



Personal Systems Reference
IBM ThinkPad Notebooks A, T, X, and G Series
2000 to 2005 - withdrawn

May 2005 - Version 291



IBM® ThinkPad® A20m - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	CD-ROM	Communications	Bay	Preload	Avail	
2628-11U	Celeron	500	64MB	12.1" SVGA	6GB ⁸	24X-10X ⁹	modem		98SE	May 00	WINDOWS 98 PRELOAD¹⁴ - Microsoft® Windows® 98 Second Edition ¹³ • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™ ¹⁵ • Access ThinkPad II • PC-Doctor™ • Universal Manageability Services † Lotus® SmartSuite® Millennium CD † Software Selections CD-ROM † Recovery CD-ROM (Windows 98 SE) † Recovery CD-ROM (Windows 95)
2628-12U	Celeron	500	64MB	12.1" SVGA	6GB	24X-10X	modem		2000	May 00	
2628-14U	Celeron	500	64MB	12.1" SVGA	6GB	24X-10X	Intel® eth/modem		98SE	May 00	
2628-1TU	Celeron	500	64MB	12.1" SVGA	6GB	24X-10X	Intel eth/modem		2000	May 00	
2628-21U	Pentium III	500	64MB	12.1" SVGA	6GB	24X-10X	modem		98SE	May 00	
2628-22U	Pentium III	500	64MB	12.1" SVGA	6GB	24X-10X	modem		2000	May 00	
2628-24U	Pentium III	500	64MB	12.1" SVGA	6GB	24X-10X	Intel eth/modem		98SE	May 00	
2628-2TU	Pentium III	500	64MB	12.1" SVGA	6GB	24X-10X	Intel eth/modem		2000	May 00	
2628-31U	Celeron	500	64MB	15.0" XGA	12G	24X-10X	modem		98SE	May 00	
2628-32U	Celeron	500	64MB	15.0" XGA	12G	24X-10X	modem		2000	May 00	
2628-35U	Celeron	500	64MB	15.0" XGA	12G	24X-10X	Intel eth/modem		98SE	May 00	
2628-3TU	Celeron	500	64MB	15.0" XGA	12G	24X-10X	Intel eth/modem		2000	May 00	
2628-41U	Pentium III	700	64MB	14.1" XGA	12G	24X-10X	modem		98SE	May 00	
2628-42U	Pentium III	700	64MB	14.1" XGA	12G	24X-10X	modem		2000	May 00	
2628-4SU	Pentium III	700	64MB	14.1" XGA	12G	24X-10X	Intel eth/modem		98SE	May 00	
2628-4TU	Pentium III	700	64MB	14.1" XGA	12G	24X-10X	Intel eth/modem		2000	May 00	
Processor	Intel® Mobile Celeron™ 500MHz¹ with 100MHz bus or Pentium® III 500MHz with 100MHz system bus or Pentium III 700MHz with SpeedStep™ technology and 100MHz system bus Celeron: 128KB / onboard (at processor speed) / ECC Pentium III: 256KB / onboard (at processor speed) / ECC										WINDOWS 2000 PRELOAD¹⁴ - Windows 2000 Professional ¹³ • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe® • IBM Update Connector • Access ThinkPad II • PC-Doctor † Lotus® SmartSuite® Millennium CD † Software Selections CD-ROM † Recovery CD-ROM (Windows 2000) † Recovery CD-ROM (Windows NT)
L2 cache	Celeron: 128KB / onboard (at processor speed) / ECC Pentium III: 256KB / onboard (at processor speed) / ECC										
Memory	64MB standard / 512MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 64MB in one socket / 1 socket available										
Diskette drive	3.5" 1.44MB / not removable										
CD-ROM	CD-ROM / 24X-10X speed / bootable / removable from Ultrabay™ 2000										
Ultrabay 2000	Modular bay for interchangeable devices / on all A and T Series, ThinkPad Dock										
Disk (removable)	6 or 12.0GB / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter										
Display	12.1" (307.3mm) SVGA (800x600) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix										
Graphics controller	12.1" models: ATI™ Rage™ Mobility M / AGP 2X / 4MB SDRAM / DDC2B 14.1 and 15" models: ATI Rage Mobility M1 / AGP 2X / 8MB SDRAM / DDC2B										
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200										
Keyboard	ThinkPad Button / palm rest / TrackPoint®, Press-to-Select, Internet Scroll Bar										
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™ connect	None										
Dimensions ³	12.1 and 14.1: Approximately 12.48 x 10.53 x 1.44-1.7"; 317 x 268 x 37.7-43.3mm 15" models: Approximately 12.95 x 10.53 x 1.5-1.76"; 329 x 268 x 38.1-44.7mm										
Approximate weight ²	with CD drive and battery: 12.1" models: 6.3 lb (2.9 kg), 14.1" models: 6.6 lb (3.0 kg) 15.0" models: 6.9 lb (3.1 kg) / IBM ThinkPad UltraCarbon™ case										
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										
Battery - life ¹⁰	12.1" and 15.0" models: 3.5 hrs, 14.1" models: 3.7 hours										
Charge time ¹⁰ - on / off	2 to 3 hrs / 1.5 to 2.5 hrs										
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)										
Port replicator	ThinkPad Port Replicator										
Docking Station	ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video										
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) 72 watt AC Adapter										
Other features	None										
Video in and out	None										
Communicatns Bay	Communications Bay with Mini PCI IIIB slot / customer accessible										
Modem	Some models: 56K ⁹ V.90 Mini PCI modem card / Lucent® chip set										
Ethernet/modem	Some models: IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set										
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / int microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in										
Security	Power-on password / hard disk password / supervisor password / security keyhole										
Limited warranty ¹²	1 year - carry-in or ThinkPad EasyServ™ ¹⁹ depot repair service via courier										Windows 98 model: - C: drive is FAT16 of 2GB - D: drive is FAT32 of remaining space Windows 2000 models: - C: drive is FAT32 of entire drive PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM PC Lifecycle Care provides proactive life cycle management and transition planning tools ENERGY STAR compliant Setup Guide, User's Reference, Windows manual Asset ID™ wireless RF technology via replacing HDD access door Personalized Web-based support International Warranty Service ¹⁷ IBM SystemXtra™ ²⁰ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty
Service options	Service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										
Communication Bay					- 64MB SO DIMM 100MHz NP SDRAM		20L0254				
- IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com					- 128MB SO DIMM 100MHz NP SDRAM		20L0255				
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	09N9774				- 256MB SO DIMM 100MHz NP SDRAM		33L3069				
Ultrabay 2000 interchangeable accessories					- 6.0GB HDD		05K9237				
- 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233				- 12.0GB HDD		05K9238				
- 6X-2X DVD Ultrabay 2000 Drive	05K9232				- 18.0GB HDD		05K9239				
- Zip 250MB Ultrabay 2000 Drive	00N8253				- 20.0GB HDD		27L3439				
- SuperDisk (LS-120) UltraBay 2000 Drive	05K9236				- Second HDD Adapter for Ultrabay 2000		08K6068				
- 4X/4X/20X CD-Read/Write Ultrabay 2000	00N8252				- Portable Drive Bay 2000		19K4480				
- Ultrabay 2000 Li-Ion battery	02K6646				- ThinkPad Port Replicator (A and T Ser)		02K8667				
- Travel Bezel for Ultrabay 2000	08K6070				- ThinkPad Dock (A and T Series)		263110U				
Wireless connectivity					- ThinkPad A Series Battery (9-cell)		02K6640				
- IBM 802.11b Wireless LAN PC Card	09N9863				- ThinkPad 72W AC Adapter		02K6699				
- IBM 802.11b Wireless LAN Access Point	09N9865				- IBM 340MB Microdrive		00N8073				
					- ThinkPad Monitor Stand 2000		00N8222				
					- Asset ID RF Adapter		08K6064				
					- IBM Multi-Port USB Hub		00N8215				

All trademarks are the property of their respective owners
 Models withdrawn from marketing effective February 2001

No warranties are expressed or implied in this summary
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IBM® ThinkPad® A20m (Summer 2000) - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	CD or DVD	Communica	Bay	Preload	Avail	
2628-1AU	Celeron	550	64MB	12.1" SVGA	6GB ⁸	24X-10X ⁹	CD	modem	98SE	Jun 00	WINDOWS 98 PRELOAD¹⁴ - Microsoft® Windows® 98 Second Edition ¹³ • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™ ¹⁵ • Access ThinkPad II • PC-Doctor™ • Universal Manageability Services ◇ Lotus® SmartSuite® Millennium CD ◇ Software Selections CD-ROM ◇ Recovery CD-ROM (Windows 98 SE) ◇ Recovery CD-ROM (Windows 95) WINDOWS 2000 PRELOAD¹⁴ - Windows 2000 Professional ¹³ • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe® • IBM Update Connector • Access ThinkPad II • PC-Doctor ◇ Lotus® SmartSuite® Millennium CD ◇ Software Selections CD-ROM ◇ Recovery CD-ROM (Windows 2000) ◇ Recovery CD-ROM (Windows NT) LINUX PRELOAD¹⁴ - Caldera® OpenLinux eDesktop™ 2.4 • Access ThinkPad II • StarOffice • Netscape Communicator ◇ OpenLinux eDesktop CD-ROM ◇ Recovery CD-ROM The right bay (Ultrabay 2000) supports the following: • standard CD-ROM • optional DVD drive • optional Zip drive • optional second battery • optional SuperDisk (LS-120) drive • optional CD-RW • optional HDD adapter; for second disk • optional ThinkPad Proven™ solutions ¹⁶ (such as Travel Bezel) Windows 98 model: - C: drive is FAT16 of 2GB - D: drive is FAT32 of remaining space Windows 2000 models: - C: drive is FAT32 of entire drive Service options: Service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period) PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM PC Lifecycle Care provides proactive life cycle management and transition planning tools ENERGY STAR compliant Setup Guide, User's Reference, Windows manual Asset ID™ wireless RF technology via replacing HDD access door Personalized Web-based support International Warranty Service ¹⁷ IBM SystemXtra® ²⁰ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty
2628-1CU	Celeron	550	64MB	12.1" SVGA	6GB	24X-10X	CD	modem	2000	Jun 00	
2628-3AU	Celeron	550	64MB	15.0" XGA	12GB	24X-10X	CD	modem	98SE	Jun 00	
2628-3CU	Celeron	550	64MB	15.0" XGA	12GB	24X-10X	CD	modem	2000	Jun 00	
2628-4AU	Pentium III	600	64MB	14.1" XGA	12GB	6X-2.3X ⁹	DVD	modem	98SE	Jun 00	
2628-4CU	Pentium III	600	64MB	14.1" XGA	12GB	6X-2.3X	DVD	modem	2000	Jun 00	
2628-1UU	Celeron	550	64MB	12.1" SVGA	6GB	24X-10X		Intel® eth/mod	98SE	Jun 00	
2628-1VU	Celeron	550	64MB	12.1" SVGA	6GB	24X-10X		Intel eth/mod	2000	Jun 00	
2628-3UU	Celeron	550	64MB	15.0" XGA	12G	24X-10X		Intel eth/mod	98SE	Jun 00	
2628-3VU	Celeron	550	64MB	15.0" XGA	12G	24X-10X		Intel eth/mod	2000	Jun 00	
2628-4UU	Pentium III	600	64MB	14.1" XGA	12G	6X-2.3X	DVD	Intel eth/mod	98SE	Jun 00	
2628-4VU	Pentium III	600	64MB	14.1" XGA	12G	6X-2.3X	DVD	Intel eth/mod	2000	Jun 00	
2628-4LU*	Pentium III	700	128M	14.1" XGA	12G	24X-10X		modem	Linux®	July 00	
2628-4XU	Pentium III	700	64MB	14.1" XGA	12G	24X-10X		3Com® eth/mod	98SE	July 00	
2628-4WU	Pentium III	700	64MB	14.1" XGA	12G	24X-10X		3Com eth/mod	2000	July 00	
2628-1XU	Celeron	500	64MB	12.1" SVGA	6GB	24X-10X	CD	3Com eth/mod	98SE	Aug 00	
2628-2XU	Pentium III	500	64MB	12.1" SVGA	6GB	24X-10X	CD	3Com eth/mod	98SE	Aug 00	
2628-3XU	Celeron	500	64MB	15.0" XGA	12GB	24X-10X	CD	3Com eth/mod	98SE	Aug 00	
Processor	Intel® Mobile Celeron™ 550MHz ^{1,24} with 100MHz bus or Pentium® III 500MHz with 100MHz system bus or Pentium® III 600 or 700MHz with SpeedStep™ technology and 100MHz bus										
L2 cache	Celeron: 128KB / onboard (at processor speed) / ECC Pentium III: 256KB / onboard (at processor speed) / ECC										
Memory	64 or 128MB standard / 512MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / two 144-pin SO-DIMM sockets / std memory in one socket / 1 socket available										
Diskette drive	3.5" 1.44MB / not removable										
CD or DVD-ROM	Bootable / removable from Ultrabay™ 2000										
Ultrabay 2000	Modular bay for interchangeable devices / on all A and T Series, ThinkPad Dock										
Disk (removable)	6 or 12.0GB ⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter										
Display	12.1" (307.3mm) SVGA (800x600) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix										
Graphics controller	12.1" models: ATI™ Rage™ Mobility M / AGP 2X / 4MB SDRAM / DDC2B 14.1 and 15" models: ATI Rage Mobility M1 / AGP 2X / 8MB SDRAM / DDC2B										
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200										
Keyboard	ThinkPad Button / palm rest / TrackPoint®, Press-to-Select, Internet Scroll Bar										
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™ connectr	None										
Dimensions ³	12.1" and 14.1": Approximately 12.48 x 10.53 x 1.44-1.7"; 317 x 268 x 37.7-43.3mm 15" models: Approximately 12.95 x 10.53 x 1.5-1.76"; 329 x 268 x 38.1-44.7mm										
Approximate weight ²	with CD drive and battery: 12.1" models: 6.3 lb (2.9 kg), 14.1" models: 6.6 lb (3.0 kg) 15.0" models: 6.9 lb (3.1 kg) / IBM ThinkPad UltraCarbon™ case										
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										
Battery - life ¹⁰	12.1" and 15.0" models: 3.5 hrs, 14.1" models: 3.7 hours										
Charge time ¹⁰ - on / off ²	to 3 hrs / 1.5 to 2.5 hrs										
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)										
Port replicator	ThinkPad Port Replicator										
Docking Station	ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video										
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)										
Other features	72 watt AC Adapter										
Video in and out	None										
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible										
Modem	Some models: 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set										
Ethernet/modem	Some models: IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel or 3Com ethernet chipset / Lucent modem chip set										
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / int microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in										
Security	Power-on password / hard disk password / supervisor password / security keyhole										
Limited warranty ¹²	1 year - carry-in or ThinkPad EasyServ™ ¹⁹ depot repair service via courier										
Communication Bay	- 64MB SO DIMM 100MHz NP SDRAM 20L0254 - 128MB SO DIMM 100MHz NP SDRAM 20L0255 - 256MB SO DIMM 100MHz NP SDRAM 33L3069 - 6.0GB HDD 05K9237 - 12.0GB HDD 05K9238 - 18.0GB HDD 05K9239 - 20.0GB HDD 27L3439 - Second HDD Adapter for Ultrabay 2000 08K6068 - Portable Drive Bay 2000 19K4480 - ThinkPad Port Replicator (A and T Ser) 02K8667 - ThinkPad Dock (A and T Series) 263110U - ThinkPad A Series Battery (9-cell) 02K6640 - ThinkPad 72W AC Adapter 02K6699 - IBM 340MB Microdrive 00N8073 - ThinkPad Monitor Stand 2000 00N8222 - Asset ID RF Adapter 08K6064 - IBM Multi-Port USB Hub 00N8215										
- IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com	09N9774										
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	08K3124										
Ultrabay 2000 interchangeable accessories											
- 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233										
- 6X-2X DVD Ultrabay 2000 Drive	05K9232										
- Zip 250MB Ultrabay 2000 Drive	00N8253										
- SuperDisk (LS-120) UltraBay 2000 Drive	05K9236										
- 4X/4X/20X CD-Read/Write Ultrabay 2000	00N8252										
- Ultrabay 2000 Li-Ion battery	02K6646										
- Travel Bezel for Ultrabay 2000	08K6070										
Wireless connectivity											
- IBM 802.11b Wireless LAN PC Card	09N9863										
- IBM 802.11b Wireless LAN Access Point	09N9865										

All trademarks are the property of their respective owners
 * Linux preloaded model does not support most options and has other limitations²⁵
 Models withdrawn from marketing effective February 2001

No warranties are expressed or implied in this summary
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IBM® ThinkPad® A20p - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	DVD-ROM	Communica	Bay	Preload	Avail
2629-61U	Pentium III	700	128MB	15" SXGA+	18G ⁸	6X-2X ⁹	modem	98SE	May 00	
2629-62U	Pentium III	700	128MB	15" SXGA+	18G	6X-2X	modem	2000	May 00	
2629-6SU	Pentium III	700	128MB	15" SXGA+	18G	6X-2X	Intel [®] eth/modem	98SE	May 00	
2629-6TU	Pentium III	700	128MB	15" SXGA+	18G	6X-2X	Intel eth/modem	2000	May 00	
2629-6AU	Pentium III	750	128MB	15" SXGA+	20G	6X-2X	modem	98SE	Jun 00	
2629-6CU	Pentium III	750	128MB	15" SXGA+	20G	6X-2X	modem	2000	Jun 00	
2629-6UU	Pentium III	750	128MB	15" SXGA+	20G	6X-2X	Intel eth/modem	98SE	Jun 00	
2629-6VU	Pentium III	750	128MB	15" SXGA+	20G	6X-2X	Intel eth/modem	2000	Jun 00	
Processor Intel [®] Mobile Pentium [®] III 700 or 750MHz ¹ with Intel SpeedStep [™] technology and 100MHz system bus L2 cache 256KB / onboard (at processor speed) / ECC Memory 128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available										
Diskette drive 3.5" 1.44MB / not removable DVD-ROM DVD-ROM / 6X-2X ⁹ speed / bootable / removable from Ultrabay [™] 2000 Ultrabay 2000 Modular bay for interchangeable devices / on all A and T Series, ThinkPad Dock Disk (removable) 18.0GB ⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in optional HDD adapter										
Display 15.0" (381mm) SXGA+ (1400x1050) TFT color / Active Matrix										
Graphics controller ATI Rage [™] Mobility 128 / AGP 2X / 16MB SDRAM / 128-bit path to memory Graphics - external Supports external digital monitor ² via the Digital Video Interface (DVI) port on either of the optional docking solutions / DDC2B / external SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200										
Keyboard ThinkPad Button / palm rest / TrackPoint [®] , Press-to-Select, Internet Scroll Bar ThinkLight Illuminates the keyboard to improve visibility in low-light conditions UltraPort[™] UltraPort connector on top of display for options such as digital Ultraport Camera										
Dimensions³ Approximately 13.2 x 10.7 x 1.5-1.8"; 329mm x 268mm x 38.1-44.7mm Approximate weight² with DVD drive and battery: 7.6 lb (3.45 kg) Case material Titanium Composite in the cover for enhanced strength ⁴ and a lightweight design Battery - type Lithium Ion 9-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 Battery - life¹⁰ 4.3 hours Charge time¹⁰ - on / off 2 to 3 hrs / 1.5 to 2.5 hrs										
Architecture Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI [®] PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)										
Port replicator ThinkPad Port Replicator Docking Station ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) PC Card Std slots 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video Ports USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)										
Other features 72 watt AC Adapter										
Video in and out S-video in and S-video out / two industry standard connectors / full MPEG-2 support / video out cable included (S-video to composite)										
Communicatns Bay Communications Bay with Mini PCI IIIb slot / customer accessible Modem Some models: 56K ⁶ V.90 Mini PCI modem card / Lucent [®] chip set Ethernet/modem Some models: IBM 10/100 EtherJet [™] Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set										
Audio support PCI audio / SoundBlaster Pro [™] support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack										
Security Power-on password / hard disk password / supervisor password / security keyhole										
Limited warranty¹² 3 year - carry-in or ThinkPad EasyServ ^{™,19} depot repair service via courier Service options Service. Upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										
Communication Bay - IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com 09N9774 - IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem 08K3124		- 64MB SO DIMM 100MHz NP SDRAM 20L0254 - 128MB SO DIMM 100MHz NP SDRAM 20L0255 - 256MB SO DIMM 100MHz NP SDRAM 33L3069 - IBM UltraPort Camera II 04P6135 - ThinkPad Port Replicator (A and T Ser) 02K8667 - ThinkPad Dock (A and T Series) 263110U - ThinkPad A Series Battery (9-cell) 02K6640 - ThinkPad 72W AC Adapter 02K6699 - Li-Ion Multiple Battery Charger 02K6643 - SmartCard Security Kit 33L5075 - Asset ID RF Adapter 08K6064 - ThinkPad Monitor Stand 2000 00N8222		Interchangeable storage - 6.0GB HDD 05K9237 - 12.0GB HDD 05K9238 - 18.0GB HDD 05K9239 - 20.0GB HDD 27L3439 - Second HDD Adapter for Ultrabay 2000 (to add a second disk, a Second HDD Adpr req) 08K6068 - Portable Drive Bay 2000 19K4480 - (accepts Ultrabay 2000 devices) - IBM 340MB Microdrive 00N8073						
Wireless connectivity - IBM 802.11b Wireless LAN PC Card 09N9863 - IBM 802.11b Wireless LAN Access Point 09N9865		WINDOWS 98 PRELOAD¹⁴ - Microsoft [®] Windows [®] 98 Second Edition ¹³ • ThinkPad Utilities • ThinkPad Assistant [™] • ConfigSafe [®] • IBM Update Connector ^{™,15} • Access ThinkPad II • PC-Doctor [™] • Universal Manageability Services • Mediamatics DVD Express • MGI VideoWare III (video editing) ♦ Lotus [®] SmartSuite [®] Millennium CD ♦ Software Selections CD-ROM ♦ Recovery CD-ROM (Windows 98 SE) ♦ Recovery CD-ROM (Windows 95)								
		WINDOWS 2000 PRELOAD¹⁴ - Windows 2000 Professional ¹³ • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe [®] • IBM Update Connector • Access ThinkPad II • PC-Doctor • Mediamatics DVD Express • MGI VideoWare III (video editing) ♦ Lotus [®] SmartSuite [®] Millennium CD ♦ Software Selections CD-ROM ♦ Recovery CD-ROM (Windows 2000) ♦ Recovery CD-ROM (Windows NT)								
		The right bay (Ultrabay 2000) supports the following: • optional CD-ROM • optional DVD drive • optional Zip drive • optional second battery • optional SuperDisk (LS-120) drive • optional CD-RW • optional HDD adapter; for second disk • optional travel bezel • optional ThinkPad Proven [™] solutions ¹⁶								
		PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM PC Lifecycle Care provides proactive life cycle management and transition planning tools ENERGY STAR compliant Setup Guide, User's Reference, Windows manual Asset ID [™] wireless RF technology (via replacing HDD access door) IBM is planning to announce Bluetooth [™] wireless technology communications devices including a Bluetooth PC Card option and Bluetooth option for the ThinkPad UltraPort connector in the second half of 2000 Personalized Web-based support International Warranty Service ¹⁷ IBM SystemXtra ^{®,20} 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty								

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 Models withdrawn from marketing effective February 2001

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IBM® ThinkPad® A21e (2628) - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	CD	Comm Bay	Design	Modular bay	Preload	Avail	
2628-C1U	Celeron™	600	64MB	12.1" SVGA	10GB ⁸	24X-10X ⁹ CD	modem	Three spindle	Ultrabay 2000	Windows 98 SE	Oct 00	
2628-CXU	Celeron	600	64MB	12.1" SVGA	10GB	24X-10X CD	3Com® eth/mod	Three spindle	Ultrabay 2000	Windows 98 SE	Oct 00	
2628-CSU	Celeron	600	64MB	12.1" SVGA	10GB	24X-10X CD	Intel® eth/mod	Three spindle	Ultrabay 2000	Windows 98SE	Nov 00	
2628-C2U	Celeron	600	64MB	12.1" SVGA	10GB	24X-10X CD	modem	Three spindle	Ultrabay 2000	Windows 2000	Oct 00	
2628-CYU	Celeron	600	64MB	12.1" SVGA	10GB	24X-10X CD	3Com eth/mod	Three spindle	Ultrabay 2000	Windows 2000	Oct 00	
2628-CTU	Celeron	600	64MB	12.1" SVGA	10GB	24X-10X CD	Intel eth/mod	Three spindle	Ultrabay 2000	Windows 2000	Nov 00	
2628-J1U	Celeron	600	64MB	15.0" XGA	10GB	24X-10X CD	modem	Three spindle	Ultrabay 2000	Windows 98 SE	Oct 00	
2628-JXU	Celeron	600	64MB	15.0" XGA	10GB	24X-10X CD	3Com eth/mod	Three spindle	Ultrabay 2000	Windows 98 SE	Oct 00	
2628-JSU	Celeron	600	64MB	15.0" XGA	10GB	24X-10X CD	Intel eth/mod	Three spindle	Ultrabay 2000	Windows 98 SE	Nov 00	
2628-J2U	Celeron	600	64MB	15.0" XGA	10GB	24X-10X CD	modem	Three spindle	Ultrabay 2000	Windows 2000	Oct 00	
2628-JWU	Celeron	600	64MB	15.0" XGA	10GB	24X-10X CD	3Com eth/mod	Three spindle	Ultrabay 2000	Windows 2000	Oct 00	
2628-JTU	Celeron	600	64MB	15.0" XGA	10GB	24X-10X CD	Intel eth/mod	Three spindle	Ultrabay 2000	Windows 2000	Nov 00	
2628-JAU	Celeron	700	64MB	15.0" XGA	20GB	24X-10X CD	modem	Three spindle	Ultrabay 2000	Windows 98 SE	Feb 01	
2628-JUU	Celeron	700	64MB	15.0" XGA	20GB	24X-10X CD	Intel eth/mod	Three spindle	Ultrabay 2000	Windows 98 SE	Feb 01	
2628-JCU	Celeron	700	64MB	15.0" XGA	20GB	24X-10X CD	modem	Three spindle	Ultrabay 2000	Windows 2000	Feb 01	
2628-JVU	Celeron	700	64MB	15.0" XGA	20GB	24X-10X CD	Intel eth/mod	Three spindle	Ultrabay 2000	Windows 2000	Feb 01	
Processor	Intel® Mobile Celeron™ 600 or 700MHz¹ with 100MHz system bus								WINDOWS 98 PRELOAD¹⁴			
L2 cache	128KB / onboard (at processor speed) / ECC								- Microsoft® Windows® 98 Second Edition ¹³			
Memory	64MB standard / 256MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / two 144-pin SO-DIMM sockets / std memory in one socket / 1 socket available								• ThinkPad Utilities			
Diskette drive	3.5" 1.44MB / not removable								• ThinkPad Assistant™			
CD or DVD-ROM	Bootable / removable from Ultrabay™ 2000								• ConfigSafe®			
Ultrabay 2000	Modular bay for interchangeable devices								• IBM Update Connector™ ¹⁵			
Disk (removable)	10GB or 20GB / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter								• Access ThinkPad II			
Display	12.1" (307.3mm) SVGA (800x600) TFT color / Active Matrix								• PC-Doctor™			
	15.0" (381mm) XGA (1024x768) TFT color / Active Matrix								- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license			
Graphics controller	ATI® Rage™ Mobility-M / PCI / 4MB SDRAM / DDC2B								◇ Software Selections CD-ROM			
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200								◇ Recovery CD-ROM (Windows 98 SE)			
Keyboard	ThinkPad Button / palm rest / TrackPoint®, Press-to-Select, Internet Scroll Bar								WINDOWS 2000 PRELOAD¹⁴			
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions								- Windows 2000 Professional ¹³			
UltraPort™ connectr	None								• ThinkPad Utilities			
Case material	<i>Color: black; Material: ABS plastic</i>								• ThinkPad Assistant			
Dimensions ³	Cxx: approximately 12.7 x 10.7 x 1.47-1.73"; 317mm x 267.5mm x 36.7-43.3mm								• ConfigSafe®			
	Jxx: approximately 12.95 x 10.53 x 1.5-1.79"; 329mm x 268mm x 38.1-44.7mm								• IBM Update Connector			
Approximate weight ²	with CD drive and battery: Cxx: 6.6 lb (3.0 kg) Jxx: 7.2 lb (3.3 kg)								• Access ThinkPad II			
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000								• PC-Doctor			
Battery - life ¹⁰	3 hrs; JAU/JUU/JCU/JVU: 3.5 hrs								- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license			
Charge time ¹⁰ - on / off	2 to 3 hrs / 1.5 to 2.5 hrs								◇ Software Selections CD-ROM			
Architecture	Intel 440MX PCiset (82443MX) / combines Host Bridge and PIIX4 in single chip / TI ⁶								◇ Recovery CD-ROM (Windows 2000)			
	PCI1410 for CardBus / PCI 2.1 / 32-bit / 33MHz (graphics, EIDE, CardBus, audio, USB) / PC97338 Super I/O / ISA (diskette, serial, parallel, ext exp)								◇ Recovery CD-ROM (Windows NT)			
Port replicator	Optional ThinkPad Port Replicator								The right bay (Ultrabay 2000) supports the following:			
Docking Station	No support for ThinkPad Dock								• standard or optional CD-ROM			
PC Card Std slots	1 Type I, 1 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video								• optional DVD drive			
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard/mouse / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no infrared (4Mbps)								• optional Zip drive			
Other features	72 watt AC Adapter / no Asset ID™ wireless RF technology support								• optional second battery			
Video in and out	None								• optional SuperDisk (LS-120) drive			
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible								• optional CD-RW			
Modem	<i>Some models:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set								• optional HDD adapter; for second disk			
Ethernet/modem	<i>Some models:</i> IBM 10/100 Ethernet Mini PCI Adapter with 56K ⁶ Modem								• optional ThinkPad Proven™ solutions ¹⁶ (such as Travel Bezel)			
	3Com ethernet chipset / 3Com modem chip set											
	<i>Some models:</i> IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set											
Audio support	PCI audio / SoundBlaster Pro™ support / Intel 440MX AC97 audio support with CS4299 AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / no int microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack											
Security	Power-on password / hard disk password / supervisor password / security keyhole											
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service											
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)											
Communication Bay					- 64MB SO DIMM 100MHz NP SDRAM 20L0254				PC 99-compliant			
- IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com	09N9774				- 128MB SO DIMM 100MHz NP SDRAM 20L0255				CIM and DMI 2.0 compliant			
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887				- 10GB HDD 08K9510				Wired for Management 2.0			
Ultrabay 2000 interchangeable accessories					- 20GB HDD 27L3439				Local and remote asset management via the IBM Universal Manageability solutions			
- 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233				- 32GB HDD 08K9511				IBM PC Lifecycle Care ²¹ provides proactive life cycle management and transition planning tools			
- 8X-2X DVD Ultrabay 2000 Drive	27L3448				- Second HDD Adapter for Ultrabay 2000 08K6068				ENERGY STAR compliant			
- Zip 250MB Ultrabay 2000 Drive	00N8253				- Portable Drive Bay 2000 19K4480				Setup Guide, User's Reference, Windows manual			
- 2X SuperDisk (LS-120) UltraBay 2000	27L3451				(accepts all Ultrabay 2000 storage devices)				Personalized Web-based support			
- 4X/4X/20X CD-Read/Write Ultrabay 2000	00N8252				- ThinkPad Port Replicator 02K8667				International Warranty Service ¹⁷			
- Ultrabay 2000 Li-Ion battery	02K6646				- Multiple Li-Ion/NiMH Battery Charger 02K6719				IBM SystemXtra ²⁰			
- Travel Bezel for Ultrabay 2000	08K6070				- ThinkPad A Series Battery (9-cell) 02K6640				24 hour x 7 day ¹⁸ toll-free hardware support during the warranty			
Wireless connectivity					- ThinkPad 72W AC Adapter 02K6699							
- IBM H Rate Wireless LAN PC Card 128	09N9904				- IBM 340MB Microdrive 00N8073							
- IBM Wireless LAN Access Point 500	09N9906				- ThinkPad Monitor Stand 2000 00N8222							
					- IBM Multi-Port USB Hub 00N8215							

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 Models withdrawn effective July 2001

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IBM® ThinkPad® A21e (2655) - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	CD	Communications	Bay Design	Modular bay	Preload	Avail
2655-21U	Celeron™	650	64MB	12.1" SVGA	20GB ⁸	24X-10X ⁹ CD	modem	Two spindle	Ultrabay™ 2000	Windows® 98 SE	Mar 01
2655-71U	Celeron	650	64MB	12.1" SVGA	20GB	24X-10X CD	modem	Two spindle	Ultrabay 2000	Windows 2000	Mar 01
2655-23U	Celeron	650	64MB	12.1" SVGA	20GB	24X-10X CD	Intel® eth/mod	Two spindle	Ultrabay 2000	Windows 98 SE	Mar 01
2655-73U	Celeron	650	64MB	12.1" SVGA	20GB	24X-10X CD	Intel eth/mod	Two spindle	Ultrabay 2000	Windows 2000	Mar 01
2655-41U	Celeron	700	64MB	14.1" XGA	20GB	24X-10X CD	modem	Two spindle	Ultrabay 2000	Windows 98 SE	Mar 01
2655-91U	Celeron	700	64MB	14.1" XGA	20GB	24X-10X CD	modem	Two spindle	Ultrabay 2000	Windows 2000	Mar 01
2655-43U	Celeron	700	64MB	14.1" XGA	20GB	24X-10X CD	Intel eth/mod	Two spindle	Ultrabay 2000	Windows 98 SE	Mar 01
2655-93U	Celeron	700	64MB	14.1" XGA	20GB	24X-10X CD	Intel eth/mod	Two spindle	Ultrabay 2000	Windows 2000	Mar 01

Processor	Intel® Mobile Celeron™ 650 or 700MHz¹ with 100MHz system bus						WINDOWS 98 PRELOAD¹⁴					
L2 cache	128KB / onboard (at processor speed) / ECC						- Microsoft® Windows® 98 Second Edition ¹³					
Memory	64MB standard / 256MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / two 144-pin SO-DIMM sockets / std memory in one socket / 1 socket available						• ThinkPad Utilities					
Diskette drive	None standard / optional USB Portable Diskette Drive or Ultrabay 2000 diskette drive						• ThinkPad Assistant™					
CD or DVD-ROM	Bootable / removable from Ultrabay™ 2000						• ConfigSafe®					
Ultrabay 2000	Modular bay for interchangeable devices / cold (system off) swap only						• IBM Update Connector™ ¹⁵					
Disk (removable)	20GB ⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter						• Access ThinkPad II					
Display	12.1" (307.3mm) SVGA (800x600) TFT color / Active Matrix						• PC-Doctor™					
	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix						- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license					
Graphics controller	ATI® Rage™ Mobility-M / PCI / 4MB SDRAM / DDC2B						◇ Software Selections CD-ROM					
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200						◇ Recovery CD-ROM (Windows 98 SE)					
Keyboard	ThinkPad Button / palm rest / TrackPoint®, Press-to-Select, Internet Scroll Bar						◇ Disk-to-Disk Recovery (in hidden Service Partition)					
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions						WINDOWS 2000 PRELOAD¹⁴					
UltraPort™ connectr	None						- Windows 2000 Professional ¹³					
Case material	Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic						• ThinkPad Utilities					
Dimensions ³	Approximately 12.0 x 10.4 x 1.4"; 305mm x 254mm x 35.6mm						• ThinkPad Assistant					
Approximate weight ²	with battery and optional travel bezel in Ultrabay 2000:						• ConfigSafe®					
	12.1" models: 5.7 lb (2.59 kg); 14.1" models: 5.8 lb (2.62 kg)						• IBM Update Connector					
Battery - type	NiMH 7-cell / intelligent / supports optional Li-Ion battery / does not support any battery in Ultrabay 2000						• Access ThinkPad II					
Battery - life ¹⁰	2.5 hrs (NiMH 7-cell) / 3.0 hrs with optional Li-Ion						• PC-Doctor					
Charge time ¹⁰ - on / off	3.2 to 6 hrs / 3.2 hrs						- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license					
Architecture	Intel 440MX PCIset (82443MX) / combines Host Bridge and PIIX4 in single chip / TI ⁶ PCI1410 for CardBus / PCI 2.1 / 32-bit / 33MHz (graphics, EIDE, CardBus, audio, USB) / PC97338 Super I/O / ISA (serial, parallel, external expansion)						◇ Software Selections CD-ROM					
Port replicator	Optional ThinkPad Port Replicator						◇ Recovery CD-ROM (Windows 2000)					
Docking Station	No support for ThinkPad Dock						◇ Recovery CD-ROM (Windows NT)					
PC Card Std slots	1 Type I, 1 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video						◇ Disk-to-Disk Recovery (in hidden Service Partition)					
Ports	One USB (Version 1.1) / one serial (9 pin) / parallel / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or infrared											
Other features	72 watt AC Adapter / no Asset ID™ wireless RF technology support											
Video in and out	None						The right bay (Ultrabay 2000) supports the following:					
Communicatns Bay	Communications Bay with Mini PCI IIIa slot / customer accessible						• standard or optional CD-ROM					
Modem	Some models: 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set						• optional DVD drive					
Ethernet/modem	Some models: IBM 10/100 EtherJet™ Mini PCI Adapter with 56K ⁶ Modem / Intel ethernet chipset / Lucent modem chip set						• optional Zip drive					
Audio support	PCI audio / SoundBlaster Pro™ support / Intel 440MX AC97 audio support with CS4299 AC97 codec / mono speaker / 1.5 watt / volume up, down, mute buttons above keyboard						• optional SuperDisk (LS-240) drive					
Audio jacks	Input jack (3.5 mm) / output jack (3.5 mm) / line in jack / no internal microphone						• optional CD-RW					
Security	Power-on password / hard disk password / supervisor password / security keyhole						• optional HDD adapter; for second disk					
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service						• optional ThinkPad Proven™ solutions ¹⁶ (such as Travel Bezel)					
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)						• no support for battery on the A21e 2655					
							• optional diskette					
Options							PC 99-compliant					
64MB SO DIMM 100MHz NP SDRAM	20L0254	USB Portable Diskette Drive				05K9276	PXE 2.0-compliant					
128MB SO DIMM 100MHz NP SDRAM	20L0255	ThinkPad NiMH Battery (2655), 6 cell				02K6742	Wired for Management (WfM) 2.0					
256MB SO DIMM 100MHz NP SDRAM	33L3069	ThinkPad Li-Ion Battery (2655), 6 cell				02K6743	Local and remote asset management via the IBM Universal					
ThinkPad Removable Diskette Drive	08K9603	ThinkPad 72W AC Adapter				02K6699	Manageability solutions					
SuperDisk (LS-240) UltraBay 2000 Drive	08K9616	Multiple Li-Ion/NiMH Battery Charger				02K6719	IBM PC Lifecycle Care ²¹ provides					
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator				02K8667	proactive life cycle management					
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Monitor Stand 2001				22P5265	and transition planning tools					
8X/4X/24X CD-RW Ultrabay 2000 Drive	08K9569	Portable Drive Bay 2000				19K4480	ENERGY STAR compliant					
8X-2X DVD Ultrabay 2000 Drive	27L3448	IBM IEEE 1394 CardBus Card				19K5679	Setup Guide, User's Reference,					
CD-RW/DVD Combo Ultrabay 2000 Drive	08K9572	10/100 Enet/56K Mini PCI (3Com)				09N9774	Windows manual					
Travel Bezel for Ultrabay 2000	08K6070	Intel Pro/100 SP Mini PCI				06P3801	Personalized Web-based support					
Second HDD Adapter for Ultrabay 2000	08K6068	ServicePac 3yr IOR 9x5 NBD				30L9195	International Warranty Service ¹⁷					
15GB HDD	08K9588	ServicePac 3yr P&L P/U Depot				30L9192	IBM SystemXtra® ²⁰					
30GB HDD	08K9593						24 hour x 7 day ¹⁸ toll-free hardware					
32GB HDD*	08K9511						support during the warranty					
* Supported in Ultrabay 2000 only. Requires HDD adapter 08K6068												

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Models withdrawn effective September 2001

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IBM® ThinkPad® A21m - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	CD or DVD	CommunicaBay	Preload	Avail	
2628-D1U	Pentium III	700	64MB	12.1" SVGA	10GB ⁸ 24X-10X ⁹ CD	modem	98SE	Sep 00		
2628-D2U	Pentium III	700	64MB	12.1" SVGA	10GB 24X-10X CD	modem	2000	Sep 00		
2628-DXU	Pentium III	700	64MB	12.1" SVGA	10GB 24X-10X CD	3Com [®] eth/mod	98SE	Sep 00		
2628-DWU	Pentium III	700	64MB	12.1" SVGA	10GB 24X-10X CD	3Com eth/mod	2000	Sep 00		
2628-E1U	Pentium III	700	64MB	14.1" XGA	10GB 8X-2X ⁹ DVD	modem	98SE	Sep 00		
2628-E2U	Pentium III	700	64MB	14.1" XGA	10GB 8X-2X DVD	modem	2000	Sep 00		
2628-EXU	Pentium III	700	64MB	14.1" XGA	10GB 8X-2X DVD	3Com [®] eth/mod	98SE	Sep 00		
2628-EWU	Pentium III	700	64MB	14.1" XGA	10GB 8X-2X DVD	3Com eth/mod	2000	Sep 00		
2628-F1U	Pentium III	750	64MB	15.0" XGA	20GB 24X-10X CD	modem	98SE	Sep 00		
2628-F2U	Pentium III	750	64MB	15.0" XGA	20GB 24X-10X CD	modem	2000	Sep 00		
2628-FXU	Pentium III	750	64MB	15.0" XGA	20GB 24X-10X CD	3Com eth/mod	98SE	Sep 00		
2628-FWU	Pentium III	750	64MB	15.0" XGA	20GB 24X-10X CD	3Com eth/mod	2000	Sep 00		
2628-G1U	Pentium III	800	64MB	14.1" XGA	20GB 8X-2X DVD	modem	98SE	Sep 00		
2628-G2U	Pentium III	800	64MB	14.1" XGA	20GB 8X-2X DVD	modem	2000	Sep 00		
2628-GSU	Pentium III	800	64MB	14.1" XGA	20GB 8X-2X DVD	Intel [®] eth/mod	98SE	Sep 00		
2628-GTU	Pentium III	800	64MB	14.1" XGA	20GB 8X-2X DVD	Intel eth/mod	2000	Sep 00		
2628-GXU	Pentium III	800	64MB	14.1" XGA	20GB 8X-2X DVD	3Com eth/mod	98SE	Sep 00		
2628-GWU	Pentium III	800	64MB	14.1" XGA	20GB 8X-2X DVD	3Com eth/mod	2000	Sep 00		
2628-GLU*	Pentium III	800	128M	14.1" XGA	20GB 8X-2X DVD	modem	Linux [®]	Oct 00		
Processor	Intel[®] Pentium[®] III 700, 750, or 800MHz^{1,2,4} with SpeedStep[™] technology and 100MHz system bus									
L2 cache	256KB / onboard (at processor speed) / ECC									
Memory	64 or 128MB standard / 512MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / two 144-pin SO-DIMM sockets / std memory in one socket / 1 socket available									
Diskette drive	3.5" 1.44MB / not removable									
CD or DVD-ROM	Bootable / removable from Ultrabay [™] 2000 (modular bay)									
Disk (removable)	10 or 20GB⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter									
Display	12.1" (307.3mm) SVGA (800x600) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix									
Graphics controller	<i>Dxx/Exx models:</i> ATI[®] Rage[™] Mobility M / AGP 2X / 4MB SDRAM / DDC2B <i>Fxx/Gxx models:</i> ATI Rage Mobility M1 / AGP 2X / 8MB SDRAM / DDC2B									
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200									
Keyboard	ThinkPad Button / palm rest / TrackPoint [®] , Press-to-Select, Internet Scroll Bar									
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions									
UltraPort [™] connectr	None									
Cover	IBM ThinkPad UltraCarbon [™] case									
Dimensions ³	<i>Dxx/Exx/Gxx:</i> approximately 12.7 x 10.7 x 1.47-1.73"; 317 x 267.5 x 36.7-43.3mm <i>Fxx:</i> approximately 13.2 x 10.7 x 1.5-1.79"; 329 x 267.5 x 38.1-44.7mm									
Approximate weight ²	with CD or DVD drive and battery: <i>Dxx:</i> 6.3 lb, <i>Exx:</i> 6.6 lb, <i>Fxx:</i> 7.0 lb, <i>Gxx:</i> 6.8 lb									
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000									
Battery - life ¹⁰	3.5 hrs									
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI [®] PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)									
Port replicator	Optional ThinkPad Port Replicator									
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)									
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video									
Ports	USB: (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)									
Video in and out	<i>Fxx/Gxx:</i> S-Video out (no S-Video in)									
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible									
Modem	<i>Some models:</i> 56K [®] V.90 Mini PCI modem card / Lucent [®] chip set									
Ethernet/modem	<i>Some models:</i> IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com (3Com ethernet chipset / 3Com modem chip set) <i>Some models:</i> IBM 10/100 EtherJet [™] Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set									
Audio support	PCI audio / SoundBlaster Pro [™] support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / int microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in									
Security	Power-on password / hard disk password / supervisor password / security keyhole									
Limited warranty ¹²	1 year - EasyServ ^{™,19} onsite pickup and delivery courier service									
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)									
Communication Bay										
- IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com			09N9774		- 64MB SO DIMM 100MHz NP SDRAM		20L0254			
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem			19K5887		- 128MB SO DIMM 100MHz NP SDRAM		20L0255			
Ultrabay 2000 interchangeable accessories					- 256MB SO DIMM 100MHz NP SDRAM		33L3069			
- 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233				- 10GB HDD		08K9510			
- 8X-2X DVD Ultrabay 2000 Drive	27L3448				- 20GB HDD		27L3439			
- Zip 250MB Ultrabay 2000 Drive	00N8253				- 32GB HDD		08K9511			
- 2X SuperDisk (LS-120) UltraBay 2000	27L3451				- Second HDD Adapter for Ultrabay 2000		08K6068			
- 4X/4X/20X CD-Read/Write Ultrabay 2000	00N8252				- Portable Drive Bay 2000 (accepts all Ultrabay 2000 storage devices)		19K4480			
- Ultrabay 2000 Li-Ion battery	02K6646				- ThinkPad Port Replicator		02K8667			
- Travel Bezel for Ultrabay 2000	08K6070				- ThinkPad Dock		263110U			
Wireless connectivity					- ThinkPad A Series Battery (9-cell)		02K6640			
- IBM High Rate Wireless LAN PC Card	09N9863				- ThinkPad 72W AC Adapter		02K6699			
- IBM H Rate Wireless LAN Access Point	9085NA2				- IBM 340MB Microdrive		00N8073			
					- ThinkPad Monitor Stand 2000		00N8222			
					- Asset ID RF Adapter		08K6064			
					- IBM Multi-Port USB Hub		00N8215			

WINDOWS 98 PRELOAD¹⁴

- Microsoft[®] Windows[®] 98 Second Edition¹³
- ThinkPad Utilities
- ThinkPad Assistant[™]
- ConfigSafe[®]
- IBM Update Connector^{™,15}
- Access ThinkPad II
- PC-Doctor[™]
- Lotus[®] SmartSuite[®] Millennium and Lotus Notes[®] Client 5.0 license
- ✦ Software Selections CD-ROM
- ✦ Recovery CD-ROM (Windows 98 SE)

WINDOWS 2000 PRELOAD¹⁴

- Windows 2000 Professional¹³
- ThinkPad Utilities
- ThinkPad Assistant
- ConfigSafe[®]
- IBM Update Connector
- Access ThinkPad II
- PC-Doctor
- Lotus[®] SmartSuite[®] Millennium and Lotus Notes[®] Client 5.0 license
- ✦ Software Selections CD-ROM
- ✦ Recovery CD-ROM (Windows 2000)
- ✦ Recovery CD-ROM (Windows NT)

LINUX PRELOAD¹⁴

- Caldera[®] OpenLinux[™] eDesktop 2.4
 - Access ThinkPad II
 - StarOffice
 - Netscape Communicator
 - ✦ OpenLinux eDesktop CD-ROM
 - ✦ Recovery CD-ROM
- The right bay (Ultrabay 2000) supports the following:
- standard or optional CD-ROM
 - standard or optional DVD drive
 - optional Zip drive
 - optional second battery
 - optional SuperDisk (LS-120) drive
 - optional CD-RW
 - optional HDD adapter; for second disk
 - optional ThinkPad Proven[™] solutions¹⁶ (such as Travel Bezel)

All trademarks are the property of their respective owners
 * Linux preloaded model does not support most options and has other limitations²⁵
 Models withdrawn effective April 2001 or July 2001

No warranties are expressed or implied in this summary
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Type-model	Processor	MHz	Mem	Screen	Disk	CD or DVD	Communications Bay	Preload	Available
2628-DSU	Pentium III	700	64MB	12.1" SVGA	10GB ⁸	24X-10X ⁹ CD	Intel® ethernet/modem	Windows 98 SE	Nov 2000
2628-DTU	Pentium III	700	64MB	12.1" SVGA	10GB	24X-10X CD	Intel ethernet/modem	Windows 2000	Nov 2000
2628-ESU	Pentium III	700	64MB	14.1" XGA	10GB	8X-2X ⁹ DVD	Intel ethernet/modem	Windows 98 SE	Nov 2000
2628-ETU	Pentium III	700	64MB	14.1" XGA	10GB	8X-2X DVD	Intel ethernet/modem	Windows 2000	Nov 2000
2628-FSU	Pentium III	750	64MB	15.0" XGA	20GB	24X-10X CD	Intel ethernet/modem	Windows 98 SE	Nov 2000
2628-FTU	Pentium III	750	64MB	15.0" XGA	20GB	24X-10X CD	Intel ethernet/modem	Windows 2000	Nov 2000
2628-G6U	Pentium III	800	64MB	14.1" XGA	20GB	8X-2X DVD	modem	Windows 98 SE, Small Business	Mar 2001
2628-G8U	Pentium III	800	64MB	14.1" XGA	20GB	8X-2X DVD	Intel ethernet/modem	Windows 98 SE, Small Business	Mar 2001
2628-G7U	Pentium III	800	64MB	14.1" XGA	20GB	8X-2X DVD	modem	Windows 2000, Small Business	Mar 2001
2628-G9U	Pentium III	800	64MB	14.1" XGA	20GB	8X-2X DVD	Intel ethernet/modem	Windows 2000, Small Business	Mar 2001

Processor	Intel® Pentium® III 700, 750, or 800MHz¹ with SpeedStep™ technology and 100MHz system bus	WINDOWS 98 PRELOAD¹⁴ - Microsoft® Windows® 98 Second Edition ¹³ - <i>Some models:</i> Office 2000 Small Business (Word, Excel, Outlook, Publisher, Small Business Tools) preloaded and CD-ROM • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™,™15 • Access ThinkPad II • PC-Doctor™ - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license ◇ Software Selections CD-ROM ◇ Recovery CD-ROM (Windows 98 SE)
L2 cache	256KB / onboard (at processor speed) / ECC	
Memory	64MB standard / 512MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / two 144-pin SO-DIMM sockets / std memory in one socket / 1 socket available	
Diskette drive	3.5" 1.44MB / not removable	
CD or DVD-ROM	Bootable / removable from Ultrabay™ 2000 (modular bay)	
Disk (removable)	10 or 20GB⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter	
Display	12.1" (307.3mm) SVGA (800x600) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix	
Graphics controller	<i>Dxx/Exx models:</i> ATI® Rage™ Mobility M / AGP 2X / 4MB SDRAM / DDC2B <i>Fxx/Gxx models:</i> ATI Rage Mobility M1 / AGP 2X / 8MB SDRAM / DDC2B	
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200	
Keyboard	ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar	
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions	
UltraPort™ connect	None	
Cover	IBM ThinkPad UltraCarbon™ case	
Dimensions ³	<i>Dxx/Exx/Gxx:</i> approximately 12.7 x 10.7 x 1.47-1.73"; 317 x 267.5 x 36.7-43.3mm <i>Fxx:</i> approximately 13.2 x 10.7 x 1.5-1.79"; 329 x 267.5 x 38.1-44.7mm	WINDOWS 2000 PRELOAD¹⁴ - Windows 2000 Professional ¹³ - <i>Some models:</i> Office 2000 Small Business (Word, Excel, Outlook, Publisher, Small Business Tools) preloaded and CD-ROM • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe® • IBM Update Connector • Access ThinkPad II • PC-Doctor - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license ◇ Software Selections CD-ROM ◇ Recovery CD-ROM (Windows 2000) ◇ Recovery CD-ROM (Windows NT)
Approximate weight ²	with CD or DVD drive and battery: <i>Dxx:</i> 6.3 lb, <i>Exx/Gxx:</i> 6.6 lb, <i>Fxx:</i> 7.0 lb	
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000	
Battery - life ¹⁰	3.5 to 3.7 hours	
Architecture	Intel 440BX AGPset / Intel PIIx4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)	
Port replicator	Optional ThinkPad Port Replicator	
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)	
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video	
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)	
Video in and out	<i>Fxx/Gxx:</i> S-Video out (no S-Video in)	
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible	
Ethernet/modem	IBM 10/100 EtherJet™ Mini PCI Adapter with 56K ⁶ Modem / Intel ethernet chipset / Lucent® modem chip set	
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / int microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in	
Security	Power-on password / hard disk password / supervisor password / security keyhole	
Limited warranty* ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service	
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)	

Communication Bay			
- IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com	09N9774	- 64MB SO DIMM 100MHz NP SDRAM	20L0254
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887	- 128MB SO DIMM 100MHz NP SDRAM	20L0255
Ultrabay 2000 interchangeable accessories		- 256MB SO DIMM 100MHz NP SDRAM	33L3069
- 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	- 10GB HDD	08K9510
- 8X-2X DVD Ultrabay 2000 Drive	27L3448	- 20GB HDD	27L3439
- Zip 250MB Ultrabay 2000 Drive	00N8253	- 32GB HDD	08K9511
- 2X SuperDisk (LS-120) UltraBay 2000	27L3451	- Second HDD Adapter for Ultrabay 2000	08K6068
- 4X/4X/20X CD-Read/Write Ultrabay 2000	00N8252	- Portable Drive Bay 2000	19K4480
- Ultrabay 2000 Li-Ion battery	02K6646	(accepts all Ultrabay 2000 storage devices)	
- Travel Bezel for Ultrabay 2000	08K6070	- ThinkPad Port Replicator	02K8667
Wireless connectivity		- ThinkPad Dock	263110U
- IBM High Rate Wireless LAN PC Card	09N9863	- ThinkPad A Series Battery (9-cell)	02K6640
- IBM H Rate Wireless LAN Access Point	9085NA2	- ThinkPad 72W AC Adapter	02K6699
		- IBM 340MB Microdrive™	00N8073
		- ThinkPad Monitor Stand 2000	00N8222
		- Asset ID RF Adapter	08K6064
		- IBM Multi-Port USB Hub	00N8215

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
US models announced March 1, 2001
US models withdrawn effective April 2001 or April 2002

No warranties are expressed or implied in this summary
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IBM® ThinkPad® A21p - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	DVD	Communication	Bay	Preload	Avail
2629-H1U	Pentium® III	850	128MB	15" UXGA	32GB ⁸ 8X-2X ⁹		modem		98 SE	Sept 00
2629-HXU	Pentium III	850	128MB	15" UXGA	32GB 8X-2X		3Com® eth/modem		98 SE	Sept 00
2629-HSU	Pentium III	850	128MB	15" UXGA	32GB 8X-2X		Intel® eth/modem		98 SE	Nov 00
2629-H2U	Pentium III	850	128MB	15" UXGA	32GB 8X-2X		modem		2000	Sept 00
2629-HWU	Pentium III	850	128MB	15" UXGA	32GB 8X-2X		3Com eth/modem		2000	Sept 00
2629-HTU	Pentium III	850	128MB	15" UXGA	32GB 8X-2X		Intel eth/modem		2000	Nov 00
Processor	Intel® Mobile Pentium® III 850MHz¹ with Intel SpeedStep™ technology and 100MHz system bus									
L2 cache	256KB / onboard (at processor speed) / ECC									
Memory	128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available									
Diskette drive	3.5" 1.44MB / not removable									
DVD-ROM	DVD-ROM / 8X-2X ⁹ speed / bootable / removable from Ultrabay™ 2000									
Ultrabay 2000	Modular bay for interchangeable devices									
Disk (removable)	32GB⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in optional HDD adapter									
Display	15.0" (381mm) UXGA (1600x1200) TFT color / Active Matrix									
Graphics controller	ATI® Rage™ Mobility 128 / AGP 2X / 16MB SGRAM / 128-bit path to memory									
Graphics - external	Supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions / DDC2B / external SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200									
Keyboard	ThinkPad Button / palm rest / TrackPoint®, Press-to-Select, Internet Scroll Bar									
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions									
UltraPort™	UltraPort connector on top of display for options such as digital Ultraport Camera									
Case material	Titanium Composite in the cover for enhanced strength ⁴ and a lightweight design									
Dimensions ³	Approximately 13.2 x 10.7 x 1.5-1.79"; 329mm x 267.5mm x 38.1-44.7mm									
Approximate weight ²	with DVD drive and battery: 7.6 lb (3.45 kg)									
Battery - type	Lithium Ion 9-cell / intelligent / supports unique 2nd battery in Ultrabay 2000									
Battery - life ¹⁰	4 hours									
Charge time ¹⁰ - on / off	2 to 3 hrs / 1.5 to 2.5 hrs									
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)									
Port replicator	Optional ThinkPad Port Replicator									
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)									
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video									
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)									
Other features	72 watt AC Adapter									
Video in and out	S-video in and S-video out / two industry standard connectors / full MPEG-2 support / video out cable included (S-video to composite)									
Communicatns Bay	Communications Bay with Mini PCI III slot / customer accessible									
Modem	<i>Some models:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set									
Ethernet/modem	<i>Some models:</i> IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem (3Com ethernet chipset / 3Com modem chip set)									
	<i>Some models:</i> IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set									
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack									
Security	Power-on password / hard disk password / supervisor password / security keyhole									
Limited warranty ¹²	3 years - EasyServ™.19 onsite pickup and delivery courier service									
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)									
- UltraPort Array Microphone	09N4178	- 64MB SO DIMM 100MHz NP SDRAM	20L0254							
- UltraPort Compact Flash Reader	19K4510	- 128MB SO DIMM 100MHz NP SDRAM	20L0255							
- IBM IEEE 1394 CardBus Card	19K5679	- 256MB SO DIMM 100MHz NP SDRAM	33L3069							
- IBM 1GB Microdrive	07N5574	- IBM UltraPort Camera II	04P6135							
Communication Bay		- ThinkPad Port Replicator	02K8667							
- IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem by 3Com	09N9774	- ThinkPad Dock*	263110U							
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887	- ThinkPad A Series Battery (9-cell)	02K6640							
		- ThinkPad 72W AC Adapter	02K6699							
		- Multiple Li-Ion/MiMH Battery Charger	02K6719							
		- Li-Ion Multiple Battery Charger	02K6643							
		- SmartCard Security Kit	33L5075							
		- Asset ID RF Adapter	08K6064							
		- ThinkPad Monitor Stand 2000	00N8222							
Ultrabay 2000 interchangeable accessories		Interchangeable storage								
- 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	- 10.0GB HDD	08K9510							
- 8X-2X DVD Ultrabay 2000 Drive	27L3448	- 20.0GB HDD	27L3439							
- 2X SuperDisk (LS-120) Ultrabay 2000	27L3451	- 32.0GB HDD	08K9511							
- 4X/4X/20X CD-Read/Write Ultrabay 2000	00N8252	- Second HDD Adapter for Ultrabay 2000 (to add a second disk, a Second HDD Adpr req)	08K6068							
- 250MB Zip Ultrabay 2000 Drive	00N8253	- Portable Drive Bay 2000*	19K4480							
- Ultrabay 2000 Li-Ion battery	02K6646	- IBM 340MB Microdrive	00N8073							
- Travel Bezel for Ultrabay 2000	08K6070									
Wireless connectivity										
- IBM High Rate Wireless LAN PC Card	09N9863									
- IBM H Rate Wireless LAN Access Point	9085NA2									
- Bluetooth PC Card (available 4Q 2000)	09N9812									
		* accepts Ultrabay 2000 storage devices								

WINDOWS 98 PRELOAD¹⁴

- Microsoft® Windows® 98 Second Edition¹³
- ThinkPad Utilities
- ThinkPad Assistant™
- ConfigSafe®
- IBM Update Connector™.15
- Access ThinkPad II
- PC-Doctor™
- Mediamatics DVD Express
- MGI VideoWare III (video editing)
- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license
- ✦ Software Selections CD-ROM
- ✦ Recovery CD-ROM (Windows 98 SE)

WINDOWS 2000 PRELOAD¹⁴

- Windows 2000 Professional¹³
- ThinkPad Utilities
- ThinkPad Assistant
- ConfigSafe®
- IBM Update Connector
- Access ThinkPad II
- PC-Doctor
- Mediamatics DVD Express
- MGI VideoWare III (video editing)
- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license
- ✦ Software Selections CD-ROM
- ✦ Recovery CD-ROM (Windows 2000)
- ✦ Recovery CD-ROM (Windows NT)

- The right bay (Ultrabay 2000) supports the following:
- standard or optional CD-ROM
 - standard or optional DVD drive
 - optional Zip drive
 - optional second battery
 - optional SuperDisk (LS-120) drive
 - optional CD-RW
 - optional HDD adapter; for second disk
 - optional travel bezel
 - optional ThinkPad Proven™ solutions¹⁶

- PC 99-compliant
 CIM and DMI 2.0 compliant
 Wired for Management 2.0
 Local and remote asset management via the IBM Universal Manageability solutions
 IBM PC Lifecycle Care²¹ provides proactive life cycle management and transition planning tools
 ENERGY STAR compliant
 Setup Guide, User's Reference, Windows manual
 Asset ID™ wireless RF technology (via replacing HDD access door)
 Personalized Web-based support
 International Warranty Service¹⁷
 IBM SystemXtra²⁰
 24 hour x 7 day¹⁸ toll-free hardware support during the warranty

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 US models withdrawn from marketing effective May 2001

No warranties are expressed or implied in this summary
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IBM® ThinkPad® A22e - withdrawn

Type-model	Processor	MHz	Mem	Screen	Graphics	Disk	CD	Comm Bay	Design	Modular bay	Preload	Available
2655-25U	Celeron™	800	64MB	13.1" XGA	ATI®	15GB ⁸	24X-10X ⁹	Modem	Two spindle	Ultrabay™ 2000	Windows® 98 SE	Jun 2001
2655-75U	Celeron	800	64MB	13.1" XGA	ATI	15GB	24X-10X	Modem	Two spindle	Ultrabay 2000	Windows 2000	Jun 2001
2655-27U	Celeron	800	64MB	13.1" XGA	ATI	15GB	24X-10X	Intel® eth/mod	Two spindle	Ultrabay 2000	Windows 98 SE	Jun 2001
2655-77U	Celeron	800	64MB	13.1" XGA	ATI	15GB	24X-10X	Intel eth/mod	Two spindle	Ultrabay 2000	Windows 2000	Jun 2001
2655-45U	Pentium® III	850	64MB	13.1" XGA	S3®	30GB	24X-10X	Modem	Two spindle	Ultrabay 2000	Windows 98 SE	Jun 2001
2655-95U	Pentium III	850	64MB	13.1" XGA	S3	30GB	24X-10X	Modem	Two spindle	Ultrabay 2000	Windows 2000	Jun 2001
2655-47U	Pentium III	850	64MB	13.1" XGA	S3	30GB	24X-10X	Intel eth/mod	Two spindle	Ultrabay 2000	Windows 98 SE	Jun 2001
2655-97U	Pentium III	850	64MB	13.1" XGA	S3	30GB	24X-10X	Intel eth/mod	Two spindle	Ultrabay 2000	Windows 2000	Jun 2001

Processor	Intel® Mobile Celeron™ 800 or 850MHz¹ with 100MHz Front Side Bus or Intel Mobile Pentium® III 850MHz with Speedstep™ Technology with 100MHz Front Side Bus	OPERATING SYSTEM PRELOAD^{14,27} Windows 98 models - Microsoft® Windows® 98 Second Edition ¹³ ✦ Disk-to-Disk Recovery (in hidden Service Partition) Windows 2000 models - Windows 2000 Professional ✦ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition)		
L2 cache	<i>Celeron:</i> 128KB / onboard (at processor speed) / ECC <i>Pentium III:</i> 256KB / onboard (at processor speed) / ECC			
Memory	<i>Celeron:</i> 64MB standard / 256MB max ⁷ <i>Pentium III:</i> 64MB standard / 512MB max ⁷ SDRAM / non-parity / 100MHz / PC100 / two 144-pin SO-DIMM sockets / std memory in one socket / 1 socket available			
Diskette drive	None standard / optional USB Portable Diskette Drive or Ultrabay 2000 diskette drive	ADDITIONAL PRELOADED SOFTWARE Common to all models • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™.15 • Easy Keys Utility • Access ThinkPad II • PC-Doctor™ - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license		
CD or DVD-ROM	Bootable / removable from Ultrabay™ 2000			
Ultrabay 2000	Modular bay for interchangeable devices / cold (system off) swap only			
Disk (removable)	15GB⁸ or 30GB / 9.5mm / upgradeable / S.M.A.R.T. / 2nd disk support in Ultrabay			
Display	13.1" (337.8mm) XGA (1024x768) TFT color / Active Matrix			
Graphics controller	<i>2xx/7xx:</i> ATI® Rage™ Mobility-M / PCI / 4MB SDRAM / DDC2B <i>4xx/9xx:</i> S3 Savage™ IX8+ / AGP 2X / 8MB SGRAM / 64-bit path to memory			
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200			
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar / pitch: 19mm; stroke: 2.7mm			
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions			
UltraPort™ connect	None			
Case material	<i>Color:</i> black; <i>Top:</i> ABS plastic; <i>Bottom:</i> glass-fiber reinforced plastic			
Dimensions ³	Approximately 12.0 x 10.0 x 1.4"; 305mm x 254mm x 35mm	The right bay (Ultrabay 2000) supports the following: • standard or optional CD-ROM • optional DVD drive • optional Zip drive • optional SuperDisk drive • optional CD-RW • optional HDD adapter; for second disk • optional ThinkPad Proven™ solutions ¹⁶ (such as Travel Bezel) • no support for battery on the A22e 2655 • optional diskette		
Approximate weight ²	with battery and CD-ROM: 5.7 lbs / 2.1 kgs			
Battery - type	NiMH 7-cell / 8.4V 4.5AH / intelligent / supports optional Li-Ion battery / no support for Ultrabay 2000 battery			
Battery - life ¹⁰	3.0 hrs (Li-Ion 6-cell) / optional NiMH battery supported only on Celeron models			
Charge time ¹⁰ - on / off	3.2 to 6 hrs / 3.2 hrs			
AC adapter	Universal 72 watt / 16VDC 4.5A			
Architecture	Intel 440MX PCIset (82443MX) / combines Host Bridge and PIIX4 in single chip / TI® PCI1410 for CardBus / PCI 2.1 / 32-bit / 33MHz (graphics, EIDE, CardBus, audio, USB) / PC97338 Super I/O / ISA (serial, parallel, external expansion)			
Port replicator	Optional ThinkPad Port Replicator			
Docking Station	No support for ThinkPad Dock			
PC Card Std slots	1 Type I, Type II, or Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video			
Ports	One USB (Version 1.1) / one serial (9 pin) / parallel / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or infrared			
Video in and out	None	<ul style="list-style-type: none"> • standard or optional CD-ROM • optional DVD drive • optional Zip drive • optional SuperDisk drive • optional CD-RW • optional HDD adapter; for second disk • optional ThinkPad Proven™ solutions¹⁶ (such as Travel Bezel) • no support for battery on the A22e 2655 • optional diskette 		
Communicatns Bay	Communications Bay with Mini PCI IIIa slot / customer accessible			
Modem	<i>Some:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set			
Ethernet/modem	<i>Some:</i> Intel® PRO/100 SP Mobile Combo Adapter / Mini PCI ethernet with 56K modem / Intel 82550EY ethernet chipset / Lucent modem chipset			
Audio support	PCI audio / SoundBlaster Pro™ support / Intel 440MX AC97 audio support with CS4299 AC97 codec / mono speaker / 1.5 watt / volume up, down, mute buttons above keyboard			
Audio jacks	Microphone (3.5 mm) / speaker out (3.5 mm) / line in (3.5mm) / no int microphone			
Security	Power-on password / hard disk password / supervisor password / security keyhole			
Limited warranty* ¹²	1 year - EasyServ™.19 onsite pickup and delivery courier service			
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)			
64MB SO DIMM 100MHz NP SDRAM	20L0254		USB Portable Diskette Drive	05K9276
128MB SO DIMM 100MHz NP SDRAM	20L0255	ThinkPad NiMH Battery (2655)*	02K6742	PXE 2.0-compliant
256MB SO DIMM 100MHz NP SDRAM	33L3069	* supported only on Celeron-based models		Wired for Management (WfM) 2.0
ThinkPad Removable Diskette Drive	08K9603	ThinkPad Li-Ion Battery (2655), 6 cell	02K6743	Local and remote asset management via the IBM Universal Manageability solutions
SuperDisk (LS-240) UltraBay 2000 Drive	08K9616	ThinkPad 72W AC Adapter	02K6699	IBM PC Lifecycle Care ²¹ provides proactive life cycle management and transition planning tools
Zip 250MB Ultrabay 2000 Drive	00N8253	Multiple Li-Ion/NiMH Battery Charger	02K6719	Setup Guide, User's Reference, Windows manual
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Port Replicator	02K8667	Personalized Web-based support
8X/4X/24X CD-RW Ultrabay 2000 Drive	08K9569	ThinkPad Monitor Stand 2001	22P5265	International Warranty Service ¹⁷
8X-2X DVD Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000	19K4480	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty
CD-RW/DVD Combo Ultrabay 2000 Drive	08K9572	IBM IEEE 1394 CardBus Card	19K5679	
Travel Bezel for Ultrabay 2000	08K6070	10/100 Enet/56K Mini PCI (3Com)	09N9774	
Second HDD Adapter for Ultrabay 2000	08K6068	Intel Pro/100 SP Mini PCI	06P3801	
15GB HDD	08K9588	ServicePac® 3yr IOR 9x5 NBD	30L9195	
30GB HDD	08K9593	ServicePac 3yr P&L P/U Depot	30L9192	
32GB HDD*	08K9511			

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
US models announced June 2001
US models withdrawn from marketing effective November 2001

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Type-model	Processor MHz	Mem	Screen	Disk	Optical	Spindles	Modular Bay	Comm Bay	Wireless	Preload	Available
2628-VTU	Pentium III 900	64MB	14.1" XGA	10GB ⁸	CD	3 spindle	Ultrabay 2000	Intel® eth/mod	802.11b	Windows® 2000	May 2001
2628-VSU	Pentium III 900	64MB	14.1" XGA	10GB	CD	3 spindle	Ultrabay 2000	Intel eth/mod	802.11b	Windows 98 SE	May 2001
2628-WTU	Pentium III 1GHz	128MB	14.1" XGA	30GB	DVD	3 spindle	Ultrabay 2000	Intel eth/mod	802.11b	Windows 2000	May 2001
2628-WSU	Pentium III 1GHz	128MB	14.1" XGA	30GB	DVD	3 spindle	Ultrabay 2000	Intel eth/mod	802.11b	Windows 98 SE	May 2001

Processor	Intel® Pentium® III 900MHz¹ or 1.0GHz¹ with SpeedStep™ technology and 100MHz Front Side Bus	OPERATING SYSTEM PRELOAD^{14,27} Windows 98 models - Microsoft® Windows® 98 Second Edition ¹⁵ ✧ Disk-to-Disk Recovery (in hidden Service Partition) Windows 2000 models - Windows 2000 Professional ¹³ ✧ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition) Common to most models • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™ ¹⁵ • Easy Keys Utility • Access ThinkPad II • PC-Doctor™ • Mediamatics™ DVD (DVD models) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license
L2 cache	256KB / onboard (at processor speed) / ECC	
Memory	64MB or 128MB standard / 512MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / two 144-pin SO-DIMM sockets / std memory in one socket / 1 socket available	
Diskette drive	3.5" 1.44MB / not removable	
CD	Some: CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000	
DVD-ROM	Some: DVD-ROM / 8X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000	
Disk (removable)	10 or 30GB⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter	
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix	
Graphics controller	ATI® Rage™ Mobility M1 / AGP 2X / 8MB SDRAM	
Graphics - external	External SVGA to 1280x1024x16.7M colors at 75Hz and up to 1600x1200	
Keyboard	ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar / pitch: 19mm; stroke: 2.7mm	
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions	
UltraPort™ connectr	None	
Dimensions ³	12.5 x 10.5 x 1.5-1.8"	
Approximate weight ²	With battery and weight saver bezel only: 6.4 lb	
Battery - type	Li-Ion 6-cell / 10.8V 3.2AH / intelligent / supports unique 2nd battery in Ultrabay 2000	
Battery - life ¹⁰	3.0 hours	
AC adapter	Universal 72 watt / 16VDC 4.5A	
Architecture	Intel 440BX AGPset / Intel PII X4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)	
Port replicator	Optional ThinkPad Port Replicator	
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)	
PC Card Std slots	1 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video (supported on 98 preloads only)	
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / DB-15 external analog monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)	
Video in and out	S-Video out (no S-Video in)	
Wireless	Integrated 802.11b network interface with antenna in cover / implemented with PC card in non accessible PC Card slot	
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible	
Ethernet/modem	Intel® PRO/100 SP Mobile Combo Adapter / Mini PCI ethernet with 56K modem / Intel 82550EY ethernet chipset / Lucent® modem chipset	
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / input jack (3.5 mm) / output jack (3.5 mm) / line in (3.5mm)	
Security	Power-on password / hard disk password / supervisor password / security keyhole	
Limited warranty* ¹²	1 year -EasyServ™ ¹⁹ onsite pickup and delivery courier service	
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)	

Options			
64MB SO DIMM 100MHz NP SDRAM	20L0254	ThinkPad A Series Battery	02K6640
128MB SO DIMM 100MHz NP SDRAM	20L0255	Ultrabay 2000 Li-Ion battery	02K6646
256MB SO DIMM 100MHz NP SDRAM	33L3069	ThinkPad 72W AC Adapter	02K6699
SuperDisk (LS-240) UltraBay 2000 Drive	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U
8X/4X/24X CD-RW Ultrabay 2000 Drive	08K9569	ThinkPad Monitor Stand 2001	22P5265
8X-2X DVD Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000	19K4480
CD-RW/DVD Combo Ultrabay 2000 Drive	08K9572	Wireless LAN Access Point	09N9906
Travel Bezel for Ultrabay 2000	08K6070	IBM IEEE 1394 CardBus Card	19K5679
Second HDD Adapter for Ultrabay 2000	08K6068	ServicePac 3yr IOR 9x5 NBD	30L9195
15GB HDD	08K9588	ServicePac 3yr P&L P/U Depot	30L9192
30GB HDD	08K9593		
32GB HDD	08K9511		

PC 99-compliant
CIM and DMI 2.0 compliant
Wired for Management 2.0
Local and remote asset management via the IBM Universal Manageability solutions
IBM ImageUltra Services available
IBM Rapid Restore PC available to protect software image and data
Setup Guide, User's Reference, Windows manual
Asset ID™ wireless RF technology via replacing HDD access door
Personalized Web-based support
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free hardware support during the warranty

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
US models announced May 15, 2001
US models withdrawn effective April 2002

No warranties are expressed or implied in this summary
(A22MS) © IBM Corp. April 2002

Type-model	Processor	MHz	Mem	Screen	Disk	Optical	Spindles	Modular Bay	Comm Bay	Wireless	Preload	Available
2628-QUU	Pentium III	800	64MB	12.1" SVGA	20G ⁸	CD	3 spindle	Ultrabay 2000	modem		Windows® 98 SE	SB Apr 2001
2628-QVU	Pentium III	800	64MB	12.1" SVGA	20G	CD	3 spindle	Ultrabay 2000	modem		Windows 2000	SB Apr 2001
2628-T7U	Pentium III	1GHz	128M	14.1" XGA	30G	DVD	3 spindle	Ultrabay 2000	modem		Windows 98 SE	SB Apr 2001
2628-T8U	Pentium III	1GHz	128M	14.1" XGA	30G	DVD	3 spindle	Ultrabay 2000	modem		Windows 2000	SB Apr 2001
2628-TUU	Pentium III	1GHz	128M	14.1" XGA	30G	DVD	3 spindle	Ultrabay 2000	Intel® eth/mod		Windows 98 SE	SB Apr 2001
2628-TVU	Pentium III	1GHz	128M	14.1" XGA	30G	DVD	3 spindle	Ultrabay 2000	Intel eth/mod		Windows 2000	SB Apr 2001
2628-QRU	Pentium III	800	64MB	12.1" SVGA	20G	CD	3 spindle	Ultrabay 2000	Intel eth/mod		Windows 2000	XP Aug2001
2628-VRU	Pentium III	900	64MB	14.1" XGA	10G	CD	3 spindle	Ultrabay 2000	Intel eth/mod	802.11b	Windows 2000	XP Aug2001
2628-TRU	Pentium III	1GHz	128M	14.1" XGA	30G	DVD	3 spindle	Ultrabay 2000	Intel eth/mod		Windows 2000	XP Aug2001

Positioning Processor	<i>Desktop alternatives covering a rage of performance and functionalities</i> Intel® Pentium® III 800MHz¹, 900MHz, or 1GHz² with SpeedStep™ technology and 100MHz front side bus										OPERATING SYSTEM PRELOAD¹⁴ Windows 98 models - Microsoft® Windows® 98 Second Edition ¹³ ♦ Disk-to-Disk Recovery (in hiddenService Partition) Windows 2000 models - Windows 2000 Professional ¹³ ♦ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition) ADDITIONAL PRELOADED SOFTWARE Office 2000 SB models (SB) - Microsoft Office 2000 Small Business (Word, Excel, Outlook, Publisher, Small Business Tools) ♦ Office 2000 Small Business CD Office XP SB models (XP) - Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ♦ Office XP Small Business CD Common to all models • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™.15 • Easy Keys Utility • Access ThinkPad II • PC-Doctor™ • Mediamatics™ DVD (DVD models) - License for Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0
L2 cache	256KB / onboard (at processor speed) / ECC										
Memory	64MB or 128MB standard / 512MB max ⁷ / SDRAM / non-parity / 100MHz / PC 100 / two 144-pin SO-DIMM sockets / std memory in one socket / one socket available										
Diskette drive	3.5" 1.44MB / not removable										
CD	<i>Some:</i> CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000										
DVD-ROM	<i>Some:</i> DVD-ROM / 8X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000										
Disk (removable)	10, 20 or 30GB⁸ / upgradeable / S.M.A.R.T. / supports 2nd disk in opt HDD adapter										
Display	Qxx: 12.1" (307.3mm) SVGA (800x600) TFT color / Active Matrix Txx/Vxx: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix										
Graphics controller	Qxx: ATI® Rage™ Mobility M / AGP 2X / 4MB SDRAM Txx/Vxx: ATI Rage Mobility M3 / AGP 2X / 8MB SDRAM										
Graphics - external	External SVGA to 1280x1024x16.7M colors at 75Hz and up to 1600x1200										
Keyboard	Pitch: 19mm / stroke: 2.7mm / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar										
ThinkLight	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™ connectr	None										
Dimensions ³	12.5 x 10.5 x 1.5-1.8"										
Approximate weight ²	with battery and weight saver bezel only: Qxx: 6.3 lb Txx: 6.4 lb										
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										
Battery - life ¹⁰	3.5 Hours										
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)										
Port replicator	Optional ThinkPad Port Replicator										
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video										
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)										
Video in and out	Txx: S-Video out (no S-Video in)										
Wireless	Vxx: Integrated 802.11b network interface with antenna in cover / implemented with PC card in non accessible PC Card slot										
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible										
Modem	<i>Some:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set										
Ethernet/modem	<i>Some:</i> IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem (3Com® ethernet chipset / 3Com modem chip set)										
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / input jack (3.5 mm) / output jack (3.5 mm) / line in										
Security	Power-on password / hard disk password / supervisor password / security keyhole										
Limited warranty* ¹²	1 year -EasyServ™.19 onsite pickup and delivery courier service										
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										

Options	Part Number	Description	Part Number
64MB SO DIMM 100MHz NP SDRAM	20L0254	ThinkPad A Series Li-Ion Battery	02K6640
128MB SO DIMM 100MHz NP SDRAM	20L0255	Ultrabay 2000 Li-Ion battery	02K6646
256MB SO DIMM 100MHz NP SDRAM	33L3069	ThinkPad 72W AC Adapter	02K6699
SuperDisk (LS-240) UltraBay 2000 Drive	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U
8X/4X/24X CD-RW Ultrabay 2000 Drive	08K9569	ThinkPad Monitor Stand 2001	22P5265
8X-2X DVD Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000	19K4480
CD-RW/DVD Combo Ultrabay 2000 Drive	08K9572	Wireless LAN Access Point	09N9906
Travel Bezel for Ultrabay 2000	08K6070	IBM IEEE 1394 CardBus Card	19K5679
Second HDD Adapter for Ultrabay 2000	08K6068	ServicePac 3yr IOR 9x5 NBD	30L9195
15GB HDD	08K9588	ServicePac 3yr P&L P/U Depot	30L9192
30GB HDD	08K9593		
32GB HDD	08K9511		
48GB HDD (5400 rpm)	08K9600		

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
US models announced July 31, 2001
US models withdrawn effective July 2001 or April 2002

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Type-model	Processor	MHz	Memory	Screen	Disk	Optical	Spindles	Modular Bay	Comm Bay	Preload	Available
2629-U1U	Pentium III	1GHz ¹	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Modem	Windows® 98 SE	Apr 2001
2629-U2U	Pentium III	1GHz	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Modem	Windows 2000	Apr 2001
2629-UUU	Pentium III	1GHz	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Intel® eth/mod	Windows 98 SE, SB	Apr 2001
2629-UVU	Pentium III	1GHz	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Modem	Windows 2000, SB	Apr 2001
2629-USU	Pentium III	1GHz	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Inteleth/mod	Windows 98 SE	Apr 2001
2629-UTU	Pentium III	1GHz	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Inteleth/mod	Windows 2000	Apr 2001
2629-URU	Pentium III	1GHz	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Inteleth/mod	Windows 2000, XP	Jul 2001
2629-Y1U	Pentium III	900	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Modem	Windows 98 SE	May 2001
2629-Y2U	Pentium III	900	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Modem	Windows 2000	May 2001
2629-YUU	Pentium III	900	128MB	15.0" UXGA	32GB	DVD	3 spindle	Ultrabay 2000	Inteleth/mod	Windows 98 SE	May 2001
2629-YVU	Pentium III	900	128MB	15.0" UXGA	32GB	DVD	3 spindle	Ultrabay 2000	Inteleth/mod	Windows 2000	May 2001
2629-YSU	Pentium III	900	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Inteleth/mod	Windows 98 SE	May 2001
2629-YTU	Pentium III	900	128MB	15.0" UXGA	32GB	CD-RW	3 spindle	Ultrabay 2000	Inteleth/mod	Windows 2000	May 2001

Positioning Processor	<i>Desktop alternatives covering a range of performance and functionalities</i> Intel® Mobile Pentium® III 900MHz¹ or 1GHz with Intel SpeedStep™ technology and 100MHz Front Side Bus	
L2 cache	256KB / onboard (at processor speed) / ECC	
Memory	128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available	
Diskette drive	3.5" 1.44MB / not removable	
CD-RW	<i>Some:</i> CD-RW / 8X-4X-24X ⁹ speed / bootable / removable from Ultrabay™ 2000	
DVD-ROM	<i>Some:</i> DVD-ROM / 8X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000	
Ultrabay 2000	Modular bay for interchangeable devices	
Disk (removable)	32GB⁸ / 5400 rpm / upgradeable / S.M.A.R.T. / supports 2nd disk with HDD adapter	
Display	15.0" (381mm) UXGA (1600x1200) TFT color / Active Matrix	
Graphics controller	ATI® Rage™ Mobility 128 / AGP 2X / 16MB SGRAM / 128-bit path to memory	
Graphics - external	Supports external digital monitor ⁸ via the Digital Video Interface (DVI) port on either of the optional docking solutions / DDC2B / 1600x1200x16.7M colors at 75Hz	
Keyboard	85-key keyboard / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar / pitch: 19mm; stroke: 2.7mm	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera	
Case material	Titanium Composite in the cover for enhanced strength ⁴ and a lightweight design	
Dimensions ³	Approximately 13.2 x 10.7 x 1.5-1.8"	
Approximate weight ²	with battery and weight saver bezel only: 7.2 lb with battery and CD-RW: 7.7 lb	
Battery - type	Lithium Ion 9-cell / intelligent / supports unique 2nd battery in Ultrabay 2000	
Battery - life ¹⁰	4 hours	
AC adapter	Universal 72 watt / 16VDC 4.5A	
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, external expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, external expansion)	
Port replicator	Optional ThinkPad Port Replicator	
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)	
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video	
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)	
Video in and out	S-video in and S-video out / two industry standard connectors / full MPEG-2 support / video out cable included (S-video to composite)	
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible	
Modem	<i>Some:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set	
Ethernet/modem	<i>Some:</i> Intel® PRO/100 SP Mobile Combo Adapter / Mini PCI ethernet with 56K modem / Intel 82550EY ethernet chipset / Lucent modem chipset	
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / .5 watt / volume up, down, mute buttons / input jack (3.5 mm) / output jack (3.5 mm) / line in jack	
Security	Power-on password / hard disk password / supervisor password / security keyhole	
Limited warranty* ¹²	3 years - EasyServ™ ¹⁹ onsite pickup and delivery courier service	
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)	

OPERATING SYSTEM PRELOAD^{14, 27}
Windows 98 models - Microsoft® Windows® 98 Second Edition ¹³ ♦ Disk-to-Disk Recovery (in hidden Service Partition)
Windows 2000 models - Windows 2000 Professional ♦ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition)
ADDITIONAL PRELOADED SOFTWARE
Office 2000 SB models (SB) - Microsoft Office 2000 Small Business ♦ Office 2000 Small Business CD
Office XP SB models (XP) - Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ♦ Office XP Small Business CD
Common to all models • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™ ¹⁵ • Easy Keys Utility • Access ThinkPad II • PC-Doctor™ • Mediamatics™ DVD (DVD models) - License for Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0
The right bay (Ultrabay 2000) supports: • standard or optional CD-RW • standard or optional DVD drive • optional SuperDisk drive • optional Zip drive • optional CD-ROM • optional CD-RW/DVD Combo • optional HDD adapter • optional second battery • optional ThinkPad Proven™ solutions ¹⁶ (such as Travel Bezel)
PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM ImageUltra Services available IBM Rapid Restore PC available to protect software image and data Setup Guide, User's Reference, Windows manual Asset ID™ wireless RF technology (via replacing HDD access door) Personalized Web-based support International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty

64MB SO DIMM 100MHz NP SDRAM	20L0254	ThinkPad A Series Li-Ion Battery	02K6640
128MB SO DIMM 100MHz NP SDRAM	20L0255	Ultrabay 2000 Li-Ion battery	02K6646
256MB SO DIMM 100MHz NP SDRAM	33L3069	ThinkPad 72W AC Adapter	02K6699
SuperDisk (LS-240) UltraBay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U
8X/4X/24X CD-RW Ultrabay 2000	08K9569	ThinkPad Monitor Stand 2001	22P5265
8X-2X DVD Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000	19K4480
CD-RW/DVD Combo Ultrabay 2000	08K9572	UltraPort Camera	04P6135
Travel Bezel for Ultrabay 2000	08K6070	UltraPort Digital Array Microphone	09N4178
Second HDD Adapter for Ultrabay 2000	08K6068	IBM IEEE 1394 CardBus Card	19K5679
15GB HDD	08K9588	10/100 Enet/56K Mini PCI (3Com)	09N9774
30GB HDD	08K9593	Intel Pro/100 SP Mini PCI	06P3801
32GB HDD	08K9511	ServicePac® 3yr IOR 9x5 NBD	30L9195
48GB HDD (5400 rpm)	08K9600		

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
US models withdrawn effective July 2001 or November 2001 or April 2002

No warranties are expressed or implied in this summary
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Type-model	Processor	Speed	Memory	Screen	Disk	Ultrabay optical	Ultrabay diskette	Mini PCI wireless/modem	CDC ethernet	Preload	Limited warranty	Avail date
2652-1UU	Pentium® III-M	1.0GHz	128MB	14.1" XGA	20GB ⁸	CD-ROM	Diskette	Wi-Fi ³² /modem	10/100	Windows® XP Pro	1 yr	Apr 2002
2653-1UU	Pentium III-M	1.0GHz	128MB	14.1" XGA	20GB	CD-ROM	Diskette	Wi-Fi/modem	10/100	Windows XP Pro	3 yr	Apr 2002

These educational models of the ThinkPad A30 notebook must be sold only to qualified education customers. Qualified institution/customer is a public or private K-12 (or higher) accredited school organized and operated exclusively for educational purposes for use by Qualified Students and/or Qualified 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>High-performance desktop alternatives with exceptional versatility; three spindle</i> Mobile Intel® Pentium® III Processor-M 1.0GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus						SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ↳ Disk-to-Disk Recovery (in hidden Service Partition)					
L2 cache	512KB / on die (at processor speed) / ECC						INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Support - Access Help • ConfigSafe® • Mediamatics™ DVD • PC-Doctor™ • IBM Update Connector™ ¹⁵ • ThinkPad Utilities Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • IBM Director Agent License - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0					
Memory	128MB std / 1GB max ⁷ / SDRAM / non-parity / 133MHz / PC133-compliant / 3.3v / two 144-pin SO-DIMM sockets / std memory in one socket / one socket available											
Diskette drive	3.5" 1.44MB / removable from Ultrabay™ 2000 (but travel bezel in bay at ship)											
CD-ROM	CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay Plus											
Modular bays	Two modular bays for interchangeable devices / Ultrabay 2000 (left side with travel bezel or diskette) and Ultrabay Plus (right side with CD-ROM)											
Disk (removable)	20GB⁸ / upgradeable / S.M.A.R.T. / supports two additional disks with optional HDD adapter in each modular bay											
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 200:1 contrast											
Graphics controller	ATI® Mobility Radeon™ 7000 / AGP 4X / 16MB DDR-SDRAM 188MHz											
Graphics - external	Supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions / DDC2B / 1600x1200x16.7M colors at 85Hz											
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
UltraPort™	None											
Case material	<i>Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic</i>											
Dimensions ³	Approximately 13 x 10.7 x 1.8"; 330mm x 272mm x 45.8mm											
Approximate weight ²	with battery and optical drive: 7.4 lb (3.36kg)											
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 (left)											
Battery - life ¹⁰	3.2 hours / universal 72 watt AC adapter											
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / Intel 82802AB Firmware Hub / PCI bus 2.2 32-bit, 33MHz (Ricoch® R5C476II CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)											
Port replicator	Optional ThinkPad Port Replicator											
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)											
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video											
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse											
Video out	S-video out port (TV out) / industry standard connector / no cable ships standard											
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable											
Wi-Fi ³² /modem	Mini PCI Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Lucent® chipset											
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible											
Ethernet	10/100 ethernet on CDC / Intel82562ET chipset (physical layer)											
Open	One Communications Daughter Card (CDC) socket open											
Audio support	SoundBlaster Pro™-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack											
Security	Power-on password / hard disk password / supervisor password / security keyhole /											
Limited warranty ^{*,12}	2652: 1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service 2653: 3 years /1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service											
Service options	Service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)											
64 MB SO DIMM	133MHz NP SDRAM	19K4650	ThinkPad A30 Series Li-Ion Battery	02K6878								
128 MB SO DIMM	133MHz NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery	02K6646								
256 MB SO DIMM	133MHz NP SDRAM	19K4654	ThinkPad 72W AC Adapter	02K6699								
512 MB SO DIMM	133MHz NP SDRAM	19K4656	Multiple Li-Ion/NiMH Battery Charger	02K6719								
ThinkPad Removable Diskette Drive		08K9603	ThinkPad Port Replicator	02K8667								
SuperDisk (LS-240) UltraBay 2000		08K9616	ThinkPad Dock	263120U								
Zip 250MB Ultrabay 2000 Drive		00N8253	Portable Drive Bay 2000	19K4480								
8X/4X/24X Max CD-RW Ultrabay 2000		22P9101	10/100 EtherJet™ CardBus Adapter	08L3147								
Ultralight 8X Max DVD Ultrabay 2000		22P9102	10/100 Enet/56K Mini PCI (3Com)	09N9774								
DVD/CD-RW Combo II Ultrabay 2000		08K9701	2652: ServicePac ²² 1yr IOR 9x5 NBD	30L9188								
Travel Bezel for Ultrabay 2000		08K6070	2652: ServicePac 2yr IOR 9x5 NBD	30L9189								
Second HDD Adapter for Ultrabay 2000		08K6068	2652: ServicePac 3yr IOR 9x5 NBD	30L9195								
IBM ThinkPad Ultrabay Plus Carrier		22P5737	2652: ServicePac 2yr P&L P/U Depot	30L9191								
IBM ThinkPad Ultrabay Plus c500 Cradle		22P5738	2652: ServicePac 3yr P&L P/U Depot	30L9192								
ThinkPad Ultrabay Plus Numeric Keypad		22P7330	2653: ServicePac 2yr IOR 9x5 NBD	30L9190								
20GB Hard Disk Drive		08K9686	2653: ServicePac 3yr IOR 9x5 NBD	30L9197								
40GB Hard Disk Drive		08K9687										
60GB HS Hard Disk 9.5mm (5400 rpm)		08K9688										
						PC 2001-compliant ACPI 1.0b and 2.0 support CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM ImageUltra Services available IBM Rapid Restore PC available to protect software image and data Setup Guide, Service and Troubleshooting Guide, Windows manual Personalized Web-based support ³¹ International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²						

See footnotes for important warranty information
US models announced April 30, 2002
US models withdrawn effective October 2002

Type-model	Processor	GHz	Memory	Screen	Disk	Ultraday optical	Mini PCI Comm Bay	CDC ethernet	CDC Bluetooth	Security Chip	Small business software	Workhorse model	Avail date
2653-6TU	Pentium® III-M	1.2	128MB	15" UXGA	48GB ⁵ Combo	11b Wi-Fi ³² /mod	10/100		Yes	XP Pro	Office XP SB ²⁸	No	Nov 2001
2653-63U	Pentium III-M	1.2	128MB	15" UXGA	48GB Combo	Modem	10/100		Yes	XP Pro		No	Nov 2001
2653-65U	Pentium III-M	1.2	128MB	15" UXGA	48GB Combo	11b Wi-Fi/mod	10/100		Yes	XP Pro		No	Nov 2001
2653-64U	Pentium III-M	1.2	128MB	15" UXGA	48GB Combo	Modem	10/100		Yes	Windows® 2000		No	Oct 2001
2653-66U	Pentium III-M	1.2	128MB	15" UXGA	48GB Combo	11b Wi-Fi/mod	10/100	Yes	Yes	Windows 2000		No	Oct 2001
Positioning Processor	<i>High-performance desktop alternatives with exceptional versatility; three spindle enhanced Intel SpeedStep™ technology¹ and 133MHz frontside bus</i>												
L2 cache	512KB / on die (at processor speed) / ECC												
Memory	128MB standard / 1GB maximum ⁷ / SDRAM / non-parity / 133MHz / PC 133 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available												
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive												
CD-RW/DVD-ROM	Combo drive / CD-RW/DVD-ROM / removable from Ultrabay Plus (right side)												
Modular bays	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)												
Disk (removable)	48GB⁸ / high-speed 5400 rpm / upgradable / S.M.A.R.T. / supports two additional disks with optional HDD adapter in each modular bay												
Display	15.0" (381mm) UXGA-IPS (1600x1200) TFT color / Active Matrix / 400:1 contrast / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology												
Graphics controller	ATI® Mobility RADEON™ 7000 / AGP 4X / 32MB DDR-SDRAM 188MHz												
Graphics - external	Supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions / DDC2B / 1600x1200x16.7M colors at 85Hz												
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera												
Case material	<i>Color:</i> Black; <i>Top:</i> ABS plastic; <i>Bottom:</i> glass-fiber reinforced plastic												
Dimensions ³	Approximately 13 x 10.7 x 1.8"; 330mm x 272mm x 45.8mm												
Approximate weight ²	with battery and optical drive: 7.6 lb (3.45kg)												
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 (left)												
Battery - life ¹⁰	2.5 hours / universal 72 watt AC adapter												
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB [Bluetooth]) / Intel 82802AB 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 for diskette, serial, parallel, infrared)												
Port replicator	Optional ThinkPad Port Replicator												
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)												
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1												
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / IEEE 1394 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard/mouse												
Video in and out	S-video in and S-video out ports / two industry standard connectors / video out cable included (S-video to composite)												
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable												
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible												
Modem	<i>Some:</i> 56K ⁶ V.90 (V.92-capable ²⁹) Mini PCI modem card / Lucent® chip set												
11b Wi-Fi ³² /modem	<i>Some:</i> Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, diversity antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 ²⁹ modem combo, Lucent® chipset												
Ethernet	<i>Some:</i> 10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset												
Bluetooth™	<i>Some:</i> Bluetooth wireless technology / on CDC / power button on display												
IEEE 1394	IEEE 1394 port												
Audio support	SoundBlaster Pro™-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / input jack (3.5 mm) / output jack (3.5 mm) / line in jack												
Security	Power-on password / hard disk password / supervisor password / security keyhole /												
Security chip	IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁸												
Limited warranty ¹²	3 years/1 year battery - 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)												
64 MB SO DIMM	133MHz NP SDRAM	19K4650	ThinkPad A30 Series Li-Ion Battery								02K6878		
128 MB SO DIMM	133MHz NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery								02K6646		
256 MB SO DIMM	133MHz NP SDRAM	19K4654	ThinkPad 72W AC Adapter								02K6699		
512 MB SO DIMM	133MHz NP SDRAM	19K4656	Multiple Li-Ion/NiMH Battery Charger								02K6719		
ThinkPad Removable Diskette Drive		08K9603	ThinkPad Port Replicator								02K8667		
SuperDisk (LS-240) UltraBay 2000		08K9616	ThinkPad Dock								263120U		
Zip 250MB Ultrabay 2000 Drive		00N8253	ThinkPad Monitor Stand 2001								22P5265		
24X-10X CD-ROM Ultrabay 2000 Drive		05K9233	Portable Drive Bay 2000								19K4480		
8X/4X/24X Max CD-RW Ultrabay 2000		08K9569	UltraPort Camera II								04P6135		
8X-3X DVD Ultrabay 2000 Drive		27L3448	UltraPort Digital Array Microphone								09N4178		
CD-RW/DVD Combo Ultrabay 2000		08K9572	UltraPort Compact Flash Reader								19K4510		
Travel Bezel for Ultrabay 2000		08K6070	IBM USB 32MB Memory Key								22P5296		
Second HDD Adapter for Ultrabay 2000		08K6068	IBM IEEE 1394 CardBus Card								19K5679		
IBM ThinkPad Ultrabay Plus Carrier		22P5737	10/100 EtherJet™ CardBus Adapter								08L3147		
ThinkPad Ultrabay Plus Numeric Keypad		22P7330	15GB HDD								08K9588		
ServicePac®, 22 2yr IOR 9x5 NBD		30L9190	40GB HS Hard Disk 9.5mm (5400 rpm)								08K9816		
ServicePac 3yr IOR 9x5 NBD		30L9197	48GB HS Hard Disk 12.5mm (5400 rpm)								08K9600		
SOFTWARE¹⁴													
Windows XP Pro models													
- Microsoft® Windows® XP Professional													
✧ Disk-to-Disk Recovery (in hidden Service Partition)													
Windows 2000 models													
- Microsoft Windows 2000 Professional ¹³													
✧ Disk-to-Disk Recovery (in hidden Service Partition)													
INCLUDED SOFTWARE¹⁴ (all)													
Preloaded													
• Access ThinkPad													
- Access Connections													
- Access Help													
• ConfigSafe®													
• Mediamatics™ DVD													
• MGI Video Wave IV													
• PC-Doctor™													
• ThinkPad Utilities													
• IBM Update Connector™ ¹⁵													
• Veritas RecordNOW													
Downloadable													
• IBM Rapid Restore™ PC													
• IBM Data Transfer													
• Universal Manageability Services™													
• Client Security Software (for security chip)													
License													
- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0													
Office XP Small Business models only													
- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)													
✧ Office XP Small Business CD													
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 and Cradle for the WorkPad® c500 Series													
PC 2001-compliant													
ACPI 1.0b and 2.0 support													
CIM and DMI 2.0 compliant													
Wired for Management 2.0													
Local and remote asset management via the IBM Universal Manageability solutions													
IBM ImageUltra™ Services available													
IBM Rapid Restore PC available to protect software image and data													
Setup Guide, Service and Troubleshooting Guide, Windows manual													
International Warranty Service ¹⁷													
24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²													

See footnotes for important warranty information
US models announced October 9, 2001
US models withdrawn effective July 2003

Type-model	Processor	Speed	Memory	Screen	Disk	Ultrabay optical	Mini PCI	CDC Ethernet	CDC Modem	Security Chip	Preload	Workhorse or Global model	Avail date
2652-D3U	Pentium® 4-M	1.6GHz	256MB	15" SXGA+	40GB ⁸ DVD/CD-RW	Open		10/100	Modem		Windows® XP Pro	No	Mar 2002
2652-D4U	Pentium 4-M	1.6GHz	256MB	15" SXGA+	40GB DVD/CD-RW	Open		10/100	Modem		Windows 2000	No	Mar 2002
2652-D5U	Pentium 4-M	1.6GHz	256MB	15" SXGA+	40GB DVD/CD-RW	Wi-Fi ³² /mod		10/100	Open	Yes	Windows XP Pro	No	Mar 2002
2652-D6U	Pentium 4-M	1.6GHz	256MB	15" SXGA+	40GB DVD/CD-RW	Wi-Fi/mod		10/100	Open	Yes	Windows 2000	No	Mar 2002
Positioning Processor	<i>High-performance desktop alternatives with exceptional versatility; three spindle</i>												
L2 cache	Mobile Intel® Pentium® 4 Processor-M 1.6GHz with enhanced Intel SpeedStep™ technology ²¹ and 400MHz frontside bus												
Memory	512KB / on die (at processor speed) / ECC 256MB std / 1GB max ⁷ / PC2100 266MHz³⁰ DDR-SDRAM / non-parity / 2.5v / 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												
DVD-ROM/CD-RW	Combo / 8X/8X/24X/8X ²¹ speed / bootable / removable from Ultrabay Plus												
Modular bays	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)												
Disk (removable)	40GB⁸ / upgradeable / S.M.A.R.T. / supports two additional disks with optional HDD adapter in each modular bay												
Display	15.0" (381mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200:1 contrast												
Graphics controller	ATI® Mobility™ Radeon™ 7500 / AGP 4X / 32MB DDR-SDRAM 166MHz												
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions												
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar / pitch: 19mm; stroke: 2.7mm												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
UltraPort™	None												
Case material	<i>Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic</i>												
Dimensions ³	Approximately 13.0 x 10.7 x 1.8"; 329mm x 272.5mm x 45.8mm												
Approximate weight ²	with battery and optical drive: 7.6 lb (3.45kg)												
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000												
Battery - life ¹⁰	2.3 hours / universal 72 watt AC adapter (16Vdc 4.5A)												
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (Ricoh® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)												
Port replicator	Optional ThinkPad Port Replicator												
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)												
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video												
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse												
Video out	S-video out port (TV out) / industry standard connector / no cable ships standard												
IEEE 1394	None												
Mini PCI	One Mini PCI IIIb slot (Communications Bay) / customer upgradeable												
Wi-Fi ³² /modem	<i>Some: Mini PCI Wi-Fi³² wireless⁴, Intersil® Prism 2.5 chipset, dual antennas in display cover / 56K⁶ V.90 (V.92-designed²⁹)modem combo, Lucent® chipset</i>												
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible												
Modem	<i>Some: 56K⁶ V.90 (V.92-designed²⁹) CDC modem card / Lucent® chip set</i>												
Ethernet	10/100 ethernet on CDC / Intel 82562ET chipset (physical layer)												
Bluetooth™	None												
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack												
Security	Power-on password / hard disk password / supervisor password / security keyhole /												
Security chip	<i>Some: IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security¹⁶</i>												
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service												
Service options	Service upgrades ²² provide up to three 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	IBM ThinkPad Ultrabay Plus Carrier	22P5737	PC 2001-compliant									
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	IBM ThinkPad Ultrabay Plus c500 Cradle	22P5738	ACPI 1.0b and 2.0 support									
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Ultrabay Plus Numeric Keypd	22P7330	CIM and DMI 2.0-compliant									
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad Port Replicator	02K8667	IBM ImageUltra Services available									
20GB Hard Disk Drive	08K9686	ThinkPad Dock	263120U	IBM Rapid Restore PC available to protect software image and data									
40GB Hard Disk Drive	08K9687	IBM USB Sleek Mouse	33L3244	Setup Guide, Service and Troubleshooting Guide, Windows manual									
60GB HS Hard Disk Drive (5400 rpm)	08K9688	IBM USB Numeric Keypad	33L3225	Personalized Web-based support ³¹									
ThinkPad Removable Diskette Drive	08K9603	IBM USB 32MB Memory Key	22P5296	Proactive e-mail updates ³¹									
SuperDisk (LS-240) UltraBay 2000	08K9616	Portable Drive Bay 2000	19K4480	International Warranty Service ¹⁷									
Zip 250MB Ultrabay 2000 Drive	00N8253	10/100 EtherJet™ CardBus Adapter	08L3147	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty									
8X/4X/24X Max CD-RW Ultrabay 2000	22P9101	10/100 Enet/56K Mini PCI (3Com)	09N9774										
Ultralight 8X Max DVD Ultrabay 2000	22P9102	ServicePac®. 22 1yr IOR 9x5 NBD	30L9188										
DVD/CD-RW Combo II Ultrabay 2000	08K9701	ServicePac 2yr IOR 9x5 NBD	30L9189										
Travel Bezel for Ultrabay 2000	08K6070	ServicePac 3yr IOR 9x5 NBD	30L9195										
ThinkPad A30 Series Li-Ion Battery	02K6878	ServicePac 2yr P&L P/U Depot	30L9191										
Ultrabay 2000 Li-Ion battery	02K6646	ServicePac 3yr P&L P/U Depot	30L9192										
ThinkPad 72W AC Adapter	02K6699	Other options at ibm.com/us/pc/accessories											
Multiple Li-Ion/NiMH Battery Charger	02K6719												

See footnotes for important warranty information
US models announced March 5, 2002
US models withdrawn effective July 2002

Type-model	Processor	Speed	Memory	Screen	Disk	Ultrabay optical	Mini PCI wireless/modem	CDC ethernet	CDC Security modem chip	Preload	Small business	Workhorse or Global model	Avail date
2652-C3U	Pentium® 4-M	1.6GHz	256MB	15" XGA	30GB ⁸	CD-RW	Open	10/100	Modem	XP Pro		W G	Apr 2002
2652-C4U	Pentium 4-M	1.6GHz	256MB	15" XGA	30GB	CD-RW	Open	10/100	Modem	2000		W G	Apr 2002
2652-C5U	Pentium 4-M	1.6GHz	256MB	15" XGA	30GB	CD-RW	11b Wi-Fi ³² /mod	10/100	Open	XP Pro		W G	Apr 2002
2652-C6U	Pentium 4-M	1.6GHz	256MB	15" XGA	30GB	CD-RW	11b Wi-Fi/mod	10/100	Open	Yes	2000	W G	Apr 2002
2652-CTU	Pentium 4-M	1.6GHz	256MB	15" XGA	30GB	CD-RW	Open	10/100	Modem	2000	XP Office ²⁸	W	Apr 2002
Positioning Processor	<i>High-performance desktop alternatives with exceptional versatility; three spindle</i>												
L2 cache	Mobile Intel® Pentium® 4 Processor-M 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus												
Memory	512KB / on die (at processor speed) / ECC 256MB std / 1GB max ⁷ / PC2100 266MHz³⁰ DDR-SDRAM / non-parity / 2.5v / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available												
Diskette drive CD-RW	None standard / use optional Ultrabay™-based or USB-based diskette drive CD-RW / 8X/4X/24X ⁹ speed / bootable / removable from Ultrabay Plus												
Modular bays (both 12.7mm)	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)												
Disk (removable)	30GB⁸ / upgradable / S.M.A.R.T. / 12.5mm bay / supports two additional disks with optional HDD adapter in each modular bay												
Display	15.0" (381mm) XGA (1024x768) TFT color / Active Matrix / 200:1 contrast												
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16MB DDR-SDRAM 166MHz												
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions												
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
UltraPort™	None												
Case material	<i>Color: Black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic</i>												
Dimensions ³	Approximately 13.0 x 10.7 x 1.8-1.9"; 329mm x 272.5mm x 44.6-46.8mm												
Approximate weight ²	with battery and optical drive: 7.5 lb (3.45kg)												
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000												
Battery - life ¹⁰	2.5 hours / universal 72 watt AC adapter (16Vdc 4.5A)												
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-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 (Ricoch [®] R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)												
Port replicator	Optional ThinkPad Port Replicator												
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)												
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 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse												
Video out IEEE 1394	S-video out port (TV out) / industry standard connector / no cable ships standard												
Mini PCI	None												
11b Wi-Fi ³² /mod	One Mini PCI IIIb slot (Communications Bay) / customer upgradable <i>Some: Mini PCI 11b Wi-Fi³² wireless⁴, Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi certified / 56K²⁹ V.90 (V.92-designed²⁹) modem combo, Lucent® chipset</i>												
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible												
Modem	<i>Some: 56K²⁹ V.90 (V.92-designed²⁹) CDC modem card / Lucent® chip set</i>												
Ethernet	10/100 ethernet on CDC / Intel 82562ET chipset (physical layer)												
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack												
Security	Power-on password / hard disk password / supervisor password / security keyhole /												
Security chip	<i>Some: IBM Embedded Security Subsystem³³ / hardware key storage / mult-factor authentication / local file encryption / enhances VPN security¹⁶</i>												
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	IBM ThinkPad Ultrabay Plus Carrier	22P5737										
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	IBM ThinkPad Ultrabay Plus c500 Cradle	22P5738										
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Ultrabay Plus Numeric Keypd	22P7330										
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad Port Replicator	02K8667										
20GB Hard Disk 9.5mm (4200 rpm)	08K9686	ThinkPad Dock	263120U										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	Optical 3-Button Travel Wheel Mouse	31P7410										
IBM 256MB USB 2.0 Memory Key	22P9025	IBM USB Numeric Keypad	33L3225										
ThinkPad Removable Diskette Drive	08K9603	IBM USB 32MB Memory Key	22P5296										
SuperDisk (LS-240) UltraBay 2000	08K9616	Portable Drive Bay 2000	19K4480										
Zip 250MB Ultrabay 2000 Drive	00N8253	10/100 EtherJet™ CardBus Adapter	08L3147										
Ultralight 8X Max DVD Ultrabay 2000	22P9102	ServicePac [®] .22 1yr IOR 9x5 NBD	30L9188										
DVD/CD-RW Combo III Ultrabay 2000	22P6980	ServicePac 2yr IOR 9x5 NBD	30L9189										
Travel Bezel for Ultrabay 2000	08K6070	ServicePac 3yr IOR 9x5 NBD	30L9195										
ThinkPad A30 Series Li-Ion Battery	02K6878	ServicePac 2yr P&L P/U Depot	30L9191										
Ultrabay 2000 Li-Ion battery	02K6646	ServicePac 3yr P&L P/U Depot	30L9192										
ThinkPad 72W AC Adapter	02K6699	Other options at ibm.com/us/pc/accessories											
Multiple Li-Ion/NiMH Battery Charger	02K6719												
			PC 2001-compliant ACPI 1.0b and 2.0 support CIM and DMI 2.0-compliant IBM ImageUltra™ Services available IBM Rapid Restore PC available to protect software image and data Setup Guide, Service and Troubleshooting Guide, Windows manual International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²										

See footnotes for important warranty information
US models announced April 23, 2002
US models withdrawn effective August 2003

Type-model	Processor	Speed	Memory	Screen	Disk	Ultrabay optical	Mini PCI wireless/modem	CDC ethernet	CDC Security modem	chip	Preload business	Workhorse or Global model	Avail date
2652-J4U	Pentium® 4-M	1.6GHz	128MB	14.1" XGA	20GB ⁸	CD-ROM	Open	10/100	Modem	2000		No	Jun 2002
2652-J6U	Pentium 4-M	1.6GHz	128MB	14.1" XGA	20GB	CD-ROM	11b Wi-Fi ³² /mod	10/100	Open	2000		No	Jun 2002
2652-M4U	Pentium 4-M	1.8GHz	256MB	15" SXGA+	40GB	Combo	Open	10/100	Modem	2000		No	Jun 2002
2652-M6U	Pentium 4-M	1.8GHz	256MB	15" SXGA+	40GB	Combo	11b Wi-Fi/mod	10/100	Open	Yes	2000	No	Jun 2002
2652-J3U	Pentium 4-M	1.6GHz	128MB	14.1" XGA	20GB	CD-ROM	Open	10/100	Modem	XP Pro		No	Jun 2002
2652-J5U	Pentium 4-M	1.6GHz	128MB	14.1" XGA	20GB	CD-ROM	11b Wi-Fi/mod	10/100	Open	XP Pro		No	Jun 2002
2652-JBU	Pentium 4-M	1.8GHz	128MB	14.1" XGA	20GB	CD-ROM	Open	10/100	Modem	XP Pro		No	Mar 2003
2652-JCU	Pentium 4-M	1.8GHz	128MB	14.1" XGA	20GB	CD-ROM	11b Wi-Fi/mod	10/100	Open	XP Pro		No	Mar 2003
2652-M3U	Pentium 4-M	1.8GHz	256MB	15" SXGA+	40GB	Combo	Open	10/100	Modem	XP Pro		No	Jun 2002
2652-M5U	Pentium 4-M	1.8GHz	256MB	15" SXGA+	40GB	Combo	11b Wi-Fi/mod	10/100	Open	Yes	XP Pro	No	Jun 2002
2652-JEU	Pentium 4-M	1.6GHz	128MB	14.1" XGA	20GB	CD-ROM	Open	10/100	Modem	XP Home		No	Jun 2002
2652-JFU	Pentium 4-M	1.6GHz	128MB	14.1" XGA	20GB	CD-ROM	11b Wi-Fi/mod	10/100	Open	XP Home		No	Jun 2002
2652-JTU	Pentium 4-M	1.6GHz	128MB	14.1" XGA	20GB	CD-ROM	Open	10/100	Modem	2000	XP Office ²⁸	No	Jun 2002
Positioning Processor	High-performance desktop alternatives with exceptional versatility; three spindle Mobile Intel® Pentium® 4 Processor-M 1.6 or 1.8GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus										SOFTWARE¹⁴		
L2 cache	512KB / on die (at processor speed) / ECC										Windows 2000 models		
Memory	128 or 256MB std / 1GB max⁷ / PC2100 DDR-SDRAM / non-parity / 266MHz³⁰ / 2.5v / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® 2000 Professional ²⁰ • ConfigSafe® ◆ Disk-to-Disk Recovery (in hidden Service Partition)		
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive										Windows XP Pro models		
CD-ROM	Some: CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay Plus										- Microsoft Windows XP Professional ²⁰ ◆ Disk-to-Disk Recovery (in hidden Service Partition)		
DVD-ROM/CD-RW	Some: Combo / 8X/8X/24X/8X ²¹ speed / bootable / removable from Ultrabay Plus										Windows XP Home models		
Modular bays	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)										- Microsoft Windows XP Professional ²⁰ ◆ Disk-to-Disk Recovery (in hidden Service Partition)		
Disk (removable)	20 or 40GB⁸ / upgradable / S.M.A.R.T. / 12.5mm bay / supports two additional disks with optional HDD adapter in each modular bay										Windows XP Home models		
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 200:1 contrast Some: 15.0" (381mm) SXGA+ (1400x1050) TFT color / Active Matrix / 400:1 cont / FlexView display with wide viewing angle and high density (IPS technology)										- Microsoft Windows XP Home Edition ²⁰ ◆ Disk-to-Disk Recovery (in hidden Service Partition)		
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / DDR-SDRAM 166MHz / Jxx: 16MB, Mxx: 32MB										◆ Disk-to-Disk Recovery (in hidden Service Partition)		
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions										INCLUDED SOFTWARE¹⁴ (all)		
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint™, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm										Preloaded		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™										• Access ThinkPad		
Case material	Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic										- Access Connections		
Dimensions ³	Approximately 13.0 x 10.7 x 1.8-1.9"; 329mm x 272.5mm x 44.6-46.8mm										• Adobe Acrobat Reader		
Approximate weight ²	with battery and optical drive: Jxx: 7.2 lb (3.27kg); Mxx: 7.6 lb (3.45kg)										• PC-Doctor™		
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000										• ThinkPad Utilities		
Battery - life ¹⁰	Mxx: 2.3 hr; Jxx: 2.5 hr; All: universal 72 watt AC adapter (16Vdc 4.5A)										• IBM Update Connector™ ¹⁵		
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-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 (Ricoch® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)										• IBM Veritas® RecordNOW and DLA (combo models)		
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)										Downloadable		
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										• IBM Rapid Restore™ PC		
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse										• IBM Data Transfer		
Video out	S-video out port (TV out) / industry standard connector / no cable ships standard										• IBM Director Agent		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										• Client Security Software (security chip models)		
11b Wi-Fi ³² /mod	Some: Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi certified / 56K ²⁹ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset										License (CD not included)		
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Modem	Some: 56K ²⁹ V.90 (V.92-designed ²⁹) CDC modem card / Agere® chipset										Office XP Small Business model only (2652-JTU)		
Ethernet	10/100 ethernet on CDC / Intel82562ET chipset (physical layer) / PXE / Wake on LAN®										- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ◆ Office XP Small Business CD		
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack										Ultrabay Plus integrated modular bay supports most Ultrabay 2000 devices including CD-RW/DVD Combo II drive, diskette drive, or Zip drive; the optional Ultrabay Plus Device Carrier adds potential functionality by supporting the Ultrabay Plus Numeric Keypad and Cradle for the WorkPad® c500 Series		
Security	Power-on password / hard disk password / supervisor password / security keyhole / Some: IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶										PC 2001-compliant ACPI 1.0b and 2.0 support CIM and DMI 2.0-compliant IBM Rapid Restore PC available to protect software image and data Setup Guide, Service and Troubleshooting Guide, Windows manual International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²		
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² available												
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028		ThinkPad Port Replicator		02K8667								
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030		ThinkPad Port Replicator II		74P6733								
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032		ThinkPad Mini Dock		287810U								
Second HDD Adapter for Ultrabay 2000	08K6068		ThinkPad Dock		263120U								
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816		ThinkPad Dock II		287710U								
IBM 256MB USB 2.0 Memory Key	22P9025		Optical 3-Button Travel Wheel Mouse		31P7410								
ThinkPad Removable Diskette Drive	08K9603		IBM 128MB USB 2.0 Memory Key		22P8998								
Ultralight 8X Max DVD Ultrabay 2000	22P9102		ServicePac® ²² 1yr IOR 9x5 NBD		30L9188								
DVD/CD-RW Combo IV Ultrabay 2000	22P6991		ServicePac 2yr IOR 9x5 NBD		30L9189								
Travel Bezel for Ultrabay 2000	08K6070		ServicePac 3yr IOR 9x5 NBD		30L9195								
ThinkPad A30 Series Li-Ion Battery	02K6878		ServicePac 2yr P&L P/U Depot		30L9191								
Ultrabay 2000 Li-Ion battery	02K6646		ServicePac 3yr P&L P/U Depot		30L9192								
ThinkPad 72W AC Adapter	02K6699		Other options at ibm.com/us/pc/accessories										

See footnotes for important warranty information
US models announced March 12, 2003; previous models on June 4, 2002
US models withdrawn effective April or October 2003

Type-model	Processor	Speed	Memory	Screen	Disk	Ultrabay optical	Mini PCI wireless/modem	CDC ethernet	CDC modem	Security chip	Preload	Small business	Workhorse or Global model	Avail date
2652-P3U	Pentium® 4-M	1.9GHz	256MB	15" XGA	30GB ⁸	DVD Open		10/100	Modem		XP Pro		W G	Sep 2002
2652-P4U	Pentium 4-M	1.9GHz	256MB	15" XGA	30GB	DVD Open		10/100	Modem		2000			Sep 2002
2652-P5U	Pentium 4-M	1.9GHz	256MB	15" XGA	30GB	DVD	11b Wi-Fi ³² /mod	10/100	Open	Yes	XP Pro		W G	Sep 2002
2652-P6U	Pentium 4-M	1.9GHz	256MB	15" XGA	30GB	DVD	11b Wi-Fi/mod	10/100	Open	Yes	2000			Sep 2002
2652-PTU	Pentium 4-M	1.9GHz	256MB	15" XGA	30GB	DVD Open		10/100	Modem		2000	Office XP SB ²⁸		Sep 2002

Positioning Processor	<i>High-performance desktop alternatives with exceptional versatility; three spindle</i> Mobile Intel® Pentium® 4 Processor-M 1.9GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus	SOFTWARE¹⁴ Windows 2000 models - Microsoft® Windows® 2000 Professional ²⁰ • ConfigSafe® ◇ Disk-to-Disk Recovery (in hidden Service Partition) Windows XP Pro models - Microsoft Windows XP Professional ²⁰ ◇ Disk-to-Disk Recovery (in hidden Service Partition) INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Support - Access Help • Adobe Acrobat Reader • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ • IBM Veritas® RecordNOW and DLA (combo models) Downloadable • IBM Rapid Restore™ PC • Software Delivery Assistant • System Migration Assistant • IBM Director Agent • Client Security Software (security chip models) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client Office XP Small Business model only (2652-PTU) - Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ◇ Office XP Small Business CD
L2 cache	512KB / on die (at processor speed) / ECC	
Memory	256MB std / 1GB max ⁷ / PC2100 DDR-SDRAM / non-parity / 266MHz ³⁰ / 2.5v / 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	
DVD-ROM	DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay Plus	
Modular bays (both 12.7mm)	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)	
Disk (removable)	30GB⁸ / upgradable / S.M.A.R.T. / 12.5mm bay / supports two additional disks with optional HDD adapter in each modular bay	
Display	15.0" (381mm) XGA (1024x768) TFT color / Active Matrix / 200:1 contrast	
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / DDR-SDRAM 166MHz / 16MB	
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions	
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™	
Case material	<i>Color: Black; Top: ABS plastic; Bottom: Glass-fiber reinforced plastic</i>	
Dimensions ³	Approximately 13.0 x 10.7 x 1.8"; 329mm x 272.5mm x 45.8mm	
Approximate weight ²	with battery and optical drive: 7.5 lb (3.4kg)	
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000	
Battery - life ¹⁰	2.5 hr; All: universal 72 watt AC adapter (16Vdc 4.5A)	
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-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 (Ricoch® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)	
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)	
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 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard/mouse	
Video out	S-video out port (TV out) / industry standard connector / no cable ships standard	
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable	
11b Wi-Fi ³² /mod	<i>Some: Mini PCI 11b Wi-Fi³² wireless⁴, Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi certified / 56K²⁹ V.90 (V.92-designed²⁹) modem combo, Agere® chipset</i>	
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible	
Modem	<i>Some: 56K²⁹ V.90 (V.92-designed²⁹) CDC modem card / Agere® chipset</i>	
Ethernet	10/100 ethernet on CDC / Intel 82562ET chipset (physical layer)	
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack	
Security	Power-on password / hard disk password / supervisor password / security keyhole / <i>Some: IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security¹⁶ / TCPA-compliant</i>	
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 A30 Series Li-Ion Battery	02K6878
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Multiple Li-Ion/NiMH Battery Charger	02K6719
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad 72W AC Adapter	02K6699
20GB Hard Disk Drive	08K9686	ThinkPad Ultrabay Plus Carrier	22P5737
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Ultrabay Plus Numeric Keypd	22P7330
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Port Replicator	02K8667
IBM USB Portable Diskette Drive	05K9276	ThinkPad Dock	263120U
ThinkPad Removable Diskette Drive	08K9603	IBM Optical Travel Wheel Mouse (black)	31P7410
SuperDisk (LS-240) UltraBay 2000	08K9616	IBM 1 GB Microdrive	07N5574
Zip 250MB Ultrabay 2000 Drive	00N8253	ServicePac ²² 1yr IOR 9x5 NBD	30L9188
Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102	ServicePac 2yr IOR 9x5 NBD	30L9189
DVD/CD-RW Combo III Ultrabay 2000	22P6980	ServicePac 3yr IOR 9x5 NBD	30L9195
Travel Bezel for Ultrabay 2000	08K6070	ServicePac 4yr IOR 9x5 NBD	69P9194
Portable Drive Bay 2000	19K4480	ServicePac 5yr IOR 9x5 NBD	69P9196
IBM 128MB USB 2.0 Memory Key	22P8998	ServicePac 2yr P&L P/U Depot	30L9191
IBM Portable USB 2.0 CD-RW Drive	22P5297	ServicePac 3yr P&L P/U Depot	30L9192
ThinkPad USB 2.0 CardBus Adapter	33L3245	ServicePac 4yr P&L P/U Depot	69P9195
IBM MicroPortable Data/Video Projector	0037A02	ServicePac 5yr P&L P/U Depot	69P9197
IBM High Rate Wireless LAN PC Card 128	09N9904	Other options at ibm.com/us/pc/accessories	

Ultrabay Plus integrated modular bay supports most Ultrabay 2000 devices including CD-RW/DVD Combo II drive, diskette drive, or Zip drive; the optional Ultrabay Plus Device Carrier adds potential functionality by supporting the Ultrabay Plus Numeric Keypad and Cradle for the WorkPad® c500 Series

PC 2001-compliant
ACPI 1.0b and 2.0 support
CIM and DMI 2.0-compliant
IBM ImageUltra™ Services available
IBM Rapid Restore PC available to protect software image and data
Setup Guide, Service and Troubleshooting Guide, Windows manual
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free hardware support during the warranty¹²

See footnotes for important warranty information
US models announced August 27, 2002
US models withdrawn effective October 2003

Type-model	Processor	Speed	Memory	Screen	Graphics memory	Disk	Ultrabay optical	Mini PCI wireless/modem	CDC ethernet	CDC Security modem chip	Workhorse or Avail Global model	Preload	Software	
2652-P8U	Pentium® 4-M	2.0GHz	128MB	14.1" XGA	16MB	20GB ⁸	CD	Open	10/100	Modem	XP Pro	Jan 2003		
2652-P9U	Pentium 4-M	2.0GHz	128MB	14.1" XGA	16MB	20GB	CD	11b Wi-Fi ³² /modem	10/100	Modem	XP Pro	Jan 2003		
2652-PBU	Pentium 4-M	2.0GHz	256MB	15.0" XGA	16MB	40GB	Combo	Open	10/100	Open	XP Pro	W	Jan 2003	
2652-PCU	Pentium 4-M	2.0GHz	256MB	15.0" XGA	16MB	40GB	Combo	11b Wi-Fi/modem	10/100	Open	Yes	XP Pro	W	Jan 2003
2652-Q3U	Pentium 4-M	2.0GHz	256MB	15.0" SXGA+	32MB	40GB	Combo	Open	10/100	Open	Yes	XP Pro	Jan 2003	
2652-Q5U	Pentium 4-M	2.0GHz	256MB	15.0" SXGA+	32MB	40GB	Combo	11b Wi-Fi/modem	10/100	Open	Yes	XP Pro	Jan 2003	
2652-PEU	Pentium 4-M	2.0GHz	128MB	14.1" XGA	16MB	20GB	CD	Open	10/100	Open	Yes	XP Home	Jan 2003	
Positioning Processor	<i>High-performance desktop alternatives with exceptional versatility; three spindle</i>										SOFTWARE¹⁴			
L2 cache	Mobile Intel® Pentium® 4 Processor-M 2.0GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus										Windows XP Pro models			
Memory	512KB / on die (at processor speed) / ECC 128 or 256MB std / 1GB max ⁷ / PC2100 DDR-SDRAM / non-parity / 266MHz ³⁰ / 2.5v / 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 Service Partition)			
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive										Windows XP Home models			
CD-ROM	Some: CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay Plus										- Microsoft Windows XP Home Edition ²⁰			
Combo	Some: Combo / 16X/8X/24X/8X ²¹ speed / bootable / removable from Ultrabay Plus										• ConfigSafe® ◇ Disk-to-Disk Recovery (in hidden Service Partition)			
Modular bays (both 12.7mm)	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)										INCLUDED SOFTWARE¹⁴ (all)			
Disk (removable)	20 or 40GB ⁸ , 4200 rpm, 9.5mm / upgradable / S.M.A.R.T. / 12.5mm bay / supports two additional disks with optional HDD adapter in each modular bay										Preloaded			
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 200:1 contrast Some: 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix / 200:1 contrast Some: 15.0" (381mm) SXGA+ (1400x1050) TFT color / Active Matrix / 400:1 cont / FlexView display with wide viewing angle and high density (IPS technology)										• Access ThinkPad - Access Connections - Access Support - Access Help • Adobe Acrobat Reader • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ • IBM Veritas® RecordNow and DLA (combo models)			
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / DDR-SDRAM 166MHz / 16 or 32MB										Downloadable			
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions										• IBM Rapid Restore™ PC • Software Delivery Assistant • System Migration Assistant • IBM Director Agent • Client Security Software (security chip models)			
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint™, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm										License (CD not included)			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
Case material	Color: Black; Top: ABS plastic; Bottom: Glass-fiber reinforced plastic													
Dimensions ³	Approximately 13.0 x 10.7 x 1.8"; 329mm x 272.5mm x 45.8mm													
Approximate weight ²	With battery and optical drive: 7.5 lb (3.4kg)													
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000													
Battery - life ¹⁰	PCU/Q3U/Q5U: 2.3 hr; Others: 2.5 hr; All: universal 72 watt AC adapter (16Vdc 4.5A)													
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-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 (Ricoch® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)													
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)													
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 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard/mouse													
Video out	S-video out port (TV out) / industry standard connector / no cable ships standard													
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable													
11b Wi-Fi ³² /mod	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intersil® Prism 2.5 chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi certified / 56K ²⁹ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset										PC 2001-compliant ACPI 1.0b and 2.0 support CIM and DMI 2.0-compliant IBM ImageUltra™ Services available IBM Rapid Restore PC available to protect software image and data Setup Guide, Service and Troubleshooting Guide, Windows manual International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²			
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible													
Modem	Some: 56K ²⁹ V.90 (V.92-designed ²⁹) CDC modem card / Agere® chipset													
Ethernet	10/100 ethernet on CDC / Intel 82562ET chipset (physical layer)													
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack													
Security	Power-on password / hard disk password / supervisor password / security keyhole / Some: IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multifactor authentication / local file encryption / enhances VPN security ¹⁶ / TCFPA-compliant													
Limited warranty ¹²	1 year - EasyServ™.19 onsite pickup and delivery courier service										ServicePac®.22 1yr IOR 9x5 NBD 30L9188			
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 2yr IOR 9x5 NBD 30L9189			
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028				ThinkPad A30 Series Li-Ion Battery				02K6878					
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030				Ultrabay 2000 Li-Ion battery				02K6646					
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032				Multiple Li-Ion/NiMH Battery Charger				02K6719					
Second HDD Adapter for Ultrabay 2000	08K6068				ThinkPad 72W AC Adapter				02K6699					
20GB Hard Disk Drive	08K9686				ThinkPad Ultrabay Plus Carrier				22P5737					
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816				ThinkPad Ultrabay Plus Numeric Keypd				22P7330					
IBM 256MB USB 2.0 Memory Key	22P9025				ThinkPad Port Replicator				02K8667					
IBM USB Portable Diskette Drive	05K9276				ThinkPad Port Replicator II				74P6733					
ThinkPad Removable Diskette Drive	08K9603				ThinkPad Mini Dock				287810U					
Zip 250MB Ultrabay 2000 Drive	00N8253				ThinkPad Dock				263120U					
Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102				IBM Optical Travel Wheel Mouse (black)				31P7410					
DVD/CD-RW Combo IV Ultrabay 2000	22P6991				Portable Drive Bay 2000				19K4480					
Travel Bezel for Ultrabay 2000	08K6070				IBM 128MB USB 2.0 Memory Key				22P8998					
IBM High Rate Wireless LAN PC Card 128	09N9904				IBM Portable USB 2.0 CD-RW Drive				22P5297					
IBM 1GB Microdrive	07N5574				ThinkPad USB 2.0 CardBus Adapter				33L3245					
Bluetooth PC Card II from IBM	19K5796				Other options at ibm.com/us/pc/accessories									

See footnotes for important warranty information
US models announced January 28, 2003
US models withdrawn effective October 2003 or January 2004

Type-model	Processor	Speed	Memory	Screen	Disk	Ultrabay optical	Ultrabay diskette	Mini PCI wireless/modem	CDC ethernet	Preload	Limited warranty	Avail date
2652-AUU	Pentium® 4-M	1.6GHz	256MB	14.1" XGA	30GB ⁸	CD-RW	Diskette	Wi-Fi ³² /modem	10/100	Windows® XP Pro	1 yr	Apr 2002
2653-AUU	Pentium 4-M	1.6GHz	256MB	14.1" XGA	30GB	CD-RW	Diskette	Wi-Fi/modem	10/100	Windows XP Pro	3 yr	Apr 2002

These educational models of the ThinkPad A31 notebook must be sold only to qualified education customers. Qualified institution/customer is a public or private K-12 (or higher) accredited school organized and operated exclusively for educational purposes for use by Qualified Students and/or Qualified 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>High-performance desktop alternatives with exceptional versatility; three spindle Mobile Intel® Pentium® 4 Processor-M 1.6GHz with enhanced Intel SpeedStep™ technology¹ and 400MHz frontside bus</i>										SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ◇ Disk-to-Disk Recovery (in hidden Service Partition) INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Support - Access Help • Adobe® Acrobat Reader • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ • IBM RecordNOW by Veritas® Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • IBM Director Agent License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand Alone Client
L2 cache	512KB / on die (at processor speed) / ECC										
Memory	256MB std / 1GB max ⁷ / PC2100 266MHz³⁰ DDR-SDRAM / non-parity / 2.5v / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										
Diskette drive	3.5" 1.44MB / removable from left Ultrabay 2000 (but travel bezel in bay at ship)										
CD-RW	CD-RW / 8X/4X/24X Max ⁹ speed / bootable / removable from Ultrabay Plus										
Modular bays	Two modular bays for interchangeable devices / Ultrabay 2000 (left side with travel bezel or diskette) and Ultrabay Plus (right side with CD-RW)										
Disk (removable)	30GB⁸ / upgradeable / S.M.A.R.T. / supports two additional disks with optional HDD adapter in each modular bay										
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 200:1 contrast										
Graphics controller	ATI® Mobility™ Radeon™ 7500 / AGP 4X / 16MB DDR-SDRAM 166MHz										
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions										
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm										
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™										
Case material	Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic										
Dimensions ³	Approximately 13.0 x 10.7 x 1.8-1.9"; 329mm x 272.5mm x 44.6-46.8mm										
Approximate weight ²	with battery and optical drive: 7.5 lb (3.32kg)										
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000										
Battery - life ¹⁰	2.3 hours / universal 72 watt AC adapter (16Vdc 4.5A)										
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-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 (Ricoh® R5C552 CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)										
Port replicator	Optional ThinkPad Port Replicator										
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video										
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse										
Video out	S-video out port (TV out) / industry standard connector / no cable ships standard										
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable										
Wi-Fi ³² /modem	Mini PCI Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Lucent® chipset										
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible										
Ethernet	10/100 ethernet on CDC / Intel 82562ET chipset (physical layer)										
Open	One Communications Daughter Card (CDC) socket open										
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack										
Security	Power-on password / hard disk password / supervisor password / security keyhole /										
Limited warranty ¹²	2652: 1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service 2653: 3 years / 1 year battery - EasyServ 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	IBM ThinkPad Ultrabay Plus Carrier	22P5737	PC 2001-compliant ACPI 1.0b and 2.0 support CIM and DMI 2.0-compliant IBM ImageUltra Services available IBM Rapid Restore PC available to protect software image and data Setup Guide, Service and Troubleshooting Guide, Windows manual Personalized Web-based support ³¹ Proactive e-mail updates ³¹ International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	IBM ThinkPad Ultrabay Plus c500 Cradle	22P5738	
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Ultrabay Plus Numeric Keypad	22P7330	
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad Port Replicator	02K8667	
20GB Hard Disk 9.5mm (4200 rpm)	08K9686	ThinkPad Dock	263120U	
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM USB Sleek Mouse	33L3244	
60GB HS Hard Disk 12.5mm (5400 rpm)	08K9688	IBM USB Numeric Keypad	33L3225	
ThinkPad Removable Diskette Drive	08K9603	IBM USB 32MB Memory Key	22P5296	
SuperDisk (LS-240) UltraBay 2000	08K9616	Portable Drive Bay 2000	19K4480	
Zip 250MB Ultrabay 2000 Drive	00N8253	10/100 EtherJet™ CardBus Adapter	08L3147	
Ultralight 8X Max DVD Ultrabay 2000	22P9102	2652: ServicePac ²² 1yr IOR 9x5 NBD	30L9188	
DVD/CD-RW Combo III Ultrabay 2000	22P6980	2652: ServicePac 2yr IOR 9x5 NBD	30L9189	
Travel Bezel for Ultrabay 2000	08K6070	2652: ServicePac 3yr IOR 9x5 NBD	30L9195	
ThinkPad A30 Series Li-Ion Battery	02K6878	2652: ServicePac 2yr P&L P/U Depot	30L9191	
Ultrabay 2000 Li-Ion battery	02K6646	2652: ServicePac 3yr P&L P/U Depot	30L9192	
ThinkPad 72W AC Adapter	02K6699	2653: ServicePac 2yr IOR 9x5 NBD	30L9190	
Multiple Li-Ion/NiMH Battery Charger	02K6719	2653: ServicePac 3yr IOR 9x5 NBD	30L9197	
		Other options at ibm.com/us/pc/accessories		

See footnotes for important warranty information
US models announced April 30, 2002
US models withdrawn effective January 2003

Type-model	Processor	Speed	Memory	Screen	Disk GB ⁸	Ultrabay optical	Ultrabay diskette	Mini PCI wireless/modem	CDC ethernet	CDC Security modem	CDC chip	Preload	Limited Warranty	Avail date
2652-JUU	Pentium® 4-M	1.6GHz	128MB	14.1" XGA	20G	CD-ROM	Diskette	11b Wi-Fi ³² /mod	10/100	Open	No	XP Pro	1 year	Jun 2002
2653-JUU	Pentium 4-M	1.6GHz	128MB	14.1" XGA	20G	CD-ROM	Diskette	11b Wi-Fi/modem	10/100	Open	No	XP Pro	3 year	Jun 2002
2653-J9U	Pentium 4-M	1.8GHz	128MB	14.1" XGA	20G	CD-ROM	Diskette	11b Wi-Fi/modem	10/100	Open	No	XP Pro	3 year	Mar 2003
2653-Q5U	Pentium 4-M	2.0GHz	256MB	15.0" SXGA+	40G	Combo	Diskette	11b Wi-Fi/modem	10/100	Open	Yes	XP Pro	3 year	Jan 2003

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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	High-performance desktop alternatives with exceptional versatility; three spindle	SOFTWARE ¹⁴
L2 cache	Mobile Intel® Pentium® 4 Processor-M 1.6, 1.8 or 2.0GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus	Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden Service Partition)
Memory	512KB / on die (at processor speed) / ECC 128 or 256MB std / 1GB max ⁷ / PC2100 DDR-SDRAM / non-parity / 266MHz ³⁰ / 2.5v / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available	
Diskette drive	3.5" 1.44MB / removable from left Ultrabay 2000 (but travel bezel in bay at ship)	INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Support - Access Help • Adobe Acrobat Reader • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • IBM Director Agent • Client Security Software (security chip model) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
CD-ROM	Some: CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay Plus	
Combo	Some: Combo / 16X/8X/24X/8X ²¹ speed / bootable / removable from Ultrabay Plus	
Modular bays (both 12.7mm)	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)	
Disk (removable)	20 or 40GB ⁸ , 4200 rpm, 9.5mm / upgradable / S.M.A.R.T. / 12.5mm bay / supports two additional disks with optional HDD adapter in each modular bay	
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 16MB memory Some: 15.0" (381mm) SXGA+ (1400x1050) TFT color / Active Matrix / 32MB memory / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology	
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16 or 32MB DDR-SDRAM 166MHz	
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions	
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™	
Case material	Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic	
Dimensions ³	Approximately 13.0 x 10.7 x 1.8-1.9"; 329mm x 272.5mm x 44.6-46.8mm	
Approximate weight ²	with battery and optical drive: JUU: 7.3 lb (3.32kg); Q5U: 7.5 lb (3.4kg)	
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000	
Battery - life ¹⁰	2.3 hr / universal 72 watt AC adapter (16Vdc 4.5A)	
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801 CAM ICH3-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 (Ricoch® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)	PC 2001-compliant ACPI 1.0b and 2.0 support CIM and DMI 2.0-compliant IBM ImageUltra™ Services available IBM Rapid Restore PC available to protect software image and data Setup Guide, Service and Troubleshooting Guide, Windows manual International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)	
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 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse	
Video out	S-video out port (TV out) / industry standard connector / no cable ships standard	
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable	
11b Wi-Fi ³² /mod	All: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intersil® Prizm 2.5 chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi certified / 56K ²⁹ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset	2562: ServicePac ²² 1yr IOR 9x5 NBD 30L9188 2652: ServicePac 2yr IOR 9x5 NBD 30L9189 2652: ServicePac 3yr IOR 9x5 NBD 30L9195 2652: ServicePac 4yr IOR 9x5 NBD 69P9194 2652: ServicePac 5yr IOR 9x5 NBD 69P9196 2652: ServicePac 2yr P&L P/U Depot 30L9191 2652: ServicePac 3yr P&L P/U Depot 30L9192 2652: ServicePac 4yr P&L P/U Depot 69P9195 2652: ServicePac 5yr P&L P/U Depot 69P9197 2653: ServicePac 2yr IOR 9x5 NBD 30L9190 2653: ServicePac 3yr IOR 9x5 NBD 30L9197 2653: ServicePac 4yr IOR 9x5 NBD 69P9198 2653: ServicePac 5yr IOR 9x5 NBD 69P9200 2653: ServicePac 5yr P&L P/U Depot 69P9201 Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf
CDC Ethernet	Two Communications Daughter Card (CDC) sockets / customer accessible 10/100 ethernet on CDC / Intel 82562ET chipset (physical layer) / PXE / Wake on LAN®	
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack	
Security	Power-on password / hard disk password / supervisor password / security keyhole Some: 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	2652: 1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service 2653: 3 years/1 year battery - EasyServ 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 A30 Series Li-Ion Battery	02K6878
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Multiple Li-Ion/NiMH Battery Charger	02K6719
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad 72W AC Adapter	02K6699
20GB Hard Disk Drive	08K9686	ThinkPad Ultrabay Plus Carrier	22P5737
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Ultrabay Plus Numeric Keybd	22P7330
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Port Replicator	02K8667
IBM USB Portable Diskette Drive	05K9276	ThinkPad Port Replicator II	74P6733
ThinkPad Removable Diskette Drive	08K9603	ThinkPad Mini Dock	287810U
ThinkPad Multi-Burner Ultrabay 2000 Drive	22P7015	ThinkPad Dock II	287710U
Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102	IBM Optical Travel Wheel Mouse (black)	31P7410
DVD/CD-RW Combo IV Ultrabay 2000	22P6991	Portable Drive Bay 2000	19K4480
Travel Bezel for Ultrabay 2000	08K6070	IBM Portable USB 2.0 CD-RW Drive	22P5297
IBM High Rate Wireless LAN PC Card 128	09N9904	ThinkPad USB 2.0 CardBus Adapter	33L3245
Bluetooth PC Card II from IBM	19K5796	Other options at ibm.com/us/pc/accessories	

See footnotes for important warranty information
 US models announced on June 18, 2002, January 28, 2003, or March 12, 2003
 US models withdrawn effective April or October 2003

Type-model	Processor	GHz	Memory	Screen	Disk	Ultrabay optical	Mini PCI	CDC Ethernet	CDC Mod/Blu	Security Chip	Preload	Small bus software	Workhorse or Global model	Avail date
2653-H3U	Pentium® 4-M	1.7	256MB	15" UXGA	60GB ⁸ DVD/CD-RW	Open		10/100	Modem	Yes	XP Pro		No	Mar 2002
2653-H4U	Pentium 4-M	1.7	256MB	15" UXGA	60GB DVD/CD-RW	Open		10/100	Modem	Yes	Windows® 2000		No	Mar 2002
2653-H5U	Pentium 4-M	1.7	256MB	15" UXGA	60GB DVD/CD-RW	Wi-Fi ³² /mod		10/100	Bluetooth	Yes	XP Pro		No	Mar 2002
2653-H6U	Pentium 4-M	1.7	256MB	15" UXGA	60GB DVD/CD-RW	Wi-Fi/mod		10/100	Bluetooth	Yes	Windows 2000		No	Mar 2002
2653-HTU	Pentium 4-M	1.7	256MB	15" UXGA	60GB DVD/CD-RW	Wi-Fi/mod		10/100	Bluetooth	Yes	XP Pro Office XP SB ²⁸		No	Mar 2002
Positioning Processor	High-performance desktop alternatives with exceptional versatility; three spindle Mobile Intel® Pentium® 4 Processor-M 1.7GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus											SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ♦ Disk-to-Disk Recovery (in hidden Service Partition) Windows 2000 models - Microsoft Windows 2000 Professional ¹³ • ConfigSafe® ♦ Disk-to-Disk Recovery (in hidden Service Partition) INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Help - Access Support • Adobe Acrobat Reader • InterVideo™ Win DVD • MGI VideoWave 4 • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ • Veritas RecordNOW Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • Client Security Software (models with security chip) • IBM Director Agent License - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 Office XP Small Business models only - Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ♦ Office XP Small Business CD 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 and Cradle for the WorkPad® c500 Series		
L2 cache	512KB / on die (at processor speed) / ECC													
Memory	256MB std / 1GB max ⁷ / PC2100 266MHz ³⁰ DDR-SDRAM / non-parity / 2.5v / 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													
DVD-ROM/CD-RW	Combo / 8X/8X/24X/8X ²¹ speed / bootable / removable from Ultrabay Plus													
Modular bays	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)													
Disk (removable)	60GB ⁸ / high-speed 5400 rpm / upgradeable / S.M.A.R.T. / supports two additional disks with optional HDD adapter in each modular bay													
Display	15.0" (381mm) UXGA-IPS (1600x1200) TFT color / Active Matrix / 400:1 contrast / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology													
Graphics controller	ATI® Mobility™ FireGL™ 7800 / AGP 4X / 64MB DDR-SDRAM 183MHz / supports OpenGL technology for 3D applications													
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions													
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar / pitch: 19mm; stroke: 2.7mm													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera													
Case material	Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic													
Dimensions ³	Approximately 13.0 x 10.7 x 1.8"; 329mm x 272.5mm x 45.8mm													
Approximate weight ²	with battery and optical drive: 7.7 lb (3.49kg)													
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000													
Battery - life ¹⁰	2.0 hours / universal 72 watt AC adapter (16Vdc 4.5A)													
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (Ricoh® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)													
Port replicator	Optional ThinkPad Port Replicator													
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)													
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video													
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / IEEE 1394 / no keyboard/mouse													
Video in and out	S-video in and out ports / industry standard connectors / cable ships standard													
IEEE 1394	IEEE 1394 FireWire port													
Mini PCI	One Mini PCI IIIb slot (Communications Bay) / customer upgradeable													
Wi-Fi ³² /modem	Some: Mini PCI Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Lucent® chipset													
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible													
Modem	Some: 56K ⁶ V.90 (V.92-designed ²⁹) CDC modem card / Lucent® chip set													
Ethernet	10/100 ethernet on CDC / Intel 82562ET chipset (physical layer)													
Bluetooth™	Some: Bluetooth wireless technology / on CDC / power button on display													
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack													
Security	Power-on password / hard disk password / supervisor password / security keyhole /													
Security chip	IBM Embedded Security Subsystem ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶													
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service													
Service options	Service upgrades ²² provide up to three 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	Ultrabay 2000 Li-Ion battery	02K6646	PC 2001-compliant										
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Multiple Li-Ion/NiMH Battery Charger	02K6719	ACPI 1.0b and 2.0 support										
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad 72W AC Adapter	02K6699	CIM and DMI 2.0-compliant										
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad Ultrabay Plus Carrier	22P5737	IBM ImageUltra Services available										
20GB Hard Disk Drive	08K9686	ThinkPad Ultrabay Plus c500 Cradle	22P5738	IBM Rapid Restore PC available to										
40GB Hard Disk Drive	08K9687	ThinkPad Ultrabay Plus Numeric Keypd	22P7330	protect software image and data										
60GB HS Hard Disk Drive (5400 rpm)	08K9688	ThinkPad Port Replicator	02K8667	Setup Guide, Service and Trouble-										
IBM USB Portable Diskette Drive	05K9276	ThinkPad Dock	263120U	shooting Guide, Windows manual										
ThinkPad Removable Diskette Drive	08K9603	IBM USB Keyboard w/ USB Ports	10K3849	Personalized Web-based support										
SuperDisk (LS-240) UltraBay 2000	08K9616	IBM USB Sleek Mouse	33L3244	International Warranty Service ¹⁷										
Zip 250MB Ultrabay 2000 Drive	00N8253	IBM USB 32MB Memory Key	22P5296	24 hour x 7 day ¹⁸ toll-free hardware										
8X/4X/24X Max CD-RW Ultrabay 2000	22P9101	Portable Drive Bay 2000	19K4480	support during the warranty										
Ultralight 8X Max DVD Ultrabay 2000	22P9102	10/100 Enet/56K Mini PCI (3Com)	09N9774											
DVD/CD-RW Combo II Ultrabay 2000	08K9701	ServicePac ²² 2yr IOR 9x5 NBD	30L9190											
Travel Bezel for Ultrabay 2000	08K6070	ServicePac 3yr IOR 9x5 NBD	30L9197											
ThinkPad A30 Series Li-Ion Battery	02K6878	Other options at ibm.com/us/pc/accessories												

See footnotes for important warranty information
US models announced March 5, 2002
US models withdrawn effective July 2002

Type-model	Processor	GHz	Memory	Screen	Disk	Ultrabay optical	Mini PCI	CDC Ethernet	CDC Mod/Blu	Security Chip	Preload	Small bus software	Workhorse or Global model	Avail date
2653-N3U	Pentium® 4-M	1.8	256MB	15" UXGA	60GB ⁸ DVD/CD-RW	Open		10/100	Modem	Yes	XP Pro		No Jun 2002	
2653-N4U	Pentium 4-M	1.8	256MB	15" UXGA	60GB DVD/CD-RW	Open		10/100	Modem	Yes	Windows® 2000		No Jun 2002	
2653-N5U	Pentium 4-M	1.8	256MB	15" UXGA	60GB DVD/CD-RW	Wi-Fi ³² /mod		10/100	Bluetooth	Yes	XP Pro		No Jun 2002	
2653-N6U	Pentium 4-M	1.8	256MB	15" UXGA	60GB DVD/CD-RW	Wi-Fi/mod		10/100	Bluetooth	Yes	Windows 2000		No Jun 2002	
2653-NTU	Pentium 4-M	1.8	256MB	15" UXGA	60GB DVD/CD-RW	Wi-Fi/mod		10/100	Bluetooth	Yes	XP Pro Office XP SB ²⁸		No Jun 2002	
Positioning Processor	<i>High-performance desktop alternatives with exceptional versatility; three spindle</i>													
L2 cache	Mobile Intel® Pentium® 4 Processor-M 1.8GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus													
Memory	512KB / on die (at processor speed) / ECC													
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive													
DVD-ROM/CD-RW	Combo / 8X/8X/24X/8X ²¹ speed / bootable / removable from Ultrabay Plus													
Modular bays	Two modular bays for interchangeable devices / Ultrabay 2000 (left side) and Ultrabay Plus (right side) / Ultrabay 2000 left bay empty at ship (uses Travel Bezel)													
Disk (removable)	60GB⁸ / high-speed 5400 rpm / upgradeable / S.M.A.R.T. / supports two additional disks with optional HDD adapter in each modular bay													
Display	15.0" (381mm) UXGA-IPS (1600x1200) TFT color / Active Matrix / 400:1 contrast / FlexView display with wide viewing angle and high density using in plane switching (IPS) technology													
Graphics controller	ATI® Mobility™ FireGL™ 7800 / AGP 4X / 64MB DDR-SDRAM 183MHz / supports OpenGL technology for 3D applications													
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions													
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera													
Case material	<i>Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic</i>													
Dimensions ³	Approximately 13.0 x 10.7 x 1.8"; 329mm x 272.5mm x 45.8mm													
Approximate weight ²	with battery and optical drive: 7.7 lb (3.49kg)													
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrabay 2000													
Battery - life ¹⁰	2.0 hours / universal 72 watt AC adapter (16Vdc 4.5A)													
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (Ricoh® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)													
Port replicator	Optional ThinkPad Port Replicator													
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)													
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video													
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / IEEE 1394 / no keyboard/mouse													
Video in and out	S-video in and out ports / industry standard connectors / cable ships standard													
IEEE 1394	IEEE 1394 FireWire port													
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable													
Wi-Fi ³² /modem	<i>Some: Mini PCI Wi-Fi³² wireless⁴, Intersil® Prism 2.5 chipset, dual antennas in display cover / 56K⁶ V.90 (V.92-designed²⁹) modem combo, Lucent® chipset</i>													
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible													
Modem	<i>Some: 56K⁶ V.90 (V.92-designed²⁹) CDC modem card / Lucent® chip set</i>													
Ethernet	10/100 ethernet on CDC / Intel 82562ET chipset (physical layer)													
Bluetooth™	<i>Some: Bluetooth wireless technology / on CDC / power button on display</i>													
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack													
Security	Power-on password / hard disk password / supervisor password / security keyhole / IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶													
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service													
Service options	Service upgrades ²² provide up to three 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	Ultrabay 2000 Li-Ion battery	02K6646											
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Multiple Li-Ion/NiMH Battery Charger	02K6719											
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad 72W AC Adapter	02K6699											
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad Ultrabay Plus Carrier	22P5737											
20GB Hard Disk Drive	08K9686	ThinkPad Ultrabay Plus c500 Cradle	22P5738											
40GB Hard Disk Drive	08K9687	ThinkPad Ultrabay Plus Numeric Keypd	22P7330											
60GB HS Hard Disk 9.5mm (5400 rpm)	08K9688	ThinkPad Port Replicator	02K8667											
IBM USB Portable Diskette Drive	05K9276	ThinkPad Dock	263120U											
ThinkPad Removable Diskette Drive	08K9603	IBM USB Keyboard w/ USB Ports	10K3849											
SuperDisk (LS-240) UltraBay 2000	08K9616	IBM USB Sleek Mouse	33L3244											
Zip 250MB Ultrabay 2000 Drive	00N8253	IBM 128MB USB 2.0 Memory Key	22P8998											
8X/4X/24X Max CD-RW Ultrabay 2000	22P9101	Portable Drive Bay 2000	19K4480											
Ultralight 8X Max DVD Ultrabay 2000	22P9102	10/100 Enet /56K Mini PCI (3Com)	09N9774											
DVD/CD-RW Combo II Ultrabay 2000	08K9701	ServicePac®, ²² 2yr IOR 9x5 NBD	30L9190											
Travel Bezel for Ultrabay 2000	08K6070	ServicePac 3yr IOR 9x5 NBD	30L9197											
ThinkPad A30 Series Li-Ion Battery	02K6878	Other options at ibm.com/us/pc/accessories												
SOFTWARE¹⁴														
Windows XP Pro models														
- Microsoft® Windows® XP Professional														
◆ Disk-to-Disk Recovery (in hidden Service Partition)														
Windows 2000 models														
- Microsoft Windows 2000 Professional ¹³														
• ConfigSafe®														
◆ Disk-to-Disk Recovery (in hidden Service Partition)														
INCLUDED SOFTWARE¹⁴ (all)														
Preloaded														
• Access ThinkPad														
- Access Connections														
- Access Help														
- Access Support														
• Adobe Acrobat Reader														
• InterVideo™ Win DVD														
• MGI VideoWave 4														
• PC-Doctor™														
• ThinkPad Utilities														
• IBM Update Connector™ ¹⁵														
• Veritas RecordNOW and DLA														
Downloadable														
• IBM Rapid Restore™ PC														
• IBM Data Transfer														
• IBM Director Agent														
• Client Security Software (security chip models)														
License (CD not included)														
- Lotus® SmartSuite® Millennium and Lotus Notes® Standalone Client														
Office XP Small Business models only (Model NTU)														
- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)														
◆ Office XP Small Business CD														
Certified software														
- Visit ibm.com/pc/thinkpad/cert.html for a complete list of applications certified to run on the ThinkPad A31p														
Supported operating systems³⁵														
- Microsoft Windows XP Professional														
- Microsoft Windows 2000														
- Microsoft Windows 98 Second Edition														
- Microsoft Windows 98														
- Microsoft Windows Millennium Edition														
- Microsoft Windows NT® 4.0 SP6a														
- Red Hat Linux®														
- SuSE Linux														
PC 2001-compliant														
ACPI 1.0b and 2.0 support														
CIM and DMI 2.0-compliant														
IBM ImageUltra Services available														
IBM Rapid Restore PC available to protect software image and data														
Setup Guide, Service and Troubleshooting Guide, Windows manual														
Personalized Web-based support ³¹														
Proactive e-mail updates ³¹														
International Warranty Service ¹⁷														
24x7 toll-free support ¹⁸ for warranty-related issues during the warranty period ¹²														

See footnotes for important warranty information
US models announced June 4, 2002
US models withdrawn effective October 2002

IBM® ThinkPad® A31p (August 2002) - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Screen	Disk	Ultrapay optical	Mini PCI	CDC ethernet mod/Blue chip	CDC Security Preload	Small bus software	Workhorse or Global model	Avail date
2653-R3U	Pentium® 4-M	2.0	256MB	15" UXGA	60 or 80GB*	Combo Open		10/100 Modem	Yes	XP Pro	No	Sep 2002
2653-R4U	Pentium 4-M	2.0	256MB	15" UXGA	60 or 80GB*	Combo Open		10/100 Modem	Yes	Windows® 2000	No	Sep 2002
2653-R5U	Pentium 4-M	2.0	256MB	15" UXGA	60 or 80GB*	Combo	11b Wi-Fi ³² /mod	10/100 Bluetooth	Yes	XP Pro	No	Sep 2002
2653-R6U	Pentium 4-M	2.0	256MB	15" UXGA	60 or 80GB*	Combo	11b Wi-Fi/mod	10/100 Bluetooth	Yes	Windows 2000	No	Sep 2002
2653-R8U	Pentium® 4-M	2.0	256MB	15" UXGA	40GB	Combo Open		10/100 Modem	Yes	XP Pro	No	Mar 2003
2653-RBU	Pentium 4-M	2.0	256MB	15" UXGA	40GB	Combo Open		10/100 Modem	Yes	Windows® 2000	No	Mar 2003
2653-R9U	Pentium 4-M	2.0	256MB	15" UXGA	40GB	Combo	11b Wi-Fi ³² /mod	10/100 Bluetooth	Yes	XP Pro	No	Mar 2003
2653-RCU	Pentium 4-M	2.0	256MB	15" UXGA	40GB	Combo	11b Wi-Fi/mod	10/100 Bluetooth	Yes	Windows 2000	No	Mar 2003
2653-RTU	Pentium 4-M	2.0	256MB	15" UXGA	60 or 80GB*	Combo	11b Wi-Fi/mod	10/100 Bluetooth	Yes	XP Pro Office XP SB ²⁸	No	Sep 2002
Positioning Processor	High-performance desktop alternatives with exceptional versatility; three spindle Mobile Intel® Pentium® 4 Processor-M 2.0GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴	
L2 cache	512KB / on die (at processor speed) / ECC										Windows XP Pro models	
Memory	256MB std / 1GB max⁷ / PC2100 DDR-SDRAM / 266MHz³⁰ / non-parity / 2.5v / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available										- Microsoft® Windows® XP Professional	
Diskette drive	None standard / use optional Ultrapay™-based or USB-based diskette drive										⊕ Disk-to-Disk Recovery (in hidden Service Partition)	
Combo	DVD-ROM/CD-RW / 8X/16X/10X/24X ²¹ speed / removable from Ultrapay Plus										Windows 2000 models	
Modular bays (both 12.7mm)	Two modular bays for interchangeable devices / Ultrapay 2000 (left side) and Ultrapay Plus (right side) / Ultrapay 2000 left bay empty at ship (uses Travel Bezel)										- Microsoft Windows 2000 Professional ¹³	
Disk (removable)	40GB⁸ (9.5mm, 5400 rpm), 60GB (12.5mm, 5400rpm), or 80GB (9.5mm, 4200rpm) / upgradable and removable / 12.5mm bay / supports two additional disks with optional HDD adapter in each modular bay										• ConfigSafe®	
Display	15.0" (381mm) UXGA-IPS (1600x1200) TFT color / Active Matrix / 400:1 contrast / FlexView display with wide viewing angle and high density using IPS technology										⊕ Disk-to-Disk Recovery (in hidden Service Partition)	
Graphics controller	ATI® Mobility™ FireGL™ 7800 / AGP 4X / 64MB DDR-SDRAM 183MHz / supports OpenGL technology for 3D applications										INCLUDED SOFTWARE¹⁴ (all)	
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions										Preloaded	
Keyboard	87-key / Web navigation keys (6 total, 3 customizable) / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm										• Access ThinkPad	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										- Access Connections	
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										- Access Help	
Case material	Color: black; Top: ABS plastic; Bottom: glass-fiber reinforced plastic										- Access Support	
Dimensions ³	Approximately 13.0 x 10.7 x 1.8"; 329mm x 272.5mm x 45.8mm										• Adobe Acrobat Reader	
Approximate weight ²	with battery and optical drive: 7.7 lb (3.49kg)										• InterVideo™ Win DVD	
Battery - type	Lithium Ion 6-cell 10.8V 4.0Ah / intelligent / supports 2nd battery in Ultrapay 2000										• MGI VideoWave 4	
Battery - life ¹⁰	2.0 hours / universal 72 watt AC adapter (16Vdc 4.5A)										• PC-Doctor™	
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (Ricoh® R5C552 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)										• ThinkPad Utilities	
Port replicator	Optional ThinkPad Port Replicator or Port Replicator II										• IBM Update Connector™ ¹⁵	
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrapay 2000 and half-size PCI slot)										• Veritas RecordNow and DLA	
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door										Downloadable	
Ports	Two USB (version 1.1) / one 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / IEEE 1394 / no keyboard/mouse										• IBM Rapid Restore™ PC	
Video in and out	S-video in and out ports / industry standard connectors / cable ships standard										• Software Delivery Assistant	
IEEE 1394 (FireWire)	IEEE 1394 (FireWire) port (4-pin connector)										• System Migration Assistant	
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										• IBM Director Agent	
11b Wi-Fi ³² /mod	Some: Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Lucent® chipset										• Client Security Software (security chip models)	
CDC	Two Communications Daughter Card (CDC) sockets / customer accessible										License (CD not included)	
Modem	Some: 56K ⁶ V.90 (V.92-designed ²⁹) CDC modem card / Lucent® chip set										- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
Ethernet	10/100 ethernet on CDC / Intel82562ET chipset (physical layer) / PXE / Wake on LAN®										Office XP Small Business models only (Model RTU)	
Bluetooth™	Some: Bluetooth wireless technology / on CDC / power button on display										- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)	
Audio support	SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / mic input jack / output jack / line in jack										⊕ Office XP Small Business CD	
Security	Power-on password / hard disk password / supervisor password / security keyhole / IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										Certified software	
Limited warranty ¹²	3 years/1 year battery - EasyServ™¹⁹ onsite pickup and delivery courier service										- Visit ibm.com/pc/thinkpad/cert.html for a complete list of applications certified to run on the ThinkPad A31p	
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad A30 Series Li-Ion Battery			02K6878							
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrapay 2000 Li-Ion battery			02K6646							
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Multiple Li-Ion/NiMH Battery Charger			02K6719							
Second HDD Adapter for Ultrapay 2000	08K6068	ThinkPad Port Replicator II			74P6733							
20GB Hard Disk Drive	08K9686	ThinkPad Mini Dock			287810U							
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Dock			263120U							
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Dock II			287710U							
IBM USB Portable Diskette Drive	05K9276	IBM Optical Travel Wheel Mouse (black)			31P7410							
ThinkPad Removable Diskette Drive	08K9603	ServicePac® ²² 2yr IOR 9x5 NBD			30L9190							
Zip 250MB Ultrapay 2000 Drive	00N8253	ServicePac 3yr IOR 9x5 NBD			30L9197							
DVD/CD-RW Combo IV Ultrapay 2000	22P6991	ServicePac 4yr IOR 9x5 NBD			69P9198							
Travel Bezel for Ultrapay 2000	08K6070	ServicePac 5yr IOR 9x5 NBD			69P9200							
Portable Drive Bay 2000	19K4480	ServicePac 4yr P&L P/U Depot			69P9199							
IBM Portable USB 2.0 CD-RW Drive	2295297	ServicePac 5yr P&L P/U Depot			69P9201							
ThinkPad 72W AC Adapter	02K6699	Other options at ibm.com/us/pc/accessories										

See footnotes for important warranty information

*80GB for systems manufactured after May 2003

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US models announced on August 27, 2002 or March 12, 2003

US models withdrawn effective January 2004

IBM® ThinkPad® T20 - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	CD or DVD	Communica	Bay	Preload	Avail	
2647-21U	Pentium III	650	128MB	13.3" XGA	6.0GB ⁸	24X-10X ⁹ CD	modem		98SE	May 00	WINDOWS 98 PRELOAD¹⁴ - Microsoft® Windows® 98 Second Edition ¹³ • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™ ¹⁵ • Access ThinkPad II • PC-Doctor™ • Mediamatics DVD Express (if DVD) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license ✦ Software Selections CD-ROM ✦ Recovery CD-ROM (Windows 98 SE) ✦ Recovery CD-ROM (Windows 95) WINDOWS 2000 PRELOAD¹⁴ - Windows 2000 Professional ¹³ • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe • IBM Update Connector • Access ThinkPad II • PC-Doctor • Mediamatics DVD Express (if DVD) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license ✦ Software Selections CD-ROM ✦ Recovery CD-ROM (Windows 2000) ✦ Recovery CD-ROM (Windows NT) LINUX PRELOAD¹⁴ - Caldera® OpenLinux eDesktop™ 2.4 • Access ThinkPad II • StarOffice • Netscape Communicator ✦ OpenLinux eDesktop CD-ROM ✦ Recovery CD-ROM The right bay (Ultrabay 2000) supports the following: • optional CD-ROM • optional DVD drive • optional Zip drive • optional second battery • optional SuperDisk (LS-120) drive • optional CD-RW • optional HDD adapter; for second disk • optional travel bezel • optional ThinkPad Proven™ solutions ¹⁶ PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM PC Lifecycle Care provides proactive life cycle management and transition planning tools ENERGY STAR compliant Setup Guide, User's Reference, Windows manual Asset ID™ wireless RF technology (via installing into disk cover) IBM is planning to announce Bluetooth™ wireless technology communications devices including a Bluetooth PC Card option and Bluetooth option for the ThinkPad UltraPort connector in the second half of 2000 Personalized Web-based support International Warranty Service ¹⁷ IBM SystemXtra® ²⁰ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty
2647-24U	Pentium III	650	128MB	13.3" XGA	6.0GB	24X-10X CD	Intel® eth/mod		98SE	May 00	
2647-61U	Pentium III	650	128MB	13.3" XGA	6.0GB	24X-10X CD	modem		2000	May 00	
2647-64U	Pentium III	650	128MB	13.3" XGA	6.0GB	24X-10X CD	Intel eth/mod		2000	May 00	
2647-41U	Pentium III	700	128MB	14.1" XGA	12.0GB	6X-2.3X ⁹ DVD	modem		98SE	May 00	
2647-44U	Pentium III	700	128MB	14.1" XGA	12.0GB	6X-2.3X DVD	Intel eth/mod		98SE	May 00	
2647-81U	Pentium III	700	128MB	14.1" XGA	12.0GB	6X-2.3X DVD	modem		2000	May 00	
2647-84U	Pentium III	700	128MB	14.1" XGA	12.0GB	6X-2.3X DVD	Intel eth/mod		2000	May 00	
2647-52U	Pentium III	750	128MB	14.1" XGA	20.0GB	6X-2.3X DVD	modem		98SE	Jun 00	
2647-55U	Pentium III	750	128MB	14.1" XGA	20.0GB	6X-2.3X DVD	Intel eth/mod		98SE	Jun 00	
2647-92U	Pentium III	750	128MB	14.1" XGA	20.0GB	6X-2.3X DVD	modem		2000	Jun 00	
2647-95U	Pentium III	750	128MB	14.1" XGA	20.0GB	6X-2.3X DVD	Intel eth/mod		2000	Jun 00	
2647-L1U*	Pentium III	750	128MB	14.1" XGA	20.0GB	24X-10X CD	modem		Linux®	July 00	
2647-46U	Pentium III	700	128MB	14.1" XGA	12.0GB	6X-2.3X DVD	3Com® eth/mo		98SE	July 00	
2647-86U	Pentium III	700	128MB	14.1" XGA	12.0GB	6X-2.3X DVD	3Com eth/mod		2000	July 00	
Processor	Intel® Mobile Pentium® III 650, 700, or 750MHz^{1,24} with Intel SpeedStep™ technology and 100MHz system bus										
L2 cache	256KB / onboard (at processor speed) / ECC										
Memory	128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available										
Diskette drive	3.5" 1.44MB (use in Ultrabay 2000 or attach externally with optional cable via parallel port)										
CD-ROM	<i>Some:</i> CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000										
DVD-ROM	<i>Some:</i> DVD-ROM / 6X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000										
Ultrabay 2000	Modular bay for interchangeable devices / on all A and T Series, ThinkPad Dock										
Disk	6GB⁸ or 12GB or 20GB / upgradeable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										
Display	13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix										
Graphics controller	S ³ ® Savage IX8 / AGP 2X / 8MB SGRAM / 64-bit path to memory										
Graphics - external	External SVGA to 1024x768x16.7 million colors at 85Hz and up to 1600x1200										
Keyboard	ThinkPad Button / palm rest / TrackPoint®, Press-to-Select, Internet Scroll Bar										
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™	UltraPort connector on top of display for options such as digital Ultraport Camera										
Dimensions ³	12" x 9.8" x 1.3"; 304mm x 250mm x 33.1mm										
Approximate weight ²	With CD-ROM drive and battery: 5.0 lbs / with DVD drive and battery: 5.3 lb										
Case material	Titanium Composite in the top and bottom covers for enhanced strength ⁴										
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										
Battery - life ¹⁰	4 hours (3.75 hours for Pentium III 750MHz models)										
Charge time ¹⁰ - on / off	6.0 hrs / 2.5 hrs										
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)										
Port replicator	ThinkPad Port Replicator										
Docking Station	ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video										
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)										
Other features	72 watt AC Adapter										
Video out	S-video out / one industry standard connector / full MPEG-2 support / optional cable for S-video to composite conversion available										
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible										
Modem	<i>Some models:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set										
Ethernet/modem	<i>Some models:</i> IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel or 3Com ethernet chipset / Lucent modem chip set										
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack										
Security	Power-on password / hard disk password / supervisor password / security keyhole										
Limited warranty ¹²	3 year - carry-in or ThinkPad EasyServ™ ¹⁹ depot repair service via courier										
Service options	Optional service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										
Communication Bay						- 64MB SO DIMM 100MHz NP SDRAM	20L0254				
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem by 3Com	09N9774					- 128MB SO DIMM 100MHz NP SDRAM	20L0255				
- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	08K3124					- 256MB SO DIMM 100MHz NP SDRAM	33L3069				
Ultrabay 2000 interchangeable accessories						- 6.0GB HDD	05K9237				
- 6X-2X DVD Ultrabay 2000 Drive	05K9232					- 12.0GB HDD	05K9238				
- SuperDisk (LS-120) Ultrabay 2000 Drive	05K9236					- 18.0GB HDD	05K9239				
- 24X-10X CD-ROM Ultrabay 2000 Drive	05K9233					- 20GB HDD	27L3439				
- 4X/4X/20X CD-Read/Write Ultrabay 2000	00N8252					- Second HDD Adapter for Ultrabay 2000	08K6068				
- Zip 250MB Ultrabay 2000 Drive	00N8253					- Portable Drive Bay 2000	19K4480				
- Ultrabay 2000 Li-Ion battery	02K6646					- ThinkPad Port Replicator (A and T Ser)	02K8667				
- Travel Bezel for Ultrabay 2000	08K6070					- ThinkPad Dock (A and T Series)	263110U				
Wireless connectivity						- ThinkPad T Series Battery	02K6649				
- IBM 802.11b Wireless LAN PC Card	09N9863					- ThinkPad 72W AC Adapter	02K6699				
- IBM 802.11b Wireless LAN Access Point	09N9865					- ThinkPad Monitor Stand	00N8222				
						- IBM Ultraport Camera II	04P6135				
						- RCA video conversion cable	27L0530				
						- Asset ID RF Adapter	08K6064				
						- T Series FDD External Cable Kit	27L0524				

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* Linux preloaded model does not support most options and has other limitations²⁵

Models withdrawn from marketing effective February 2001

No warranties are expressed or implied in this summary
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IBM® ThinkPad® T21 - withdrawn

Type-model	Processor	MHz	Mem	Screen	Disk	CD or DVD	Communica	Bay	Preload	Avail	
2647-27U	Pentium III	750	128MB	13.3" XGA	10GB ⁸	24X-10X ⁹ CD	modem		98SE	Oct 00	- Microsoft® Windows® 98 Second Edition ¹³
2647-2BU	Pentium III	750	128MB	13.3" XGA	10GB	24X-10X CD	3Com [®] eth/mod		98SE	Oct 00	• ThinkPad Utilities
2647-67U	Pentium III	750	128MB	13.3" XGA	10GB	24X-10X CD	modem		2000	Oct 00	• ThinkPad Assistant™
2647-6BU	Pentium III	750	128MB	13.3" XGA	10GB	24X-10X CD	3Com eth/mod		2000	Oct 00	• ConfigSafe [®]
2647-47U	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X ⁹ DVD	modem		98SE	Oct 00	• IBM Update Connector™.15
2647-4AU	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	Intel [®] eth/mod		98SE	Oct 00	• Access ThinkPad II
2647-4BU	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	3Com eth/mod		98SE	Oct 00	• PC-Doctor™
2647-87U	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	modem		2000	Oct 00	• Mediamatics DVD Express (if DVD)
2647-8AU	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	Intel eth/mod		2000	Oct 00	- Lotus® SmartSuite® Millennium and Lotus Notes Client 5.0 license
2647-8BU	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	3Com eth/mod		2000	Oct 00	• Software Selections CD-ROM
2647-L7U*	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	modem		Linux [®]	Oct 00	• Recovery CD-ROM (Win 98 SE)
2647-57U	Pentium III	850	128MB	14.1" SXGA+	32GB	8X-2.3X DVD	modem		98SE	Oct 00	
2647-5BU	Pentium III	850	128MB	14.1" SXGA+	32GB	8X-2.3X DVD	3Com eth/mod		98SE	Oct 00	
2647-97U	Pentium III	850	128MB	14.1" SXGA+	32GB	8X-2.3X DVD	modem		2000	Oct 00	
2647-9BU	Pentium III	850	128MB	14.1" SXGA+	32GB	8X-2.3X DVD	3Com eth/mod		2000	Oct 00	
Processor Intel [®] Mobile Pentium [®] III 750, 800, or 850MHz ^{1,24} with Intel SpeedStep™ technology and 100MHz system bus L2 cache 256KB / onboard (at processor speed) / ECC Memory 128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available Diskette drive 3.5" 1.44MB (use in UltraBay 2000 or attach ext with optional cable via parallel port) CD-ROM Some: CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000 DVD-ROM Some: DVD-ROM / 8X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000 UltraBay 2000 Modular bay for interchangeable devices / on all A and T Series, ThinkPad Dock Disk 10GB ⁸ or 20GB (4200 rpm) or 32GB (High speed 5400rpm) / upgradeable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000 Display 13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix Graphics controller Others: S3 [®] Savage IX8 / AGP 2X / 8MB SGRAM / 64-bit path to memory 5xx/9xx: S3 Savage IX8+ / AGP 2X / 8MB SGRAM / 64-bit path to memory Graphics - external External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200 Keyboard ThinkPad Button / palm rest / TrackPoint™, Press-to-Select, Internet Scroll Bar ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions UltraPort™ UltraPort connector on top of display for options such as digital UltraPort Camera Dimensions³ 12" x 9.8" x 1.3"; 304mm x 250mm x 33.1mm Approximate weight² with CD or DVD drive and battery: 750MHz: 5.2 lb; 800MHz: 5.3 lb; 850MHz: 5.5 lb Case material Titanium Composite in the top and bottom covers for enhanced strength ⁴ Battery - type Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 Battery - life¹⁰ 750MHz: 3.7hr; 800MHz: 3.5hr; 850MHz: 3.2hr Architecture Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI [®] PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp) Port replicator Optional ThinkPad Port Replicator Docking Station Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) PC Card Std slots 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video Ports USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) Other features 72 watt AC Adapter Video out S-video out / one industry standard connector / full MPEG-2 support / optional cable for S-video to composite conversion available Communicatns Bay Communications Bay with Mini PCI IIIB slot / customer accessible Modem Some models: 56K ⁶ V.90 Mini PCI modem card / Lucent [®] chip set Ethernet/modem Some models: IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem (3Com ethernet chipset / 3Com modem chip set) Some models: IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set Audio support PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack Security Power-on password / hard disk password / supervisor password / security keyhole Limited warranty¹² 3 year - EasyServ™.19 onsite pickup and delivery courier service Ultrabay 2000 interchangeable accessories - 8X-2X DVD Ultrabay 2000 Drive 27L3448 - 2X SuperDisk (LS-120) Ultrabay 2000 27L3451 - 24X-10X CD-ROM Ultrabay 2000 Drive 05K9233 - 4X/4X/20X CD-Read/Write Ultrabay 2000 00N8252 - Zip 250MB Ultrabay 2000 Drive 00N8253 - Ultrabay 2000 Li-Ion battery 02K6646 - Travel Bezel for Ultrabay 2000 08K6070 Wireless connectivity - IBM 802.11b Wireless LAN PC Card 09N9863 - IBM 802.11b Wireless LAN Access Point 9085NA2 - Bluetooth™ PC Card (avail 4Q 2000) 09N9812 Other - IBM IEEE 1394 CardBus Card 19K5679 - IBM 1GB Microdrive 07N5574 - T Series FDD External Cable Kit 27L0524 - 64MB SO DIMM 100MHz NP SDRAM 20L0254 - 128MB SO DIMM 100MHz NP SDRAM 20L0255 - 256MB SO DIMM 100MHz NP SDRAM 33L3069 - 10GB HDD 08K9510 - 20GB HDD 27L3439 - 32GB HDD 08K9511 - Second HDD Adapter for Ultrabay 2000 08K6068 - Portable Drive Bay 2000 19K4480 (accepts all Ultrabay 2000 storage devices) - ThinkPad Port Replicator (A and T Ser) 02K8667 - ThinkPad Dock (A and T Series) 263110U - ThinkPad T Series Battery 02K6649 - Multiple Li-Ion/NiMH Battery Charger 02K6719 - ThinkPad 72W AC Adapter 02K6699 - ThinkPad Monitor Stand 00N8222 - IBM Ultrabay Camera II 04P6135 - RCA video conversion cable 27L0530 - Asset ID RF Adapter 08K6064 WINDOWS 98 PRELOAD¹⁴ - Windows 2000 Professional ¹³ • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe • IBM Update Connector • Access ThinkPad II • PC-Doctor • Mediamatics DVD Express (if DVD) - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license • Software Selections CD-ROM • Recovery CD-ROM (Windows 2000) • Recovery CD-ROM (Windows NT) LINUX PRELOAD¹⁴ - Caldera [®] OpenLinux™ eDesktop 2.4 • Access ThinkPad II • StarOffice • Netscape Communicator • OpenLinux eDesktop CD-ROM • Recovery CD-ROM The right bay (Ultrabay 2000) supports the following: • optional or standard CD-ROM • optional or standard DVD drive • optional Zip drive • optional second battery • optional SuperDisk (LS-120) drive • optional CD-RW • optional HDD adapter; for second disk • optional travel bezel • optional ThinkPad Proven™ solutions ¹⁶ Service options: Optional service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period) PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM PC Lifecycle Care ²¹ provides proactive life cycle management and transition planning tools ENERGY STAR compliant Setup Guide, User's Reference, Windows manual Asset ID™ wireless RF technology (via installing into disk cover) Personalized Web-based support International Warranty Service ¹⁷ IBM SystemXtra ^{®20} 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty Communication Bay Options - IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem by 3Com 09N9774 - IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem 08K3124											

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* Linux preloaded model does not support most options and has other limitations²⁵

Models withdrawn effective April 2001, July 2001, or September 2001

No warranties are expressed or implied in this summary

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Type-model	Processor	MHz	Memory	Screen	Disk	CD or DVD	Communications Bay	Preload	Available
2647-2AU	Pentium III	750	128MB	13.3" XGA	10GB ⁸	24X-10X ⁹ CD	Intel® ethernet/modem	Windows® 98 SE	Nov 2000
2647-6AU	Pentium III	750	128MB	13.3" XGA	10GB	24X-10X CD	Intel ethernet/modem	Windows 2000	Nov 2000
2647-DAU	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X ⁹ DVD	Intel ethernet/modem	Windows 98 SE, Small Business	Mar 2001
2647-48U	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	modem	Windows 98 SE, Small Business	Mar 2001
2647-EAU	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	Intel ethernet/modem	Windows 2000, Small Business	Mar 2001
2647-88U	Pentium III	800	128MB	14.1" XGA	20GB	8X-2.3X DVD	modem	Windows 2000, Small Business	Mar 2001
2647-5AU	Pentium III	850	128MB	14.1" SXGA+	32GB	8X-2.3X DVD	Intel ethernet/modem	Windows 98 SE	Nov 2000
2647-9AU	Pentium III	850	128MB	14.1" SXGA+	32GB	8X-2.3X DVD	Intel ethernet/modem	Windows 2000	Nov 2000
Processor Intel® Mobile Pentium® III 750, 800, or 850MHz¹ with Intel SpeedStep™ technology and 100MHz system bus 256KB / onboard (at processor speed) / ECC 128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available								WINDOWS 98 PRELOAD¹⁴ - Microsoft® Windows® 98 Second Edition ¹³ - <i>Some models:</i> Office 2000 Small Business (Word, Excel, Outlook, Publisher, Small Business Tools) preloaded and CD-ROM • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™ ¹⁵ • Access ThinkPad II • PC-Doctor™ • Mediamatics DVD Express (if DVD) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license ♦ Software Selections CD-ROM ♦ Recovery CD-ROM (Win 98 SE)	
L2 cache Memory 3.5" 1.44MB (use in UltraBay 2000 or attach ext with optional cable via parallel port) CD-ROM <i>Some:</i> CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000 DVD-ROM <i>Some:</i> DVD-ROM / 8X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000 UltraBay 2000 Modular bay for interchangeable devices / on all A and T Series, ThinkPad Dock Disk 10GB⁸, 20GB (4200 rpm) or 32GB (High speed 5400rpm) / upgradeable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000								• ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™ ¹⁵ • Access ThinkPad II • PC-Doctor™ • Mediamatics DVD Express (if DVD) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license ♦ Software Selections CD-ROM ♦ Recovery CD-ROM (Win 98 SE)	
Display 13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix								WINDOWS 2000 PRELOAD¹⁴ - Windows 2000 Professional ¹³ - <i>Some models:</i> Office 2000 Small Business preloaded and CD-ROM • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe • IBM Update Connector • Access ThinkPad II • PC-Doctor • Mediamatics DVD Express (if DVD) - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license ♦ Software Selections CD-ROM ♦ Recovery CD-ROM (Windows 2000 and Windows NT)	
Graphics controller <i>750/800MHz:</i> S3® Savage IX8 / AGP 2X / 8MB SGRAM / 64-bit path to memory <i>Others:</i> S3 Savage IX8+ / AGP 2X / 8MB SGRAM / 64-bit path to memory Graphics - external External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200								♦ Recovery CD-ROM (Win 98 SE)	
Keyboard ThinkLight™ UltraPort™ ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar Illuminates the keyboard to improve visibility in low-light conditions UltraPort connector on top of display for options such as digital UltraPort Camera								WINDOWS 2000 PRELOAD¹⁴ - Windows 2000 Professional ¹³ - <i>Some models:</i> Office 2000 Small Business preloaded and CD-ROM • ThinkPad Utilities • ThinkPad Assistant • ConfigSafe • IBM Update Connector • Access ThinkPad II • PC-Doctor • Mediamatics DVD Express (if DVD) - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license ♦ Software Selections CD-ROM ♦ Recovery CD-ROM (Windows 2000 and Windows NT)	
Dimensions³ Approximate weight² Case material Battery - type Battery - life¹⁰ Architecture Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)								• ThinkPad Utilities • ThinkPad Assistant • ConfigSafe • IBM Update Connector • Access ThinkPad II • PC-Doctor • Mediamatics DVD Express (if DVD) - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license ♦ Software Selections CD-ROM ♦ Recovery CD-ROM (Windows 2000 and Windows NT)	
Port replicator Docking Station PC Card Std slots Ports Other features Video out Communications Bay Modem Ethernet/modem Audio support Security Limited warranty*¹² Service options								Optional ThinkPad Port Replicator Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) 72 watt AC Adapter S-video out / one industry standard connector / full MPEG-2 support / optional cable for S-video to composite conversion available Communications Bay with Mini PCI III slot / customer accessible <i>Some models:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set <i>Some models:</i> IBM 10/100 EtherJet™ Mini PCI Adapter with 56K ⁶ Modem / Intel ethernet chipset / Lucent modem chip set PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack Power-on password / hard disk password / supervisor password / security keyhole 3 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service Optional service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)	
UltraBay 2000 interchangeable accessories - 8X-2X DVD Ultrabay 2000 Drive 27L3448 - 2X SuperDisk (LS-120) Ultrabay 2000 27L3451 - 24X-10X CD-ROM Ultrabay 2000 Drive 05K9233 - 4X/4X/20X CD-Read/Write Ultrabay 2000 00N8252 - Zip 250MB Ultrabay 2000 Drive 00N8253 - Ultrabay 2000 Li-Ion battery 02K6646 - Travel Bezel for Ultrabay 2000 08K6070 Wireless connectivity - IBM 802.11b Wireless LAN PC Card 09N9863 - IBM 802.11b Wireless LAN Access Point 9085NA2 - Bluetooth™ PC Card (avail 4Q 2000) 09N9812 Other - IBM IEEE 1394 CardBus Card 19K5679 - IBM 1GB Microdrive™ 07N5574 - T Series FDD External Cable Kit 27L0524								The right bay (Ultrabay 2000) supports the following: • optional or standard CD-ROM • optional or standard DVD drive • optional Zip drive • optional second battery • optional SuperDisk (LS-120) drive • optional CD-RW • optional HDD adapter; for 2nd disk • optional travel bezel • opt ThinkPad Proven™ solutions ¹⁶	
- 64MB SO DIMM 100MHz NP SDRAM 20L0254 - 128MB SO DIMM 100MHz NP SDRAM 20L0255 - 256MB SO DIMM 100MHz NP SDRAM 33L3069 - 10GB HDD 08K9510 - 20GB HDD 27L3439 - 32GB HDD 08K9511 - Second HDD Adapter for Ultrabay 2000 08K6068 - Portable Drive Bay 2000 19K4480 (accepts all Ultrabay 2000 storage devices) - ThinkPad Port Replicator (A and T Ser) 02K8667 - ThinkPad Dock (A and T Series) 263110U - ThinkPad T Series Battery 02K6649 - Multiple Li-Ion/NiMH Battery Charger 02K6719 - ThinkPad 72W AC Adapter 02K6699 - ThinkPad Monitor Stand 00N8222 - IBM UltraPort Camera II 04P6135 - RCA video conversion cable 27L0530 - Asset ID RF Adapter 08K6064								PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM ImageUltra Services available IBM Rapid Restore PC available to protect software image and data Setup Guide, User's Reference, Windows manual Asset ID™ wireless RF technology (via installing into disk cover) Personalized Web-based support International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty	
Communication Bay Options - IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem 09N9774 - IBM 10/100 EtherJet Mini PCI Adapter w/ 56K Modem 08K3124								- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem 09N9774 - IBM 10/100 EtherJet Mini PCI Adapter w/ 56K Modem 08K3124	

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
 US models announced November 2001 or March 1, 2001
 US models withdrawn effective July 2001 or April 2002

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Type-model	Processor	MHz	Mem	Screen	Disk	Optical	Comm Bay	Preload	Available	OPERATING SYSTEM PRELOAD ^{14,27}
2647-3CU	Pentium III	800	128M	13.3" XGA	10G ⁸	CD-ROM	modem	98 SE	Mar 2001	Windows 98 models - Microsoft® Windows® 98 Second Edition ¹³ ↙ Disk-to-Disk Recovery (in hidden Service Partition) Windows 2000 models - Windows 2000 Professional - PC Card Wizard ↙ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition) Linux models - Caldera® OpenLinux™ eDesktop 2.4 • StarOffice™ • Netscape® Communicator ↙ OpenLinux eDesktop CD-ROM ↙ Recovery CD-ROM ADDITIONAL PRELOADED SOFTWARE Common to all models • ThinkPad Assistant™ • Access ThinkPad II Common to most Windows models • ThinkPad Utilities • ConfigSafe® • IBM Update Connector™ ¹⁵ • Easy Keys Utility • PC-Doctor™ • Mediamatics™ DVD (models with DVD-ROM) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 license
2647-7CU	Pentium III	800	128M	13.3" XGA	10G	CD-ROM	modem	2000	Mar 2001	
2647-3EU	Pentium III	800	128M	13.3" XGA	10G	CD-ROM	Intel® eth/mod	98 SE	Mar 2001	
2647-7EU	Pentium III	800	128M	13.3" XGA	10G	CD-ROM	Intel eth/modem	2000	Mar 2001	
2647-4CU	Pentium III	900	128M	14.1" XGA	20G	DVD-ROM	modem	98 SE	Mar 2001	
2647-8CU	Pentium III	900	128M	14.1" XGA	20G	DVD-ROM	modem	2000	Mar 2001	
2647-4EU	Pentium III	900	128M	14.1" XGA	20G	DVD-ROM	Intel eth/modem	98 SE	Mar 2001	
2647-8EU	Pentium III	900	128M	14.1" XGA	20G	DVD-ROM	Intel eth/modem	2000	Mar 2001	
2647-4GU	Pentium III	900	128M	14.1" XGA	20G	DVD-ROM	3Com® eth/mod	98 SE	Mar 2001	
2647-8GU	Pentium III	900	128M	14.1" XGA	20G	DVD-ROM	3Com eth/mod	2000	Mar 2001	
2647-LCU**	Pentium III	900	128M	14.1" XGA	20G	DVD-ROM	modem	Linux®	Mar 2001	
2647-5CU	Pentium III	1GHz	128M	14.1" SXGA+	32G	DVD-ROM	modem	98 SE	Mar 2001	
2647-9CU	Pentium III	1GHz	128M	14.1" SXGA+	32G	DVD-ROM	modem	2000	Mar 2001	
2647-5EU	Pentium III	1GHz	128M	14.1" SXGA+	32G	DVD-ROM	Intel eth/modem	98 SE	Mar 2001	
2647-9EU	Pentium III	1GHz	128M	14.1" SXGA+	32G	DVD-ROM	Intel eth/modem	2000	Mar 2001	
2647-6CU	Pentium III	900	128M	14.1" SXGA+	32G	DVD-ROM	modem	98 SE	May 2001	
2647-ECU	Pentium III	900	128M	14.1" SXGA+	32G	DVD-ROM	modem	2000	May 2001	
2647-6EU	Pentium III	900	128M	14.1" SXGA+	32G	DVD-ROM	Intel eth/modem	98 SE	May 2001	
2647-AEU	Pentium III	900	128M	14.1" SXGA+	32G	DVD-ROM	Intel eth/modem	2000	May 2001	
Processor	Intel® Mobile Pentium® III 800, 900MHz^{1,24} or 1GHz¹ with Intel SpeedStep™ technology and 100MHz system bus									
L2 cache	256KB / onboard (at processor speed) / ECC									
Memory	128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available									
Diskette drive	3.5" 1.44MB (use in UltraBay 2000 or attach ext with optional cable via parallel port)									
CD-ROM	<i>Some:</i> CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000									
DVD-ROM	<i>Some:</i> DVD-ROM / 8X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000									
UltraBay 2000	Modular bay for interchangeable devices									
Disk	10GB⁸ or 20GB (4200 rpm) or 32GB (High speed 5400rpm) / upgradeable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000									
Display	13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix									
Graphics controller	S3 Savage IX8+ / AGP 2X / 8MB SGRAM / 64-bit path to memory									
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200									
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar / pitch: 19mm; stroke: 2.7mm									
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions									
UltraPort™	UltraPort connector on top of display for options such as digital Ultraport Camera									
Dimensions ³	12" x 9.8" x 1.3" / 304mm x 250mm x 33.1mm									
Approximate weight ²	with CD or DVD drive and battery: 800MHz: 5.2 lb; 900MHz: 5.3 lb; 1GHz: 5.6 lb									
Case material	Titanium Composite in the top and bottom covers for enhanced strength ⁴									
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000									
Battery - life ¹⁰	800MHz: 3.5hr; 900MHz/1GHz: 3.2hr									
AC adapter	Universal 72 watt / 16VDC 4.5A									
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)									
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)									
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed Video									
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)									
Video out	S-video out / one industry standard connector / full MPEG-2 support / optional cable for S-video to composite conversion available									
Communicatns Bay	Communications Bay with Mini PCI IIIb slot / customer accessible									
Modem	<i>Some:</i> 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set									
Ethernet/modem	<i>Some:</i> IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem (3Com ethernet chipset / 3Com modem chip set) <i>Some:</i> Intel PRO/100 SP Mini PCI Adapter / Mini PCI ethernet with 56K modem / Intel 82550EY ethernet chipset / Lucent modem chipset									
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack									
Security	Power-on password / hard disk password / supervisor password / security keyhole									
Limited warranty ^{*,12}	3 year - EasyServ™¹⁹ onsite pickup and delivery courier service									
64MB SO DIMM	100MHz NP SDRAM	20L0254	ThinkPad T Series Battery	02K6649						
128MB SO DIMM	100MHz NP SDRAM	20L0255	Ultrabay 2000 Li-Ion battery	02K6646						
256MB SO DIMM	100MHz NP SDRAM	33L3069	ThinkPad 72W AC Adapter	02K6699						
SuperDisk (LS-240)	Ultrabay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719						
Zip 250MB	Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667						
24X-10X CD-ROM	Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U						
8X/4X/24X CD-RW	Ultrabay 2000	08K9569	ThinkPad Monitor Stand 2001	22P5265						
8X-2X DVD	Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000	19K4480						
CD-RW/DVD Combo	Ultrabay 2000	08K9572	UltraPort Camera	04P6135						
Travel Bezel for Ultrabay 2000		08K6070	UltraPort Digital Array Microphone	09N4178						
Second HDD Adapter for Ultrabay 2000		08K6068	T Series FDD External Cable Kit	27L0524						
15GB HDD		08K9588	10/100 Enet/56K Mini PCI (3Com)	09N9774						
30GB HDD		08K9593	Intel Pro/100 SP Mini PCI	06P3801						
32GB HDD		08K9511	ServicePro®, ²² 3yr IOR 9x5 NBD	30L9197						
Service options: Optional service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227

** Linux preloaded model does not support most options and has other limitations²⁵

US models withdrawn effective July 2001 or November 2001 or April 2002

No warranties are expressed or implied in this summary

Type-model	Processor	MHz	Memory	Screen	Disk	Optical	Modular Bay	Comm Bay	Preload	Available
2647-M2U	Pentium III	900	128MB	14.1" XGA	20GB ⁸	DVD-ROM	Ultrabay 2000	Modem	Windows® 98 SE, SB	Mar 2001
2647-M3U	Pentium III	900	128MB	14.1" XGA	20GB	DVD-ROM	Ultrabay 2000	Modem	Windows 2000, SB	Mar 2001
2647-M4U	Pentium III	900	128MB	14.1" XGA	20GB	DVD-ROM	Ultrabay 2000	Intel® ethernet/mod	Windows 98 SE, SB	Mar 2001
2647-M5U	Pentium III	900	128MB	14.1" XGA	20GB	DVD-ROM	Ultrabay 2000	Intel ethernet/mod	Windows 2000, SB	Mar 2001
2647-M6U	Pentium III	1GHz	128MB	14.1" SXGA+	32GB	DVD-ROM	Ultrabay 2000	Intel ethernet/mod	Windows 2000, SB	Mar 2001
2647-N5U	Pentium III	900	128MB	14.1" XGA	20GB	DVD-ROM	Ultrabay 2000	Intel ethernet/mod	Windows 2000, XP	Aug 2001
2647-N6U	Pentium III	1GHz	128MB	14.1" SXGA+	32GB	DVD-ROM	Ultrabay 2000	Intel ethernet/mod	Windows 2000, XP	Aug 2001

Positioning Processor	<i>Perfect balance of performance and portability</i> Intel® Mobile Pentium® III 900MHz^{1,24} or 1GHz¹ with Intel SpeedStep™ technology and 100MHz system bus	OPERATING SYSTEM PRELOAD^{14, 27} Windows 98 models - Microsoft® Windows® 98 Second Edition ¹³ ↳ Disk-to-Disk Recovery (in hiddenService Partition) Windows 2000 models - Windows 2000 Professional ↳ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition)
L2 cache Memory	256KB / onboard (at processor speed) / ECC 128MB standard / 512MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / 1 socket available	
Diskette drive	3.5" 1.44MB (use in UltraBay 2000 or attach ext with optional cable via parallel port)	ADDITIONAL PRELOADED SOFTWARE Office 2000 SB models (SB) - Microsoft Office 2000 Small Business ↳ Office 2000 Small Business CD Office XP SB models (XP) - Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ↳ Office XP Small Business CD
CD-ROM	<i>Some:</i> CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000	
DVD-ROM	<i>Some:</i> DVD-ROM / 8X-2.3X ⁹ speed / bootable / removable from Ultrabay 2000	Common to all models • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™.15 • Easy Keys Utility • Access ThinkPad II • PC-Doctor™ • Mediamatics™ DVD (DVD models) - License for Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0
UltraBay 2000	Modular bay for interchangeable devices / on all A and T Series, ThinkPad Dock	
Disk	20GB⁸ (4200 rpm) or 32GB (High speed 5400 rpm) / upgradeable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000	The right bay (Ultrabay 2000) supports: • optional or standard CD-ROM • optional or standard DVD drive • optional Zip drive • optional second battery • optional SuperDisk (LS-120) drive • optional CD-RW • optional CD-RW/DVD combo • optional HDD adapter (for 2nd disk) • optional travel bezel • opt ThinkPad Proven™ solutions ¹⁶
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix	
Graphics controller	S3 Savage IX8+ / AGP 2X / 8MB SGRAM / 64-bit path to memory	<ul style="list-style-type: none"> • ThinkPad Utilities • ThinkPad Assistant™ • ConfigSafe® • IBM Update Connector™.15 • Easy Keys Utility • Access ThinkPad II • PC-Doctor™ • Mediamatics™ DVD (DVD models)
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200	
Keyboard	Pitch: 19mm / stroke: 2.7mm / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar	<ul style="list-style-type: none"> • License for Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
UltraPort™	UltraPort connector on top of display for options such as digital Ultraport Camera	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Dimensions ³	12" x 9.8" x 1.3"; 304mm x 250mm x 33.1mm	
Approximate weight ²	with CD or DVD drive and battery: <i>900MHz</i> : 5.3 lb; <i>1GHz</i> : 5.6 lb	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Case material	Titanium Composite in the top and bottom covers for enhanced strength ⁴	
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Battery - life ¹⁰	3.2hr	
Architecture	Intel 440BX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / TI® PCI1450 for CardBus / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp)	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Port replicator	Optional ThinkPad Port Replicator	
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1	
Ports	USB: One (Version 1.1) / Serial: one 9 pin / Parallel: one / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Other features	72 watt AC Adapter	
Video out	S-video out / one industry standard connector / full MPEG-2 support / optional cable for S-video to composite conversion available	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Communicatns Bay	Communications Bay with Mini PCI IIIB slot / customer accessible	
Modem	<i>Some models:</i> 56K ⁹ V.90 Mini PCI modem card / Lucent® chip set	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Ethernet/modem	<i>Some models:</i> Intel PRO/100 SP Mobile Combo Adapter / Mini PCI ethernet with 56K modem / Intel 82550EY ethernet chipset / Lucent modem chipset	
Audio support	PCI audio / SoundBlaster Pro™ support / CS4624 with CS4297A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Security	Power-on password / hard disk password / supervisor password / security keyhole	
Limited warranty ^{*, 12}	3 year - EasyServ™.19 onsite pickup and delivery courier service	<ul style="list-style-type: none"> • opt ThinkPad Proven™ solutions¹⁶
Service options	Optional service upgrades ²² provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period) / visit ibm.com/services/its/us/spwarmain.html or call your authorized reseller	

64MB SO DIMM 100MHz NP SDRAM	20L0254	ThinkPad T Series Li-Ion Battery	02K6649	PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM ImageUltra Services available IBM Rapid Restore PC available to protect software image and data Asset ID™ wireless RF technology (via installing into disk cover) Personalized Web-based support International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty
128MB SO DIMM 100MHz NP SDRAM	20L0255	Ultrabay 2000 Li-Ion battery	02K6646	
256MB SO DIMM 100MHz NP SDRAM	33L3069	ThinkPad 72W AC Adapter	02K6699	
SuperDisk (LS-240) UltraBay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719	
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667	
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U	
8X/4X/24X CD-RW Ultrabay 2000	08K9569	ThinkPad Monitor Stand 2001	22P5265	
8X-2X DVD Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000	19K4480	
CD-RW/DVD Combo Ultrabay 2000	08K9572	UltraPort Camera II	04P6135	
Travel Bezel for Ultrabay 2000	08K6070	IBM Ultraport Compact Flash Reader	19K4510	
Second HDD Adapter for Ultrabay 2000	08K6068	UltraPort Digital Array Microphone	09N4178	
15GB HDD	08K9588	RCA video conversion cable	27L0530	
30GB HDD	08K9593	Asset ID RF Adapter	08K6064	
32GB HDD	08K9511	IBM IEEE 1394 CardBus Card	19K5679	
48GB HDD (5400 rpm)	08K9600	10/100 Enet /56K Mini PCI (3Com)	09N9774	
T Series FDD External Cable Kit	27L0524	Intel Pro/100 SP Mini PCI	06P3801	
IBM 1GB Microdrive™	07N5574	ServicePac® 3yr IOR 9x5 NBD	30L9197	

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
 US models announced March 2001 or July 31, 2001
 US models withdrawn effective November 2001 or April 2002

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Type-model	Processor	Speed	Memory	Screen	Disk	Optical	Mini PCI	Security Chip	Communications Daughter Card	Preload	Available
2647-2KU	Pentium® III-M	866MHz ¹	128MB	13.3" XGA	15GB	CD-ROM	Modem		Ethernet	Windows® 98 SE	Jul 2001
2647-6KU	Pentium III-M	866MHz	128MB	13.3" XGA	15GB	CD-ROM	Modem		Ethernet	Windows 2000	Jul 2001
2647-5KU	Pentium III-M	1.13GHz	128MB	14.1" SXGA+	48GB	DVD-ROM	Modem		Ethernet	Windows 98 SE	Jul 2001
2647-9KU	Pentium III-M	1.13GHz	128MB	14.1" SXGA+	48GB	DVD-ROM	Modem		Ethernet	Windows 2000	Jul 2001
2647-5LU	Pentium III-M	1.13GHz	128MB	14.1" SXGA+	48GB	DVD-ROM	802.11b/mod	Yes	Ethernet	Windows 98 SE	Jul 2001
2647-9LU	Pentium III-M	1.13GHz	128MB	14.1" SXGA+	48GB	DVD-ROM	802.11b/mod	Yes	Ethernet	Windows 2000	Jul 2001
2647-HLU	Pentium III-M	1.13GHz	128MB	14.1" SXGA+	48GB	DVD-ROM	802.11b/mod	Yes	Ethernet	2000, XP Sm Bus	Jul 2001

Positioning Processor	<i>The perfect balance of performance and portability</i> Mobile Intel® Pentium® III Processor-M 866MHz¹ or 1.13GHz¹ with enhanced Intel SpeedStep™ technology and 133MHz front side bus							SOFTWARE^{14, 27}			
L2 cache	512KB / on die (at processor speed) / ECC							Windows 98 models			
Memory	128MB standard / 1GB maximum ⁷ / SDRAM / non-parity / 133MHz / PC 133 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / one socket available							- Microsoft® Windows® 98 Second Edition ¹³ ↔ Disk-to-Disk Recovery (in hidden Service Partition)			
Diskette drive	3.5" 1.44MB (use in Ultrabay 2000 or attach ext with optional cable via parallel port)							Windows 2000 models			
CD-ROM	Some: CD-ROM / 24X-10X ⁹ speed / bootable / removable from Ultrabay™ 2000							- Windows 2000 Professional			
DVD-ROM	Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000							- PC Card Wizard			
Ultrabay 2000	Modular bay for interchangeable devices							↔ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition)			
Disk	15GB⁸ (4200 rpm) or 48GB (5400 rpm) / upgradeable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000							INCLUDED SOFTWARE¹⁴ (all)			
Display	Some: 13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix All: Easy-open cover to unlatch and open with one hand							Preloaded			
Graphics controller	S3® SuperSavage/IXC16 / AGP 4X / 16MB SDRAM							• ThinkPad Assistant™			
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200							• Access ThinkPad II			
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar / pitch: 19mm; stroke: 2.7mm							• ThinkPad Utilities			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions							• ConfigSafe®			
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera							• Access Connections (W2000 wireless models only)			
Dimensions ³	xKx: 12.0" x 9.8" x 1.3"; xLx: 12.1" x 9.8" x 1.3"							• PC-Doctor™			
Approximate weight ²	With optical drive and battery: 2Kx/6Kx: 5.4 lbs; 5Kx/9Kx: 5.45 lbs; 5Lx/9Lx: 5.5 lbs							• Mediamatics™ DVD (DVD models)			
Case material	Titanium Composite in the top and bottom covers for enhanced strength ⁴							Downloadable			
Battery - type	Lithium Ion 6-cell / 10.8V 3.6AH / intelligent / supports unique 2nd battery in Ultrabay							• IBM Backup and Restore			
Battery - life ¹⁰	xKx: 3.0 hrs; xLx: 2.8 hrs							• IBM Data Transfer			
AC adapter	Universal 72 watt / 16VDC 4.5A							• Universal Manageability Services			
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / E82802AC Firmwave Hub / PCI bus 2.2 32-bit, 33MHz (TI® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)							• IBM Update Connector™ ¹⁵			
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)							• Client Security Software 2.0 (models with security chip)			
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video							License			
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)							- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0			
Video out	S-video out / one industry standard connector / full MPEG-2 support / optional cable for S-video to composite conversion available							Office XP Small Business models			
Mini PCI	Mini PCI IIIb slot / customer accessible							- Microsoft Office XP Small Business (Word, Excel, Outlook, Publisher, Small Business Tools)			
CDC	One Communications Daughter Card socket (used by ethernet)							↔ Office XP Small Business CD			
Modem	xKx: Mini PCI 56K ⁶ V.90 modem card / Lucent® chipset							The Ultrabay 2000 plus supports:			
802.11b/modem	xLx: Mini PCI 802.11b wireless, Intersil® Prism 2.5 chipset, diversity antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 modem combo, Lucent® chipset										
Ethernet	10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset							• optional or standard CD-ROM			
Audio support	Soft audio / ICH AC97 controller / SoundBlaster compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)							• optional or standard DVD drive			
Security	Power-on password / hard disk password / supervisor password / security keyhole xLx: Embedded Security Chip / authenticates and encrypts data communications / stores encrypted passwords in hardware							• optional Zip drive			
Limited warranty* ¹²	3 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service							• optional second battery			
64 MB SO DIMM	133MHz NP SDRAM	19K4650	ThinkPad T Series Li-Ion Battery				02K6649	• optional SuperDisk drive			
128 MB SO DIMM	133MHz NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery				02K6646	• optional CD-RW			
256 MB SO DIMM	133MHz NP SDRAM	19K4654	ThinkPad 72W AC Adapter				02K6699	• optional CD-RW/DVD combo			
512 MB SO DIMM	133MHz NP SDRAM	19K4656	ThinkPad 72W DC Auto/Air Adapter				10K3820	• optional HDD adapter (for 2nd disk)			
SuperDisk (LS-240)	Ultrabay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger				02K6719	• optional travel bezel			
Zip 250MB	Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator				02K8667	IBM ImageUltra Services available IBM Rapid Restore PC available to protect software image and data Asset ID™ wireless RF technology (via installing into disk cover)			
24X-10X CD-ROM	Ultrabay 2000 Drive	05K9233	ThinkPad Dock				263120U				
8X/4X/24X CD-RW	Ultrabay 2000	08K9569	ThinkPad Monitor Stand 2001				22P5265	Personalized Web-based support International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty			
8X-2X DVD	Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)				19K4480				
CD-RW/DVD Combo	Ultrabay 2000	08K9572	UltraPort Camera II				04P6135				
Travel Bezel for Ultrabay 2000		08K6070	UltraPort Digital Array Microphone				09N4178				
Second HDD Adapter for Ultrabay 2000		08K6068	Bluetooth™ UltraPort Module from IBM				09N9811				
15GB Hard Disk Drive		08K9588	T Series FDD External Cable Kit				27L0524				
30GB Hard Disk Drive		08K9593	ServicePac ²² 3yr IOR 9x5 NBD				30L9197				
48GB Hard Disk Drive		08K9600									

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
US models announced July 31, 2001
US models withdrawn effective April 2002

No warranties are expressed or implied in this summary
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Type-model	Processor	Speed GHz	Memory	Screen	Disk	Optical	Mini PCI Comm Bay	CDC	Security Chip	Preload	Small business software	Workhorse (W) or Global (G) model	Avail date
2647-GNU	Pentium® III-M	1.13	128MB	14.1" XGA	30GB ⁸	DVD-ROM	11b Wi-Fi ³² /mod	Ethernet	Yes	XP Pro	Office XP SB ²⁸		Oct 2001
2647-HNU	Pentium III-M	1.2	128MB	14.1" SXGA+	48GB	CD-RW	11b Wi-Fi/mod	Ethernet	Yes	XP Pro	Office XP SB		Oct 2001
2647-8QU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	Modem			XP Pro		W	Oct 2001
2647-4QU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	Modem			Windows® 2000		W	Oct 2001
2647-8MU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	Modem	Ethernet		XP Pro		W G	Oct 2001
2647-8NU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	11b Wi-Fi/mod	Ethernet		XP Pro		W	Oct 2001
2647-9MU	Pentium III-M	1.2	128MB	14.1" SXGA+	48GB	CD-RW	Modem	Ethernet	Yes	XP Pro			Oct 2001
2647-9NU	Pentium III-M	1.2	128MB	14.1" SXGA+	48GB	CD-RW	11b Wi-Fi/mod	Ethernet	Yes	XP Pro			Oct 2001
2647-4MU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	Modem	Ethernet		Windows 2000		W G	Oct 2001
2647-4NU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	11b Wi-Fi/mod	Ethernet		Windows 2000		W	Oct 2001
2647-5MU	Pentium III-M	1.2	128MB	14.1" SXGA+	48GB	CD-RW	Modem	Ethernet	Yes	Windows 2000			Oct 2001
2647-5NU	Pentium III-M	1.2	128MB	14.1" SXGA+	48GB	CD-RW	11b Wi-Fi/mod	Ethernet	Yes	Windows 2000			Oct 2001
Positioning Processor	The perfect balance of performance and portability; two-spindle system												
L2 cache	Mobile Intel® Pentium® III Processor-M 1.13 or 1.2GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus												
Memory	512KB / on die (at processor speed) / ECC 128MB standard / 1GB maximum ² / SDRAM / non-parity / 133MHz / PC 133 / 3.3v / two 144-pin SO-DIMM sockets / 128MB in one socket / one socket available												
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)												
CD-RW	Some: CD-RW / 8X/4X/24X Max ⁹ / removable from Ultrabay 2000												
DVD-ROM	Some: DVD-ROM / 8X-3.3X ⁹ speed / removable from Ultrabay 2000												
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible												
Disk	30GB ⁸ (4200 rpm) or 48GB (5400 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000												
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix All: Easy-open cover to unlatch and open with one hand (two latches)												
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM												
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200												
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera												
Dimensions ³	Wi-Fi ³² models: 12.1" x 9.8" x 1.3"; Others: 12.0" x 9.8" x 1.3";												
Approximate weight ²	with optical drive and battery: Gxx/8xx/4xx: 5.2 lbs; Hxx/9xx/5xx: 5.5 lbs												
Case material	Titanium Composite in the top and bottom covers for enhanced strength												
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000												
Battery - life ¹⁰	3 hrs 11 minutes to 3 hrs 30 minutes depending on model												
AC adapter	Universal 72 watt / 16VDC 4.5A												
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / E82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (TI® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)												
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)												
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1												
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / some: RJ-45 (ethernet)												
Video out	S-video out port (TV out) / one industry standard connector												
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	Some: Mini PCI 56K ⁶ V.90 (V.92-designed ²⁹) modem card / Lucent® chipset												
11b Wi-Fi ³² /modem	Some: Mini PCI 11b Wi-Fi ³² wireless, Intersil® Prism 2.5 chipset, diversity antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Lucent® chipset												
Ethernet	Some: 10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset												
Audio support	Soft audio / ICH AC97 controller / SoundBlaster-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)												
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	Some: IBM Embedded Security Subsystem ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶												
Limited warranty ¹²	3 years/1 year battery - EasyServ™.19 onsite pickup and delivery courier service												
64 MB SO DIMM	133MHz NP SDRAM	19K4650	ThinkPad T20 Series Li-Ion Battery					02K6649					
128 MB SO DIMM	133MHz NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery					02K6646					
256 MB SO DIMM	133MHz NP SDRAM	19K4654	ThinkPad 72W AC Adapter					02K6699					
512 MB SO DIMM	133MHz NP SDRAM	19K4656	ThinkPad 72W DC Auto/Air Adapter					10K3820					
SuperDisk (LS-240)	UltraBay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger					02K6719					
Zip 250MB	Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator					02K8667					
24X-10X CD-ROM	Ultrabay 2000 Drive	05K9233	ThinkPad Dock					263120U					
8X/4X/24X Max	CD-RW Ultrabay 2000	08K9569	ThinkPad Monitor Stand 2001					22P5265					
8X-3X DVD	Ultrabay 2000 Drive	27L3448	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)					19K4480					
CD-RW/DVD Combo	Ultrabay 2000	08K9572	Bluetooth™ UltraPort Module from IBM					09N9811					
Travel Bezel for	Ultrabay 2000	08K6070	T Series FDD External Cable Kit					27L0524					
Second HDD Adapter for	Ultrabay 2000	08K6068	ServicePac ²² 2yr IOR 9x5 NBD					30L9190					
IBM ThinkPad Ultrabay Plus Carrier		22P5737	ServicePac 3yr IOR 9x5 NBD					30L9197					
IBM ThinkPad Ultrabay Plus c500 Cradle		22P5738	40GB HS Hard Disk 9.5mm (5400 rpm)					08K9816					
ThinkPad Ultrabay Plus Numeric Keypad		22P7330	48GB HS Hard Disk 12.5mm (5400 rpm)					08K9600					
ThinkPad Asset ID RF Adapter		08K6064											
<p>SOFTWARE¹⁴</p> <p>Windows XP Pro models</p> <ul style="list-style-type: none"> - Microsoft® Windows® XP Professional ◇ Disk-to-Disk Recovery (in hidden Service Partition) <p>Windows 2000 models</p> <ul style="list-style-type: none"> - Microsoft Windows 2000 Professional¹³ ◇ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition) <p>INCLUDED SOFTWARE¹⁴ (all)</p> <p>Preloaded</p> <ul style="list-style-type: none"> • Access ThinkPad - Access Connections - Access Help • ConfigSafe® • Mediamatics™ DVD (DVD models) • PC-Doctor™ • SystemSoft CardWizard • ThinkPad Utilities • Veritas RecordNOW (CD-RW mod) <p>Downloadable</p> <ul style="list-style-type: none"> • IBM Rapid Restore™ PC • IBM Data Transfer • Universal Manageability Services™ • IBM Update Connector™.15 • Client Security Software (models with security chip) <p>License</p> <ul style="list-style-type: none"> - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 <p>Office XP Small Business models only</p> <ul style="list-style-type: none"> - Microsoft Office XP Small Business²⁶ (Word, Excel, Outlook, Publisher, Small Business Tools) ◇ Office XP Small Business CD <p>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 and Cradle for the WorkPad® c500 Series</p>													
<p>PC 99-compliant</p> <p>CIM and DMI 2.0-compliant</p> <p>Wired for Management 2.0</p> <p>Local and remote asset management via the IBM Universal Manageability solutions</p> <p>IBM ImageUltra Services available</p> <p>IBM Rapid Restore PC available to protect software image and data</p> <p>Asset ID™ wireless RF technology (via installing into disk cover)</p> <p>International Warranty Service¹⁷</p> <p>24 hour x 7 day¹⁸ toll-free hardware support during the warranty¹²</p>													

See footnotes for important warranty information
US models announced October 9, 2001
US models withdrawn effective July 2002, April 2003, or July 2003

Type-model	Processor	Speed GHz	Memory	Screen	Disk	Optical	Mini PCI Comm Bay	CDC	Security Chip	Preload	Small business software	Workhorse (W) or Global (G) model	Avail date
2647-2RU	Pentium® III-M	1.0	128MB	14.1" XGA	20GB ⁸ CD-ROM	Modem		Ethernet		Windows® 2000			Jan 2002
2647-6RU	Pentium III-M	1.0	128MB	14.1" XGA	20GB CD-ROM	Modem		Ethernet		XP Pro			Jan 2002
2647-6GU	Pentium III-M	1.0	256MB	14.1" XGA	20GB DVD-ROM	Modem		Ethernet		XP Pro		W G	Feb 2002
2647-2TU	Pentium III-M	1.0	128MB	14.1" XGA	20GB DVD-ROM	Modem		Ethernet		Windows 2000		W G	Feb 2002
2647-2GU	Pentium III-M	1.0	256MB	14.1" XGA	20GB DVD-ROM	Modem		Ethernet		Windows 2000		W G	Feb 2002
2647-5RU	Pentium III-M	1.2	256MB	14.1" SXGA+	60GB DVD/CD-RW	Modem		Ethernet	Yes	Windows2000			Jan 2002
2647-9RU	Pentium III-M	1.2	256MB	14.1" SXGA+	60GB DVD/CD-RW	Modem		Ethernet	Yes	XP Pro			Jan 2002
2647-5SU	Pentium III-M	1.2	256MB	14.1" SXGA+	60GB DVD/CD-RW	11b Wi-Fi ³² /mod		Ethernet	Yes	Windows2000			Jan 2002
2647-9SU	Pentium III-M	1.2	256MB	14.1" SXGA+	60GB DVD/CD-RW	11b Wi-Fi/mod		Ethernet	Yes	XP Pro			Jan 2002
2647-HSU	Pentium III-M	1.2	256MB	14.1" SXGA+	60GB DVD/CD-RW	11b Wi-Fi/mod		Ethernet	Yes	XP Pro	Office XP SB ²⁸		Jan 2002
Positioning Processor	<i>The perfect balance of performance and portability; two-spindle system</i>												
L2 cache	Mobile Intel® Pentium® III Processor-M 1.0 or 1.2GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus												
Memory	512KB / on die (at processor speed) / ECC 128MB or 256MB standard / 1GB max ⁷ / SDRAM / non-parity / 133MHz / PC 133 / 3.3v / two 144-pin SO-DIMM sockets / std mem in one socket / one socket available												
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)												
CD-ROM	Some: CD-ROM / 24X-10X ⁹ / removable from Ultrabay 2000												
DVD-ROM	Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000												
DVD-ROM/CD-RW	Some: DVD-ROM/CD-RW / 8X/8X/24X/8X ²¹ speed / removable from Ultrabay 2000												
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible												
Disk	20GB ⁸ (4200 rpm) or 60GB ⁸ (5400 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000												
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix All: Easy-open cover to unlatch and open with one hand (two latches)												
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM												
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200												
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm (standard-size keys)												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera												
Dimensions ³	<i>Wi-Fi³² models:</i> 12.1" x 9.8" x 1.3"; <i>Others:</i> 12.0" x 9.8" x 1.3"; with optical drive and battery: <i>2Rx/6Rx:</i> 5.05 lbs (2.29kg); <i>6Gx/2Tx/2Gx:</i> 5.19 lbs (2.36kg); <i>5Rx/9Rx:</i> 5.58 lbs (2.53kg); <i>5Sx/9Sx/HSx:</i> 5.62 lbs (2.55kg)												
Approximate weight ²													
Case material	Titanium Composite in the top and bottom covers for enhanced strength ⁴												
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000												
Battery - life ¹⁰	3.1 hrs to 3.5 hrs depending on model												
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / E82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (TI® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)												
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)												
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1												
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / <i>some:</i> RJ-45 (ethernet)												
Video out	S-video out port (TV out) / one industry standard connector												
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	Some: Mini PCI 56K ⁶ V.90 (V.92-designed ²⁹) modem card / Lucent® chipset												
11b Wi-Fi ³² /modem	Some: Mini PCI 11b Wi-Fi ³² wireless ³ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 modem combo, Lucent® chipset												
Ethernet	10/100 ethernet on Communications Daughter Card / Intel® 82562E chipset												
Audio support	Soft audio / ICH AC97 controller / SoundBlaster-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)												
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	Some: IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶												
Limited warranty ¹²	3 years/1 year battery - EasyServ™.19 onsite pickup and delivery courier service												
64 MB SODIMM	133MHz CL3 NP SDRAM	19K4650	ThinkPad T20 Series Li-Ion Battery	02K6649	Universal 72 watt AC adapter								
128 MB SO DIMM	133MHz CL3 NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery	02K6646	PC 99-compliant								
256 MB SO DIMM	133MHz CL3 NP SDRAM	19K4654	ThinkPad 72W AC Adapter	02K6699	CIM and DMI 2.0-compliant								
512 MB SO DIMM	133MHz CL3 NP SDRAM	19K4656	ThinkPad 72W DC Auto Adapter	10K3820	PXE 2.0-compliant								
SuperDisk (LS-240)	Ultrabay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719	Wired for Management 2.0								
Zip 250MB	Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667	Local and remote asset management via the IBM Universal Management solutions								
24X-10X CD-ROM	Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U	IBM ImageUltra™ Services available								
8X/4X/24X Max CD-RW	Ultrabay 2000	22P9101	ThinkPad Monitor Stand 2001	22P5265	IBM Rapid Restore PC available to protect software image and data								
Ultralight 8X Max DVD	Ultrabay 2000	22P9102	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480	Asset ID™ wireless RF technology (via installing into disk cover)								
CD-RW/DVD Combo III	Ultrabay 2000	22P6980	Bluetooth™ UltraPort Module from IBM	09N9811	International Warranty Service ¹⁷								
Travel Bezel for Ultrabay 2000		08K6070	T Series FDD External Cable Kit	27L0524	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²								
Second HDD Adapter for Ultrabay 2000		08K6068	ServicePac®, ²² 2yr IOR 9x5 NBD	30L9190									
IBM ThinkPad Ultrabay Plus Carrier		22P5737	ServicePac 3yr IOR 9x5 NBD	30L9197									
IBM ThinkPad Ultrabay Plus c500 Cradle		22P5738	20GB Hard Disk 9.5mm (4200 rpm)	08K9686									
ThinkPad Ultrabay Plus Numeric Keypad		22P7330	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816									
ThinkPad Asset ID RF Adapter		08K6064	80GB Hard Disk 9.5mm (4200 rpm)	08K9869									
Other options at ibm.com/pc/us/accessories													

See footnotes for important warranty information
US models announced January 22 or February 7, 2002
US models withdrawn effective July 2002 or July 2003

Type-model	Processor	Speed GHz	Memory	Screen	Disk	Optical	Mini PCI Comm Bay	CDC	Security Chip	Preload	Workhorse (W) or Global (G) model	Avail date
2647-GGU	Pentium® III-M	1.0	256MB	14.1" XGA	20GB ⁸	DVD/CD-RW	11b Wi-Fi ³² /mod	Ethernet	No	Windows® XP Pro	No	Apr 2002

This educational model of the ThinkPad T23 notebook must be sold only to qualified education customers. Qualified institution/customer is a public or private K-12 (or higher) accredited school organized and operated exclusively for educational purposes for use by Qualified Students and/or Qualified 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>The perfect balance of performance and portability; two-spindle system</i>										
L2 cache	Mobile Intel® Pentium® III Processor-M 1.0GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus										
Memory	512KB / on die (at processor speed) / ECC										
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)										
DVD-ROM/CD-RW	DVD-ROM/CD-RW / 8X/8X/24X/8X ²¹ speed / removable from Ultrabay 2000										
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible										
Disk	20GB⁸ (4200 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / easy-open cover to unlatch and open with one hand (two latches)										
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM										
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200										
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm (standard-size keys)										
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										
Dimensions ³	12.1" x 9.8" x 1.3" (305 mm x 250 mm x 33.1 mm)										
Approximate weight ²	with optical drive and battery: 5.3 lbs (2.4kg)										
Case material	Titanium Composite in the top and bottom covers for enhanced strength										
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										
Battery - life ¹⁰	3.1 hrs										
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / E82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (TI® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)										
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1										
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)										
Video out	S-video out port (TV out) / one industry standard connector										
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										
11b Wi-Fi ³² /mod	Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Lucent® chipset										
CDC	One Communications Daughter Card (CDC) socket / customer accessible										
Ethernet	10/100 ethernet on Communications Daughter Card / Intel 82562ET chipset										
Audio support	Soft audio / ICH AC97 controller / SoundBlaster-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)										
Security	Power-on password / hard disk password / supervisor password / security keyhole										
Limited warranty ¹²	3 years/1 year battery - 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)										
64 MB SO DIMM	133MHz CL3 NP SDRAM	19K4650	ThinkPad T20 Series Li-Ion Battery	02K6649	Universal 72 watt AC adapter						
128 MB SO DIMM	133MHz CL3 NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery	02K6646	PC 99-compliant						
256 MB SO DIMM	133MHz CL3 NP SDRAM	19K4654	ThinkPad 72W AC Adapter	02K6699	CIM and DMI 2.0-compliant						
512 MB SO DIMM	133MHz CL3 NP SDRAM	19K4656	ThinkPad 72W DC Auto Adapter	10K3820	PXE 2.0-compliant						
SuperDisk (LS-240) UltraBay 2000		08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719	Wired for Management 2.0						
Zip 250MB Ultrabay 2000 Drive		00N8253	ThinkPad Port Replicator	02K8667	Local and remote asset management via the IBM Universal Manageability solutions						
24X-10X CD-ROM Ultrabay 2000 Drive		05K9233	ThinkPad Dock	263120U	IBM ImageUltra™ Services available						
8X/4X/24X Max CD-RW Ultrabay 2000		22P9101	ThinkPad Monitor Stand 2001	22P5265	IBM Rapid Restore PC available to protect software image and data						
Ultralight 8X Max DVD Ultrabay 2000		22P9102	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480	Asset ID™ wireless RF technology (via installing into disk cover)						
CD-RW/DVD Combo III Ultrabay 2000		22P6980	Bluetooth™ UltraPort Module from IBM	09N9811	International Warranty Service ¹⁷						
Travel Bezel for Ultrabay 2000		08K6070	T Series FDD External Cable Kit	27L0524	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²						
Second HDD Adapter for Ultrabay 2000		08K6068	ServicePac®, ²² 2yr IOR 9x5 NBD	30L9190							
IBM ThinkPad Ultrabay Plus Carrier		22P5737	ServicePac 3yr IOR 9x5 NBD	30L9197							
IBM ThinkPad Ultrabay Plus c500 Cradle		22P5738	20GB Hard Disk 9.5mm (4200 rpm)	08K9686							
ThinkPad Ultrabay Plus Numeric Keypad		22P7330	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816							
ThinkPad Asset ID RF Adapter		08K6064	80GB Hard Disk 9.5mm (4200 rpm)	08K9869							
Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US model announced April 30, 2002
US model withdrawn effective July 2003

Type-model	Processor	Speed GHz	Memory	Screen	Disk	Optical	Mini PCI Comm Bay	CDC	Security Chip	Preload	Small business software	Workhorse (W) or Global (G) model	Avail date
2647-4RU	Pentium® III-M	1.2	256MB	14.1" XGA	40GB ⁸	DVD-ROM	Modem	Ethernet	No	Windows® 2000		W G	Apr 2002
2647-4SU	Pentium III-M	1.2	256MB	14.1" XGA	40GB	DVD-ROM	11b Wi-Fi ³² /mod	Ethernet	No	Windows 2000		W G	Apr 2002
2647-8RU	Pentium III-M	1.2	256MB	14.1" XGA	40GB	DVD-ROM	Modem	Ethernet	No	XP Pro		W G	Apr 2002
2647-8SU	Pentium III-M	1.2	256MB	14.1" XGA	40GB	DVD-ROM	11b Wi-Fi/modem	Ethernet	No	XP Pro		W G	Apr 2002
2647-BSU	Pentium III-M	1.2	256MB	14.1" XGA	40GB	DVD-ROM	11b Wi-Fi/modem	Ethernet	No	XP Pro	Office XP SB ²⁸	W	Apr 2002

Positioning Processor	<i>The perfect balance of performance and portability; two-spindle system</i>										
L2 cache	Mobile Intel® Pentium® III Processor-M 1.2GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus										
Memory	512KB / on die (at processor speed) / ECC 256MB standard / 1GB max ⁷ / SDRAM / non-parity / 133MHz / PC 133 / 3.3v / two 144-pin SO-DIMM sockets / 256MB in one socket / one socket available										
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)										
DVD-ROM	DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000										
CD-RW	Optional / removable from Ultrabay 2000										
DVD-ROM/CD-RW	Optional / removable from Ultrabay 2000										
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible										
Disk	40GB⁸ (4200 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / easy-open cover to unlatch and open with one hand										
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM										
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200										
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm (standard-size keys)										
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										
Dimensions ³	<i>Wi-Fi³² models:</i> 12.1" x 9.8" x 1.3"; <i>Other (4RU/8RU):</i> 12.0" x 9.8" x 1.3";										
Approximate weight ²	with optical drive and battery: 5.17 lbs (2.34kg)										
Case material	Titanium Composite in the top and bottom covers for enhanced strength										
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										
Battery - life ¹⁰	xSU: 3.3 hrs; xRU: 3.4 hrs										
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / E82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (TI® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)										
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1										
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)										
Video out	S-video out port (TV out) / one industry standard connector										
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										
CDC	One Communications Daughter Card (CDC) socket / customer accessible										
Modem	<i>Some:</i> Mini PCI 56K ⁶ V.90 (V.92-designed ²⁹) modem card / Lucent® chipset										
11b Wi-Fi ³² /modem	<i>Some:</i> Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 modem combo, Lucent® chipset										
Ethernet	10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset										
Audio support	Soft audio / ICH AC97 controller / SoundBlaster-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)										
Security	Power-on password / hard disk password / supervisor password / security keyhole										
Limited warranty ¹²	3 years /1 year battery - 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)										

SOFTWARE¹⁴

Windows XP Pro models

- Microsoft® Windows® XP Professional²⁰
- ◇ Disk-to-Disk Recovery (in hidden Service Partition)

Windows 2000 models

- Microsoft Windows 2000 Professional²⁰
- ConfigSafe®
- ◇ Disk-to-Disk Recovery (in hidden Service Partition)

INCLUDED SOFTWARE¹⁴ (all)

Preloaded

- Access ThinkPad
- Access Connections
- Access Help
- Access Support
- Adobe® Acrobat Reader
- Mediamatics™ DVD (DVD models)
- PC-Doctor™
- ThinkPad Utilities
- Veritas RecordNOW (CD-RW mod)
- IBM Software Installer
- IBM Update Connector™.15

Downloadable

- IBM Rapid Restore™ PC
- IBM Data Transfer
- IBM Director Agent

License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0

Office XP Small Business model only (2647-BSU)

- Microsoft Office XP Small Business²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)
- ◇ Office XP Small Business CD

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 and Cradle for the WorkPad® c500 Series

64 MB SODIMM 133MHz CL3 NP SDRAM	19K4650	ThinkPad T20 Series Li-Ion Battery	02K6649	Universal 72 watt AC adapter
128 MB SO DIMM 133MHz CL3 NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery	02K6646	PC 99-compliant
256 MB SO DIMM 133MHz CL3 NP SDRAM	19K4654	ThinkPad 72W AC Adapter	02K6699	CIM and DMI 2.0-compliant
512 MB SO DIMM 133MHz CL3 NP SDRAM	19K4656	ThinkPad 72W DC Auto Adapter	10K3820	PXE 2.0-compliant
SuperDisk (LS-240) UltraBay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719	Local and remote asset management via the IBM Universal Manageability solutions
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667	IBM ImageUltra™ Services available
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U	IBM Rapid Restore PC available to protect software image and data
8X/4X/24X Max CD-RW Ultrabay 2000	22P9101	ThinkPad Monitor Stand 2001	22P5265	Asset ID™ wireless RF technology (via installing into disk cover)
Ultralight 8X Max DVD Ultrabay 2000	22P9102	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480	International Warranty Service ¹⁷
CD-RW/DVD Combo III Ultrabay 2000	22P6980	Bluetooth™ UltraPort Module from IBM	09N9811	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²
Travel Bezel for Ultrabay 2000	08K6070	T Series FDD External Cable Kit	27L0524	
Second HDD Adapter for Ultrabay 2000	08K6068	ServicePac®, 22 2yr IOR 9x5 NBD	30L9190	
IBM ThinkPad Ultrabay Plus Carrier	22P5737	ServicePac 3yr IOR 9x5 NBD	30L9197	
IBM ThinkPad Ultrabay Plus c500 Cradle	22P5738	20GB Hard Disk 9.5mm (4200 rpm)	08K9686	
ThinkPad Ultrabay Plus Numeric Keypad	22P7330	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	
ThinkPad Asset ID RF Adapter	08K6064	80GB Hard Disk 9.5mm (4200 rpm)	08K9869	
Other options at ibm.com/pc/us/accessories				

See footnotes for important warranty information
US models announced April 23, 2002
US models withdrawn effective July 2003

Type-model	Processor	Speed GHz	Memory	Screen	Disk	Optical	Diskette Drive	Mini PCI Comm Bay	CDC	Preload	Workhorse (W) or Global (G) model	Avail date
2647-7GU	Pentium® III-M	1.0	256MB	14.1" XGA	20GB ⁸	DVD/CD-RW	None	Modem	Ethernet	Windows® XP Pro	No	Jun 2002
2647-7MU	Pentium III-M	1.13	256MB	14.1" XGA	30GB	DVD/CD-RW	None	Modem	Ethernet	Windows XP Pro	No	Jun 2002
2647-7NU	Pentium III-M	1.13	256MB	14.1" XGA	30GB	DVD/CD-RW	None	11b Wi-Fi ³² /mod	Ethernet	Windows XP Pro	No	Jun 2002
2647-3GU	Pentium III-M	1.0	256MB	14.1" XGA	20GB	DVD/CD-RW	None	Modem	Ethernet	Windows 2000	No	Jun 2002
2647-2MU	Pentium III-M	1.13	256MB	14.1" XGA	30GB	DVD/CD-RW	None	Modem	Ethernet	Windows 2000	No	Jun 2002
2647-2NU	Pentium III-M	1.13	256MB	14.1" XGA	30GB	DVD/CD-RW	None	11b Wi-Fi/mod	Ethernet	Windows 2000	No	Jun 2002
2647-4U2	Pentium III-M	1.0	256MB	14.1" SXGA+	20GB	DVD/CD-RW	None	Modem	Ethernet	Windows 2000	No	Jun 2002
2647-4U3	Pentium III-M	1.13	256MB	14.1" SXGA+	30GB	DVD/CD-RW	None	modem	Ethernet	Windows 2000	No	Jun 2002
2647-T4U	Pentium III-M	1.13	256MB	14.1" XGA	30GB	CD-ROM	Diskette	modem	Ethernet	Windows 2000	No	Jun 2002
2647-4U5	Pentium III-M	1.13	256MB	14.1" XGA	30GB	DVD/CD-RW	Diskette	modem	Ethernet	Windows 2000	No	Jun 2002
Positioning Processor	<i>The perfect balance of performance and portability; two-spindle system</i>											
L2 cache	Mobile Intel® Pentium® III Processor-M 1.0 or 1.13GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus										SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ⇨ Disk-to-Disk Recovery (in hidden Service Partition) Windows 2000 models - Microsoft Windows 2000 Professional ¹³ • ConfigSafe® ⇨ Disk-to-Disk Recovery (in hidden Service Partition) INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Help - Access Support • Mediamatics™ DVD (Combo models) • PC-Doctor™ • ThinkPad Utilities • Veritas RecordNOW (Combo models) • IBM Software Installer • IBM Update Connector™ ¹⁵ Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • IBM Director Agent License (CD not included) • Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0	
Memory	512KB / on die (at processor speed) / ECC											
Diskette drive	<i>Some: 3.5" 1.44MB (use in Ultrabay™ or attach ext with optional cable via parallel port)</i>											
CD-ROM	<i>Some: CD-ROM / 24X-10X⁹ / removable from Ultrabay 2000</i>											
DVD-ROM/CD-RW	<i>Some: Combo / DVD-ROM/CD-RW / 8X/8X/24X/8X²¹ speed / removable from Ultrabay 2000</i>											
Ultrabay 2000 Disk	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible 20GB⁸ or 30GB (4200 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000											
Display	<i>Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix</i> <i>Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix</i> <i>All: Easy-open cover to unlatch and open with one hand (two latches)</i>											
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM											
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200											
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm (standard-size keys)											
ThinkLight™ UltraPort™	Illuminates the keyboard to improve visibility in low-light conditions UltraPort connector on top of display for options such as digital UltraPort Camera											
Dimensions ³	<i>Wi-Fi³² models: 12.1" x 9.8" x 1.3"; Others: 12.0" x 9.8" x 1.3";</i>											
Approximate weight ²	<i>with optical drive and battery: T4U (CD-ROM model): 5.13 lbs (2.33kg); 7NU/2NU (Wi-Fi models): 5.42 lbs (2.46kg); 4U2/4U3 (SXGA+ models): 5.45 (2.47kg); Others: 5.37 lbs (2.43kg)</i>											
Case material	Titanium Composite in the top and bottom covers for enhanced strength ⁴											
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000											
Battery - life ¹⁰	3.1 hrs to 3.5 hrs depending on model											
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / E82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (T1® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)											
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)											
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1											
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / <i>some: RJ-45 (ethernet)</i>											
Video out	S-video out port (TV out) / one industry standard connector											
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable											
CDC	One Communications Daughter Card (CDC) socket / customer accessible											
Modem	<i>Some: Mini PCI 56K⁶ V.90 (V.92-designed²⁹) modem card / Lucent® chipset</i>											
11b Wi-Fi ³² /modem	<i>Some: Mini PCI 11b Wi-Fi³² wireless⁴, Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K⁶ V.90 modem combo, Lucent® chipset</i>											
Ethernet	10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset											
Audio support	Soft audio / ICH AC97 controller / SoundBlaster-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)											
Security	Power-on password / hard disk password / supervisor password / security keyhole											
Security chip	None											
Limited warranty ¹²	3 years/1 year battery - EasyServ™¹⁹ onsite pickup and delivery courier service											
64 MB SODIMM	133MHz CL3 NP SDRAM	19K4650	ThinkPad T20 Series Li-Ion Battery	02K6649	Universal 72 watt AC adapter							
128 MB SO DIMM	133MHz CL3 NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery	02K6646	PC 99-compliant							
256 MB SO DIMM	133MHz CL3 NP SDRAM	19K4654	ThinkPad 72W AC Adapter	02K6699	CIM and DMI 2.0-compliant							
512 MB SO DIMM	133MHz CL3 NP SDRAM	19K4656	ThinkPad 72W DC Auto Adapter	10K3820	PXE 2.0-compliant							
SuperDisk (LS-240)	Ultrabay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719	Wired for Management 2.0							
Zip 250MB	Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667	Local and remote asset management via the IBM Universal							
24X-10X CD-ROM	Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U	Management solutions							
8X/4X/24X Max CD-RW	Ultrabay 2000	22P9101	ThinkPad Monitor Stand 2001	22P5265	IBM ImageUltra™ Services available							
Ultralight 8X Max DVD	Ultrabay 2000	22P9102	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480	IBM Rapid Restore PC available to protect software image and data							
CD-RW/DVD Combo III	Ultrabay 2000	22P6980	Bluetooth™ UltraPort Module from IBM	09N9811	Asset ID™ wireless RF technology (via installing into disk cover)							
Travel Bezel for Ultrabay 2000		08K6070	T Series FDD External Cable Kit	27L0524	International Warranty Service ¹⁷							
Second HDD Adapter for Ultrabay 2000		08K6068	20GB Hard Disk 9.5mm (4200 rpm)	08K9686	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²							
IBM ThinkPad Ultrabay Plus Carrier		22P5737	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816								
IBM ThinkPad Ultrabay Plus c500 Cradle		22P5738	80GB Hard Disk 9.5mm (4200 rpm)	08K9869								
ThinkPad Ultrabay Plus Numeric Keypad		22P7330	ServicePac ²² 2yr IOR 9x5 NBD	30L9190								
ThinkPad Asset ID RF Adapter		08K6064	ServicePac 3yr IOR 9x5 NBD	30L9197								
Other options at ibm.com/pc/us/accessories												

See footnotes for important warranty information
US models announced June 11, 2002
US models withdrawn effective April or July 2003

Type-model	Processor	Speed GHz	Memory	Screen	Disk	Optical	Mini PCI Comm Bay	CDC	Security Chip	Preload	Small business software	Avail date
2647-3HU	Pentium® III-M	1.0	128MB	14.1" XGA	20GB ⁸	DVD-ROM	Modem	Ethernet	No	Windows® 2000	Office XP SB ²⁸	Aug 2002
2647-5GU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	Modem	Ethernet	No	Windows 2000	Office XP SB	Aug 2002
2647-9GU	Pentium III-M	1.13	128MB	14.1" XGA	30GB	DVD-ROM	Modem	Ethernet	No	Windows XP Pro	Office XP SB	Aug 2002

Positioning Processor	<i>The perfect balance of performance and portability; two-spindle system</i>									
L2 cache	Mobile Intel® Pentium® III Processor-M 1.0 or 1.13GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus									
Memory	512KB / on die (at processor speed) / ECC 128MB standard / 1GB max ⁷ / SDRAM / non-parity / 133MHz / PC 133 / 3.3v / two 144-pin SO-DIMM sockets / std mem in one socket / one socket available									
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)									
DVD-ROM	DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000									
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible									
Disk	20GB⁸ or 30GB (4200 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000									
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / easy-open cover to unlatch and open with one hand									
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM									
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200									
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm (standard-size keys)									
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions									
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera									
Dimensions ³	12.0" x 9.8" x 1.3" (304mm x 250mm x 33.1mm)									
Approximate weight ²	with optical drive and battery: 5.9 lbs (2.36kg)									
Case material	Titanium Composite in the top and bottom covers for enhanced strength ⁴									
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000									
Battery - life ¹⁰	3.1 hrs to 3.5 hrs depending on model									
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB) / E82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (TI® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared)									
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)									
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1									
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)									
Video out	S-video out port (TV out) / one industry standard connector									
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable									
Modem	Mini PCI 56K ⁶ V.90 (V.92-designed ²⁹) modem card / Lucent® chipset									
CDC	One Communications Daughter Card (CDC) socket / customer accessible									
Ethernet	10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset									
Audio support	Soft audio / ICH AC97 controller / SoundBlaster-compatible / CS4299 AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)									
Security	Power-on password / hard disk password / supervisor password / security keyhole									
Security chip	None									
Limited warranty ¹²	3 years /1 year battery - 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)									

SOFTWARE¹⁴

Windows XP Pro models

- Microsoft® Windows® XP Professional
- ↳ Disk-to-Disk Recovery (in hidden Service Partition)

Windows 2000 models

- Microsoft Windows 2000 Professional¹³
- ConfigSafe®
- ↳ Disk-to-Disk Recovery (in hidden Service Partition)

INCLUDED SOFTWARE¹⁴ (all)

Preloaded

- Access ThinkPad
- Access Connections
- Access Help
- Access Support
- Mediamatics™ DVD (DVD models)
- PC-Doctor™
- ThinkPad Utilities
- IBM Software Installer
- IBM Update Connector™¹⁵

Downloadable

- IBM Rapid Restore™ PC
- IBM Data Transfer
- Universal Manageability Services™

License

- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0

Office XP Small Business

- Microsoft Office XP Small Business²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)
- ↳ Office XP Small Business CD

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 and Cradle for the WorkPad® c500 Series

Universal 72 watt AC adapter
PC 99-compliant
CIM and DMI 2.0-compliant
PXE 2.0-compliant
Wired for Management 2.0
Local and remote asset management via the IBM Universal Manageability solutions
IBM ImageUltra™ Services available
IBM Rapid Restore PC available to protect software image and data
Asset ID™ wireless RF technology (via installing into disk cover)
Personalized Web-based support
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free hardware support during the warranty¹²

64 MB SODIMM 133MHz CL3 NP SDRAM	19K4650	ThinkPad T20 Series Li-Ion Battery	02K6649
128 MB SO DIMM 133MHz CL3 NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery	02K6646
256 MB SO DIMM 133MHz CL3 NP SDRAM	19K4654	ThinkPad 72W AC Adapter	02K6699
512 MB SO DIMM 133MHz CL3 NP SDRAM	19K4656	ThinkPad 72W DC Auto Adapter	10K3820
SuperDisk (LS-240) UltraBay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger	02K6719
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667
24X-10X ⁹ CD-ROM Ultrabay 2000 Drive	05K9233	ThinkPad Dock	263120U
8X/4X/24X Max ⁹ CD-RW Ultrabay 2000	22P9101	ThinkPad Monitor Stand 2001	22P5265
Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480
CD-RW/DVD Combo III Ultrabay 2000	22P6980	T Series FDD External Cable Kit	27L0524
Travel Bezel for Ultrabay 2000	08K6070	IBM 128MB USB 2.0 Memory Key	22P8998
Second HDD Adapter for Ultrabay 2000	08K6068	ServicePac ²² 2yr IOR 9x5 NBD	30L9190
IBM ThinkPad Ultrabay Plus Carrier	22P5737	ServicePac 3yr IOR 9x5 NBD	30L9197
IBM ThinkPad Ultrabay Plus c500 Cradle	22P5738	ServicePac 4yr IOR 9x5 NBD	69P9198
ThinkPad Ultrabay Plus Numeric Keypad	22P7330	ServicePac 5yr IOR 9x5 NBD	69P9200
ThinkPad Asset ID RF Adapter	08K6064	ServicePac 4yr P&L P/U Depot	69P9199
IBM Optical 3-Button Travel Wheel Mouse	31P7410	ServicePac 5yr P&L P/U Depot	69P9201
IBM Optical 3-Button ScrollPoint® Mouse	31P7405	20GB Hard Disk Drive	08K9686
IBM High Rate Wireless LAN PC Card 128	09N9904	80GB Hard Disk 9.5mm (4200 rpm)	08K9869
Other options at ibm.com/pc/us/accessories			

See footnotes for important warranty information
US models announced August 13, 2002
US models withdrawn effective April 2003

IBM® ThinkPad® T30 - withdrawnCreated by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory GB	Screen	Disk GB ⁸	Optical	UltraNav™ touch pad	Mini PCI Comm Bay wireless/modem	CDC modem or Bluetooth™	Ethernet on planar	Ethernet Security Chip	Preload business software	Small business model	Workhorse (W) or Global (G) model	Availability (G) date
2366-61U	Pentium® 4-M	1.6	256MB	14.1" XGA	20G	DVD	Yes	Open (wireless upg) ³⁶	Modem	10/100	XP Pro	XP Pro	W G	May 2002	
2366-63U	Pentium 4-M	1.6	256MB	14.1" XGA	20G	DVD	Yes	Open (wireless upg)	Modem	10/100	XP Pro	XP Pro	W G	May 2002	
2366-81U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	Open (wireless upg)	Modem	10/100	XP Pro	XP Pro	W G	May 2002	
2366-83U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	Open (wireless upg)	Modem	10/100	XP Pro	XP Pro	W G	May 2002	
2366-82U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	11b Wi-Fi ³² /modem	Open	10/100	Yes	XP Pro	W G	May 2002	
2366-84U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	11b Wi-Fi/modem	Open	10/100	Yes	XP Pro	W G	May 2002	
2366-85U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	Cisco 802.11b	Modem	10/100	Yes	XP Pro	W	May 2002	
2366-91U	Pentium 4-M	1.8	256MB	14.1" SXGA+	40HS	Combo	Yes	Open (wireless upg)	Modem	10/100	Yes	XP Pro	W	May 2002	
2366-92U	Pentium 4-M	1.8	256MB	14.1" SXGA+	40HS	Combo	Yes	11b Wi-Fi/modem	Bluetoo	10/100	Yes	XP Pro	W	May 2002	
2366-C1U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	Open (wireless upg)	Modem	10/100	XP Pro	XP Pro Office ²⁸	W	May 2002	
Positioning Processor	<i>The perfect balance of performance and portability; two-spindle system</i>											SOFTWARE¹⁴			
L2 cache	Mobile Intel® Pentium® 4 Processor-M 1.6 or 1.8GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus											Windows XP Pro models			
Memory	512KB / on die (at processor speed) / ECC											- Microsoft® Windows® XP Professional ²⁰			
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive											◇ Disk-to-Disk Recovery (in hidden Service Partition)			
DVD	Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000											INCLUDED SOFTWARE¹⁴ (all)			
Combo	Some: DVD-ROM/CD-RW / 8X/8X/24X/8X ²¹ speed / removable from Ultrabay 2000											Preloaded			
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus-compatible											• Access ThinkPad			
Disk	20GB ⁸ or 40GB (4200 rpm) or 40GB HS (5400 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000 / HDD Shock Absorber											- Access Connections			
Display	Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											- Access Help			
Graphics controller	Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits											- Access Support			
Graphics - external	All: Easy-open cover to unlatch and open with one hand											• Adobe Acrobat Reader			
Keyboard	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16MB DDR-SDRAM 364MHz											• InterVideo WinDVD (DVD models)			
TrackPoint®	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions											• PC-Doctor™			
Touch pad	87-key / ThinkPad Button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)											• ThinkPad Utilities			
ThinkLight™	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³											• Veritas RecordNOW (CD-RW mod)			
Dimensions ³	Some: UltraNav multi-pointing system / touch pad below keyboard / Tap Zones											• IBM Update Connector™ ¹⁵			
Approximate weight ²	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™											Downloadable			
Case material	12.0" x 9.8" x 1.4"; 304mm x 250mm x 36.6mm											• IBM Rapid Restore™ PC			
Battery - type	with optical drive and battery: 5.33 to 5.67 lbs (2.42 to 2.57 kg) depending on model											• IBM Data Transfer			
Battery - life ¹⁰	Titanium Composite in the top and bottom covers for enhanced strength											• IBM Director Agent			
Architecture	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000											• Client Security Software (models with security chip)			
Docking Station	Wireless 82U/84U/85U/92U: 2.5 hrs; Others: 3.0 hrs											License (CD not included)			
PC Card Std slots	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, serial, par, infrared)											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
Ports	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)											Office XP Small Business model only (2366-C1U)			
Video out	2 Type II, 2 Type I, or 1 Type III / CardBus 32-bit / PCMCIA 2.1											- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)			
Mini PCI	Two USB (Version 1.1) / 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse port (use USB)											◇ Office XP Small Business CD			
11b Wi-Fi ³² /mod	S-video out port (TV out) / one industry standard connector											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 and Cradle for the WorkPad® c500 Series			
802.11b	One Mini PCI type III slot (Communications Bay) / customer upgradable ^{4,36}											Universal 72 watt AC adapter			
CDC	Some: Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intel PRO/Wireless LAN with Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset											Asset ID™ ³⁴ (system-specific info in chip accessed over network)			
Modem	Some: Mini PCI 802.11b wireless ⁴ , Cisco® Aironet® Wireless 802.11b, Prism 2.0 chipset, dual antennas in display cover, Wi-Fi-certified											PC 2001-compliant			
Bluetooth™	One Communications Daughter Card (CDC) socket / customer accessible											ACPI 1.0b and 2.0-compliant			
Ethernet	Some: 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset											CIM and DMI 2.0-compliant			
Audio support	Some: Bluetooth wireless technology / on CDC / power button on display											PXE 2.0-compliant			
Security	Soft audio / ICH AC97 controller / SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)											IBM ImageUltra™ Services available			
Security chip	Power-on password / hard disk password / supervisor password / security keyhole											IBM Rapid Restore PC available to protect software image and data			
Limited warranty ¹²	Some: IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multifactor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant											International Warranty Service ¹⁷			
128 MB PC2100 DDR-SDRAM CL2.5 SOD	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service											Personalized Web-based support ³¹			
256 MB PC2100 DDR-SDRAM CL2.5 SOD	Travel Bezel for Ultrabay 2000											Proactive e-mail updates ³¹			
512 MB PC2100 DDR-SDRAM CL2.5 SOD	ThinkPad Removable Diskette Drive											24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²			
IBM 11a/b/g Wireless CardBus Adapter	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)											ThinkPad Port Replicator			
IBM ThinkPad Ultrabay Plus Carrier	22P5737											ThinkPad Dock			
ThinkPad Ultrabay Plus Numeric Keypad	22P7330											ServicePac®. ²² 2yr IOR 9x5 NBD			
Zip 250MB Ultrabay 2000 Drive	00N8253											30L9190			
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233											30L9197			
Ultralight 8X Max DVD Ultrabay 2000	22P9102											Other options at ibm.com/pc/us/accessories			
CD-RW/DVD Combo IV Ultrabay 2000	22P6991														
Second HDD Adapter for Ultrabay 2000	08K6068														
IBM High Rate Wireless LAN Mini PCI	22P7701														
Cisco Aironet Wireless 802.11b Mini PCI	31P8301														

See footnotes for important warranty information
US models announced April 23, 2002
US models withdrawn effective April or July 2003

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Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	UltraNav™ touch pad	Mini PCI Comm Bay wireless/modem	CDC modem or Bluetooth™	Ethernet on planar	Preload Security Chip	Small business software	Workhorse (W) or Global (G) model	Availability date
2366-21U	Pentium® 4-M	1.6	256MB	14.1" XGA	20G	DVD	Yes	Open (wireless upg) ³⁶	Modem	10/100	W2000		W G	May 2002
2366-23U	Pentium 4-M	1.6	256MB	14.1" XGA	20G	DVD		Open (wireless upg)	Modem	10/100	W2000		W G	May 2002
2366-41U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	Open (wireless upg)	Modem	10/100	W2000		W G	May 2002
2366-43U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD		Open (wireless upg)	Modem	10/100	W2000		W G	May 2002
2366-42U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	11b Wi-Fi ³² /modem	Open	10/100	Yes	W2000	W G	May 2002
2366-44U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD		11b Wi-Fi/modem	Open	10/100	Yes	W2000	W G	May 2002
2366-45U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	Cisco 802.11b	Modem	10/100	Yes	W2000	W	May 2002
2366-51U	Pentium 4-M	1.8	256MB	14.1" SXGA+	40HS	Combo	Yes	Open (wireless upg)	Modem	10/100	Yes	W2000		May 2002
2366-52U	Pentium 4-M	1.8	256MB	14.1" SXGA+	40HS	Combo	Yes	11b Wi-Fi/modem	Bluetoo	10/100	Yes	W2000		May 2002
2366-G1U	Pentium 4-M	1.8	256MB	14.1" XGA	40G	DVD	Yes	Open (wireless upg)	Modem	10/100		W2000 Office ²⁸	W	May 2002
Positioning Processor	The perfect balance of performance and portability; two-spindle system											SOFTWARE¹⁴		
L2 cache Memory	Mobile Intel® Pentium® 4 Processor-M 1.6 or 1.8GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus											Windows 2000 models		
	512KB / on die (at processor speed) / ECC											- Microsoft® Windows® 2000 Professional ²⁰		
	256MB standard / 1GB max ⁷ / PC2100 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / 256MB in one socket / one socket available											• ConfigSafe® ◆ Disk-to-Disk Recovery (in hidden Service Partition)		
Diskette drive DVD Combo Ultrabay 2000 Disk	None standard / use optional Ultrabay™-based or USB-based diskette drive Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000 Some: DVD-ROM/CD-RW / 8X/8X/24X/8X ²¹ speed / removable from Ultrabay 2000 One modular bay for interchangeable devices (right side) / Ultrabay Plus-compatible 20GB ⁸ or 40GB (4200 rpm) or 40GB HS (5400 rpm) / removable / 9.5 or 12.5mm bay* supports 2nd disk with optional HDD Adapter in Ultrabay 2000 / HDD Shock Absorber											INCLUDED SOFTWARE¹⁴ (all)		
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: Easy-open cover to unlatch and open with one hand (two latches)											Preloaded • Access ThinkPad - Access Connections - Access Help - Access Support • Adobe Acrobat Reader • InterVideo WinDVD (DVD models) • PC-Doctor™ • ThinkPad Utilities • Veritas RecordNOW (CD-RW mod) • IBM Update Connector™ ¹⁵		
Graphics controller Graphics - external	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16MB DDR-SDRAM 364MHz External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions											Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • IBM Director Agent • Client Security Software (models with security chip)		
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / ThinkPad Button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ Some: UltraNav multi-pointing system / touch pad below keyboard / Tap Zones Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™											License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Dimensions ³ Approximate weight ² Case material Battery - type Battery - life ¹⁰	12.0" x 9.8" x 1.4"; 304mm x 250mm x 36.6mm with optical drive and battery: 5.33 to 5.67 lbs (2.42 to 2.57 kg) depending on model Titanium Composite in the top and bottom covers for enhanced strength Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 Wireless 42U/44U/45U/52U: 2.5 hrs; Others: 3.0 hrs											Office XP Small Business model only (2366-G1U) - Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ◆ Office XP Small Business CD		
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, serial, par, infrared)													
Docking Station PC Card Std slots Ports	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 Two USB (Version 1.1) / 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse port (use USB)													
Video out Mini PCI 11b Wi-Fi ³² /mod 802.11b	S-video out port (TV out) / one industry standard connector One Mini PCI type III slot (Communications Bay) / customer upgradable Some: Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intel PRO/Wireless LAN with Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset Some: Mini PCI 802.11b wireless ⁴ , Cisco® Aironet® Wireless 802.11b, Prism 2.0 chipset, dual antennas in display cover, Wi-Fi-certified											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 and Cradle for the WorkPad® c500 Series		
CDC Modem Bluetooth™ Ethernet Audio support	One Communications Daughter Card (CDC) socket / customer accessible Some: 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset Some: Bluetooth wireless technology / on CDC / power button on display 10/100 ethernet on motherboard / Intel 82562ET chipset (physical layer) Soft audio / ICH AC97 controller / SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)													
Security Security chip	Power-on password / hard disk password / supervisor password / security keyhole Some: IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multifactor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant													
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service													
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	Travel Bezel for Ultrabay 2000										08K6070		
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Removable Diskette Drive										08K9603		
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)										19K4480		
IBM ThinkPad Ultrabay Plus Carrier	22P5737											02K7050		
IBM ThinkPad Ultrabay Plus c500 Cradle	22P5738											02K6646		
ThinkPad Ultrabay Plus Numeric Keypad	22P7330											02K6699		
Zip 250MB Ultrabay 2000 Drive	00N8253											22P9010		
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233											02K6719		
Ultralight 8X Max DVD Ultrabay 2000	22P9102											08K9686		
CD-RW/DVD Combo IV Ultrabay 2000	22P6991											08K9816		
Second HDD Adapter for Ultrabay 2000	08K6068											08K9869		
IBM High Rate Wireless LAN Mini PCI	22P7701											30L9197		
Cisco Aironet Wireless 802.11b Mini PCI	31P8301											30L9197		

See footnotes for important warranty information
US models announced April 23, 2002
US models withdrawn effective April or July 2003

* UltraNav-based systems have 9.5mm bay

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	UltraNav™ touch pad	Mini PCI Comm Bay wireless/modem	CDC modem or Bluetooth™	Ethernet on Security Chip	Preload business software	Small or Global (G) model	Workhorse (W) or Global (G) Avail date																																												
2366-66U	Pentium® 4-M	1.9	256MB	14.1" XGA	20G	DVD	Yes	Open (wireless upg) ³⁶	Modem	10/100	XP Pro	W G	Aug 2002																																												
2366-86U	Pentium 4-M	2.0	256MB	14.1" XGA	40HS	DVD	Yes	Open (wireless upg)	Modem	10/100	XP Pro	W G	Aug 2002																																												
2366-87U	Pentium 4-M	2.0	256MB	14.1" XGA	40HS	DVD	Yes	11b Wi-Fi ³² /modem	Open	10/100	Yes XP Pro	W G	Aug 2002																																												
2366-8AU	Pentium 4-M	2.0	256MB	14.1" XGA	40HS	DVD	Yes	Cisco 802.11b	Modem	10/100	Yes XP Pro	W	Aug 2002																																												
2366-68U	Pentium 4-M	1.9	256MB	14.1" XGA	20G	DVD		Open (wireless upg)	Modem	10/100	XP Pro	W G	Aug 2002																																												
2366-88U	Pentium 4-M	2.0	256MB	14.1" XGA	40HS	DVD		Open (wireless upg)	Modem	10/100	XP Pro	W G	Aug 2002																																												
2366-89U	Pentium 4-M	2.0	256MB	14.1" XGA	40HS	DVD		11b Wi-Fi/modem	Open	10/100	Yes XP Pro	W G	Aug 2002																																												
2366-96U	Pentium 4-M	2.0	256MB	14.1" SXGA+	60G	Combo	Yes	Open (wireless upg)	Modem	10/100	Yes XP Pro	W	Aug 2002																																												
2366-97U	Pentium 4-M	2.0	256MB	14.1" SXGA+	60G	Combo	Yes	11b Wi-Fi/modem	Bluetoo	10/100	Yes XP Pro	W	Aug 2002																																												
2366-C6U	Pentium 4-M	2.0	256MB	14.1" XGA	40HS	DVD	Yes	Open (wireless upg)	Modem	10/100	XP Pro Office ²⁸	W	Aug 2002																																												
Positioning Processor	The perfect balance of performance and portability; two-spindle system																																																								
L2 cache Memory	Mobile Intel® Pentium® 4 Processor-M 1.9 or 2.0GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus 512KB / on die (at processor speed) / ECC 256MB standard / 1GB max ⁷ / PC2100 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / 256MB in one socket / one socket available																																																								
Diskette drive DVD Combo Ultrabay 2000 Disk	None standard / use optional Ultrabay™-based or USB-based diskette drive Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000 Some: DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000 One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible 20GB⁸ (4200 rpm) or 40GB HS (5400 rpm) or 60GB (4200 rpm) / 9.5 or 12.5 mm bay* / supports 2nd disk with optional HDD Adapter in Ultrabay 2000 / HDD Shock Absorber																																																								
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: Easy-open cover to unlatch and open with one hand (two latches)																																																								
Graphics controller Graphics - external	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16MB DDR-SDRAM 364MHz External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions																																																								
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / ThinkPad Button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys) TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ Some: UltraNav multi-pointing system / touch pad below keyboard / Tap Zones Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™																																																								
Dimensions ³ Approximate weight ² Case material Battery - type Battery - life ¹⁰	12.0" x 9.8" x 1.4"; 304mm x 250mm x 36.6mm with optical drive and battery: 5.33 to 5.67 lbs (2.42 to 2.57 kg) depending on model Titanium Composite in the top and bottom covers for enhanced strength Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 Wireless 87U/8AU/89U/97U: 2.5 hrs; Non-wireless others: 2.8 hrs																																																								
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, serial, par, infrared)																																																								
Docking Station PC Card Std slots Ports	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 Two USB (Version 1.1) / 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse port (use USB)																																																								
Video out Mini PCI 11B Wi-Fi ³² /mod 802.11b	S-video out port (TV out) / one industry standard connector One Mini PCI type III slot (Communications Bay) / customer upgradable Some: Mini PCI 11B Wi-Fi ³² wireless ⁴ , Intel PRO/Wireless LAN with Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset Some: Mini PCI 802.11b wireless ⁴ , Cisco® Aironet® Wireless 802.11b, Prism 2.0 chipset, dual antennas in display cover, Wi-Fi-certified																																																								
CDC Modem Bluetooth™ Ethernet Audio support	One Communications Daughter Card (CDC) socket / customer accessible Some: 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset Some: Bluetooth wireless technology / on CDC / power button on display 10/100 ethernet on motherboard / Intel 82562ET chipset (physical layer) Soft audio / ICH AC97 controller / SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)																																																								
Security Security chip	Power-on password / hard disk password / supervisor password / security keyhole Some: IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multifactor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant																																																								
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service																																																								
128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	IBM 128MB USB 2.0 Memory Key	22P8998	ThinkPad Port Replicator	02K8667	256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480	ServicePac®.22 2yr IOR 9x5 NBD	263120U	512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad T30 Series Li-Ion Battery	02K7050	ServicePac 3yr IOR 9x5 NBD	30L9190	IBM ThinkPad Ultrabay Plus Carrier	22P5737	Ultrabay 2000 Li-Ion battery	02K6646	ThinkPad SuperDisk (LS-240) UltraBay 2000	08K9616	ThinkPad 72W AC Adapter	02K6699	ServicePac 4yr IOR 9x5 NBD	30L9197	Zip 250MB Ultrabay 2000 Drive	00N8253	Multiple Li-Ion/NiMH Battery Charger	02K6719	ServicePac 5yr IOR 9x5 NBD	69P9198	24X-10X ⁹ CD-ROM Ultrabay 2000 Drive	05K9233	IBM High Rate Wireless LAN Mini PCI	22P7701	ServicePac 4yr P&L P/U Depot	69P9200	Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102	Cisco Aironet Wireless 802.11b Mini PCI	31P8301	Second HDD Adapter for Ultrabay 2000	08K6068	20GB Hard Disk 9.5mm (4200 rpm)	08K9686	ThinkPad Removable Diskette Drive	08K9603	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM 11 a/b/g Wireless CardBus Adapter	31P9101	80GB Hard Disk 9.5mm (4200 rpm)	08K9869	Other options at ibm.com/pc/us/accessories	

See footnotes for important warranty information
US models announced August 27, 2002
US models withdrawn effective April 2003, October 2003, or January 2004

* UltraNav-based systems have 9.5mm bay

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	UltraNav™ touch pad	Mini PCI Comm Bay wireless/modem	CDC modem or Bluetooth™	Ethernet on planar	Security chip	Preload	Workhorse (W) or Global (G) or Entry (E)	Avail date
2366-FBU	Pentium® 4-M	2.2	256MB	14.1" XGA	40HS	Combo	Yes	11b Wi-Fi ³² /modem	Open	10/100	Yes	XP Pro	W G	Jan 2003
2366-JBU	Pentium 4-M	2.4	256MB	14.1" SXGA+	60G	Combo	Yes	11b Wi-Fi/modem	Open	10/100	Yes	XP Pro		Jan 2003
2366-JCU	Pentium 4-M	2.2	256MB	14.1" SXGA+	40HS	Combo	Yes	Open (wireless upg ³⁶)	Modem	10/100	Yes	XP Pro		Sep 2003
Positioning Processor	<i>The perfect balance of performance and portability; two-spindle system</i>													
L2 cache	Mobile Intel® Pentium® 4 Processor-M 2.2 or 2.4GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus													
Memory	512KB / on die (at processor speed) / ECC 256MB standard / 1GB max ⁷ / PC2100 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / 256MB in one socket / one socket available													
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive													
Combo	DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000													
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible													
Disk	40GB⁹ HS (5400 rpm) or 60GB (4200 rpm), 9.5mm / removable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000 / HDD Shock Absorber													
Display	<i>Some: 14.1"</i> (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits <i>Some: 14.1"</i> (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits <i>All: Easy-open cover to unlatch and open with one hand (two latches)</i>													
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16MB DDR-SDRAM 364MHz													
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions													
Keyboard	87-key / ThinkPad Button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)													
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³													
Touch pad	UltraNav multi-pointing system / touch pad below keyboard / Tap Zones													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™													
Dimensions ³	12.0" x 9.8" x 1.4"; 304mm x 250mm x 36.6mm													
Approximate weight ²	with optical drive and battery: 5.67 lbs (2.57 kg)													
Case material	Titanium Composite in the top and bottom covers for enhanced strength													
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000													
Battery - life ¹⁰	2.5 hrs													
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, serial, par, infrared)													
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) or Mini Dock													
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1													
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse port (use USB)													
Video out	S-video out port (TV out) / one industry standard connector													
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable													
11b Wi-Fi ³² /mod	<i>Some: Mini PCI 11b Wi-Fi³² wireless⁴, Intel PRO/Wireless LAN with Intersil® Prism 2.5</i> chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset													
Wireless upg ³⁶	<i>Some: Wireless upgradable with wireless Mini PCI options</i>													
CDC	One Communications Daughter Card (CDC) socket / customer accessible													
Modem	<i>Some: 56K⁶ V.90 (V.92-designed²⁹)</i> modem in CDC / Agere® chipset													
Bluetooth™	None													
Ethernet	10/100 ethernet on motherboard / Intel 82562ET chipset (physical layer)													
Audio support	Soft audio / ICH AC97 controller / SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)													
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 / TCPA-compliant													
Limited warranty ¹²	3 years /1 year battery - 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	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)										19K4480		
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad T30 Series Li-Ion Battery										02K7050		
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Ultrabay 2000 Li-Ion battery										02K6646		
IBM ThinkPad Ultrabay Plus Carrier	22P5737	ThinkPad 72W AC Adapter										02K6699		
ThinkPad Ultrabay Plus Numeric Keypad	22P7330	ThinkPad 72W AC/DC Combo Adapter										22P9010		
SuperDisk (LS-240) Ultrabay 2000	08K9616	Multiple Li-Ion/NiMH Battery Charger										02K6719		
Zip 250MB Ultrabay 2000 Drive	00N8253	IBM High Rate Wireless LAN Mini PCI										22P7701		
24X-10X ⁹ CD-ROM Ultrabay 2000 Drive	05K9233	Cisco Aironet Wireless 802.11b Mini PCI										31P8301		
Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102	20GB Hard Disk 9.5mm (4200 rpm)										08K9686		
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	40GB HS Hard Disk 9.5mm (5400 rpm)										08K9816		
Second HDD Adapter for Ultrabay 2000	08K6068	80GB Hard Disk 9.5mm (4200 rpm)										08K9869		
ThinkPad Removable Diskette Drive	08K9603	ThinkPad Port Replicator										02K8667		
IBM USB Portable Diskette Drive	05K9276	ThinkPad Port Replicator II										74P6733		
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ThinkPad Mini Dock										287810U		
IBM 128MB USB 2.0 Memory Key	22P8998	ThinkPad Dock										263120U		
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Monitor Stand 2001										22P5265		
IBM Portable USB 2.0 CD-RW Drive	22P5297	Other options at ibm.com/pc/us/accessories												
ThinkPad USB 2.0 PC CardBus Adapter	33L3245													
SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ⇨ Disk-to-Disk Recovery (in hidden Service Partition) Preloaded • Access ThinkPad - Access Connections - Access Help - Access Support • Adobe Acrobat Reader • IBM Rapid Restore™ PC • InterVideo WinDVD • PC-Doctor™ • ThinkPad Utilities • Veritas RecordNOW • IBM Update Connector™ ¹⁵ Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software 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 PC available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware 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 on January 28 or September 17, 2003
US models withdrawn effective January 2004

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	UltraNav™ touch pad	Mini PCI Comm Bay wireless/modem	CDC modem or Bluetooth™	Ethernet on planar	Preload Security Chip	Small business software	Workhorse (W) or Global (G) model	Availability date
2366-56U	Pentium® 4-M.2.0	256MB	14.1" SXGA+	60GB Combo	Yes	Open (wireless upg ³⁶)	Modem	10/100	Yes	W2000	None	No	Aug 2002	
2366-57U	Pentium 4-M	2.0	256MB	14.1" SXGA+	60GB Combo	Yes	11b Wi-Fi ³² /modem	Bluetooth	10/100	Yes	W2000	None	No	Aug 2002

Positioning	<i>The perfect balance of performance and portability; two-spindle system</i>												
Processor	Mobile Intel® Pentium® 4 Processor-M 2.0GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus											SOFTWARE¹⁴	
L2 cache	512KB / on die (at processor speed) / ECC											Windows 2000 models - Microsoft® Windows® 2000 Professional ²⁰ • ConfigSafe® ♦ Disk-to-Disk Recovery (in hidden Service Partition)	
Memory	256MB standard / 1GB max ⁷ / PC2100 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / 256MB in one socket / one socket available												
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive												
Combo	DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000												
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible												
Disk	60GB ⁸ (4200 rpm) 9.5mm high (not high speed 5400 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000 / HDD Shock Absorber												
Display	14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits / easy-open cover to unlatch and open with one hand												
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16MB DDR-SDRAM 364MHz												
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor ⁵ via the Digital Video Interface (DVI) port on either of the optional docking solutions												
Keyboard	87-key / ThinkPad Button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)												
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³												
Touch pad	<i>Some:</i> UltraNav multi-pointing system / touch pad below keyboard / Tap Zones												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™												
Dimensions ³	12.0" x 9.8" x 1.4"; 304mm x 250mm x 36.6mm												
Approximate weight ²	with optical drive and battery: 5.33 to 5.67 lbs (2.42 to 2.57 kg) depending on model												
Case material	Titanium Composite in the top and bottom covers for enhanced strength												
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000												
Battery - life ¹⁰	<i>Wireless 57U:</i> 2.5 hrs; <i>Non-wireless 56U:</i> 3.0 hrs												
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, serial, par, infrared)												
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)												
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1												
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse port (use USB)												
Video out	S-video out port (TV out) / one industry standard connector												
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable ^{4,36}												
11b Wi-Fi ³² /mod	<i>57U:</i> Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intel PRO/Wireless LAN with Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset												
Wireless upg ³⁶	<i>56U:</i> Dual antennas in display cover for wireless connectivity Mini PCI options												
CDC	One Communications Daughter Card (CDC) socket / customer accessible												
Modem	<i>56U:</i> 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset												
Bluetooth™	<i>57U:</i> Bluetooth wireless technology / on CDC / power button on display												
Ethernet	10/100 ethernet on motherboard / Intel 82562E Chipset (physical layer)												
Audio support	Soft audio / ICH AC97 controller / SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)												
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 / TCPA-compliant												
Limited warranty ¹²	3 years/1 year battery - 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	IBM 128MB USB 2.0 Memory Key	22P8998	ThinkPad Port Replicator	02K8667								
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480	ThinkPad Dock	263120U								
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad T30 Series Li-Ion Battery	02K7050	ServicePac ²² 2yr IOR 9x5 NBD									
IBM ThinkPad Ultrabay Plus Carrier	22P5737	Ultrabay 2000 Li-Ion battery	02K6646	ServicePac 3yr IOR 9x5 NBD									
ThinkPad Ultrabay Plus Numeric Keypad	22P7330	ThinkPad 72W AC Adapter	02K6699		30L9197								
Zip 250MB Ultrabay 2000 Drive	00N8253	Multiple Li-Ion/NiMH Battery Charger	02K6719	ServicePac 4yr IOR 9x5 NBD									
24X-10X ⁹ CD-ROM Ultrabay 2000 Drive	05K9233	IBM High Rate Wireless LAN Mini PCI	22P7701		69P9198								
Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102	Cisco Aironet Wireless 802.11b Mini PCI	31P8301	ServicePac 5yr IOR 9x5 NBD									
CD-RW/DVD Combo III Ultrabay 2000	22P6980	20GB Hard Disk Drive	08K9686		69P9200								
Second HDD Adapter for Ultrabay 2000	08K6068	40GB Hard Disk Drive	08K9687	ServicePac 4yr P&L P/U Depot									
ThinkPad Removable Diskette Drive	08K9603	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816		69P9199								
IBM High Rate Wireless LAN PC Card 128	09N9904	80GB Hard Disk 9.5mm (4200 rpm)	08K9869	ServicePac 5yr P&L P/U Depot									
IBM 11a Wireless LAN CardBus Adapter	22P7501	IBM Optical Travel Wheel Mouse (black)	31P7410		69P9201								
IBM Portable USB 2.0 20GB Hard Drive	09N4211	IBM 1GB Microdrive	07N5574										
IBM Portable USB 2.0 CD-RW Drive	22P5297	Other options at ibm.com/pc/us/accessories											
ThinkPad USB 2.0 PC CardBus Adapter	33L3245												

See footnotes for important warranty information
US models announced August 27, 2002
US models withdrawn effective April 2003

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	UltraNav™ touch pad	Mini PCI Comm Bay wireless/modem	CDC modem or Bluetooth™	Ethernet on planar	Security Chip	Preload	Workhorse (W) or Global (G) model	Avail date
2366-B1U	Pentium® 4-M	1.6	256MB	14.1" XGA	40G	Combo	Yes	11b Wi-Fi ³² /mod	Open	10/100	No	Windows® XP Pro	No	Apr 2002
2366-B2U	Pentium 4-M	2.0	256MB	14.1" XGA	40HS	Combo	Yes	11b Wi-Fi/mod	Open	10/100	Yes	Windows® XP Pro	No	Nov2002

This educational model of the ThinkPad T30 notebook must be sold only to qualified education customers. Qualified institution/customer is a public or private K-12 (or higher) accredited school organized and operated exclusively for educational purposes for use by Qualified Students and/or Qualified 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>The perfect balance of performance and portability; two-spindle system</i>											SOFTWARE¹⁴		
L2 cache	Mobile Intel® Pentium® 4 Processor-M 1.6 or 2.0GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus											Windows XP Pro models		
Memory	512KB / on die (at processor speed) / ECC											- Microsoft® Windows® XP Professional ²⁰		
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive											◇ Disk-to-Disk Recovery (in hidden Service Partition)		
Combo	B1U: DVD-ROM/CD-RW / 8X/8X/24X/8X ²¹ speed / removable from Ultrabay 2000; B2U: DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000											INCLUDED SOFTWARE¹⁴ (all)		
Ultrabay 2000 Disk	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible B1U: 40GB ⁹ 4200 rpm; B2U: 40GB high-speed (HS) 5400 rpm All: removable and upgradable / 9.5mm high bay / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000 / HDD Shock Absorber											Preloaded		
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits easy-open cover to unlatch and open with one hand (two latches)											<ul style="list-style-type: none"> • Access ThinkPad - Access Connections - Access Help - Access Support • Adobe Acrobat Reader • InterVideo WinDVD • IBM Rapid Restore™ PC • PC-Doctor™ • ThinkPad Utilities • Veritas RecordNOW • IBM Update Connector™¹⁵ 		
Graphics controller	ATI® Mobility™ RADEON™ 7500 / AGP 4X / 16MB DDR-SDRAM 364MHz											Downloadable		
Graphics - external	External monitor support via analog DB-15 connector / up to 2048x1536x16.7M colors at 75Hz / DDC2B / supports external digital monitor via the Digital Video Interface (DVI) port on either of the optional docking solutions											<ul style="list-style-type: none"> • IBM Director Agent • Software Delivery Assistant • System MigrationAssistant • IBM Client Security Software (for security chip) 		
Keyboard	87-key / ThinkPad Button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)											License (CD not included)		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Touch pad	UltraNav multi-pointing system / touch pad below keyboard / Tap Zones													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions / no UltraPort™													
Dimensions ³	12.0" x 9.8" x 1.4"; 304mm x 250mm x 36.6mm											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 and Cradle for the WorkPad® c500 Series		
Approximate weight ²	with optical drive and battery: B1U: 5.4 lbs (2.43kg); B2U: 5.5 lbs (2.5kg)													
Case material	Titanium Composite in the top and bottom covers for enhanced strength													
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000													
Battery - life ¹⁰	2.5 hrs													
Architecture	Intel 845MP chipset / 82845MP Memory Controller Hub (MCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth], Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, par, infrared)													
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)													
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1													
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse port (use USB)													
Video out	S-video out port (TV out) / one industry standard connector													
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable													
11b Wi-Fi ³² /mod	Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intel PRO/Wireless LAN with Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset													
CDC	One Communications Daughter Card (CDC) socket / customer accessible													
Modem	One Communications Daughter Card (CDC) socket open													
Bluetooth™	None													
Ethernet	10/100 ethernet on motherboard / Intel 82562ET chipset (physical layer)													
Audio support	Soft audio / ICH AC97 controller / SoundBlaster Pro™-compatible / AD1881A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / line in jack (3.5 mm)													
Security	Power-on password / hard disk password / supervisor password / security keyhole													
Security chip	B2U: 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 - 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	Travel Bezel for Ultrabay 2000	08K6070											
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Removable Diskette Drive	08K9603											
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Portable Drive Bay 2000 (accepts Ultrabay 2000 media and storage devices)	19K4480											
IBM ThinkPad Ultrabay Plus Carrier	22P5737	ThinkPad T30 Series Li-Ion Battery	02K7050											
ThinkPad Ultrabay Plus Numeric Keypad	22P7330	Ultrabay 2000 Li-Ion battery	02K6646											
SuperDisk (LS-240) UltraBay 2000	08K9616	ThinkPad 72W AC Adapter	02K6699											
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad 72W AC/DC Combo Adapter	22P9010											
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	Multiple Li-Ion/NiMH Battery Charger	02K6719											
Ultralight 8X Max DVD Ultrabay 2000	22P9102	20GB Hard Disk 9.5mm (4200 rpm)	08K9686											
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816											
Second HDD Adapter for Ultrabay 2000	08K6068	80GB Hard Disk 9.5mm (4200 rpm)	08K9869											
Other options at ibm.com/pc/us/accessories														
ThinkPad Port Replicator	02K8667													
ThinkPad Dock	263120U													
IBM 11a/b/g Wireless CardBus Adapter	31P9101													
ServicePac ²² 2yr IOR 9x5 NBD	30L9190													
ServicePac 3yr IOR 9x5 NBD	30L9197													
ServicePac 5yr P&L P/U Depot	69P9201													
Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf														

See footnotes for important warranty information
US models announced on April 30 or November 19, 2002
US models withdrawn effective October 2003

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 date
2373-58U	Pentium® M1.3	256MB	14.1"	SXGA+	9000	30G	DVD	Open; wireless upg ³⁶	Modem	Gigabit	Yes	6 XP Pro Mar 2003
2373-14U	Pentium M 1.3	256MB	14.1"	XGA	7500	30G	DVD	Open; wireless upg	Modem	10/100	Yes	6 XP Pro Mar 2003
2373-12U	Pentium M 1.3	256MB	14.1"	XGA	7500	30G	Combo	Open; wireless upg	Modem	10/100	Yes	6 XP Pro Mar 2003
2373-72U	Pentium M 1.5	256MB	14.1"	XGA	7500	40HS	Combo	*Intel 11b Wi-Fi ³²	Modem	Gigabit	Yes	6 XP Pro W G Mar 2003
2373-7CU	Pentium M 1.5	256MB	14.1"	XGA	7500	40HS	Combo	Open; wireless upg	Modem	10/100	Yes	6 XP Pro W G Mar 2003
2373-75U	Pentium M 1.5	256MB	14.1"	XGA	7500	40HS	Combo	Cisco® 802.11b ³²	Modem	Gigabit	Yes	6 XP Pro W G Mar 2003
2373-82U	Pentium M 1.5	256MB	14.1"	XGA	7500	40HS	DVD	*Intel 11b Wi-Fi	Modem	Gigabit	Yes	6 XP Pro W G Mar 2003
2373-85U	Pentium M 1.5	256MB	14.1"	XGA	7500	40HS	DVD	Cisco 802.11b	Modem	Gigabit	Yes	6 XP Pro W Mar 2003
2373-8CU	Pentium M 1.5	256MB	14.1"	XGA	7500	40HS	DVD	Open; wireless upg	Modem	10/100	Yes	6 XP Pro W G Mar 2003
2373-8DU	Pentium M 1.5	256MB	14.1"	XGA	7500	40HS	DVD	Open; wireless upg	Modem	Gigabit	Yes	6 XP Pro W Mar 2003
2373-47U	Pentium M 1.5	512MB	14.1"	XGA	7500	40HS	DVD	*Intel 11b Wi-Fi	Modem	Gigabit	Yes	6 XP Pro W Mar 2003
2373-19U	Pentium M 1.3	256MB	14.1"	XGA	7500	30G	Combo	*Intel 11b Wi-Fi	Modem	10/100	Yes	6 XP Pro Mar 2003
2373-91U	Pentium M 1.6	512MB	14.1"	SXGA+	9000	80G	Combo	Open; wireless upg	Modem	Gigabit	Yes	9 XP Pro Mar 2003
2373-92U	Pentium M 1.6	512MB	14.1"	SXGA+	9000	80G	Combo	11a/b Wi-Fi ²⁷	Mod/Blue	Gigabit	Yes	9 XP Pro Mar 2003
2373-94U	Pentium M 1.6	512MB	14.1"	SXGA+	9000	80G	Combo	*Intel 11b Wi-Fi	Mod/Blue	Gigabit	Yes	9 XP Pro Mar 2003
2373-96U	Pentium M 1.6	512MB	14.1"	SXGA+	9000	80G	Combo	Cisco 802.11b	Mod/Blue	Gigabit	Yes	9 XP Pro Mar 2003

Positioning	Perfect balance of performance and portability; two-spindle system
Processor	Intel® Pentium® M Processor 1.3, 1.5, or 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus
L2 cache	1MB / on die (at processor speed) / ECC
Memory	256 or 512MB standard / 2GB max ⁷ / PC2100 266MHz DDR-SDRAM / 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 80GB (4200 rpm), 9.5mm / removable and upgradable / 9.5mm bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Integrated HDD Shock Absorber
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 controller	Some: ATI® Mobility RADEON® 7500 / AGP 4X / 32MB DDR-SDRAM Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB 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 /
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	6-cell models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm; 9-cell models (WxDxH): 12.2" x 10.9" x 1.0-1.2"; 311mm x 276.8mm x 26.6-31.4mm
Approximate weight ²	with optical drive and battery: 4.9 lbs (2.22 kg)
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 models: 5.5 hr; 9-cell models: 7.5 hr; 9-cell plus Ultrabay Slim battery: 9.5 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]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared, parallel [docking-based ports])
PC Card Std slots	2 Type II, 2 Type III, or 1 Type III / CardBus 32-bit / PCMCIA 2.1
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, Intel 82531 chipset
Cisco 802.11b ³²	Some: 802.11b wireless ⁴ , Mini PCI, Cisco® Aironet® Wireless 802.11b
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 / 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 Some: 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

SOFTWARE¹⁴	
Windows XP Pro models	
- Microsoft® Windows® XP Professional ²⁰	
- Disk-to-Disk Recovery (in hidden protected area)	
Preloaded	
• Access IBM	
- Access Connections	
• Adobe Acrobat Reader	
• IBM Rapid Restore™ PC	
• Veritas RecordNOW (combo mdl)	
• InterVideo WinDVD	
• 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	
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 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	
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
ThinkPad Port Replicator II	74P6733
ThinkPad Mini Dock	287810U
ThinkPad Dock II	287710U
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273
IBM 256MB USB 2.0 Memory Key	22P9025
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	
128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad T40 Li-Ion Battery 6-cell
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	08K8214
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	T40 High Capacity Li-Ion Battery 9-cell
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	08K8197
IBM USB Portable Diskette Drive	05K9276	Ultrabay Slim Li-Polymer Battery 3-cell
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	08K8190
Second HDD Adapter for Ultrabay Slim	62P4554	IBM 11a/b/g Wireless CardBus Adapter
		31P9101
		IBM 11a/b/g Wireless Mini PCI Adapter
		31P9701
		Intel PRO/Wireless 2200BG Mini PCI
		73P2801
		Cisco Aironet Wireless 802.11b Mini PCI
		31P8301

See footnotes for important warranty information * Powered by Intel Centrino™ mobile technology (T40) © IBM Corp. July 2004
US models announced March 12, 2003
US models withdrawn effective January 2004 or July 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	Security chip	Preload	Small business software	Workhorse (W) or Global (G) model	Availability date
2373-7AU	Pentium® M	1.5	256MB	14.1"	XGA 7500	40HS	Combo	Open; wireless upg ³⁶	Modem	10/100		XP Pro Office SB ²⁸	W	Mar 2003	
2373-8AU	Pentium M	1.5	256MB	14.1"	XGA 7500	40HS	DVD	Open; wireless upg	Modem	10/100		XP Pro Office SB	W	Mar 2003	
2373-16U	Pentium M	1.3	256MB	14.1"	XGA 7500	30G	DVD	Open; wireless upg	Modem	10/100		2000		Mar 2003	
2373-BDU	Pentium M	1.5	256MB	14.1"	XGA 7500	40HS	DVD	Open; wireless upg	Modem	Gigabit	Yes	2000		Mar 2003	

- This sheet lists models with Office XP Small Business preinstalled with XP Professional
- This sheet lists models with Windows 2000 preloaded

Positioning Processor	Perfect balance of performance and portability; two-spindle system												SOFTWARE¹⁴		
L2 cache Memory	Intel® Pentium® M Processor 1.3 or 1.5GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus 1MB / on die (at processor speed) / ECC 256MB standard / 2GB max ⁷ / PC2100 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available												Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ⇨ Disk-to-Disk Recovery (in hidden protected area)		
Diskette drive	None standard / use optional USB-based diskette drive												Windows 2000 models - Microsoft® Windows® 2000 Professional ²⁰ • ConfigSafe® ⇨ Disk-to-Disk Recovery (in hidden Service Partition)		
DVD Combo	Some: DVD-ROM / 24X-8X ⁸ speed / bootable / removable from Ultrabay™ Slim												Preloaded(all) • Access IBM • Access Connections • Adobe Acrobat Reader • IBM Rapid Restore™ PC • Veritas RecordNOW (combo mdl) • InterVideo WinDVD • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵		
Ultrabay Slim Disk	Some: DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay Slim One modular bay for interchangeable devices (right side) / 9.5mm high bay 30GB ⁸ (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 Integrated HDD Shock Absorber														
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits												Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant • Client Security Software (security chip model) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Graphics controller	ATI® Mobility RADEON® 7500 / AGP 4X / 32MB 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)												Office XP Small Business models only (2373-7AU and 8AU) - Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ⇨ Office XP Small Business CD		
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	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones														
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³	6-cell models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm														
Approximate weight ²	with optical drive and battery: 4.9 lbs (2.22 kg)														
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover												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 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)		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim														
Battery - life ¹⁰	6-cell models: 5.5 hr; 9-cell High Capacity plus Ultrabay Slim battery: 9.5 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]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared, parallel [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)												- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
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	Wireless upgradable with wireless Mini PCI options														
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												- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Ethernet	Some: 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE Some: 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	Some: IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant												- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
Limited warranty ¹²	3 years/1 yr battery - 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)												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)		
128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad T40 Li-Ion Battery 6-cell	08K8214												
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	T40 High Capacity Li-Ion Battery 9-cell	08K8197												
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190												
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	ThinkPad Multiple Battery Charger II	22P9040												
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699												
IBM USB 2.0 Portable Combo Drive	22P9194	ThinkPad 72W AC/DC Combo Adapter	22P9010												
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101												
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701												
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	Intel PRO/Wireless 2200BG Mini PCI	73P2801												
Second HDD Adapter for Ultrabay Slim	62P4554	Cisco Aironet Wireless 802.11b Mini PCI	31P8301												
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM E400 Projector	0038A04												
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	Kensington® MicroSaver® Security Cable	73P2582												
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Port Replicator II	74P6733												
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Mini Dock	287810U												
IBM USB Keyboard with UltraNav	31P8950	ThinkPad Dock II	287710U												
ThinkPad Premiere Leather Carrying Case	10K0209	ThinkPad Monitor Stand 2001	22P5265												
ThinkPad Carrying Case - Leather	73P3600	IBM MicroPortable Data/Video Projector	0037A02												
Ericsson® GC82 EDGE PC Card Wireless	58P8782	Other options at ibm.com/pc/us/accessories													

See footnotes for important warranty information
US models announced March 12, 2003
US models withdrawn effective January or May 2004

IBM® ThinkPad® T40 (Education) - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	Speed GHz	Memory GB	Screen	Graphics controller	Disk GB ^a	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Ethernet on planar	Battery Security chip	Battery cells	Workhorse (W) or Global (G) model	Avail date	
2373-2AU	Pentium® M	1.3	512MB	14.1" XGA	7500	40HS	Combo	11a/b Wi-Fi ²⁷	Modem	10/100	Yes	6	XP Pro	No	Mar 2003
2373-2CU	Pentium M	1.3	512MB	14.1" XGA	7500	40HS	Combo	*Intel 11b Wi-Fi ³²	Modem	10/100	Yes	6	XP Pro	No	Mar 2003
2373-44U	Pentium M	1.5	512MB	14.1" XGA	7500	40HS	Combo	11a/b Wi-Fi	Modem	10/100	Yes	6	XP Pro	No	Mar 2003
2373-4CU	Pentium M	1.5	512MB	14.1" XGA	7500	40HS	Combo	*Intel 11b Wi-Fi	Modem	10/100	Yes	6	XP Pro	No	Mar 2003
2373-9CU	Pentium M	1.6	512MB	14.1" SXGA+	9000	80G	Combo	11a/b Wi-Fi	Mod/Blue	Gigabit	Yes	6	XP Pro	No	Mar 2003
2373-3CU	Pentium M	1.5	512MB	14.1" SXGA+	9000	40HS	Combo	*Intel 11b Wi-Fi	Modem	Gigabit	Yes	6	XP Pro	No	Jun 2003

These educational models of the ThinkPad T40 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	<i>The perfect balance of performance and portability; two-spindle system</i>													
Processor	Intel® Pentium® M Processor 1.3, 1.5, or 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus													
L2 cache	1MB / on die (at processor speed) / ECC													
Memory	512MB standard / 2GB max ⁷ / PC2100 266MHz DDR-SDRAM / 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													
Combo	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	40GB⁸ HS (5400 rpm) or 80GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Integrated HDD Shock Absorber													
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>													
Graphics controller	<i>Some: ATI® Mobility RADEON® 7500 / AGP 4X / 32MB DDR-SDRAM</i> <i>Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB DDR-SDRAM</i>													
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 /													
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	(WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm													
Approximate weight ²	with optical drive and battery: 4.9 lbs (2.22 kg)													
Case material	Magnesium composite in the top cover, carbon fiber reinforced plastic in bottom cover													
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim													
Battery - life ¹⁰	Up to 4.6 hr; 9-cell High Capacity plus Ultrabay Slim battery: up to 8.9 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®) PCI1520 CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared, parallel [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 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													
11b Wi-Fi ³²	<i>Some: 11b Wi-Fi³² wireless⁴, Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset</i>													
11a/b Wi-Fi ²⁷	<i>Some: 11a/b Wi-Fi²⁷ wireless⁴, Mini PCI, Atheros™ AR5001X chipset</i>													
CDC	One Communications Daughter Card (CDC) socket / customer accessible													
Modem	56K ⁵ V.90 (V.92-designed ²⁸) modem in CDC / Agere® chipset													
Bluetooth™	<i>Some: Bluetooth wireless technology / in CDC (with modem)</i>													
Ethernet	<i>Some: 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE</i> <i>Some: Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE</i>													
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													
128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	30L9190										
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	T40 High Capacity Li-Ion Battery 9-cell	08K8197	30L9190										
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	30L9197										
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	ThinkPad Multiple Battery Charger II	22P9040	69P9198										
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699	69P9198										
IBM Portable USB 2.0 CD-RW Drive	22P5297	ThinkPad 72W AC/DC Combo Adapter	22P9010	69P9200										
CD-RW/DVD Combo Ultrabay Slim Drive	22P7011	IBM 11a/b/g Wireless CardBus Adapter	31P9101	69P9200										
Second HDD Adapter for Ultrabay Slim	62P4554	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	69P9199										
20GB Hard Disk 9.5mm (4200 rpm)	08K9686	Intel PRO/Wireless 2100 3B Mini PCI	31P8601	69P9199										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	Cisco Aironet Wireless 802.11b Mini PCI	31P8301	69P9201										
80GB Hard Disk 9.5mm (4200 rpm)	08K9869	GemPC400 Smart Card Reader/Writer	31P8901	69P9201										
IBM 1GB Microdrive™ with PC Card	07N5574	ThinkPad Port Replicator II	74P6733											
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Mini Dock	287810U											
IBM USB Keyboard with UltraNav	31P8950	ThinkPad Dock II	287710U											
IBM Optical 3-Button Travel Wheel Mouse	31P7410	Other options at ibm.com/pc/us/accessories												

See footnotes for important warranty information
US models announced March 25 or June 17, 2003
US models withdrawn effective October 2003

* Powered by Intel Centrino™ mobile technology

Table with columns: Type-model, Processor, Speed, Memory, Screen, Graphics controller, Disk, Optical, Mini PCI, Comm Bay, wireless, CDC modem/Bluetooth™, Ethernet on planar, Security chip, Preload, TAA-compliant, Workhorse (W) or Global (G) Avail date. Lists models 2373-C3U through 2373-C1U.

• Trade Act Agreement (TAA)-compliant models

Table with two columns: Feature/Specification and Description. Features include Positioning, Processor, L2 cache, Memory, Diskette drive, Display, Graphics controller, Keyboard, Dimensions, Architecture, PC Card Std slots, Ports, Video out, Wireless antenna, Mini PCI, CDC Modem, Ethernet, Audio support, Security, and Security chip.

Table with three columns: Part Number, Description, and Part Number. Lists various components like 128MB PC2100 DDR-SDRAM, IBM USB Portable Diskette Drive, and various adapters and mice.

See footnotes for important warranty information
US models announced March 12, 2003
US models withdrawn effective July 2003

* Powered by Intel Centrino™ mobile technology

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Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁹	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Ethernet on planar	Security chip	Battery cells	Limited Warranty	Avail date
2378-D1U	Pentium® M	1.3	256MB	14.1" XGA	7500	30GB	DVD	Open; wireless upg ³⁶	Modem	10/100	No	6-cell	XP Pro	1 year Jun 2003
2378-D2U	Pentium® M	1.3	256MB	14.1" XGA	7500	30GB	DVD	*Intel 11b Wi-Fi ³²	Modem	10/100	Yes	6-cell	XP Pro	1 year Jun 2003

- 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 T40 2379 models have a 3 year limited warranty)

Positioning Processor	Perfect balance of performance and portability; two-spindle system												
L2 cache	Intel® Pentium® M Processor 1.3GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus												
Memory	1MB / on die (at processor speed) / ECC 256MB standard / 2GB max ⁷ / PC2100 266MHz DDR-SDRAM / 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	DVD-ROM / 24X-8X ⁶ speed / bootable / removable from Ultrabay™ Slim												
Ultrabay Slim	One modular bay for interchangeable devices (right side) / 9.5mm high bay												
Disk	30GB ⁸ (4200 rpm), 9.5mm high / upgradable and removable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Integrated HDD 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 controller	ATI® Mobility RADEON® 7500 / AGP 4X / 32MB 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	6-cell models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm												
Approximate weight ²	with optical drive and battery: 4.9 lbs (2.2 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: 5.0 hr; 9-cell High Capacity plus Ultrabay Slim battery: 9.5 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]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared, parallel [docking-based ports])												
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1												
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, Intel 82531 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™	None												
Ethernet	Some: 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE Some: 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	Some: 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 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)												
128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad T40 Li-Ion Battery 6-cell	08K8214										
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	T40 High Capacity Li-Ion Battery 9-cell	08K8197										
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190										
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	ThinkPad Multiple Battery Charger II	22P9040										
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699										
IBM USB 2.0 Portable Combo Drive	22P9194	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701										
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	Intel PRO/Wireless 2100 3B Mini PCI	31P8601										
Second HDD Adapter for Ultrabay Slim	62P4554	Intel PRO/Wireless 2200BG Mini PCI	73P2801										
20GB Hard Disk 9.5mm (4200 rpm)	08K9686	Cisco Aironet Wireless 802.11b Mini PCI	31P8301										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	iLC300 Conf Room Data/Video Projector	0039A03										
80GB Hard Disk 9.5mm (4200 rpm)	08K9869	GemPC400 Smart Card Reader/Writer	31P8901										
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Port Replicator II	74P6733										
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Mini Dock	287810U										
IBM TrackPoint USB Space Saver Keybrd	22P5150	ThinkPad Dock II	287710U										
IBM Optical 3-Button Travel Wheel Mouse	31P7410	ThinkPad Monitor Stand 2001	22P5265										
Ericsson® GC82 EDGE PC Card Wireless	58P8782	Other options at ibm.com/pc/us/accessories											
SOFTWARE¹⁴													
Windows XP Pro models													
- Microsoft® Windows® XP Professional ²⁰													
↳ Disk-to-Disk Recovery (in hidden protected area)													
Preloaded(all)													
• Access IBM													
- Access Connections													
• Adobe Acrobat Reader													
• IBM Rapid Restore™ PC													
• InterVideo WinDVD													
• 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 (models with 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 PC available to protect software image and data													
International Warranty Service ¹⁷													
24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²													
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
US models announced June 17, 2003
US models withdrawn effective April 2004

* Powered by Intel Centrino™ mobile technology

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IBM® ThinkPad® T40 (2379) - SMB - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

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-D3U	Pentium® M	1.4	256MB	14.1" XGA	7500	30G	Combo	* Intel 11b Wi-Fi ³²	Modem	10/100	Yes	6-cell XP Pro	3 yrs Jun 2003
2379-D4U	Pentium M	1.6	256MB	14.1" XGA	7500	40HS	Combo	* Intel 11b Wi-Fi	Modem	10/100	Yes	6-cell XP Pro	3 yrs Jun 2003
2379-D5U	Pentium M	1.6	512MB	14.1" SXGA+	9000	80G	Combo	11a/b Wi-Fi ²⁷	Mod/Blue	Gigabit	Yes	6-cell XP Pro	3 yrs Jun 2003
2379-D6U	Pentium M	1.4	256MB	14.1" SXGA+	9000	40HS	Combo	* Intel 11b Wi-Fi	Modem	Gigabit	Yes	6-cell XP Pro	3 yrs Jun 2003

- 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 T40 2378 models have a 1 year limited warranty)

Positioning Processor	The perfect balance of performance and portability; two-spindle system											
L2 cache	Intel® Pentium® M Processor 1.4 or 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus											
Memory	1MB / on die (at processor speed) / ECC											
Diskette drive	None standard / use optional USB-based diskette drive											
Combo	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 ³ (4200 rpm), 40GB HS (5400 rpm), or 80GB (4200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / IBM Integrated HDD Shock Absorber											
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 controller	Some: ATI® Mobility RADEON® 7500 / AGP 4X / 32MB DDR-SDRAM Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB DDR-SDRAM											
Graphics - external	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 /											
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	6-cell models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm											
Approximate weight ²	with optical drive and battery: 4.9 lbs (2.22 kg)											
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover											
Battery - type	Lithium Ion 6-cell or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim											
Battery - life ¹⁰	6-cell models: 5.0 hr; Optional 9-cell: 7.5 hr; 9-cell plus Ultrabay Slim battery: 9.5 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]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared, parallel [docking-based ports])											
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1											
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 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											
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 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 / customer accessible											
Modem	56K V.90 (V.92-designed ²³) 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 Some: 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 PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad T40 Li-Ion Battery 6-cell	08K8214	ServicePac ²² 2yr IOR 9x5 NBD	30L9190							
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	T40 High Capacity Li-Ion Battery 9-cell	08K8197	ServicePac 3yr IOR 9x5 NBD	30L9197							
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190	ServicePac 4yr IOR 9x5 NBD	69P9198							
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	ThinkPad Multiple Battery Charger II	22P9040	ServicePac 5yr IOR 9x5 NBD	69P9198							
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699	ServicePac 5yr IOR 9x5 NBD	69P9200							
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad 72W AC/DC Combo Adapter	22P9010	ServicePac 4yr P&L P/U Depot	69P9199							
CD-RW/DVD Combo Ultrabay Slim Drive	22P7011	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 5yr P&L P/U Depot	69P9201							
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	Other ServicePac options at								
Second HDD Adapter for Ultrabay Slim	62P4554	Intel PRO/Wireless 2100 3B Mini PCI	31P8601	ibm.com/services/its/us/source/wamomxeu.pdf								
20GB Hard Disk 9.5mm (4200 rpm)	08K9686	Cisco Aironet Wireless 802.11b Mini PCI	31P8301	Post-warranty annual maintenance agreements at								
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	GemPC400 Smart Card Reader/Writer	31P8901	ibm.com/services/its/us/source/maspspleu.pdf								
80GB Hard Disk 9.5mm (4200 rpm)	08K9869	ThinkPad Port Replicator II	74P6733									
IBM 1GB Microdrive™	07N5574	ThinkPad Mini Dock	287810U									
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Dock II	287710U									
IBM TrackPoint USB Space Saver Keybrd	22P5150	ThinkPad Monitor Stand 2001	22P5265									
IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM MicroPortable Data/Video Projector	0037A02									
IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700	Other options at	ibm.com/pc/us/accessories									

See footnotes for important warranty information
US models announced June 17, 2003
US models withdrawn effective January 2004

* Powered by Intel Centrino™ mobile technology

(T40B3) © IBM Corp. January 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics controller	Disk GB ⁵ and rpm	Optical	Mini PCI Comm Bay wireless	CDC modem/Bluetooth™	Ethernet on planar chip	Battery Securitycells	Workhorse (W) or Global (G) Preload model	Avail date	
2373-G1U	Pentium® M 1.6	512MB	14.1"	SXGA+	9000	40G 5400	Combo	11a/b Wi-Fi ²⁷	Mod/Blue	Gigabit	Yes	9 XP Pro	No	Mar 2003
2373-G3U	Pentium M 1.6	512MB	14.1"	SXGA+	9000	60G 7200	Combo	11a/b Wi-Fi	Mod/Blue	Gigabit	Yes	9 XP Pro	No	Jun 2003
2373-G5U	Pentium M 1.6	512MB	14.1"	SXGA+	9000	60G 7200	Combo*	Intel 11b Wi-Fi ³²	Mod/Blue	Gigabit	Yes	9 XP Pro	No	Jun 2003
Positioning Processor	<i>Perfect balance of performance and portability; two-spindle system</i>													
L2 cache	Intel® Pentium® M Processor 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus													
Memory	1MB / on die (at processor speed) / ECC 512MB standard / 2GB max ⁷ / PC2100 266MHz 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													
Combo	DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay Slim													
Ultrabay Slim Disk	One modular bay for interchangeable devices (right side) / 9.5mm high bay 40GB ⁸ HS (5400 rpm) or 60GB Ultra HS (7200 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with opt HDD Adapter in Ultrabay Slim / IBM Integrated HDD Shock Absorber													
Display	14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits / one latch to unlatch and open with one hand													
Graphics controller	ATI® Mobility FireGL® 9000 / AGP 4X / 64MB 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 / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap													
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	9-cell model (WxDxH): 12.2" x 10.9" x 1.0-1.2"; 311mm x 276.8mm x 26.6-31.4mm													
Approximate weight ²	with optical drive and battery: 4.9 lbs (2.22 kg)													
Case material	Magnesium composite in the top cover, titanium-reinforced carbon fiber reinforced plastic (Ti-CFRP) in bottom cover													
Battery - type	Lithium Ion 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim													
Battery - life ¹⁰	9-cell models: 7.0 hr; 9-cell High Capacity plus Ultrabay Slim battery: 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]) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1520 CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared, parallel [docking-based ports])													
Docking Station	Optional Dock II (includes Ultrabay 2000 and half-size PCI slot) or Mini Dock													
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) / not customer upgradable													
11a/b Wi-Fi ²⁷	Some: 11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset													
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset													
CDC	One Communications Daughter Card (CDC) socket / customer accessible													
Modem	56K ⁵ V.90 (V.92-designed ²⁹) modem in CDC / Agere® 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 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁵ / TCG-compliant													
Limited warranty ¹²	3 years/1 yr battery - 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)													
128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad T40 Li-Ion Battery 6-cell	08K8214											
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	T40 High Capacity Li-Ion Battery 9-cell	08K8197											
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	Ultrabay Slim Li-Polymer Battery 3-cell	08K8190											
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	ThinkPad Multiple Battery Charger II	22P9040											
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699											
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad 72W AC/DC Combo Adapter	22P9010											
IBM USB 2.0 Portable Combo Drive	22P9194	IBM 11a/b/g Wireless CardBus Adapter	31P9101											
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701											
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	Intel PRO/Wireless 2100 3B Mini PCI	31P8601											
Second HDD Adapter for Ultrabay Slim	62P4554	Intel PRO/Wireless 2200BG Mini PCI	73P2801											
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	Cisco Aironet Wireless 802.11b Mini PCI	31P8301											
80GB Hard Disk 9.5mm (4200 rpm)	08K9869	iLC300 Conf Room Data/Video Projector	0039A01											
IBM 4GB Microdrive™ with PC Card	09N4280	GemPC400 Smart Card Reader/Writer	31P8901											
IBM 256MB USB 2.0 Memory Key	22P9025	ThinkPad Port Replicator II	74P6733											
IBM USB Keyboard with UltraNav	31P8950	ThinkPad Mini Dock	287810U											
IBM Optical 3-Button Travel Wheel Mouse	31P7410	ThinkPad Dock II	287710U											
IBM Optical 3-Button ScrollPoint® Mouse	31P7405	Kensington® MicroSaver® Security Cable	73P2582											
IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700	Other options at ibm.com/pc/us/accessories												
SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ⇨ Disk-to-Disk Recovery (in hidden protected area) Preloaded • Access IBM - Access Connections • Adobe Acrobat Reader • IBM Rapid Restore™ PC • Veritas RecordNOW • InterVideo WinDVD • 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 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 PC available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²														
The Ultrabay Slim supports: • standard or optional CD-RW/DVD combo drive • standard 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
US models announced May 27, 2003; previous models on March 12, 2003
US models withdrawn effective April 2004

* Powered by Intel Centrino™ mobile technology

(T40P) © IBM Corp. April 2004

IBM® ThinkPad® T41 (2378) - Express - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

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 Preload	Limited Warranty	Avail date
2378-DEU	Pentium® M 1.4	256MB	14.1"	SXGA+	9000	30GB	DVD	Open; wireless upg ³⁶	Modem	Gigabit	Yes	6	XP Pro 1 yr Oct 2003
2378-DFU	Pentium M 1.4	256MB	14.1"	XGA	7500	40HS	DVD	Open; wireless upg	Modem	Gigabit	Yes	6	XP Pro 1 yr Oct 2003
2378-DGU	Pentium M 1.4	256MB	14.1"	XGA	7500	40HS	Combo	Open; wireless upg	Modem	Gigabit	Yes	6	XP Pro 1 yr Oct 2003
2378-DHU	Pentium M 1.4	256MB	14.1"	XGA	7500	40HS	Combo	* Intel 11b Wi-Fi ³²	Modem	Gigabit	Yes	6	XP Pro 1 yr 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 2378 has a 1 year limited warranty (other ThinkPad T41 2379 models have a 3 year limited warranty) 													
Positioning Processor	Perfect balance of performance and portability; two-spindle system												
L2 cache	Intel® Pentium® M Processor 1.4GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus												
Memory	1MB / on die (at processor speed) / ECC												
Diskette drive	None standard / use optional USB-based diskette drive												
DVD	Some: DVD-ROM / 24X-8X ⁸ 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) 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)												
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 controller	Some: ATI® Mobility RADEON® 7500 / AGP 4X / 32MB DDR-SDRAM Some: ATI Mobility RADEON 9000 / AGP 4X / 32MB 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"; 311 mm x 255 mm x 26.6-31.4 mm												
Approximate weight ²	with optical drive and battery: DFU/DGU/DHU: 4.9 lb (2.2 kg); DEU: 5.0 lb (2.2kg)												
Case material	Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover												
Battery - type	Lithium Ion 6-cell or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim												
Battery - life ¹⁰	6-cell models: 4.7 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												
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 802.11b, Intel 82531 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	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	1 year - EasyServ™ ¹⁹ onsite pickup and delivery courier serv / 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 CD-RW Drive	22P5297	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM USB 2.0 Portable Combo Drive	22P9194	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
CD-RW/DVD Combo II Ultrabay Slim Drive	73P3288	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701										
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270	Intel PRO/Wireless 2200BG Mini PCI	73P2801										
Second HDD Adapter for Ultrabay Slim	62P4554	Cisco Aironet Wireless 802.11b Mini PCI	31P8301										
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	GemPC400 Smart Card Reader/Writer	31P8901										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Port Replicator II	74P6733										
80GB Hard Disk 9.5mm (4200 rpm)	08K9869	ThinkPad Mini Dock	287810U										
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Dock II	287710U										
IBM 256MB USB 2.0 Memory Key	22P9025	Kensington® SecurityCable® Security Cable 73P2582											
IBM Optical 3-Button Travel Wheel Mouse	31P7410	Other options at ibm.com/pc/us/accessories											

SOFTWARE¹⁴

Windows XP Pro models
 - Microsoft® Windows® XP Professional²⁰
 ↗ Disk-to-Disk Recovery (in hidden protected area)

Preloaded(all)
 • Access IBM
 • Access Connections
 • Adobe Acrobat Reader
 • IBM Rapid Restore™ Ultra
 • IBM RecordNOW and IBM Drive Letter Access (combo models)
 • InterVideo WinDVD (combo mdl)
 • 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 Service¹⁷
 24 hour x 7 day¹⁸ toll-free hardware support during the warranty¹²

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
 US models announced October 7, 2003
 US models withdrawn effective July 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™	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 Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ↳ Disk-to-Disk Recovery (in hidden protected area)					
L2 cache Memory	1MB / on die (at processor speed) / ECC 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							Preloadable • 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					
Diskette drive Combo Ultrabay Slim Disk	None standard / use optional USB-based diskette drive DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay™ Slim One modular bay for interchangeable devices (right side) / 9.5mm high bay 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)							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					
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / one latch to unlatch and open with one hand							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 via 800-IBM-SERV (426-7378)					
Graphics Graphics external	ATI® MOBILITY™ RADEON® 7500 / AGP 4X / 32MB DDR1 (DDR-SDRAM) External monitor support via analog DB-15 connector / up to 2048x1536x16.7M at 75Hz							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					
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (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							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					
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	(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 lbs (2.2 kg) Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim 4HU/4KU: 4.7 hr; 4JU: 4.9 hr; <i>Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim batt: 9 hr</i>							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					
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 Ports	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)												
Video out Wireless antenna Mini PCI	S-video out port (TV out) / one 4-pin industry standard connector UltraConnect™ Antenna built into the display cover for optimal wireless signal reception One Mini PCI type III slot (Communications Bay) / customer upgradable 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset												
CDC Modem Bluetooth™ Ethernet Audio support	One Communications Daughter Card (CDC) socket / customer accessible 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset None Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE 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 Security chip	Power-on password / hard disk password / supervisor password / security keyhole IBM Embedded Security Subsystem 2.0 ³³ / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant												
Limited warranty ¹² Service options	3 years /1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service Service upgrades ²² provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)												
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					
Multi-Burner Plus Ultrabay Slim Drive		73P3342		IBM M400 Projector				0037A04					
Second HDD Adapter for Ultrabay Slim		62P4554		IBM E400 Projector				0038A04					
40GB HS Hard Disk 9.5mm (5400 rpm)		08K9816		IBM C400 Projector				0039A04					
60GB HS Hard Disk 9.5mm (5400 rpm)		73P3357		GemPC400 Smart Card Reader/Writer				31P8901					
80GB HS Hard Disk 9.5mm (5400 rpm)		09N4273		ThinkPad Port Replicator II				74P6733					
IBM 4GB Microdrive™ with PC Card		09N4280		ThinkPad Mini Dock				287810U					
IBM USB Travel Keyboard with UltraNav		31P9490		ThinkPad Dock II				287710U					
IBM Optical 3-Button Travel Wheel Mouse		31P7410		ThinkPad Monitor Stand 2001				22P5265					
ThinkPad Nylon Carrying Case		10K0207		Other options at ibm.com/options									

See footnotes for important warranty information
US models announced on October 7, 2003 or April 20, 2004
US models withdrawn effective May 2005

IBM® ThinkPad® X20 - withdrawn

Type-model	Processor	MHz	Memory	Screen	Disk	DVD drive	Communications Bay	Preload	Available
2662-11U	Celeron™	500	64MB	12.1" SVGA	10GB ⁸	opt via UltraBase™ X2 or Dock	modem	Windows 98 SE	Sept 00
2662-12U	Celeron	500	64MB	12.1" SVGA	10GB	option via UltraBase X2 or Dock	modem	Windows 2000	Sept 00
2662-31U	Pentium® III	600	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	modem	Windows 98 SE	Sept 00
2662-32U	Pentium III	600	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	modem	Windows 2000	Sept 00
2662-34U	Pentium III	600	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	Intel® ethernet/modem	Windows 98 SE	Sept 00
2662-35U	Pentium III	600	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	Intel ethernet/modem	Windows 2000	Sept 00
2662-36U	Pentium III	600	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	3Com® ethernet/modem	Windows 98 SE	Sept 00
2662-37U	Pentium III	600	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	3Com ethernet/modem	Windows 2000	Sept 00

Processor	Intel® Mobile Celeron™ 500MHz¹ with 100MHz system bus or Intel Mobile Pentium® III 600MHz with Intel SpeedStep™ technology and 100MHz system bus	WINDOWS 98 PRELOAD¹⁴ <ul style="list-style-type: none"> - Microsoft® Windows® 98 Second Edition • ThinkPad Utilities • ThinkPad Assistant™ • Easy Keys Utility • ConfigSafe® • IBM Update Connector™.15 • Access ThinkPad II • PC-Doctor™ • SystemSoft Card Wizard - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license
L2 cache	Celeron: 128KB / onboard (at processor speed) / ECC Pentium III: 256KB / onboard (at processor speed) / ECC	
Memory	64MB or 128MB standard / 320MB maximum⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / one 144-pin SO-DIMM socket / 64MB on systemboard / 1 socket available on 64MB models; socket occupied by 64MB SO-DIMM in 128MB models	
Diskette drive CD or DVD-ROM UltraBay™ 2000	None standard / 3.5" 1.44MB integrated in optional UltraBase X2 media slice None standard / optional CD or DVD-ROM removable from optional UltraBase X2 Modular bay for interchangeable devices / support for UltraBay™ 2000 devices in optional UltraBase X2 media slice or ThinkPad Dock	
Disk	10GB⁸ or 20GB / user upgradeable / S.M.A.R.T. / ATA-66	WINDOWS 2000 PRELOAD¹⁴ <ul style="list-style-type: none"> - Microsoft Windows 2000 Professional • ThinkPad Utilities • ThinkPad Assistant • Easy Keys Utility • ConfigSafe • IBM Update Connector • Access ThinkPad II • PC-Doctor • SystemSoft Card Wizard - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license
Display	12.1" (308mm) SVGA (800x600) TFT color / Active Matrix / 125 nits or 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits	
Graphics controller Graphics - external	ATI™ Rage™ Mobility M / AGP 2X / 4MB SGRAM / DDC2B External SVGA to 1024x768x16.7 million colors at 75Hz and up to 1600x1200	
Keyboard ThinkLight™ UltraPort™	ThinkPad Button / palm rest / TrackPoint®, Press-to-Select, Internet Scroll Bar Illuminates the keyboard to improve visibility in low-light conditions UltraPort connector on top of display for options such as digital UltraPort Camera	
Dimensions ³	11U/12U: 11" x 8.9" x .94"-1.1"; 279mm x 227mm x 23.8-27.9mm Others: 11" x 8.9" x .98"-1.2"; 279mm x 227mm x 24.9-30.5mm	
Travel weight ² Case material	11U/12U: 3.1 lbs Others: 3.5 lbs Titanium Composite in the top cover for enhanced strength⁴	
Battery - type Battery - life ¹⁰	11U/12U: Lithium Ion 4-cell / intelligent Others: Lithium Ion 6-cell / intelligent 11U/12U: 2.1 hrs Others: 3.8 hrs	
Architecture	Intel 440ZXM AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / Ricoh® R5C476II CardBus controller for PC Card and Compact Flash / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp) Optional ThinkPad Port Replicator	
Port replicator Docking Station Compact Flash slot PC Card Std slot Ports	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) Compact Flash slot / 1 CF+ Type II / supports optional IBM Microdrive One Type II / CardBus 32-bit / PCMCIA 2.1 / no Zoomed Video Two USB (Version 1.1) / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard, mouse or infrared ports	
Video out Communicatns Bay Modem Ethernet/modem	None Communications Bay with Mini PCI IIIb slot / customer accessible Some models: 56K⁶ V.90 Mini PCI modem card / Lucent® chip set Some models: IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem (3Com ethernet chipset / 3Com modem chip set) Some models: IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set	
Audio support	PCI audio / SoundBlaster Pro™ support / CS4281 with CS4297A AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack	
Security	Power-on password / dual hard disk password / supervisor pwrd / security keyhole	
Limited warranty ¹² Service options ²²	3 year - EasyServ™.19 onsite pickup and delivery courier service Optional service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)	
Communication Bay	- 64MB SO DIMM 100MHz NP SDRAM 20L0254 - 128MB SO DIMM 100MHz NP SDRAM 20L0255 - 256MB SO DIMM 100MHz NP SDRAM 33L3069 - 10GB HDD 08K9510 - 20GB HDD 27L3439 - 32GB HDD²³ 08K9511 - Second HDD Adapter for Ultrabay 2000 08K6068 - 1GB Microdrive 07N5574 - UltraBase X2 media slice 08N1180 - ThinkPad Port Replicator 02K8667 - ThinkPad Dock 263110U - ThinkPad X Series Battery (6-cell) 02K6651 - Li-Ion Multiple Battery Charger 02K6643 - ThinkPad 72W AC Adapter 02K6699 - ThinkPad Monitor Stand 00N8222 - IBM UltraPort Camera II 04P6135 - Multi-Port USB Hub 00N8215 - USB Portable Diskette Drive 05K9276	72 watt AC Adapter PC 99-compliant CIM and DMI 2.0 compliant Wired for Management 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM PC Lifecycle Care²¹ provides proactive life cycle management and transition planning tools ENERGY STAR compliant Setup Guide, User's Reference, Windows OS manual Personalized Web-based support International Warranty Service¹⁷ IBM SystemXtra²⁰ 24 hour x 7 day¹⁸ toll-free hardware support during the warranty
Ultrabay 2000 interchangeable accessories	- 8X⁹-3X DVD Ultrabay 2000 Drive 27L3448 - 2X SuperDisk (LS-120) Ultrabay 2000 27L3451 - 24X-10X CD-ROM Ultrabay 2000 Drive 05K9233 - 4X/4X/20X CD-Read/Write Ultrabay 2000 00N8252 - Zip 250MB Ultrabay 2000 Drive 00N8253 - Portable Drive Bay 2000 19K4480	
Wireless connectivity	- IBM High Rate Wireless LAN PC Card 09N9863 - IBM High Rate Wireless LAN Access Point 9085NA2 09N9812	
IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	09N9774	
IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887	
IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887	
IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887	
IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887	

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Models withdrawn effective April 2001 or July 2001

No warranties are expressed or implied in this summary
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Type-model	Processor	MHz	Memory	Screen	Disk	CD or DVD drive	Comm Bay	Preload	Available
2662-41U	Pentium® III	600	64MB	12.1" SVGA	10GB ⁸	opt via UltraBase™ X2 or Dock	modem	98 SE	Apr 2001
2662-42U	Pentium III	600	64MB	12.1" SVGA	10GB	option via UltraBase X2 or Dock	modem	2000	Apr 2001
2662-61U	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	modem	98 SE	Apr 2001
2662-62U	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	modem	2000	Apr 2001
2662-64U	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	Intel® eth/mod	98 SE	Apr 2001
2662-65U	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	Intel eth/mod	2000	Apr 2001
2662-66U	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	3Com® eth/mod	98 SE	Apr 2001
2662-67U	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	3Com eth/mod	2000	Apr 2001
2662-6MU	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	Intel eth/mod	98 SE, Office 2000 SB	Apr 2001
2662-6NU	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	Intel eth/mod	2000, Office 2000 SB	Apr 2001
2662-6HU	Pentium III	700	128MB	12.1" XGA	20GB	option via UltraBase X2 or Dock	Intel eth/mod	2000, Office XP SB	Aug 2001
Processor Intel® Mobile Pentium® III 600MHz with Intel SpeedStep™ technology and 100MHz system bus L2 cache 256KB / onboard (at processor speed) / ECC Memory 64MB or 128MB standard / 320MB or 384MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / one 144-pin SO-DIMM socket / 64MB or 128MB on systemboard / 1 socket available Diskette drive None standard / 3.5" 1.44MB integrated in optional UltraBase X2 media slice CD or DVD-ROM None standard / optional CD or DVD-ROM removable from optional UltraBase X2 UltraBay™ 2000 Modular bay for interchangeable devices / support for UltraBay™ 2000 devices in optional UltraBase X2 media slice or ThinkPad Dock Disk 10GB ⁸ or 20GB / user upgradeable / S.M.A.R.T. / ATA-66 Display 12.1" (308mm) SVGA (800x600) TFT color / Active Matrix / 125 nits or 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits Graphics controller ATI™ Rage™ Mobility M / AGP 2X / 4MB SGRAM / DDC2B Graphics - external External SVGA to 1024x768x16.7 million colors at 75Hz and up to 1600x1200 Keyboard Standard-size ²⁶ keys / 97% size of T Series / pitch: 18.5mm / stroke: 2.5mm / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions UltraPort™ UltraPort connector on top of display for options such as digital UltraPort Camera Dimensions³ 4xx: 11" x 8.9" x .94"-1.1"; 279mm x 227mm x 23.8-27.9mm Travel weight² 4xx: 3.1 lbs Others: 3.5 lbs Case material Titanium Composite in the top cover for enhanced strength ⁴ Battery - type 4xx: Lithium Ion 4-cell / intelligent Others: Lithium Ion 6-cell / intelligent Battery - life¹⁰ 4xx: 2.8 hrs 61U/62U: 4.9 hrs Others: 4.8 hrs Architecture Intel 440ZX AGPset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / Ricoh® R5C476II CardBus controller for PC Card and Compact Flash / AGP 2X for graphics / PCI 2.1 / 32-bit / 33MHz (EIDE, CardBus, audio, USB, ext expansion) / PC97338 Super I/O / ISA (diskette, serial, parallel, infrared, ext exp) Port replicator Optional ThinkPad Port Replicator Media slice Optional UltraBase X2 media slice (see right side) Docking Station Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot) 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 / no Zoomed Video Ports Two USB (Version 1.1) / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard, mouse or infrared ports Video out None Communicatns Bay Communications Bay with Mini PCI IIIB slot / customer accessible Modem Some: 56K ⁶ V.90 Mini PCI modem card / Lucent® chip set Ethernet/modem Some: IBM 10/100 Ethernet Mini PCI Adapter with 56K Modem (3Com ethernet chipset / 3Com modem chip set) Audio support Some: Intel PRO/100 SP Mobile Combo Adapter / Mini PCI ethernet with 56K modem / Intel 82550EY ethernet chipset / Lucent modem chipset Security PCI audio / SoundBlaster Pro™ support / CS4281 with CS4297A AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack Limited warranty*¹² Power-on password / dual hard disk password / supervisor pwr / security keyhole Service options²² 3 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service Optional service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period) Communication Bay - IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem by 3Com 09N9774 - Intel Pro/100 SP Mini PCI Adapter with 56K modem 06P3801 Ultrabay 2000 interchangeable accessories - 8X ⁹ -3X DVD Ultrabay 2000 Drive 27L3448 - 2X SuperDisk (LS-120) Ultrabay 2000 27L3451 - 24X-10X CD-ROM Ultrabay 2000 Drive 05K9233 - 8X/4X/24X CD-RW Ultrabay 2000 08K9569 - Zip 250MB Ultrabay 2000 Drive 00N8253 - Portable Drive Bay 2000 19K4480 - CD-RW/DVD Combo Ultrabay 2000 Drive 08K9572 Wireless connectivity - IBM H Rate Wireless LAN PC Card 128 09N9904 - IBM H R Wireless LAN Access Pt 500 09N9906 - Bluetooth™ PC Card 09N9812 Other features - 64MB SO DIMM 100MHz NP SDRAM 20L0254 - 128MB SO DIMM 100MHz NP SDRAM 20L0255 - 256MB SO DIMM 100MHz NP SDRAM 33L3069 - 10GB HDD 08K9510 - 20GB HDD 27L3439 - 32GB HDD ²³ 08K9511 - Second HDD Adapter for Ultrabay 2000 08K6068 - 1GB Microdrive 07N5574 - UltraBase X2 media slice 08N1180 - ThinkPad Port Replicator 02K8667 - Enhanced ThinkPad Dock 263120U - ThinkPad X Series Battery (6-cell) 02K6651 - Li-Ion Multiple Battery Charger 02K6643 - ThinkPad 72W AC Adapter 02K6699 - ThinkPad Monitor Stand 2001 22P5265 - IBM UltraPort Camera II 04P6135 - Multi-Port USB Hub 00N8215 - USB Portable Diskette Drive 05K9276 - Portable DVD-ROM Drive 22P5282 72 watt AC Adapter PC 99-compliant CIM and DMI 2.0-compliant Wired for Management (WfM) 2.0 Local and remote asset management via the IBM Universal Manageability solutions IBM PC Lifecycle Care²¹ Personalized Web-based support International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free hardware support during the warranty								WINDOWS 98 PRELOAD^{14, 27} - Microsoft® Windows® 98 Second Edition - Some: Microsoft Office 2000 Small Business (Word, Excel, Outlook, Publisher, Small Business Tools) • ThinkPad Utilities • ThinkPad Assistant™ • Universal Manageability Svcs (web) • ConfigSafe® • IBM Update Connector™ ¹⁵ • Access ThinkPad II • PC-Doctor™ • SystemSoft Card Wizard - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license ↔ Some: Office 2000 Small Bus CD ↔ Disk-to-Disk Recovery (in hidden Service Partition) WINDOWS 2000 PRELOAD^{14, 27} - Microsoft Windows 2000 Professional - Some: Microsoft Office 2000 or XP Small Business ²⁸ • ThinkPad Utilities • ThinkPad Assistant • Universal Manageability Svcs (web) • ConfigSafe • IBM Update Connector • Access ThinkPad II • PC-Doctor • SystemSoft Card Wizard - Lotus SmartSuite Millennium and Lotus Notes Client 5.0 license ↔ Some: Office 2000 Small Bus CD ↔ Some: Office XP Small Bus CD ↔ Disk-to-Disk Recovery (in hidden Service Partition) ULTRABASE X2 MEDIA SLICE OPTION Left bay of UltraBase X2 supports most Ultrabay 2000 options: • optional CD-ROM, CD-RW, DVD-ROM, LS-120 SuperDisk, Zip 250MB, CD-RW/DVD Combo • optional HDD adapter; for 2nd disk UltraBase X2 right bay contains: • standard diskette drive (not removable) Other features • stereo speakers (1 watt) • security keyhole, UltraBase lock • Serial and parallel ports • Keyboard / mouse port	

* For a copy of IBM's Statement of Limited Warranty, call 1-800-772-2227
US model announced August 7, 2001; others on March 20, 2001
US models withdrawn effective November 2001 or January 2001

No warranties are expressed or implied in this summary
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Type-model	Processor	MHz	Memory	Screen	Disk	Optical	Mini PCI Comm Bay	CDC ethernet	Security Chip	Preload	Small business software	Workhorse or Global model	Avail date
2662-9MU	Pentium® III	800	128MB	12.1" XGA	20GB ⁸	None	Modem	10/100		Windows® XP Pro	Office XP SB		Oct 2001
2662-9NU	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100		Windows 2000	Office XP SB		Oct 2001
2662-9BU	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100		Windows XP Pro		W	Oct 2001
2662-9AU	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100		Windows XP Pro		W	Oct 2001
2662-9EU	Pentium III	800	128MB	12.1" XGA	20GB	None	Wi-Fi ³² /mod	10/100		Windows XP Pro		W	Oct 2001
2662-9GU	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100	Yes	Windows XP Pro		W	Oct 2001
2662-8BU	Pentium III	733	128MB	12.1" XGA	10GB	None	Modem	10/100		Windows XP Pro			Oct 2001
2662-85U	Pentium III	733	128MB	12.1" XGA	10GB	None	Modem	10/100		Windows 2000			Oct 2001
2662-9DU	Pentium III	800	128MB	12.1" XGA	20GB	None	Wi-Fi/mod	10/100		Windows 2000		W	Oct 2001
2662-97U	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100	Yes	Windows 2000		W	Oct 2001
2662-95U	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100		Windows 2000		W G	Oct 2001
2662-92U	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100		Windows 2000		W	Oct 2001
2662-9PU*	Pentium III	800	256MB	12.1" XGA	20GB	None	Modem	10/100		Windows 2000		W G	Dec 2001

Positioning Processor	<i>Extra-light, extra-small ultraportable notebook; one spindle</i>										
L2 cache	Mobile Intel® Pentium® III Processor-M 733 or 800MHz with enhanced Intel SpeedStep™ technology¹ and 133MHz frontside bus										
Memory	512KB / on die (at processor speed) / ECC										
Diskette drive	None standard / 3.5" 1.44MB integrated in optional UltraBase™ X2 media slice										
CD or DVD-ROM	None standard / optional optical drive removable from optional UltraBase X2										
Ultrabay™ 2000	Supports Ultrabay 2000 devices in optional Ultrabase X2 media slice or ThinkPad Dock										
Disk	10GB⁸ or 20GB / 4200 rpm / user upgradeable / S.M.A.R.T. / ATA-100										
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										
Graphics controller	ATI™ Rage™ Mobility RADEON M6 / AGP 4X / 8MB DDR-SDRAM / DDC2B										
Graphics - external	External monitor to 1024x768 with 16.7 million colors at 100Hz and up to 1600x1200										
Keyboard	Standard-size ²⁶ keys / 97% size of T Series / 85-key / 18.5mm pitch; 2.5mm stroke / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar										
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										
Dimensions ³	11" x 8.9" x .98"-1.2"; 279mm x 227mm x 25-30.2mm										
Travelweight ²	with battery: <i>8xx</i> : 3.4 lbs (1.54kg); <i>9Ex/9Dx</i> : 3.7 lbs (1.68kg); <i>Others</i> : 3.6 lbs (1.64kg)										
Case material	Titanium Composite in the top cover for enhanced strength ⁴										
Battery - type	<i>8xx</i> : Lithium Ion 4-cell / intelligent										
Battery - life ¹⁰	<i>Others</i> : Lithium Ion 6-cell / intelligent										
Architecture	<i>8xx</i> : 2.7 hrs; <i>802.11b models</i> : 4.4 hrs; <i>Modem only</i> : 5.0 hrs; <i>Others</i> : 4.6 hrs										
Port replicator	Optional ThinkPad Port Replicator										
Media slice	Optional UltraBase X2 media slice (see right side)										
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
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 / no Zoomed Video										
Ports	Two USB (version 1.1) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / <i>some</i> : RJ-45 (ethernet) / no serial, parallel, keyboard, or mouse ports										
Video out	None										
Mini PCI	One Mini PCI IIIa slot (Communications Bay) / customer upgradeable										
CDC	One Communications Daughter Card (CDC) socket / not customer accessible										
Modem	<i>Some</i> : 56K ⁶ V.90 (V.92-designed ²⁹) Mini PCI modem card / Lucent® chip set										
Wi-Fi ³² /modem	<i>Some</i> : Mini PCI Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, diversity antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 ²⁹ modem combo, Lucent® chipset										
Ethernet	<i>Some</i> : 10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset										
Audio support	SoundBlaster Pro™-compatible / CS4299 AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack										
Security	Power-on password / dual hard disk password / supervisor pwr / security keyhole										
Security chip	<i>Some</i> : IBM Embedded Security Subsystem ³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶										
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service										
Service options ²²	Optional service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										

SOFTWARE¹⁴

Windows XP Pro models

- Microsoft® Windows® XP Professional
- ↔ Disk-to-Disk Recovery (in hidden Service Partition)

Windows 2000 models

- Microsoft Windows 2000 Professional¹³
- ↔ Disk-to-Disk Recovery (in hidden Service Partition)

INCLUDED SOFTWARE¹⁴ (all)

Preloaded

- Access ThinkPad
- Access Connections
- Access Help
- ConfigSafe[®]
- PC-DocTor™
- ThinkPad Utilities

Downloadable

- IBM Rapid Restore™ PC
- IBM Data Transfer
- Universal Manageability Services™
- IBM Update Connector™¹⁵
- Client Security Software (for security chip)

License

- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0

Office XP Small Business models only

- Microsoft Office XP Small Business²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)
- ↔ Office XP Small Business CD

ULTRABASE X2 MEDIA SLICE OPTION

Left bay of UltraBase X2 supports most Ultrabay 2000 options:

- Optional CD-ROM, CD-RW, DVD-ROM, LS-120/240 SuperDisk, Zip 250MB, CD-RW/DVD Combo
- Optional HDD adapter; for 2nd disk

UltraBase X2 right bay contains:

- Standard diskette drive (fixed)

Other features

- Stereo speakers (1 watt)
- Security keyhole, UltraBase lock
- Serial and parallel ports
- Keyboard/mouse port

56 watt AC Adapter

PC 2001-compliant

CIM and DMI 2.0-compliant

Wired for Management (WfM) 2.0

Local and remote asset management via the IBM Universal Manageability solutions

Setup Guide, Service and Troubleshooting Guide, Windows manual

IBM ImageUltra Services available

IBM Rapid Restore PC available to protect software image and data

Personalized Web-based support

International Warranty Service¹⁷

24 hour x 7 day¹⁸ toll-free hardware support during the warranty

64 MB SO DIMM	133MHz NP SDRAM	19K4650	UltraBase X2 media slice	08N1180
128 MB SO DIMM	133MHz NP SDRAM	19K4652	ThinkPad Port Replicator	02K8667
256 MB SO DIMM	133MHz NP SDRAM	19K4654	ThinkPad Dock	263120U
512 MB SO DIMM	133MHz NP SDRAM	19K4656	ThinkPad X20 Series Li-Ion Battery (6-cell)	02K6651
USB Portable Diskette Drive		05K9276	Multiple Li-Ion/NiMH Battery Charger	02K6719
Portable DVD-ROM Drive		22P5282	ThinkPad Ultraportable 56W AC Adapter	02K6880
Portable Drive Bay 2000		19K4480	ThinkPad 72W AC Adapter	02K6699
Ultrabay 2000 interchangeable accessories:			IBM USB Serial Parallel Adapter	22P5298
SuperDisk (LS-240)	UltraBay 2000	08K9616	UltraPort Camera II	04P6135
Zip 250MB	UltraBay 2000 Drive	00N8253	UltraPort Compact Flash Reader	19K4510
24X-10X CD-ROM	UltraBay 2000 Drive	05K9233	10/100 Enet/56K Mini PCI (3Com)	09N9774
8X/4X/24X Max CD-RW	UltraBay 2000	08K9569	10/100 EtherJet™ CardBus Adapter	08K9687
8X-3X DVD	UltraBay 2000 Drive	27L3448	15GB HDD	08K9588
CD-RW/DVD Combo	UltraBay 2000	08K9572	40GB HDD	08K9687
Travel Bezel for Ultrabay 2000		08K6070	48GB HDD (5400 rpm) ²³	08K9600
Second HDD Adapter for Ultrabay 2000		08K6068	ServicePac [®] , ²² 2yr IOR 9x5 NBD	30L9190
			ServicePac 3yr IOR 9x5 NBD	30L9197

See footnotes for important warranty information; * Special ordering only
US models announced October 9 or November 27, 2001
US models withdrawn effective April 2002 or July 2002

Type-model	Processor	MHz	Memory	Screen	Disk	Optical	Mini PCI Comm Bay	CDC: ethernet or Bluetooth™	Security Chip	Preload	Workhorse or Global model	Avail date
2662-DBU	Pentium® III	800	128MB	12.1" XGA	20GB ⁸	None	Modem	10/100		Windows® XP Pro		Jan 2002
2662-D5U	Pentium III	800	128MB	12.1" XGA	20GB	None	Modem	10/100		Windows 2000		Jan 2002
2662-EBU	Pentium III	866	128MB	12.1" XGA	30GB	None	Modem	10/100		Windows XP Pro	W G	Jan 2002
2662-EEU	Pentium III	866	128MB	12.1" XGA	30GB	None	11b Wi-Fi ³² /modem	10/100		Windows XP Pro	W G	Jan 2002
2662-ELU	Pentium III	866	128MB	12.1" XGA	30GB	None	10/100/modem	Bluetooth		Windows XP Pro	W	Jan 2002
2662-EGU	Pentium III	866	128MB	12.1" XGA	30GB	None	11b Wi-Fi/modem	10/100	Yes	Windows XP Pro	W	Jan 2002
2662-E5U*	Pentium III	866	128MB	12.1" XGA	30GB	None	Modem	10/100		Windows 2000	W G	Jan 2002
2662-EDU	Pentium III	866	128MB	12.1" XGA	30GB	None	11b Wi-Fi/modem	10/100		Windows 2000	W G	Jan 2002
2662-E6U	Pentium III	866	128MB	12.1" XGA	30GB	None	10/100/modem	Bluetooth		Windows 2000	W	Jan 2002
2662-E7U	Pentium III	866	128MB	12.1" XGA	30GB	None	11b Wi-Fi/modem	10/100	Yes	Windows 2000	W	Jan 2002

Positioning Processor	<i>Extra-light, extra-small ultraportable notebook; one spindle</i>										
L2 cache	Mobile Intel® Pentium® III Processor-M 800 or 866MHz with enhanced Intel SpeedStep™ technology¹ and 133MHz frontside bus										
Memory	512KB / on die (at processor speed) / ECC 128MB std / 640MB max ⁷ / SDRAM / non-parity / 133MHz / PC133 / 3.3v / one 144-pin SO-DIMM socket / 128MB integrated / 1 socket avail (128MB models)										
Diskette drive	None standard / 3.5" 1.44MB integrated in optional UltraBase™ X2 media slice										
CD or DVD-ROM	None standard / optional optical drive removable from optional UltraBase X2										
Ultrabay™ 2000	Supports Ultrabay 2000 devices in optional Ultrabase X2 media slice or ThinkPad Dock										
Disk	20GB⁸ or 30GB / 4200 rpm / user upgradable / S.M.A.R.T. / ATA-100										
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										
Graphics controller	ATI™ Rage™ Mobility RADEON M6 / AGP 4X / 8MB DDR-SDRAM / DDC2B										
Graphics - external	External monitor to 1024x768 with 16.7 million colors at 100Hz and up to 1600x1200										
Keyboard	Standard-size ²⁶ keys / 97% size of T Series / 85-key / 18.5mm pitch; 2.5mm stroke / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³										
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										
Dimensions ³	11" x 8.9" x .98"-1.2"; 279mm x 227mm x 25-30.2mm										
Travel weight ²	with battery: <i>Dxx</i> : 3.2 lbs; <i>E5x/EBx</i> : 3.5 lbs; <i>Others</i> : 3.6 lbs										
Case material	Titanium Composite in the top cover for enhanced strength										
Battery - type	<i>Dxx</i> : Li-Ion 4-cell / intelligent; <i>Exx</i> : Li-Ion 6-cell / intelligent										
Battery - life ¹⁰	<i>Dxx</i> : 2.7 hrs; <i>802.11b/Bluetooth models</i> : 4.4 hrs; <i>Others</i> : 4.6 hrs										
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB [Bluetooth]) / Intel 82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (Ricoch® R5C476II CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87391 Super I/O for infrared [dock-based diskette, serial, parallel])										
Port replicator	Optional ThinkPad Port Replicator										
Media slice	Optional UltraBase X2 media slice (see right side)										
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										
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										
Ports	Two USB (version 1.1) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard, or mouse ports										
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										
Modem	<i>Some</i> : 56K ⁶ V.90 (V.92-designed ²⁹) Mini PCI modem card / Lucent® chip set										
Wi-Fi ³² /modem	<i>Some</i> : Mini PCI Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 ²⁹ modem combo, Lucent® chipset										
10/100/modem	<i>Some</i> : 10/100 ethernet, 56K ⁶ V.90 modem combo Mini PCI card / IP Sec / Intel chipset										
CDC	One Communications Daughter Card (CDC) socket / not customer accessible										
Ethernet	<i>Some</i> : 10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset										
Bluetooth™	<i>Some</i> : Bluetooth wireless technology / on CDC / power button near keyboard										
Audio support	SoundBlaster Pro™-compatible / CS4299 AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal microphone / mic in / line in / headphone out										
Security	Power-on password / dual hard disk password / supervisor pwd / security keyhole										
Security chip	<i>Some</i> : IBM Embedded Security Subsystem³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶										
Limited warranty ¹²	3 years /1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service										
Service options ²²	Optional service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)										
64 MB SO DIMM	133MHz NP SDRAM	19K4650	UltraBase X2 media slice	08N1180							
128 MB SO DIMM	133MHz NP SDRAM	19K4652	ThinkPad Port Replicator	02K8667							
256 MB SO DIMM	133MHz NP SDRAM	19K4654	ThinkPad Dock	263120U							
512 MB SO DIMM	133MHz NP SDRAM	19K4656	ThinkPad X20 Series Li-Ion Battery (6-cell)	02K6651							
USB Portable Diskette Drive		05K9276	Multiple Li-Ion/NiMH Battery Charger	02K6719							
Portable CD-RW Drive		22P5297	ThinkPad Ultraportable 56W AC Adapter	02K6880							
Portable Drive Bay 2000		19K4480	ThinkPad 72W AC Adapter	02K6699							
IBM USB Serial Parallel Adapter			IBM USB Serial Parallel Adapter	22P5298							
IBM UltraPort Camera II			IBM UltraPort Camera II	04P6135							
IBM IEEE 1394 CardBus Card			IBM IEEE 1394 CardBus Card	19K5679							
IBM 32MB USB Memory Key			IBM 32MB USB Memory Key	22P5296							
20GB Hard Disk 9.5mm (4200 rpm)			20GB Hard Disk 9.5mm (4200 rpm)	08K9686							
40GB HS Hard Disk 9.5mm (5400 rpm)			40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816							
80GB Hard Disk 9.5mm (4200 rpm)			80GB Hard Disk 9.5mm (4200 rpm)	08K9869							
ServicePac ²² 2yr IOR 9x5 NBD			ServicePac ²² 2yr IOR 9x5 NBD	30L9190							
ServicePac 3yr IOR 9x5 NBD			ServicePac 3yr IOR 9x5 NBD	30L9197							
Other options at ibm.com/pc/us/accessories											
56 watt AC Adapter											
PC 2001-compliant											
CIM and DMI 2.0-compliant											
Local and remote asset management via the IBM Universal Manageability solutions											
Setup Guide, Service and Troubleshooting Guide, Windows manual											
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 hardware support during the warranty ¹²											

See footnotes for important warranty information

US models announced January 23, 2002; US models withdrawn effective July 2002 or July 2003

* Special ordering only

Type-model	Processor	GHz	Memory	Screen	Disk	Optical	Mini PCI wireless/modem or Bluetooth™	CDC: ethernet or Bluetooth™	Security Chip	Preload	Workhorse or Global model	Avail date
2662-MPU	Pentium® III-M	1.13	256MB	12.1" XGA	30GB ⁸	None	Modem	10/100		Windows® 2000	W G	May 2002
2662-MXU	Pentium III-M	1.13	256MB	12.1" XGA	30GB	None	11b Wi-Fi ³² /modem	10/100	Yes	Windows 2000	W G	May 2002
2662-M6U	Pentium III-M	1.13	256MB	12.1" XGA	30GB	None	10/100/modem	Bluetooth		Windows 2000	W	May 2002
2662-MQU	Pentium III-M	1.13	256MB	12.1" XGA	30GB	None	Modem	10/100		Windows XP Pro	W G	May 2002
2662-MWU	Pentium III-M	1.13	256MB	12.1" XGA	30GB	None	11b Wi-Fi/modem	10/100	Yes	Windows XP Pro	W G	May 2002
2662-MLU	Pentium III-M	1.13	256MB	12.1" XGA	30GB	None	10/100/modem	Bluetooth		Windows XP Pro	W	May 2002
Positioning Processor	<i>Extra-light, extra-small ultraportable notebook; one spindle</i>										SOFTWARE¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ◇ Disk-to-Disk Recovery (in hidden Service Partition) Windows 2000 models - Microsoft Windows 2000 Professional ²⁰ • ConfigSafe® ◇ Disk-to-Disk Recovery (in hidden Service Partition) INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Help - Access Support • PC-Doctor™ • ThinkPad Utilities Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • IBM Director Agent • IBM Update Connector™ ¹⁵ • IBM Client Security Software (for security chip) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0	
L2 cache	Mobile Intel® Pentium® III Processor-M 1.13GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus											
Memory	512KB / on die (at processor speed) / ECC 256MB std / 640MB max ⁷ / SDRAM / non-parity / 133MHz / PC133 / 3.3v / one 144-pin SO-DIMM socket / 128MB integrated / 128MB SO-DIMM in 1 socket (none avail)											
Diskette drive	None standard / 3.5" 1.44MB integrated in optional UltraBase™ X2 media slice											
CD or DVD-ROM	None standard / optional optical drive removable from optional UltraBase X2											
Ultrabay™ 2000	Supports Ultrabay 2000 devices in optional Ultrabase X2 media slice or ThinkPad Dock											
Disk	30GB ⁸ / 4200 rpm / user upgradable / S.M.A.R.T. / ATA-100											
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											
Graphics controller	ATI™ Rage™ Mobility RADEON M6MC / AGP 4X / 8MB DDR-SDRAM / DDC2B											
Graphics - external	External monitor to 1024x768 with 16.7 million colors at 100Hz and up to 1600x1200											
Keyboard	Standard-size ²⁶ keys / 97% size of T Series / 85-key / 18.5mm pitch; 2.5mm stroke / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera											
Dimensions ³	11" x 8.9" x .98"-1.2"; 279mm x 227mm x 24.9-30.2mm											
Travel weight ²	with battery: <i>Wi-Fi/Bluetooth models</i> : 3.7 lbs (1.69 kg); <i>Others</i> : 3.6 lbs (1.64 kg)											
Case material	Titanium Composite in the top cover for enhanced strength											
Battery - type	Li-Ion 6-cell / intelligent											
Battery - life ¹⁰	<i>Wi-Fi/Bluetooth models</i> : 4.0 hrs; <i>Others (MPU/MQU)</i> : 4.1 hrs											
Architecture	Intel 830MP chipset / 82830MP Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, Low Pin Count (LPC) interface, USB [Bluetooth]) / Intel 82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (Ricoch® R5C476II CardBus controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87391 Super I/O for infrared [dock-based diskette, serial, parallel])											
Port replicator	Optional ThinkPad Port Replicator											
Media slice	Optional UltraBase X2 media slice (see right side)											
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)											
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											
Ports	Two USB (version 1.1) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard, or mouse ports											
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable											
Modem	<i>Some</i> : 56K ⁶ V.90 (V.92-designed ²⁹) Mini PCI modem card / Lucent® chip set											
11b Wi-Fi ³² /mod	<i>Some</i> : Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Lucent® chipset											
10/100/modem	<i>Some</i> : 10/100 ethernet, 56K ⁶ V.90 (V.92-designed ²⁹) modem combo Mini PCI card / IP Sec / Intel chipset											
CDC	One Communications Daughter Card (CDC) socket / not customer accessible											
Ethernet	<i>Some</i> : 10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset											
Bluetooth	<i>Some</i> : Bluetooth wireless technology / on CDC / power button near keyboard											
Audio support	SoundBlaster Pro™-compatible / CS4299 AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal microphone / mic in / line in / headphone out											
Security	Power-on password / dual hard disk password / supervisor pwd / security keyhole											
Security chip	<i>Some</i> : IBM Embedded Security Subsystem ³³ / hardware key storage / multi-factor authentication / enhances VPN security ¹⁶											
Limited warranty ¹²	3 years/1 year battery - EasyServ™ ¹⁹ onsite pickup and delivery courier service											
Service options ²²	Optional service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)											
64 MB SO DIMM	133MHz NP SDRAM		19K4650	UltraBase X2 media slice		08N1180	56 watt AC Adapter					
128 MB SO DIMM	133MHz NP SDRAM		19K4652	ThinkPad Port Replicator		02K8667	PC 2001-compliant					
256 MB SO DIMM	133MHz NP SDRAM		19K4654	ThinkPad Dock		263120U	CIM and DMI 2.0-compliant					
512 MB SO DIMM	133MHz NP SDRAM		19K4656	ThinkPad X20 Series Li-Ion Battery (6-cell)		02K6651	Setup Guide, Service and Troubleshooting Guide, Windows manual					
USB Portable Diskette Drive			05K9276	Multiple Li-Ion/NiMH Battery Charger		02K6719	IBM ImageUltra™ Services available					
Portable CD-RW Drive			22P5297	ThinkPad Ultraportable 56W AC Adapter		02K6880	IBM Rapid Restore PC available to protect software image and data					
Portable Drive Bay 2000			19K4480	ThinkPad 72W AC Adapter		02K6699	International Warranty Service ¹⁷					
Ultrabay 2000 interchangeable accessories:				IBM USB Serial Parallel Adapter		22P5298	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²					
SuperDisk (LS-240) UltraBay 2000			08K9616	IBM UltraPort Camera II		04P6135						
Zip 250MB Ultrabay 2000 Drive			00N8253	IBM IEEE 1394 CardBus Card		19K5679						
24X-10X CD-ROM Ultrabay 2000 Drive			05K9233	IBM 32MB USB Memory Key		22P5296						
8X/4X/24X Max CD-RW Ultrabay 2000			22P9101	20GB Hard Disk 9.5mm (4200 rpm)		08K9686						
Ultralight 8X Max DVD Ultrabay 2000			22P9102	40GB HS Hard Disk 9.5mm (5400 rpm)		08K9816						
CD-RW/DVD Combo III Ultrabay 2000			22P6980	80GB Hard Disk 9.5mm (4200 rpm)		08K9869						
Travel Bezel for Ultrabay 2000			08K6070	ServicePac®, 2yr IOR 9x5 NBD		30L9190						
256 HDD Adapter for Ultrabay 2000			08K6068	ServicePac 3yr IOR 9x5 NBD		30L9197						
				Other options at ibm.com/pc/us/accessories								

See footnotes for important warranty information
US models announced April 23, 2002
US models withdrawn effective July 2003

IBM® ThinkPad® X30 - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory ¹¹	Screen	Disk	Optical	Mini PCI wireless/modem	CDC: modem or Bluetooth™	Security Chip	Ethernet planar	Workhorse or Global model	Avail date
2672-42U	Pentium® III-M	1.20	256MB	12.1" XGA	40GB ⁸	None	Open	Modem	Yes	10/100	W G	Sep 2002
2672-4BU	Pentium III-M	1.20	256MB	12.1" XGA	40GB	None	11b Wi-Fi ³² /modem	None	Yes	10/100	W G	Sep 2002
2672-4HU	Pentium III-M	1.20	256MB	12.1" XGA	40GB	None	11b Wi-Fi/modem	Bluetooth	Yes	10/100	W	Sep 2002
2672-41U	Pentium III-M	1.20	256MB	12.1" XGA	40GB	None	Open	Modem	Yes	10/100	W	Sep 2002
2672-4AU	Pentium III-M	1.20	256MB	12.1" XGA	40GB	None	11b Wi-Fi/modem	None	Yes	10/100	W	Sep 2002
2672-4GU	Pentium III-M	1.20	256MB	12.1" XGA	40GB	None	11b Wi-Fi/modem	Bluetooth	Yes	10/100	W	Sep 2002
2672-4XU	Pentium III-M	1.20	256MB	12.1" XGA	40GB	None	Cisco 802.11b	Modem	Yes	10/100	W	Sep 2002
2672-12U	Pentium III-M	1.06	128MB	12.1" XGA	20GB	None	Open	Modem	Yes	10/100	W	Sep 2002
2672-1BU	Pentium III-M	1.06	128MB	12.1" XGA	20GB	None	11b Wi-Fi/modem	None	Yes	10/100	W	Sep 2002
2672-11U	Pentium III-M	1.06	128MB	12.1" XGA	20GB	None	Open	Modem	Yes	10/100	W	Sep 2002
2672-1AU	Pentium III-M	1.06	128MB	12.1" XGA	20GB	None	11b Wi-Fi/modem	None	Yes	10/100	W	Sep 2002
Positioning Processor	<i>Extra-light, extra-small ultraportable notebook; one spindle</i> Mobile Intel® Pentium® III Processor-M 1.06 or 1.20GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus											
L2 cache Memory	512KB / on die (at processor speed) / ECC											
Diskette drive CD or DVD-ROM Ultrabay™ 2000 Disk	None standard / use optional Ultrabay™-based (in opt X3) or USB-based diskette drive None standard / optional optical drive removable from optional X3 UltraBase Supports Ultrabay 2000 devices in optional X3 Ultrabase media slice or ThinkPad Dock 20 or 40GB⁸ / 4200 rpm / user upgradable / S.M.A.R.T. / ATA-100 / 9.5mm tall											
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											
Graphics controller	Intel 830MG Integrated Direct AGP 3D / Unified Memory Architecture / in GMCH / controller dynamically allocates 8 to 32MB ¹¹ of system memory for graphics											
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, or 1600x1200											
Keyboard	Standard-size ²⁶ keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions ³	10.7" x 8.8" x .98"-1.19" ; 273mm x 223mm x 24.9-30.2mm											
Travel weight ²	with battery: 3.6 lbs to 3.7 lbs (1.62 to 1.66 kg)											
Case material	Titanium Composite in the top cover / magnesium alloy bottom case											
Battery - type	Li-Ion 6-cell / intelligent (also supports opt Extended Life Battery and Ultrabay battery)											
Battery - life ¹⁰	<i>Non-wireless</i> : 5.0 hrs; <i>Intel wireless</i> : 4.6 hrs; <i>Cisco wireless</i> : 4.5 hrs											
Architecture	Intel 830MG chipset / 82830MG Graphics Memory Controller Hub (GMCH-M) / 82801CAM ICH3-M I/O Controller Hub (ATA-100/66 EIDE, PCI bus, 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])											
Media slice	Optional X3 UltraBase media slice (see right side)											
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)											
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											
IEEE 1394	IEEE 1394 (FireWire) Port (4-pin)											
Ports	Two USB (version 1.1) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / parallel / IEEE 1394 (4-pin) / no serial, keyboard, or mouse ports											
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable											
11b Wi-Fi ³² /mod	<i>Some</i> : Mini PCI 11b Wi-Fi ³² wireless ⁴ , Intel PRO/Wireless LAN with Intersil® Prism 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K ⁶ V.90 (V.92-designed ²⁹) modem combo, Agere® chipset											
802.11b	<i>Some</i> : Mini PCI 802.11b wireless ⁴ , Cisco® Aironet® Wireless 802.11b, Prism 2.0 chipset, dual antennas in display cover, Wi-Fi-certified											
Wireless upg	<i>Some</i> : PC Card or USB option; not via Mini PCI option as no antennas in display cover											
CDC	One Communications Daughter Card (CDC) socket / customer accessible											
Modem	<i>Some</i> : 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset											
Bluetooth™	<i>Some</i> : Bluetooth wireless technology / in CDC / power button on display											
Ethernet	10/100 ethernet on systemboard / Intel 82562ET chipset (physical layer) / PXE											
Audio support	SoundBlaster Pro™-compatible / AD1981A AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal microphone / mic in / line in / headphone out											
Security	Power-on password / dual hard disk password / supervisor pwd / security keyhole											
Security chip	<i>Some</i> : 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 courier service											
64 MB SO DIMM 133MHz NP SDRAM	19K4650				IBM ThinkPad X30 UltraBase media slice				46P7912			
128 MB SO DIMM 133MHz NP SDRAM	19K4652				ThinkPad Port Replicator				02K8667			
256 MB SO DIMM 133MHz NP SDRAM	19K4654				ThinkPad Dock				263120U			
512 MB SO DIMM 133MHz NP SDRAM	19K4656				ThinkPad X30 Series Li-Ion Battery (6-cell)				02K7039			
USB Portable Diskette Drive	05K9276				ThinkPad X30 Series Extended Life Battery				02K7041			
Portable CD-RW Drive	22P5297				ThinkPad Ultraportable 56W AC Adapter				02K6880			
Portable Drive Bay 2000	19K4480				ThinkPad 72W AC Adapter				02K6699			
20GB Hard Disk Drive	08K9686				IBM 128MB USB 2.0 Memory Key				22P8998			
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816				ThinkPad Monitor Stand 2001				22P5265			
80GB Hard Disk 9.5mm (4200 rpm)	08K9869				IBM 11a/b/g Wireless CardBus Adapter				31P9101			
Ultrabay 2000 interchangeable accessories:					ServicePac ²² 2yr IOR 9x5 NBD				30L9190			
24X-10X ⁹ CD-ROM Ultrabay 2000 Drive	05K9233				ServicePac 3yr IOR 9x5 NBD				30L9197			
Ultralight 8X ⁹ Max DVD Ultrabay 2000	22P9102				ServicePac 4yr IOR 9x5 NBD				69P9198			
CD-RW/DVD Combo III Ultrabay 2000	22P6980				ServicePac 5yr IOR 9x5 NBD				69P9200			
Second HDD Adapter for Ultrabay 2000	08K6068				ServicePac 4yr P&L P/U Depot				69P9199			
					ServicePac 5yr P&L P/U Depot				69P9201			
	Other options at ibm.com/pc/us/accessories											
	SOFTWARE ¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ◇ Disk-to-Disk Recovery (in hidden Service Partition) Windows 2000 models - Microsoft Windows 2000 Professional ²⁰ • ConfigSafe® ◇ Disk-to-Disk Recovery (in hidden Service Partition) INCLUDED SOFTWARE ¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Help - Access Support • PC-Doctor™ • IBM Rapid Restore™ PC • ThinkPad Utilities • IBM Update Connector™ ¹⁵ Downloadable • IBM Data Transfer • IBM Director Agent • IBM Client Security Software (for security chip) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0 IBM ThinkPad X30 UltraBase™ Option Right bay of X30 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 X30 UltraBase bottom contains: • Bay for X30 battery (same as X30) Other features • Second battery support (for Ultrabay battery or second system 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 1.1) • Ethernet port and modem port • Retractable feet; 1.41 lb; 638g 56 watt AC Adapter PC 2001-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant Setup Guide, Service and Troubleshooting Guide, Windows manual IBM Rapid Restore PC available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²											

See footnotes for important warranty information
 US models announced August 27, 2002
 US models withdrawn effective April or October 2003

Type-model	Processor	GHz	Memory	Screen	Disk	Optical	Mini PCI wireless	CDC: modem/ Bluetooth™	Security Chip	Ethernet planar Preload	Workhorse or Global model	Avail date
2672-B2U	Pentium® M	1.3	256MB	12.1" XGA	20GB ⁸	None	Open; wireless upg ³⁶	Modem	Yes	10/100	XP Pro	Mar 2003
2672-BBU	Pentium M	1.3	256MB	12.1" XGA	20GB	None	* Intel 11b Wi-Fi ³²	Modem	Yes	10/100	XP Pro	Mar 2003
2672-C2U	Pentium M	1.4	256MB	12.1" XGA	40GB	None	Open; wireless upg	Modem	Yes	10/100	XP Pro	W G Mar 2003
2672-CBU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	* Intel 11b Wi-Fi	Modem	Yes	10/100	XP Pro	W G Mar 2003
2672-CXU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	Cisco® 802.11b	Modem	Yes	10/100	XP Pro	W G Mar 2003
2672-JHU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	11a/b Wi-Fi ²⁷	Mod/Blue	Yes	Gigabit	XP Pro	W Mar 2003
2672-J7U	Pentium M	1.4	256MB	12.1" XGA	40GB	None	Open; wireless upg	Modem	Yes	Gigabit	XP Pro	W Mar 2003
2672-JBU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	* Intel 11b Wi-Fi	Modem	Yes	Gigabit	XP Pro	W Mar 2003
2672-JXU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	Cisco 802.11b	Modem	Yes	Gigabit	XP Pro	W Mar 2003
Positioning Processor	Ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® M Processor 1.3 or 1.4GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus										SOFTWARE ¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ ◇ Disk-to-Disk Recovery (in hidden protected area) Preloaded • Access IBM - Access Connections • Adobe Acrobat Reader • IBM Rapid Restore™ PC • 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 (security chip model) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
L2 cache	1MB / on die (at processor speed) / ECC											
Memory	256MB std / 2GB max ⁷ / PC2100 266MHz 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 (in opt X3) or USB-based diskette drive											
Optical drive	None standard / optional USB-based optical, or optional Ultrabay 2000-based optical removable from optional X3 UltraBase, ThinkPad Dock, or ThinkPad Dock II											
Ultrabay™ 2000 Disk	Supports Ultrabay 2000 devices in optional X3 Ultrabase, ThinkPad Dock, or Dock II 20 or 40GB ⁹ , 4200 rpm, 9.5mm, ATA-100 / removable and upgradable / 9.5mm high bay											
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / two latches											
Graphics controller	ATI® Mobility RADEON® / AGP 4X / 16MB 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 stoke / 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	10.7" x 8.8" x .98"-1.19"; 273mm x 223mm x 24.9-30.2mm											
Travel weight ²	with battery: 3.6 lb (1.64 to 1.65kg)											
Case material	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	5.3 to 6.0 hrs; <i>with std battery and optional Extended Life Battery:</i> 9.9 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 for infrared [dock-based diskette, serial, parallel])											
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											
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	<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											
Cisco 802.11b	<i>Some:</i> 802.11b wireless ⁴ , Mini PCI, Cisco® Aironet® Wireless 802.11b, Prism 2.0 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 / customer accessible											
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset											
Bluetooth™	<i>Some:</i> Bluetooth wireless technology / in CDC (with modem)											
Ethernet	<i>Some:</i> 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE											
Audio support	<i>Some:</i> 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 pwr / security keyhole											
Security chip	<i>Some:</i> 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 PC2100 DDR-SDRAM CL2.5 SOD	10K0028	IBM ThinkPad X3 UltraBase media slice	46P7912									
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Port Replicator II	74P6733									
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Mini Dock	287810U									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Dock II	287710U									
USB Portable Diskette Drive	05K9276	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad X30 Series Extended Life Battery	02K7041									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad Ultraportable 56W AC Adapter	02K6880									
IBM 256MB USB 2.0 MemoryKey	22P9025	ThinkPad 72W AC/DC Combo Adapter	22P9010									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac®.22 2yr IOR 9x5 NBD	30L9190									
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 3yr IOR 9x5 NBD	30L9197									
Intel PRO/Wireless 2100 3B Mini PCI	31P8601	ServicePac 5yr IOR 9x5 NBD	69P9200									
Cisco Aironet Wireless 802.11b Mini PCI	31P8301	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	46P7912									
		Asset ID™ ³⁴ (system-specific info in	74P6733									
		chp accessed over network)	287810U									
		PC 2001-compliant	287710U									
		ACPI 1.0b and 2.0-compliant	02K7039									
		CIM and DMI 2.0-compliant	02K7041									
		IBM Rapid Restore PC available to	02K6880									
		protect software image and data	22P9010									
		International Warranty Service ¹⁷	30L9190									
		24 hour x 7 day ¹⁸ toll-free warranty	30L9197									
		support during the warranty ¹²	69P9200									
			69P9201									

See footnotes for important warranty information
US models announced March 12, 2003
US models withdrawn effective October 2003 or July 2004

* Powered by Intel Centrino™ mobile technology

IBM® ThinkPad® X31 (Windows 2000) - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Screen	Disk	Optical	Mini PCI wireless	CDC: modem/Bluetooth™	Security Chip	Ethernet planar	Preload	Workhorse or Global model	Avail date
2672-B1U	Pentium® M	1.3	256MB	12.1" XGA	20GB ⁸	None	Open; wireless upg ³⁶	Modem		10/100	2000	No	Mar 2003
2672-BAU	Pentium M	1.3	256MB	12.1" XGA	20GB	None	*Intel 11b Wi-Fi	Modem	Yes	10/100	2000	No	Mar 2003
2672-C1U	Pentium M	1.4	256MB	12.1" XGA	40GB	None	Open; wireless upg	Modem		10/100	2000	No	Mar 2003
2672-CAU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	*Intel 11b Wi-Fi	Modem	Yes	10/100	2000	No	Mar 2003
2672-J6U	Pentium M	1.4	256MB	12.1" XGA	40GB	None	Open; wireless upg	Modem	Yes	Gigabit	2000	No	Mar 2003
2672-JAU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	*Intel 11b Wi-Fi	Modem	Yes	Gigabit	2000	No	Mar 2003
Positioning Processor	<i>Extreme mobility in a small and light ultraportable; one spindle</i>												
L2 cache	Intel® Pentium® M Processor 1.3 or 1.4GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz frontside bus												
Memory	1MB / on die (at processor speed) / ECC 256MB std / 2GB max ⁷ / PC2100 266MHz 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 (in opt X3) or USB-based diskette drive												
Optical drive	None standard / optional USB-based optical, or optional Ultrabay 2000-based optical removable from optional X3 UltraBase, ThinkPad Dock, or ThinkPad Dock II												
Ultrabay™ 2000 Disk	Supports Ultrabay 2000 devices in optional X3 UltraBase, ThinkPad Dock, or Dock II 20 or 40GB ⁹ , 4200 rpm, 9.5mm, ATA-100 / removable and upgradable / 9.5mm high bay												
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / easy-open cover to unlatch and open with one hand (two latches)												
Graphics controller	ATI® Mobility RADEON® / AGP 4X / 16MB 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	10.7" x 8.8" x .98"-1.19"; 273mm x 223mm x 24.9-30.2mm												
Travel weight ²	with battery: 3.6 lb (1.64 to 1.65kg)												
Case material	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) 5.2 to 5.4 hrs; with std battery and optional Extended Life Battery: 9.2 to 9.4 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 for infrared [dock-based diskette, serial, parallel])												
Media slice	Optional X3 UltraBase media slice (see right side)												
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)												
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												
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												
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 standard (optional PC Card available)												
Ethernet	Some: 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE Some: Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE												
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 (pink) / headphone jack (green) / mic in (blue) [all 3.5mm]												
Security	Power-on password / dual hard disk password / supervisor pwd / security keyhole												
Security chip	Some: IBM Embedded Security Subsystem 2.0 ³⁵ / 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 PC2100 DDR-SDRAM CL2.5 SOD	10K0028	IBM ThinkPad X3 UltraBase media slice	46P7912										
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Port Replicator II	74P6733										
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Mini Dock	287810U										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Dock II	287710U										
IBM USB Portable Diskette Drive	05K9276	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039										
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad X30 Series Extended Life Battery	02K7041										
20GB Hard Disk Drive 9.5 mm (4200 rpm)	08K9686	ThinkPad Multiple Battery Charger II	22P9040										
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Ultraportable 56W AC Adapter	02K6880										
80GB Hard Disk Drive 9.5mm (4200 rpm)	08K9869	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM 64MB USB 2.0 Memory Key	22P9024	ServicePac ³⁰ .22 2yr IOR 9x5 NBD	30L9190										
IBM 256MB USB 2.0 MemoryKey	22P9025	ServicePac 3yr IOR 9x5 NBD	30L9197										
ThinkPad Monitor Stand 2001	22P5265	ServicePac 4yr IOR 9x5 NBD	69P9198										
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 5yr IOR 9x5 NBD	69P9200										
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 4yr P&L P/U Depot	69P9199										
Intel PRO/Wireless 2100 3B Mini PCI	31P8601	ServicePac 5yr P&L P/U Depot	69P9201										
Cisco Aironet Wireless 802.11b Mini PCI	31P8301	Other options at ibm.com/pc/us/accessories											
SOFTWARE¹⁴ Windows 2000 models - Microsoft® Windows® 2000 Professional ²⁰ • ConfigSafe® ✦ Disk-to-Disk Recovery (in hidden protected area) Preloaded • Access IBM - Access Connections • Adobe Acrobat Reader • IBM Rapid Restore™ PC • 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 (security chip model) License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client IBM ThinkPad X3 UltraBase™ Option 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 such as 80GB Hard Disk 9.5mm (4200 rpm) 08K9869 • Ultrabay Plus-compatible Ultrabay 2000 accessories: • CD-RW/DVD Combo IV Ultrabay 2000 22P6991 • Second HDD Adptr for Ultrabay 2000 08K6068 • ThinkPad Removable Diskette Drive 08K9603 • Ultrabay 2000 Li-Ion battery 02K6646 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 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 PC available to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²													

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

(X31W2K) © IBM Corp. January 2004

US models announced March 12, 2003

US models withdrawn effective October 2003 or January 2004

IBM® ThinkPad® X31 (2672) - February 2004 - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Screen	Disk	Optical in	ThinkPad UltraBase X3	ThinkPad 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	Ultimate mobility in a versatile ultraportable; one spindle											SOFTWARE¹⁴			
L2 cache	Intel® Pentium® M Processor 1.5 or 1.7GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											Windows XP Professional			
Memory	1MB / on die (at processor speed) / ECC											- Microsoft® Windows® XP Professional ²⁰			
Diskette drive	None standard / use optional Ultrabay™-based (inX3) or USB-based diskette drive											◇ Disk-to-Disk Recovery (in hidden protected area)			
Optical	None standard / optional USB-based optical, or optional Ultrabay 2000-based optical removable from optional X3 UltraBase, ThinkPad Dock, or ThinkPad Dock II											Preloaded			
Ultrabay™ 2000	Supports Ultrabay 2000 devices in optional X3 UltraBase (or optional ThinkPad Dock II)											• Access IBM			
Disk	30GB (4200 rpm), 40GB ⁸ (4200 rpm), or 40GB (HS 5400 rpm), 9.5mm, ATA-100 / removable and upgradable / 9.5mm high bay											• Access Connections			
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											• Adobe Reader			
Graphics controller	ATI® MOBILITY™ RADEON® / AGP 4X / 16MB DDR1 (DDR-SDRAM)											• IBM Rapid Restore™ Ultra			
Graphics - external	External monitor support via analog DB-15 connector / up to 1280x1024x16.7M at 85Hz											• Norton AntiVirus (OEM edition)			
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											• PC-Doctor™			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											• ThinkPad Utilities			
Dimensions ³	without X3 UltraBase: 10.7" x 8.8" x .98-1.19"; 273mm x 223mm x 24.9-30.2mm											• IBM Update Connector™ ¹⁵			
Travel weight ²	with X3 UltraBase and optical: 10.8" x 8.9" x 2.0-2.3"; 273 x 227 x 51-58mm											Downloadable			
Case material	Color: black; All: titanium composite in the top cover / magnesium alloy bottom case											• IBM Director Agent			
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)											• Software Delivery Assistant			
Battery - life ¹⁰	5.5 to 6.0 hrs; with std battery and optional Extended Life Battery: up to 10.1 hrs											• 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)) / Intel 82802AC Firmware Hub / PCI bus 2.2 32-bit, 33MHz (Ricoh® R5C554 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O)											• Client Security Software (for security chip)			
Media slice	Optional X3 UltraBase media slice (see right side)											License (CD not included)			
Compact Flash slot	Compact Flash slot / 1 CF+ Type II / supports optional IBM Microdrive™											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			
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											IBM ThinkPad X3 UltraBase™			
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradeable											Right bay of X3 UltraBase supports most Ultrabay 2000 options:			
Wireless upg ³⁶	Some: wireless upgradeable with wireless Mini PCI options											• Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo			
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset											• Optional HDD adapter for 2nd disk			
IBM 11b/g ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset											• Ultrabay Plus-compatible			
11a/b/g Wi-Fi ³²	Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5001X+ chipset											Ultrabay 2000 accessories:			
CDC	One Communications Daughter Card (CDC) socket / customer accessible											• CD-RW/DVD Combo IV Ultrabay 2000 22P6991			
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset											• Second HDD Adapter for Ultrabay 2000 08K6068			
Bluetooth™	None											• ThinkPad Removable Diskette Drive 08K9603			
Ethernet	Some: 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE											• Ultrabay 2000 Li-Ion battery 02K6646			
Audio support	Some: Gigabit Ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											• Enhanced Drive Adapter for Ultrabay 2000 73P3268			
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]											X3 UltraBase bottom contains:			
Security chip	Power-on password / dual hard disk password / supervisor password / security keyhole											• Bay for X30 battery (same as X31)			
Limited warranty ¹²	IBM Embedded Security Subsystem 2.0 ³³ / Atmel® chip / TCG-compliant											Other features:			
	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail											• Second battery support (for Ultrabay battery or second 6-cell battery)			
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				
IBM USB 2.0 Portable Multi-Burner	22P9163					IBM USB Portable Diskette Drive					05K9276				
IBM USB Fingerprint Reader	73P4774					ThinkPad X30 Series Li-Ion Battery (6-cell)					92P1097				
60GB HS Hard Disk 9.5mm (5400 rpm)	73P3357					ThinkPad X30 Series Extended Life Battery					02K7041				
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273					ThinkPad Ultraportable 56W AC Adapter					02K6880				
IBM 11a/b/g Wireless CardBus Adapter	31P9101					Carrying Case - Leather Ultraportable					73P5186				
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701					ServicePac® 22 2yr IOR 9x5 NBD					30L9190				
Intel PRO/Wireless 2200BG Mini PCI	73P2801					ServicePac 5yr P&L P/U Depot					69P9201				
Preferred Pro USB Fingerprint Keyboard	73P4730					Other options at ibm.com/options									
											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				
											ENERGY STAR®-compliant				
											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 or June 2005

* Powered by Intel Centrino™ mobile technology

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Type-model	Processor	GHz	Memory	Screen	Disk	Optical	Mini PCI wireless	CDC: modem/ Bluetooth™	Security Chip	Ethernet planar	Preload	Limited Warranty	Avail date
2884-BNU	Pentium® M	1.3	256MB	12.1" XGA	20GB ⁸	None	Open; wireless upg ³⁶	Modem	Yes	10/100	XP Pro	1 year	May 2003
2884-BRU	Pentium M	1.3	256MB	12.1" XGA	20GB	None	*Intel 11b Wi-Fi ³²	Modem	Yes	10/100	XP Pro	1 year	May 2003
2884-CRU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	*Intel 11b Wi-Fi	Modem	Yes	10/100	XP Pro	1 year	May 2003
2884-JUU	Pentium M	1.4	256MB	12.1" XGA	40GB	None	11a/b Wi-Fi ²⁷	Mod/Blue	Yes	10/100	XP Pro	1 year	May 2003

- **These small and medium business (SMB) models are part of the IBM US Think Express Program**
- **The 2884 has a 1 year limited warranty**

Positioning Processor	<p><i>Ultimate mobility in a versatile ultraportable; one spindle</i> Intel® Pentium® M Processor 1.3 or 1.4GHz with enhanced Intel SpeedStep™ technology¹ and 400MHz frontside bus</p>											
L2 cache	<p>1MB / on die (at processor speed) / ECC</p>											
Memory	<p>256MB std / 2GB max⁷ / PC2100 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available</p>											
Diskette drive	None standard / use optional Ultrabay™-based (in opt X3) or USB-based diskette drive											
Optical drive	None standard / optional USB-based optical, or optional Ultrabay 2000-based optical removable from optional X3 UltraBase, ThinkPad Dock, or ThinkPad Dock II											
Ultrabay™ 2000 Disk	Supports Ultrabay 2000 devices in optional X3 UltraBase, ThinkPad Dock, or Dock II 20 or 40GB⁸ , 4200 rpm, 9.5mm, ATA-100 / removable and upgradable / 9.5mm high bay											
Display	<p>12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / easy-open cover to unlatch and open with one hand (two latches)</p>											
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," Internal 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	10.7" x 8.8" x .98"-1.19"; 273mm x 223mm x 24.9-30.2mm											
Travel weight ²	with battery: 3.6 lb (1.64kg)											
Case material	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	Up to 5.5 hrs; <i>with std battery and optional Extended Life Battery</i> : up to 10 hrs											
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 (Ricoh® 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	Optional X3 UltraBase media slice (see right side)											
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)											
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											
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											
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 / 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	10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE											
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 (pink) / headphone jack (green) / mic in (blue) [all 3.5mm]											
Security	Power-on password / dual hard disk password / supervisor pwr / 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 PC2100 DDR-SDRAM CL2.5 SOD	10K0028	IBM ThinkPad X3 UltraBase media slice	46P7912									
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Port Replicator II	74P6733									
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Mini Dock	287810U									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Dock II	287710U									
IBM USB Portable Diskette Drive	05K9276	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039									
IBM Powered USB 2.0 Port Combo Drive	22P9194	ThinkPad X30 Series Extended Life Battery	02K7041									
20GB Hard Disk Drive 9.5 mm (4200 rpm)	08K9686	ThinkPad Multiple Battery Charger II	22P9040									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Ultraportable 56W AC Adapter	02K6880									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ThinkPad 72W AC/DC Combo Adapter	22P9010									
IBM USB 2.0 Memory Key 256MB	22P9228	ServicePac ²² 1yr IOR 9x5 NBD	30L9188									
IBM USB 2.0 Memory Key 512MB	22P9230	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	31P9701	ServicePac 2yr P&L P/U Depot	30L9191									
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										
		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 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)										

See footnotes for important warranty information
US models announced on April 22 or May 6, 2003
US models withdrawn effective January 2004 or January 2005

* Powered by Intel Centrino™ mobile technology

IBM® ThinkPad® X31 (2884) - Express (June 2003) - withdrawn

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-B5U	Pentium® M	1.3	256MB	12.1" XGA	20GB ⁸	DVD	X3 UltraBase	Open; wireless upg ³⁶	Modem	Yes	10/100 XP Pro	Jun 2003
2884-BSU	Pentium M	1.3	256MB	12.1" XGA	20GB	DVD	X3 UltraBase	* Intel 11b Wi-Fi ³²	Modem	Yes	10/100 XP Pro	Jun 2003
2884-CWU	Pentium M	1.4	256MB	12.1" XGA	40GB	Combo	X3 UltraBase	* Intel 11b Wi-Fi	Modem	Yes	10/100 XP Pro	Jun 2003
2884-JGU	Pentium M	1.4	256MB	12.1" XGA	40GB	Combo	X3 UltraBase	11a/b Wi-Fi ²⁷	Mod/Blue	Yes	Gigabit XP Pro	Jun 2003

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- The 2884 has a 1 year limited warranty

Positioning Processor	Ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® M Processor 1.3 or 1.4GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ • ConfigSafe® ◇ Disk-to-Disk Recovery (in hidden protected area) Preloaded • Access IBM - Access Connections • Adobe Reader • IBM Rapid Restore™ PC • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ • InterVideo WinDVD • RecordNow and DLA (combo mods) 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™ (standard with B5U/BSU/CWU/JGU) 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 such as 80GB HS Hard Disk 9.5mm (5400 rpm) 09N4273 • Ultrabay Plus-compatible Ultrabay 2000 accessories: • CD-RW/DVD Combo IV Ultrabay 2000 22P6991 • Second HDD Adptr for Ultrabay 2000 08K6068 • ThinkPad Removable Diskette Drive 08K9603 • Ultrabay 2000 Li-Ion battery 02K6646 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 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 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
L2 cache	1MB / on die (at processor speed) / ECC											
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											
Diskette drive	None standard / use optional Ultrabay™-based (in opt X3) or USB-based diskette drive											
DVD	Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000 of X3											
Combo	Some: DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000											
Ultrabay™ 2000	Supports Ultrabay 2000 devices in standard X3 UltraBase (or optional ThinkPad Dock II)											
Disk	20 or 40GB⁸ , 4200 rpm, 9.5mm, ATA-100 / removable and upgradable / 9.5mm high bay											
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / easy-open cover to unlatch and open with one hand (two latches)											
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											
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	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)											
Battery - type	supports Ultrabay battery or optional 6-cell battery in X3 UltraBase (for two batteries) / Up to 6 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 for infrared [dock-based diskette, serial, parallel])											
Media slice	X3 UltraBase media slice (see right side)											
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)											
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 upgradeable 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											
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 / 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 Some: Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											
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 (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 2.0³³ / 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 PC2100 DDR-SDRAM CL2.5 SOD	10K0028	IBM ThinkPad X3 UltraBase media slice	46P7912									
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Port Replicator II	74P6733									
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Mini Dock	287810U									
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad Dock II	287710U									
IBM USB Portable Diskette Drive	05K9276	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039									
IBM Powered USB 2.0 Port Combo Drive	22P9194	ThinkPad X30 Series Extended Life Battery	02K7041									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad Multiple Battery Charger II	22P9040									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ServicePac ²² 1yr IOR 9x5 NBD	30L9188									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 2yr IOR 9x5 NBD	30L9189									
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 3yr IOR 9x5 NBD	30L9195									
Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 2yr P&L P/U Depot	30L9191									
SonyEricsson® GC83 EDGE PC Card	26K3393	ServicePac 3yr P&L P/U Depot	30L9192									
ThinkPad 72W AC/DC Combo Adapter	22P9010	ServicePac 5yr P&L P/U Depot	69P9197									
IBM M400 Projector	0037A04	Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information
US models announced June 17, 2003
US models withdrawn effective January 2004 or January 2005

* Powered by Intel Centrino™ mobile technology

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IBM® ThinkPad® X31 (2884) - Express (October 2003) - withdrawn

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
2884-25U	Pentium® M 1.4	256MB	12.1" XGA	20GB ⁸	DVD	X3 UltraBase	Open; wireless upg ³⁶	Modem	Yes	10/100 XP Pro	Oct 2003	
2884-2NU	Pentium M 1.4	256MB	12.1" XGA	20GB		Optional	Open; wireless upg	Modem	Yes	10/100 XP Pro	Oct 2003	
2884-2WU	Pentium M 1.4	256MB	12.1" XGA	20GB	Combo	X3 UltraBase *	Intel 11b Wi-Fi ³²	Modem	Yes	10/100 XP Pro	Oct 2003	
2884-NRU	Pentium M 1.6	256MB	12.1" XGA	40GB		Optional	* Intel 11b Wi-Fi	Modem	Yes	Gigabit XP Pro	Oct 2003	

- These small and medium business (SMB) models are part of the IBM US Think Express Program
- The 2884 has a 1 year limited warranty

Positioning Processor	<i>Ultimate mobility in a versatile ultraportable; one spindle</i> Intel® Pentium® M Processor 1.4 or 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴	
L2 cache Memory	1MB / on die (at processor speed) / ECC										Windows XP Pro models	
Diskette drive DVD	None standard / use optional Ultrabay™-based (inX3) or USB-based diskette drive										- Microsoft® Windows® XP Professional ²⁰	
Combo Ultrabay™ 2000 Disk	<i>Some:</i> DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000 of X3 <i>Some:</i> DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000										◇ Disk-to-Disk Recovery (in hidden protected area)	
Display	Supports Ultrabay 2000 devices in std or opt X3 UltraBase (or opt ThinkPad Dock II)										Preloaded	
Graphics controller	ATI® Mobility RADEON® / AGP 4X / 16MB DDR-SDRAM										• Access IBM	
Graphics - external	External monitor support via analog DB-15 connector / up to 1280x1024x16.7M at 85Hz										• Access Connections	
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										• Adobe Acrobat Reader	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• IBM Rapid Restore™ Ultra	
Dimensions ³	<i>without X3 UltraBase:</i> 10.7" x 8.8" x .98-1.19"; 273mm x 223mm x 24.9-30.2mm										• Norton AntiVirus (OEM edition)	
Travel weight ²	<i>with X3 UltraBase and optical:</i> 10.8" x 8.9" x 2.0-2.3"; 273 x 227 x 51-58mm										• PC-Doctor™	
Case material	<i>with battery:</i> 3.6 lb (1.65kg); <i>with X3 UltraBase and optical:</i> 5.6 lb (2.54kg)										• ThinkPad Utilities	
Battery - type	Color: black; All: titanium composite in the top cover / magnesium alloy bottom case										• IBM Update Connector™ ¹⁵	
Battery - life ¹⁰	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) Up to 6 hrs; <i>with std battery and optional Extended Life Battery:</i> up to 10.1 hrs										• InterVideo WinDVD (combo, DVD)	
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 (Ricoch® R5C522 CardBus/1394 combo controller, Mini PCI, ext expansion) / LPC bus 33MHz (PC87392 Super I/O for infrared [dock-based diskette, serial, parallel])										• RecordNow and DLA (combo model)	
Media slice	<i>Some:</i> X3 UltraBase media slice (see right side)										Downloadable	
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)										• IBM Director Agent	
Compact Flash slot	Compact Flash slot / 1 CF+ Type II / supports optional IBM Microdrive™										• Software Delivery Assistant	
PC Card Std slot	One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door										• System Migration Assistant	
IEEE 1394	IEEE 1394 (FireWire) port (4-pin)										• Client Security Software (for security chip)	
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										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 X3 UltraBase™ (standard with 25U/2WU)	
Wireless upg ³⁶ 11b Wi-Fi ³²	<i>Some:</i> wireless upgradeable with wireless Mini PCI options <i>Some:</i> 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset										Right bay of X3 UltraBase supports most Ultrabay 2000 options:	
CDC	One Communications Daughter Card (CDC) socket / customer accessible										• Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo	
Modem	56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset										• Optional HDD adapter; for 2nd disk such as 80GB Hard Disk 9.5mm (4200 rpm) 08K9869	
Bluetooth™	None										• Ultrabay Plus-compatible	
Ethernet	<i>Some:</i> 10/100 ethernet on systemboard / Intel 82562EZ chipset (physical layer) / PXE <i>Some:</i> Gigabit Ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE										Ultrabay 2000 accessories:	
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 (pink) / headphone jack (green) / mic in (blue) [all 3.5mm]										• CD-RW/DVD Combo IV Ultrabay 2000 22P6991	
Security	Power-on password / dual hard disk password / supervisor password / security keyhole										• Second HDD Adptr for Ultrabay 2000 08K6068	
Security chip	IBM Embedded Security Subsystem 2.0³³ / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security ¹⁶ / TCG-compliant										• ThinkPad Removable Diskette Drive 08K9603	
Limited warranty ¹²	1 year - EasyServ™¹⁹ onsite pickup and delivery / service upgrades ²² avail										• Ultrabay 2000 Li-Ion battery 02K6646	
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									
IBM USB Portable Diskette Drive	05K9276	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039									
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad X30 Series Extended Life Battery	02K7041									
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad Ultraportable 56W AC Adapter	02K6880									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	ThinkPad 72W AC/DC Combo Adapter	22P9010									
80GB Hard Disk Drive 9.5mm (4200 rpm)	08K9869	ServicePac® ²² 1yr IOR 9x5 NBD	30L9188									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 3yr IOR 9x5 NBD	30L9195									
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 5yr IOR 9x5 NBD	30L9196									
Intel PRO/Wireless 2100 3B Mini PCI	31P8601	ServicePac 3yr P&L P/U Depot	30L9192									
Cisco Aironet Wireless 802.11b Mini PCI	31P8301	ServicePac 5yr P&L P/U Depot	69P9197									
Intel PRO/Wireless 2200BG Mini PCI	73P2801	Other options at ibm.com/pc/us/accessories										

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

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IBM® ThinkPad® X31 (2885) - Express (October 2003) - withdrawn

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
2885-PWU	Pentium® M 1.6	256MB	12.1" XGA	40GB ⁸	Combo	X3 UltraBase	*Intel 11b Wi-Fi ³²	Modem	Yes	Gigabit XP Pro	Oct 2003	
2885-RGU	Pentium M 1.6	512MB	12.1" XGA	40HS	Combo	X3 UltraBase	11a/b/g Wi-Fi ³²	Modem	Yes	Gigabit XP Pro	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 2885 has a 3 year limited warranty 												
Positioning Processor	<i>Ultimate mobility in a versatile ultraportable; one spindle</i> Intel® Pentium® M Processor 1.6GHz with enhanced Intel SpeedStep™ technology ¹ and 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™ Ultra • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵ • InterVideo WinDVD • RecordNow and DLA 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	
L2 cache	1MB / on die (at processor speed) / ECC											
Memory	256 or 512MB 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 Ultrabay™-based (inX3) or USB-based diskette drive											
Combo	DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000											
Ultrabay™ 2000	Supports Ultrabay 2000 devices in standard X3 UltraBase (or optional ThinkPad Dock II)											
Disk	40GB⁸ (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 / easy-open cover to unlatch and open with one hand (two latches)											
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											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
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	<i>Color:</i> black; <i>All:</i> 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	Up to 5.5 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 for infrared [dock-based diskette, serial, parallel])											
Media slice	X3 UltraBase media slice (see right side)											
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)											
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											
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/g Wi-Fi ³²	<i>Some:</i> 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	Gigabit Ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE											
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 (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 2.0³³ / 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											
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									
IBM USB Portable Diskette Drive	05K9276	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039									
IBM Powered USB 2.0 Port Combo Drive	22P9194	ThinkPad X30 Series Extended Life Battery	02K7041									
IBM USB 2.0 Portable 40GB Hard Disk	22P7196	ThinkPad Multiple Battery Charger II	22P9040									
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad Ultraportable 56W AC Adapter	02K6880									
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 Travel USB Keyboard with UltraNav	31P9493									
IBM USB 2.0 Memory Key 256MB	22P9228	ServicePac ²² 2yr IOR 9x5 NBD	30L9190									
IBM USB 2.0 Memory Key 512MB	22P9230	ServicePac 3yr IOR 9x5 NBD	30L9197									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 4yr IOR 9x5 NBD	69P9198									
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 5yr IOR 9x5 NBD	69P9200									
Intel PRO/Wireless 2200BG Mini PCI	73P2801	ServicePac 4yr P&L P/U Depot	69P9199									
SonyEricsson® GC83 EDGE PC Card	26K3393	ServicePac 5yr P&L P/U Depot	69P9201									
IBM M400 Projector	0037A04	Other options at ibm.com/pc/us/accessories										
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 such as 80GB HS Hard Disk 9.5mm (5400 rpm) 09N4273 • 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 • Multi-Burner Plus Ultrabay Enhanced Drive 73P3312 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 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 October 7, 2003
US models withdrawn effective January 2005

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IBM® ThinkPad® X31 (2885) - Express (February 2004) - withdrawn

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
2885-4LU	Pentium® M 1.7	256MB	12.1" XGA	40HS	Combo	X3 UltraBase	*Intel 11b Wi-Fi ³²	Modem	Yes	Gigabit XP Pro	Feb 2004	
2885-4WU	Pentium M 1.7	512MB	12.1" XGA	40HS	Combo	X3 UltraBase	IBM 11b/g ³²	Modem	Yes	Gigabit XP Pro	Feb 2004	
<ul style="list-style-type: none"> • These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2885 has a 3 year limited warranty 												
Positioning Processor	Ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® M Processor 1.7GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus										SOFTWARE¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ⇨ Disk-to-Disk Recovery (in hidden protected area)	
L2 cache	1MB / on die (at processor speed) / ECC											
Memory	256 or 512MB 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 Ultrabay™-based (inX3) or USB-based diskette drive											
Combo	DVD-ROM/CD-RW / 16X/10X/24X/8X ²¹ speed / removable from Ultrabay 2000 in X3 UltraBase											
Ultrabay™ 2000	Supports Ultrabay 2000 devices in standard X3 UltraBase (or optional ThinkPad Dock II)											
Disk	40GB⁸ (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 / easy-open cover to unlatch and open with one hand (two latches)											
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											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
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	Up to 5.5 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 for infrared [dock-based diskette, serial, parallel])											
Media slice	X3 UltraBase media slice (see right side)											
Docking Station	Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)											
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											
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											
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 / Agere® 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 / 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 2.0³³ / 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											
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									
IBM USB Portable Diskette Drive	05K9276	ThinkPad X30 Series Li-Ion Battery (6-cell)	02K7039									
IBM Powered USB 2.0 Port Combo Drive	22P9194	ThinkPad X30 Series Extended Life Battery	02K7041									
IBM USB 2.0 Portable Multi-Burner	22P9163	ThinkPad Multiple Battery Charger II	22P9040									
IBM USB 2.0 Memory Key 512MB	22P9230	ThinkPad Ultraportable 56W AC Adapter	02K6880									
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad 72W AC/DC Combo Adapter	22P9010									
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM USB Travel Keyboard with UltraNav	31P9490									
80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273	ServicePac ²² 2yr IOR 9x5 NBD	30L9190									
ThinkPad Monitor Stand 2001	22P5265	ServicePac 3yr IOR 9x5 NBD	30L9197									
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 4yr IOR 9x5 NBD	69P9198									
IBM 11a/b/g Wireless Mini PCI Adapter	31P9701	ServicePac 5yr IOR 9x5 NBD	69P9200									
Intel PRO/Wireless 2200BG Mini PCI	73P2801	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										
										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 Service¹⁷ 24 hour x 7 day¹⁸ toll-free warranty support during the warranty¹²		

See footnotes for important warranty information
US models announced February 10, 2004
US models withdrawn effective January 2005

* Powered by Intel Centrino™ mobile technology

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Type-model	Processor	GHz	Memory	Screen	Disk	Optical in UltraBase X4	ThinkPad UltraBase™	Mini PCI wireless	CDC: modem/Bluetooth™	Sec Ethernet chip planar	Battery cells Preload	WH (W) Entry (Ent)	Gbl (G) Avail date
2371-13U	Pentium® M	1.0	256MB	12.1" XGA	20GB	None	Optional	Open; wireless upg ³⁶	Modem	Yes	Gigabit	4 XP Pro Ent	Feb 2004
2371-1CU	Pentium M	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	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	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	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	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	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	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	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	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	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												
L2 cache Memory	Intel® Pentium® M Processor Ultra Low Voltage 1.0GHz or Low Voltage 1.2GHz with enhanced Intel SpeedStep™ technology¹ and 400MHz system bus 1MB / on die (at processor speed) / ECC 256 or 512MB std / 1.28 to 1.53GB max² / PC2700 333MHz DDR1 / non-parity / CL2.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available												
Diskette drive Ultrabay™ Slim Disk	None standard / use optional USB-based diskette drive Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock 20GB or 40GB ³ (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 stoke / 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 4-cell battery models: 2.7 lb (1.23kg); 8-cell battery models: 3.2 lb (1.44kg); with 8-cell battery and X4 UltraBase with combo: 4.89 lb (2.22kg)												
Weight ²													
Case material Battery - type	Color: black; All: magnesium alloy 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												
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 11b Wi-Fi ³²	Some: wireless upgradeable with wireless Mini PCI options Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset												
IBM 11b/g ³² 11a/b/g Wi-Fi ³²	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset 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 / Atmel® chip / 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 X40 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)									91P1119		
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		
60GB Mini Hard Disk 9.5mm (4200 rpm)	73P3358	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/options											
SOFTWARE ¹⁴													
Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ↳ Disk-to-Disk Recovery (in hidden protected area)													
Preload • 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 • Client Security Software (for security chip)													
License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client													
Supports IBM ThinkVantage™ technologies													
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 - Multi-Burner Plus Ultrabay Slim Drive 73P3342 - Second HDD Adapter for Ultrabay Slim 62P4554 Disks supported: • 40GB HS Hard Disk 08K9816 • 60GB HS Hard Disk 73P3357 • 80GB HS Hard Disk 09N4273													
Other features: • Power button (front) • Stereo speakers (1 watt) • Security key lock, security keyhole, and optical security screw • Serial and parallel ports • PS/2 port for keyboard or mouse • Analog DB-15 monitor port • Three USB 2.0 ports (via USB hub) • Ethernet port (Gigabit Ethernet) • 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
US models announced February 10, 2004
US models withdrawn effective March 2005

* Powered by Intel Centrino™ mobile technology

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IBM® ThinkPad® X40 (2386) - Express - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Screen	Disk	Optical in UltraBase X4	ThinkPad UltraBase™	Mini PCI wireless	CDC: modem/ Bluetooth™	Sec chip	Ethernet planar	Battery cells	Avail date
2386-13U	Pentium® M 1.0	256MB	12.1" XGA	20GB	DVD	X4 UltraBase	Open; wireless upg ³⁶	Modem	Yes	Gigabit	4	XP Pro	Feb 2004
2386-1QU	Pentium M 1.0	256MB	12.1" XGA	20GB	DVD	X4 UltraBase	Open; wireless upg	Modem	Yes	Gigabit	4	XP Pro	Feb 2004
2386-1ZU	Pentium M 1.0	256MB	12.1" XGA	20GB	Combo	X4 UltraBase	* Intel 11b Wi-Fi ³²	Modem	Yes	Gigabit	4	XP Pro	Feb 2004
2386-1CU	Pentium M 1.0	256MB	12.1" XGA	20GB			* Intel 11b Wi-Fi	Modem	Yes	Gigabit	4	XP Pro	Feb 2004
2386-1GU	Pentium M 1.0	256MB	12.1" XGA	40GB			* Intel 11b Wi-Fi	Modem	Yes	Gigabit	4	XP Pro	Feb 2004
2386-5GU	Pentium M 1.2	256MB	12.1" XGA	40GB			* Intel 11b Wi-Fi	Modem	Yes	Gigabit	4	XP Pro	Feb 2004
2386-6GU	Pentium M 1.2	256MB	12.1" XGA	40GB			* Intel 11b Wi-Fi	Modem	Yes	Gigabit	8	XP Pro	Feb 2004
2386-6UU	Pentium M 1.2	256MB	12.1" XGA	40GB	Combo	X4 UltraBase	* Intel 11b Wi-Fi	Modem	Yes	Gigabit	8	XP Pro	Feb 2004
2386-8EU	Pentium M 1.2	512MB	12.1" XGA	40GB			IBM 11b/g ³²	Modem	Yes	Gigabit	8	XP Pro	Feb 2004
2386-8WU	Pentium M 1.2	512MB	12.1" XGA	40GB	Combo	X4 UltraBase	IBM 11b/g	Mod/Blue	Yes	Gigabit	8	XP Pro	Feb 2004
<p>• These small and medium business (SMB) models are part of the IBM US Think Express Program • The 2386 has a 1 year limited warranty</p>													
Positioning	Ultimate mobility in a versatile ultraportable; one spindle											Avail date	
Processor	Intel® Pentium® M Processor Ultra Low Voltage 1.0GHz or Low Voltage 1.2GHz with enhanced Intel SpeedStep™ technology ¹ and 400MHz system bus											SOFTWARE ¹⁴	
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	
Diskette drive	None standard / use optional USB-based diskette drive											◇ Disk-to-Disk Recovery (in hidden protected area)	
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / removable from Ultrabay™ Slim in X4 UltraBase											Preloaded	
Combo	Some: DVD-ROM/CD-RW / 24X/24X/24X/8X ²¹ speed / removable from X4 UltraBase											• Access IBM	
Ultrabay™ Slim	Supports Ultrabay Slim devices in optional or standard X4 UltraBase Dock											• Access Connections	
Disk	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)											• Adobe Reader	
Display	12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits											• IBM Rescue and Recovery™	
Graphics	Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 266MHz											• Norton AntiVirus (OEM edition)	
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200x16.7M at 85Hz											• 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											• IBM Update Connector™ ¹⁵	
ThinkLight®	Illuminates the keyboard to improve visibility in low-light conditions											• InterVideo WinDVD (DVD, combo)	
Dimensions ³	4-cell without X4 UltraBase: 10.5" x 8.3" x .81-1.06"; 268mm x 211mm x 20.6-26.9mm											• RecordNow and DLA (combo)	
Weight ²	8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06"; 268mm x 237mm x 20.6-26.9mm											Downloadable	
Case material	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											• IBM Director Agent	
Battery - type	4-cell with battery: 2.7 lb (1.23kg); 8-cell with battery: 3.1 lb (1.43kg); 8-cell battery and X4 UltraBase with combo: 4.89 lb (2.2kg)											• Software Delivery Assistant	
Battery - life ¹⁰	Color: black; All: magnesium alloy											• System Migration Assistant	
Architecture	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)											• Client Security Software (for security chip)	
Mobile media base	4-cell models: 3.5 hr; 6GU with 8-cell: 7.5 hr; with 8-cell and optional Extended Life Battery: up to 10 hr											License (CD not included)	
Secure Digital slot	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])											- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
PC Card Std slot	Some: X4 UltraBase Dock (see right side)											IBM ThinkPad X4 UltraBase™ Dock (standard with 1QU/1ZU/6UU/8WU)	
Ports	One Secure Digital Card slot / supports SD memory cards used in consumer devices											• Provides desktop expansion and cable management for the X40	
Wireless antenna	One Type I or one Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door											• Easily connects to the bottom of the X40 for traveling	
Mini PCI	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											• Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side:	
Wireless upg ³⁶	UltraConnect™ antenna built into the display cover for optimal wireless signal reception											- Ultrabay Slim Li-Polymer Battery 3-cell 08K8190	
11b Wi-Fi ³²	One Mini PCI type III slot (Communications Bay) / customer upgradeable											- CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288	
IBM 11b/g ³²	Some: wireless upgradable with wireless Mini PCI options											- ThinkPad Multi-Burner Ultrabay Slim Drive 73P3294	
CDC	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset											- Second HDD Adapter for Ultrabay Slim 62P4554	
Modem	Some: IBM 11b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros™ AR5004G chipset											Disks supported:	
Bluetooth™	One Communications Daughter Card (CDC) socket / customer accessible											• 30GB Hard Disk 09N4268	
Ethernet	56K ⁹ V.90 (V.92-designed ²⁵) modem in CDC / Conexant® chipset											• 40GB HS Hard Disk 08K9816	
Audio support	Some: Bluetooth wireless technology / in CDC (with modem)											• 80GB HS Hard Disk 09N4273	
Security	Intel PRO/1000 Gigabit Ethernet / on systemboard / Intel 82541GI chipset (MAC/PHY)											Other features:	
Security chip	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)											• Power button (front)	
Limited warranty ¹²	Power-on password / dual hard disk password / supervisor password / security keyhole											• Stereo speakers (1 watt)	
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	IBM ThinkPad X4 UltraBase Dock	92P3429										
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	40GB Mini Hard Disk 9.5mm (4200 rpm)	09N4283										
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	ThinkPad X40 Series Li-Ion Battery (4-cell)	92P1009										
1GB PC2700 DDR-SDRAM CL2.5 SOD	31P9834	ThinkPad X40 Series Li-Ion Battery (8-cell)	92P1005										
IBM USB Portable Diskette Drive	05K9276	ThinkPad X40 Series Extended Life Battery	92P1006										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Ultraportable 56W AC Adapter	02K6880										
IBM 11a/b/g Wireless CardBus Adapter	31P9101	ThinkPad 72W AC/DC Combo Adapter	22P9010										
IBM 11a/b/g Wireless Mini PCI Adapter II	73P4301	ServicePac® ²² 1yr IOR 9x5 NBD	30L9188										
Intel PRO/Wireless 2200BG Mini PCI	73P2801	Other options at ibm.com/pc/us/accessories											
<p>56 watt AC Adapter Asset ID™³⁴ (system-specific info in chip accessed over network) ACPI 1.0b and 2.0-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free warranty support during the warranty¹²</p>													

See footnotes for important warranty information
US models announced February 10, 2004
US models withdrawn effective January 2005

* Powered by Intel Centrino™ mobile technology

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IBM® ThinkPad® X40 (2386) - Express (May 2004) - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Screen	Disk	Optical in UltraBase	ThinkPad X4 UltraBase™	Mini PCI wireless	CDC: modem/Bluetooth™	Sec Battery chip	Battery cells	Preload	Limited warranty ¹²	Avail date
2386-5FU	Pentium® M 1.3		256MB	12.1" XGA	40GB		Optional	* Intel 11b/g Wi-Fi ³²	Modem	Yes	4	XP Pro	1 year	May 2004
2386-6RU	Pentium M 1.3		256MB	12.1" XGA	40GB	Combo	X4 UltraBase	* Intel 11b/g Wi-Fi	Modem	Yes	8	XP Pro	1 year	May 2004
2386-8RU	Pentium M 1.3		512MB	12.1" XGA	40GB	Combo	X4 UltraBase	* Intel 11b/g Wi-Fi	Modem	Yes	8	XP Pro	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 2386 has a 1 year limited warranty 														
Positioning Processor	Ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® M Processor Low Voltage 1.3GHz with enhanced Intel SpeedStep™ technology ¹ and 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 Rescue and Recovery™ • Norton AntiVirus (OEM edition) • PC-Doctor™ • IBM Update Connector™ ¹⁵ • InterVideo WinDVD (DVD, combo) • 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			
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 / 5FU/6RU: std memory soldered to systemboard; one 200-pin SO-DIMM socket available 8RU with 512MB: 256MB soldered to board; one 256MB SO-DIMM in 200-pin socket													
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	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 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: 3.5 hr; 8-cell models: 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	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™	None													
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 / 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	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 512MB	22P9230	IBM Enh Perf Wireless Keybd and Mouse	73P4067											
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												

See footnotes for important warranty information
US models announced May 18, 2004
US models withdrawn effective January 2005

* Powered by Intel Centrino™ mobile technology

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Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Workhorse (W) or Global (G) model	Avail date
2388-1NU	Celeron®	2.0	128MB	14.1" XGA	20GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-17U	Celeron	2.0	128MB	15.0" XGA	20GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-18U	Celeron	2.0	256MB	15.0" XGA	20GB	Combo	11b Wi-Fi ³²	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-1QU	Celeron	2.0	256MB	14.1" XGA	40GB	Combo	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-2MU	Pentium® 4	2.4	256MB	14.1" XGA	20GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-2UU	Pentium 4	2.4	256MB	14.1" XGA	40GB	DVD	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-2VU	Pentium 4	2.4	256MB	14.1" XGA	40GB	Combo	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-3BU	Pentium 4	2.4	256MB	15.0" XGA	20GB	DVD	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-3CU	Pentium 4	2.4	256MB	15.0" XGA	20GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-3HU	Pentium 4	2.4	256MB	15.0" XGA	40GB	Combo	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-3JU	Pentium 4	2.4	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-4PU	Pentium 4	2.8	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	6-cell Li-Ion	XP Pro	No Apr 2003
2388-4QU	Pentium 4	2.8	256MB	15.0" XGA	40GB	Combo	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2003
2388-51U	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No May 2003
2388-5BU	Pentium 4	3.0	256MB	15.0" SXGA+	40GB	Combo	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No May 2003
2388-5DU	Pentium 4	3.0	256MB	15.0" SXGA+	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No May 2003
Positioning Processor	Powerful desktop replacement; three-spindle system										SOFTWARE ¹⁴ Windows XP Professional - Microsoft® Windows® XP Professional ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)	
L2 cache Memory	Intel® Celeron 2.0GHz ³⁷ with 400MHz frontside bus or Intel Pentium 4 at 2.4, 2.8 or 3.0GHz ²⁷ with 400MHz frontside bus Celeron: 128KB; Pentium 4: 512KB; All: on die (at processor speed) / ECC 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										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	
DVD Combo Disk	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 20GB ⁸ or 40GB, 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										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
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 External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle											
Graphics external EasyPivot	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										Universal 120 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 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	
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™										ServicePac® ²² 1 yr 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	
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	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: 7.94 to 8.89 lb (3.6 to 4.0kg) Color: Black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic Lithium Ion 6 or 12-cell / intelligent / removable 4PU: 1.24 hr; 4QU: 2.48 hr; 2.0GHz models: 3.0 hr; 2.4GHz: 3.3 hr; 3.0GHz: 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)										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	
PC Card Std slots Ports	One Type I, one 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 or IEEE 1394 or video out											
Wireless antenna Mini PCI	Some (wireless models): UltraConnect™ Antenna built into the display cover One Mini PCI type III slot (Communications Bay) / not customer upgradable										ThinkPad G40 Li-Ion Battery 12-cell 08K8178 ThinkPad 120W AC Adapter 22P9150 IBM H Rate Wireless LAN PC Card 128 09N9904 IBM 11a/b/g Wireless CardBus Adapter 31P9101 GemPC400 Smart Card Reader/Writer 31P8901 ThinkPad Monitor Stand 2001 22P5265 ThinkPad Nylon Carrying Case 10K0207 ThinkPad Leather Carrying Case 10K0209 Keyboard/Mouse Connector 07G3793 IBM USB Keyboard with UltraNav 31P8950 IBM Enhanced Performance USB Keybrd 73P2620 Other options at ibm.com/pc/us/accessories	
11b Wi-Fi ³² CDC Modem Bluetooth Ethernet Audio support	None Some: Empty / not customer upgradable Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intersil® Prism 2.5 chipset One Communications Daughter Card (CDC) socket (used by modem) / not accessible 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset None 10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN® 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 Power-on password / hard disk password / supervisor password / security keyhole											
Security Security chip	None										Limited warranty ¹² 1 year - EasyServ™ ¹⁹ onsite pickup and delivery	
Security chip	None											

See footnotes for important warranty information

US models announced April 22, 2003

US models withdrawn effective October 2003 or January 2005

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Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Workhorse (W) or Global (G) Preload or Entry (E)	Avail date	
2388-7DU	Celeron®	2.2	256MB	14.1" XGA	30GB	CD	None	Modem	10/100	6-cell Li-Ion	XP Pro	No	Oct 2003
2388-7NU	Celeron	2.2	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-8GU	Celeron	2.2	256MB	15.0" XGA	40GB	DVD	None	Modem	10/100	6-cell Li-Ion	XP Pro	No	Oct 2003
2388-8JU	Celeron	2.2	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-9DU	Pentium® 4	2.6	256MB	14.1" XGA	20GB	DVD	None	Modem	10/100	6-cell Li-Ion	XP Pro	No	Oct 2003
2388-9HU	Pentium 4	2.6	256MB	14.1" XGA	30GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-9JU	Pentium 4	2.6	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-9RU	Pentium 4	2.6	256MB	14.1" XGA	40GB	Combo	11a/b Wi-Fi ²⁷	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-AKU	Pentium 4	2.6	256MB	15.0" XGA	20GB	DVD	None	Modem	10/100	6-cell Li-Ion	XP Pro	No	Oct 2003
2388-ANU	Pentium 4	2.6	256MB	15.0" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-ASU	Pentium 4	2.6	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	6-cell Li-Ion	XP Pro	No	Oct 2003
2388-ATU	Pentium 4	2.6	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-AWU	Pentium 4	2.6	256MB	15.0" XGA	60GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-B1U	Pentium 4	2.6	256MB	15.0" SXGA+	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-B3U	Pentium 4	2.6	256MB	15.0" SXGA+	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-BFU	Pentium 4	3.0	256MB	15.0" XGA	60GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-BLU	Pentium 4	3.0	256MB	15.0" SXGA+	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-BMU	Pentium 4	3.0	256MB	15.0" SXGA+	60GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-BNU	Pentium 4	3.0	512MB	15.0" SXGA+	60GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
2388-B9U	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	No	Oct 2003
Positioning Processor	Powerful desktop replacement; three-spindle system Intel® Celeron 2.2GHz ³⁷ with 400MHz system bus or Intel Pentium 4 at 2.6 or 3.0GHz ³⁷ 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 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 License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client Universal 120 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 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 1 yr 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		
L2 cache	Celeron: 128KB; Pentium 4: 512KB; All: on die (at processor speed) / ECC												
Memory	256 or 512MB 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												
DVD	Some: DVD-ROM / 24X-8X 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	20GB ⁸ , 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												
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: 7.64 to 8.89 lb (3.5 to 4.0kg)												
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	6-cell models: 1.3 hr; 12-cell 3.0GHz models: 2.0 hr; other 12-cell models: 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)												
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 or IEEE 1394 or video out												
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												
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										
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad 120W AC Adapter	22P9150										
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
IBM USB Portable Diskette Drive	05K9276	IBM 4GB Microdrive™ with PC Card	09N4280										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	IBM USB 2.0 Memory Key 256MB	22P9228										
IBM USB 2.0 Portable 40GB Hard Disk	22P7196	IBM USB 2.0 Memory Key 512MB	22P9230										
IBM USB Serial Parallel Adapter	22P5298	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US models announced October 7, 2003
US models withdrawn effective April 2004 or January 2005

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁶	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Preload	Workhorse or Global or Entry	Avail date
2388-1CU	Celeron®	2.0	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	6-cell Li-Ion	XP Home	Entry	Apr 2003
2388-7RU	Celeron	2.2	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	6-cell Li-Ion	XP Home	Entry	Oct 2003
2388-2BU	Pentium® 4	2.4	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	6-cell Li-Ion	XP Home	Entry	Apr 2003
2388-2QU	Pentium 4	2.4	256MB	14.1" XGA	20GB	Combo	None	Modem	10/100	6-cell Li-Ion	XP Home	No	Apr 2003
2388-2TU	Pentium 4	2.4	256MB	14.1" XGA	40GB	DVD	None	Modem	10/100	6-cell Li-Ion	XP Home	No	Apr 2003
2388-3AU	Pentium 4	2.4	128MB	15.0" XGA	20GB	DVD	None	Modem	10/100	6-cell Li-Ion	XP Home	No	Apr 2003
2388-52U	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Home	No	May 2003
2388-6AU	Pentium 4	2.2	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	6-cell Li-Ion	XP Home	Entry	Aug 2003
2388-BAU	Pentium 4	3.0	256MB	14.1" XGA	30GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Home	No	Oct 2003
2388-BCU	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Home	No	Oct 2003
Positioning Processor	Powerful desktop replacement; three-spindle system										SOFTWARE ¹⁴		
L2 cache	Intel® Celeron 2.0 or 2.2GHz ³⁷ with 400MHz system bus or Intel Pentium 4 at 2.2, 2.4, or 3.0GHz ³⁷ with 400MHz system bus										Windows XP Home models - Microsoft® Windows® XP Home Edition ²⁰ ♦ Disk-to-Disk Recovery (in hidden protected area)		
Memory	Celeron: 128MB; Pentium 4: 512KB; All: on die (at processor speed) / ECC 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										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		
CD	Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7mm high												
DVD	Some: DVD-ROM / 24X-8X ⁹ speed / fixed, not removable / 12.7mm high												
Combo Disk	Some: DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / fixed, not removable / 12.7mm 20GB ⁸ , 30GB, or 40GB / 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 All: one latch to unlatch and open with one hand										Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant		
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 External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle												
Graphics external EasyPivot	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
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™										ThinkPad notebooks implement IBM ThinkVantage™ technologies and design; visit ibm.com/thinkvantage		
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: Some: 7.64 to 7.89 lb (3.46 to 3.57kg); Pentium 4 at 3.0GHz models: 8.63 to 8.85 lb (3.91 to 4.01kg)												
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic										Universal 120 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 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)		
Battery - type Battery - life ¹⁰	Lithium Ion 6 or 12-cell / intelligent / removable 6-cell battery models: 1.3 to 1.45 hr; 12-cell battery models: up to 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)										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)		
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 port										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		
Video out	No video out port												
IEEE 1394	None										ServicePac 4 yr P&L P/U Depot 69P9195 ServicePac 5 yr P&L P/U Depot 69P9197		
Wireless antenna	None												
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable										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		
None	Empty / not customer upgradable												
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										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		
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Agere® chipset												
Bluetooth	None										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		
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										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		
Security	Power-on password / hard disk password / supervisor password / security keyhole												
Security chip	None										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		
Limited warranty ¹²	1 year - 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)										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		
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G40 Li-Ion Battery 12-cell	08K8178										
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad 120W AC Adapter	22P9150										
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
IBM USB Portable Diskette Drive	05K9276	GemPC400 Smart Card Reader/Writer	31P8901										
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	TrackPoint Cap Collection	73P2698										
IBM USB 2.0 Portable 40GB Hard Disk	22P7196	ThinkPad Monitor Stand 2001	22P5265										
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Nylon Carrying Case	10K0207										
IBM USB 2.0 Memory Key 256MB	22P9228	ThinkPad Premiere Leather Carrying Case	10K0209										
IBM USB 2.0 Memory Key 512MB	22P9230	Keyboard/Mouse Connector	07G3793										
IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM USB Keyboard with UltraNav	31P8950										
IBM USB Serial Parallel Adapter	22P5298	IBM M400 Projector	0037A04										
IBM USB Numeric Keypad	33L3225	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information

US models announced on April 22, August 5, October 7, or October 14, 2003

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

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁵	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Workhorse (W) or Global (G) or Entry (E)	Avail date
2388-HBU	Celeron®	2.5	128MB	14.1" XGA	30GB	CD	None	Modem	10/100	6-cell Li-Ion	XP Home	Entry Apr 2004
2388-JBU	Celeron	2.6	128MB	14.1" XGA	30GB	DVD	None	Modem	10/100	6-cell Li-Ion	XP Home	Entry Apr 2004
2388-KBU	Pentium® 4	2.8	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2004
2388-KNU	Pentium 4	3.0	256MB	14.1" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	No Apr 2004
Positioning	<i>Powerful desktop replacement; three-spindle system</i>										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 • Adobe Reader • IBM Rapid Restore™ PC • IBM RecordNOW and IBM Drive Letter Access powered by Sonic products (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 License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client Universal 120 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 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 ServicePac®. ²² 1 yr 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	
Processor	Intel® Celeron 2.5 or 2.6GHz ³⁷ with 400MHz system bus or Intel Pentium 4 at 2.8 or 3.0GHz ³⁷ with 400MHz system bus											
L2 cache	Celeron: 128KB; Pentium 4: 512KB; All: on die (at processor speed) / ECC											
Memory	128 or 256MB std / 1GB max ⁷ / PC2100 266MHz or 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	3.5" 1.44MB / fixed, not removable / 12.7mm high											
CD	Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7mm high											
DVD	Some: DVD-ROM / 24X-8X 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	30GB ⁸ or 40GB, 4200 rpm, 9.5mm high / removable / 9.5mm high bay											
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 / Direct AGP / in 852GM GMCH / uses main memory (8 to 32MB with 128MB memory; 8 to 64MB with 256MB+) / 133MHz / DMVT External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle											
Graphics external	EasyPivot											
Keyboard	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											
ComfortSlant	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											
TrackPoint®	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™											
Touch pad												
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: HBU: 7.63 lb (3.47kg); JBU: 7.70 lb (3.50kg); KBU: 8.34 lb (3.79kg); KNU: 8.65 lb (3.93kg)											
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 ¹⁰	HBU/JBU: up to 1.30 hr; KNU: up to 2.0 hr; KBU: up to 2.48 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	None											
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable											
None	Empty / not customer upgradable											
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible											
Modem	56K ^v V.90 (V.92-designed ²³) 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											
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)											
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G40 Li-Ion Battery 12-cell	08K8178									
256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad 120W AC Adapter	22P9150									
512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	IBM H Rate Wireless LAN PC Card 128	09N9904									
IBM USB 2.0 Combo Drive	73P4515	IBM 11a/b/g Wireless CardBus Adapter	31P9101									
IBM USB 2.0 Portable Multi-Burner	22P9163	ThinkPad Monitor Stand 2001	22P5265									
IBM USB 2.0 Portable 40GB Hard Drive	22P7196	ThinkPad Nylon Carrying Case	10K0207									
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Carrying Case - Expander	73P3597									
IBM USB 2.0 Memory Key 256MB	22P9228	ThinkPad Leather Carrying Case	10K0209									
IBM USB 2.0 Memory Key 512MB	22P9230	Keyboard/Mouse Connector	07G3793									
IBM Optical 3-Button Travel Wheel Mouse	31P7410	IBM USB Keyboard with UltraNav	31P8950									
IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700	IBM Enhanced Performance USB Keybrd	73P2620									
IBM USB Serial Parallel Adapter	22P5298	IBM M400 Projector	0037A04									
TrackPoint Cap Collection	73P2698	IBM E400 Projector	0038A04									
Kensington® MicroSaver® Security Cable	73P2582	IBM C400 Projector	0039A04									
GemPC400 Smart Card Reader/Writer	31P8901	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

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ⁸	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Preload	Workhorse (W) or Global (G) or Education software	Education software	Avail date
2389-1DU	Celeron®	2.0	128MB	14.1" XGA	20GB	CD	11b Wi-Fi ³²	Modem	10/100	12-cell	XP Pro	Educ		Apr 2003
2389-2XU	Pentium® 4	2.4	256MB	14.1" XGA	20GB	CD	11b Wi-Fi	Modem	10/100	12-cell	XP Pro	Educ		Apr 2003
2389-3HU	Pentium 4	2.4	256MB	15.0" XGA	40GB	Combo	11b Wi-Fi	Modem	10/100	12-cell	XP Pro	Educ		Apr 2003
2389-7EU	Celeron	2.2	128MB	14.1" XGA	20GB	CD	11a/b Wi-Fi ²⁷	Modem	10/100	12-cell	XP Pro	Educ		Oct 2003
2389-9FU	Pentium 4	2.6	256MB	14.1" XGA	30GB	CD	11a/b Wi-Fi	Modem	10/100	12-cell	XP Pro	Educ		Oct 2003
2389-ATU	Pentium 4	2.6	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell	XP Pro	Educ		Oct 2003
2389-DHU	Celeron	2.4	256MB	14.1" XGA	30GB	CD	11a/b Wi-Fi	Modem	10/100	12-cell	XP Pro	Educ		Jan 2004
2389-HEU	Celeron	2.5	256MB	14.1" XGA	30GB	CD	11a/b Wi-Fi	Modem	10/100	12-cell	XP Pro	Educ	Vital Source	Apr 2004
2389-KHU	Pentium 4	2.8	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell	XP Pro	Educ	Vital Source	Apr 2004

• The 2389 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	Powerful desktop replacement; three-spindle system										SOFTWARE ¹⁴			
L2 cache	Intel® Celeron 2.0, 2.2, 2.4 or 2.5GHz ³⁷ with 400MHz system bus or Intel Pentium 4 at 2.4, 2.6 or 2.8GHz ³⁷ with 400MHz system bus										Windows XP Professional			
Memory	Celeron: 128KB; Pentium 4: 512KB; All: on die (at processor speed) / ECC 128 or 256MB std / 1GB max ⁷ / PC2100 266MHz or 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 Professional ²⁰ ◆ Disk-to-Disk Recovery (in hidden protected area)			
Diskette drive	3.5" 1.44MB / fixed, not removable / 12.7mm high										Preloaded			
CD	Some: CD-ROM / 24X-10X ⁹ speed / fixed, not removable / 12.7mm high										• HEU/KHU: Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™			
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 Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits										• Adobe Reader			
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 External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										• IBM Rapid Restore™ PC			
Graphics external	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle										• IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models)			
Keyboard	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										• InterVideo WinDVD (combo models)			
ComfortSlant	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										• Norton AntiVirus (OEM edition)			
TrackPoint®	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™										• PC-Doctor™			
Touch pad	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™										• ThinkPad Utilities			
Dimensions ³	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters										• IBM Update Connector™ ¹⁵			
Weight ²	with optical drive and battery: 14.1" models: 8.24 lb (3.74kg); 15.0" models: 8.54 lb (3.87kg)										Downloadable			
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic										• IBM Director Agent			
Battery - type	Lithium Ion 12-cell / intelligent / removable										• Software Delivery Assistant			
Battery - life ¹⁰	KHU with Pentium 4 at 2.8GHz: up to 2.48 hr; Others: up to 3.0 hr										• System Migration Assistant			
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)										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	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										Universal 120 watt AC adapter Asset ID™ ³⁴ (system-specific info in chip accessed over network)			
Video out	No video out port										PC 2001 and PXE 2.0-compliant			
IEEE 1394	None										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 customer upgradable										IBM ImageUltra™ Services available			
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intersil® Prism 2.5 chipset										IBM Rapid Restore PC available to protect software image and data			
11a/b Wi-Fi ²⁷	Some: 11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset										International Warranty Service ¹⁷			
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible										24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹²			
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Agere® chipset													
Bluetooth	None standard													
Ethernet	10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®										ServicePac® ²² 2 yr IOR 9x5 NBD 30L9190			
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 3 yr IOR 9x5 NBD 30L9197			
Security	Power-on password / hard disk password / supervisor password / security keyhole										ServicePac 4 yr IOR 9x5 NBD 69P9198			
Security chip	None										ServicePac 5 yr IOR 9x5 NBD 69P9200			
Limited warranty ¹²	3 years/1 yr battery - EasyServ™ ¹⁹ onsite pickup and delivery / service upgrades ²² avail										ServicePac 4 yr P&L P/U Depot 69P9199			
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828			ThinkPad G40 Li-Ion Battery 12-cell			08K8178			ServicePac 5 yr P&L P/U Depot 69P9201				
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830			ThinkPad 120W AC Adapter			22P9150			Other ServicePac options at ibm.com/services/its/us/source/ wamomxeu.pdf				
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832			IBM 11a/b/g Wireless CardBus Adapter			31P9101			Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/ maspspleu.pdf				
IBM USB 2.0 Portable Multi-Burner Drive	22P9163			GemPC400 Smart Card Reader/Writer			31P8901							
IBM USB 2.0 Portable 40GB Hard Disk	22P7196			ThinkPad Monitor Stand 2001			22P5265							
IBM 4GB Microdrive™ with PC Card	09N4280			ThinkPad Nylon Carrying Case			10K0207							
IBM USB 2.0 Memory Key 256MB	22P9228			ThinkPad Premiere Leather Carrying Case			10K0209							
IBM USB 2.0 Memory Key 512MB	22P9230			Keyboard/Mouse Connector			07G3793							
IBM Optical 3-Button Travel Wheel Mouse	31P7410			IBM USB Keyboard with UltraNav			31P8950							
IBM Optical 3-Button ScrollPoint® Mouse	31P7405			TrackPoint Cap Collection			73P2698							
IBM USB Serial Parallel Adapter	22P5298			Other options at ibm.com/pc/us/accessories										

See footnotes for important warranty information

US models announced on April 22 or October 7, 2003, or January 20 or April 6, 2004

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

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB ³	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Battery	Preload	Small and medium business	Avail date
2384-DLU	Celeron®	2.4	256MB	14.1" XGA	30GB	DVD	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Jan 2004
2384-DWU	Celeron	2.4	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Jan 2004
2384-ECU	Pentium® 4	2.8	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Jan 2004
2384-EHU	Pentium 4	2.8	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Jan 2004
2384-JCU	Celeron	2.6	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Apr 2004
2384-JNU	Celeron	2.6	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi ²⁷	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Apr 2004
2384-KMU	Pentium 4	2.8	256MB	15.0" SXGA+	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Apr 2004
2384-KPU	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Apr 2004
2384-KQU	Pentium 4	3.0	256MB	15.0" SXGA+	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro	Yes	Apr 2004
These small and medium business (SMB) models are part of the IBM US Think Express Program													
Positioning Processor	Powerful desktop replacement; three-spindle system Intel® Celeron 2.4 or 2.6GHz³⁷ 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)	
L2 cache	Celeron: 128MB ; Pentium 4: 512KB ; All: on die (at processor speed) / ECC												
Memory	256MB std / 1GB max ⁷ / PC2100 266MHz or 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	3.5" 1.44MB / fixed, not removable / 12.7mm high											Preloaded • Access IBM • Access Connections • Adobe Reader • IBM Rapid Restore™ PC • IBM RecordNOW and Drive Letter Access powered by Sonic products (combo models) • InterVideo WinDVD (combo, DVD) • Norton AntiVirus (OEM edition) • PC-Doctor™ • ThinkPad Utilities • IBM Update Connector™ ¹⁵	
DVD	Some: DVD-ROM / 24X-8X 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 high											Downloadable • IBM Director Agent • Software Delivery Assistant • System Migration Assistant	
Disk	30GB⁸ or 40GB / 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											License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	
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											Universal 120 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 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)	
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)											ServicePac®. ²² 1yr IOR 9x5 NBD 30L9188	
ComfortSlant	ThinkPad ComfortSlant keyboard with built-in incline provides maximum typing comfort												
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹⁹ , magnifying glass / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap											ServicePac 2 yr IOR 9x5 NBD 30L9189	
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; <i>Volume</i> : 4 liters											ServicePac 3 yr IOR 9x5 NBD 30L9195	
Weight ²	with optical drive and battery: <i>DLU</i> : 8.32 lb (3.78kg); <i>JCU</i> : 8.34 lb (3.79kg); <i>ECU</i> : 8.36 lb (3.80kg); <i>JNU</i> : 8.52 lb (3.87 kg); <i>DWU/EHU</i> : 8.54 lb (3.88kg); <i>KMU</i> : 8.56 lb (3.89kg); <i>KPU</i> : 8.83 lb (4.01kg); <i>KQU</i> : 8.87 lb (4.03kg)												
Case material	<i>Color</i> : black; <i>All</i> : Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic											ServicePac 4 yr IOR 9x5 NBD 30L9194	
Battery - type	Lithium Ion 12-cell / intelligent / removable												
Battery - life ¹⁰	<i>KPU/KQU</i> : up to 2.0 hr; <i>ECU/EHU/KMU</i> : up to 2.48 hr; <i>DLU/DWU/JCU/JNU</i> : 3.0 hr											ServicePac 5 yr IOR 9x5 NBD 30L9196	
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											ServicePac 2 yr P&L P/U Depot 30L9191	
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												
Video out	No video out port											ServicePac 3 yr P&L P/U Depot 30L9192	
IEEE 1394	None												
Wireless antenna	Some (<i>wireless models</i>): UltraConnect™ Antenna built into the display cover											ServicePac 4 yr P&L P/U Depot 69P9195	
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable												
None	Some: empty / not customer upgradable											ServicePac 5 yr P&L P/U Depot 69P9197	
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											Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf	
Modem	56K ⁶ V.90 (V.92-designed ²⁵) modem in CDC / Agere® chipset												
Bluetooth	None standard (optional PC Card available)											Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf	
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											ServicePac 2 yr P&L P/U Depot 30L9191	
Security chip	None												
Limited warranty ¹²	1 year - EasyServ™. ¹⁹ onsite pickup and delivery / service upgrades ²² available											ServicePac 2 yr P&L P/U Depot 30L9192	
128 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G40 Li-Ion Battery 12-cell	08K8178										
256 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad 120W AC Adapter	22P9150										
512 MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	IBM 11a/b/g Wireless CardBus Adapter	31P9101										
IBM USB Portable Diskette Drive	05K9276	ThinkPad Monitor Stand 2001	22P5265										
IBM USB 2.0 Combo Drive	73P4515	ThinkPad Nylon Carrying Case	10K0207										
IBM USB 2.0 Portable Multi-Burner	22P9163	ThinkPad Premiere Leather Carrying Case	10K0209										
IBM USB 2.0 Portable 40GB Hard Disk	22P7196	Keyboard/Mouse Connector	07G3793										
IBM 4GB Microdrive™ with PC Card	09N4280	TrackPoint Cap Collection	73P2698										
IBM USB 2.0 Memory Key 512MB	22P9230	IBM USB Keyboard with UltraNav	31P8950										
IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700	IBM M400 Projector	0037A04										
IBM USB Serial Parallel Adapter	22P5298	IBM E400 Projector	0038A04										
IBM USB Numeric Keypad	33L3225	Other options at ibm.com/pc/us/accessories											

See footnotes for important warranty information
US models announced on January 20 or 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	Ethernet on planar	Battery	Workhorse or Global or Entry or TAA	Avail date
2388-F1U	Pentium® 4	2.8	256MB	15.0" XGA	40GB	Combo	11b Wi-Fi ³²	Modem	10/100	12-cell Li-Ion	XP Pro TAA	Jan 2004
2388-F2U	Pentium 4	3.0	256MB	15.0" XGA	40GB	Combo	None	Modem	10/100	12-cell Li-Ion	XP Pro TAA	Jan 2004
2388-F3U	Pentium 4	3.0	256MB	15.0" SXGA+	40GB	Combo	11b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro TAA	Jan 2004
2388-F4U	Pentium 4	2.6	256MB	15.0" XGA	40GB	Combo	11a/b Wi-Fi ²⁷	Modem	10/100	12-cell Li-Ion	XP Pro TAA	Jan 2004
2388-F5U	Pentium 4	2.6	256MB	15.0" SXGA+	40GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro TAA	Jan 2004
2388-F6U	Pentium 4	3.0	512MB	15.0" SXGA+	60GB	Combo	11a/b Wi-Fi	Modem	10/100	12-cell Li-Ion	XP Pro TAA	Jan 2004

• **US Government Trade Act Agreement (TAA)-compliant models**

Positioning	<i>Powerful desktop replacement; three-spindle system</i>							SOFTWARE¹⁴									
US Govt (TAA) ⁵	All: US Government model (Trade Act Agreement-compliant)							Windows XP Professional									
Processor	Intel® Pentium 4 at 2.6, 2.8 or 3.0GHz ³⁷ with 400MHz system bus							- Microsoft® Windows® XP Professional ²⁰									
L2 cache	512KB / on die (at processor speed) / ECC							◆ Disk-to-Disk Recovery (in hidden protected area)									
Memory	256 or 512MB 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							Preloaded									
Diskette drive	3.5" 1.44MB / fixed, not removable / 12.7mm high							• Access IBM									
Combo	DVD-ROM/CD-RW / 24X/10X/24X/8X ²¹ speed / fixed, not removable / 12.7mm							• Access Connections									
Disk	40GB ⁸ or 60GB, 4200 rpm, 9.5mm high / removable / 9.5mm high bay							• Adobe Reader									
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							• IBM Rapid Restore™ PC									
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							• IBM RecordNOW and IBM Drive Letter Access (combo models)									
Graphics external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B							• InterVideo WinDVD (combo models)									
EasyPivot	ThinkPad EasyPivot base allows smooth positioning for a comfortable viewing angle							• Norton AntiVirus (OEM edition)									
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)							• PC-Doctor™									
ComfortSlant	ThinkPad ComfortSlant keyboard with built-in incline provides maximum typing comfort							• ThinkPad Utilities									
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 Update Connector™ ¹⁵									
Touch pad	No touch pad (UltraNav™ multi-pointing system) / no ThinkLight™							Downloadable									
Dimensions ³	12.9" x 11.1" x 1.5-2.0"; 329mm x 282.5mm x 37.1-50.9mm; Volume: 4 liters							• IBM Director Agent									
Weight ²	with optical drive and battery: F1U/F4U: 8.54 lb (3.88kg); F2U: 8.85 lb (4.02kg); F3U/F6U: 8.89 lb (4.04kg); F5U: 8.58 lb (3.90kg)							• Software Delivery Assistant									
Case material	Color: black; All: Acrylonitrile-Butadiene-Styrene/Polycarbonate (ABS/PC) plastic							• System Migration Assistant									
Battery - type	Lithium Ion 12-cell / intelligent / removable							License (CD not included)									
Battery - life ¹⁰	F1U: 2.8 hr; F2U/F3U/F6U: 2.0 hr; F4U/F5U: 3.0 hr							- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client									
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)							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 120 watt AC adapter 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							PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant									
Video out	No video out port							IBM ImageUltra™ Services available									
IEEE 1394	None							IBM Rapid Restore PC available to protect software image and data									
Wireless antenna	Some (wireless models): UltraConnect™ Antenna built into the display cover							International Warranty Service ¹⁷									
Mini PCI	One Mini PCI type III slot (Communications Bay) / not customer upgradable							24 hour x 7 day ¹⁸ toll-free warranty support during the warranty ¹² via 800-IBM-SERV (426-7378)									
None	Some: empty / not customer upgradable							ServicePac®. ²² 1yr IOR 9x5 NBD 30L9188									
11b Wi-Fi ³²	Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intersil® Prism 2.5 chipset							ServicePac 2 yr IOR 9x5 NBD 30L9189									
11a/b Wi-Fi ²⁷	Some: 11a/b Wi-Fi ²⁷ wireless ⁴ , Mini PCI, Atheros™ AR5001X chipset							ServicePac 3 yr IOR 9x5 NBD 30L9195									
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible							ServicePac 4 yr IOR 9x5 NBD 30L9194									
Modem	56K ⁶ V.90 (V.92-designed ²⁸) modem in CDC / Agere® chipset							ServicePac 5 yr IOR 9x5 NBD 30L9196									
Bluetooth	None							ServicePac 2 yr P&L P/U Depot 30L9191									
Ethernet	10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®							ServicePac 3 yr P&L P/U Depot 30L9192									
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 P&L P/U Depot 69P9195									
Security	Power-on password / hard disk password / supervisor password / security keyhole							ServicePac 5 yr P&L P/U Depot 69P9197									
Security chip	None							Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf									
Limited warranty ¹²	1 year - EasyServ™ ¹⁹ onsite pickup and delivery							Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf									
128MB PC2700 DDR-SDRAM CL2.5 SOD	31P9828	ThinkPad G40 Li-Ion Battery 12-cell	08K8178	ServicePac 2 yr P&L P/U Depot	30L9196	256MB PC2700 DDR-SDRAM CL2.5 SOD	31P9830	ThinkPad 120W AC Adapter	22P9150	ServicePac 3 yr P&L P/U Depot	30L9191	512MB PC2700 DDR-SDRAM CL2.5 SOD	31P9832	IBM 11a/b/g Wireless CardBus Adapter	31P9101	ServicePac 4 yr P&L P/U Depot	69P9195
IBM USB Portable Diskette Drive	05K9276	IBM USB Keyboard with UltraNav	31P8950	ServicePac 5 yr P&L P/U Depot	69P9197	IBM USB 2.0 Combo Drive	73P4515	IBM Enhanced Performance USB Keybrd	73P2620	Other ServicePac options at		IBM USB 2.0 Portable Multi-Burner	22P9163	IBM M400 Projector	0037A04		
IBM USB 2.0 Portable Multi-Burner	22P9163	IBM USB Numeric Keypad	33L3225			IBM USB 2.0 Memory Key 256MB	22P9228	IBM E400 Projector	0038A04			IBM USB 2.0 Memory Key 512MB	22P9230	IBM C400 Projector	0039A04		
IBM USB 2.0 Portable Multi-Burner	22P9163					IBM USB 2.0 Memory Key 512MB	22P9230					IBM Optical 3-Button Travel Wheel Mouse	31P7410				
IBM USB 2.0 Portable Multi-Burner	22P9163					IBM Optical 3-Button Travel Wheel Mouse	31P7410					IBM Optical 3-Button ScrollPoint® Mouse	31P7405				
IBM USB 2.0 Portable Multi-Burner	22P9163					IBM Optical 3-Button ScrollPoint® Mouse	31P8700					IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700				
IBM USB 2.0 Portable Multi-Burner	22P9163					IBM Optical 3-Button ScrollPoint Pro Mouse	31P8700					IBM USB Serial Parallel Adapter	22P5298				
IBM USB 2.0 Portable Multi-Burner	22P9163					IBM USB Serial Parallel Adapter	22P5298					IBM USB Numeric Keypad	33L3225				
IBM USB 2.0 Portable Multi-Burner	22P9163					IBM USB Numeric Keypad	33L3225										

See footnotes for important warranty information
US models announced January 20, 2004
US models withdrawn effective April 2004 or January 2005

Type-model	Processor	MHz	Memory	Screen	Disk	Digital notepad and pen	Hand	Comm Bay	Preload	Available
2675-21U	Pentium® III	600	64MB	10.4" TFT FlipTouch™	10GB ⁸	ThinkScribe™ notepad	Right	ethernet/modem	Windows® 98 SE	Feb 2001
2675-22U	Pentium III	600	64MB	10.4" TFT FlipTouch	10GB	ThinkScribe notepad	Left	ethernet/modem	Windows 98 SE	Feb 2001
2675-61U	Pentium III	600	64MB	10.4" TFT FlipTouch	10GB	ThinkScribe notepad	Right	ethernet/modem	Windows 2000	Feb 2001
2675-62U	Pentium III	600	64MB	10.4" TFT FlipTouch	10GB	ThinkScribe notepad	Left	ethernet/modem	Windows 2000	Feb 2001

- IBM ThinkPad TransNote portfolio notebook is a revolutionary portfolio notebook that integrates paper and ink with a mobile computer

Processor	Intel® Mobile Pentium® III 600MHz with Intel SpeedStep™ technology ¹ and 100MHz frontside bus		<p>WINDOWS 98 PRELOAD¹⁴</p> <ul style="list-style-type: none"> - Microsoft® Windows® 98 Second Edition • Ink Manager™ Pro • 3M Post-It® Notes Lite • TouchBoard™ on-screen keyboard • Utility Wizard • ThinkPad Assistant™ • IBM Update Connector™.15 • Access ThinkPad II • PC-Doctor™ • ConfigSafe ↳ Lotus SmartSuite Millennium CD ↳ Software Selections CD-ROM ↳ Recovery CD-ROM (Windows 98 SE) ↳ Disk-to-Disk Recovery (in hidden Service Partition) <p>WINDOWS 2000 PRELOAD¹⁴</p> <ul style="list-style-type: none"> - Microsoft Windows 2000 Professional • Ink Manager™ Pro • 3M Post-It® Notes Lite • TouchBoard™ on-screen keyboard • Utility Wizard • ThinkPad Assistant™ • IBM Update Connector™.15 • Access ThinkPad II • PC-Doctor™ • ConfigSafe ↳ Lotus SmartSuite Millennium CD ↳ Recovery CD-ROM (Windows 2000) ↳ Software Selections CD-ROM ↳ Disk-to-Disk Recovery (in hidden Service Partition) <p>ThinkScribe Digital Notepad</p> <ul style="list-style-type: none"> - Uses regular pad of paper (up to 50 pages) on side of system (left or right handed models available) - Automatically saves handwritten notes and transfers them to PC via Ink Manager Pro - Stores up to 50 pages of notes in 2MB flash memory - Stores even with PC off and transferred when PC powered on <p>Digital Pen</p> <ul style="list-style-type: none"> - Pen stored on side of system - Used three ways <ol style="list-style-type: none"> 1. Write with ink (blue or black) on paper (can be saved to PC) 2. Touch screen (either red end) 3. Move mouse cursor by moving pen on paper (with ink side of pen with ink or red cap on) <p>72 watt AC Adapter PC-99, WfM 2.0, DMI 2.0-compliant Local and remote asset management via the IBM Universal Manageability solutions IBM ImageUltra™ Services available IBM Rapid Restore™ PC available to protect software image and data Setup Guide, User's Reference, Windows OS manual Personalized Web-based support International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free hardware support during the warranty</p>	
L2 cache	256KB / onboard (at processor speed) / ECC			
Memory	64MB standard / 320MB maximum ⁷ / SDRAM / non-parity / 100MHz / PC 100 / 3.3v / one 144-pin SO-DIMM socket / 64MB on systemboard / 1 socket available			
Diskette drive	None standard / optional USB Portable Diskette Drive			
CD or DVD-ROM	None standard / optional USB CD or DVD-ROM			
Disk	10GB⁸ / user upgradeable / S.M.A.R.T. / ATA-66			
Display	10.4" (264mm) SVGA (800x600) TFT color / Active Matrix / FlipTouch™ screen / touch screen display / display can be used flat or raised exposing the keyboard / image and screen both invert to share work with someone across from user / 3 buttons on right: ThinkPad Button, Flip Touch Button, Mute Button			
Graphics controller	ATI™ Mobility-M / 4MB SGRAM / PCI / DDC2B			
Graphics - external	External SVGA to 1024x768x16.7 million colors at 100Hz and up to 1600x1200			
Digital notepad	ThinkScribe digital notepad automatically saves handwritten notes			
Digital pen	Digital pen used for handwriting and for touch screen functions			
Keyboard	Ergonomic keyboard, 95% size / TrackPoint®, "Press-to-Select," Internet Scroll Bar			
FlexFold™ design	FlexFold™ hinge compacts the system in one quick motion to use one side (PC or pad) independently, even standing / available for right- or left-handed users			
Dimensions ³	12.6" x 11.1" x 1.3"; 320mm x 282mm x 33mm			
Travel weight ²	5.5 lbs; 2.5 kg (includes digital pen and paper pad)			
Cover material	Endurimer™ cover (man-made leather)			
Battery	Lithium Ion 4-cell / intelligent / also has warm swap bridge battery			
Battery - life ¹⁰	2.5 hrs (ThinkScribe will operate additional 10 hours if battery low)			
Architecture	Intel 440ZX chipset / Intel PIIX4M (EIDE with Ultra DMA/33 or PIO Mode 4 support, ISA Bridge, USB) / PCI 2.1, 32-bit, 33MHz (graphics, EIDE, CardBus, audio) / Ricoh® R5C476II CardBus controller for PC Card and Compact Flash / PC97338 Super I/O, ISA (infrared)			
Port replicator	Optional TransNote Port Extender (graphics, power, two USB ports)			
Docking Station	None			
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			
Ports	Two USB (Version 1.1) / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / infrared / no serial, parallel, keyboard, or mouse ports			
Video out	None			
Communicatns Bay	Communications Bay with Mini PCI type III slot / customer accessible			
Ethernet/modem	IBM 10/100 EtherJet™ Mini PCI Adapter with 56K Modem / Intel ethernet chipset / Lucent modem chip set			
Audio support	PCI audio / SoundBlaster Pro™ support / CS4281 with CS4297A AC97 codec / mono speaker / 0.25 watt / mute button / software volume control / internal microphone / input jack (3.5 mm) / output jack (3.5 mm) / line in jack			
Security	Power-on password / hard disk password / supervisor pwrld / security keyhole			
Limited warranty ¹²	1 year - EasyServ™.19 onsite pickup and delivery courier service			
Service options ²²	Optional service upgrades provide up to three years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)			
OS support ¹¹	Microsoft Windows 98 Second Edition, Windows 2000 Professional, Windows Millennium Edition			
Communication Bay	- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem by 3Com	09N9774	- USB Portable Diskette Drive	05K9276
	- IBM 10/100 EtherJet Mini PCI Adapter with 56K Modem	19K5887	- USB Portable CD-ROM	33L5151
Devices for IBM Portable Drive Bay 2000* (USB or PC Card)		19K4480	- 64MB SO DIMM 100MHz NP SDRAM	20L0254
- 8X/8X/24X ⁹ CD-Read/Write Ultrabay		08K9569	- 128MB SO DIMM 100MHz NP SDRAM	20L0255
- 8X-3X DVD Ultrabay 2000 Drive		27L3448	- 256MB SO DIMM 100MHz NP SDRAM	33L3069
- 2X SuperDisk (LS-120) UltraBay		27L3451	- TransNote Li-Ion Battery	02K6713
- 10GB Ultrabay 2000 Disk Drive**		08K9510	- TransNote Port Extender	27L0572
- 20GB Ultrabay 2000 Disk Drive**		27L3439	- Multi-Port USB Hub	00N8215
- 32GB Ultrabay 2000 Disk Drive**		08K9511	- USB to Parallel Printer Cable	19K4164
* accepts Ultrabay 2000 storage devices			- TransNote Digital Pen	02K5280
** requires Second Hard Disk Drive Adapter 08K6068			- ThinkScribe Paper Pads (A4)	04P3685
			- ThinkScribe Paper Pads (Letter)	04P3686
			- 10GB HDD	08K9510
			- 20GB HDD	27L3439
			- 1GB Microdrive	07N5574
			- ThinkPad 72W AC Adapter	02K6699
			- IBM UltraPort Camera II (USB)	04P6135
Wireless connectivity			- Visit ibm.com/options (U.S.)	
- IBM High Rate Wireless PC Card 128	09N9904		or ibm.com/pc/ca/accessories (CA)	
- High Rate Wireless Access Point 500	09N9906			
- Bluetooth PC Card from IBM	09N9812			

See footnotes for important warranty information
US models withdrawn effective October 2003

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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