

IBM ThinkPad® 390 - withdrawn

IBM® ThinkPad®

Processor	Intel® Pentium® 233MHz ¹ with MMX™ technology or Mobile Pentium II 233 or 266MHz / 66MHz system bus			All-in-one design: disk, diskette drive, and CD-ROM are all within the covers																																																																																																																																					
Processor features	No upgrade / processor, L2 cache, and MTXC (North Bridge) on Intel Mobile Module																																																																																																																																								
L2 cache	512KB / sync pipelined burst (66MHz for Pentium / ECC and 150MHz for Pentium II)																																																																																																																																								
Diskette drive	Internal 3.5" 1.44MB / removable from UltraBay FX / on right side / integrated with CD-ROM																																																																																																																																								
External FDD port	None since diskette internal																																																																																																																																								
CD-ROM	CD-ROM / 24X-10X ⁵ speed / ATAPI / bootable / removable from UltraBay FX / on right side / integrated with diskette drive																																																																																																																																								
DVD-ROM	Option: Removable UltraBay FX option / 2X ⁵ integrated with diskette drive / not supported in Pentium systems (2xx)																																																																																																																																								
Type - model	2626-20U	2626-50U	2626-70U																																																																																																																																						
Processor	Pentium 233MHz	Pentium II 233MHz	Pentium II 266MHz																																																																																																																																						
Disk - size / ms	3.2GB ⁴ / 13ms read / 14ms write / S.M.A.R.T. ²⁹		4.3GB ⁴ / 13ms read / 14ms write / S.M.A.R.T. ²⁹																																																																																																																																						
Disk controller	EIDE / PCI 2.1 / supports one internal disk / disk can be removed to upgrade by customer / supports two internal disks																																																																																																																																								
Avail / withdrawn date	November 1998 / March 1999																																																																																																																																								
Display - size and type	12.1" TFT color / Active Matrix		14.1" TFT color / Active Matrix																																																																																																																																						
Display - technology	SVGA / 640x480 or 800x600 / 30ms / 150 nits 16.7 million simultaneous colors / 100 to 1 contrast		XGA / 640x480 or 800x600 or 1024x768 / 30ms / 120 nits 16.7 million simultaneous colors / 150 to 1 contrast ratio																																																																																																																																						
Graphics - controller	NeoMagic™ MagicMedia256AV™ (NM2200) / PCI 2.1 / 128-bit engine, 256-bit memory interface / DDC2B / Direct3D 2.5MB / SDRAM (embedded) / motion compensation / color space conversion / interpolation in X and Y axis																																																																																																																																								
Graphics - external	External SVGA to 1024x768 with 16.7 million colors at 85Hz			The right bay (UltraBay FX) has a device lock on the bottom of the system and a bay LED which should be off to safely remove a device; it supports: • standard diskette/CD-ROM (warm swap) • optional second battery (hot swap); same battery as main one • optional second disk (cold swap) • optional ThinkPad Proven™ solutions ¹²																																																																																																																																					
Graphics - features	Simultaneous LCD and CRT / 150 degree tilt / multiple-monitor support ²⁶																																																																																																																																								
Memory - std / max	32MB / 256MB ³³	64MB / 256MB ³³																																																																																																																																							
Memory - features	SDRAM / non-parity / 66MHz / 3.3 volt / 64-bit 2 sockets for JEDEC 144-pin SO DIMMs / one socket used by std memory sockets accessed from bottom via removing cover held by phillips-head screw																																																																																																																																								
Keyboard	Full-size 85-key (7 Fn key functions) / palm rest / keyboard slope with tilt feet																																																																																																																																								
Pointing	TrackPoint® / Press-to-Select / Release-to-Select / dragging / click pace center button for scrolling (Internet Scroll Bar) or magnifying glass / spare caps																																																																																																																																								
Dimensions	12.4 x 10.1 x 1.8" (225 cubic inches)		12.4 x 10.2 x 1.8" (227 cubic inches)	All models: - C: drive is FAT16 of 2GB - D: drive is FAT32 of remaining space																																																																																																																																					
Weight ²	7.5 lbs (3.4 kg) with battery and disk		7.7 lbs (3.5 kg) with battery and disk																																																																																																																																						
Case material	PC/ABS plastic		PC/ABS plastic																																																																																																																																						
Battery - type / life ¹⁰	NiMH / intelligent / 3.25 hrs (1 battery) / left side		Li-Ion / intelligent / 4 hrs / left side																																																																																																																																						
Charge time ¹⁰ - on / off	5 hrs on / 2.5 hrs off		6 hrs on / 3 hrs off																																																																																																																																						
Architecture	Intel Triton 430TX for Pentium system / Intel 440BX PCIs for Pentium II Intel PIIX4E (EIDE, PCI to ISA bridge, USB) Texas Instruments® Ti1250A PCMCIA controller / NS PC97338 (FDC, IR, I/O) PCI 2.1 / 32-bit / 33MHz (EIDE, graphics, PCMCIA, USB, audio) ISA (audio, diskette, serial, parallel, infrared, modem)			WINDOWS 98 PRELOAD ¹⁶																																																																																																																																					
Docking station	None			- Microsoft® Windows® 98 • Online User's Guide • ThinkPad Configuration Program • ThinkPad Utilities • IBM Update Connector • RingCentral Fax • Ergonomics • IBM Registration • Puma IntelliSync 97 (infrared) • IBM Global Network Dialer • Netscape Navigator web browser • Lotus® SmartSuite Millennium ²⁰ • PC Doctor • ConfigSafe • Norton AntiVirus (OEM Version) • ThinkPad on the Net (TCC CD) ◇ Customization Center CD-ROM ◇ Lotus SmartSuite Millennium CD-ROM ◇ Product Recovery CD-ROM																																																																																																																																					
Port replicator	ThinkPad Port Replicator with Advanced EtherJet™ / ThinkPad 560 Port Replic																																																																																																																																								
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / Zoomed video																																																																																																																																								
USB / serial / parallel	One USB / one 9 pin; 16550A / one (IEEE P1284-A, EPP, ECP, bidirectional)																																																																																																																																								
Other features	APM-aware BIOS / Universal AC adapter; barrel (56 watts)																																																																																																																																								
Video in/out	None																																																																																																																																								
MPEG decoder	None (software support for MPEG-1 in Windows 98)																																																																																																																																								
Data/fax modem	56Kbps ²⁴ / V.90 / integrated in system / Lucent 1644 / not voice-capable																																																																																																																																								
Audio	16-bit SoundBlaster Pro™ compatible / NeoMagic NMA2 / ISA / full duplex																																																																																																																																								
Speakers	Two Altec Lansing® stereo speakers on display (1 watt)																																																																																																																																								
Audio features	Dial volume control (right side) / internal microphone																																																																																																																																								
Audio in/out jacks	Microphone jack (stereo) / headphone jack (stereo) / line-in jack																																																																																																																																								
Infrared ports	Infrared port on left side / IrDA 1.1 compatible / up to 4Mbps																																																																																																																																								
Security	Power-on password / setup password / disk password / security keyhole / security screw for UltraBay FX																																																																																																																																								
Limited warranty ¹¹	1 year - carry-in or ThinkPad EasyServ™ ³¹ (door-to-door depot repair service)																																																																																																																																								
Service options ¹⁵	On-site ³² , M-F, 8-5, next bus day (72 cities) / serv up to 5 yrs from purchase date																																																																																																																																								
<table><tr><th colspan="2">LCD</th><th colspan="3">External Monitor</th><th colspan="2">OPTIONS</th></tr><tr><th>Resolution</th><th>TFT</th><th>60Hz</th><th>75Hz</th><th>85Hz</th><th></th><th></th></tr><tr><td>640x480</td><td>16M</td><td>16M</td><td>16M</td><td>16M</td><td>- 32MB SO DIMM 3.3v NP SDRAM</td><td>76H0294</td></tr><tr><td>800x600</td><td>16M</td><td>16M</td><td>16M</td><td>16M</td><td>- 64MB SO DIMM 3.3v NP SDRAM</td><td>20L0241</td></tr><tr><td>1024x768</td><td>16M</td><td>16M</td><td>16M</td><td>16M</td><td>- 128MB SO DIMM 3.3v NP SDRAM</td><td>01K1150</td></tr><tr><td>1280x1024</td><td>--</td><td>256</td><td>--</td><td>--</td><td>- ThinkPad 560 Port Replicator</td><td>46H4209</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- Port Replicator w/ Advanced EtherJet</td><td>05K4872</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- ThinkPad 390/i Series Li-Ion Battery</td><td>02K6513</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- 56 watt AC Adapter (barrel; 3 prong)</td><td>83H6739</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- 6.4GB disk with UltraBay FX adapter</td><td>05K8923</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- 10GB disk with UltraBay FX adapter</td><td>05K8983</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- 900MHz Cordless Computer Conn</td><td>04K0064</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- V.90 PC Card Modem with XJACK²⁴</td><td>10L7393</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- 10/100 Ethernet CardBus PC Card</td><td>08L3147</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- Smart Card Security Kit</td><td>10L7333</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- DVD/Diskette (for UltraBay FX)</td><td>05K8921</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- Visit www.ibm.com/pc/us/accessories (U.S.) or www.ibm.com/pc/ca/accessories (CA)</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>- ThinkPad Proven™ solutions¹² (visit www.ibm.com/pc/us/thinkpad/proven)</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>Pressing F1 during startup brings up IBM BIOS Setup Utility</td><td></td></tr></table>					LCD		External Monitor			OPTIONS		Resolution	TFT	60Hz	75Hz	85Hz			640x480	16M	16M	16M	16M	- 32MB SO DIMM 3.3v NP SDRAM	76H0294	800x600	16M	16M	16M	16M	- 64MB SO DIMM 3.3v NP SDRAM	20L0241	1024x768	16M	16M	16M	16M	- 128MB SO DIMM 3.3v NP SDRAM	01K1150	1280x1024	--	256	--	--	- ThinkPad 560 Port Replicator	46H4209						- Port Replicator w/ Advanced EtherJet	05K4872						- ThinkPad 390/i Series Li-Ion Battery	02K6513						- 56 watt AC Adapter (barrel; 3 prong)	83H6739						- 6.4GB disk with UltraBay FX adapter	05K8923						- 10GB disk with UltraBay FX adapter	05K8983						- 900MHz Cordless Computer Conn	04K0064						- V.90 PC Card Modem with XJACK ²⁴	10L7393						- 10/100 Ethernet CardBus PC Card	08L3147						- Smart Card Security Kit	10L7333						- DVD/Diskette (for UltraBay FX)	05K8921						- Visit www.ibm.com/pc/us/accessories (U.S.) or www.ibm.com/pc/ca/accessories (CA)							- ThinkPad Proven™ solutions ¹² (visit www.ibm.com/pc/us/thinkpad/proven)							Pressing F1 during startup brings up IBM BIOS Setup Utility	
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3.2GB = Ultra DMA/33 or PIO Mode 4 4.3GB = Ultra DMA/33 or PIO Mode 4 6.4GB = Ultra DMA/33 or PIO Mode 4 10GB = Ultra DMA/33 or PIO Mode 4 All disks are S.M.A.R.T. ²⁹ compliant																																																																																																																																									
FEATURES Wired for Management 1.1a compliant DMI 2.0 compliant PC 97 compliant ACPI ready (APM enabled) Wake on LAN™ support²⁸ Setup Guide, User's Reference, Windows 98 manual, and Quick Reference Card System Status Indicators Plug and Play 1.0a Standby, suspend, and hibernation modes ENERGY STAR compliant International Warranty Service¹⁴ IBM SystemXtra™³⁵ 24 hour / 7 day telephone³⁰, bulletin board, fax, electronic, and Internet (www.ibm.com/pc/us) support																																																																																																																																									
The ThinkPad Port Replicator with Advanced EtherJet Feature provides cable management, additional I/O ports, CardBus PC Card slots, and 10/100 ethernet with Wake on LAN™ ²⁸ . Features: • 10/100 ethernet (Intel 82558, Wake on LAN) • Dual IBM lock slots to secure the ThinkPad, PC Cards, and Port Replicator • USB, serial (RS-232, 9 pin), parallel (25 pin), external display, keyboard, mouse • Audio in and out (3.5 mm) • Joystick/MIDI port (15 pin) - not on system • Power connector • Two Type III PC Card slots (side by side) - PC Card Standard 95 compliant - CardBus compliant (PCI 2.1 / 32-bit) - PCMCIA 2.1 (no Zoomed Video)																																																																																																																																									

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