

Extreme mobility in a small and light ultraportable



## IBM ThinkPad X31 notebooks



**IBM ThinkPad X30**  
Best of 2002: Windows Portable PC  
*Fortune Magazine*  
December 2002

### Highlights

- **Experience optional all-day computing with this compact system that's about 1" thin<sup>1</sup> and weighs just 3.6 lb<sup>2</sup>.**
- **Expand your computing options with the IBM ThinkPad<sup>®</sup> X3 UltraBase<sup>™</sup> for port replication and more.**
- **Enjoy the flexibility of up to five connectivity capabilities, IEEE 1394 and CompactFlash.**
- **Rely on the IBM UltraConnect<sup>™</sup> Antenna to optimize coverage and performance<sup>3</sup> worldwide for increased productivity.**

### Small package, big performance

Travelers will love ThinkPad X31 notebooks for powerful computing in a small and light package. There's new Intel<sup>®</sup> Centrino<sup>™</sup> mobile technology on select models designed for performance and long battery life. ThinkPad X31 notebooks can deliver battery power up to 6 hours<sup>4</sup>—upgradable to 10.1 hours (select models) for all-day computing by using the optional IBM ThinkPad X30 Series Extended Life Battery with the standard system battery<sup>5</sup>.

### IBM means innovation.

IBM innovations can help IT departments simplify system management chores, reduce ownership costs and improve productivity for all. IBM Rapid Restore<sup>™</sup> PC, an IBM ThinkVantage<sup>™</sup> Technology, lets

users restore previously saved data—including applications and the operating system—locally.

The IBM Embedded Security Subsystem on select models, including IBM Client Security Software (available by download), provides a higher level of security with a unique hardware- and software-based solution. This ThinkVantage Technology can encrypt data to virtually "lock" private information.

### Leadership in wireless connectivity

The IBM UltraConnect Antenna built into the display helps make the most of a wireless LAN. Select ThinkPad X31 notebook models feature new integrated 11a/b Wi-Fi<sup>®</sup> wireless or Intel Centrino mobile technology. To easily blend a wireless ThinkPad X31 notebook into a wireless-equipped Cisco network, choose Cisco Aironet<sup>®</sup> Wireless 802.11b technology integrated on select models. Or choose a Wi-Fi wireless upgradable<sup>3</sup> model.

### IBM. Always there for you.

Rely on worldwide IBM service and support available in over 160 countries and 22 languages<sup>7</sup>. If you prefer traveling light, choose a ThinkPad X31 model and get on-the-go performance.

Call 1 888 SHOP IBM or go to [ibm.com](http://ibm.com)

to buy direct, locate an IBM reseller or for more information.

## IBM ThinkPad X31 notebook features

1 Access IBM

**NEW!**  
2 IBM UltraConnect Antenna

3 IBM Embedded Security Subsystem 2.0 (select models)

4 Legendary IBM keyboard

5 Integrated wireless technology (select models)

6 ThinkLight™

7 Flexible docking options

8 Optional IBM ThinkPad X3 UltraBase

9 Comprehensive standard slots and ports

**NEW!**  
10 Intel Centrino mobile technology (select models)

CISCO SYSTEMS  
(select models)

Wi-Fi  
CERTIFIED

Intel  
centrino  
MOBILE TECHNOLOGY

shown with optional IBM ThinkPad X3 UltraBase

## The ThinkPad advantage

- 1 Access IBM** provides easy access to online<sup>8</sup> and on-system information including IBM Service and Support. IBM Access Connections software helps you manage wired and wireless connections (if applicable) at work, on the road or at home.
- 2 NEW!** The innovative **IBM UltraConnect Antenna** supports multiple frequencies to optimize coverage and performance for improved wireless LAN connectivity around the world. Works with both IEEE 802.11a and 802.11b wireless technologies for optimal signal reception.
- On select models, ThinkPad X31 notebooks with Intel Centrino mobile technology and the **Embedded Security Subsystem 2.0** (requires download of security software from IBM) offer the most secure wireless computing.
- IBM keyboard** resists damage caused by spills<sup>9</sup> and features standard-size<sup>10</sup> keys, individual volume control and a TrackPoint® pointing device with Internet Scroll Bar<sup>8</sup> for comfort and ease.
- 5 Integrated wireless technology** (select models) uses the UltraConnect Antenna built into both sides of the display for enhanced signal strength, whether you choose Cisco 802.11b, 11a/b Wi-Fi wireless or Intel Centrino mobile technology.
- 6 ThinkLight keyboard light**, exclusive to IBM ThinkPad notebooks, lets you work in low-light conditions.
- For **desktop expansion**, the optional new ThinkPad Mini Dock features pass-through port replication, key-lock security and includes a power adapter. For affordable cable management, choose the new IBM Port Replicator II.
- 8 Optional IBM ThinkPad X3 UltraBase** easy-to-carry expansion and cable management includes an Ultrabay Plus bay and accommodates an optional second battery for up to 10.1 hours of computing (on select models) when combined with the standard system battery.
- 9 Comprehensive standard slots and ports** include a PC card slot, CompactFlash, IEEE 1394, two USB 2.0 ports, VGA, parallel, RJ-11 and RJ-45 for easy connections to peripherals, networking and more.
- 10 NEW!** With **Intel Centrino mobile technology**, three components work together to deliver a breakthrough in freedom and capability. These components are the Intel Pentium® M processor, the Intel PRO/Wireless Network Connection and the Intel 855 PM Chipset.

<b>IBM ThinkPad X31 notebook specifications</b>				
<b>Machine type</b> (model number)	2672 (C2U, CXU, CBU)	2672 (J7U, JXU, JHU, JBU)	2672 (J6U, JAU, C1U, CAU)	2672 (B2U, B1U, BBU, BAU)
<b>Intel® Centrino™ mobile technology</b>	<i>CBU</i> : yes	<i>JBU</i> : yes	<i>JAU, CAU</i> : yes	<i>BBU, BAU</i> : yes
<b>Processor/Level 2 cache</b> <sup>11</sup>	Intel Pentium® M 1.4GHz/12/1MB	Intel Pentium M 1.4GHz/1MB	Intel Pentium M 1.4GHz/1MB	Intel Pentium M 1.3GHz/1MB
<b>Display/resolution</b>	12.1" TFT XGA/1024x768	12.1" TFT XGA/1024x768	12.1" TFT XGA/1024x768	12.1" TFT XGA/1024x768
<b>Hard disk drive</b>	40GB <sup>13</sup>	40GB	40GB	20GB
<b>Memory</b> (std/max <sup>14</sup> )	256MB/1GB PC2100 DDR SDRAM	256MB/1GB PC2100 DDR SDRAM	256MB/1GB PC2100 DDR SDRAM	256MB/1GB PC2100 DDR SDRAM
<b>Video graphics</b>	ATI® Mobility RADEON™ 16MB DDR 4X AGP	ATI Mobility RADEON 16MB DDR 4X AGP	ATI Mobility RADEON 16MB DDR 4X AGP	ATI Mobility RADEON 16MB DDR 4X AGP
<b>Integrated communications</b>	<i>CBU</i> : Intel PRO/Wireless Network Connection, 56K <sup>15</sup> modem, 10/100 Ethernet <i>C2U</i> : 56K modem, 10/100 Ethernet (Wi-Fi wireless upgradable with built-in antenna); <i>CXU</i> : Cisco Aironet® 802.11b; 56K modem, 10/100 Ethernet	<i>JBU</i> : Intel PRO/Wireless Network Connection, 56K modem, Gigabit Ethernet; <i>JXU</i> : Cisco 802.11b, 56K modem, Gigabit Ethernet; <i>JHU</i> : 11a/b Wi-Fi wireless, Bluetooth™ <sup>16</sup> , 56K modem, Gigabit Ethernet; <i>J7U</i> : 56K modem, Gigabit Ethernet (Wi-Fi wireless upgradable with built-in antenna)	<i>JAU</i> : Intel PRO/Wireless Network Connection, 56K modem, Gigabit Ethernet; <i>CAU</i> : Intel PRO/Wireless Network Connection, 56K modem, 10/100 Ethernet; <i>J6U</i> : 56K modem, Gigabit Ethernet (Wi-Fi wireless upgradable with built-in antenna); <i>C1U</i> : 56K modem, 10/100 Ethernet (Wi-Fi wireless upgradable with built-in antenna)	<i>BBU, BAU</i> : Intel PRO/Wireless Network Connection, 56K modem, 10/100 Ethernet; <i>B1U, B2U</i> : 56K modem, 10/100 Ethernet (Wi-Fi wireless upgradable with built-in antenna)
<b>Li-Ion battery life</b>	<i>C2U</i> : 6.0hr <i>CXU</i> : 5.3hr <i>CBU</i> : 5.5hr	<i>J7U</i> : 5.9hr <i>JBU, JHU</i> : 5.5hr <i>JXU</i> : 5.3hr	<i>J6U, C1U</i> : 5.4hr <i>JAU, CAU</i> : 5.2hr	<i>B2U</i> : 6.0hr <i>B1U</i> : 5.4hr <i>BBU</i> : 5.5hr <i>BAU</i> : 5.2hr
<b>With optional ThinkPad X30 Series Extended Life Battery</b>	<i>C2U</i> : 10.1hr <i>CXU</i> : 9.9hr <i>CBU</i> : 10hr	<i>J7U</i> : 10.1hr <i>JBU, JHU</i> : 10hr <i>JXU</i> : 9.9hr	<i>J6U, C1U</i> : 9.4hr <i>JAU, CAU</i> : 9.2hr	<i>B2U</i> : 10.1hr <i>B1U</i> : 9.4hr <i>BBU</i> : 10hr <i>BAU</i> : 9.2hr
<b>Ports</b>	IEEE 1394, 2 USB 2.0; parallel; Infrared; Dock/Port Replicator; external display; AC adapter; audio:headphone/line-out, external microphone, line-in; RJ-11, RJ-45			
<b>Slots</b>	1 Type II PC Card; 1 Compact Flash Type II	1 Type II PC Card; 1 Compact Flash Type II	1 Type II PC Card; 1 Compact Flash Type II	1 Type II PC Card; 1 Compact Flash Type II
<b>IBM Embedded Security Subsystem 2.0</b>	yes	yes	<i>J6U, JAU, CAU</i> : yes <i>C1U</i> : no	yes
<b>Keyboard</b>	ergonomic keyboard (87 keys, 18.5mm vertical stroke and 18.2mm horizontal key pitch, 2.5mm stroke) with palm rest, TrackPoint® pointing device with "Press-to-Select", Internet Scroll Bar, intuitive volume control and Access IBM			
<b>Dimensions</b>	10.7x8.8x0.98-1.19"	10.7x8.8x0.98-1.19"	10.7x8.8x0.98-1.19"	10.7x8.8x0.98-1.19"
<b>Weight</b>	3.6 lb	3.6 lb	3.6 lb	3.6 lb
<b>Port replicator/Dock support</b>	yes/yes	yes/yes	yes/yes	yes/yes
<b>Limited warranty</b> <sup>17</sup>	3 years/1 year battery	3 years/1 year battery	3 years/1 year battery	3 years/1 year battery

<b>IBM ThinkPad X31 notebook software</b>	
<b>Preloaded operating system</b> <sup>18</sup>	Microsoft® Windows® XP Professional: J7U, JXU, JHU, JBU, C2U, CXU, CBU, B2U, BBU Windows 2000 Professional: J6U, JAU, C1U, CAU, B1U, BAU
<b>Supported operating systems</b> <sup>19</sup>	Windows XP Professional, Windows XP Home Edition, Windows 2000 Professional, Windows 98 Second Edition, Windows 98, Windows NT® 4.0
<b>Included software</b> <sup>20</sup> (preloaded)	<ul style="list-style-type: none"> <li>• Access IBM</li> <li>• Access Connections</li> <li>• Adobe Acrobat Reader</li> <li>• ConfigSafe (W2000 models only)</li> <li>• IBM Rapid Restore™ PC</li> <li>• Norton AntiVirus 2003 (OEM Edition)</li> <li>• PC-Doctor</li> <li>• ThinkPad Utilities</li> <li>• Update Connector™<sup>21</sup></li> </ul>
(downloadable)	<ul style="list-style-type: none"> <li>• Client Security Software (Embedded Security Subsystem models only)</li> <li>• IBM Director Agent</li> <li>• Software Delivery Assistant</li> <li>• System Migration Assistant</li> </ul>
(license—CD not included)	<ul style="list-style-type: none"> <li>• Lotus® SmartSuite® Millennium</li> <li>• Lotus Notes® Stand-alone Client</li> </ul>

**Comprehensive support included with your purchase**

- Personalized Web-based support<sup>22</sup>
- Proactive e-mail updates<sup>22</sup>
- International Warranty Service
- 24x7<sup>23</sup> toll-free support for warranty-related issues during the warranty period
- EasyServ™ onsite pickup and delivery<sup>24</sup>

For important warranty information, see page 6.

# Customize your ThinkPad notebook.

## ■ IBM ImageUltra™ Offerings

Choose ImageUltra Services and let IBM handle custom software image creation for your enterprise to help simplify deployment and lower costs. Or, handle software image creation yourself with the IBM ImageUltra Builder. Visit [ibm.com/pc/services](http://ibm.com/pc/services) for more information.

## ■ IBM ServicePac® for Warranty and Maintenance Options<sup>25</sup>

Get prompt, consistent response from IBM for less downtime. Tailor service levels to your needs. Optional service includes parts and labor during and beyond the warranty period. Visit [ibm.com/pc/services](http://ibm.com/pc/services) for more information.

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## IBM ThinkPad X3 UltraBase

46P7912

Enhance the functionality of your ThinkPad X31 by snapping it into the IBM ThinkPad X3 UltraBase for an array of expansion ports, two stereo speakers and a Kensington Lock slot. This simple, quick-attach solution is easy to carry in checked luggage so it doesn't weigh you down.



An integrated Ultrabay Plus bay accommodates optional Ultrabay 2000 devices, including a second battery and selection of storage and optical drives. Plus, with the optional Ultrabay Plus Device Carrier, you can add an optional keyboard-extending numeric keypad or WorkPad® cradle.



Add an extra system battery to the IBM ThinkPad X3 UltraBase for all-day computing, up to 10.1 hours on select models, when combined with the standard system battery.

## IBM ThinkPad X30 Series Extended Life Battery

02K7041



All-day computing is a reality with your ThinkPad X31 notebook system battery and the optional IBM ThinkPad X30 Series Extended Life Battery. This unique battery can be quickly added to the bottom of the ThinkPad X31 notebook to provide up to 10.1 hours of computing. Its clever design includes a bar that extends below the battery to tilt the system to a more ergonomic typing angle. At less than 1 lb, it's easy to carry extra battery power anywhere you go.

**IBM iLM300 MicroPortable Data/Video Projector**

0037-A03



At only 2.4 lb, it's one of the world's lightest projectors. Striking XGA (1024x768) native resolution images are clear and bright, thanks to DLP technology and 1100 lumens of projection power. In addition, the projector now includes IBM 3-Year Rapid Replacement Service. If the projector requires a repair covered by the warranty, IBM will ship a replacement—with a goal of three days or less, depending on location.

**IBM USB 2.0 Portable CD-RW Drive**

22P5297



Achieve incredible data transfer at a rate up to 480Mbps<sup>26</sup> with this small, lightweight clamshell USB 2.0 and 1.1 compatible CD-RW drive supporting buffer underrun protection technology.

**IBM Portable USB 2.0 Hard Drive with Rapid Restore**

09N4211



Take the ultimate recover and restore solution on the road. This unique hard disk drive comes preloaded with IBM Rapid Restore PC software to enable a complete image backup of up to 30GB of user data with file compression (20GB standard capacity).

**NEW!**

**IBM 256MB USB 2.0 Memory Key**

22P9025



Carry loads of data in this thumb-size USB device, now boasting a cool, new design and new interface, security, partition and write-protection software to make it secure and easy to use. Plus, you can boot to it<sup>27</sup>, rather than to a boot diskette, for diagnostic or repair utilities. (64MB also available.)

Visit [ibm.com/pc/options](http://ibm.com/pc/options) to browse the complete selection of IBM accessories and upgrades.



The **Targus DEFCON PC Card Fingerprint Reader** makes biometric authentication portable to provide another layer of security for system and network data wherever you are. For added protection, the IBM Embedded Security Subsystem 2.0 (on select models) encrypts and stores the fingerprint image.

# Your next step is easy.

## Check the Web.

- ThinkPad  
**ibm.com**/thinkpad
- NetVista™  
**ibm.com**/netvista
- Accessories and upgrades  
**ibm.com**/pc/options
- eSupport  
**ibm.com**/support
- Webcasts  
**ibm.com**/pc/webcast
- PC Services  
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- Financing  
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## Read on.

### Download product literature.

- ThinkPad  
**ibm.com**/pc/us/thinkpad/literature/index.html
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### Warranty information:

For a copy of applicable product warranties, write to: Warranty Information, PO Box 12195, RTP, NC 27709, USA, Attn: Dept. JDJA/B203. IBM makes no representation or warranty regarding third-party products or services.

- 1 Thinness may vary at certain points on the system.
- 2 Includes battery. Weight may vary due to vendor components, manufacturing process and options.
- 3 Requires compatible wireless-enabled peripherals, sold separately.
- 4 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 Run-down 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. Winstone is a registered trademark and BatteryMark is a trademark of Ziff Davis Publishing Holdings Inc., in the U.S. and other countries. A description of the environment under which the test was performed is available at **ibm.com**/pc/www/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. May not provide full feature functionality. Refer to **ibm.com**/pc/support and enter your machine type and model number for more information.
- 5 The ThinkPad X31 supports only two batteries in use at one time.
- 6 Based on IEEE 802.11a and 802.11b. This wireless LAN product has been designed to permit legal operation world-wide 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.
- 7 International Warranty Service is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- 8 Requires separate Internet access account; not included.
- 9 Not designed for prolonged contact with liquid.
- 10 As defined by ISO/IEC 15412.
- 11 At processor speed.
- 12 Processor speed may be lower when operating on battery power.
- 13 GB equals 1,000,000,000 bytes when referring to storage capacity; Accessible capacity is less; up to 3GB is used in service partition.
- 14 Maximum memory varies depending on model and may require replacement of standard memory with optional maximum memory module.
- 15 Public network download speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps 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.
- 16 Bluetooth is a trademark of Bluetooth SIG, Inc., licensed to IBM.
- 17 Telephone support may be subject to additional charges. For onsite labor, IBM will attempt to

diagnose and resolve the problem remotely before sending a technician. Battery covered by a separate, one-year limited warranty. Delivered with Windows 2000 or Windows XP Professional preloaded and a Recovery Partition on the hard disk drive.

- 19 Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to **ibm.com**/pc/support and select Notebooks and PC Companions from the "Browse the Support Site" drop-down menu or enter your machine type and model number for more information.
- 20 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.
- 21 Update Connector is available at no charge to registered ThinkPad customers during the limited warranty period. Line charges may apply.
- 22 Profiling at **ibm.com**/support required.
- 23 Response times may vary. May exclude some holidays.
- 24 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.
- 25 These services are available for machines normally used for business, professional or trade purposes, rather than personal, family or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response-time objectives and are not guarantees. A service technician is scheduled to arrive at your location within two or four business hours or the next business day (depending on service) after remote problem determination is completed. For the 9x5x4-hour service, calls dispatched after 1:00 p.m. local time, you can expect the service technician to arrive by the morning of the next business day. For noncritical service requests, a service technician will arrive by the end of the following business day. If the machine problem turns out to be a Customer Replaceable Unit (CRU), IBM will express ship the part to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. External peripherals, such as racks, tape drives, and channel controllers, require their own, separate service coverage, they are not covered under the attached machine. Service activation is required immediately following purchase. For ThinkPad notebooks requiring LCD or other component replacement, IBM may choose to perform service at the depot repair center. For failing non-IBM components, customer must provide replacement part unless IBM has a Technical Support Agreement with the manufacturer. Service does not cover accessories, supply items and certain parts such as batteries, frames and covers.



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- 26 Data transfer rates depend on many factors and are of ten less than the maximum possible. Faster speeds require USB 2.0 enabled devices. Data transfer to USB 1.1 enabled devices will be at USB 1.1 speeds.
- 27 Booting requires Boot-to-USB BIOS support on the system. See your system documentation to determine if your system supports this feature.

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