



New IBM ThinkPad T40 Notebook Computers for Education Feature Great Performance in a Lightweight Package

Overview

The ThinkPad® T40 notebook for education is the ideal computer for frequent travelers who need high performance in a lightweight package.

These models 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.

The ThinkPad T40 notebook models for education are for sale direct from IBM or through an Authorized Education Reseller. They are not available for resale to any other organization or individual.

Exciting New Technology

- Intel® Centrino Mobile Technology:
 - Intel Pentium® M Processor
 - Intel PRO/Wireless Network Connection 802.11b
 - Intel 855 PM Chipset Family
- Choice of graphics chipset for clear, crisp images:
 - ATI Mobility Radeon 7500 (32 MB)
 - ATI Mobility Radeon 9000 (32 MB)
- 512 MB DDR RAM at 266 MHz
- UltraNav dual-pointing system, featuring TrackPoint® and customized touch pad for the ultimate in pointing flexibility
- Longer battery operation: Up to 5.5 hours on the six-cell system battery, up to 7.5 hours with the nine-cell system battery, and up to 9.5 hours with the nine-cell system battery and battery options
- UltraConnect antenna to help optimize frequency coverage and performance for improved wireless LAN connectivity around the world

Excellent Features and Options

- Embedded Security subsystem 2.0 on all models, TCPA-compliant
- Choice of integrated communications: modem and 10/100 or 1 Gb Ethernet LAN connection
- Integrated Bluetooth with antenna on selected model
- IBM 11a/b Wi-Fi wireless⁹; wireless LAN LED indicator on selected models
- Access Connections utility to help manage wired and wireless communications
- 358.1-mm (14.1-in) TFT displays with 1024 x 768 or 1400 x 1050 resolution
- Windows® XP Professional with selected applications
- Ultrabay™ Slim for fast and easy hot- and warm-swapping of selected options
- Large selection of options from IBM, including memory expansion, additional HDDs, and much more

Light and Portable: The ThinkPad T40 notebook is 26.6 mm (1.0 in) thin¹⁰ with optimal travel weight starting at 2.05 kg (4.5 lb)¹¹ with travel bezel.

Robust System Manageability: The ThinkPad T40 notebook features support for IBM Director Agent and is designed to the PXE 2.0 manageability requirements for mobile systems.

ImageUltra Services: Selected ThinkPad notebooks are enabled for ImageUltra.

For more information, visit:

<http://www.ibm.com/pc/us/pc/um/migration>

At a Glance

The new ThinkPad T40 notebooks for education feature:

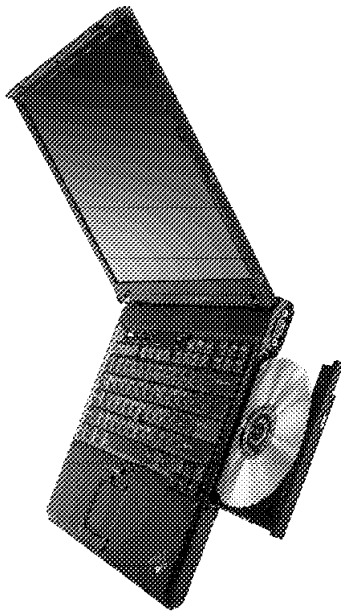
- Intel Pentium M processor¹ at 1.3, 1.5, or 1.6 GHz with 1 MB on-die L2 cache
- Sleek profile and light weight
- 400 MHz front-side system bus with 266 MHz double data rate (DDR) memory
- 512 MB of memory standard, expandable to 2.0 GB²
- UltraNav dual-pointing system, featuring TrackPoint and customized touch pad
- ThinkPad HDD shock absorber
- 40 GB high-speed (5400 rpm) or 80 GB³ HDD
- 16x-10x-24x-8x⁴ max CD-RW/DVD⁵
- Standard integrated communications of V.90⁶ modem (V.92⁷-designed) and 10/100 or 1 Gb Ethernet. IBM 11a/b Wi-Fi wireless on all models, and Bluetooth on one selected model
- Embedded Security Subsystem 2.0 on all models, Trusted Computing Platform Alliance (TCPA)-compliant⁸
- Three-year, limited warranty; one-year limited warranty on battery; HelpCenter® (800-772-2227)

Availability Date

March 25, 2003

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: <http://www.ibm.com>.

Description



Leadership Design

- Shock absorber to help prevent HDD crashes when system is placed on a hard surface while in use
- UltraConnect antenna to help optimize frequency coverage and performance for improved wireless LAN connectivity around the world; supports 2.4 GHz frequency band for 802.11b networks and four sub-bands in 5 GHz frequency band to meet unique country spectrum requirements
- Integrated Bluetooth with antenna on one selected model
- Choice of graphics chipsets for clear, crisp images
- Access Connections software to easily manage wired and wireless connections
- Disk-to-disk recovery of preloaded software
- 400 MHz front-side system bus
- 266 MHz DDR memory modules
- IBM Embedded Security Subsystem 2.0 (TCPA-compliant) on all models
- IBM 11a/b Wi-Fi wireless on selected models
- Intel PRO/Wireless Network Connection 802.11b on selected models

Latest Processor Technology

The new ThinkPad T40 notebook computer features the Intel Pentium M processor at 1.3, 1.5, or 1.6 GHz with 1 MB on-die L2 cache and floating-point decimal for exceptional performance. All models include enhanced Intel SpeedStep technology with two performance modes:

- Maximum performance mode for top performance while connected to ac external power using the ac power adapter.
- Battery-optimized performance mode for balance between performance and battery life when operating on battery power. In this mode the MHz speed is reduced to conserve battery power.

Superior Security and Manageability

- Designed to the PXE 2.0 manageability requirements for mobile systems
- Support for IBM Director Agent, a comprehensive set of superior, standards-based PC hardware manageability tools that work with and complement existing systems management products
- Compliant with the industry-standard Common Information Model
- Local and remote asset management, and early detection of HDD failure via IBM Director Agent
- Remote setup and low-level maintenance via Remote Deployment Manager
- Asset and data security via multiple passwords and locks

Operating System: Microsoft™ Windows XP Professional with selected applications

Communications: Choice of communications:

- Modem and 10/100 Ethernet LAN connection with IBM 11a/b Wi-Fi wireless
- Modem and 1 Gb Ethernet LAN connection with IBM 11a/b Wi-Fi wireless and Bluetooth card and antenna
- Modem, 10/100 Ethernet, and Intel PRO/Wireless Network Connection

Integrated IBM 11a/b Wi-Fi wireless lets you connect to a LAN without wires or cables. To connect to the Internet, the IBM High Rate Wireless Access Point 500 (or similar device) and an Internet connection are required.

Multimedia: DVD movie playback does not require complementary graphics hardware on ThinkPad T40 systems that have a DVD drive or a CD-RW/DVD drive and Windows XP Professional installed.

Other Features

LCD TFT Display: The ThinkPad T40 notebook comes with:

- 358.1-mm (14.1-in) TFT display with 1024 x 768 resolution
- 358.1-mm (14.1-in) TFT display with 1400 x 1050 resolution

All displays are measured diagonally.

Video Modes

1024 x 768 Resolution ATI Mobility Radeon 7500 (32 MB)

Resolution	LCD TFT	External Monitor (CRT only mode)				
		85 Hz	75 Hz	72 Hz	70 Hz	60 Hz
640 X 480	16M	16M	16M	16M	NA	16M
800 x 600	16M	16M	16M	16M	16M	16M
1024 x 768	16M	16M	16M	16M	16M	16M
1280 x 1024	16M(12)	16M	16M	NA	16M	16M
1400 x 1050	N/A	NA	NA	NA	NA	NA
1600 x 1200	16M(12)	16M	16M	NA	NA	16M
2048 x 1536	16M(12)	NA	16M	NA	16M	16M

1400 x 1050 Resolution ATI Mobility Radeon 7500 (32 MB) and ATI Mobility Radeon 9000 (32 MB)

Resolution	LCD	External Monitor (CRT only mode)				
	TFT	85 Hz	75 Hz	72 Hz	70 Hz	60 Hz
640 X 480	16M	16M	16M	16M	NA	16M
800 x 600	16M	16M	16M	16M	16M	16M
1024 x 768	16M	16M	16M	16M	16M	16M
1280 x 1024	16M	16M	16M	NA	16M	16M
1400 x 1050	N/A	16M	NA	NA	NA	NA
1600 x 1200	16M(12)	16M	16M	NA	NA	16M
2048 x 1536	16M(12)	NA	16M	NA	16M	16M

Keyboard with TrackPoint and Enhanced Features: The keyboard has the familiar layout of a ThinkPad notebook with function keys that allow you to quickly access system functions such as power-management control.

- New UltraNav, which combines the advantages of the TrackPoint device, center-scrolling button, and a touch pad, is standard.
- ThinkLight™; easy to view your keyboard in low-light conditions.
- ThinkPad button provides one-button access to critical information. Choose from three different caps for the TrackPoint.
- The TrackPoint with enhanced features includes the Press-to-Select and Release-to-Select function.

Just tap the TrackPoint to speed icon launches and help reduce keystrokes. The programmable center button enables fast scrolling of Web sites and documents or fast panning across wide spreadsheets. Switch to the innovative magnifying glass feature to enlarge screen views in any application.

Memory: The system has 512 MB of memory standard and can be configured for up to 2 GB of addressable memory. Memory options up to 1 GB DDR SO DIMMs each can be added in the two slots for memory expansion.

To achieve the maximum 2 GB, to which memory can be expanded, you need to replace the 512 MB card with a 1 GB card and add another 1 GB card in the extra slot.

Only 266 MHz SO DIMM memory can be used in this system. The use of 133 MHz SO DIMM memory is not supported in the T40 systems.

PC Card: The Type III slot accommodates either two Type I, two Type II, or one Type III PC card. The slot supports CardBus adapters and a PC card.

Storage: The customer-removable HDD is 40 GB high-speed (5400 rpm) or 80 GB HDD.

Drives: 16x-10x-24x-8x max CD-RW/DVD combination drive.

An optional SuperDisk (LS-240) drive or a second HDD in the UltraBay Slim expands storage. The second HDD option, requiring an adapter, can be used with all ThinkPad T40 models.

Audio: Full-duplex audio on the system board and the integrated microphone allow voice annotation and audio. The system is equipped with audio in/out jacks for stereo speakers, headphone, or external microphone. The system supports Microsoft DirectSound applications.

Video: Digital visual interface for digital displays is supported through the optional ThinkPad Dock II or ThinkPad Port Replicator II.

Infrared (IR): The system has one fast IR transceiver (up to 4 Mbps) for wireless file and data transfer and printing. The ThinkPad T40 notebook is designed for compliance with the Infrared Data Association (IrDA) IR data link specification V1.1.

Other Features: The ThinkPad T40 systems include these ports:

- Enhanced parallel
- External display
- Built-in RJ-11 and RJ-45 connectors for telephony and LAN connections
- IR
- Microphone
- Headphone
- Two USB ports
- S-Video out (TV out)

PS/2® port is not included, but one can be obtained through the optional ThinkPad Port Replicator II, ThinkPad Dock II, or ThinkPad Mini-Dock.

The USB ports, which connect external drives and other devices, are supported with Microsoft Windows XP Professional.

The 240-pin connector supports these optional docking solutions:

- ThinkPad Port Replicator for simple port replication and cable management
- ThinkPad Dock for a more advanced docking solution

AC Adapter: The ac adapter is an ac-to-dc converter that supplies the necessary power to the computer. The ac adapter also charges the battery pack when it is installed in the computer.

Li-Ion Battery Pack

- A Li-Ion battery pack with six cells is shipped with the system. This same battery is also available as an optional feature.
- A different Li-Ion battery pack with three cells, fits into the Ultrabay Slim.
- A nine-cell Li-Ion optional battery pack is available for even Longer battery hours of operation. Two batteries can be installed to increase battery operating time.
- The battery pack is an internal power source to the computer when the ac adapter is not available. The battery pack is rechargeable and is charged using the ac adapter with the system.
- You can determine how much battery power remains by using the Fuel-Gauge ThinkPad utility program. This displays the percent charge remaining, whether one or two batteries are in the system. This feature is not available on systems running the OS/2® operating system.

Approximate operation and charging hours:

- Power off/suspend charging¹³: 3.6 hr
- Charging during operation¹³: 3.6 to 6.0 hr
- Battery operation¹⁴:
 - All models with six-cell battery: Up to 5.5 hours
 - All models with nine-cell battery: Up to 7.5 hours
 - All models with nine-cell plus bay battery: Up to 9.5 hours

Software

Non-IBM Software: The non-IBM software programs listed in this section may be licensed to you under the non-IBM manufacturer's, supplier's, or publisher's terms and conditions. The non-IBM manufacturers, suppliers, or publishers are responsible for providing any service or support associated with these programs. The descriptions of these programs were obtained from information made available by these companies to the general public. IBM does not warrant these products. Some software may differ from its separately available version (if available), and may not include user manuals or all program function.

IBM Software Available for Download from Web

- IBM Client Security software
<http://www.pc.ibm.com/us/security/secdownload.html>
Note: Models with IBM Embedded Security Subsystem only
- IBM Director Agent
http://www.pc.ibm.com/us/eserver/xseries/systems_management/dwnl.html
- IBM Remote Deployment Manager
http://www.pc.ibm.com/us/eserver/xseries/systems_management/dwnl.html

Software That May Be Included or Preloaded on the System

Standard Preload Systems

U.S. English Machines Software #1 (Windows XP Professional)

- Microsoft Windows XP Professional
- InterVideo WinDVD Player — only for systems with DVD drive or DVD/CD-RW
- Update Connector¹⁵
- IBM Access IBM
- IBM Access Support
- PC-Doctor
- IBM Record Now and IBM Drive Letter Access by Veritas — only for systems with DVD/CD-RW drive
- IBM Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- Norton AntiVirus 2003 (OEM version)

Warranty Information

For a copy of applicable product warranties write to:

Warranty Information
P.O. Box 12195
Research Triangle Park, NC 27709
Attn: Dept JDJA/B203

IBM makes no representation or warranty regarding third-party products or services.

Telephone support may be subject to additional charges, even during the limited warranty period. For IBM machines with on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. For IBM machines with EasyServ service, IBM will attempt to diagnose and resolve the problem remotely before sending a courier.

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Accessibility by People with Disabilities

The following features support use by people with disabilities:

- Controls and latches operable with one hand and minimal dexterity
- Keys discernible by touch without activating them
- Ports and connectors for connection of industry-standard devices

Reference Information

- ¹ Mobile Intel Pentium processors feature Intel SpeedStep technology. Processor speed may be reduced to conserve battery power.
- ² Recognizes up to 2.0 GB of addressable memory in these models. Memory options up to 1 GB DDR SO DIMMs each can be added in the two slots for memory expansion.
- ³ GB equals one billion bytes when referring to HDD. Accessible capacity may vary.
- ⁴ Variable read rate. Actual playback speed will vary and is often less than the maximum possible.
- ⁵ For combination drives, maximum speeds are given in the following order: CD-W, CD-RW, CD-R, and DVD-R.
- ⁶ The V.90 modem can receive data at up to 56 Kbps from a compatible service provider and transmit data at up to 31.2 Kbps. Public networks currently limit maximum download speeds to about 53 Kbps. Actual speeds depend on many factors and are often less than the maximum possible.
- ⁷ Public network download speeds are limited to 53 Kbps. Upload speeds are limited to 48 Kbps 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, and download of V.92 support device driver when available. Check with your telephone and Internet service providers for availability.
- ⁸ Requires download of Client Security software from the Web.
- ⁹ Based on IEEE 802.11a and 802.11b, this wireless LAN product permits legal operation worldwide in regions in 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.
- ¹⁰ Thickness may vary at certain points on the system.
- ¹¹ Actual weight may vary depending on vendor components, or manufacturing process, or options. Weight includes battery and optional travel bezel instead of the standard optical drive in the Ultrabay Plus.
- ¹² Panning on LCD
- ¹³ Recharge time will also vary.

- 14 These model numbers achieved eTesting Labs, Inc.'s BatteryMark 4.0.1, or the Ziff Davis Media Inc.'s Business Winstone 2002 BatteryMark Version 1.0, battery rundown time of at least the time 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. For a description of the environment under which the test was performed, visit:
<http://www.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.
- 15 Update Connector™ is available to registered ThinkPad customers during the warranty period at no charge. Line charges may apply.

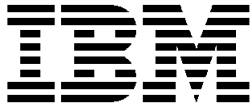
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IBM US Announcement Supplemental Information

March 25, 2003

Optional Features

The ThinkPad® T40 notebook is compatible with peripherals and software products that run on other IBM systems.

For the latest information on options available for the ThinkPad T40 models and other ThinkPad notebooks, visit:

<http://www.pc.ibm.com/options>

Options

Description	Order Number
ThinkPad Ultralight 8x DVD-ROM Ultrabay™ 2000 Drive	22P9102
ThinkPad CD-RW/DVD Combo IV Ultrabay 2000 Drive	22P6991
ThinkPad Zip 250 MB Ultrabay 2000 Drive	00N8253
ThinkPad Slim Drive Adapter for Ultrabay 2000	62P4557
ThinkPad 24x-10x CD-ROM Ultrabay 2000 Drive	05K9233
ThinkPad Removable Diskette Drive	08K9603
ThinkPad 2nd HDD Adapter for Ultrabay 2000	08K6068
ThinkPad Multi-Burner Ultrabay 2000 Drive	22P7015
ThinkPad CD-RW/DVD-ROM Combo Ultrabay Slim Drive	22P7011
IBM 10/100 EtherJet™ CardBus Adapter	08L3147
IBM 16/4 Token-Ring CardBus Adapter	34L4801
IBM 16/4 Turbo Token-Ring PC Card 2	34L1401
ThinkPad 72 W dc Auto Adapter	10K3820
ThinkPad Monitor Stand 2001	22P5265
UltraPort™ Digital Array Microphone	09N4178
UltraPort Compact Flash Reader	19K4510
UltraPort Camera II	04P6135

Note: The above UltraPort options must be connected through the USB port.

IBM FlatPanel Speakers	
U.S. Power Cord	09N4175
EU1 Power Cord	10K0160
Denmark Power Cord	10K0161
South Africa Power Cord	10K0162
U.K./Ireland Power Cord	10K0163
Switzerland Power Cord	10K0164
Italy Power Cord	10K0165
Israel Power Cord	10K0166
Japan Power Cord	10K0167
Gem PC400 Smart Card Reader from IBM	31P8901
IBM High Rate Wireless LAN PC Card 128	09N9904

Description	Order Number
IBM 11a Wireless LAN CardBus Adapter U.S. and Canada only	22P7501
Japan only	22P7502
IBM Bluetooth PC Card II from IBM	19K5796
Cisco Aironet Wireless 802.11b Mini PCI by IBM	31P8301
PCI Card (EMEA)	31P8303
PCI Card (Japan)	31P8302
PCI Card (China)	31P8304
Intel® PRO/Wireless LAN 2100 3B Mini PCI Adapter	31P8601
IBM MicroPortable Data/Video Projector	0037A02
Projector Lamp for the MicroPortable Data/Video Projector	33L3456
IBM iLM300 MicroPortable Data/Video Projector	
U.S./Canada	0037-A03
LA/Mexico/Taiwan/Thailand	31P6904
U.K./Hong Kong/Singapore	31P6905
Australia/New Zealand	31P6911
Japan	31P6912
EMEA	31P6913
China	31P6914
Denmark	33L3532
Switzerland	33L3533
Italy	33L3534
Projector Lamp for iLM300 MicroPortable Data/Video Projector	33L3537
IBM iLV200 ValueBased Data/Video Projector	
U.S./Canada	0038A02
Taiwan, Thailand	31P6926
U.K./Singapore	31P6927
Australia, New Zealand	31P6928
Japan	31P6929
EMEA	31P6930
Italy	31P6931
Denmark	31P6932
Switzerland	31P6935
Projector Lamp for iLV200 ValueBased/iLC200 Conference Room Data/Video Projector	31P6936
IBM iLC200 Conference Room Data/Video Projector	
U.S./Canada	0039A02
Taiwan, Thailand	31P6937
U.K./Singapore	31P6938
Australia, New Zealand	31P6939
Japan	31P6940
EMEA	31P6941
Italy	31P6942
Denmark	31P6943
Switzerland	31P6946
IBM 64 MB USB 2.0 Memory Key	22P9024
IBM 256 MB USB 2.0 Memory Key	22P9025
IBM 1 GB Microdrive™	07N5574
ThinkPad 20 GB HDD	08K9686
ThinkPad High Speed 40 GB HDD	08K9816

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Description	Order Number
ThinkPad 80 GB HDD	08K9869
ThinkPad 2nd HDD Adapter for Ultrabay Slim	62P4554
IBM 128 MB PC2100 CL2.5 DDR SDRAM SODIMM	10K0028
IBM 256 MB PC2100 CL2.5 DDR SDRAM SODIMM	10K0030
IBM 512 MB PC2100 CL2.5 DDR SDRAM SODIMM	10K0032
IBM 1 GB PC2100 CL2.5 DDR SDRAM SODIMM	10K0034
ThinkPad Multiple Battery Charger II	22P9040
ThinkPad Ultrabay Slim Li Polymer Battery	08K8190
ThinkPad T40 Series High Capacity Li-Ion Battery	08K8197
ThinkPad T40 Series Li-Ion Battery	08K8214
IBM Portable USB 2.0 CD-RW Drive	22P5297
IBM Portable USB CD-ROM Drive	33L5151
IBM USB Portable Diskette Drive	05K9276
IBM USB Numeric Keypad	33L3225
IBM Preferred USB Keyboard with 2 port USB Hub (black)	10K3849
TrackPoint® USB Space Saver Keyboard	22P5150
IBM Rapid Access III USB Keyboard	22P5185
IBM USB Mobile Mouse	33L3243
IBM Sleek USB Mouse	33L3244
IBM 800 dpi Optical Travel Wheel Mouse	31P7410
IBM 800 dpi Optical ScrollPoint™ Mouse (Metallic Black)	31P7405
IBM 800 dpi Optical ScrollPoint Pro Mouse (Metallic Black)	31P8700
ThinkPad Port Replicator II	74P6733
ThinkPad Dock II	
with U.S. power cord	2877-20U
with Argentina power cord	2877-20X
with Brazil power cord	2877-20P
without power cord	2877-20A
with Japanese power cord	2877-20J
with Europe General power cord	2877-20G
with EU1 power cord	67P8995
with U.K. power cord	67P8998
with Denmark power cord	67P8996
with Israel power cord	67P9001
with Italy power cord	67P9000
with Saudi power cord	92P3319
with South Africa power cord	67P8997
with Switzerland power cord	67P8999
ThinkPad Mini-Dock	
with U.S. power cord	2878-20U
with Argentina power cord	2878-20X
with Brazil power cord	2878-20P
without power cord	2878-20A
with Japanese power cord	2878-20J
with Europe General power cord	2878-20G
with EU1 power cord	67P8984
with U.K. power cord	67P8987
with Denmark power cord	67P8985
with Israel power cord	67P8990
with Italy power cord	67P8989
with Saudi power cord	92P2801
with South Africa power cord	67P8986
with Switzerland power cord	67P8988

Note: Order an appropriate country-specific line cord with these options. Contact your IBM Authorized Dealer or IBM representative for details.

Description	Order Number
ThinkPad 72 W ac Adapter U.S./Canada/LA.02K6699	
Japan	02K6750
EMEA with EU1 power cord	02K6701
with Denmark power cord	02K6702
with Africa/India power cord	02K6703
with U.K. power cord	02K6704
with Switzerland power cord	02K6705
with Italy power cord	02K6706
with Israel power cord	02K6707
with ANZ/SEAN power cord	02K6708
with Argentina power cord	02K6709

Note: Order an appropriate country-specific line cord with these options. Contact your IBM Authorized Dealer or IBM representative for details.

ThinkPad Nylon Carrying Case	10K0207
ThinkPad Premiere Leather Carrying Case	10K0209
ThinkPad Alpha Carrying Case	09N4171
ThinkPad Alpha Plus Carrying Case	09N4163
ThinkPad Alpha Executive Carrying Case	09N4165
ThinkPad Alpha Rolling Carrying Case	09N4167
ThinkPad Alpha Backpack Carrying Case	09N4169
ISDN International PC Card	09N3606

Publications

ThinkPad Data sheets and other publications are now available on the Web. Many can be downloaded or printed free of charge.

To view or print marketing publications or data sheets on ThinkPad notebooks, visit:

<http://www.ibm.com/thinkpad>

- Under the ThinkPad Overview bar or in the left menu click Literature.
- Scroll down to the Data Sheets bar and then to the ThinkPad notebook you want information about.
- Click PDF to the right of the product.
- To print the data sheet for the system, click Print.

To view, download, or print ThinkPad publications, visit:

<http://www.pc.ibm.com/support>

- Under Browser click Notebooks and PC Companions.
- Click Online Publications.
- Under Select Your Product, choose the product or family.
- Click on the publication you want to see.
- Scroll to the file link under the File Details bar and click on the link to view the publication.
- To print the publication, click Print.

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Technical Information

Physical Specifications

Note: Actual specifications and weights may vary based on features, vendor components, or manufacturing processes. All weights and dimensions are approximate.

- Width: 311 mm (12.2 in)
- Depth: 255 mm (10.0 in)
- Height: 26.6 mm (1.0 in)
- Weight:
 - Travel: 2.05 kg (4.5 lb) with travel bezel
 - Configured system: 2.22 kg (4.9 lb)

Accessories

- Li-Ion battery pack: 325 g (0.72 lb)
- FDD: 210 g (0.45 lb)
- ac adapter (2-pin or 3-pin): 360 g (0.795 lb)
- Power cord for ac adapter: 90 g (0.19 lb)
- DVD drive: 345 g (0.76 lb)

Electrical Specifications

- Universal ac adapter (72 W):
 - Input: 100/240 V ac, 1.4/0.70 A, 50/60 Hz
 - Output: 16 V dc, 4.5 A
- Li-Ion battery packs: 10.8 V, 4.4 Ah, 6 cell/pack or 10.8 V, 6.6 Ah, 9 cell/pack

Heat Dissipation: 246 Btu/hr maximum

Heat Emissions: 72 watts maximum

Air Temperature for Shipping and Storage: -20° to 60°C (-4° to 140°F)

Acoustic Noise Level: Category 3D (office environment)

- Low cooling fan speed:
 - Sound power level: 3.7 bels (idling), 4.0 bels (HDD seeking)
 - Sound pressure level at the operator position: 31 dB (idling), 34 dB (HDD seeking)
- Middle cooling fan speed:
 - Sound power level: 3.9 bels (idling), 4.0 bels (HDD seeking)
 - Sound pressure level at the operator position: 33 dB (idling), 34 dB (HDD seeking)

- High cooling fan speed:
 - Sound power level: 4.0 bels (idling), 4.1 bels (HDD seeking)
 - Sound pressure level at the operator position: 36 dB (idling), 37 dB (HDD seeking)

Note: All measurements are made in accordance with ISO 7779 and reported in conformance with ISO 9296.

Operating Environment: ThinkPad computers are designed, built, and tested for high quality and reliability. When used properly in standard business environments, a ThinkPad system should be a reliable computing asset for many years. Harsh environments and abuse can damage ThinkPads since they are not intended to withstand extreme temperatures, dust, shock, or other severe physical environments. ThinkPad systems should not be used in unsuitable environments. For example, a ThinkPad system should not be used in non-stationary environments, such as in-vehicle installations, without additional casing or shock dissipation. IBM warrants that the ThinkPad notebook will conform to its Official Published Specifications when used in a suitable physical operating environment.

Air Temperature

- 0 to 8,000 ft:
 - Operating:
 - Without diskette: 5° to 35°C (41° to 95°F)
 - With diskette inside unit: 10° to 35°C (50° to 95°F)
 - System off: 5° to 43°C (41° to 110°F)
 - Storage/shipment: -20° to 60°C (-4° to 140°F)
 - Wet bulb (maximum): 29.4°C (85°F)
- 8,000 to 10,000 ft:
 - Operating:
 - Without diskette: 5° to 31.3°C (41° to 88°F)
 - With diskette inside unit: 10° to 31.3°C (50° to 88°F)
 - System off: 5° to 43°C (41° to 110°F)
 - Storage/shipment: -20° to 60°C (-4° to 140°F)
 - Wet bulb (maximum): 25.7°C (78°F)

Note: The maximum temperature when the system is on is linearly decreased from 8,000 ft to 10,000 ft.

Relative Humidity

- Operating:
 - 8% to 95% (without diskette)
 - 8% to 80% (with diskette inside unit)
- Storage/shipment: 5% to 95%

Altitude: 10,000 ft maximum (3,048 m)

Agency Approvals: System unit approvals:

- FCC Class-B Certified to comply with FCC Rules, Part 15
- VCCI Class 2
- UL-60950
- C-UL
- CCC (for China)
- BSMI (for Taiwan)
- SMA 3548 (Australia and New Zealand)

- MPR-II (Sweden)
- CE Mark
- CB Report (EMEA)
- NOM (Mexico)
- MIC (Korea)

Software Requirements: The following operating systems support the ThinkPad T40 computer:

- OS/2 Warp® Convenience Package 2 V4.52 MCP2: XR_4502¹⁶ with FixPak XR_F001, or later¹⁶, and XR_D003, or later
- OS/2 Warp Convenience Package 1 V4.51 MCP1: XR_4501 with FixPak XR_C002, or later, and XR_D003, or later
- OS/2 Warp Convenience Package 2 V4.52 Refresh MCP2 Refresh: XR_4503
- Windows® 98 Second Edition with USB 1.1 support
- Windows 98 Gold with USB 1.1 support
- Windows NT® Workstation 4.0 SP6a; no USB support
- Windows NT Workstation 4.0 SP6a Japanese; no USB support
- Windows 2000 Professional (SPO, SP1, SP2, SP3) with USB 2.0 support
- Windows XP Professional (OPKD, SP1) with USB 2.0 support
- Windows XP Home (OPKD, SP1) with USB 2.0 support

Note: Model 2373-G1x is supported only with the Windows XP Professional and Windows 2000 Professional operating systems.

¹⁶ P4_FIX.ZIP is also available for those customers who install OS/2 Warp Convenience Package 2 for the first time.

For information about support for these operating systems, visit:

<http://www.pc.ibm.com/support>

Note: Previous versions of these operating systems are not supported.

Operating systems other than those preinstalled on the systems may not provide full-feature functionality. To view considerations or Service Hints and Tips by operating system, visit:

<http://www.pc.ibm.com/support>

- In the middle of the page, in the Quick path to a product field, enter your system's four-digit machine type and model number, such as 2373-123.
- On the left side of the page, click Hints and Tips.
- In middle of the page, select a category such as Windows 2000 to see the list of considerations or hints and tips for your machine type.

Compatibility and Supported Products

Contact your IBM representative for a list of supported features and options.

PC Card: The ThinkPad T40 computer conforms to the PC Card Standard 95, which encompasses both the former 16-bit Release 2.1 card standard and the new 32-bit CardBus card. Other PC card adapters that comply with the PC Card Standard may also function, but have not been tested by IBM.

Vendor Software Compatibility

IBM tests a large number of commonly used and available applications for compatibility with its ThinkPad systems, using supporting operating systems and configurations. In general, you can expect that most vendor applications designed to run on supported operating systems and Intel-compatible system architectures should be compatible with a ThinkPad system. Some configurations, however, may not be compatible.

IBM does not warrant or support vendor software products, nor guarantee compatibility of those products with IBM systems. Refer to the applicable warranty and license terms provided by the respective vendors.

ThinkPad T40 systems contain BIOS in flash ROM, and a GUI to set up the system and power-management features Windows users. BIOS provides the hardware instructions and interfaces designed to support the standard features of the ThinkPad T40 computer and to maintain compatibility with many software programs currently operating under Windows 98 Second Edition, Windows 2000, and Windows XP Professional.

Limitations: For a list of tips about running various versions of operating systems, visit the IBM electronic support site at:

<http://www.pc.ibm.com/support>

General

- Do not use the RJ-11, RJ-45, or VGA port when the ThinkPad T40 notebook is docked on the Dock II or Port Replicator II.
- Systems with the wireless LAN product permit legal operation worldwide in regions in 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 brand.
- Using Wi-Fi wireless and optional Bluetooth products together may impact the performance of both.
- Support for a DVI monitor is through the ThinkPad Dock option and is limited to a resolution of 1280 x 1024, 60 Hz mode.

Windows 2000

- Screen expansion for DVD playback is not supported.
- DVD playback is not supported in 1400 x 1050, 32-bit mode.

Windows NT 4.0

- Windows NT 4.0 is not supported on models with the Cisco 802.11b wireless LAN.
- Screen expansion is not supported for DVD playback in 1024 x 768 mode.

Windows 95 or 98

- Screen expansion is not supported for DVD playback to external TV at 800 x 600, 256, or 16-bit color mode.
- In systems with Windows 98 installed, when a wireless LAN adapter PC card is installed, the system requires a longer time to boot when the power is off. Boot time of approximately 150 seconds is to be expected. Normal boot times without a wireless PC card installed are approximately 70 to 110 seconds, depending on specific configurations. The time to resume from

suspend or hibernate is not affected by the wireless LAN card.

OS/2 Warp V4.0

- Standby and hibernation power management functions are not supported.
- Do not enter suspend/hibernation mode with an Ethernet or token-ring card installed.

Planning Information

Cable Orders: All required cables are included in the shipment group.

Installability: ThinkPad notebook systems require approximately 20 minutes for installation. Installation includes unpacking, setting up, and powering on the system. Additional time is required to install optional memory and other features.

Packaging: Depending on model, the shipment group contains the following items:

- System unit with the appropriate processor, HDD, and display
- 256 or 512 MB of memory
- CD-RW/DVD drive installed
- Modem and Ethernet
- IBM Embedded Security Subsystem 2.0
- Bluetooth card and antenna on selected model
- Appropriate preloaded software

Shipment Group for All Models: Package contents:

- System unit with U.S. English keyboard
- AC adapter
- Rechargeable battery pack (Li-Ion)
- Power cord
- TrackPoint caps
- ThinkPad T Series Service and Troubleshooting Guide
- ThinkPad T Series Setup Guide
- Windows XP Professional manual
- License agreement and supporting documentation
- Lotus SmartSuite® Millennium license of use
- Lotus Notes® stand-alone client license of use
- Envelope Group BM (miscellaneous envelope): Insurance brochure

Security, Auditability, and Control

Passwords: These password protection mechanisms are available:

- Power-on passwords, to help protect the system from unauthorized use
- Supervisor password, for use by a system administrator
- HDD password, to help protect data on the removable HDD

In addition, an optional locking device in the IBM security slot provides physical security.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

Terms and Conditions

This product is available for purchase under the terms of the IBM Customer Agreement (ICA).

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may have been previously installed.

Regardless, IBM warranty terms apply.

IBM Credit Corporation Financing: Yes

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or call IBM. In the United States, call 800-772-2227. In Canada, call 800-565-3344.

Warranty Period

- System hardware — Three years on parts and labor
- System battery — One year

Warranty Service

Customer Carry-in Repair (CCR) or ThinkPad EasyServ: Warranty service is provided by CCR or ThinkPad EasyServ to a reseller authorized to perform warranty service. ThinkPad EasyServ is an on-site courier pickup and delivery, depot repair service in which the ThinkPad system is picked up at the customer's location and delivered to an IBM-designated repair location. The repair location will repair the system and return it to the customer. Charges for the courier service are paid by IBM.

Call the HelpCenter® at 800-772-2227 in the U.S. to assist with problem isolation for hardware. If a hardware problem is identified, the HelpCenter will arrange for a courier to pick up the system for overnight delivery (where available) to the repair location. Most repairs should be made within 48 hours after the system is received at the repair location (actual repair time may vary). Keep the original shipping carton for shipping to the repair location. If the original shipping carton is not available, the courier will deliver a shipping carton and return to pick up the system for delivery to the repair location.

ThinkPad EasyServ is available in the U.S. and Canada.

For information on terms and conditions or warranty service, call the HelpCenter.

ThinkPad EasyServ is available in Brazil and Mexico.

International Warranty Service (IWS): IWS is available during the warranty period to customers who travel or relocate to countries where their computer is sold and serviced by IBM or IBM resellers authorized to perform warranty service. Eligible IBM computers are identified by their four-digit machine type.

You can obtain IWS through the method of service, such as depot, carry-in, or on-site, provided in the servicing country. Service methods and procedures vary by country, and some service or parts may not be available in all countries. Service centers in certain countries may not be able to service all models of a particular machine type. In addition, some countries may have fees and restrictions that apply at the time of service.

To determine the eligibility of your computer and to view a list of countries where service is available, visit:

<http://www.pc.ibm.com/support>

Click on the Warranty Lookup tab.

For more information on IWS, refer to Services Announcement 601-034, dated September 25, 2001.

Licensing: Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the system.

Maintenance Services — ServiceElect and ServiceSuite™

ServiceElect and ServiceSuite provide hardware warranty service upgrades, maintenance, and selected annuity support services in one agreement.

Warranty Service Upgrade: During the warranty period, warranty service upgrade provides an enhanced level of service for an additional charge for all three years of the original warranty period. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated.

The following warranty service upgrade option is available.

IBM on-site repair (IOR), 9 hours per day, Monday through Friday excluding holidays, next-business-day (NBD) response. Some repairs may require the use of ThinkPad EasyServ.

Maintenance Service

- ThinkPad EasyServ is an on-site courier pickup and delivery, depot repair service in which the ThinkPad system is picked up at the customer's location and delivered to an IBM-designated repair location. The repair location will repair the system and return it to the customer. Charges for the courier service are paid by IBM. For customers purchasing service offerings, most repairs should be made within 12 hours after the system is received at the repair location (actual repair time may vary). Keep the original shipping carton for shipping to the repair location. If the original shipping carton is not available, the courier will deliver a shipping carton and pick up the system for delivery to the repair location.
- IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response. Some repairs may require the use of ThinkPad EasyServ.

Maintenance Service (ICA)

Maintenance services are available for ICA legacy contracts. The preferred go-to-market offerings are ServiceElect. However, ICA legacy contracts will still be available for current customers until they are withdrawn.

Alternative Service (Warranty Service Upgrades): During the warranty period, warranty service upgrade provides an enhanced level of service for an additional charge. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated.

The following warranty service upgrade option is available:

IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response. Some repairs may require the use of ThinkPad EasyServ.

Maintenance Service

- ThinkPad EasyServ is an on-site courier pickup and delivery, depot repair service in which the ThinkPad system is picked up at the customer's location and delivered to an IBM-designated repair location. The repair location will repair the system and return it to the customer. Charges for the courier service are paid by IBM. For customers purchasing service offerings, most repairs should be made within 12 hours after the system is received at the repair location (actual repair time may vary). Keep the original shipping carton for shipping to the repair location. If the original shipping carton is not available, the courier will deliver a shipping carton and pick up the system for delivery to the repair location.
- IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response. Some repairs may require the use of ThinkPad EasyServ.

Mid-Range System Option: No

Corporate Service Option: No

Extended Maintenance Option: No

Central Facility Maintenance Service (CFMS) Option: No

Non-IBM Parts Support

Warranty Service: IBM is now shipping machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to customers, and normal warranty service procedures for the IBM machine apply.

Warranty Service Upgrades and Maintenance Services: Under certain conditions, IBM Integrated Technology Services repairs selected non-IBM parts at no additional charge for machines that are covered under a warranty service upgrade or maintenance services.

IBM Service provides hardware problem determination on non-IBM parts (adapter cards, PCMCIA cards, disk drives, memory, and so forth) installed within IBM systems covered under the IBM warranty service upgrade or maintenance services and provide the labor to replace the failing parts at no additional charge. If IBM has technical service agreements with the manufacturers of the failing part, or if the failing part is an accommodations part (a part with an IBM FRU label), IBM may also source and replace the failing parts at no additional charge. For all other non-IBM parts, customers are responsible for sourcing the parts. Installation labor is provided at no additional charge, if the machine is covered under a warranty service upgrade or maintenance services.

IBM Hourly Service Rate Classification: One

International Service for ThinkPads: International Service for ThinkPads is a hardware repair service for customers who have purchased an IBM warranty service upgrade, maintenance services, or package offerings. This service is provided at no additional charge.

International service is available wherever IBM sells and services ThinkPad products. Customers are required to register for this service.

For more information, refer to Services Announcement 698-019, dated March 24, 1998. To register for this service, call one of the following offices:

- United States: 800-497-7426 or 248-740-1215
- Scotland: 44-1475-893638
- Japan: 81-462-73-7598
- Australia: 61-2-9354-4171

ServicePac® Offerings

Warranty and Maintenance Options: The announced products may be eligible for ServicePacs for Warranty and Maintenance Options, convenient prepackaged offerings for warranty service upgrades and maintenance services.

Installation Services: The announced products may be eligible for ServicePacs for Installation Services, convenient prepackaged offerings for installation services. Refer to the **Prices** section for information on the availability of ServicePac offerings.

For additional ServicePac information, visit:

<http://www-1.ibm.com/services/its/us/servicepac.html>

Rental Offering: No

Field-Installable Features: Yes

Model Conversions: No

Machine Installation: Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

Graduated Charges: No

Prices

Mobile Products — ThinkPad T40

Description	Part Number	Machine Type/Model	IBM List Price ¹⁷
IBM U.S. English Machines Standard preinstalled software			
Software #1 (Windows XP Professional)			
40.0 GB HS, Intel Pentium® M 1.3 GHz Processor, 512 MB, 16x-10x-24x-8x CD-RW/DVD drive, 32 MB Mobility Radeon 7500 graphics chipset, 6-cell battery, modem, 10/100 Ethernet, ThinkPad UltraNav, IBM 11a/b Wi-Fi wireless, IBM Embedded Security Subsystem 2.0, 14-in TFT 1024 x 768	23732AU	2373-2AU	\$2,449

Description	Part Number	Machine Type/Model	IBM List Price ¹⁷
40.0 GB HS, Intel Pentium M 1.3 GHz Processor, 512 MB, 16x-10x-24x-8x CD-RW/DVD drive, 32 MB Mobility Radeon 7500 graphics chipset, 6-cell battery, modem, 10/100 Ethernet, ThinkPad UltraNav, Intel Wi-Fi wireless, IBM Embedded Security Subsystem 2.0, 14.1-in TFT 1024 x 768	23732CU	2373-2CU	\$2,399
40.0 GB HS, Intel Pentium M 1.4 GHz Processor, 512 MB, 16x-10x-24x-8x CD-RW/DVD drive, 32 MB Mobility Radeon 7500 graphics chipset, 6-cell battery, modem, 10/100 Ethernet, 14.1-in TFT 1024 x 768, IBM 11a/b Wi-Fi wireless, IBM Embedded Security Subsystem 2.0, ThinkPad UltraNav	237344U	2373-44U	2,579
40.0 GB HS, Intel Pentium M 1.5 GHz Processor, 512 MB, 16x-10x-24x-8x CD-RW/DVD drive, 32 MB Mobility Radeon 7500 graphics chipset, 6-cell battery, modem, 10/100 Ethernet, 14.1-in TFT 1024 x 768, Intel Wi-Fi wireless, IBM Embedded Security Subsystem 2.0, ThinkPad UltraNav	23734CU	2373-4CU	2,529
80.0 GB, Intel Pentium M 1.6 GHz Processor, 512 MB, 16x-10x-24x-8x CD-RW/DVD drive, 32 MB Mobility Radeon 9000 graphics chipset, 6-cell battery, modem, 1 Gb Ethernet, ThinkPad UltraNav, IBM 11a/b Wi-Fi wireless, IBM Embedded Security Subsystem 2.0, Bluetooth, 14.1-in TFT 1400 x 1050	23739CU	2373-9CU	3,199

¹⁷ IBM list price; does not include tax or shipping and is subject to change without notice. Reseller prices may vary.

ServicePac for Warranty and Maintenance

Description	Part Number
2-year IOR 9 x 5 NBD	30L9190
3-year IOR 9 x 5 NBD	30L9197
4-year IOR 9 x 5 NBD	69P9198
5-year IOR 9 x 5 NBD	69P9200
4-year P&L P/U Depot	69P9199
5-year P&L P/U Depot	69P9201

ServicePac for Post Warranty/Warranty Service Upgrade Service

Description	Part Number
1-year IOR 9 x 5 NBD	69P9381
1-year P&L P/U Depot	69P9380

ServicePac for Installation Services

Description	Part Number
Basic Installs 1 to 25 Units	21P2001
Basic Install + Data Migration 1 to 25 units	21P2076

For ServicePac prices, visit:

<http://www-1.ibm.com/services/its/us/spwarmain.html>

Maintenance Service Charges (Legacy)

Alternative Service (Warranty Service Upgrades)

**IOR 9 x 5
for ThinkPads with
a 3-Year Warranty**

\$147

Maintenance Services

EasyServ 1-Year Courier Depot	1-Year IOR 9 x 5
\$315	\$378

For ServiceElect (ESA) Maintenance Service Charges, call IBM at 888-IBM-4343 (426-4343).

Global Financing: IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, both from IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit:

<http://www.ibm.com/financing>

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