



Personal Systems Reference

IBM ThinkPad Notebooks

January 2005 - Version 286



Type-model	Processor	GHz	Memory	Screen	Disk	Optical in UltraBase	ThinkPad X3 UltraBase™	Mini PCI wireless	CDC: modem/Bluetooth™	Sec Ethernet chip	Planar Preload	WH (W) Entry (E)	Gbl (G) TAA	Avail date
2672-27U	Pentium® M 1.4	256MB	12.1" XGA	20GB ⁸	None	Optional	Open; wireless upg ³⁶	Modem	Yes	10/100	XP Pro	E		Oct 03
2672-2BU	Pentium M 1.4	256MB	12.1" XGA	20GB	None	Optional	*Intel 11b Wi-Fi ³²	Modem	Yes	10/100	XP Pro	E		Oct 03
2672-N7U	Pentium M 1.6	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg	Modem	Yes	10/100	XP Pro	W G		Oct 03
2672-P7U	Pentium M 1.6	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg	Modem	Yes	Gigabit	XP Pro	W		Oct 03
2672-PBU	Pentium M 1.6	256MB	12.1" XGA	40GB	None	Optional	*Intel 11b Wi-Fi	Modem	Yes	Gigabit	XP Pro	W G		Oct 03
2672-PUU	Pentium M 1.6	256MB	12.1" XGA	40GB	None	Optional	11a/b/g Wi-Fi ³²	Modem	Yes	Gigabit	XP Pro	W		Oct 03
2672-PXU	Pentium M 1.6	256MB	12.1" XGA	40GB	None	Optional	Cisco® 802.11b ³²	Modem	Yes	Gigabit	XP Pro	W G		Oct 03
2672-REU	Pentium M 1.6	512MB	12.1" XGA	40HS	None	Optional	*Intel 11b Wi-Fi	Mod/Blue	Yes	Gigabit	XP Pro	W		Oct 03
2672-RHU	Pentium M 1.6	512MB	12.1" XGA	40HS	None	Optional	11a/b/g Wi-Fi ³²	Mod/Blue	Yes	Gigabit	XP Pro	W		Oct 03
2672-NYU	Pentium M 1.6	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg	Modem	Yes	10/100	XP Pro	W TAA		Dec 03
Positioning Processor	<i>Ultimate mobility in a versatile ultraportable; one spindle</i> NYU: US Government model (Trade Act Agreement-compliant) Intel® Pentium® M Processor 1.4 or 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus													
L2 cache Memory	1MB / on die (at processor speed) / ECC 256 or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (memory controller limits memory speed to 266MHz) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available													
Diskette drive	None standard / use optional Ultrabay™-based (inX3) or USB-based diskette drive													
Optical	None standard / optional USB-based optical, or optional Ultrabay 2000-based optical removable from optional X3 UltraBase, ThinkPad Dock, or ThinkPad Dock II Supports Ultrabay 2000 devices in standard X3 UltraBase (or optional ThinkPad Dock II)													
Ultrabay™ 2000 Disk	20GB (4200 rpm), 40GB ⁸ (4200 rpm), or 40GB (HS 5400 rpm), 9.5mm, ATA-100 / removable and upgradable / 9.5mm high bay													
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits													
Graphics controller	ATI® Mobility RADEON® / 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 ²⁶ 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 ¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap Illuminates the keyboard to improve visibility in low-light conditions													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	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 8.9" x 2.0-2.3"; 273 x 227 x 51-58mm with battery: 3.6 lb (1.65kg); with X3 UltraBase and optical: 5.6 lb (2.54kg)													
Travel weight ²	Color: black; All: titanium composite in the top cover / magnesium alloy bottom case													
Case material	Li-Ion 6-cell / intelligent / supports opt Extended Life Battery on base (for two batteries) supports Ultrabay battery or optional 6-cell battery in X3 UltraBase (for two batteries)													
Battery - type	5.3 to 6.0 hrs; with std battery and optional Extended Life Battery: up to 10.1 hrs													
Battery - life ¹⁰														
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]) / Intel 82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (Ricoh® R5C522 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O)													
Media slice	Optional X3 UltraBase media slice (see right side)													
Compact Flash slot	Compact Flash slot / 1 CF+ Type II / supports optional IBM Microdrive™													
PC Card Std slot	One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door													
IEEE 1394	IEEE 1394 (FireWire) port (4-pin)													
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													
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable													
Wireless upg ³⁶	Some: wireless upgradable with wireless Mini PCI options													
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset													
Cisco 802.11b ³²	Some: 802.11b wireless ⁴ , Mini PCI, Cisco® Aironet® Wireless 802.11b													
11a/b/g Wi-Fi ³²	Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset													
CDC	One Communications Daughter Card (CDC) socket / customer accessible													
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset													
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)													
Ethernet	Some: 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE													
Audio support	Some: Gigabit Ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE													
Security	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 (pink) / headphone jack (green) / mic in (blue) [all 3.5mm]													
Security chip	Power-on password / dual hard disk password / supervisor password / security keyhole IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant													
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail													
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	IBM ThinkPad X3 UltraBase media slice	46P7912											
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad Port Replicator II	74P6733											
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad Mini Dock	287810U											
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Dock II	287710U											
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM USB Portable Diskette Drive	05K9276											
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039											
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ThinkPad X30 Series Extended Life Battery	02K7041											
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ThinkPad Ultraportable 56W AC Adapter	02K6880											
Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac ²² 2yr IOR 9x5 NBD	30L9190											
IBM M400 Projector	0037A04	Other options at ibm.com/pc/us/accessories												
56 watt AC Adapter Asset ID™ ³⁴ (system-specific info in chip accessed over network) PC 2001-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant IBM Rapid Restore Ultra available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)														

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US models announced on October 7 or December 9, 2003

≠ US models withdrawn effective April 2004 or January 2005

Type-model	Processor	GHz	Memory	Screen	Disk	Optical in UltraBase	ThinkPad X3 UltraBase™	Mini PCI wireless	CDC: modem/Bluetooth™	Sec Ethernet chip	Ethernet planar Preload	WH (W) Entry (E)	Gbl (G) Avail date
2672-38U	Pentium® M 1.5	256MB	12.1" XGA	30GB ⁸	None	Optional	Open; wireless upg ³⁶	Modem	Yes	10/100	XP Pro	Entry	Feb 04
2672-3KU	Pentium M 1.5	256MB	12.1" XGA	30GB	None	Optional	*Intel 11b Wi-Fi ³²	Modem	Yes	10/100	XP Pro	Entry	Feb 04
2672-3UU	Pentium M 1.5	256MB	12.1" XGA	30GB	None	Optional	IBM 11b/g ³²	Modem	Yes	10/100	XP Pro	Entry	Feb 04
2672-58U	Pentium M 1.7	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg	Modem	Yes	Gigabit	XP Pro	W G	Feb 04
2672-5KU	Pentium M 1.7	256MB	12.1" XGA	40GB	None	Optional	*Intel 11b Wi-Fi	Modem	Yes	Gigabit	XP Pro	W G	Feb 04
2672-7KU	Pentium M 1.7	512MB	12.1" XGA	40GB	None	Optional	*Intel 11b Wi-Fi	Modem	Yes	Gigabit	XP Pro	W	Feb 04
2672-4UU	Pentium M 1.7	512MB	12.1" XGA	40HS	None	Optional	IBM 11b/g	Modem	Yes	Gigabit	XP Pro	W	Feb 04
2672-5UU	Pentium M 1.7	256MB	12.1" XGA	40GB	None	Optional	IBM 11b/g	Modem	Yes	Gigabit	XP Pro	W	Feb 04
2672-5ZU	Pentium M 1.7	256MB	12.1" XGA	40GB	None	Optional	11a/b/g Wi-Fi ³²	Modem	Yes	Gigabit	XP Pro	W	Feb 04
Positioning Processor	<i>Ultimate mobility in a versatile ultraportable; one spindle</i>												
L2 cache	Intel® Pentium® M Processor 1.5 or 1.7GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus												
Memory	1MB / on die (at processor speed) / ECC												
Diskette drive	None standard / use optional Ultrabay™-based (inX3) or USB-based diskette drive												
Optical	None standard / optional USB-based optical, or optional Ultrabay 2000-based optical removable from optional X3 UltraBase, ThinkPad Dock, or ThinkPad Dock II Supports Ultrabay 2000 devices in standard X3 UltraBase (or optional ThinkPad Dock II)												
Ultrabay™ 2000 Disk	30GB (4200 rpm), 40GB ⁹ (4200 rpm), or 40GB (HS 5400 rpm), 9.5mm, ATA-100 / removable and upgradable / 9.5mm high bay												
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits												
Graphics controller	ATI® Mobility RADEON® / 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 ²⁶ 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 ¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap Illuminates the keyboard to improve visibility in low-light conditions												
ThinkLight™													
Dimensions ³	<i>without X3 UltraBase:</i> 10.7" x 8.8" x .98-1.19"; 273mm x 223mm x 24.9-30.2mm <i>with X3 UltraBase and optical:</i> 10.8" x 8.9" x 2.0-2.3"; 273 x 227 x 51-58mm												
Travel weight ²	<i>with battery:</i> 3.6 lb (1.65kg); <i>with X3 UltraBase and optical:</i> 5.6 lb (2.54kg)												
Case material	Color: black; All: titanium composite in the top cover / magnesium alloy bottom case												
Battery - type	Li-Ion 6-cell / intelligent / supports opt Extended Life Battery on base (for two batteries) supports Ultrabay battery or optional 6-cell battery in X3 UltraBase (for two batteries)												
Battery - life ¹⁰	5.5 to 6.0 hrs; <i>with std battery and optional Extended Life Battery:</i> up to 10.1 hrs												
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)) / Intel 82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (Ricoh® R5C522 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O)												
Media slice	Optional X3 UltraBase media slice (see right side)												
Compact Flash slot	Compact Flash slot / 1 CF+ Type II / supports optional IBM Microdrive™												
PC Card Std slot	One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door												
IEEE 1394	IEEE 1394 (FireWire) port (4-pin)												
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												
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable												
Wireless upg ³⁶	Some: wireless upgradable with wireless Mini PCI options												
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset												
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset												
11a/b/g Wi-Fi ³²	Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset												
Bluetooth™	None												
Ethernet	Some: 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE												
Audio support	Some: Gigabit Ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE 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 (pink) / headphone jack (green) / mic in (blue) [all 3.5mm]												
Security	Power-on password / dual hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail												
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	IBM ThinkPad X3 UltraBase media slice	46P7912	56 watt AC Adapter									
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad Port Replicator II	74P6733	Asset ID™ ³⁴ (system-specific info in chip accessed over network)									
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad Mini Dock	287810U	PC 2001-compliant									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Dock II	287710U	ACPI 1.0b and 2.0-compliant									
IBM USB 2.0 Portable Multi-Burner	22P9163	IBM USB Portable Diskette Drive	05K9276	CIM and DMI 2.0-compliant									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039	IBM Rapid Restore Ultra available to protect software image and data									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad X30 Series Extended Life Battery	02K7041	International Warranty Service ¹⁷									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ThinkPad Ultrabay 56W AC Adapter	02K6880	24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²									
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac® ²² 2yr IOR 9x5 NBD	30L9190										
Intel PRO/Wireless 2200GB Mini PCI	73P2801	ServicePac 5yr P&L P/U Depot	69P9201										
IBM M400 Projector	0037A04	Other options at ibm.com/pc/us/accessories											

SOFTWARE¹⁴

Windows XP Professional

- Microsoft® Windows® XP Professional²⁰
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Access IBM
- Access Connections
- Adobe Reader
- IBM Rapid Restore™ Ultra
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™¹⁵

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

IBM 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

Ultrabay 2000 accessories:

- CD-RW/DVD Combo IV Ultrabay 2000 22P6991
- Second HDD Adapter for Ultrabay 2000 08K6068
- ThinkPad Removable Diskette Drive 08K9603
- Ultrabay 2000 Li-Ion battery 02K6646
- Enhanced Drive Adapter for Ultrabay 2000 73P3268

X3 UltraBase bottom contains:

- Bay for X30 battery (same as X31)

Other features:

- Second battery support (for Ultrabay 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

See footnotes for important warranty information
US model announced February 10, 2004
≠ US models withdrawn effective October 2004

* Powered by Intel Centrino™ mobile technology

IBM® ThinkPad® X31 (2884) - Express (February 2004)

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Screen	Disk	Optical in UltraBase	ThinkPad X3 UltraBase™	Mini PCI wireless	CDC: modem/Bluetooth™	Security chip	Ethernet planar Preload	Avail date
2884-68U	Pentium® M	1.5	256MB	12.1" XGA	20GB ⁸		Optional	Open; wireless upg ³⁶	Modem	Yes	10/100 XP Pro	Feb 2004
2884-6KU	Pentium M	1.5	256MB	12.1" XGA	20GB		Optional	* Intel 11b Wi-Fi ³²	Modem	Yes	10/100 XP Pro	Feb 2004
2884-6LU	Pentium M	1.5	256MB	12.1" XGA	20GB	DVD	X3 UltraBase	* Intel 11b Wi-Fi	Modem	Yes	10/100 XP Pro	Feb 2004
2884-3UU	Pentium M	1.5	256MB	12.1" XGA	30GB		Optional	IBM 11b/g ³²	Modem	Yes	10/100 XP Pro	Feb 2004
2884-3WU	Pentium M	1.5	256MB	12.1" XGA	30GB	Combo	X3 UltraBase	IBM 11b/g	Modem	Yes	10/100 XP Pro	Feb 2004
2884-5KU	Pentium M	1.7	256MB	12.1" XGA	40GB		Optional	* Intel 11b Wi-Fi	Modem	Yes	Gigabit XP Pro	Feb 2004
2884-5LU	Pentium M	1.7	256MB	12.1" XGA	40GB	Combo	X3 UltraBase	* Intel 11b Wi-Fi	Modem	Yes	Gigabit XP Pro	Feb 2004
2884-4LU	Pentium M	1.7	256MB	12.1" XGA	40HS	Combo	X3 UltraBase	* Intel 11b Wi-Fi	Modem	Yes	Gigabit XP Pro	Feb 2004
2884-4WU	Pentium M	1.7	512MB	12.1" XGA	40HS	Combo	X3 UltraBase	IBM 11b/g	Modem	Yes	Gigabit XP Pro	Feb 2004
<p>• These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2884 has a 1 year limited warranty</p>												
Positioning Processor	<p>Ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® M Processor 1.5 or 1.7GHz with enhanced Intel SpeedStep™ technology¹ and 400MHz system bus</p>											
L2 cache	<p>1MB / on die (at processor speed) / ECC</p>											
Memory	<p>256MB or 512MB std / 2GB max⁷ / 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</p>											
Diskette drive	<p>None standard / use optional Ultrabay™-based (inX3) or USB-based diskette drive</p>											
DVD	<p><i>Some:</i> DVD-ROM / 8X-3.3X⁹ speed / bootable / removable from Ultrabay 2000 of X3</p>											
Combo	<p><i>Some:</i> DVD-ROM/CD-RW / 16X/10X/24X/8X²¹ speed / removable from Ultrabay 2000</p>											
Ultrabay™ 2000	<p>Supports Ultrabay 2000 devices in std or opt X3 UltraBase (or opt ThinkPad Dock II)</p>											
Disk	<p>20GB⁸ (4200 rpm), 30GB (4200 rpm), or 40GB (4200 rpm or HS 5400 rpm), 9.5mm, ATA-100 / removable, upgradable / 9.5mm high bay</p>											
Display	<p>12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</p>											
Graphics controller	<p>ATI® Mobility RADEON® / AGP 4X / 16MB DDR1 (DDR-SDRAM)</p>											
Graphics - external	<p>External monitor support via analog DB-15 connector / up to 1280x1024x16.7M at 85Hz</p>											
Keyboard	<p>Standard-size²⁶ keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stoke / Access IBM button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap</p>											
ThinkLight™	<p>Illuminates the keyboard to improve visibility in low-light conditions</p>											
Dimensions ³	<p><i>without X3 UltraBase:</i> 10.7" x 8.8" x .98-1.19"; 273mm x 223mm x 24.9-30.2mm <i>with X3 UltraBase and optical:</i> 10.8" x 8.9" x 2.0-2.3"; 273 x 227 x 51-58mm</p>											
Travel weight ²	<p><i>with battery:</i> 3.6 lb (1.65kg); <i>with X3 UltraBase and optical:</i> 5.6 lb (2.54kg)</p>											
Case material	<p>Color: black; All: titanium composite in the top cover / magnesium alloy bottom case</p>											
Battery - type	<p>Li-Ion 6-cell / intelligent / supports opt Extended Life Battery on base (for two batteries) supports Ultrabay battery or optional 6-cell battery in X3 UltraBase (for two batteries)</p>											
Battery - life ¹⁰	<p>Up to 5.5 hrs; <i>with std battery and optional Extended Life Battery:</i> up to 10.1 hrs</p>											
Architecture	<p>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]) / Intel 82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (Ricoch® R5C522 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared [dock-based diskette, serial, parallel])</p>											
Media slice	<p><i>Some:</i> X3 UltraBase media slice (see right side)</p>											
Docking Station	<p>Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)</p>											
Compact Flash slot	<p>Compact Flash slot / 1 CF+ Type II / supports optional IBM Microdrive™</p>											
PC Card Std slot	<p>One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door</p>											
IEEE 1394	<p>IEEE 1394 (FireWire) port (4-pin)</p>											
Ports	<p>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</p>											
Wireless antenna	<p>UltraConnect™ antenna built into the display cover for optimal wireless signal reception</p>											
Mini PCI	<p>One Mini PCI type III slot (Communications Bay) / customer upgradeable</p>											
Wireless upg ³⁶	<p><i>Some:</i> wireless upgradable with wireless Mini PCI options</p>											
11b Wi-Fi ³²	<p><i>Some:</i> 11b Wi-Fi³² wireless⁴, Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset</p>											
IBM 11b/g ³²	<p><i>Some:</i> IBM 11b/g Wi-Fi³² wireless⁴, Mini PCI, Atheros™ AR5004G chipset</p>											
CDC	<p>One Communications Daughter Card (CDC) socket / customer accessible</p>											
Modem	<p>56K V.90 (V.92-designed²⁵) modem in CDC / Agere® chipset</p>											
Ethernet	<p><i>Some:</i> 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE</p>											
Audio support	<p><i>Some:</i> Gigabit Ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE</p>											
Security	<p>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 (pink) / headphone jack (green) / mic in (blue) [all 3.5mm]</p>											
Security chip	<p>Power-on password / dual hard disk password / supervisor password / security keyhole</p>											
Limited warranty ¹²	<p>1 year - EasyServ™¹⁹ onsite pickup and delivery / service upgrades²² avail</p>											
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	IBM ThinkPad X3 UltraBase media slice	46P7912									
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad Port Replicator II	74P6733									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Mini Dock	287810U									
IBM USB Portable Diskette Drive	05K9276	ThinkPad Dock II	287710U									
IBM USB 2.0 Memory Key 512MB	22P9230	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039									
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad X30 Series Extended Life Battery	02K7041									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad 72W AC/DC Combo Adapter	22P9010									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	IBM Powered USB 2.0 Port Combo Drive	22P9194									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac® ²² 1yr IOR 9x5 NBD	30L9188									
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 3yr IOR 9x5 NBD	30L9195									
Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 3yr P&L P/U Depot	30L9192									
IBM M400 Projector	0037A04	Other options at IBM.com/pc/us/accessories										
56 watt AC Adapter												
Asset ID™ ³⁴ (system-specific info in chip accessed over network)												
PC 2001-compliant												
ACPI 1.0b and 2.0-compliant												
CIM and DMI 2.0-compliant												
IBM Rapid Restore Ultra available to protect software image and data												
International Warranty Service ¹⁷												
24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²												

See footnotes for important warranty information
US models announced February 10, 2004
≪ US models withdrawn effective October 2004

* Powered by Intel Centrino™ mobile technology

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Type-model	Processor	GHz	Memory	Screen	Disk	Optical in	ThinkPad UltraBase X4	ThinkPad UltraBase™	Mini PCI wireless	CDC: modem/ Bluetooth™	Sec Ethernet chip	Battery cells	WH (W) Preload	Gbl (G) Entry (Ent)	Avail date	
2371-13U	Pentium® M 1.0	1.0	256MB	12.1" XGA	20GB	None	Optional	Open; wireless upg ³⁶	Intel 11b Wi-Fi ³²	Modem	Yes	Gigabit	4	XP Pro	Ent	Feb 2004
2371-1CU	Pentium M 1.0	1.0	256MB	12.1" XGA	20GB	None	Optional	* Intel 11b Wi-Fi ³²		Modem	Yes	Gigabit	4	XP Pro	Ent	Feb 2004
2371-57U	Pentium M 1.2	1.2	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg		Modem	Yes	Gigabit	4	XP Pro	W	Feb 2004
2371-67U	Pentium M 1.2	1.2	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg		Modem	Yes	Gigabit	8	XP Pro	W G	Feb 2004
2371-87U	Pentium M 1.2	1.2	512MB	12.1" XGA	40GB	None	Optional	Open; wireless upg		Modem	Yes	Gigabit	8	XP Pro	W	Feb 2004
2371-6GU	Pentium M 1.2	1.2	256MB	12.1" XGA	40GB	None	Optional	* Intel 11b Wi-Fi		Modem	Yes	Gigabit	8	XP Pro	W	Feb 2004
2371-7GU	Pentium M 1.2	1.2	512MB	12.1" XGA	40GB	None	Optional	* Intel 11b Wi-Fi		Modem	Yes	Gigabit	4	XP Pro	W	Feb 2004
2371-6EU	Pentium M 1.2	1.2	256MB	12.1" XGA	40GB	None	Optional	IBM 11b/g ³²		Modem	Yes	Gigabit	8	XP Pro	W	Feb 2004
2371-8EU	Pentium M 1.2	1.2	512MB	12.1" XGA	40GB	None	Optional	IBM 11b/g		Modem	Yes	Gigabit	8	XP Pro	W G	Feb 2004
2371-8LU	Pentium M 1.2	1.2	512MB	12.1" XGA	40GB	None	Optional	IBM 11b/g		Mod/Blue	Yes	Gigabit	8	XP Pro	W	Feb 2004
2371-8VU	Pentium M 1.2	1.2	512MB	12.1" XGA	40GB	None	Optional	11a/b/g Wi-Fi ³²		Modem	Yes	Gigabit	8	XP Pro	W	Feb 2004
Positioning Processor	Ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® M Processor Ultra Low Voltage 1.0GHz or Low Voltage 1.2GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE¹⁴				
L2 cache	1MB / on die (at processor speed) / ECC											Windows XP Professional				
Memory	256 or 512MB std / 1.28 to 1.53GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available											- Microsoft® Windows® XP Professional ²⁰ ↳ Disk-to-Disk Recovery (in hidden protected area)				
Diskette drive	None standard / use optional USB-based diskette drive											Preload				
Ultrabay™ Slim Disk	Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock 20GB or 40GB ⁸ (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM Active Protection System (shock protection)											<ul style="list-style-type: none"> Access IBM Access Connections Adobe Reader IBM Rescue and Recovery™ Norton AntiVirus (OEM edition) PC-Doctor™ ThinkPad Utilities IBM Update Connector™¹⁵ 				
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											Downloadable				
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 266MHz											<ul style="list-style-type: none"> IBM Director Agent Software Delivery Assistant System Migration Assistant Client Security Software (for security chip) 				
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200x16.7M at 85Hz											License (CD not included)				
Keyboard	Standard-size ²⁶ 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 ¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap Illuminates the keyboard to improve visibility in low-light conditions											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client				
ThinkLight®												Supports IBM ThinkVantage™ technologies				
Dimensions ³	4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm 8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06"; 268mm x 237mm x 20.6-26.9mm 4-cell battery models: 2.7 lb (1.23kg); 8-cell battery models: 3.1 lb (1.43kg); with 8-cell battery and X4 UltraBase with combo: 4.89 lb (2.22kg)											IBM ThinkPad X4 UltraBase™ Dock				
Weight ²												<ul style="list-style-type: none"> Provides desktop expansion and cable management for the X40 Easily connects to the bottom of the X40 for traveling Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: <ul style="list-style-type: none"> Ultrabay Slim Li-Polymer Battery 3-cell 08K8190 CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288 ThinkPad Multi-Burner Ultrabay Slim Drive 73P3294 Second HDD Adapter for Ultrabay Slim 62P4554 Disks supported: <ul style="list-style-type: none"> 30GB Hard Disk 09N4268 40GB HS Hard Disk 08K9816 80GB HS Hard Disk 09N4273 				
Case material	Color: black; All: magnesium alloy											Other features:				
Battery - type	Li-Ion 4- or 8-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase Dock (for two batteries) with 4-cell: 3.5 hr; with 8-cell: 7.5 hr; with 8-cell and optional Extended Life Battery: up to 10 hr											<ul style="list-style-type: none"> 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 				
Battery - life ¹⁰																
Architecture	Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-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 (PC87392 Super I/O for infrared [dock-based ports])															
Mobile media base	Supports optional X4 UltraBase Dock (see right side)															
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 32-bit / PCMCIA 2.1 / integrated door															
Ports	Two USB (version 2.0), plus one powered USB port for select IBM options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4) / no IEEE 1394 port															
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 ³⁶	Some: wireless upgradable with wireless Mini PCI options															
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset															
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset															
11a/b/g Wi-Fi ³²	Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset															
CDC	One Communications Daughter Card (CDC) socket / customer accessible															
Modem	56K ⁶ V.90 (V.92-designed ²⁸) modem in CDC / Conexant® chipset															
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)															
Ethernet	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN®															
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	Power-on password / dual hard disk password / supervisor password / security keyhole															
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant															
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail															
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	IBM ThinkPad X4 UltraBase Dock	92P3429													
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad X40 Series Li-Ion Battery (4-cell)	92P1009													
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad X40 Series Li-Ion Battery (8-cell)	92P1005													
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad X40 Series Extended Life Battery	92P1006													
IBM USB Portable Diskette Drive	05K9276	ThinkPad Ultraportable 56W AC Adapter	02K6880													
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad 72W AC/DC Combo Adapter	22P9010													
40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283	ServicePac™ ²² 2yr IOR 9x5 NBD	30L9190													
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 3yr IOR 9x5 NBD	30L9197													
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301	ServicePac 5yr P&L P/U Depot	69P9201													
Intel PRO/Wireless 2200BG Mini PCI	73P2801	Other options at ibm.com/pc/us/accessories														
				56 watt AC Adapter Asset ID™ ³⁴ (system-specific info in chip accessed over network) ACPI 1.0b and 2.0-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)												

See footnotes for important warranty information
US models announced February 10, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	GHz	Memory	Screen	Disk	Optical	UltraBase X4	ThinkPad UltraBase™	Mini PCI wireless	CDC: modem/Sec Bluetooth™	Battery chip	Preload	Warranty ¹²	WH TAA	Gbl	Avail date
2371-97U	Pentium® M	1.2	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg ³⁶	Modem	Yes	8	XP Pro	3 years	TAA		May 2004
2371-6DU	Pentium M	1.3	256MB	12.1" XGA	40GB	None	Optional	* Intel 11b Wi-Fi ³²	Modem	Yes	8	XP Pro	3 years			May 2004
2371-6FU	Pentium M	1.3	256MB	12.1" XGA	40GB	None	Optional	* Intel 11b/g Wi-Fi ³²	Modem	Yes	8	XP Pro	3 years			May 2004
2371-7FU	Pentium M	1.3	512MB	12.1" XGA	40GB	None	Optional	* Intel 11b/g Wi-Fi	Modem	Yes	4	XP Pro	3 years			May 2004
Positioning	<i>Ultimate mobility in a versatile ultraportable; one spindle</i>															
US Govt (TAA) ⁵ Processor	97U: US Government model (Trade Act Agreement-compliant) Intel® Pentium® M Processor Low Voltage 1.2 or 1.3GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus															
L2 cache	1MB / on die (at processor speed) / ECC															
Memory	256 or 512MB std / 1.28 to 1.53GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / 97U/6DU/6FU: std memory soldered to systemboard; one 200-pin SO-DIMM socket available 7FU with 512MB: 256MB soldered to board; one 256MB SO-DIMM in 200-pin socket															
Diskette drive	None standard / use optional USB-based diskette drive															
Ultrabay™ Slim Disk	Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock 40GB⁸ (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM 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															
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200x16.7M at 85Hz															
Keyboard	Standard-size ²⁶ 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 ¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap Illuminates the keyboard to improve visibility in low-light conditions															
ThinkLight®																
Dimensions ³	4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm 8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06"; 268mm x 237mm x 20.6-26.9mm															
Weight ²	4-cell battery models: 2.7 lb (1.23kg); 8-cell battery models: 3.2 lb (1.47kg); with 8-cell battery and X4 UltraBase with combo: 5.0 lb (2.26kg)															
Case material	Color: black; All: magnesium alloy															
Battery - type	Li-Ion 4- or 8-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase Dock (for two batteries)															
Battery - life ¹⁰	with 4-cell: 3.5 hr; with 8-cell: 7.5 hr; with 8-cell and optional Extended Life Battery: up to 10 hr															
Architecture	Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-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 (PC87392 Super I/O for infrared [dock-based ports])															
Mobile media base	Supports optional X4 UltraBase Dock (see right side)															
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 32-bit / PCMCIA 2.1 / integrated door															
Ports	Two USB (version 2.0), plus one powered USB port for select IBM options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4) / no IEEE 1394 port															
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 ³⁶	Some: wireless upgradable with wireless Mini PCI options															
Intel 11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset															
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset															
CDC	One Communications Daughter Card (CDC) socket / customer accessible															
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset															
Bluetooth™	None															
Ethernet	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN®															
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	Power-on password / dual hard disk password / supervisor password / security keyhole															
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant															
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail															
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	IBM ThinkPad X40 UltraBase Dock	92P3429													
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad X40 Series Li-Ion Battery (4-cell)	92P1009													
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad X40 Series Li-Ion Battery (8-cell)	92P1005													
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad X40 Series Extended Life Battery	92P1006													
IBM USB Portable Diskette Drive	05K9276	ThinkPad Multiple Battery Charger II	22P9040													
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad Ultraportable 56W AC Adapter	02K6880													
IBM Powered USB 2.0 Port Combo Drive	22P9194	ThinkPad 72W AC/DC Combo Adapter	22P9010													
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 4GB Microdrive™ with PC Card	09N4280													
IBM USB 2.0 Memory Key 512MB	22P9230	ServicePac® ²² 2yr IOR 9x5 NBD	30L9190													
40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283	ServicePac 3yr IOR 9x5 NBD	30L9197													
Kensington® MicroSaver® Security Cable	73P2582	ServicePac 5yr IOR 9x5 NBD	69P9200													
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 4yr P&L P/U Depot	69P9199													
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301	ServicePac 5yr P&L P/U Depot	69P9201													
Intel PRO/Wireless 2200BG Mini PCI	73P2801	Other options at ibm.com/pc/us/accessories														
SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ◇ Disk-to-Disk Recovery (in hidden protected area) Preloaded • Access IBM • Access Connections • Adobe Reader • IBM Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • IBM Client Security Software (for security chip) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage IBM ThinkPad X40 UltraBase™ Dock • Provides desktop expansion and cable management for the X40 • Easily connects to the bottom of the X40 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 08K8190 - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288 - ThinkPad Multi-Burner Ultrabay Slim Drive 73P3294 - Second HDD Adapter for Ultrabay Slim 62P4554 Disks supported: • 30GB Hard Disk 09N4268 • 40GB HS Hard Disk 08K9816 • 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 Asset ID™ ³⁴ (system-specific info in chip accessed over network) ACPI 1.0b and 2.0-compliant ENERGY STAR®-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)																

See footnotes for important warranty information
US models announced May 18, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	L2 GHz cache	Memory	Screen	Optical in Disk	UltraBase	ThinkPad X4 UltraBase™	Mini PCI wireless	CDC: modem/ Bluetooth™	Sec chip	Battery cells	Limited warranty ¹²	WH Entry	Gbl	Avail date	
2371-E8U	Pentium® M 738	1.4	2MB	256MB	12.1" XGA	40GB	None	Optional	Open; wireless upg ³⁶	Modem	Yes	8	3 years	W	G	Oct 04
2371-GHU	Pentium M 738	1.4	2MB	512MB	12.1" XGA	40GB	None	Optional * Intel 11b/g Wi-Fi ³²	Modem	Yes	8	3 years	W	G	Oct 04	
2371-H8U	Pentium M 738	1.4	2MB	512MB	12.1" XGA	40GB	None	Optional * Intel 11b/g Wi-Fi	Mod/Blue	Yes	8	3 years	W	W	Oct 04	
2371-G4U	Pentium M 738	1.4	2MB	512MB	12.1" XGA	40GB	None	Optional * Intel 11b/g Wi-Fi	Modem	Yes	4	3 years	W	W	Oct 04	
2371-H9U	Pentium M 738	1.4	2MB	512MB	12.1" XGA	40GB	None	Optional IBM 11a/b/g II ³²	Mod/Blue	Yes	8	3 years	W	W	Oct 04	
2371-E9U	Pentium M 738	1.4	2MB	256MB	12.1" XGA	40GB	None	Optional * Intel 11b/g Wi-Fi	Modem	Yes	8	3 years	W	W	Oct 04	
2371-E5U	Pentium M 738	1.4	2MB	256MB	12.1" XGA	40GB	None	Optional * Intel 11b/g Wi-Fi	Modem	Yes	4	3 years	W	W	Oct 04	
2371-A9U	Pentium M 713	1.1	1MB	256MB	12.1" XGA	30GB	None	Optional * Intel 11b/g Wi-Fi	Modem	Yes	4	3 years	Entry	W	Oct 04	
Positioning Processor	<i>Ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® M Processor Ultra Low Voltage 713 (1.1GHz) or Low Voltage 738 (1.4GHz) with enhanced Intel SpeedStep™ technology¹ and 400MHz system bus 1.1GHz: 1MB; 1.4GHz: 2MB; All: on die (at processor speed) / ECC</i>										SOFTWARE¹⁴					
L2 cache Memory	256 or 512MB std / 1.28 to 1.53GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available										Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ◇ Disk-to-Disk Recovery (in hidden protected area)					
Diskette drive Ultrabay™ Slim Disk	None standard / use optional USB-based diskette drive Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock 30GB⁸ or 40GB⁸ (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM Active Protection System (shock protection)										Preloaded • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵					
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • IBM Client Security Software (for security chip)					
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 266MHz										• License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client					
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200x16.7M at 85Hz										Supports IBM ThinkVantage™ technologies					
Keyboard	Standard-size ²⁶ 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 ¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap										Illuminates the keyboard to improve visibility in low-light conditions					
ThinkLight®	Illuminates the keyboard to improve visibility in low-light conditions															
Dimensions ³	<i>4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm</i> <i>8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06"; 268mm x 237mm x 20.6-26.9mm</i> <i>4-cell battery models: 2.7 lb (1.23kg); 8-cell battery models: 3.2 lb (1.47kg); with 8-cell battery and X4 UltraBase with combo: 5.0 lb (2.26kg)</i>															
Travel weight ²	<i>with 8-cell battery and X4 UltraBase with combo: 5.0 lb (2.26kg)</i>															
Case material	Color: black; All: magnesium alloy															
Battery - type	Li-Ion 4- or 8-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase Dock (for two batteries)															
Battery - life ¹⁰	<i>with 4-cell: up to 3.25 hr; with 8-cell: up to 7.0 hr; with 8-cell and optional Extended Life Battery: up to 10 hr</i>															
Architecture	Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-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 (PC87392 Super I/O for infrared [dock-based ports])										IBM ThinkPad X4 UltraBase™ Dock • Provides desktop expansion and cable management for the X40 • Easily connects to the bottom of the X40 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 08K8190 - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288 - ThinkPad Multi-Burner Ultrabay Slim Drive 73P3294 - Second HDD Adapter for Ultrabay Slim 62P4554 Disks supported: • 30GB Hard Disk 09N4268 • 40GB HS Hard Disk 08K9816 • 80GB HS Hard Disk 09N4273					
Mobile media base	Supports optional X4 UltraBase Dock (see right side)															
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 32-bit / PCMCIA 2.1 / integrated door															
Ports	Two USB (version 2.0), plus one powered USB port for select IBM options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4) / no IEEE 1394 port															
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 ³⁶	Some: wireless upgradeable with wireless Mini PCI options															
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset															
IBM 11a/b/g II ³²	Some: 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros™ AR5004X chipset															
CDC	One Communications Daughter Card (CDC) socket / customer accessible															
Modem	56K ⁹ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset															
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)															
Ethernet	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN®															
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)										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					
Security	Power-on password / dual hard disk password / supervisor password / security keyhole															
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant															
Limited warranty ¹²	3 years/1 yr battery - EasyServ™¹⁹ onsite pickup and delivery / service upgrades²² avail															
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828		IBM ThinkPad X4 UltraBase Dock		92P3429											
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830		ThinkPad X40 Series Li-Ion Battery (4-cell)		92P1009											
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832		ThinkPad X40 Series Li-Ion Battery (8-cell)		92P1005											
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834		ThinkPad X40 Series Extended Life Battery		92P1006											
IBM USB Portable Diskette Drive	05K9276		ThinkPad Multiple Battery Charger II		22P9040											
IBM USB 2.0 Portable CD-RW Drive	22P5297		ThinkPad Ultraportable 56W AC Adapter		02K6880											
IBM Powered USB 2.0 Port Combo Drive	22P9194		ThinkPad 72W AC/DC Combo Adapter		22P9010											
IBM USB 2.0 Portable Multi-Burner Drive	22P9163		IBM Enh Perf Wireless Keyboard and Mouse		73P4067											
IBM USB 2.0 Memory Key 512MB	22P9230		ServicePac® ²² 2yr IOR 9x5 NBD		30L9190											
40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283		ServicePac 3yr IOR 9x5 NBD		30L9197											
Kensington® MicroSaver® Security Cable	73P2582		ServicePac 5yr IOR 9x5 NBD		69P9200											
IBM 11a/b/g Wireless CardBus Adapter	31P9101		ServicePac 4yr P&L P/U Depot		69P9199											
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301		ServicePac 5yr P&L P/U Depot		69P9201											
Intel PRO/Wireless 2200BG Mini PCI	73P2801		Other options at ibm.com/pc/us/accessories													
56 watt AC Adapter	Asset ID™ ³⁴ (system-specific info in chip accessed over network) ACPI 1.0b and 2.0-compliant ENERGY STAR®-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)															

See footnotes for important warranty information
US models announced May 18, 2004

* Powered by Intel Centrino™ mobile technology

IBM® ThinkPad® X40 (2382) - Express

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	L2 GHz cache	Memory	Screen	Disk	Optical in UltraBase	ThinkPad X4 UltraBase™	Mini PCI wireless	CDC: Bluetooth™	SecBattery chip	Limited cells	Avail warranty	date
2382-1GU	Pentium® M	1.0 1MB	256MB	12.1" XGA	40GB		Optional	*Intel 11b Wi-Fi ³²	Modem	Yes	4	3 yr	Feb 04
2382-6UU	Pentium M	1.2 1MB	256MB	12.1" XGA	40GB	Combo	X4 UltraBase	*Intel 11b Wi-Fi	Modem	Yes	8	3 yr	Feb 04
2382-8WU	Pentium M	1.2 1MB	512MB	12.1" XGA	40GB	Combo	X4 UltraBase	IBM 11b/g ³²	Mod/Blue	Yes	8	3 yr	Feb 04
2382-8RU	Pentium M	1.3 1MB	512MB	12.1" XGA	40GB	Combo	X4 UltraBase	*Intel 11b/g Wi-Fi ³²	Modem	Yes	8	3 yr	May 04
2382-ECU	Pentium M 738	1.4 2MB	256MB	12.1" XGA	40GB	Combo	X4 UltraBase	*Intel 11b/g Wi-Fi	Modem	Yes	8	3 yr	Oct 04
2382-HCU	Pentium M 738	1.4 2MB	512MB	12.1" XGA	40GB	Combo	X4 UltraBase	*Intel 11b/g Wi-Fi	Mod/Blue	Yes	8	3 yr	Oct 04

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- The 2382 has a 3 year limited warranty

Positioning	Ultimate mobility in a versatile ultraportable; one spindle										SOFTWARE¹⁴		
Processor	Intel® Pentium® M Processor Ultra Low Voltage 1.0GHz or Low Voltage 1.2, 1.3, or 1.4GHz (738) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus 1.0/1.2/1.3GHz: 1MB ; 1.4GHz: 2MB ; All: on die (at processor speed) / ECC										Windows XP Professional		
L2 cache	256 or 512MB std / 1.28 to 1.53GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / 1GU/6UU/8WU/ECU/HCU: std memory soldered to systemboard; one 200-pin SO-DIMM socket available;										- Microsoft® Windows® XP Professional ²⁰		
Memory	8RU with 512MB soldered to board; one 256MB SO-DIMM in 200-pin socket										- ECU/HCU only: Service Pack 2 ♦ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded		
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from X4 UltraBase										• IBM Rescue and Recovery™		
Ultrabay™ Slim	Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock										• Access IBM		
Disk	40GB⁸ (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM Active Protection System (shock protection)										• Access Connections		
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• Norton AntiVirus (OEM edition)		
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 266MHz										• PC-Doctor™		
Keyboard	Standard-size ²⁶ 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 ¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap										• ThinkPad Utilities		
ThinkLight®	Illuminates the keyboard to improve visibility in low-light conditions										• Adobe Reader		
Dimensions ³	4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm										• IBM Update Connector™ ¹⁵		
Weight ²	8-cell without X4 UltraBase and optical: 10.7" x 9.3" x 1.5-2.0"; 272 x 237 x 38.2-50.4mm										• InterVideo WinDVD (combo models)		
Battery - type	Li-Ion 4- or 8-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase Dock (for two batteries)										• RecordNow and DLA (combo)		
Battery - life ¹⁰	1GU with 4-cell: up to 3.5 hr; 6UU/8WU/8RU/ECU/HCU with 8-cell: up to 7.5 hr; with 8-cell and optional Extended Life Battery: up to 10 hr										Downloadable		
Architecture	Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-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 (PC87392 Super I/O for infrared [dock-based controller])										• IBM Director Agent		
Mobile media base	Some: X4 UltraBase Dock (see right side)										• Software Delivery Assistant		
Secure Digital slot	One Secure Digital Card slot / supports SD memory cards used in consumer devices										• System Migration Assistant		
PC Card Std slot	One Type I or one Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door										• IBM Client Security Software (for security chip)		
Ports	Two USB (version 2.0), plus one powered USB port for select IBM options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4) / no IEEE 1394 port										License (CD not included)		
Wireless antenna	UltraConnect™ antenna built into the display cover for optimal wireless signal reception										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable										IBM ThinkPad X4 UltraBase™ Dock (standard with 6UU/8WU/ECU/HCU)		
Intel 11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset										• Provides desktop expansion and cable management for the X40		
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset										• Easily connects to the bottom of the X40 for traveling		
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										• Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side:		
CDC	One Communications Daughter Card (CDC) socket / customer accessible										- Ultrabay Slim Li-Polymer Battery 3-cell 08K8190		
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										- CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288		
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)										- ThinkPad DVD-ROM Ultrabay Slim Drive 73P3270		
Ethernet	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN®										- Second HDD Adapter for Ultrabay Slim 62P4554		
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)										Disks supported:		
Security	Power-on password / dual hard disk password / supervisor password / security keyhole										• 30GB Hard Disk 09N4268		
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										• 40GB HS Hard Disk 08K9816		
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail										• 80GB HS Hard Disk 09N4273		
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828		IBM ThinkPad X4 UltraBase Dock		92P3429								
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830		ThinkPad X40 Series Li-Ion Battery (4-cell)		92P1009								
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832		ThinkPad X40 Series Li-Ion Battery (8-cell)		92P1005								
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834		ThinkPad X40 Series Extended Life Battery		92P1006								
IBM USB Portable Diskette Drive	05K9276		ThinkPad Ultraportable 56W AC Adapter		02K6880								
IBM Powered USB 2.0 Port Combo Drive	22P9194		ThinkPad 72W AC/DC Combo Adapter		22P9010								
IBM USB 2.0 Portable Multi-Burner Drive	22P9163		ServicePac®. 22 2yr IOR 9x5 NBD		30L9190								
40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283		ServicePac 3yr IOR 9x5 NBD		30L9197								
IBM 11a/b/g Wireless CardBus Adapter	31P9101		ServicePac 5yr IOR 9x5 NBD		69P9200								
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301		ServicePac 5yr P&L P/U Depot		69P9201								
Intel PRO/Wireless 2200BG Mini PCI	73P2801		Other options at ibm.com/pc/us/accessories										
							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						
							Asset ID™ ³⁴ (system-specific info in chip accessed over network)						
							ACPI 1.0b and 2.0-compliant						
							International Warranty Service ¹⁷						
							24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²						
							via 800-IBM-SERV (426-7378)						

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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Ⓜ US models announced October 5, 2004; previous models on February 10 or May 18, 2004

Ⓜ US models withdrawn effective January 2005

IBM® ThinkPad® X40 (2386) - Express (October 2004)

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	L2 GHz cache	Memory	Screen	Optical in Disk	UltraBase	ThinkPad X4 UltraBase™	Mini PCI wireless	CDC: modem/Bluetooth™	Sec chip	Battery cells	Limited warranty ¹²	Avail date
2386-A4U	Pentium® M 713	1.1	1MB 256MB	12.1" XGA	20GB	None	Optional	*Intel 11b/g Wi-Fi ³²	Modem	Yes	4	1 year	Oct 04
2386-GCU	Pentium M 738	1.4	2MB 512MB	12.1" XGA	40GB	Combo	X4 UltraBase	*Intel 11b/g Wi-Fi	Modem	Yes	8	1 year	Oct 04
2386-E9U	Pentium M 738	1.4	2MB 256MB	12.1" XGA	40GB	None	Optional	*Intel 11b/g Wi-Fi	Modem	Yes	8	1 year	Oct 04
2386-ECU	Pentium M 738	1.4	2MB 256MB	12.1" XGA	40GB	Combo	X4 UltraBase	*Intel 11b/g Wi-Fi	Modem	Yes	8	1 year	Oct 04
2386-HCU	Pentium M 738	1.4	2MB 512MB	12.1" XGA	40GB	Combo	X4 UltraBase	*Intel 11b/g Wi-Fi	Mod/Blue	Yes	8	1 year	Oct 04

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- The 2386 has a 1 year limited warranty

Positioning	Ultimate mobility in a versatile ultraportable; one spindle											
Processor	Intel® Pentium® M Processor Ultra Low Voltage 713 (1.1GHz) or Low Voltage 738 (1.4GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											
L2 cache	1.1GHz: 1MB; 1.4GHz: 2MB; All: on die (at processor speed) / ECC											
Memory	256 or 512MB std / 1.28 to 1.53GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available											
Diskette drive	None standard / use optional USB-based diskette drive											
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from X4 UltraBase											
Ultrabay™ Slim	Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock											
Disk	20GB ⁸ or 40GB (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM 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											
Keyboard	Standard-size ²⁶ 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 ¹³ / 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 ³	4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm 8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06"; 268mm x 237mm x 20.6-26.9mm 8-cell with X4 UltraBase and optical: 10.7" x 9.3" x 1.5-2.0"; 272 x 237 x 38.2-50.4mm											
Weight ²	4-cell with battery: 2.7 lb (1.23kg); 8-cell with battery: 3.2 lb (1.47kg); 8-cell battery and X4 UltraBase with combo: 5.0 lb (2.26kg)											
Case material	Color: black; All: magnesium alloy											
Battery - type	Li-Ion 4- or 8-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase Dock (for two batteries)											
Battery - life ¹⁰	4-cell models: up to 3.25 hr; 8-cell models: up to 7.0 hr; with 8-cell and optional Extended Life Battery: up to 10 hr											
Architecture	Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-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 (PC87392 Super I/O for infrared [dock-based ports])											
Mobile media base	Some: X4 UltraBase Dock (see right side)											
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 32-bit / PCMCIA 2.1 / integrated door											
Ports	Two USB (version 2.0), plus one powered USB port for select IBM options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4) / no IEEE 1394 port											
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											
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset											
CDC	One Communications Daughter Card (CDC) socket / customer accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)											
Ethernet	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY)											
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	Power-on password / dual hard disk password / supervisor password / security keyhole											
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / TCG-compliant											
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available											
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	IBM ThinkPad X4 UltraBase Dock	92P3429									
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad X40 Series Li-Ion Battery (4-cell)	92P1009									
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad X40 Series Li-Ion Battery (8-cell)	92P1005									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad X40 Series Extended Life Battery	92P1006									
IBM USB Portable Diskette Drive	05K9276	ThinkPad Multiple Battery Charger II	22P9040									
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad Ultraportable 56W AC Adapter	02K6880									
IBM Powered USB 2.0 Port Combo Drive	22P9194	ThinkPad 72W AC/DC Combo Adapter	22P9010									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 4GB Microdrive™ with PC Card	09N4280									
IBM USB 2.0 Memory Key 128MB	73P4512	TrackPoint Cap Collection	73P2698									
40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283	ServicePac® ²² 1yr IOR 9x5 NBD	30L9188									
Kensington® MicroSaver® Security Cable	73P2582	ServicePac 2yr IOR 9x5 NBD	30L9189									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 3yr IOR 9x5 NBD	30L9195									
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301	ServicePac 5yr IOR 9x5 NBD	30L9196									
Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 3yr P&L P/U Depot	30L9192									
SonyEricsson® GC83 EDGE PC Card	26K3393	ServicePac 5yr P&L P/U Depot	69P9197									
IBM M400 Projector	0037A04	Other options at ibm.com/pc/us/accessories										

SOFTWARE¹⁴

- Windows XP Professional**
- Microsoft® Windows® XP Professional²⁰ (Service Pack 2)
◇ Disk-to-Disk Recovery (in hidden protected area)
- Preloaded**
- IBM Rescue and Recovery™
 - Access IBM
 - Access Connections
 - Norton AntiVirus (OEM edition)
 - PC-Doctor™
 - Adobe Reader
 - IBM Update Connector™¹⁵
 - InterVideo WinDVD (combo models)
 - RecordNow and DLA (combo)
- Downloadable**
- IBM Director Agent
 - Software Delivery Assistant
 - System Migration Assistant
 - IBM Client Security Software (for security chip)
- License** (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

- ThinkPad notebooks implement IBM ThinkVantage™ technologies
- IBM ThinkPad X4 UltraBase™ Dock** (standard with GCU/ECU/HCU)
- Provides desktop expansion and cable management for the X40
 - Easily connects to the bottom of the X40 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 08K8190
 - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288
 - ThinkPad Multi-Burner Ultrabay Slim Drive 73P3294
 - Second HDD Adapter for Ultrabay Slim 62P4554
 - Disks supported:
 - 30GB Hard Disk 09N4268
 - 40GB HS Hard Disk 08K9816
 - 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
- Asset ID™³⁴ (system-specific info in chip accessed over network)
- ACPI 1.0b and 2.0-compliant
- ENERGY STAR®-compliant
- International Warranty Service¹⁷
- 24 hour x 7 day¹⁸ toll-free warranty support during the warranty¹² via 800-IBM-SERV (426-7378)

See footnotes for important warranty information
US models announced October 5, 2004
⚡ US model withdrawn effective January 2005

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	L2 GHz cache	Memory	Screen	Disk	Optical in UltraBase	ThinkPad X4 UltraBase™	Mini PCI wireless	CDC: modem/ Bluetooth™	Sec chip	Limited warranty ¹²	Education software	Avail date	
2371-9EU	Pentium® M	1.2	1MB	512MB	12.1" XGA	40GB	None	Optional	* Intel 11b/g Wi-Fi ³²	Modem	Yes	EasyServ	No	Apr 2004
2371-GEU	Pentium M 738	1.4	2MB	512MB	12.1" XGA	40GB	None	Optional	* Intel 11b/g Wi-Fi	Modem	Yes	EasyServ	Yes	Oct 2004

• The 2371 has an EasyServ™¹⁹ onsite pickup and delivery 3 year limited warranty

These models for education are for sale direct from IBM or through an Authorized Education Reseller. The models for education are not available for resale to any other organization or individual.

Positioning Processor	<i>Ultimate mobility in a versatile ultraportable; one spindle</i> Intel® Pentium® M Processor Low Voltage 1.2GHz or 738 (1.4 GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus 1.2GHz: 1MB ; 1.4GHz: 2MB ; All: on die (at processor speed) / ECC										SOFTWARE¹⁴		
L2 cache	512MB std / 1.53GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available										Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ - <i>GEU only</i> : Service Pack 2 ♦ Disk-to-Disk Recovery (in hidden protected area)		
Memory	None standard / use optional USB-based diskette drive Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock 40GB⁸ (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM Active Protection System (shock protection)										Preloaded • <i>GEU only</i> : Education software from Vital Source Technologies®: vidualsource KEY™ and Personal Portable library™ • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵		
Diskette drive	None standard / use optional USB-based diskette drive										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software (for security chip)		
Ultrabay™ Slim Disk	Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock 40GB⁸ (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM Active Protection System (shock protection)										License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										Supports ThinkVantage™ technologies		
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 266MHz										IBM ThinkPad X4 UltraBase™ Dock		
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200x16.7M at 85Hz										• Provides desktop expansion and cable management for the X40 • Easily connects to the bottom of the X40 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 08K8190 - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288 - ThinkPad DVD-ROM Ultrabay Slim Drive 73P3270 - Second HDD Adapter for Ultrabay Slim 62P4554 Disks supported: • 30GB Hard Disk 09N4268 • 40GB HS Hard Disk 08K9816 • 80GB HS Hard Disk 09N4273		
Keyboard	Standard-size ²⁶ 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 ¹³ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap Illuminates the keyboard to improve visibility in low-light conditions										• 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		
ThinkLight®	Illuminates the keyboard to improve visibility in low-light conditions										• 56 watt AC Adapter • Asset ID™ ³⁴ (system-specific info in chip accessed over network) • ACPI 1.0b and 2.0-compliant • International Warranty Service ¹⁷ • 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²		
Dimensions ³	4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm with battery: 2.7 lb (1.24kg)												
Weight ²	with battery: 2.7 lb (1.24kg)												
Case material	Color: black; All: magnesium alloy												
Battery - type	Li-Ion 4-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase Dock (for two batteries)												
Battery - life ¹⁰	with 4-cell: up to 3.5 hr; with optional 8-cell: up to 7.5 hr; with 8-cell and optional Extended Life Battery: up to 10 hr												
Architecture	Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-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 (PC87392 Super I/O for infrared [dock-based ports]) <i>Optional: X4 UltraBase Dock</i> (see right side)												
Mobile media base	Optional: X4 UltraBase Dock (see right side)												
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 32-bit / PCMCIA 2.1 / integrated door												
Ports	Two USB (version 2.0), plus one powered USB port for select IBM options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4) / no IEEE 1394 port												
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												
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant™ chipset												
Bluetooth™	None												
Ethernet	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN®												
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	Power-on password / dual hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail												
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828					IBM ThinkPad X4 UltraBase Dock			92P3429				
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830					ThinkPad X40 Series Li-Ion Battery (4-cell)			92P1009				
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832					ThinkPad X40 Series Li-Ion Battery (8-cell)			92P1005				
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834					ThinkPad X40 Series Extended Life Battery			92P1006				
IBM USB Portable Diskette Drive	05K9276					ThinkPad Multiple Battery Charger II			22P9040				
IBM USB Serial Parallel Adapter	22P5298					ThinkPad Ultraportable 56W AC Adapter			02K6880				
IBM Powered USB 2.0 Port Combo Drive	22P9194					ThinkPad 72W AC/DC Combo Adapter			22P9010				
IBM USB 2.0 Portable Multi-Burner Drive	22P9163					IBM Enh Perf Wireless Keybrd and Mouse			73P4067				
IBM USB 2.0 Portable 40GB Hard Disk	22P7196					IBM USB Travel Keyboard with UltraNav			31P9490				
IBM USB 2.0 Memory Key 256MB	22P9228					TrackPoint Cap Collection			73P2698				
IBM USB 2.0 Memory Key 512MB	22P9230					ThinkPad Nylon Carrying Case			10K0207				
40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283					Premiere Leather Carrying Case			10K0209				
Kensington® MicroSaver® Security Cable	73P2582					ThinkPad Carrying Case - Backpack			73P3599				
IBM 11a/b/g Wireless CardBus Adapter	31P9101					ServicePac ²² 2yr IOR 9x5 NBD			30L9190				
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301					ServicePac 3yr IOR 9x5 NBD			30L9197				
Intel PRO/Wireless 2200BG Mini PCI	73P2801					ServicePac 4yr IOR 9x5 NBD			69P9198				
SonyEricsson® GC83 EDGE PC Card	26K3393					ServicePac 5yr IOR 9x5 NBD			69P9200				
IBM Optical 3-Button Travel Wheel Mouse	31P7410					ServicePac 4yr P&L P/U Depot			69P9199				
IBM E400 Projector	0038A04					ServicePac 5yr P&L P/U Depot			69P9201				
IBM M400 Projector	0037A04					Other options at ibm.com/pc/us/accessories							

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US model announced October 5, 2004; previous model on April 6, 2004

Type-model	Processor	L2 GHz cache	Memory	Screen	Disk	Optical in UltraBase	ThinkPad X4 UltraBase™	Mini PCI wireless	CDC: modem/ Bluetooth™	Sec chip	Limited warranty ¹²	Education software	Avail date	
2372-9EU	Pentium® M	1.2	1MB	512MB	12.1" XGA	40GB	None	Optional	* Intel 11b/g Wi-Fi ³²	Modem	Yes	Onsite	No	Apr 2004
2372-G4U	Pentium M 738	1.4	2MB	512MB	12.1" XGA	40GB	None	Optional	* Intel 11b/g Wi-Fi	Modem	Yes	Onsite	Yes	Oct 2004

• **The 2372 has a limited onsite service²⁴ 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 teachers.

Positioning Processor	<i>Ultimate mobility in a versatile ultraportable; one spindle</i>										<p>SOFTWARE¹⁴</p> <p>Windows XP Professional</p> <ul style="list-style-type: none"> - Microsoft® Windows® XP Professional²⁰ - G4U only: Service Pack 2 <p>◆ Disk-to-Disk Recovery (in hidden protected area)</p> <p>Preloaded</p> <ul style="list-style-type: none"> • G4U only: Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™ • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™¹⁵ <p>Downloadable</p> <ul style="list-style-type: none"> • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software (for security chip) <p>License (CD not included)</p> <ul style="list-style-type: none"> - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client <p>Supports ThinkVantage™ technologies</p> <p>IBM ThinkPad X4 UltraBase™ Dock</p> <ul style="list-style-type: none"> • Provides desktop expansion and cable management for the X40 • Easily connects to the bottom of the X40 for traveling • Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: <ul style="list-style-type: none"> - Ultrabay Slim Li-Polymer Battery 3-cell 08K8190 - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288 - ThinkPad Multi-Burner Ultrabay Slim Drive 73P3294 - Second HDD Adapter for Ultrabay Slim 62P4554 <p>Disks supported:</p> <ul style="list-style-type: none"> • 30GB Hard Disk 09N4268 • 40GB HS Hard Disk 08K9816 • 80GB HS Hard Disk 09N4273 <p>Other features:</p> <ul style="list-style-type: none"> • 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 <p>56 watt AC Adapter</p> <p>Asset ID™³⁴ (system-specific info in chip accessed over network)</p> <p>ACPI 1.0b and 2.0-compliant</p> <p>International Warranty Service¹⁷</p> <p>24 hour x 7 day¹⁸ toll-free warranty support during the warranty¹²</p>
L2 cache	Intel® Pentium® M Processor Low Voltage 1.2GHz or 738 (1.4GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										
Memory	1.2GHz: 1MB; 1.4GHz: 2MB; All: on die (at processor speed) / ECC 512MB std / 1.53GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available										
Diskette drive	None standard / use optional USB-based diskette drive										
Ultrabay™ Slim Disk	Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock 40GB ⁸ (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradable / 9.5mm high bay / IBM 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										
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200x16.7M at 85Hz										
Keyboard	Standard-size ²⁶ 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 ¹³ / 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 ³	4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm										
Weight ²	with battery: 2.7 lb (1.24kg)										
Case material	Color: black; All: magnesium alloy										
Battery - type	Li-Ion 4-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase Dock (for two batteries)										
Battery - life ¹⁰	with 4-cell: up to 3.5 hr; with optional 8-cell: up to 7.5 hr; with 8-cell and optional Extended Life Battery: up to 10 hr										
Architecture	Intel 855GME chipset / 82852GME Memory Controller Hub (MCH-M) / 82801DBM ICH4-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 (PC87392 Super I/O for infrared [dock-based ports])										
Mobile media base	Optional: X4 UltraBase Dock (see right side)										
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 32-bit / PCMCIA 2.1 / integrated door										
Ports	Two USB (version 2.0), plus one powered USB port for select IBM options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse ports (use X4) / no IEEE 1394 port										
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										
CDC	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										
Modem	One Communications Daughter Card (CDC) socket / customer accessible										
Bluetooth™	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										
Ethernet	None										
Audio support	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY) / Wake on LAN ⁹										
Security	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	Power-on password / dual hard disk password / supervisor password / security keyhole										
Limited warranty ¹²	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										
	3 years/1 year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time ²⁴										
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828								IBM ThinkPad X4 UltraBase Dock	92P3429	
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830								ThinkPad X40 Series Li-Ion Battery (4-cell)	92P1009	
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832								ThinkPad X40 Series Li-Ion Battery (8-cell)	92P1005	
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834								ThinkPad X40 Series Extended Life Battery	92P1006	
IBM USB Portable Diskette Drive	05K9276								ThinkPad Multiple Battery Charger II	22P9040	
IBM USB Serial Parallel Adapter	22P5298								ThinkPad Ultraportable 56W AC Adapter	02K6880	
IBM Powered USB 2.0 Port Combo Drive	22P9194								ThinkPad 72W AC/DC Combo Adapter	22P9010	
IBM USB 2.0 Portable Multi-Burner Drive	22P9163								IBM USB Travel Keyboard with UltraNav	31P9490	
IBM USB 2.0 Portable 40GB Hard Disk	22P7196								IBM Enh Perf Wireless Keybd and Mouse	73P4067	
IBM USB 2.0 Memory Key 256MB	22P9228								IBM M400 Projector	0037A04	
IBM USB 2.0 Memory Key 512MB	22P9230								IBM C400 Projector	0039A04	
40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283								ThinkPad Nylon Carrying Case	10K0207	
IBM 4GB Microdrive™ with PC Card	09N4280								ThinkPad Carrying Case - Leather	73P3600	
Kensington® MicroSaver® Security Cable	73P2582								Other options at ibm.com/pc/us/accessories		
IBM 11a/b/g Wireless CardBus Adapter	31P9101								Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf		
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301										
Intel PRO/Wireless 2200BG Mini PCI	73P2801										
IBM Optical 3-Button Travel Wheel Mouse	31P7410										

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

US model announced October 5, 2004; previous model on April 6, 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Ethernet on planar chip	Battery Security cells	Workhorse (W) or Global (G) Avail	Entry (E) date
2373-1HU	Pentium® M 1.4	256MB	14.1" XGA	7500	30GB	DVD	* Intel 11b Wi-Fi ³²	Modem	Gigabit	Yes	6	XP Pro G E	Oct 2003
2373-1FU	Pentium M 1.4	256MB	14.1" XGA	7500	30GB	Combo*	Intel 11b Wi-Fi	Modem	Gigabit	Yes	6	XP Pro G E	Oct 2003
2373-7FU	Pentium M 1.6	512MB	14.1" XGA	7500	40HS	Combo*	Intel 11b Wi-Fi	Modem	Gigabit	Yes	6	XP Pro W G	Oct 2003
2373-7JU	Pentium M 1.6	512MB	14.1" XGA	7500	40HS	Combo	Cisco® 802.11b ³²	Modem	Gigabit	Yes	6	XP Pro W G	Oct 2003
2373-3HU	Pentium M 1.6	512MB	14.1" SXGA+	9000	40HS	Combo*	Intel 11b Wi-Fi	Modem	Gigabit	Yes	6	XP Pro W G	Oct 2003
2373-8RU	Pentium M 1.6	256MB	14.1" XGA	7500	40HS	DVD	Open; wireless upg ³⁶	Modem	Gigabit	Yes	6	XP Pro W G	Oct 2003
2373-8SU	Pentium M 1.6	512MB	14.1" XGA	7500	40HS	DVD	Open; wireless upg	Modem	Gigabit	Yes	6	XP Pro W	Oct 2003
2373-4GU	Pentium M 1.6	512MB	14.1" XGA	7500	40HS	Combo	11a/b/g Wi-Fi ³²	Mod/Blue	Gigabit	Yes	6	XP Pro W	Oct 2003
2373-9EU	Pentium M 1.7	512MB	14.1" SXGA+	9000	60U	Combo	Open; wireless upg	Modem	Gigabit	Yes	6	XP Pro No	Oct 2003
2373-9FU	Pentium M 1.7	512MB	14.1" SXGA+	9000	60U	Combo	11a/b/g Wi-Fi	Mod/Blue	Gigabit	Yes	6	XP Pro No	Oct 2003
2373-9HU	Pentium M 1.7	1GB	14.1" SXGA+	9000	60U	Combo*	Intel 11b Wi-Fi	Mod/Blue	Gigabit	Yes	6	XP Pro No	Oct 2003
2373-9KU	Pentium M 1.7	512MB	14.1" SXGA+	9000	60U	Combo	Cisco® 802.11b	Mod/Blue	Gigabit	Yes	6	XP Pro No	Oct 2003
Positioning Processor	Perfect balance of performance and portability; two-spindle system												
L2 cache	Intel® Pentium® M Processor 1.4, 1.6 or 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus												
Memory	1MB / on die (at processor speed) / ECC 256MB, 512MB, or 1GB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / 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	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim												
Combo	Some: DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay Slim												
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay												
Disk	30GB ⁸ (4200 rpm), 40GB HS (5400 rpm), or 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 / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact protection)												
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: ATI® Mobility RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)												
Graphics external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M at 75Hz												
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)												
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones												
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions												
ThinkLight™													
Dimensions ³	(WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm												
Weight ²	with optical drive and battery: 4.9 to 5.0 lb (2.2 to 2.3 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 - life ¹⁰	6-cell models: 4.1 to 5.0 hr; Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim battery: 9 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 (TI® PCI4520A CardBus and 1394 controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door												
Ports	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 port (TV out) / one 4-pin industry standard connector												
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 upgradable												
Wireless upg ³⁶	Some: wireless upgradable with wireless Mini PCI options												
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection												
Cisco 802.11b ³²	802.11b, Intel 82531 chipset												
11a/b/g Wi-Fi ³²	Some: 802.11b wireless ⁴ , Mini PCI, Cisco® Aironet® Wireless 802.11b Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Agere® chipset												
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)												
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE												
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail												
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214										
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197										
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190										
1 GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad 72W AC/DC Combo Adapter	22P9010										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301										
ThinkPad Port Replicator II	74P6733	Intel PRO/Wireless 2200BG Mini PCI	73P2801										
ThinkPad Mini Dock	287810U	IBM M400 Projector	0037A04										
ThinkPad Dock II	287710U	Other options at ibm.com/pc/us/accessories											
SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ⇨ Disk-to-Disk Recovery (in hidden protected area) Preloaded(all) • Access IBM • Access Connections • Adobe Reader • IBM Rapid Restore™ Ultra • IBM RecordNOW and IBM Drive Letter Access (combo models) • InterVideo WinDVD (combo models) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ 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													
Universal 72 watt AC adapter Asset ID™ ³⁴ (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 IBM ImageUltra™ Services available IBM Rapid Restore Ultra available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² The Ultrabay Slim supports: • standard or optional CD-RW/DVD combo drive • optional DVD drive • optional second battery • optional HDD adapter (for 2nd disk) • optional travel bezel ServicePac®. ²² 2yr IOR 9x5 NBD 30L9190 ServicePac 3yr IOR 9x5 NBD 30L9197 ServicePac 4yr IOR 9x5 NBD 69P9198 ServicePac 5yr IOR 9x5 NBD 69P9200 ServicePac 4yr P&L P/U Depot 69P9199 ServicePac 5yr P&L P/U Depot 69P9201 Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf													

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US models announced October 7, 2003

⚡ US models withdrawn effective July 2004, November 2004, or January 2005

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Ethernet on planar	Battery Security cells	Workhorse (W) or Global (G) Avail date
2373-4JU	Pentium® M	1.5	512MB	14.1" XGA	7500	30GB	Combo	11a/b/g Wi-Fi ³²	Modem	Gigabit	Yes	6 XP Pro No Apr 2004
2373-4HU	Pentium M	1.6	512MB	14.1" XGA	7500	40HS	Combo	11a/b/g Wi-Fi	Modem	Gigabit	Yes	6 XP Pro No Oct 2003
2373-4KU	Pentium M	1.7	512MB	14.1" XGA	7500	40HS	Combo	11a/b/g Wi-Fi	Modem	Gigabit	Yes	6 XP Pro No Apr 2004

These educational models of the ThinkPad T41 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 IBM or through an Authorized Education Reseller.
The model or models for education are not available for resale to any other organization or individual.

Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i> Intel® Pentium® M Processor 1.5, 1.6, or 1.7GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴	
L2 cache	1MB / on die (at processor speed) / ECC										Windows XP Professional	
Memory	512MB standard / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ ↔ Disk-to-Disk Recovery (in hidden protected area)	
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded(all)	
Combo	DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay™ Slim										• Access IBM	
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay										• Access Connections	
Disk	30GB⁸ (4200 rpm) or 40GB HS (5400 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (shock protection)										• Adobe Reader	
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / one latch to unlatch and open with one hand										• IBM Rapid Restore™ Ultra	
Graphics	ATI® Mobility RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)										• IBM RecordNOW and IBM Drive Letter Access (combo models)	
Graphics external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M at 75Hz										• InterVideo WinDVD (combo models)	
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)										• Norton AntiVirus (OEM edition)	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass /										• PC-Doctor™	
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• ThinkPad Utilities	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• IBM Update Connector™ ¹⁵	
Dimensions ³	(WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm										Downloadable	
Weight ²	with optical drive and battery: 4.9 lbs (2.22 kg)										• IBM Director Agent	
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover										• Software Delivery Assistant	
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim										• System Migration Assistant	
Battery - life ¹⁰	4HU/4KU: 4.7 hr; 4JU: 4.9 hr; <i>Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim batt: 9 hr</i>										• Client Security Software (for security chip)	
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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])										License (CD not included)	
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
Ports	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)										Universal 72 watt AC adapter	
Video out	S-video out port (TV out) / one 4-pin industry standard connector										Asset ID™ ³⁴ (system-specific info in chip accessed over network)	
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										PC 2001-compliant	
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										ACPI 1.0b and 2.0-compliant	
11a/b/g Wi-Fi ³²	11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset										CIM and DMI 2.0-compliant	
CDC	One Communications Daughter Card (CDC) socket / customer accessible										PXE 2.0-compliant	
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset										IBM ImageUltra™ Services available	
Bluetooth™	None										IBM Rapid Restore Ultra available to protect software image and data	
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE										International Warranty Service ¹⁷	
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)	
Security	Power-on password / hard disk password / supervisor password / security keyhole										The Ultrabay Slim supports:	
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										• standard or optional CD-RW/DVD combo drive	
Limited warranty ¹²	3 years¹/1 yr battery - EasyServ™¹⁹ onsite pickup and delivery courier service										• optional DVD drive	
Service options	Service upgrades ²² provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										• optional second battery	
											• optional HDD adapter (for 2nd disk)	
											• optional travel bezel	
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214									ServicePac®. ²² 2yr IOR 9x5 NBD
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197									30L9190
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190									ServicePac 3yr IOR 9x5 NBD
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040									30L9197
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699									ServicePac 4yr IOR 9x5 NBD
IBM USB 2.0 Combo Drive	73P4515	ThinkPad 72W AC/DC Combo Adapter	22P9010									69P9198
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101									ServicePac 5yr IOR 9x5 NBD
IBM USB 2.0 Memory Key 512MB	22P9230	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301									69P9200
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Intel PRO/Wireless 2200BG Mini PCI	73P2801									ServicePac 4yr P&L P/U Depot
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM M400 Projector	0037A04									69P9199
Second HDD Adapter for Ultrabay Slim	62P4554	IBM E400 Projector	0038A04									ServicePac 5yr P&L P/U Depot
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	IBM C400 Projector	0039A04									69P9201
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	GemPC400 Smart Card Reader/Writer	31P8901									Other ServicePac options at
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Port Replicator II	74P6733									ibm.com/services/its/us/source/wamomxeu.pdf
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Mini Dock	287810U									Post-warranty annual maintenance agreements at
IBM USB Travel Keyboard with UltraNav	31P9490	ThinkPad Dock II	287710U									ibm.com/services/its/us/source/maspspleu.pdf
IBM Optical 3-Button Travel Wheel Mouse	31P7410	ThinkPad Monitor Stand 2001	22P5265									
ThinkPad Nylon Carrying Case	10K0207	Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information

US models announced April 20, 2004; previous models on October 7, 2003

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ^a	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Ethernet on planar chip	Battery Security cells	Limited Warranty Preload	Avail date				
2379-DJU	Pentium® M	1.6	256MB	14.1" SXGA+	9000	40HS	Combo	* Intel 11b Wi-Fi ³²	Modem	Gigabit	Yes	6-cell XP Pro	3 yrs Oct 2003				
2379-DKU	Pentium M	1.6	512MB	14.1" XGA	7500	40HS	Combo	11a/b/g Wi-Fi ³²	Modem	Gigabit	Yes	6-cell XP Pro	3 yrs Oct 2003				
<ul style="list-style-type: none"> • These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2379 has a 3 year limited warranty (other ThinkPad T41 2378 models have a 1 year limited warranty) 																	
Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE¹⁴					
L2 cache	1MB / on die (at processor speed) / ECC											Windows XP Professional					
Memory	256MB or 512MB standard / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available											- Microsoft® Windows® XP Professional ²⁰ ↳ Disk-to-Disk Recovery (in hidden protected area)					
Diskette drive	None standard / use optional USB-based diskette drive											Preloaded(all)					
Combo	DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay™ Slim											• Access IBM					
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay											• Access Connections					
Disk	40GB HS (5400 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (shock protection)											• Adobe Reader					
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 All: one latch to unlatch and open with one hand											• IBM Rapid Restore™ Ultra					
Graphics	Some: ATI® Mobility RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)											• IBM RecordNOW and IBM Drive Letter Access (combo models)					
Graphics external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M at 75Hz											• InterVideo WinDVD (combo mdl)					
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)											• Norton AntiVirus (OEM edition)					
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass /											• PC-Doctor™					
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones											• ThinkPad Utilities					
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											• IBM Update Connector™ ¹⁵					
Dimensions ³	(WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm											Downloadable					
Weight ²	with optical drive and battery: DKU: 4.9 lb (2.2 kg); DJU: 5.0 lb (2.3kg)											• IBM Director Agent					
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover											• Software Delivery Assistant					
Battery - type	Lithium Ion 6-cell or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim											• System Migration Assistant					
Battery - life ¹⁰	6-cell models: 4.4 to 4.7 hr; Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim battery: 9 hr											• Client Security Software (for security chip)					
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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])											License (CD not included)					
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client					
Ports	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)											ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage					
Video out	S-video out port (TV out) / one 4-pin industry standard connector											Universal 72 watt AC adapter					
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception											Asset ID™ ³⁴ (system-specific info in chip accessed over network)					
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable											PC 2001-compliant					
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset											ACPI 1.0b and 2.0-compliant					
11a/b/g Wi-Fi ³²	Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset											CIM and DMI 2.0-compliant					
CDC	One Communications Daughter Card (CDC) socket / customer accessible											PXE 2.0-compliant					
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset											ENERGY STAR®-compliant					
Bluetooth™	None											IBM ImageUltra™ Services available					
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											IBM Rapid Restore Ultra available to protect software image and data					
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)											International Warranty Service ¹⁷					
Security	Power-on password / hard disk password / supervisor password / security keyhole											24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)					
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											ServicePac® ²² 2yr IOR 9x5 NBD 30L9190					
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail																
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	ServicePac 3yr IOR 9x5 NBD	08K8197	256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197	ServicePac 4yr IOR 9x5 NBD	30L9197	512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 5yr IOR 9x5 NBD	69P9198
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 5yr P&L P/U Depot	69P9200	IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699	ServicePac 4yr P&L P/U Depot	69P9199	IBM USB 2.0 Combo Drive	73P4515	ThinkPad 72W AC/DC Combo Adapter	22P9010	ServicePac 5yr P&L P/U Depot	69P9201
IBM USB Portable Diskette Drive	05K9276	IBM 11a/b/g Wireless CardBus Adapter	31P9101	Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf		IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301	Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf		IBM USB 2.0 Memory Key 512MB	22P9230	Intel PRO/Wireless 2200BG Mini PCI	73P2801		
CD-RW/DVD II Combo Ultrabay Slim Drive	73P3288	IBM C400 Projector	0039A04			ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM E400 Projector	0038A04			ThinkPad HDD Adapter for Ultrabay Slim	62P4554	IBM M400 Projector	0037A04		
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM 4000 Projector	0038A04			Second HDD Adapter for Ultrabay Slim	62P4554	IBM 4000 Projector	0038A04			30GB Hard Disk 9.5mm (4200 rpm)	09N4268	GemPC400 Smart Card Reader/Writer	31P8901		
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad Port Replicator II	74P6733			40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Mini Dock	287810U			80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U		
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Mini Dock	287810U			IBM Enh Perf Wireless Keybrd and Mouse	73P4067	ThinkPad Dock II	287710U			IBM USB Travel Keyboard with UltraNav	31P9490	Kensington® MicroSaver® Security Cable 22P5265	22P5265		
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U			IBM USB Carrying Case - Expander	73P3597	Other options at ibm.com/pc/us/accessories				ThinkPad Carrying Case - BackPack	73P3599				

See footnotes for important warranty information
US models announced October 7, 2003
⚠ US model withdrawn effective October 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ³	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Ethernet on planar chip	Battery Security cells	Workhorse (W) or Global (G) Entry (E)	Avail date
2373-1UU	Pentium® M	1.5	256MB	14.1" XGA	7500	30GB	DVD	* Intel 11b Wi-Fi ³²	Modem	Gigabit	Yes	6 XP Pro E	May 2004
2373-1YU	Pentium M	1.5	256MB	14.1" XGA	7500	30GB	DVD	* Intel 11b/g Wi-Fi ³²	Modem	Gigabit	Yes	6 XP Pro E	May 2004
2373-1WU	Pentium M	1.5	256MB	14.1" XGA	7500	30GB	Combo	* Intel 11b Wi-Fi	Modem	Gigabit	Yes	6 XP Pro E G	May 2004
2373-5TU	Pentium M	1.6	512MB	14.1" XGA	9000	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	6 XP Pro E	Aug 2004
Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE¹⁴	
L2 cache	1.5GHz: 1MB ; 1.6GHz: 2MB ; All: on die (at processor speed) / ECC											Windows XP Professional	
Memory	256MB or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available											- Microsoft® Windows® XP Professional ²⁰ ↔ Disk-to-Disk Recovery (in hidden protected area)	
Diskette drive	None standard / use optional USB-based diskette drive											Preloaded	
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim											• Access IBM	
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim											• Access Connections	
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay											• IBM Rescue and Recovery™	
Disk	30GB⁸ (4200 rpm) or 40GB HS (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System											• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)	
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											• InterVideo WinDVD (combo models)	
Graphics	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 64MB DDR1 (DDR-SDRAM)											• Norton AntiVirus (OEM edition)	
Graphics external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M / DDC2B											• PC-Doctor™	
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)											• ThinkPad Utilities	
TrackPoint®	TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones											• Adobe Reader	
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions											• IBM Update Connector™ ¹⁵	
ThinkLight™												Downloadable	
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2" ; 311mm x 255mm x 26.6-31.4mm with optical drive and battery: 4.9 lb (2.2kg)											• IBM Director Agent	
Weight ²												• Software Delivery Assistant	
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover											• System Migration Assistant	
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim											• IBM Client Security Software (for security chip)	
Battery - life ¹⁰	6-cell models: up to 5.0 hr; <i>Optional 9-cell:</i> 7 hr; <i>9-cell plus Ultrabay Slim battery:</i> 9 hr											License (CD not included)	
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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door												
Ports	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)											ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage	
Video out	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											Universal 72 watt AC adapter	
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable											Asset ID™ ³⁴ (system-specific info in chip accessed over network)	
Intel 11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset											PC 2001-compliant	
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset											ACPI 1.0b and 2.0-compliant	
CDC	One Communications Daughter Card (CDC) socket / customer accessible											CIM and DMI 2.0-compliant	
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											PXE 2.0-compliant	
Bluetooth™	None											ENERGY STAR®-compliant	
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											IBM ImageUltra™ Services available	
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)											International Warranty Service ¹⁷	
Security	Power-on password / hard disk password / supervisor password / security keyhole											24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)	
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											The Ultrabay Slim supports:	
Limited warranty ¹²	3 years/1 yr battery - EasyServ™¹⁹ onsite pickup and delivery / service upgrades²² avail											• standard or optional CD-RW/DVD combo drive	
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214										
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197										
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040										
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699										
IBM USB 2.0 Combo Drive	73P4515	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
IBM USB 2.0 Memory Key 512MB	22P9230	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301										
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Intel PRO/Wireless 2200BG Mini PCI	73P2801										
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	Kensington® MicroSaver® Security Cable	73P2582										
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	TrackPoint Cap Collection	73P2698										
Second HDD Adapter for Ultrabay Slim	62P4554	IBM M400 Projector	0037A04										
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	IBM E400 Projector	0038A04										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM C400 Projector	0039A04										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	GemPC400 Smart Card Reader/Writer	31P8901										
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Port Replicator II	74P6733										
IBM USB Travel Keyboard with UltraNav	31P9490	ThinkPad Mini Dock	287810U										
SonyEricsson® GC83 EDGE PC Card	26K3393	ThinkPad Dock II	287710U										
ThinkPad Carrying Case - Leather	73P3600	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

US model announced August 17, 2004; previous models on May 11, 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Security chip	Workhorse (W) or Global (G) Preload or Entry (E)	Avail date
2373-3UU	Pentium® M 735	1.7	512MB	14.1" SXGA+	9600	40HS	Combo	11a/b/g Wi-Fi ³²	Mod/Blue	Yes	XP Pro W	May 2004
2373-4WU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	* Intel 11b Wi-Fi ³²	Modem	Yes	XP Pro W G	May 2004
2373-8XU	Pentium M 735	1.7	512MB	14.1" SXGA+	9600	40HS	Combo	* Intel 11b Wi-Fi	Modem	Yes	XP Pro W	May 2004
2373-8ZU	Pentium M 735	1.7	512MB	14.1" SXGA+	9600	40HS	Combo	* Intel 11b/g Wi-Fi ³²	Modem	Yes	XP Pro W	May 2004
2373-8TU	Pentium M 735	1.7	256MB	14.1" XGA	7500	40HS	DVD	Open; wireless upg ³⁶	Modem	Yes	XP Pro W G	May 2004
2373-6UU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	DVD	Open; wireless upg	Modem	Yes	XP Pro W	May 2004
2373-6ZU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	11a/b/g Wi-Fi	Mod/Blue	Yes	XP Pro W	May 2004
2373-4TU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	Open; wireless upg	Modem	Yes	XP Pro W	May 2004
2373-JTU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	IBM 11b/g ³²	Modem	Yes	XP Pro W	May 2004
2373-9XU	Pentium M 745	1.8	512MB	14.1" SXGA+	9600	80HS	Combo	11a/b/g Wi-Fi	Mod/Blue	Yes	XP Pro	May 2004
2373-9VU	Pentium M 745	1.8	1GB	14.1" SXGA+	9600	80HS	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Yes	XP Pro	May 2004
2373-9ZU	Pentium M 745	1.8	512MB	14.1" SXGA+	9600	80HS	DVD-RW	11a/b/g Wi-Fi	Mod/Blue	Yes	XP Pro	May 2004
Positioning Processor	Perfect balance of performance and portability; two-spindle system											
L2 cache	Intel® Pentium® M Processor 735 (1.7GHz) or 745 (1.8GHz)											
Memory	with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											
Diskette drive	2MB / on die (at processor speed) / ECC											
DVD	256MB, 512MB or 1GB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available											
Combo DVD-RW	None standard / use optional USB-based diskette drive											
Ultra Slim Disk	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim											
Display	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim											
Graphics	Some: CD-RW/DVD-RW Multi-Burner / removable from Ultrabay Slim											
Graphics external	One modular bay for interchangeable devices (right side) / 9.5mm high bay											
Keyboard	40GB ⁸ HS (5400 rpm) or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System											
TrackPoint®	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											
Touch pad	Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits											
ThinkLight™	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)											
Dimensions ³	Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)											
Weight ²	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M / DDC2B											
Battery - type	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)											
Battery - life ¹⁰	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones											
Architecture	Illuminates the keyboard to improve visibility in low-light conditions											
PC Card Std slots	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm with optical drive and battery: XGA models: 4.9 lb (2.2kg); SXGA+ mod: 5.0 lb (2.3kg)											
Ports	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim											
Video out	Up to 4.6 hr; Optional 9-cell: up to 7.5 hr; 9-cell plus Ultrabay Slim battery: up to 9.5 hr											
Wireless antenna	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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])											
Mini PCI	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door											
Wireless upg ³⁶	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)											
Intel 11b Wi-Fi ³²	S-video out port (TV out) / one 4-pin industry standard connector											
Intel 11b/g ³²	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception											
11a/b/g Wi-Fi ³²	One Mini PCI type III slot (Communications Bay) / customer upgradable											
IBM 11b/g ³²	Some: wireless upgradable with wireless Mini PCI options											
CDC	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset											
Modem	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip											
Bluetooth™	Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset											
Ethernet	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset											
Audio support	One Communications Daughter Card (CDC) socket / customer accessible											
Security	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Security chip	Some: Bluetooth wireless technology / in CDC (with modem)											
Limited warranty ¹²	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											
128MB PC2700 DDR-SDRAM CL2.5 SOD	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)											
256MB PC2700 DDR-SDRAM CL2.5 SOD	Power-on password / hard disk password / supervisor password / security keyhole											
512MB PC2700 DDR-SDRAM CL2.5 SOD	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
1GB PC2700 DDR-SDRAM CL2.5 SOD	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail											
IBM USB Portable Diskette Drive	ThinkPad T40 Li-Ion Battery 6-cell 08K8214											
IBM USB 2.0 Portable Multi-Burner Drive	T40 High Capacity Li-Ion Battery 9-cell 08K8197											
ThinkPad Multi-Burner Ultrabay Slim Drive	Ultrabay Slim Li-Polymer Battery 3-cell 08K8190											
Second HDD Adapter for Ultrabay Slim	IBM 11a/b/g Wireless CardBus Adapter 31P9101											
ThinkPad Carrying Case - Leather	IBM 11a/b/g Wireless Mini PCI Adptr II 73P4301											
80GB HS Hard Disk 9.5mm (5400 rpm)	Intel PRO/Wireless 2200BG Mini PCI 73P2801											
	ThinkPad Port Replicator II 74P6733											
	ThinkPad Mini Dock 287810U											
	ThinkPad Dock II 287710U											
	Other options at ibm.com/pc/us/accessories											
SOFTWARE¹⁴												
Windows XP Professional												
- Microsoft® Windows® XP Professional ²⁰												
↳ Disk-to-Disk Recovery (in hidden protected area)												
Preloaded												
• Access IBM												
• Access Connections												
• IBM Rescue and Recovery™												
• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW models)												
• InterVideo WinDVD (combo, DVD, DVD-RW models)												
• InterVideo WinDVD Creator (DVD-RW models)												
• Norton AntiVirus (OEM edition)												
• PC-Doctor™												
• ThinkPad Utilities												
• Adobe Reader												
• IBM Update Connector™ ¹⁵												
Downloadable												
• IBM Director Agent												
• Software Delivery Assistant												
• System Migration Assistant												
• IBM Client Security Software (for security chip)												
License (CD not included)												
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client												
ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage												
Universal 72 watt AC adapter												
Asset ID™ ³⁴ (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												
IBM ImageUltra™ Services available												
International Warranty Service ¹⁷												
24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²												
ServicePac®. ²² 2yr IOR 9x5 NBD 30L9190												
ServicePac 3yr IOR 9x5 NBD 30L9197												
ServicePac 4yr IOR 9x5 NBD 69P9198												
ServicePac 5yr IOR 9x5 NBD 69P9200												
ServicePac 4yr P&L P/U Depot 69P9199												
ServicePac 5yr P&L P/U Depot 69P9201												
Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf												

See footnotes for important warranty information
US models announced May 11, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	FingerSecu- print rity reader chip	Bat- tery life ⁹ or Global (G) or Entry (E)	Workhorse (W) or Global (G) or Entry (E)	Avail date	
2373-J2U	Pentium® M 725	1.6	256MB	14.1" XGA	7500	30GB	DVD	* Intel 11b Wi-Fi ³²	Modem	No	Yes	5.3 hr	E	Oct 04
2373-J3U	Pentium M 725	1.6	256MB	14.1" XGA	7500	30GB	DVD	* Intel 11b/g Wi-Fi ³²	Modem	No	Yes	5.3 hr	E	Oct 04
2373-J4U	Pentium M 725	1.6	256MB	14.1" XGA	7500	30GB	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	5.3 hr	E G	Oct 04
2373-K1U	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Finger	Yes	5.1 hr	W G	Oct 04
2373-KRU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	5.1 hr	W G	Nov 04
2373-K2U	Pentium M 735	1.7	256MB	14.1" XGA	7500	40HS	DVD	Open; wireless upg ³⁶	Modem	Finger	Yes	5.3 hr	W G	Oct 04
2373-K3U	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	DVD	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	5.1 hr	W	Oct 04
2373-K5U	Pentium M 735	1.7	512MB	14.1" SXGA+	9600	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	4.0 hr	W G	Oct 04
2373-K9U	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	IBM 11a/b/g II ³²	Mod/Blue	Finger	Yes	5.2 hr	W	Oct 04
2373-KEU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	Open; wireless upg	Modem	Finger	Yes	5.3 hr	W	Oct 04
2373-KFU	Pentium M 735	1.7	256MB	14.1" SXGA+	7500	80HS	Combo	* Intel 11a/b/g ³²	Mod/Blue	Finger	Yes	4.8 hr	W	Feb 05
2373-KGU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	IBM 11b/g ³²	Modem	Finger	Yes	5.2 hr	W	Oct 04
2373-KMU	Pentium M 735	1.7	256MB	14.1" XGA	7500	80HS	Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	5.2 hr	W	Feb 05
2373-M1U	Pentium M 745	1.8	512MB	14.1" SXGA+	9600	80HS	Combo	IBM 11a/b/g II	Mod/Blue	Finger	Yes	4.1 hr	W	Oct 04
2373-M2U	Pentium M 745	1.8	512MB	14.1" SXGA+	9600	80HS	Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	4.1 hr	W	Feb 05
2373-M3U	Pentium M 745	1.8	512MB	14.1" SXGA+	9600	60U	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Finger	Yes	4.0 hr	W	Oct 04
Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 725 (1.6GHz), 735 (1.7GHz) or 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE¹⁴		
L2 cache	2MB / on die (at processor speed) / ECC											Windows XP Professional		
Memory	256MB or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available											- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive	None standard / use optional USB-based diskette drive											Preloaded		
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim											• IBM Rescue and Recovery™		
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim											• Access IBM		
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay											• Access Connections		
Disk	30GB⁸ (4200 rpm), 40GB HS (5400 rpm), 60GB Ultra HS (7200 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System											• Norton AntiVirus (with 90 days of virus definitions)		
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											• PC-Doctor™		
Graphics	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)											• ThinkPad Utilities		
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)											• Adobe Reader		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones											• IBM Update Connector™ ¹⁵		
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions											• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)		
ThinkLight™												• InterVideo WinDVD (combo, DVD)		
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm											• IBM Fingerprint Software (fingerprint models)		
Weight ²	with optical drive and battery: XGA models: 4.9 lb (2.2kg); SXGA+ mod: 5.0 lb (2.3kg)											• IBM Client Security Software (for security chip)		
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover											Downloadable		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim											• IBM Director Agent		
Battery - life ¹⁰	Up to 4.9 hr; <i>Optional 9-cell</i> : up to 7.0 hr; <i>9-cell plus Ultrabay Slim battery</i> : up to 9.0 hr											• Software Delivery Assistant		
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], [fingerprint]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])											• System Migration Assistant		
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door											License (CD not included)		
Ports	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)											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Video out	S-video out port (TV out) / one 4-pin industry standard connector											ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception											Universal 72 watt AC adapter		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable											Asset ID™ ³⁴ (system-specific info in chip accessed over network)		
Wireless upg ³⁶	Some: wireless upgradable with wireless Mini PCI options											PC 2001-compliant		
Intel 11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset											ACPI 1.0b and 2.0-compliant		
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip											CIM and DMI 2.0-compliant		
Intel 11a/b/g ³²	Some: 11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset											PXE 2.1-compliant		
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset											IBM ImageUltra™ Services available		
IBM 11a/b/g II ³²	Some: 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros AR5004X chipset											International Warranty Service ¹⁷		
CDC	One Communications Daughter Card (CDC) socket / customer accessible											24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²		
Modem	56K ⁵ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											ServicePac® ²² 2yr IOR 9x5 NBD 30L9190		
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)											ServicePac 3yr IOR 9x5 NBD 30L9197		
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											ServicePac 4yr IOR 9x5 NBD 69P9198		
Audio support	Soft audio / ICH AC97 controller / DirectSound™ support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)											ServicePac 4yr P&L P/U Depot 69P9199		
Security	Power-on password / hard disk password / supervisor password / security keyhole											ServicePac 5yr IOR 9x5 NBD 69P9200		
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant											ServicePac 5yr P&L P/U Depot 69P9201		
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip											Other options at ibm.com/pc/us/accessories		
Limited warranty ¹²	3 years /1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail													
	256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad T40 Li-Ion Battery 6-cell	08K8214										
	512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	T40 High Capacity Li-Ion Battery 9-cell	08K8197										
	1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Port Replicator II	74P6733										
	80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Mini Dock	287810U										
	IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Dock II	287710U										
	ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294												

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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® US models announced January 11, 2005; previous models on October 5 or November 30, 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Security chip	Workhorse (W) or Global (G) Preload or Entry (E)	Avail date
2373-6YU	Pentium® M 735	1.7	512MB	15.0" XGA	7500	40HS	Combo	* Intel 11b Wi-Fi ³²	Modem	Yes	XP Pro	W G May 2004
2373-JXU	Pentium M 735	1.7	512MB	15.0" SXGA+	9600	40HS	Combo	IBM 11b/g ³²	Modem	Yes	XP Pro	W May 2004
2373-CWU	Pentium M 745	1.8	512MB	15.0" SXGA+	9600	80HS	Combo	11a/b/g Wi-Fi ³²	Mod/Blue	Yes	XP Pro	May 2004
2373-CXU	Pentium M 745	1.8	512MB	15.0" SXGA+	9600	80HS	Combo	* Intel 11b/g Wi-Fi ³²	Mod/Blue	Yes	XP Pro	May 2004
2373-CVU	Pentium M 745	1.8	1GB	15.0" SXGA+	9600	80HS	Combo	11a/b/g Wi-Fi	Mod/Blue	Yes	XP Pro	May 2004
2373-CYU	Pentium M 745	1.8	512MB	15.0" SXGA+	9600	80HS	DVD-RW	11a/b/g Wi-Fi	Mod/Blue	Yes	XP Pro	May 2004
Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i>											
L2 cache	Intel® Pentium® M Processor 735 (1.7GHz) or 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											
Memory	2MB / on die (at processor speed) / ECC 512MB or 1GB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / 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 DVD-RW	<i>Some:</i> DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay™ Slim <i>Some:</i> CD-RW/DVD-RW Multi-Burner / removable from Ultrabay Slim											
Ultrabay Slim Disk	One modular bay for interchangeable devices (right side) / 9.5mm high bay 40GB⁸ HS (5400 rpm) or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact protection)											
Display	<i>Some:</i> 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits <i>Some:</i> 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	<i>Some:</i> ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) <i>Some:</i> ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)											
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)											
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones											
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions											
ThinkLight™												
Dimensions ³	(WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm											
Weight ²	with optical drive and battery: <i>XGA models:</i> 5.7 lb (2.6kg); <i>SXGA+ mod:</i> 5.8 lb (2.7kg)											
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 - life ¹⁰	Up to 4.4 hr; <i>Optional 9-cell:</i> up to 7 hr; <i>9-cell plus Ultrabay Slim battery:</i> up to 9 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 (TI® PCI4520A CardBus controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / integrated door											
Ports	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 port (TV out) / one 4-pin industry standard connector											
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 upgradable											
Intel 11b Wi-Fi ³²	<i>Some:</i> 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset											
Intel 11b/g ³²	<i>Some:</i> 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset											
11a/b/g Wi-Fi ³²	<i>Some:</i> 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset											
IBM 11b/g ³²	<i>Some:</i> IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset											
CDC	One Communications Daughter Card (CDC) socket / customer accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Bluetooth™	<i>Some:</i> Bluetooth wireless technology / in CDC (with modem)											
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole											
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail											
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214									
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197									
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad 72W AC Adapter	02K6699									
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC/DC Combo Adapter	22P9010									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101									
IBM USB 2.0 Memory Key 512MB	22P9230	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301									
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Intel PRO/Wireless 2200BG Mini PCI	73P2801									
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	Kensington® MicroSaver® Security Cable	73P2582									
Second HDD Adapter for Ultrabay Slim	62P4554	IBM M400 Projector	0037A04									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Port Replicator II	74P6733									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Mini Dock	287810U									
ThinkPad Premiere Leather Carrying Case	10K0209	ThinkPad Dock II	287710U									
IBM USB Travel Keyboard with UltraNav	31P9490	TrackPoint Cap Collection	73P2698									
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at ibm.com/pc/us/accessories										
											ServicePac [®] . ²² 2yr IOR 9x5 NBD	
											30L9190	
											ServicePac 3yr IOR 9x5 NBD	
											30L9197	
											ServicePac 4yr IOR 9x5 NBD	
											69P9198	
											ServicePac 5yr IOR 9x5 NBD	
											69P9200	
											ServicePac 4yr P&L P/U Depot	
											69P9199	
											ServicePac 5yr P&L P/U Depot	
											69P9201	
											Post-warranty annual maintenance agreements at	
											ibm.com/services/its/us/source/maspspleu.pdf	

See footnotes for important warranty information
US models announced May 11, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Security chip	Bat- tery life ¹⁰	Workhorse (W) or Global (G) Entry (E)	Avail date
2373-L1U	Pentium® M 735	1.7	512MB	15.0" XGA	7500 40HS	Combo	* Intel 11b/g Wi-Fi ³²	Mod/Blue	Finger	Yes	5.0 hr	W G	Oct 04	
2373-LAU	Pentium® M 735	1.7	512MB	15.0" XGA	7500 40HS	Combo	* Intel 11b/g Wi-Fi ³²	Modem	Finger	Yes	5.0 hr	W G	Nov 04	
2373-L4U	Pentium M 735	1.7	512MB	15.0" SXGA+	9600 40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	3.9 hr	W	Oct 04	
2373-L5U	Pentium M 735	1.7	512MB	15.0" SXGA+	9600 40HS	Combo	* Intel 11b Wi-Fi ³²	Modem	Finger	Yes	3.9 hr	W	Oct 04	
2373-L6U	Pentium M 735	1.7	512MB	15.0" SXGA+	9600 40HS	Combo	IBM 11b/g ³²	Modem	Finger	Yes	3.9 hr	W	Oct 04	
2373-L7U	Pentium M 735	1.7	512MB	15.0" SXGA+	9600 40HS	Combo	* Intel 11a/b/g ³²	Modem	Finger	Yes	3.9 hr	W	Feb 05	
2373-N1U	Pentium M 745	1.8	512MB	15.0" SXGA+	9600 80HS	Combo	IBM 11a/b/g II ³²	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	Mod/Blue	Finger	Yes	3.9 hr	W	Feb 05	
2373-N3U	Pentium M 745	1.8	512MB	15.0" SXGA+	9600 60U	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Finger	Yes	3.9 hr	W	Oct 04	
Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i>													
L2 cache	Intel® Pentium® M Processor 735 (1.7GHz) or 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus													
Memory	2MB / on die (at processor speed) / ECC 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / 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	DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay™ Slim													
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay													
Disk	40GB⁸ HS (5400rpm), 80GB HS (5400 rpm), or 60GB Ultra HS (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System													
Display	<i>Some:</i> 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits <i>Some:</i> 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	<i>Some:</i> ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) <i>Some:</i> ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)													
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)													
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													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm													
Weight ²	with optical drive and battery: XGA models: 5.7 lb (2.6kg); SXGA+ mod: 5.8 lb (2.7kg)													
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 - life ¹⁰	Up to 4.9 hr; <i>Optional 9-cell:</i> up to 7.0 hr; <i>9-cell plus Ultrabay Slim battery:</i> up to 9.0 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], fingerprint) / PCI bus 2.2 32-bit, 33MHz (T ¹⁸ PCI4520A CardBus controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / integrated door													
Ports	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 port (TV out) / one 4-pin industry standard connector													
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 upgradable													
Intel 11b Wi-Fi ³²	<i>Some:</i> 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset													
Intel 11b/g ³²	<i>Some:</i> 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset													
Intel 11a/b/g ³²	<i>Some:</i> 11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset													
IBM 11b/g ³²	<i>Some:</i> IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset													
IBM 11a/b/g II ³²	<i>Some:</i> 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros AR5004X chipset													
CDC	One Communications Daughter Card (CDC) socket / customer accessible													
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Conexant® chipset													
Bluetooth™	<i>Some:</i> Bluetooth wireless technology / in CDC (with modem)													
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE													
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole													
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant													
Fingerprint reader	Fingerprint reader on palm rest / swipe sensor / integrated with security chip													
Limited warranty ¹²	3 years/1 yr battery - EasyServ™.19 onsite pickup and delivery / service upgrades ²² avail													
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214											
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197											
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190											
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040											
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699											
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad 72W AC/DC Combo Adapter	22P9010											
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM 11a/b/g Wireless CardBus Adapter	31P9101											
Second HDD Adapter for Ultrabay Slim	62P4554	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701											
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	Intel PRO/Wireless 2200BG Mini PCI	73P2801											
IBM USB 2.0 Memory Key 512MB	22P9230	ThinkPad Port Replicator II	74P6733											
ThinkPad Carrying Case - Expander	73P3597	ThinkPad Mini Dock	287810U											
ThinkPad Carrying Case - BackPack	73P3599	ThinkPad Dock II	287710U											
ThinkPad Carrying Case - Leather	73P3600	Other options at ibm.com/pc/us/accessories												
SOFTWARE¹⁴														
Windows XP Professional														
- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2)														
✦ Disk-to-Disk Recovery (in hidden protected area)														
Preloaded														
• IBM Rescue and Recovery™														
• Access IBM														
• Access Connections														
• Norton AntiVirus (with 90 days of virus definitions)														
• PC-Doctor™														
• ThinkPad Utilities														
• Adobe Reader														
• IBM Update Connector™.15														
• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)														
• InterVideo WinDVD (combo models)														
• IBM Fingerprint Software														
• IBM 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 IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage														
Universal 72 watt AC adapter														
Asset ID™.34 (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 2.1-compliant														
IBM ImageUltra™ Services available														
International Warranty Service ¹⁷														
24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)														
ServicePac ^{®.22} 2yr IOR 9x5 NBD 30L9190														
ServicePac 3yr IOR 9x5 NBD 30L9197														
ServicePac 4yr IOR 9x5 NBD 69P9198														
ServicePac 5yr IOR 9x5 NBD 69P9200														
ServicePac 4yr P&L P/U Depot 69P9199														
ServicePac 5yr P&L P/U Depot 69P9201														
Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspplu.pdf														

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

(T4215O) © IBM Corp. January 2005

® US models announced January 11, 2005; previous models on October 5 or November 30, 2004

IBM® ThinkPad® T42 (2378) - Express

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ²	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Security chip	Workhorse (W) Global (G) Limited Avail Preload Entry (E) warranty date
2378-DTU	Pentium® M	1.5	256MB	14.1" XGA	7500	30GB	DVD	* Intel 11b/g Wi-Fi ³²	Modem	Yes	XP Pro No 1 yr May 2004
2378-DUU	Pentium M	1.5	256MB	14.1" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No 1 yr May 2004
2378-FTU	Pentium M 735	1.7	256MB	14.1" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No 1 yr May 2004
2378-FVU	Pentium M 735	1.7	256MB	14.1" SXGA+	9600	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No 1 yr May 2004
2378-FZU	Pentium M 735	1.7	512MB	15.0" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No 1 yr May 2004
2378-DVU	Pentium M 735	1.7	256MB	15.0" XGA	7500	30GB	DVD	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No 1 yr May 2004
2378-DWU	Pentium M	1.5	256MB	15.0" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No 1 yr May 2004
2378-DXU	Pentium M 735	1.7	512MB	15.0" SXGA+	9600	60U	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Yes	XP Pro No 1 yr May 2004
2378-2ZU	Pentium M	1.5	256MB	15.0" XGA	7500	30GB	DVD	* Intel 11b Wi-Fi ³²	Modem	Yes	XP Pro No 1 yr May 2004
2378-5UU	Pentium M 725	1.6	256MB	14.1" XGA	9000	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No 1 yr Aug 2004

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- The 2378 has a 1 year limited warranty (other ThinkPad T42 2379 Express models have a 3 year limited warranty)

Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) or 735 (1.7GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus							SOFTWARE¹⁴				
L2 cache	1.5GHz: 1MB ; 1.6/1.7GHz: 2MB ; All: on die (at processor speed) / ECC							Windows XP Professional				
Memory	256MB or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available							- Microsoft® Windows® XP Professional ²⁰ ↳ Disk-to-Disk Recovery (in hidden protected area)				
Diskette drive	None standard / use optional USB-based diskette drive							Preloaded				
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim							• Access IBM				
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim							• Access Connections				
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay							• IBM Rescue and Recovery™				
Disk	30GB⁸ (4200 rpm), 40GB HS (5400 rpm), 60GB Ultra HS (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / Hard Disk Drive Shock Absorber / IBM Active Protection System							• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)				
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 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 / FlexView display with wide viewing angle and high density using IPS technology							• Norton AntiVirus (OEM edition)				
Graphics	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 64MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)							• PC-Doctor™				
Graphics external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M / DDC2B							• ThinkPad Utilities				
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)							• Adobe Reader				
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones							• IBM Update Connector™ ¹⁵				
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones							Downloadable				
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm; 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm							• IBM Director Agent				
Weight ²	with optical drive and battery: 14.1" XGA models: 4.9 lb (2.2kg) 14.1" SXGA+: 5.0 lb (2.3kg); 15.0" XGA: 5.7 lb (2.6kg); 15.0" SXGA+: 5.8 lb (2.7kg)							• Software Delivery Assistant				
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim							• System Migration Assistant				
Battery - life ¹⁰	4.0 to 5.0 hr; <i>Optional 9-cell</i> : up to 7.0 hr; <i>9-cell plus Ultrabay Slim battery</i> : up to 9.0 hr							• IBM Client Security Software (for security chip)				
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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])							License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client				
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door							ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage				
Ports	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)							Universal 72 watt AC adapter Asset ID™ ³⁴ (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 IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)				
Video out	S-video out port (TV out) / one 4-pin industry standard connector							ServicePac® ²² 1yr IOR 9x5 NBD 30L9188				
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception							ServicePac 2 yr IOR 9x5 NBD 30L9189				
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable							ServicePac 3 yr IOR 9x5 NBD 30L9195				
Intel 11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset							ServicePac 4 yr IOR 9x5 NBD 30L9194				
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset							ServicePac 5 yr IOR 9x5 NBD 30L9196				
CDC	One Communications Daughter Card (CDC) socket / customer accessible							ServicePac 2 yr P&L P/U Depot 30L9191				
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset							ServicePac 3 yr P&L P/U Depot 30L9192				
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)							ServicePac 5 yr P&L P/U Depot 69P9197				
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole											
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail											
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214									
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197									
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301									
IBM USB Portable Diskette Drive	05K9276	ThinkPad Port Replicator II	74P6733									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Mini Dock	287810U									
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	ThinkPad Dock II	287710U									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

(T42B) © IBM Corp. August 2004

® US model announced August 17, 2004; previous models on May 11, 2004

IBM® ThinkPad® T42 (2378) - Express (October 2004)

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Finger print reader	Security chip	Bat- tery life ¹⁰	Bat- tery cells	Limited war- ranty	Avail date
2378-R1U	Pentium® M 725	1.6	256MB	14.1" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi ³²	Modem	Finger	Yes	5.1 hr	6	1 yr	Oct 04
2378-R2U	Pentium M 735	1.7	512MB	15.0" SXGA+	9600	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	3.9 hr	6	1 yr	Oct 04
2378-R3U	Pentium M 725	1.6	256MB	14.1" XGA	7500	30GB	DVD	* Intel 11b/g Wi-Fi	Modem	No	Yes	5.3 hr	6	1 yr	Oct 04
2378-R4U	Pentium M 725	1.6	256MB	14.1" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	No	Yes	5.1 hr	6	1 yr	Oct 04
2378-R5U	Pentium M 745	1.8	256MB	14.1" SXGA+	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	7.2 hr	9	1 yr	Oct 04
2378-R6U	Pentium M 725	1.6	512MB	15.0" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	No	Yes	5.0 hr	6	1 yr	Oct 04
2378-R7U	Pentium M 725	1.6	256MB	15.0" XGA	7500	30GB	DVD	* Intel 11b Wi-Fi ³²	Modem	No	Yes	5.3 hr	6	1 yr	Oct 04
2378-R8U	Pentium M 745	1.8	512MB	15.0" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	5.0 hr	6	1 yr	Oct 04
2378-R9U	Pentium M 745	1.8	512MB	15.0" SXGA+	9600	60U	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Finger	Yes	5.9 hr	9	1 yr	Oct 04
<ul style="list-style-type: none"> • These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2378 has a 1 year limited warranty (other ThinkPad T42 2379 Express models have a 3 year limited warranty) 															
Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 725 (1.6GHz), 735 (1.7GHz), or 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area) Preloaded • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (with 90 days of virus definitions) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo, DVD models) • IBM Fingerprint Software (fingerprint models) • IBM 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				
L2 cache	2MB / on die (at processor speed) / ECC														
Memory	256MB or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available														
Diskette drive	None standard / use optional USB-based diskette drive														
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim														
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim														
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay														
Disk	30GB ⁸ (4200 rpm), 40GB HS (5400 rpm), or 60GB Ultra HS (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System														
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 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 / FlexView display with wide viewing angle and high density using IPS technology														
Graphics	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)														
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size 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														
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm; 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: 14.1" XGA models: 4.9 lb (2.2kg); 14.1" SXGA+: 5.4 lb (2.4kg); 15.0" XGA: 5.7 lb (2.6kg); 15.0" SXGA+: 5.8 lb [6-cell] or 6.2 lb [9-cell] (2.8kg)														
Weight ²															
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover														
Battery - type	Lithium Ion 6- or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim														
Battery - life ¹⁰	6-cell: up to 4.9 hr; 9-cell: up to 7.0 hr; 9-cell plus Ultrabay Slim battery: up to 9.0 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], [fingerprint]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4520A CardBus controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / integrated door														
Ports	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 port (TV out) / one 4-pin industry standard connector														
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 upgradable														
Intel 11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset														
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset														
CDC	One Communications Daughter Card (CDC) socket / customer accessible														
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset														
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)														
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE														
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole														
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / TCG-compliant														
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip														
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available														
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	ServicePac 4 yr IOR 9x5 NBD	30L9188										
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	T40 High Capacity Li-Ion Battery 9-cell	08K8197	ServicePac 5 yr IOR 9x5 NBD	30L9194										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 2 yr P&L P/U Depot	30L9196										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 3 yr P&L P/U Depot	30L9191										
IBM USB 2.0 Memory Key 512MB	22P9230	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301	ServicePac 3 yr P&L P/U Depot	30L9192										
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 5 yr P&L P/U Depot	69P9197										
Second HDD Adapter for Ultrabay Slim	62P4554	ThinkPad Port Replicator II	74P6733												
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Mini Dock	287810U												
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U												
ThinkPad Carrying Case - Leather	73P3600	Other options at ibm.com/pc/us/accessories													

See footnotes for important warranty information
US models announced October 5, 2004

* Powered by Intel Centrino™ mobile technology

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Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ²	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Security chip	Workhorse (W) Global (G) Limited Entry (E) warranty	Avail date
2379-DWU	Pentium® M	1.5	256MB	15.0" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi ³²	Modem	Yes	XP Pro No	3 yr May 2004
2379-5VU	Pentium M 725	1.6	512MB	14.1" XGA	9000	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Yes	XP Pro No	3 yr Aug 2004
2379-DXU	Pentium M 735	1.7	512MB	15.0" SXGA+	9600	60U	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Yes	XP Pro No	3 yr May 2004

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- The 2379 has a 3 year limited warranty (other ThinkPad T42 2378 Express models have a 1 year limited warranty)

Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i>									
L2 cache	Intel® Pentium® M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) or 735 (1.7GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus									
Memory	1.5GHz: 1MB ; 1.6/1.7GHz: 2MB ; All: on die (at processor speed) / ECC									
Diskette drive	None standard / use optional USB-based diskette drive									
Combo	DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay™ Slim									
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay									
Disk	40GB³ HS (5400 rpm) or 60GB Ultra HS (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / Hard Disk Drive Shock Absorber / IBM 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 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									
Graphics	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 64MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)									
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)									
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones									
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions									
ThinkLight™										
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm; 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm									
Weight ²	with optical drive and battery: 14.1" XGA model: 4.9 lb (2.2kg); 15.0" XGA model: 5.7 lb (2.6kg); 15.0" SXGA+ model: 5.8 lb (2.7kg)									
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 - life ¹⁰	Up to 4.7 hr; <i>Optional 9-cell: up to 7.0 hr; 9-cell plus Ultrabay Slim battery: up to 9.0 hr</i>									
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 (TI® PCI4520A CardBus controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / integrated door									
Ports	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 port (TV out) / one 4-pin industry standard connector									
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 upgradable									
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset									
CDC	One Communications Daughter Card (CDC) socket / customer accessible									
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset									
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)									
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE									
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole									
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant									
Limited warranty ¹²	3 years/1 yr battery - EasyServ™.19 onsite pickup and delivery / service upgrades²² avail									

SOFTWARE ¹⁴	
Windows XP Professional	- Microsoft® Windows® XP Professional ²⁰
	↳ Disk-to-Disk Recovery (in hidden protected area)
Preloaded	<ul style="list-style-type: none"> • Access IBM • Access Connections • IBM Rescue and Recovery™ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo models) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™.15
Downloadable	<ul style="list-style-type: none"> • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • IBM Client Security Software (for security chip)
License (CD not included)	- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage	
Universal 72 watt AC adapter Asset ID™.34 (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	
IBM ImageUltra™ Services available	
International Warranty Service ¹⁷	
24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)	

128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	ServicePac®.22 2yr IOR 9x5 NBD	30L9190
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197	ServicePac 3yr IOR 9x5 NBD	30L9197
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 4yr IOR 9x5 NBD	69P9198
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 5yr IOR 9x5 NBD	69P9200
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC/DC Combo Adapter	22P9010	ServicePac 4yr P&L P/U Depot	69P9199
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 5yr P&L P/U Depot	69P9201
IBM USB 2.0 Memory Key 512MB	22P9230	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301	Post-warranty annual maintenance agreements at	ibm.com/services/its/us/source/maspspleu.pdf
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Intel PRO/Wireless 2200BG Mini PCI	73P2801		
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	Kensington® MicroSaver® Security Cable	73P2582		
Second HDD Adapter for Ultrabay Slim	62P4554	IBM M400 Projector	0037A04		
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM C400 Projector	0039A04		
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Port Replicator II	74P6733		
ThinkPad Carrying Case - Expander	73P3597	ThinkPad Mini Dock	287810U		
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Dock II	287710U		
IBM USB Travel Keyboard with UltraNav	31P9490	TrackPoint Cap Collection	73P2698		
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at ibm.com/pc/us/accessories			

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

Ⓢ US model announced August 17, 2004; previous models on May 11, 2004

IBM® ThinkPad® T42 (2379) - Express (October 2004)

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Security chip	Bat- tery life ¹⁰	Bat- tery cells	Limited war- ranty	Avail date
2379-R1U	Pentium® M 725	1.6	256MB	14.1" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi ³²	Modem	Finger	Yes	5.1 hr	6	3 yr	Oct 04
2379-R5U	Pentium M 745	1.8	256MB	14.1" SXGA+	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	7.2 hr	9	3 yr	Oct 04
2379-R6U	Pentium M 725	1.6	512MB	15.0" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	No	Yes	5.0 hr	6	3 yr	Oct 04
2379-R8U	Pentium M 745	1.8	512MB	15.0" XGA	7500	40HS	Combo	* Intel 11b/g Wi-Fi	Modem	Finger	Yes	5.0 hr	6	3 yr	Oct 04
2379-R9U	Pentium M 745	1.8	512MB	15.0" SXGA+	9600	60U	Combo	* Intel 11b/g Wi-Fi	Mod/Blue	Finger	Yes	5.9 hr	9	3 yr	Oct 04
<ul style="list-style-type: none"> • These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2379 has a 3 year limited warranty (other ThinkPad T42 2378 Express models have a 1 year limited warranty) 															
Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 725 (1.6GHz) or 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴				
L2 cache	2MB / on die (at processor speed) / ECC										Windows XP Professional				
Memory	256MB or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area)				
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded				
Combo	DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim										• IBM Rescue and Recovery™				
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay										• Access IBM				
Disk	40GB ⁸ HS (5400 rpm) or 60GB Ultra HS (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact protection)										• Access Connections				
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 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 / FlexView display with wide viewing angle and high density using IPS technology										• Norton AntiVirus (with 90 days of virus definitions)				
Graphics	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)										• PC-Doctor™				
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)										• ThinkPad Utilities				
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• Adobe Reader				
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions										• IBM Update Connector™ ¹⁵				
ThinkLight™											• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)				
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm; 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm										• InterVideo WinDVD (combo models)				
Weight ²	with optical drive and battery: 14.1" XGA models: 4.9 lb (2.2kg); 14.1" SXGA+: 5.4 lb (2.4kg); 15.0" XGA: 5.7 lb (2.6kg); 15.0" SXGA+: 6.2 lb (2.8kg)										• IBM Fingerprint Software (fingerprint models)				
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover										• IBM Client Security Software (for security chip)				
Battery - type	Lithium Ion 6- or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim										Downloadable				
Battery - life ¹⁰	6-cell: up to 4.9 hr; 9-cell: up to 7.0 hr; 9-cell plus Ultrabay Slim battery: up to 9.0 hr										• IBM Director Agent				
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], [fingerprint]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])										• Software Delivery Assistant				
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door										• System Migration Assistant				
Ports	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)										License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client				
Video out	S-video out port (TV out) / one 4-pin industry standard connector										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage				
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										Universal 72 watt AC adapter				
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										Asset ID™ ³⁴ (system-specific info in chip accessed over network)				
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										PC 2001-compliant				
CDC	One Communications Daughter Card (CDC) socket / customer accessible										ACPI 1.0b and 2.0-compliant				
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										CIM and DMI 2.0-compliant				
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)										PXE 2.1-compliant				
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE										IBM ImageUltra™ Services available				
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)										International Warranty Service ¹⁷				
Security	Power-on password / hard disk password / supervisor password / security keyhole										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)				
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / TCG-compliant														
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip / can replace multiple passwords / UPEK® TCD41B controller with TCS3B sensor														
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail														
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214												
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197												
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190												
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad 72W AC Adapter	02K6699												
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC/DC Combo Adapter	22P9010												
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101												
IBM USB 2.0 Memory Key 512MB	22P9230	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301												
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Intel PRO/Wireless 2200BG Mini PCI	73P2801												
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM Enh Perf Wireless Kybd and Mouse	73P4067												
Second HDD Adapter for Ultrabay Slim	62P4554	ThinkPad Port Replicator II	74P6733												
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Mini Dock	287810U												
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U												
SonyEricsson® GC83 EDGE PC Card	26K3393	ThinkPad Carrying Case - Backpack	73P3599												
IBM M400 Projector	0037A04	ThinkPad Carrying Case - Leather	73P3600												
IBM C400 Projector	0039A04	Other options at ibm.com/pc/us/accessories													

See footnotes for important warranty information
US models announced October 5, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Security chip	Preload	Limited warranty	Avail date
2373-6VU	Pentium® M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	*Intel 11b/g Wi-Fi ³²	Modem	Yes	XP Pro	EasyServ	May 2004
2373-3VU	Pentium M 735	1.7	512MB	14.1" SXGA+	9600	80HS	DVD-RW	*Intel 11b/g Wi-Fi	Modem	Yes	XP Pro	EasyServ	May 2004
2373-3XU	Pentium M 735	1.7	512MB	15.0" SXGA+	9600	40HS	Combo	*Intel 11b/g Wi-Fi	Modem	Yes	XP Pro	EasyServ	May 2004

• **The 2373 has an EasyServ™,19 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.

This model for education is for sale direct from IBM or through an Authorized Education Reseller.

The model or models for education are not available for resale to any other organization or individual.

Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i>										SOFTWARE¹⁴		
L2 cache	Intel® Pentium® M Processor 735 (1.7GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										Windows XP Professional		
Memory	2MB / on die (at processor speed) / ECC										- Microsoft® Windows® XP Professional ²⁰		
Diskette drive	None standard / use optional USB-based diskette drive										↔ Disk-to-Disk Recovery (in hidden protected area)		
Combo DVD-RW	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay™ Slim										Preloaded		
Ultrabay Slim Disk	Some: CD-RW/DVD-RW Multi-Burner / removable from Ultrabay Slim										• Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™		
Display	One modular bay for interchangeable devices (right side) / 9.5mm high bay										• Access IBM		
Graphics	40GB ⁸ HS (5400 rpm) or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• Access Connections		
Graphics external	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• IBM Rescue and Recovery™		
Keyboard	Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits										• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW models)		
TrackPoint®	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										• InterVideo WinDVD (combo, DVD-RW models)		
Touch pad	Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)										• InterVideo WinDVD Creator (DVD-RW models)		
ThinkLight™	Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)										• Norton AntiVirus (OEM edition)		
Dimensions ³	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M / DDC2B										• PC-Doctor™		
Weight ²	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)										• ThinkPad Utilities		
Case material	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• Adobe Reader		
Battery - type	Illuminates the keyboard to improve visibility in low-light conditions										• IBM Update Connector™.15		
Battery - life ¹⁰	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm; 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: 14.1 XGA model: 4.9 lb (2.2kg); 14.1" SXGA+ model: 5.0 lb (2.3kg); 15.0" model: 5.8 lb (2.7 kg)										Downloadable		
Architecture	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover										• IBM Director Agent		
PC Card Std slots	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim										• Software Delivery Assistant		
Ports	Up to 4.5 hr; Optional 9-cell: up to 7.0 hr; 9-cell plus Ultrabay Slim battery: up to 9.0 hr										• System Migration Assistant		
Video out	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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])										• IBM Client Security Software (for security chip)		
Wireless antenna	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door										License (CD not included)		
Mini PCI	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)										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
CDC	S-video out port (TV out) / one 4-pin industry standard connector										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Modem	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										Universal 72 watt AC adapter		
Bluetooth™	One Mini PCI type III slot (Communications Bay) / customer upgradable										Asset ID™.34 (system-specific info in chip accessed over network)		
Ethernet	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										PC 2001-compliant		
Audio support	One Communications Daughter Card (CDC) socket / customer accessible										ACPI 1.0b and 2.0-compliant		
Security	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										CIM and DMI 2.0-compliant		
Security chip	None										PXE 2.0-compliant		
Limited warranty ¹²	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE										IBM ImageUltra™ Services available		
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	International Warranty Service ¹⁷			24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)						
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197	ServicePac ²² 2yr IOR 9x5 NBD			30L9190						
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 3yr IOR 9x5 NBD			30L9197						
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad 72W AC/DC Combo Adapter	22P9010	ServicePac 4yr IOR 9x5 NBD			69P9198						
IBM USB Portable Diskette Drive	05K9276	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 5yr IOR 9x5 NBD			69P9200						
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301	ServicePac 4yr P&L P/U Depot			69P9199						
IBM USB 2.0 Memory Key 512MB	22P9230	Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 5yr P&L P/U Depot			69P9201						
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Kensington® MicroSaver® Security Cable	73P2582	Post-warranty annual maintenance agreements at			ibm.com/services/its/us/source/maspspleu.pdf						
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	ThinkPad Port Replicator II	74P6733										
Second HDD Adapter for Ultrabay Slim	62P4554	ThinkPad Mini Dock	287810U										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Dock II	287710U										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	TrackPoint Cap Collection	73P2698										
ThinkPad Carrying Case - Backpack	73P3599	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US models announced May 11, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Security chip	Preload	Limited warranty	Avail date
2374-6VU	Pentium® M 735	1.7	512MB	14.1" XGA	7500	40HS	Combo	*Intel 11b/g Wi-Fi ³²	Modem	Yes	XP Pro	Onsite	May 2004
2374-3VU	Pentium M 735	1.7	512MB	14.1" SXGA+	9600	80HS	DVD-RW	*Intel 11b/g Wi-Fi	Modem	Yes	XP Pro	Onsite	May 2004
2374-3XU	Pentium M 735	1.7	512MB	15.0" SXGA+	9600	40HS	Combo	*Intel 11b/g Wi-Fi	Modem	Yes	XP Pro	Onsite	May 2004

• **The 2374 has a limited onsite service²⁴ 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	<i>Perfect balance of performance and portability; two-spindle system</i>										SOFTWARE¹⁴		
L2 cache	Intel® Pentium® M Processor 735 (1.7GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										Windows XP Professional		
Memory	2MB / on die (at processor speed) / ECC										- Microsoft® Windows® XP Professional ²⁰		
Diskette drive	None standard / use optional USB-based diskette drive										↳ Disk-to-Disk Recovery (in hidden protected area)		
Combo	<i>Some: DVD-ROM/CD-RW / 24X/24X/24X/8X²¹ speed / removable from Ultrabay™ Slim</i>										Preloaded		
DVD-RW	<i>Some: CD-RW/DVD-RW Multi-Burner / removable from Ultrabay Slim</i>										• Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™		
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay										• Access IBM		
Disk	40GB⁹ HS (5400 rpm) or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• Access Connections		
Display	<i>Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i> <i>Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits</i> <i>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</i>										• IBM Rescue and Recovery™		
Graphics	<i>Some: ATI® Mobility™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)</i> <i>Some: ATI Mobility RADEON 9600 / AGP 4X / 64MB DDR1 (DDR-SDRAM)</i>										• IBM RecordNOW and Drive Letter		
Graphics external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M / DDC2B										• Access powered by Sonic products (combo, DVD-RW models)		
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)										• InterVideo WinDVD (combo, DVD-RW models)		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• InterVideo WinDVD Creator (DVD-RW models)		
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions										• Norton AntiVirus (OEM edition)		
ThinkLight™											• PC-Doctor™		
Dimensions ³	<i>14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm;</i> <i>15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm</i> with optical drive and battery; <i>14.1 XGA model: 4.9 lb (2.2kg);</i> <i>14.1" SXGA+ model: 5.0 lb (2.3kg); 15.0" model: 5.8 lb (2.7 kg)</i>										• ThinkPad Utilities		
Weight ²											• Adobe Reader		
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover										• IBM Update Connector™ ¹⁵		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim										Downloadable		
Battery - life ¹⁰	Up to 4.5 hr; <i>Optional 9-cell: up to 7.0 hr; 9-cell plus Ultrabay Slim battery: up to 9.0 hr</i>										• IBM Director Agent		
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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])										• Software Delivery Assistant		
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door										• System Migration Assistant		
Ports	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)										• IBM Client Security Software (for security chip)		
Video out	S-video out port (TV out) / one 4-pin industry standard connector										License (CD not included)		
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable												
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset												
Bluetooth™	None												
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE												
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Limited warranty ¹²	3 years/1 yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time										Universal 72 watt AC adapter Asset ID™ ³⁴ (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 IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)		
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214										
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197										
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM USB Portable Diskette Drive	05K9276	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301										
IBM USB 2.0 Memory Key 256MB	22P9228	Intel PRO/Wireless 2200BG Mini PCI	73P2801										
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	IBM Enh Perf Wireless Kybd and Mouse	73P4067										
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	ThinkPad Port Replicator II	74P6733										
Second HDD Adapter for Ultrabay Slim	62P4554	ThinkPad Mini Dock	287810U										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Dock II	287710U										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	TrackPoint Cap Collection	73P2698										
ThinkPad Premiere Leather Carrying Case	10K0209	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US models announced May 11, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Finger print reader	Secu- rity chip	Bat- tery life ¹⁰	Workhorse (W) or Global (G) Avail Entry (E) date
2373-P1U	Pentium® M 765	2.1	1GB	14.1" SXGA+	FireGL	60U	DVD-RW	IBM 11a/b/g II ³²	Mod/Blue	Finger	Yes	5.8 hr	Oct 2004
2373-P2U	Pentium M 765	2.1	1GB	14.1" SXGA+	FireGL	60U	Combo	*Intel 11b/g Wi-Fi ³²	Mod/Blue	Finger	Yes	6.0 hr	Oct 2004
2373-P3U	Pentium M 765	2.1	1GB	14.1" SXGA+	FireGL	60U	DVD-RW	*Intel 11a/b/g ³²	Mod/Blue	Finger	Yes	5.9 hr	Jan 2005
2373-Q1U	Pentium M 765	2.1	1GB	15.0" UXGA	FireGL	60U	DVD-RW	IBM 11a/b/g II	Mod/Blue	Finger	Yes	5.3 hr	Oct 2004
2373-Q2U	Pentium M 765	2.1	1GB	15.0" UXGA	FireGL	60U	Combo	*Intel 11b/g Wi-Fi	Mod/Blue	Finger	Yes	5.4 hr	G Oct 2004
2373-Q4U	Pentium M 765	2.1	1GB	15.0" UXGA	FireGL	60U	DVD-RW	*Intel 11a/b/g	Mod/Blue	Finger	Yes	5.3 hr	Jan 2005
Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i> Intel® Pentium® M Processor 765 (2.1GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴		
L2 cache	2MB / on die (at processor speed) / ECC										Windows XP Professional		
Memory	1GB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ◆ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded		
Combo DVD-RW	<i>Some:</i> DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay™ Slim <i>Some:</i> CD-RW/DVD-RW Multi-Burner / writes to CD-R, CD-RW, DVD-RAM, DVD-R, DVD-RW / reads many formats / removable from Ultrabay Slim										• IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (with 90 days of virus definitions) • PC-Doctor™		
Ultrabay Slim Disk	One modular bay for interchangeable devices (right side) / 9.5mm high bay 60GB⁸ Ultra HS (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact protection)										• ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW) • InterVideo WinDVD (combo, DVD-RW) • InterVideo WinDVD Creator (DVD-RW) • IBM Fingerprint Software • IBM Client Security Software (for security chip)		
Display	<i>Some:</i> 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits <i>Some:</i> 15.0" (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant		
Graphics	ATI® Mobility™ FireGL™ T2 / AGP 4X / 128MB DDR1 / OpenGL® support										License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
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)												
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones												
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions												
ThinkLight™													
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm 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: 14.1" models: 5.4 lb (2.4kg); 15" models: 6.2 lb (2.8kg)												
Weight ²													
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover												
Battery - type	Lithium Ion 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim												
Battery - life ¹⁰	9-cell: up to 6.0 hr; 9-cell plus Ultrabay Slim battery: up to 8.5 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, fingerprint) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4520A CardBus controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / integrated door												
Ports	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 port (TV out) / one 4-pin industry standard connector												
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable												
Intel 11b/g ³²	<i>Some:</i> 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset												
Intel 11a/b/g ³²	<i>Some:</i> 11a/b/g ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset												
IBM 11a/b/g II ³²	<i>Some:</i> 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros AR5004X chipset												
CDC	One Communications Daughter Card (CDC) socket / customer accessible										Universal 72 watt AC adapter Asset ID™ ³⁴ (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 2.1-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)		
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Conexant® chipset												
Bluetooth™	Bluetooth wireless technology / in CDC (with modem)												
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE												
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Fingerprint reader	Fingerprint reader on palm rest / swipe sensor / integrated with security chip / can replace multiple passwords / UPEK® TCD41B controller with TCS3B sensor												
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail												
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	ServicePac 3yr IOR 9x5 NBD	30L9190								
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197	ServicePac 3yr IOR 9x5 NBD	30L9197								
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 4yr IOR 9x5 NBD	69P9198								
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad 72W AC Adapter	02K6699	ServicePac 5yr IOR 9x5 NBD	69P9200								
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC/DC Combo Adapter	22P9010	ServicePac 4yr P&L P/U Depot	69P9199								
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adptr II	73P4301	ServicePac 5yr P&L P/U Depot	69P9201								
IBM USB 2.0 Portable 40GB Hard Disk	22P7196	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 5yr P&L P/U Depot	69P9201								
IBM USB 2.0 Memory Key 512MB	22P9230	Intel PRO/Wireless 2200BG Mini PCI	73P2801	Post-warranty annual maintenance agreements at									
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Kensington® MicroSaver® Security Cable	73P2582										
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	GemPC400 Smart Card Reader/Writer	31P8901										
Second HDD Adapter for Ultrabay Slim	62P4554	ThinkPad Port Replicator II	74P6733										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Mini Dock	287810U										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U										
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

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† US models announced January 11, 2005; previous models on October 20, 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Security chip	Workhorse (W) Global (G) Limited warranty	Avail date
2378-DYU	Pentium® M 745	1.8	512MB	15.0" UXGA	FireGL 80HS	DVD-RW	DVD-RW	11a/b/g Wi-Fi ³²	Mod/Blue	Yes	XP Pro No	1 year May 2004
<ul style="list-style-type: none"> • These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2378 has a 1 year limited warranty (other ThinkPad T42p 2379 Express models have a 3 year limited 												
Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											
L2 cache	2MB / on die (at processor speed) / ECC											
Memory	512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available											
Diskette drive	None standard / use optional USB-based diskette drive											
DVD-RW	CD-RW/DVD-RW Multi-Burner / writes to CD-R, CD-RW, DVD-RAM, DVD-R, DVD-RW / reads CD-ROM, CD-R, CD-RW, CD-Audio, DVD-ROM, DVD-R, DVD+R, DVD+RW, DVD-RW, DVD-Video, DVD-RAM / same as optional ThinkPad Multi-Burner Ultrabay Slim Drive Option / removably from Ultrabay™ Slim											
Ultrabay Slim Disk	One modular bay for interchangeable devices (right side) / 9.5mm high bay 80GB⁸ HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact 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 / AGP 4X / 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)											
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones											
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions											
ThinkLight™												
Dimensions ³	15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm											
Weight ²	with optical drive and battery: 5.9 lb (2.7kg)											
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 - life ¹⁰	Up to 3.5 hr; <i>Optional 9-cell</i> : up to 5.7 hr; <i>9-cell plus Ultrabay Slim battery</i> : 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 (TI® PCI4520A CardBus controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / integrated door											
Ports	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 port (TV out) / one 4-pin industry standard connector											
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 upgradable											
11a/b/g Wi-Fi ³²	11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset											
CDC	One Communications Daughter Card (CDC) socket / customer accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Bluetooth™	Bluetooth wireless technology / in CDC (with modem)											
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole											
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available											
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214									
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197									
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040									
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699									
IBM USB Serial Parallel Adapter	22P5298	ThinkPad 72W AC/DC Combo Adapter	22P9010									
IBM USB 2.0 Combo Drive	73P4515	IBM 11a/b/g Wireless CardBus Adapter	31P9101									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301									
IBM USB 2.0 Memory Key 512MB	22P9230	Intel PRO/Wireless 2200BG Mini PCI	73P2801									
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	SonyEricsson® GC83 EDGE PC Card	26K3393									
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	Kensington® MicroSaver® Security Cable	73P2582									
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM M400 Projector	0037A04									
Second HDD Adapter for Ultrabay Slim	62P4554	IBM E400 Projector	0038A04									
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	IBM C400 Projector	0039A04									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	GemPC400 Smart Card Reader/Writer	31P8901									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Port Replicator II	74P6733									
ThinkPad Carrying Case - Expander	73P3597	ThinkPad Mini Dock	287810U									
ThinkPad Carrying Case - Leather	73P3600	ThinkPad Dock II	287710U									
IBM Enh Perf Wireless Keybrd and Mouse	73P4067	ThinkPad Monitor Stand 2001	22P5265									
IBM USB Keyboard with UltraNav	31P8950	TrackPoint Cap Collection	73P2698									
IBM USB Travel Keyboard with UltraNav	31P9490	Other options at ibm.com/pc/us/accessories										
											ServicePac ²² 1yr IOR 9x5 NBD	30L9188
											ServicePac 2 yr IOR 9x5 NBD	30L9189
											ServicePac 3 yr IOR 9x5 NBD	30L9195
											ServicePac 4 yr IOR 9x5 NBD	30L9194
											ServicePac 5 yr IOR 9x5 NBD	30L9196
											ServicePac 2 yr P&L P/U Depot	30L9191
											ServicePac 3 yr P&L P/U Depot	30L9192
											ServicePac 4 yr P&L P/U Depot	69P9195
											ServicePac 5 yr P&L P/U Depot	69P9197
											Post-warranty annual maintenance agreements at ibm.com/services/us/its/pdf/maspspleu.pdf	

See footnotes for important warranty information
US model announced May 11, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Security chip	Workhorse (W) Global (G) Limited warranty	Avail date
2379-DYU	Pentium® M 745	1.8	512MB	15.0" UXGA	FireGL 80HS	80HS	DVD-RW	11a/b/g Wi-Fi ³²	Mod/Blue	Yes	XP Pro No	3 year May 2004
<ul style="list-style-type: none"> • These small and medium business (SMB) models are part of the IBM 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	<i>Perfect balance of performance and portability; two-spindle system</i> Intel® Pentium® M Processor 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											
L2 cache	2MB / on die (at processor speed) / ECC											
Memory	512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available											
Diskette drive	None standard / use optional USB-based diskette drive											
DVD-RW	CD-RW/DVD-RW Multi-Burner / writes to CD-R, CD-RW, DVD-RAM, DVD-R, DVD-RW / reads CD-ROM, CD-R, CD-RW, CD-Audio, DVD-ROM, DVD-R, DVD+R, DVD+RW, DVD-RW, DVD-Video, DVD-RAM / same as optional ThinkPad Multi-Burner Ultrabay Slim Drive Option / removably from Ultrabay™ Slim											
Ultrabay Slim Disk	One modular bay for interchangeable devices (right side) / 9.5mm high bay 80GB⁸ HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact 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 / AGP 4X / 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)											
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											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions ³	15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm											
Weight ²	with optical drive and battery: 5.9 lb (2.7kg)											
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 - life ¹⁰	Up to 3.5 hr; <i>Optional 9-cell</i> : up to 5.7 hr; <i>9-cell plus Ultrabay Slim battery</i> : 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 (TI® PCI4520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports]) 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door											
PC Card Std slots	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)											
Ports	S-video out port (TV out) / one 4-pin industry standard connector											
Video out	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception											
Wireless antenna	One Mini PCI type III slot (Communications Bay) / customer upgradable											
Mini PCI	11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset											
11a/b/g Wi-Fi ³²	One Communications Daughter Card (CDC) socket / customer accessible											
CDC	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Modem	Bluetooth wireless technology / in CDC (with modem)											
Bluetooth™	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											
Ethernet	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / 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	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
Security chip												
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail											
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214									
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197									
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040									
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699									
IBM USB Serial Parallel Adapter	22P5298	ThinkPad 72W AC/DC Combo Adapter	22P9010									
IBM USB 2.0 Combo Drive	73P4515	IBM 11a/b/g Wireless CardBus Adapter	31P9101									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301									
IBM USB 2.0 Memory Key 512MB	22P9230	SonyEricsson® GC83 EDGE PC Card	26K3393									
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Intel PRO/Wireless 2200BG Mini PCI	73P2801									
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	Kensington® MicroSaver® Security Cable	73P2582									
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM M400 Projector	0037A04									
Second HDD Adapter for Ultrabay Slim	62P4554	IBM E400 Projector	0038A04									
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	IBM C400 Projector	0039A04									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	GemPC400 Smart Card Reader/Writer	31P8901									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Port Replicator II	74P6733									
ThinkPad Carrying Case - Backpack	73P3599	ThinkPad Mini Dock	287810U									
ThinkPad Carrying Case - Leather	73P3600	ThinkPad Dock II	287710U									
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Monitor Stand 2001	22P5265									
IBM USB Keyboard with UltraNav	31P8950	TrackPoint Cap Collection	73P2698									
IBM USB Travel Keyboard with UltraNav	31P9490	Other options at ibm.com/pc/us/accessories										

SOFTWARE¹⁴

Windows XP Professional

- Microsoft® Windows® XP Professional²⁰
- ↳ Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Access IBM
- Access Connections
- IBM Rescue and Recovery™
- IBM RecordNOW and Drive Letter Access powered by Sonic products (DVD-RW)
- InterVideo WinDVD (DVD-RW)
- InterVideo WinDVD Creator (DVD-RW)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- IBM Update Connector™¹⁵

Downloadable

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

License (CD not included)

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

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

Universal 72 watt AC adapter Asset ID™³⁴ (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 IBM ImageUltra™ Services available International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free warranty support during the warranty¹² via 800-IBM-SERV (426-7378)

ServicePac®.²² 2yr IOR 9x5 NBD 30L9190

ServicePac 3yr IOR 9x5 NBD 30L9197

ServicePac 4yr IOR 9x5 NBD 69P9198

ServicePac 5yr IOR 9x5 NBD 69P9200

ServicePac 4yr P&L P/U Depot 69P9199

ServicePac 5yr P&L P/U Depot 69P9201

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

See footnotes for important warranty information
US model announced May 11, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Security chip	Preload	Limited warranty	Avail date
2374-7XU	Pentium® M 745	1.8	512MB	15.0" UXGA	FireGL	80HS	DVD-RW	*Intel 11b/g Wi-Fi ³²	Modem	Yes	XP Pro	Onsite	May 2004

• **The 2374 has a limited onsite service²⁴ 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 IBM or through an Authorized Education Reseller.

The model or models for education are not available for resale to any other organization or individual.

Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i> Intel® Pentium® M Processor 745 (1.8GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										<p>SOFTWARE¹⁴</p> <p>Windows XP Professional</p> <ul style="list-style-type: none"> - Microsoft® Windows® XP Professional²⁰ ↔ Disk-to-Disk Recovery (in hidden protected area) <p>Preloaded</p> <ul style="list-style-type: none"> • Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™ • Access IBM • Access Connections • IBM Rescue and Recovery™ • IBM RecordNOW and Drive Letter Access powered by Sonic products (DVD-RW models) • InterVideo WinDVD (DVD-RW) • InterVideo WinDVD Creator (DVD-RW models) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™¹⁵ <p>Downloadable</p> <ul style="list-style-type: none"> • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • IBM Client Security Software (for security chip) <p>License (CD not included)</p> <ul style="list-style-type: none"> - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client 		
L2 cache	2MB / on die (at processor speed) / ECC												
Memory	512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available												
Diskette drive	None standard / use optional USB-based diskette drive												
DVD-RW	CD-RW/DVD-RW Multi-Burner / writes to CD-R, CD-RW, DVD-RAM, DVD-R, DVD-RW / reads CD-ROM, CD-R, CD-RW, CD-Audio, DVD-ROM, DVD-R, DVD+R, DVD+RW, DVD-RW, DVD-Video, DVD-RAM / removable from Ultrabay™ Slim												
Ultrabay Slim Disk	One modular bay for interchangeable devices (right side) / 9.5mm high bay 80GB⁸ HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact 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 / AGP 4X / 128MB DDR1 / OpenGL® support												
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)												
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												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³	15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm												
Weight ²	with optical drive and battery: 5.9 lb (2.7kg)												
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 - life ¹⁰	Up to 3.5 hr; <i>Optional 9-cell:</i> up to 5.7 hr; <i>9-cell plus Ultrabay Slim battery:</i> 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 (TI® PCI4520A CardBus controller, Mini PCI, 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, or 1 Type III / CardBus 32-bit / integrated door												
Ports	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 port (TV out) / one 4-pin industry standard connector												
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 upgradable												
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset												
Bluetooth™	None												
Ethernet	Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE												
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 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 / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Limited warranty ¹²	3 years/1 yr battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time												
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	Universal 72 watt AC adapter									
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40 High Capacity Li-Ion Battery 9-cell	08K8197	Asset ID™ ³⁴ (system-specific info in chip accessed over network)									
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	PC 2001-compliant									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040	ACPI 1.0b and 2.0-compliant									
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC/DC Combo Adapter	22P9010	CIM and DMI 2.0-compliant									
IBM USB 2.0 Combo Drive	73P4515	IBM 11a/b/g Wireless CardBus Adapter	31P9101	PXE 2.0-compliant									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301	ENERGY STAR®-compliant									
IBM USB 2.0 Memory Key 256MB	22P9228	Intel PRO/Wireless 2200BG Mini PCI	73P2801	IBM ImageUltra™ Services available									
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Kensington® MicroSaver® Security Cable	73P2582	International Warranty Service ¹⁷									
ThinkPad Multi-Burner Ultrabay Slim Drive	73P3294	IBM M400 Projector	0037A04	24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)									
Second HDD Adapter for Ultrabay Slim	62P4554	GemPC400 Smart Card Reader/Writer	31P8901	Post-warranty annual maintenance agreements at									
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad Port Replicator II	74P6733	ibm.com/services/its/us/source/maspspleu.pdf									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Mini Dock	287810U										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U										
ThinkPad Carrying Case - Leather	73P3600	ThinkPad Monitor Stand 2001	22P5265										
IBM 4GB Microdrive™ with PC Card	09N4280	TrackPoint Cap Collection	73P2698										
IBM Enhanced Performance USB Keyboard	73P2620	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US models announced May 11, 2004

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller memory	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Security chip	Workhorse (W) or Global (G) Avail Preload or Entry (E) date
1871-11U	Pentium® M 730	1.60	256MB	14.1" XGA	GMA 900	40HS	DVD	* Intel 11b/g ³²	Modem	No	Yes	XP Pro Entry Feb 05
1871-12U	Pentium M 730	1.60	256MB	14.1" XGA	GMA 900	40HS	Combo	* Intel 11b/g	Modem	No	Yes	XP Pro Entry Feb 05
1871-13U	Pentium M 730	1.60	256MB	14.1" XGA	GMA 900	40HS	Combo	* Intel 11b/g	Modem	Finger	Yes	XP Home Entry Feb 05
1871-16U	Pentium M 730	1.60	256MB	14.1" XGA	GMA 900	40HS	Combo	* Intel 11b/g	Modem	Finger	Yes	XP Pro Entry Feb 05
1871-22U	Pentium M 730	1.60	256MB	15.0" XGA	GMA 900	40HS	Combo	* Intel 11b/g	Modem	No	Yes	XP Pro Entry Feb 05
1871-24U	Pentium M 730	1.60	256MB	15.0" XGA	GMA 900	40HS	Combo	* Intel 11b/g	Modem	Finger	Yes	XP Pro Entry Feb 05
Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i> Intel® Pentium® M Processor 730 (1.60GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz system bus										SOFTWARE¹⁴	
L2 cache	2MB / on die (at processor speed) / ECC										Windows XP Professional models	
Memory	256MB std / 2GB max ⁷ / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area)	
Diskette drive	None standard / use optional USB-based diskette drive										Windows XP Home models	
DVD	<i>Some:</i> DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim										- Microsoft Windows XP Home Edition ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area)	
Combo	<i>Some:</i> DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim											
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay											
Disk	40GB⁸ HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System											
Display	<i>Some:</i> 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits <i>Some:</i> 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits										Preloaded (all)	
Graphics	Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz										• IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™.15 • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo, DVD models) • IBM Fingerprint Software (fingerprint models) • IBM Client Security Software (for security chip)	
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)										Downloadable (all)	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass /										• IBM Director Agent • Software Delivery Assistant • System Migration Assistant	
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										License (CD not included)	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage	
Weight ²	with optical drive and battery: 14.1" models: up to 5.1 lb (2.3kg); 15": up to 5.8 lb (2.6 kg)										Universal 72 watt AC adapter Asset ID™.34 (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 2.1-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²	
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 - life ¹⁰	Up to 4.0 hr; <i>Optional 9-cell:</i> up to 5.9 hr; <i>9-cell plus Ultrabay Slim battery:</i> up to 7.7 hr											
Architecture	Mobile Intel 915GM Express Chipset / 82915GM Graph Mem Cont Hub (GMCH-M) / 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (TI® PCI1510 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 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) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)											
Video out	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											
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable											
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip											
CDC	One Communications Daughter Card (CDC) socket / customer accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Bluetooth™	None											
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE											
Audio support	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; pink) / headphone jack (3.5 mm; green)											
Security	Power-on password / hard disk password / supervisor password / security keyhole											
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant											
Fingerprint reader	<i>Some:</i> Fingerprint reader on palm rest / swipe sensor / integrated with security chip											
Limited warranty ¹² 3 years/1 yr battery - EasyServ™.19 onsite pickup and delivery / service upgrades ²² avail												
256MB PC2-4200 DDR2 NP CL4 SOD	73P3840	ThinkPad T40/R50 Li-Ion Battery 6-cell	92P1101									
512MB PC2-4200 DDR2 NP CL4 SOD	73P3842	ThinkPad T40/R50 Li-Ion Battery 9-cell	92P1102									
1GB PC2-4200 DDR2 NP CL4 SOD	73P3844	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Multi-Battery Charger II	22P9040									
IBM USB 2.0 Memory Key 128MB	73P4512	ThinkPad 72W AC/DC Combo Adapter	22P9010									
IBM USB 2.0 Memory Key 256MB	22P9228	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301									
IBM USB 2.0 Memory Key 512MB	22P9230	Intel PRO/Wireless 2200BG Mini PCI	73P2801									
IBM 4GB Microdrive® with PC Card	09N4280	IBM 11a/b/g Wireless CardBus Adapter	31P9101									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Port Replicator II	74P6733									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Mini Dock	287810U									
IBM USB Portable Diskette Drive	05K9276	ThinkPad Dock II	287710U									
Second HDD Adapter for Ultrabay Slim	62P4554	ThinkPad Carrying Case - Backpack	73P3599									
Multi-Burner Plus Ultrabay Slim Drive	73P3342	ThinkPad Carrying Case - Leather	73P3600									
IBM Enh Perf Wireless Kybd and Mouse	73P4067	IBM M400 Projector	0037A04									
IBM USB Travel Keyboard with UltraNav	31P9490	IBM E400 Projector	0038A04									
IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM C400 Projector	0039A04									
Kensington® MicroSaver® Security Cable	73P2582	TrackPoint Cap Collection	73P2698									
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information
US models announced January 19, 2005

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Finger print reader	Secu- rity chip set	Workhorse (W) or Global (G) Entry (E)	Avail date
1871-48U	Pentium® M 750	1.86	512MB	14.1" XGA	GMA 40HS	DVD	* Intel 11a/b/g ³²	Modem	No	Yes	915GM	W	Feb 05
1871-4AU	Pentium M 750	1.86	512MB	14.1" XGA	GMA 40HS	Combo	* Intel 11b/g ³²	Modem	No	Yes	915GM	W G	Feb 05
1871-4BU	Pentium M 750	1.86	512MB	14.1" XGA	GMA 40HS	Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915GM	W	Feb 05
1871-4CU	Pentium M 750	1.86	512MB	14.1" XGA	GMA 40HS	Combo	* Intel 11a/b/g	Mod/Blue	No	Yes	915GM	W	Feb 05
2668-41U	Pentium M 750	1.86	256MB	14.1" XGA	X300	DVD	Open; wireless upg ³⁶	Modem	No	Yes	915PM	W	Feb 05
2668-42U	Pentium M 750	1.86	512MB	14.1" XGA	X300	DVD	Open; wireless upg	Modem	No	Yes	915PM	W G	Feb 05
2668-43U	Pentium M 750	1.86	512MB	14.1" XGA	X300	DVD	* Intel 11b/g	Modem	No	Yes	915PM	W G	Feb 05
2668-49U	Pentium M 750	1.86	512MB	14.1" XGA	X300	Combo	* Intel 11a/b/g	Modem	No	Yes	915PM	W	Feb 05
2668-44U	Pentium M 750	1.86	512MB	14.1" XGA	X300	Combo	* Intel 11b/g	Modem	Finger	Yes	915PM	W G	Feb 05
2668-45U	Pentium M 750	1.86	512MB	14.1" XGA	X300	Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915PM	W	Feb 05
2668-46U	Pentium M 750	1.86	512MB	14.1" SXGA+	X300	Combo	* Intel 11b/g	Modem	No	Yes	915PM	W G	Feb 05
2668-4DU	Pentium M 750	1.86	512MB	14.1" SXGA+	X300	Combo	* Intel 11b/g	Modem	Finger	Yes	915PM	W G	Feb 05
2668-4EU	Pentium M 750	1.86	512MB	14.1" SXGA+	X300	Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915PM	W	Feb 05
2668-71U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915PM	Feb 05
2668-72U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	DVD±RW	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915PM	Feb 05
2668-73U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	Combo	* Intel 11a/b/g	Mod/Blue	No	Yes	915PM	Feb 05
2668-74U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	Combo	IBM 11a/b/g II ³²	Mod/Blue	Finger	Yes	915PM	Feb 05
2668-75U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	DVD±RW	IBM 11a/b/g II	Mod/Blue	Finger	Yes	915PM	Feb 05
2668-76U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	Combo	IBM 11a/b/g II	Mod/Blue	No	Yes	915PM	Feb 05

Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 750 (1.86GHz) or 760 (2.00GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz system bus	SOFTWARE¹⁴
L2 cache	2MB / on die (at processor speed) / ECC	Windows XP Professional
Memory	256MB or 512MB std / 2GB max ⁷ / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail	- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area)
Diskette drive	None standard / use optional USB-based diskette drive	Preloaded
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim	• IBM Rescue and Recovery™
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim	• Access IBM
DVD±RW	Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim	• Access Connections
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay	• Norton AntiVirus
Disk	40GB⁸ HS (5400 rpm) or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System	• PC-Doctor™
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	• ThinkPad Utilities
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	• Adobe Reader
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)	• IBM Update Connector™ ¹⁵
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass /	• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD±RW)
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones	• InterVideo WinDVD (combo, DVD±RW models)
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	• InterVideo WinDVD Creator (DVD±RW models)
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm	• IBM Simple Backup (DVD±RW)
Weight ²	with optical drive and battery: up to 5.2 lb (2.3kg)	• IBM Fingerprint Software (fingerprint models)
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover	• IBM Client Security Software (for security chip)
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim	Downloadable
Battery - life ¹⁰	Up to 4.0 hr; <i>Optional 9-cell</i> : up to 6.0 hr; <i>9-cell plus Ultrabay Slim battery</i> : up to 7.8 hr	• IBM Director Agent
Architecture	Some: Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub Some: Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub All: 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, 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 PC8394T Super I/O for security chip [TPM], Asset ID, hardware event log, parallel, infrared, [docking-based ports (serial, diskette)])	• Software Delivery Assistant
PC Card Std slot	One Type I or Type II slot / CardBus 32-bit / integrated door	• System Migration Assistant
ExpressCard slot	One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door	ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage
Ports	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)	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
Video out	S-video out port (TV out) / one 4-pin industry standard connector	IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception	ServicePac ²² 2yr IOR 9x5 NBD 30L9190
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable	ServicePac 3yr IOR 9x5 NBD 30L9197
Wireless upg ³⁶	Some: wireless upgradable with wireless Mini PCI options	ServicePac 4yr IOR 9x5 NBD 69P9198
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip	ServicePac 5yr IOR 9x5 NBD 69P9200
Intel 11a/b/g ³²	Some: 11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset	ServicePac 4yr P&L P/U Depot 69P9199
IBM 11a/b/g II ³²	Some: 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros AR5004X chipset	ServicePac 5yr P&L P/U Depot 69P9201
CDC	One Communications Daughter Card (CDC) socket / customer accessible	
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant™ chipset	
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)	
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE	
Audio support	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; pink) / headphone jack (3.5 mm; green)	
Security	Power-on password / hard disk password / supervisor password / security keyhole	
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant	
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip	
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail	

See footnotes for important warranty information
US models announced January 19, 2005

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Security chip	Workhorse (W) or Global (G) set	Chip or Entry (E) Avail date
1871-86U	Pentium® M 750	1.86	512MB	15.0"	XGA	GMA	40HS Combo	* Intel 11a/b/g ³²	Modem	Finger	Yes	915GM W	Feb 05
2668-87U	Pentium M 750	1.86	512MB	15.0"	XGA	X300	40HS Combo	* Intel 11a/b/g	Modem	No	Yes	915PM W	Feb 05
2668-83U	Pentium M 750	1.86	512MB	15.0"	XGA	X300	40HS Combo	* Intel 11b/g ³²	Modem	Finger	Yes	915PM W G	Feb 05
2668-84U	Pentium M 750	1.86	512MB	15.0"	SXGA+	X300	40HS Combo	* Intel 11b/g	Mod/Blue	No	Yes	915PM W G	Feb 05
2668-88U	Pentium M 750	1.86	512MB	15.0"	SXGA+	X300	40HS Combo	* Intel 11a/b/g	Modem	No	Yes	915PM W	Feb 05
2668-85U	Pentium M 750	1.86	512MB	15.0"	SXGA+	X300	40HS Combo	* Intel 11a/b/g	Modem	Finger	Yes	915PM W	Feb 05
2668-89U	Pentium M 750	1.86	512MB	15.0"	SXGA+	X300	80HS Combo	* Intel 11a/b/g	Modem	Finger	Yes	915PM W	Feb 05
2668-91U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	80HS Combo	* Intel 11a/b/g	Mod/Blue	No	Yes	915PM W	Feb 05
2668-93U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	80HS Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915PM W	Feb 05
2668-92U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	80HS DVD±RW	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915PM W	Feb 05
2668-94U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	60U Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	915PM W	Feb 05
2668-95U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	80HS Combo	IBM 11a/b/g II ³²	Mod/Blue	No	Yes	915PM W	Feb 05
2668-96U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	80HS Combo	IBM 11a/b/g II	Mod/Blue	Finger	Yes	915PM W	Feb 05
2668-97U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	80HS DVD±RW	IBM 11a/b/g II	Mod/Blue	Finger	Yes	915PM W	Feb 05
2668-98U	Pentium M 760	2.00	512MB	15.0"	SXGA+	X300	60U Combo	IBM 11a/b/g II	Mod/Blue	Finger	Yes	915PM W	Feb 05
Positioning Processor	Perfect balance of performance and portability; two-spindle system												
L2 cache	Intel® Pentium® M Processor 750 (1.86GHz) or 760 (2.00GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz system bus												
Memory	2MB / on die (at processor speed) / ECC												
Diskette drive	512MB std / 2GB max ⁷ / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available												
Combo DVD±RW	None standard / use optional USB-based diskette drive												
UltraBay Slim Disk	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim One modular bay for interchangeable devices (right side) / 9.5mm high bay 40GB ⁸ HS (5400 rpm), 60GB ⁸ Ultra HS (7200 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System												
Display	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 / 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												
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)												
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones												
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions												
ThinkLight™													
Dimensions ³	15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm												
Weight ²	with optical drive and battery: up to 5.9 lb (2.7kg)												
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 - life ¹⁰	Up to 3.9 hr; Optional 9-cell: up to 5.9 hr; 9-cell plus Ultrabay Slim battery: up to 7.7 hr												
Architecture	Some: Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub Some: Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub All: 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, 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 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												
Ports	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 port (TV out) / one 4-pin industry standard connector												
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 upgradable												
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip												
Intel 11a/b/g ³²	Some: 11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset												
IBM 11a/b/g II ³²	Some: 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros AR5004X chipset												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset												
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)												
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE												
Audio support	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; pink) / headphone jack (3.5 mm; green)												
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / TCG-compliant												
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip												
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail												
256MB PC2-4200 DDR2 NP CL4 SOD	73P3840	ThinkPad T40/R50 Li-Ion Battery 6-cell	92P1101										
512MB PC2-4200 DDR2 NP CL4 SOD	73P3842	ThinkPad T40/R50 Li-Ion Battery 9-cell	92P1102										
1GB PC2-4200 DDR2 NP CL4 SOD	73P3844	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Port Replicator II	74P6733										
Other options at ibm.com/pc/us/accessories		ThinkPad Dock II	287710U										
										SOFTWARE¹⁴			
										Windows XP Professional			
										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2)			
										↔ Disk-to-Disk Recovery (in hidden protected area)			
										Preloaded			
										• IBM Rescue and Recovery™			
										• Access IBM			
										• Access Connections			
										• Norton AntiVirus			
										• PC-Doctor™			
										• ThinkPad Utilities			
										• Adobe Reader			
										• IBM Update Connector™ ¹⁵			
										• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD±RW)			
										• InterVideo WinDVD (combo, DVD±RW models)			
										• InterVideo WinDVD Creator (DVD±RW models)			
										• IBM Simple Backup (DVD±RW)			
										• IBM Fingerprint Software (fingerprint models)			
										• IBM Client Security Software (for security chip)			
										Downloadable			
										• IBM Director Agent			
										• Software Delivery Assistant			
										• System Migration Assistant			
										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage			
										Universal 72 watt AC adapter			
										Asset ID™ ³⁴ (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 2.1-compliant			
										IBM ImageUltra™ Services available			
										International Warranty Service ¹⁷			
										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²			
										ServicePac®. ²² 2yr IOR 9x5 NBD			
										30L9190			
										ServicePac 3yr IOR 9x5 NBD			
										30L9197			
										ServicePac 4yr IOR 9x5 NBD			
										69P9198			
										ServicePac 5yr IOR 9x5 NBD			
										69P9200			
										ServicePac 4yr P&L P/U Depot			
										69P9199			
										ServicePac 5yr P&L P/U Depot			
										69P9201			
										Post-warranty annual maintenance agreements at			
										ibm.com/services/its/us/source/maspspleu.pdf			

See footnotes for important warranty information
US models announced January 19, 2005

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller memory	Disk GB ⁶	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Security chip	Bat-tery life ¹⁰	Workhorse (W) or Global (G) Entry (E)	Avail date
2668-G1U	Pentium® M 770	2.13	1GB	14.1" SXGA+	128MB	60U	Combo	* Intel 11a/b/g ³²	Mod/Blue	Finger	Yes	5.2 hr		Apr 05
2668-G3U	Pentium M 770	2.13	1GB	14.1" SXGA+	128MB	60U	Combo	* Intel 11a/b/g	Mod/Blue	No	Yes	5.2 hr		Apr 05
2668-G2U	Pentium M 770	2.13	1GB	14.1" SXGA+	128MB	60U	DVD±RW	* Intel 11a/b/g	Mod/Blue	Finger	Yes	5.1 hr		Apr 05
2668-G5U	Pentium M 770	2.13	1GB	14.1" SXGA+	128MB	60U	Combo	IBM 11a/b/g II ³²	Mod/Blue	Finger	Yes	5.2 hr		Apr 05
2668-G6U	Pentium M 770	2.13	1GB	14.1" SXGA+	128MB	60U	Combo	IBM 11a/b/g II	Mod/Blue	No	Yes	5.2 hr		Apr 05
2668-G7U	Pentium M 770	2.13	1GB	14.1" SXGA+	128MB	60U	DVD±RW	IBM 11a/b/g II	Mod/Blue	Finger	Yes	5.1 hr		Apr 05
2668-H1U	Pentium M 770	2.13	1GB	15.0" UXGA	128MB	60U	Combo	* Intel 11a/b/g	Mod/Blue	Finger	Yes	4.8 hr		Apr 05
2668-H3U	Pentium M 770	2.13	1GB	15.0" UXGA	128MB	60U	Combo	IBM 11a/b/g II	Mod/Blue	Finger	Yes	4.8 hr		Apr 05
2668-H2U	Pentium M 770	2.13	1GB	15.0" UXGA	128MB	60U	DVD±RW	* Intel 11b/g ³²	Mod/Blue	Finger	Yes	4.7 hr	Global	Apr 05
2668-H4U	Pentium M 770	2.13	1GB	15.0" UXGA	128MB	60U	Combo	* Intel 11a/b/g	Mod/Blue	No	Yes	4.8 hr		Apr 05
2668-H5U	Pentium M 770	2.13	1GB	15.0" UXGA	128MB	60U	DVD±RW	* Intel 11a/b/g	Mod/Blue	No	Yes	4.7 hr		Apr 05
2668-H7U	Pentium M 770	2.13	1GB	15.0" UXGA	128MB	60U	Combo	IBM 11a/b/g II	Mod/Blue	No	Yes	4.8 hr		Apr 05
2668-H8U	Pentium M 770	2.13	1GB	15.0" UXGA	128MB	60U	DVD±RW	IBM 11a/b/g II	Mod/Blue	No	Yes	4.7 hr		Apr 05
Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 770 (2.13GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz system bus													
L2 cache	2MB / on die (at processor speed) / ECC													
Memory	1GB std / 2GB max ⁷ / 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 / use optional USB-based diskette drive													
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim													
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim													
DVD±RW	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	60GB⁸ Ultra HS (7200 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System													
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 / PCI Express x16 / 128MB GDDR1 memory													
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size 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													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm													
Weight ²	with optical drive and battery: 14.1" models: up to 5.5 lb (2.5kg); 15": up to 6.3 lb (2.9 kg)													
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover													
Battery - type	Lithium Ion 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim													
Battery - life ¹⁰	9-cell: up to 5.2 hr; 9-cell plus Ultrabay Slim battery: up to 7.7 hr													
Architecture	Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub (MCH-M) / 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (Ricoh® R5C811 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 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) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)													
Video out	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													
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable													
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip													
Intel 11a/b/g ³²	Some: 11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset													
IBM 11a/b/g II ³²	Some: 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros AR5004X chipset													
CDC	One Communications Daughter Card (CDC) socket / customer accessible													
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset													
Bluetooth™	Bluetooth wireless technology / in CDC (with modem)													
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE													
Audio support	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; pink) / headphone jack (3.5 mm; green)													
Security	Power-on password / hard disk password / supervisor password / security keyhole													
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant													
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip													
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail													
256MB PC2-4200 DDR2 NP CL4 SOD	73P3840	ThinkPad T40/R50 Li-Ion Battery 6-cell	92P1101											
512MB PC2-4200 DDR2 NP CL4 SOD	73P3842	ThinkPad T40/R50 Li-Ion Battery 9-cell	92P1102											
1GB PC2-4200 DDR2 NP CL4 SOD	73P3844	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301											
IBM USB 2.0 Memory Key 512MB	22P9230	Intel PRO/Wireless 2200BG Mini PCI	73P2801											
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Port Replicator II	74P6733											
IBM USB Portable Diskette Drive	05K9276	ThinkPad Mini Dock	287810U											
Multi-Burner Plus Ultrabay Slim Drive	73P3342	ThinkPad Dock II	287710U											
IBM Enh Perf Wireless Kybd and Mouse	73P4067	ThinkPad Carrying Case - Leather	73P3600											
Kensington® MicroSaver® Security Cable	73P2582	Other options at ibm.com/pc/us/accessories												
				ServicePac ²² 2yr IOR 9x5 NBD	30L9190									
				ServicePac 3yr IOR 9x5 NBD	30L9197									
				ServicePac 4yr IOR 9x5 NBD	69P9198									
				ServicePac 5yr IOR 9x5 NBD	69P9200									
				ServicePac 4yr P&L P/U Depot	69P9199									
				ServicePac 5yr P&L P/U Depot	69P9201									
				Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf										

See footnotes for important warranty information
US models announced January 19, 2005

* Powered by Intel Centrino™ mobile technology

IBM® ThinkPad® T43 and T43p (1871 and 2668) - Education

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Finger print reader	Chip set	Limited warranty	Avail date
T43 1871-C1U	Pentium® M 750	1.86	512MB	14.1" XGA	GMA	40HS	Combo	* Intel 11a/b/g ³²	Modem	No	915GM	EasyServ	Feb 05
T43 2668-C5U	Pentium M 760	2.00	512MB	14.1" XGA	X300	60HS	DVD±RW	* Intel 11a/b/g	Modem	No	915PM	EasyServ	Feb 05
T43 2668-C2U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	Combo	* Intel 11a/b/g	Modem	No	915PM	EasyServ	Feb 05
T43 2668-C6U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	DVD±RW	* Intel 11a/b/g	Modem	No	915PM	EasyServ	Feb 05
T43 2668-C3U	Pentium M 760	2.00	512MB	15.0" SXGA+	X300	60HS	Combo	* Intel 11a/b/g	Modem	No	915PM	EasyServ	Feb 05
T43p 2668-C4U	Pentium M 770	2.13	1GB	15.0" UXGA	V3200	80HS	DVD±RW	* Intel 11a/b/g	Modem	No	915PM	EasyServ	Apr 05

• **These models have an EasyServ™.19 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	<i>Perfect balance of performance and portability; two-spindle system</i>							SOFTWARE¹⁴					
L2 cache	Intel® Pentium® M Processor 750 (1.86GHz), 760 (2.00GHz), or 770 (2.13GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz bus							Windows XP Professional					
Memory	2MB / on die (at processor speed) / ECC							- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2)					
Diskette drive	None standard / use optional USB-based diskette drive							↳ Disk-to-Disk Recovery (in hidden protected area)					
Combo DVD±RW	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim							Preloaded					
Ultrabay Slim	Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim							• Education software from Vital Source Technologies®: vidualsource KEY™ and Personal Portable library™					
Disk	One modular bay for interchangeable devices (right side) / 9.5mm high bay							• IBM Rescue and Recovery™					
	40GB ⁸ HS (5400 rpm), 60GB ⁸ HS (5400 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System							• Access IBM					
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits							• Access Connections					
	Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits							• Norton AntiVirus					
	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							• PC-Doctor™					
	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							• ThinkPad Utilities					
Graphics	Some: Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz							• Adobe Reader					
	Some: ATI® MOBILITY™ RADEON® X300 / PCI Express x16 / 64MB GDDR1 memory							• IBM Update Connector™.15					
	Some: ATI MOBILITY FireGL™ V3200 / PCI Express x16 / 128MB GDDR1 memory							• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD±RW)					
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)							• InterVideo WinDVD (combo, DVD±RW models)					
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones							• InterVideo WinDVD Creator (DVD±RW models)					
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions							• IBM Simple Backup (DVD±RW)					
ThinkLight™								• IBM Client Security Software (for security chip)					
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm							Downloadable					
	15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm							• IBM Director Agent					
Weight ²	with optical drive and battery: 14.1" models: up to 5.2 lb (2.3kg); 15": up to 5.9 lb (2.7 kg)							• Software Delivery Assistant					
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover							• System Migration Assistant					
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim												
Battery - life ¹⁰	Up to 4 hr; Optional 9-cell: up to 5.9 hr; 9-cell plus Ultrabay Slim battery: up to 7.7 hr												
Architecture	Some: Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub							ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage					
	Some: Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub												
	All: 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, 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 PC8394T Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, [docking-based ports (serial, diskette)])							Universal 72 watt AC adapter					
PC Card Std slot	One Type I or Type II slot / CardBus 32-bit / integrated door							Asset ID™.34 (system-specific info in chip accessed over network)					
ExpressCard slot	One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door							PC 2001-compliant					
Ports	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)							ACPI 1.0b and 2.0-compliant					
Video out	S-video out port (TV out) / one 4-pin industry standard connector							CIM and DMI 2.0-compliant					
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception							PXE 2.1-compliant					
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable							IBM ImageUltra™ Services available					
Intel 11a/b/g ³²	11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset							International Warranty Service ¹⁷					
CDC	One Communications Daughter Card (CDC) socket / customer accessible							24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²					
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset												
Bluetooth™	None							ServicePac ²² 2yr IOR 9x5 NBD					
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE							30L9190					
Audio support	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; pink) / headphone jack (3.5 mm; green)							ServicePac 3yr IOR 9x5 NBD					
Security	Power-on password / hard disk password / supervisor password / security keyhole							30L9197					
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / TCG-compliant							ServicePac 4yr IOR 9x5 NBD					
Fingerprint reader	None							69P9198					
Limited warranty ¹²	3 years/1 yr battery - EasyServ™.19 onsite pickup and delivery / service upgrades ²² avail							ServicePac 5yr IOR 9x5 NBD					
								69P9200					
256MB PC2-4200 DDR2 NP CL4 SOD	73P3840		ThinkPad T40/R50 Li-Ion Battery 6-cell		92P1101		ServicePac 4yr P&L P/U Depot						
512MB PC2-4200 DDR2 NP CL4 SOD	73P3842		ThinkPad T40/R50 Li-Ion Battery 9-cell		92P1102		69P9199						
1GB PC2-4200 DDR2 NP CL4 SOD	73P3844		IBM 11a/b/g Wireless Mini PCI Adptr II		73P4301		ServicePac 5yr P&L P/U Depot						
IBM USB 2.0 Memory Key 512MB	22P9230		IBM 11a/b/g Wireless CardBus Adapter		31P9101		69P9201						
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273		ThinkPad Port Replicator II		74P6733		Post-warranty annual maintenance agreements at						
Second HDD Adapter for Ultrabay Slim	62P4554		ThinkPad Dock II		287710U		ibm.com/services/its/us/source/maspspleu.pdf						
IBM Enh Perf Wireless Kybd and Mouse	73P4067		Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information
US models announced January 19, 2005

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IBM® ThinkPad® T43 and T43p (1872 and 2669) - Education

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Chip set	Limited warranty	Avail date
T43 1872-C1U	Pentium® M 750	1.86	512MB	14.1" XGA	GMA	40HS	Combo	* Intel 11a/b/g ³²	Modem	No	915GM	Onsite	Feb 05
T43 2669-C5U	Pentium M 760	2.00	512MB	14.1" XGA	X300	60HS	DVD±RW	* Intel 11a/b/g	Modem	No	915PM	Onsite	Feb 05
T43 2669-C2U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	Combo	* Intel 11a/b/g	Modem	No	915PM	Onsite	Feb 05
T43 2669-C6U	Pentium M 760	2.00	512MB	14.1" SXGA+	X300	80HS	DVD±RW	* Intel 11a/b/g	Modem	No	915PM	Onsite	Feb 05
T43 2669-C3U	Pentium M 760	2.00	512MB	15.0" SXGA+	X300	60HS	Combo	* Intel 11a/b/g	Modem	No	915PM	Onsite	Feb 05
T43p 2669-C4U	Pentium M 770	2.13	1GB	15.0" UXGA	V3200	80HS	DVD±RW	* Intel 11a/b/g	Modem	No	915PM	Onsite	Apr 05
T43 2669-C7U	Pentium M 750	1.86	512MB	14.1" XGA	X300	40HS	Combo	* Intel 11b/g ³²	Modem	No	915PM	Onsite	Feb 05
T43 2669-C8U	Pentium M 750	1.86	512MB	14.1" SXGA+	X300	80HS	Combo	* Intel 11b/g	Modem	No	915PM	Onsite	Feb 05
T43 2669-C9U	Pentium M 750	1.86	512MB	15.0" SXGA+	X300	40HS	DVD±RW	* Intel 11b/g	Modem	No	915PM	Onsite	Feb 05
T43p 2669-CAU	Pentium M 750	1.86	512MB	15.0" UXGA	V3200	80HS	DVD±RW	* Intel 11b/g	Mod/Blue	No	915PM	Onsite	Apr 05

• **These models have a limited onsite service²⁴ 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	<i>Perfect balance of performance and portability; two-spindle system</i> Intel® Pentium® M Processor 750 (1.86GHz), 760 (2.00GHz), or 770 (2.13GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz bus	SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area)
L2 cache	2MB / on die (at processor speed) / ECC	
Memory	512MB or 1GB std / 2GB max ⁷ / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail	Preloaded • Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™ • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD±RW) • InterVideo WinDVD (combo, DVD±RW models) • InterVideo WinDVD Creator (DVD±RW models) • IBM Simple Backup (DVD±RW) • IBM Client Security Software (for security chip)
Diskette drive	None standard / use optional USB-based diskette drive	
Combo	<i>Some:</i> DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim	
DVD±RW	<i>Some:</i> 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	40GB⁸ HS (5400 rpm), 60GB⁸ HS (5400 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System	
Display	<i>Some:</i> 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits <i>Some:</i> 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits <i>Some:</i> 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology <i>Some:</i> 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	<i>Some:</i> Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz <i>Some:</i> ATI® MOBILITY™ RADEON® X300 / PCI Express x16 / 64MB GDDR1 memory <i>Some:</i> ATI® MOBILITY FireGL™ V3200 / PCI Express x16 / 128MB GDDR1 memory	Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)	License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
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	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm 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: 14.1" models: up to 5.2 lb (2.3kg); 15": up to 5.9 lb (2.7 kg)	
Weight ²	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover	
Case material	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim	
Battery - type	Up to 3.9 hr; <i>Optional 9-cell:</i> up to 5.9 hr; <i>9-cell plus Ultrabay Slim battery:</i> up to 7.7 hr	
Battery - life ¹⁰		
Architecture	<i>Some:</i> Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub <i>Some:</i> Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub <i>All:</i> 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, 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 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	
Ports	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)	ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage
Video out	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	Universal 72 watt AC adapter
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable <i>Some:</i> 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip <i>Some:</i> 11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset	Asset ID™ ³⁴ (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 2.1-compliant
CDC	One Communications Daughter Card (CDC) socket / customer accessible	IBM ImageUltra™ Services available
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset	International Warranty Service ¹⁷
Bluetooth™	<i>Some:</i> Bluetooth wireless technology / in CDC (with modem)	24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE	
Audio support	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; pink) / headphone jack (3.5 mm; green)	
Security	Power-on password / hard disk password / supervisor password / security keyhole	
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant	
Fingerprint reader	None	Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf
Limited warranty ¹²	3 years/1 yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time	

See footnotes for important warranty information
US models announced January 19, 2005

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Limited Warranty	Workhorse or Global Express	Avail date
1875-D1U	Pentium® M 740	1.73	256MB	14.1" XGA	GMA 900	40HS	DVD	* Intel 11b/g ³²	Modem	No	1 year	Express	Feb 05
1875-D2U	Pentium M 740	1.73	256MB	14.1" XGA	GMA 900	40HS	Combo	* Intel 11a/b/g ³²	Modem	No	1 year	Express	Feb 05
1875-D6U	Pentium M 740	1.73	256MB	14.1" XGA	GMA 900	40HS	Combo	* Intel 11a/b/g	Modem	Finger	1 year	Express	Feb 05
1875-D9U	Pentium M 740	1.73	256MB	15.0" XGA	GMA 900	40HS	Combo	* Intel 11a/b/g	Modem	No	1 year	Express	Feb 05
1875-DAU	Pentium M 740	1.73	256MB	15.0" XGA	GMA 900	40HS	Combo	* Intel 11a/b/g	Modem	Finger	1 year	Express	Feb 05

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- These 1875 models have a 1 year limited warranty (other ThinkPad T43/T43p 2687 Express models have a 3 year limited warranty)

Positioning Processor	Perfect balance of performance and portability; two-spindle system Intel® Pentium® M Processor 740 (1.73GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz system bus										SOFTWARE¹⁴		
L2 cache	2MB / on die (at processor speed) / ECC										Windows XP Professional		
Memory	256MB std / 2GB max ⁷ / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket avail										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ↔ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded		
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / bootable / removable from Ultrabay™ Slim										• IBM Rescue and Recovery™		
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim										• Access IBM		
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay										• Access Connections		
Disk	40GB⁸ HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• Norton AntiVirus		
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										• PC-Doctor™		
Graphics	Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz										• ThinkPad Utilities		
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)										• Adobe Reader		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• IBM Update Connector™.15		
Touch pad	Illuminates the keyboard to improve visibility in low-light conditions										• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)		
ThinkLight™											• InterVideo WinDVD (combo, DVD models)		
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm										• IBM Fingerprint Software (fingerprint models)		
Weight ²	with optical drive and battery: 14.1" models: up to 5.1 lb (2.3kg); 15": up to 5.8 lb (2.6 kg)										• IBM Client Security Software (for security chip)		
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover										Downloadable		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim										• IBM Director Agent		
Battery - life ¹⁰	Up to 3.9 hr; <i>Optional 9-cell</i> : up to 5.9 hr; <i>9-cell plus Ultrabay Slim battery</i> : up to 7.7 hr										• Software Delivery Assistant		
Architecture	Mobile Intel 915GM Express Chipset / 82915GM Graph Mem Cont Hub (GMCH-M) / 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint] / PCI bus (TI® PC1510 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))										• System Migration Assistant		
PC Card Std slot	One Type I or Type II slot / CardBus 32-bit / integrated door										License (CD not included)		
ExpressCard slot	One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Ports	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 port (TV out) / one 4-pin industry standard connector										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										Universal 72 watt AC adapter		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										Asset ID™.34 (system-specific info in chip accessed over network)		
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip										PC 2001-compliant		
Intel 11a/b/g ³²	Some: 11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset										ACPI 1.0b and 2.0-compliant		
CDC	One Communications Daughter Card (CDC) socket / customer accessible										CIM and DMI 2.0-compliant		
Modem	56K ⁶ V.90 (V.92-designed ²³) modem in CDC / Conexant® chipset										PXE 2.1-compliant		
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)										IBM ImageUltra™ Services available		
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE										International Warranty Service ¹⁷		
Audio support	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; pink) / headphone jack (3.5 mm; green)										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²		
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant												
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip												
Limited warranty ¹²	1 year - EasyServ™.19 onsite pickup and delivery / service upgrades ²² avail												
256MB PC2-4200 DDR2 NP CL4 SOD	73P3840	ThinkPad T40/R50 Li-Ion Battery 6-cell	92P1101	ServicePac ²² 1yr IOR 9x5 NBD	30L9188								
1GB PC2-4200 DDR2 NP CL4 SOD	73P3842	ThinkPad T40/R50 Li-Ion Battery 9-cell	92P1102	ServicePac 2 yr IOR 9x5 NBD									
1GB PC2-4200 DDR2 NP CL4 SOD	73P3844	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 3 yr IOR 9x5 NBD	30L9189								
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 4 yr IOR 9x5 NBD	30L9195								
IBM USB 2.0 Memory Key 128MB	73P4512	ThinkPad 72W AC/DC Combo Adapter	22P9010	ServicePac 5 yr IOR 9x5 NBD	30L9194								
IBM USB 2.0 Memory Key 256MB	22P9228	IBM 11a/b/g Wireless Mini PCI Adptr II	73P4301	ServicePac 2 yr P&L P/U Depot	30L9196								
IBM USB 2.0 Memory Key 512MB	22P9230	Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 3 yr P&L P/U Depot	30L9191								
IBM 4GB Microdrive® with PC Card	09N4280	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 5 yr P&L P/U Depot	30L9192								
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Port Replicator II	74P6733	ServicePac 5 yr P&L P/U Depot	69P9197								
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Mini Dock	287810U										
IBM USB Portable Diskette Drive	05K9276	ThinkPad Dock II	287710U										
Second HDD Adapter for Ultrabay Slim	62P4554	ThinkPad Carrying Case - Leather	73P3600										
Multi-Burner Plus Ultrabay Slim Drive	73P3342	IBM M400 Projector	0037A04										
Kensington® MicroSaver® Security Cable	73P2582	TrackPoint Cap Collection	73P2698										
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US models announced January 19, 2005

* Powered by Intel Centrino™ mobile technology

IBM® ThinkPad® T43 and T43p (2687) - Express

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller memory	Disk GB ^b	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Finger print reader	Battery life ¹⁰	Battery cells	Limited Warranty	Avail date
T43	2687-DEU Pentium® M 750	1.86	512MB	14.1" XGA	64MB	40HS	Combo	* Intel 11a/b/g ³²	Modem	No	3.8 hr	6-cell	3 yrs	Feb 05
T43	2687-D7U Pentium M 750	1.86	512MB	14.1" SXGA+	64MB	40HS	Combo	* Intel 11a/b/g	Modem	No	3.6 hr	6-cell	3 yrs	Feb 05
T43	2687-D8U Pentium M 750	1.86	512MB	14.1" SXGA+	64MB	60HS	DVD±RW	* Intel 11a/b/g	Modem	No	3.6 hr	6-cell	3 yrs	Feb 05
T43	2687-D4U Pentium M 750	1.86	512MB	15.0" SXGA+	64MB	40HS	Combo	* Intel 11a/b/g	Modem	No	3.4 hr	6-cell	3 yrs	Feb 05
T43	2687-DDU Pentium M 750	1.86	512MB	15.0" SXGA+	64MB	60HS	DVD±RW	* Intel 11a/b/g	Modem	No	3.4 hr	6-cell	3 yrs	Feb 05
T43p	2687-D5U Pentium M 760	2.00	1GB	15.0" UXGA	128MB	80HS	DVD±RW	* Intel 11a/b/g	Mod/Blue	Finger	4.7 hr	9-cell	3 yrs	Apr 05

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- These 2687 models have a 3 year limited warranty (other ThinkPad T43 1875 Express models have a 1 year limited warranty)

Positioning	Perfect balance of performance and portability; two-spindle system										SOFTWARE¹⁴			
Processor	Intel® Pentium® M Processor 750 (1.86GHz) or 760 (2.00GHz) with enhanced Intel SpeedStep™ technology ¹ , Execute Disable Bit, and 533MHz system bus										Windows XP Professional			
L2 cache	2MB / on die (at processor speed) / ECC										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2)			
Memory	512MB or 1GB std / 2GB max ⁷ / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail										↳ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded			
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Slim										• IBM Rescue and Recovery™			
DVD±RW	Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim										• Access IBM			
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay										• Access Connections			
Disk	40GB ⁸ HS (5400 rpm), 60GB HS (5400 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• Norton AntiVirus			
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• PC-Doctor™			
Graphics	Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits										• ThinkPad Utilities			
Keyboard	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										• Adobe Reader			
TrackPoint®	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										• IBM Update Connector™ ¹⁵			
Touch pad	Some: ATI® MOBILITY™ RADEON® X300 / PCI Express x16 / 64MB GDDR1 memory										• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD±RW)			
ThinkLight™	Some: ATI MOBILITY FireGL™ V3200 / PCI Express x16 / 128MB GDDR1 memory										• InterVideo WinDVD (combo, DVD±RW models)			
Dimensions ³	14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm										• InterVideo WinDVD Creator (DVD±RW models)			
Weight ²	15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm										• IBM Simple Backup (DVD±RW)			
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover										• IBM Fingerprint Software (fingerprint models)			
Battery - type	Lithium Ion 6- or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim										• IBM Client Security Software (for security chip)			
Battery - life ¹⁰	6-cell: up to 3.9 hr; 9-cell: up to 5.9 hr; 9-cell plus Ultrabay Slim battery: up to 7.7 hr										Downloadable			
Architecture	Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub (MCH-M) / 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (Ricoh® R5C811 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)])										• IBM Director Agent			
PC Card Std slot	One Type I or Type II slot / CardBus 32-bit / integrated door										• Software Delivery Assistant			
ExpressCard slot	One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door										• System Migration Assistant			
Ports	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)										License (CD not included)			
Video out	S-video out port (TV out) / one 4-pin industry standard connector										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage			
Mini PCI	One Mini PCI Type III slot (Communications Bay) / customer upgradable										Universal 72 watt AC adapter			
Intel 11a/b/g ³²	11a/b/g wireless ⁴ , Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset										Asset ID™ ³⁴ (system-specific info in chip accessed over network)			
CDC	One Communications Daughter Card (CDC) socket / customer accessible										PC 2001-compliant			
Modem	56K ⁶ V.90 (V.92-designed ²³) modem in CDC / Conexant® chipset										ACPI 1.0b and 2.0-compliant			
Bluetooth™	Some: Bluetooth wireless technology / in CDC (with modem)										CIM and DMI 2.0-compliant			
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE										PXE 2.1-compliant			
Audio support	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; pink) / headphone jack (3.5 mm; green)										IBM ImageUltra™ Services available			
Security	Power-on password / hard disk password / supervisor password / security keyhole										International Warranty Service ¹⁷			
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / TCG-compliant										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²			
Fingerprint reader	Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip										ServicePac ²² 2yr IOR 9x5 NBD			
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail										30L9190			
256MB PC2-4200 DDR2 NP CL4 SOD	73P3840			ThinkPad T40/R50 Li-Ion Battery 6-cell				92P1101			ServicePac 5yr IOR 9x5 NBD			
512MB PC2-4200 DDR2 NP CL4 SOD	73P3842			ThinkPad T40/R50 Li-Ion Battery 9-cell				92P1102			69P9198			
1GB PC2-4200 DDR2 NP CL4 SOD	73P3844			Ultrabay Slim Li-Polymer Battery 3-cell				08K8190			69P9200			
IBM USB 2.0 Portable Multi-Burner Drive	22P9163			ThinkPad Multiple Battery Charger II				22P9040			ServicePac 4yr P&L P/U Depot			
IBM USB 2.0 Memory Key 512MB	22P9230			ThinkPad 72W AC/DC Combo Adapter				22P9010			69P9199			
IBM 4GB Microdrive® with PC Card	09N4280			IBM 11a/b/g Wireless Mini PCI Adptr II				73P4301			ServicePac 5yr P&L P/U Depot			
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816			IBM 11a/b/g Wireless CardBus Adapter				31P9101			69P9201			
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273			ThinkPad Port Replicator II				74P6733			Post-warranty annual maintenance agreements at			
IBM USB Portable Diskette Drive	05K9276			ThinkPad Mini Dock				287810U			ibm.com/services/its/us/source/maspspleu.pdf			
Second HDD Adapter for Ultrabay Slim	62P4554			ThinkPad Dock II				287710U						
Multi-Burner Plus Ultrabay Slim Drive	73P3342			Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information
US models announced January 19, 2005

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Security chip	Preload	Workhorse (W) or Global (G) or Entry (E)	Avail date
2684-22U	Celeron®	1.7	128MB	13.3" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Home	E	Mar 2003
2684-G2U	Celeron	1.8	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Home	E	May 2003
2684-G8U	Celeron	1.8	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Pro	No	May 2003
2684-CAU	Pentium® 4-M	1.7	256MB	14.1" XGA	20GB	Combo	None	Modem	10/100	No	Windows XP Pro	No	Mar 2003
2684-B2U	Pentium 4-M	1.8	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Home	No	Mar 2003
2684-Q2U	Pentium 4-M	2.2	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Home	E	May 2003
2684-QQU	Pentium 4-M	2.2	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	No	Windows XP Pro	No	May 2003
2684-QBU	Pentium 4-M	2.2	256MB	14.1" XGA	40GB	Combo	11b Wi-Fi ³²	Modem	10/100	No	Windows XP Pro	No	May 2003
Positioning Processor	<i>Mainstream performance and features; two-spindle system</i> 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 ¹ and 400MHz frontside bus												
L2 cache	<i>Celeron: 256KB; Pentium 4-M: 512KB; All: on die (at processor speed) / ECC</i>												
Memory	128 or 256MB std / 1GB max ⁷ / PC2100 266MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available												
Diskette drive	None standard / use optional USB-based diskette drive												
CD	<i>Some: CD-ROM / 24X-10X⁹ speed / fixed, not removable</i>												
Combo	<i>Some: Combo / 24X/10X/24X/8X²¹ speed / fixed, not removable</i>												
Ultrabay™ 2000	None												
Disk	20, 30, or 40GB⁸ , 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay												
Display	<i>Some: 13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i> <i>Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i> <i>All: Easy-open cover to unlatch and open with one hand (two latches)</i>												
Graphics	ATI® RADEON™ IGP 330M / integrated in northbridge / 16MB DDR1 (DDR-SDRAM)												
Graphics external	External monitor support 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®	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												
Touch pad	No UltraNav™ multi-pointing system												
ThinkLight™	None												
Dimensions ³	12.3 x 10.0 x 1.53" / 313mm x 254mm x 38.9mm												
Weight ²	with optical drive and battery: <i>G2U/G8U/B2U/Q2U: 5.9 lb (2.67kg); 22U/CAU/QQU/QBU: 6.0 lb (2.72kg)</i>												
Case material	<i>Color: Black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic</i>												
Battery - type	Lithium Ion 6-cell / intelligent												
Battery - life ¹⁰	<i>Celeron models: 2.1 hrs; Pentium 4-M models: 2.6 hrs</i>												
Architecture	ATI RADEON IGP 330M chipset / IGP 330M northbridge (memory controller, graphics controller, PCI bus) / ALi® M1535+ southbridge (ATA-100 EIDE, Low Pin Count [LPC] interface, USB, parallel, audio) / PCI 2.1, 32-bit 33MHz (TI® PCI1510 CardBus controller) / 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 II or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door												
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	None												
IEEE 1394	None												
Wireless antenna	<i>Some (non-wireless models): None / can upgrade to wireless via optional PC Cards</i> <i>Some (wireless model QBU): UltraConnect™ Antenna built into the display cover</i>												
Mini PCI	<i>Some (non-wireless models): No Mini PCI slot (Communications Bay)</i>												
11b Wi-Fi ³²	<i>Some (wireless model QBU): 11b Wi-Fi³² wireless⁴, Mini PCI, Intersil® Prism 2.5 chipset</i>												
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset												
Ethernet	10/100 ethernet on planar / 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												
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	None												
Limited warranty ¹²	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 coverage from date of ThinkPad purchase (including warranty period)												
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R40e Li-Ion Battery (6-cell)	08K8218										
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Multiple Multiple Battery Charger II	22P9040										
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad 72W AC Adapter	02K6699										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM 4GB Microdrive™ with PC Card	09N4280	IBM Enh Perf Wireless Kybd and Mouse	73P4067										
IBM USB Portable Diskette Drive	05K9276	IBM USB Travel Keyboard with UltraNav	31P9490										
IBM USB Serial Parallel Adapter	22P5298	ThinkPad Monitor Stand 2001	22P5265										
IBM USB 2.0 Combo Drive	73P4515	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
IBM USB 2.0 Memory Key 128MB	73P4512	IBM Optical 3-Button Travel Wheel Mouse	31P7410										
IBM USB 2.0 Memory Key 256MB	22P9228	IBM Optical 3-Button ScrollPoint® Mouse	31P7405										
IBM USB 2.0 Memory Key 512MB	22P9230	Nylon Carrying Case	10K0207										
GemPC400 Smart Card Reader/Writer	31P8901	Leather Carrying Case	10K0209										
IBM E400 Projector	0038A04	ThinkPad Carrying Case - Expander	73P3597										
IBM M400 Projector	0037A04	Other options at ibm.com/pc/us/accessories											
SOFTWARE¹⁴													
Windows XP Home models													
- Microsoft® Windows® XP Home Edition ²⁰													
✦ Disk-to-Disk Recovery (in hidden protected area)													
Windows XP Pro models													
- Microsoft Windows XP Professional ²⁰													
✦ Disk-to-Disk Recovery (in hidden protected area)													
Preloaded													
• Access IBM													
• Adobe Reader													
• IBM Rapid Restore™ PC													
• IBM RecordNOW and DLA by Veritas® (combo models)													
• InterVideo WinDVD (combo models)													
• Norton® AntiVirus (OEM edition)													
• PC-Doctor™													
• ThinkPad Utilities													
• IBM Update Connector™ ¹⁵													
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 IBM ThinkVantage™ technologies and design; visit ibm.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 IBM Rapid Restore PC available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)													
ServicePac®. ²² 1yr IOR 9x5 NBD 30L9188													
ServicePac 2 yr IOR 9x5 NBD 30L9189													
ServicePac 3 yr IOR 9x5 NBD 30L9195													
ServicePac 4 yr IOR 9x5 NBD 30L9194													
ServicePac 5 yr IOR 9x5 NBD 30L9196													
ServicePac 2 yr P&L P/U Depot 30L9191													
ServicePac 3 yr P&L P/U Depot 30L9192													
ServicePac 4 yr P&L P/U Depot 69P9195													
ServicePac 5 yr P&L P/U Depot 69P9197													
Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf													
Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf													

See footnotes for important warranty information

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Ⓜ US model announced May 21, 2003; previous models on March 12, 2003

Ⓜ US models withdrawn effective July 2003 or January 2004 or October 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB ⁹	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE Security 1394 Chip	Workhorse (W) or Global (G) Avail Preload or Entry (E) date
2681-15U	Celeron®	1.6	128MB	13.3" XGA	16MB	20GB	CD	Open; wireless upg ³⁶	Modem	10/100	1394 No	XP Home E Jan 2003
2681-25U	Celeron	1.6	128MB	14.1" XGA	16MB	20GB	CD	Open; wireless upg	Modem	10/100	1394 No	XP Home E Jan 2003
2681-43U	Celeron	1.8	128MB	14.1" XGA	16MB	20GB	DVD	Open; wireless upg	Modem	10/100	1394 No	XP Home No Jan 2003
2681-35U	Celeron	1.6	128MB	15.0" XGA	16MB	20GB	CD	Open; wireless upg	Modem	10/100	1394 No	XP Home No Jan 2003
2681-4FU	Celeron	1.8	128MB	14.1" XGA	16MB	20GB	CD	Open; wireless upg	Modem	10/100	1394 No	XP Home E May 2003
2681-5FU	Celeron	1.8	128MB	15.0" XGA	16MB	20GB	CD	Open; wireless upg	Modem	10/100	1394 No	XP Home No May 2003
2681-7CU	Celeron	2.0	128MB	15.0" XGA	16MB	20GB	CD	Open; wireless upg	Modem	10/100	1394 No	XP Home No Nov 2003
2681-C1U	Pentium® 4-M	1.9	128MB	14.1" XGA	16MB	20GB	CD	Open; wireless upg	Modem	10/100	1394 No	XP Home No Jan 2003
2681-J5U	Pentium 4-M	2.2	128MB	14.1" XGA	16MB	20GB	CD	Open; wireless upg	Modem	10/100	1394 No	XP Home E May 2003
Positioning Processor	<i>Mainstream performance and features; two-spindle system</i> Mobile Intel® Celeron 1.6, 1.8, or 2.0GHz with 400MHz system bus or Mobile Intel Pentium 4 Processor-M 1.9 or 2.2GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus <i>Celeron: 256KB; Pentium 4-M: 512KB; All: on die (at processor speed) / ECC</i> 128MB std / 1GB max ⁷ / PC2100 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										SOFTWARE¹⁴ Windows XP Home models - Microsoft® Windows® XP Home Edition ²⁰ ✦ Disk-to-Disk Recovery (in hidden protected area)	
L2 cache Memory	None standard / use optional Ultrabay™-based or USB-based diskette drive <i>Some: CD-ROM / 24X-10X⁹ speed / bootable / removable from Ultrabay 2000</i> <i>Some: DVD-ROM / 8X-3.3X⁹ speed / bootable / removable from Ultrabay 2000</i> One modular bay for interchangeable devices / Ultrabay Plus -compatible / 12.7mm high 20GB⁸ , 4200 rpm, 9.5mm high, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										Preloaded • Access IBM - Access Connections - Access Help - Access Support • Adobe Reader • IBM Rapid Restore™ PC • InterVideo WinDVD (DVD models) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵	
Diskette drive CD DVD Ultrabay 2000 Disk	None standard / use optional Ultrabay™-based or USB-based diskette drive <i>Some: CD-ROM / 24X-10X⁹ speed / bootable / removable from Ultrabay 2000</i> <i>Some: DVD-ROM / 8X-3.3X⁹ speed / bootable / removable from Ultrabay 2000</i> One modular bay for interchangeable devices / Ultrabay Plus -compatible / 12.7mm high 20GB⁸ , 4200 rpm, 9.5mm high, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant	
Display	<i>Some: 13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix / 150 nits /</i> <i>Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits /</i> <i>Some: 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix / 150 nits /</i> <i>All: Easy-open cover to unlatch and open with one hand (two latches)</i>										License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
Graphics Graphics external	ATI® Mobility™ RADEON™ / AGP 4X / 16MB DDR1 (DDR-SDRAM) External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage	
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones Illuminates the keyboard to improve visibility in low-light conditions										Universal 72 watt AC adapter Asset ID (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant ENERGY STAR®-compliant IBM Rapid Restore PC available to protect software image and data International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free warranty support during the warranty¹² via 800-IBM-SERV (426-7378)	
Dimensions ³ Weight ²	13.3/14.1" models: 12.3" x 10" x 1.5"; 15.0" models: 13" x 10.5" x 1.6" with optical drive and battery: 43U/C1U/4FU/J5U: 6.0 lb; 25U: 6.1 lb; 15U: 6.2 lb; 7CU: 6.6 lb; 35U/5FU: 6.7 lb										ServicePac®.²² 1yr IOR 9x5 NBD 30L9188	
Case material Battery - type Battery - life ¹⁰	<i>Color: Black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic</i> Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 13.3/14.1" models: 3.8 to 4.0 hrs; 15.0" models: 3.4 to 3.6 hrs										ServicePac 2 yr IOR 9x5 NBD 30L9189	
Architecture	Intel 845MP chipset / 82845MP 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, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)										ServicePac 3 yr IOR 9x5 NBD 30L9195	
Port Replicator PC Card Std slots Ports	Optional Port Replicator and Mini Dock (no ThinkPad Dock support) One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door 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										ServicePac 4 yr IOR 9x5 NBD 30L9194	
Video out IEEE 1394 Wireless antenna Mini PCI Wireless upg ³⁶ CDC Modem Ethernet Audio support	S-video out port (TV out) / one 4-pin industry standard connector IEEE 1394 (FireWire) port / 4-pin connector UltraConnect™ Antenna built into the display cover for optimal wireless signal reception One Mini PCI type III slot (Communications Bay) / customer upgradable <i>All: Wireless upgradable with wireless Mini PCI options</i> One Communications Daughter Card (CDC) socket (used by modem) / not accessible <i>All: 56K⁶ V.90 (V.92-designed²⁹) modem in CDC / Agere® chipset</i> 10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer) Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack										ServicePac 5 yr IOR 9x5 NBD 30L9196	
Security	Power-on password / hard disk password / supervisor password / security keyhole										ServicePac 2 yr P&L P/U Depot 30L9191	
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available										ServicePac 3 yr P&L P/U Depot 30L9192	
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R32/R40 Series Li-Ion Battery	02K7052	256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646	512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 4 yr IOR 9x5 NBD
Ultralight 8X Max DVD Ultrabay 2000	22P9102	IBM USB Keyboard with UltraNav	31P8950	CD-RW/DVD Combo IV Ultrabay 2000	22P6991	ThinkPad Monitor Stand 2001	22P5265	24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ServicePac 5 yr IOR 9x5 NBD
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad Monitor Stand 2001	22P5265	Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ThinkPad Removable Diskette Drive	08K9603	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 2 yr P&L P/U Depot
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699	IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad 72W AC/DC Combo Adapter	22P9010	IBM USB Serial Parallel Adapter	22P5298	ThinkPad Port Replicator II	74P6733	ServicePac 3 yr P&L P/U Depot
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Mini Dock	287810U	IBM USB Serial Parallel Adapter	22P5298	ThinkPad Mini Dock	287810U	Optical 3-Button Travel Wheel Mouse	31P7410	GemPC400 Smart Card Reader/Writer	31P8901	ServicePac 4 yr P&L P/U Depot
IBM E400 Projector	0038A04	IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM ThinkPad Ultrabay Plus Carrier	22P5737	ThinkPad Carrying Case - Expander	73P3597	ThinkPad Ultrabay Plus Numeric Keypad	22P7330	Other options at ibm.com/pc/us/accessories		ServicePac 5 yr P&L P/U Depot
IBM 4GB Microdrive™ with PC Card	09N4280											69P9197

See footnotes for important warranty information

Ⓜ US model announced November 11, 2003; previous models on January 28 or May 21, 2003

Ⓜ US models withdrawn effective January 2004 or April 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB ³	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security chip	Workhorse (W) Global (G) Preload Entry (E)	Avail date
2682-N7U	Pentium® 4-M 2.4	2.4	256MB	14.1" XGA	16MB	30G	Combo	Open; wireless upg ³⁶	Modem	10/100		Yes	XP Pro No	Oct 2003
2682-NAU	Pentium 4-M 2.4	2.4	256MB	14.1" XGA	16MB	30G	DVD	Open; wireless upg	Modem	10/100		Yes	XP Pro No	Oct 2003
2682-PAU	Pentium 4-M 2.4	2.4	256MB	15.0" XGA	32MB	40G	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro No	Oct 2003

2682 models have a 3 year limited warranty (other 2681 and 2896 ThinkPad R40 systems have a 1 year limited warranty)

Positioning Processor	Mainstream performance and features; two-spindle system Mobile Intel® Pentium 4 Processor-M 2.4GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE ¹⁴		
L2 cache	512KB / on die (at processor speed) / ECC											Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)		
Memory	256MB std / 1GB max ⁷ / 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	None standard / use optional Ultrabay™-based or USB-based diskette drive											Preloaded • Access IBM • Access Connections • Adobe Reader • IBM Rapid Restore™ PC • IBM RecordNow and DLA by Veritas (combo models) • InterVideo WinDVD (DVD model) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵		
DVD	Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000													
Combo	Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000											Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software (for security chip)		
Ultrabay 2000	One modular bay for interchangeable devices / Ultrabay Plus-compatible / 12.7 mm high													
Disk	30GB ⁸ or 40GB, 4200 rpm, 9.5mm high, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000											License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / Some: 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / All: easy-open cover to unlatch and open with one hand (two latches)													
Graphics	Some: ATI® Mobility™ RADEON™ / AGP 4X / 16MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)											ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Graphics external	External monitor support 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)											Universal 72 watt AC adapter Asset ID (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant ENERGY STAR®-compliant IBM ImageUltra™ Services available IBM Rapid Restore PC available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)		
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											ServicePac® ²² 2 yr IOR 9x5 NBD 30L9190		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	14.1" models: 12.3" x 10" x 1.5"; 313mm x 254mm x 38.9mm 15.0" models: 13" x 10.5" x 1.6"; 329mm x 267.5mm x 40.5mm											ServicePac 3 yr IOR 9x5 NBD 30L9197		
Weight ²	with optical drive and battery: N7U: 6.1 lb (2.7kg); NAU: 6.0 lb (2.7kg); PAU: 6.7 lb (3.0kg)													
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic											ServicePac 4 yr IOR 9x5 NBD 69P9198		
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000													
Battery - life ¹⁰	4.02 hrs											ServicePac 5 yr IOR 9x5 NBD 69P9200		
Architecture	Intel 845MP chipset / 82845MP 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, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)													
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door											ServicePac 4 yr P&L P/U Depot 69P9199		
Ports	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													
Video out	S-video out port (TV out) / one 4-pin industry standard connector											ServicePac 5 yr P&L P/U Depot 69P9201		
IEEE 1394	Some: IEEE 1394 (FireWire) port / 4-pin connector													
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception											Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable													
Wireless upg ³⁶	Wireless upgradable with wireless Mini PCI options											See footnotes for important warranty information US models announced October 7, 2003 ⚡ US model withdrawn effective October 2004		
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible													
Modem	56K ⁶ V.90 (V.92-designed ²³) modem in CDC / Agere® chipset													
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer)													
Audio support	Soft audio / ICH AC97 controller / DirectSound™ support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack													
Security	Power-on password / hard disk password / supervisor password / security keyhole													
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant													
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery													
Service options	Service upgrades ²² provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)													
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R32/R40 Series Li-Ion Battery	02K7052											
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646											
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Multiple Battery Charger II	22P9040											
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	30GB Hard Disk 9.5mm (4200rpm)	09N4268											
Ultralight 8X Max DVD Ultrabay 2000	22P9102	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816											
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273											
Second HDD Adapter for Ultrabay 2000	08K6068	IBM 4GB Microdrive™ with PC Card	09N4280											
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	Cisco Aironet Wireless 802.11b Mini PCI	31P8301											
ThinkPad Removable Diskette Drive	08K9603	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701											
IBM USB Portable Diskette Drive	05K9276	IBM 11a/b/g Wireless CardBus Adapter	31P9101											
IBM USB Serial Parallel Adapter	22P5298	ThinkPad 72W AC Adapter	02K6699											
IBM USB 2.0 Combo Drive	73P4515	ThinkPad 72W AC/DC Combo Adapter	22P9010											
IBM USB 2.0 Portable 40GB Hard Disk	22P7196	ThinkPad Monitor Stand 2001	22P5265											
IBM USB 2.0 Memory Key 512MB	22P9230	IBM E400 Projector	0038A04											
IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM C400 Projector	0039A04											
IBM Optical 3-Button ScrollPoint® Mouse	31P7405	ThinkPad Port Replicator II	74P6733											
IBM USB Travel Keyboard with UltraNav	31P9490	ThinkPad Mini Dock	287810U											
GemPC400 Smart Card Reader/Writer	31P8901	Other options at ibm.com/pc/us/accessories												

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE Security 1394 port	chip Preload	Workhorse (W) or Global (G) Entry (E)	Avail date	
2682-48U	Celeron®	1.8	128MB	14.1" XGA	16MB	20GB	CD	11a/b Wi-Fi ²⁷	Modem	10/100	1394	XP Pro	No	Mar 2003	
2682-FXU	Pentium® 4-M	2.0	256MB	14.1" XGA	32MB	40GB	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	No	Mar 2003
2682-LAU	Pentium 4-M	2.2	256MB	15.0" SXGA+	32MB	40GB	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	No	Mar 2003
2682-6GU	Celeron	2.0	128MB	14.1" XGA	16MB	20GB	CD	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	No	Oct 2003
2682-RDU	Pentium 4-M	2.2	256MB	14.1" XGA	32MB	40GB	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	No	Oct 2003
2682-QGU	Pentium 4-M	2.4	256MB	15.0" SXGA+	32MB	40GB	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	No	Oct 2003

These educational models of the ThinkPad R40 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 IBM or through an Authorized Education Reseller.

The model or models for education are not available for resale to any other organization or individual.

2682 models have a 3 year limited warranty (other 2681 and 2896 ThinkPad R40 systems have a 1 year limited warranty)

Positioning Processor	<i>Mainstream performance and features; two-spindle system</i> Mobile Intel® Celeron 1.8 or 2.0GHz with 400MHz system bus or Mobile Intel® Pentium 4 Processor-M 2.0, 2.2, or 2.4GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴			
L2 cache	Celeron: 256KB; Pentium 4-M: 512KB; All: on die (at processor speed) / ECC										Windows XP Professional			
Memory	128 or 256MB std / 1GB max ⁷ / PC2100 266MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive										Preloaded			
CD-ROM	<i>Some:</i> CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay 2000										• Access IBM			
Combo	<i>Some:</i> DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000										• Access Connections			
Ultrabay 2000	One modular bay for interchangeable devices / Ultrabay Plus -compatible / 12.7 mm high										• Adobe Reader			
Disk	20GB⁸ or 40GB , 4200 rpm, 9.5mm high, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										• IBM Rapid Restore™ PC			
Display	<i>Some:</i> 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / <i>Some:</i> 15.0" (381mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits / <i>All:</i> easy-open cover to unlatch and open with one hand (two latches)										• IBM RecordNOW and DLA by Veritas (combo models)			
Graphics	<i>Some:</i> ATI® Mobility™ RADEON™ / AGP 4X / 16MB DDR1 (DDR-SDRAM) <i>Some:</i> ATI Mobility RADEON 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)										• InterVideo WinDVD (combo mlds)			
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• Norton AntiVirus (OEM edition)			
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• PC-Doctor™			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										• ThinkPad Utilities			
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• IBM Update Connector™ ¹⁵			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										Downloadable			
Dimensions ³	14.1" models (WxDxH): 12.3" x 10" x 1.5"; 313mm x 254mm x 38.9mm 15.0" models (WxDxH): 13" x 10.5" x 1.6"; 329mm x 267.5mm x 40.5mm										• IBM Director Agent			
Weight ²	with optical drive and battery: 14.1" models: 6.0 to 6.1 lb (2.7kg); 15.0": 6.7 lb (3.0kg)										• Software Delivery Assistant			
Case material	<i>Color:</i> black; <i>All:</i> Acrylonitrile-Butadiene-Styrene (ABS) plastic										• System Migration Assistant			
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										• Client Security Software (models with security chip)			
Battery - life ¹⁰	14.1" Celeron models: 3.8 hrs; 14.1" Pentium 4-M models: 3.8 hrs; 15.0" mods: 3.4 hrs										License (CD not included)			
Architecture	Intel 845MP chipset / 82845MP 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, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)										Ultrabay Plus integrated modular bay supports most Ultrabay 2000 devices including CD-RW/DVD Combo drive, diskette drive, or Zip drive; the optional Ultrabay Plus Device Carrier adds potential functionality by supporting the Ultrabay Plus Numeric Keypad			
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										Universal 72 watt AC adapter			
Ports	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										Asset ID (system-specific info in chip accessed over network)			
Video out	S-video out port (TV out) / one 4-pin industry standard connector										PC 2001 and PXE 2.0-compliant			
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector										ACPI 1.0b and 2.0-compliant			
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										CIM and DMI 2.0-compliant			
Mini PCI	One Mini PCI type III slot (Communications Bay) / not custom upgradable										IBM ImageUltra™ Services available			
11a/b Wi-Fi ²⁷	11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset										IBM Rapid Restore PC available to protect software image and data			
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										International Warranty Service ¹⁷			
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)			
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer)										ServicePac®. ²² 2 yr IOR 9x5 NBD			
Audio support	Soft audio / ICH AC97 controller / DirectSound™ support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack										30L9190			
Security	Power-on password / hard disk password / supervisor password / security keyhole <i>Some:</i> IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										ServicePac 3 yr IOR 9x5 NBD			
Limited warranty ¹²	3 years/1 year battery - EasyServ™.19 onsite pickup and delivery										ServicePac 4 yr IOR 9x5 NBD			
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028			ThinkPad R32/R40 Series Li-Ion Battery			02K7052			ServicePac 5 yr IOR 9x5 NBD				
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030			Ultrabay 2000 Li-Ion Battery			02K6646			69P9198				
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032			ThinkPad Multiple Battery Charger II			22P9040			ServicePac 4 yr P&L P/U Depot				
CD-RW/DVD Combo IV Ultrabay 2000	22P6991			40GB HS Hard Disk 9.5mm (5400 rpm)			08K9816			69P9200				
Ultralight 8X Max DVD Ultrabay 2000	22P9102			80GB HS Hard Disk 9.5mm (5400 rpm)			09N4273			ServicePac 5 yr P&L P/U Depot				
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233			IBM 11a/b/g Wireless Mini PCI Adapter			31P9701			69P9199				
Second HDD Adapter for Ultrabay 2000	08K6068			IBM 11a/b/g Wireless CardBus Adapter			31P9101			ServicePac 5 yr P&L P/U Depot				
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312			ThinkPad 72W AC Adapter			02K6699			Post-warranty annual maintenance agreements at				
ThinkPad Slim Drive Adpr for Ultrabay 2000	62P4557			ThinkPad 72W AC/DC Combo Adapter			22P9010			ibm.com/services/its/us/source/maspspleu.pdf				
ThinkPad Removable Diskette Drive	08K9603			ThinkPad Port Replicator II			74P6733							
IBM USB Portable Diskette Drive	05K9276			ThinkPad Mini Dock			287810U							
IBM USB 2.0 Portable Combo Drive	22P9194			ThinkPad Carrying Case - Expander			73P3597							
30GB Hard Disk 9.5mm (4200 rpm)	09N4268			Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information

Ⓜ US models announced October 7, 2003; previous models on March 25, 2003

Ⓜ US models withdrawn effective April 2004 or October 2004

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Type-model	Processor	Speed GHz	GB Memory	Screen	Graphics Disk memory GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Ethernet on planar	IEEE 1394 Security port chip	Workhorse (W) or Global (G) Preload Entry (E)	Avail date
2722-5JU	Pentium® M 1.3	256MB	15.0" XGA	32MB 40G Combo	Open; wireless upg ³⁶	Modem	10/100	1394 Yes	XP Pro	Apr 2003		
2722-58U	Pentium M 1.3	256MB	15.0" XGA	32MB 40G DVD	Open; wireless upg	Modem	10/100	1394 Yes	XP Pro	Apr 2003		
2722-F2U	Pentium M 1.5	256MB	15.0" XGA	32MB 40G DVD	Open; wireless upg	Modem	10/100	1394 Yes	XP Pro	W Apr 2003		
2722-G3U	Pentium M 1.5	256MB	15.0" SXGA+	32MB 60G Combo	Open; wireless upg	Modem	10/100	1394 Yes	XP Pro	Apr 2003		
2722-GAU	Pentium M 1.5	256MB	15.0" SXGA+	32MB 40G Combo	*Intel 11b Wi-Fi ³²	Mod/Blu	10/100	1394 Yes	XP Pro	Apr 2003		
2722-GDU	Pentium M 1.5	256MB	15.0" SXGA+	32MB 60G Combo	11a/b Wi-Fi ²⁷	Modem	10/100	1394 Yes	XP Pro	Apr 2003		
2722-22U	Pentium M 1.3	128MB	14.1" XGA	16MB 20G CD	Open; wireless upg	Modem	10/100	1394 Yes	XP Pro	Mar 2003		
2722-2QU	Pentium M 1.3	256MB	14.1" XGA	16MB 20G DVD	*Intel 11b Wi-Fi	Modem	10/100	1394 Yes	XP Pro	Mar 2003		
2722-27U	Pentium M 1.3	256MB	14.1" XGA	16MB 20G DVD	Open; wireless upg	Modem	10/100	1394 Yes	XP Pro	W Mar 2003		
2722-2JU	Pentium M 1.3	256MB	14.1" XGA	16MB 40G Combo	Open; wireless upg	Modem	10/100	1394 Yes	XP Pro	Mar 2003		
2722-47U	Pentium M 1.3	256MB	15.0" XGA	16MB 20G DVD	Open; wireless upg	Modem	10/100	1394 Yes	XP Pro	Mar 2003		
2722-24U	Pentium M 1.3	128MB	14.1" XGA	16MB 20G CD	Open; wireless upg	Modem	10/100	1394 Yes	XP Home	Mar 2003		
2722-9FU	Pentium M 1.4	128MB	14.1" XGA	16MB 20G CD	*Intel 11b Wi-Fi	Modem	10/100	1394 Yes	XP Home E	Oct 2003		
2722-8FU	Pentium M 1.4	128MB	15.0" XGA	16MB 20G CD	*Intel 11b Wi-Fi	Modem	10/100	1394 Yes	XP Home E	Nov2003		
Positioning Processor	Mainstream performance and features; two-spindle system Intel® Pentium® M Processor 1.3, 1.4, or 1.5GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											
L2 cache	1MB / on die (at processor speed) / ECC											
Memory	128 or 256MB std / 2GB max ⁷ / PC2100 266MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available											
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive											
CD	<i>Some:</i> CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay 2000											
DVD	<i>Some:</i> DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000											
Combo	<i>Some:</i> DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000											
Ultrabay 2000	One modular bay for interchangeable devices / Ultrabay Plus -compatible / 12.7 mm high											
Disk	20GB³, 40GB³, or 60GB³ , 4200 rpm, 9.5mm / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000											
Display	<i>Some:</i> 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits <i>Some:</i> 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits <i>Some:</i> 15.0" (381.0mm) SXGA+ (1450x1050) TFT color / Active Matrix / 150 nits											
Graphics	<i>Some:</i> ATI® Mobility™ RADEON™ / AGP 4X / 16MB DDR1 (DDR-SDRAM) <i>Some:</i> ATI Mobility RADEON 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)											
Graphics external	External monitor support 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®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , 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 ³	14.1" models: 12.3" x 10.0" x 1.53"; 15.0" models: 13.0" x 10.5" x 1.59"											
Weight ²	with optical drive and battery: 14.1" models: 6.0 to 6.7 lb; 15.0": 6.6 to 6.7 lb (3.0 to 3.4kg)											
Case material	<i>Color:</i> Black; <i>All:</i> Acrylonitrile-Butadiene-Styrene (ABS) plastic											
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000											
Battery - life ¹⁰	<i>Model GAU:</i> 5.0 hr; <i>Others:</i> 5.7 to 6.2 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, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI®) PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)											
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door											
Ports	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											
Video out	S-video out port (TV out) / one 4-pin industry standard connector											
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector											
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 upgradable											
Wireless upg ³⁶	<i>Some:</i> Wireless upgradable with wireless Mini PCI options											
11b Wi-Fi ³²	<i>Some:</i> 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset											
11a/b Wi-Fi ²⁷	<i>Some:</i> 11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset											
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Agere® chipset											
Bluetooth™	<i>Some:</i> Bluetooth wireless technology / in CDC (with modem)											
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer) / PXE											
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack											
Security	Power-on password / hard disk password / supervisor password / security keyhole											
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available											
128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	30GB Hard Disk 9.5mm (4200rpm)	09N4268									
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816									
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad R32/R40 Series Li-Ion Battery	02K7052									
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	Ultrabay 2000 Li-Ion battery	02K6646									
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	ThinkPad Multiple Battery Charger II	22P9040									
Second HDD Adapter for Ultrabay 2000	08K6068	IBM 11a/b/g Wireless CardBus Adapter	31P9101									
ThinkPad Removable Diskette Drive	08K9603	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701									
IBM USB Portable Diskette Drive	05K9276	ThinkPad Carrying Case - Expander	73P3597									
IBM USB 2.0 Combo Drive	73P4515	IBM M400 Projector	0037A04									
<p>See footnotes for important warranty information * Powered by Intel Centrino™ mobile technology (R40M) © IBM Corp. November 2003</p> <p>US models announced March 12, October 21, or November 11, 2003</p> <p>⚡ US models withdrawn effective January 2004 or April 2004 or October 2004</p>												

SOFTWARE¹⁴

Windows XP Pro models

- Microsoft® Windows® XP Professional²⁰
- ⚡ Disk-to-Disk Recovery (in hidden protected area)

Windows XP Home models

- Microsoft Windows XP Home Edition²⁰
- ⚡ Disk-to-Disk Recovery (in hidden protected area)

INCLUDED SOFTWARE¹⁴ (all)

Preloaded

- Access IBM
- Access Connections
- Adobe Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (Combo, DVD)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™¹⁵

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

Universal 72 watt AC adapter
Asset ID™³⁴ (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free warranty support during the warranty¹²

- ServicePac®.22 1yr IOR 9x5 NBD 30L9188
- ServicePac 3 yr IOR 9x5 NBD 30L9195
- ServicePac 3yr P&L P/U Depot 30L9192
- ServicePac 5yr P&L P/U Depot 69P9197

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

- ThinkPad Port Replicator II 74P6733
- ThinkPad Mini Dock 287810U
- ThinkPad 72W AC Adapter 02K6699
- ThinkPad 72W AC/DC Combo Adapter 22P9010
- Other options at **ibm.com/pc/us/accessories**

Type-model	Processor	Speed GHz	Memory	Screen	Graphics	Disk memory	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security Chip	Workhorse (W) or Global (G) Avail date
2723-2FU	Pentium® M	1.3	256MB	14.1" XGA	16MB	20G	DVD	*Intel 11b Wi-Fi ³²	Modem	10/100		Yes	XP Pro	W G Mar 2003
2723-26U	Pentium M	1.3	256MB	14.1" XGA	16MB	20G	DVD	Open; wireless upg ³⁶	Modem	10/100		Yes	XP Pro	W G Mar 2003
2723-27U	Pentium M	1.3	256MB	14.1" XGA	16MB	20G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	W Mar 2003
2723-2SU	Pentium M	1.3	256MB	14.1" XGA	16MB	20G	DVD	Cisco® 802.11b ³²	Modem	10/100	1394	Yes	XP Pro	W Mar 2003
2723-3LU	Pentium M	1.3	256MB	14.1" XGA	32MB	40G	Combo	11a/b Wi-Fi ²⁷	Modem	10/100	1394	Yes	XP Pro	W Apr 2003
2723-58U	Pentium M	1.3	256MB	15.0" XGA	32MB	40G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	W Apr 2003
2723-5TU	Pentium M	1.3	256MB	15.0" XGA	32MB	40G	DVD	Cisco 802.11b	Modem	10/100	1394	Yes	XP Pro	W Apr 2003
2723-6LU	Pentium M	1.3	256MB	15.0" SXGA+	32MB	40G	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	W Apr 2003
2723-BSU	Pentium M	1.4	256MB	15.0" XGA	32MB	40G	DVD	Cisco 802.11b	Modem	10/100		Yes	XP Pro	W G Apr 2003
2723-B4U	Pentium M	1.4	256MB	15.0" XGA	32MB	40G	DVD	Open; wireless upg	Modem	10/100		Yes	XP Pro	W G Apr 2003
2723-F2U	Pentium M	1.5	256MB	15.0" XGA	32MB	40G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	W Apr 2003
2723-BAU	Pentium M	1.4	256MB	15.0" XGA	32MB	40G	DVD	*Intel 11b Wi-Fi	Modem	10/100		Yes	XP Pro	W G Apr 2003

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

Positioning Processor	Mainstream performance and features; two-spindle system Intel® Pentium® M Processor 1.3, 1.4, or 1.5GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus										SOFTWARE¹⁴			
L2 cache	1MB / on die (at processor speed) / ECC										Windows XP Professional			
Memory	256MB std / 2GB max ⁷ / PC2100 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive										Preloaded			
DVD	Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000										• Access IBM			
Combo	Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000										• Access Connections			
Ultrabay 2000	One modular bay for interchangeable devices / Ultrabay Plus -compatible / 12.7 mm high										• Adobe Reader			
Disk	20GB⁸ or 40GB⁸ , 4200 rpm, 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										• IBM Rapid Restore™ PC			
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: Easy-open cover to unlatch and open with one hand (two latches)										• IBM RecordNOW and DLA by Veritas (combo models)			
Graphics	Some: ATI® Mobility™ RADEON™ / AGP 4X / 16MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM)										• Norton AntiVirus (OEM edition)			
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• PC-Doctor™			
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• ThinkPad Utilities			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										• IBM Update Connector™ ¹⁵			
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										Downloadable			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• IBM Director Agent			
Dimensions ³	14.1" models: 12.3" x 10.0" x 1.53"; 15.0" models: 13.0" x 10.5" x 1.59"										• Software Delivery Assistant			
Weight ²	with optical drive and battery: 14.1" models: 6.0 to 6.1 lb; 15.0": 6.6 to 6.7 lb (3.0 to 3.4kg)										• System Migration Assistant			
Case material	Color: Black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic										• Client Security Software (for security chip)			
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										License (CD not included)			
Battery - life ¹⁰	Model BAU : 5.0 hr; Others: 5.7 to 6.2 hr										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
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, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)										Universal 72 watt AC adapter			
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										Asset ID™ ³⁴ (system-specific info in chip accessed over network)			
Ports	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										PC 2001 and PXE 2.0-compliant			
Video out	S-video out port (TV out) / one 4-pin industry standard connector										ACPI 1.0b and 2.0-compliant			
IEEE 1394	Some: IEEE 1394 (FireWire) port / 4-pin connector										CIM and DMI 2.0-compliant			
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										IBM ImageUltra™ Services available			
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										IBM Rapid Restore PC available to protect software image and data			
Wireless upg ³⁶	Some: Wireless upgradable with wireless Mini PCI options										International Warranty Service ¹⁷			
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²			
Cisco 802.11b ³²	Some: 802.11b wireless ⁴ , Mini PCI, Cisco® Aironet® Wireless 802.11b										ServicePac® ²² 2 yr IOR 9x5 NBD			
11a/b Wi-Fi ²⁷	Some: 11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset										30L9190			
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										ServicePac 3 yr IOR 9x5 NBD			
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset										30L9197			
Bluetooth	None										ServicePac 5 yr IOR 9x5 NBD			
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer) / PXE										69P9200			
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack										ServicePac 5 yr P&L P/U Depot			
Security	Power-on password / hard disk password / supervisor password / security keyhole										69P9201			
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf			
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery										Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf			
128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028			40GB HS Hard Disk 9.5mm (5400 rpm)			08K9816			ThinkPad Port Replicator II 74P6733				
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030			GemPC400 Smart Card Reader/Writer			31P8901			ThinkPad Mini Dock 287810U				
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032			ThinkPad R32/R40 Series Li-Ion Battery			02K7052			ThinkPad 72W AC Adapter 02K6699				
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034			Ultrabay 2000 Li-Ion battery			02K6646			ThinkPad 72W AC/DC Combo Adapter 22P9010				
CD-RW/DVD Combo IV Ultrabay 2000	22P6991			ThinkPad Multiple Battery Charger II			22P9040			IBM USB 2.0 Portable CD-RW Drive 22P5297				
Second HDD Adapter for Ultrabay 2000	08K6068			IBM 11a/b/g Wireless CardBus Adapter			31P9101			Other options at ibm.com/pc/us/accessories				
ThinkPad Removable Diskette Drive	08K9603			IBM 11a/b/g Wireless Mini PCI Adapter			31P9701							
IBM USB Portable Diskette Drive	05K9276			IBM E400 Projector			0038A04							
Optical 3-Button Travel Wheel Mouse	31P7410			IBM C400 Projector			0039A04							
IBM USB 2.0 Memory Key 512MB	22P9230			ThinkPad Carrying Case - Expander			73P3597							

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US models announced March 12, 2003

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

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ^a	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security chip Preload	Limited warranty ¹²	Workhorse (W) Global (G) Entry (E)	Avail date
1834-4EU	Celeron® M	1.3	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	No	XP Home 1 yr	E	Apr 2004
1834-5BU	Celeron M	1.3	128MB	15.0" XGA	20GB	CD	None	Modem	10/100	No	No	XP Home 1 yr	E	Apr 2004
1834-4AU	Celeron M	1.3	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	No	No	XP Pro 1 yr		Apr 2004
1834-56U	Celeron M	1.3	256MB	15.0" XGA	30GB	Combo	None	Modem	10/100	No	No	XP Pro 1 yr		Apr 2004
1834-NEU	Pentium® M 705	1.5	128MB	14.1" XGA	30GB	CD	* Intel 11b/g Wi-Fi ³²	Modem	10/100	No	No	XP Home 1 yr	E	July 2004
1834-C4U	Pentium M 715	1.5	128MB	14.1" XGA	30GB	CD	* Intel 11b/g Wi-Fi	Modem	10/100	No	No	XP Home 1 yr	E	July 2004
1834-AAU	Pentium M 715	1.5	256MB	14.1" XGA	30GB	CD	* Intel 11b/g Wi-Fi	Modem	10/100	No	No	XP Pro 1 yr		July 2004
Positioning Processor	Mainstream performance and features; two-spindle system Intel® Celeron M Processor 1.3GHz with 400MHz system bus or Intel Pentium M Processor 705 (1.5GHz with 1MB L2 cache) or 715 (1.5GHz with 2MB L2 cache) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus Celeron M: 512KB; Pentium M 705: 1MB; Pentium M 715: 2 MB; All: ECC 128MB or 256MB std / 2GB max ⁷ / PC2700 333MHz DDR 1 (memory controller limits speed to 266MHz) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available											SOFTWARE¹⁴ Windows XP Home models - Microsoft® Windows® XP Home Edition ²⁰ ✦ Disk-to-Disk Recovery (in hidden protected area) Windows XP Pro models - Microsoft Windows XP Professional ²⁰ ✦ Disk-to-Disk Recovery (in hidden protected area) Preloaded (all) • Access IBM • Access Connections • IBM Rescue and Recovery™ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo models) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™.15 Downloadable (all) • IBM Director Agent • Software Delivery Assistant • System Migration Assistant License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
L2 cache														
Memory														
Diskette drive	None standard / use optional USB-based diskette drive <i>Some:</i> CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7 mm high <i>Some:</i> DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / fixed, not removable / 12.7 mm													
CD														
Combo														
Ultrabay Enhanced Disk	None / no support for removable Ultrabay™ options 20GB⁸ or 30GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / IBM Hard Disk Drive Shock Absorber													
Display	<i>Some:</i> 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits <i>Some:</i> 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits <i>All:</i> one latch to unlatch and open with one hand													
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	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass													
TrackPoint®														
Touch pad	No UltraNav™ multi-pointing system													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	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 with optical drive and battery: 14.1" models: 6.0 lb (2.7kg); 15.0" models: 6.6 lb (3.0kg)													
Weight ²														
Case material	<i>Color:</i> black; <i>All:</i> Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type	Lithium Ion 6-cell / intelligent / supports optional 9-cell battery													
Battery - life ¹⁰	<i>Celeron M models:</i> up to 4.0 hr; <i>Pentium M models:</i> up to 4.7 hr; <i>Optional High Capacity 9-cell:</i> up to 6.0 hr													
Architecture	Intel 855GM chipset / 82855GM 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) / PCI bus 2.2 32-bit, 33MHz (TI ⁹ PCI1510 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, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door													
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											ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Video out	None											Universal 72 watt AC adapter Asset ID™.34 (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant ENERGY STAR®-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²		
IEEE 1394	None											ServicePac®.22 1yr IOR 9x5 NBD 30L9188		
Wireless antenna	<i>Some (Celeron models):</i> none / can upgrade to wireless via optional PC Cards <i>Some (Pentium models):</i> UltraConnect™ Antenna built into the display cover <i>Some (Celeron models):</i> no Mini PCI slot (Communications Bay) <i>Some (Pentium):</i> one Mini PCI slot (Communications Bay) / not customer upgradable <i>Some:</i> 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset											ServicePac 2 yr IOR 9x5 NBD 30L9189		
Mini PCI	One Communications Daughter Card (CDC) socket (used by modem) / not accessible											ServicePac 3 yr IOR 9x5 NBD 30L9195		
Intel 11b/g ³²	56K ⁵ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											ServicePac 4 yr IOR 9x5 NBD 30L9194		
CDC	10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®											ServicePac 5 yr IOR 9x5 NBD 30L9196		
Modem	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec /											ServicePac 2 yr P&L P/U Depot 22P9040 30L9191		
Ethernet	mono speaker / 1 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack											ServicePac 3 yr P&L P/U Depot 30L9192		
Audio support	Power-on password / hard disk password / supervisor password / security keyhole											ServicePac 4 yr P&L P/U Depot 69P9195		
Security	None											ServicePac 5 yr P&L P/U Depot 69P9197		
Security chip												Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf		
Limited warranty ¹²	1 year - EasyServ™.19 onsite pickup and delivery courier service													
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828			T40/R50 Series Li-Ion Battery 6-cell				08K8214						
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830			T40/R50 High Capacity Li-Ion Batt 9-cell				08K8197						
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832			ThinkPad Multiple Battery Charger II				22P9040						
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834			TrackPoint Cap Collection				73P2698						
IBM 4GB Microdrive™ with PC Card	09N4280			Kensington® MicroSaver® Security Cable				73P2582						
IBM USB Portable Diskette Drive	05K9276			30GB Hard Disk 9.5mm (4200 rpm)				09N4268						
IBM USB 2.0 Combo Drive	73P4515			40GB HS Hard Disk 9.5mm (5400 rpm)				08K9816						
IBM USB 2.0 Portable Multi-Burner Drive	22P9163			80GB HS Hard Disk 9.5mm (5400 rpm)				09N4273						
IBM USB 2.0 Portable 40GB Hard Disk	22P7196			IBM 11a/b/g Wireless CardBus Adapter				31P9101						
IBM USB 2.0 Memory Key 256MB	22P9228			ThinkPad Carrying Case - Leather				73P3600						
IBM USB 2.0 Memory Key 512MB	22P9230			ThinkPad 72W AC/DC Combo Adapter				22P9010						
IBM C400 Projector	0039A04			IBM USB Travel Keyboard with UltraNav				31P9490						
ThinkPad Monitor Stand 2001	22P5265			Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information

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Ⓜ US models announced July 13, 2004; previous models on April 6, 2004

Ⓜ US models withdrawn effective January 2005

Type-model	Processor	Speed L2 GHz cache	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Integrated graphics	Secu- rity chip	Limited warranty ¹² Preload	Workhorse (W) Global (G)/Avail Entry (E) date
1834-ELU	Celeron® M 330	1.4 512K	128MB	14.1" XGA	30GB	CD	None	Modem Extreme™ 2	No	XP Home	1 yr	E Dec 04
1834-EKU	Celeron M 330	1.4 512K	256MB	14.1" XGA	30GB	CD	None	Modem Extreme 2	No	XP Home	1 yr	E Dec 04
1834-GPU	Celeron M 330	1.4 512K	256MB	15.0" XGA	30GB	CD	None	Modem Extreme 2	No	XP Home	1 yr	E Dec 04
1834-E2U	Celeron M 340	1.5 512K	128MB	14.1" XGA	30GB	CD	None	Modem Extreme 2	No	XP Home	1 yr	E Sep 04
1834-E9U	Celeron M 350	1.3 1MB	128MB	14.1" XGA	30GB	CD	None	Modem Extreme 2	No	XP Home	1 yr	E Sep 04
1834-E4U	Celeron M 340	1.5 512K	256MB	14.1" XGA	30GB	CD	None	Modem Extreme 2	No	XP Home	1 yr	E Sep 04
1834-E7U	Celeron M 340	1.5 512K	256MB	14.1" XGA	30GB	Combo	None	Modem Extreme 2	No	XP Pro	1 yr	E Sep 04
1834-G4U	Celeron M 340	1.5 512K	256MB	15.0" XGA	30GB	CD	None	Modem Extreme 2	No	XP Home	1 yr	E Sep 04
1834-G7U	Celeron M 340	1.5 512K	256MB	15.0" XGA	30GB	Combo	None	Modem Extreme 2	No	XP Pro	1 yr	E Sep 04
1834-PEU	Pentium® M 710	1.4 2MB	128MB	14.1" XGA	30GB	CD	* Intel 11b/g Wi-Fi ³²	Modem Extreme 2	No	XP Home	1 yr	E Oct 04
1834-PMU	Pentium M 715a	1.5 2MB	256MB	14.1" XGA	30GB	Combo	* Intel 11b/g Wi-Fi	Modem Extreme 2	No	XP Home	1 yr	E Jan 05
1834-FEU	Pentium M 725	1.6 2MB	128MB	14.1" XGA	30GB	CD	* Intel 11b/g Wi-Fi	Modem Extreme 2	No	XP Home	1 yr	E Sep 04
1834-FKU	Pentium M 725	1.6 2MB	256MB	14.1" XGA	30GB	Combo	* Intel 11b/g Wi-Fi	Modem Extreme 2	No	XP Pro	1 yr	E Sep 04
1834-HRU	Pentium M 725	1.6 2MB	256MB	15.0" XGA	30GB	Combo	* Intel 11b/g Wi-Fi	Modem Extreme 2	No	XP Pro	1 yr	E Sep 04
Positioning Processor	<i>Mainstream performance and features; two-spindle system</i>										SOFTWARE¹⁴	
L2 cache	Intel® Celeron M Processor 330 (1.4GHz), 340 (1.5GHz) or 350 (1.3GHz) with 400MHz system bus or Intel Pentium M Processor 710 (1.4GHz), 715/715a (1.5GHz), or 725 (1.6GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										Windows XP Home models	
Memory	Celeron M 330/340: 512KB; Celeron M 350: 1MB; Pentium M 710/725: 2 MB; All: ECC 128MB or 256MB std / 2GB max ⁷ / 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										- Microsoft® Windows® XP Home Edition ²⁰ - Dec/Jan models: Service Pack 2 ♦ Disk-to-Disk Recovery (in hidden protected area)	
Diskette drive	None standard / use optional USB-based diskette drive										Windows XP Pro models	
CD	Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7 mm high										- Microsoft Windows XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)	
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / fixed, not removable / 12.7 mm											
Ultrabay Enhanced Disk	None / no support for removable Ultrabay™ options 30GB ⁸ (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / IBM 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										Preloaded (all)	
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GM GMCH / uses main memory (up to 64MB) / 200MHz										• IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo models)	
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										Downloadable (all)	
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• IBM Director Agent • Software Delivery Assistant • System Migration Assistant	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										License (CD not included)	
Touch pad	No UltraNav™ multi-pointing system										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										Supports IBM ThinkVantage™ technologies	
Dimensions ³	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 with optical drive and battery: 14.1" models: 6.0 lb (2.7kg); 15.0" models: 6.6 lb (3.0kg)										Universal 72 watt AC adapter Asset ID™ ³⁴ (system-specific info in chip accessed over network) 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 Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²	
Weight ²											ServicePac® ²² 1yr IOR 9x5 NBD 30L9188	
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic										ServicePac 2 yr IOR 9x5 NBD 30L9189	
Battery - type	Lithium Ion 6-cell / intelligent / supports optional 9-cell battery										ServicePac 3 yr IOR 9x5 NBD 30L9195	
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										ServicePac 4 yr IOR 9x5 NBD 30L9194	
Architecture	Intel 855GM chipset / 82855GM 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) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, Mini PCI) / LPC bus 33MHz (PC87392 Super I/O for parallel)										ServicePac 5 yr IOR 9x5 NBD 30L9196	
Port replicator	No port replicator support											
Docking station	No 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											
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	Some: none / can upgrade to wireless via optional PC Cards Some: UltraConnect™ Antenna built into the display cover											
Mini PCI	Some: no Mini PCI slot (Communications Bay) Some: one Mini PCI slot (Communications Bay) / not customer upgradable											
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset											
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Ethernet	10/100 ethernet on planar / Intel 82562EZ 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 (3.5 mm) / headphone jack (3.5 mm) / no line in jack											
Security	Power-on password / hard disk password / supervisor password / security keyhole											
Security chip	None											
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service											
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828			T40/R50 Series Li-Ion Battery 6-cell			08K8214			ServicePac 2 yr P&L P/U Depot		
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830			T40/R50 High Capacity Li-Ion Batt 9-cell			08K8197			30L9191		
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832			ThinkPad Multiple Battery Charger II			22P9040			ServicePac 3 yr P&L P/U Depot		
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834			40GB HS Hard Disk 9.5mm (5400 rpm)			08K9816			30L9192		
IBM USB Portable Diskette Drive	05K9276			80GB HS Hard Disk 9.5mm (5400 rpm)			09N4273			ServicePac 4 yr P&L P/U Depot		
IBM USB 2.0 Combo Drive	73P4515			IBM 11a/b/g Wireless CardBus Adapter			31P9101			69P9195		
IBM USB 2.0 Portable Multi-Burner Drive	22P9163			ThinkPad 72W AC/DC Combo Adapter			22P9010			ServicePac 5 yr P&L P/U Depot		
IBM USB 2.0 Memory Key 512MB	22P9230			Other options at ibm.com/pc/us/accessories						69P9197		

See footnotes for important warranty information

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Ⓜ US model announced January 11, 2005; previous models on September 14, October 12, or December 21, 2004

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Integrated graphics	Security chip	Limited warranty ¹²	Workhorse (W) Global (G) Avail Education date
1834-FWU	Celeron® M 320	1.3	512KB	256MB	14.1" XGA	30GB	CD	Intel 11b/g Wi-Fi ³²	Modem	Extreme™ 2	No	XP Pro	1 yr Educ Sep 04
1834-FXU	Celeron M 340	1.5	512KB	256MB	14.1" XGA	30GB	CD	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	XP Pro	1 yr Educ Sep 04
<p>• The 1834 has a 1 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 teachers.</p>													
Positioning Processor	<i>Mainstream performance and features; two-spindle system</i> Intel® Celeron M Processor 320 (1.3GHz) or 340 (1.5GHz) with 400MHz system bus										SOFTWARE¹⁴		
L2 cache	512KB / on die (at processor speed) / ECC										Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)		
Memory	256MB std / 2GB max ⁷ / 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										Preloaded (all) • Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable Library™ • Access IBM • Access Connections • IBM Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵		
Diskette drive	None standard / use optional USB-based diskette drive										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant		
CD	CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7 mm high										License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Ultrabay Enhanced Disk	None / no support for removable Ultrabay™ options 30GB⁸ (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / IBM Hard Disk Drive Shock Absorber												
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / one latch to unlatch and open with one hand												
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	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)												
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass												
Touch pad	No UltraNav™ multi-pointing system												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³	<i>14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm</i>												
Weight ²	<i>with optical drive and battery: 14.1" models: 6.0 lb (2.7kg)</i>												
Case material	<i>Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic</i>												
Battery - type	Lithium Ion 6-cell / intelligent / supports optional 9-cell battery												
Battery - life ¹⁰	Up to 3.5 hr; <i>Optional 9-cell: up to 5.5 hr</i>												
Architecture	Intel 855GM chipset / 82855GM 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) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 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, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door												
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										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
IEEE 1394	None												
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										Universal 72 watt AC adapter		
Mini PCI	One Mini PCI slot (Communications Bay) / not customer upgradable										Asset ID™ ³⁴ (system-specific info in chip accessed over network)		
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										PC 2001 and PXE 2.0-compliant		
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										ACPI 1.0b and 2.0-compliant		
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										CIM and DMI 2.0-compliant		
Bluetooth	None										ENERGY STAR®-compliant		
Ethernet	10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®										IBM ImageUltra™ Services available		
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 (3.5 mm) / headphone jack (3.5 mm) / no line in jack										International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)		
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	None												
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service										ServicePac® ²² 1yr IOR 9x5 NBD		
Service options	Service upgrades ²² provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										30L9188		
											ServicePac 2 yr IOR 9x5 NBD		
											30L9189		
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828										T40/R50 Series Li-Ion Battery 6-cell		
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830										08K8214		
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832										08K8197		
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834										22P9040		
IBM 4GB Microdrive™ with PC Card	09N4280										ServicePac 4 yr IOR 9x5 NBD		
IBM USB Portable Diskette Drive	05K9276										73P2582		
IBM USB 2.0 Portable 40GB Hard Disk	22P7196										31P8901		
IBM USB 2.0 Combo Drive	73P4515										31P9101		
IBM USB 2.0 Portable Multi-Burner Drive	22P9163										02K6699		
IBM USB 2.0 Memory Key 256MB	22P9228										22P9010		
IBM USB 2.0 Memory Key 512MB	22P9230										ThinkPad 72W AC Adapter		
IBM USB Keyboard with UltraNav	31P8950										ThinkPad 72W AC/DC Combo Adapter		
IBM USB Travel Keyboard with UltraNav	31P9490										IBM Optical 3-Button Travel Wheel Mouse		
IBM Enh Perf Wireless Keybrd and Mouse	73P4067										31P7410		
IBM Preferred Pro PS/2 Keyboard (black)	31P7415										31P7405		
30GB Hard Disk 9.5mm (4200 rpm)	09N4268										31P8700		
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816										ServicePac 2 yr P&L P/U Depot		
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273										30L9191		
											ServicePac 3 yr P&L P/U Depot		
											30L9192		
											ServicePac 4 yr P&L P/U Depot		
											69P9195		
											ServicePac 5 yr P&L P/U Depot		
											69P9197		
											Post-warranty annual maintenance agreements at		
											ibm.com/services/its/us/source/maspspleu.pdf		
											Other options at ibm.com/pc/us/accessories		

See footnotes for important warranty information
US models announced September 14, 2004

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Integrated graphics	Security chip	Limited warranty ¹²	Workhorse (W) Global (G) Avail Entry (E) date
1842-2QU	Celeron® M	1.3	512K	256MB	15.0" XGA	20GB	CD	None	Modem	Extreme™ 2	No	XP Pro 1 yr	No May 04
1842-2RU	Celeron M	1.3	512K	256MB	15.0" XGA	30GB	Combo	None	Modem	Extreme 2	No	XP Pro 1 yr	No May 04
1842-BJU	Pentium® M 715	1.5	2MB	256MB	15.0" XGA	30GB	Combo *	Intel 11b/g Wi-Fi ³²	Modem	Extreme 2	No	XP Pro 1 yr	No July 04
1842-PPU	Pentium M 715a	1.5	2MB	256MB	15.0" XGA	30GB	Combo *	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	XP Pro 1 yr	No Jan 05
1842-GQU	Celeron M 330	1.4	512K	256MB	15.0" XGA	30GB	CD	None	Modem	Extreme 2	No	XP Pro 1 yr	No Dec 04
1842-GRU	Celeron M 330	1.4	512K	256MB	15.0" XGA	30GB	Combo	None	Modem	Extreme 2	No	XP Pro 1 yr	No Dec 04
1842-G3U	Celeron M 340	1.5	512K	256MB	15.0" XGA	30GB	CD	None	Modem	Extreme 2	No	XP Pro 1 yr	No Sep 04
1842-G7U	Celeron M 340	1.5	512K	256MB	15.0" XGA	30GB	Combo	None	Modem	Extreme 2	No	XP Pro 1 yr	No Sep 04
1842-GBU	Celeron M 350	1.3	1MB	256MB	15.0" XGA	30GB	CD	None	Modem	Extreme 2	No	XP Pro 1 yr	No Sep 04
1842-GDU	Celeron M 350	1.3	1MB	256MB	15.0" XGA	30GB	Combo	None	Modem	Extreme 2	No	XP Pro 1 yr	No Sep 04
1842-HRU	Pentium M 725	1.6	2MB	256MB	15.0" XGA	30GB	Combo *	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	XP Pro 1 yr	No Sep 04

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

Positioning	Mainstream performance and features; two-spindle system	SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ - Dec/Jan models: Service Pack 2 ♦ Disk-to-Disk Recovery (in hidden protected area)
Processor	Intel® Celeron M Processor 1.3GHz, 330 (1.4GHz), 340 (1.5GHz) or 350 (1.3GHz) with 400MHz system bus or Intel Pentium M Processor 715/715a (1.5GHz) or 725 (1.6GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus	
L2 cache	Celeron M and M 330/340: 512KB; Celeron M 350: 1MB; Pentium M 715/715a/725: 2 MB	Preloaded (all) • Access IBM • Access Connections • IBM Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™.15 • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo models)
Memory	256MB std / 2GB max ⁷ / 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	
Diskette drive	None standard / use optional USB-based diskette drive	Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
CD	Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7 mm high	
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / fixed, not removable / 12.7 mm	ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage Universal 72 watt AC adapter Asset ID™.34 (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant ENERGY STAR®-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)
UltraTray Enhanced Disk	None / no support for removable UltraTray™ options 20GB ⁸ or 30GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / IBM Hard Disk Drive Shock Absorber	
Display	15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits / one latch to unlatch and open with one hand	ServicePac®.22 1yr IOR 9x5 NBD 30L9188 ServicePac 2 yr IOR 9x5 NBD 30L9189 ServicePac 3 yr IOR 9x5 NBD 30L9195 ServicePac 4 yr IOR 9x5 NBD 30L9194 ServicePac 5 yr IOR 9x5 NBD 30L9196 ServicePac 2 yr P&L P/U Depot 30L9191 ServicePac 3 yr P&L P/U Depot 30L9192 ServicePac 4 yr P&L P/U Depot 69P9195 ServicePac 5 yr P&L P/U Depot 69P9197 Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf
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	128 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9828 T40/R50 Series Li-Ion Battery 6-cell 08K8214 256 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9830 T40/R50 High Capacity Li-Ion Batt 9-cell 08K8197 512 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9832 ThinkPad Multiple Battery Charger II 22P9040 1GB PC2700 DDR-SDRAM CL2.5 SOD 31P9834 30GB Hard Disk 9.5mm (4200 rpm) 09N4268 IBM 4GB Microdrive™ with PC Card 09N4280 40GB HS Hard Disk 9.5mm (5400 rpm) 08K9816 IBM USB Portable Diskette Drive 05K9276 80GB HS Hard Disk 9.5mm (5400 rpm) 09N4273 IBM USB 2.0 Portable Multi-Burner Drive 22P9163 IBM 11a/b/g Wireless CardBus Adapter 31P9101 IBM USB 2.0 Portable 40GB Hard Disk 22P7196 IBM Optical 3-Button Travel Wheel Mouse 31P7410 IBM USB 2.0 Memory Key 512MB 22P9230 ThinkPad T2W AC/DC Combo Adapter 22P9010 IBM M400 Projector 0037A04 ThinkPad Premiere Leather Carrying Case 10K0209 Kensington® MicroSaver® Security Cable 73P2582 Other options at ibm.com/pc/us/accessories
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touch pad	No UltraNav™ multi-pointing system	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm	
Weight ²	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 ¹⁰	Celeron M models: up to 3.5 hr; Pentium M models: 4.0 hr; Optional 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, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 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, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door	
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	
IEEE 1394	None	
Wireless antenna	Some: none / can upgrade to wireless via optional PC Cards Some: UltraConnect™ Antenna built into the display cover	
Mini PCI	Some: no Mini PCI slot (Communications Bay) Some: one Mini PCI slot (Communications Bay) / not customer upgradable Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset	
Intel 11b/g ³²	One Communications Daughter Card (CDC) socket (used by modem) / not accessible	
CDC	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset	
Modem	None	
Bluetooth	None	
Ethernet	10/100 ethernet on planar / Intel 82562EZ 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 (3.5 mm) / headphone jack (3.5 mm) / no line in jack	
Security	Power-on password / hard disk password / supervisor password / security keyhole	
Security chip	None	
Limited warranty ¹²	1 year - EasyServ™.19 onsite pickup and delivery courier service	

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

☞ US model announced January 11, 2005; previous models on July 13, May 18, Sept 14, and Dec 21, 2004

☞ US models withdrawn effective January 2005

Type-model	Processor	Speed GHz	GHz Memory	Screen	Graphics controller	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	Ethernet CDC modem	Ethernet on planar	IEEE 1394 port	Security chip	Workhorse (W) Global (G) Preload Entry (E)	Avail date
1830-ADU	Pentium® M	1.6	256MB	14.1" XGA	7500	40GB	Combo	*Intel 11b/g Wi-Fi ³²	Modem	Gigabit	1394	Yes	XP Pro W	Apr 2004
1830-AKU	Pentium M	1.6	512MB	14.1" XGA	7500	40HS	Combo	11a/b/g Wi-Fi ³²	Modem	Gigabit	1394	Yes	XP Pro	Apr 2004
1830-ALU	Pentium M	1.6	256MB	14.1" XGA	7500	40GB	Combo	IBM 11b/g ³²	Modem	Gigabit	1394	Yes	XP Pro W	Apr 2004
1830-BLU	Pentium M	1.6	256MB	15.0" XGA	7500	40GB	Combo	*Intel 11b Wi-Fi ³²	Modem	Gigabit	1394	Yes	XP Pro W G	Apr 2004
1830-BQU	Pentium M	1.6	256MB	15.0" SXGA+	9000	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	XP Pro W	Apr 2004
1830-BVU	Pentium M	1.6	256MB	15.0" XGA	7500	40GB	Combo	IBM 11b/g	Modem	Gigabit	1394	Yes	XP Pro W	Apr 2004

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

Positioning	Mainstream performance and features; two-spindle system										SOFTWARE¹⁴			
Processor	Intel® Pentium® M Processor 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										Windows XP Professional			
L2 cache	1MB / on die (at processor speed) / ECC										- Microsoft® Windows® XP Professional ²⁰			
Memory	256 or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										◆ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded			
Combo	DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Enhanced										• Access IBM			
Ultrabay Enhanced Disk	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high 40GB ⁸ (4200 rpm) or 40GB (HS 5400 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• Access Connections			
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 / FlexView display with wide viewing angle and high density using IPS technology										• IBM Rescue and Recovery™			
Graphics	Some: ATI® Mobility™ RADEON™ 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)										• IBM RecordNOW and IBM Drive Letter Access powered by Sonic products (combo models)			
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• InterVideo WinDVD (combo)			
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• Norton AntiVirus (OEM edition)			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										• PC-Doctor™			
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• ThinkPad Utilities			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• Adobe Reader			
Dimensions ³	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 with optical drive and battery; ADU/AKU/ALU: 6.0 lb (2.7kg); BLU/BQU/BVU: 6.6 lb (3.0kg)										• IBM Update Connector™ ¹⁵			
Weight ²	Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic										Downloadable			
Case material	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced										• IBM Director Agent			
Battery - type	Model BQU with SXGA+: up to 4.0 hr; Others: up to 4.7 hr; Optional 9-cell: up to 6.9 hr										• Software Delivery Assistant			
Battery - life ¹⁰	Architecture										• System Migration Assistant			
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 (TI® PCI4520A CardBus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for parallel, infrared, [docking-based ports])										• Client Security Software (for security chip)			
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										License (CD not included)			
Ports	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										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
Video out	S-video out port (TV out) / one 4-pin industry standard connector										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage			
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard										Universal 72 watt AC adapter			
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										Asset ID™ ³⁴ (system-specific info in chip accessed over network)			
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										PC 2001 and PXE 2.0-compliant			
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset										ACPI 1.0b and 2.0-compliant			
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										CIM and DMI 2.0-compliant			
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset										ENERGY STAR™-compliant			
11a/b/g Wi-Fi ³²	Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset										IBM ImageUltra™ Services available			
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										International Warranty Service ¹⁷			
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)			
Bluetooth	None standard										ServicePac®. ²² 2 yr IOR 9x5 NBD			
Ethernet	Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN®										30L9190			
Audio support	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) / headphone jack (3.5 mm) / no line in jack										ServicePac 3 yr IOR 9x5 NBD			
Security	Power-on password / hard disk password / supervisor password / security keyhole										30L9197			
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										ServicePac 4 yr IOR 9x5 NBD			
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail										69P9198			
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830			T40/R50 Series Li-Ion Battery 6-cell			08K8214			ServicePac 5 yr IOR 9x5 NBD				
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832			T40/R50 High Capacity Li-Ion Batt 9-cell			08K8197			69P9200				
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834			Ultrabay Slim Li-Polymer Battery 3-cell			08K8190			ServicePac 4 yr P&L P/U Depot				
Second HDD Adapter for Ultrabay Slim	62P4554			Intel PRO/Wireless 2200BG Mini PCI			73P2801			69P9199				
CD-RW/DVD Combo Ultrabay Enhanced	73P3275			IBM 11a/b/g Wireless Mini PCI Adapter II			73P4301			ServicePac 5 yr P&L P/U Depot				
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312			IBM 11a/b/g Wireless CardBus Adapter			31P9101			69P9201				
IBM USB Portable Diskette Drive	05K9276			ThinkPad 72W AC/DC Combo Adapter			22P9010			Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf				
IBM USB 2.0 Portable Multi-Burner Drive	22P9163			ThinkPad Port Replicator II			74P6733			Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf				
IBM USB 2.0 Memory Key 512MB	22P9230			ThinkPad Mini Dock			287810U							
30GB Hard Disk 9.5mm (4200 rpm)	09N4268			ThinkPad Dock II			287710U							
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816			IBM M400 Projector			0038A04							
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273			IBM Optical 3-Button Travel Wheel Mouse			31P7410							
TrackPoint Cap Collection	73P2698			Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information
US models announced April 6, 2004
≠ US models withdrawn effective January 2005

* Powered by Intel Centrino™ mobile technology

Type-model	Processor	Speed GHz	GHz Memory	Screen	Graphics controller	GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security chip	Workhorse (W) Global (G) Avail Entry (E) date
1830-G7U	Pentium® M 725	1.6	256MB	14.1" XGA	7500	40GB	Combo	*Intel 11b/g Wi-Fi ³²	Modem	Gigabit	1394	Yes	XP Pro No Jul 04
1830-H3U	Pentium M 725	1.6	256MB	15.0" XGA	7500	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	XP Pro No Jul 04
1830-8MU	Pentium M 735	1.7	256MB	14.1" XGA	7500	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	XP Pro W G Sep 04
1830-8TU	Pentium M 735	1.7	512MB	14.1" XGA	7500	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	XP Pro W Sep 04
1830-9TU	Pentium M 735	1.7	512MB	15.0" SXGA+	9000	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	XP Pro W Sep 04
1830-PVU	Pentium M 735	1.7	256MB	15.0" XGA	7500	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	XP Pro W G Sep 04
1830-F4U	Pentium M 735	1.7	512MB	15.0" XGA	7500	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	XP Pro W Sep 04
1830 models have a 3 year limited warranty (other 1829/1836 ThinkPad R51 systems have a 1 year limited warranty)													
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 ¹ and 400MHz system bus										SOFTWARE¹⁴		
L2 cache	2MB / on die (at processor speed) / ECC										Windows XP Professional		
Memory	256 or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded		
Combo	DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Enhanced										• Access IBM		
Ultrabay Enhanced Disk	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high 40GB ⁸ (4200 rpm) or 40GB (HS 5400 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• Access Connections		
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										• IBM Rescue and Recovery™		
Graphics	Some: ATI® Mobility™ RADEON™ 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)										• Norton AntiVirus (OEM edition)		
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• PC-Doctor™		
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• ThinkPad Utilities		
TrackPoint®	TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										• Adobe Reader		
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• IBM Update Connector™ ¹⁵		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• IBM RecordNOW and IBM Drive Letter Access powered by Sonic products (combo models)		
Dimensions ³	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 with optical drive and battery; 14.1" models: 6.0 lb (2.7kg); 15.0" models: 6.6 lb (3.0kg)										• InterVideo WinDVD (combo)		
Weight ²	Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic										Downloadable		
Case material	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced										• IBM Director Agent		
Battery - type	Model with SXGA+: up to 3.7 hr; Others: up to 4.0 hr; Optional 9-cell: up to 6.2 hr										• Software Delivery Assistant		
Battery - life ¹⁰											• System Migration Assistant		
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 (TI® PCI4520A CardBus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for parallel, infrared, [docking-based ports])										• Client Security Software (for security chip)		
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										License (CD not included)		
Ports	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										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Video out	S-video out port (TV out) / one 4-pin industry standard connector										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard										Universal 72 watt AC adapter		
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										Asset ID™ ³⁴ (system-specific info in chip accessed over network)		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										PC 2001 and PXE 2.0-compliant		
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										ACPI 1.0b and 2.0-compliant		
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										CIM and DMI 2.0-compliant		
Modem	56K ⁵ V.90 (V.92-designed ²⁵) modem in CDC / Conexant® chipset										ENERGY STAR®-compliant		
Bluetooth	None standard										IBM ImageUltra™ Services available		
Ethernet	Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN®										International Warranty Service ¹⁷		
Audio support	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) / headphone jack (3.5 mm) / no line in jack										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)		
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail												
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	T40/R50 Series Li-Ion Battery 6-cell	08K8214	ServicePac® ²² 2 yr IOR 9x5 NBD	30L9190								
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40/R50 High Capacity Li-Ion Batt 9-cell	08K8197	ServicePac 3 yr IOR 9x5 NBD									
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190		30L9197								
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 4 yr IOR 9x5 NBD									
Second HDD Adapter for Ultrabay Slim	62P4554	Kensington® MicroSaver® Security Cable	73P2582		69P9198								
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	ThinkPad Monitor Stand 2001	22P5265	ServicePac 5 yr IOR 9x5 NBD									
CD-RW/DVD Combo Ultrabay Enhanced	73P3275	Intel PRO/Wireless 2200BG Mini PCI	73P2801		69P9200								
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301	ServicePac 4 yr P&L P/U Depot									
IBM 4GB Microdrive™ with PC Card	09N4280	IBM 11a/b/g Wireless CardBus Adapter	31P9101		69P9199								
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699	ServicePac 5 yr P&L P/U Depot									
IBM USB 2.0 Combo Drive	73P4515	ThinkPad 72W AC/DC Combo Adapter	22P9010		69P9201								
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Port Replicator II	74P6733	Other ServicePac options at									
IBM USB 2.0 Memory Key 512MB	22P9230	ThinkPad Mini Dock	287810U	ibm.com/services/its/us/source/wamomxeu.pdf									
IBM M400 Projector	0037A04	ThinkPad Dock II	287710U	Post-warranty annual maintenance agreements at									
IBM Enh Perf Wireless Keybrd and Mouse	73P4067	IBM Optical 3-Button Travel Wheel Mouse	31P7410	ibm.com/services/its/us/source/maspspleu.pdf									
IBM USB Travel Keyboard with UltraNav	31P9490	SonyEricsson® GC83 EDGE PC Card	26K3393										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Carrying Case - Expander	73P3597										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US models announced September 14, 2004; previous models on July 13, 2004

Type-model	Processor	Speed GHz	Memory GB	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	EthernetSecu- on chip	Preload	Workhorse (W) Limited Global (G) Avail warranty ¹² Education	date
1830-AHU	Pentium® M	1.5	512MB	14.1" XGA	40GB	Combo	*Intel 11b/g Wi-Fi ³²	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Apr 04
1830-AJU	Pentium M	1.5	512MB	14.1" XGA	60GB	DVD-RW	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Apr 04
1830-BTU	Pentium M	1.5	512MB	15.0" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Apr 04
1830-BUU	Pentium M	1.5	512MB	15.0" SXGA+	60GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Apr 04
1830-8KU	Pentium M 725	1.6	512MB	14.1" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Sep 04
1830-8LU	Pentium M 725	1.6	512MB	14.1" XGA	60GB	DVD±RW	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Sep 04
1830-PUU	Pentium M 725	1.6	512MB	15.0" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Sep 04
1830-9QU	Pentium M 725	1.6	512MB	15.0" SXGA+	60GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	EasyServ Educ Sep 04

• The 1830 has an EasyServ™¹⁹ 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 and 400MHz system bus 1.5GHz: 1MB; 1.6GHz: 2MB; All: on die (at processor speed) / ECC		SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ◆ Disk-to-Disk Recovery (in hidden protected area)	
L2 cache	512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available		Preloaded • Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™ • Access IBM • Access Connections • IBM Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW, DVD±RW) • InterVideo WinDVD (combo, DVD-RW, DVD±RW) • InterVideo WinDVD Creator (DVD-RW, DVD±RW) • IBM Simple Backup (DVD-RW, DVD±RW)	
Memory	None standard / use optional USB-based diskette drive Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Enhanced Some: CD-RW/DVD-RW Multi-Burner / removable from 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 40GB⁹ 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' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact protection)		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	
Diskette drive	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology		Universal 72 watt AC adapter Asset ID™ ³⁴ (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)	
Combo	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology		ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf	
DVD-RW	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology		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 IBM or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.	
DVD±RW	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Ultrabay Enhanced Disk	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Graphics	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Graphics external	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Keyboard	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
TrackPoint®	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Touch pad	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
ThinkLight™	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Dimensions ³	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Weight ²	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Case material	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Battery - type	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Battery - life ¹⁰	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Architecture	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
PC Card Std slots	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Ports	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Video out	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
IEEE 1394	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Wireless antenna	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Mini PCI	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Intel 11b/g ³²	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
CDC	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Modem	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Bluetooth	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Ethernet	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Audio support	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Security	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Security chip	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
Limited warranty ¹²	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 / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology			
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	T40/R50 Series Li-Ion Battery 6-cell	08K8214	
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40/R50 High Capacity Li-Ion Batt 9-cell	08K8197	
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	Intel PRO/Wireless 2200BG Mini PCI	73P2801	
Second HDD Adapter for Ultrabay Slim	62P4554	IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301	
CD-RW/DVD Combo Ultrabay Enhanced	73P3275	IBM 11a/b/g Wireless CardBus Adapter	31P9101	
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	ThinkPad 72W AC/DC Combo Adapter	22P9010	
IBM USB Portable Diskette Drive	05K9276	Kensington® MicroSaver® Security Cable	73P2582	
IBM USB 2.0 Combo Drive	73P4515	ThinkPad Port Replicator II	74P6733	
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Mini Dock	287810U	
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Dock II	287710U	
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	Other options at ibm.com/pc/us/accessories		

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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® US models announced September 14, 2004; previous models on April 6, 2004

Type-model	Processor	Speed GHz	Memory GB	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet planar	Secu- rity chip	Workhorse (W) Limited Global (G) Education	Avail date
1831-AHU	Pentium® M	1.5	512MB	14.1" XGA	40GB	Combo	*Intel 11b/g Wi-Fi ³²	Modem	Gigabit	Yes	XP Pro	Onsite Educ Apr 2004
1831-AJU	Pentium M	1.5	512MB	14.1" XGA	60GB	DVD-RW	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	Onsite Educ Apr 2004
1831-BTU	Pentium M	1.5	512MB	15.0" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	Onsite Educ Apr 2004
1831-BUU	Pentium M	1.5	512MB	15.0" SXGA+	60GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	Onsite Educ Apr 2004
1831-8KU	Pentium M 725	1.6	512MB	14.1" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	Onsite Educ Sep2004
1831-8LU	Pentium M 725	1.6	512MB	14.1" XGA	60GB	DVD±RW	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	Onsite Educ Sep2004
1831-PUU	Pentium M 725	1.6	512MB	15.0" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	Onsite Educ Sep2004
1831-9QU	Pentium M 725	1.6	512MB	15.0" SXGA+	60GB	Combo	*Intel 11b/g Wi-Fi	Modem	Gigabit	Yes	XP Pro	Onsite Educ Sep2004

• The 1831 has a limited onsite service²⁴ 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 and 400MHz system bus 1.5GHz: 1MB; 1.6GHz: 2MB; All: on die (at processor speed) / ECC							SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ◆ Disk-to-Disk Recovery (in hidden protected area)				
L2 cache Memory	512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available							◆ Preloaded • Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™ • Access IBM • Access Connections • IBM Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW, DVD±RW) • InterVideo WinDVD (combo, DVD-RW, DVD±RW) • InterVideo WinDVD Creator (DVD-RW, DVD±RW) • IBM Simple Backup (DVD-RW, DVD±RW)				
Diskette drive	None standard / use optional USB-based diskette drive							◆ Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software (for security chip)				
Combo DVD-RW	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Enhanced							◆ License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client				
DVD±RW	Some: CD-RW/DVD-RW Multi-Burner / removable from Ultrabay Enhanced							◆ Universal 72 watt AC adapter Asset ID™ ³⁴ (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹² via 800-IBM-SERV (426-7378)				
Ultrabay Enhanced Disk	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 40GB⁹ 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' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System (impact protection)							◆ Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf				
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 / FlexView display with wide viewing angle and high density using IPS technology							◆ 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 IBM or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.				
Graphics	ATI® Mobility™ RADEON™ 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)											
Graphics external	External monitor support 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®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , 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 ³	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 ²	with optical drive and battery: 14.1" models: 6.0 lb (2.7kg); 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 unique 2nd battery in Ultrabay Enhanced											
Battery - life ¹⁰	Models with SXGA+: up to 3.7 hr; Others: up to 4.0 hr; Optional 9-cell: up to 6.2 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 (TI® PCI4520A 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	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door											
Ports	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											
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											
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 upgradable											
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset											
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible											
Modem	56K ⁵ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset											
Bluetooth	None standard											
Ethernet	Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN®											
Audio support	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) / headphone jack (3.5 mm) / no line in jack											
Security	Power-on password / hard disk password / supervisor password / security keyhole											
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
Limited warranty ¹²	3 years/1 year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time ²⁴											
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828		T40/R50 Series Li-Ion Battery 6-cell				08K8214					
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830		T40/R50 High Capacity Li-Ion Batt 9-cell				08K8197					
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832		Ultrabay Slim Li-Polymer Battery 3-cell				08K8190					
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834		Intel PRO/Wireless 2200BG Mini PCI				73P2801					
Second HDD Adapter for Ultrabay Slim	62P4554		IBM 11a/b/g Wireless Mini PCI Adapter II				73P4301					
CD-RW/DVD Combo Ultrabay Enhanced	73P3275		IBM 11a/b/g Wireless CardBus Adapter				31P9101					
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312		ThinkPad 72W AC/DC Combo Adapter				22P9010					
IBM USB Portable Diskette Drive	05K9276		IBM M400 Projector				0037A04					
IBM USB 2.0 Combo Drive	73P4515		ThinkPad Port Replicator II				74P6733					
IBM USB 2.0 Portable Multi-Burner Drive	22P9163		ThinkPad Mini Dock				287810U					
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816		ThinkPad Dock II				287710U					
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273		Other options at ibm.com/pc/us/accessories									

See footnotes for important warranty information

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® US models announced September 14, 2004; previous models on April 6, 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ³	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Ethernet on planar	IEEE 1394 port	Security chip	Workhorse (W) Global (G) Entry (E)	Avail date
1836-Q2U	Pentium® M 725	1.6	256MB	14.1" XGA	7500	40GB	Combo	* Intel 11b/g Wi-Fi ³²	Modem	10/100		Yes	No	Sep 2004
1836-Q3U	Pentium M 725	1.6	256MB	14.1" XGA	7500	60GB	DVD±RW	IBM 11a/b/g II ³²	Modem	Gigabit	1394	Yes	No	Sep 2004
1836-Q4U	Pentium M 725	1.6	256MB	15.0" XGA	7500	40GB	Combo	* Intel 11b/g Wi-Fi	Modem	10/100		Yes	No	Sep 2004
1836-Q5U	Pentium M 725	1.6	256MB	15.0" SXGA+	7500	40GB	Combo	* Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	No	Sep 2004
1836-Q6U	Pentium M 735	1.7	256MB	15.0" SXGA+	9000	60GB	Combo	* Intel 11b/g Wi-Fi	Modem	Gigabit	1394	Yes	No	Sep 2004
1836-Q7U	Pentium M 735	1.7	512MB	15.0" SXGA+	9000	80GB	DVD±RW	IBM 11a/b/g II	Mod/Blue	Gigabit	1394	Yes	No	Sep 2004

These small and medium business (SMB) models are part of the IBM US Think Express Program

Positioning	Mainstream performance and features; two-spindle system												
Processor	Intel® Pentium® M Processor 725 (1.6GHz) or 735 (1.7GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus												
L2 cache	2MB / on die (at processor speed) / ECC												
Memory	256 or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / 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/8X ²¹ speed / removable from Ultrabay Enhance												
DVD±RW	Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Enhanced												
Ultrabay Enhanced	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high												
Disk	40GB⁸ (4200 rpm), 60GB (4200 rpm), or 80GB (4200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM 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 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												
Graphics	Some: ATI® Mobility™ RADEON™ 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)												
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B												
Keyboard	87-key / Accs IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size 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												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³	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 ²	with optical drive and battery: 14.1" models: 6.0 lb (2.7kg); 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 unique 2nd battery in Ultrabay Enhanced												
Battery - life ¹⁰	Models with SXGA+: up to 3.7 hr; Others: up to 4.0 hr; Optional 9-cell: up to 6.2 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 (TI® PCI4520A 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	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door												
Ports	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												
Video out	S-video out port (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 upgradable												
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset												
IBM 11a/b/g II ³²	Some: 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros™ AR5004X chipset												
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset												
Bluetooth	Some: Bluetooth wireless technology / in CDC (with modem)												
Ethernet	Some: 10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN® Some: Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN												
Audio support	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) / headphone jack (3.5 mm) / no line in jack												
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available												
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	T40/R50 Series Li-Ion Battery 6-cell	08K8214	ServicePac 4 yr IOR 9x5 NBD	30L9188								
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40/R50 High Capacity Li-Ion Batt 9-cell	08K8197	ServicePac 2 yr IOR 9x5 NBD	30L9189								
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 3 yr IOR 9x5 NBD	30L9195								
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 4 yr IOR 9x5 NBD	30L9194								
Second HDD Adapter for Ultrabay Slim	62P4554	IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301	ServicePac 5 yr IOR 9x5 NBD	30L9196								
CD-RW/DVD Combo Ultrabay Enhanced	73P3275	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 2 yr P&L P/U Depot	30L9191								
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	ThinkPad T2W AC/DC Combo Adapter	22P9010	ServicePac 3 yr P&L P/U Depot	30L9192								
IBM USB Portable Diskette Drive	05K9276	ThinkPad Port Replicator II	74P6733	ServicePac 4 yr P&L P/U Depot	69P9195								
IBM USB 2.0 Combo Drive	73P4515	ThinkPad Mini Dock	287810U	ServicePac 5 yr P&L P/U Depot	69P9197								
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Dock II	287710U										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Carrying Case - Leather	73P3600										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US models announced September 14, 2004

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Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ³	Optical	Mini PCI Comm Bay wireless	Integrated graphics	Ethernet on planar port	IEEE 1394 port	Security chip	Limited warranty ¹²	Workhorse (W) Global (G) Avail Entry (E) date	
2887-45U	Celeron® M	1.3	128MB	14.1" XGA	20GB	CD	Open; wireless upg ³⁶	Extreme™ 2	10/100	No	Yes	XP Home	1 yr	Apr 04
2887-67U	Celeron M	1.3	128MB	15.0" XGA	20GB	CD	Open; wireless upg	Extreme 2	10/100	No	Yes	XP Home	1 yr	Apr 04
2887-EXU	Celeron M 330	1.4	256MB	14.1" XGA	30GB	CD	Open; wireless upg	Extreme 2	10/100	No	Yes	XP Home	1 yr	Dec 04
2887-GWU	Celeron M 330	1.4	256MB	15.0" XGA	30GB	CD	Open; wireless upg	Extreme 2	10/100	No	Yes	XP Home	1 yr	Dec 04
2887-E3U	Celeron M 340	1.5	256MB	14.1" XGA	30GB	CD	Open; wireless upg	Extreme 2	10/100	No	Yes	XP Home	1 yr	Sep 04
2887-GAU	Celeron M 340	1.5	256MB	15.0" XGA	30GB	CD	Open; wireless upg	Extreme 2	10/100	No	Yes	XP Home	1 yr	Sep 04
2887-2KU	Pentium® M	1.5	128MB	14.1" XGA	20GB	CD	* Intel 11b/g Wi-Fi ³²	Extreme 2	10/100	No	Yes	XP Home	1 yr	E Apr 04
2887-2LU	Pentium M	1.5	128MB	15.0" XGA	20GB	CD	* Intel 11b/g Wi-Fi	Extreme 2	10/100	No	Yes	XP Home	1 yr	E Apr 04
2887-8PU	Pentium M 715	1.5	128MB	14.1" XGA	30GB	CD	* Intel 11b/g Wi-Fi	Extreme 2	10/100	No	Yes	XP Home	1 yr	E July 04
2887-P2U	Pentium M 710	1.4	256MB	15.0" XGA	40GB	Combo	* Intel 11b/g Wi-Fi	Extreme 2	10/100	No	Yes	XP Pro	1 yr	Nov 04
2887-P3U	Pentium M 710	1.4	256MB	15.0" XGA	40GB	Combo	* Intel 11b/g Wi-Fi	Extreme 2	Gigabit	Yes	Yes	XP Pro	1 yr	Nov 04
Positioning Processor	<i>Mainstream performance and features; two-spindle system</i> Intel® Celeron M Processor 1.3GHz or 330 (1.4GHz), 340 (1.5GHz) with 400MHz bus or Intel Pentium M Processor 1.5GHz or Intel Pentium M Processor 710 (1.4GHz) or 715 (1.5GHz) with enhanced Intel SpeedStep™ technology¹ and 400MHz system bus <i>Celeron M: 512KB; Pentium M: 1MB; Pentium M 710/715: 2 MB; All: ECC</i>										SOFTWARE¹⁴			
L2 cache Memory	128 or 256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket avail										- Microsoft® Windows® XP Home Edition ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive CD Combo Ultrabay Enhanced Disk	None standard / use optional USB-based diskette drive <i>Some: CD-ROM / 24X-10X⁹ speed / removable from Ultrabay Enhanced</i> <i>Some: DVD-ROM/CD-RW / 24X/24X/24X/8X²¹ speed / removable from Ultrabay Enhance</i> One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high 20GB⁸, 30GB, or 40GB (4200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										Windows XP Professional - Microsoft Windows XP Professional ²⁰ (Service Pack 2) ♦ Disk-to-Disk Recovery (in hidden protected area)			
Display	<i>Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i> <i>Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits</i>										Preloaded • Access IBM • Access Connections • IBM Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo)			
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 250MHz										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software (for security chip)			
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones Illuminates the keyboard to improve visibility in low-light conditions										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage			
Dimensions ³	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 with optical drive and battery: 14.1" models: 6.0 lb (2.7kg); 15.0" models: 6.6 lb (3.0kg)										Universal 72 watt AC adapter Asset ID™ ³⁴ (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant ENERGY STAR®-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)			
Weight ² Case material Battery - type Battery - life ¹⁰	<i>Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic</i> Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced <i>Celeron M models: up to 3.5 hr; Pentium M models: up to 4.0 hr; Optional High Capacity 9-cell: up to 6.0 hr</i>										ServicePac® ²² 1yr IOR 9x5 NBD 30L9188			
Architecture	Intel 855GME chipset / 82855GME 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) / PCI bus 2.2 32-bit, 33MHz (TI® PC14510 CardBus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for parallel, infrared, [docking-based ports])										ServicePac 3 yr IOR 9x5 NBD 30L9195			
PC Card Std slots Ports	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door 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										ServicePac 5 yr IOR 9x5 NBD 30L9196			
Video out IEEE 1394 Wireless antenna Mini PCI Wireless upg ³⁶ Intel 11b/g ³²	S-video out port (TV out) / one 4-pin industry standard connector <i>Some: IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard</i> UltraConnect™ Antenna built into the display cover for optimal wireless signal reception One Mini PCI type III slot (Communications Bay) / customer upgradable <i>Some: wireless upgradable with wireless Mini PCI options</i> <i>Some: 11b/g Wi-Fi³² wireless⁴, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset</i>										ServicePac 3 yr P&L P/U Depot 30L9192			
CDC Modem Ethernet	One Communications Daughter Card (CDC) socket (used by modem) / not accessible 56K ⁵ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset <i>Some: 10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®</i> <i>Some: Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN</i> 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) / headphone jack (3.5 mm) / no line in jack Power-on password / hard disk password / supervisor password / security keyhole										ServicePac 5 yr P&L P/U Depot 69P9197			
Audio support	DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack Power-on password / hard disk password / supervisor password / security keyhole										Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf			
Security Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / TCG-compliant													
Limited warranty ¹²	1 year - EasyServ™ onsite pickup and delivery / service upgrades ²² available													
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828		T40/R50 Series Li-Ion Battery 6-cell		08K8214		ServicePac 3 yr IOR 9x5 NBD 30L9195							
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830		T40/R50 High Capacity Li-Ion Batt 9-cell		08K8197		ServicePac 5 yr IOR 9x5 NBD 30L9196							
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832		Ultrabay Slim Li-Polymer Battery 3-cell		08K8190		ServicePac 3 yr P&L P/U Depot 30L9192							
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834		ThinkPad Multiple Battery Charger II		22P9040		ServicePac 5 yr P&L P/U Depot 69P9197							
Second HDD Adapter for Ultrabay Slim	62P4554		Intel PRO/Wireless 2200BG Mini PCI		73P2801									
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270		IBM 11a/b/g Wireless Mini PCI Adapter II		73P4301									
CD-RW/DVD Combo Ultrabay Enhanced	73P3275		IBM 11a/b/g Wireless CardBus Adapter		31P9101									
Multi-Burner Plus Ultrabay Enhanced Drive	73P3212		ThinkPad Port Replicator II		74P6733									
IBM USB Portable Diskette Drive	05K9276		ThinkPad Mini Dock		287810U									
IBM USB 2.0 Portable Multi-Burner Drive	22P9163		ThinkPad Dock II		287710U									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273		Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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☞ US models announced November 30 and December 21, 2004; previous models on April 6, July 13, or September 14, 2004

☞ US models withdrawn effective January 2005

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	Ethernet CDC modem planar	IEEE 1394 port	Security chip	Limited warranty	Workhorse (W) Global (G) Entry (E)	Avail date
2888-4AU	Pentium® M	1.6	256MB	14.1" XGA	30GB	CD	* Intel 11b/g Wi-Fi ³²	Mod 10/100	No	Yes	XP Pro 3 yr	W	Apr 2004
2888-47U	Pentium M	1.5	256MB	14.1" XGA	20GB	DVD	Open; wireless upg ³⁶	Mod 10/100	No	Yes	XP Pro 3 yr	W G	Apr 2004
2888-5RU	Pentium M	1.6	256MB	14.1" XGA	40GB	Combo	* Intel 11b/g Wi-Fi	Mod Gigabit	Yes	Yes	XP Pro 3 yr	W	Apr 2004
2888-4BU	Pentium M	1.6	256MB	14.1" XGA	30GB	DVD	IBM 11b/g ³²	Mod 10/100	No	Yes	XP Pro 3 yr	W	Apr 2004
2888-6AU	Pentium M	1.6	256MB	15.0" XGA	30GB	DVD	IBM 11b/g	Mod 10/100	No	Yes	XP Pro 3 yr	W	Apr 2004
2888-68U	Pentium M	1.6	256MB	15.0" XGA	30GB	CD	* Intel 11b/g Wi-Fi	Mod 10/100	No	Yes	XP Pro 3 yr	W	Apr 2004
2888-69U	Pentium M	1.6	256MB	15.0" XGA	30GB	DVD	Open; wireless upg	Mod 10/100	No	Yes	XP Pro 3 yr	W	Apr 2004
2888-7JU	Pentium M	1.6	256MB	15.0" XGA	40GB	Combo	* Intel 11b/g Wi-Fi	Mod Gigabit	Yes	Yes	XP Pro 3 yr	W	Apr 2004
2888-BQU	Pentium M 725	1.6	256MB	15.0" XGA	40GB	Combo	* Intel 11b/g Wi-Fi	Mod Gigabit	Yes	Yes	XP Pro 3 yr		July 2004
Positioning	Mainstream performance and features; two-spindle system										SOFTWARE¹⁴		
Processor	Intel® Pentium® M Processor 1.5 or 1.6GHz or Intel Pentium M Processor 725 (1.6GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus <i>Pentium M: 1MB; Pentium M 725: 2MB; All: on die (at processor speed) / ECC</i>										Windows XP Professional		
L2 cache											- Microsoft® Windows® XP Professional ²⁰		
Memory	256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										◆ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive	None standard / use optional USB-based diskette drive										Preloaded		
CD	<i>Some:</i> CD-ROM / 24X-10X ⁹ speed / removable from Ultrabay Enhanced										• Access IBM		
DVD	<i>Some:</i> DVD-ROM / 8X-3.3X ⁹ speed / removable from Ultrabay Enhanced										• Access Connections		
Combo	<i>Some:</i> DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Enhan										• IBM Rescue and Recovery™		
Ultrabay Enhanced	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high										• Norton AntiVirus (OEM edition)		
Disk	20GB⁸, 30GB, or 40GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• PC-Doctor™		
Display	<i>Some:</i> 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits <i>Some:</i> 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits										• ThinkPad Utilities		
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 250MHz										• Adobe Reader		
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• IBM Update Connector™.15		
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										• InterVideo WinDVD (combo, DVD models)		
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										Downloadable		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• IBM Director Agent		
Dimensions ³	<i>14.1" models (WxDxH):</i> 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm <i>15.0" models (WxDxH):</i> 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm										• Software Delivery Assistant		
Weight ²	with optical drive and battery: <i>14.1" models:</i> 6.0 lb (2.7kg); <i>15.0" models:</i> 6.6 lb (3.0kg)										• System Migration Assistant		
Case material	<i>Color:</i> black; <i>All:</i> Acrylonitrile-Butadiene-Styrene (ABS) plastic										• Client Security Software (for security chip)		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced										License (CD not included)		
Battery - life ¹⁰	Up to 4.7 hr; <i>Optional High Capacity 9-cell:</i> up to 6.9 hr										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Architecture	Intel 855GME chipset / 82855GME 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) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4510 CardBus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										Universal 72 watt AC adapter		
Ports	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										Asset ID™.34 (system-specific info in chip accessed over network)		
Video out	S-video out port (TV out) / one 4-pin industry standard connector										PC 2001 and PXE 2.0-compliant		
IEEE 1394	<i>Some:</i> IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard										ACPI 1.0b and 2.0-compliant		
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										CIM and DMI 2.0-compliant		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										ENERGY STAR®-compliant		
Wireless upg ³⁶	<i>Some:</i> wireless upgradable with wireless Mini PCI options										IBM ImageUltra™ Services available		
Intel 11b/g ³²	<i>Some:</i> 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										International Warranty Service ¹⁷		
IBM 11b/g ³²	<i>Some:</i> IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²		
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										ServicePac®.22 2 yr IOR 9x5 NBD 30L9190		
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										ServicePac 3 yr IOR 9x5 NBD 30L9197		
Bluetooth	None										ServicePac 4 yr IOR 9x5 NBD 69P9198		
Ethernet	<i>Some:</i> 10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®										ServicePac 5 yr IOR 9x5 NBD 69P9200		
	<i>Some:</i> Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN										ServicePac 4 yr P&L P/U Depot 69P9199		
Audio support	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) / headphone jack (3.5 mm) / no line in jack										ServicePac 5 yr P&L P/U Depot 69P9201		
Security	Power-on password / hard disk password / supervisor password / security keyhole										Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf		
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf		
Limited warranty ¹²	3 years /1 yr battery - EasyServ™.19 onsite pickup and delivery / service upgrades ²² avail												
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	T40/R50 Series Li-Ion Battery 6-cell	08K8214										
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40/R50 High Capacity Li-Ion Batt 9-cell	08K8197										
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	Intel PRO/Wireless 2200BG Mini PCI	73P2801										
Second HDD Adapter for Ultrabay Slim	62P4554	IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301										
CD-RW/DVD Combo Ultrabay Enhanced	73P3275	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	IBM E400 Projector	0038A04										
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Port Replicator II	74P6733										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Mini Dock	287810U										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U										
ThinkPad Carrying Case - BackPack	73P3599	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

US model announced July 13, 2004; previous models on April 6, 2004

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	Ethernet IEEE CDC modem	IEEE 1394 planar port	Security chip	Limited warranty	Workhorse (W) Global (G) Entry (E)	Avail date
2888-P9U	Pentium® M 715a	1.5	256MB	14.1" XGA	40GB	Combo *	Intel 11b/g Wi-Fi ³²	Mod 10/100	No	Yes XP Pro	3 yr	Jan 2005	
2888-PAU	Pentium M 715a	1.5	256MB	15.0" XGA	40GB	Combo *	Intel 11b/g Wi-Fi	Mod 10/100	No	Yes XP Pro	3 yr	Jan 2005	
2888-PBU	Pentium M 715a	1.5	256MB	15.0" XGA	40GB	Combo *	Intel 11b/g Wi-Fi	Mod Gigabit	Yes	Yes XP Pro	3 yr	Jan 2005	
2888-ESU	Pentium M 735	1.7	256MB	14.1" XGA	30GB	DVD *	Intel 11b/g Wi-Fi	Mod 10/100	No	Yes XP Pro	3 yr	W G Sep2004	
2888-ETU	Pentium M 735	1.7	256MB	14.1" XGA	30GB	CD *	Intel 11b/g Wi-Fi	Mod 10/100	No	Yes XP Pro	3 yr	W Sep2004	
2888-EUU	Pentium M 735	1.7	256MB	14.1" XGA	30GB	DVD	Open; wireless upg ³⁶	Mod 10/100	No	Yes XP Pro	3 yr	W Sep2004	
2888-FMU	Pentium M 735	1.7	256MB	14.1" XGA	40GB	Combo *	Intel 11b/g Wi-Fi	Mod Gigabit	Yes	Yes XP Pro	3 yr	W Sep2004	
2888-GRU	Pentium M 735	1.7	256MB	15.0" XGA	30GB	CD *	Intel 11b/g Wi-Fi	Mod 10/100	No	Yes XP Pro	3 yr	W Sep2004	
2888-GSU	Pentium M 735	1.7	256MB	15.0" XGA	30GB	DVD	Open; wireless upg	Mod 10/100	No	Yes XP Pro	3 yr	W Sep2004	
2888-GTU	Pentium M 735	1.7	256MB	15.0" XGA	30GB	DVD *	Intel 11b/g Wi-Fi	Mod 10/100	No	Yes XP Pro	3 yr	W Sep2004	
2888-M9U	Pentium M 735	1.7	256MB	15.0" XGA	40GB	Combo *	Intel 11b/g Wi-Fi	Mod Gigabit	Yes	Yes XP Pro	3 yr	W Sep2004	
Positioning	Mainstream performance and features; two-spindle system										SOFTWARE¹⁴		
Processor	Intel® Pentium® M Processor 715 /715a (1.5GHz) or 735 (1.7GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										Windows XP Professional		
L2 cache	2MB / on die (at processor speed) / ECC										- Microsoft® Windows® XP Professional ²⁰		
Memory	256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Pxx models only: Service Pack 2		
Diskette drive	None standard / use optional USB-based diskette drive										♦ Disk-to-Disk Recovery (in hidden protected area)		
CD	Some: CD-ROM / 24X-10X ⁹ speed / removable from Ultrabay Enhanced										Preloaded		
DVD	Some: DVD-ROM / 8X-3.3X ⁹ speed / removable from Ultrabay Enhanced										• Access IBM		
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Enhanced										• Access Connections		
Ultrabay Enhanced Disk	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high 30GB ⁹ or 40GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System										• IBM Rescue and Recovery™		
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										• Norton AntiVirus (OEM edition)		
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 250MHz										• PC-Doctor™		
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• ThinkPad Utilities		
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• Adobe Reader		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										• IBM Update Connector™.15		
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones										• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• InterVideo WinDVD (combo, DVD models)		
Dimensions ³	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										Downloadable		
Weight ²	with optical drive and battery: 14.1" models: 6.0 lb (2.7kg); 15.0" models: 6.6 lb (3.0kg)										• IBM Director Agent		
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic										• Software Delivery Assistant		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced										• System Migration Assistant		
Battery - life ¹⁰	Up to 4.0 hr; Optional High Capacity 9-cell: up to 6.2 hr										• Client Security Software (for security chip)		
Architecture	Intel 855GME chipset / 82855GME 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) / PCI bus 2.2 32-bit, 33MHz (TI® PCI14510 CardBus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])										License (CD not included)		
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Ports	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										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Video out	S-video out port (TV out) / one 4-pin industry standard connector										Universal 72 watt AC adapter		
IEEE 1394	Some: IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard										Asset ID™.34 (system-specific info in chip accessed over network)		
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception										PC 2001 and PXE 2.0-compliant		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										ACPI 1.0b and 2.0-compliant		
Wireless upg ³⁶	Some: wireless upgradable with wireless Mini PCI options										CIM and DMI 2.0-compliant		
Intel 11b/g ³²	Some: 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset										ENERGY STAR™-compliant		
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										IBM ImageUltra™ Services available		
Modem	56K ⁶ V.90 (V.92-design ²⁹) modem in CDC / Conexant® chipset										International Warranty Service ¹⁷		
Bluetooth	None										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²		
Ethernet	Some: 10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®										ServicePac®.22 2 yr IOR 9x5 NBD		
Audio support	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) / headphone jack (3.5 mm) / no line in jack										30L9190		
Security	Power-on password / hard disk password / supervisor password / security keyhole										ServicePac 3 yr IOR 9x5 NBD		
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / TCG-compliant										30L9197		
Limited warranty ¹²	3 years/1 yr battery - EasyServ™.19 onsite pickup and delivery / service upgrades ²² avail										ServicePac 4 yr IOR 9x5 NBD		
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	T40/R50 Series Li-Ion Battery 6-cell	08K8214										
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40/R50 High Capacity Li-Ion Batt 9-cell	08K8197										
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	Intel PRO/Wireless 2200BG Mini PCI	73P2801										
Second HDD Adapter for Ultrabay Slim	62P4554	IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301										
CD-RW/DVD Combo Ultrabay Enhanced	73P3275	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM USB Portable Diskette Drive	05K9276	ThinkPad Port Replicator II	74P6733										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Mini Dock	287810U										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Dock II	287710U										
ThinkPad Carrying Case - BackPack	73P3599	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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† US models announced January 11, 2005; previous models on September 14, 2004

IBM® ThinkPad® R51 (2887/2888) - Education

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay	CDC modem	Integrated graphics	IEEE 1394 port	Security chip	Limited warranty ¹²	Workhorse (W) Global (G) Avail Preload Entry (E) date
2887-2RU	Celeron® M	1.3	256MB	14.1" XGA	30GB	CD	Intel 11b/g Wi-Fi ³²	Modem	Extreme™ 2	No	Yes	1 year	XP Pro Educ Apr 04
2888-2RU	Celeron M	1.3	256MB	14.1" XGA	30GB	CD	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	Yes	3 year	XP Pro Educ Apr 04
2888-EVU	Celeron M 340	1.5	256MB	14.1" XGA	30GB	CD	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	Yes	3 year	XP Pro Educ Sep 04
2888-2WU	Pentium® M	1.5	256MB	14.1" XGA	40GB	Combo *	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	Yes	3 year	XP Pro Educ Apr 04
2888-EWU	Pentium M 725	1.6	256MB	14.1" XGA	40GB	Combo *	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	Yes	3 year	XP Pro Educ Sep 04

- **The 2887 has an EasyServ™¹⁹ onsite pickup and delivery 1 year limited warranty**
- **The 2888 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 teachers.

Positioning Processor	<i>Mainstream performance and features; two-spindle system</i> Intel® Celeron M Processor 1.3GHz or 340 (1.5GHz) with 400MHz system bus or Intel Pentium M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus									SOFTWARE¹⁴			
L2 cache	Celeron M: 512KB; Pentium M 1.5GHz: 1MB; Pentium M 725: 2MB; All: on die / ECC									Windows XP Professional			
Memory	256MB std / 2GB max⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available									- Microsoft® Windows® XP Professional ²⁰ ◆ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive	None standard / use optional USB-based diskette drive									Preloaded			
CD	<i>Some: CD-ROM / 24X-10X⁹ speed / removable from Ultrabay Enhanced</i>									• Access IBM			
Combo	<i>Some: DVD-ROM/CD-RW / 24X/24X/24X/8X²¹ speed / removable from Ultrabay Enhanced</i>									• Access Connections			
Ultrabay Enhanced Disk	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high 30GB⁸ or 40GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System									• IBM Rescue and Recovery™			
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits									• Norton AntiVirus (OEM edition)			
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 250MHz									• PC-Doctor™			
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B									• ThinkPad Utilities			
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)									• Adobe Reader			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass									• IBM Update Connector™ ¹⁵			
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones									• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo model)			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions									• InterVideo WinDVD (combo model)			
Dimensions ³	14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm with optical drive and battery: 6.0 lb (2.7kg)									Downloadable			
Weight ²	<i>Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic</i>									• IBM Director Agent			
Case material	Lithium Ion 6-cell / intelligent / supports optional 2nd battery in Ultrabay Enhanced									• Software Delivery Assistant			
Battery - type	<i>Celeron models: up to 3.4 hr; Pentium model: up to 4.0 hr; Optional 9-cell: up to 6.2 hr</i>									• System Migration Assistant			
Battery - life ¹⁰	Intel 855GME chipset / 82855GME 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) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4510 CardBus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared, [docking-based ports])									• Client Security Software (for security chip)			
Architecture	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door									License (CD not included)			
PC Card Std slots	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									- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
Ports	S-video out port (TV out) / one industry standard connector									ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage			
Video out	None									Universal 72 watt AC adapter			
IEEE 1394	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception									Asset ID™ ³⁴ (system-specific info in chip accessed over network)			
Wireless antenna	One Mini PCI type III slot (Communications Bay) / customer upgradable									PC 2001 and PXE 2.0-compliant			
Mini PCI	<i>Some: wireless upgradable with wireless Mini PCI options</i>									ACPI 1.0b and 2.0-compliant			
Wireless upg ³⁶	<i>Some: 11b/g Wi-Fi³² wireless⁴, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset</i>									CIM and DMI 2.0-compliant			
Intel 11b/g ³²	One Communications Daughter Card (CDC) socket (used by modem) / not accessible									ENERGY STAR®-compliant			
CDC	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset									IBM ImageUltra™ Services available			
Modem	None									International Warranty Service ¹⁷			
Bluetooth	10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®									24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)			
Ethernet	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) / headphone jack (3.5 mm) / no line in jack									ServicePac options at ibm.com/services/us/its/pdf/wamomxeu.pdf			
Audio support	Power-on password / hard disk password / supervisor password / security keyhole									Post-warranty annual maintenance agreements at ibm.com/services/us/its/pdf/maspspleu.pdf			
Security	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant									ThinkPad Port Replicator II 74P6733			
Security chip	Limited warranty ¹² 2887: 1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available 2888: 3 years /1 yr battery - EasyServ onsite pickup and delivery / srv upgrades ²² avail									ThinkPad Mini Dock 287810U			
128 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9828	T40/R50 Series Li-Ion Battery 6-cell			08K8214			ThinkPad Dock II 287710U						
256 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9830	Ultrabay Slim Li-Polymer Battery 3-cell			08K8197			TrackPoint Cap Collection 73P2698						
512 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9832	ThinkPad Multiple Battery Charger II			22P9040			ThinkPad Monitor Stand 2001 22P5265						
1GB PC2700 DDR-SDRAM CL2.5 SOD 31P9834	IBM USB Travel Keyboard with UltraNav			31P9490									
Second HDD Adapter for Ultrabay Slim	Kensington® MicroSaver® Security Cable			73P2582									
CD-RW/DVD Combo Ultrabay Enhanced	40GB HS Hard Disk 9.5mm (5400 rpm)			08K9816									
Multi-Burner Plus Ultrabay Enhanced Drive	80GB HS Hard Disk 9.5mm (5400 rpm)			09N4273									
IBM 4GB Microdrive™ with PC Card	Intel PRO/Wireless 2200BG Mini PCI			73P2801									
IBM USB Portable Diskette Drive	IBM 11a/b/g Wireless Mini PCI Adptr II			73P4301									
IBM USB 2.0 Combo Drive	IBM 11a/b/g Wireless CardBus Adapter			31P9101									
IBM USB 2.0 Portable Multi-Burner Drive	ThinkPad 72W AC Adapter			02K6699									
IBM USB 2.0 Memory Key 512MB	ThinkPad 72W AC/DC Combo Adapter			22P9010									
IBM M400 Projector	Other options at ibm.com/pc/us/accessories												
ThinkPad Carrying Case - Leather													

See footnotes for important warranty information

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US models announced September 14, 2004; previous models on April 6, 2004

US models withdrawn effective January 2005

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Integrated graphics	IEEE 1394 port	Security chip	Preload warranty ¹²	Workhorse (W) Limited Global (G) Avail Entry (E) date
2889-2RU	Celeron® M	1.3	256MB	14.1" XGA	30GB	CD	Intel 11b/g Wi-Fi ³²	Modem	Extreme™ 2	No	Yes	XP Pro	Onsite Educ Apr 04
2889-EVU	Celeron M 340	1.5	256MB	14.1" XGA	30GB	CD	Intel 11b/g Wi-Fi	Modem	Extreme 2	No	Yes	XP Pro	Onsite Educ Sep 04
2889-2WU	Pentium® M	1.5	256MB	14.1" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Extreme 2	No	Yes	XP Pro	Onsite Educ Apr 04
2889-EWU	Pentium M 725	1.6	256MB	14.1" XGA	40GB	Combo	*Intel 11b/g Wi-Fi	Modem	Extreme 2	No	Yes	XP Pro	Onsite Educ Sep 04

• **The 2889 has a limited onsite service²⁴ 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 teachers.

This model for education is for sale direct from IBM or through an Authorized Education Reseller.

Positioning Processor	<i>Mainstream performance and features; two-spindle system</i> Intel® Celeron M Processor 1.3GHz or 340 (1.5GHz) with 400MHz system bus or Intel Pentium M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE¹⁴
L2 cache Memory	<i>Celeron M: 512KB; Pentium M 1.5GHz: 1MB; Pentium M 725: 2MB; All: on die / ECC</i> 256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available											Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)
Diskette drive CD Combo	None standard / use optional USB-based diskette drive <i>Some: CD-ROM / 24X-10X⁹ speed / removable from Ultrabay Enhanced</i> <i>Some: DVD-ROM/CD-RW / 24X/24X/24X/8X²¹ speed / removable from Ultrabay Enhanced</i>											Preloaded • Access IBM • Access Connections • IBM Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo model) • InterVideo WinDVD (combo model)
Ultrabay Enhanced Disk	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 30GB⁸ or 40GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM Active Protection System											Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software (for security chip)
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 250MHz											ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage Universal 72 watt AC adapter Asset ID™³⁴ (system-specific info in chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant ENERGY STAR™-compliant IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B											
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions ³ Weight ² Case material	<i>14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"</i> ; 314mm x 260mm x 34-37mm with optical drive and battery: 6.0 lb (2.7kg) <i>Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic</i>											
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced <i>Celeron models: up to 3.5 hr; Pentium model: up to 4.0 hr; Optional 9-cell: up to 6.2 hr</i>											
Architecture	Intel 855GME chipset / 82855GME 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) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4150 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 Ports	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door 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											
Video out IEEE 1394	S-video out port (TV out) / one 4-pin industry standard connector None											
Wireless antenna Mini PCI	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception One Mini PCI type III slot (Communications Bay) / customer upgradable											
Intel 11b/g ³² CDC Modem Bluetooth Ethernet Audio support	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset One Communications Daughter Card (CDC) socket (used by modem) / not accessible 56K ⁵ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset None 10/100 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 (3.5 mm) / headphone jack (3.5 mm) / no line in jack											
Security Security chip	Power-on password / hard disk password / supervisor password / security keyhole IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											
Limited warranty ¹²	3 years/1 year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time ²⁴											
128MB PC2700 DDR-SDRAM CL2.5 SOD 31P9828 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 ThinkPad DVD-ROM Ultrabay Slim Drive CD-RW/DVD Combo Ultrabay Enhanced Multi-Burner Plus Ultrabay Enhanced Drive IBM 4GB Microdrive™ with PC Card IBM USB Portable Diskette Drive IBM USB 2.0 Combo Drive IBM USB 2.0 Portable Multi-Burner Drive IBM USB 2.0 Memory Key 512MB IBM Enh Perf Wireless Keybrd and Mouse Kensington® MicroSaver® Security Cable	T40/R50 Series Li-Ion Battery 6-cell T40/R50 High Capacity Li-Ion Batt 9-cell Ultrabay Slim Li-Polymer Battery 3-cell ThinkPad Multiple Battery Charger II 30GB Hard Disk 9.5mm (4200 rpm) 40GB HS Hard Disk 9.5mm (5400 rpm) 80GB HS Hard Disk 9.5mm (5400 rpm) Intel PRO/Wireless 2200BG Mini PCI IBM 11a/b/g Wireless Mini PCI Adptr II IBM 11a/b/g Wireless CardBus Adapter ThinkPad 72W AC Adapter ThinkPad 72W AC/DC Combo Adapter IBM M400 Projector IBM C400 Projector Other options at ibm.com/pc/us/accessories			08K8214 08K8197 08K8190 22P9040 09N4268 08K9816 09N4273 73P2801 73P4301 31P9101 02K6699 22P9010 0037A04 0039A04			Post-warranty annual maintenance agreements at ibm.com/services/us/its/pdf/maspspleu.pdf ThinkPad Port Replicator II 74P6733 ThinkPad Mini Dock 287810U ThinkPad Dock II 287710U TrackPoint Cap Collection 73P2698 ThinkPad Monitor Stand 2001 22P5265					

See footnotes for important warranty information

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Ⓜ US models announced September 14, 2004; previous models on April 6, 2004

Ⓜ US model withdrawn effective January 2005

IBM® ThinkPad® R51 (2883) - Express (September 2004)

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Integrated graphics	Secu- rity warranty ¹²	Limited Global (G) Avail Preload Entry (E) date	Workhorse (W)		
2883-GXU	Celeron® M 330	1.4	512KB	256MB	15.0" XGA	30GB	Combo	Intel 11b/g Wi-Fi ³²	Modem	Extreme™ 2	Yes	1 yr	XP Pro	No	Dec 04
2883-GHU	Celeron M 340	1.5	512KB	256MB	15.0" XGA	30GB	Combo	Intel 11b/g Wi-Fi	Modem	Extreme™ 2	Yes	1 yr	XP Pro	No	Sep 04
2883-GJU	Celeron M 350	1.3	1MB	256MB	15.0" XGA	30GB	Combo	Intel 11b/g Wi-Fi	Modem	Extreme™ 2	Yes	1 yr	XP Pro	No	Sep 04
2883-ELU	Pentium® M 725	1.6	2MB	256MB	14.1" XGA	30GB	Combo *	Intel 11b/g Wi-Fi	Modem	Extreme™ 2	Yes	1 yr	XP Pro	No	Sep 04
2883-GKU	Pentium M 725	1.6	2MB	256MB	15.0" XGA	30GB	Combo *	Intel 11b/g Wi-Fi	Modem	Extreme™ 2	Yes	1 yr	XP Pro	No	Sep 04

• These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2883 has a 1 year limited warranty

Positioning	Mainstream performance and features; two-spindle system	SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area) Preloaded • Access IBM • Access Connections • IBM Rescue and Recovery™ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo models) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ 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	
Processor	Intel® Celeron M Processor 330 (1.4GHz), 340 (1.5GHz) or 350 (1.3GHz) with 400MHz system bus or Intel Pentium M Processor 725 (1.6GHz) with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus		
L2 cache	Celeron M 330/340: 512KB; Celeron M 350: 1MB; Pentium M 725: 2 MB; All: ECC		
Memory	256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / 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	DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from Ultrabay Enhan		
Ultrabay Enhanced	One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high		
Disk	30GB ⁸ (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / IBM Hard Disk Drive Shock Absorber / IBM 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 855GME GMCH / uses main memory (up to 64MB) / 250MHz		
Graphics external	External monitor support 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®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , 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 ³	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 ²	with optical drive and battery: 14.1" models: 6.0 lb (2.7kg); 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 unique 2nd battery in Ultrabay Enhanced		
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 6.2 hr		
Architecture	Intel 855GME chipset / 82855GME 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) / PCI bus 2.2 32-bit, 33MHz (TI® PCI4510 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	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door		
Ports	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		
Video out	S-video out port (TV out) / one 4-pin industry standard connector		
IEEE 1394	None		
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 upgradable		
Intel 11b/g ³²	11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset		
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible		
Modem	56K ⁹ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset		
Bluetooth	None		
Ethernet	10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN®		
Audio support	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) / headphone jack (3.5 mm) / no line in jack		
Security	Power-on password / hard disk password / supervisor password / security keyhole		
Security chip	IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant		
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available		
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	T40/R50 Series Li-Ion Battery 6-cell	08K8214
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	T40/R50 High Capacity Li-Ion Batt 9-cell	08K8197
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Multiple Battery Charger II	22P9040
Second HDD Adapter for Ultrabay Slim	62P4554	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273
CD-RW/DVD Combo Ultrabay Enhanced	73P3275	Intel PRO/Wireless 2200BG Mini PCI	73P2801
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301
IBM 4GB Microdrive™ with PC Card	09N4280	IBM 11a/b/g Wireless CardBus Adapter	31P9101
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC/DC Combo Adapter	22P9010
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Port Replicator II	74P6733
IBM USB 2.0 Memory Key 512MB	22P9230	ThinkPad Mini Dock	287810U
Kensington® MicroSaver® Security Cable	73P2582	ThinkPad Dock II	287710U
SonyEricsson® GC83 EDGE PC Card	26K3393	GemPC400 Smart Card Reader/Writer	31P8901
ThinkPad Carrying Case - Expander	73P3597	IBM M400 Projector	0037A04
ThinkPad Carrying Case - Backpack	73P3599	IBM E400 Projector	0038A04
ThinkPad Carrying Case - Leather	73P3600	Other options at ibm.com/pc/us/accessories	
			ServicePac® ²² 1yr IOR 9x5 NBD 30L9188
			ServicePac 2 yr IOR 9x5 NBD 30L9189
			ServicePac 3 yr IOR 9x5 NBD 30L9195
			ServicePac 4 yr IOR 9x5 NBD 30L9194
			ServicePac 5 yr IOR 9x5 NBD 30L9196
			ServicePac 2 yr P&L P/U Depot 30L9191
			ServicePac 3 yr P&L P/U Depot 30L9192
			ServicePac 4 yr P&L P/U Depot 69P9195
			ServicePac 5 yr P&L P/U Depot 69P9197
			Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US model announced December 21, 2004; previous models on September 14, 2004

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁶	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Workhorse (W) or Global (G) or Entry (E)	Avail date
2388-DAU	Celeron®	2.4	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	6-cell Li-Ion	XP Pro Entry	Jan 2004
2388-DGU	Celeron	2.4	256MB	14.1" XGA	30GB	CD	None	Modem	10/100	12-cell Li-Ion	XP Pro No	Jan 2004
2388-DMU	Celeron	2.4	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro No	Jan 2004
2388-DVU	Celeron	2.4	256MB	15.0" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro No	Jan 2004
2388-DXU	Celeron	2.4	256MB	15.0" XGA	40GB	Combo	11b Wi-Fi ³²	Modem	10/100	12-cell Li-Ion	XP Pro No	Jan 2004
2388-EJU	Pentium® 4	2.8	256MB	15.0" XGA	60GB	Combo	11a/b Wi-Fi ²⁷	Modem	10/100	12-cell Li-Ion	XP Pro No	Jan 2004
2388-EKU	Pentium 4	2.8	256MB	15.0" SXGA+	60GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro No	Jan 2004
2388-ENU	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro No	Jan 2004
Positioning Processor	Powerful desktop replacement; three-spindle system Intel® Celeron 2.4GHz³⁷ with 400MHz system bus or Intel Pentium 4 at 2.8 or 3.0GHz³⁷ with 400MHz system bus										SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area) Preloaded • Access IBM • Access Connections • Adobe Reader • IBM Rapid Restore™ PC • IBM RecordNOW and IBM Drive Letter Access (combo models) • InterVideo WinDVD (combo) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
L2 cache	Celeron: 128KB ; Pentium 4: 512KB ; All: on die (at processor speed) / ECC											
Memory	128 or 256MB std / 1GB max ⁷ / PC2100 266MHz DDR1 / 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											
CD	Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7mm high											
Combo	Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / fixed, not removable / 12.7mm											
Disk	20GB⁸ or 40GB or 60GB , 4200 rpm, 9.5mm high / removable / 9.5mm high bay											
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: one latch to unlatch and open with one hand											
Graphics	Integrated Intel Extreme™ Graphics / Direct AGP / in 852GM GMCH / uses main memory (8 to 32MB with 128MB memory; 8 to 64MB with 256MB+) / 133MHz / DMVT											
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B											
EasyPivot	ThinkPad 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)											
ComfortSlant	ThinkPad ComfortSlant keyboard with built-in incline provides maximum typing comfort											
TrackPoint®	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											
Touch pad	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™											
Dimensions ³	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume : 4 liters											
Weight ²	with optical drive and battery: DAU : 7.64 lb (3.47kg); DGU : 8.24 lb (3.75kg); DMU : 8.36 lb (3.80kg); DVU/DXU/EJU : 8.54 lb (3.88kg); EKU : 8.58 lb (3.90kg); ENU : 8.85 lb (4.02kg);											
Case material	Color : black; All : Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic											
Battery - type	Lithium Ion 6 or 12-cell / intelligent / removable											
Battery - life ¹⁰	DAU : 1.50 hr; DGU/DMU/DVU/DXU : 3.0 hr; EJU/EKU : 2.8 hr; ENU : 2.0 hr											
Architecture	Intel 852GM chipset / 82852GM Graphics Memory Controller Hub (GMCH) / 82801DBM ICH4-M 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 (TI® PCI1410A CardBus controller, Mini PCI) / LPC bus 33MHz (PC87393F Super I/O for diskette, parallel, PS/2)											
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door											
Ports	Four USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared											
Video out	No video out port											
IEEE 1394	None											
Wireless antenna	Some (wireless models): UltraConnect™ Antenna built into the display cover											
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable											
None	Some: empty / not customer upgradable											
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intersil® Prism 2.5 chipset											
11a/b Wi-Fi ²⁷	Some: 11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset											
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset											
Bluetooth	None											
Ethernet	10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®											
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speaker / 2 watt / volume up, down, mute buttons / no internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack											
Security	Power-on password / hard disk password / supervisor password / security keyhole											
Security chip	None											
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery											
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G40 Li-Ion Battery 12-cell	08K8178	ServicePac® ²² 1yr IOR 9x5 NBD	30L9188							
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad 120W AC Adapter	22P9150	ServicePac 2 yr IOR 9x5 NBD	30L9189							
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	IBM H Rate Wireless LAN PC Card 128	09N9904	ServicePac 3 yr IOR 9x5 NBD	30L9195							
IBM USB 2.0 Combo Drive	73P4515	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 4 yr IOR 9x5 NBD	30L9194							
IBM USB 2.0 Portable Multi-Burner	22P9163	GemPC400 Smart Card Reader/Writer	31P8901	ServicePac 5 yr IOR 9x5 NBD	30L9196							
IBM USB 2.0 Portable 40GB Hard Drive	22P7196	ThinkPad Monitor Stand 2001	22P5265	ServicePac 2 yr P&L P/U Depot	30L9191							
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Nylon Carrying Case	10K0207	ServicePac 3 yr P&L P/U Depot	30L9192							
IBM USB 2.0 Memory Key 256MB	22P9228	ThinkPad Leather Carrying Case	10K0209	ServicePac 4 yr P&L P/U Depot	69P9195							
IBM USB 2.0 Memory Key 512MB	22P9230	Keyboard/Mouse Connector	07G3793	ServicePac 5 yr P&L P/U Depot	69P9197							
IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM USB Keyboard with UltraNav	31P8950	Other ServicePac options at								
IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700	IBM Enhanced Performance USB Keybrd	73P2620	ibm.com/services/its/us/source/wamomxeu.pdf								
IBM USB Serial Parallel Adapter	22P5298	IBM E400 Projector	0038A04	Post-warranty annual maintenance agreements at								
TrackPoint Cap Collection	73P2698	Other options at ibm.com/pc/us/accessories		ibm.com/services/its/us/source/maspspleu.pdf								

See footnotes for important warranty information
US models announced January 20, 2004

ⓧ US models withdrawn effective January 2005

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Preload	Small and medium business	Avail date
2384-31U	Celeron®	2.0	256MB	15.0" XGA	20GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	May 2003
2384-32U	Pentium® 4	2.4	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	May 2003
2384-33U	Pentium 4	2.4	256MB	15.0" XGA	40GB	Combo	11b Wi-Fi ³²	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	May 2003
2384-34U	Pentium 4	2.2	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Aug 2003
2384-89U	Celeron	2.2	256MB	15.0" XGA	30GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Oct 2003
2384-A9U	Pentium 4	2.6	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Oct 2003
2384-B9U	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi ²⁷	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Oct 2003
2384-7NU	Celeron	2.2	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Oct 2003
2384-9JU	Pentium 4	2.6	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Oct 2003
2384-ATU	Pentium 4	2.6	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Oct 2003
2384-ANU	Pentium 4	2.6	256MB	15.0" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Oct 2003

These small and medium business (SMB) models are part of the IBM US Think Express Program

Positioning	<i>Powerful desktop replacement; three-spindle system</i>										SOFTWARE¹⁴		
Processor	Intel® Celeron 2.0 or 2.2GHz ³⁷ with 400MHz system bus or Intel Pentium 4 at 2.2, 2.4, 2.6, or 3.0GHz ³⁷ with 400MHz system bus										Windows XP Professional		
L2 cache	Celeron: 128MB; Pentium 4: 512KB; All: on die (at processor speed) / ECC										- Microsoft® Windows® XP Professional ²⁰		
Memory	256MB std / 1GB max ⁷ / PC2100 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰		
Diskette drive	3.5" 1.44MB / fixed, not removable / 12.7mm high										◇ Disk-to-Disk Recovery (in hidden protected area)		
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / fixed, not removable / 12.7mm high										Preloaded		
Combo	Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / fixed, not removable / 12.7mm										• Access IBM		
Disk	20GB ⁸ , 30GB, or 40GB / 4200 rpm / 9.5mm high / removable / 9.5mm high bay										- Access Connections		
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• Adobe Reader		
	Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• IBM Rapid Restore™ PC		
	All: one latch to unlatch and open with one hand										• IBM RecordNow and DLA by Veritas (combo models)		
Graphics	Integrated Intel Extreme™ Graphics / Direct AGP / in 852GM GMCH / uses main memory (8 to 32MB with 128MB memory; 8 to 64MB with 256MB+) / 133MHz / DMVT										• Norton AntiVirus (OEM edition)		
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• PC-Doctor™		
EasyPivot	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										• ThinkPad Utilities		
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• IBM Update Connector™ ¹⁵		
ComfortSlant	ThinkPad ComfortSlant keyboard with built-in incline provides maximum typing comfort										Downloadable		
TrackPoint®	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										• IBM Director Agent		
Touch pad	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™										• Software Delivery Assistant		
Dimensions ³	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters										• System Migration Assistant		
Weight ²	with optical drive and battery: 34U: 7.9 lb (3.6kg); Others: 8.36 to 8.54 lb (3.79 to 3.87kg)										License (CD not included)		
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Battery - type	Lithium Ion 12-cell / intelligent / removable												
Battery - life ¹⁰	89U: 3.0 hr; 32U/33U: 3.3 hr; Others: 3.0 hr												
Architecture	Intel 852GM chipset / 82852GM Graphics Memory Controller Hub (GMCH) / 82801DBM ICH4-M 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 (TI® PCI1410A CardBus controller, Mini PCI) / LPC bus 33MHz (PC87393F Super I/O for diskette, parallel, PS/2)										Universal 120 watt AC adapter		
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										Asset ID™ ³⁴ (system-specific info in chip accessed over network)		
Ports	Four USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared port										PC 2001 and PXE 2.0-compliant		
Video out	No video out port										ACPI 1.0b and 2.0-compliant		
IEEE 1394	None										CIM and DMI 2.0-compliant		
Wireless antenna	Some (wireless model): UltraConnect™ Antenna built into the display cover										IBM ImageUltra™ Services available		
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable										IBM Rapid Restore PC available to protect software image and data		
None	Some: empty / not customer upgradable										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)		
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intersil® Prism 2.5 chipset										ServicePac® ²² 1yr IOR 9x5 NBD		
11a/b Wi-Fi ²⁷	Some: 11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset										30L9188		
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										ServicePac 2 yr IOR 9x5 NBD		
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset										30L9189		
Bluetooth	None										ServicePac 3 yr IOR 9x5 NBD		
Ethernet	10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®										30L9195		
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speaker / 2 watt / volume up, down, mute buttons / no internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack										ServicePac 4 yr IOR 9x5 NBD		
Security	Power-on password / hard disk password / supervisor password / security keyhole										30L9194		
Security chip	None										ServicePac 5 yr IOR 9x5 NBD		
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery										30L9196		
Service options	Service upgrades ²² provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										ServicePac 2 yr P&L P/U Depot		
	128 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9828										30L9191		
	256 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9830										ServicePac 3 yr P&L P/U Depot		
	512 MB PC2700 DDR-SDRAM CL2.5 SOD 31P9832										30L9192		
	IBM USB Portable Diskette Drive 05K9276										ServicePac 4 yr P&L P/U Depot		
	IBM USB 2.0 Portable Multi-Burner Drive 22P9163										69P9195		
	IBM USB 2.0 Portable 40GB Hard Disk 22P7196										ServicePac 5 yr P&L P/U Depot		
	IBM 4GB Microdrive™ with PC Card 09N4280										69P9197		
	IBM USB 2.0 Memory Key 512MB 22P9230										Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf		
	IBM Optical 3-Button ScrollPoint Pro Mouse 31P8700										Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf		
	IBM USB Serial Parallel Adapter 22P5298												
	ThinkPad G40 Li-Ion Battery 12-cell 08K8178												
	ThinkPad 120W AC Adapter 22P9150												
	IBM 11a/b/g Wireless CardBus Adapter 31P9101												
	ThinkPad Monitor Stand 2001 22P5265												
	ThinkPad Nylon Carrying Case 10K0207												
	ThinkPad Premiere Leather Carrying Case 10K0209												
	Keyboard/Mouse Connector 07G3793												
	IBM USB Keyboard with UltraNav 31P8950												
	IBM M400 Projector 0037A04												
	Other options at ibm.com/pc/us/accessories												

See footnotes for important warranty information

Ⓜ US model announced October 7, 2003; previous models on May 6 or July 29, 2003

Ⓜ US models withdrawn effective October 2003, April 2004, or January 2005

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Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Diskette drive	Disk GB ⁸	Optical	Graphics	Mini PCI Comm Bay wireless	Ethernet on planar	Battery	Preload	Workhorse (W) Global (G) Avail Entry (E) date
2881-26U	Celeron® D 320	2.40	256K	256MB	14.1" XGA	Yes	30GB	Combo	Extreme™ 2	None	10/100	6-cell	XP Pro	No Oct 04
2881-27U	Celeron D 320	2.40	256K	256MB	14.1" XGA	No	30GB	DVD	Extreme 2	None	10/100	12-cell	XP Home	No Oct 04
2881-2GU	Celeron D 320	2.40	256K	256MB	15.0" XGA	Yes	30GB	Combo	Extreme 2	IBM 11b/g ³²	10/100	12-cell	XP Pro	No Oct 04
2881-36U	Celeron D 325	2.53	256K	256MB	14.1" XGA	Yes	30GB	Combo	Extreme 2	None	10/100	6-cell	XP Pro	No Oct 04
2881-3GU	Celeron D 325	2.53	256K	256MB	15.0" XGA	Yes	30GB	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Oct 04
2881-3QU	Celeron D 325	2.53	256K	256MB	15.0" XGA	No	40GB	Combo	Extreme 2	None	10/100	12-cell	XP Pro	No Oct 04
2881-3NU	Celeron D 325	2.53	256K	128MB	15.0" XGA	No	40HS	CD	Extreme 2	None	10/100	6-cell	XP Home	No Oct 04
2881-46U	Celeron D 330	2.66	256K	256MB	14.1" XGA	Yes	30GB	Combo	Extreme 2	None	10/100	6-cell	XP Pro	No Oct 04
2881-4AU	Celeron D 330	2.66	256K	256MB	14.1" XGA	Yes	30GB	Combo	Extreme 2	IBM 11b/g	10/100	6-cell	XP Pro	No Oct 04
2881-4CU	Celeron D 330	2.66	256K	256MB	15.0" XGA	Yes	40HS	Combo	Extreme 2	None	10/100	12-cell	XP Pro	No Oct 04
2881-4FU	Celeron D 330	2.66	256K	256MB	15.0" XGA	Yes	30GB	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Oct 04
2881-58U	Pentium® 4 532	3.06	1MB	256MB	14.1" XGA	Yes	30GB	DVD	Extreme 2	None	10/100	6-cell	XP Pro	No Oct 04
2881-59U	Pentium 4 532	3.06	1MB	256MB	14.1" XGA	Yes	40GB	Combo	Extreme 2	IBM 11b/g	10/100	6-cell	XP Pro	No Oct 04
2881-5AU	Pentium 4 532	3.06	1MB	256MB	15.0" SXGA+	No	40HS	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Oct 04
2881-5LU	Pentium 4 532	3.06	1MB	256MB	15.0" XGA	Yes	40GB	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Oct 04
2881-5MU	Pentium 4 532	3.06	1MB	256MB	15.0" XGA	Yes	30GB	Combo	Extreme 2	None	10/100	6-cell	XP Pro	No Oct 04
2881-65U	Pentium 4 538	3.2	1MB	256MB	14.1" XGA	Yes	30GB	Combo	Extreme 2	None	10/100	6-cell	XP Pro	No Oct 04
2881-67U	Pentium 4 538	3.2	1MB	256MB	14.1" XGA	Yes	40GB	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Oct 04
2881-68U	Pentium 4 538	3.2	1MB	256MB	15.0" SXGA+	No	30GB	Combo	Extreme 2	None	10/100	12-cell	XP Pro	No Oct 04
2881-69U	Pentium 4 538	3.2	1MB	256MB	15.0" XGA	Yes	40HS	Combo	Extreme 2	None	10/100	6-cell	XP Pro	No Oct 04
2881-6CU	Pentium 4 538	3.2	1MB	256MB	15.0" XGA	Yes	40HS	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Oct 04
2881-6JU	Pentium 4 548	3.33	1MB	256MB	14.1" XGA	Yes	40HS	Combo	Extreme 2	None	10/100	12-cell	XP Pro	No Oct 04
Positioning Processor ³⁷	Powerful desktop replacement; two (models without diskette drive) or three-spindle system Intel® Celeron D Processor 320 (2.40GHz), 325 (2.53GHz), or 330 (2.66GHz) with 533MHz system bus or Mobile Intel Pentium 4 Processor 532 (3.06GHz), 538 (3.2GHz), or 548 (3.33GHz) with enhanced Intel SpeedStep™ technology ¹ , Hyper-Threading technology, and 533MHz bus Celeron: 256KB; Pentium 4: 1MB; All: on die (at processor speed) / ECC 128 or 256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available											SOFTWARE¹⁴ Windows XP Home models - Microsoft® Windows® XP Home Edition ²⁰ (Service Pack 2) ♦ Disk-to-Disk Recovery (in hidden protected area) Windows XP Pro models - Microsoft Windows XP Professional ²⁰ (Service Pack 2) ♦ Disk-to-Disk Recovery (in hidden protected area) Preloaded (all) • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and IBM Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo, DVD) Downloadable (all) • IBM Director Agent • Software Delivery Assistant • System Migration Assistant License (CD not included) (all) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
L2 cache														
Memory														
Diskette drive														
CD														
DVD														
Combo														
Disk														
Display														
Graphics														
Graphics external														
EasyPivot														
Keyboard														
ComfortSlant														
TrackPoint®														
Touch pad														
Dimensions ³														
Weight ²														
Case material														
Battery - type														
Battery - life														
Architecture														
PC Card Std slots														
Ports														
Video out or in														
IEEE 1394														
Wireless antenna														
Mini PCI														
None														
IBM 11b/g ³²														
CDC														
Modem														
Ethernet														
Audio support														
Security														
Security chip														
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available											Supports IBM ThinkVantage™ technologies; visit ibm.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 IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² ServicePac®. ²² 1yr IOR 9x5 NBD 30L9188 ServicePac 3 yr P&L P/U Depot 30L9192 ServicePac 5 yr P&L P/U Depot 69P9197 Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf		

See footnotes for important warranty information
US models announced October 19, 2004
⚡ US models withdrawn effective January 2005

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Diskette drive	Disk GB ⁸	Optical	Graphics	Mini PCI Comm Bay wireless	Ethernet on planar	Battery	Preload	Workhorse (W) Global (G) Avail Entry (E) date
2881-2CU	Celeron® D 320	2.40	256K	256MB	15.0" XGA	Yes	40GB	Combo	Extreme™ 2	IBM 11b/g ³²	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
2881-2QU	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	None	10/100	12-cell	XP Pro	No Nov 04
2881-2SU	Celeron D 330	2.66	256K	256MB	14.1" XGA	Yes	30GB	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Nov 04
2881-A6U	Celeron D 335	2.80	256K	256MB	14.1" XGA	No	30GB	CD	Extreme 2	None	10/100	12-cell	XP Pro	No Jan 05
2881-AFU	Celeron D 335	2.80	256K	256MB	15.0" XGA	Yes	30GB	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Jan 05
2881-5PU	Pentium® 4 532	3.06	1MB	256MB	14.1" XGA	Yes	40GB	Combo	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No Nov 04
Positioning Processor ³⁷	Powerful desktop replacement; two (models without diskette drive) or three-spindle system										SOFTWARE¹⁴			
L2 cache	Intel® Celeron D Processor 320 (2.40GHz), 325 (2.53GHz), 330 (2.66GHz), or 335 (2.80GHz) with 533MHz system bus or Mobile Intel Pentium 4 Processor 532 (3.06GHz) with enhanced Intel SpeedStep™ technology ¹ , Hyper-Threading technology, and 533MHz system bus										Windows XP Pro models			
Memory	Celeron: 256KB; Pentium 4: 1MB; All: on die (at processor speed) / ECC 256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ✦ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive	Some: 3.5" 1.44MB / fixed, not removable / 12.7mm high										Preloaded (all)			
CD	Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7mm high										• IBM Rescue and Recovery™			
Combo	Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / fixed, not removable / 12.7mm										• Access IBM			
Disk	30GB ⁸ (4200 rpm) or 40GB (4200 rpm), 9.5mm high / removable / 9.5mm high bay										• Access Connections			
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• Norton AntiVirus (OEM edition)			
Graphics	Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• PC-Doctor™			
Graphics external	All: one latch to unlatch and open with one hand										• ThinkPad Utilities			
EasyPivot	Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 852GME GMCH / uses main memory (up to 64MB) / 266MHz / DMVT										• Adobe Reader			
Keyboard	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										• IBM Update Connector™ ¹⁵			
ComfortSlant	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										• IBM RecordNOW and IBM Drive Letter Access powered by Sonic products (combo models)			
TrackPoint®	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• InterVideo WinDVD (combo)			
TrackPoint®	ThinkPad ComfortSlant keyboard with built-in incline provides maximum typing comfort										Downloadable (all)			
Touch pad	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										• IBM Director Agent			
Dimensions ³	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™										• Software Delivery Assistant			
Weight ²	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters										• System Migration Assistant			
Case material	with optical drive and battery: 6-cell: up to 7.71 lb (3.5kg); 12-cell: up to 8.31 lb (3.8kg)										License (CD not included) (all)			
Battery - type	Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
Battery - life	Lithium Ion 6-cell or 12-cell / intelligent / removable													
Architecture	Not published													
Architecture	Intel 852GME chipset / 82852GME Graphics Memory Controller Hub (GMCH) / 82801DBM ICH4-M 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 (TI® PCI1520 CardBus controller, Mini PCI) / LPC bus 33MHz (PC87391 Super I/O for [diskette], parallel, PS/2)										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage			
PC Card Std slots	Two Type I, two Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door													
Ports	Four USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared													
Video out or in	None										Universal 120 watt AC adapter			
IEEE 1394	None										PC 2001 and PXE 2.0-compliant			
Wireless antenna	Some (wireless models): UltraConnect™ Antenna built into the display cover										ACPI 1.0b and 2.0-compliant			
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable										CIM and DMI 2.0-compliant			
None	Some: empty / not customer upgradable										ENERGY STAR®-compliant			
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset										IBM ImageUltra™ Services available			
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										International Warranty Service ¹⁷			
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Conexant® chipset										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²			
Ethernet	10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®										ServicePac®. ²² 1yr IOR 9x5 NBD			
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD90764 AC97 codec / mono speaker / 2 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack										30L9188			
Security	Power-on password / hard disk password / supervisor password / security keyhole										ServicePac 2 yr IOR 9x5 NBD			
Security chip	None										30L9189			
Limited warranty ¹²	1 year - EasyServ™. ¹⁹ onsite pickup and delivery / service upgrades ²² available										ServicePac 3 yr IOR 9x5 NBD			
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G41 Li-Ion Battery 12-cell	08K8178	ServicePac 4 yr IOR 9x5 NBD	30L9194									
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 5 yr IOR 9x5 NBD	30L9196									
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad 120W AC Adapter	22P9150	ServicePac 2 yr P&L P/U Depot	30L9191									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 3 yr P&L P/U Depot	30L9192									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	GemPC400 Smart Card Reader/Writer	31P8901	ServicePac 4 yr P&L P/U Depot	69P9195									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Monitor Stand 2001	22P5265	ServicePac 5 yr P&L P/U Depot	69P9197									
IBM 4GB Microdrive™ with PC Card	09N4280	IBM Flat Panel Speakers (black)	09N4175	Post-warranty annual maintenance agreements at										
IBM USB Numeric Keypad	33L3225	ThinkPad Carrying Case - Expander	73P3597	ibm.com/services/us/its/pdf/maspspleu.pdf										
IBM USB Portable Diskette Drive	05K9276	ThinkPad Carrying Case - BackPack	73P3599											
IBM USB 2.0 Combo Drive	73P4515	ThinkPad Carrying Case - Leather	73P3600											
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM USB Keyboard with UltraNav	31P8950											
IBM USB 2.0 Memory Key 512MB	22P9230	IBM USB Travel Keyboard with UltraNav	31P9490											
IBM USB Optical Wheel Mouse	06P4069	IBM Enhanced Performance USB Keybrd	73P2620											
IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700	IBM M400 Projector	0037A04											
Kensington® MicroSaver® Security Cable	73P2582	IBM E400 Projector	0038A04											
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at ibm.com/pc/us/accessories												

See footnotes for important warranty information

Ⓜ US models announced January 11, 2005; previous models on November 23, 2004

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Diskette drive	Disk GB ⁸	Disk Optical	Graphics controller and memory	Mini PCI Comm Bay wireless	Ethernet on planar	Battery Preload	Workhorse (W) Global (G) Avail Entry (E) date
2881-73U	Pentium® 4 538	3.2	1MB	512MB	15.0" SXGA+	No	80HS	Combo	Go5200 128M	IBM 11b/g ³²	Gb 12-cell	XP Pro	No Oct 04
2881-87U	Pentium 4 532	3.06	1MB	256MB	15.0" XGA	No	30GB	Combo	Go5200 64MB	None	Gb 6-cell	XP Pro	No Oct 04
2881-88U	Pentium 4 532	3.06	1MB	256MB	15.0" XGA	No	40GB	Combo	Go5200 64MB	IBM 11b/g	Gb 12-cell	XP Pro	No Oct 04
2881-8DU	Pentium 4 538	3.2	1MB	256MB	15.0" SXGA+	No	40HS	Combo	Go5200 64MB	IBM 11b/g	Gb 12-cell	XP Pro	No Oct 04
2881-8JU	Pentium 4 538	3.2	1MB	512MB	15.0" XGA	No	40HS	Combo	Go5200 64MB	None	Gb 12-cell	XP Pro	No Oct 04
2881-8MU	Pentium 4 548	3.33	1MB	512MB	15.0" SXGA+	No	80HS	DVD±RW	Go5200 128M	IBM 11a/b/g II ³²	Gb 12-cell	XP Pro	No Oct 04
2881-8NU	Pentium 4 548	3.33	1MB	256MB	15.0" SXGA+	No	80HS	Combo	Go5200 64MB	None	Gb 12-cell	XP Pro	No Oct 04
2881-8PU	Pentium 4 548	3.33	1MB	256MB	15.0" XGA	No	40HS	Combo	Go5200 64MB	IBM 11b/g	Gb 12-cell	XP Pro	No Oct 04
2881-8QU	Pentium 4 548	3.33	1MB	256MB	15.0" XGA	No	40HS	Combo	Go5200 64MB	None	Gb 12-cell	XP Pro	No Oct 04
2881-D2U	Pentium 4 552	3.46	1MB	512MB	15.0" SXGA+	No	80HS	DVD±RW	Go5200 128M	IBM 11a/b/g II	Gb 12-cell	XP Pro	No Jan 05
2881-D9U	Pentium 4 552	3.46	1MB	256MB	15.0" XGA	No	40HS	Combo	Go5200 64MB	IBM 11b/g	Gb 12-cell	XP Pro	No Jan 05
Positioning Processor ³⁷	Powerful desktop replacement; two (models without diskette drive) or three-spindle system												
L2 cache	Mobile Intel® Pentium 4 Processor 532 (3.06GHz), 538 (3.2GHz), 548 (3.33GHz), or 552 (3.46GHz) with enhanced Intel SpeedStep™ technology ¹ , Hyper-Threading technology, and 533MHz system bus												
Memory	1MB / on die (at processor speed) / ECC 256 or 512MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available												
Diskette drive	None / use optional USB-based diskette drive												
Combo DVD±RW	Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / fixed, not removable / 12.7mm												
Disk	Some: DVD and CD burner / writes to + and - formats / Multi-Burner Plus / not removable 30GB ⁸ (4200 rpm), 40GB (4200 rpm), 40GB HS (5400 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable / 9.5mm high bay												
Display	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: one latch to unlatch and open with one hand												
Graphics	NVIDIA® GeForce™ FX Go5200 / NV34M / AGP 4X / 350MHz / 64 or 128MB memory												
Graphics external EasyPivot	External monitor support via analog DB-15 connector / up to 2048x1536 at 72Hz / DDC2B ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle												
Keyboard ComfortSlant TrackPoint®	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) ThinkPad ComfortSlant 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												
Touch pad	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™												
Dimensions ³ Weight ²	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters with optical drive and battery: 6-cell: up to 7.55 lb (3.4kg); 12-cell: up to 8.18 lb (3.7kg)												
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic												
Battery - type	Lithium Ion 6-cell or 12-cell / intelligent / removable												
Battery - life	Not published												
Architecture	Intel 852GME chipset / 82852GME Graphics Memory Controller Hub (GMCH) / 82801DBM ICH4-M 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 (TI® PCI1520 CardBus controller, Mini PCI) / LPC bus 33MHz (PC87391 Super I/O for [diskette], parallel, PS/2)												
PC Card Std slots	Two Type I, two Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door												
Ports	Four USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared												
IEEE 1394	None												
Wireless antenna	Some (wireless models): UltraConnect™ Antenna built into the display cover												
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable												
None	Some: empty / not customer upgradable												
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset												
IBM 11a/b/g II ³²	Some: 11a/b/g wireless ⁴ , IBM 11a/b/g Mini PCI Adapter II, Atheros™ AR5004X chipset												
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible												
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Conexant® chipset												
Ethernet	Gigabit (Gb) ethernet on planar / Broadcom® BCM5705M (PHY/MAC) / PXE, Wake on LAN®												
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD90764 AC97 codec / mono speaker / 2 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack												
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	None												
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available												
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G41 Li-Ion Battery 12-cell	08K8178	ServicePac 5 yr IOR 9x5 NBD	30L9188								
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 2 yr IOR 9x5 NBD	30L9189								
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad 120W AC Adapter	22P9150	ServicePac 3 yr P&L P/U Depot	30L9191								
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 4 yr P&L P/U Depot	69P9195								
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Monitor Stand 2001	22P5265	ServicePac 5 yr P&L P/U Depot	69P9197								
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	IBM Flat Panel Speakers (black)	09N4175	Post-warranty annual maintenance agreements at	ibm.com/services/us/its/pdf/maspspleu.pdf								
IBM USB Portable Diskette Drive	05K9276	ThinkPad Carrying Case - Expander	73P3597										
IBM USB 2.0 Combo Drive	73P4515	ThinkPad Carrying Case - Backpack	73P3599										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Carrying Case - Leather	73P3600										
IBM USB 2.0 Memory Key 512MB	22P9230	IBM Enh Perf Wireless Keybd and Mouse	73P4067										
IBM USB Optical Wheel Mouse	06P4069	IBM USB Travel Keyboard with UltraNav	31P9490										
IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700	IBM Enhanced Performance USB Keybrd	73P2620										
Kensington® MicroSaver® Security Cable	73P2582	IBM M400 Projector	0037A04										
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at	ibm.com/pc/us/accessories										

See footnotes for important warranty information

Ⓜ US models announced January 11, 2005; previous models on October 19, 2004

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Diskette drive	Disk drive GB ⁸	Optical	Graphics	Mini PCI Comm Bay wireless	Ethernet on Battery planar cells	Workhorse (W) Global (G) Avail Entry (E) date
2886-2UU	Celeron® D 320	2.40	256K	256MB	15.0" XGA	No	30GB	Combo	Extreme™ 2	IBM 11b/g ³²	10/100 12-c	XP Pro No Oct 04
2886-23U	Celeron D 320	2.40	256K	256MB	14.1" XGA	No	30GB	Combo	Extreme 2	None	10/100 12-c	XP Pro No Oct 04
2886-2VU	Celeron D 320	2.40	256K	256MB	14.1" XGA	No	30GB	CD	Extreme 2	None	10/100 12-c	XP Pro No Nov 04
2886-2WU	Celeron D 320	2.40	256K	256MB	14.1" XGA	No	30GB	DVD	Extreme 2	None	10/100 12-c	XP Pro No Nov 04
2886-3UU	Celeron D 325	2.53	256K	256MB	15.0" XGA	No	30GB	Combo	Extreme 2	IBM 11b/g	10/100 12-c	XP Pro No Oct 04
2886-5TU	Pentium® 4 532	3.06	1MB	256MB	15.0" XGA	Yes	40GB	Combo	Extreme 2	IBM 11b/g	10/100 6-c	XP Pro No Oct 04
2886-78U	Pentium 4 538	3.2	1MB	512MB	15.0" SXGA+	No	80HS	Combo	Go5200 128M	IBM 11b/g	Gigabit 12-c	XP Pro No Oct 04
2886-79U	Pentium 4 548	3.33	1MB	512MB	15.0" SXGA+	No	80HS	DVD±RW	Go5200 128M	IBM 11b/g	Gigabit 12-c	XP Pro No Oct 04
2886-92U	Pentium 4 532	3.06	1MB	256MB	15.0" XGA	No	40HS	Combo	Go5200 64MB	IBM 11b/g	Gigabit 12-c	XP Pro No Oct 04
2886-93U	Pentium 4 538	3.2	1MB	512MB	15.0" SXGA+	No	40HS	Combo	Go5200 64MB	IBM 11b/g	Gigabit 12-c	XP Pro No Oct 04

These small and medium business (SMB) models are part of the IBM US Think Express Program

Positioning Processor ³⁷	Powerful desktop replacement; two (models without diskette drive) or three-spindle system										SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ (Service Pack 2) ♦ Disk-to-Disk Recovery (in hidden protected area)																														
L2 cache Memory	Intel® Celeron D Processor 320 (2.40GHz) or 325 (2.53GHz) with 533MHz system bus or Mobile Intel Pentium 4 Processor 532 (3.06GHz), 538 (3.2GHz), or 548 (3.33GHz) with enhanced Intel SpeedStep™ technology ¹ , Hyper-Threading technology, and 533MHz bus Celeron: 256KB; Pentium 4: 1MB; All: on die (at processor speed) / ECC 256 or 512MB std / 2GB max⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available																																								
Diskette drive CD DVD Combo DVD±RW Disk	Some: 3.5" 1.44MB / fixed, not removable / 12.7mm high Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7mm high Some: DVD-ROM / 24X-8X ⁹ speed / fixed, not removable / 12.7mm high Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / fixed, not removable / 12.7mm Some: DVD and CD burner / writes to + and - formats / Multi-Burner Plus / not removable 30GB⁸ (4200 rpm), 40GB (4200 rpm), 40GB HS (5400 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable / 9.5mm high bay										PRELOADED • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™ ¹⁵ • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW models) • InterVideo WinDVD (combo, DVD, DVD±RW models) • InterVideo WinDVD Creator (DVD±RW models) • IBM Simple Backup (DVD±RW)																														
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: one latch to unlatch and open with one hand																																								
Graphics	Some: Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 852GME GMCH / uses main memory (up to 64MB) / 266MHz / DMVT Some: NVIDIA® GeForce™ FX Go5200 / NV34M / AGP 4X / 64 or 128MB memory ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client																														
EasyPivot	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) ThinkPad ComfortSlant 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 No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™																																								
Keyboard ComfortSlant TrackPoint®	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) ThinkPad ComfortSlant 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 No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™										Supports IBM ThinkVantage™ technologies; visit ibm.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 IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²																														
Touch pad	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™																																								
Dimensions ³ Weight ² Case material Battery - type Battery - life	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters with optical drive and battery: 6-cell: up to 7.71 lb (3.5kg); 12-cell: up to 7.67 lb (3.5 kg) Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic Lithium Ion 6-cell or 12-cell / intelligent / removable Not published																																								
Architecture	Intel 852GME chipset / 82852GME Graphics Memory Controller Hub (GMCH) / 82801DBM ICH4-M 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 (TI® PCI1520 CardBus controller, Mini PCI) / LPC bus 33MHz (PC87391 Super I/O for [diskette], parallel, PS/2)																																								
PC Card Std slots Ports	Two Type I, two Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door Four USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared																																								
Wireless antenna Mini PCI CDC Modem Ethernet	Some (wireless models): UltraConnect™ Antenna built into the display cover One Mini PCI type III slot (Communications Bay) / not customer upgradable Some: empty / not customer upgradable Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset One Communications Daughter Card (CDC) socket (used by modem) / not accessible 56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Conexant® chipset Some: 10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / Wake on LAN® Some: Gigabit ethernet on planar / Broadcom® BCM5705M (PHY/MAC) / Wake on LAN										ServicePac®. ²² 1yr IOR 9x5 NBD 30L9188 ServicePac 2 yr IOR 9x5 NBD 30L9189 ServicePac 3 yr IOR 9x5 NBD 30L9195 ServicePac 4 yr IOR 9x5 NBD 30L9194 ServicePac 5 yr IOR 9x5 NBD 30L9196 ServicePac 2 yr P&L P/U Depot 30L9191 ServicePac 3 yr P&L P/U Depot 30L9192 ServicePac 4 yr P&L P/U Depot 69P9195 ServicePac 5 yr P&L P/U Depot 69P9197 Post-warranty annual maintenance agreements at ibm.com/services/us/its/pdf/maspspleu.pdf																														
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD90764 AC97 codec / mono speaker / 2 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack																																								
Security Security chip	Power-on password / hard disk password / supervisor password / security keyhole None																																								
Limited warranty ¹²	1 year - EasyServ™. ¹⁹ onsite pickup and delivery / service upgrades ²² available																																								
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G41 Li-Ion Battery 12-cell	08K8178	256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad Multiple Battery Charger II	22P9040	512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad 120W AC Adapter	22P9150	1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	IBM 11a/b/g Wireless CardBus Adapter	31P9101	30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad Monitor Stand 2001	22P5265	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Carrying Case - Leather	73P3600	80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	IBM USB Keyboard with UltraNav	31P8950	IBM USB Portable Diskette Drive	05K9276	IBM USB Travel Keyboard with UltraNav	31P9490	IBM USB 2.0 Combo Drive	73P4515	IBM Enhanced Performance USB Keybrd	73P2620	IBM USB 2.0 Memory Key 512MB	22P9230	IBM M400 Projector	0037A04	Other options at ibm.com/pc/us/accessories	

See footnotes for important warranty information

US models announced November 23, 2004; previous models on October 19, 2004

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Diskette drive	Disk GB ⁸	Optical	Graphics	Mini PCI Comm Bay wireless	Ethernet on planar	Battery	Preload software	Education software	Avail date
2882-2TU	Celeron® D 320	2.40	256K	256MB	14.1" XGA	Yes	30GB	CD	Extreme™ 2	IBM 11b/g ³²	10/100	12-cell	XP Pro	No	Oct 04
2882-3TU	Celeron D 325	2.53	256K	256MB	14.1" XGA	Yes	30GB	CD	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No	Oct 04
2882-4UU	Celeron D 330	2.66	256K	256MB	14.1" XGA	Yes	30GB	CD	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	No	Oct 04
2882-ASU	Celeron D 335	2.80	256K	256MB	14.1" XGA	Yes	30GB	CD	Extreme 2	IBM 11b/g	10/100	12-cell	XP Pro	Yes	Jan 05
2882-8XU	Pentium® 4 532	3.06	1MB	256MB	15.0" XGA	No	40HS	Combo	Go5200 64MB	IBM 11b/g	Gigabit	12-cell	XP Pro	No	Oct 04

• **The 2882 has an EasyServ™.19 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 teachers.

This model for education is for sale direct from IBM or through an Authorized Education Reseller.

The model or models for education are not available for resale to any other organization or individual.

Positioning Processor ³⁷	<i>Powerful desktop replacement; two (models without diskette drive) or three-spindle system</i>										SOFTWARE¹⁴				
L2 cache	Intel® Celeron D Processor 320 (2.40GHz), 325 (2.53GHz), 330 (2.66GHz), or 335 (2.80GHz) with 533MHz system bus or										Windows XP Pro models				
Memory	Mobile Intel Pentium 4 Processor 532 (3.06GHz) with enhanced Intel SpeedStep™ technology ¹ , Hyper-Threading technology, and 533MHz system bus										- Microsoft® Windows® XP Professional ²⁰ (Service Pack 2)				
Diskette drive	Celeron: 256KB; Pentium 4: 1MB; All: on die (at processor speed) / ECC										♦ Disk-to-Disk Recovery (in hidden protected area)				
CD	256MB std / 2GB max⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										Preloaded				
Combo	<i>Some: 3.5" 1.44MB / fixed, not removable / 12.7mm high</i>										• ASU only: Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™				
Disk	<i>Some: CD-ROM / 24X-10X⁹ speed / fixed, not removable / 12.7mm high</i>										• IBM Rescue and Recovery™				
Display	<i>Some: DVD-ROM/CD-RW / 24X/10X/24X/8X²¹ speed / fixed, not removable / 12.7mm</i>										• Access IBM				
	30GB⁸ (4200 rpm) or 40GB HS (5400 rpm), 9.5mm high / removable / 9.5mm high bay										• Access Connections				
	<i>Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i>										• Norton AntiVirus (OEM edition)				
	<i>Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i>										• PC-Doctor™				
	<i>All: one latch to unlatch and open with one hand</i>										• ThinkPad Utilities				
Graphics	<i>Some: Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 852GME GMCH / uses main memory (up to 64MB) / 266MHz / DMVT</i>										• Adobe Reader				
EasyPivot	<i>Some: NVIDIA® GeForce™ FX Go5200 / NV34M / AGP 4X / 350MHz / 64MB memory</i>										• IBM Update Connector™.15				
Keyboard	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										• IBM RecordNOW and IBM Drive Letter Access powered by Sonic products (combo model)				
ComfortSlant	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)										• InterVideo WinDVD (combo model)				
TrackPoint®	ThinkPad ComfortSlant keyboard with built-in incline provides maximum typing comfort										Downloadable				
TrackPoint®	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										• IBM Director Agent				
Touch pad	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™										• Software Delivery Assistant				
Dimensions ³	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters										• System Migration Assistant				
Weight ²	with optical drive and battery: 12-cell: up to 8.15 lb (3.7kg)										License (CD not included)				
Case material	<i>Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic</i>										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client				
Battery - type	Lithium Ion 12-cell / intelligent / removable														
Battery - life	Not published														
Architecture	Intel 852GME chipset / 82852GME Graphics Memory Controller Hub (GMCH) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) /														
PC Card Std slots	PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI) /														
Ports	LPC bus 33MHz (PC87391 Super I/O for [diskette], parallel, PS/2)														
	Two Type I, two Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door														
	Four USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) /														
	RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage				
Video out or in	None														
IEEE 1394	None														
Wireless antenna	UltraConnect™ Antenna built into the display cover										Universal 120 watt AC adapter				
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable										PC 2001 and PXE 2.0-compliant				
IBM 11b/g ³²	IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset										ACPI 1.0b and 2.0-compliant				
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										CIM and DMI 2.0-compliant				
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset										ENERGY STAR®-compliant				
Ethernet	<i>Some: 10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / Wake on LAN®</i>										IBM ImageUltra™ Services available				
	<i>Some: Gigabit ethernet on planar / Broadcom® BCM5705M (PHY/MAC) / Wake on LAN</i>										International Warranty Service ¹⁷				
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD90764 AC97 codec /										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²				
	mono speaker / 2 watt / volume up, down, mute buttons / no internal microphone /														
	microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack														
Security	Power-on password / hard disk password / supervisor password / security keyhole										ServicePac®.22 2 yr IOR 9x5 NBD				
Security chip	None										30L9190				
Limited warranty ¹²	3 years/1 yr battery - EasyServ™.19 onsite pickup and delivery / service upgrades ²² avail										ServicePac 3 yr IOR 9x5 NBD				
											30L9197				
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828			ThinkPad G41 Li-Ion Battery 12-cell			08K8178			ServicePac 4 yr IOR 9x5 NBD					
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830			ThinkPad Multiple Battery Charger II			22P9040			69P9198					
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832			ThinkPad 120W AC Adapter			22P9150			ServicePac 5 yr IOR 9x5 NBD					
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834			IBM 11a/b/g Wireless CardBus Adapter			31P9101			69P9200					
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816			ThinkPad Carrying Case - Expander			73P3597			ServicePac 4 yr P&L P/U Depot					
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273			ThinkPad Carrying Case - BackPack			73P3599			69P9199					
IBM USB Portable Diskette Drive	05K9276			ThinkPad Carrying Case - Leather			73P3600			ServicePac 5 yr P&L P/U Depot					
IBM USB 2.0 Combo Drive	73P4515			IBM Enh Perf Wireless Keybrd and Mouse			73P4067			69P9201					
IBM USB 2.0 Portable Multi-Burner Drive	22P9163			IBM USB Travel Keyboard with UltraNav			31P9490			ServicePac options at					
IBM USB 2.0 Memory Key 256MB	22P9228			IBM Enhanced Performance USB Keybrd			73P2620			ibm.com/services/its/us/source/wamomxeu.pdf					
IBM USB 2.0 Memory Key 512MB	22P9230			IBM M400 Projector			0037A04			Post-warranty annual maintenance					
TrackPoint Cap Collection	73P2698			IBM E400 Projector			0038A04			agreements at					
Kensington® MicroSaver® Security Cable	73P2582			IBM C400 Projector			0039A04			ibm.com/services/its/us/source/maspspleu.pdf					
SonyEricsson® GC83 EDGE PC Card	26K3393			Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

® US model announced January 11, 2005; previous models on October 19, 2004

Type-model	Processor	Speed GHz	L2 cache	Memory	Screen	Diskette drive	Disk GB ⁸	Optical	Graphics	Mini PCI Comm Bay wireless	Ethernet on planar	Battery cells	Workhorse (W) Global (G) Entry (E) Avail date
2881-22U	Celeron® D 320	2.40	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	256K	256MB	14.1" XGA	No	30GB	CD	Extreme 2	None	10/100	6-cell XP Home	Entry Nov 04
2881-28U	Celeron D 320	2.40	256K	128MB	14.1" XGA	Yes	30GB	DVD	Extreme 2	None	10/100	6-cell XP Home	Entry Oct 04
2881-2BU	Celeron D 320	2.40	256K	256MB	14.1" XGA	Yes	30GB	CD	Extreme 2	IBM 11b/g ³²	10/100	6-cell XP Pro	Entry Oct 04
2881-2NU	Celeron D 320	2.40	256K	128MB	15.0" XGA	No	30GB	CD	Extreme 2	None	10/100	6-cell XP Home	Entry Oct 04
2881-32U	Celeron D 325	2.53	256K	128MB	14.1" XGA	Yes	30GB	CD	Extreme 2	None	10/100	6-cell XP Home	Entry Oct 04
2881-38U	Celeron D 325	2.53	256K	128MB	14.1" XGA	Yes	30GB	DVD	Extreme 2	None	10/100	6-cell XP Home	Entry Oct 04
2881-3BU	Celeron D 325	2.53	256K	256MB	14.1" XGA	No	30GB	CD	Extreme 2	IBM 11b/g	10/100	6-cell XP Pro	Entry Oct 04
2881-42U	Celeron D 330	2.66	256K	128MB	14.1" XGA	Yes	30GB	CD	Extreme 2	None	10/100	6-cell XP Home	Entry Oct 04
2881-47U	Celeron D 330	2.66	256K	128MB	14.1" XGA	Yes	30GB	DVD	Extreme 2	None	10/100	6-cell XP Home	Entry Oct 04
2881-57U	Pentium® 4 532	3.06	1MB	128MB	14.1" XGA	No	30GB	CD	Extreme 2	None	10/100	6-cell XP Home	Entry Oct 04

Positioning Processor ³⁷	<i>Powerful desktop replacement; two (models without diskette drive) or three-spindle system</i>										SOFTWARE¹⁴		
L2 cache Memory	Intel® Celeron D Processor 320 (2.40GHz), 325 (2.53GHz), or 330 (2.66GHz) with 533MHz system bus or Mobile Intel Pentium 4 Processor 532 (3.06GHz) with enhanced Intel SpeedStep™ technology ¹ , Hyper-Threading technology, and 533MHz system bus <i>Celeron: 256KB; Pentium 4: 1MB; All: on die (at processor speed) / ECC</i> 128 or 256MB std / 2GB max ⁷ / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										Windows XP Home models - Microsoft® Windows® XP Home Edition ²⁰ (Service Pack 2) ♦ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive CD	<i>Some: 3.5" 1.44MB / fixed, not removable / 12.7mm high</i>										Windows XP Pro models - Microsoft Windows XP Professional ²⁰ (Service Pack 2) ♦ Disk-to-Disk Recovery (in hidden protected area)		
DVD Disk	<i>Some: DVD-ROM / 24X-8X⁹ speed / fixed, not removable / 12.7mm high</i>												
Display	<i>Some: 30GB⁸ (4200 rpm) / 9.5mm high / removable / 9.5mm high bay</i>												
Graphics	<i>Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i>										Preloaded (all) • IBM Rescue and Recovery™ • Access IBM • Access Connections • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • Adobe Reader • IBM Update Connector™.15 • InterVideo WinDVD (DVD)		
Graphics external EasyPivot	<i>Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits</i>												
Keyboard ComfortSlant TrackPoint®	<i>All: one latch to unlatch and open with one hand</i>												
Touch pad	Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 852GME GMCH / uses main memory (up to 64MB) / 266MHz / DMVT										Downloadable (all) • IBM Director Agent • Software Delivery Assistant • System Migration Assistant		
Dimensions ³ Weight ²	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B										License (CD not included) (all) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Case material Battery - type Battery - life	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
Architecture	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) ThinkPad ComfortSlant 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 No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™										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 IBM ImageUltra™ Services available International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²		
PC Card Std slots Ports	Intel 852GME chipset / 82852GME Graphics Memory Controller Hub (GMCH) / 82801DBM ICH4-M 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 (TI® PCI1520 CardBus controller, Mini PCI) / LPC bus 33MHz (PC87391 Super I/O for [diskette], parallel, PS/2)										ServicePac®.22 1yr IOR 9x5 NBD 30L9188 ServicePac 2 yr IOR 9x5 NBD 30L9189 ServicePac 3 yr IOR 9x5 NBD 30L9195 ServicePac 4 yr IOR 9x5 NBD 30L9194 ServicePac 5 yr IOR 9x5 NBD 30L9196 ServicePac 2 yr P&L P/U Depot 30L9191 ServicePac 3 yr P&L P/U Depot 30L9192 ServicePac 4 yr P&L P/U Depot 69P9195 ServicePac 5 yr P&L P/U Depot 69P9197		
Wireless antenna Mini PCI	Two Type I, two Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door												
None	Four USB (Version 2.0) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared												
IBM 11b/g ³²	Some (wireless models): UltraConnect™ Antenna built into the display cover												
CDC	One Mini PCI type III slot (Communications Bay) / not customer upgradable												
Modem	Some: empty / not customer upgradable												
Ethernet	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset												
Audio support	One Communications Daughter Card (CDC) socket (used by modem) / not accessible												
Security Security chip	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Conexant® chipset												
Limited warranty ¹² 1 year	Soft audio / ICH AC97 controller / DirectSound® support / AD90764 AC97 codec / mono speaker / 2 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack												
	Power-on password / hard disk password / supervisor password / security keyhole												
	None												
	EasyServ™.19 onsite pickup and delivery / service upgrades ²² available												
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G41 Li-Ion Battery 12-cell	08K8178										
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad Multiple Battery Charger II	22P9040										
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad 120W AC Adapter	22P9150										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	GemPC400 Smart Card Reader/Writer	31P8901										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Monitor Stand 2001	22P5265										
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Carrying Case - Expander	73P3597										
IBM USB Portable Diskette Drive	05K9276	ThinkPad Carrying Case - Backpack	73P3599										
IBM USB 2.0 Combo Drive	73P4515	ThinkPad Carrying Case - Leather	73P3600										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM USB Keyboard with UltraNav	31P8950										
IBM USB 2.0 Memory Key 512MB	22P9230	IBM USB Travel Keyboard with UltraNav	31P9490										
IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM Enhanced Performance USB Keybrd	73P2620										
TrackPoint Cap Collection	73P2698	IBM E400 Projector	0038A04										
Kensington® MicroSaver® Security Cable	73P2582	IBM C400 Projector	0039A04										
SonyEricsson® GC83 EDGE PC Card	26K3393	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

Ⓜ US model announced November 23, 2004; previous models on October 19, 2004

Availability: All offers subject to availability. IBM reserves the right to alter product offerings and specifications at any time, without notice. IBM 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 JDJA/B203. IBM 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 **Travel weight** includes battery and optional travel bezel instead of standard optical drive in Ultrabay bay, if applicable; weight may vary due to vendor components, manufacturing process and options.
- ³ **Thinness** may vary at certain points on the system.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- 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 may be less; up to 4GB is used in 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 the Ziff Davis Media Inc.'s Business Winstone 2002 BatteryMark™ Version 1.0, Battery Rundown Time of at least the times shown. This test was performed without independent verification by the VeriTest testing division of Lionbridge Technologies, Inc. ("VeriTest") nor Ziff Davis Media Inc.; neither Ziff Davis Media Inc. nor VeriTest makes any representations or warranties as to these test results. Winstone is a registered trademark and BatteryMark is a trademark of Ziff Davis Publishing Holdings Inc., in the US and other countries. A description of the environment under which the test was performed is available at ibm.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. Refer to ibm.com/pc/support and enter machine type and model number for more information.
- 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 **IBM Embedded Security Subsystem** works with optional VPN software.
- ¹⁷ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. 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, IBM 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 IBM machines with EasyServ or Courier service, IBM will attempt to diagnose and resolve the problem remotely before sending a courier.
- ¹⁹ **Depot repair:** 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 warranty period.
- ²⁰ **Delivered with** Windows 2000, Windows XP Professional, or Windows XP Home Edition preloaded and a recovery partition on the hard disk drive.
- ²¹ **For combination drives**, maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.
- ²² **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. If the machine problem turns out to be a Customer Replaceable Unit (CRU), IBM will express ship the part to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. For ThinkPad notebooks requiring LCD or other component replacement, IBM may choose to perform service at the depot repair center.

²³ **For ThinkPad X Series**, the 32GB, 48GB, and 60GB HDD only supports ThinkPad Dock, UltraBase X2, or X3 UltraBase media slice and requires the ThinkPad Second HDD Adapter for Ultra-bay 2000.

²⁴ **Systems with limited onsite service** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by IBM. IBM 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 IBM for onsite replacement. For a list of onsite replaceable parts, contact IBM. Support unrelated to a warranty issue may be subject to additional charges. IBM onsite repair (IOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day response time.

²⁵ **Linux preloaded systems** do not support UltraPort connector solutions and S-video-out port that may be included on this machine.

²⁶ **As defined by ISO/IEC 15412.**

²⁷ **Based on IEEE 802.11a and 802.11b.** A customer can not upgrade to a different wireless Mini PCI adapter due to FCC regulations. Security screws prevent removal of this adapter. This wireless LAN product has been designed to permit legal operation world-wide in regions which it is approved. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo.

²⁸ **Certain Microsoft software products** included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software products or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

²⁹ **Public network download speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability. Requires download of V.92 microcode when available and country approval.

³⁰ **Measures only maximum** data transfer rate, not application performance. Many factors affect application performance.

³¹ **Internet access** account (not included) and profiling at ibm.com/support required.

³² **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 either/any of these listed formats respectively, the actual connection will be based on the access point to which it connects.

- ³³ **IBM Embedded Security Subsystem** requires 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 ibm.com/pc/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 card. These systems are designed to operate only with wireless LAN Mini PCI options sold by IBM.
- ³⁷ **Mobile processors:** Power management features reduce processor speed when in battery mode.

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