IBM

IBM ThinkPad T Series notebooks

CNET
Editors' Choice Award,
May 2001

Highlights

- *Balance the load with the lightest*, high-performance notebooks with 14.1" displays. Travel weight starts at 4.6 lb[1]*

- *Simplify setup and management of communications on select models with Access Connections*

- *Work where you want with integrated wireless (requires wireless LAN) and embedded security on select models for more secure communications*

- *Rely on HelpCenter® support available worldwide, 24 hours a day, 7 days a week[2]*

Designed for power and mobility

In the office, on the road and anywhere in between, IBM ThinkPad® T Series notebooks are the perfect solution for frequent travelers who require big functionality without a heavy load. Enjoy bright, clear, 14.1" SXGA+ TFT displays protected by Titanium Composite top and bottom covers.

The ThinkPad e-xperience

ThinkPad T Series notebooks are designed to make computing simpler and easier to manage. Ultrabay™ Plus and common docking across ThinkPad Series[3] work together to provide a better e-xperience.

Freedom from your desk

Integrated, Wi-Fi-certified 802.11b wireless technology on select ThinkPad T23 notebooks provides a wireless connection to information on an access point-equipped network. Rigorous testing won these systems Wi-Fi certification, the industry symbol of interoperability. Plus, Access Connections lets you save your connectivity settings and easily switch between modem, Ethernet and wireless.
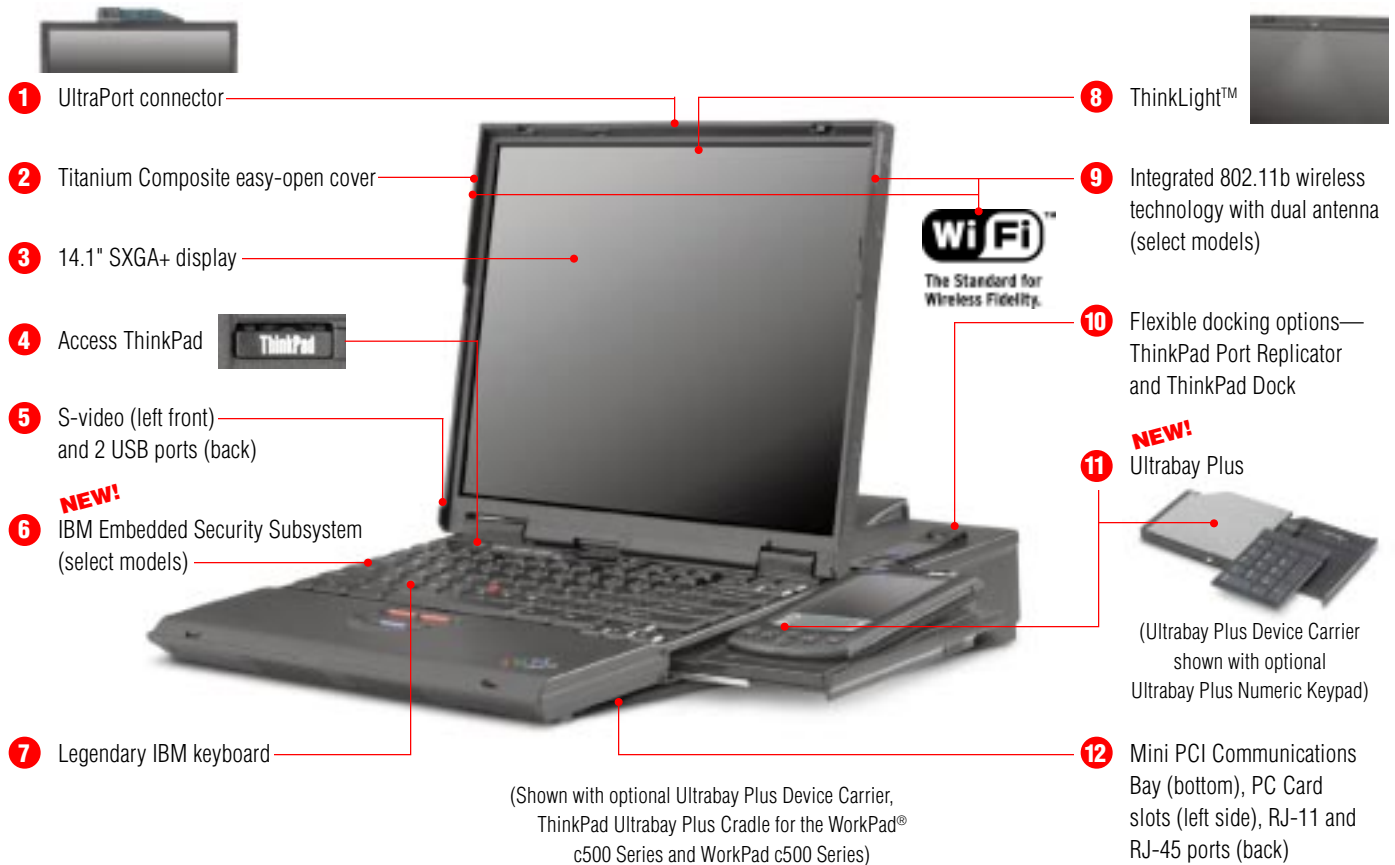
Trusted communications

The IBM Embedded Security Subsystem (IBM Client Security Software 2.0 download required) on select ThinkPad T23 notebooks helps safeguard your data and Internet communications by encrypting files on the hard disk drive and storing encryption keys and passwords right in the existing hardware, where they are best protected. (Communications encryption requires third-party software.)

*Based on comparisons with the following models offering a 14.1" display as of 8/10/01: Compaq Armada M700, Dell Latitude C600, Sony VAIO GR100, Fujitsu LifeBook E Series, Toshiba Tecra 8200, Hewlett-Packard Omnibook 6100, NEC Versa LXi, Acer TravelMate 527, Micron TransPort XT, Gateway Solo 5300 and Sharp PC-AR50.

Choose IBM today | Go to **ibm.com** or call 1 888 SHOP IBM to buy direct, locate an IBM reseller or for more information.

① UltraPort connector

② Titanium Composite easy-open cover

③ 14.1" SXGA+ display

④ Access ThinkPad

⑤ S-video (left front) and 2 USB ports (back)

NEW!
⑥ IBM Embedded Security Subsystem (select models)

⑦ Legendary IBM keyboard

⑧ ThinkLight™

⑨ Integrated 802.11b wireless technology with dual antenna (select models)

WiFi™
The Standard for
Wireless Fidelity.

⑩ Flexible docking options— ThinkPad Port Replicator and ThinkPad Dock

NEW!
⑪ Ultrabay Plus

(Ultrabay Plus Device Carrier shown with optional Ultrabay Plus Numeric Keypad)

⑫ Mini PCI Communications Bay (bottom), PC Card slots (left side), RJ-11 and RJ-45 ports (back)

(Shown with optional Ultrabay Plus Device Carrier, ThinkPad Ultrabay Plus Cradle for the WorkPad® c500 Series and WorkPad c500 Series)

The ThinkPad e-xperience

① **UltraPort connector** is in a better location for more options like the new IBM UltraPort Camera II or Bluetooth™ UltraPort Module from IBM.

② **Titanium Composite** top and bottom covers are up to 3 times stronger than ABS plastic[4] while maintaining a thin and light design.

③ **14.1" SXGA+** high-resolution TFT display provides larger viewing area optimized for spreadsheets or presentations.

④ The ThinkPad Button launches **Access ThinkPad** to simplify access to online[5] and on-system resources, including Access Connections connectivity management software and award-winning service and support.

⑤ **S-video and 2 USB ports** provide expanded multimedia capability.

⑥ **NEW! The IBM Embedded Security Subsystem** (IBM Client Security Software 2.0 download required) helps protect data locally and works with third-party software to help secure communications (select models).

⑦ **IBM keyboard** with standard-size keys, individual volume control and TrackPoint® pointing device with Internet Scroll Bar provides comfort and ease.

⑧ **ThinkLight keyboard light**, unique to IBM ThinkPad notebooks, lets you work in low-light conditions.

⑨ **Integrated 802.11b wireless technology with dual-antenna system** (select models) built into either side of the display for strong signal performance[6].

⑩ **Flexible docking options**—common to ThinkPad X, T, R[3] and A Series notebooks:
- ThinkPad Port Replicator—easy cable management
- ThinkPad Dock—cable management plus simple desktop expansion including an Ultrabay 2000.

⑪ **NEW! Ultrabay Plus** integrated modular bay supports all Ultrabay 2000 devices including CD-RW/DVD Combo drive, diskette drive, Zip drive or second battery[7]; the optional Ultrabay Plus Device Carrier adds potential functionality by supporting the Ultrabay Plus Numeric Keypad and Cradle for your WorkPad c500 Series.

⑫ **Mini PCI Communications Bay** and **PC Card slots** provide communications expansion, while **RJ-11 and RJ-45 ports** eliminate the need for cable or card swapping for select models with integrated Ethernet and V.92-ready modem.

ThinkPad T Series specifications

	2647 (9NU, 5NU, 9MU, 5MU)	2647 (8QU, 4QU, 8NU, 4NU, 8MU, 4MU)	2647 (6KU, 2KU)
Machine type	2647 (9NU, 5NU, 9MU, 5MU)	2647 (8QU, 4QU, 8NU, 4NU, 8MU, 4MU)	2647 (6KU, 2KU)
Processor/Level 2 cache[8]	**NEW!** ● at 1.2GHz[9]/512KB	● at 1.13GHz/512KB	● at 866MHz/512KB
Display/resolution	14.1" TFT SXGA+ (1400x1050)	14.1" TFT XGA (1024x768)	13.3" TFT XGA (1024x768)
Hard disk drive	48GB[10] high speed	30GB	15GB
Memory (std/max)[11]	128MB/1GB PC133 SDRAM	128MB/1GB PC133 SDRAM	128MB/1GB PC133 SDRAM
Optical drive	8X/4X/24X[12] Max CD-RW	8X-2.3X DVD-ROM	24X-10X CD-ROM
Video graphics (chip)	16MB SGRAM (S3 SuperSavage IXC)	16MB SGRAM (S3 SuperSavage IXC)	16MB SGRAM (S3 SuperSavage IXC)
Communications	9NU, 5NU: 802.11b wireless, 56K[13] modem*, 10/100 Ethernet 9MU, 5MU: 56K modem*, 10/100 Ethernet	8QU, 4QU: 56K modem* 8NU, 4NU: 802.11b wireless, 56K modem*, 10/100 Ethernet 8MU, 4MU: 56K modem*, 10/100 Ethernet	56K modem*, 10/100 Ethernet
Battery type/battery life[14]	9NU, 5NU: Li-Ion/3.1hr 9MU, 5MU: Li-Ion/3.3hr	8QU, 4QU, 8NU, 4NU: Li-Ion/3.3hr 8MU, 4MU: Li-Ion/3.5hr	Li-Ion/3.3hr
Ports	infrared, RJ-11, RJ-45, 2 USB, S-video out, serial, parallel, headphone, keyboard/mouse, line-in and microphone, UltraPort connector		
Slots	2 Type II or 1 Type III PC Card	2 Type II or 1 Type III PC Card	2 Type II or 1 Type III PC Card
IBM Embedded Security Subsystem	yes	no	no
Titanium Composite cover	top and bottom	top and bottom	top and bottom
Keyboard	ergonomic keyboard with palm rest, TrackPoint pointing device with "Press-to-Select" and Internet Scroll Bar		
Dimensions[15]	9NU, 5NU: 12.1"x9.8"x1.3" 9MU, 5MU: 12"x9.8"x1.3"	8NU, 4NU: 12.1"x9.8"x1.3" 8QU, 8MU, 4QU, 4MU: 12"x9.8"x1.3"	12"x9.8"x1.3"
Travel weight[1]**/ with optical drive**	5.0 lb/5.5 lb	8NU, 4NU: 4.7 lb/5.2 lb 8QU, 8MU, 4QU, 4MU: 4.6 lb/5.2 lb	4.8 lb/5.2 lb
Port Replicator/Dock support	yes	yes	yes
RFID-enabled	yes	yes	yes
Diskette drive	yes	yes	yes

NEW! ● Mobile Intel® Pentium® III Processor-M   *V.92-ready

Software

Preloaded operating system[16]	9NU, 9MU: WXP 5NU, 5MU: W2000	8QU, 8NU, 8MU: WXP 4QU, 4NU, 4MU: W2000	6KU: W2000 2KU: W98
Supported operating systems[17]	Microsoft® Windows® XP, Windows 2000, Windows 98, Windows 95, Windows NT® 4.0, Windows Millennium, OS/2® Warp V4, Red Hat Linux®		
Included software[18] (preloaded)	• Access ThinkPad – Access Connections (WXP and W2000 models only) – Access Help • ConfigSafe • Mediamatics DVD (DVD models only) • PC Doctor • SystemSoft Card Wizard • ThinkPad Utilities • Veritas RecordNOW (CD-RW models only)		
(downloadable)	• IBM Backup and Restore • IBM Data Transfer • Universal Manageability (UM Services™) • Update Connector™,[19] • Client Security Software (security subsystem models only)		
(license)	• Lotus® SmartSuite® Millennium (CD not included)		

NEW! WXP=Microsoft Windows XP Professional   W2000=Windows 2000 Professional   W98=Windows 98 Second Edition

Comprehensive support included with your purchase

- ■ Limited warranty of three years**
- ■ Personalized Web-based support[21]
- ■ International Warranty Service[22]
- ■ 24x7 toll-free hardware support[2] during the warranty period
- ■ EasyServ™ onsite pickup and delivery[23]

**See page 6 for additional warranty information[20].

Manageability services[24]

Installation Services Plus Data Migration	Get your new systems up and running with ServicePac® for Installation Plus Data Migration. Basic and enhanced services let you pick the level of service you need. Both offer data migration to get your new systems functioning like your old systems quickly. Visit **ibm.com**/services/its/us/ss-spinstl.html for more information.
Data Migration Kits	Easily move the data from your old system to your new system with an IBM Data Migration Kit. These kits include the hardware and software necessary to transfer the data files and personal settings from your old computer. Visit **ibm.com**/pc/services for more information.
Easier long-term deployment	IBM ThinkPad notebooks offer workhorse and global models for stable and easy long-term deployment. Visit **ibm.com**/pc/workhorse for more information.

Wireless communications made easy

Get more freedom to work how you want, where you want with the wide range of Wi-Fi-certified IBM wireless PC offerings and services.

Select ThinkPad notebooks	Integrated 802.11b wireless technology with a dual-antenna system built into the display cover for increased signal strength.
Wireless accessories	Add wireless connectivity to any ThinkPad notebook without rewiring your network with the IBM High Rate Wireless LAN PC Card 128 and the IBM High Rate Wireless LAN Access Point 500 or IBM High Rate Wireless LAN Gateway.
Access Connections	Software to simply connect to your network, whether in the office or on the move, wired or wireless.

Visit **ibm.com**/pc/wireless for more information.

The first to integrate a security chip in a PC[25]

IBM Embedded Security Subsystem	Integrated security chip and IBM Client Security Software 2.0 work together to provide levels of security not previously available.
Security chip	Hardware-based protection of critical security information, including passwords, encryption keys and electronic credentials helps to keep them safe from sniffers, Trojan Horses and other potential invaders.
IBM Client Security Software 2.0	Provides the interface between security-aware applications and the functionality of the chip. In addition, it supports a variety of the latest peripheral security devices that control access to the notebook itself. (downloadable)

Additional services

Warranty Service Upgrades[26]	Up to three years parts and onsite labor (now available anywhere in the continental U.S.) coverage from the date of the ThinkPad notebook purchase (including warranty period**). Visit **ibm.com**/pc/services/ for applicable terms and conditions or call your authorized reseller for additional information.
IBM Mobile and Wireless Services	Helps customers turn wireless technology into tangible business advantage (U.S. only). Visit **ibm.com**/services/its/us/mobilew for more information.

**See page 6 for additional warranty information[20].

PC Magazine
Editors Choice Award,
August 2001

"Despite the T22's thin-and-light *profile, it remains eminently usable thanks to its wonderfully* bright display *and the ThinkPad's famous keyboard . . . The T22 continues the tradition of solidly built,* easy-to-use *ThinkPads."*

—**ZDNet** Reviews, July 26, 2001

ThinkPad Proven solutions

Complementary to IBM options are additional third-party accessories from ThinkPad Proven™ and WorkPad Proven partners[27]. Proven products are tested, warranted and supported by the manufacturer to ThinkPad and WorkPad compatibility standards. Visit **ibm.com**/ww/thinkpad/proven for a complete list.

Apricorn, Inc.—EZ-FireDrive, the IEEE 1394 Hard Disk Drive for high-speed storage and backup (use with IBM IEEE 1394 CardBus Card option-19K5679)
C-Pen—600C/800C "electronic highlighter" which captures, edits, translates and sends text to your ThinkPad notebook via infrared or serial cable
Margi, Inc.—Display-to-Go 4MB PC Card adapter enables multiple display operation
MobileStar Network Corporation and Wayport, Inc.— 802.11b wireless service providers (use with integrated 802.11b wireless technology or IBM High Rate Wireless LAN PC Card 128-09N9904)
Novatel Wireless, Inc.—Merlin PC Card modem for CDPD for ThinkPad notebooks operates as a wireless wide-area Network Interface Card (NIC) or a Dial-Up Networking (DUN) modem interface (wireless service sold separately)
PORT, Inc.—carrying cases customized for ThinkPad T Series notebooks; ThinkPad Alpha Executive case and ThinkPad Alpha Rolling case

IBM ThinkPad® PROVEN*
™ *Tested, warranted and supported by manufacturer to ThinkPad Compatibility Standards.

IBM WorkPad® PROVEN*
™ *Tested, warranted and supported by manufacturer to WorkPad Compatibility Standards.

Customize your ThinkPad notebook

IBM MicroPortable Data/Video Projector

0037-A02

Travel light with one of the world's lightest projectors: weighing 3 lb with striking XGA (1024x768) resolution and bright, 1100 lumens. Or, choose the IBM ValueBased Data/Video Projector or IBM Conference Room Data/Video Projector.

NEW!

IBM 32MB USB Memory Key

22P5296

Carry presentations up to 32MB on your keychain with this unique, new storage option. Access from any USB-equipped system. Also available: IBM 8MB USB Memory Key.

NEW!

ThinkPad Ultrabay Plus Cradle for the WorkPad c500 Series

27P5738

Synchronize and charge your WorkPad PC Companion on the road. The ThinkPad Ultrabay Plus Cradle for the WorkPad c500 Series fits into the Ultrabay Plus Device Carrier so you needn't carry a cradle. Or, use the ThinkPad Ultrabay Plus Numeric Keypad.

NEW!

Bluetooth UltraPort Module from IBM

09N9811

Create a cable-free workspace with the Bluetooth UltraPort Module from IBM so your ThinkPad can communicate wirelessly with Bluetooth enabled peripherals like printers or scanners. Or, choose the IBM UltraPort Digital Array Microphone, an IBM UltraPort Compact Flash Reader and IBM UltraPort Camera II.

ThinkPad CD-RW/DVD Combo Ultrabay 2000 Drive

08K9572

Combine two drives in one, slim form factor for low-cost, high-capacity read/write storage. Or, select from the expanding range of IBM ThinkPad Ultrabay 2000 devices, including: SuperDisk (LS-240), Zip 250MB, 8X/4X/24X[12] Max CD-RW and 8X-3X DVD-ROM drives.

ThinkPad Ultrabay 2000 Li-Ion Battery

02K6646

Enjoy twice the usage time without pausing or switching batteries by sliding this battery into your Ultrabay Plus or Ultrabay 2000 modular bay. IBM offers a full line of power accessories: batteries, adapters and chargers.

IBM High Rate Wireless LAN Access Point 500

09N9906

Add this "wireless bridge" between your existing wired Ethernet infrastructure and wireless clients. Also available: IBM High Rate Wireless LAN PC Card 128 and IBM High Rate Wireless LAN Gateway.

ThinkPad Dock

2631-20U

Enjoy desktop expansion in a snap with the ThinkPad Dock, featuring cable management, a modular Ultrabay 2000, a half-size PCI Card slot, two USB ports and an integrated power supply.

Options by IBM offers a wide range of accessories and upgrades designed to work with your ThinkPad notebook. For a complete list of options and compatibility information, visit **ibm.com**/options (U.S.) or **ibm.com**/pc/ca/accessories (Canada).

Choose IBM today | Go to **ibm.com** or call 1 888 SHOP IBM to buy direct, locate an IBM reseller or for more information.

Get the tools that inspire success.

Request an IBM PC Guide today.
Call 1 888 SHOP IBM.

[1] Includes battery and optional travel bezel, instead of standard optical drive in Ultrabay 2000, if applicable; weight may vary due to vendor components, manufacturing process and options.

[2] Response times may vary. May exclude some holidays.

[3] ThinkPad R Series models support the ThinkPad Port Replicator only.

[4] As tested using the high flex modulus test.

[5] Requires Internet access account, available separately.

[6] Requires compatible wireless-enabled peripherals, not included.

[7] Second battery option not supported on A or R Series Ultrabay Plus bay.

[8] At processor speed.

[9] For Mobile Intel Pentium III processors featuring Intel SpeedStep™ technology, this denotes maximum performance mode; battery optimization mode is approximately 80% of maximum performance mode.

[10] GB equals 1,000,000,000 bytes when referring to hard disk drive capacity. Accessible capacity may be less.

[11] Maximum memory varies depending on model and may require replacement of standard memory with optional maximum memory module.

[12] CD and DVD drives list maximum rates; rates are variable and are often less than the maximum.

[13] Designed to be capable of receiving data at up to 56Kbps with compatible phone line and server equipment, and transmitting data at up to 31.2Kbps. Public networks currently limit download speeds to about 53Kbps. Actual speeds vary and are often less than the maximum possible.

[14] These model numbers achieved a Ziff Davis BatteryMark™ Version 4.0.1 Battery Rundown Time of the times shown above. This test was performed without independent verification by Ziff Davis Media, Inc.; Ziff Davis makes no representations or warranties as to these test results. A description of the environment under which the test was performed is available at **ibm.com**/pc/ww/thinkpad/batterylife.html. 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] Thickness may vary at certain points on the system.

[16] Delivered with Windows 98, Windows 2000 or Windows XP Professional preloaded and a Recovery Partition on the hard disk drive.

[17] Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Please refer to **ibm.com**/pc/support and select Notebooks and PC Companions from the "Browse the Support Site" dropdown or enter your machine type and model number for more information.

[18] Some software may differ from its retail version (if any) and may not include user manuals or all program functionality. Warranty, service and support for non-IBM products are provided directly to you by third parties, not IBM. IBM makes no representations or warranties regarding non-IBM products. For non-IBM software, applicable third-party software licenses may apply.

[19] Update Connector is available at no charge to registered ThinkPad customers during the limited warranty period. Line charges may apply.

[20] For terms and conditions or a copy of the IBM Statement of Limited Warranty, call 1 800 772 2227 in the U.S. and in Canada, call 1 800 426 2255. Battery covered by a separate, one-year limited warranty.

[21] Registration is required at **ibm.com**/pc/support

[22] Available in those countries where IBM and IBM resellers sell and service ThinkPad products. Registration required. Service level is based on the standard service for ThinkPad notebooks in that particular country.

[23] The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the warranty period.

[24] These data migration solutions cannot be used for transfer of operating systems or applications.

[25] As of August 10, 2001, IBM alone offers an embedded data-encrypting security subsystem on notebook systems.

[26] These upgrades are available for machines used for business, professional, or trade purposes rather than personal, family or household purposes. Subject to IBM ServicePac Maintenance Service Agreement. The customer may be asked certain diagnostic questions before a technician is sent.

[27] IBM makes no warranties, express or implied, regarding ThinkPad Proven or WorkPad Proven products and services, including any implied warranties of merchantability or fitness for a particular purpose.

As an ENERGY STAR Partner, IBM has determined that this product meets the ENERGY STAR guidelines for energy efficiency. ENERGY STAR is a U.S. registered mark.

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