

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>								SOFTWARE^{14, 27}		
L2 cache	Mobile Intel® Pentium® III Processor-M 866MHz¹ or 1.13GHz¹ with enhanced Intel SpeedStep™ technology and 133MHz front side bus								Windows 98 models		
Memory	512KB / on die (at processor speed) / ECC 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										
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										
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 xLx: Embedded Security Chip / authenticates and encrypts data communications / stores encrypted passwords in hardware										
Limited warranty ^{*.12}	3 year - EasyServ™ ¹⁹ onsite pickup and delivery courier service										

64 MB SO DIMM 133MHz NP SDRAM	19K4650	ThinkPad T 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 CD-RW Ultrabay 2000	08K9569	ThinkPad Monitor Stand 2001	22P5265
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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IBM® ThinkPad® T23 (Fall 2001) - withdrawn

Created by IBM PC Institute
Personal Systems Reference (PSREF)

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		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	<i>The perfect balance of performance and portability; two-spindle system</i>										SOFTWARE¹⁴		
L2 cache	Mobile Intel® Pentium® III Processor-M 1.13 or 1.2GHz with										Windows XP Pro models		
Memory	enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus 512KB / on die (at processor speed) / ECC 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® XP Professional ◇ Disk-to-Disk Recovery (in hidden Service Partition)		
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)										Windows 2000 models		
CD-RW	<i>Some:</i> CD-RW / 8X/4X/24X Max ⁹ / removable from Ultrabay 2000										- Microsoft Windows 2000 Professional ¹³		
DVD-ROM	<i>Some:</i> DVD-ROM / 8X-3.3X ⁹ speed / removable from Ultrabay 2000										◇ Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition)		
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus-compatible										INCLUDED SOFTWARE¹⁴ (all)		
Disk	30GB⁸ (4200 rpm) or 48GB (5400 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										Preloaded		
Display	<i>Some:</i> 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix <i>Some:</i> 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix <i>All:</i> Easy-open cover to unlatch and open with one hand (two latches)										• Access ThinkPad • Access Connections • Access Help • ConfigSafe® • Mediamatics™ DVD (DVD models) • PC-Doctor™ • SystemSoft CardWizard • ThinkPad Utilities • Veritas RecordNOW (CD-RW mod)		
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM										Downloadable		
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200										• IBM Rapid Restore™ PC • IBM Data Transfer • Universal Manageability Services™ • IBM Update Connector™ ¹⁵ • Client Security Software (models with security chip)		
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm										License		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0		
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										Office XP Small Business models only		
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";										- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) ◇ Office XP Small Business CD		
Approximate weight ²	with optical drive and battery: <i>Gxx/8xx/4xx:</i> 5.2 lbs; <i>Hxx/9xx/5xx:</i> 5.5 lbs										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		
Case material	Titanium Composite in the top and bottom covers for enhanced strength										PC 99-compliant		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										CIM and DMI 2.0-compliant		
Battery - life ¹⁰	3 hrs 11 minutes to 3 hrs 30 minutes depending on model										Wired for Management 2.0		
AC adapter	Universal 72 watt / 16VDC 4.5A										Local and remote asset management via the IBM Universal Manageability solutions		
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)										IBM ImageUltra Services available		
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										IBM Rapid Restore PC available to protect software image and data		
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1										Asset ID™ wireless RF technology (via installing into disk cover)		
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)										International Warranty Service ¹⁷		
Video out	S-video out port (TV out) / one industry standard connector										24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²		
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, 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	<i>Some:</i> 10/100 ethernet on Communications Daughter Card / Intel® 82562ETchipset												
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	<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												
64MB SO DIMM	133MHz NP SDRAM	19K4650	ThinkPad T20 Series Li-Ion Battery	02K6649									
128MB SO DIMM	133MHz NP SDRAM	19K4652	Ultrabay 2000 Li-Ion battery	02K6646									
256MB SO DIMM	133MHz NP SDRAM	19K4654	ThinkPad 72W AC Adapter	02K6699									
512MB 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											

See footnotes for important warranty information

US models announced October 9, 2001

US models withdrawn effective July 2002, April 2003, or July 2003

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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)	Avail date
2647-2RU	Pentium® III-M	1.0	128MB	14.1" XGA	20GB ⁸ CD-ROM	Modem	Ethernet	Ethernet	Windows® 2000				Jan 2002
2647-6RU	Pentium III-M	1.0	128MB	14.1" XGA	20GB CD-ROM	Modem	Ethernet	Ethernet	XP Pro				Jan 2002
2647-6GU	Pentium III-M	1.0	256MB	14.1" XGA	20GB DVD-ROM	Modem	Ethernet	Ethernet	XP Pro		W G		Feb 2002
2647-2TU	Pentium III-M	1.0	128MB	14.1" XGA	20GB DVD-ROM	Modem	Ethernet	Ethernet	Windows 2000		W G		Feb 2002
2647-2GU	Pentium III-M	1.0	256MB	14.1" XGA	20GB DVD-ROM	Modem	Ethernet	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	Windows 2000				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	Windows 2000				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> Mobile Intel® Pentium® III Processor-M 1.0 or 1.2GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus										SOFTWARE¹⁴		
L2 cache	512KB / on die (at processor speed) / ECC										Windows XP Pro models		
Memory	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										- Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden Service Partition)		
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)										Windows 2000 models		
CD-ROM	Some: CD-ROM / 24X-10X ⁹ / removable from Ultrabay 2000										- Microsoft Windows 2000 Professional ¹³		
DVD-ROM	Some: DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000										• ConfigSafe®		
DVD-ROM/CD-RW	Some: DVD-ROM/CD-RW / 8X/8X/24X/8X ²¹ speed / removable from Ultrabay 2000										- Disk-to-Disk Recovery to Windows 2000 or Windows NT 4.0 (in hidden Service Partition)		
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible										INCLUDED SOFTWARE¹⁴ (all)		
Disk	20GB⁸ (4200 rpm) or 60GB⁸ (5400 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										Preloaded		
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)										• Access ThinkPad - Access Connections - Access Help - Access Support • Mediamatics™ DVD (DVD models) • PC-Doctor™ • ThinkPad Utilities • Veritas RecordNOW (CD-RW mod) • IBM Software Installer • IBM Update Connector™ ¹⁵		
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM										Downloadable		
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200										• IBM Rapid Restore™ PC • IBM Data Transfer • Universal Manageability Services™ • Client Security Software (models with security chip)		
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm (standard-size keys)										License		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0		
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										Office XP Small Business models only		
Dimensions ³	Wi-Fi ³² models: 12.1" x 9.8" x 1.3"; Others: 12.0" x 9.8" x 1.3"; with optical drive and battery: 2Rx/6Rx: 5.05 lbs (2.29kg); 6Gx/2Tx/2Gx: 5.19 lbs (2.36kg); 5Rx/9Rx: 5.58 lbs (2.53kg); 5Sx/9Sx/HSx: 5.62 lbs (2.55kg)										- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools) - Office XP Small Business CD		
Approximate weight ¹²	Titanium Composite in the top and bottom covers for enhanced strength ⁴ Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000 3.1 hrs to 3.5 hrs depending on model										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		
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) / 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 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® 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 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 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 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> 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 ²⁰ ✧ Disk-to-Disk Recovery (in hidden Service Partition)		
L2 cache	512KB / on die (at processor speed) / ECC					
Memory	256MB standard / 1GB max ⁷ / SDRAM / non-parity / 133MHz / PC133-compliant / 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/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			INCLUDED SOFTWARE¹⁴ (all) Preloaded • Access ThinkPad - Access Connections - Access Help - Access Support • Mediamatics™ DVD • PC-Doctor™ • ThinkPad Utilities • Veritas RecordNOW • IBM Software Installer • IBM Update Connector™.15 Downloadable • IBM Rapid Restore™ PC • IBM Data Transfer • IBM Director Agent License - Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0		
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	
24X-10X CD-ROM Ultrabay 2000 Drive		05K9233	ThinkPad Dock	263120U	Manageability 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	ServicePac®, 22 2yr IOR 9x5 NBD	30L9190	24 hour x 7 day ¹⁸ toll-free hardware support during the warranty ¹²	
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

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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
2647-4RU	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>										SOFTWARE¹⁴		
L2 cache	Mobile Intel® Pentium® III Processor-M 1.2GHz with enhanced Intel SpeedStep™ technology ¹ and 133MHz frontside bus										Windows XP Pro models		
Memory	512KB / on die (at processor speed) / ECC										- Microsoft® Windows® XP Professional ²⁰		
	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										✧ Disk-to-Disk Recovery (in hidden Service Partition)		
Diskette drive	3.5" 1.44MB (use in either Ultrabay™ or attach ext with optional cable via parallel port)										Windows 2000 models		
DVD-ROM	DVD-ROM / 8X-3.3X ⁹ speed / bootable / removable from Ultrabay 2000										- Microsoft Windows 2000 Professional ²⁰		
CD-RW	Optional / removable from Ultrabay 2000										• ConfigSafe®		
DVD-ROM/CD-RW	Optional / removable from Ultrabay 2000										✧ Disk-to-Disk Recovery (in hidden Service Partition)		
Ultrabay 2000	One modular bay for interchangeable devices (right side) / Ultrabay Plus -compatible										INCLUDED SOFTWARE¹⁴ (all)		
Disk	40GB⁸ (4200 rpm) / upgradable / S.M.A.R.T. / supports 2nd disk with optional HDD Adapter in Ultrabay 2000										Preloaded		
Display	14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / easy-open cover to unlatch and open with one hand										• Access ThinkPad		
Graphics controller	S3 Graphics® SuperSavage / IXC16 / AGP 4X / 16MB SDRAM										- Access Connections		
Graphics - external	External SVGA to various modes such as 16.7 million colors, 85Hz, 1600x1200										- Access Help		
Keyboard	85-key / ThinkPad Button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar ¹³ / pitch: 19mm; stroke: 2.7mm (standard-size keys)										- Access Support		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										• Adobe® Acrobat Reader		
UltraPort™	UltraPort connector on top of display for options such as digital UltraPort Camera										• Mediamatics™ DVD (DVD models)		
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";										• PC-Doctor™		
Approximate weight ¹²	with optical drive and battery: 5.17 lbs (2.34kg)										• ThinkPad Utilities		
Case material	Titanium Composite in the top and bottom covers for enhanced strength										• Veritas RecordNOW (CD-RW mod)		
Battery - type	Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay 2000										• IBM Software Installer		
Battery - life ¹⁰	xSU: 3.3 hrs; xRU: 3.4 hrs										• IBM Update Connector™ ¹⁵		
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)										Downloadable		
Docking Station	Optional ThinkPad Dock (includes Ultrabay 2000 and half-size PCI slot)										• IBM Rapid Restore™ PC		
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1										• IBM Data Transfer		
Ports	Two USB (Version 1.1) / 9-pin serial / parallel / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)										• IBM Director Agent		
Video out	S-video out port (TV out) / one industry standard connector										License (CD not included)		
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable										- Lotus® SmartSuite® Millennium and Lotus Notes® Client 5.0		
CDC	One Communications Daughter Card (CDC) socket / customer accessible										Office XP Small Business model only (2647-BSU)		
Modem	<i>Some:</i> Mini PCI 56K ⁶ V.90 (V.92-designed ²⁹) modem card / Lucent® chipset										- Microsoft Office XP Small Business ²⁸ (Word, Excel, Outlook, Publisher, Small Business Tools)		
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										✧ Office XP Small Business CD		
Ethernet	10/100 ethernet on Communications Daughter Card / Intel® 82562ET chipset										Ultrabay Plus integrated modular bay supports most Ultrabay 2000 devices including CD-RW/DVD		
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)										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		
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 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
Zip 250MB Ultrabay 2000 Drive	00N8253	ThinkPad Port Replicator	02K8667	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 models announced April 23, 2002
 US models withdrawn effective July 2003

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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	Windows2000	No	Jun 2002
2647-4U2	Pentium III-M	1.0	256MB	14.1" SXGA+	20GB	DVD/CD-RW	None	Modem	Ethernet	Windows2000	No	Jun 2002
2647-4U3	Pentium III-M	1.13	256MB	14.1" SXGA+	30GB	DVD/CD-RW	None	modem	Ethernet	Windows2000	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> 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	
L2 cache	512KB / on die (at processor speed) / ECC											
Memory	256MB standard / 1GB max ⁷ / SDRAM / non-parity / 133MHz / PC133-compliant / 3.3v / two 144-pin SO-DIMM sockets / std mem in one socket / one socket available											
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> 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™ 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 ¹²	with optical drive and battery: <i>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 (TI® PCI1420 CardBus, Mini PCI, external expansion) / LPC bus 33MHz (PC87392 Super I/O for diskette, serial, parallel, infrared) / 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 / keyboard / mouse / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / <i>some: RJ-45 (ethernet)</i>											
Docking Station												
PC Card Std slots												
Ports												
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> <i>Some: Mini PCI 11b Wi-Fi³² wireless⁴, Intel® Prizm 2.5 chipset, dual antennas in display cover, Wi-Fi-certified / 56K⁶ V.90 modem combo, Lucent® chipset</i>											
11b Wi-Fi ³² /modem												
Ethernet	10/100 ethernet on Communications Daughter Card / Intel® 82562ETchipset											
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 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	20GB Hard Disk 9.5mm (4200 rpm)	08K9686								
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	Windows2000	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> 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 • Mediatics™ 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 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
L2 cache	512KB / on die (at processor speed) / ECC	
Memory	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)	

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 , 22yr 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			
		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 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 13, 2002
 US models withdrawn effective April 2003

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