Intel 11a/b/g/d</em></td>
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<td>None</td>
<td>None</td>
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<td>GM 6</td>
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<td>XMA 60G DMA</td>
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<td>None</td>
<td>None</td>
<td>Blue Finger GM 9</td>
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<td>X600100G DVD±RW <em>Intel 11a/b/g/d</em></td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>Blue Finger GM 9</td>
<td>GM 6</td>
<td>GM 6</td>
<td>Jan 06</td>
</tr>
</tbody>
</table>

* This model has a limited onsite service - 3 year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning**

Stylish notebooks for work and life; widescreen display; two-socket system

**Processor**

Intel® Pentium M Processor 750 or 760 with Enhanced Intel SpeedStep® technology, Execute Disable Bit, and 533MHz System bus

**L2 cache Memory**

2MB / on die (at processor speed) / ECC

**Diskette drive EIDE DVD±RW**

None standard / use optional US B-based diskette drive

**EIDE DVD±RW EIDE DVD±RW Ultrabay Enhanced Serial ATA disk (SATA150)**

Some: DVD burner / Super Multi Burner (40Y8623) dual-layer, removable Ultrabay Enhanced

**Battery - life**

6-cell: up to 7.0 lb (3.2kg); 9-cell: up to 7.3 lb (3.3kg)

**Case material**

Black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Keyboard**

89-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, Appl keys

**TrackPoint® TrackPoint® ThinkLight™**

89-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, Appl keys / illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

(WxDxH): 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

**Weight**

6-cell: up to 7.0 lb (3.2kg); 9-cell: up to 7.3 lb (3.3kg)

**Case material**

Black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Battery - life**

6-cell: up to 4.0 hour; 9-cell: up to 6.0 hour; 9-cell plus Ultrabay battery: up to 8.0 hour

**Architecture**

Some: Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub

**PC Card slot ExpressCard slot**

One Type I or Type II slot / CardBus 32-bit / integrated door

[ software prepaid offerings ]

**Software**

Windows XP Professional

- Microsoft® Windows® XP Professional (Service Pack 2)

- Disk-to-Disk Recovery

(in hidden protected area)

**Preloaded**

- Education software from Vital Source Technologies™: vitalsource KEY™ and Personal Portable Library™

- Rescue and Recovery™

- Access Connections™

- Client Security Solution™

- ThinkVantage Productivity Center

- ThinkVantage System Update

- Symantec® Client Security

- Diskeeper Lite

- PC-Doctor™

- ThinkPad utilities

- Adobe® Reader

- Multimedia Center for ThinkPad

- Sonic RecordNOW and Drive Letter Access

- InterVideo WinDVD

- InterVideo WinDVD Creator (DVD±RW models)

**License**

- CD nick included

- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client

**Wireless antenna**

UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Modem**

None

**Bluetooth**

64KB (V9.2a-modified) modem in Comm Daughter Card socket / Conexant® chip

**Ethernet**

Some: Bluetooth wireless technology / USB 2.0 interface via ICH6-M / LED indicator

**Audio**

Gigabit ethernet on system board / Broadcom BCM5751 (MAC/PHY) / PCI x1 / PXE High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute, and options / internal microphone / microphone input jack / headphone jack / microphone

**Security**

Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**

Trusted Platform Module / Atmel chip / TCG 1.1-compliant

**Fingerprint reader**

Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip

**Limited warranty**

3-year / 1-year battery, limited onsite service - 3 year limited warranty

8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

Post-waranty annual maintenance agreements at lenovo.com/thinkplus/warranty

see footnotes for important warranty information

powered by Intel Centri® mobile technology

Lenovo

US models announced September 20, 2005 or January 31, 2006

US models withdrawn effective June or October 2006

(WRS) October 2006

Software at Lenovo Training Solutions

Personal Systems Reference (PSRF)

See footnotes for important warranty information

- Powered by Intel Centri® mobile technology

Lenovo
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>Mini PCI 802.11</th>
<th>Mini PCIle WWAN</th>
<th>Finger print</th>
<th>Camera</th>
<th>Workhorse</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>9450-D9S/D9U</td>
<td>Silver</td>
<td>Intel Core 2 Duo processor T5500 or T7200 with dual-core, Enhanced Intel SpeedStep technology, Execute Disable Bit, and 667MHz system bus;</td>
<td>1GB std / 4GB max / 667MHz DDR2</td>
<td>Intel Chipset ICH9</td>
<td>SBG optical</td>
<td>GMA 8780M</td>
<td>ThinkPad Gobi</td>
<td>Blue Finger</td>
<td>PM Cam</td>
<td>No Oct</td>
<td>06</td>
</tr>
<tr>
<td>9450-D6S/D6U</td>
<td>Silver</td>
<td>Intel Core 2 Duo processor T5500 or T7200 with dual-core, Enhanced Intel SpeedStep technology, Execute Disable Bit, and 667MHz system bus;</td>
<td>2GB DDR2</td>
<td>Intel Chipset ICH9</td>
<td>SBG optical</td>
<td>GMA 8780M</td>
<td>ThinkPad Gobi</td>
<td>Blue Finger</td>
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<tr>
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<td>SBG optical</td>
<td>GMA 8780M</td>
<td>ThinkPad Gobi</td>
<td>Blue Finger</td>
<td>PM Cam</td>
<td>No Oct</td>
<td>06</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US ThinkPad™ Program.
- These models have a 1-year limited warranty.

Positioning Processor: Widescreen multimedia; two spindles

Memory: 1GB std / 4GB max / 667MHz DDR2 / non-parity / CLS / dual-channel capable / two 200-pin SO-DIMM sockets / Model DSU: Models D6U/D9U: std memory in one socket; one socket available

IDE DVD:RW DVD burner / Super Multi-Burner (40yw623) dual-layer, removable Ultrabay™ Enhanced DVD drive / Serial ATA Enhanced DVD drive

Widescreen display (anti-glare): Some: 15.4" (391mm) WXGA (1280x800) TFT color / 200 nits / 16:10 / 500:1 contrast

WLAN Model: Mobile Intel 945GM Express Chipset / 82945QM Graphics Memory Controller Hub

Architecture: Some: Mobile Intel 945PM Express Chipset / 82945PM Memory Controller Hub

Wireless antenna Integrated antenna: UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios / 4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, xD-Picture Card) / 5-video out port (TV out) / IEEE 1394a-2000 (FireWire 400) / three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / docking connector / no keyboard or mouse or parallel or serial ports (USB)

Security chip: Trusted Platform Module / Atmel chip / TCG 1.2-compliant

Limited warranty: 1-year - EasyServ 3-year / Stand-alone Client

See footnotes for important warranty information
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor Details</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Mini PCI WWAN</th>
<th>Finger print reader</th>
<th>Workstation</th>
<th>Preload Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>9451-NPU</td>
<td>Intel Celeron M 420</td>
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<td>GMA 40G Combo</td>
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<td>9451-5UU</td>
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<td>No XP Pro W</td>
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<td>GMA 60G Combo</td>
<td>11a/b/g</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>No XP Pro W</td>
</tr>
</tbody>
</table>

- These models have a 1-year limited warranty.

**SOFTWARE**

- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery

**Preloaded**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo models)
- InterVideo WinDVD (combo models)

**License**

- CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

- Supports ThinkVantage technologies
- 65-watt (GMA graphics) or 90 watt (ATI graphics) AC adapter
- ThinkPad Roll Cage
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day® toll-free warranty support during the warranty

- ThinkPlus®/™ 2-year LOR 9x5 NBD
- ThinkPlus® 2-year LOR 9x5 NBD
- ThinkPlus® 3-year LOR 9x5 NBD
- ThinkPlus® 4-year LOR 9x5 NBD
- ThinkPlus® 5-year LOR 9x5 NBD
- ThinkPlus® 2-year P/L P/U Depot
- ThinkPlus® 3-year P/L P/U Depot
- ThinkPlus® 4-year P/L P/U Depot
- ThinkPlus® 5-year P/L P/U Depot
- Lenovo Post-warranty maintenance agreements at lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Mini PCIe</th>
<th>Finger print</th>
<th>Chip</th>
<th>Limited Workhorse</th>
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<tbody>
<tr>
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<td>Silver Celeron® M 410</td>
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<td>Cam</td>
<td>EasyServ</td>
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</table>

*These models have an EasyServ® onsite pickup and delivery 1-year limited warranty*

These educational models are available only to private or public K-12 (or higher) accredited schools and operated exclusively for educational purposes for use by qualified students and teachers.

### SOFTWARE®

- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery

### Preloaded

- VitalSource Library education software
- Adobe Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery®
- Access Connections®
- Client Security Solution®

### License

- Adobe Reader®
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW® and Drive Letter Access (combo, DVD±RW)
- InterVideo WinDVD Creator (combo, DVD±RW models)
- InterVideo WinDVD Creator (combo, DVD±RW models)

### Support

- 65-watt (GMA graphics) or 90 watt (ATI graphics) AC adapter
- ThinkPad Roll Cage
- RoHS-compliant
- International Warranty Service®
- 24 hour x 7 day toll-free warranty support during the warranty®

**Note:**

- **512MB PC2-5300 DDR2 CLS SODIMM:**
  - 40Y7733
  - Z60m/R60 Series Li-Ion Battery 6-cell
  - 60Y7695
- **512MB PC2-5300 DDR2 CLS SODIMM:**
  - 40Y7733
  - Z60m/R60 Series Li-Ion Battery 9-cell
  - 60Y7697

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See footnotes for important warranty information
* Powered by Intel Centrino® Duo processor technology
© Lenovo

US models announced May 16 or 30, 2006
US models withdrawn effective February or September 2007
### ThinkPad Z61m (9452) - withdrawn

#### System Specifications

<table>
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<tr>
<th>Type-model color</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
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<th>EIDE controller</th>
<th>Mini PCI</th>
<th>Mini PCIe WWAN</th>
<th>Finger print</th>
<th>Security</th>
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<tbody>
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<td>950 MHz</td>
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<td>Finger</td>
<td>None</td>
<td>G</td>
<td>G</td>
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<td>Finger</td>
<td>None</td>
<td>G</td>
<td>G</td>
<td>W</td>
</tr>
</tbody>
</table>

- These models have a 3-year limited warranty.

#### Software

- **Windows XP Professional models**
  - Microsoft Windows XP Professional (Service Pack 2)
  - 90-watt (ATI graphics) AC adapter
  - 65-watt (GMA graphics) or 50-watt (GMA graphics) AC adapter

#### License

- CD not included (all)
- Lenovo's SmartSuite Millennium and Lenovo Notes Stand-alone Client

---

### Features

- **Dimensions**
  - 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

- **Weight**
  - 6.65 lb (2.97 kg)
  - 6.07 lb (2.75 kg)

- **Battery**
  - 6-cell lithium ion, 60 Wh (1C/5A/2A)

- **Architecture**
  - Mobile Intel 945GM Express Chipset
  - Intel PRO/Wireless 3945ABG Network Adapter

- **Security**
  - KeyLock
  - Security Cable

- **Ports**
  - ExpressCard slot
  - Combination CardBus/PC Card slot

- **Wireless**
  - UltraConnect

- **Memory**
  - 512 MB DDR2 SODIMM

- **Display**
  - WXGA+ (1680x1050)

- **Graphics**
  - GM 31M/400/850/950M/965M/980M/9890M/9900M/9950M/9960M/9980M

- **Finger Print Reader**
  - Trusted Platform Module

- **Limited warranty**
  - 3-year/1-year battery - EasyServ, on-site pickup and delivery - service upgrades available

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See footnotes for important warranty information.

© Lenovo

US models announced May 16, 2006

US models withdrawn effective February 2007

* Powered by Intel Centrino™ Duo mobile technology
### ThinkPad Z61m (9452) - October 2006 - withdrawn

#### See footnotes for important warranty information

- Powered by Intel Centrino® Duo mobile technology
- © Lenovo
- (WR25-2) September 2007

#### Softwaré

- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery
- Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec Client Security™
  - Diskkeeper® Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
- License
  - CD not included (all)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
  - Lotus SmartSuite® Mobile Edition

#### Software

- Supports ThinkVantage® technologies
- 65-watt (GMA graphics) or 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage
- ROHS-compliant
- International Warranty Service
  - 24 hour x 7 day toll-free warranty support during the warranty

#### Workhorse

- Processor: Intel® Core™ 2 Duo processor T5600 or T7200 with dual-core, Intel® 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit
- Memory: 512MB std / 4GB max / 2x PC2-5300 667MHz DDR2 / non-parity / OLS - dual-channel capable / 200-pin SO-DIMM sockets / [J4U1 NU: standard memory in both sockets (512MB each socket); no sockets avail; J3U1 PU: standard memory in 1 socket; 1 socket available
- Processor: Intel® Core™ 2 Duo processor T5600 or T7200 with dual-core, Intel® 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit
- Memory: 512MB std / 4GB max / 2x PC2-5300 667MHz DDR2 / non-parity / OLS - dual-channel capable / 200-pin SO-DIMM sockets / [J4U1 NU: standard memory in both sockets (512MB each socket); no sockets avail; J3U1 PU: standard memory in 1 socket; 1 socket available
- Processor: Intel® Core™ 2 Duo processor T5600 or T7200 with dual-core, Intel® 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit
- Memory: 512MB std / 4GB max / 2x PC2-5300 667MHz DDR2 / non-parity / OLS - dual-channel capable / 200-pin SO-DIMM sockets / [J4U1 NU: standard memory in both sockets (512MB each socket); no sockets avail; J3U1 PU: standard memory in 1 socket; 1 socket available

#### Type-model cover color

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed Mem-</th>
<th>Wide-</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Finger</th>
<th>Workhorse</th>
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</thead>
<tbody>
<tr>
<td>9452-J3U</td>
<td>Black</td>
<td>Core 2 Du</td>
<td>1.83</td>
<td>1GB</td>
<td>15.4&quot; WXGA GMA</td>
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<td>1GB</td>
<td>15.4&quot; WXGA+ X1400</td>
<td>80G</td>
<td>Blue</td>
</tr>
</tbody>
</table>

#### Features

- **These models have a 3-year limited warranty:**
- **Positioning Processor:** Widescreen multimedia; two spindles
- **Memory:** 512MB std / 4GB max / 2x PC2-5300 667MHz DDR2 / non-parity / OLS - dual-channel capable / 200-pin SO-DIMM sockets / [J4U1 NU: standard memory in both sockets (512MB each socket); no sockets avail; J3U1 PU: standard memory in 1 socket; 1 socket available
- **EIDE Combo** Some: DVD-ROM/CD-RW / 2x4/2x4/2x8x/1x speed / removable from Ultrabay™ Enh
- **Graphics:** Some: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- **Keyboard:** 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
- **Dimensions:** (WxHxD): 14.1" x 10.3" x 1.47-1.58";
- **Weight:** 6.8 lbs (3050 g)
- **Battery:** 5-cell Li-ion; 4.4 Ah / charge time: 3 hours up to 4.0 hr; 6-cell Li-ion; 6.6 Ah / charge time: 3 hours up to 5.6 hr; 9-cell Li-ion; 9.9 Ah / charge time: 3 hours up to 10.3 hr
- **Architecture:** Some: Mobile Intel 945GM Express Chipset / 82895GM Graphics Memory Cont Hub
- **Wireless antenna:** UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios
- **Mini PCI Express:** None
- **Modem:** 56K V.90 (V.92-designed) modem in Comm Daughter Card socket / Conexant® chip / Bluetooth® wireless / USB 2.0 via ICH-M / LED indicator
- **Ethernet:** Gigabit Ethernet on systemboard / Broadcom® BCM5725M (MAC/PHY) / PCIe x1 / PXE
- **Audio:** High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / GMA models: mono microphone / ATI graphics models: stereo microphone / microphone input jack / headphone jack
- **Security:** Power-on password / hard disk password / supervisor password / security keyhole / security chip
- **Fingerprint reader:** None
- **Limited warranty:** 3-year / 1-year battery - EasyServ™ on-site pickup and delivery / service upgrades available

#### Footnotes

1. *Post-warranty annual maintenance
2. *24 hour x 7 day toll-free warranty support during the warranty
3. *Supported by Microsoft® Windows® XP Professional Service Pack 2
4. *3-year / 1-year battery - EasyServ™ on-site pickup and delivery / service upgrades available

#### References

- US models announced October 17, 2006
- US models withdrawn effective September 2007

**See footnotes for important warranty information

- Powered by Intel Centrino® Duo mobile technology
- © Lenovo
- (WR25-2) September 2007

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**Note:** The above table and information are specific to the ThinkPad Z61m model (9452) as of October 2006, as withdrawn from Lenovo's product lineup. The features listed include processor options, memory specifications, display options, battery life, and additional accessories such as optical drives and memory cards. The warranty terms are outlined, with options for 3-year, 1-year, or other support plans. The table provides a comprehensive overview of the product's configuration and features at the time of its release.
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk capacity</th>
<th>Mini PCI</th>
<th>Mini PCIE</th>
<th>Finger print reader</th>
<th>Chip type</th>
<th>Limited Workhorse Warranty</th>
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<tbody>
<tr>
<td>9452-E1U</td>
<td>Intel® Celeron® M 410</td>
<td>512MB</td>
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<td>GMA 400 Combo</td>
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<td>None</td>
<td>Finger GM</td>
<td>EasyServ W  May 06</td>
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<td>None</td>
<td>Finger GM</td>
<td>EasyServ W  May 06</td>
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<td>Finger GM</td>
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<td>Finger GM</td>
<td>EasyServ W  May 06</td>
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</tr>
</tbody>
</table>

* These models have an EasyServ onsite pickup and delivery 3-year limited warranty.

This Education Z61m model is for use by qualified students and teachers. 

For more information, please visit [lenovo.com/thinkplus/warranty](lenovo.com/thinkplus/warranty) or call 1-800-THINK-45 (800-846-4545) to determine if an Education model is available.  

**SOFTWARE**

- **Windows XP Professional**
- **Microsoft® Windows® XP Professional** (Service Pack 2)
- **Disk-to-Disk Recovery**

**Preloaded**

- VitalSource Library eduction software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkVantage Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD±RW models)
- InterVideo WinDVD (combo, DVD±RW models)
- InterVideo WinDVD Creator (DVD±RW models)
- Adobe Photoshop Elements plus Adobe Premiere Elements

**License** - CD not included

- Lotus® SmartSuite® Millennium and Lotus Notes™ Stand-alone Client

See footnotes for important warranty information. 

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US models announced May 16 or 30, 2006

US models withdrawn effective February or September 2007

Lenovo Training Solutions

Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)
ThinkPad Z61m (9453) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controllers</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCI</th>
<th>Mini PCIe</th>
<th>Finger print</th>
<th>Chip Camera</th>
<th>Limited Workhorse (W)</th>
<th>Gbl (G)</th>
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<tr>
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<td>W</td>
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</tr>
</tbody>
</table>

* These models have a limited onsite service² 3-year limited warranty

These educational models are available to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning
Processor: Widescreen multimedia; two spindles
Intel® Celeron M Processor 410 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache of
Intel Core™ Duo processor T2400 or T2500 with dual-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz bus, and 2MB L2 cache (shared)

Memory: 512MB or 1GB std / 4GB max¹ / PC2-5300 667MHz DDR2 / non-parity /
CL3 / dual-channel capable / two 200-pin SO-DIMM sockets /
512MB models: std memory in one socket; one socket available /
1GB models: std memory in two sockets; none available

EIDE Combo
EIDE DVD RW
Some: DVD-ROM/CD-RW / 24X/24X/24X/8X/² speed / removable from Ultrabay™ Enh
Some: DVD burner / Super Multi-Burner (40Y823) dual-layer, removable Ultrabay Enh
One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm high
Serial ATA disk (SATA150)

Pack (shock absorber) / Active Protection System™

Widescreen display (anti-glare)
Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio
Some: 15.4" (391mm) WSXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect
All: stainless steel hinges / one hand activates dual latches

Graphics
Some: Intel Graphics Media Accelerator 950 / Integrated in 945GM / 250MHz
Some: ATI Mobility Radeon™ X1400 M54 / PCI Express x16 / 128MB GDDR1 /
DVI pass-through support to opt Advanced Mini Dock and Advanced Dock

Keyboard
TrackPoint® pointing device / UltraNav® multi-pointing system (touchpad)

Dimensions³
Weight⁴
(WxDxH): 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm
with optical drive and battery: 6-cell black: starting at 5.94 lb (2.7kg)/6.33 lb (2.9kg);
6-cell titanium: starting at 6.47 lb (2.9kg)/6.85 lb (3.1kg)

Case material
Some: black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
Some: top cover: silver color; ABS, aluminum, titanium material; bottom: black; PC/ABS
Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
6-cell GMA graphics: up to 5.6 hr; 6-cell ATI graphics: up to 4.0 hr;
optional 9-cell GMA graphics: up to 8.3 hr; 9-cell plus Ultrabay battery: up to 10.3 hr

Battery - type
Battery - life¹⁵

Architecture
Some: Mobile Intel 945GM Express Chipset / 82845GM Memory Control Hub
Some: Mobile Intel 945PM Express Chipset
Some: Mobile Intel 855PM Memory Controller Hub
All: 82801GM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE)
PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (Tt®
P CI8412 CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel® AT973320)
One Type I or II slot / CardBus 32-bit / integrated connector
One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, X-Plate Card™⁶) / S-video out port (TV out) / IEEE 1394a-2000 (FireWire 400) / three USB 2.0 /
external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) /
 telemetry / 82945GM Graphics Memory Cont Hub

PC Card slot
Ports
ExpressCard slot

Wireless antenna
Integrated camera
Mini PCI Express
WWAN
Modem
Bluetooth™
Ethernet
Audio
Security
Security chip
Fingerprint reader

Wireless antenna
Integrated camera
Mini PCI Express
WWAN
Modem
Bluetooth™
Ethernet
Audio
Security
Security chip
Fingerprint reader

Supports ThinkVantage technologies

SOFTWARE²
Windows XP Professional
- Microsoft® Windows® XP Professional²² (Service Pack 2)
Preloaded
- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery™
- Access Connections
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Lenovo System Update
- Sonic RecordNow® and Drive Letter Access (combo, DVD\#RW)
- InterVideo WinDVD (combo, DVD\#RW models)
- InterVideo WinDVD Creator (DVD\#RW models)
- CD
- Adobe Photoshop Elements plus Adobe Premiere Elements

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Lenovo Training Solutions

Lenovo.com

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

POWERED BY INTEL CENTRINO® DUO MOBILE TECHNOLOGY
© Lenovo

US models announced May 16 or 30, 2006
US models withdrawn effective February or September 2007

(WR2-6) September 2007
Partial list of accessories supported on:
- ThinkPad Z60m announced on September 20, 2005
- ThinkPad Z61m announced on May 16, 2006
- ThinkPad Z61p announced on July 18, 2006

**Memory (Z60m)**
- 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 ann 01/05/06

**Memory (Z61m and Z61p)**
- 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 ann 01/05/06
- 2GB PC2-5300 DDR2 SODIMM 40Y7735 ann 11/2/06

**Ultrabay Slim 9.5mm** (best to use curved bezel options)
- Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725 ann 09/20/05
- DVD-ROM Ultrabay Slim Drive (curved bezel) 73P3270 ann 10/7/03
- Combo II Ultrabay Slim Drive (flat bezel) 40Y8621 ann 09/20/05
- ThinkPad DVD Ultrabay Slim Drive (flat) 41N5643 ann 05/31/07

**Ultrabay Enhanced 12.7mm** (best to use curved bezel options)
- DVD-ROM Ultrabay Enhanced Drive (curved) 39X2642 ann 03/14/06
- CD-RW/DVD Combo Enhanced (curved) 78P3275 ann 10/7/03

**Storage and removable storage**
- 60GB Disk 9.5m SATA150 (7200 rpm)** 41N3012 ann 01/05/06
- 80GB Disk 9.5m SATA150 (5400 rpm)** 41N6622 ann 08/15/06
- 100GB Disk 9.5mm SATA150 (7200 rpm)** 41N3013 ann 01/05/06
- 120GB Disk 9.5mm SATA150 (5400 rpm)** 41N5691 ann 03/20/07
- 160GB Disk 9.5mm SATA150 (5400 rpm)** 41N6692 ann 03/20/07

**Wireless LAN (Mini PCI) (Z60m)**
- 11a/b/g Wireless Mini PCI Adapter I® 73P4301

**Wireless LAN (Mini PCI Express) (Z61m and Z61p)**
- 11a/b/g Wireless Mini PCI Express Adapter® 40Y7026 ann 09/20/05
- Intel PRO/Wireless 3945ABG Mini PCI Express Adapter® 41N3008 ann 01/05/06

**ThinkPad Expansion**
- USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07
- USB 2.0 Essential Memory Key 2GB 41U4944 ann 01/23/07
- USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07
- USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07
- USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07
- USB Portable Diskette Drive 08K3276 ann 06/05/06
- USB 2.0 Portable 80GB Hard Disk 41N8378 ann 04/17/07
- USB 2.0 Portable 120GB Hard Disk 41N8379 ann 04/17/07
- USB 2.0 Super Multi-Burner Drive 41N5665 ann 01/23/07

**Wireless LAN (Mini PCI) (Z60m)**
- 11a/b/g Wireless Mini PCI Adapter I® 73P4301

**Wireless LAN (Mini PCI Express) (Z61m and Z61p)**
- 11a/b/g Wireless Mini PCI Express Adapter® 40Y7026 ann 09/20/05
- Intel PRO/Wireless 3945ABG Mini PCI Express Adapter® 41N3008 ann 01/05/06

**ThinkPad Expansion**
- USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07
- USB 2.0 Essential Memory Key 2GB 41U4944 ann 01/23/07
- USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07
- USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07
- USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07
- USB Portable Diskette Drive 08K3276 ann 06/05/06
- USB 2.0 Portable 80GB Hard Disk 41N8378 ann 04/17/07
- USB 2.0 Portable 120GB Hard Disk 41N8379 ann 04/17/07
- USB 2.0 Super Multi-Burner Drive 41N5665 ann 01/23/07

**Batteries**
- ThinkPad 65W AC Adapter® 40Y7696
- "Only compatible with the 945GM and GM965 chipset models.
- ThinkPad 90W AC Adapter 40Y7599 ann 09/20/05
- ThinkPad 90W AC/Dc Combo Adapter 40Y7590 ann 12/13/05
- Belkin 1 Outlet Notebook Surge 31P7658
- Belkin Universal Notebook Travel Surge 22P7127
- Belkin Surge Protector 31P7659

**Data/Video Projectors**
- Lenovo M500 Projector 0037A05 ann 02/28/06
- Lenovo C500 Projector 0039A05 ann 07/11/06

**Carrying Cases**
- Lenovo Carry Case - Messenger Max 41U5253 ann 05/01/07
- Lenovo Carry Case - Performance Backpack 41U5254 ann 05/01/07
- ThinkPad Nylon Carrying Case 10K0207
- ThinkPad Carrying Case - Expander 73P3597
- ThinkPad Carrying Case - Backpack 73P3599
- ThinkPad Premiere Leather Carrying Case 10K0209
- ThinkPad Convertible Carrying Case 22P8860

**USB 2.0 Lenovo Webcam 40Y8519
- ® Lenovo Optical Wheel Mouse 06P4069 ann 05/21/03
- Optical 3-Button ScrollPoint Mouse 31P7405 ann 08/27/02
- Optical 3-Button ScrollPoint Pro Mouse 31P8700 ann 10/01/02
- Optical 3-Button Travel Wheel Mouse 31P7410
- Lenovo Laser Mouse (USB, PS/2) 41U3074 ann 01/23/07

**Multimedia**
- USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06
- USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06

Other accessories at lenovo.com/accessories

Need to buy accessories no longer marketed by Lenovo? See www.itxchange.com/lenovo for the Options Continuation Program.
## Specifications

**ThinkPad Z60t (2511) - TopSeller - withdrawn**

### Type-models

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<th>Type-model</th>
<th>Top cover color</th>
<th>Olympic logo on cover</th>
<th>Processor</th>
<th>Speed</th>
<th>Screen type</th>
<th>Memory</th>
<th>Disk</th>
<th>Mini PCIe 802.11a/b/g</th>
<th>Mini PCIe WWAN</th>
<th>Finger Battery</th>
<th>Finger Battery Preload</th>
<th>Limited warranty</th>
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<td>7-cell</td>
<td>1 yr Sep 05</td>
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</tbody>
</table>

**Positioning**

- **Processor**: Intel Celeron M 900 or 370 with XD 86 and 400MHz system bus or Intel Pentium M Processor 740 (1.73GHz), 750 (1.86GHz), or 760 (2.0GHz) with Enhanced Intel SpeedStep technology.
- **L2 cache**: Execute Disable Bit, and 533MHz system bus

**Memory**

- **Diskette drive**: None standard / optional USB-based disk drive
- **IDE Combo**: Some: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabay Slim
- **IDE DVD:RW**: Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim

**Display**

- **Widescreen / 14.0” (356mm) WXGA (1280x768) TFT color**: 200 nits / 15:9 ratio / stainless steel hinges / one hand activates dual latches / secure screen surround

**Graphics**

- **Intel Graphics Media Accelerator 900 (GMA 900)** / integrated graphics in 915GM

**Keyboard**

- **98-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys**

**TrackPoint®**

- **Pointing device / UltraNav® multi-pointing system (touchpad)**

**Dimensions**

- **(WxDxH): 33.1 x 9.0 x 1.05-1.22 / 334mm x 228mm x 26.6-30.9mm** with optical drive and battery: 4-cell: up to 4.8 lb (2.2kg); 7-cell: up to 5.15 lb (2.34 kg)

**Weight**

- **Some**: color black / hybrid carbon fiber reinforced polymer (CFRP) material / some: top cover: silver color / CFRP / aluminum / titanium material / black: CFRP / lithium-ion / 4-cell / 7-cell: up to 8.6 lb (3.9kg)

**Battery**

- **4-cell: up to 3.0 hr / 7-cell: up to 5.0 hr / 7-cell plus Ultrabay Slim battery: up to 7.0 hr**

**Architecture**

- **Mobile Intel 915GM Express Chipset** / 82895GM Graphics Memory Controller Hub / 82801FB ICH6-M / I/O Controller Hub (SATARA-150, ATA-100, IDE, IDE Express x1, PCI Express x1, PCI bus, Ethernet, USB, Bluetooth, fingerprint, PC USB (6Pin) R5C41 CardBus controller) / LPC bus (NS PC8782 Sупер + AT95.12D.Super = 1/16).

**PC Card slot**

- **Type I or Type II / CardBus 32-bit / PCMCIA 2.1 / integrated 128-bit**

**Ports**

- **S-video out port (TV out) / Secure Digital (SD) / IEEE 1394 (FireWire 400) / docking / three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or parallel or serial ports (use USB)**

**Wireless**

- **Wireless antenna**: Ultraview® antenna built into the display cover / on/off switch for all wireless radios

**Modem**

- **Some**: Bluetooth 2.0 wireless technology / USB 2.0 interface / ICH6-H / LED indicator / Gigabit ethernet on systemboard / Broadcom BCM5751M / MACPHY / PCI x4 / PXE High Definition (HD) Audio / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input / headphone jack / power-on password / hard disk password / power button / security keyhole / Security Chip / Trusted Platform Module / ThinkPad Roll Cage (one-piece / thinkVantage / thinkpad)

**Software**

- **Windows XP Professional**
  - Microsoft Windows XP Professional Service Pack 2
  - Disk-to-Disk Recovery (in hidden protected area)

**Windows XP Home models**

- **Microsoft Windows XP Home Edition** (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded (all)**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- Diskeeper Lite
- PC-Doctor®
- ThinkPad utilities
- Adobe® Reader
- Fingerprint Software
- Multimedia Center for ThinkPad
- Sonic RecordNOW and Drive
- Microsoft Windows XP Media Center Edition
- Windows XP Media Center Edition
- ThinkPlus 3-year LOR 9x5 NBD
- 1-day 7×24 toll-free warranty support during the warranty

**License - CD not included**

- Lotus® Notes® Stand-alone Client
- Lotus® SmartSuite

**Other available services**

- ThinkPlus 1-year LOR 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus services at lenovo.com/thinkplus/warranty
### ThinkPad® Z60t (2511) - TopSeller (January 2006) - withdrawn

#### Type-model | Cover | Processor | Speed | Memory | Cache | Graphics | Disk | Mini PCIe | Mini PCIe | Bluetooth | Finger | Battery | Limited | Avail
|---------------|--------|-----------|-------|--------|-------|---------|------|---------|---------|-----------|--------|---------|---------|--------
| 2511-H1U Black | Celeron M 380 | 1.6 | 512MB | 14.0" WXGA | GMA | 40GB | Combo | 11a/b | 4-cell | Home 1-yr | 2006
| 2511-H2U Black | Pentium M 760 | 2.0 | 512MB | 14.0" WXGA | GMA | 40GB | DVD+RW | 11a/b | Finger | 7-cell | Pro 1-yr | 2006
| 2511-HB2 Silver | Pentium M 770 | 2.13 | 512MB | 14.0" WXGA | GMA | 40GB | DVD+RW | 11a/b | Finger | 7-cell | Pro 1-yr | 2006
| 2511-HGU Silver | Pentium M 740 | 1.77 | 512MB | 14.0" WXGA | GMA | 40GB | Open | upg | 4-cell | Home 1-yr | 2006
| 2511-HCU Black | Celeron M 370 | 1.73 | 512MB | 14.0" WXGA | GMA | 40GB | Combo | Open | 4-cell | Home 1-yr | 2006
| 2511-HDU Silver | Pentium M 740 | 1.73 | 512MB | 14.0" WXGA | GMA | 40GB | Open | upg | 4-cell | Home 1-yr | 2006
| 2511-HSU Silver | Pentium M 740 | 1.73 | 512MB | 14.0" WXGA | GMA | 40GB | Open | upg | 4-cell | Home 1-yr | 2006
| 2511-HHU Silver | Pentium M 740 | 1.73 | 512MB | 14.0" WXGA | GMA | 40GB | Open | upg | 4-cell | Home 1-yr | 2006

- These small medium business (SMB) models are part of the US TopSeller™ Program
- These 2511 models have a 1-year limited warranty

### Positioning

**Processor**
- Stylish notebooks for work and life; thin and light; two-spindle system

**L2 cache Memory**
- Celeron M: 1 MB; Pentium M: 2 MB; All: on die (at processor speed) / ECC
- 256MB, or 512MB std / 2GB max / PC-24200 533MHz DDR2 / non-parity / dual channel capable / two 50-pin SO-DIMM sockets / 2 memory slots / 1 socket available

**Diskette drive**
- DVD-ROM/CD-RW / 4X24X24X8X speed / removable from Ultrabay Slim

**Display**
- Widescreen / 14.0" (356mm) WXGA (1280x768) TFT color / 200 nits / 15:9 ratio / stainless steel hinges / one hand activates dual latches / secure screen surround

**Graphics**
- Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM

**Keyboard**
- B9-key / ThinkVantage button / spill-resistant / multimedia f keys / Windows, App keys

**Modem**, **Bluetooth**, **Wireless**
- ThinkVantage ThinkLight™
- Bluetooth 2.0, wireless technology / USB 2.0 interface via ICH6-M / LED indicator

**Modem**, **Security**, **Modem**, **Security**, **Security**
- Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE
- High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down / mute buttons / internal microphone / microphone input jack / headphone jack

**Security chip**
- Hardware security / hard disk password / Supervisor password / security keyhole

**Limited warranty**
- 1-year EasyServ™ / onsite pickup and delivery / service upgrades available

### SOFTWARE

**Windows XP Professional models**
- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Desk Recovery

**Windows XP Home models**
- Microsoft Windows XP Home Edition (Service Pack 2)
- Disk-to-Desk Recovery

**Preloaded (all)**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Diskeeper Lite
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader
- FingerPrint Software
- Multimedia Center for Think offerings
- Sonic RecordNOW and Drive Letter Access (combo, DVD+RW)

**License**
- CD not included (all)
- Lotus® Smartsuite® Millennium and Lotus® Notes® Stand-alone Client (Notes client not supported on XP Home)

**Support**
- 24 hour x 7 day toll-free warranty

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See footnotes for important warranty information

US models announced January 25, 2005

US models withdrawn effective October 2006

Created by Lenovo Training Solutions

Personal Systems Reference (PSRF)
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<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics</th>
<th>Disk cache</th>
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<th>Mini PCle EIDE</th>
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**Positioning**
- Processor: Intel® Pentium® M Processor 740 (1.73GHz) with Enhanced Intel SpeedStep® technology.
- L2 cache: 1MB (40GB), 2MB (256GB).

**Diskette drive**
- None standard / use optional USB-based diskette drive.

**Display**
- Widescreen: 14.0" (356mm) WXGA (1280x768) TFT color / 200 nits / 15:9 ratio / stainless steel hinges / one hand activates dual latches / screen secure surround.

**Architecture**
- Memory: 1GB DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail.

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole.

**Wireless**
- Bluetooth® technology:
  - 11a/b/g wireless
  - ThinkPad 11a/b/g Mini PCI Express Adapter, Atheros AR5006EX chip.

**Software**
- Windows XP Professional models:
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disco Recovery (in hidden protected area)

Windows XP Home models:
- Microsoft® Windows XP Home Edition (Service Pack 2)
- Disk-to-Disco Recovery (in hidden protected area)

**License**
- Stand-alone Client

**Supplementary Information**
- Lenovo Training Solutions
- Lenovo Warranty Information
- Lenovo Service and Support

See footnotes for important warranty information.

US models announced September 20, 2005 or February 28, 2006
US models withdrawn effective 1-9 June or October 2006

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**ThinkPad® Z60t (2513) - withdrawn**

**Processor**
- **Type**: Intel® Celeron® M
- **Speed**: 1.66 GHz
- **Memory**: 1 GB (200-pin SO-DIMM)
- **Disk**: 60 GB (5400 rpm)
- **Ports**: USB 2.0, RJ-45, Audio

**Display**
- **Type**: 15.4" WXGA (1280x800)
- **Resolution**: 1280x800
- **Brightness**: 250 nits

**Security**
- **Security**: Fingerprint reader
- **Utilities**: Client Security Solution

**Software**
- **Operating System**: Windows XP Professional

**Limited warranty**
- **Type**: 3-year, 1-year
- **Service**: On-site pickup and delivery

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*See footnotes for important warranty information

US models announced on September 20, 2005 and January 24 or February 28, 2006

US models withdrawn effective June, September, or October 2006

"Lenovo" (M3) October 2006

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Lenovo Training Solutions

Personal Systems Reference (PSREF)
This model has an EasyServ™ onsite pickup and delivery 3-year limited warranty. These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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<th>Top cover color</th>
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### SOFTWARE

#### Windows XP Professional models
- Microsoft Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

#### Preloaded
- Education software from Vital Source Technologies®
- CoSorit KeyTM and Personal Portable library™
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- Diskeeper Lite
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive Letter Access (combo, DVD±RW)

#### License
- CD not included
- Lenovo® SmartSite® Millennium and Lenovo Notes® Stand-alone Client

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See footnotes for important warranty information

US model announced September 20, 2005

US model withdrawn effective June 2006

© Lenovo (M4) April 2006
**ThinkPad® Z60t (2514) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>EIDE controller</th>
<th>Mini PCIe WWAN wireless</th>
<th>Bluetooth® reader</th>
<th>Battery - life</th>
<th>3-year Limited warranty expiration date</th>
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<tbody>
<tr>
<td>2514-MHU</td>
<td>Black</td>
<td>Pentium® M 740</td>
<td>1.73</td>
<td>512MB</td>
<td>14.0&quot; WXGA</td>
<td>GM60</td>
<td>60GB</td>
<td>Combo</td>
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<td>Combo</td>
<td>11a/b/g</td>
<td>None</td>
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<td>Jan 06</td>
</tr>
</tbody>
</table>

- **These models have a limited onsite service** - 3-year limited warranty

**Positioning**
- Stylish notebooks for work and life; thin and light; two-spindle system
- Intel® Pentium M Processor 740 or 760 with Enhanced Intel SpeedStep™ Technology
- Execute Disable Bit, and 533MHz system bus
- 2MB / on die (at processor speed) / ECC
- 2512MB std / 256MB max / PC-2 4200 533MHz DDR2 / non-parity / CL4 / dual-channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

**Diskette drive**
- None standard / use optional USB-based diskette drive
- DVD-ROM / CD-RW / 24x/24x/24x/8x2x speed / removable from Ultrabay Slim

**Graphics**
- Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main with 256MB+ / 200MHz

**Weight**
- 60 or 80GB (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber)
- Active Protection System™

**Display**
- WXGA (1280x768) TFT color / 200 nits / 15:9 ratio / stainless steel hinges / one hand activates dual latches / secure screen surround

**Software**
- Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- Diskeeper Lite
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader

**Multimedia Center for Think Offerings**
- Sonic RecordNOW and Drive Letter Access (combo, model)
- InterVideo WinDVD (combo, model)

**License**
- CD not included
- Lenovo® SmartSoft® Millennium and Lenovo Notes® Stand-alone Client

**Memory**
- 512 MB PC2-4200 DDR2 NP CL4 GB
- PC2-4200 DDR2 NP CL4 SOD
- PC-2 4200 DDSR NP CL4 SOD
- 1GB PC-2 4200 DDSR NP CL4 SOD
- 2GB Portable Diskette Drive
- 50K9276
- 7-cell Lithium Ion 4-cell or 7-cell / intelligent / supports unique 2nd battery in Ultrabay Slim
- Battery - life (days)

**Processor**
- Intel® Pentium M Processor 740 / or 760 / with Enhanced Intel SpeedStep™ Technology
- Execute Disable Bit / and 533MHz system bus
- 2MB / on die (at processor speed) / ECC
- 2512MB std / 256MB max / PC-2 4200 533MHz DDR2 / non-parity / CL4 / dual-channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

**Find more information at**
- lenovo.com
- visit lenovo.com/thinkpad

**Post-warranty annual maintenance agreements at**
- lenovo.com/think沃尔/
ThinkPad® Z60t (2514) - Education - withdrawn

### Top cover color

<table>
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<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk controller</th>
<th>Optical Drive</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Limited warranty</th>
<th>Education Avail date</th>
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<tbody>
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<td>2514-2GU</td>
<td>Black</td>
<td>Intel® Pentium M 750 (1.86GHz)</td>
<td>1.86</td>
<td>512MB</td>
<td>14.0” WXGA GMA</td>
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<td>None</td>
<td>Yes Sep 05</td>
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</tbody>
</table>

- **This model has a limited onsite service** - 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Hardware Features

- **Positioning Processor**: ThinkPad® Pentium M Processor 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology!
- **L2 cache Memory**: Execute Disable Bit, and 533MHz system bus
- **2MB / on die (at processor speed) / (ECC)**
- **512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available**
- **Diskette drive**: None standard / ultrafast USB-based diskette drive
- **Ultrabay Slim**: DVD-ROM/CD-RW / 24x/24/4x/8x speed / removable from Ultrabay Slim
- **Serial ATA disk**: One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
- **Battery - type**: 60GB (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack / Active Protection System™
- **Display**: Widescreen / 14.0” / 358.4mm WXGA / 200 nits / 15:9 ratio / stainless steel bezel / one hand activation / one screen surround
- **Graphics**: Intel® Graphics Media Accelerator 950M / integrated graphics in 950GM / GMCH / uses main memory (up to 128MB with 526MB+) / 2000MHz
- **Keyboard**: 89-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, Apple keys / TrackPoint®
- **ThinkLight™**: Illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions**: (WxDxH): 13.1” x 9.0” x 1.05-1.22” / 334mm x 228mm x 26.6-30.9mm
- **Weight**: With optical drive and battery: 7-cell / up to 5.1 lb (2.3 kg)
- **Case material**: Black color / hybrid carbon fiber-reinforced polymer (CFRP) material
- **Battery - type**: Lithium Ion / 7-cell / intelligent / supports unique 2nd battery in Ultrabay Slim
- **Battery - life**: 7-cell: up to 5.0 hr / 7-cell plus Ultrabay Slim battery: up to 7.0 hr
- **Architecture**: Mobile Intel 915GM Express Chipset
- **PC Card slot**: One Type I or One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated / IDE / USB
- **Wireless antenna**: Mini PCI Express / UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- **Mini PCI Express**: 11a/b/g / 54M / WWAN
- **USB**: 512MB PC2-4200 DDR2 / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

### Software

#### Windows XP Professional models
- **Microsoft® Windows® XP Professional** (Service Pack 2)
- **Disk-to-Disk Recovery** (in hidden protected area)

### Preloaded
- **Education software from Vital Source Technologies**: vitsource KEY™ and Personal Portable library™
- **Rescue and Recovery™**
- **Access Connections™**
- **Client Security Solution™**
- **ThinkVantage Productivity Center**
- **ThinkVantage System Update**
- **Symantec® Client Security**
- **Diskeeper Lite**
- **PC-Doctor™**
- **ThinkPad utilities**
- **Adobe® Reader**
- **Multimedia Center for Think Offerings**
- **Sonic RecordNOW and Drive Letter Access (combo, DVD:rw)**

### License
- **CD not included**
- **Lotus® Smartsite® Millennium and Lotus Notes® Stand-alone Client**

### Additional Information

- **Limited warranty**: 3-years / 1-yr battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

### Other options at lenovo.com

- **ThinkPad Roll Cage (one-piece magnesium frame)**
- **PC 2001-compliant**
- **ACPI 1.0b and 2.0-compliant**
- **CIM and DMI 2.0-compliant**
- **PXE 2.1-compliant**
- **ENERGY STAR®**
- **RoHS-compliant**
- **International Warranty Service**
- **24 hour on 7 day off-time warranty support during the warranty**

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

US model announced September 20, 2005

US model withdrawn effective June 2006

© Lenovo

(MNS) April 2006
### ThinkPad Z61t (9440) - Top-Seller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Mini PCIe WLAN</th>
<th>Mini PCIe WWAN</th>
<th>Blue-tooth</th>
<th>Finger print reader</th>
<th>Security chip Preload</th>
<th>Workhorse (W)</th>
<th>Gbl (G) Available</th>
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<tbody>
<tr>
<td>9440-25U Silver Celeron M 410</td>
<td>1.46 512M 14.1” WXGA</td>
<td>60GB Combo</td>
<td>11a/b/g^2</td>
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<td>60GB Combo</td>
<td>* Intel 11a/b/g^2</td>
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<td>80GB Combo</td>
<td>* Intel 11a/b/g</td>
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<td>9440-22U Silver Core Duo T2300E 1.66 512M 14.1” WXGA</td>
<td>80GB DVD</td>
<td>* Intel 11a/b/g</td>
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<td>80GB DVD</td>
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<td>9440-25U Silver Core Duo T2300E 1.66 512M 14.1” WXGA</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

### Positioning
- Processor: Widescreen multimedia, two spindles Intel® Celeron M Processor 410 or 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel® Core™ Duo processor T2300e or T2500 with dual-core, Enhanced Intel SpeedStep™ technology , Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache (3.75V), 512MB 184-pin DDR2 533 or 667MHz (1GB max) CL5 / dual-channel capable / both 200-pin SO-DIMM sockets / 512MB models; std mem in one socket; 1 sock available / 1 GB models: std mem in 2 sockets; none available

### Memory
- Video: Widescreen multimedia / Intel® Graphics Media Accelerator 950

### Diskette drive

### Display
- (anti-glare): Some: Widescreen / 14.0” (356mm) WXGA (1280x768) / TFT color / 200 nits / 15:9<br>Some: Widescreen / 14.1” (358mm) WXGA (1280x800) / TFT color / 185 nits / 16:10<br>Some: Widescreen / (1440x900) / TFT color / 200 nits / 16:10<br>Some: stainless steel hinges / one hand activates latches

### Graphics
- Chip: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

### Keyboard
- TrackPoint®: 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys / U.S., Jpn., It., Sp., Fr., Espanol, German, etc.

### ThinkLight™
- This keyboard illuminates the keyboard to improve visibility in low-light conditions

### Dimensions^2
- Weight^2: (WxHxD): 13.1” x 9.0” x 1.05-1.22” / 334mm x 228mm x 26.6-30.9mm

### Battery - type
- Life: Battery - life (h): Celeron 4-cell: up to 6.25 hr<br>Celeron 4-cell titanium: up to 3.7 hr; 4-cell<br>Some: 4-cell titanium: up to 6.25 hr

### Architecture
- Mobile Intel 945GM Express Chipset / 82801GBM ICH5 / I/O Controller Hub (SO-IC00, PCI Express x1, PCI, bus, LPC interface, [Bluetooth], (fingerprint) / PCI bus (T* PCI8412 Cardbus controller) / LPC bus (NS PCB8732 Super I/O, Atmel AT9753203)

### PC Card slot
- Ports: Some: 1 Type I or one Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door / 3-in-1 MultiCard Reader Security Digital, xD-Picture Card / S-video out port (TV out) / some: IEEE 1394 (FireWire 400) / docking / three USB 2.0 / external DB-15 monitor / all except 25U: infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or parallel or serial (ports use USB)

### Wireless antenna Integrated camera
- Some: camera on top of screen / 0.3-megapixel / fixed focus / USB 2.0

### Mini PCI Express
- 11a/b/g^2: One (2SU) or two Mini PCI Express slots / only 802.11 wireless is customer upgradable<br>Some: 11a/b/g wireless, ThinkPad 11a/b/g Mini PCI Express Adv, Atheros AR5006EX<br>Some: 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

### Modem
- Bluetooth: Some: Bluetooth 2.0 wireless technology / USB 2.0 interface / ICH7-M / LED indicator / Gigabit Ethernet / Internetworking / Broadcom 430725M (MAC) / PCi x 1 / PXE High Definition (HD) Audio / AD1981HD codec / speakers / 1 watt / volume up / down, mute buttons / 2SU: mono microphone / others: stereo microphone / microphone input jack / headphone jack

### Security
- Power-on password / hard disk password / supervisor password / security keyhole / Security chip: Some: Trusted Platform Module / Atmel chip / TCG 1.2-compliant

### Fingerprint reader
- Some: Fingerprint reader on palm rest / swipesensor / supports the security chip

### Limited warranty 1-year - EasyServ™ onsite pickup and delivery / service upgrades^2 available

### Software
- Windows XP Professional models
- - Microsoft® Windows® XP Professional^2, Service Pack 2
- - Disk-to-Disk Recovery (in hidden protected area)

- Windows XP Home models
- - Microsoft Windows XP Home Edition^2, Service Pack 2
- - Disk-to-Disk Recovery (in hidden protected area)

- Preloaded (all)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Dikeeper® Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)
  - Multimedia Center for Think Relevant Offers
  - Sonic RecordNow and Drive Letter Access (combo, DVD/RW)
  - InterVideo Video Creator (combo, DVD/RW)
  - InterVideo Video Creator (DVD/RW Creator)

- License - CD not included (all)
- - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

- ThinkPlus® 2-year LOR 9x5 NBD
- - 41C9186
- ThinkPlus® 2-year LOR 9x5 NBD
- - 41C9186
- ThinkPlus® 3-year LOR 9x5 NBD
- - 41C9186
- Other ThinkPlus services at lenovo.com/thinkplus/warranty
ThinkPad® Z61t (9440) - TopSeller (October 2006) - withdrawn

### Type-model

| Top cover color | Color | Processor | Speed | RAM Memory | Wide-screen display | Disk ATA | IDE optical | Mini PCIe | Mini PCIe WWAN | Bluetooth | Camera | Print finger reader | WorldWide support
<table>
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<td>14.0&quot; WXGA</td>
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</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program
* These models have a 1-year limited warranty

### Positioning

- Processor: Intel® Core™ 2 Duo processor T5500 or T7200 with dual-core
- Intel® 64 Technology: Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667 MHz system bus
- Memory: 1GB or 2GB std / 4GB max3 / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / All: std memory in 2 sockets; no sockets available

### Diskette drive

- Drive: Optional 3.5" floppy drive

### EIDE Combo

- Some: DVD-ROM/CD-RW / 24X/24X/24X/6X speed / removable from Ultrabay Slim
- Ultrabay Slim: One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel

### Display

- (anti-glare): Some: Widescreen / 14.0" (356mm) WXGA (1280x768) TFT color / 200 nits / 15:9 / WXGA+ (1440x900) TTA TFT color / 200 nits / 16:10
- All: stainless steel hinges / one hand activates dual latches

### Graphics

- In: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz / DVI-pass through / supports optional Advanced Mini Dock and Advanced Dock

### Keyboard

- 89-key / ThinkVantage buttons / spill-resistant / multimedia Fn keys / Windows, Appl keys
- TrackPoint™: TrackPoint® pointing device / UltraNav multi-pointing system (touchpad)
- ThinkLight™: Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 9440-ABU: (WxHxT): 13.1 / 9.0 / 1.05-1.22 / 354mm x 228mm x 26.6-30.9mm

### Battery

- Life: 4-cell: up to 3.7 hr; optional 7-cell: up to 6.25 hr

### Lectures

- Lenovo: ThinkPlus 3-year P&L P/U Depot 41C9167
- Experience: Roll Cage (one-piece magnesium frame)
- Lenovo: 2-year P&L P/U Depot 41C9160
- Lenovo: 1-year LOR 9x5 NBD 41C9180
- Lenovo: 2-year LOR 9x5 NBD 41C9171
- Lenovo: 4-year LOR 9x5 NBD 41C9170
- Lenovo: 1-year LOR 9x5 NBD 41C9169

### SOFTWARE

- Windows XP Professional
  - Microsoft® Windows® XP Professional3 / Service Pack 2
  - Disk-to-Disk Recovery

### Preloaded

- Model: A8U/ACU/ADU: Microsoft Office OneNote® 2003
- Model: A8U/ACU/ADU: Rescue and Recovery™
- Model: A8U/ACU/ADU: Client Security Solution™
- Model: A8U/ACU/ADU: ThinkVantage Productivity Center with Away Manager
- Model: A8U/ACU/ADU: Symantec Client Security™
- Model: A8U/ACU/ADU: Diskeeper Lite
- Model: A8U/ACU/ADU: PC-Doctor™ (diagnostics)
- Model: A8U/ACU/ADU: ThinkPad Utilities (Power Manager and Presentation Director)
- Model: A8U/ACU/ADU: Adobe® Reader
- Model: A8U/ACU/ADU: Google Toolbar
- Model: A8U/ACU/ADU: Google Desktop
- Model: A8U/ACU/ADU: Picasa from Google
- Model: A8U/ACU/ADU: FingerPrint Software (fingerprint models)
- Model: A8U/ACU/ADU: Desktop Media Center for ThinkPlus
- Model: A8U/ACU/ADU: Sonic RecordNOW and Drive
- Model: A8U/ACU/ADU: WinDVD combo (combo, DVD±RW models)

### License

- Model: A8U/ACU/ADU: CD not included
- Lotus® SmarSuite® Millennium and Lotus Notes® Stand-alone Client

### Other

- USB 2.0: 200MB Secure Disk (SATA150) 7200RPM 200GB Hard Disk
- USB 2.0: 200Mbit/s USB 2.0 interface via ICH7-M / LED indicator
- Network: Gigabit ethernet on systemboard / Broadcom® BCM5752 (MAC/PHY) / PCI x1 / PXE
- Audio: High Definition (HD) Audio / AD1981 HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / 25U: mono microphone; others: stereo microphone / microphone input jack / headphone jack
- Security: Power-on password / hard disk password / supervisor password / security keyhole
- Security keyhole: Trusted Platform Module / Atmel chip / TCG 1.2-compliant
- Fingerprint reader: FingerPrint reader on palm rest / swipe sensor / supports the security chip

### Limited warranty

- 1-year EasyServ⁴ / onsite pickup and delivery / service upgrades⁵ available

### See notes for important warranty information

© Lenovo

US models withdrawn effective April or September 2007
ThinkPad Z61t (9441) - withdrawn

### Specifications

#### Processor
- **9441-4FU Silver**
  - Processor: Core Duo T2400 1.83 GHz
  - Memory: 512MB (2GB max)
  - Graphics: WXGA GMA 60GB
  - **Modular battery**: combo 11a/b/g

#### Memory
- **9441-4GU Black**
  - Processor: Core Duo T2400 1.83 GHz
  - Memory: 512MB (2GB max)
  - Graphics: WXGA GMA 80GB

#### Display
- **9441-4HU Silver**
  - Processor: Celeron M 420
  - Memory: 1.60 GB
  - Graphics: WXGA GMA 14.1" WXGA GMA 40GB

### Software

- **Windows XP Professional**
- **XP Professional** Service Pack 2
- **Disk-to-Desk Recovery** (in hidden protected area)
- Preloaded:
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec Client Security
  - Diskeeper Lite
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)
  - Multimedia Center for Think Offers
  - Sonic RecordNOW and Drive
  - InterVideo WinDVD (combo models)

### Other Accessories
- Lenovo Laser Mouse (USB, PS/2) 41U3074
- 160GB Disk 9.5mm SATA150 (5400 rpm) 41N5692
- Lenovo Laser Mouse (USB, PS/2) 41U3074
- Other accessories on O-Z60T sheet

### Additional Information
- **Lenovo** Carrying Case - BackPack 73P3599
- **Lenovo** Carrying Case - Expander 73P3597

### Accessory Options
- **Lenovo L192 Wide 19" Monitor (black) 6920AB1**
- **ThinkPad 90W AC/DC Combo Adapter 40Y7630**
- **ThinkPad 90W AC Adapter 40Y7659**
- **Advanced Ultrabay Battery 3-cell 40Y6789**
- **IBM 2GB PC2-5300 DDR2 SODIMM 40Y7733**
- **IBM 1GB PC2-5300 DDR2 SODIMM 40Y7734**
- **IBM 2GB PC2-5300 DDR2 SODIMM 40Y7735**
- **IBM USB Portable Diskette Drive 05K9276**
- **IBM USB FingerPrint Reader 40Y8519**
- **IBM USB 2.0 Lenovo Webcam 40Y8519**
- **IBM USB 2.0 Security Memory Key 2GB 41U5119**
- **IBM USB 2.0 Memory Key G4 41U5119**
- **IBM USB 2.0 Multi-Burner Drive 41N5643**
- **IBM USB 2.0 Portable 120GB Hard Disk 41N8379**
- **IBM Combo II Ultrabay Slim Drive (flat bezel) 40Y8621**
- **IBM ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643**
- **IBM Serial Hard Drive Ultrabay Slim Adapter (flat) 41N8725**
- **IBM 160GB Disk 9.5mm SATA150 (5400 rpm) 41N5692**

### Notes
- See footnotes for important warranty information
- *Powered by Intel Centrino® Duo processor technology*
- US models announced May 16, 2006
- **Lenovo** US models withdrawn effective April or September 2007

### Lenovo
- © Lenovo (2006)
## ThinkPad® Z61t (9441) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Graphics Disk</th>
<th>Mini PCIE</th>
<th>Finger print reader</th>
<th>1-year warranty</th>
<th>Workhorse (Edu) GBI (Avail. date)</th>
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<tr>
<td>9441-E1U</td>
<td>Black</td>
<td>Core Duo T2300E</td>
<td>1.65</td>
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<td>Finger Cam EasyServ Yes W May 06</td>
<td>41C9168 2-2y P&amp;L Depot</td>
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</tr>
</tbody>
</table>

- **These models have an EasyServ™ on-site pickup and delivery 1-year limited warranty**

  These educational models are available to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- Processor: **Intel® Core Duo processor T2300E or T2400 with dual-core**

### Memory

- 512MB std. / 4GB max. / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

### Disk drive


### Ultrabay Slim

- Serial ATA disk (SATA150): 60GB(5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high / supports 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System™

### Display (anti-glare)

- Widescreen / 14.1" (358mm) WXGA (1280x800) TFT color / 185 nits / 16:10 ratio / stainless steel hinges / one hand activates dual latches

### Graphics

- Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

### Keyboard

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / multimedia Print Screen / Windows, Apple keys

### TrackPoint™

- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- (WxDxH): 13.1 x 9.0 x 1.05 - 1.22"; 334mm x 228mm x 26.6 - 30.9mm

### Weight

- 4-cell black: 1.97 lb (0.89kg) / 4-cell white: 1.99 lb (0.90kg) / 4-cell black: 1.97 lb (0.89kg) / 4-cell white: 1.99 lb (0.90kg) / 4-cell white: 2.12 lb (0.96kg) / 7-cell black: 3.45 lb (1.56kg) / 7-cell white: 3.46 lb (1.57kg)

### Battery - type

- lithium ion 4-cell / intelligent / supports 2nd battery in Ultrabay Slim / up to 6.25 hr; 4-cell: up to 3.7 hr; 7-cell: up to 2.5 hr; 7-cell plus Ultrabay Slim battery: up to 8.25 hr

### Battery - life

- 11a/b/g wireless 4, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

### Architectures

- Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, USB 2.0, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (16-bit) / VESA/PCI1412 CardBus controller / LPC bus (NS PCI7382 Super I/O, Attal, Atmel AT97535203) / One Type I or one Type II / CardBus 32-bit / CardBus A 2.1 / integrated door

### PC Card slot

- 3-in-1 Multicard Reader (MultiMedia card, Secure Digital, xD-Picture Card) / S-video out port (TV out) / IEEE 1394 (FireWire 400) / docking / three USB 2.0 / MIDI / PS/2 / S/PDIF / S-video / S/PDIF / Standalone CardBus controller / LPC bus (NS PCI7382 Super I/O, Attal, Atmel AT97535203) / One Type I or one Type II / CardBus 32-bit / CardBus A 2.1 / integrated door

### Wireless antenna

- UltraConnect™ antenna built into the cover / on-off switch for all wireless radios

### Integrated camera

- UltraConnect™ antenna built into the cover / on-off switch for all wireless radios / camera on top of screen / 0.3-megapixel / fixed focus / USB 2.0

### Security

- Security keyhole / fingerprint reader / Fingerprint reader on palm rest /Favorites support / supports the security chip

### Limited warranty

- 1-year - EasyServ™ on-site pickup and delivery / service upgrades available

### Software

- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2) / Disk-to-Disk Recovery

### Preloaded

- VitalSource Library education software / Adobe® Photoshop® Elements plus Adobe Premiere Elements / Rescue and Recovery™ / Access Connections™ / Client Security Solution™ / ThinkVantage Productivity Center with Away Manager / ThinkVantage System Update / System Management / Diskeeper Life / PC-Doctor™ (diagnostics) / ThinkPad Utilities (Power Manager and Presentation Director) / Adobe Reader / Google Toolbar / Google Desktop / Picasa from Google / Multimedia Center for Think Offerings / Sonic RecordNOW and Drive / Letter Access (combo, DVD:RW) / InterVideo WinDVD (combo, DVD:RW models) / InterVideo WinDVD Creator (DVD:RW models)

### CD

- Adobe Photoshop Elements plus Adobe Premiere Elements

### License

- CD - not included / Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Support

- Supports ThinkVantage® technologies

### International Warranty Service

- Universal 65-watt AC adapter / ThinkPad Roll Cage (one-piece magnesium frame) / RoHS-compliant / International Warranty Service / 24 hour x 7 day toll-free warranty support during the warranty

### Notes

- See footnotes for important warranty information

* Powered by Intel® Centrino® Duo processor technology

© Lenovo (MN2-7) September 2007

US models announced May 16 or 30, 2006
US models withdrawn effective February, April, or September 2007
ThinkPad® Z61t (9442) - withdrawn

SOFTWARE

- Windows XP Professional models
  - Microsoft® Windows® XP Professional2 (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper Life
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Fingerprint Software (fingerprint models)
  - Multimedia Center for Think
  - Sonic RecordNOW! and Drive

License - CD not included
- Lenovo’s SmartSuite® Millennium and Lenovo Notes’ Stand-alone Client

Supported
- ThinkVantage® technologies
- Universal 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant International Warranty Service
  - 24 hour x 7 day toll-free warranty support during the warranty

Models listed:
- ThinkPad Z61t (9442, 9443, 9444)
- Lenovo Z61t (9442, 9443, 9444)
- Lenovo Z61t (9442, 9443, 9444)

See footnotes for important warranty information

US models announced May 16, 2006
US models withdrawn effective September 2007

+ Powered by Intel Centrino® Duo processor technology

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(MN2-3) September 2007
### ThinkPad Z61t (9442) - October 2006 - withdrawn

**Top cover color**  |  **Processor**  |  **Speed**  |  **Hz**  |  **Memory**  |  **Wide-screen graphics**  |  **Disk**  |  **Mini PCIe**  |  **Fingerprint reader**  |  **Camera**  |  **Limited warranty**  |  **Workhorse (W)**  |
---|---|---|---|---|---|---|---|---|---|---|---|
9442-P6U Black  |  Core 2 Duo T7200  |  2.00  |  1GB  |  14.0" WXGA  |  GMA 80GB  |  DVD-ROM  |  Intel 11a/b/g  |  Finger Cam 4-cell  |  3-yr  |  W Oct 06  |  4-cell  |
9442-PMU Black  |  Core 2 Duo T7200  |  2.00  |  1GB  |  14.0" WXGA  |  GMA 80GB  |  DVD-ROM  |  Intel 11a/b/g  |  Finger Cam 4-cell  |  3-yr  |  W Oct 06  |  4-cell  |

* These models have a 3-year limited warranty

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### SOFTWARE

**Windows XP Professional**
- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec Client Security™
- Diskeeper Life
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNow! and Drive Letter Access (combo, DVD±RW)
- InterVideo WinDVD (combo, DVD±RW models)
- InterVideo WinDVD Creator (DVD±RW models)

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

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### Important warranty information

US models announced October 17, 2006
US models withdrawn effective September 2007

See footnotes for important warranty information

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(MN25-1) September 2007

*Powered by Intel Centrino® Duo processor technology*
### ThinkPad Z61t (9442) - Education - withdrawn

#### Created by Lenovo Training Solutions
#### Personal Systems Reference (PSREF)

#### Types of cover (color)

<table>
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<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Graphics</th>
<th>Video Card</th>
<th>Mini PCIe</th>
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</table>

Note: Some models have an EasyServ onsite pickup and delivery 3-year limited warranty.

### Positioning

- ThinkPad logo
- ThinkLight™
- Security chip
- Ethernet™
- Bluetooth Modem
- Intel 11a/b/g 32
- TrackPoint (anti-glare)
- (SATA150)
- Ultrabay Slim
- ± EIDE DVD
- EIDE Combo
- Positioning Ports
- PC Card slot

### SOFTWARe

- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery
- Preloaded (only some listed)
  - VitalSource Library education software
  - Adobe® Photoshop Elements plus Adobe Premiere® Elements
  - Rescue and Recovery
  - Access Connections
  - Client Security Solution™
  - ThinkVantage Productivity Center with Aware™
  - ThinkVantage System Update
  - Symantec® Client Security™
  - DiskKeeper Lite
  - PC-Doc™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Multimedia Center for Think

### License

- CD - not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Other accessories

- Other accessories on O-Z60T sheet
  - Combo II Ultrabay Slim Drive (flat bezel) 40Y8621
  - USB Fingerprint Reader 41U3167
  - 2GB PC2-5300 DDR2 SODIMM 40Y7735
  - Camera on top of screen / 0.3-megapixel / fixed focus / USB 2.0
  - Intel® Centrino® Duo processor technology

**See footnotes for important warranty information**

- Power-on password / hard disk password / supervisor password / security keyhole
- Microphone input jack / headphone jack
- Security chip
- Trusted Platform Module
- Atmel chip / TCG 1.2-compliant
- 1GB std / 4GB max
- 11a/b/g32 Finger Cam EasyServ Yes W May 06
- 1GB std memory in two sockets; none available
- 3-in-1 Multicard Reader

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

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- 1GB std / 4GB max
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- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"

- 1GB std / 4GB max
- 11a/b/g Finger  EasyServ Yes W May 06
- 7-cell: 9.5mm high bay / supports 2nd disk / (shock absorber) / 13.1" x 9.0" x 1.05-1.22"
## ThinkPad Z61t (9443) - withdrawn

### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Graphics Disk controller</th>
<th>EIDE controller</th>
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<td>Combo</td>
<td>11a/b/g</td>
<td>Finger-Onsite</td>
<td>W</td>
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</tbody>
</table>

*These models have a limited onsite service and 3-year limited warranty.

### Positioning

- Widescreen multimedia; two spindles
- Intel Core Duo processor T2300E/T2400 with dual-core, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache
- 512MB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

### Diskette drive

- None standard / use optional USB-based diskette drive
- Some: DVD-ROM/CD-RW / 2X/4X/8X speed / removable from Ultrabay Slim
- Some: DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim drive
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
- Supports 2nd HDD / HDD Protection Pack (shock absorber) / Active Protection System

### Display

- Some: Widescreen / 14.1" (358mm) WXGA (1280x800) TFT color / 185 nits / 16:10
- Some: Widescreen / 14.1" (358mm) WXGA+ (1440x900) TFT color / 200 nits / 16:10
- All: stainless steel hinges / one hand activates dual latches

### Graphics

- Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

### Keyboard

- 89-key / ThinkVantage button / spill-resistant / multimediaFn keys / Windows, Apk keys
- TrackPoint pointing device / UltraNav multi-pointing system (touchpad)
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- (WxDxH): 13.1" x 9.0" x 1.05-1.22" / 334mm x 228mm x 26.6-30.9mm
- With optical drive and battery: 4-cell black: starting at 4.17 lb / 4.57 lb (1.9kg / 2.1kg)
- 4-cell titanium: starting at 4.42 lb / 4.81 lb (2.0 / 2.2kg)

### Case material

- Some: black / hybrid carbon fiber reinforced polymer (CFRP) material
- Some: top cover: aluminum, titanium material: front, black, CFRP
- Some: Lithium Ion 4-cell / intelligent / supports 2nd battery in Ultrabay Slim
- Some: 4-cell: up to 3.7 hr; 7-cell plus Ultrabay Slim battery: up to 8.25 hr

### Architecture

- Mobile Intel 945GM Express Chipset / 82801GB ICH7-M I/O Controller Hub / 82801GB ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, 3-in-1 Multicard Reader / One Type I or one Type II / CardBus 32-bit / CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel AT97SC3203)
- One Type I or one Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door
- One MultiMediaCard / Secure Digital, xP-Card / XPI Card / S-video output port (TV out) / IEEE 1394 (FireWire 400) / docking / three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (network) / microphone or mouse or parallel or serial ports (use USB)

### Wireless antenna

- UltraConnect antenna built into the display cover / on/off switch for all wireless radios
- Integrated camera / some: camera on top of screen / 0.3-megapixel / fixed focus / USB 2.0
- Two Mini PCI Express slots / only 802.11a/b/g wireless / 11a/b/g
- Intel 11a/b/g
- Some: 11a/b/g wireless, ThinkPad 11a/b/g Mini PCI Express Adp. Atheros AR5006EX
- Some: 11a/b/g wireless, ThinkPad Mini PCI Express Adapter, Intel PRO/Wireless 3945ABG
- Some: WWAN / Mobile Broadband / 3G / GPRS / EDGE / UMTS / HSDPA / EV-DO / HSDPA / WiFi
- Some: 56K V.90 (V.92-designed) modem in Comm Daughter Card socket / Connector chip / modem / Ethernet Audio
- Gigabit ethernet on system board / Broadcom BCM5752M (MAC/PHY) / PCIle x1 / PXE
- High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / stereo microphone / microphone input jack / headphone jack
- Security
- Power-on password / hard disk password / supervisor password / security keyhole

### Security chip

- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

### Finger print reader

- Finger print reader on palm rest / swipe sensor / supports the security chip

### Limited warranty

- 3-year / 1-year battery, limited onsite service / 8 am - 5 pm, Mon - Fri coverage / excluding holidays, next business day response time

## Notes

See footnotes for important warranty information

*Powered by Intel Centrino Duo processor technology

US models announced May 16 or May 30, 2006

US models withdrawn effective April or September 2007

## Software

- Windows XP Professional models
  - Microsoft Windows XP
  - Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

### Preloaded

- Rescue and Recovery
- Access Connections
- Client Security Solutions
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec Client Security
- Dikepepper Lite
- PC-Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offers
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD:DRW)
- IntelVideo WinDVD (combo, DVD:DRW models)
- InterVideo WinDVD Creator (DVD:DRW models)
- License - CD not included
- Lenovo SmartSuite Millennium and Lenovo Notes Stand-alone Client

For more information on this product, visit

- lenovo.com/thinkplus/warranty

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® Z61t (9443) - October 2006 - withdrawn

See footnotes for important warranty information

US models announced October 17, 2006
US models withdrawn effective September 2007

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Lenovo Training Solutions
Personal Systems Reference (PSREF)

Created by Lenovo

These models have a limited onsite service 24 3-year limited warranty

Positioning

Processor

Widescreen multimedia; two spindles

Intel® Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache

Memory

1GB or 2GB std / 4GB max* / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / 1GB models: std memory in both sockets (512MB each socket); no sockets available; 2GB models: standard memory in 1 socket; 1 socket available

Diskette drive

EIDE Combo

UltraBanc RW

Serial ATA disk (SATA150)

Display

(anti-glare)

Some: Widescreen / 14.0" (356mm) WXGA (1280x768) TFT color / 200 nits / 15:9

Some: Widescreen / 14.1" (356mm) WXGA+ (1440x900) TFT color / 200 nits / 16:10

All: stainless steel hinges / one hand activities / oil set available

Graphics

Intel Graphics Media Accelerator 950 / Integrated in 945GM / 250MHz / DVI pass-through support to optional Advanced Mini Dock and Advanced Dock

Keyboard

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apk keys

TrackPoint®

Touchpad

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

Weight

Case material

Battery type

Battery life

Architecture

Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, 82945GM Graphics Memory Controller Hub / 7-cell: up to 6.25 hr; 7-cell plus Ultrabay Slim battery: up to 8.25 hr

PC Card slot

3-in-1 Multicard Reader (MultiMediaCard, Secure Digital, X-Picture Card®/x, S-video out port (TV out) / IEEE 1394 (FireWire 400) / docking / three USB 2.0 / 3-in-1 Multicard Reader

Ports

USB 2.0

Universal Connectivity / UltraConnect™ Antenna built into the display cover / or off switch for all wireless radios / integrated camera / fixed focus / USB 2.0

Mini PCI Express

Intel 11a/b/g or None

Modem

56K V.90 (V.92-designed*) modem in Comm Daughter Card socket / Conexant® chip

Bluetooth™

Ethernet

Audio

Security chip

Fingerprint reader / palm rest / swipe sensor / supports the security chip

Limited warranty

3-year / 1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

512MB PC2-5300 DDR2 CLS SODIMM

Z60t Series Li-Ion Battery 4-cell

Z60t Series Li-Ion Battery 7-cell

2GB PC2-5300 DDR2 SODIMM

40Y7373

40Y7372

USB Portable Diskette Drive

1059276

ThinkPad External Battery Charger

40Y7625

USB Fingerprint Reader

41J5167

ThinkPad 90W AC Adapter

40Y7659

USB 2.0 Lenovo Webcam

40Y8519

11a/b/g Wireless Mini PCI Express Adapter

40Y7026

USB 2.0 Security Memory Key 4GB

41J5120

Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub

Universal 65-watt AG adapter

ThinkPad Roll Cage (one-piece magnesium frame)

RoHS-compliant

International Warranty Service

24 hour x 7 day* toll-free warranty

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

SOFTWARE

Windows XP Professional

- Microsoft® Windows® XP Professional* (Service Pack 2)

- Disk-to-Disk Recovery

(in hidden protected area)

Preloaded

- Rescue and Recovery™

- Access Connections™

- Client Security Solution™

- ThinkVantage Productivity Center with Away Manager

- ThinkVantage System Update

- Symantec® Client Security™

- Diskeeper® Lite

- PC-Doctor (diagnostics)

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe® Reader

- Google Toolbar

- Google Desktop

- Picasa from Google

- FingerPrint Software (fingerprint models)

- Multimedia Center for Think Offerings

- Sonic RecordNOW and Drive

- Letter Access (combo, DVD+R/W)

- InterVideo WinDVD (combo, DVD+R/W models)

- InterVideo WinDVD Creator (DVD+R/W models)

License - CD not included

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology
<table>
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<td>Yes</td>
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*This model has a limited onsite service. 3-year limited warranty*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Post-warranty maintenance agreements at lenovo.com/thinkplus/warranty**

**SOFTWARE**

- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

**Preloaded**

- VitalSource Library education software
- Adobe Photoshop Elements plus Adobe Premiere Elements
- Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec Client Security
- Diskeeper Life
- PC-Doc (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offersings
- Sonic RecordNow and Drive
- Letter Access (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

**CD**

- Adobe Photoshop Elements plus Adobe Premiere Elements

**License**

- CD not included
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client
Partial list of accessories supported on ThinkPad Z60t (and Z61t) originally announced on September 20, 2005 (and May 16, 2006)

| Memory (Z60t) | 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06 |
| Memory (Z61t) | 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06 |

| Storage and removable storage | 60GB Disk 9.5mm SATA150 (7200 rpm)*1 41N3012 ann 01/05/06 |
| USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07 |
| USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07 |
| USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07 |
| USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07 |
| USB Portable Diskette Drive 05K9276 ann 06/05/00 |
| USB 2.0 Portable 80GB Hard Disk 41N8378 ann 04/17/07 |
| USB 2.0 Super Multi-Burner Drive 41N5656 ann 01/23/07 |

| Wireless LAN (Mini PCI Express) | 11a/b/g Wireless Mini PCI Express Adpr 40Y7026 ann 09/20/05 |
| Intel PRO/Wireless 3945ABG Mini PCI Express 41N3008 ann 05/01/06 |
| 41n System must be wireless upgradable. |
| Kensington WiFi Finder Plus 40Y7717 |

| ThinkPad Expansion | USB Serial Parallel Adapter 22P5298 ann 10/09/01 |
| ThinkPad Adjustable Notebook Stand 40Y7676 ann 09/20/05 |
| ThinkPad Essential Port Replicator 250510W ann 09/20/05 |
| ThinkPad Advanced Mini Dock 250410U ann 09/20/05 |
| ThinkPad Advanced Dock 250310U ann 09/20/05 |
| 41 ThinkPad Advanced Dock supports dual-head graphics adapters: |
| - ATI™ X1100 Dual Head 41U5026 |
| - ATI Radeon™ X300 SE 128MB Dual Head 41U4813 |

| External Keyboard | TrackPoint Cap Collection 73P2698 ann 12/16/03 |
| USB Numeric Keypad 33L3225 ann 05/01/00 |
| Preferred Pro USB Keyboard 73P5220 ann 06/21/05 |
| Enhanced Performance USB Keyboard 73P2620 ann 03/23/04 |
| Targus Wireless Keyboard and Mouse Combo 40Y7721 |
| Enh Perf Wireless Keyboard and Mouse 73P4067 ann 12/07/04 |
| USB Keyboard with UltraNav 31P9850 ann 01/28/03 |
| USB Travel Keyboard with UltraNav 31P9480 ann 04/27/04 |
| Preferred Pro USB Fingerprint Keyboard 73P4730 ann 02/22/05 |

| External Mouse | USB Optical Wheel Mouse 06P4069 ann 05/21/03 |
| Optical 3-Button ScrollPoint® Mouse 31P7405 ann 08/27/02 |
| Optical 3-Button ScrollPoint Pro Mouse 31P8070 ann 10/01/02 |
| Optical 3-Button Travel Wheel Mouse 31P7410 |
| Lenovo Laser Mouse (USB, PS/2) 41U3074 ann 01/23/07 |

| Batteries | ThinkPad Z60t Series Li-Ion Battery 4-cell 40Y6791 ann 09/20/05 |
| ThinkPad Z60t Series Li-Ion Battery 7-cell 40Y6793 ann 09/20/05 |
| ThinkPad Advanced Ultrabay Battery 3-cell*4 40Y6789 ann 09/20/05 |
| *4 Used in Ultrabay Slim bay. |
| ThinkPad External Battery Charger*4 40Y7625 ann 09/20/05 |
| 44 Requires the ThinkPad 90W AC Adapter 40Y 7659 (adapter provided with some systems). |
| ThinkPad 65W AC Adapter*5 40Y7696 |
| 45 Only compatible with the 945GM and GM965 chipset models. |
| ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05 |
| ThinkPad 90W AC/DC Combo Adapter 40Y7630 ann 12/13/05 |
| Belkin 1 Outlet Notebook Surge 31P7658 |
| Belkin Universal Notebook Travel Surge 22P7127 |
| Belkin Surge Protector 31P7659 |

| Data/Video Projectors | Lenovo M500 Projector 0037A05 ann 02/28/06 |
| Lenovo C500 Projector 0039A05 ann 07/11/06 |

| Carrying Cases | Lenovo Carry Case - Messenger Max 41U5253 ann 05/01/07 |
| Lenovo Carry Case - Performance Backpack 41U5254 ann 05/01/07 |
| ThinkPad Nylon Carrying Case 10K0207 |
| ThinkPad Carrying Case - Expand 73P3597 |
| ThinkPad Carrying Case - BackPack 73P3599 |
| ThinkPad Premiere Leather Carrying Case 10K0209 |
| ThinkPad Convertible Carrying Case 22P8880 |
| ThinkPad Convertible Back Pack 22P8889 |

| Security | Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03 |
| USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06 |
| PC Card Gemplus GemPC Smart Card Reader 41N3004 ann 12/13/05 |
| ExpressCard Gemplus GemPC Smart Card Reader 41N3043 ann 06/27/06 |
| USB Fingerprint Reader 41U3167 ann 10/24/06 |

| Monitors | Lenovo E75 17” CRT Monitor (16.0” vis) blk 6307BTN ann 01/05/06 |
| Lenovo L151 15” Monitor (black) 9165AB6 ann 01/05/06 |
| Lenovo L171p 17” Monitor (black) 9417HC2 ann 10/31/06 |
| Lenovo L192 Wide 19” Monitor (black) 6920AB1 ann 09/19/06 |
| Lenovo 19K4464 |
| ThinkVision® L171p 17” Monitor (black) 9417HC2 ann 10/31/06 |
| ThinkVision L192p 19” Monitor (black) 9419HC2 ann 10/31/06 |
| ThinkVision L201p 20.1” Monitor (black) 9220HB1 ann 10/31/06 |

| Monitor Accessories | Lenovo Soundbar 40Y7616 ann 08/29/06 |
| Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03 |
| Lenovo Carrying Case - Messenger Max 41U5253 ann 05/01/07 |
| Kensington Deluxe Monitor Stand 73P2582 ann 01/05/06 |
| 44 Requires the ThinkPad 90W AC Adapter 40Y 7659 (adapter provided with some systems). |
| ThinkPad 65W AC Adapter*5 40Y7696 |
| 45 Only compatible with the 945GM and GM965 chipset models. |

| Multimedia | USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06 |
| USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06 |

Other accessories at lenovo.com/accessories
Need to buy accessories no longer marketed by Lenovo? See www.lenovo.com for the Options Continuation Program.
ThinkPad® Z61e (0672) - Top-Seller - withdrawn

Positioning

Widescreen multimedia; two spindles

Processor

Intel® Celeron M Processor 410 or 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or

Intel Core® Solo processor T3100 or T4100 with single-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB L2 cache

Memory

256MB or 512MB std / 4GB max1 / PC2-5300 667MHz DDR2 / non-parity / CLS / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

EIDE CD

Some: CD-ROM / 24x/10x speed / fixed, not removable / 12.7mm high

EIDE Combo

Some: DVD-ROM/CD-RW / 24x/24x/24x/8x11 speed / fixed, not removable / 12.7mm high

UltraBay Enhanced

No / support for removable UltraBay™ options

Serial ATA disk (SATA150)

40GBB (5400 rpm) or 60GB (5400 rpm) / 9.5mm high / removable and upgradeable / 9.5mm high bay / no support for 2nd disk

HDD Protection Pack (shock absorber) • Active Protection System™

Widescreen display

15.4" (391mm) WXGA (1280x800) TFT color / 16:10 aspect ratio / anti-glare / Model B3U: 200; nits: 500; 1 contrast ratio; Other models: 150; nits: 300; 1 contrast ratio / stainless steel hinges / one hand activates dual latches

Graphics

Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

Keyboard (7-row)

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

TrackPoint®

TrackPoint® pointing device

Touchpad

No UltraNav® multi-pointing system

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions3

(WxDxH): 14.1" x 10.3" x 1.47-1.58" / 357mm x 263mm x 37.3-40.2mm

Weight4

with optical drive and battery: 6-cell: starting at 5.3 lbs/5.8 lbs (2.4kg/2.6kg)

Case material

Some: black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Some: top cover; silver color; ABS, aluminum, titanium material; bottom: black; PC/ABS

Battery - type

Lithium ion 6-cell / intelligent / no support for 2nd battery in UltraBay Enhanced

Battery - life

6-cell: up to 5.6 hours; optional 9-cell: up to 8.3 hours

Architecture

Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801BM ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, PCIe express x1, PCI bus; USB, LPC interface) / PCI bus (T1/PCI8412 CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel® AT97SC3203)

Docking station

No port replicator or docking station support

PC Card slot

One Type I or Type II slot / CardBus 32-bit / integrated door

Ports

4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, xD-Picture Card™) / 5-video out port (TV out) / IEEE 1394 (FireWire 400) / three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / mono microphone / microphone input jack / headphone jack / no docking connector / no keyboard or mouse or parallel or serial ports (use USB)

Wireless antenna

UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

Integrated camera

None

Mini PCI Express

One Mini PCI Express slot / 802.11 wireless is customer upgradable / 11a/b/g wireless®, ThinkPad 11a/b/g Mini PCI Express Adapter, Atheros® AR5006EX

Modem

56K V.90 (V.92-designed®) modem in Comm Daughter Card socket / Conexant® chip

Bluetooth™ Audio

Gigabit ethernet on systemboard / Broadcom® BCM5752M (MAC/PHY) / PCIe x1 / PEX High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume up/down, mute buttons / mono microphone / microphone input jack / headphone jack

Security

Power on password / hard disk password / supervisor password / security keyhole

Securitychip

None

Fingerprint reader

None

Limited warranty®

1-year - EasyServTM11 on site pickup and delivery / service upgrades available

SOFTWARE®

Windows XP Professional models

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery

Windows XP Home models

- Microsoft Windows XP Home Edition® (Service Pack 2)
- Disk-to-Disk Recovery

Preloaded (all)

- Rescue and Recovery™
- Access ConnectionsTM
- Client Security SolutionTM
- ThinkVantage Productivity Center (with Away Manager)
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think
- Sonic RecordNOW and Drive
- Letter Access (combo models) / InterVideo WinDVD (combo models)

License - CD not included

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

Supported ThinkVantage technologies

65-watt adapter

ThinkPad Roll Cage

RoHS-compliant

International Warranty Service®

24 hour x 7 day® toll-free warranty support during the warranty®

ThinkPlus® 1-year LOR 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 2-year P&L U/P Depot

ThinkPlus 3-year P&L U/P Depot

ThinkPlus 4-year P&L U/P Depot

ThinkPlus 5-year P&L U/P Depot

See footnotes for important warranty information

US models announced May 16, May 30, or October 17, 2006

US models withdrawn effective February, April, or September 2007

(© Lenovo

(WR2E-1) September 2007)
**ThinkPad Z61e (0673) - withdrawn**

**Specifications**

<table>
<thead>
<tr>
<th>Type-model color</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>EIDE optical</th>
<th>Mini PCI</th>
<th>Mini PCie</th>
<th>Blue-Wave wireless</th>
<th>Finger print Chip Camera reader set</th>
<th>Preload workstation</th>
<th>Workhorse (W) Glb (G) Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0673-23U Black</td>
<td>Celeron M 140</td>
<td>1.46</td>
<td>512MB</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>60GB</td>
<td>Combo</td>
<td>11a/b/g²</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No GP No XP Home No May06</td>
<td>No 2006</td>
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<tr>
<td>0673-24U Silver</td>
<td>Celeron M 140</td>
<td>1.46</td>
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<td>15.4&quot; WXGA</td>
<td>GMA</td>
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<td>Combo</td>
<td>11a/b/g²</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No GP No XP Home No May06</td>
<td>No 3006</td>
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<tr>
<td>0673-25U Black</td>
<td>Core Solo T1300</td>
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<td>512MB</td>
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<td>60GB</td>
<td>Combo</td>
<td>11a/b/g²</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No GP No XP Home No May06</td>
<td>No 2006</td>
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<tr>
<td>0673-26U Silver</td>
<td>Core Solo T1300</td>
<td>1.66</td>
<td>512MB</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>60GB</td>
<td>Combo</td>
<td>11a/b/g²</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No GP No XP Home No May06</td>
<td>No 2006</td>
</tr>
</tbody>
</table>

* These models have a 1-year limited warranty²

**Positioning Processor**

- **Stylish notebooks for work and life: widescreen display; two-spindle system**
  - **Intel® Celeron® M Processor 410** with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or
  - **Intel Core™ Solo processor T1300** with single-core, Enhanced Intel SpeedStep™ technology

**Memory**

- **EIDE Combo Ultrabay Enhanced Hard Disk Drive Socket**
  - **256MB** of 512MB std / 4GB max³ / PC2-5300 667MHz DDR2 / non-parity / CLS / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

**Widescreen display**

- **15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio / anti-glare / stainless steel hinges / one hand activates dual latch**

**Graphics**

- **Intel Graphics Media Accelerator 950** / integrated in 945GMS / 250MHz

**Keyboard (7-row)**

- **TrackPoint® pointing device**
  - **99-key** / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
  - **Touchpad**
  - **ThinkLight™ illumination**

**Dimensions³**

- **Weight³**
  - **Case material**
    - **(WXDH): 14.1" x 10.3" x 1.47-1.58"** / 357mm x 263mm x 37.3-40.2mm
    - **56K v.92 modem**
    - **Some:** black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
    - **Some:** top cover: silver color; ABS, aluminum, titanium material; bottom: black, PC/ABS

**Battery**

- **Lithium Ion 6-cell / intelligent / no support for 2nd battery in Ultrabay Enhanced**
  - **6-cell:** up to 5.6 hr / 8-cell:** up to 8.3 hr

**Architecture**

- **Mobile Intel® 955GM Express Chipset / 829545MS Graphics Memory Controller Hub / 82801GBIMICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, EIDE, PCI Express x1, PCI bus, USB, LPC interface) / PCI bus (1I-PCI8412 CardBus controller) / PCI bus (NS PC87382 Super I/O, Atmel AT9793C203)

**Docking Station**

- **No port replicator or docking station support**
  - **On one Type I or Type II slot / CardBus 32-bit / integrated door**

**Ports**

- **4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, XD Picture Card) / 5-video output port (TV / IEEE 1394 (FireWire 400) / three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no infrared port / no docking connector / no keyboard or mouse or parallel or serial ports (use USB)**

**Wireless antenna**

- **UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios**
  - **None**
    - **One Mini PCIE Express slot** / 802.11 wireless is customer upgradeable
    - **11a/b/g wireless²**
      - **ThinkPad 11a/b/g Mini PCIE Express Adapter, Atheros AR5006EX**
    - **None**

**Integrated camera**

- **Mini PCIE Express 11a/b/g²**
  - **WWAN**
    - **Not supported**
      - **56K v.92 modem**
        - **Modem in Card Daughter Card socket / Conexant® chip**
      - **None**

**Ethernet**

- **Gigabit ethernet on system board / Broadcom® BCM5752M (MAC/PHY) / PCI x1 / PXE**
  - **High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack**

**Audio**

- **High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack**

**Security**

- **Power-on password / hard disk password / supervisor password / security keyhole**

**Fingerprint reader**

- **None**

**Limited warranty²**

- **1-year - EasyServ⁴ - on-site pickup / delivery and service upgrade² available**

**Type-model color**

- **512MB PC2-5300 DDR 2 CLS SODIMM**
  - **600GB Drive**
  - **60GB Battery**
  - **40Y7733**
  - **Black or White**

**Software**

- **Windows XP Home models**
  - **Microsoft® Windows® XP Home Edition® (Service Pack 2)**
  - **Disk-to-Disk Recovery**
  - **65-watt adapter**
  - **ThinkPad Roll Cage**
  - **ENERGY STAR® compliant**
  - **RoHS-compliant**
  - **International Warranty Service¹⁷**
  - **24 hour x 7 day² toll-free warranty support during the warranty¹³**

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(WRZ2E) February 2007

See footnotes for important warranty information

US models announced May 16 or 30, 2006

US models withdrawn effective February 2007
## ThinkPad Z61e (0673) - October 2006 - withdrawn

### Top line-up

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Battery Life</th>
<th>Finger print reader</th>
<th>Mini PCI</th>
<th>Workhorse Global Availability</th>
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</thead>
<tbody>
<tr>
<td>0673-BHU Black Core™ 2 Duo T7200</td>
<td>2.00</td>
<td>1GB 15.4&quot; WXGA</td>
<td>GMA</td>
<td>80GB Combo</td>
<td>Intel 11a/b/g/n</td>
<td>No</td>
<td>GM</td>
<td>No</td>
<td>No</td>
<td>Oct 06</td>
</tr>
</tbody>
</table>

- **This model has a 1-year limited warranty**

## Positioning

- **ThinkPad**
- **Dimensions**
- **ThinkLight™**

## EIDE Combo

- **WWAN**

## Ultrabay Enhanced

- **Serial ATA disk (SATA150)**

## Widescreen display

- **ThinkPad**
- **Audio**
- **Bluetooth™**

## Graphics

- **Intel Graphics Media Accelerator 950**

## Dimensions

- **Weight**

## Battery - type

- **Battery - life**

## Architecture

- **Mobile Intel 945GM Express Chipset**

## Docking station

- **PC Card slot ExpressCard slot**

## Ports

- **UltraConnect™ Antenna**
- **Integrated camera**

## Mini PCI Express

- **WWAN**

## Modem

- **Gigabit ethernet on systemboard**

## Bluetooth™

- **Audio**

## Security

- **Power-on password / hard disk password / supervisor password / security keyhole**

## Limited warranty

- **1-year - EasyServ**

## Software

- **Windows XP Professional**
- **Rohs-compliant**

## Preloaded

- **Windows XP Professional**
- **Rohs-compliant**

## Workhorse Global Availability

- **1-year LOR 9x5 NBD**

## See footnotes for important warranty information

US model announced October 17, 2006

US model withdrawn effective September 2007

© Lenovo

(WR25E-1) September 2007

created by Lenovo Training Solutions

Personal Systems Reference (PSREF)
Partial list of accessories supported on ThinkPad Z61e originally announced on May 16, 2005

### Memory
- 512MB PC2-5300 DDR2 CL5 SODIMM: 40Y7733, ann 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM: 40Y7734, ann 01/05/06
- 2GB PC2-5300 DDR2 SODIMM: 40Y7735, ann 11/28/06

### Ultrabay Slim 9.5mm
None (no removable bay options)

### Ultrabay Enhanced 12.7mm
None (no removable bay options)

### Storage and Removable Storage
- 60GB Disk 9.5mm SATA150 (7200 rpm): 41N3012, ann 01/05/06
- 80GB Disk 9.5mm SATA150 (5400 rpm): 41N5662, ann 09/15/06
- 100GB Disk 9.5mm SATA150 (7200 rpm): 41N3013, ann 01/05/06
- 120GB Disk 9.5mm SATA150 (5400 rpm): 41N5691, ann 03/20/07
- 160GB Disk 9.5mm SATA150 (5400 rpm): 41N5692, ann 03/20/07

### USB 2.0 Port Replicator with Video: 40Y8132

### USB Serial Parallel Adapter: 22P5298

### ThinkPad Expansion

### Kensington WiFi Finder Plus: 40Y7659

### 11a/b/g Wireless Mini PCI Adapter II: 73P4301, ann 09/20/05

### USB 2.0 Essential Memory Key 1GB: 41U4940, ann 01/23/07

### USB 2.0 Security Memory Key 1GB: 41U6118, ann 07/17/07

### USB 2.0 Security Memory Key 2GB: 41U6119, ann 07/17/07

### USB 2.0 Security Memory Key 4GB: 41U6120, ann 07/17/07

### USB Portable Diskette Drive: 05K9276, ann 06/05/00

### USB 2.0 CD-RW/DVD-ROM Combo II Drive: 40Y8637, ann 01/05/06

### USB 2.0 Portable 80GB Hard Disk: 41N8378, ann 04/17/07

### USB 2.0 Portable 120GB Hard Disk: 41N8379, ann 04/17/07

### USB 2.0 Super Multi-Burner Drive: 41N5656, ann 01/23/07

### ThinkVision USB Soundbar: 73P4301, ann 09/20/05

### External Keyboards
- TrackPoint Cap Collection: 73P2698, ann 12/16/03
- USB Numeric Keypad: 33L3225, ann 05/01/06
- Preferred Pro USB Keyboard: 73P5220, ann 06/21/05
- Enhanced Performance USB Keyboard: 73P2620, ann 03/23/04
- Targus Wireless Keyboard and Mouse Combo: 40Y7721
- Enhanced Wireless Keyboard and Mouse: 73P4067, ann 12/07/04
- USB Keyboard with UltraNav: 31P9450, ann 01/28/03
- USB Travel Keyboard with UltraNav: 31P9490, ann 04/27/04
- Preferred Pro USB Fingerprint Keyboard: 73P4730, ann 02/22/05

### External Mouse
- USB Optical Wheel Mouse: 06P4069, ann 05/21/03
- Optical 3-Button ScrollPoint® Mouse: 31P7405, ann 08/27/02
- Optical 3-Button ScrollPoint Pro Mouse: 31P9070, ann 10/01/02
- Optical 3-Button Wheel Mouse: 31P7410
- Lenovo Laser Mouse (USB, PS/2): 41U3074, ann 01/23/07

### Multimedia
- USB 2.0 Lenovo Multimedia Headset: 40Y8518, ann 06/27/06
- USB 2.0 Lenovo Webcam: 40Y8519, ann 08/29/06

### Batteries
- Z60m/R60 Series Li-Ion Battery 6-cell: 40Y7675, ann 09/20/05
- Z60m/T60/R60 Li-Ion Battery 9-cell: 40Y7697, ann 09/20/05

### ThinkPad External Battery Charger

### Carrying Cases
- Lenovo M500 Projector: 0037A05, ann 02/28/06
- Lenovo C500 Projector: 0039A05, ann 07/11/06

### Monitors
- Lenovo E75 17" CRT Monitor (16.0" vis) bk: 6307BTN, ann 01/16/07
- Lenovo L151 15" Monitor (black): 9165AB6, ann 02/28/06
- Lenovo L171 17" Monitor (black): 9277A1C, ann 11/07/06
- Lenovo L191 19" Monitor (black): 6135AB1, ann 06/27/06
- Lenovo L171p 17” Monitor (black): 6920AB1, ann 09/19/06
- Lenovo D221 Wide 22" Monitor (black): 6622HB1, ann 11/21/06
- ThinkVision® L171p 17" Monitor (black): 9417HC2, ann 10/31/06
- ThinkVision L201p 20.1" Monitor (black): 9220AB1, ann 10/31/06

### Security
- Kensington® Lock from Lenovo: 73P2582, ann 12/29/03
- USB Gemplus GemPC Smart Card Reader: 41N3040, ann 02/11/06
- PC Card Gemplus Smart Card Reader: 41N3004, ann 12/13/05
- ThinkPad Convertible Carrying Case: 41U3617, ann 10/24/06

### Monitor Accessories
- ThinkVision USB Soundbar: 40Y7616, ann 08/23/05
- Kensington Cable Lock from Lenovo: 73P2588, ann 12/29/03
- ThinkPad Convertible Monitor Stand: 40Y7620, ann 01/05/06
- Belkin Radial Arm: 19K4464, ann 05/05/00

### Other accessories at lenovo.com/accessories

Need to buy accessories no longer marketed by Lenovo? See www.itxchange.com/lenovo for the Options Continuation Program.
ThinkPad® Z61p (9450) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed Mem-</th>
<th>Display</th>
<th>Disk Graphics</th>
<th>IDE EIDE</th>
<th>Mini PCI WWAN</th>
<th>Mini PCI PCIe</th>
<th>Finger Button</th>
<th>One Note</th>
<th>Work-life</th>
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<tr>
<td>9450-3AU</td>
<td>Black</td>
<td>Core Duo T2500</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4'' WUXGA</td>
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<td>100G DVD-RW*</td>
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<td>CD</td>
<td>Oct 06</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

<table>
<thead>
<tr>
<th>Positioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
</tr>
<tr>
<td>Widescreen multimedia; two spindles</td>
</tr>
<tr>
<td>Intel® Core™ Duo processor T2500 with dual-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache or Intel Core 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache</td>
</tr>
</tbody>
</table>

| Memory |
| 1GB std / 4GB max / PC2-6300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / 3AU: standard memory in both sockets (512MB each socket); no sockets available; A1U: standard memory in one socket; 1 socket available |

| EIDE DVD:RW |
| Ultrabay Enhanced |
| Serial ATA disk |
| (SATA150) |
| DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Enhanced DVDRW drive / One modular bay for interchangeable devices / Ultrabay Slim-compatible / 15.7mm high / 100GB (7200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System™ |

| Graphics |
| ATI® MOBILITY™ FireGL® V5200 M56 / PCI Express x16 / 256MB memory / DVI pass-through support to optional Advanced Mini Dock and Advanced Dock |

| Keyboard |
| TrackPoint® |
| ThinkLight™ |
| 89-key / thin/quick button / spill-resistant / multimedia Fn keys / Windows, Apple keys / TrackPoint® pointing device / UltraNav® multi-pointing system (touchpad) |

| Dimensions |
| Weight |
| Case material |
| Battery - type |
| Battery - life |

| Architecture |
| Mobile Intel 945PM Express Chipset / 82801GBM ICH7-M I/O Controller Hub / S3ATA, AT100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint] / PCI bus (T1/PCI412) CardBus controller / LPC bus (NS PC87382 Super I/O, Atmel® AT97SC3203) |

| PC Card slot |
| ExpressCard slot Ports |
| One Type I or Type II slot / CardBus 32-bit / integrated door |
| One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door |

| Wireless antenna |
| Integrated camera |
| Media Express |  |
| Intel 11a/b/g/n | ThinkPad 11n™ |

| UltraConnect® Antenna built into the display cover / on-off switch for all wireless radios |
| Two Mini PCI Express slots / only 802.11 wireless is customer upgradable |
| None / 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG |

| WWAN |
| Modem |
| Bluetooth™ |
| Ethernet |
| Audio |

| 56K V.90 (V.92-designed) modem in Comm Daughter Card slot / Conexant® chip |
| Gigabit ethernet on systemboard / Broadcom® BCM5752M (MAC) / PCIe x1 / PXE High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / ATI graphics models: stereo microphone / microphone input jack / headphone jack |

| Security chip |
| Fingerprint reader |

| Trusted Platform Module / Atmel chip / TCG 1.2-compliant |
| Fingerprint reader on palm rest / swipe sensor / supports the security chip |

| Limited warranty |
| 1-year / EasyServ® on-site pickup and delivery / service upgrades® available |

| 512MB PC2-5300 DDR2 CL5 SODIMM | 40Y7733 |
| 1GB PC2-5300 DDR2 SODIMM | 40Y7734 |
| 2GB PC2-5300 DDR2 SODIMM | 40Y7735 |
| DVD-ROM Ultrabay Enhanced Drive | 40Y7736 |
| CD-RW/DVD Combo Ultrabay Enhanced | 40Y7737 |
| ThinkPad ThinPad External Battery Charger | 40Y7672 |
| ThinkPad Ultrabay Slim Burner (flat) | 40Y7673 |
| ThinkPad ThinPad External Battery Charger | 40Y7675 |
| ThinkPad External Battery Charger | 40Y7676 |
| ThinkPad Internal Battery Charger | 40Y7677 |

| 90-watt (ATI graphics) AC adapter |
| ThinkPad Roll Cage |
| RoHS-compliant |

| SOFTWARE® |
| Windows XP Professional |
| - Microsoft® Windows® XP Professional® (Service Pack 2) |
| - Disk-to-Disk Recovery |

| Preloaded |
| Model A1U: Microsoft Office OneNote 2003 |
| Rescue and Recovery™ |

| Access Connections™ |
| Client Security Solution™ |
| ThinkVantage Productivity Center with Away Manager |
| ThinkVantage System Update |
| Symantec® Client Security™ |

| Diskeeper Lite |
| PC-Doctor® (diagnostics) |
| ThinkPad UltraTweak cells (Power Manager and Presentation Director) |
| Adobe® Reader |
| Google Toolbar |
| Google Desktop |
| Picasa from Google |
| Microsoft Office Technology |

| CD included |
| Model A1U: Microsoft Office OneNote 2003 |

| License - CD not included |
| Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client |

| Lenovo.com/thinkplus/warranty |

See footnotes for important warranty information
* Powered by Intel Centrino® Duo processor technology
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2007 Lenovo (WR2-1) September 2007

US models announced July 18 or October 17, 2006
US models withdrawn effective April or September 2007
## ThinkPad Z61p (9452) - withdrawn

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Mini PCIE</th>
<th>Finger</th>
<th>Battery</th>
<th>Work-horse</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>9452-JRU</td>
<td>Intel Core 2 Duo</td>
<td>2.00</td>
<td>1GB</td>
<td>SATA150</td>
<td>802.11 wireless</td>
<td>wireless</td>
<td>Blue</td>
<td>9</td>
<td>Pro W G</td>
<td>Oct06</td>
</tr>
<tr>
<td></td>
<td>T7200</td>
<td></td>
<td>15.4&quot; WUXGA</td>
<td>(391mm)</td>
<td></td>
<td></td>
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</tbody>
</table>

- This model has a 3-year limited warranty.

### Positioning
- Widescreen multimedia; two spindles
- Memory: 1GB, 4GB, PC2-5300
- Audio: High Definition (HD) Audio
- Ethernet: 10/100 Base-T Ethernet
- Modem: Internet Modem
- Battery - Life: 9-cell, 4GB max

### Software
- Windows XP Professional
- - Microsoft Windows XP Professional (Service Pack 2)
- - Disk-to-Disk Recovery

### Preloaded
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Sonic RecordNOW and Drive Letter Access (DVD:SRW)
- InterVideo WinDVD (DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)
- License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Warranty
- 1 year battery - EasyServ™ on-site pickup and delivery / service upgrades available
- Limited warranty:
  - 3-year: 1-year battery - EasyServ™ on-site pickup and delivery / service upgrades available
  - 2-year: 2-year LOR 9x5 NBD
  - 4-year: 4-year LOR 9x5 NBD
  - 5-year: 5-year LOR 9x5 NBD

### LAN
- 802.11b/g/n
- USB 2.0
- Bluetooth™
- CardBus 32-bit
- PCI Express x1 or USB 2.0
- Integrated door

### Ports
- CardBus 32-bit
- PCI Express x1 or USB 2.0
- Integrated door

### Security
- Power-on password / hard disk password / supervisor password / security keyhole
- Security chip
- Fingerprint reader

### Keyboard
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple keys

### Dimensions
- (WxHxD): 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

### Graphics
- ATI Mobility FireGL™ V5200 M56 / PCl Express x16 / 256MB memory / DVI pass-through support to optional Advanced Mini Dock and Advanced Dock

### Ports
- Two Mini PCI Express slots: one ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated 4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, X-Picture Card™) / 8-video out port (TV out) / IEEE 1394a-2000 (FireWire 400) / three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ether)

### Features
- Mobile Intel 945PM Express Chipset
- 9-cell plus Ultrabay battery: up to 5.9 hr
- 100GB (7200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System™

### More Information
- See footnotes for important warranty information
- Lenovo Laser Mouse (USB, PS/2) 41U3074
- USB Keyboard with UltraNav 31P8950
- 160GB Disk 9.5mm SATA150 (5400 rpm)
- USB Keyboard with UltraNav 31P8950
- Lenovo L221 Wide 22" Monitor (black) 6622HB
- Lenovo L221 Wide 22" Monitor (black) 6622HB
- Lenovo L221 Wide 22" Monitor (black) 6622HB
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**Availability:** All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

**Warranty:** For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP NC, 27709, Attn: Dept ZPYA/8676. Lenovo makes no representation or warranty regarding third party products or services.

**Footnotes:**

1. With Intel SpeedStep, processor speed may be reduced to conserve battery power.

2. Weight includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.

3. Thinness may vary at certain points on the system.


5. TAA: ThinkPad notebook is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.

6. Public network download speeds are limited to 53Kbps. Upload speeds are limited to 31.2Kbps. Compatible phone line and server equipment required. Actual speeds depend on many factors and are often less than the maximum possible.

7. Maximum memory and hard disk drive capacity may require the replacement of standard component with largest supported component available.

8. Hard drive: GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.

9. CD/DVD drive speeds list maximum rates; rates are variable and are often less than the maximum.

10. **Battery:** These model numbers achieved Battery Rundown Time of at least the time shown during testing. A description of the testing available at [lenovo.com/pc/ww/thinkpad/batterylife]. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

11. **Memory:** For ThinkPad models without a separate video card, memory supports both system and video. Accessible system memory may be up to 64MB less than the amount stated, depending on video mode.

12. **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

13. **Internet access not included.**

14. **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

15. **Update Connector** is available to registered ThinkPad customers during the limited warranty period at no charge. Line charges may apply.

16. **Activating Verizon Wireless Service:** Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service and airtime charges will apply; $175 early termination fee. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations, and maps at [www.verizonwireless.com].

17. **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having “On-site service for select repairs”, this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For ThinkPad notebooks with EasyServ or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.

18. **EasyServ depot repair service:** In the United States call 1-800-426-7378. The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.

19. **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to [lenovo.com/pc/support] and enter your machine type and model number for more information.

20. For combination drives, maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.

21. **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. For ThinkPad notebooks requiring LCD or other component replacement, Lenovo may choose to perform service at the depot repair center. Calls must be received by 5 pm local time in order to qualify for Next Business Day service. P/L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.
**Activating AT&T Wireless Service:** Requires separate agreement with AT&T subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

**Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

**Modem speeds:** Public network download speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps for V92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.

**Measures only maximum** data transfer rate, not application performance. Many factors affect application performance.

**Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems with an Intel 945GM, 945PM, GM965, or PM965 chipset, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by an operating system will be limited to 3GB. This limitation does not exist with the Intel GM965 and PM965 with the 64-bit operating systems Windows XP Professional 64-bit and Windows Vista 64-bit Editions.

**Wireless:** Based on IEEE 802.11a, 802.11b, and 802.11g respectively. An adapter with 11a/b, 11b/g, or 11a/b/g can communicate on any of its supported formats.
33 Embedded Security Subsystem may require download of client security software from the Web and requires Internet access, not included.

34 Asset ID allows system-specific information to be stored in a chip inside the system; it does not have any radio frequency support.

35 Operating system: Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/think/support and enter your machine type and model number for more information.

36 Wireless upgradable allows the system to be wireless-enabled with an optional wireless Mini PCI or Mini PCI Express card. Designed to operate only with Lenovo options.

37 Mobile processors: Power management reduces processor speed when in battery mode.

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