



Getting Started

HP Notebook

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Product notice

This guide describes features that are common to most models. Some features may not be available on your computer.

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For any further information or for requesting a full refund of the computer, please contact your local point of sale (the seller).

Safety warning notice

 **WARNING!** To reduce the possibility of heat-related injuries or of overheating the computer, do not place the computer directly on your lap or obstruct the computer air vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to come into contact with the skin or a soft surface, such as pillows or rugs or clothing, during operation. The computer and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950).

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1 Welcome

- [What's new?](#)
- [Finding information](#)

After you set up and register the computer, it is important to take the following steps:

- **Set up HP QuickWeb**—Immediately access the Internet, widgets, and communication programs without launching your main operating system. For more information, refer to [HP QuickWeb on page 13](#).
- **Connect to the Internet**—Set up your wired or wireless network so that you can connect to the Internet. For more information, refer to [Networking on page 14](#).
- **Update your antivirus software**—Protect your computer from damage caused by viruses. The software is preinstalled on the computer and includes a limited subscription for free updates. For more information, refer to the *HP Notebook Reference Guide*. For instructions on accessing this guide, refer to [Finding information on page 3](#).
- **Get to know your computer**—Learn about your computer features. Refer to [Getting to know your computer on page 5](#) and [Keyboard and pointing devices on page 17](#) for additional information.
- **Create recovery discs or a recovery flash drive**—Recover the operating system and software to factory settings in case of system instability or failure. For instructions, refer to [Backup and recovery on page 31](#).
- **Find installed software**—Access a list of the software preinstalled on the computer. Select **Start > All Programs**. For details about using the software included with the computer, refer to the software manufacturer's instructions, which may be provided with the software or on the manufacturer's Web site.

What's new?

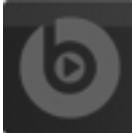
Beats Audio

Beats Audio is an enhanced audio profile that provides a deep, controlled bass while maintaining a clear sound. Beats Audio is enabled by default.

▲ To increase or decrease the Beats Audio bass settings, press **fn+b**.

Select **Start > Control Panel > Hardware and Sound > Beats Audio**.

The following table describes the Beats Audio icons that appear when you press **fn+b**.

Icon	Description
	Indicates that Beats Audio is enabled.
	Indicates that Beats Audio is disabled.

Finding information

The computer comes with several resources to help you perform various tasks.

Resources	For information about
Quick Setup poster	<ul style="list-style-type: none">• How to set up the computer• Help to identify computer components
Getting Started	<ul style="list-style-type: none">• Computer features
To access this guide:	<ul style="list-style-type: none">• How to connect to a wireless network
Select Start > Help and Support > User Guides. – or – Select Start > All Programs > HP > HP Documentation.	<ul style="list-style-type: none">• How to use the keyboard and pointing devices• How to replace or upgrade the hard drive and memory modules• How to perform a backup and recovery• How to contact customer support• Computer specifications
HP Notebook Reference Guide	<ul style="list-style-type: none">• Power management features
To access this guide:	<ul style="list-style-type: none">• How to maximize battery life
Select Start > Help and Support > User Guides. – or – Select Start > All Programs > HP > HP Documentation.	<ul style="list-style-type: none">• How to use the multimedia features of the computer• How to protect the computer• How to care for the computer• How to update the software
Help and Support	<ul style="list-style-type: none">• Operating system information
To access Help and Support, select Start > Help and Support .	<ul style="list-style-type: none">• Software, driver, and BIOS updates• Troubleshooting tools• How to access technical support
NOTE: For country- or region-specific support, go to http://www.hp.com/support , select your country or region, and follow the on-screen instructions.	
Regulatory, Safety and Environmental Notices	<ul style="list-style-type: none">• Regulatory and safety information
To access this guide:	<ul style="list-style-type: none">• Battery disposal information
Select Start > Help and Support > User Guides. – or – Select Start > All Programs > HP > HP Documentation.	
Safety & Comfort Guide	<ul style="list-style-type: none">• Proper workstation setup, posture, health, and work habits• Electrical and mechanical safety information
To access this guide:	
Select Start > Help and Support > User Guides. – or – Select Start > All Programs > HP > HP Documentation. – or – Go to http://www.hp.com/ergo .	

Resources	For information about
<i>Worldwide Telephone Numbers</i> booklet	HP support telephone numbers
This booklet is provided with your computer.	
HP Web site	<ul style="list-style-type: none"> ● Support information ● Ordering parts and finding additional help ● Software, driver, and BIOS updates ● Accessories available for the device
<i>Limited Warranty*</i>	Warranty information
To access the warranty:	
Select Start > Help and Support > User Guides > View Warranty Information.	
– or –	
Select Start > All Programs > HP > HP Documentation > View Warranty Information.	
– or –	
Go to http://www.hp.com/go/orderdocuments .	
<p>*You may find the expressly provided HP Limited Warranty applicable to your product located with the electronic guides on your computer and/or on the CD/DVD provided in the box. Some countries/regions may provide a printed HP Limited Warranty in the box. In countries/regions where the warranty is not provided in printed format, you may request a printed copy at http://www.hp.com/go/orderdocuments or write to:</p> <ul style="list-style-type: none"> ● North America: Hewlett-Packard, MS POD, 11311 Chinden Blvd, Boise, ID 83714, USA ● Europe, Middle East, Africa: Hewlett-Packard, POD, Via G. Di Vittorio, 9, 20063, Cernusco s/Naviglio (MI), Italy ● Asia Pacific: Hewlett-Packard, POD, P.O. Box 200, Alexandra Post Office, Singapore 911507 <p>Please include your product number, warranty period (found on your serial number label), name, and postal address.</p>	

2 Getting to know your computer

- [Top](#)
- [Front](#)
- [Right side](#)
- [Left side](#)
- [Display](#)
- [Bottom](#)

Top

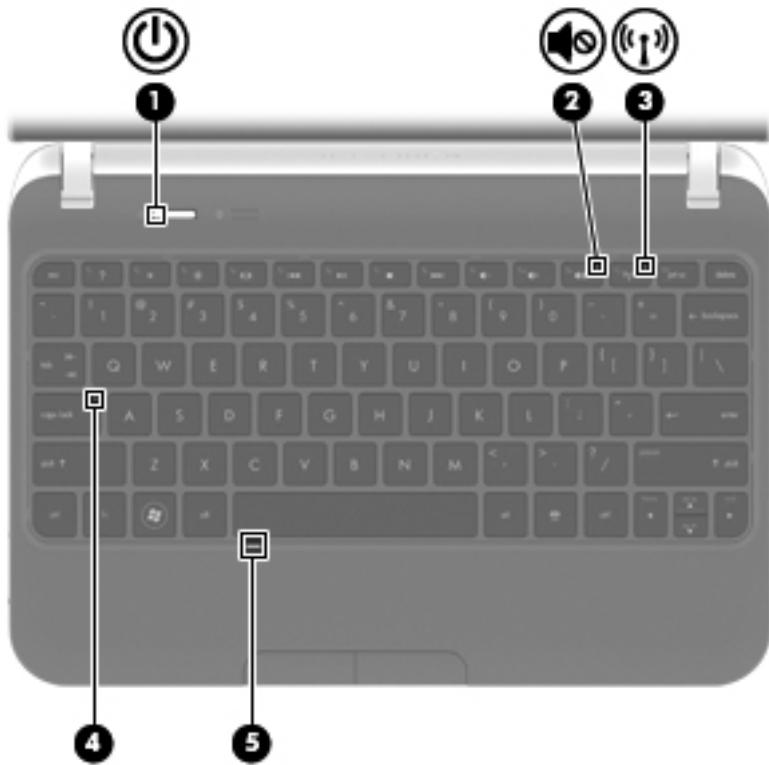
TouchPad



Reviewers: please confirm.

Component	Description
(1)	TouchPad light <ul style="list-style-type: none">White: The TouchPad is on.Amber: The TouchPad is off.
(2)	TouchPad on/off button Quickly double-tap the TouchPad on/off button to turn the TouchPad on or off.
(3)	TouchPad zone Moves the pointer and selects or activates items on the screen.
(4)	Left TouchPad button Functions like the left button on an external mouse.
(5)	Right TouchPad button Functions like the right button on an external mouse.

Lights



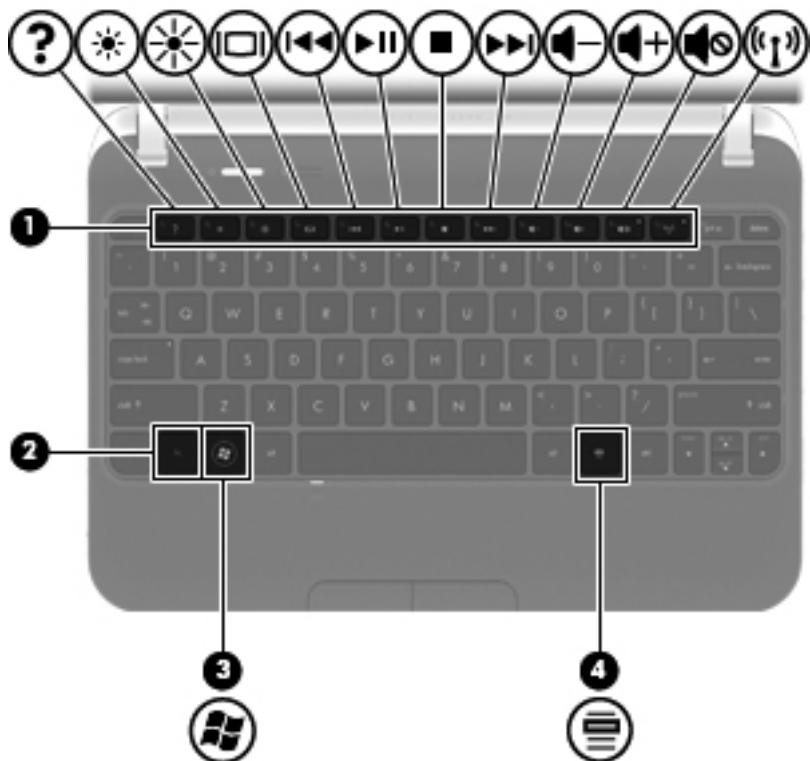
Component	Description
(1) Power light	<ul style="list-style-type: none">White: The computer is on.Blinking white: The computer is in the Sleep state.Off: The computer is off or in Hibernation.
(2) Mute light	<ul style="list-style-type: none">Amber: Computer sound is off.Off: Computer sound is on.
(3) Wireless light	<ul style="list-style-type: none">White: An integrated wireless device, such as a wireless local area network (WLAN) device and/or a Bluetooth® device, is on.Amber: All wireless devices are off.
(4) Caps lock light	On: Caps lock is on.
(5) TouchPad light	<ul style="list-style-type: none">White: The TouchPad is on.Amber: The TouchPad is off.

Buttons



Component	Description
(1) 	<p>Power button</p> <ul style="list-style-type: none">When the computer is off, press the button to turn on the computer.When the computer is on, press the button briefly to initiate Sleep.When the computer is in the Sleep state, press the button briefly to exit Sleep.When the computer is in Hibernation, press the button briefly to exit Hibernation. <p>If the computer has stopped responding and Windows® shutdown procedures are ineffective, press and hold the power button for at least 5 seconds to turn off the computer.</p> <p>To learn more about your power settings, select Start > Control Panel > System and Security > Power Options, or refer to the <i>HP Notebook Reference Guide</i>.</p>
(2) 	<p>QuickWeb button</p> <ul style="list-style-type: none">When the computer is off or in Hibernation, press the button to open HP QuickWeb.When the computer is in Microsoft Windows, press the button to open the default Web browser.When the computer is in HP QuickWeb, press the button to open the default Web browser. <p>NOTE: For more information, refer to "HP QuickWeb" in this guide and to the HP QuickWeb software Help. If your computer does not have HP QuickWeb software, the button does not perform any action or function.</p>

Keys



Component		Description
(1)	Action keys	Execute frequently used system functions.
(2)	fn key	Executes frequently used system functions when pressed in combination with a function key, the num lk key, or the esc key.
(3)	 Windows logo key	Displays the Windows Start menu.
(4)	 Windows applications key	Displays a shortcut menu for items beneath the pointer.

Front



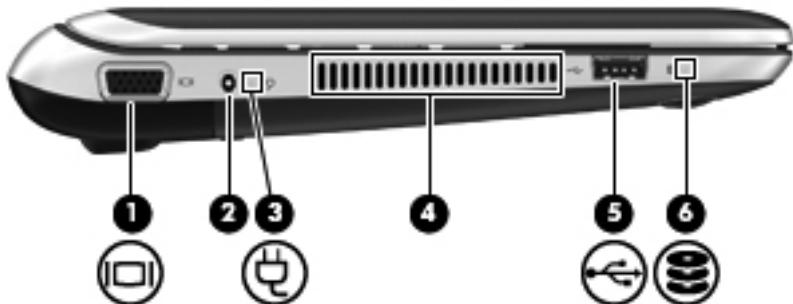
Component	Description
Speakers (2)	Produce sound.

Right side



Component	Description
(1) Digital Media Slot	Supports the following digital card formats: <ul style="list-style-type: none"> MultiMediaCard Secure Digital (SD) Card Secure Digital High Capacity Card (SDHC) Secure Digital Extended Capacity (SDxC)
	Supports mini versions by use of an adapter (adapter is not included).
(2) Audio-out (headphone) jack	Produces sound when connected to optional powered stereo speakers, headphones, earbuds, a headset, or television audio. <p>WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, refer to the <i>Regulatory, Safety and Environmental Notices</i>.</p> <p>NOTE: When a device is connected to the headphone jack, the computer speakers are disabled.</p>
(3) Audio-in (microphone) jack	Connects an optional computer headset microphone, stereo array microphone, or monaural microphone.
(4) Security cable slot	Attaches an optional security cable to the computer. <p>NOTE: The security cable is designed to act as a deterrent, but it may not prevent the computer from being mishandled or stolen.</p>
(5) USB ports (2)	Connect optional USB devices.
(6) RJ-45 (network) jack	Connects a network cable.

Left side



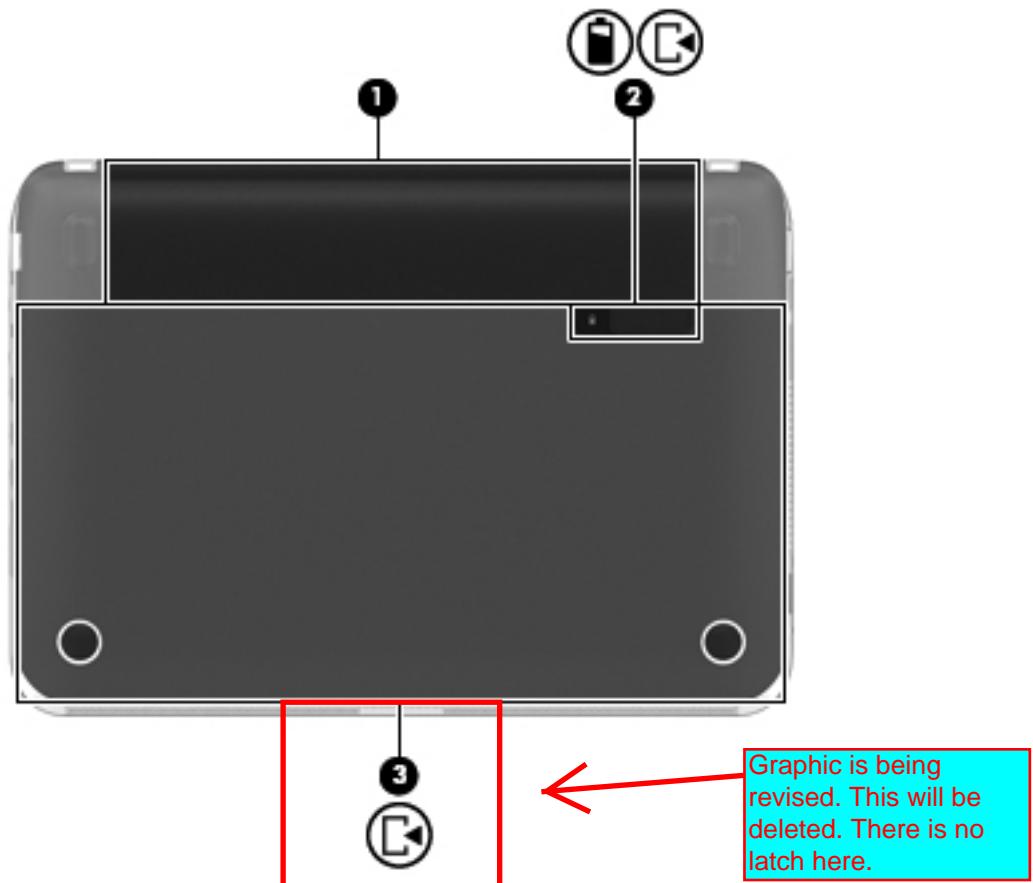
Component	Description	
(1) External monitor port	Connects an external VGA monitor or projector.	
(2) Power connector	Connects an AC adapter.	
(3) AC adapter light	<ul style="list-style-type: none">White: The computer is connected to external power and the battery is fully charged.Amber: The computer is connected to external power and the battery is charging.Off: The computer is not connected to external power.	
(4) Vent	<p>Enables airflow to cool internal components.</p> <p>NOTE: The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.</p>	
(5) USB port	Connects an optional USB device.	
(6) Hard drive light	On: The hard drive is being accessed.	

Display



Component	Description
(1) WLAN antennas (2)	Send and receive wireless signals to communicate with wireless local area networks (WLAN).
(2) WWAN antennas (2)	Send and receive wireless signals to communicate with wireless wide-area networks (WWAN).
(3) Internal microphone	Records sound.
(4) Webcam	Records video and captures still photographs. To use the webcam, select Start > All Programs > CyberLink YouCam > CyberLink YouCam.
(5) Webcam light	On: The webcam is in use.

Bottom



Component	Description	
(1)	Battery bay	Holds the battery.
(2)	Battery/service access cover latch	Releases the battery from the battery bay and the service access cover from the computer.

3 HP QuickWeb

- [Starting HP QuickWeb](#)

The HP QuickWeb environment provides a fun and engaging way to perform many of your favorite activities. Your computer is ready to go within seconds of starting QuickWeb, allowing you to rapidly access the Internet, widgets, and communication programs. Simply press the QuickWeb key (or QuickWeb button on select models), and then start browsing the Internet, communicating with Skype, and exploring other HP QuickWeb programs.

Your HP QuickWeb Home screen includes the following features:

- Web browser—Search and browse the Internet, and create links to your favorite Web sites.
- Skype—Communicate using Skype, an application that uses voice over Internet protocol (VoIP). Skype lets you make conference calls or have video chats with one or more people at a time. You can also make long-distance phone calls to land lines.
- Widgets—Start using widgets for news, weather, social networking, stocks, a calculator, sticky notes, and more. You can also use Widget Manager to add more widgets to the HP QuickWeb Home screen.



NOTE: For additional information about using HP QuickWeb, refer to the HP QuickWeb software Help.

Starting HP QuickWeb

- ▲ To start HP QuickWeb, press the QuickWeb key (or QuickWeb button on select models) when the computer is off or in Hibernation.

The following table explains the different behaviors of the QuickWeb key (or QuickWeb button on select models).

Key	Behavior
QuickWeb key (or QuickWeb button on select models)	<ul style="list-style-type: none">• When the computer is off or in Hibernation, opens HP QuickWeb.• When the computer is in Microsoft Windows, opens the default Web browser.• When the computer is in HP QuickWeb, opens the default Web browser. <p>NOTE: If your computer does not have HP QuickWeb software, the key does not perform any action or function.</p>



NOTE: For more information, refer to the HP QuickWeb software Help.

4 Networking

- [Using an Internet service provider \(ISP\)](#)
- [Connecting to a wireless network](#)

 **NOTE:** Internet hardware and software features vary depending on computer model and your location.

Your computer may support one or both of the following types of Internet access:

- Wireless—For mobile Internet access, you can use a wireless connection. Refer to [Connecting to an existing WLAN on page 15](#) or [Setting up a new WLAN network on page 15](#).
- Wired—You can access the Internet by connecting to a wired network. For information on connecting to a wired network, refer to the *HP Notebook Reference Guide*.

Using an Internet service provider (ISP)

Before you can connect to the Internet, you must establish an ISP account. Contact a local ISP to purchase Internet service and a modem. The ISP will help set up the modem, install a network cable to connect your wireless computer to the modem, and test the Internet service.

 **NOTE:** Your ISP will give you a user ID and password to access the Internet. Record this information and store it in a safe place.

The following features will help you set up a new Internet account or configure the computer to use an existing account:

- **Internet Services & Offers (available in some locations)**—This utility assists with signing up for a new Internet account and configuring the computer to use an existing account. To access this utility, select **Start > All Programs > Online Services > Get Online**.
- **ISP-provided icons (available in some locations)**—These icons may be displayed either individually on the Windows desktop or grouped in a desktop folder named Online Services. To set up a new Internet account or configure the computer to use an existing account, double-click an icon, and then follow the on-screen instructions.
- **Windows Connect to the Internet Wizard**—You can use the Windows Connect to the Internet Wizard to connect to the Internet in any of these situations:
 - You already have an account with an ISP.
 - You do not have an Internet account and want to select an ISP from the list provided within the wizard. (The list of ISP providers is not available in all regions.)
 - You have selected an unlisted ISP, and the ISP has provided you with information such as a specific IP address and POP3 and SMTP settings.

To access the Windows Connect to the Internet Wizard and instructions for using it, select **Start > Control Panel > Network and Internet > Network and Sharing Center**.

 **NOTE:** If you are prompted within the wizard to choose between enabling or disabling Windows Firewall, choose to enable the firewall.

Connecting to a wireless network

Wireless technology transfers data across radio waves instead of wires. Your computer may be equipped with one or more of the following wireless devices:

- Wireless local area network (WLAN) device
- HP Mobile Broadband Module, a wireless wide area network (WWAN) device
- Bluetooth device

For more information on wireless technology and connecting to a wireless network, refer to the *HP Notebook Reference Guide* and information and Web site links provided in Help and Support.

Connecting to an existing WLAN

1. Turn on the computer.
2. Be sure that the WLAN device is on.
3. Click the network icon in the notification area, at the far right of the taskbar.
4. Select a network to connect to.
5. Click **Connect**.
6. If required, enter the security key.

Setting up a new WLAN network

Required equipment:

- A broadband modem (either DSL or cable) (1) and high-speed Internet service purchased from an Internet service provider (ISP)
- A wireless router (purchased separately) (2)
- Your new wireless computer (3)

 **NOTE:** Some modems have a built-in wireless router. Check with your ISP to determine what type of modem you have.

The illustration shows an example of a completed WLAN network installation that is connected to the Internet. As your network grows, additional wireless and wired computers can be connected to the network to access the Internet.



Configuring a wireless router

For help in setting up a WLAN, refer to the information provided by your router manufacturer or your ISP.

The Windows operating system also provides tools to help you set up a new wireless network. To use the Windows tools to set up your network, select **Start > Control Panel > Network and Internet > Network and Sharing Center > Set up a new connection or network > Set up a new network**. Then follow the on-screen instructions.



NOTE: It is recommended that you initially connect your new wireless computer to the router by using the network cable provided with the router. When the computer successfully connects to the Internet, you can disconnect the cable, and then access the Internet through your wireless network.

Protecting your WLAN

When you set up a WLAN or access an existing WLAN, always turn on security features to protect your network from unauthorized access.

For information on protecting your WLAN, refer to the *HP Notebook Reference Guide*.

5 Keyboard and pointing devices

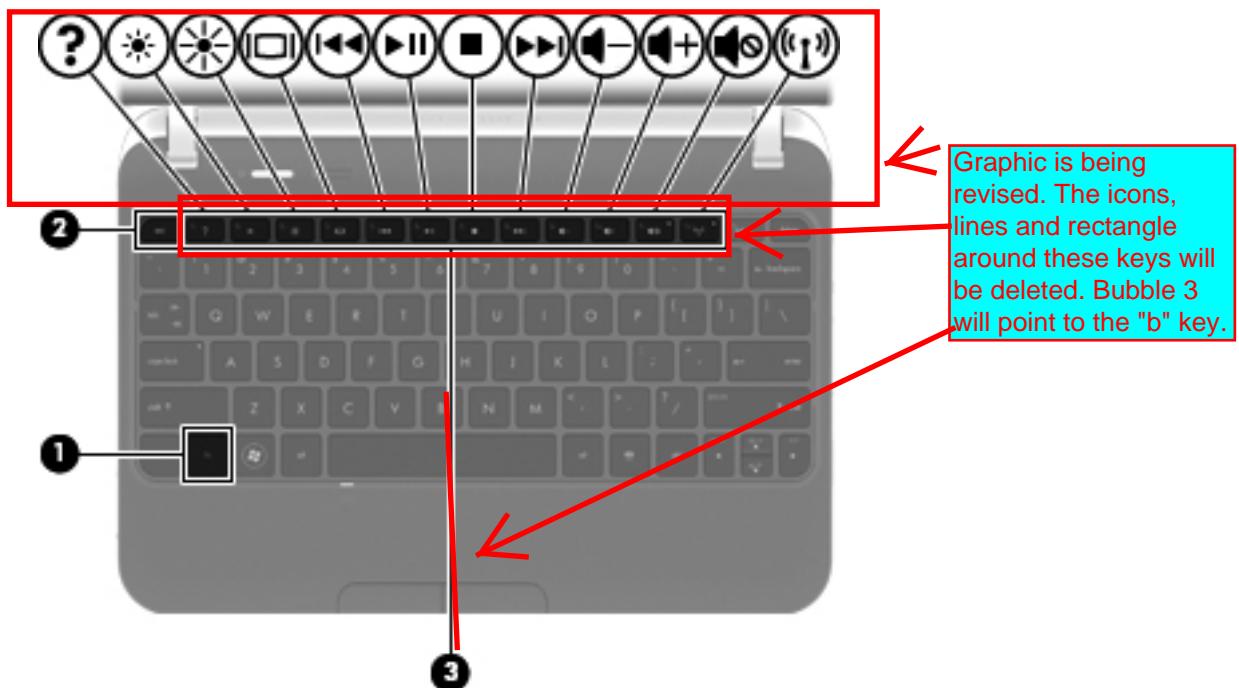
- [Using the keyboard](#)
- [Using pointing devices](#)

Reviewers: Please confirm the hotkeys and functionality.

Using the keyboard

Identifying the hotkeys

A hotkey is a combination of the **fn** key (1) and either the **esc** key (2), or the **b** key (3).



To use a hotkey:

- ▲ Briefly press the **fn** key, and then briefly press the second key of the hotkey combination.

Description	
fn+esc	Displays system information.
fn+b	Increases or decreases the Beats Audio bass settings. Beats Audio is an enhanced audio profile that provides a deep, controlled bass while maintaining a clear sound. Beats Audio is enabled by default. You can also view and control the bass settings through the Windows operating system. To view and control the bass properties: Select Start > Control Panel > Hardware and Sound > Beats Audio.

Using the action keys

Action keys are customized actions that are assigned to specific keys at the top of the keyboard. The icons on the **f1** through **f12** keys represent the action key functions.

To use an action key, press and hold this key to activate the assigned function.

 **NOTE:** The action key feature is enabled at the factory. You can disable this feature in Setup Utility (BIOS) and revert back to standard settings by pressing the **fn** key and one of the function keys to activate the assigned function. Refer to the “Setup Utility (BIOS) and System Diagnostics” chapter in the *HP Notebook Reference Guide* for instructions.

 **CAUTION:** Use extreme care when making changes in Setup Utility. Errors can prevent the computer from operating properly.



Icon	Key	Description
?	f1	Opens Help and Support, which provides information about your Windows operating system and computer, answers to questions and tutorials, and updates to your computer. Help and Support also provides automated troubleshooting and links to support specialists.
★	f2	Decreases the screen brightness level incrementally when you hold down this key.
★	f3	Increases the screen brightness level incrementally when you hold down this key.
	f4	Switches the screen image among display devices connected to the system. For example, if a monitor is connected to the computer, pressing this key alternates the screen image from computer display to monitor display to simultaneous display on both the computer and the monitor. Most external monitors receive video information from the computer using the external VGA video standard. The switch screen image key can also alternate images among other devices that are receiving video information from the computer.
◀◀	f5	Plays the previous track of an audio CD or the previous section of a DVD or a BD.
▶	f6	Plays, pauses, or resumes a track of an audio CD or a section of a DVD or a BD.
■	f7	Stops playback.
▶▶	f8	Plays the next track of an audio CD or the next section of a DVD or a BD.
🔉	f9	Decreases speaker volume incrementally when you hold down this key.
🔊	f10	Increases speaker volume incrementally when you hold down this key.

Icon	Key	Description
	f11	Mutes or restores speaker sound.
	f12	Turns the wireless feature on or off. NOTE: This key does not establish a wireless connection. To establish a wireless connection, a wireless network must also be set up.

Using pointing devices

 **NOTE:** In addition to the pointing devices included with your computer, you can use an external USB mouse (purchased separately) by connecting it to one of the USB ports on the computer.

Setting pointing device preferences

Use Mouse Properties in Windows to customize settings for pointing devices, such as button configuration, click speed, and pointer options.

To access Mouse Properties, select **Start > Devices and Printers**. Then right-click the device representing your computer, and select **Mouse settings**.

Using the TouchPad

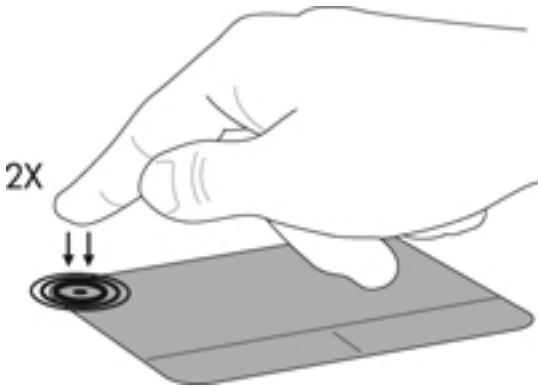
To move the pointer, slide one finger across the TouchPad in the direction you want the pointer to go. Use the left and right TouchPad buttons like the buttons on an external mouse. To scroll up and down using the TouchPad vertical scroll zone, slide your finger up or down over the lines.

 **NOTE:** If you are using the TouchPad to move the pointer, you must lift your finger off the TouchPad before moving it to the scroll zone. Simply sliding your finger from the TouchPad to the scroll zone does not activate the scrolling function.

Turning the TouchPad off and on

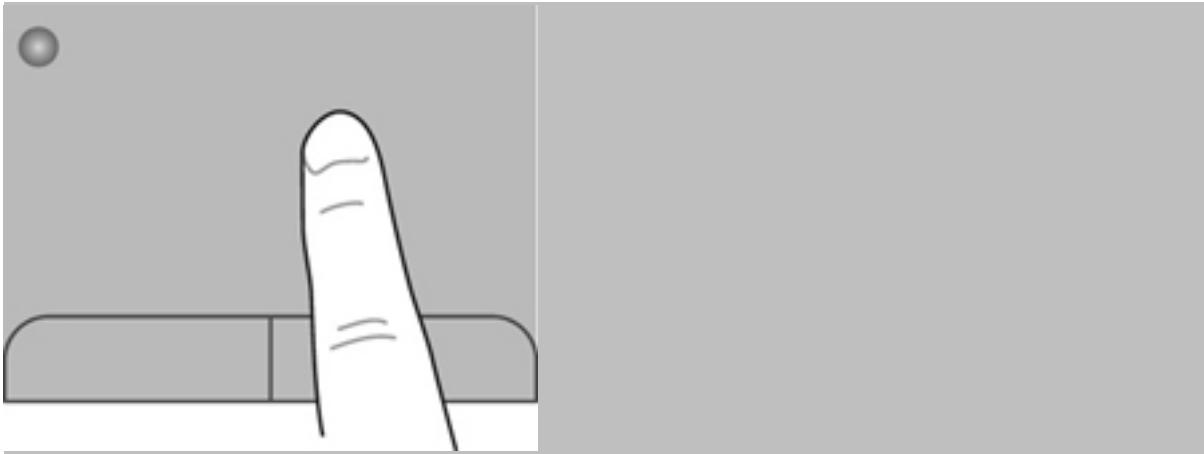
To turn the TouchPad off and on, quickly double-tap the TouchPad light.

 **NOTE:** The TouchPad light is white when the TouchPad is on. The TouchPad light is amber when the TouchPad is off.



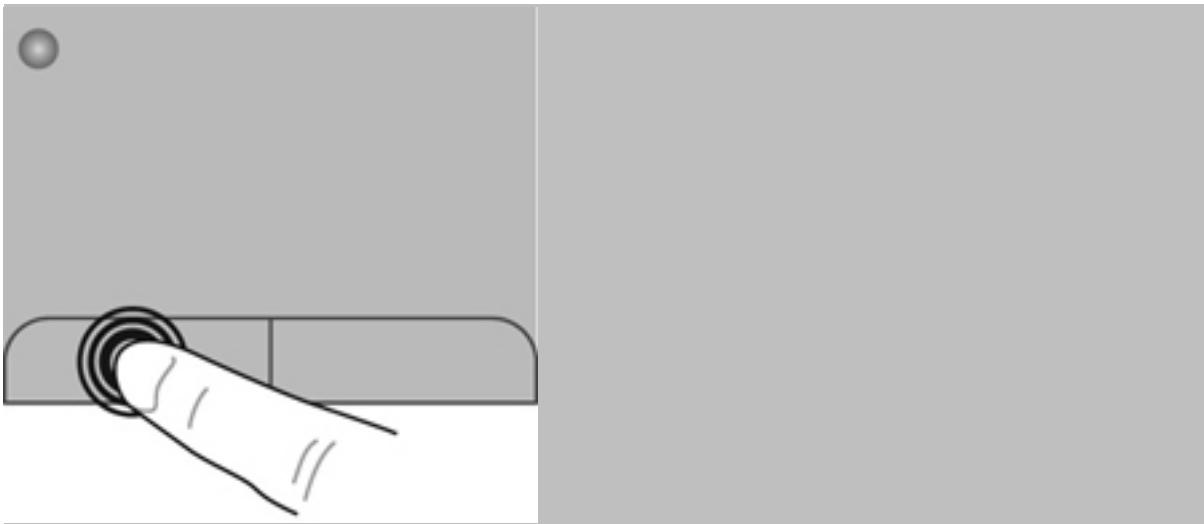
Navigating

To move the pointer, slide one finger across the TouchPad in the direction you want the pointer to go.



Selecting

Use the left and right TouchPad buttons like the corresponding buttons on an external mouse.



Using TouchPad gestures

The TouchPad supports a variety of gestures. To use TouchPad gestures, place two fingers on the TouchPad at the same time.



NOTE: TouchPad gestures are not supported in all programs.

To view the demonstration of a gesture:

1. Click the **Show hidden icons** icon in the notification area, at the far right of the taskbar.
2. Right-click the **Synaptics Pointing Device** icon , and then click **TouchPad Properties**.
3. Click a gesture to activate the demonstration.

To turn the gestures on and off:

1. Click the **Show hidden icons** icon in the notification area, at the far right of the taskbar.
2. Right-click the **Synaptics Pointing Device** icon , and then click **TouchPad Properties**.
3. Select the check box next to the gesture that you want to turn on or off.
4. Click **Apply**, and then click **OK**.

Scrolling

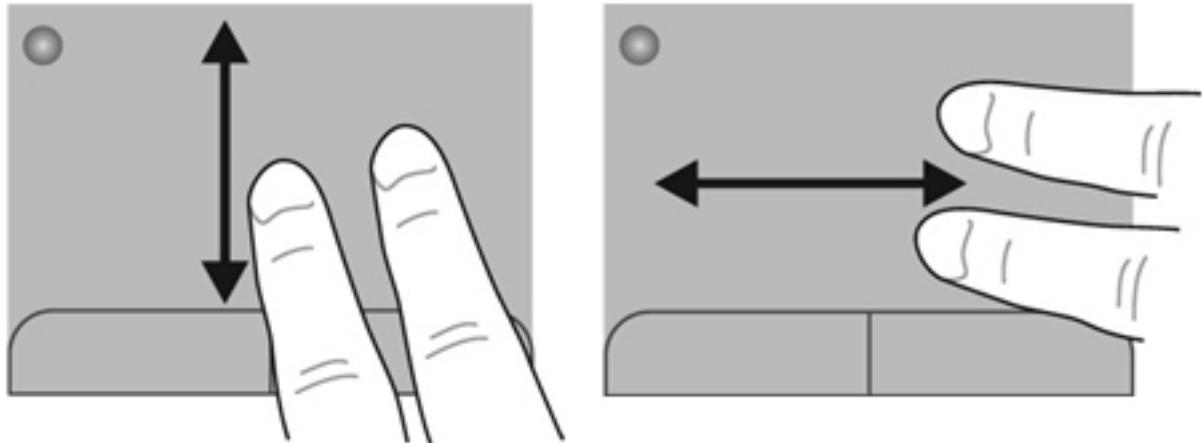
Scrolling is useful for moving up, down, or sideways on a page or image. To scroll, place two fingers slightly apart on the TouchPad, and then drag them across the TouchPad in an up, down, left, or right motion.



NOTE: Scrolling speed is controlled by finger speed.



NOTE: Two-finger scrolling is enabled at the factory.

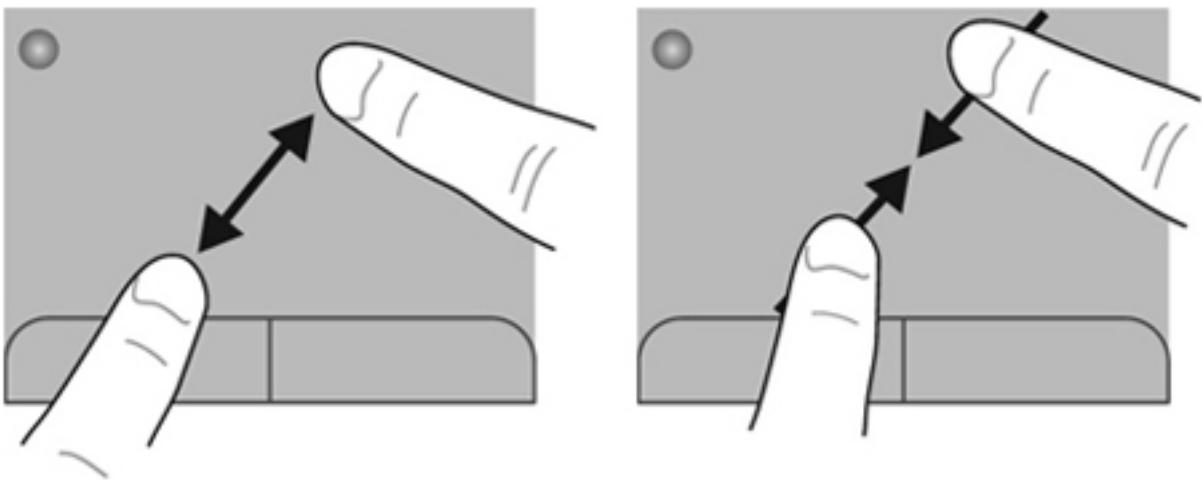


Pinching/Zooming

Pinching allows you to zoom in or out on images or text.

- Zoom in by placing two fingers together on the TouchPad, and then moving them apart.
- Zoom out by placing two fingers apart on the TouchPad, and then moving them together.

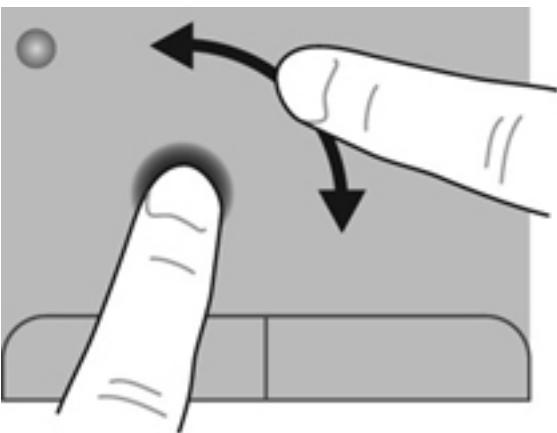
 **NOTE:** Pinching/zooming is enabled at the factory.



Rotating

Rotating allows you to rotate items such as photos. To rotate, anchor your left forefinger in the TouchPad zone. Move the right forefinger around the anchored finger in a sweeping motion, moving from 12 o'clock to 3 o'clock. To reverse the rotation, move your right forefinger from 3 o'clock to 12 o'clock.

 **NOTE:** Rotating is disabled at the factory.



6 Maintenance

- [Inserting or removing the battery](#)
- [Replacing or upgrading the hard drive](#)
- [Replacing the memory module](#)

Inserting or removing the battery

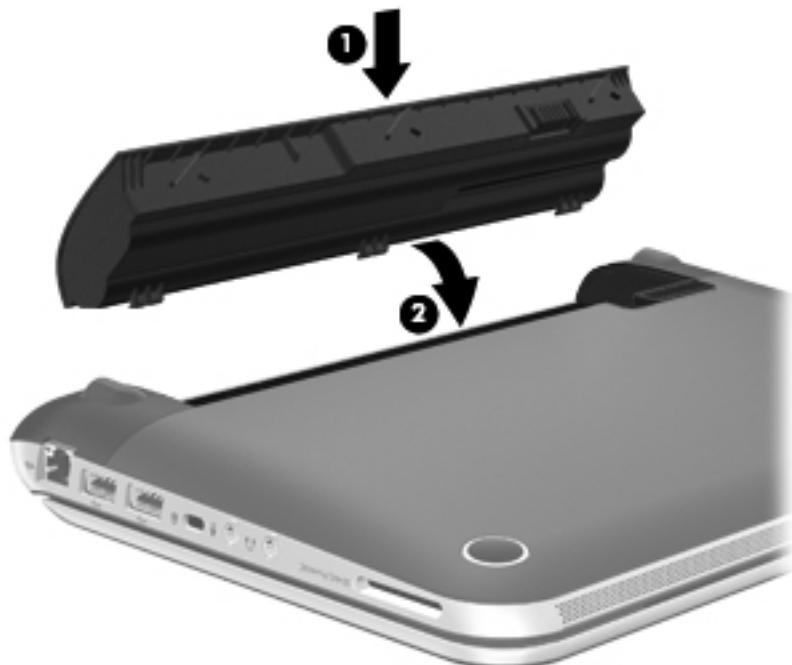


NOTE: For additional information on using the battery, refer to the *HP Notebook Reference Guide*.

Inserting the battery

To insert the battery:

- ▲ Insert the battery **(1)** into the battery bay and rotate it downward **(2)** until it is firmly seated.

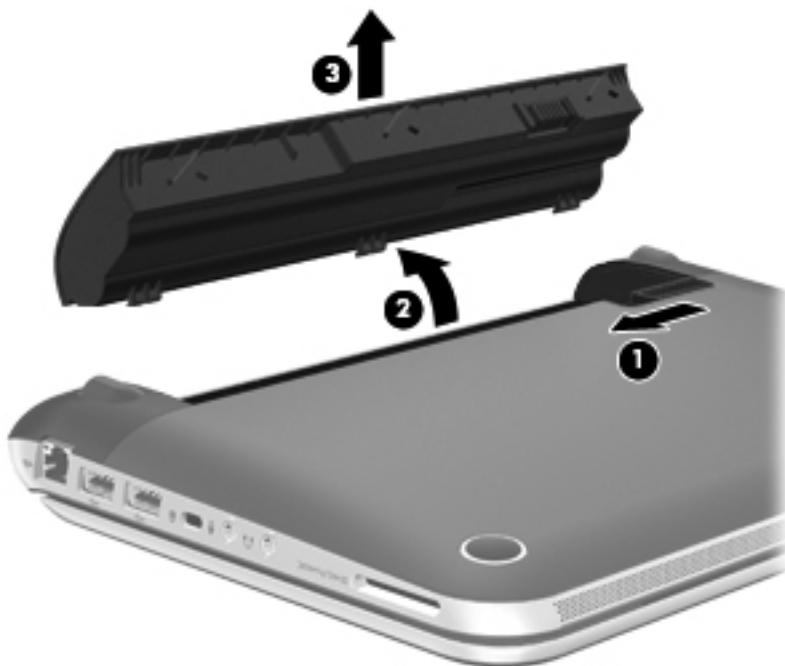


Removing the battery

To remove the battery:

CAUTION: Removing a battery that is the sole power source for the computer can cause loss of information. To prevent loss of information, save your work and initiate Hibernation or shut down the computer through Windows before removing the battery.

1. Slide the battery/service access cover latch (1) to release the battery.
2. Pivot the battery (2) upward and lift it out of the computer (3).



Replacing or upgrading the hard drive



CAUTION: To prevent information loss or an unresponsive system:

Shut down the computer before removing the hard drive from the hard drive bay. Do not remove the hard drive while the computer is on, in the Sleep state, or in Hibernation.

If you are not sure whether the computer is off or in Hibernation, turn the computer on by pressing the power button. Then shut down the computer through the operating system.

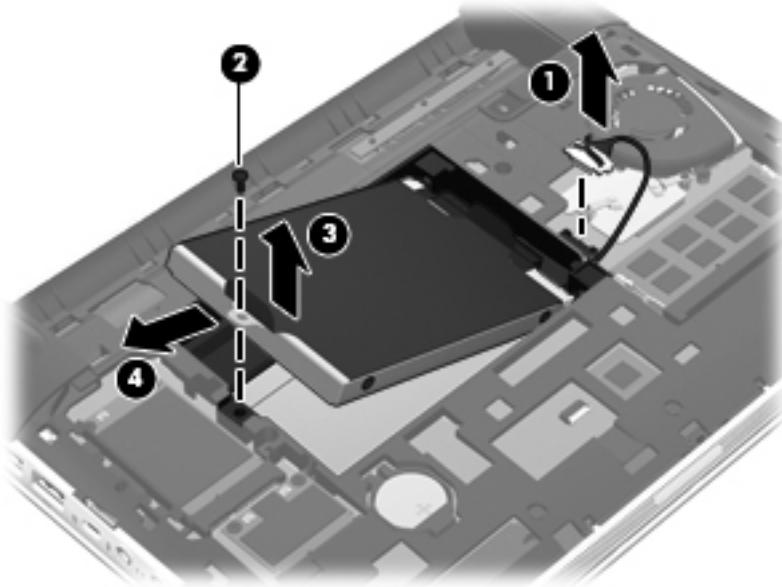
Removing the hard drive

1. Save your work and shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Unplug the power cord from the AC outlet and remove the battery.
4. Slide the battery/service access cover latch (1) to release the service access cover.
5. Slide the service access cover toward the bottom of the computer (2) and remove the cover (3).



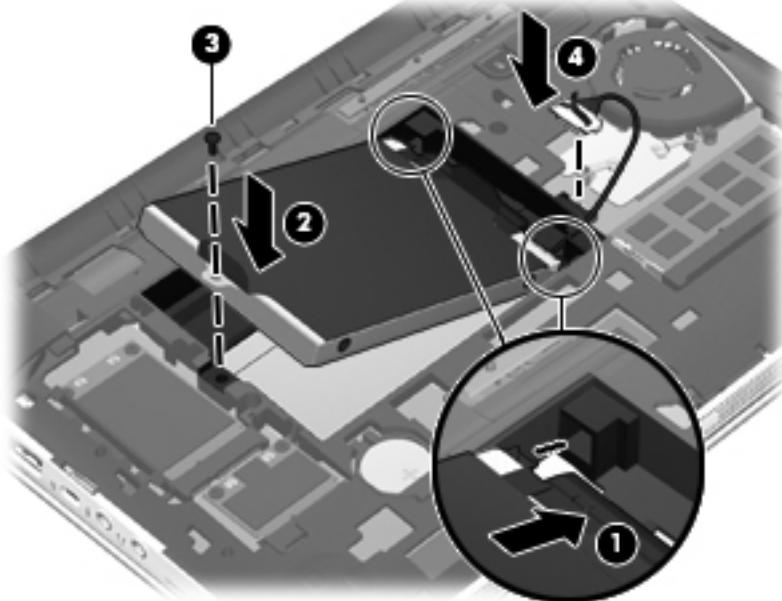
6. Lift up the hard drive connector (1) until it disconnects from the computer.
7. Remove the Phillips screw (2) that secures the hard drive to the computer.

8. Pull up on the hard drive tab (3) and slide the hard drive (4) out of the hard drive bay.



Installing the hard drive

1. Insert the rubber bumpers on the drive into the slots (1) on the hard drive bay.
2. Lower the hard drive (2) into the hard drive bay.
3. Replace the Phillips screw (3).
4. Connect the hard drive connector (4) to the computer.



- 5.** Lower the service access cover onto the computer (1) and then slide the cover (2) toward the battery bay until the battery/service access cover latch snaps into place.



- 6.** Replace the battery.
- 7.** Reconnect external power and external devices.
- 8.** Turn on the computer.

Replacing the memory module

The computer has one memory module compartment. The capacity of the computer can be upgraded by upgrading the existing memory module in the memory module slot.

⚠️ WARNING! To reduce the risk of electric shock and damage to the equipment, unplug the power cord and remove all batteries before installing a memory module.

⚠️ CAUTION: Electrostatic discharge (ESD) can damage electronic components. Before beginning any procedure, ensure that you are discharged of static electricity by touching a grounded metal object.

To replace the memory module:

⚠️ CAUTION: To prevent information loss or an unresponsive system:

Shut down the computer before replacing the memory module. Do not remove the memory module while the computer is on, in the Sleep state, or in Hibernation.

If you are not sure whether the computer is off or in Hibernation, turn the computer on by pressing the power button. Then shut down the computer through the operating system.

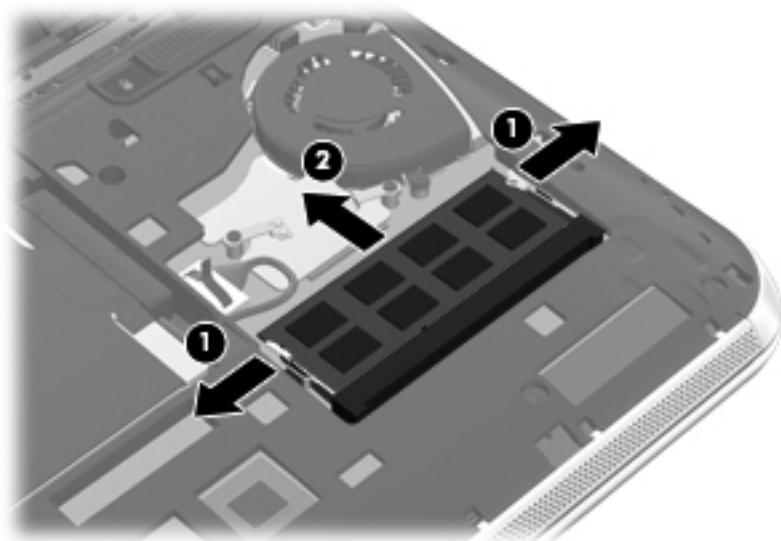
1. Save your work and shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Unplug the power cord from the AC outlet and remove the battery.
4. Remove the service access cover (see [Replacing or upgrading the hard drive on page 26](#)).
5. Remove the existing memory module:

- a. Pull away the retention clips (1) on each side of the memory module.

The memory module tilts up.

- b. Grasp the edge of the memory module (2), and then gently pull the memory module out of the memory module slot.

⚠️ CAUTION: To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.



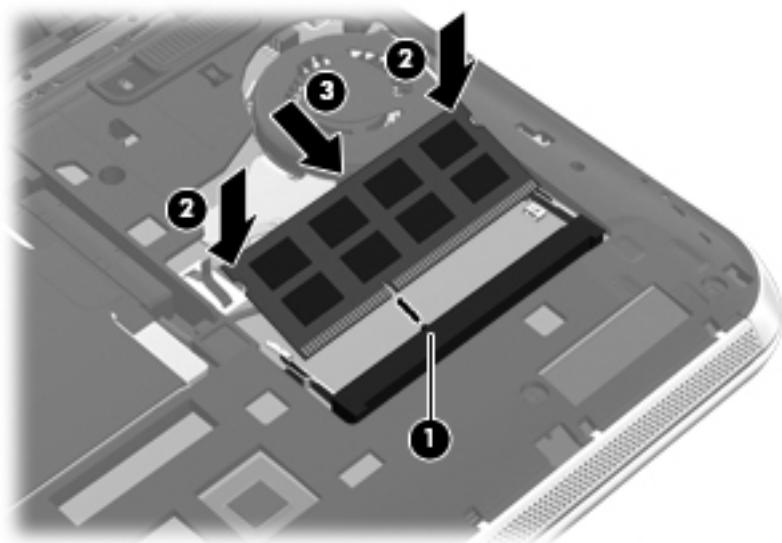
To protect a memory module after removal, place it in an electrostatic-safe container.

6. Insert the new memory module:

⚠ CAUTION: To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.

- a. Align the notched edge (1) of the memory module with the tab in the memory module slot.
- b. With the memory module at a 45-degree angle from the surface of the memory module compartment, press the module (2) into the memory module slot until it is seated.
- c. Gently press the memory module (3) down, applying pressure to both the left and right edges of the memory module, until the retention clips snap into place.

⚠ CAUTION: To prevent damage to the memory module, be sure that you do not bend the memory module.



- 7.** Replace the service access cover (see [Replacing or upgrading the hard drive on page 26](#)).
- 8.** Replace the battery.
- 9.** Reconnect external power and external devices.
- 10.** Turn on the computer.

7 Backup and recovery

- [Restore](#)
- [Creating restore media](#)
- [Performing a system restore](#)
- [Backing up and recovering your information](#)

Your computer includes tools provided by the operating system and HP to help you safeguard your information and restore it if ever needed.

This chapter provides information on the following topics:

- Creating a set of recovery discs or a recovery flash drive (HP Recovery Manager software feature)
- Performing a system restore (from the partition, recovery discs, or a recovery flash drive)
- Backing up your information
- Recovering a program or driver

Restore

In the event of hard drive failure, to restore your system to its factory image you will need a set of recovery discs or a recovery flash drive that you can create using HP Recovery Manager. HP recommends that you use this software to create either a set of recovery discs or a recovery flash drive immediately after software setup.

If for some other reason you need to restore your system, this can be achieved using the HP Recovery partition (select models only), without the need for recovery discs or a recovery flash drive. To check for the presence of a recovery partition, click **Start**, right-click **Computer**, click **Manage**, and then click **Disk Management**. If the recovery partition is present, a Recovery drive is listed in the window.

 **CAUTION:** HP Recovery Manager (partition or discs/flash drive) restores only software that was preinstalled at the factory. Software not provided with this computer must be reinstalled manually.

 **NOTE:** Recovery discs have been included if your computer does not have a recovery partition.

Creating restore media

HP recommends that you create either a set of recovery discs or a recovery flash drive to be sure that you can restore your computer to its original factory state if the hard drive fails, or if for any reason you cannot restore using the recovery partition tools. Create these discs or the flash drive after setting up the computer for the first time.

 **NOTE:** HP Recovery Manager allows the creation of only one set of recovery discs or one recovery flash drive. Handle these discs or flash drive carefully and keep them in a safe place.

 **NOTE:** If your computer does not include an integrated optical drive, you can use an optional external optical drive (purchased separately) to create recovery discs, or you can purchase recovery discs for your computer from the HP Web site. If you use an external optical drive, it must be connected directly to a USB port on the computer, not to a USB port on an external device, such as a USB hub.

Guidelines:

- Purchase high-quality DVD-R, DVD+R, DVD-R DL, or DVD+R DL discs.

 **NOTE:** Read-write discs, such as CD-RW, DVD±RW, double-layer DVD±RW, and BD-RE (rewritable Blu-ray) discs, are not compatible with the HP Recovery Manager software.

- The computer must be connected to AC power during this process.
- Only one set of recovery discs or one recovery flash drive can be created per computer.

 **NOTE:** If you are creating recovery discs, number each disc before inserting it into the optical drive.

- If necessary, you can exit the program before you have finished creating the recovery discs or recovery flash drive. The next time you open HP Recovery Manager, you will be prompted to continue the backup creation process.

To create a set of recovery discs or a recovery flash drive:

- Select **Start > All Programs > HP > HP Recovery Manager > HP Recovery Media Creation**.
- Follow the on-screen instructions.

Performing a system restore

HP Recovery Manager software allows you to repair or restore the computer to its original factory state. HP Recovery Manager works from recovery discs, a recovery flash drive, or from a dedicated recovery partition (select models only) on the hard drive.

 **NOTE:** A system restore needs to be performed if the computer hard drive has failed or if all attempts to correct any functional computer issues fail. A system restore should be used as a final attempt to correct computer issues.

Note the following when performing a system restore:

- You can restore only the system that you have previously backed up. HP recommends that you use HP Recovery Manager to create either a set of recovery discs or a recovery flash drive as soon as you set up the computer.
- Windows has its own built-in repair features, such as System Restore. If you have not already tried these features, try them before using HP Recovery Manager.
- HP Recovery Manager restores only software that was preinstalled at the factory. Software not provided with this computer must be downloaded from the manufacturer's Web site or reinstalled from the disc provided by the manufacturer.

Restoring using the dedicated recovery partition (select models only)

When using the dedicated recovery partition, there is an option to back up pictures, music and other audio, videos and movies, recorded TV shows, documents, spreadsheets and presentations, e-mails, Internet favorites and settings during this process.

To restore the computer from the recovery partition, follow these steps:

1. Access HP Recovery Manager in either of the following ways:
 - Select **Start > All Programs > HP > HP Recovery Manager > HP Recovery Manager**.
 - or –
 - Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen. Then, press **f11** while the “F11 (System Recovery)” message is displayed on the screen.
2. Click **System Recovery** in the **HP Recovery Manager** window.
3. Follow the on-screen instructions.

Restoring using the restore media

1. If possible, back up all personal files.
2. Insert the first recovery disc into the optical drive on your computer or an optional external optical drive, and then restart the computer.

– or –

Insert the recovery flash drive into a USB port on your computer, and then restart the computer.
3.  **NOTE:** If the computer does not automatically restart in the HP Recovery Manager, the computer boot order needs to be changed.
4. Press **f9** at system bootup.
5. Select the optical drive or the flash drive.
5. Follow the on-screen instructions.

Changing the computer boot order

To change the boot order for recovery discs:

1. Restart the computer.
2. Press **esc** while the computer is restarting, and then press **f9** for boot options.
3. Select **Internal CD/DVD ROM Drive** from the boot options window.

To change the boot order for recovery flash drive:

1. Insert the flash drive into a USB port.
2. Restart the computer.
3. Press **esc** while the computer is restarting, and then press **f9** for boot options.
4. Select the flash drive from the boot options window.

Backing up and recovering your information

It is very important to back up your files and keep any new software in a safe place. As you add new software and data files, continue to create backups on a regular basis.

How completely you are able to recover your system depends on how recent your backup is.

 **NOTE:** A recovery from your most recent backup needs to be performed if the computer has a virus attack or if any major system components fail. In order to correct computer issues, a recovery should first be attempted before a system restore is attempted.

You can back up your information to an optional external hard drive, a network drive, or discs. Back up your system at the following times:

- At regularly scheduled times
-  **TIP:** Set reminders to back up your information periodically.
- Before the computer is repaired or restored
- Before you add or modify hardware or software

Guidelines:

- Create system restore points using the Windows® System Restore feature, and periodically copy them to an optical disc or an external hard drive. For more information on using system restore points, refer to [Using Windows system restore points on page 35](#).
- Store personal files in the Documents library and back up this folder periodically.
- Save customized settings in a window, toolbar, or menu bar by taking a screen shot of your settings. The screen shot can be a time-saver if you have to re-enter your preferences.

To create a screen shot:

1. Display the screen you want to save.

2. Copy the screen image:

To copy only the active window, press **alt+fn+prt sc**.

To copy the entire screen, press **fn+prt sc**.

3. Open a word-processing document, and then select **Edit > Paste**. The screen image is added to the document.

4. Save and print the document.

Using Windows Backup and Restore

Guidelines:

- Be sure that the computer is connected to AC power before you start the backup process.
- Allow enough time to complete the backup process. Depending on file sizes, it may take over an hour.

To create a backup:

1. Select **Start > Control Panel > System and Security > Backup and Restore**.

2. Follow the on-screen instructions to schedule and create a backup.

 **NOTE:** Windows® includes the User Account Control feature to improve the security of the computer. You may be prompted for your permission or password for tasks such as installing software, running utilities, or changing Windows settings. Refer to Help and Support for more information.

Using Windows system restore points

A system restore point allows you to save and name a snapshot of your hard drive at a specific point in time. You can then recover back to that point if you want to reverse subsequent changes.

 **NOTE:** Recovering to an earlier restore point does not affect data files saved or e-mails created since the last restore point.

You also can create additional restore points to provide increased protection for your files and settings.

When to create restore points

- Before you add or modify software or hardware
- Periodically, whenever the computer is functioning optimally

 **NOTE:** If you revert to a restore point and then change your mind, you can reverse the restoration.

Create a system restore point

1. Select **Start > Control Panel > System and Security > System**.
2. In the left pane, click **System Protection**.
3. Click the **System Protection** tab.
4. Follow the on-screen instructions.

Restore to a previous date and time

To revert to a restore point (created at a previous date and time), when the computer was functioning optimally, follow these steps:

1. Select **Start > Control Panel > System and Security > System**.
2. In the left pane, click **System Protection**.
3. Click the **System Protection** tab.
4. Click **System Restore**.
5. Follow the on-screen instructions.

8 Customer support

- [Contacting customer support](#)
- [Labels](#)

Contacting customer support

If the information provided in this user guide, in the *HP Notebook Reference Guide*, or in Help and Support does not address your questions, you can contact HP Customer Support at:

<http://www.hp.com/go/contactHP>



NOTE: For worldwide support, click **Contact HP worldwide** on the left side of the page, or go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

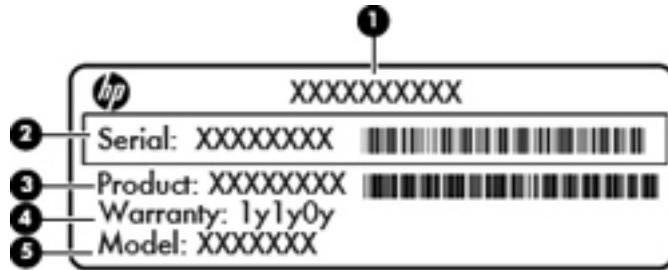
Here you can:

- Chat online with an HP technician.
 NOTE: When technical support chat is not available in a particular language, it is available in English.
- E-mail HP Customer Support.
- Find HP Customer Support worldwide telephone numbers.
- Locate an HP service center.

Labels

The labels affixed to the computer provide information you may need when you troubleshoot system problems or travel internationally with the computer:

- Serial number label—Provides important information, including the following:



Component

- | Component |
|--------------------------------------|
| (1) Product name |
| (2) Serial number (s/n) |
| (3) Part number/Product number (p/n) |
| (4) Warranty period |
| (5) Model description |

Have this information available when you contact technical support. The serial number label is affixed to the bottom of the computer.

- Microsoft® Certificate of Authenticity—Contains the Windows Product Key. You may need the Product Key to update or troubleshoot the operating system. The Microsoft Certificate of Authenticity is located on the bottom of the computer.
- Regulatory label—Provides regulatory information about the computer. The regulatory label is affixed inside the battery bay.
- Wireless certification label or labels (select models only)—Provide information about optional wireless devices and the approval markings of some of the countries or regions in which the devices have been approved for use. If your computer model includes one or more wireless devices, one or more certification labels are included with your computer. You may need this information when traveling internationally. Wireless certification labels are affixed to the bottom of the computer.
- SIM (subscriber identity module) label (select models only)—Provides the ICCID (Integrated Circuit Card Identifier) of the SIM. This label is located inside the battery bay.
- HP Mobile Broadband Module serial number label (select models only)—Provides the serial number of the HP Mobile Broadband Module. This label is located inside the battery bay.

9 Specifications

- [Input power](#)
- [Operating environment](#)

Input power

The power information in this section may be helpful if you plan to travel internationally with the computer.

The computer operates on DC power, which can be supplied by an AC or a DC power source. The AC power source must be rated at 100–240 V, 50–60 Hz. Although the computer can be powered from a standalone DC power source, it should be powered only with an AC adapter or a DC power source supplied and approved by HP for use with this computer.

The computer can operate on DC power within the following specifications.

Input power	Rating	Reviewers: Is this correct?
Operating voltage and current	18.5 V dc @ 3.5 A - 65W	

DC plug of external HP power supply



 **NOTE:** This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 V rms.

 **NOTE:** The computer operating voltage and current can be found on the system regulatory label.

Operating environment

Factor	Metric	U.S.
Temperature		
Operating (writing to optical disc)	5°C to 35°C	41°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	10% to 90%
Nonoperating	5% to 95%	5% to 95%
Maximum altitude (unpressurized)		
Operating	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating	-15 m to 12,192 m	-50 ft to 40,000 ft

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Regulatory, Safety and Environmental Notices

User Guide

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1 Regulatory notices

This guide provides country- and region-specific non-wireless and wireless regulatory notices and compliance information for the computer product. Some of these notices may not apply to your product.

One or more integrated wireless devices may be installed. In some environments, the use of wireless devices may be restricted. Such restrictions may apply on-board airplanes, in hospitals, near explosives, in hazardous locations, and so on. If you are uncertain of the policy that applies to the use of this product, ask for authorization to use it before you turn it on.

To identify a hardware device such as a wireless LAN (WLAN) network device, choose the procedure below that corresponds to the operating system running on your computer.

For Windows® XP Professional and Windows XP Home, follow these steps:

1. Select **Start > My Computer**.
2. If the left pane, select **View System Information > Hardware tab > Device Manager**.

For Windows Vista®, follow these steps:

1. Select **Start > Computer > System properties**.
2. In the left pane, click **Device Manager**.

For later Windows operating systems, such as Windows 7, follow these steps:

- ▲ Select **Start > Control Panel > System and Security > Device Manager**.

For non-Windows operating systems, follow the instructions provided by your operating system to identify a hardware device such as a wireless LAN (WLAN) network device.

Regulatory markings for your country or region may be located on the bottom of the product, either under the battery, under a user-removable door (or some other user-accessible location), or on the wireless or modem module.

To view the FCC IDs for any radio modules in your notebook (Bluetooth®, WLAN, or WWAN), follow these steps:

1. Turn on or restart the computer, and then press **esc** while the "Press the ESC key for Startup Menu" message is displayed at the bottom of the screen.
2. Press **f10** to enter BIOS Setup.
3. Select the **System Configuration** menu.

The FCC IDs are displayed at the bottom of the screen.

⚠ CAUTION: Devices not for sale or use in the United States may not have an FCC ID.

Federal Communications Commission notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by HP may void the user's authority to operate the equipment.

Cables

To maintain compliance with FCC Rules and Regulations, connections to this device must be made with shielded cables having metallic RFI/EMI connector hoods.

Declaration of Conformity for products marked with the FCC logo (United States only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following 2 conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

If you have questions about the product that are *not* related to this declaration, write to

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 530113
Houston, TX 77269-2000

For questions regarding this FCC declaration, write to

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 510101
Houston, TX 77269-2000

or call HP at 281-514-3333

To identify your product, refer to the part, series, or model number located on the product.

Products with wireless LAN devices or HP Mobile Broadband Modules

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

⚠ WARNING! Exposure to Radio Frequency Radiation The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation of tablet PCs and notebook computers.

During normal operation of tablet PCs and notebook computers with displays equal to or less than 12 inches: To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennas should not be less than 2.5 cm (1 inch). To identify the location of the wireless antennas, refer to the computer user guides. To access the user guides, select **Start > Help and Support > User Guides**.

During normal operation of notebook computers with displays greater than 12 inches: To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennas should not be less than 20 cm (8 inches), including when the computer display is closed. To identify the location of the wireless antennas, refer to the computer user guides. To access the user guides, select **Start > Help and Support > User Guides**.

⚠ CAUTION: When using IEEE 802.11a wireless LAN, this product is restricted to indoor use, due to its operation in the 5.15- to 5.25-GHz frequency range. The FCC requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High-power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65- to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

Brazil notice

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Este equipamento atende aos limites de Taxa de Absorção Específica referente à exposição a campos elétricos, magnéticos e eletromagnéticos de radiofreqüências adotados pela ANATEL.

Canada notices

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. If this device has WLAN or Bluetooth capability, the device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CAUTION: When using IEEE 802.11a wireless LAN, this product is restricted to indoor use, due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High-power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65- to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The antennas for this device are not replaceable. Any attempt at user access will damage your computer.

Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Regulatory notices

Products bearing the CE marking comply with the following EU Directives:

- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC
- Ecodesign Directive 2009/125/EC where applicable

CE compliance of this product is valid if powered with the correct CE-marked AC adapter provided by HP.

If this product has wired and/or wireless telecommunications functionality, it also complies with the essential requirements of EU Directive R&TTE Directive 1999/5/EC.

Compliance with these directives implies conformity to applicable harmonized European standards (European Norms) that are listed in the EU Declaration of Conformity issued by HP for this product or product family and available (in English only) either within the product documentation or at the following Web site: www.hp.eu/certificates (type the product number in the search box).

The compliance is indicated by one of the following conformity markings placed on the product:



For non-telecommunications products and for EU harmonized telecommunications products, such as Bluetooth®, within power class below 10 mW.



For EU non-harmonized telecommunications products (if applicable, a 4-digit notified body number is inserted between CE and ! (the exclamation mark).

Please refer to the regulatory label provided on the product.

The telecommunications functionality of this product may be used in the following EU and EFTA countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom.

The telephone connector (not available for all products) is intended for connection to analog telephone networks.



NOTE: For products with wireless LAN devices, some countries may have specific obligations or special requirements about the operation of wireless LAN networks such as indoor use only or restrictions of the channels available. Be sure that the country settings of the wireless network are correct.

In France, certain restrictions apply for the 2.4-GHz wireless LAN operation of this product. This product may be used indoors for the entire 2400-MHz to 2483.5-MHz frequency band (channels 1 to 13). For outdoor use, only the 2400-MHz to 2454-MHz frequency band (channels 1 to 7) may be used. For the latest requirements, see <http://www.arcep.fr>.

The point of contact for regulatory matters is Hewlett-Packard GmbH, Dept./MS: HQ-TRE, Herrenberger Strasse 140, 71034 Boeblingen, GERMANY.

Products with HP Mobile Broadband Modules

THIS DEVICE MEETS INTERNATIONAL GUIDELINES FOR EXPOSURE TO RADIO FREQUENCY RADIATION.

The HP Mobile Broadband Module in your notebook is a radio transmitter and receiver. The device is designed not to exceed the limits for exposure to radio frequency (RF) recommended by international guidelines (ICNIRP). These limits are part of comprehensive guidelines that establish permitted levels of RF radiation for the general population. The guidelines were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The device also meets the European R&TTE directives, including the protection of the health and the safety of the user and any other person.

The exposure standard for mobile devices employs a unit of measurement known as the Specific Absorption Rate (SAR).* The SAR was obtained by testing the device at standard operating positions

with the device transmitting at its highest certified power level in all tested frequency bands. The actual SAR of the device while operating can be well below the maximum value, because the device operates at multiple power levels and uses only the power required to reach the network.

When installed in the notebook computer, this device meets RF exposure guidelines when the antennas are positioned at a minimum distance from the body. In order to transmit data or messages, this device requires a quality connection to the network. In some cases, transmission of data or messages may be delayed until such a connection becomes available. Be sure that the recommended distance is observed until the transmission is complete.

*The non-FCC, international guidelines state that the SAR limit for mobile devices used by the public is 2.0 watts/kilogram (W/kg) averaged over 10 grams of body tissue. The guidelines incorporate a substantial margin of safety to give additional protection for the public and to account for any variations in measurements. SAR values may vary depending on national reporting requirements and the network band.

This equipment incorporates a radio transmitting device. In normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with the Australian and New Zealand Standards.

Ergonomics notice

Germany

Mobile computers bearing the "GS" approval mark meet the ergonomic requirements and are suitable only for short-time use of VDU tasks. When a mobile computer is used for display work tasks where the Visual Display Unit (VDU) Directive 90/270/EEC is applicable, an adequate external keyboard is required. Depending on the application and task, an adequate external monitor may also be necessary to attain working conditions comparable to a workstation setup.

Ref: EK1-ITB 2000:2008

This device is intended for use at visual display workplaces in compliance with BildscharbV, only with external keyboard and adequate external monitor.

During mobile use with disadvantageous illumination conditions (e.g. direct sun light) reflections may occur which result in reduced readability.

Mobile Computer, welche das "GS" Zeichen tragen, entsprechen den ergonomischen Anforderungen und sind nur für kurzzeitige Benutzung von Bildschirmarbeitsaufgaben geeignet. Wird ein mobiler Computer für Bildschirmarbeitsaufgaben verwendet, wo die Richtlinie 90/270/EEG (Bildschirmarbeitsrichtlinie) anzuwenden ist, wird eine geeignete externe Tastatur notwendig. Abhängig von der Anwendung und der Aufgabe kann ein geeigneter externer Monitor erforderlich sein, um vergleichbare Arbeitsbedingungen zu einem stationären Arbeitsplatz zu erreichen.

Ref: EK1-ITB 2000:2008

Das Gerät ist für die Benutzung am Bildschirmarbeitsplatz gemäß BildscharbV nur mit externer Tastatur und geeignetem Monitor vorgesehen.

Bei mobiler Nutzung mit ungünstigen Lichtverhältnissen (z.B. direkte Sonneneinstrahlung) kann es zu Reflexionen und damit zu Einschränkungen der Lesbarkeit der dargestellten Zeichen kommen.

Japan notices

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。 VCCI-B

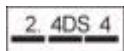
この機器の使用周波数帯では、電子レンジ等の産業・科学・医療用機器のほか工場の製造ライン等で使用されている移動体識別用の構内無線局（免許を要する無線局）及び特定小電力無線局（免許を要しない無線局）が運用されています。

- 1 この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局が運用されていないことを確認して下さい。
- 2 万一、この機器から移動体識別用の構内無線局に対して電波干渉の事例が発生した場合には、速やかに使用周波数を変更するか又は電波の発射を停止した上、下記連絡先にご連絡頂き、混信回避のための処置等（例えば、パーティションの設置など）についてご相談して下さい。
- 3 その他、この機器から移動体識別用の特定小電力無線局に対して電波干渉の事例が発生した場合など何かお困りのことが起きたときは、次の連絡先へお問い合わせ下さい。

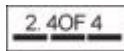
連絡先：日本ヒューレット・パッカード株式会社 TEL：0120-014121

5 GHz帯を使用する特定無線設備（802.11a相当）は屋内使用に限られています。この機器を屋外で使用することは電波法で禁じられています。

Wireless LAN 802.11b devices



Wireless LAN 802.11g devices



Bluetooth devices



Wireless LAN, Wireless WAN, and Bluetooth certification markings

This product contains certified radio equipment.



South Korea notice

B급 기기

(가정용 방송통신기기)

이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

Mexico notice

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) este equipo puede que no cause interferencia y (2) este equipo debe aceptar cualquier interferencia, incluyendo interferencia que pueda ser causada por la operación no deseada.

Singapore wireless notice

Turn off any WWAN devices while you are onboard aircraft. The use of these devices onboard aircraft is illegal, may be dangerous to the operation of the aircraft, and may disrupt the cellular network. Failure to observe this instruction may lead to suspension or denial of cellular services to the offender, or legal action, or both.

Users are reminded to restrict the use of radio equipment in fuel depots, chemical plants, and where blasting operations are in progress.

As with other mobile radio transmitting equipment, users are advised that for satisfactory operation of the equipment and for the safety of personnel, no part of the human body should be allowed to come too close to the antennas during operation of the equipment.

This device has been designed to comply with applicable requirements for exposure to radio waves, based on scientific guidelines that include margins intended to assure the safety of all people, regardless of health and age. These radio wave exposure guidelines employ a unit of measurement known as the specific absorption rate (SAR). Tests for SAR are conducted using standardized methods, with the phone transmitting at its highest certified power level in all used frequency bands. The SAR data information is based on CENELEC's standards EN50360 and EN50361, which use the limit of 2 watts per kilogram, averaged over 10 grams of tissue.

Thailand WWAN wireless notice

This telecom equipment has complied with NTC regulations.

เครื่องโทรศัพท์มือถือและอุปกรณ์นี้ มีความสอดคล้องตามข้อกำหนดของ กทช.

Taiwan notices

Wireless LAN 802.11a devices

在5.25G ~5.35G頻帶內操作之無線資訊傳輸設備僅適於室內使用

Wireless LAN 802.11b devices

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Vietnam Compliance Marking Notice

This marking is for applicable products only.



Airline travel notice

Use of electronic equipment onboard commercial aircraft is at the discretion of the airline.

Battery notices

WARNING! Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

For information about removing a battery, refer to the user guide included with the product.

ENERGY STAR compliance

As an ENERGY STAR Partner, Hewlett-Packard Company has followed the EPA's enhanced product qualification and certification process to ensure that the products marked with the ENERGY STAR logo are ENERGY STAR qualified per the applicable ENERGY STAR guidelines for energy efficiency. The following logo appears on all ENERGY STAR-qualified computers:



The ENERGY STAR program for computers was created by the EPA to promote energy efficiency and reduce air pollution through more energy-efficient equipment in homes, offices, and factories. One way that products achieve this goal is by using the Microsoft® Windows® power management feature to reduce power consumption when the product is not in use.

The power management feature allows the computer to initiate a low-power or "Sleep" mode after a period of user inactivity. When used with an external ENERGY STAR qualified monitor, this feature also supports similar power management features of the monitor. To take advantage of these potential energy savings, the power management feature has been preset to behave in the following ways when the system is operating on AC power:

- Turn off the display after 15 minutes
- Initiate Sleep after 30 minutes

The computer exits Sleep when the power/Sleep button is pressed. When the Wake On LAN (WOL) feature is enabled, the computer can also exit Sleep in response to a network signal.

Additional information on the potential energy and financial savings of the power management feature can be found on the EPA ENERGY STAR Power Management Web site at <http://www.energystar.gov/powermanagement>.

Additional information on the ENERGY STAR program and its environmental benefits are available on the EPA ENERGY STAR Web site at <http://www.energystar.gov>.

Laser compliance

⚠️ WARNING! Use of controls or adjustments, or performance of procedures other than those specified in the laser product installation guide, may result in hazardous radiation exposure. To reduce the risk of exposure to hazardous radiation:

Do not try to open the module enclosure. There are no user-serviceable components inside.

Do not operate controls, make adjustments, or perform procedures to the laser device other than those specified in the laser product installation guide.

Allow only authorized service providers to repair the unit.

This product may be provided with an optical storage device (for example, a CD or DVD drive) and/or a fiber optic transceiver. Each of these devices that contain a laser is classified as a Class 1 Laser Product in accordance with IEC 60825-1 and meets the requirements for safety of that standard.

Each laser product complies with US FDA regulations of 21 CFR 1040.10 and 1040.11 or complies with those regulations except for deviations pursuant to Laser Notice No. 50 dated June 24, 2007.

Modem notices

⚠️ WARNING! To reduce the risk of fire, electric shock, and injury to persons when using this device, always follow basic safety precautions, including the following:

Do not use this product near water—for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.

Avoid using this product during an electrical storm. There is a remote risk of electric shock from lightning.

Do not use this product to report a gas leak while in the vicinity of the leak.

Always disconnect the modem cable before opening the equipment enclosure or touching an uninsulated modem cable, jack, or internal component.

If this product was not provided with a telephone line cord, use only No. 26 AWG or larger telecommunication line cord.

Do not plug a modem or telephone cable into the RJ-45 (network) jack.

SAVE THESE INSTRUCTIONS

Telecommunications device approvals

The telecommunications device in the computer is approved for connection to the telephone network in the countries and regions whose approval markings are indicated on the product label located on the bottom of the computer or on the modem.

Refer to the user guide included with the product to ensure that the product is configured for the country or region in which the product is located. Selecting a country or region other than the one in which it is located may cause the modem to be configured in a way that violates the telecommunication regulations/laws of that country or region. In addition, the modem may not function properly if the correct country or region selection is not made. If, when you select a country or region, a message appears that states that the country or region is not supported, this means that the modem has not been approved for use in this country or region and thus should not be used.

U.S. modem statements

This equipment complies with Part 68 of the FCC Rules and the requirements adopted by the ACTA. On the bottom of the computer or on the modem is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. Provide this information to the telephone company if you are requested to do so.

Applicable certification jack USOC = RJ11C. A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all locations, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this HP equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But, if advance notice isn't practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes to its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted telephone service.

If trouble is experienced with this equipment, call technical support. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved. You should perform repairs only to the equipment specifically discussed in the "Troubleshooting" section of the user guide, if one is provided.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission, or corporation commission for information.

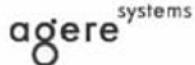
If your home has specially wired alarm equipment connected to the telephone line, ensure that the installation of this HP equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including a fax machine, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page, or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or other individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges).

In order to program this information into your fax machine, you should complete the steps outlined in the faxing software instructions.

U.S. modem declarations

Refer to the following modem vendor declarations for the modem device installed in your computer:



Brad Grande
Technical Manager

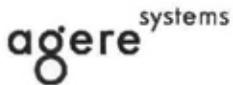
1110 American Parkway NE
Lehigh Valley Central Campus
Allentown, PA 18109
Phone: 610-712-7853
bgrande@agere.com

Supplier's Declaration of Conformity

Reference Number: Delphi D40
Place of Issue: Allentown, PA, USA
Date of Issue: 21st July 2005

Agere Systems Inc. at 1110 American Parkway NE, Lehigh Valley Central Campus, Allentown, PA 18109 in the United States of America, hereby certifies that the Delphi Modem, bearing labelling identification number **US: AGSMD01BDELPHI** complies with the Federal Communications Commission's ("FCC") Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments ("ACTA")-adopted technical criteria TIA/EIA/IS-968-A-3, Telecommunications - Telephone Terminal Equipment -Technical Requirements for Connection of Terminal Equipment To the Telephone Network.

Brad Grand
Technical Manager



Brad Grande
Technical Manager

1110 American Parkway NE
Lehigh Valley Central Campus
Allentown, PA 18109
Phone: 610-712-7853
bgrande@agere.com

Supplier's Declaration of Conformity

Reference Number: Delphi D40 (revision AM5)
Place of Issue: Allentown, PA, USA
Date of Issue: 30th November 2006

Agere Systems Inc. at 1110 American Parkway NE, Lehigh Valley Central Campus, Allentown, PA 18109 in the United States of America, hereby certifies that the Modem, bearing labelling identification number US: AGSMD01BDELPHI complies with the Federal Communications Commission's ("FCC") Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments ("ACTA")-adopted technical criteria TIA/EIA/IS-968, 968-A, 968-A-1, 968-A-2 and 968-A-3 Telecommunications – Telephone Terminal Equipment –Technical Requirements for Connection of Terminal Equipment To the Telephone Network.

Brad Grand
Technical Manager

Canada modem statements

This equipment meets the applicable Industry Canada technical specifications.

The Ringer Equivalence Number, REN, is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices, subject only to the requirement that the sum of the RENs of all devices does not exceed 5. The REN for this terminal equipment is 1.0.

Japan modem statements

If the computer does not have the Japanese certification mark on the bottom of the computer, refer to the appropriate certification marking below.

The Japanese certification mark for the V.92 56K Data/Fax Modem is below:



New Zealand modem statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment is not capable, under all operating conditions, of correct operation at the higher speeds for which it is designed. Telecom will accept no responsibility should difficulties arise in such circumstances.

If this device is equipped with pulse dialing, note that there is no guarantee that Telecom lines will always continue to support pulse dialing.

Use of pulse dialing, when this equipment is connected to the same line as other equipment, may give rise to bell tinkle or noise and may also cause a false answer condition. Should such problems occur, the user should *not* contact the Telecom Faults Service.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specifications:

- a. There shall be no more than 10 call attempts to the same number within any 30-minute period for any single manual call initiation.
- b. The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.
- c. Where automatic calls are made to different numbers, the equipment shall be set to go on-hook for a period of not less than 5 seconds between the end of one attempt and the beginning of the next attempt.
- d. The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing (So set between 2 and 10).

Voice support

All persons using this device for recording telephone conversations shall comply with New Zealand law. This requires that at least one party to the conversation is aware that it is being recorded. In addition, the Principles enumerated in the Privacy Act 1993 shall be complied with in respect to the nature of the personal information collected, the purpose for its collection, how it is to be used, and what is disclosed to any other party.

This equipment shall not be set to make automatic calls to the Telecom '111' Emergency Service.

Power cord notice

If you were not provided with a power cord for the computer or for an external power accessory intended for use with the computer, you should purchase a power cord that is approved for use in your country or region.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the diameter of the wire must be a minimum of **0.75 mm²/18AWG**, and the length of the cord must be between **1.5 m** (5 ft) and **2 m** (6½ ft). If you have questions about the type of power cord to use, contact your authorized service provider.

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

Japan power cord notice

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

DC plug of external HP power supply



NOTE: This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 V rms.

NOTE: The computer operating voltage and current can be found on the system regulatory label.

Macrovision Corporation notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation and is intended for home and other limited viewing uses only, unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

2 Safety notices

Heat-related safety warning notice

⚠️ WARNING! To reduce the possibility of heat-related injuries or of overheating the computer, do not place the computer directly on your lap or obstruct the computer air vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The computer and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950).

Potential safety conditions notice

If you notice any of the following conditions (or if you have other safety concerns), do not use the computer: crackling, hissing, or popping sound, or a strong odor or smoke coming from the computer. It is normal for these conditions to appear when an internal electronic component fails in a safe and controlled manner. However, these conditions may also indicate a potential safety issue. Do not assume it is a safe failure. Turn off the computer, disconnect it from its power source, and contact technical support for assistance.

Battery notices

⚠️ WARNING! To reduce the risk of fire or burns, do not disassemble, crush, or puncture; do not short external contacts; do not dispose of in fire or water.

WARNING! Keep the battery away from children.

WARNING! To reduce potential safety issues, only the battery provided with the computer, a replacement battery provided by HP, or a compatible battery purchased as an accessory from HP should be used with the computer.

Headset and earphone volume level notice

⚠️ WARNING! Listening to music at high volume levels and for extended durations can damage one's hearing. To reduce the risk of hearing damage, lower the volume to a safe, comfortable level and reduce the amount of time listening at high levels.

For your own safety, before using headsets or earphones, always reset the volume. Some headphones are louder than other headphones, even if the volume control setting is the same.

Changing the default audio or equalizer settings might lead to higher volume and should only be done with caution.

For your own safety, headsets or earphones used with this product should comply with the headphone limits in EN 50332-2.

If the computer includes a headset or earphones, this combination is in compliance to EN 50332-1.

Power cord notices

⚠️ WARNING! To reduce the risk of electric shock or damage to the equipment:

Plug the power cord into an AC outlet that is easily accessible at all times.

Disconnect power from the computer by unplugging the power cord from the AC outlet (not by unplugging the power cord from the computer).

If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

WARNING! To reduce potential safety issues, only the AC adapter provided with the computer, a replacement AC adapter provided by HP, or an AC adapter purchased as an accessory from HP should be used with the computer.

Cleaning the keyboard

⚠️ WARNING! To reduce the risk of electric shock or damage to internal components, do not use a vacuum cleaner attachment to clean the keyboard. A vacuum cleaner can deposit household debris on the keyboard surface. Clean the keyboard regularly to prevent keys from sticking and to remove dust, lint, and particles that can become trapped beneath the keys. A can of compressed air with a straw extension can be used to blow air around and under the keys to loosen and remove debris.

Travel notice

⚠️ WARNING! To reduce the risk of electric shock, fire, or damage to the equipment, do not attempt to power the computer with a voltage converter kit sold for appliances.

Norway and Sweden: Cable grounding notice for products with a TV tuner

⚠️ CAUTION: To reduce potential safety issues, use a galvanic isolator when connecting to a cable distribution system.

3 Environmental notices

This chapter provides country- and region-specific environmental notices and compliance information. Some of these notices may not apply to your product.

Electronic hardware and battery recycling

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, see the HP Web site at <http://www.hp.com/recycle>.

Disposal of waste equipment by users in private households in the European Union



This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please contact your household waste disposal service.

Chemical substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at <http://www.hp.com/go/reach>.

China material content declarations

微型计算机电源声明书

能耗信息说明

惠普公司对笔记本电脑提供能耗信息说明，更多信息请登陆
<http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/chinasepa.html>

当本产品进行操作时，若在未接任何外部输入电源的状态下，产品将实现零能耗的状况，特此声明。

回收信息说明

惠普公司对废弃的电子计算机（笔记本电脑）提供回收服务，更多信息请登陆
<http://h20423.www2.hp.com/program/suppliesrecycling/cn/zh/hardware/index.asp>

环境标志信息

笔记本电脑已在中国环境标志认证产品的范围内，环境标志表明该产品不仅品质合格，而且在生产、使用和处理处置过程中符合特定的环境保护要求，与同类产品相比，具有低毒少害、节约资源等环境优势。在国家环境保护部网站 (<http://www.sepa.gov.cn>) 上可浏览到关于环境标志的信息。

The Table of Toxic and Hazardous Substances/Elements and their Content

As required by China's Management Methods for Controlling Pollution by Electronic Information Products



Toxic and Hazardous Substances and Elements

Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Battery	X	O	O	O	O	O
Cables	X	O	O	O	O	O
Camera	X	O	O	O	O	O
Chassis/Other	X	O	O	O	O	O
Flash memory card reader	X	O	O	O	O	O
Floppy disk drive	X	O	O	O	O	O
Hard disk drive	X	O	O	O	O	O
Headphones	X	O	O	O	O	O
I/O PCAs	X	O	O	O	O	O
Keyboard	X	O	O	O	O	O

Toxic and Hazardous Substances and Elements						
Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Liquid crystal display (LCD) panel	X	X	O	O	O	O
Media (CD/DVD/floppy)	O	O	O	O	O	O
Memory	X	O	O	O	O	O
Motherboard, processor, heat sinks	X	O	O	O	O	O
Mouse	X	O	O	O	O	O
Optical disk drive	X	O	O	O	O	O
Optional docking device	X	O	O	O	O	O
Power adapter	X	O	O	O	O	O
Power supply	X	O	O	O	O	O
Remote control	X	O	O	O	O	O
Smart card/Java™ card reader	X	O	O	O	O	O
Speakers, external	X	O	O	O	O	O
TV tuner	X	O	O	O	O	O
USB flash memory drive	X	O	O	O	O	O
USB hub	X	O	O	O	O	O
Web camera	X	O	O	O	O	O
Wireless receiver	X	O	O	O	O	O
Wireless cards	X	O	O	O	O	O

O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.

X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.

All parts named in this table with an X are in compliance with the European Union's RoHS Legislation "Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment" and its amendments.

NOTE: The referenced Environmental Protection Use Period Marking was determined according to normal operating use conditions of the product such as temperature and humidity.

产品中有毒有害物质或元素的名称及含量

根据中国《电子信息产品污染控制管理办法》

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Toxic and Hazardous Substances and Elements

部件名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBBS)	多溴二苯醚 (PBDE)
电池	X	O	O	O	O	O
电线	X	O	O	O	O	O
照相机	X	O	O	O	O	O
机箱 / 其他	X	O	O	O	O	O
闪存读卡器	X	O	O	O	O	O
软驱	X	O	O	O	O	O
硬盘	X	O	O	O	O	O
耳机	X	O	O	O	O	O
I/O PCA	X	O	O	O	O	O
键盘	X	O	O	O	O	O
液晶显示屏	X	X	O	O	O	O
介质 (CD/DVD/ 红盘)	O	O	O	O	O	O
内存条	X	O	O	O	O	O
主板：处理器和散热器	X	O	O	O	O	O
鼠标	X	O	O	O	O	O
光驱	X	O	O	O	O	O
对接设备选件	X	O	O	O	O	O
电源适配器	X	O	O	O	O	O
电源	X	O	O	O	O	O
遥控器	X	O	O	O	O	O
Smart 卡 / Java 卡读卡器	X	O	O	O	O	O
内置扬声器	X	O	O	O	O	O
电视接收器	X	O	O	O	O	O
UAS 内存条	X	O	O	O	O	O
UAS 声卡	X	O	O	O	O	O
网线端头	X	O	O	O	O	O
无线接收器	X	O	O	O	O	O
无线网卡	X	O	O	O	O	O

O：表示该有毒有害物质在该部件所有的均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

表中带有“X”的所有部件都符合欧盟 RoHS 法规“欧洲议会和欧盟理事会 2003 年 1 月 27 日关于电子电器设备中限制使用某些有害物质的 2002/95/EC 可指令”。

 **注：**环保使用期限的参考标准取决于产品正常工作的温度和湿度等条件。

Japan material content declaration

A Japanese regulatory requirement, defined by specification JIS C 0950, 2008, mandates that manufacturers provide material content declarations for certain categories of electronic products offered for sale after July 1, 2006. To view the JIS C 0950 material declaration for this product, see the HP Web site at <http://www.hp.com/go/jisc0950>.

2008年、日本における製品含有表示方法、JIS C 0950が公示されました。製造事業者は、2006年7月1日以降に販売される電気・電子機器の特定化学物質の含有につきまして情報提供を義務付けられました。製品の部材表示につきましては、www.hp.com/go/jisc0950を参照してください。

Turkey EEE regulation

In Conformity with the EEE regulation

EEE Yönetmeliğine Uygundur

Ukraine Restriction of Hazardous Substances

The equipment complies with requirements of the Technical Regulation, approved by the Resolution of Cabinet of Ministry of Ukraine as of December 3, 2008 № 1057, in terms of restrictions for the use of certain dangerous substances in electrical and electronic equipment.

Україна обмеження на наявність небезпечних речовин

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнані, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057.

United States mercury disposal

This HP product contains the following materials that might require special handling at end-of-life:

- Mercury in the fluorescent lamp in the display LCD

Disposal of mercury can be regulated because of environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance (EIA) <http://www.eiae.org>.



NOTE: Notebook computers configured with LED backlights do not contain mercury lamps.

Perchlorate material—special handling may apply

See <http://www.dtsc.ca.gov/hazardouswaste/perchlorate>.

This product's real-time clock battery or coin cell battery may contain perchlorate and may require special handling when recycled or disposed of in California.

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