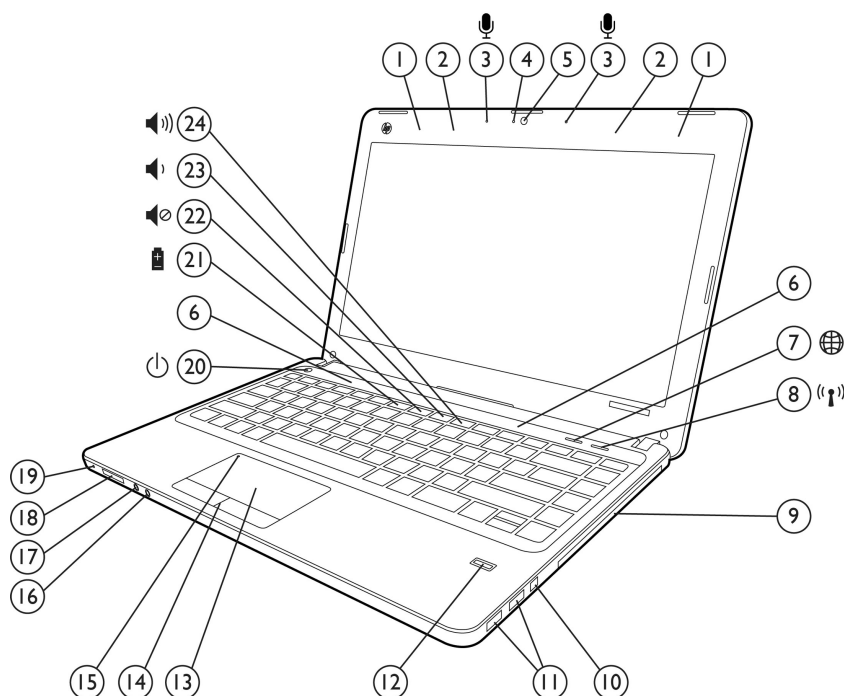


# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Overview

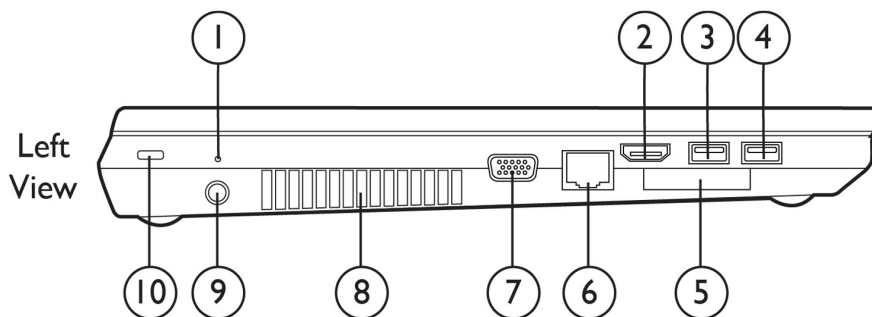


- |  |   |
|--|---|
| 1. WWAN antennas (select models)             | 13. Touchpad                                  |
| 2. WLAN antennas                             | 14. Touchpad pick buttons                     |
| 3. Dual-microphone array                     | 15. Touchpad on/off button with LED indicator |
| 4. Webcam LED indicator                      | 16. Stereo microphone in                      |
| 5. 720p HD webcam                            | 17. Stereo headphone/line out                 |
| 6. Stereo speakers                           | 18. Media Card Reader                         |
| 7. HP QuickWeb button with LED indicator     | 19. Hard drive activity LED indicator         |
| 8. Wireless on/off button with LED indicator | 20. Power button with LED indicator           |
| 9. Optical drive (select models)             | 21. HP Power Assistant function key           |
| 10. Optional RJ-11/modem port                | 22. Volume mute function key                  |
| 11. (2) USB 2.0 ports                        | 23. Volume down function key                  |
| 12. Optional HP Fingerprint Sensor           | 24. Volume up function key                    |

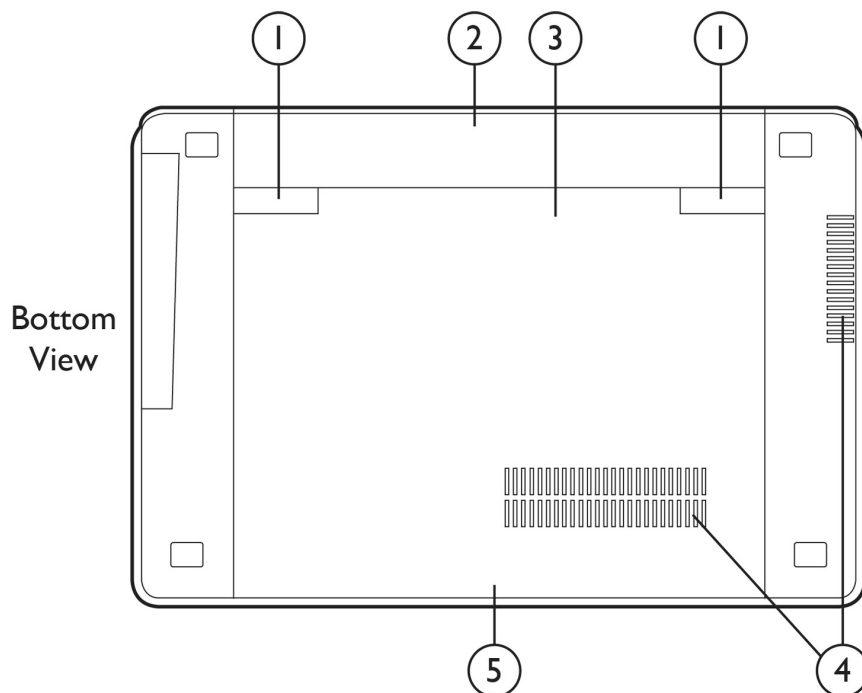
# QuickSpecs

**HP ProBook 4330s Notebook PC**  
**HP ProBook 4430s Notebook PC**  
**HP ProBook 4530s Notebook PC**  
**HP ProBook 4730s Notebook PC**

## Overview



- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| 1. Battery charging LED indicator | 6. RJ-45/Ethernet port            |
| 2. HDMI 1.3a port                 | 7. VGA/external monitor connector |
| 3. USB 3.0 port                   | 8. Vent                           |
| 4. USB 2.0 port                   | 9. Power connector                |
| 5. ExpressCard/34 slot            | 10. Security lock slot            |



- |   |                   |
|---|-------------------|
| 1. Battery and access cover release latches                 | 4. Vents          |
| 2. Battery bay  | 5. Hard drive bay |
| 3. SIM card slot (select units, located inside battery bay) |                   |

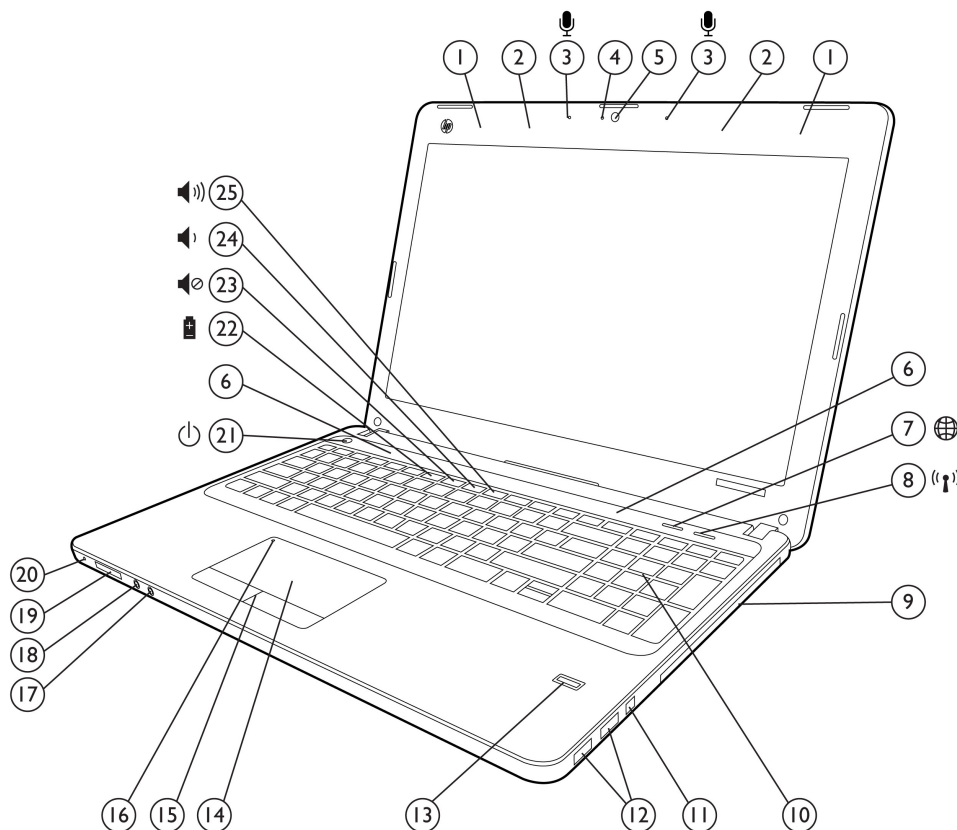
**HP ProBook 4530s Notebook PC**  
**HP ProBook 4730s Notebook PC**



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Overview

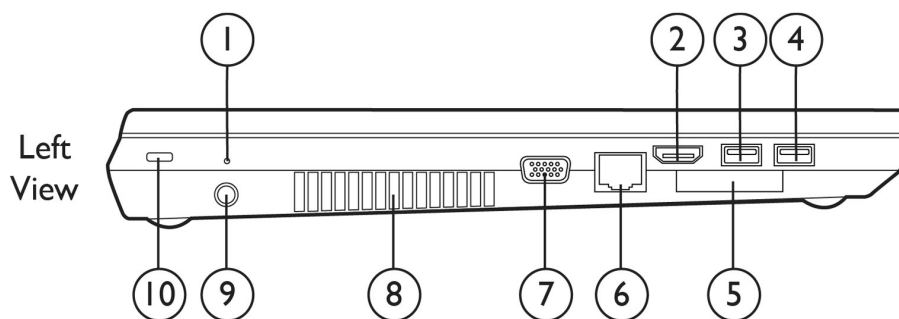


- |  |   |
|--|---|
| 1. WWAN antennas (select models)             | 14. Touchpad                                  |
| 2. WLAN antennas                             | 15. Touchpad pick buttons                     |
| 3. Dual-microphone array                     | 16. Touchpad on/off button with LED indicator |
| 4. Webcam LED indicator                      | 17. Stereo microphone in                      |
| 5. 720p HD webcam                            | 18. Stereo headphone/line out                 |
| 6. Stereo speakers                           | 19. Media Card Reader                         |
| 7. HP QuickWeb button with LED indicator     | 20. Hard drive activity LED indicator         |
| 8. Wireless on/off button with LED indicator | 21. Power button with LED indicator           |
| 9. Optical drive (select models)             | 22. HP Power Assistant function key           |
| 10. Numeric keypad                           | 23. Volume mute function key                  |
| 11. Optional RJ-11/modem port                | 24. Volume down function key                  |
| 12. (2) USB 2.0 ports                        | 25. Volume up function key                    |
| 13. Optional HP Fingerprint Sensor           |   |

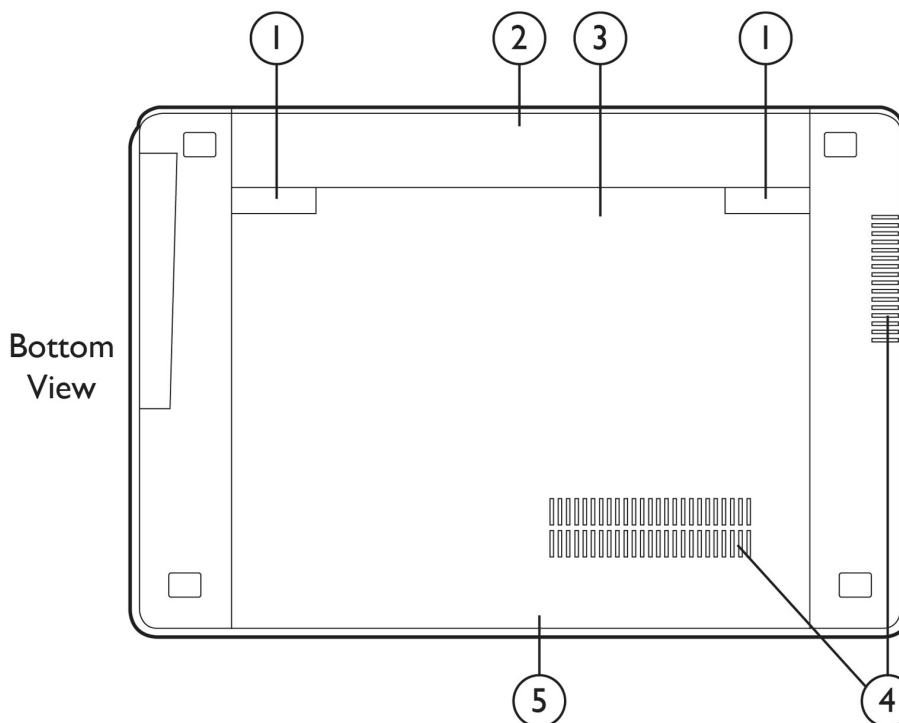
# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Overview



- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| 1. Battery charging LED indicator | 6. RJ-45/Ethernet port            |
| 2. HDMI 1.3a port                 | 7. VGA/external monitor connector |
| 3. USB 3.0 port (select models)   | 8. Vent                           |
| 4. USB 2.0 port                   | 9. Power connector                |
| 5. ExpressCard/34 slot            | 10. Security lock slot            |



- |   |                   |
|---|-------------------|
| 1. Battery and access cover release latches                 | 4. Vents          |
| 2. Battery bay  | 5. Hard drive bay |
| 3. SIM card slot (select units, located inside battery bay) |                   |

# QuickSpecs

## Overview

### At A Glance

- Genuine Windows 7 versions or SUSE Linux
- Thin, lightweight design with brushed aluminum finish for durability and style, wear-resistant HP DuraFinish
- Full-sized spill-resistant keyboard; full separate numeric keypad on HP ProBook 4530s and 4730s
- Larger Touchpad with gestures support, on/off button with LED indicator
- Enhanced security features including HP ProtectTools, HP Face Recognition, optional HP Fingerprint Sensor, and optional HP Privacy Filter
- HD webcam with dual-microphone array for video conferencing
- HDMI port for connecting to high-resolution displays; USB 2.0 ports
- ArcSoft TotalMedia Suite for playing, creating, and editing video and audio files
- SRS Premium Sound optimized for high fidelity audio
- Widescreen LED-backlit HD display with 16:9 aspect ratio
  - HP ProBook 4330s: 13.3-inch diagonal HD
  - HP ProBook 4530s: 15.6-inch diagonal HD
  - HP ProBook 4730s: 17.3-inch diagonal HD+
- Choice of 2nd generation Intel® Core™ i7, i5 and i3 processors, and Intel Celeron processor
- HP QuickWeb for convenient online access without long boot-up times
- Flexible wireless connectivity options controlled by HP Connection Manager:
  - Integrated HP Mobile Broadband Module\*
  - Integrated 802.11 b/g/n wireless LAN module
  - Integrated 802.11 a/b/g/n or b/g/n with Bluetooth 3.0 High Speed (HS) combo card\*\*
- HP DayStarter for calendar display during startup
- HP Power Assistant to conserve power, increase battery run-time, monitor power needs, report workforce power consumption
- BFR/PVC-free\*\*\*, ENERGY STAR qualified and EPEAT TBD registered in the U.S. EPEAT status varies by country- please see [epeat.net](http://epeat.net).

\* Available only on HP ProBook 4330s and 4530s with integrated graphics.

\*\* Available on select models.

\*\*\* Meeting the industry definition of 'BFR/PVC-free' per the iNEMI Position Statement on "Low Halogen" Electronics. Plastic parts incorporated into the chassis generally contain < 1000 ppm (0.1%) of bromine or chlorine. Printed circuit board and substrate laminates generally contain < 1500 ppm (0.15%) of total bromine and chlorine. Service parts after purchase may not be BFR/PVC-free. External accessories, including power supplies, power cords, and peripherals as well as the following customer-configurable internal components: ATT SIM card are not BFR/PVC-free.

Standard Features (availability may vary by country)

## Processors

### HP ProBook 4730s Notebook PC

#### 2nd Generation Intel Core i7 Processors

Intel Core i7-2670QM Processor (2.2 GHz, 6 MB L3 cache, 4 cores/8 threads, 45W)\*  
Up to 3.1 GHz with Intel Turbo Boost Technology

#### 2nd Generation Intel Core i5 Processors

Intel Core i5-2540M Processor (2.60 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.30 GHz with Intel Turbo Boost Technology

Intel Core i5-2520M Processor (2.50 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.20 GHz with Intel Turbo Boost Technology

Intel Core i5-2450M Processor (2.50 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.10 GHz with Intel Turbo Boost Technology

Intel Core i5-2430M Processor (2.40 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.0 GHz with Intel Turbo Boost Technology

Intel Core i5-2410M Processor (2.30 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 2.90 GHz with Intel Turbo Boost Technology

#### 2nd Generation Intel Core i3 Processors

Intel Core i3-2350M Processor (2.30 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*

Intel Core i3-2330M Processor (2.20 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*

Intel Core i3-2310M Processor (2.10 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*

#### Intel Pentium Processor

Intel Pentium B950 Processor (2.10 GHz, 2 MB L3 cache, 35W)

Intel Pentium B940 Processor (2.00 GHz, 2 MB L3 cache, 35W)

#### Intel Celeron Processor

Intel B840 Processor (1.90GHz, 2MB L3 Cache, 2 threads, 35W)\*

Intel B810 Processor (1.60GHz, 2MB L3 Cache, 2 threads, 35W)\*

### HP ProBook 4530s Notebook PC

#### 2nd Generation Intel Core i7 Processors

Intel Core i7-2670QM Processor (2.2 GHz, 6 MB L3 cache, 4 cores/8 threads, 45W)\*  
Up to 3.1 GHz with Intel Turbo Boost Technology

#### 2nd Generation Intel Core i5 Processors

Intel Core i5-2540M Processor (2.60 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.30 GHz with Intel Turbo Boost Technology

Intel Core i5-2520M Processor (2.50 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.20 GHz with Intel Turbo Boost Technology

Intel Core i5-2450M Processor (2.50 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.10 GHz with Intel Turbo Boost Technology

Intel Core i5-2430M Processor (2.40 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.0 GHz with Intel Turbo Boost Technology

# QuickSpecs

HP ProBook 4330s Notebook PC

HP ProBook 4430s Notebook PC

HP ProBook 4530s Notebook PC

HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

Intel Core i5-2410M Processor (2.30 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 2.90 GHz with Intel Turbo Boost Technology

### 2nd Generation Intel Core i3 Processors

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## HP ProBook 4330s Notebook PC

### 2nd Generation Intel Core i5 Processors

Intel Core i5-2540M Processor (2.60 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.30 GHz with Intel Turbo Boost Technology

Intel Core i5-2520M Processor (2.50 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.20 GHz with Intel Turbo Boost Technology

Intel Core i5-2450M Processor (2.50 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 3.10 GHz with Intel Turbo Boost Technology

Intel Core i5-2410M Processor (2.30 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)\*  
Up to 2.90 GHz with Intel Turbo Boost Technology

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### Intel Celeron Processor

Intel B840 Processor (1.90GHz, 2MB L3 Cache, 2 threads, 35W)\*

Intel B810 Processor (1.60GHz, 2MB L3 Cache, 2 threads, 35W)\*

**NOTE:** Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

\* Intel's numbering is not a measurement of higher performance.



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

<b>Operating System</b>	<b>Preinstalled</b>	Genuine Windows 7 Professional 32* Genuine Windows 7 Professional 64* Genuine Windows 7 Home Premium 32* Genuine Windows 7 Home Premium 64* Genuine Windows 7 Home Basic 32* (select countries) Genuine Windows 7 Starter* (select countries and configurations) SuSE Linux Enterprise Desktop 11
	<b>Supported</b>	Genuine Windows Vista Home Basic 32**† Genuine Windows XP Professional 32
<p>* System may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See: <a href="http://www.microsoft.com/windows/windows-7/">http://www.microsoft.com/windows/windows-7/</a> for details.</p> <p>** Certain Windows Vista product features require advanced or additional hardware. See: <a href="http://www.microsoft.com/windowsvista/getready/hardwarereqs.msp">http://www.microsoft.com/windowsvista/getready/hardwarereqs.msp</a> and <a href="http://www.microsoft.com/windowsvista/getready/capable.msp">http://www.microsoft.com/windowsvista/getready/capable.msp</a> for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit: <a href="http://www.windowsvista.com/upgradeadvisor">http://www.windowsvista.com/upgradeadvisor</a>.</p> <p>† Windows Vista Home Basic will not be a configuration choice after 9/30/11.</p>		

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<b>Chipset</b>	Mobile Intel HM65 Express Chipset
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<b>Graphics</b>	Models with integrated graphics (not an option on HP 4730s): Intel HD Graphics 3000 Microsoft DirectX 10.1 (Shader Model 4.1) and OpenGL 3.0 capable <b>NOTE:</b> Intel HD Graphics for configurations with Celeron processor
	Models with discrete graphics*: AMD Radeon™ HD 7470M with 512 MB or 1 GB dedicated GDDR5 video memory Microsoft DirectX 11 (Shader Model 5.0) and OpenGL 4.0 capable

\* AMD Dynamic Switchable Graphics technology switches automatically between the Intel integrated graphics and the AMD Radeon discrete graphics to stretch battery life when running typical productivity applications or to enable discrete graphics when running demanding applications.  
**NOTE:** This feature requires Windows 7 Professional, Home Premium, and/or Home Basic OS. Full enablement of all discrete graphics video and display features may not be supported on all applications (e.g., OpenGL applications will run on the integrated graphics).





# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

<b>Display</b>	<b>Internal</b>	HP ProBook 4330s: 13.3-inch diagonal LED-backlit HD anti-glare (1366 x 768 resolution)  HP ProBook 4530s: 15.6-inch diagonal LED-backlit HD anti-glare (1366 x 768 resolution)  HP ProBook 4730s: 17.3-inch diagonal LED-backlit HD+ anti-glare (1600x900 resolution)  Optional HP Privacy Filter
	<b>External</b>	Up to 32-bit per pixel color depth <b>VGA</b> port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz. <b>HDMI</b> port supports direct connection to high-definition displays with up to 1920 x 1080 resolution and 7-channel audio with one convenient cable (not included). <b>NOTE:</b> Resolutions are dependent upon monitor capability, and resolution and color depth settings.

<b>Memory</b>	<b>Standard</b>	DDR3 PC3-10600 SDRAM (1333 MHz) Two SODIMM slots supporting dual-channel memory 1 GB, 2 GB, and 4 GB SODIMMs*
	<b>Maximum</b>	Upgradeable to 8 GB with 4 GB SODIMMs in slots 1 and 2
	<b>Dual-channel</b>	Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

\* Upgradeable to 6 GB with 4 GB SODIMM in slot 1 and 2 GB SODIMM in slot 2  
**NOTE:** Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed. Full availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements.

<b>Communications</b>	Realtek Ethernet (10/100/1000 NIC)* Optional 56K V.92 modem**
	* The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.  ** Designed for downloads from 56K modem compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions. Modem availability is subject to country regulatory approval.



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

### Wireless Devices

Support for a broad range of secure, integrated wireless options featuring support for the latest industry standards.

#### Mobile Broadband options

Mobile Broadband (WWAN) requires a Windows operating system and is available in select countries as a factory configurable feature for the HP ProBook 4330s and 4530s with integrated graphics only. Two 850/900/1575/1700/1800/1900/2100 MHz antennas integrated in the top of the display panel support current and future WWAN technologies.

**NOTE:** Separately purchased mobile network operator service is required.

#### HP hs2340 HSPA+ Mobile Broadband Module

Integrated mobile broadband module that provides connectivity to both HSPA and HSPA+ (UMTS) networks. It also provides standalone, Internet and network assisted GPS functionality for various mapping applications and security applications such as Computrace Pro for HP ProtectTools.

#### 802.11 integrated wireless LAN options

Wi-Fi certified\*

Wired Equivalent Privacy (WEP) support up to 128-bit keys

Wi-Fi Protected Access (WPA) and WPA2 support

802.1x authentication support, including EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, and LEAP

Advanced Encryption Standard (AES) support

Dual antennas integrated in the display enclosure

#### Intel Centrino Advanced-N 6230 802.11 a/b/g/n 2x2 WiFi and Bluetooth 2.1+EDR Combo Adapter

Integrated support for 802.11 a, b, g, and n

Up to 300 mbps data rate

Bluetooth Specification 2.1+EDR compliant

Works with a wide range of Bluetooth devices

#### Ralink 3592BC8 802.11 a/b/g/n 2x2 WiFi and Bluetooth 3.0+HS Combo Adapter\*

Integrated support for 802.11 a, b, g, and n

Up to 300 mbps data rate

Bluetooth Specification 3.0 High Speed (HS)\* and 2.1 compliant

Works with a wide range of Bluetooth devices

#### Atheros 9285GN 802.11 b/g/n 1x1 WiFi and 3011 Bluetooth 3.0+HS Combo Adapter\*

Integrated support for 802.11 b, g, and n

Up to 150 mbps data rate

Bluetooth Specification 3.0 High Speed (HS)\* and 2.1 compliant

Works with a wide range of Bluetooth devices

\* Bluetooth 3.0+HS support requires a Windows operating system.

### Keyboard

The HP spill-resistant keyboard is designed using a thin layer of Mylar film under the keyboard. The 101/102-key compatible keyboard features a full-pitch key layout with desktop keyboard features, such as editing keys, both left and right control and alt keys, and function keys. US and International key layouts are available. The HP ProBook 4530s and 4730s include a separate numeric keypad.



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

<b>Launch Buttons and Function Keys</b>	Separate launch buttons provide easy access to wireless on/off and HP QuickWeb. Function keys provide control of features including: standby mode, display brightness, external display, HP Power Assistant, volume mute, volume down, volume up, and media control.	
<b>Pointing device</b>	Touchpad with gestures support, on/off button with LED indicator, two-way scroll, two pick buttons	
<b>Expansion card slots</b>	<b>ExpressCard/34 slot</b>	Supports ExpressCard/34 (34 mm x 75 mm x 5 mm) card sizes
	<b>Media Card Reader</b>	Supports High Speed SD 3.0 (Secure Digital), MultiMediaCard, Memory Stick, Memory Stick Pro, Memory Stick Pro Duo*, SD Micro, MultiMediaCard Micro
* Memory Stick Pro Duo Adapters are required and sold separately. Inserting a Memory Stick Pro Duo Card directly into your notebook could damage the memory card and/or notebook.		
<b>Internal Storage</b>	<b>Hard drives</b>	320/500/750 GB 7200 rpm SMART SATA II 320/500/640/750 GB 5400 rpm SMART SATA II
	<b>NOTE:</b> Up to 15 GB is reserved for the system recovery software.	
	<b>HP 3D DriveGuard</b> (Windows models only)	The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive. Uses three-axis digital motion detection with intelligent sensitivity to help protect the hard drive during normal use from shock and vibration. The digital accelerometer temporarily halts all data transfer and parks the hard drive when abrupt motion is detected.
<b>Removable Storage</b>	<b>Fixed optical drives</b>	Blu-ray ROM DVD+/-RW SuperMulti DL Drive* DVD+/-RW SuperMulti DL Drive
	<b>Weight saver</b>	* Blu-ray drives not available on configurations with an Intel Celeron processor.



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

<b>Interfaces</b>	<b>VGA</b>	One
	<b>HDMI 1.3a</b>	One
	<b>Stereo microphone in</b>	One
	<b>Stereo headphone/line out</b>	One
	<b>Power connector</b>	One
	<b>RJ-11/modem (optional)</b>	One
	<b>RJ-45/Ethernet</b>	One
	<b>USB 3.0*</b>	One
	<b>USB 2.0</b>	Three
	<b>LED status indicators</b>	Nine

\*Available on select models only.

## Audio/Visual

SRS Premium Sound™  
Integrated stereo speakers  
Integrated microphone (dual-microphone array when equipped with optional webcam)  
Function keys for volume mute, volume up, volume down; play, rewind, and fast-forward of video and audio files  
Stereo headphone/line out  
Stereo microphone/line in

720p HD webcam

- HD format (widescreen)
- Supports videoconferencing and still image capture
- High quality fixed focus lens
- Video capture at various resolutions up to 1280x720 resolution (720p) and up to 30fps
- M-JPEG compression supports higher frame rates for video capture and videoconferencing
- Improved low light sensitivity
- Improved dynamic range



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

<b>Software</b>	<b>Preinstalled software with Windows Operating System</b>	HP Recovery Manager HP Support Assistant HP ProtectTools Security Manager HP ProtectTools for Central Management HP Hotkey Support HP QuickWeb HP Power Assistant HP Connection Manager 4.0 HP DayStarter Microsoft Office 2010 preloaded (purchase of a Product Key required to activate a full Office 2010 suite)* Norton Internet Security 2011** PDF Complete Special Edition*** ArcSoft Total Media Suite HP Webcam Software (select models) Skype
	<b>Additional software available from the web</b>	HP SoftPaq Download Manager

\* Microsoft Office 2010 Preloaded includes reduced functionality versions of Word and Excel. Purchase of Product Key required to activate full Office 2010 suite available at participating resellers/retailers and <http://www.office.com>.

\*\* Norton Internet Security 2011 includes 60 days of complimentary live updates; subscription required for live updates thereafter. Internet access required to receive updates.

\*\*\* PDF Complete Special Edition 60 day trial; purchase license afterwards for full functionality.

<b>HP Recovery Manager</b>	Models shipped with Windows 7 or Windows Vista include HP Recovery Manager. HP Recovery Manager enables fast recovery of the factory preinstalled image if the system becomes corrupted or if important system files are accidentally deleted. Up to 20 GB of the hard drive is reserved for the system recovery software.
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<b>Security</b>	<b>Standard Features</b>	HP ProtectTools Security Manager (standard modules include) <ul style="list-style-type: none"><li>● Credential Manager</li><li>● Computrace* Pro</li><li>● Device Access Manager</li><li>● Drive Encryption</li><li>● Face Recognition (webcam configurations only)</li><li>● File Sanitizer</li><li>● Privacy Manager</li><li>● Embedded Security</li></ul>
		Enhanced Pre-Boot Security HP SpareKey One-Step Logon Security lock slot Support for Intel AT**



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
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HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

### Optional Features

HP Fingerprint Sensor  
HP Privacy Filter

\* The Computrace agent is shipped turned off, and must be activated by customers when they purchase a subscription with terms ranging from one to five years.

For more information on HP security solutions refer to: <http://www.hp.com/products/security>.

\*\* Intel AT security requires a separately purchased Absolute Computrace service subscription and must be activated and configured. Check with Absolute for availability in your country. Intel and HP assume no liability for lost or stolen data and/or systems or any other damages resulting therefrom. See <http://www.intel.com/technology/anti-theft/>

### HP ProtectTools Security Manager with Central Management

HP ProtectTools Security Manager is the security platform for business notebooks and desktops. The HP ProtectTools Security Manager is an extensible client security console that delivers enhanced security capabilities through add-on software modules. The ProtectTools modules are available on the hard drive (also downloadable from the web) and can be configured in Software Setup.

HP ProtectTools is centrally manageable with the capability to manage notebooks from a single point. HP ProtectTools is management ready out of the box, in partnership with Digital Persona. Features address requirements that customers expect from a centrally managed security solution such as user provisioning, credential reset, and credential revocation.

HP ProtectTools provides two separate management solutions, targeted at the enterprise and the SMB:

- Digital Persona Pro AD: Designed for the enterprise customer. Integrates with Active Directory and gives IT Managers the ability to provision users, create login policies based on passwords, biometrics or smartcards. Management features also include remote credential recovery in case the user forgets the password, loses the smartcard or cannot use the fingerprint reader for any reason. In addition, advanced auditing capabilities are also built in. Digital Persona Pro AD is available now.
- Digital Persona Pro Workgroup: Designed for the small business customer. Provides features similar to the Active Directory version, but for workgroups. Workgroup activation is built into HP ProtectTools, and activation of up to 5 seats is completely free.

For more information on Central Management for HP ProtectTools, refer to:

<http://www.hp.com/products/security>.

### Power Supply

Models with integrated graphics: External 65-watt Smart AC adapter

Models with discrete graphics: External 90-watt Smart AC adapter

1.8-meter (6-foot) power cord included; total length including external AC adapter is 3.66 meter (12 feet)  
HP Fast Charge\*

\* HP Fast Charge recharges your battery up to 90% within 90 minutes when the system is off. HP Fast Charge does not apply to the HP 9-cell battery.



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Standard Features (availability may vary by country)

<b>Battery</b>	<b>Primary battery</b>	HP ProBook 4330s and 4530s: HP 9-cell (93 WHr) Li-Ion battery HP 6-cell (47 WHr) Li-Ion battery  HP ProBook 4730s: HP 8-cell (73 WHr) Li-Ion battery
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Battery Life	Configurations with integrated graphics	Configurations with discrete graphics (1 GB)
<b>HP ProBook 4330s</b>		
9-cell (93 WHr) battery	Up to 12 hours 15 minutes	Up to 10 hours 45 minutes
6-cell (47 WHr) battery	Up to 6 hours	Up to 6 hours
<b>HP ProBook 4530s</b>		
9-cell (93 WHr) battery	Up to 12 hours 45 minutes	Up to 10 hours 30 minutes
6-cell (47 WHr) battery	Up to 6 hours 15 minutes	Up to 6 hours 15 minutes
<b>HP ProBook 4730s</b>		
8-cell (73 WHr) battery	Not applicable	Up to 8 hours 30 minutes
<b>NOTE:</b> Battery life will vary depending on the product model, configuration, loaded applications, features, use, wireless functionality and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See MobileMark07 battery benchmark <a href="http://www.bapco.com/products/mobilemark2007">www.bapco.com/products/mobilemark2007</a> for additional details.		
<b>System Standby Time</b>	Up to 1 week	

<b>Power Conservation</b>	Supports enhanced Intel SpeedStep technology (allows Battery Optimized Mode, Maximum Performance Mode, or Automatic mode) ATI PowerPlay technology Hibernation Standby ACPI compliance
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<b>Service and Support</b>	HP Services offers limited 3-year, 1-year and 90-day warranty options depending on country; 1-year limited warranty on primary battery. Warranty upgrades are also available. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <a href="http://www.hp.com/go/lookuptool">http://www.hp.com/go/lookuptool</a> . Additional HP Care Pack Services information by product is available at: <a href="http://www.hp.com/hps/carepack">http://www.hp.com/hps/carepack</a> . <b>NOTE:</b> Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details. <a href="http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp">http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp</a> .
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# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

Options (availability may vary by country)

**NOTE:** Options/capabilities listed in the QuickSpecs represent those capabilities available through Base Units or Build to Order configurations. The various product features and capabilities will vary in terms of configurable vs. aftermarket options (AMOs). There may be options and capabilities available through CTO that are not available as AMOs.

<b>Memory</b>	HP 1 GB (DDR3 1333 MHz) SODIMM	AT911AA#xxx
	HP 2 GB (DDR3 1333 MHz) SODIMM	AT912AA#xxx
	HP 4 GB (DDR3 1333 MHz) SODIMM	AT913AA#xxx
	HP 2 GB PC3-12800 (DDR3 1600 MHz) SODIMM	H2P63AA
	HP 4 GB PC3-12800 (DDR3 1600 MHz) SODIMM	H2P64AA

**NOTE:** Full availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements. Due to system limitations, DDR3-1600 MHz memory will only be supported at DDR3-1333 MHz.

<b>Storage</b>	HP 250 GB Pocket Media Drive	FE477AA
	HP Mobile USB DVD	XQ543AA
	HP Mobile USB DVDRW	BU516AA

<b>Power</b>	HP 90W Smart AC Adapter	ED495AA#xxx
	HP 90W Smart AC/Auto/Air Combo Adapter	AJ652AA#xxx
	HP 90W Smart Auto/Truck Adapter	ED493AA
	HP 65W Slim Adapter	AX727AA#xxx
	HP 90W Slim Adapter	BT796AA#xxx

<b>Carrying Cases</b>	HP Basic Carrying Case	AJ078AA
	HP Business Nylon Case	BP848AA
	HP Professional Slim Top Load Case	AY530AA

<b>Security</b>	HP Notebook Combo Lock	AY475AA#xxx
	HP Keyed Cable Lock	BV411AA
	HP 13.3-inch Display Privacy Filter	AU649AA#xxx
	HP 14.0-inch Display Privacy Filter	AU100AA#xxx
	HP 15.6-inch Display Privacy Filter	AU103AA#xxx
	HP 17.3-inch Display Privacy Filter	AU650AA#xxx

<b>Input/Output Devices</b>	HP USB Optical Travel Mouse	RH304AA
	HP USB/PS2 Optical 2-Button Scroll Mouse	DC369A
	HP USB Keyboard & Mouse Bundle	RC465AA#xxx
	HP Notebook Projection Companion	AX325AA#xxx





# QuickSpecs

HP ProBook 4330s Notebook PC  
 HP ProBook 4430s Notebook PC  
 HP ProBook 4530s Notebook PC  
 HP ProBook 4730s Notebook PC

## Technical Specifications

<b>System Unit</b>	<b>Dimensions (HxWxD)</b>	HP ProBook 4330s: 1.10 in (at front) x 12.99 in x 9.28 in 2.79 cm (at front) x 33.0 cm x 23.5 cm
		HP ProBook 4530s: 1.13 in (at front) x 14.76 in x 10.1 in 2.87 cm (at front) x 37.4 cm x 25.6 cm
<b>Weight</b>		HP ProBook 4730s: 1.15 in (at front) x 16.29 in x 11.00 in 2.9 cm (at front) x 41.4 cm x 27.9 cm
		HP ProBook 4330s: Starting at 4.41 lb (2.0 kg) without optical drive or 4.7 lb (2.13 kg) with optical drive
		HP ProBook 4530s: Starting at 5.22 lb (2.36 kg) without optical drive or 5.55 lb (2.51 kg) with optical drive
		HP ProBook 4730s: Starting at 6.44 lb (2.92 kg) without optical drive or 6.72 lb (3.05 kg) with optical drive
<b>NOTE:</b> Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components.		
<b>Stand-Alone Power Requirements</b> (AC Power)	Nominal Operating Voltage	18.5 V
	Average Operating Power	with integrated graphics: TBD W with discrete graphics: TBD W
<b>Temperature</b>	Max Operating Power	< 90 W or < 65W
	Operating*	0° to 35° C (32° to 95° F) (not writing optical) 5° to 35° C (41° to 95° F) (writing optical)
<b>Relative Humidity</b>	Non-operating	-20° to 60° C (-4° to 140° F)
	Operating	10% to 90%, non-condensing
<b>Shock</b>	Non-operating	5% to 95%, 38.7° C (101.6° F) maximum wet bulb temperature
	Operating	125 G, 2 ms, half-sine
<b>Random Vibration</b>	Non-operating	200 G, 2 ms, half-sine
	Operating	0.75 grms
<b>Altitude</b> (unpressurized)	Non-operating	1.50 grms
	Operating	-15.24 to 3,048 m (-50 to 10,000 ft)
<b>Planned Industry Standard Certifications</b>	Operating	-15.24 to 12,192 m (-50 to 40,000 ft)
	UL	Yes
	CSA	Yes
	FCC Compliance	Yes
	ENERGY STAR®	Select models**



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

EPEAT	Registered TBD in United States***
ICES	Yes
Australia / NZ A-Tick Compliance	Yes
CCC	Yes
Japan VCCI Compliance	Yes
KCC	Yes
BSMI	Yes
CE Marking Compliance	Yes

\* At temperatures above 86° F (30° C), the Intel Core i3-2310M Processor may not run at maximum clock speed.

\*\* Configurations of the HP ProBook 4330s, HP Probook 4430s, HP ProBook 4530s, and HP Probook 4730s that are ENERGY STAR qualified are identified as HP ProBook 4330s ENERGY STAR, HP ProBook 4430s ENERGY STAR, HP ProBook 4530s ENERGY STAR, and HP Probook 4730s ENERGY STAR on HP websites and on [www.energystar.gov](http://www.energystar.gov).

\*\*\* EPEAT registration varies by country. See [www.epeat.net](http://www.epeat.net) for registration status by country. EPEAT status listed above applies to U.S.

**NOTE:** For accessibility information on HP products, please visit: <http://www.hp.com/accessibility>.

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### Audio SRS Premium Sound

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Hardware	Implementation	IDT 92HD87 High Definition CODEC
	Touch-Sensitive Volume Controls	Volume up, volume down, and mute
	Full Duplex	Yes
	Microphone In	Stereo
	Headphone/Line Out	Stereo
	Integrated Microphone	Yes, dual digital microphone array when equipped with optional webcam

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# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Audio Output Quality</b>	<b>Frequency Response</b>	20 Hz – 20 kHz
	<b>Signal to Noise Ratio</b>	>85 dB
	<b>Total Harmonic Distortion</b>	0.01%
	<b>Noise Floor</b>	–110 dB
	<b>Play/Record Sampling Rate(s)</b>	8 kHz – 48kHz
	<b>DAC</b>	16, 20 or 24-bit
	<b>ADC</b>	16 or 20-bit

<b>Integrated Stereo Speakers</b>	<b>Power Rating</b>	2 Watts
	<b>Impedance</b>	4 Ohms

## Power

<b>HP 90W Smart AC Adapter</b>	<b>Dimensions</b>	12.7 x 5.0 x 2.9 cm (5.00 x 1.97 x 1.1 in)	
	<b>Weight</b>	370 g (0.82 lb)	
	<b>Input</b>	100 to 240 VAC	
		Input Efficiency	87% min at 115 VAC
		Input frequency range	47 to 63 Hz
		Input AC current	1.5 A at 90 VAC, 0.75 A at 180 VAC PFC Version
			2.4 A at 90 VAC, 1.2 A at 180 VAC NON PFC Version
	<b>Output</b>	Output power	90W
		DC output	19.0V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown
	<b>Connector</b>	3 pin/grounded, mates with interchangeable cords	
	<b>Environmental Design</b>	Operating temperature	0° to 40° C (32° to 104° F)
		Non-operating (storage) temperature	–20° to 65° C (–4° to 149° F)
		Altitude	0 to 3,048 m (0 to 10,000 ft)
		Humidity	20% to 80%
		Storage Humidity	10% to 90%
	<b>EMI and Safety Certifications</b>	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF- over 200,000 hours at 25°C ambient condition.	



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>HP 65W Smart AC Adapter</b>	<b>Dimensions</b>	10.6 x 4.7 x 2.8 cm (4.17 x 1.85 x 1.1 in)
	<b>Weight</b>	280 g (0.62 lb)
	<b>Input</b>	100 to 240 VAC
		Input Efficiency 87% min at 115 VAC
	<b>Output</b>	Input frequency range 47 to 63 Hz
		Input AC current 1.7 A at 90 VAC, 0.85 A at 180 VAC
		Output power 65W
		DC output 18.5V
		Hold-up time 5 msec at 115 VAC input
		Output current limit <11A, Over voltage protection- 29V max automatic shutdown
	<b>Connector</b>	3 pin/grounded, mates with interchangeable cords
	<b>Environmental Design</b>	Operating temperature 0° to 40° C (32° to 104° F)
		Non-operating (storage) temperature -20° to 65° C (-4° to 149° F)
		Altitude 0 to 3,048 m (0 to 10,000 ft)
		Humidity 20% to 80%
		Storage Humidity 10% to 90%
	<b>EMI and Safety Certifications</b>	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF - over 200,000 hours at 25°C ambient condition.

**NOTE:** Unless otherwise noted, temperature limits listed in the following component specifications relate to the internal temperatures of these components and not to the environment in which the PC is operating.

<b>9-Cell (93 WHr) Lithium-Ion battery</b>	<b>Dimensions (H x W x L)</b>	2.0 x 7.3 x 21.0 cm (0.8 x 2.9 x 8.3 in)
	<b>Weight</b>	0.488 kg (1.07 lb)
	<b>Cells/Type</b>	9-cell Lithium-Ion
	<b>Energy</b>	Watt-hour Capacity 93 WHr
	<b>Temperature</b>	Operating (Charging) 0° to 45° C (32° to 113° F)
		Operating (Discharging) -10° to 60° C (14° to 140° F)
		Non-operating -20° to 60° C (-4° to 140° F)
	<b>Battery Re-Charge Time</b>	System in OFF mode or Standby 3 to 4 hours
		System ON 4 to 6 hours (depending on system power consumption)



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>8-Cell (73 Whr) Lithium-Ion Primary battery</b>	<b>Dimensions (HxWxL)</b>	2.0 x 4.8 x 27.0 cm (0.8 x 1.9 x 10.6 in)	
	<b>Weight</b>	0.445 kg (0.980 lb)	
	<b>Cells/Type</b>	8-cell Lithium-Ion	
	<b>Energy</b>	Watt-hour Capacity	73 Wh
	<b>Temperature</b>	Operating (Charging)	0° to 45° C (32° to 113° F)
		Operating (Discharging)	-10° to 60° C (14° to 140° F)
		Non-operating	-20° to 60° C (-4° to 140° F)
	<b>Battery Re-Charge Time</b>	System in OFF mode or Standby	2.5 hours
		System ON	3 to 5 hours (depending on system power consumption)
		HP Fast Charge Technology Charges the battery up to 90% within 1.5 hours when system is OFF	

<b>6-Cell (47 WHr) Lithium-Ion battery</b>	<b>Dimensions (H x W x L)</b>	2.0 x 5.1 x 21.1 cm (0.8 x 2.0 x 8.3 in)	
	<b>Weight (max)</b>	0.325 kg (0.72 lb)	
	<b>Cells/Type</b>	Lithium-Ion	
	<b>Energy</b>	Watt-hour capacity	47Wh
	<b>Temperature</b>	Operating (Charging)	0° to 45° C (32° to 113° F)
		Operating (Discharging)	-10° to 60° C (14° to 140° F)
		Non-operating	-20° to 60° C (-4° to 140° F)
	<b>Battery Re-Charge Time</b>	System in OFF or Standby Mode	2.5 hours
		System ON	3 to 5 hours
	<b>Fuel Gauge LED</b>	No	
	<b>Warranty</b>	1 year	
	<b>Optional Travel Battery Available</b>	No	

## Displays



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>17.3-inch LED HD+ anti-glare</b>	<b>Active Area (W x H)</b>	38.2 x 21.5 cm (15.0 x 8.5 in)
	<b>Diagonal Size</b>	43.9 cm (17.3 in)
	<b>Surface Treatment</b>	Anti-glare
	<b>Contrast Ratio</b>	400:1 typical
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	200 nit typical
	<b>Pixel Resolution</b>	<b>Pitch</b> 0.23868 x 0.23868 mm
		<b>Format</b> 1600 x 900
		<b>Configuration</b> RGB Stripe
	<b>Backlight</b>	LED
	<b>PPI</b>	107
	<b>Viewing Angle</b>	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)

<b>15.6-inch LED HD (1366 x 768) anti-glare</b>	<b>Dimensions (W x H)</b>	34.4 x 19.4 cm (13.54 x 7.59 in)
	<b>Diagonal Size</b>	39.6cm (15.6 in)
	<b>Surface Treatment</b>	Anti-glare
	<b>Contrast Ratio</b>	400:1 (min)
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	210 nit (typical)
	<b>Pixel Resolution</b>	<b>Pitch</b> 0.252 mm
		<b>Format</b> 1366 x 768
		<b>Configuration</b> RGB Stripe
	<b>Backlight</b>	LED
	<b>PPI</b>	101 ppi
	<b>Viewing Angle</b>	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>13.3-inch LED HD (1366 x 768) anti-glare</b>	<b>Active Area (W x H)</b>	29.3 x 16.5 cm (11.53 x 6.49 in)	
	<b>Diagonal Size</b>	33.8cm (13.3 in)	
	<b>Surface Treatment</b>	Anti-glare	
	<b>Contrast Ratio</b>	400:1 (typical)	
	<b>Refresh Rate</b>	60 Hz	
	<b>Brightness</b>	200 nit (typical)	
	<b>Pixel Resolution</b>	<b>Pitch</b>	0.215 mm
		<b>Format</b>	1366 x 768
		<b>Configuration</b>	RGB Stripe
	<b>Backlight</b>	LED	
	<b>PPI</b>	118 ppi	
	<b>Viewing Angle</b>	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

## Internal Storage

<b>750 GB 7200 rpm SATA Hard Drive</b>	<b>Drive Weight</b>	0.25 lbs (115g)	
	<b>Capacity</b>	750 GB	
	<b>Height</b>	0.37 in (9.5 mm)	
	<b>Width</b>	2.75 in (70 mm)	
	<b>Interface</b>	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	<b>Transfer Rate</b>	<b>Synchronous (maximum)</b>	300 MB/s (Drive Capability)
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b>	1.5 ms
		<b>Average</b>	11 ms
		<b>Maximum</b>	22 ms
	<b>Rotational Speed</b>	7200 rpm	
	<b>Logical Blocks</b>	1,465,149,168	
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]	
	<b>Features</b>	ATA Security	



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>500 GB 7200 rpm SATA Hard Drive</b>	<b>Drive Weight</b>	0.25 lbs (115g)
	<b>Capacity</b>	500 GB
	<b>Height</b>	0.37 in (9.5 mm)
	<b>Width</b>	2.75 in (70 mm)
	<b>Interface</b>	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum) 300 MB/s (Drive Capability)
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b> 1.5 ms
		<b>Average</b> 11 ms
		<b>Maximum</b> 22 ms
	<b>Rotational Speed</b>	7200 rpm
	<b>Logical Blocks</b>	976,773,168
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]
	<b>Features</b>	ATA Security

<b>320 GB 7200 rpm SATA Hard Drive</b>	<b>Drive Weight</b>	0.25 lbs (115 g)
	<b>Capacity</b>	320 GB
	<b>Height</b>	0.37 in (9.5 mm)
	<b>Width</b>	2.75 in (70 mm)
	<b>Interface</b>	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum) 300 MB/s (Drive Capability)
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b> 1.5 ms
		<b>Average</b> 11 ms
		<b>Maximum</b> 22 ms
	<b>Rotational Speed</b>	7200 rpm
	<b>Logical Blocks</b>	625,142,448
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]
	<b>Features</b>	ATA Security





# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>750 GB 5400 rpm SATA Hard Drive</b>	<b>Drive Weight</b>	0.27 lb (125 g) or 0.22 lb (101 g)	
	<b>Capacity</b>	750 GB	
	<b>Height</b>	0.50 in (12.7 mm) or 0.37 in (9.5 mm)	
	<b>Width</b>	2.75 in (70 mm)	
	<b>Interface</b>	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum)	300 MB/s (Drive Capability)
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b>	3 ms
		<b>Average</b>	13 ms
		<b>Maximum</b>	24 ms
	<b>Rotational Speed</b>	5400 rpm	
	<b>Logical Blocks</b>	1,465,149,168	
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]	
	<b>Features</b>	ATA Security	

<b>640 GB 5400 rpm SATA Hard Drive</b>	<b>Drive Weight</b>	0.22 lb (101 g)	
	<b>Capacity</b>	640 GB	
	<b>Height</b>	0.37 in (9.5 mm)	
	<b>Width</b>	2.75 in (70 mm)	
	<b>Interface</b>	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum)	300 MB/s (Drive Capability)
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b>	3 ms
		<b>Average</b>	13 ms
		<b>Maximum</b>	24 ms
	<b>Rotational Speed</b>	5400 rpm	
	<b>Logical Blocks</b>	1,250,263,728	
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]	
	<b>Features</b>	ATA Security	



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>500 GB 5400 rpm SATA Hard Drive</b>	<b>Drive Weight</b>	0.22 lb (101 g)
	<b>Capacity</b>	500 GB
	<b>Height</b>	0.37 in (9.5 mm)
	<b>Width</b>	2.75 in (70 mm)
	<b>Interface</b>	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum) 300 MB/s (Drive Capability)
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b> 3 ms
		<b>Average</b> 13 ms
		<b>Maximum</b> 24 ms
	<b>Rotational Speed</b>	5400 rpm
	<b>Logical Blocks</b>	976,773,168
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]
	<b>Features</b>	ATA Security

## Optical Drives

<b>DVD-ROM Drive</b>	<b>Access Times</b>	Random	< 140 ms CD (typical) < 160 ms DVD (typical)
	<b>Max Data Transfer Rate</b>	24X CD-ROM 8X-DVD	
	<b>Transfer Mode</b>	UDMA Mode 5	
	<b>Interface</b>	Gen 1 SATA	
	<b>Supported Media</b> (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	<b>Supported Media</b> (write)	None	
	<b>Max Media Capacity</b> (read)	8.5GB	
	<b>Transport</b>	Tray Loading	



# QuickSpecs

HP ProBook 4330s Notebook PC  
 HP ProBook 4430s Notebook PC  
 HP ProBook 4530s Notebook PC  
 HP ProBook 4730s Notebook PC

## Technical Specifications

<b>DVD+/-RW SuperMulti DL Drive</b>	<b>Access Times</b>	Random	<140ms CD (typical) < 160 ms DVD (typical)
	<b>Max Data Transfer Rate</b>	24X CD-ROM 8X DVD 24X CD-R 24X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 6X - DVD+R Dual Layer 6X - DVD-R Dual Layer 5X DVD-RAM	
	<b>Transfer Mode</b>	UDMA Mode 5	
	<b>Interface</b>	Gen 1 SATA	
	<b>Supported Media (read)</b>	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	<b>Supported Media (write)</b>	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, DVD+R DL, DVD-R DL	
	<b>Max Media Capacity (read)</b>	8.5 GB	
	<b>Max Media Capacity (write)</b>	8.5 GB	
	<b>Transport</b>	Tray Loading	
<b>Blu-ray ROM DVD+/-RW SuperMulti DL Drive</b>	<b>Access Times</b>	Random	<190 ms CD-ROM (typical) < 180ms DVD-ROM (typical) <230 ms BD-ROM (typical)
	<b>Max Data Transfer Rate</b>	24X CD-ROM 8X DVD-ROM 24X CD-R 16X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 4X - DVD+R Dual Layer 4X - DVD-R Dual Layer 5X DVD-RAM	



# QuickSpecs

HP ProBook 4330s Notebook PC  
 HP ProBook 4430s Notebook PC  
 HP ProBook 4530s Notebook PC  
 HP ProBook 4730s Notebook PC

## Technical Specifications

	6X BD-ROM
<b>Transfer Mode</b>	UDMA Mode 5
<b>Interface</b>	Gen 1 SATA
<b>Supported Media</b> (read)	CD-DA, , CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW. DVD-RAM, BD-ROM, BD-R, BD-RE
<b>Supported Media</b> (write)	CD-R, CD-RW, DVD+R, DVD+R DL, DVD+RW, DVD-R, DVD-R DL, DVD-RW, DVD-RAM
<b>Max Media Capacity</b> (read)	50.0 GB
<b>Max Media Capacity</b> (write)	8.5GB
<b>Transport</b>	Tray Loading

### Blu-ray R/RE DVD+/-RW SuperMulti DL Drive

<b>Access Times</b>	Random	<165 ms CD-ROM (typical) <185 ms DVD-ROM (typical) <205 ms BD-ROM (typical)
<b>Max Data Transfer Rate</b>	24X CD-ROM 8X DVD-ROM 24X CD-R 16X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 6X DVD+R Dual Layer 6X DVD-R Dual Layer 5X DVD-RAM 6X BD-ROM 6X BD-R 2X BD-RE	
<b>Transfer Mode</b>	UDMA Mode 5	
<b>Interface</b>	Gen 1 SATA	
<b>Supported Media</b> (read)	CD-DA, , CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW. DVD-RAM, BD-ROM, BD-R, BD-RE	
<b>Supported Media</b> (write)	CD-R, CD-RW, DVD+R, DVD+R DL, DVD+RW, DVD-R, DVD-R DL, DVD-RW, DVD-RAM, BD-R, BD-RE	
<b>Max Media Capacity</b> (read)	50.0 GB	



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Max Media Capacity</b> (write)	50.0 GB
<b>Transport</b>	Tray Loading

## Security

<b>HP Fingerprint Sensor</b> (optional)	<b>Mobile Voltage Operation</b>	3.0V-3.6V Single Supply
	<b>Operating Temperature</b>	32° – 158°F (0° – 70°C)
	<b>Current Consumption @ 3.3V</b>	Less than 70 mA peak imaging and scrolling Less than 25 mA hardware finger detection Advanced Power Management
	<b>High-Rate Image Capture</b>	Up to 240 image frames /sec
	<b>ESD Resistance</b>	IEC 61000-4-2 Level 4 (±15KV)
	<b>Detection Matrix</b>	192 x 16 Pixels 9.7 mm x 0.81 mm 500 ppi High-Resolution Images

## Communications

<b>Integrated Realtek</b> <b>RTL8153EH-CG</b> <b>10/100/1000 NIC</b>	<b>Ethernet Features</b>	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE (Energy Efficient Ethernet) Jumbo Frame 9K Auto MDI/MDIX Crossover cable detection
	<b>Power Management</b>	ACPI compliant - multiple power modes Situation-sensitive features reduce power consumption Advanced link down power saving for reducing link down power consumption
	<b>Performance Features</b>	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling
	<b>Manageability</b>	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30))



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

	Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status
<b>Interface</b>	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ
<b>NIC Device Driver Name</b>	Realtek PCIe GBE Ethernet Family Controller

<b>V.92 56K Data/Fax Modem Form Factor</b>	MDC 1.5 Daughtercard
<b>Power Management Support</b>	APM Revision 1.2, ACPI
<b>Approvals/Certifications</b>	UL, CSA, NEMKO, CCIB, Industry Canada, FCC Part 68, CTR21, FCC Part 15 Class B, Canadian ICES-003 Class B, C.I.S.P.R.22, Australian ACA, CE Mark, Other Countries
<b>Data Mode Capabilities</b>	V.92 data V.8bis V.80 V.44, V.42bis, MNP5 (Compression) V.42 (LAPM, MNP2-4) (Error Correction) <b>Optional symbol rates:</b> 2800, 3429 Asymmetric Symbol rates <b>Synchronous primary channel data signaling rates:</b> 3600, 31200 Automatic rate re-negotiation V.34 V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A Bell 103J
<b>Fax Mode Capabilities</b>	TIA/EIA-578-B (Class 1) T.30, T.4 (Group 3) V.17 V.29 V.27ter V.21 Channel 2 T.31
<b>Command Set</b>	V.250 (Partial) TIA-602 Identification: +GMI, +GMM, +GMR Port control: +IPR, +ICF, +IFC, +ILRR Modulation: +MS, +MR, +MA Error control: +ES, +ER, +EB, +ESR, +ETBM Data compression: +DS, +DR



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

V.251

<b>HP hs2340 HSPA+ Mobile Broadband Module</b>	<b>Technology/Operating Bands</b>	GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS) UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900MHz (UTRA FDD Band II), 900MHz(UTRA FDD Band VIII), 850 MHz (UTRA FDD Band V)
	<b>Wireless Protocol Standards</b>	GSM/GPRS/EDGE: Class B, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 7 Advanced Receiver Type 3i
	<b>Wireless Parametric Standards</b>	Complies with 3GPP specifications
	<b>Maximum Data Rates</b>	UMTS (HSPA) - 21 Mbps (Download ), 5.76Mbps (Upload)
	<b>GPS</b>	Standalone, A-GPS (Internet- and Network assisted)
	<b>GPS Bands</b>	1575.42 MHz (± 1.023 MHz)
	<b>Maximum Output Power</b>	GSM/EDGE GSM850 & GSM900 bands GPRS: +33 dBm ± 2 dBm (class 4) EGPRS: +27 dBm ± 3 dBm (class E2)  DCS1800 & PCS1900 bands GPRS: +30 dBm ± 2 dBm (class 1) EGPRS: +26 dBm +4 / -3 dBm (class E2)  UMTS UTRA FDD Bands +24 dBm +4 / -3 dBm (class 3)
	<b>Maximum Power Consumption</b>	2000mA (peak); 600mA (average)
	<b>Power Consumption, Sleep Mode</b>	5 mA
	<b>Power Management</b>	USB selective suspend Integrated notebook wireless button
	<b>Antenna Type</b>	Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure
	<b>Form Factor</b>	PCI-Express MiniCard, USB 2.0 interface
	<b>Weight</b>	< 12 g
	<b>Dimensions</b> (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 mm)
	<b>Voltage, Operating</b>	3.3v +/- 9%
	<b>Temperature, Operating</b>	14° to 149° F (-10° to 65° C) (full RF performance) 14° to 167° F (-10° to 75° C) (reduced RF performance)



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Temperature, Non-operating, 96 hours</b> (from MIL-STD 202 Method 108)	-22° to 185° F (-30° to 85° C)
<b>Humidity, Non-operating</b>	85% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)
<b>Configuration Utilities</b>	HP Connection Manager
<b>LED Activity</b>	LED Off - Radio Off; Solid LED On - Radio On

### Intel Centrino Advanced-N Wireless LAN Standards 6230 WiFi and Bluetooth Combo Adapter

<b>Interoperability</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows Vista and XP (details at: <a href="http://www.hp.com/go/notebooks/WLAN">http://www.hp.com/go/notebooks/WLAN</a> )
<b>Frequency Band</b>	2.4 GHz and 5GHz
<b>Data Rates</b>	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 66 possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
<b>Modulation</b>	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
<b>Security<sup>1</sup></b>	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.  Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
<b>Sub-channels</b>	Multinational support with frequency bands and channels compliant to local regulations.
<b>Media Access Protocol</b>	CSMA/CA (Collision Avoidance) with ACK
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power</b> (for CCK and OFDM) <sup>2</sup>	17 dBm , nominal
<b>Output Power</b> (for OFDM; power varies by data rate) <sup>2</sup>	15 dBm , nominal





# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Power Consumption</b>	Idle associated: 250 mW Idle unassociated: 150 mW Transmit: 2.0 W (max) Receive: 2.0 W (max)	
<b>Power Management</b>	ACPI compliant power management 802.11 compliant power saving mode	
<b>Receiver Sensitivity</b> <sup>3</sup>	54 Mbps: -71 dBm, 11 Mbps: -85 dBm , 1 Mbps: -95 dBm	
<b>Antenna type</b>	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure	
<b>Form Factor</b>	PCI-Express Half-MiniCard	
<b>Weight</b>	0.013 lb (6 g)	
<b>Dimensions</b>	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
<b>Operating Voltage</b>	3.3v +/- 10%	
<b>Temperature</b>	Operating	14° to 149° F (-10° to 65° C)
	Non-operating	-40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
<b>Altitude</b>	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
<b>Configuration Utility</b> <sup>4</sup>	Microsoft Windows XP Choice of Configuration Utility: <ul style="list-style-type: none"><li>• Microsoft Windows XP Wireless Network Connection Manager</li><li>• Broadcom Wireless Configuration Utility (required for Cisco Compatible Extensions support)</li></ul> Microsoft Windows Vista <ul style="list-style-type: none"><li>• Microsoft Windows Vista Wireless Network Connection Manager</li><li>• Broadcom IHV extensions for Windows Vista available to support Cisco Compatible Extensions.</li></ul>	
<b>LED Activity</b>	LED Off - Radio OFF; Solid LED On - Radio ON <ol style="list-style-type: none"><li>1. Check latest software/driver release for updates on supported security features.</li><li>2. Maximum output power may vary by country according to local regulations.</li><li>3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</li><li>4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.</li></ol>	
<b>Bluetooth Specification</b>	2.1+EDR and 3.0+HS Compliant	
<b>Dimensions</b>	1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm)	
<b>Frequency Band</b>	2402 to 2480 MHz	
<b>Number of Available Channels</b>	79 (1 MHz) available channels	



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Data Rates and Throughput</b>	3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric
<b>Transmit Power</b>	Max 5.5 dBm (Bluetooth Class I)
<b>Receiver Sensitivity</b>	Better than -80 dBm at 0.1 % raw bit error rate
<b>Power Consumption</b>	Average 165mW Sleep <1 mW
<b>Antenna</b>	Internally integrated within module
<b>Range</b>	Up 33 ft (10 m)
<b>Electrical Interface</b>	USB 2.0 compliant Microsoft Windows Plug and Play compliant
<b>Bluetooth Software Supported</b>	Broadcom Bluetooth for Windows Microsoft Windows Bluetooth Software
<b>Link Topology</b>	Point to Point, Multipoint Pico Nets up to 7 slaves
<b>Security</b>	Full support of Bluetooth Security Provisions
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
<b>Certifications</b>	All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
<b>Temperature</b>	Operating -4° to 158° F (-20° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating 10% to 90% Non-operating 5% to 95%
<b>Altitude</b>	Operating 15,000 ft (4,572 m) Non-operating 40,000 ft (12,192 m)
<b>Bluetooth Profiles Supported</b>	Serial Port Profile (SPP) <sup>1</sup> Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) <sup>1,2</sup> Generic Object Exchange Profile (GOEP) <sup>1,2</sup> Object Push Profile (OPP) <sup>1,2</sup> File Transfer Profile (FTP) Synchronization Profile (SYNC) Hard Copy Cable Replacement (HCRP) <sup>1,2</sup> Personal Area Networking Profile (PAN) <sup>1,2</sup> Human Interface Device Profile (HID) <sup>1,2,3</sup>



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

FAX Profile (FAX)  
Basic Imaging Profile (BIP)<sup>2</sup>  
Headset Profile (HSP)  
Hands Free Profile (HFP)  
Advanced Audio Distribution Profile (A2DP)

1. indicates the profile is supported by Microsoft Windows XP SP2
2. indicates the profile is part of Windows Vista

### Atheros 9285GN 802.11b/g/n + BT 3.0 HS Combo Adapter

<b>Wireless LAN Standards</b>	IEEE 802.11b IEEE 802.11g IEEE 802.11n
<b>Interoperability</b>	Wi-Fi certified
<b>Frequency Band</b>	2.4 GHz
<b>Data Rates</b>	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: many possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
<b>Modulation</b>	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
<b>Security<sup>1</sup></b>	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.
<b>Sub-channels</b>	Multinational support with frequency bands and channels compliant to local regulations.
<b>Media Access Protocol</b>	CSMA/CA (Collision Avoidance) with ACK
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power</b> (for CCK and OFDM) <sup>2</sup>	17 dBm, nominal
<b>Output Power</b> (for OFDM; power varies by data rate) <sup>2</sup>	15 dBm, nominal
<b>Power Consumption</b>	Transmit: 1.5 W (max) Receive: 1.0 W (max) Associated to Access Point, Idle: 300 mW nominal Wireless Button Off: 75 mW nominal
<b>Power Management</b>	ACPI compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>3</sup></b>	54 Mbps: -75 dBm, 11 Mbps: -88 dBm, 1 Mbps: -93 dBm
<b>Antenna type</b>	High efficiency antenna with spatial diversity, mounted in the display enclosure
<b>Form Factor</b>	PCI-Express Half-MiniCard



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Weight</b>	0.013 lb (6 g)	
<b>Dimensions</b>	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
<b>Operating Voltage</b>	3.3v +/- 9%	
<b>Temperature</b>	Operating	14° to 149° F (-10° to 65° C)
	Non-operating	-40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
<b>Altitude</b>	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Off - Radio OFF; Solid LED On - Radio ON	
<div><div>1. Check latest software/driver release for updates on supported security features.</div><div>2. Maximum output power may vary by country according to local regulations.</div><div>3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</div></div>		

### Ralink 3592BC8 802.11a/b/g/n 2x2 WiFi and Bluetooth 3.0+HS Combo Adapter

<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n
<b>Interoperability</b>	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows Vista and XP (details at: <a href="http://www.hp.com/go/notebooks/WLAN">http://www.hp.com/go/notebooks/WLAN</a> )
<b>Frequency Band</b>	2.4 GHz and 5GHz
<b>Data Rates</b>	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
<b>Modulation</b>	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
<b>Security<sup>1</sup></b>	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.  Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
<b>Sub-channels</b>	Multinational support with frequency bands and channels compliant to local regulations.
<b>Media Access Protocol</b>	CSMA/CA (Collision Avoidance) with ACK
<b>Network Architecture</b>	Ad-hoc (Peer to Peer)
<b>Models</b>	Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Output Power</b> (for CCK and 17 dBm , nominal OFDM) <sup>2</sup>		
<b>Output Power</b> (for OFDM; 15 dBm , nominal power varies by data rate) <sup>2</sup>		
<b>Power Consumption</b>	Idle associated: 250 mW Idle unassociated: 150 mW Transmit: 2.0 W (max) Receive: 2.0 W (max)	
<b>Power Management</b>	ACPI compliant power management 802.11 compliant power saving mode	
<b>Receiver Sensitivity</b> <sup>3</sup>	54 Mbps: -71 dBm, 11 Mbps: -85 dBm , 1 Mbps: -95 dBm	
<b>Antenna type</b>	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure	
<b>Form Factor</b>	PCI-Express Half-MiniCard	
<b>Weight</b>	0.013 lb (6 g)	
<b>Dimensions</b>	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
<b>Operating Voltage</b>	3.3v +/- 10%	
<b>Temperature</b>	Operating	14° to 149° F (-10° to 65° C)
	Non-operating	-40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
<b>Altitude</b>	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
<b>Configuration Utility</b> <sup>4</sup>	Microsoft Windows XP Choice of Configuration Utility: <ul style="list-style-type: none"><li>• Microsoft Windows XP Wireless Network Connection Manager</li><li>• Broadcom Wireless Configuration Utility (required for Cisco Compatible Extensions support)</li></ul> Microsoft Windows Vista <ul style="list-style-type: none"><li>• Microsoft Windows Vista Wireless Network Connection Manager</li><li>• Broadcom IHV extensions for Windows Vista available to support Cisco Compatible Extensions.</li></ul>	
<b>LED Activity</b>	LED Off - Radio OFF; Solid LED On - Radio ON	
<ol style="list-style-type: none"><li>1. Check latest software/driver release for updates on supported security features.</li><li>2. Maximum output power may vary by country according to local regulations.</li><li>3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</li><li>4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.</li></ol>		
<b>Bluetooth Specification</b>	2.1+EDR and 3.0+HS Compliant	



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

<b>Wireless Technology</b>	<b>Dimensions</b>	1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm)
	<b>Frequency Band</b>	2402 to 2480 MHz
	<b>Number of Available Channels</b>	79 (1 MHz) available channels
	<b>Data Rates and Throughput</b>	3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric
	<b>Transmit Power</b>	-6 dBm to 4 dBm (Bluetooth Class II)
	<b>Receiver Sensitivity</b>	Better than -80 dBm at 0.1 % raw bit error rate
	<b>Power Consumption</b>	Peak (Tx) 175 mW Peak (Rx) 160 mW Sleep <1 mW
	<b>Antenna</b>	Internally integrated within module
	<b>Range</b>	Up 33 ft (10 m)
	<b>Electrical Interface</b>	USB 2.0 compliant Microsoft Windows Plug and Play compliant
	<b>Bluetooth Software Supported</b>	Broadcom Bluetooth for Windows Microsoft Windows Bluetooth Software
	<b>Link Topology</b>	Point to Point, Multipoint Pico Nets up to 7 slaves
	<b>Security</b>	Full support of Bluetooth Security Provisions
	<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
	<b>Certifications</b>	All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
	<b>Temperature</b>	Operating -4° to 158° F (-20° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)
	<b>Humidity</b>	Operating 10% to 90% Non-operating 5% to 95%
	<b>Altitude</b>	Operating 15,000 ft (4,572 m) Non-operating 40,000 ft (12,192 m)
	<b>Bluetooth Profiles Supported</b>	Serial Port Profile (SPP) <sup>1</sup> Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) <sup>1,2</sup> Generic Object Exchange Profile (GOEP) <sup>1,2</sup> Object Push Profile (OPP) <sup>1,2</sup>



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

File Transfer Profile (FTP)  
Synchronization Profile (SYNC)  
Hard Copy Cable Replacement (HCRP)<sup>1,2</sup>  
Personal Area Networking Profile (PAN)<sup>1,2</sup>  
Human Interface Device Profile (HID)<sup>1,2,3</sup>  
FAX Profile (FAX)  
Basic Imaging Profile (BIP)<sup>2</sup>  
Headset Profile (HSP)  
Hands Free Profile (HFP)  
Advanced Audio Distribution Profile (A2DP)

1. indicates the profile is supported by Microsoft Windows XP SP2
2. indicates the profile is part of Windows Vista

### Environmental Data

### Eco-Label Certifications

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- US ENERGY STAR®
- IT ECO declaration
- EPEAT - Gold where HP registers commercial notebook products. See <http://www.epeat.net> for registration status in your country.

### System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Convertible Mini tower Desktop model is based on a "Typically Configured Notebook"

#### HP ProBook 4330s Notebook PC

Energy Consumption	115 VAC	230 VAC	100 VAC
Normal Operation	9.75W	10.19 W	10.32 W
Sleep (Energy Star low power mode)	1.24 W	1.4 W	1.24 W
Off	0.57 W	0.66 W	0.56 W
Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	33 BTU/hr	35 BTU/hr	35 BTU/hr
Sleep	4 BTU/hr	5 BTU/hr	4 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

\* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

### Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)



## Technical Specifications

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3.5	31.6
Fixed Disk (random writes)	3.6	32.9

System fan is usually off except when charging the battery

**Batteries** This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:

CR2032 (coin cell), Li-ion

6-cell high capacity Lithium-Ion battery (optional 8 cell available)

### Additional information

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see [www.epeat.net](http://www.epeat.net)

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 93.9% recycle-able when properly disposed of at end of life.

### Packaging Materials

- External:
  - Corrugated Carton 385 g
  - Corrugated 115 g
  - CANON bags - Several layers 5 g
- Internal:
  - Polyethylene low density 15 g
  - Molded Pulp 180 g
- The Corrugated Carton packaging material is made from 80% recycled content.
- The Corrugated packaging material is made from 80% recycled content.
- The CANON bags - Several layers packaging material is made from 80%



# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

recycled content.

- The Polyethylene low density packaging material is made from 60% recycled content.
- The Molded Pulp packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

### HP ProBook 4530s Notebook PC

#### Energy Consumption

	115 VAC	230 VAC	100 VAC
Normal Operation	9.29 W	10.44 W	9.23 W
Sleep (Energy Star low power mode)	1.18 W	1.08 W	1.16 W
Off	0.51 W	0.64 W	0.51 W

#### Heat Dissipation\*

	115 VAC	230 VAC	100 VAC
Normal Operation	31.7 BTU/hr	35.7 BTU/hr	31.5 BTU/hr
Sleep	4.03 BTU/hr	4 BTU/hr	4 BTU/hr
Off	2 BTU/hr	2.1 BTU/hr	2 BTU/hr

\* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

#### Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3.5	28.2
Fixed Disk (random writes)	4.1	33.8

System fan is usually off except when charging the battery



## Technical Specifications

### Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:

CR2032 (coin cell), Li-ion

6-cell high capacity Lithium-Ion battery (optional 8 cell available)

### Additional information

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see [www.epeat.net](http://www.epeat.net)

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 95.1% recycle-able when properly disposed of at end of life.

### Packaging Materials

- External:
  - Corrugated 115 g
  - Corrugated Carton 455 g
  - Canon bag 5 g
- Internal:
  - Polyethylene low density 15g
  - Molded pulp 190g
- The Corrugated carton packaging material is made from 80% recycled content.
- The Corrugated packaging material is made from 80% recycled content.
- The Canon Bag packaging material is made from 80% recycled content.
- The Polyethylene low density packaging material is made from 60% recycled content.
- The Molded Pulp packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

# QuickSpecs

HP ProBook 4330s Notebook PC  
HP ProBook 4430s Notebook PC  
HP ProBook 4530s Notebook PC  
HP ProBook 4730s Notebook PC

## Technical Specifications

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

### HP ProBook 4730s Notebook PC

Energy Consumption	115 VAC	230 VAC	100 VAC
Normal Operation	9.29 W	10.44 W	9.23 W
Sleep (Energy Star low power mode)	1.18 W	1.08 W	1.16 W
Off	0.51 W	0.64 W	0.51 W

Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	32 BTU/hr	36 BTU/hr	32 BTU/hr
Sleep	4 BTU/hr	4 BTU/hr	4 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

\* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

### Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3.5	29.3
Fixed Disk (random writes)	3.7	32.1

System fan is usually off except when charging the battery

**Batteries** This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:



## Technical Specifications

### Additional information

CR2032 (coin cell), Li-ion

6-cell high capacity Lithium-Ion battery (optional 8 cell available)

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see [www.epeat.net](http://www.epeat.net)

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 97.1% recycle-able when properly disposed of at end of life.

### Packaging Materials

- External:
  - Corrugated – 565 g
  - CANON bags – several layers – 5 g
- Internal:
  - Polypropylene – 15 g
  - Molded pulp – 225 g
- The Corrugated packaging material is made from 80% recycled content.
- The CANON bags - several layers packaging material is made from 80% recycled content.
- The Polypropylene packaging material is made from 60% recycled content.
- The Molded Pulp packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.

## Technical Specifications

- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

### HP ProBook 4330s, 4530s, and 4730s Notebook PCs

#### Material Usage

This product does not contain any of the following substances in excess of regulatory limits (for reference of these limits please refer to the HP General Specification of the Environment:

[http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen\\_specifications.html](http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html)):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Nickel finishes that release greater than 0.5 µgrams/cm<sup>2</sup>/week, measured according to EN 1811:1998, are not used on any product surface designed to be frequently handled or touched by users.

#### End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to:

<http://www.hp.com/go/reuse-recycle> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/recyclers>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

## Technical Specifications

### **Hewlett-Packard Corporate Environmental Information**

For more information about HP's commitment to the environment:  
Global Citizenship Report

<http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html>

Environment website

<http://www.hp.com/environment>

Eco-label certifications

<http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html>

ISO 14001 certificates:

<http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html>

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