IBM ThinkPad® 770 - withdrawn

IBM® ThinkPad®:

Processor type/path	**Pentium® MMX™ 200/66 or 233/66MHz**[1] (Tillamook) / 64bit to L2 and memory
Processor features	No upgrade / processor, L2 cache, and MTXC (North Bridge) on Intel MMO
L2 cache	**512KB** / write-back / direct mapped / 7ns data; 15ns tag / sync pipelined burst
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 / 20X-8X**[5] **or 24X-10X**[5] **speed** / CAV / bootable / hot swapping EIDE (ATAPI) / PIO Mode 4 for W95; DMA Mode 2 for NT / use in UltraBay II
DVD (removable)	*Option:* **DVD-ROM 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	9548-40U	9548-30U	9548-31U	9549-1AU	9548-32U (AAP)
Processor	**200/66MHz**	**233/66MHz**	**233/66MHz**	**233/66MHz**	**233/66MHz**
Display (diagonal)	**13.3" XGA**	**13.3" XGA**	**13.3" XGA**	**14.1" XGA**	**13.3" XGA**
Disk (removable)	**3.2GB**[4] / PIO4	**4GB** / PIO4	**4GB** / DMA33	**5.1GB** / PIO4	None
Preload (see side)	**W95 OSR2**	**W95 OSR2**	**NT 4.0 SP3**	**W95 OSR2**	Blank (no disk)
DVD and Enh Vid Ad	Optional	Optional	Optional	**Standard**	Optional
Modem	Opt PC Card	Opt PC Card	Opt PC Card	**33.6Kbps** (upg)	Opt PC Card
Avail / withdrawn date	October 1997 / September 1998				

Memory - std / max	**32MB** / 256MB[3] non-parity / 3.3v / **SDRAM** / 83 or 100MHz
Memory - upgrade	2 sockets available for two JEDEC 144 pin EDO or SDRAM SO-DIMMs Sockets accessed by removing screw on bottom / can mix SDRAM w/ 760-supported EDO

Display - size (colors)	**XGA color / 640 x 480 (16M), 800 x 600 (16M), or 1024 x 768 (65,536 siml colors)**
Display - techology	**Active Matrix TFT -** 100 to 1 contrast ratio / 180 degree tilt

Graphics - controller	**Trident™ CYBER9397** / 64-bit SVGA accelerator / **2MB SGRAM** / 83MHz
Graphics - arch	PCI 2.1 / Direct3D, DirectDraw, DirectVideo, ActiveMovie support / ZV interface
Graphics - features	**3D hardware accelerator** / interpolation in X and Y axis / color space conversion
Graphics - external	External SVGA to 1280 x 1024 w/ 256 colors (75Hz) or 1024 x 768 w/ 65,536 colors

Disk (removable)	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

Dimensions	*1AU:* 12.3 x 10 x 2.2" (270 cubic in) / 7.8 pounds (3.55 kg) with battery/diskette
Weight[2]	*Others:* 12.3 x 9.5 x 2.2" (257 cubic inches) / 7.4 pounds (3.35 kg) with batt/diskette

Battery - type	Lithium Ion / intelligent / left side
Battery - life (1 batt)	*1AU:* 3.5 hrs (7 hrs with second battery in UltraBay II) / *Others:* 4 hrs (8 hr w/ 2 batt)
Charge time - on / off	2 to 3 hrs / 1.5 to 2.5 hrs

Architecture	ISA (audio, modem, diskette, serial, parallel, infrared, ext expansion) PCI 2.1 / 32-bit / 33Mhz (EIDE, graphics, CardBus, MPEG, USB, ext expansion) **Intel 430TX PCIset** / TI PCI1250 for CardBus / LM75 digital thermometer
Port replicator	**SelectaBase 770** / PC Card Enabler
Docking Station	**SelectaDock III / SelectaDock I and II**
PC Card Std slots	2 Type I, 2 Type II, or 1 Type III / **CardBus 32-bit PCI** / 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	*1AU or option:* Video in/out (composite and S-Video) / SAA7111A NTSC/PAL
MPEG decoder	*1AU or option:* MPEG-2 / IBM MPEGCD1M / 2MB SDRAM; 100MHz
Data/fax modem	*1AU:* 33.6Kbps (56Kbps upgradeable via x2[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 (depot repair service) or carry-in / international
Service options[15]	On-site, M-F, 8-5, next bus day (72 cities) / warranty extension to 5 years

DVD and Enhanced Video Adapter provides (standard in 1AU; 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 I[18]	3547001
- SelectaDock II[18]	3547002
- **SelectaDock III**[18]	**3547003**
- **SelectaBase PC Card Enabler**	83H6741
- **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** (UltraBay II)	02K0516
- **DVD CD-ROM Drive** (UltraBay II)	11J8950
- 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**
- 56K PC Card Modem Kit	04K0052
- ThinkPad 770 Li-Ion Battery	83H6738

ThinkPad EasyServ™: customer calls 1-800-772-2227, courier service picks up ThinkPad at any location, IBM repairs and mails back (no shipping charges, most shipping is overnight, 3 business day average turnaround).

WINDOWS 95 PRELOAD[16]

- Microsoft® Windows® 95 OSR2 (FAT16)
- Online User's Guide
- ThinkPad Configuration Program
- Diskette Factory Utilities
1. Puma TranXit;   2. IBM AntiVirus
3. Asymetrix Digital Video Producer (1AU)
4. RingZero Ring Central (1AU only)
5. Intelliquest Registration Mailer
6. Voyetra Audiostation
7. Artisoft ConfigSafe
8. IBM Internet Connection services with Netscape Navigator web browser
9. Intel® LANDesk® Client Manager
10. Intel Video Phone (receive) (1AU only)
11. ThinkPad PointCast
12. NetMeeting™ 2.0
13. Ergonomics; 14. ThinkPad on the NET
15. NetFinity for Windows 95
- Recovery CD-ROM with boot diskette
- Windows 95 CD-ROM (no installation)
- Internet Explorer 4.0 CD-ROM

WINDOWS NT 4.0 PRELOAD

- Windows NT® Workstation (FAT16)
- Advanced NT extensions:
  - Power management
  - UltraBay Plug and Play
  - DVD (storage only; no DVD movies)
  - Hot Plug PC Card; MPEG-2 playbck
  - 3D graphics (OpenGL)
  - Video capture
- Online User's Guide
- ThinkPad Configuration Program
1. IBM AntiVirus
2. IBM Internet Connection services with Netscape Navigator web browser
3. Intel LANDesk Client Manager

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;

Easy-Setup is entered by holding F1 when turning on.

Screens are 150 nits (90 nits on battery)

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

FEATURES OF 770 MODELS

Wired for Management 1.1a
PC 97 compliant
DMI 1.1 compliant
DMI instrumentation (thermal monitoring)
Wake-on-LAN via SelectaDock III
C: is 1.99 GB, D: is up to 1.99 GB, etc.
Quick Setup Guide (single page)
LCD indicator panel
Plug and Play 1.0a
Discharge battery via mouse click
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, bulletin board, fax, electronic, and Internet (www.ibm.com/pc/us) support
IBM and dealer warranty/service