IBM ThinkPad® 770E and 770ED - withdrawn

IBM® ThinkPad®:	770E	770E	770ED	770E (AAP)
Processor type/path	**Pentium® II 266/66MHz**[1] (Deschutes) / 64-bit to L2 and memory			
Processor features	No upgrade / processor, L2 cache, and MTXC (North Bridge) on Intel MMO			
L2 cache	**512KB** / write-back / 4 way set associative/ sync pipelined burst / ECC / 133MHz			
Diskette (removable)	3.5" 1.44MB / in encased enclosure / use in UltraBay II or attach externally			
External FDD port	External diskette port (use std cable to attach diskette drive externally)			
CD-ROM (removble)	*Option:* **5.25" CD-ROM / 24X-10X**[5] **speed** / CAV / bootable / hot swap EIDE (ATAPI) / PIO Mode 4 for W95; DMA Mode 2 for NT / use in UltraBay II			
DVD-ROM (remvble)	*Std or option:* **DVD drive** / 8 x to 16 x spd / CAV / use in UltraBay II / (DVD5/4.7GB) requires *DVD and Enhanced Video Adapter* for movie playback / sw enb AC-3 port			
Type - model	**9548-51U**	**9548-52U**	**9549-5AU**	**9548-53U** (AAP)
Display (diagonal)	**14.1" TFT XGA**	**14.1" TFT XGA**	**14.1" TFT XGA**	**14.1" TFT XGA**
Disk (removable)	**5.1GB**[4] / PIO4	**5.1GB** / DMA33	**8.1GB** / PIO4	None
DVD-ROM drive	Optional	Optional	**Standard DVD**	Optional
Preload (see side)	**W95 OSR2.1**	**NT 4.0**	**W95 OSR2.1**	Blank (no disk)
DVD and Enh Vid Ad	Optional	Optional	**Standard**	Optional
Modem	Opt PC Card	Opt PC Card	**56Kbps**	Opt PC Card
Avail / withdr date	April 1998 / December 1998			
Memory - std / max	**32MB** / 288MB[3]	**32MB** / 288MB[3]	**64MB** / 288MB[3]	**32MB** / 288MB[3]
Memory - upgrade	**SDRAM** / 83 or 100MHz (EIDE, graphics, MPEG, USB, ext expansion) 144 pin SDRAM SO-DIMMs / sockets accessed by removing screw on bottom			
Display - size (colors)	**XGA color** / 640x480, 800x600, or **1024x768 (16 million simultaneous colors)**			
Display - techology	**Active Matrix TFT -** 100 to 1 contrast / 150 nits (AC) / 90 nits (batt) / 180 degree tilt			
Graphics - controller	**Trident™ CYBER9397E** / 64-bit accelerator / **4MB SGRAM** / 83MHz			
Graphics - arch	PCI 2.1 / Direct3D, DirectDraw, DirectVideo, DirectX 5.0 support / ZV interface			
Graphics - features	**3D hardware accelerator** / interpolation in X and Y axis / color space conversion			
Graphics - external	External SVGA to 1280x1024 w/ 64K colors (85Hz) or 1024x768 w/ 16M colors			
Disk (swappable)	Left side / removable via 3 methods: latch, coin screw, security tool / SMART			
Disk controller	Enhanced IDE / busmaster / PCI 2.1 / 430TX South Bridge / PIIX4 / supports two internal disks (16.2GB max) / DMA Mode 2, Ultra DMA/33, or PIO Mode 4			
Keyboard / Fn keys	Full size alp/num / 7 Fn key functions / integrated palm rest			
Keyboard slope	Flat keyboard (does not lift up) / rear legs pop up (5.5 degrees slope)			
Pointing device	**TrackPoint®** / Press-to-Select / Release-to-Select / dragging / click pace/ center click button for scrolling or magnifying glass / suspension top / spare caps			
Dimensions	12.3 x 10 x 2.2" (270 cubic in) / *5AU:* 7.8 pounds (3.5 kg) with battery/diskette			
Weight[2]	*Others:* 7.6 pounds (3.45 kg) with battery/diskette			
Battery - type	Lithium Ion / intelligent / left side			
Battery - life[10] (1 batt)	3.5 hrs (7 hrs with second battery in UltraBay II)			
Charge time - on / off	2 to 3 hrs / 1.5 to 2.5 hrs			
Architecture	**Intel 440BX PCIset** / TI® PCI1250A for CardBus / LM75 digital thermometer PCI 2.1 / 32-bit / 33MHz (EIDE, graphics, CardBus, MPEG, USB, ext expansion) PC97338 Super I/O / ISA (audio, modem, diskette, serial, parallel, infrared, ext exp)			
Port replicator	**SelectaBase 770** / PC Card Enabler[18] / PC Card Enabler with Adv EtherJet[18]			
Docking Station	**SelectaDock III / SelectaDock I and II**			
PC Card Std slots	2 Type 1, 2 Type II, or 1 Type III / **CardBus** / PCMCIA 2.1 / Zoomed Video			
USB / serial / parallel	One USB / one 9 pin serial; 16550A / one (IEEE P1284-A, EPP, ECP, bidirectional)			
Other features	APM-aware BIOS / AC Adapter barrel, 3 prong (56 watts) / Selectable boot			
Video in/out	*5AU or option:* Video in/out (composite and S-Video) / SAA7111A NTSC/PAL			
MPEG decoder	*5AU or option:* MPEG-2 / IBM MPEGCD1M / 2MB SDRAM; 100MHz			
Data/fax modem	*5AU:* 56Kbps (x2, upgradeable to v.90[8]) / 14.4Kbps fax / telephony / integrated Mwave® 3780i DSP / international programmable DAA			
Audio support	16-bit / CS4237B / **SRS 3D audio** / FM synthesis / software decodes AC3 into stereo Int stereo speakers (front) **/ 1 watt /** rotary volume control (right) **/** int microphone			
Jacks	Input jack (3.5 mm) / output jack (3.5 mm) / full duplex			
Infrared ports	Infrared ports (front and back) / IrDA 1.1 compatible / **up to 4Mbps**			
Security	Power-on password / hard disk password / supervisor password / security keyhole / personalization / phillips-head screws on base for battery and UltraBay II bays			
Limited warranty[11]	**3 year** - ThinkPad EasyServ[31] (door-to-door depot repair service) or carry-in Rapid Depot Repair (12 hr service from arrival time for 3 bus day average turnaround)			
Service options[15]	On-site[32], M-F, 8-5, next bus day (71 cities) / serv up to 5 yrs from purchase date			

DVD and Enhanced Video Adapter (DEVA)
provides (standard in 5AU; optional all others):

- **MPEG-1, MPEG-2 HHR, and full MPEG-2 hardware decoder** (audio decoded via software)
- **DVD movie playback** (MPEG-2 decoding; decryption and audio decoding via software)
- **Video in** (composite and SVHS) (NTSC or PAL) for video capture (capture and digitize video from a TV or VCR), still image capture (capture and digitize still photo images), and overlay
- **Video out** (composite and SVHS) to TV (connect to video out port; NTSC or PAL); or record on VCR the screen of ThinkPad
- **Dolby® Digital AC-3**[6] (outputs undecoded Dolby Digital signal from AC-3 connector; CSA8404A); requires external AC3 decoder/amplifier
- **Three ports** - ① video in, ② video out, ③ AC-3
- Includes video in/out cable

-	5.1GB disk, 12ms, Ultra DMA/33	11J8947
-	8.1GB disk, 12ms, Ultra DMA/33	02K0517
-	2nd Disk Adapter (for 760/770 disks)	11J8836
-	**SelectaBase 770**	**83H6735**
-	**SelectaDock III**[18]	**3547003**
-	**PC Card Enabler with EtherJet**[18]	**05K4820**
-	**760 UltraBay Tray for SD III**	**11J8839**
-	56 watt AC Adapter (barrel; 3 prong)	83H6739
-	**20X-8X CD-ROM Drive** (UltraBay II)	11J8933
-	**24X-10X CD-ROM Drive** (UltraBy II)	02K0516
-	**DVD Drive** (UltraBay II)	05K8886
-	DVD and Enh Video Adapter	11J8957
-	**16MB SO DIMM 3.3v NP SDRAM**	**76H0293**
-	**32MB SO DIMM 3.3v NP SDRAM**	**76H0294**
-	**64MB SO DIMM 3.3v NP SDRAM**	**76H0295**
-	900MHz Cordless Comp Connection	04K0064
-	V.90 PC Card Modem with XJACK[24]	10L7393
-	ThinkPad 770 Li-Ion Battery	83H6738
-	External Battery Charger	11J8985

WINDOWS 95 PRELOAD[16]

- Microsoft® Windows® 95 OSR2.1 (FAT16)
- Online User's Guide
- ThinkPad Customization Center
- ThinkPad Configuration Program
- SystemSoft CardWorks
- Diskette Factory Utilities
- Puma IntelliSync 97; 2. IBM AntiVirus
- Asymetrix Digital Video Producer (5AU)
- RingZero Ring Central (5AU only)
- Intelliquest Registration Mailer
- Voyetra Audiostation
- ConfigSafe
- IBM Internet Connection services with Netscape Navigator web browser
- Intel® LANDesk® Client Manager
- Intel Video Phone (receive) (5AU only)
- ThinkPad PointCast
- Ergonomics
- ThinkPad on the NET
- NetFinity for Windows 95
- ◇ Recovery CD-ROM with boot diskette
- ◇ Customization CD-ROM (apps/drivers)

WINDOWS NT 4.0 PRELOAD

- Windows NT® Workstation (FAT16)
- Service Pack 3
- Internet Explorer 4.01
- Advanced NT extensions
- Online User's Guide
- ThinkPad Configuration Program
- SystemSoft CardWizard
- IBM AntiVirus
- IBM Internet Connection services with Netscape Navigator web browser
- Intel LANDesk Client Manager
- Artisoft ConfigSafe
- Puma IntelliSync 97
- ◇ Customization CD-ROM (apps/drivers)

The right bay (UltraBay™ II) has LED on release latch to provide status; it supports hot swapping; it supports:
① std diskette; ② optional DVD drive;
③ optional CD-ROM; ④ optional 2nd disk;
⑤ optional 2nd battery; ⑥ optional
ThinkPad Proven™ VST Zip™ 100 drive

ThinkPad 770 supported disks:

- **3.2GB** 13ms read/14ms write
  17 mm   PIO Mode 4 or DMA Mode 2
- **4.0GB** 13ms read/14ms write
  12.5 mm PIO Mode 4 or Ultra DMA/33
- **5.1GB** 12ms read/13ms write
  17 mm   PIO Mode 4 or Ultra DMA/33
- **8.1GB** 12ms read/13ms write
  17 mm   PIO Mode 4 or Ultra DMA/33
- All 760 supported disks (requires opt adaptr)

PC 97 compliant
DMI 2.0 compliant
DMI instrumentation (thermal monitoring)
ACPI ready (APM enabled)
Wired for Management 1.1a compliant
Wake on LAN™ support[28]
C: is 1.99G, D: up to 1.99G (FAT32), etc.
Setup Guide, User's Guide, Up and Running, Windows 95 manual
LCD indicator panel
Plug and Play 1.0a
Non-disruptive battery exchange
Standby, suspend, safe suspend, and hibernation modes
ENERGY STAR compliant
International Warranty Service[14]
IBM SystemXtra™
24 hour / 7 day telephone[30], bulletin board, fax, electronic, and Internet (www.ibm.com/pc/us) support

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