



User Guide

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Product notice

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

Software terms

By installing, copying, downloading, or otherwise using any software product preinstalled on this tablet, you agree to be bound by the terms of the HP End User License Agreement (EULA). If you do not accept these license terms, your sole remedy is to return the entire unused product (hardware and software) within 14 days for a refund subject to the refund policy of your place of purchase.

For any further information or to request a full refund of the tablet, 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 Starting right

This tablet is a powerful tool designed to enhance your work and entertainment. Read this chapter to learn about best practices after setup, fun things to do with your tablet, and where to get more HP resources.

Best practices

To get the most out of your smart investment, after you set up and register the tablet, we recommend the following steps:

- Take a minute to browse the printed *Windows 8 Basics* guide to explore the new Windows® features.

 **TIP:** To quickly return to the Start screen from an open app or the Windows desktop, press the Windows® logo key (displays the Start screen) .

- If you haven't already done so, connect to a wired or wireless network. See details in [Connecting to a network on page 26](#).
- Become familiar with the tablet hardware and software. Go to [Getting to know your tablet on page 3](#) and [Enjoying entertainment features on page 31](#) for information.
- Back up your tablet. See [Backing up, restoring, and recovering on page 63](#).

Fun things to do

- You know that you can watch a YouTube video on the tablet. But did you know that you can also connect your tablet to a TV or gaming console? For more information, see [Connecting an HDMI device on page 37](#).
- You know you can listen to music on the tablet. But did you know that you can also stream live radio to the tablet and listen to music or talk radio from all over the world? See [Using audio on page 34](#).
- You know you can create a powerful presentation with Microsoft applications. But did you know you can also connect to a projector to share your ideas with a group? See [Enjoying entertainment features on page 31](#).
- Experience music the way the artist intended, with deep controlled bass and clear, pure sound. See [Using Beats Audio on page 35](#).
- Use the TouchPad and the new Windows 8 touch gestures for smooth control of images and pages of text. See [Using TouchPad gestures on page 14](#) and [Using touch screen gestures on page 19](#).

More HP resources

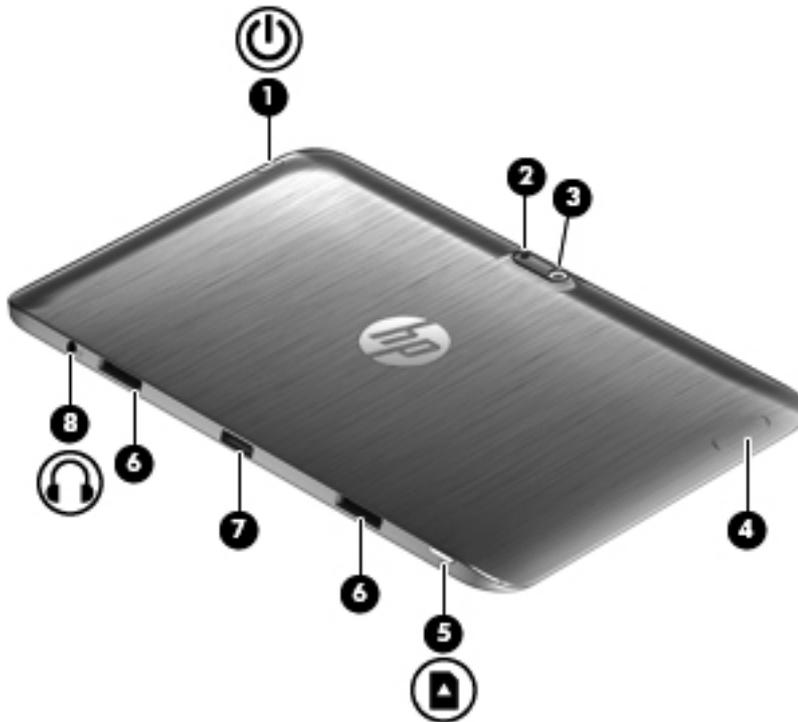
You have already used *Setup Instructions* to turn on the tablet and locate this guide. To locate product details, how-to information, and more, use this table.

Resource	Contents
<i>Setup Instructions</i>	<ul style="list-style-type: none">• Overview of tablet setup and features.
<i>Windows 8 Basics</i> guide	<ul style="list-style-type: none">• Overview of using and navigating with Windows® 8.
Help and Support	<ul style="list-style-type: none">• A broad range of how-to information and troubleshooting tips.
To access Help and Support, on the Start screen, type h , and then select Help and Support . For U.S. support, go to http://www.hp.com/go/contactHP . For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html .	
<i>Safety & Comfort Guide</i>	<ul style="list-style-type: none">• Proper workstation setup.• Guidelines for posture and work habits that increase your comfort and decrease your risk of injury.• Electrical and mechanical safety information.
To access this guide, select the HP Support Assistant app on the Start screen, select My computer , and then select User guides , or go to http://www.hp.com/ergo .	
Worldwide support web page	<ul style="list-style-type: none">• Online chat with an HP technician.• Email support.• Find support telephone numbers.• Locate HP service center locations.
To get support in your language, go to http://welcome.hp.com/country/us/en/wwcontact_us.html .	
<i>Regulatory, Safety and Environmental Notices</i>	<ul style="list-style-type: none">• Important regulatory notices.
To access this guide, select the HP Support Assistant app on the Start screen, select My computer , and then select User guides .	
<i>Limited Warranty*</i>	<ul style="list-style-type: none">• Specific warranty information about this tablet.
To access this guide, select the HP Support Assistant app, select My computer , and then select Warranty and services , or go to http://www.hp.com/go/orderdocuments .	
*You can find the expressly provided HP Limited Warranty applicable to your product located with the user guides on your tablet and/or on the CD/DVD provided in the box. In some countries/regions, HP may provide a printed HP Limited Warranty in the box. For countries/regions where the warranty is not provided in printed format, you may request a printed copy from http://www.hp.com/go/orderdocuments or write to:	
<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	
When you request a printed copy of your warranty, please include your product number, warranty period (found on your service label), name, and postal address.	
IMPORTANT: Do NOT return your HP product to the addresses above. For U.S. support, go to http://www.hp.com/go/contactHP . For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html .	

2 Getting to know your tablet

Knowing the tablet parts

Tablet edge components

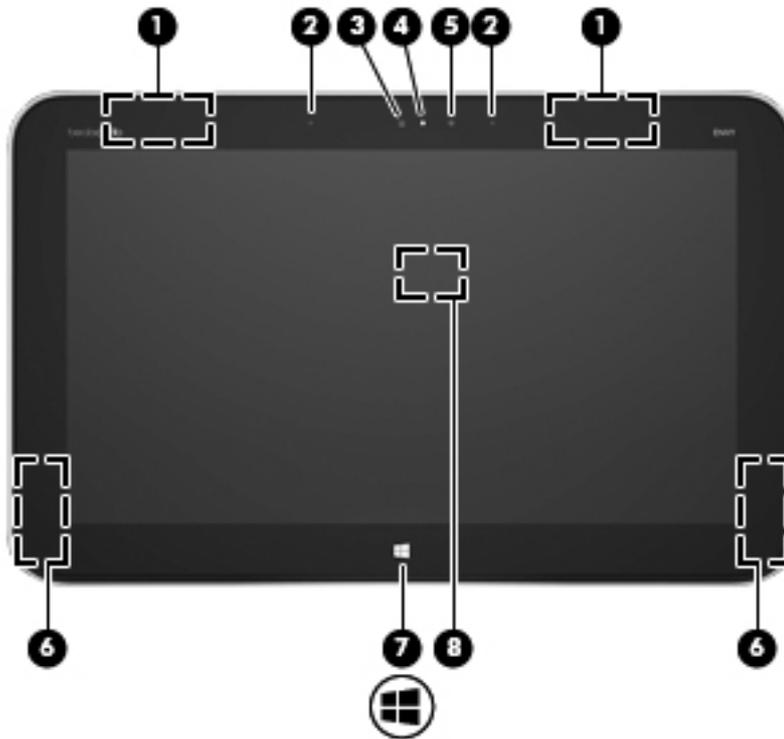


Components		Description
(1)	 Power button	<ul style="list-style-type: none"> When the tablet is off, press the button to turn on the tablet. When the tablet is on, press the button briefly to initiate Sleep. When the tablet is in the Sleep state, press the button briefly to exit Sleep. <p>CAUTION: Pressing and holding down the power button will result in the loss of unsaved information.</p> <p>If the tablet has stopped responding and Microsoft® Windows® shutdown procedures are ineffective, press and hold the power button down for at least 5 seconds to turn off the tablet.</p> <p>  On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box. In the search box, type <code>power</code>, select Settings, and then select Power options, or see Managing power on page 44. </p> <p>– or –</p> <p>  To learn more about your power settings, on the Start screen, type <code>p</code>. In the search box, type <code>power</code>, select Settings, and then select Power options, or see Managing power on page 44. </p>
(2)	Webcam light (rear)	On: The webcam is in use.
(3)	HP TrueVision HD Webcam (rear)	<p>Records video, captures still photographs, and allows video conferences and online chat by means of streaming video.</p> <p>To use the webcam, type <code>c</code>, and then select CyberLink YouCam.</p>
(4)	Volume button	<p>Controls speaker volume on the tablet.</p> <ul style="list-style-type: none"> To increase speaker volume, press the + edge of the button. To decrease speaker volume, press the – edge of the button.
(5)	 SD Card Reader	Supports SD cards.
(6)	Tablet alignment post connectors (2)	Align and attach the tablet to the keyboard dock.

Components		Description
(7)	Docking port	the tablet to the keyboard dock.
(8)	 Audio-out (headphon	<p>optional powered stereo speakers, headphones, headset, or a television audio cable.</p> <p>WARNING! To reduce the risk of personal injury, adjust the volume before using headphones, earbuds, or a headset. For additional safety information, see the <i>Regulatory, Safety and Environmental Notices</i>.</p> <p>NOTE: When a device is connected to a headphone jack, the tablet speakers are disabled.</p>

Please confirm all instances of headphone and no microphone support

Display



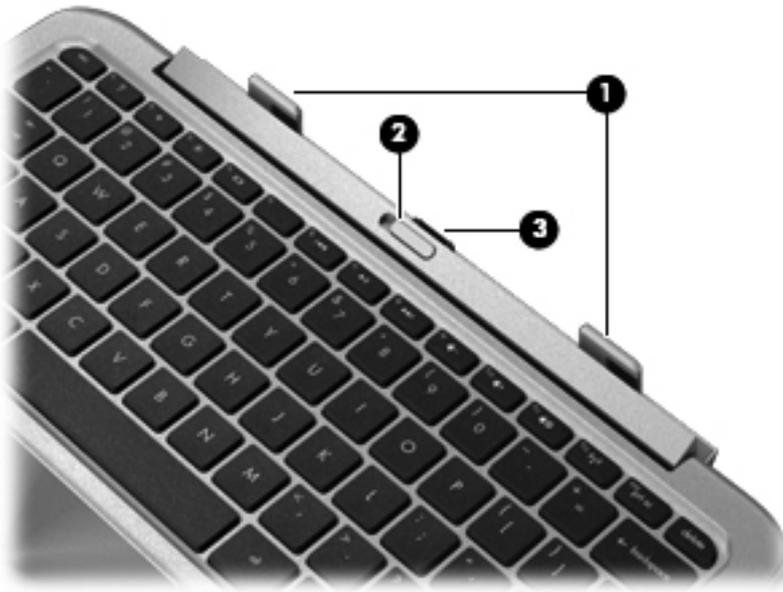
Component	Description
(1) WLAN antennas (2)*	Send and receive wireless signals.
(2) Internal microphones (2)	Record audio, automatically filtering out the noise around you and cancelling echoes.
(3) HP TrueVision HD Webcam (front)	Records video and takes still photographs.
	 <p>On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box. Type c, and then select CyberLink YouCam from the list of applications.</p> <p>– or –</p>  <p>From the Start screen, type c, and then select CyberLink YouCam from the list of applications.</p>
(4) Webcam light (front)	On: The webcam is on.
(5) Ambient light sensor	The ambient light sensor automatically adjusts the display brightness based on the lighting conditions in your environment.
(6) Speakers (2)	Produce sound.
(7) Windows® logo button	Minimizes all open applications and displays the Start screen.

Component	Description
(8) Near Field Communication antenna	With HP Touch to Share, you can wirelessly share websites to and from your Near Field Communication (NFC)–compatible Android smart phone and your tablet.

*The antennas are not visible from the outside of the tablet. For optimal transmission, keep the areas immediately around the antennas and proximity sensors free from obstructions. For wireless regulatory notices, see the section of the *Regulatory, Safety, and Environmental Notices* that applies to your country or region.

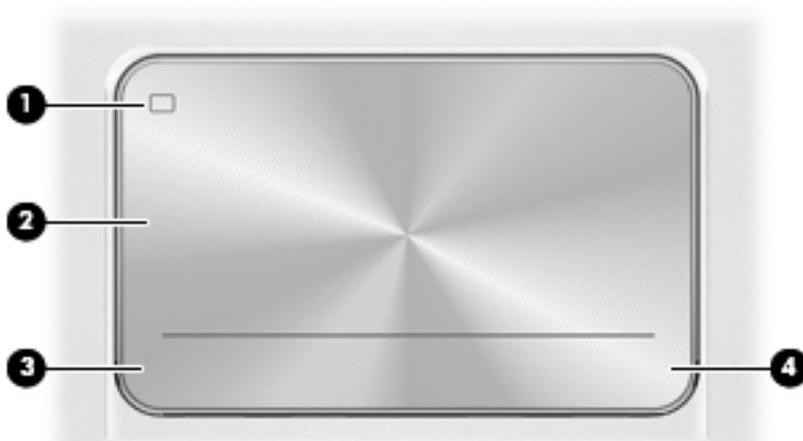
Keyboard dock

Top



Component		Description
(1)	Tablet alignment posts	Align and attach the tablet to the keyboard dock.
(2)	Release latch	Releases the tablet. To release the tablet, slide the release latch to the left.
(3)	Docking connector	Connects the tablet to the keyboard dock.

TouchPad



Component		Description
(1)	TouchPad on/off button	Turns the TouchPad off or on when you quickly double-tap the button.

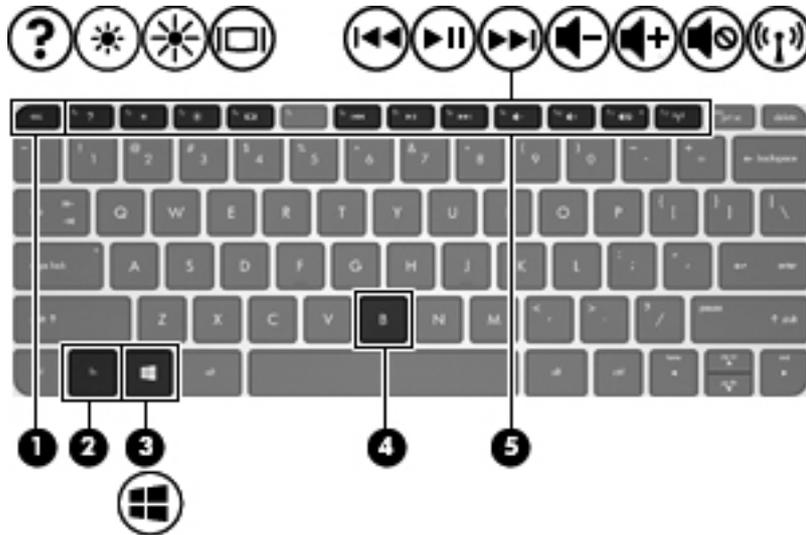
Component	Description
(2) TouchPad zone	Reads your finger gesture to move the pointer or activate items on the screen.
(3) Left TouchPad button	Functions like the left button of an external mouse.
(4) Right TouchPad button	Functions like the right button on an external mouse.

Lights



Component	Description
(1) Caps lock light	<ul style="list-style-type: none"> White: Caps lock is on. Off: Caps lock is off.
(2)  Wireless light	<ul style="list-style-type: none"> White: An integrated wireless device, such as a wireless local area network (WLAN) device, is enabled. <p>NOTE: Wireless devices are turned on at the factory.</p> <ul style="list-style-type: none"> Amber: All wireless devices are off.

Keys



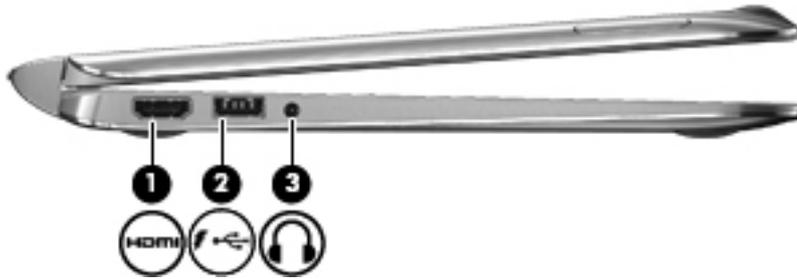
Component	Description
(1) <code>esc</code> key	Displays system information when pressed in combination with the <code>fn</code> key.
(2) <code>fn</code>	Displays system information when pressed in combination with the <code>esc</code> key.
(3)  Windows logo key	Returns you to the Start screen from an open app or the Windows desktop. NOTE: Pressing the Windows logo key again will return you to the previous screen.
(4) <code>b</code> key	Enables or disables Beats Audio when pressed in combination with the <code>fn</code> key.
(5) Action keys	Perform common tasks. NOTE: Action keys do not display or function on the on-screen keyboard of the tablet.

Right side



Component	Description
(1) Digital Media Slot	Supports the following digital card formats: <ul style="list-style-type: none"> • Secure Digital (SD) Memory Card • Secure Digital Extended Capacity (SDxC) Memory Card • Secure Digital High Capacity (SDHC) Memory Card • Ultra High Speed MultiMediaCard (UHS/MMC)
(2)  USB 2.0 charging port	Connects an optional USB 1.0 or USB 2.0 device. The USB 2.0 charging port can also charge select models of cell phones and MP3 players, even when the tablet is off. <p>NOTE: USB charging is enabled at the factory. To disable USB charging in Setup Utility, see Using Setup Utility (BIOS) and System Diagnostics on page 60.</p>
(3)  Power connector	Connects an AC adapter.

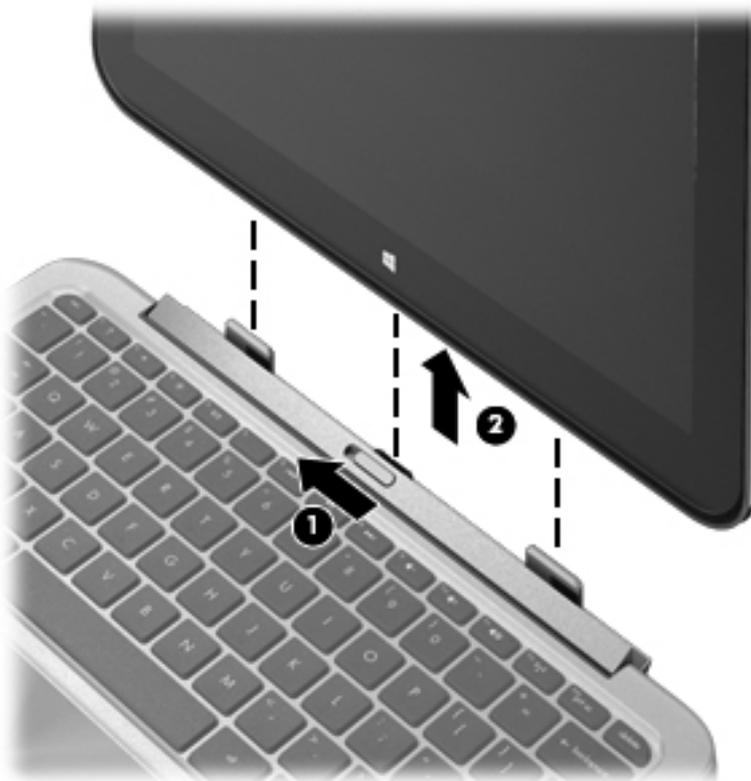
Left side



Component		Description
(1)  HDMI	HDMI port	Connects an optional video or audio device, such as a high-definition television, any compatible digital or audio component, or a high-speed HDMI 1.4 device.
(2) 	USB 2.0 charging port	<p>Connects an optional USB 1.0 or USB 2.0 device. The USB 2.0 charging port can also charge select models of cell phones and MP3 players, even when the tablet is off.</p> <p>NOTE: USB charging is enabled at the factory. To disable USB charging in Setup Utility, see Using Setup Utility (BIOS) and System Diagnostics on page 60.</p>
(3) 	Audio-out (headph	<p>Connects an optional powered stereo speakers, headphones, headset, or a television audio cable.</p> <p>To reduce the risk of personal injury, adjust the volume when using headphones, earbuds, or a headset. For additional safety information, see the <i>Regulatory, Safety and Environmental Notices</i>.</p> <p>NOTE: When a device is connected to a headphone jack, the tablet speakers are disabled.</p>

Please confirm all instances of headphone and no microphone support

Releasing the tablet from the keyboard dock



To release the tablet from the keyboard dock, follow these steps:

1. Slide the release latch on the keyboard dock to the left (1).
2. Lift and remove the tablet (2).

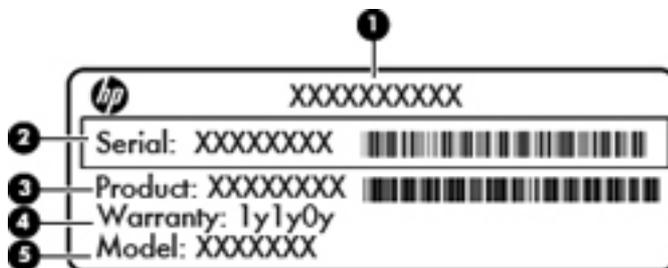
Labels

Identifying the labels

The labels on the tablet provide information you may need when you troubleshoot problems or travel internationally with the tablet. The labels are located on the bottom of the tablet or in another easily accessible location.

- Service label—Provides important information.

 **NOTE:** Have this information available when you contact technical support.



Component	
(1)	Product name
(2)	Serial number
(3)	Part number/Product number
(4)	Warranty period
(5)	Model description

- Regulatory label—Provides regulatory information about the tablet.
- 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 tablet model includes one or more wireless devices, one or more certification labels are included with your tablet. You may need this information when traveling internationally.

Changing your tablet's settings

You can change your tablet's view and its screen brightness.

Changing your tablet's view

Your tablet's orientation, or view, changes automatically from landscape to portrait view, or from portrait to landscape view.

1. To change the view of your tablet from landscape view to portrait view:
Hold the tablet vertically, and then turn it 90 degrees to the right (in a clockwise direction).
2. To change the view of your tablet from portrait view to landscape view:
Hold the tablet vertically, and then turn it 90 degrees to the left (in a counter-clockwise direction).

Adjusting your tablet's screen brightness

To adjust the screen brightness:

1. From the Windows desktop, tap the **Power Meter** icon in the notification area, at the far right of the taskbar.
2. Tap **Adjust screen brightness**.
3. Move the slider next to **Screen brightness** at the bottom of the screen.

Using TouchPad gestures



NOTE: TouchPad gestures are not supported in all apps.

Tapping

To make an on-screen selection, use the Tap function on the TouchPad.

- Point to an item on the screen, and then tap one finger on the TouchPad zone to make a selection. Double-tap an item to open it.



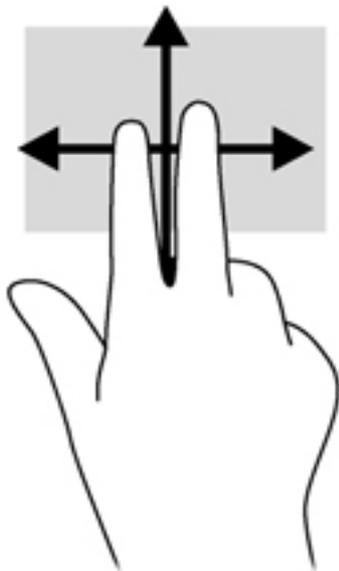
NOTE: Press and hold on the TouchPad to open a help screen that provides information about the selected item.



Scrolling

Scrolling is useful for moving up, down, or sideways on a page or image.

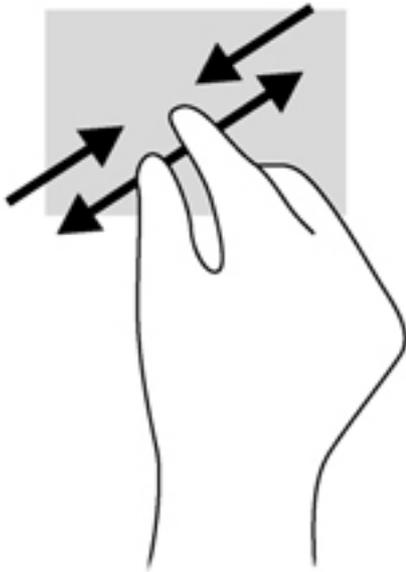
- Place two fingers slightly apart on the TouchPad zone and then drag them up, down, left, or right.



Pinching/zooming

Pinching and zooming allow you to zoom out or in on images or text.

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



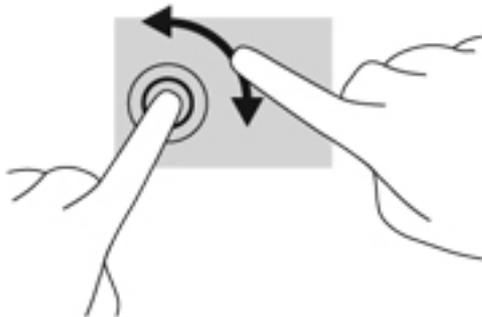
Rotating (select models only)

Rotating allows you to turn items such as photos.

- Point to an object, then anchor the forefinger of your left hand in the TouchPad zone. Using your right hand, slide your forefinger in a sweeping motion from 12 o'clock to 3 o'clock. To reverse the rotation, move your forefinger from 3 o'clock to 12 o'clock.



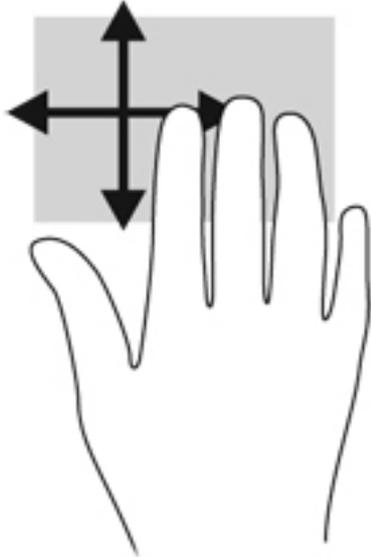
NOTE: Rotate is intended for specific apps where you can manipulate an object or image. It may not be functional for all apps.



Flicking (select models only)

Flicking allows you to navigate through screens or quickly scroll through documents.

- Place three fingers on the TouchPad zone and flick your fingers in a light, quick motion up, down, left or right.



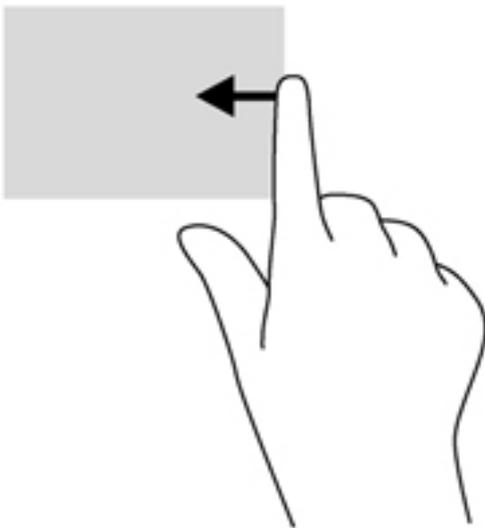
Edge swipes

Edge swipes allow you to access toolbars on your tablet for tasks such as changing settings and finding or using apps.

Right-edge swipe

The right-edge swipe accesses the charms, which let you search, share, start apps, access devices, or change settings.

- Swipe your finger gently from the right edge to display the charms.

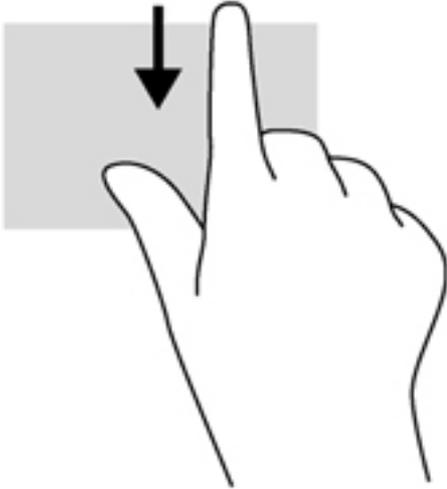


Top-edge swipe

The top-edge swipe allows you to open apps available on the Start screen.

 **IMPORTANT:** When an app is active, the top-edge gesture varies depending on the app.

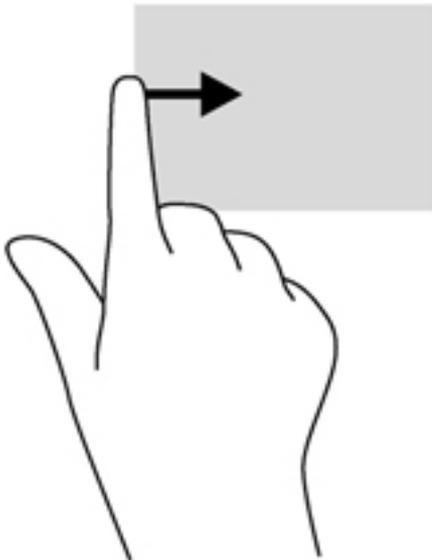
- Swipe your finger gently from the top edge to display available apps.



Left-edge swipe

The left-edge swipe accesses your recently opened apps so that you can switch between them quickly.

- Swipe your finger gently from the left edge of the TouchPad to switch between recently opened apps.



Using touch screen gestures

A touch screen tablet allows you to control items on the screen directly with your fingers.

 **TIP:** On touch screen tablets, you can perform the gestures on the screen or on the TouchPad. You can also perform on-screen actions with the keyboard and mouse.

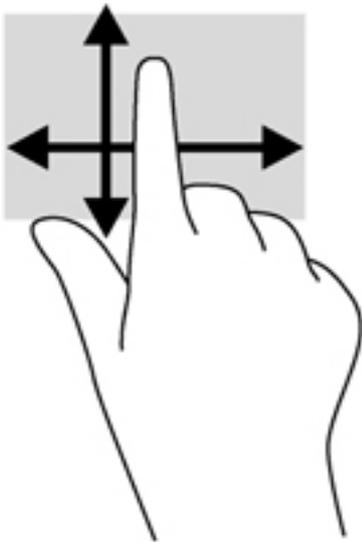
One-finger slide

The one-finger slide is mostly used to pan or scroll through lists and pages, but you can use it for other interactions, too, such as moving an object.

- To scroll across the screen, lightly slide one finger across the screen in the direction you want to move.

 **NOTE:** When many apps are displayed on the Start screen, you can slide your finger to move the screen left or right.

- To drag, press and hold an object, and then drag the object to move it.



Tapping

To make an on-screen selection, use the tap function.

- Use one finger to tap an object on the screen to make a selection. Double-tap an item to open it.

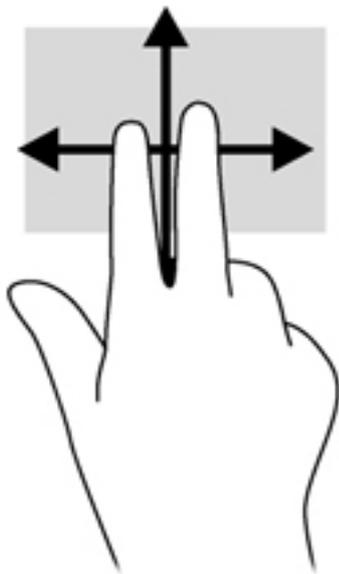
 **NOTE:** Press and hold your finger on an object to open a help screen that provides information about the object.



Scrolling

Scrolling is useful for moving the pointer up, down, left, or right on a page or image.

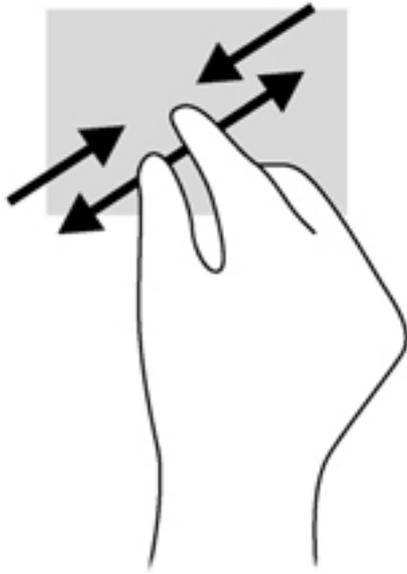
- Place two fingers on the screen and then drag them in an up, down, left, or right motion.



Pinching/stretching

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

- Zoom in by placing two fingers together on the display and then move your fingers apart.
- Zoom out by placing two fingers apart on the display and then move your fingers together.

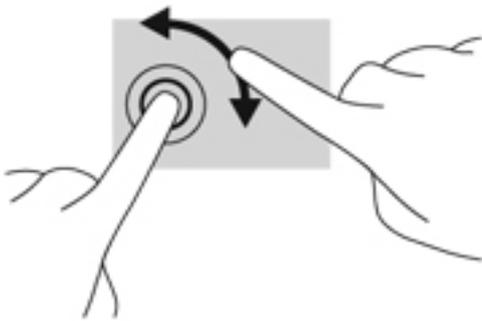


Rotating (select models only)

Rotating allows you to turn items such as photos.

- Anchor the forefinger of your left hand on the object you want to rotate. Using your right hand, slide your forefinger around in a sweeping motion from 12 o'clock to 3 o'clock. To reverse the rotation, move your forefinger from 3 o'clock to 12 o'clock.

 **NOTE:** Rotate is intended for specific apps where you can manipulate an object or image. Rotate may not be functional for all apps.



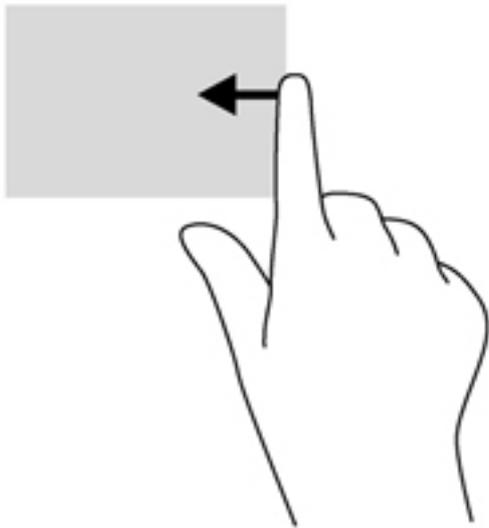
Edge swipes

With edge swipes you can perform tasks such as changing settings and finding or using apps.

Right-edge swipe

The right-edge swipe reveals the charms, which let you search, share, start apps, access devices, or change settings.

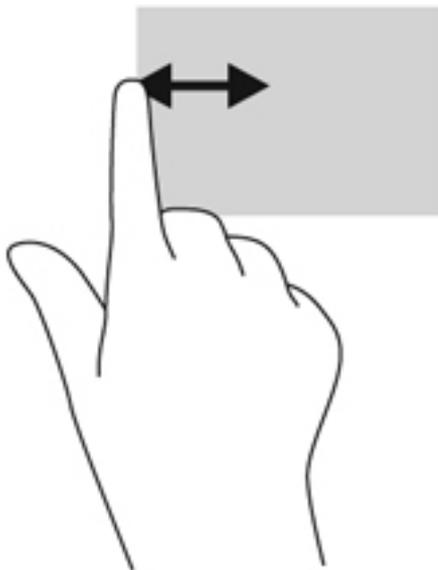
- Gently swipe your finger inward from the right edge of the display bezel onto the screen to display the charms.



Left-edge swipe

The left-edge swipe accesses your recently opened apps so that you can switch between them quickly.

- Gently swipe your finger inward from the left edge of the display bezel to switch between recently-opened apps.
- Without lifting your finger, swipe back toward the left edge to display all recently opened apps.

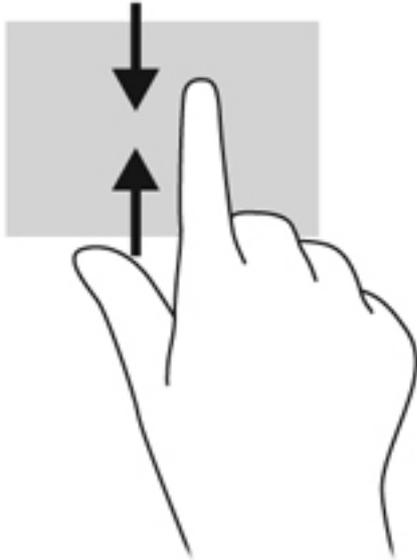


Top-edge swipe and bottom-edge swipe

The top-edge swipe or bottom-edge swipe allows you to open a list of apps available on your tablet.

1. Gently swipe finger from the top edge or the bottom edge of the display bezel onto the screen.

2. Tap **All apps** to view available apps.



Setting Touch screen preferences

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type c, tap Control Panel, tap Hardware and Sound, tap Pen and Touch, and then follow the on-screen instructions.
	<p>To change or create flick assignments:</p> <ol style="list-style-type: none">1. On the Start screen, type c, and then tap Control Panel.2. Tap Hardware and Sound, tap Pen and Touch, and then tap the Flicks tab.3. Tap Navigational flicks and editing flicks, and then tap Customize.4. Follow the on-screen instructions to change or create a flick assignment.5. Tap OK.

These preferences are specific to the touch screen and the tablet.

Using the on-screen keyboard

You may want to enter data into a data field. This may be required when you set up a wireless network configuration or a weather reporting location, or when you access user accounts on Internet sites. Your tablet has an on-screen keyboard that is displayed when you need to enter such information into data fields.

1. To display the keyboard, tap in the first data field. Tap the small keyboard icon that is displayed.
– or –
Tap the keyboard icon right side of the notification area.
2. To enlarge the size of the on-screen keyboard, tap the lower-right corner and drag it to the desired size.
3. Tap each character, continuing until you have spelled out the name or word that you are entering into the data field.

 **NOTE:** Action keys do not display or function on the on-screen keyboard.

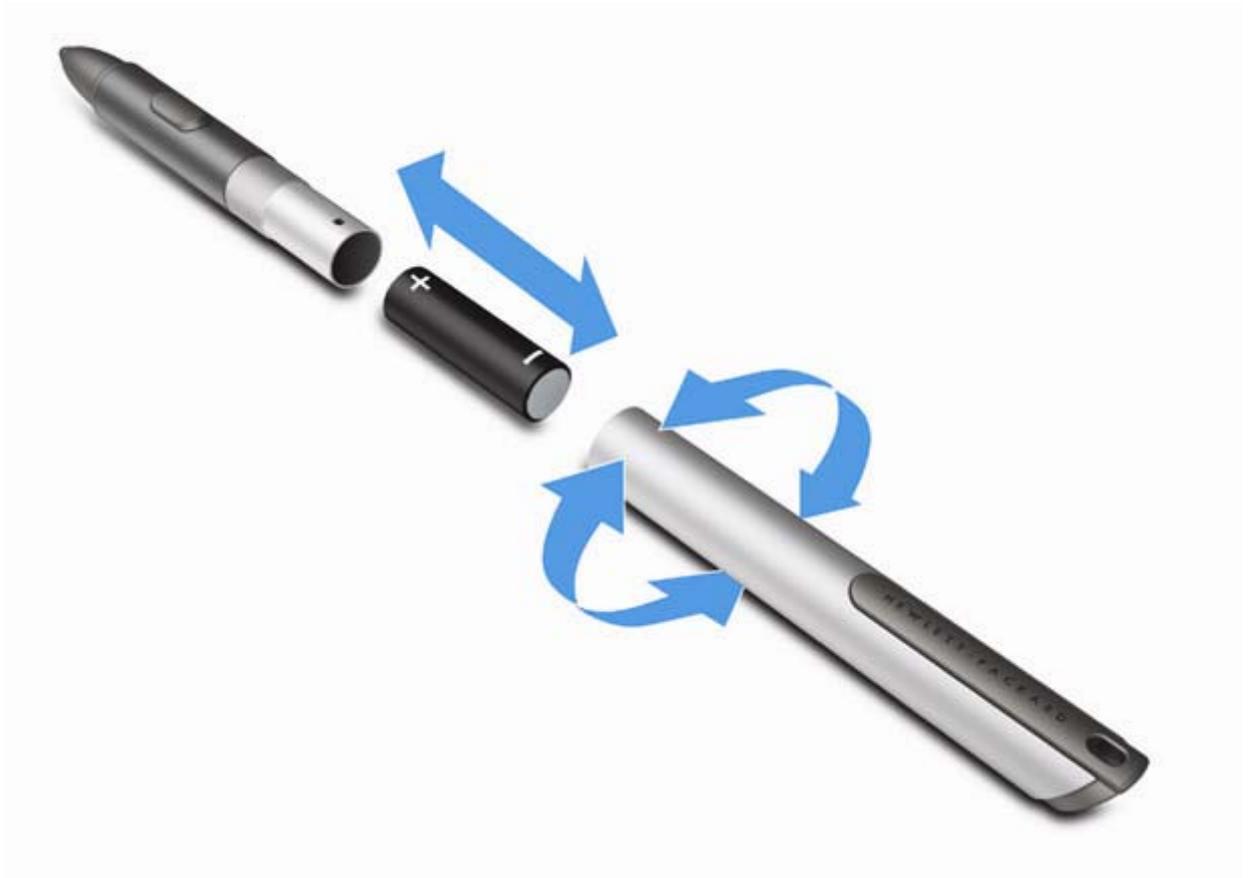
 **NOTE:** Suggested words may be displayed at the top of the keyboard. If an appropriate word is displayed, tap it to select it.

4. Tap **enter** on the keyboard.

To change on-screen keyboard settings,

- ▲ Tap or click the keyboard icon Tap the keyboard icon on the right side of the notification area.

Using the digital pen (select models only)



To insert the battery in the pen:

1. Unscrew the cap from the pen.
2. Insert the battery **(1)** in the pen.
3. Replace the cap **(2)** on the pen.
4. Turn the cap in a clockwise direction **(3)** to tighten it.

The digital pen is now ready to use with your HP tablet. Simply touch the tip of the pen lightly on the screen to write text or items on the screen. To perform a right-click action, press the button on the side of the pen when selecting an item on the screen.

To calibrate the pen and change pen settings, such as pen sensitivity, on the Start screen, tap **Control Panel**, tap **Hardware and Sound**, tap **Pen and Touch**, tap **Calibrate the screen for pen or touch input**, and then follow the on-screen instructions.



NOTE: For regulatory and safety information, refer to the *Regulatory, Safety, and Environmental Notices* on the HP tablet. To access this guide, tap the **HP Support Assistant** app on the Start screen, tap **My computer**, and then select **User guides**.

Finding your hardware and software information

Locating hardware

To find out what hardware is installed on your tablet:

1. From the Start screen, type **c**, and then select **Control Panel**.
2. Select **System and Security**, and then in the System area, click **Device Manager**.

A list displays all the devices installed in your tablet.

Locating software

- ▲ To find out what software is installed on your computer, from the Start screen, right-click using the mouse or swipe from the top of the TouchPad to display the Apps toolbar, and then select the **All apps** icon.

Updating the software installed on the tablet

Most software, including the operating system, is updated frequently by the manufacturer or provider. Important updates to the software included with the tablet may have been released since the tablet left the factory.

Some updates may affect the way the tablet responds to optional software or external devices. Many updates provide security enhancements.

Update the operating system and other software installed on the tablet as soon as the tablet is connected to the Internet. Access the updates on the HP Web site at <http://www.hp.com>.

3 Connecting to a network

Your tablet can travel with you wherever you go. But even at home, you can explore the globe and access information from millions of websites using your tablet and a wired or wireless network connection. This chapter will help you get connected to that world.

Connecting to a wireless network

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

- **Wireless local area network (WLAN) device**—Connects the tablet to wireless local area networks (commonly referred to as Wi-Fi networks, wireless LANs, or WLANs) in corporate offices, your home, and public places such as airports, restaurants, coffee shops, hotels, and universities. In a WLAN, the mobile wireless device in your tablet communicates with a wireless router or a wireless access point.
- **Bluetooth device**—Creates a personal area network (PAN) to connect to other Bluetooth-enabled devices such as computers, phones, printers, headsets, speakers, and cameras. In a PAN, each device communicates directly with other devices, and devices must be relatively close together—typically within 10 meters (approximately 33 feet) of each other.

For more information about wireless technology, see the information and website links provided in Help and Support.

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type h, and then select Help and Support.
	From the Start screen, type h , and then select Help and Support .

Using the wireless controls

You can control the wireless devices in your tablet using these features:

- Wireless button, wireless switch, or wireless key (referred to in this chapter as the wireless button)
- Operating system controls

Using the wireless button

The tablet has a wireless button, one or more wireless devices, and one or two wireless lights, depending on the model. All of the wireless devices on your tablet are enabled at the factory, so the wireless light is on (white) when you turn on the tablet.

The wireless light indicates the overall power state of your wireless devices, not the status of individual devices. If the wireless light is white, at least one wireless device is on. If the wireless light is off, all wireless devices are off.

 **NOTE:** On some models, the wireless light is amber when all wireless devices are off.

Because the wireless devices are enabled at the factory, you can use the wireless button to turn on or turn off the wireless devices simultaneously.

Using operating system controls

The Network and Sharing Center allows you to set up a connection or network, connect to a network, manage wireless networks, and diagnose and repair network problems.

To use operating system controls:

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type <code>network and sharing</code> in the search box, and then select Network and Sharing Center.
	<ol style="list-style-type: none">1. From the Start screen, type <code>n</code>, and then select Settings.2. Type <code>network and sharing</code> in the search box, and then select Network and Sharing Center.

For more information, from the Start screen, type `h`, and then select **Help and Support**.

Using a WLAN

With a WLAN device, you can access a wireless local area network (WLAN), which is composed of other devices and accessories that are linked by a wireless router or a wireless access point.

 **NOTE:** The terms *wireless router* and *wireless access point* are often used interchangeably.

- A large-scale WLAN, such as a corporate or public WLAN, typically uses wireless access points that can accommodate a large number of devices and accessories and can separate critical network functions.
- A home or small office WLAN typically uses a wireless router, which allows several wireless and wired devices to share an Internet connection, a printer, and files without requiring additional pieces of hardware or software.

To use the WLAN device in your tablet, you must connect to a WLAN infrastructure (provided through a service provider or a public or corporate network).

Using an Internet service provider

When you are setting up Internet access in your home, you must establish an account with an Internet service provider (ISP). To purchase Internet service and a modem, contact a local ISP. The ISP will help set up the modem, install a network cable to connect your wireless router to the modem, and test the Internet service.

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

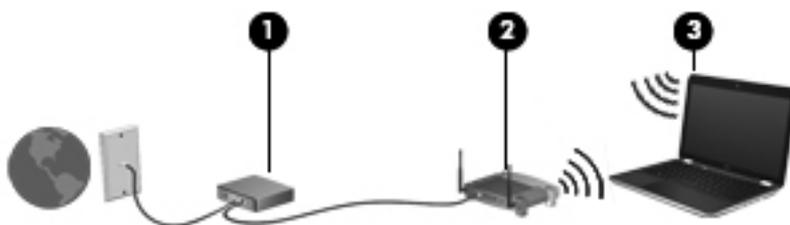
Setting up a WLAN

To set up a WLAN and connect to the Internet, you need the following equipment:

- A broadband modem (either DSL or cable) **(1)** and high-speed Internet service purchased from an Internet service provider
- A wireless router **(2)** (purchased separately)
- A 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 below shows an example of a wireless network installation that is connected to the Internet.



As your network grows, additional wireless and wired devices can be connected to the network to access the Internet.

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

Configuring a wireless router

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

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

Protecting your WLAN

When you set up a WLAN or access an existing WLAN, always enable security features to protect your network from unauthorized access. WLANs in public areas (hotspots) like coffee shops and airports may not provide any security. If you are concerned about the security of your device when connected to a hotspot, limit your network activities to email that is not confidential and basic Internet surfing.

Wireless radio signals travel outside the network, so other WLAN devices can pick up unprotected signals. Take the following precautions to protect your WLAN:

- Use a firewall.
A firewall checks both data and requests for data that are sent to your network, and discards any suspicious items. Firewalls are available in both software and hardware. Some networks use a combination of both types.
- Use wireless encryption.
Wireless encryption uses security settings to encrypt and decrypt data that is transmitted over the network. For more information, on the Start screen, type **h**, and then select **Help and Support**.

Connecting to a WLAN

To connect to the WLAN, follow these steps:

1. Be sure that the WLAN device is on. If the device is on, the wireless light is on. If the wireless light is off, press the wireless button.

 **NOTE:** On some models, the wireless light is amber when all wireless devices are off.

2. From the Windows desktop, tap or click the network status icon in the notification area, at the far right of the taskbar.
3. Select your WLAN from the list.
4. Click **Connect**.
5. If the WLAN is a security-enabled WLAN, you are prompted to enter a security code. Type the code, and then click **OK** to complete the connection.

 **NOTE:** If no WLANs are listed, you may be out of range of a wireless router or access point.

 **NOTE:** If you do not see the WLAN you want to connect to, from the Windows desktop, right-click the network status icon, and then select **Open Network and Sharing Center**. Click **Set up a new connection or network**. A list of options is displayed, allowing you to manually search for and connect to a network or to create a new network connection.

After the connection is made, place the mouse pointer over the network status icon in the notification area, at the far right of the taskbar, to verify the name and status of the connection.

 **NOTE:** The functional range (how far your wireless signals travel) depends on WLAN implementation, router manufacturer, and interference from other electronic devices or structural barriers such as walls and floors.

Using Bluetooth wireless devices

A Bluetooth device provides short-range wireless communications that replace the physical cable connections that traditionally link electronic devices such as the following:

- Computers (desktop, notebook, PDA)
- Phones (cellular, cordless, smart phone)
- Imaging devices (printer, camera)
- Audio devices (headset, speakers)
- Mouse

Bluetooth devices provide peer-to-peer capability that allows you to set up a personal area network (PAN) of Bluetooth devices. For information about configuring and using Bluetooth devices, see the Bluetooth software Help.

Connecting to a wired network

There are 2 kinds of wired connections: local area network (LAN) and modem connection. A LAN connection uses a network cable and is much faster than a modem connection, which uses a telephone cable. Both cables are sold separately.

⚠ WARNING! To reduce the risk of electric shock, fire, or damage to the equipment, do not plug a modem cable or telephone cable into an RJ-45 (network) jack.

Connecting to a local area network (LAN)

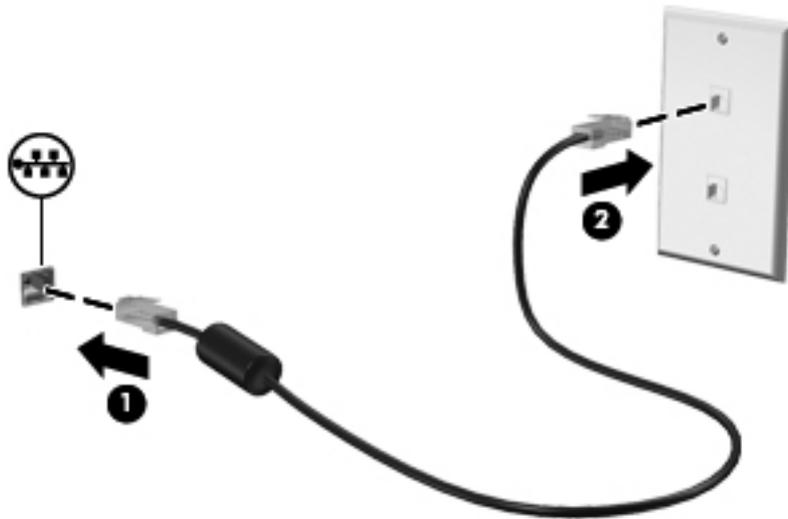
Use a LAN connection if you want to connect the tablet directly to a router in your home (instead of working wirelessly), or if you want to connect to an existing network at your office.

Connecting to a LAN requires an 8-pin, RJ-45 (network) cable.

To connect the network cable, follow these steps:

1. Plug the network cable into the network jack **(1)** on the keyboard dock.
2. Plug the other end of the network cable into a network wall jack **(2)** or router.

📝 NOTE: If the network cable contains noise suppression circuitry **(3)**, which prevents interference from TV and radio reception, orient the circuitry end of the cable toward the keyboard dock.



4 Enjoying entertainment features

Use your HP tablet as an entertainment hub to socialize via the webcam, enjoy and manage your music, and download and watch movies. Or, to make your tablet an even more powerful entertainment center, connect external devices like a monitor, projector, or TV, or speakers and headphones.

Multimedia Features

Here are some of the entertainment features on your tablet.



Component	Description	
(1)	Webcam light (rear)	On: The webcam is in use.
(2)	HP TrueVision HD Webcam (rear)	Records video, captures still photographs, and allows video conferences and online chat by means of streaming video. To use the webcam, type c , and then select CyberLink YouCam .

Component	Description	
(3)	Volume button	<p>Controls speaker volume on the tablet.</p> <ul style="list-style-type: none"> To increase speaker volume, press the + edge of the button. To decrease speaker volume, press the – edge of the button.
(4)	 Audio-out (headphone) jack	<p>Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television audio cable.</p> <p>WARNING! To reduce the risk of personal injury, adjust the volume before using headphones, earbuds, or a headset. For additional safety information, see the <i>Regulatory, Safety and Environmental Notices</i>.</p> <p>NOTE: When a device is connected to a headphone jack, the tablet speakers are disabled.</p>

Please confirm all instances of headphone and no microphone support



Component	Description	
(1)	Internal microphones (2)	Record sound.

Component	Description	
(2)	HP TrueVision HD Webcam (front)	Records video, captures still photographs, allows you to video conference and chat online using streaming video.
		 On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search , and then tap the search box. type c , and then select CyberLink YouCam from the list of applications. <p>– or –</p>  From the Start screen, type c , and then select CyberLink YouCam from the list of applications.
(3)	Webcam light (front)	On: The webcam is in use.
(4)	Ambient light sensor	The ambient light sensor automatically adjusts the display brightness based on the lighting conditions in your environment.
(5)	Speakers (2)	Produce sound.
(6)		USB 2.0 charging port
		<p>Connects an optional USB 1.0 or USB 2.0 device. The USB 2.0 charging port can also charge select models of cell phones and MP3 players, even when the tablet is off.</p> <p>NOTE: USB charging is enabled at the factory. To disable USB charging in Setup Utility, see Using Setup Utility (BIOS) and System Diagnostics on page 60.</p>
(7)	b key	<p>Enables or disables Beats Audio when pressed in combination with the fn key.</p> <p>Beats Audio is an enhanced audio feature that provides a deep, controlled bass while maintaining a clear sound. Beats Audio is enabled by default.</p> <p>You can also view and control the bass settings through the Windows operating system. To view and control the bass properties, open the Beats Audio Control Panel.</p> <p>To open Beats Audio Control Panel, from the Start screen on the keyboard dock, type c , select Control Panel, select Hardware and Sound, and then select Beats Audio Control Panel.</p>
(8)		HDMI port
		<p>Connects an optional video or audio device, such as a high-definition television, any compatible digital or audio component, or a high-speed HDMI device.</p>

Using the webcam

Your tablet has an integrated webcam, a powerful social networking tool that allows you to communicate up close with friends and colleagues, next door or on the other side of the world. With the webcam, you can stream video with your instant messaging software, capture and share video, and take still photos.

To start the webcam,

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type c, and then select CyberLink YouCam from the list of applications.
	From the Start screen, type c , and then select CyberLink YouCam from the list of applications.

For details about using the webcam, refer to the software Help for the app.

Using audio

On your HP tablet, you can play music CDs, download and listen to music, stream audio content from the web (including radio), record audio, or mix audio and video to create multimedia. To enhance your listening enjoyment, attach external audio devices such as speakers or headphones.

Connecting speakers

You can attach wired speakers to your tablet by connecting them to a USB port (or the audio-out jack) on your tablet or on a docking station.

To connect *wireless* speakers to your tablet, follow the device manufacturer's instructions. To connect high-definition speakers to the tablet, see [Configuring HDMI audio settings on page 38](#). Before connecting audio devices, be sure to adjust the volume.

Connecting headphones

You can connect wired headphones to the headphone jack on your tablet.

To connect *wireless* headphones to your tablet, follow the device manufacturer's instructions.

⚠ WARNING! To reduce the risk of personal injury, lower the volume setting before putting on headphones, earbuds, or a headset. For additional safety information, see the *Regulatory, Safety and Environmental Notices*.

Connecting a microphone

To record audio, connect a microphone to the Audio-out (headphone) jack/Audio-in (microphone) jack on the tablet. For best results when recording, speak directly into the microphone and record sound in a setting free of background noise.

Using Beats Audio

Beats Audio is an enhanced audio feature that provides a deep, controlled bass while maintaining a clear sound. You can experience Beats Audio through the tablet's internal speakers, through external speakers connected to a USB port, or through Beats Audio headphones connected to the headphone jack.

Accessing Beats Audio Control Panel

Use Beats Audio Control Panel to view and manually control audio and bass settings.

To open Beats Audio Control Panel:

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type c, select Control Panel, select Hardware and Sound, and then select Beats Audio Control Panel.
	<p>From the Start screen, type c, select Control Panel, select Hardware and Sound, and then select Beats Audio Control Panel.</p>

Enabling and disabling Beats Audio

To enable or disable Beats Audio:

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Press the fn key on the on-screen keyboard in combination with the b key.
	<ol style="list-style-type: none">1. From the Start screen, type c, select Control Panel, select Hardware and Sound, and then select Beats Audio Control Panel.2. Follow the on-screen instructions

Checking the sound

To check the audio functions on your tablet, follow these steps:

Mode	Steps
	<ol style="list-style-type: none"> 1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box. 2. Type c, tap Control Panel, tap Hardware and Sound, and then tap Sound. 3. When the Sound window opens, tap the Sounds tab. Under Program Events, tap any sound event, such as a beep or alarm, and then tap Test.
	<ol style="list-style-type: none"> 1. On the Start screen, type c, and then select Control Panel from the list of applications. 2. Select Hardware and Sound, and then select Sound. 3. When the Sound window opens, select the Sounds tab. Under Program Events, select any sound event, such as a beep or alarm, and then click Test. <p>You should hear sound through the speakers or through connected headphones.</p>

To check the recording functions on your tablet, follow these steps:

Mode	Steps
	<ol style="list-style-type: none"> 1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box. 2. Type s, and then select Sound Recorder. 3. Click Start Recording and speak into the microphone. Save the file to your desktop. 4. Open a multimedia program and play the recording.
	<ol style="list-style-type: none"> 1. From the Start screen, type s, and then select Sound Recorder. 2. Click Start Recording and speak into the microphone. Save the file to your desktop. 3. Open a multimedia program and play the recording.

To confirm or change the audio settings on your tablet:

Mode	Steps
	<ol style="list-style-type: none"> 1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box. 2. Type c, and then select Control Panel from the list of applications. 3. Select Hardware and Sound, and then select Sound.
	<ol style="list-style-type: none"> 1. From the Start screen, type c, and then select Control Panel from the list of applications. 2. Select Hardware and Sound, and then select Sound.

Using video

Your HP tablet is a powerful video device that enables you to watch streaming video from your favorite websites and download video and movies to watch on your tablet without needing to connect to a network.

To enhance your viewing enjoyment, use one of the video ports on the tablet to connect an external monitor, projector, or TV. Your tablet has a high-definition multimedia interface (HDMI) port, which allows you to connect a high-definition monitor or TV.

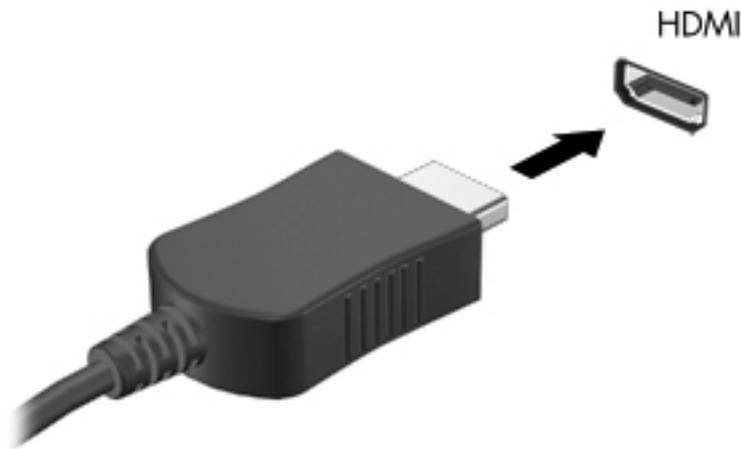
 **IMPORTANT:** Be sure that the external device is connected to the correct port on the tablet, using the correct cable. Check the device manufacturer's instructions if you have questions.

Connecting an HDMI device

 **NOTE:** To connect an HDMI device to your tablet, you need an HDMI cable, sold separately.

To see the tablet screen image on a high-definition TV or monitor, connect the high-definition device according to the following instructions.

1. Connect one end of the HDMI cable to the HDMI port on the tablet.



2. Connect the other end of the cable to the high-definition TV or monitor.
3. Press **f4** on the keyboard dock to alternate the tablet screen image between 4 display states:
 - **PC screen only:** View the screen image on the tablet only.
 - **Duplicate:** View the screen image simultaneously on *both* the tablet and external device.
 - **Extend:** View the screen image extended across *both* the tablet and external device.
 - **Second screen only:** View the screen image on the external device only.

Each time you press **f4** on the keyboard dock, the display state changes.

 **NOTE:** Adjust the screen resolution of the external device, especially if you choose the “Extend” option. From the Start screen on the keyboard dock, type **c**, and then select **Control Panel** from the list of applications. Select **Appearance and Personalization**. Under **Display**, select **Adjust screen resolution** for best results.

Configuring HDMI audio settings

HDMI is the only video interface that supports high-definition video *and audio*. After you connect an HDMI TV to the tablet, you can then turn on HDMI audio by following these steps:

1. From the Windows desktop, right-click the **Speakers** icon in the notification area, at the far right of the taskbar, and then select **Playback devices**.
2. On the Playback tab, select the name of the digital output device.
3. Click **Set Default**, and then click **OK**.

To return the audio stream to the tablet speakers:

1. From the Windows desktop, right-click the **Speakers** icon in the notification area, at the far right of the taskbar, and then click **Playback devices**.
2. On the Playback tab, click **Speakers and Headphones**.
3. Click **Set Default**, and then click **OK**.

Cameras

Your tablet includes a front and rear integrated camera. The cameras are input devices that allow you to record video and capture still photographs.

HP Tablet Camera

With HP Tablet Camera software, you can take snapshots and record video with either the inward or the outward camera.

To start the HP Tablet Camera software:

- ▲ Tap the HP Tablet Camera icon on the desktop.

Using HP Tablet Camera

 **NOTE:** For more information about the HP Tablet Camera application, refer to the software Help.

Icon	Description
	Tap the Outward/Inward icon to switch between the inward and outward cameras.
	Tap the Photo icon to capture photos.
	Tap the Video icon to record video.
	Tap the Photo Shooting/Video Recording icon to switch between the photo shooting mode and video recording mode.

Icon	Description
	Tap the Library icon to display a preview of the photos or video that were just taken.
	Tap the Settings icon to select the following camera settings: <ul style="list-style-type: none">• Image size—Tap the down arrow, and then select the size for the photos that you take.• Video quality—Tap the down arrow, and then select high, middle, or low video quality for the photos and videos that you take.• Self-timer—Tap the + or - button to set a time delay before you begin shooting photos or videos.• Recording time—Tap the + or - button to set a length of time to stop recording video automatically, or tap No limit to stop recording manually.• Show mirrored video preview for inward camera—Select the check box to enable this option.• Photo Auto Enhance—Select the check box to enable this option.• Hard Disk—Displays the available space on the hard drive.• Estimated recording time—Displays the available recording time.

 **NOTE:** “Hard drive” references in this guide refer to the flash memory drive.

5 Navigating using the keyboard, touch gestures and pointing devices

Your tablet allows navigation using touch gestures (select models only) in addition to the keyboard and mouse. Touch gestures can be used on your tablet's TouchPad or on a touch screen (select models only).

 **NOTE:** An external USB mouse (purchased separately) can be connected to one of the USB ports on the tablet.

Review the *Windows 8 Basics* guide included with your tablet. The guide provides information on common tasks using the TouchPad, touch screen, or the keyboard.

Action keys do not display or function on the on-screen keyboard of the tablet. Select tablet models have special hot key functions on the keyboard to perform routine tasks.

Using the TouchPad

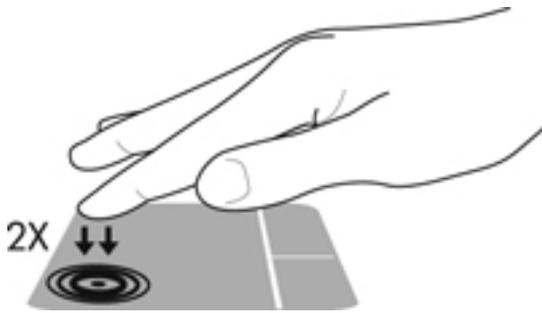
The TouchPad allows you to navigate the tablet with simple finger movements.

You can customize the touch gestures by changing settings, button configurations, click speed, and pointer options. From the Start screen on the keyboard dock, type **c** to display the **Apps** list. Select **Control Panel**, and then select **Hardware and Sound**. Under **Devices and Printers**, select **Mouse**.

Turning the TouchPad off or on

To turn the TouchPad off or on, quickly double-tap the TouchPad on/off button.

The TouchPad light is off when the TouchPad is on.



The TouchPad supports a variety of gestures that let your fingers scroll, swipe, pinch, and rotate to manipulate items on the screen.

Using the keyboard and mouse

The keyboard and mouse allow you to type, select items, scroll and to perform the same functions as using touch gestures. The keyboard dock allows you to use special action keys and hot keys to perform specific functions .

 **NOTE:** Action keys do not display or function on the on-screen keyboard of the tablet.

 **TIP:** The Windows logo key  on the keyboard allows you to quickly return to the Start screen from an open app or the Windows desktop. Pressing the Windows logo key again will return you to the previous screen.

 **NOTE:** Depending on the country or region, your keyboard may have different keys and keyboard functions than those discussed in this section.

Using the keys

Your tablet has different ways to quickly access information or perform functions with certain key combinations.

Using the action keys

 **NOTE:** Action keys do not display or function on the on-screen keyboard of the tablet.

An action key on the keyboard dock performs an assigned function. The icon on each of the **f1** through **f4** keys, the **f5** key (select models only), and **f6** through **f12** keys illustrates the assigned function for that key.

To use an action key function, press and hold the key.

The keyboard dock action key feature is enabled at the factory. You can disable this feature in Setup Utility (BIOS). See [Using Setup Utility \(BIOS\) and System Diagnostics on page 60](#) for instructions on opening Setup Utility (BIOS), and then follow the instructions at the bottom of the screen.

To activate the assigned function after disabling the action key feature on the keyboard dock, you must press the **fn** key in combination with the appropriate action key.

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

Icon	Key	Description
	f1	Opens Help and Support, which provides tutorials, information about the Windows operating system and your tablet, answers to questions, and updates to your tablet. Help and Support also provides automated troubleshooting tools and access to support.
	f2	Decreases the screen brightness incrementally as long as you hold down the key.
	f3	Increases the screen brightness incrementally as long as you hold down the key.
	f4	Switches the screen image between display devices connected to the system. For example, if a monitor is connected to the tablet, pressing this key alternates the screen image from the tablet display to the monitor display to a simultaneous display on both the tablet and the monitor. This action key can also alternate images among other devices that are receiving video information from the tablet.
	f6	Plays the previous track of an audio CD or the previous section of a DVD or a BD.
	f7	Begins, pauses, or resumes playback of an audio CD, a DVD, or a BD.

Icon	Key	Description
	f8	Plays the next track of an audio CD or the next section of a DVD or a BD.
	f9	Decreases speaker volume incrementally as long as you hold down the key.
	f10	Increases speaker volume incrementally as long as you hold down the key.
	f11	Mutes or restores speaker sound.
	f12	Turns the wireless feature on or off.

NOTE: A wireless network must be set up before a wireless connection is possible.

Using Microsoft Windows 8 shortcut keys

Microsoft Windows 8 provides shortcuts to perform actions quickly. Several shortcuts will help you with Windows 8 functions. Press the windows logo  in combination with the key to perform the action.

 **NOTE:** Action keys do not display or function on the on-screen keyboard of the tablet.

For additional information on Windows 8 shortcut keys go to **Help and Support**. From the Start screen on the keyboard dock, type **h**, and then select **Help and Support**.

Shortcut key	Key	Description
		Opens the Start screen.
 +	c	Opens the charms.
 +	d	Opens the Windows desktop.
 +	tab	Switches between open apps. NOTE: Continue to press this key combination until the app you want opens.
alt +	f4	Closes an active app. NOTE: Action keys do not display or function on the on-screen keyboard of the tablet.

Using the hot keys

A hot key is a combination of the **fn** key and either the **esc** key or the **b** key.

To use a hot key:

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

Function	Hot key	Description
Display system information.	fn+esc	Displays information about system hardware components and the system BIOS version number.
Control the bass settings.	fn+b	<p>Enables or disables the Beats Audio bass settings.</p> <p>Beats Audio is an enhanced audio feature that provides a deep, controlled bass while maintaining a clear sound. Beats Audio is enabled by default.</p> <p>You can also view and control the bass settings through the Windows operating system. To view and control the bass properties, open the Beats Audio Control Panel.</p> <p>To open Beats Audio Control Panel, from the Start screen on the keyboard dock, type c, select Control Panel, select Hardware and Sound, and then select Beats Audio Control Panel.</p>

6 Managing power

Your tablet can operate on either battery power or external power. When the tablet is only running on battery power and an AC power source is not available to charge the battery, it is important to monitor and conserve the battery charge. Your tablet supports power plans to manage how your tablet uses and conserves power so that you can balance tablet performance with power conservation.

Initiating Sleep and Hibernation

Microsoft® Windows has two power-saving states, Sleep and Hibernation.

- Sleep—The Sleep state is automatically initiated after a period of inactivity when running on battery power or on external power. Your work is saved to memory, allowing you to resume your work very quickly. You can also initiate Sleep manually. For more information, see [Initiating and exiting Sleep on page 44](#).
- Hibernation—The Hibernation state is automatically initiated if the battery reaches a critical level. In the Hibernation state, your work is saved to a hibernation file and the tablet powers down.

 **NOTE:** If you want to initiate Hibernation manually, you must enable Hibernation using Power Options. For more information, see [Enabling and exiting user-initiated Hibernation on page 45](#).

 **CAUTION:** To reduce the risk of possible audio and video degradation, loss of audio or video playback functionality, or loss of information, do not initiate Sleep while reading from or writing to a disc or an external media card.

 **NOTE:** You cannot initiate any type of networking connection or perform any tablet functions while the tablet is in the Sleep state or in Hibernation.

Intel Rapid Start Technology (select models only)

For select models, the Intel Rapid Start Technology (RST) feature is enabled. Intel Rapid Start Technology allows your tablet to resume quickly from inactivity.

Is Intel Rapid Start Tech. on Darwin?

Rapid Start Technology manages your power-saving options as follows:

- Sleep—Rapid Start Technology allows you to select the Sleep state. To exit from Sleep, press any key, activate the TouchPad, or press the power button briefly.
- Hibernation—Rapid Start Technology initiates Hibernation after a period of inactivity while in the Sleep state when running on battery power or on external power or when the battery reaches a critical level. After Hibernation is initiated, press the power button to resume your work.

 **NOTE:** Rapid Start Technology can be disabled in Setup Utility (BIOS). If you want to be able to initiate the Hibernation state, you must enable user-initiated Hibernation using Power Options. See [Enabling and exiting user-initiated Hibernation on page 45](#).

Initiating and exiting Sleep

With the tablet on, you can initiate Sleep in the following way. From the Start screen, point to the upper-right or lower-right corner of the screen. When the charms list opens, click **Settings**, click the **Power** icon, and then click **Sleep**.

To exit Sleep:

- Briefly press the power button.
- If the display is closed, and the tablet is connected to the keyboard dock, open the display.
- Press a key on the keyboard.
- Tap or swipe the TouchPad.

When the tablet exits Sleep, the power lights turn on and the tablet returns to the screen where you stopped working.



NOTE: If you have set a password to be required on wakeup, you must enter your Windows password before the tablet will return to the screen.

Enabling and exiting user-initiated Hibernation

You can enable user-initiated Hibernation and change other power settings and timeouts using Power Options:

1. From the Start screen, type `power`, select **Settings**, and then select **Power Options** from the list of applications.
2. In the left pane, click **Choose what the power button does**.
3. Click **Change Settings that are currently unavailable**.
4. In the **When I press the power button** area, select **Hibernate**.
5. Click **Save changes**.

To exit Hibernation, briefly press the power button. The power lights turn on and your work returns to the screen where you stopped working.



NOTE: If you have set a password to be required on wakeup, you must enter your Windows password before your work will return to the screen.

Setting password protection on wakeup

To set the tablet to prompt for a password when the tablet exits Sleep or Hibernation, follow these steps:

1. From the Start screen, type `power`, select **Settings**, and then select **Power Options** from the list of applications.
2. In the left pane, click **Require a password on wakeup**.
3. Click **Change Settings that are currently unavailable**.
4. Click **Require a password (recommended)**.



NOTE: If you need to create a user account password or change your current user account password, click **Create or change your user account password**, and then follow the on-screen instructions. If you do not need to create or change a user account password, go to step 5.

5. Click **Save changes**.

Using the power meter and power settings

The power meter is located on the Windows desktop. The power meter allows you to quickly access power settings and view the remaining battery charge.

- To display the percentage of remaining battery charge and the current power plan, on the Windows desktop, point over the power meter icon.
- To use Power Options, or to change the power plan, click the power meter icon and select an item from the list. From the Start screen, type `power`, select **Settings**, and then select **Power Options** from the list of applications.

Different power meter icons indicate whether the tablet is running on battery or external power. The icon also displays a message if the battery has reached a low or critical battery level.

Selecting a power plan

A power plan manages how the tablet uses power and helps you conserve power and maximize performance. To change the power plan, from the Start screen, type `power`, select **Settings**, and then select **Power Options** from the list of applications.

The following power plans are available:

- **HP Recommended (recommended)**. Automatically balances performance with energy consumption on capable hardware.
- **Power saver**. Saves power by reducing system performance and screen brightness where possible.
- **High performance**. Favors performance, but may use more energy. Your battery will not last as long between charges using this power plan. Click **Show additional plans** to select this power plan.

You can also create your own power plan and customize it to how you use the tablet for your needs.

To use Power Options, from the Start screen, type `power`, select **Settings**, and then select **Power Options** from the list of applications.

Running on battery power

When a charged battery is in the tablet and the tablet is not plugged into external power, the tablet runs on battery power. If the tablet has a charged battery installed and the AC adapter is disconnected from the tablet, the tablet automatically switches to battery power and the display brightness decreases to conserve battery life. The battery in the tablet slowly discharges when the tablet is off and unplugged from external power.

Tablet battery life varies, depending on power management settings, programs running on the tablet, display brightness, external devices connected to the tablet, and other factors.

Factory-sealed battery

To monitor the status of your battery, or if the battery is no longer holding a charge, run Battery Check in Help and Support. To access battery information, select **HP Support Assistant** from the Start screen, and then select **Battery and performance**. If Battery Check indicates that your battery should be replaced, contact support.

Finding battery information

Help and Support provides the following tools and information about the battery:

- Battery test
- Information on battery types, specifications, life cycles, and capacity

To access battery information, select **HP Support Assistant** from the Start screen, and then select **Battery and performance**.

Conserving battery power

Tips for conserving battery power and maximizing battery life:

- Lower the brightness on the display.
- Select the **Power saver** setting in Power Options.
- Turn off wireless when you are not using them.
- Disconnect unused external devices that are not plugged into an external power source, such as an external hard drive connected to a USB port.
- Stop, disable, or remove any external media cards that you are not using.
- Before you leave your work, initiate Sleep or shut down the tablet.

Identifying low battery levels

When a battery that is the sole power source for the tablet reaches a low or critical battery level, the following behavior occurs:

- The battery light (select models only) indicates a low or critical battery level.

– or –

- The power meter icon on the Windows desktop shows a low or critical battery notification.



NOTE: For additional information about the power meter, refer to “Using the power meter” section.

The tablet takes the following actions for a critical battery level:

- If Hibernation is disabled and the tablet is on or in the Sleep state, the tablet remains briefly in the Sleep state, and then shuts down and loses any unsaved information.
- If Hibernation is enabled and the tablet is on or in the Sleep state, the tablet initiates Hibernation.

Resolving a low battery level

Resolving a low battery level when external power is available

- Connect an AC adapter.
- Connect an optional docking or expansion device.
- Connect an optional power adapter purchased as an accessory from HP.

Sleep. As a result, your work is immediately available to you as soon as you exit Sleep. You do not have to wait while updates are downloaded.

- ▲ To enable this feature or manually adjust the settings, from the Start screen, type `smart`, and then select then select Intel(R) Smart Connect Technology.

Shutting down (turning off) the tablet

 **CAUTION:** Unsaved information is lost when the tablet shuts down. Be sure to save your work before shutting down the tablet.

The Shut down command closes all open programs, including the operating system, and then turns off the display and tablet.

Shut down the tablet under any of the following conditions:

- When you are connecting an external hardware device that does not connect to a USB or video port
- When the tablet will be unused and disconnected from external power for an extended period

To shut down the tablet when it is not connected to the keyboard dock:

- ▲ Press the Windows logo key and the power button at the same time, and then select **Shut Down**.

Although you can turn off the tablet with the power button, the recommended procedure to shut down **the tablet when connected to the keyboard dock** is to use the Windows Shut down command.

 **NOTE:** If the tablet is in the Sleep state or in Hibernation, you must first exit Sleep or Hibernation before shutdown is possible by briefly pressing the power button.

1. Save your work and close all open programs.
2. From the Start screen, point to the upper-right or lower-right corner of the screen.
3. When the charms list opens, click **Settings**, click the **Power** icon, and then click **Shut down**.

If the tablet is unresponsive and you are unable to use the preceding shutdown procedures, try the following emergency procedures in the sequence provided:

- Press `ctrl+alt+delete`, click the **Power** icon, and then select **Shut Down**.
- Press and hold the power button for at least 5 seconds.
- Disconnect the tablet from external power.

7 Managing and sharing information

Drives are digital storage devices that help you store, manage, share, and access information. Your tablet has a solid state drive that stores your tablet's software, operating system, and also provides storage for all of your personal files.

For added capacity or functionality, connect an external drive (purchased separately), such as an optical drive or hard drive, or insert a digital storage card directly from your phone or camera. A USB flash drive, connected to the Universal Serial Bus (USB) port on your tablet, also allows quick data transfer. Some devices use the tablet's power to run; others have their own power source. Some devices come with software that must be installed.

 **NOTE:** For information about connecting external wireless devices, see [Connecting to a network on page 26](#).

 **NOTE:** For more information about required software and drivers, or to learn which tablet port to use, see the manufacturer's instructions.

Using a USB device

Most tablets have more than one USB port, because this versatile interface allows you to connect to numerous kinds of external devices to your tablet, such as a USB keyboard, mouse, external drive, printer, scanner, or USB hub.

Type	Description
USB 2.0	Transfers data at 60 MB/s.
USB 3.0	Transfers data at 640 MB/s. USB 3.0 ports, also known as SuperSpeed ports, are also compatible with USB 1.0 and 2.0 devices.

Do we need to include this information since Darwin only has 2.0?

Connecting a USB device

 **CAUTION:** To reduce the risk of damage to a USB connector, use minimal force to connect the device.

- ▲ Connect the USB cable for the device to the USB port.

 **NOTE:** The USB port on your tablet may look slightly different from the illustration in this section.



A sound indicates that the device has been detected.

 **NOTE:** The first time you connect a USB device, a message displays on the Windows desktop and an icon appears in the notification area, letting you know that the device is recognized by the tablet.

Removing a USB device

 **CAUTION:** To reduce the risk of damage to a USB connector, do not pull on the cable to remove the USB device.

CAUTION: To reduce the risk of loss of information or an unresponsive system, use the following procedure to safely remove the USB device.

1. Save your information and close all programs associated with the device.
 2. From the Windows desktop, tap or click the hardware icon in the notification area, at the far right of the taskbar. A message, **Safely Remove Hardware and Eject Media** displays. Follow the on-screen instructions.
 3. Tap or click the USB icon and follow the on-screen instructions.
-

Connecting a powered USB device

 **CAUTION:** To reduce the risk of damage to the equipment when connecting a powered device, be sure that the device is turned off and its AC power cord is unplugged.

1. Connect the device to the tablet.
2. Plug the device power cord into a grounded AC outlet.
3. Turn on the device.

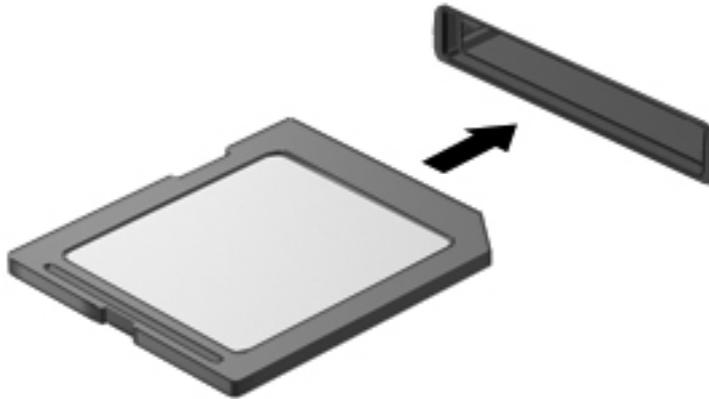
To disconnect an unpowered external device, stop the device, and then disconnect it from the tablet. To disconnect a powered external device, turn off the device, disconnect it from the tablet, and then unplug the AC power cord.

Inserting and removing a digital storage card

To insert a digital storage card:

CAUTION: To reduce the risk of damage to the digital card connectors, use minimal force to insert a digital card.

1. Hold the card label-side up, with the connectors facing the tablet.
2. Insert the card into the digital storage slot, and then press in on the card until it is firmly seated.

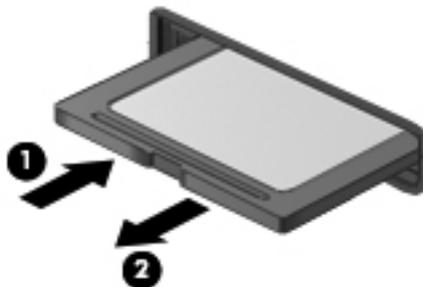


A sound indicates that the device has been detected.

To remove a digital storage card:

CAUTION: To reduce the risk of loss of data or an unresponsive system, use the following procedure to safely remove the digital card.

1. Save your information and close all programs associated with the digital card.
2. From the Windows desktop, tap or click the remove hardware icon in the notification area, at the far right of the taskbar. Then, follow the on-screen instructions.
3. Press in on the card **(1)**, and then remove it from the slot **(2)**.



NOTE: If the card is not ejected, pull the card out of the slot.

8 Maintaining your tablet

It is important to perform regular maintenance to keep your tablet in optimal condition. This chapter provides information about improving the performance of your tablet by running tools such as Disk Defragmenter and Disk Cleanup. It also provides information about updating your programs and drivers, instructions for cleaning your tablet, and tips for traveling with your tablet.

Improving performance

Everyone wants a fast tablet and by performing regular maintenance tasks, using tools such as Disk Defragmenter and Disk Cleanup, you can drastically improve the performance of your tablet. Also, as your tablet gets older, you might consider installing larger drives and adding more memory.

Using Disk Cleanup

Disk Cleanup searches the hard drive for unnecessary files that you can safely delete to free up disk space and help the tablet run more efficiently.

To run Disk Cleanup:

1. From the Start screen, type `disk`, select **Settings**, and then select **Free up disk space by deleting unnecessary files**
2. Follow the on-screen instructions.

Updating programs and drivers

HP recommends that you update your programs and drivers on a regular basis to the latest versions. Updates can resolve issues and bring new features and options to your tablet. Technology is always changing, and updating programs and drivers allows your tablet to run the latest technology available. For example, older graphics components might not work well with the most recent gaming software. Without the latest driver, you would not be getting the most out of your equipment.

Cleaning your tablet

Cleaning your tablet and external devices helps keep them in good working condition. If you don't clean your tablet, dust and dirt particles can build up.

 **CAUTION:** Avoid using the following cleaning products to clean your tablet:

Strong solvents, such as alcohol, acetone, ammonium chloride, methylene chloride, and hydrocarbons, which can permanently damage the surface of the tablet.

Cleaning the display, sides, and cover

Gently wipe the display using a soft, lint-free cloth moistened with an *alcohol-free* glass cleaner. Allow the display to dry before closing the tablet cover.

Use a pre-moistened germicidal wipe to clean the sides and cover. Fibrous materials, such as paper towels, can scratch the tablet.



NOTE: When cleaning the cover of the tablet, use a circular motion to aid in removing dirt and debris.

Cleaning the TouchPad and keyboard

CAUTION: Never allow liquids to drip between the keys on the keyboard, even when you are cleaning the tablet. This can permanently damage internal components.

- To clean and disinfect the TouchPad and keyboard, use a soft microfiber cloth or a static-free cloth without oil (such as a chamois cloth) moistened with an *alcohol-free* glass cleaner or use an acceptable germicidal disposable wipe.
- To prevent keys from sticking and to remove dust, lint, and particles from the keyboard, use a can of compressed air with a straw extension.

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.

Traveling with or shipping your tablet

If you have to travel with or ship your tablet, here are some tips to keep in mind to keep your equipment safe.

- Prepare the tablet for traveling or shipping:
 - Attach the tablet to the keyboard dock to protect the tablet screen.
 - Back up your information to an external drive.
 - Remove all discs, attached USB devices, HDMI devices, and all external media cards, such as digital storage cards, from the tablet.
 - Turn off, and then disconnect all external devices.
 - Shut down the tablet.
- Take along a backup of your information. Keep the backup separate from the tablet.
- When traveling by air, carry the tablet as hand luggage; do not check it in with the rest of your luggage.

CAUTION: Avoid exposing a drive to magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands. Airport conveyer belts and similar security devices that check carry-on baggage use X-rays instead of magnetism and do not damage drives.

- If you plan to use the tablet during a flight, listen for the in-flight announcement that tells you when you are allowed to use your tablet. In-flight tablet use is at the discretion of the airline.
- If you are shipping the tablet or a drive, use suitable protective packaging and label the package "FRAGILE."
- If the tablet has a wireless device installed, the use of these devices may be restricted in some environments. Such restrictions may apply onboard aircraft, in hospitals, near explosives, and in

hazardous locations. If you are uncertain of the policy that applies to the use of a particular device, ask for authorization to use your tablet before you turn it on.

- If you are traveling internationally, follow these suggestions:
 - Check the tablet-related customs regulations for each country or region on your itinerary.
 - Check the power cord and adapter requirements for each location in which you plan to use the tablet. Voltage, frequency, and plug configurations vary.

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

9 Securing your tablet and information

Tablet security is essential for protecting the confidentiality, integrity, and availability of your information. Standard security solutions provided by the Windows operating system, HP applications, the non-Windows Setup Utility (BIOS), and other third-party software can help protect your tablet from a variety of risks, such as viruses, worms, and other types of malicious code.



IMPORTANT: Some security features listed in this chapter may not be available on your tablet.

Tablet risk	Security feature
Unauthorized use of the tablet	Power-on password
Computer viruses	Antivirus software
Unauthorized access to data	Firewall software
Unauthorized access to Setup Utility (BIOS) settings and other system identification information	Administrator password
Ongoing or future threats to the tablet	Software updates
Unauthorized access to a Windows user account	User password

Using passwords

A password is a group of characters that you choose to secure your tablet information and to protect online transactions. Several types of passwords can be set. For example, when you set up your tablet for the first time, you were asked to create a user password to secure your tablet. Additional passwords can be set in Windows or in the HP Setup Utility (BIOS) that is preinstalled on your tablet.

You may find it helpful to use the same password for a Setup Utility (BIOS) feature and for a Windows security feature.

Use the following tips for creating and saving passwords:

- To reduce the risk of being locked out of the tablet, record each password and store it in a secure place away from the tablet. Do not store passwords in a file on the tablet.
- When creating passwords, follow requirements set by the program.
- Change your passwords at least every three months.
- An ideal password is long and has letters, punctuation, symbols, and numbers.
- Before you send your tablet for service, back up your files, delete confidential files, and then remove all password settings.

For additional information about Windows passwords, such as screen-saver passwords, from the Start screen, type **h**, and then select **Help and Support**.

Setting Windows passwords

Password	Function
User password	Protects access to a Windows user account. You may also set up your tablet to require the user password to exit Sleep. See Setting password protection on wakeup on page 45 for more information.
Administrator password	Protects administrator-level access to tablet contents. NOTE: This password cannot be used to access Setup Utility (BIOS) contents.

Setting Setup Utility (BIOS) passwords

Password	Function
Administrator password	<ul style="list-style-type: none">• Must be entered each time you access Setup Utility (BIOS).• If you forget your administrator password, you cannot access Setup Utility (BIOS). <p>NOTE: The administrator password can be used in place of the power-on password.</p> <p>NOTE: Your administrator password is not interchangeable with an administrator password set in Windows, nor is it displayed as it is set, entered, changed, or deleted.</p> <p>NOTE: If you enter the power-on password at the first password check before the “Press the ESC key for Startup Menu” message is displayed, you must enter the administrator password to access Setup Utility (BIOS).</p>
Power-on password	<ul style="list-style-type: none">• Must be entered each time you turn on or restart the tablet.• If you forget your power-on password, you cannot turn on or restart the tablet. <p>NOTE: The administrator password can be used in place of the power-on password.</p> <p>NOTE: A power-on password is not displayed as it is set, entered, changed, or deleted.</p>

To set, change, or delete an administrator or power-on password in Setup Utility (BIOS):

1. Open Setup Utility (BIOS) by turning on or restarting the tablet. While the “Press the ESC key for Startup Menu” message is displayed in the lower-left corner of the screen, press **esc**.
2. Use the arrow keys and follow the on-screen instructions. When the Startup Menu is displayed, press **f10**.
3. Use the arrow keys to select **Security**, and then follow the on-screen instructions.

Your changes take effect when the tablet restarts.

Using Internet security software

When you use your tablet to access email, a network, or the Internet, you potentially expose your tablet to tablet viruses, spyware, and other online threats. An antivirus program may be preinstalled on your tablet. It is strongly recommended that you use an antivirus program of your choice in order to fully protect your tablet.

Using antivirus software

Computer viruses can disable programs, utilities, or the operating system, or cause them to function abnormally. Antivirus software can detect most viruses, destroy them, and in most cases, repair any damage they have caused.

For more information about viruses, from the Start screen, type **h**, and then select **Help and Support**.

Using firewall software

Firewalls are designed to prevent unauthorized access to a system or network. A firewall can be software you install on your tablet and/or network, or it can be a combination of both hardware and software.

There are two types of firewalls to consider:

- Host-based firewalls—Software that protects only the computer it is installed on.
- Network-based firewalls—Installed between your DSL or cable modem and your home network to protect all the computers on the network.

When a firewall is installed on a system, all data sent to and from the system is monitored and compared with a set of user-defined security criteria. Any data that does not meet those criteria is blocked.

Installing software updates

HP, Microsoft Windows, and third-party software installed on your tablet should be regularly updated to correct security problems and improve software performance. For more information, see [Updating programs and drivers on page 53](#).

Installing Windows updates

Updates to the operating system and other software may have become available after the tablet left the factory. Microsoft sends out alerts regarding critical updates. To protect the tablet from security breaches and viruses, install all critical updates from Microsoft as soon as you receive an alert.

To be sure that all available updates are installed on the tablet, observe these guidelines:

- Run Windows Update as soon as possible after you set up your tablet. From the Start screen, type **u**, select **Settings**, and then select **Windows Update**.
- Run Windows Update monthly thereafter.
- Obtain updates to Windows and other Microsoft programs, as they are released, from the Microsoft website and through the updates link in Help and Support.

Installing HP and third-party software updates

HP recommends that you regularly update the software and drivers that were originally installed on your tablet. To download the latest versions, go to <http://www.hp.com/support>. At this location, you can also register to receive automatic update notifications when they become available.

If you have installed third-party software after you purchased your tablet, regularly update the software. Software companies provide software updates to their products to correct security problems and improve functionality of the software.

Securing your wireless network

When you set up your wireless network, always enable security features. For more information, see [Protecting your WLAN on page 28](#).

Backing up your software applications and information

Regularly back up your software applications and information to protect them from being permanently lost or damaged through a virus attack or a software or hardware failure. For more information, see [Backing up, restoring, and recovering on page 63](#).

10 Using Setup Utility (BIOS) and System Diagnostics

Setup Utility, or Basic Input/Output System (BIOS), controls communication between all the input and output devices on the system (such as disk drives, display, keyboard, mouse, and printer). Setup Utility (BIOS) includes settings for the types of devices installed, the startup sequence of the tablet, and the amount of system and extended memory.

Starting Setup Utility (BIOS)

To start Setup Utility (BIOS), turn on or restart the tablet, and then quickly press the Windows Logo key.

To start Setup Utility (BIOS), turn on or restart the tablet when it is attached to the keyboard dock, quickly press **esc**, and then press **f10**.

Information about how to navigate in Setup Utility (BIOS) is located at the bottom of the screen.



NOTE: Use extreme care when making changes in Setup Utility (BIOS). Errors can prevent the tablet from operating properly.

Updating the BIOS

Updated versions of the BIOS may be available on the HP website.

Most BIOS updates on the HP website are packaged in compressed files called *SoftPaqs*.

Some download packages contain a file named *Readme.txt*, which contains information regarding installing and troubleshooting the file.

Determining the BIOS version

To determine whether available BIOS updates contain later BIOS versions than those currently installed on the tablet, you need to know the version of the system BIOS currently installed.

BIOS version information (also known as *ROM date* and *System BIOS*) can be displayed by pressing **fn+esc** (if you are already in Windows) or by using Setup Utility (BIOS).

1. Start Setup Utility (BIOS).
2. Use the arrow keys to select **Main**.
3. To exit Setup Utility (BIOS) without saving your changes, use the arrow keys to select **Exit**, select **Exit Discarding Changes**, and then press **enter**.

Downloading a BIOS update

 **CAUTION:** To reduce the risk of damage to the tablet or an unsuccessful installation, download and install a BIOS update only when the tablet is connected to reliable external power using the AC adapter. Do not download or install a BIOS update while the tablet is running on battery power, docked in an optional docking device, or connected to an optional power source. During the download and installation, follow these instructions:

Do not disconnect power from the tablet by unplugging the power cord from the AC outlet.

Do not shut down the tablet or initiate Sleep.

Do not insert, remove, connect, or disconnect any device, cable, or cord.

1. From the Start screen, select the **HP Support Assistant** app.
2. Click **Updates and tune-ups**, and then click **Check for HP updates now**.
3. Follow the on-screen instructions.
4. At the download area, follow these steps:
 - a. Identify the most recent BIOS update and compare it to the BIOS version currently installed on your tablet. If the update is more recent than your BIOS, make a note of the date, name, or other identifier. You may need this information to locate the update later, after it has been downloaded to your hard drive.
 - b. Follow the on-screen instructions to download your selection to the hard drive.

Make a note of the path to the location on your hard drive where the BIOS update is downloaded. You will need to access this path when you are ready to install the update.

 **NOTE:** If you connect your tablet to a network, consult the network administrator before installing any software updates, especially system BIOS updates.

BIOS installation procedures vary. Follow any instructions that are displayed on the screen after the download is complete. If no instructions are displayed, follow these steps:

1. From the Start screen, type *e*, and then select **File Explorer**.
2. Click your hard drive designation. The hard drive designation is typically Local Disk (C:).
3. Using the hard drive path you recorded earlier, open the folder on your hard drive that contains the update.
4. Double-click the file that has an .exe extension (for example, *filename.exe*).
The BIOS installation begins.
5. Complete the installation by following the on-screen instructions.

 **NOTE:** After a message on the screen reports a successful installation, you can delete the downloaded file from your hard drive.

Using System Diagnostics

System Diagnostics allows you to run diagnostic tests to determine if the tablet hardware is functioning properly.

To start System Diagnostics:

1. Turn on or restart the tablet, quickly press **esc**, and then press **f2**.
2. Click the diagnostic test you want to run, and then follow the on-screen instructions.



NOTE: If you need to stop a diagnostic test while it is running, press **esc**.

11 Backing up, restoring, and recovering

Your tablet includes tools provided by HP and the operating system to help you safeguard your information and retrieve it if you ever need to. These tools will help you return your tablet to a proper working state or even back to the original factory state, all with simple steps.

This chapter provides information about the following processes:

- Creating recovery media and backups
- Restoring and recovering your system

 **NOTE:** This guide describes an overview of backing up, restoring and recovering options. For more details about the tools provided, see Help and Support.

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type h, and then select Help and Support.
	From the Start screen, type h , and then select Help and Support .

Creating recovery media and backups

Recovery after a system failure is only as good as your most recent backup.

1. As you add hardware and software programs, create system restore points. A system restore point is a snapshot of certain hard drive contents saved by Windows System Restore at a specific time. A system restore point contains information that Windows uses, such as registry settings. Windows creates a system restore point for you automatically during a Windows update and during other system maintenance (such as a software update, security scanning, or system diagnostics). You can also manually create a system restore point at any time. For more information and steps for creating specific system restore points, see Windows Help and Support. From the Start screen, type **h**, and then select **Help and Support**.

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type h, and then select Help and Support.
	From the Start screen, type h , and then select Help and Support .

2. As you add photos, video, music, and other personal files, create a backup of your personal information. Windows File History can be set to regularly and automatically back up files from libraries, desktop, contacts, and favorites. If files are accidentally deleted from the hard drive and they can no longer be restored from the Recycle Bin, or if files become corrupted, you can

restore the files that you backed up using File History. Restoring files is also useful if you ever choose to reset the tablet by reinstalling Windows or choose to recover using HP Recovery Manager.

 **NOTE:** File History is not enabled by default, so you must turn it on.

For more information and steps for enabling Windows File History, see Windows Help and Support.

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type h, and then select Help and Support.
	From the Start screen, type h , and then select Help and Support .

Restore and recovery

There are several options for recovering your system. Choose the method that best matches your situation and level of expertise:

If you need to restore your personal files and data, you can use Windows File History to restore your information from the backups you created. For more information and steps for using File History, see Windows Help and Support.

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type h, and then select Help and Support.
	From the Start screen, type h , and then select Help and Support .

If you need to correct a problem with a preinstalled application or driver, use the Drivers and Applications Reinstall option of HP Recovery Manager to reinstall the individual application or driver.

- From the Start screen on the keyboard dock, type `recovery`, select **HP Recovery Manager**, and then select **Drivers and Applications Reinstall**, and follow the on-screen instructions.
- If you want to restore the system to a previous state without losing any personal information, Windows System Restore is an option. System Restore allows you to restore without the requirements of Windows Refresh or a reinstallation. Windows creates system restore points automatically during a Windows update and other system maintenance events. Even if you did not manually create a restore point, you can choose to restore to a previous point, automatically created. For more information and steps for using Windows System Restore, see Windows Help and Support.
- If you want a quick and easy way to recover the system without losing your personal information, settings, or apps that came preinstalled on your tablet or were purchased from the Windows

Store, consider using Windows Refresh. This option does not require backing up data to another drive. See [Using Windows Refresh for quick and easy recovery on page 66](#).

- If you want to reset your tablet to its original state, Windows provides an easy way to remove all personal data, apps, and settings, and reinstall Windows.

For more information, see [Remove everything and reinstall Windows on page 66](#).

- If you want to reset your tablet using a minimized image, you can choose the HP Minimized Image Recovery option from the HP Recovery partition (select models only). Minimized Image Recovery installs only drivers and hardware-enabling applications. Other applications included in the image continue to be available for installation through the Drivers and Applications Reinstall option in HP Recovery Manager.

For more information, see [Recovering using HP Recovery Manager on page 67](#).

- If you want to recover the tablet's original factory partitioning and content, you can choose the System Recovery option from the HP Recovery media. For more information, see [Recovering using HP Recovery Manager on page 67](#).
- If you wish to remove the recovery partition to reclaim hard drive space, HP Recovery Manager offers the Remove Recovery Partition option.

For more information, see [Removing the HP Recovery partition on page 68](#).

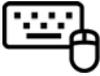
Using Windows Refresh for quick and easy recovery

When your tablet is not working properly and you need to regain system stability, the Windows Refresh option allows you to start fresh and keep what is important to you.

 **IMPORTANT:** Refresh removes any traditional applications that were not originally installed on the system at the factory.

 **NOTE:** During Refresh, a list of removed traditional applications will be saved so that you have a quick way to see what you might need to reinstall. See Help and Support for instructions on reinstalling traditional applications. From the Start screen from the keyboard dock, type **h**, and then select **Help and Support**.

 **NOTE:** You may be prompted for your permission or password when using Refresh. See Windows Help and Support for more information.

Mode	Steps
	<ol style="list-style-type: none">1. On the Start screen, tap the upper-right or lower-right corner of the screen. When the charms list opens, tap Search, and then tap the search box.2. Type h, and then select Help and Support.
	From the Start screen, type h , and then select Help and Support .

To start Refresh:

1. From the Start screen, point to the far-right upper or lower corner of the screen to display the charms.
2. Click **Settings**.
3. Click **Change PC settings** in the bottom-right corner of the screen, and then select **General** from the PC settings screen.
4. Under **Refresh your PC without affecting your files**, select **Get started**, and follow the on-screen instructions.

Remove everything and reinstall Windows

Sometimes you want to perform detailed reformatting of your tablet, or you want to remove personal information before you give away or recycle your tablet. The process described in this section provides a speedy, simple way to return the tablet to its original state. This option removes all personal data, apps, and settings from your tablet, and reinstalls Windows.

 **IMPORTANT:** This option does not provide backups of your information. Before using this option, back up any personal information you wish to retain.

You can initiate this option by using the **f11** key.

To use the **f11** key:

1. Press **f11** while the tablet boots.
– or –
Press and hold **f11** as you press the power button.
2. Select **Troubleshoot** from the boot options menu.
3. Select **Reset your PC**, and follow the on-screen instructions.

To use the Start screen:

1. From the Start screen, point to the far-right upper or lower corner of the screen to display the charms.
2. Click **Settings**.
3. Click **Change PC settings** in the bottom-right corner of the screen, and then select **General** from the PC settings screen.
4. Under **Remove everything and reinstall Windows**, select **Get started**, and follow the on-screen instructions.

Recovering using HP Recovery Manager

HP Recovery Manager software allows you to recover the tablet to its original factory state. Using the HP Recovery media you created, you can choose from one of the following recovery options:

- **System Recovery**—Reinstalls the original operating system, and then configures the settings for the programs that were installed at the factory.
- **Minimized Image Recovery**—Reinstalls the operating system and all hardware-related drivers and software, but not other software applications.
- **Factory Reset**—Restores the tablet to the state its original factory state by deleting all information from the hard drive and re-creating the partitions. Then it reinstalls the operating system and the software that was installed at the factory.

The HP Recovery partition (select models only) allows Minimized Image Recovery.

What you need to know

- HP Recovery Manager recovers only software that was installed at the factory. For software not provided with this tablet, you must either download the software from the manufacturer's website or reinstall the software from the media provided by the manufacturer.
- Recovery through HP Recovery Manager should be used as a final attempt to correct tablet issues.
- HP Recovery media must be used if the tablet hard drive fails.
- To use the Factory Reset or System Recovery options, you must use HP Recovery media.
- If the HP Recovery media do not work, you can obtain recovery media for your system from the HP website. For U.S. support, go to <http://www.hp.com/go/contactHP>. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.



IMPORTANT: HP Recovery Manager does not automatically provide backups of your personal data. Before beginning recovery, back up any personal data you wish to retain.

Using the HP Recovery partition to recover a minimized image (select models only)

The HP Recovery partition (select models only) allows you to perform a minimized image recovery without the need for recovery discs or a recovery USB flash drive. This type of recovery can only be used if the hard drive is still working.

To start HP Recovery Manager from the HP Recovery partition:

1. Press **f11** while the tablet boots.
– or –
Press and hold **f11** as you press the power button.
2. Select **Troubleshoot** from the boot options menu.
3. Select **HP Recovery Manager**, and follow the on-screen instructions.

Changing the boot order

If tablet does not restart in HP Recovery Manager, you can change the tablet boot order, which is the order of devices listed in BIOS where the tablet looks for startup information. You can change the selection for an optical drive or a USB flash drive.

To change the boot order:

1. Insert the HP Recovery media you created.
2. Restart the tablet.
3. Press and hold **esc** while the tablet is restarting, and then press **f9** for boot options.
4. Select the optical drive or USB flash drive you want to boot from.
5. Follow the on-screen instructions.

Removing the HP Recovery partition

HP Recovery Manager software allows you to remove the HP Recovery partition to free up hard drive space.



IMPORTANT: Removing the HP Recovery partition means you can no longer use Windows Refresh, the Windows Remove everything and reinstall Windows option, or the HP Recovery Manager option for minimized image recovery.

Follow these steps to remove the HP Recovery partition:

1. On the Start screen, type `recovery`, and then select **HP Recovery Manager**.
2. Select **Remove Recovery Partition**, and follow the on-screen instructions to continue.

12 Specifications

Input power

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

The tablet 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 tablet 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 tablet.

The tablet can operate on DC power within the following specifications. Operating voltage and current varies by platform.

Input power	Rating
Operating voltage and current	15Vdc 1.33A – 19.95W
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 tablet operating voltage and current can be found on the system regulatory label.

Operating environment

Factor	Metric	U.S.
Temperature		
Operating	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

13 Electrostatic Discharge

Electrostatic discharge is the release of static electricity when two objects come into contact—for example, the shock you receive when you walk across the carpet and touch a metal door knob.

A discharge of static electricity from fingers or other electrostatic conductors may damage electronic components. To prevent damage to the tablet, damage to a drive, or loss of information, observe these precautions:

- If removal or installation instructions direct you to unplug the tablet, unplug it after being properly grounded and before removing a cover.
- Keep components in their electrostatic-safe containers until you are ready to install them.
- Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.
- Use nonmagnetic tools.
- Before handling components, discharge static electricity by touching an unpainted metal surface of the component.
- If you remove a component, place it in an electrostatic-safe container.

If you need more information about static electricity or assistance with component removal or installation, contact support.

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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 radiofrequências 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場合は電波法で禁じられています。

Wireless LAN 802.11b devices

2.4DS4

Wireless LAN 802.11g devices

2.4OF4

Bluetooth devices

2.4FH1

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.

เครื่องโทรคมนาคมและอุปกรณ์นี้ 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。

Airline travel notice

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

User-replaceable battery notices

When a battery has reached the end of its useful life, do not dispose of the battery in general in household waste. Follow the local laws and regulations in your area for computer battery disposal.

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

For information about removing a user-replaceable 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.

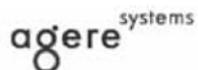
If your home has specially wired alarm equipment connected to the telephone line, ensure that the installation of this HP equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

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 labeling 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.

A handwritten signature in black ink, appearing to read "Brad Grande".

Brad Grand
Technical Manager

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.

User-replaceable battery notices

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

⚠ 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/supp/esrecycling/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中，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

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)
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
Liquid crystal display (LCD) panel	X	O	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》



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 (PBB)	多溴二苯醚 (PBDE)
电池	X	○	○	○	○	○
电缆	X	○	○	○	○	○
数码相机	X	○	○	○	○	○
机箱 / 其他	X	○	○	○	○	○
闪存卡/读卡器	X	○	○	○	○	○
软驱	X	○	○	○	○	○
键盘	X	○	○	○	○	○
鼠标	X	○	○	○	○	○
I/O PCBs	X	○	○	○	○	○
键盘	X	○	○	○	○	○
液晶显示器	X	○	○	○	○	○
介质 (CD/DVD/ 软盘)	○	○	○	○	○	○
内存条	X	○	○	○	○	○
主板、处理器和散热器	X	○	○	○	○	○
鼠标	X	○	○	○	○	○
光驱	X	○	○	○	○	○
网络设备选项	X	○	○	○	○	○
电源适配器	X	○	○	○	○	○
电源	X	○	○	○	○	○
遥控器	X	○	○	○	○	○
Smart 卡 / Java 卡读卡器	X	○	○	○	○	○
内置扬声器	X	○	○	○	○	○
电视接收器	X	○	○	○	○	○
USB 闪存盘	X	○	○	○	○	○
USB 集线器	X	○	○	○	○	○
网络摄像头	X	○	○	○	○	○
无线接收器	X	○	○	○	○	○
无线网卡	X	○	○	○	○	○

○: 表示该有毒有害物质在该部件所有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过 SJ/T11363-2006 标准规定的限量要求。
 表中标有“X”的所有部件都符合欧盟 RoHS 法规“欧洲议会和欧盟理事会 2002 年 1 月 27 日关于电子电气设备中限制使用某些有害物质的 2002/95/EC 号指令”。

注: 环保使用期限的参考知识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、JISC0950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。

Mexico Sustainable Energy Use Law

This product has been labeled in compliance with the Mexico Sustainable Energy Use Law requiring disclosure of power consumption in the normal use (idle mode) and standby modes. Your product is one of many configurations in this model family; the idle mode power consumption of your specific configuration may vary from the information on the label. Actual power consumption of your product may be higher or lower than the value reported on the Mexico product energy label due to factors such as configuration (components and modules chosen) and usage (tasks being performed, software installed and running, etc.).

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 обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057.

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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