



User Guide

HP Slate

© Copyright 2011 Hewlett-Packard
Development Company, L.P.

Bluetooth is a trademark owned by its proprietor and used by Hewlett-Packard Company under license. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. SD Logo is a trademark of its proprietor.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

First Edition: October 2011

Document Part Number: 652636-001

Product notice

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

Software terms

By installing, copying, downloading, or otherwise using any software product preinstalled on this computer, 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 for requesting a full refund of the computer, please contact your local point of sale (the seller).

Safety warning notice

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

Table of contents

1 Welcome	1
Finding information	2
2 Getting to know your Slate	4
Using the touch screen	4
Changing your Slate's view	4
Adjusting the screen brightness	5
Tapping	6
Flicking	6
Dragging	6
Scrolling	7
Rotating	7
Pinching	8
Setting touch screen preferences	9
Using the on-screen keyboard	9
On-screen keyboard options	10
Using the Swype keyboard	10
Using the digital pen (select models only)	11
Identifying the software on the Slate	11
Updating the software installed on the Slate	11
Knowing the parts	12
Top edge	12
Bottom edge	12
Right edge	13
Opening the label tray	14
Left edge	14
Buttons	16
Display	17
Rear	18
Labels	19

3 Networking (select models only)	20
Using an Internet service provider (ISP)	20
Connecting to a wireless network	21
Connecting to an existing WLAN	21
Setting up a new WLAN network	21
Configuring a wireless router	22
Protecting your WLAN	22
Creating a wireless connection	22
Identifying wireless and network status icons	22
Turning wireless devices on or off	23
Using HP Connection Manager (select models only)	23
Using operating system controls	24
Using a WLAN	25
Connecting to an existing WLAN	25
Setting up a new WLAN	26
Protecting your WLAN	26
Roaming to another network	27
Using HP Mobile Broadband (select models only)	27
Inserting a SIM	28
Removing a SIM	28
Using GPS (select models only)	29
Using Bluetooth wireless devices	29
Bluetooth and Internet Connection Sharing (ICS)	29
4 Multimedia	30
Identifying your multimedia components	30
Audio	32
Adjusting the volume	32
Checking audio functions on the Slate	33
Cameras	34
HP Slate Camera	34
Using HP Slate Camera	34
5 Power management	36
Shutting down the Slate	36
Setting power options	36
Using power-saving states	36
Initiating and exiting Sleep	37
Initiating and exiting Hibernation	37
Using the power meter	38

Using power plans	38
Viewing the current power plan	38
Selecting a different power plan	38
Customizing power plans	39
Setting password protection on wakeup	39
Using battery power	39
Displaying the remaining battery charge	39
Maximizing battery discharge time	40
Managing low battery levels	40
Identifying low battery levels	40
Resolving a low battery level	40
Resolving a low battery level when external power is available	40
Resolving a low battery level when no power source is available	40
Resolving a low battery level when the Slate cannot exit	
Hibernation	40
Conserving battery power	41
Using external AC power	41
Connecting the AC adapter	41
Docking the Slate to the HP Slate Dock	43
6 Drives	44
Handling drives	44
Using hard drives	45
Improving hard drive performance	45
Using Disk Defragmenter	45
Using Disk Cleanup	45
7 External cards and devices	46
Using Media Card Reader cards (select models only)	46
Inserting a digital card	46
Removing a digital card	46
Using a USB device	47
Connecting a USB device	47
Removing a USB device	48
Using optional external devices	49
Using optional external drives	49
8 Keeping your Slate safe	50
Managing Internet privacy	50
Protecting your system files	50

Protecting the Slate from power surges	50
Using the Slate safely	51
Securing your Slate and information	51
Using passwords	51
Setting Windows passwords	52
Setting Setup Utility (BIOS) passwords	53
Using Internet security software	53
Using antivirus software	54
Using firewall software	54
Installing software updates	54
Installing Windows security updates	54
Installing HP and third-party software updates	54
Securing your wireless network	55
Backing up your software applications and information	55
9 Backup and recovery	56
Backing up your information	56
Performing a system recovery	57
Using the Windows recovery tools	57
Using a Windows 7 operating system DVD (purchased separately)	58
10 Maintenance	60
Cleaning your Slate	60
Cleaning products	60
Cleaning procedures	60
Cleaning the display	60
Cleaning the sides and cover	61
Cleaning a tablet PC pen and pen holder (select models only)	61
Updating programs and drivers	61
Using SoftPaq Download Manager	61
11 Setup Utility (BIOS) and System Diagnostics	63
Using Setup Utility (BIOS)	63
Starting Setup Utility	63
Using Setup Utility	63
Changing the language of Setup Utility	63
Navigating and selecting in Setup Utility	64
Displaying system information	64
Restoring factory settings in Setup Utility	65
Exiting Setup Utility	65

Updating the BIOS	66
Determining the BIOS version	66
Downloading a BIOS update	67
Using System Diagnostics	68
Appendix A Traveling with the Slate	69
Appendix B Troubleshooting resources	71
Appendix C Electrostatic discharge	72
Appendix D Specifications	73
Input power	73
Operating environment	73
Index	74

1 Welcome

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

- **Connect to the Internet**—Set up your wireless network so that you can connect to the Internet. For more information, refer to [Networking \(select models only\) on page 20](#).
- **Get to know your Slate**—Learn about your Slate's features. Refer to [Getting to know your Slate on page 4](#) for additional information.
- **Find installed software**—Access a list of the software preinstalled on the Slate. Tap **Start**, and then tap **All Programs**. For details about using the software included with the Slate, refer to the software manufacturer's instructions, which may be provided with the software or on the manufacturer's Web site.

Finding information

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

Resources	For information about
<i>Setup Instructions</i> poster	• How to set up the Slate • Help to identify Slate components
<i>User Guide</i>	• Slate features
To access this guide:	• Power management features
Tap Start , tap Help and Support , and then tap User Guides .	• Instructions for the following: ◦ Connecting to a wireless network ◦ Using the on-screen keyboard and pointing devices ◦ Using the multimedia features of the Slate ◦ Maximizing battery life ◦ Protecting the Slate ◦ Performing a backup and a recovery ◦ Contacting customer support ◦ Caring for the Slate ◦ Updating the software • Computer specifications
Help and Support	• Operating system information
To access Help and Support, tap Start , and then tap Help and Support .	• Software, driver, and BIOS updates • Troubleshooting tools
NOTE: For country- or region-specific support, go to http://www.hp.com/support , tap your country or region, and then follow the on-screen instructions.	• How to access technical support
<i>Regulatory, Safety, and Environmental Notices</i>	• Regulatory and safety information
To access this guide:	• Battery disposal information
Tap Start , tap Help and Support , and then tap User Guides	
<i>Safety & Comfort Guide</i>	• Proper workstation setup, posture, health, and work habits
To access this guide:	• Electrical and mechanical safety information
Tap Start , tap Help and Support , and then tap User Guides	
– or –	
Go to http://www.hp.com/ergo .	
<i>Worldwide Telephone Numbers</i> booklet	HP customer support telephone numbers
This booklet is provided with your Slate.	

Resources	For information about
HP Web site To access this Web site, go to http://www.hp.com/support.	• Customer support information • Information for ordering parts • Software, driver, and BIOS updates • Information about accessories available for the device
<i>Limited Warranty*</i> To access the warranty: Tap Start, tap Help and Support, tap User Guides, and then tap View Warranty Information. — or — Go to http://www.hp.com/go/orderdocuments.	Warranty information *You can find the expressly provided HP Limited Warranty applicable to your product located with the user guides on your Slate 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 some 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: • 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 serial number label), name, and postal address. IMPORTANT: Do NOT return your HP product to the addresses above. For product support, refer to your product home page at http://www.hp.com/go/contactHP.

2 Getting to know your Slate

Using the touch screen

You can use your fingers to perform most actions on the touch screen.

The instructions in this section are based on the preferences set at the factory. To modify settings for recognized taps and flicks, refer to “Setting touch screen preferences.”



NOTE: Some gestures are not supported in all programs.

Changing your Slate's view

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

1. To change the view of your Slate from landscape view to portrait view:

Hold the Slate vertically, and then turn it 90 degrees to the right (in a clockwise direction).

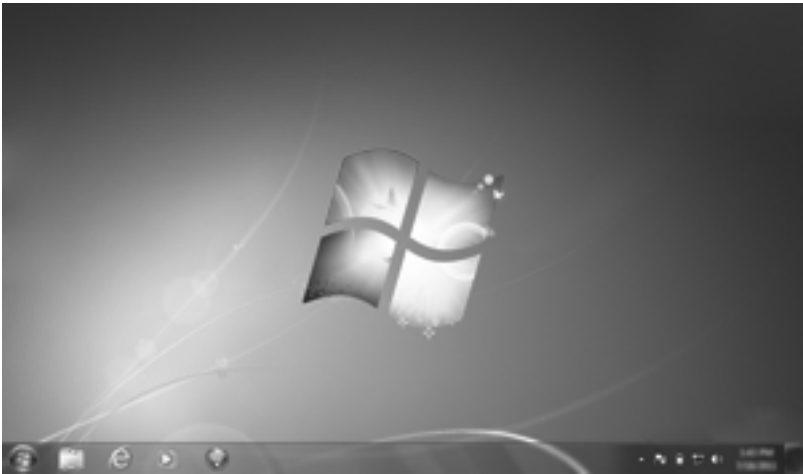
2. To change the view of your Slate from portrait view to landscape view:

Hold the Slate vertically, and then turn it 90 degrees to the left (in a counter-clockwise direction).



NOTE: The appearance of the desktop may vary.



Description	View
Landscape	
Portrait	

Adjusting the screen brightness

To adjust the screen brightness:

1. 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.

Tapping

Tap or double-tap an item on the screen as you would click or double-click with an external mouse. Tap and hold an item to see the context menu.



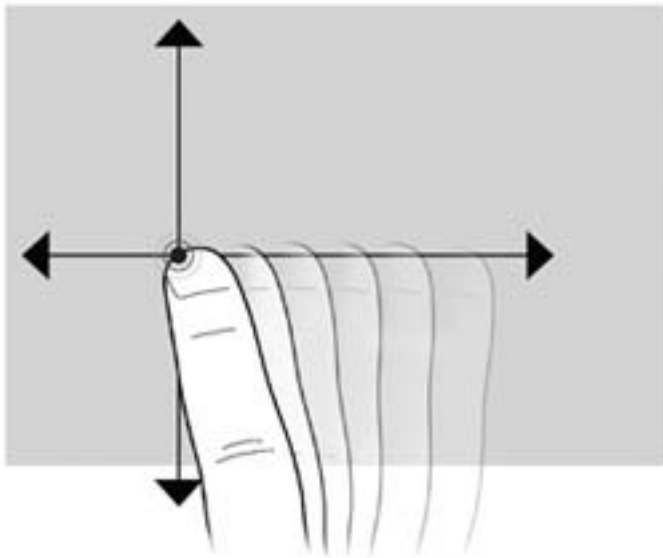
NOTE: Tap and hold your finger until the operating system draws a circle around the area you are touching, and then the context menu appears.

Flicking

Touch the screen in a light, quick flicking motion up, down, left, or right to navigate through screens or quickly scroll through documents.

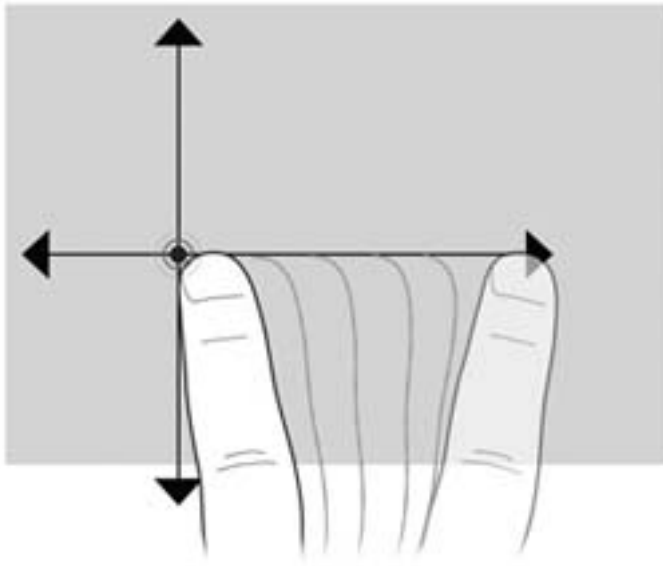


NOTE: For the flick movement to work, a scroll bar must be present in the active window.



Dragging

Press your finger on an item on the screen, and then move your finger to drag the item to a new location. You can also use this motion to slowly scroll through documents.

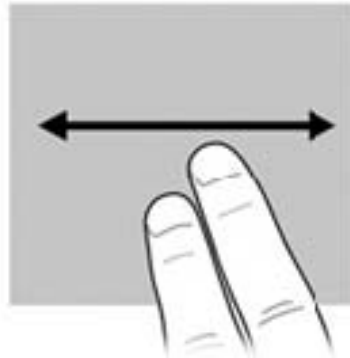
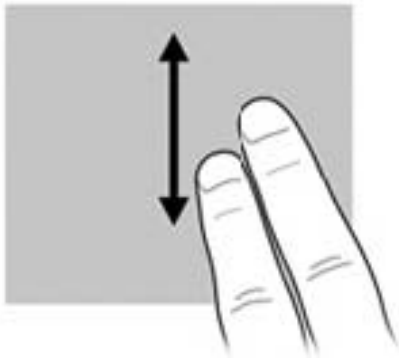


Scrolling

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



NOTE: Scrolling speed is controlled by finger speed.

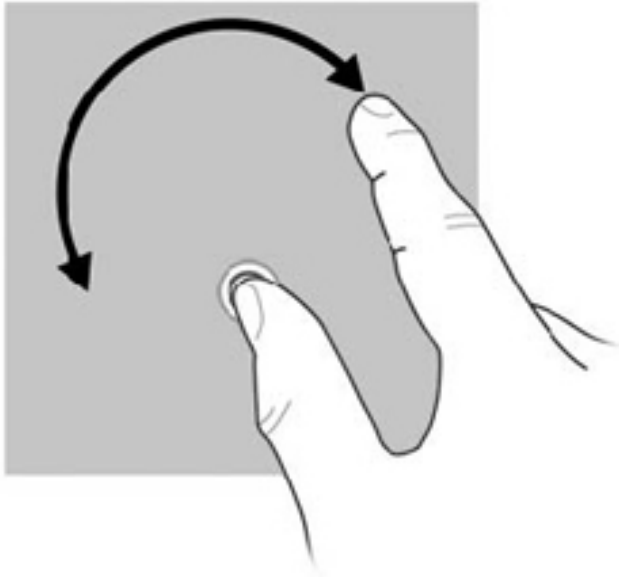


Rotating

Rotating allows you to rotate items such as photos and pages. To rotate, anchor your thumb on the screen, and then move your forefinger in a semicircular motion around your thumb.



NOTE: You must move your forefinger for at least 90 degrees of a circle.

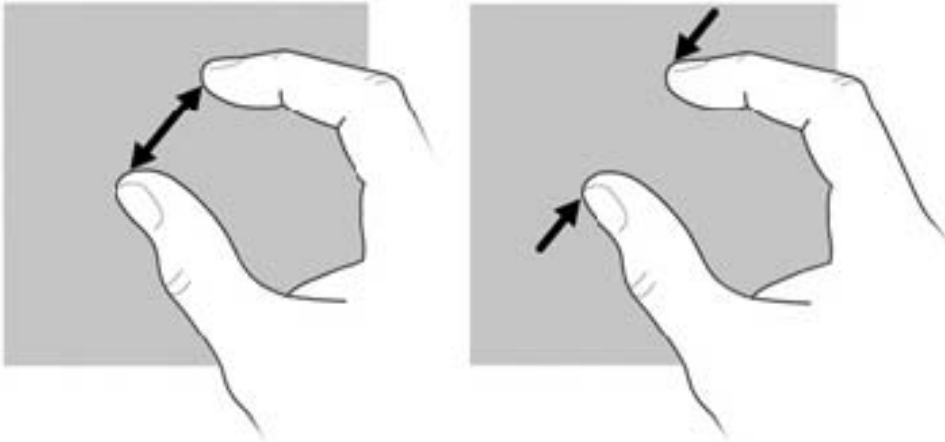


Pinching

Pinching allows you to zoom in or out on items such as PDF files, images, and photos.

To pinch:

- Zoom out by holding two fingers apart on the screen, and then pull the fingers together to decrease an object's size.
- Zoom in by holding two fingers together on the screen, and then pull the fingers apart to increase an object's size.



Setting touch screen preferences

To change or test tap settings:

1. Tap **Start**, and then tap **Control Panel**.
2. Tap **Hardware and Sound**, tap **N-trig DuoSense™ Digitizer Settings**, tap **Digitizer options** tab, and then follow the on-screen instructions.

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

To change or create flick assignments:

1. Tap **Start**, 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**.

Using the on-screen keyboard

Occasionally you may need 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 Slate 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 –
Double-tap the keyboard icon at the left side of the screen.
– or –
Press the Keyboard button on the left edge of the Slate.
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: 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.

On-screen keyboard options

To access options for the on-screen keyboard, tap **Tools** at the top of the keyboard, and then tap one of the following options:

- **Show expanded keyboard**—Displays the expanded keyboard.



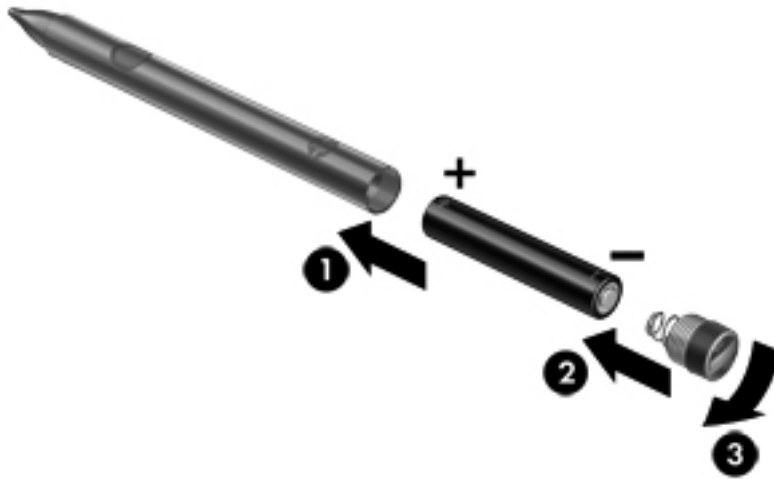
- **Docking**—Allows you to select the location where the on-screen keyboard displays on the screen.
 - **Float**—Allows you to reposition the on-screen keyboard by tapping the top of the keyboard window and dragging it to the desired location.
 - **Dock at top of screen**—Displays the keyboard at the top of the screen automatically.
 - **Dock at bottom of screen**—Displays the keyboard at the bottom of the screen automatically.
- **Help topics**—Displays Help and Support.
- **Options**—Displays the Input Panel Options.

Using the Swype keyboard

After the Slate is set up, a welcome screen is displayed that allows you to select the Swype keyboard as your default on-screen keyboard.

- ▲ To use the Swype keyboard, double-tap the desktop icon, and then follow the on-screen instructions.

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 Slate. 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.

The digital pen uses inherent pressure sensitivity, so you can create a bolder stroke by pressing harder on the screen with the digital pen. Pressure sensitivity may not be supported in all programs.

To calibrate the pen and change pen settings, such as pen sensitivity, tap **Start**, tap **Control Panel**, tap **Hardware and Sound**, tap **N-trig DuoSense Digitizer Settings**, and then follow the on-screen instructions.

 **NOTE:** For regulatory and safety information, refer to the *Regulatory, Safety, and Environmental Notices* on the HP Slate. Tap **Start**, tap **Help and Support**, and then tap **User Guides**.

Identifying the software on the Slate

To see a list of the software preinstalled on the Slate, follow these steps:

- ▲ Tap **Start**, and then tap **All Programs**. Tap the name of a program to open it.

 **NOTE:** For details about using software included with the Slate, refer to the software manufacturer's instructions, which may be provided with the software or on the manufacturer's Web site.

Updating the software installed on the Slate

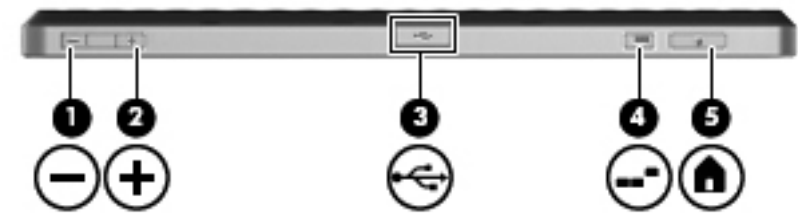
Most software, including the operating system, is updated frequently by the manufacturer or provider. Important updates to the software included with the Slate may have been released since the Slate left the factory.

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

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

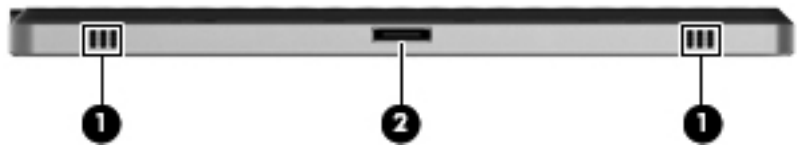
Knowing the parts

Top edge



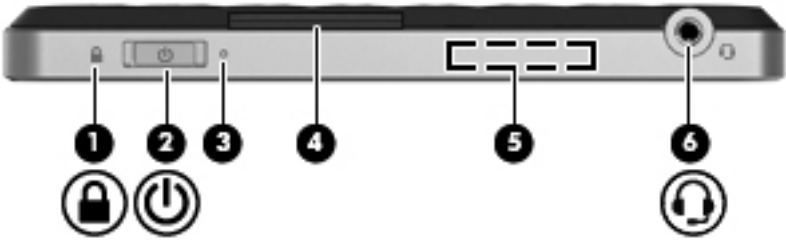
Component	Description
(1) 	Volume down button Decreases speaker volume.
(2) 	Volume up button Increases speaker volume.
(3) 	USB port Connects optional USB devices. NOTE: To use an external optical disc drive connected to the Slate, you must connect AC power separately to the external drive.
(4) 	Ctrl+alt+del button Performs the same action as pressing ctrl+alt+del on a computer keyboard.
(5) 	Home button Minimizes all open applications and displays the Windows desktop.

Bottom edge



Component	Description
(1) Speakers (2)	Produce sound.
(2) Power connector	Connects an AC adapter or an HP Slate Dock.

Right edge



Component		Description
(1)	 PowerLock icon	When the Slate is on, slide the power switch up to the lock position to lock the auto-rotate feature of the display.
(2)	 Power switch	• When the Slate is off, slide the switch down to turn on the Slate. • When the Slate is on, briefly slide the switch down to initiate Sleep. • When the Slate is in the Sleep state, briefly slide the switch down to exit Sleep. • When the Slate is in Hibernation, briefly slide the switch down to exit Hibernation. If the Slate has stopped responding and Windows shutdown procedures are ineffective, slide and hold the power switch down for at least five seconds to turn off the Slate. To learn more about your power settings, tap Start, tap Control Panel, tap System and Security, and then tap Power Options.
(3)	 Power light	• White: ◦ The Slate is on and connected to external power. ◦ The Slate is docked in the optional docking station, and the docking station is connected to external power. • Blinking: The Slate is in the Sleep state. • Off: The Slate is off or in Hibernation.
(4)	Label tray	Holds the serial number and other labels.

Component		Description
(5)	WLAN antennas	Sends and receives wireless signals to communicate with wireless local area networks (WLAN).
(6)	 Audio-out (headphone)/Audio-in (microphone) combo jack	Produces sound when connected to optional powered stereo speakers, headphones, earbuds, a headset, or television audio. Also connects an optional headset microphone.

NOTE: When an audio component is connected to the jack, the Slate's speakers are disabled.

The audio component cable must have a 4-conductor connector.

Opening the label tray

Pull the label tray out to view the serial number label.



Left edge



Component		Description
(1)	 SIM slot (select models only)	Supports a wireless subscriber identity module (SIM) (select models only).

Component	Description
(2)  SD Card Reader	Supports the following optional digital card formats: - Secure Digital High Capacity (SDHC) Memory Card (standard and large size) - xD-Picture card
(3)  Keyboard button	Displays the on-screen keyboard.
(4)  Internal microphone	Records sound.

Buttons



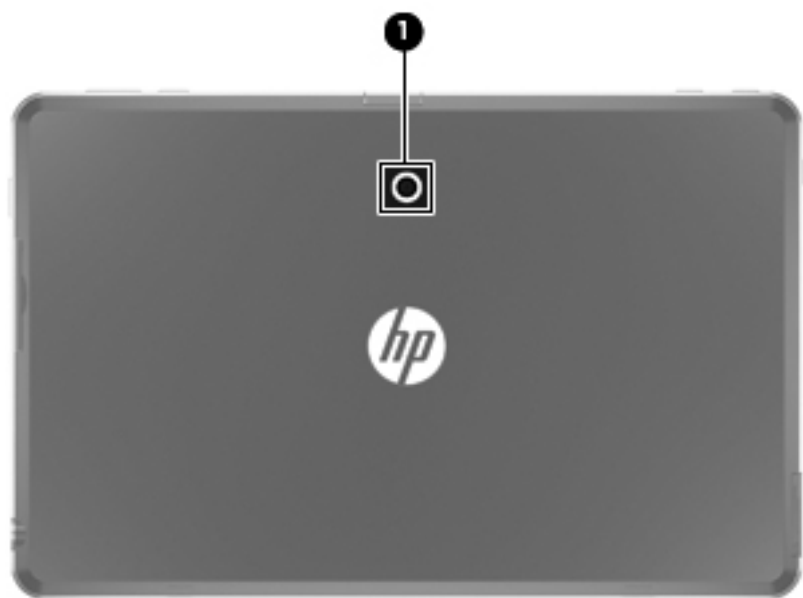
Component		Description
(1)		Home button Minimizes all open applications and display the Windows desktop.
(2)		Ctrl+alt+del button Performs the same action as pressing ctrl+alt+del on a computer keyboard.
(3)		Volume up button Increases speaker volume.
(3)		Volume down button Decreases speaker volume.
(4)		Keyboard button Displays the on-screen keyboard.

Display



Component		Description
(1)	Inward camera	Records video and captures still photographs.

Rear

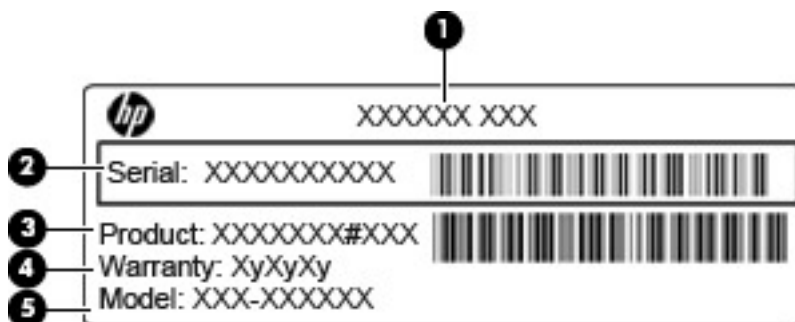


Component		Description
(1)	Outward camera	Records video and captures still photographs.

Labels

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

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



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

- Have this information available when you contact technical support. The serial number label is affixed inside the label tray.
- Microsoft® Certificate of Authenticity—Contains the Windows Product Key. You may need the Product Key to update or troubleshoot the operating system. The Microsoft Certificate of Authenticity is affixed inside the label tray.
- Regulatory label—Provides regulatory information about the Slate. The regulatory label is affixed inside the label tray.
- 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 Slate model includes one or more wireless devices, one or more certification labels are included with your Slate. You may need this information when traveling internationally. Wireless certification labels are affixed inside the label tray.
- SIM (subscriber identity module) label (select models only)—Provides the ICCID (Integrated Circuit Card Identifier) of the SIM. This label is located inside the label tray.
- HP Mobile Broadband Module serial number label (select models only)—Provides the serial number of the HP Mobile Broadband Module. This label is located inside the label tray.

3 Networking (select models only)

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

Your Slate supports wireless Internet access. For mobile Internet access, you can use a wireless connection. Refer to [Connecting to an existing WLAN on page 21](#) or [Setting up a new WLAN network on page 21](#).

Using an Internet service provider (ISP)

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

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

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

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

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

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

Connecting to a wireless network

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

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

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

Connecting to an existing WLAN

1. Turn on the computer.
2. Be sure that the WLAN device is on.
3. Tap the network icon in the notification area, at the far right of the taskbar.
4. Select a network to connect to.

 **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, tap **Open Network and Sharing Center**, and then tap **Set up a new connection or network**. A list of options is displayed. You can choose to manually search for and connect to a network or to create a new network connection.

5. Tap **Connect**.
6. If the network is a security-enabled WLAN, you are prompted to enter a network security code. Type the code, and then tap **OK** to complete the connection.

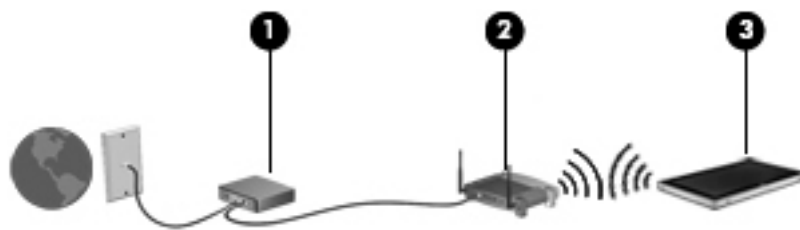
Setting up a new WLAN network

Required equipment:

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

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

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



Configuring a wireless router

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

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

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

Protecting your WLAN

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

For information on protecting your WLAN, refer to [Protecting your WLAN on page 26](#).

Creating a wireless connection

Your computer may be equipped with one or more of the following wireless devices:

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

For more information on wireless technology, refer to the information and Web site links provided in Help and Support.

Identifying wireless and network status icons

Icon	Name	Description
	Wireless (connected)	Indicates that one or more wireless devices are on.
	Wireless (disconnected)	Indicates that all wireless devices are off.

Icon	Name	Description
	HP Connection Manager (select models only)	Opens HP Connection Manager, which enables you to create and manage WWAN connections (select models only), and monitor the status of WLAN and Bluetooth connections.
	Network (connected)	Indicates that one or more network devices are connected to a network.
	Network (disconnected)	Indicates that network devices are not connected to a network.
	Network (disabled/disconnected)	Indicates that no wireless connections are available.

Turning wireless devices on or off

You can use HP Connection Manager (select models only) to turn on and turn off wireless devices.

To turn off wireless devices using HP Connection Manager:

- ▲ Tap and hold the **HP Connection Manager** icon in the notification area, at the far right of the taskbar, and then tap the power button next to the desired device.

– or –

Tap **Start**, tap **All Programs**, tap **HP**, tap **HP Connection Manager**, and then tap the power button next to the desired device.

Using HP Connection Manager (select models only)

HP Connection Manager provides a central location for managing your wireless devices, an interface for connecting to the Internet using HP Mobile Broadband, and an interface for sending and receiving SMS (text) messages. HP Connection Manager allows you to manage the following devices:

- Wireless local area network (WLAN)/Wi-Fi
- Wireless wide area network (WWAN)/HP Mobile Broadband
- Bluetooth®

HP Connection Manager provides information and notifications on connection status, power status, SIM details, and SMS messages. Status information and notifications are provided in the notification area, at the far right of the taskbar.

To open HP Connection Manager:

- ▲ Tap the **HP Connection Manager** icon in the taskbar.

– or –

Tap **Start**, tap **All Programs**, tap **HP**, and then tap **HP Connection Manager**.

For more information, refer to the HP Connection Manager software Help.

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:

- ▲ Tap **Start**, tap **Control Panel**, tap **Network and Internet**, and then tap **Network and Sharing Center**.

For more information, tap **Start**, and then tap **Help and Support**.

Using a WLAN

A wireless connection connects the computer to Wi-Fi networks, or WLANs. A WLAN is composed of other computers and accessories that are linked by a wireless router or a wireless access point.

Connecting to an existing WLAN

1. Be sure that the WLAN device is on. (Refer to [Turning wireless devices on or off on page 23.](#))
2. Tap the network icon in the notification area, at the far right of the taskbar.
3. Select your WLAN from the list.



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, tap **Open Network and Sharing Center**, and then tap **Set up a new connection or network**. A list of options is displayed. You can choose to manually search for and connect to a network, or you can create a new network connection.

4. Tap **Connect**.

If the network is a security-enabled WLAN, you are prompted to enter a network security code. Type the code, and then tap **OK** to complete the connection.

After the connection is made, you can place the mouse pointer over the network 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.

Setting up a new WLAN

Required equipment:

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

 **NOTE:** Some cable modems include a built-in router. Check with your ISP to see if you need a separate router.

- The wireless computer **(3)**

The illustration shows an example of a wireless network installation that is connected to the Internet.



 **NOTE:** When setting up a wireless connection, be sure that your computer and wireless router are synchronized. To synchronize your computer and wireless router, turn your computer and wireless router off and then back on.

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

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

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 computer in a hotspot, limit your network activities to e-mail that is not confidential and basic Internet surfing.

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

- **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.
- **Wireless encryption**—Your computer supports three encryption protocols:
 - Wi-Fi Protected Access (WPA)
 - Wi-Fi Protected Access II (WPA2)
 - Wired Equivalent Privacy (WEP)



NOTE: HP recommends that you select WPA2, which is the most advanced of the three encryption protocols. The use of WEP encryption is not recommended, because it can be overcome with little effort.

- Wi-Fi Protected Access (WPA) and Wi-Fi Protected Access II (WPA2) use security standards to encrypt and decrypt data transmitted over the network. Both WPA and WPA2 dynamically generate a new key for every packet, and they also generate a different set of keys for each computer on the network. To accomplish this:
 - WPA uses Advanced Encryption Standard (AES) and Temporal Key Integrity Protocol (TKIP).
 - WPA2 uses Cipher Block Chaining Message Authentication Code Protocol (CCMP), which is a new AES protocol.
- Wired Equivalent Privacy (WEP) encrypts data with a WEP key before it is transmitted. Without the correct key, others will not be able to use the WLAN.

Roaming to another network

When you move your computer within range of another WLAN, Windows attempts to connect to that network. If the attempt is successful, your computer is automatically connected to the new network. If Windows does not recognize the new network, follow the same procedure you used initially to connect to your WLAN.

Using HP Mobile Broadband (select models only)

HP Mobile Broadband enables your computer to use wireless wide area networks (WWANs) to access the Internet from more places and over larger areas than it can by using WLANs. Using HP Mobile Broadband requires a network service provider, which in most cases is a mobile phone network provider.

When used with mobile network provider service, HP Mobile Broadband gives you the freedom to stay connected to the Internet, send e-mail, or connect to your corporate network whether you are on the road or outside the range of Wi-Fi hotspots.



NOTE: You may need the HP Mobile Broadband Module serial number to activate mobile broadband service. Refer to [Labels on page 19](#) for the location of the serial number label.

Some mobile network service providers require the use of a subscriber identity module (SIM). A SIM contains basic information about you or your computer, such as a personal identification number (PIN), as well as network information. Some computers include a preinstalled SIM. If the SIM is not preinstalled, it may be included with the HP Mobile Broadband information provided with your computer, or it may be provided separately by the mobile network service provider.

For information on inserting and removing the SIM, refer to [Inserting a SIM on page 28](#) and [Removing a SIM on page 28](#).

For additional information on HP Mobile Broadband and how to activate service with a preferred mobile network service provider, refer to the HP Mobile Broadband information if it is included with your computer. For additional information, see the HP Web site at <http://www.hp.com/go/mobilebroadband> (U.S. only).

Inserting a SIM



NOTE: To identify the SIM slot location, refer to [Left edge on page 14](#).

1. Shut down the computer. If you are not sure whether the computer is off or in Hibernation, turn the computer on by pressing the power button. Then shut down the computer through the operating system.
2. Close the display.
3. Disconnect all external devices connected to the computer.
4. Unplug the power cord from the AC outlet.
5. Remove the battery.
6. Insert the SIM into the SIM slot, and gently press the SIM into the slot until it is firmly seated.



CAUTION: When inserting a SIM, position the card to match the icon next to the SIM slot on the computer. If a SIM is inserted incorrectly, it could damage the SIM and the SIM connector.

To reduce the risk of damage to the connector, use minimal force when inserting a SIM.

7. Replace the battery.



NOTE: HP Mobile Broadband is disabled if the battery is not replaced.

8. Reconnect external power and external devices.
9. Turn on the computer.

Removing a SIM



NOTE: To identify the SIM slot location, refer to [Left edge on page 14](#).

1. Shut down the computer. If you are not sure whether the computer is off or in Hibernation, turn the computer on by pressing the power button. Then shut down the computer through the operating system.
2. Close the display.
3. Disconnect all external devices connected to the computer.
4. Unplug the power cord from the AC outlet.
5. Remove the battery.
6. Press in on the SIM, and then remove it from the slot.
7. Replace the battery.
8. Reconnect external power and external devices.
9. Turn on the computer.

Using GPS (select models only)

Your Slate may be equipped with a Global Positioning System (GPS). GPS satellites deliver location, speed, and direction information to GPS-equipped systems.

For more information, refer to the HP GPS and Location software Help.

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
- Phones
- Imaging devices (cameras and printers)
- Audio devices

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

Bluetooth and Internet Connection Sharing (ICS)

HP does **not** recommend setting up one computer with Bluetooth as a host and using it as a gateway through which other computers may connect to the Internet. When two or more computers are connected using Bluetooth, and Internet Connection Sharing (ICS) is enabled on one of the computers, the other computers may not be able to connect to the Internet using the Bluetooth network.

The strength of Bluetooth is in synchronizing information transfers between your computer and wireless devices including cellular phones, printers, cameras, and PDAs. The inability to consistently connect two or more computers to share the Internet through Bluetooth is a limitation of Bluetooth and the Windows operating system.

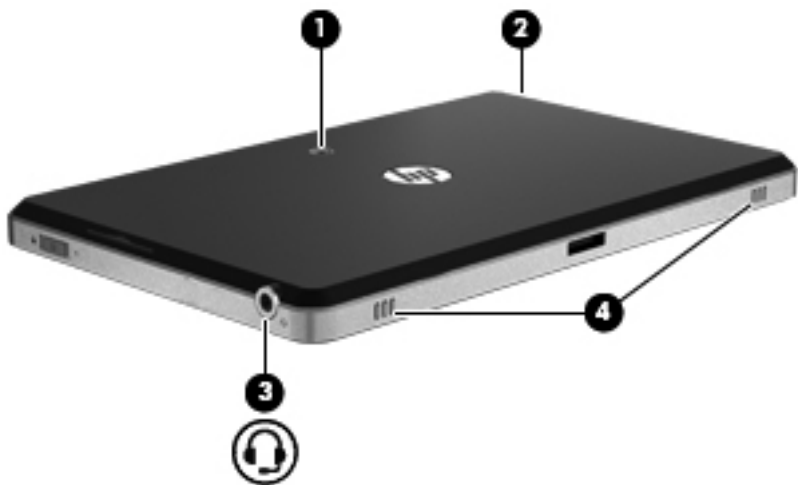
4 Multimedia

Your Slate may include the following:

- Integrated speakers
- Integrated microphone
- Integrated cameras
- Preinstalled multimedia software

Identifying your multimedia components

The following illustration and table describe the multimedia features of the Slate.



Component		Description
(1)	Outward camera	Records video and captures still photographs. NOTE: To capture still photos and record video, you can use the HP Slate Camera software. Tap the Outward button to use the outward camera.
(2)	Inward camera	Records video and captures still photographs. NOTE: To capture still photos and record video, you can use the HP Slate Camera software. Tap the Inward button to use the inward camera.

Component		Description
(3)	 Audio-out (headphone)/Audio-in (microphone) combo jack	Produces sound when connected to optional powered stereo speakers, headphones, earbuds, a headset, or television audio. Also connects an optional headset microphone. NOTE: When an audio component is connected to the jack, the Slate's speakers are disabled. The audio component cable must have a 4-conductor connector.
(4)	Speakers (2)	Produce sound.

Audio

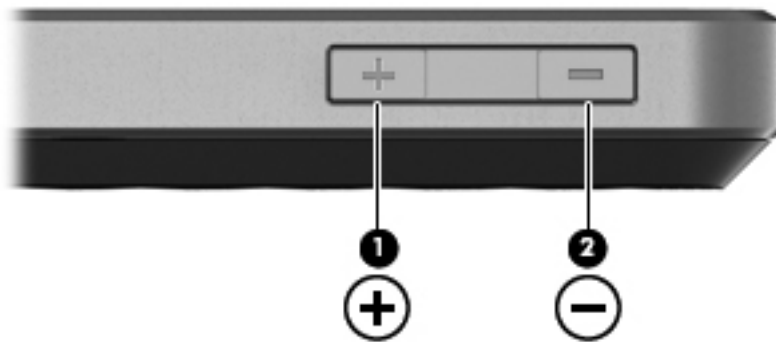
Your Slate has a variety of audio features that allow you to:

- Play music using your Slate's speakers and/or connected external speakers.
- Record sound using the internal microphone or an optional external headset microphone.
- Download music from the Internet.
- Create multimedia slideshows and presentations using audio and images.
- Transmit sound and images with instant messaging programs.

Adjusting the volume

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

You can adjust the volume using the following volume controls:



- To increase volume, press the Volume up button **(1)** on the top edge of the Slate.
- To decrease volume, press the Volume down button **(2)** on the top edge of the Slate.
- Windows® volume control:
 - a. Tap the **Speakers** icon in the notification area, and then tap **Mixer**.
 - b. In the Speakers column, increase or decrease the volume by moving the slider up or down. You can also mute the volume by tapping the **Mute Speakers** icon.

If the Speakers icon is not displayed in the notification area, follow these steps to add it:

- a. Tap and hold the **Show hidden icons** icon (the arrow at the far left of the notification area).
 - b. Tap **Customize**.
 - c. Under **Behaviors**, tap **Show icon and notifications** for the Speakers icon.
 - d. Tap **OK**.
- Program volume control:

Volume can also be adjusted within some programs.

Checking audio functions on the Slate

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

1. Tap **Start**, and then tap **Control Panel**.
2. 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 the **Test** button.

You should hear sound through the speakers or through connected headphones.

To check the record functions of the Slate, follow these steps:

1. Tap **Start**, tap **All Programs**, tap **Accessories**, and then tap **Sound Recorder**.
2. Tap **Start Recording** and speak into the microphone. Save the file to your desktop.
3. Open a multimedia program and play back the sound.



NOTE: For best results when recording, speak directly into the microphone and record sound in a setting free of background noise.

To confirm or change the audio settings:

1. Tap **Start**, and then tap **Control Panel**.
2. Tap **Hardware and Sound**, and then tap **Sound**.

Cameras

Your Slate includes an outward integrated camera and an inward integrated camera. The cameras are input devices that allow you to record video and capture still photographs.

HP Slate Camera

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

To start the HP Slate Camera software:

- ▲ Tap the **HP Slate Camera** icon on the desktop.

– or –

Tap **Start**, tap **All Programs**, tap **HP**, and then tap **HP Slate Camera**.

Using HP Slate Camera



NOTE: For more information about the HP Slate 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: • 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 Power management

Shutting down the Slate

 **CAUTION:** Unsaved information will be lost when the Slate is shut down.

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

Shut down the Slate when the Slate is unused and disconnected from external power for an extended period.

Although you can shut down the Slate with the power switch, the recommended procedure is to use the Windows Shut down command.

To shut down the Slate, follow these steps:

 **NOTE:** If the Slate is in the Sleep state or in Hibernation, you must first exit Sleep or Hibernation before shut down is possible.

1. Save your work and close all open programs.
2. Tap **Start**.
3. Tap **Shut down**.

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

- Press the Ctrl+alt+del button on the top edge of the Slate, next to the Home button, and then slide the power switch down.
- Slide and hold the power switch down for at least 5 seconds.
- Disconnect the Slate from external power.

Setting power options

Using power-saving states

The Slate has two power-saving states enabled at the factory: Sleep and Hibernation.

When Sleep is initiated, the screen clears. Your work is saved to memory, letting you exit the Sleep state faster than exiting Hibernation. If the Slate is in the Sleep state for an extended period or if the battery reaches a critical battery level while in the Sleep state, the Slate initiates Hibernation.

When Hibernation is initiated, your work is saved to a hibernation file on the hard drive and the Slate turns off.

 **CAUTION:** To prevent possible audio and video degradation, loss of audio or video playback functionality, or loss of information, do not initiate Sleep or Hibernation 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 Slate functions while the Slate is in the Sleep state or in Hibernation.

Initiating and exiting Sleep

The system is set at the factory to initiate Sleep after 10 minutes of inactivity when running on battery power and 20 minutes of inactivity when running on external power.

Power settings and timeouts can be changed using Power Options in Windows Control Panel.

With the Slate on, you can initiate Sleep in any of the following ways:

- Briefly slide the power switch down.
- Tap **Start**, tap the arrow next to the Shut down button, and then tap **Sleep**.

To exit Sleep:

- ▲ Briefly slide the power switch down.

When the Slate exits Sleep, your work returns to the screen where you stopped working.

 **NOTE:** If you have set a password to be required when the Slate exits Sleep, you must enter your Windows password before your work returns to the screen.

Initiating and exiting Hibernation

The system is set at the factory to initiate Hibernation after a period of inactivity when running on battery power or on external power, or when the battery reaches a critical battery level.

Power settings and timeouts can be changed using Power Options in Windows Control Panel.

To initiate Hibernation:

- ▲ Tap **Start**, tap the arrow next to the Shut down button, and then tap **Hibernate**.

To exit Hibernation:

- ▲ Briefly slide the power switch down.

When the Slate exits Hibernation, your work returns to the screen where you stopped working.

 **NOTE:** If you have set a password to be required when the Slate exits Hibernation, you must enter your Windows password before your work returns to the screen.

Using the power meter

The power meter is located in the notification area, at the far right of the taskbar. The power meter allows you to quickly access power settings, view remaining battery charge, and select a different power plan.

- To display the percentage of remaining battery charge and the current power plan, tap the Power Meter icon.
- To access Power Options, or to change the power plan, tap the **Power Meter** icon, and then select an item from the list.

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

To hide or display the power meter icon:

1. Tap and hold the **Show hidden icons** icon (the arrow at the left side of the notification area).
2. Tap **Customize notification icons**.
3. Under **Behaviors**, tap **Show icon and notifications** for the Power Meter icon.
4. Tap **OK**.

Using power plans

A power plan is a collection of system settings that manages how the Slate uses power. Power plans can help you conserve power and maximize Slate performance.

The following power plans are available:

- HP Recommended
- Power saver

You can change the settings of these power plans through Power Options.

Viewing the current power plan

- ▲ Tap the **Power Meter** icon in the notification area, and then tap **More power options**.

– or –

Tap **Start**, tap **Control Panel**, tap **System and Security**, and then tap **Power Options**.

Selecting a different power plan

1. Tap the **Power Meter** icon in the notification area, and then tap **More power options**.

– or –

Tap **Start**, tap **Control Panel**, tap **System and Security**, and then tap **Power Options**.

2. Select a power plan from the list.

Customizing power plans

1. Tap the **Power Meter** icon in the notification area, and then tap **More power options**.
– or –
Tap **Start**, tap **Control Panel**, tap **System and Security**, and then tap **Power Options**.
2. Tap a power plan, and then tap **Change plan settings**.
3. Change the settings as needed.
4. To change additional settings, tap **Change advanced power settings** and make your changes.

Setting password protection on wakeup

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

1. Tap the **Power Meter** icon in the notification area, and then tap **More power options**.
– or –
Tap **Start**, tap **Control Panel**, tap **System and Security**, and then tap **Power Options**.
2. In the left pane, tap **Require a password on wakeup**.
3. Tap **Change settings that are currently unavailable**.
4. Tap **Require a password (recommended)**.



NOTE: If you need to create a user account password or change your current user account password, tap **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. Tap **Save changes**.

Using battery power

 **WARNING!** To reduce potential safety issues, use only the battery provided with the Slate.

The Slate runs on battery power whenever it is not plugged into external power. Slate battery life varies, depending on power management settings, running programs, display brightness, external devices connected to the Slate, and other factors.

If the Slate contains a charged battery and the Slate is running on external AC power supplied through the AC adapter, the Slate switches to battery power if the AC adapter is disconnected from the Slate.



NOTE: When you disconnect AC power, the display brightness is automatically decreased to save battery life. For information on increasing or decreasing display brightness, refer to [Adjusting the screen brightness on page 5](#).

Displaying the remaining battery charge

- ▲ Move the pointer over the **Power Meter** icon in the notification area, at the far right of the taskbar.

Maximizing battery discharge time

Battery discharge time varies depending on the features you use while on battery power. Maximum discharge time gradually shortens, as the battery storage capacity naturally degrades.

Tips for maximizing battery discharge time:

- Decrease the brightness on the display.
- Store the Slate in a cool, dry location.
- Tap the **Power saver** setting in Power Options.

Managing low battery levels

The information in this section describes the alerts and system responses set at the factory. Some low-battery alerts and system responses can be changed using Power Options in Windows Control Panel. Preferences set using Power Options do not affect lights.

Identifying low battery levels

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

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

Resolving a low battery level

Resolving a low battery level when external power is available

Connect one of the following devices:

1. AC adapter
2. HP Slate Dock

Resolving a low battery level when no power source is available

▲ Initiate Hibernation.

– or –

Save your work and shut down the Slate.

Resolving a low battery level when the Slate cannot exit Hibernation

When the Slate lacks sufficient power to exit Hibernation, follow these steps:

1. Plug the Slate into external power.
2. Exit Hibernation by briefly sliding the power switch.

Conserving battery power

- Tap the **Power saver** power plan through Power Options under System and Security in Windows Control Panel.
- Turn off wireless and local area network (LAN) connections and exit modem applications when you are not using them.
- Disconnect unused external devices that are not plugged into an external power source.
- Stop, disable, or remove any external media cards that you are not using.
- Decrease screen brightness.
- Before you leave your work, initiate Sleep or Hibernation, or shut down the Slate.

Using external AC power

External AC power is supplied through an approved AC adapter or an HP Slate Dock.

 **WARNING!** To reduce potential safety issues, use only the AC adapter provided with the Slate, a replacement AC adapter provided by HP, or a compatible AC adapter purchased from HP.

Connect the Slate to external AC power under any of the following conditions:

 **WARNING!** Do not charge the battery while you are onboard aircraft.

- When charging or calibrating a battery
- When installing or modifying system software
- When writing information to an optional external drive
- When running Disk Defragmenter
- When performing a backup or recovery

When you connect the Slate to external AC power, the battery begins to charge.

When you disconnect external AC power, the Slate switches to battery power.

Connecting the AC adapter

 **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.

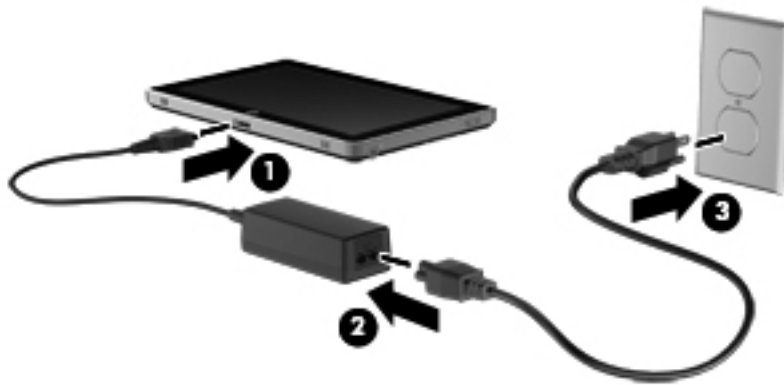
Disconnect power from the Slate by unplugging the power cord from the AC outlet (not by unplugging the power cord from the Slate).

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.

To connect the Slate to external AC power, follow these steps:

1. Plug the AC adapter into the power connector **(1)** on the Slate.
2. Plug the power cord into the AC adapter **(2)**.

3. Plug the other end of the power cord into an AC outlet **(3)**.



Docking the Slate to the HP Slate Dock

To dock the Slate to the HP Slate Dock, follow these steps:

1. Align the docking connector on the dock base with the power connector on the bottom edge of the Slate, and then lower the Slate onto the dock.
2. Plug the AC adapter into the power connector on the back of the dock.
3. Plug the power cord into the AC adapter.
4. Plug the other end of the power cord into an AC outlet.



6 Drives

Handling drives

 **CAUTION:** Drives are fragile computer components that must be handled with care. Refer to the following cautions before handling drives. Additional cautions are included with the procedures to which they apply.

Observe these precautions:

- Before you move a computer that is connected to an external hard drive, initiate Sleep and allow the screen to clear, or properly disconnect the external hard drive.
- Before handling a drive, discharge static electricity by touching the unpainted metal surface of the drive.
- Do not touch the connector pins on a removable drive or on the computer.
- Handle a drive carefully; do not drop a drive or place items on it.
- Before removing or inserting a drive, shut down the computer. If you are unsure whether the computer is off, in the Sleep state, or in Hibernation, turn the computer on, and then shut it down through the operating system.
- Do not use excessive force when inserting a drive into a drive bay.
- Do not type on the keyboard or move the computer while an optical drive is writing to a disc. The write process is sensitive to vibration.
- When the battery is the only source of power, be sure that the battery is sufficiently charged before writing to media.
- Avoid exposing a drive to temperature or humidity extremes.
- Avoid exposing a drive to liquids. Do not spray the drive with cleaning products.
- Remove media from a drive before removing the drive from the drive bay, or traveling with, shipping, or storing a drive.
- If a drive must be mailed, place the drive in a bubble-pack mailer or other suitable protective packaging and label the package “FRAGILE.”
- 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.

Using hard drives

Improving hard drive performance

Using Disk Defragmenter

As you use the computer, files on the hard drive become fragmented. Disk Defragmenter consolidates the fragmented files and folders on the hard drive so that the system can run more efficiently.



NOTE: It is not necessary to run Disk Defragmenter on solid-state drives.

After you start Disk Defragmenter, it works without supervision. Depending on the size of your hard drive and the number of fragmented files, Disk Defragmenter may take more than an hour to complete. You may want to set it to run during the night or at another time when you do not need access to your computer.

HP recommends defragmenting your hard drive at least once a month. You may set Disk Defragmenter to run on a monthly schedule, but you can defragment your computer manually at any time.

To run Disk Defragmenter:

1. Connect the computer to AC power.
2. Tap **Start**, tap **All Programs**, tap **Accessories**, tap **System Tools**, and then tap **Disk Defragmenter**.
3. **Windows 7**—Tap **Defragment disk**.



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

For additional information, access the Disk Defragmenter software Help.

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 computer to run more efficiently.

To run Disk Cleanup:

1. Tap **Start**, tap **All Programs**, tap **Accessories**, tap **System Tools**, and then tap **Disk Cleanup**.
2. Follow the on-screen instructions.

7 External cards and devices

Using Media Card Reader cards (select models only)

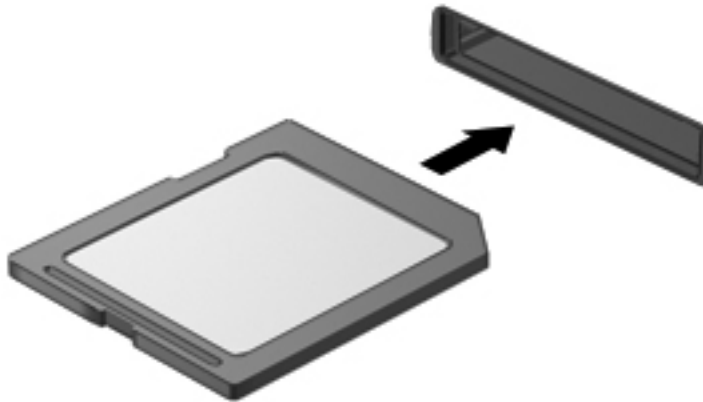
Optional digital cards provide secure data storage and convenient data sharing. These cards are often used with digital media–equipped cameras and PDAs as well as with other computers.

To determine the digital card formats that are supported on your Slate, refer to [Left edge on page 14](#).

Inserting a digital 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 Slate.
2. Insert the card into the Media Card Reader, and then press in on the card until it is firmly seated.



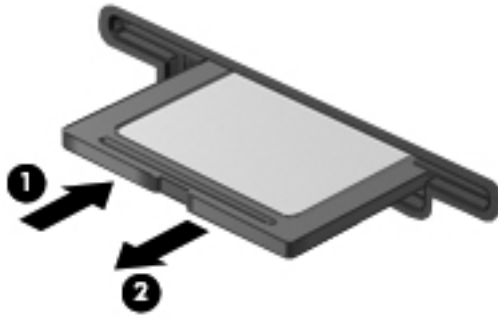
You will hear a sound when the device has been detected, and a menu of options may be displayed.

Removing a digital 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. 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 does not eject, pull the card out of the slot.

Using a USB device

Universal Serial Bus (USB) is a hardware interface that can be used to connect an optional external device, such as a USB keyboard, mouse, drive, printer, scanner, or hub.

Some USB devices may require additional support software, which is usually included with the device. For more information about device-specific software, refer to the manufacturer's instructions. These instructions may be provided with the software, on disc, or on the manufacturer's Web site.

The Slate has at least 1 USB port that supports USB 1.0, 1.1, 2.0, or 3.0 devices. Your Slate may also have a USB charging port that provides power to an external device. An optional docking device or USB hub provides additional USB ports that can be used with the Slate.

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 following illustration may look slightly different than your Slate.



You will hear a sound when the device has been detected.



NOTE: The first time you connect a USB device, a message in the notification area lets you know that the device is recognized by the Slate.

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. To remove a USB device, save your information and close all programs associated with the device.
2. the remove hardware icon in the notification area, at the far right of the taskbar, and then follow the on-screen instructions.
3. Remove the device.

Using optional external devices

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

To connect an external device to the Slate:

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

1. Connect the device to the Slate.
2. If you are connecting a powered device, plug the device power cord into a grounded AC outlet.
3. Turn on the device.

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

Using optional external drives

Removable external drives expand your options for storing and accessing information. A USB drive can be added by connecting the drive to a USB port on the Slate or the HP Slate Dock.

 **NOTE:** HP external USB optical drives should be connected to the powered USB port on the Slate.

USB drives include the following types:

- 1.44-megabyte diskette drive
- Hard drive module
- External optical drive (CD, DVD, and Blu-ray)
- MultiBay device

8 Keeping your Slate safe

Your Windows files must be backed up on a regular basis, and you must guard against viruses, privacy violations, and issues caused by power surges. The following sections address the importance of protecting your Slate as you use your Slate and the Windows operating system.

Managing Internet privacy

To manage Internet privacy settings, follow these steps:

1. Tap **Start**, and then tap **Control Panel**.
2. Tap **Network and Internet**, and then tap **Internet Options** to define the level of security your Slate should use.
3. Tap the **Privacy** tab to determine which embedded programs your browser should allow.

Protecting your system files

The backup and recovery process allows you to back up your files and recover optimal system functionality. For information, refer to [Backup and recovery on page 56](#).

Protecting the Slate from power surges

To protect the Slate from power surges that may be caused by an uncertain power supply or an electrical storm, observe these practices:

- Plug the Slate power cord into a high-quality surge protector (purchased separately). Surge protectors are available from most consumer hardware or electronics retailers.
- During an electrical storm, either run the Slate on battery power, or shut down the Slate and unplug the power cord.

Using the Slate safely

 **WARNING!** To reduce the risk of electric shock or damage to your equipment, observe these practices:

- Plug the power cord into an AC outlet that is easily accessible at all times.
- Disconnect power from the Slate by unplugging the power cord from the AC outlet (not by unplugging the power cord from the Slate).
- If provided with a 3-pin attachment plug on your 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 the possibility of heat-related injuries or of overheating the Slate, do not place the Slate directly on your lap. Use the Slate 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 Slate 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).

 **WARNING!** To reduce potential safety issues, use only the AC adapter or battery provided with the Slate, a replacement AC adapter provided by HP, or a compatible AC adapter purchased as an accessory from HP.

Securing your Slate and information

Computer 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 computer 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 computer.

Computer risk	Security feature
Unauthorized use of the computer	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 computer	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 computer information and to have safer online transactions. Several types of passwords can be set. For example, when you set up your computer for the first time, you were asked to set up a user password to secure your computer.

Additional passwords can be set in Windows or in the HP Setup Utility (BIOS) that is preinstalled on your computer.

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 computer, record each password and store it in a secure place away from the computer. Do not store passwords in a file on the computer.
- 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 computer 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, tap **Start**, and then tap **Help and Support**.

Setting Windows passwords

Password	Function
User password	Protects access to a Windows user account. It also must be entered when you exit Sleep or Hibernation.
Administrator password	Protects administrator-level access to computer contents. NOTE: This password cannot be used to access Setup Utility (BIOS) contents.

Setting Setup Utility (BIOS) passwords

Password	Function
Administrator password*	• Must be entered each time you access Setup Utility (BIOS). • If you forget your administrator password, you cannot access Setup Utility (BIOS). NOTE: The administrator password can be used in place of the power-on password. 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. NOTE: If you enter the power-on password at the first password check before the "Press the (-) key for Startup Menu" message is displayed, you must enter the administrator password to access Setup Utility (BIOS).
Power-on password*	• Must be entered each time you turn on or restart the computer, or exit Hibernation. • If you forget your power-on password, you cannot turn on or restart the computer, or exit Hibernation. NOTE: The administrator password can be used in place of the power-on password. NOTE: A power-on password is not displayed as it is set, entered, changed, or deleted.

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 computer. While the "Press the (-) key for Startup Menu" message is displayed in the lower-left corner of the screen, press the Volume down button (-) repeatedly.
2. When the Startup Menu is displayed, press the Volume down button (-) to navigate.
3. Press and hold the Home button, and then press either the Volume down button (-) or the Volume up button (+) to select **Security**, and then follow the on-screen instructions.

Your changes take effect when the computer restarts.

Using Internet security software

When you use your computer to access email, a network, or the Internet, you potentially expose your computer to computer viruses, spyware, and other online threats. To help protect your computer, Internet security software that includes antivirus and firewall features may be preinstalled on your computer as a trial offer. To provide ongoing protection against newly discovered viruses and other security risks, security software must be kept up to date. It is strongly recommended that you upgrade the security software trial offer or purchase the software of your choice in order to fully protect your computer.

Using antivirus software

Antivirus software (purchased separately) can detect most viruses, destroy them, and in most cases, repair damage they have caused. To provide ongoing protection against newly discovered viruses, antivirus software must be kept up to date.

For more information about computer viruses, type `viruses` in the Search box in 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 computer 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 computer should be regularly updated to correct security problems and improve software performance.

Installing Windows security updates

Updates to the operating system and other software may have become available after the computer left the factory. Microsoft® sends out alerts regarding critical updates. To protect the computer from security breaches and computer 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 computer, observe these guidelines:

- Run Windows Update as soon as possible after you set up your computer. Tap **Start**, tap **All Programs**, and then tap **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 computer. 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 computer, 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 26](#).

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 [Backup and recovery on page 56](#)

9 Backup and recovery

To protect your information, use Windows Backup and Restore to back up individual files and folders, back up your entire hard drive (select models only), create system repair discs (select models only) by using an optional external optical drive, or create system restore points. In case of system failure, you can use the backup files to restore the contents of your Slate.

Windows Backup and Restore provides the following options:

- Creating a system repair disc (select models only) by using an optional external optical drive (purchased separately)
- Backing up your information
- Creating a system image (select models only)
- Scheduling automatic backups (select models only)
- Creating system restore points
- Recovering individual files
- Restoring the Slate to a previous state
- Recovering information using recovery tools



NOTE: For detailed instructions, perform a search for these topics in Help and Support.

In case of system instability, HP recommends that you print the recovery procedures and save them for later use.



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

Backing up your information

Recovery after a system failure is as good as your most recent backup. You should create system repair discs by using an optional external optical drive (purchased separately) and your initial backup immediately after software setup. As you add new software and data files, you should continue to back up your system on a regular basis to maintain a reasonably current backup. The system repair discs (select models only) are used to start up (boot) the Slate and repair the operating system in case of system instability or failure. Your initial and subsequent backups allow you to restore your data and settings if a failure occurs.

You can back up your information to an optional external hard drive, a network drive, or discs.

Note the following when backing up:

- Store personal files in the Documents library, and back it up regularly.
- Back up templates that are stored in their associated programs.
- Save customized settings that appear in a window, toolbar, or menu bar by taking a screen shot of your settings. The screen shot can be a time-saver if you have to reset your preferences.
- When backing up to discs, use any of the following types of discs (purchased separately): CD-R, CD-RW, DVD+R, DVD+R DL, DVD-R, DVD-R DL, or DVD±RW. The discs you use will depend on the type of external optical drive you are using.



NOTE: DVDs and DVDs with double-layer (DL) support store more information than CDs, so using them for backup reduces the number of recovery discs required.

- When backing up to discs, number each disc before inserting it into the external drive.

To create a backup using Backup and Restore:



NOTE: Be sure that the Slate is connected to AC power before you start the backup process.



NOTE: The backup process may take over an hour, depending on file size and the speed of the Slate.

1. Tap **Start**, tap **All Programs**, tap **Maintenance**, and then tap **Backup and Restore**.
2. Follow the on-screen instructions to set up your backup, create a system image (select models only), or create a system repair disc (select models only).

Performing a system recovery

In case of system failure or instability, the Slate provides the following tools to recover your files:

- Windows recovery tools: You can use Windows Backup and Restore to recover information you have previously backed up. You can also use Windows Startup Repair to fix problems that might prevent Windows from starting correctly.



NOTE: If you are unable to boot (start up) your Slate and you cannot use the system repair discs you previously created (select models only), you must purchase a Windows 7 operating system DVD to reboot the Slate and repair the operating system. For additional information, refer to [Using a Windows 7 operating system DVD \(purchased separately\) on page 58](#).

Using the Windows recovery tools

To recover information you previously backed up:

1. Tap **Start**, tap **All Programs**, tap **Maintenance**, and then tap **Backup and Restore**.
2. Follow the on-screen instructions to recover your system settings, your Slate (select models only), or your files.

To recover your information using Startup Repair, follow these steps:

 **CAUTION:** Using Startup Repair completely erases hard drive contents and reformats the hard drive. All files you have created and any software installed on the Slate are permanently removed. When reformatting is complete, the recovery process restores the operating system, as well as the drivers, software, and utilities from the backup used for recovery.

1. If possible, back up all personal files.
2. If possible, check for the presence of the Windows partition and the HP Recovery partition.

To check for the Windows partition, tap **Start**, and then tap **Computer**.

To check for the HP Recovery partition, tap **Start**, tap and hold **Computer**, tap **Manage**, and then tap **Disk Management**.

 **NOTE:** If the Windows partition and the HP Recovery partition are not listed, you must recover your operating system and programs using the Windows 7 operating system DVD and the *Driver Recovery* disc (both purchased separately). For additional information, refer to [Using a Windows 7 operating system DVD \(purchased separately\) on page 58](#).

3. If the Windows partition and the HP Recovery partition are listed, restart the Slate, and then press **F8** before the Windows operating system loads.
4. **Startup Repair.**
5. Follow the on-screen instructions.

 **NOTE:** For additional information on recovering information using the Windows tools, perform a search for these topics in Help and Support.

Using a Windows 7 operating system DVD (purchased separately)

To order a Windows 7 operating system DVD, go to <http://www.hp.com/support>, tap your country or region, and then follow the on-screen instructions. You can also order the DVD by calling technical support. For contact information, refer to the *Worldwide Telephone Numbers* booklet included with the Slate.

 **CAUTION:** Using a Windows 7 operating system DVD completely erases hard drive contents and reformats the hard drive. All files you have created and any software installed on the Slate are permanently removed. When reformatting is complete, the recovery process helps you restore the operating system, as well as drivers, software, and utilities.

To initiate recovery using a Windows 7 operating system DVD:

 **NOTE:** This process takes several minutes.

1. If possible, back up all personal files.
2. Restart the Slate, and then insert the Windows 7 operating system DVD into the connected external optical drive before the Windows operating system loads.
3. When prompted, press any keyboard key.
4. Follow the on-screen instructions.
5. Tap **Next**.

6. **Repair your computer.**
7. Follow the on-screen instructions.

After the repair is completed:

1. Eject the Windows 7 operating system DVD, and then insert the *Driver Recovery* disc.
2. Install the Hardware Enabling Drivers first, and then install Recommended Applications.

10 Maintenance

Cleaning your Slate

Cleaning products

Use the following products to safely clean and disinfect your Slate:

- Dimethyl benzyl ammonium chloride 0.3 percent maximum concentration (For example: germicidal disposable wipes. These wipes come in a variety of brand names.)
- Alcohol-free glass cleaning fluid
- Water with mild soap solution
- Dry microfiber cleaning cloth or a chamois (static-free cloth without oil)
- Static-free cloth wipes

 **CAUTION:** Avoid the following cleaning products:

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

Fibrous materials, such as paper towels, which can scratch the Slate. Over time, dirt particles and cleaning agents can get trapped in the scratches.

Cleaning procedures

Follow the procedures in this section to safely clean your Slate.

 **WARNING!** To prevent electric shock or damage to components, do not attempt to clean your Slate while it is turned on:

Turn off the Slate.

Disconnect external power.

Disconnect all powered external devices.

 **CAUTION:** Do not spray cleaning agents or liquids directly on any Slate surface. Liquids dripped on the surface can permanently damage internal components.

Cleaning the display

Gently wipe the display using a soft, lint-free cloth moistened with an *alcohol-free* glass cleaner. Be sure that the display is dry before closing the display.

Cleaning the sides and cover

To clean and disinfect the sides and cover, use a soft microfiber cloth or chamois moistened with one of the cleaning solutions listed previously or use an acceptable germicidal disposable wipe.



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

Cleaning a tablet PC pen and pen holder (select models only)

Using one of the cleaning solutions listed previously, moisten a soft microfiber cloth or chamois or use an acceptable germicidal disposable wipe:

- To clean the pen, rub the pen in an up and down motion to aid in removing dirt and debris.
- To clean the pen holder, use a rotating motion around the opening of the pen holder.



CAUTION: Do not put any fluid or material other than the pen in the pen holder. The pen holder is not sealed off from some of the internal electronics of the tablet PC.

Updating programs and drivers

To download and install software other than a BIOS update, follow these steps:

1. Access the updates on the HP Web site at <http://www.hp.com>.
2. Follow the instructions on the screen to find the software you want to update.
3. At the download area, tap the software you want to download and follow the instructions on the screen.



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

4. When the download is complete, open Windows Explorer by tapping **Start**, and then tapping **Computer**.
5. Double-tap your hard drive designation. The hard drive designation is typically Local Disk (C:).
6. Using the hard drive path you recorded earlier, open the folder on your hard drive that contains the update.
7. Double-tap the file that has an .exe extension (for example, *filename.exe*).

The installation begins.

8. Complete the installation by following the instructions on the screen.



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

Using SoftPak Download Manager

HP SoftPak Download Manager (SDM) is a tool that provides quick access to SoftPak information for HP business computers without requiring the SoftPak number. Using this tool, you can easily search for SoftPaks, and then download and unpack them.

SoftPak Download Manager works by reading and downloading, from the HP FTP site, a published database file containing computer model and SoftPak information. SoftPak Download Manager allows you to specify one or more computer models to determine which SoftPaks are available for download.

SoftPak Download Manager checks the HP FTP site for updates to the database and software. If updates are found, they are downloaded and applied automatically.

SoftPak Download Manager is available on the HP Web site. To use SoftPak Download Manager to download SoftPaks, you must first download and install the program. Go to the HP Web site at <http://www.hp.com/go/sdm>, and follow the instructions to download and install SoftPak Download Manager.

To download SoftPaks:

1. Tap **Start**, tap **All Programs**, tap **HP Software Setup**, and then tap **HP SoftPak Download Manager**.
2. When SoftPak Download Manager opens for the first time, a window is displayed asking if you want to show only software for the computer you are using or to show the software for all supported models. Tap **Show software for all supported models**. If you have used HP SoftPak Download Manager previously, go to step 3.
 - a. Select your operating system and language filters in the Configuration Options window. The filters limit the number of options that are listed in the Product Catalog pane. For example, if only Windows 7 Professional is selected in the operating system filter, the only operating system that is displayed in the Product Catalog is Windows 7 Professional.
 - b. To add other operating systems, change the filter settings in the Configuration Options window. Refer to the HP SoftPak Download Manager software Help for more information.
3. In the left pane, tap the plus sign (+) to expand the model list, and then the model or models of the products you want to update.
4. Tap **Find Available SoftPaks** to download a list of available SoftPaks for the selected computer.
5. from the list of available SoftPaks, and then tap **Download Only** if you have many SoftPaks to download, because the SoftPak ion and Internet connection speed determine how long the download process will take.

If you want to download only one or two SoftPaks and have a high-speed Internet connection, tap **Download & Unpack**.

6. Tap and hold **Install SoftPak** in the SoftPak Download Manager software to install the selected SoftPaks on the computer.

11 Setup Utility (BIOS) and System Diagnostics

Using Setup Utility (BIOS)

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 computer, and the amount of system and extended memory.



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

Starting Setup Utility

Setup Utility is a ROM-based information and customization utility that can be used even when your Windows operating system is not working.

The utility reports information about the Slate and provides settings for startup, security, and other preferences.

To start Setup Utility:



NOTE: An external keyboard may be connected to the USB port to perform these steps.

1. Open the Startup Menu by turning on or restarting the Slate, and then, while the hyphen is displayed in the upper-left corner of the screen, repeatedly pressing the Volume down button (-) on the Slate or **f10** on an external keyboard.
2. Press the Volume down button (-) on the Slate to advance to **BIOS Setup**, and then select it by pressing the Home button on the Slate or **enter** on an external keyboard.

Using Setup Utility

Changing the language of Setup Utility

The following procedure explains how to change the language of Setup Utility. If Setup Utility is not already running, begin at step 1. If Setup Utility is already running, begin at step 3.



NOTE: An external keyboard may be connected to the USB port to perform these steps.

1. Open the Startup Menu by turning on or restarting the Slate, and then, while the hyphen is displayed in the upper-left corner of the screen, repeatedly pressing the Volume down button (-) on the Slate or **f10** on an external keyboard.
2. Press the Volume down button (-) on the Slate, or use the arrow keys on an external keyboard to advance to **BIOS Setup**, and then select it by pressing the Home button on the Slate or **enter** on an external keyboard.
3. Press and hold the Home button and then press either the Volume up button (+) or the Volume down button (-) on the Slate, or use the arrow keys on an external keyboard to select **System Configuration > Language**.
4. Press the Volume up button (+) or Volume down button (-) on the Slate or the arrow keys on an external keyboard to select a language, and then press the Home button on the Slate or **enter** on an external keyboard.
5. To save your changes and exit Setup Utility, tap **Exit**, and then tap **Exit Saving Changes** or use the arrow keys on an external keyboard to select **Exit > Exit Saving Changes**. Then press the Home button on the Slate or **enter** on an external keyboard.

Your change goes into effect immediately.

Navigating and selecting in Setup Utility



NOTE: An external keyboard may be connected to the USB port to perform these steps.

- To choose a menu or a menu item, press the Home button on the Slate, or use the arrow keys on an external keyboard.
- To navigate between menus in Setup Utility, press and hold the Home button and then press either the Volume up (+) or Volume down (-) button, or use the arrow keys on an external keyboard.
- To choose an item in a list or to toggle a field, for example an Enable/Disable field, use either the Home button, the Volume up button, or the Volume down button on the Slate, or the arrow keys on an external keyboard.
- To select an item, press the Home button on the Slate or the **enter** key on an external keyboard.
- To close a text box or return to the menu display, press the Ctrl+alt+del (Security) button on the top edge of the Slate or **esc** on an external keyboard.
- Information about navigation keys is displayed at the bottom of the screen. To display additional navigation and selection information while Setup Utility is open, press **f1** on an external keyboard.

Displaying system information

The following procedure explains how to display system information in Setup Utility. If Setup Utility is not open, begin at step 1. If Setup Utility is open, begin at step 3.



NOTE: An external keyboard may be connected to the USB port to perform these steps.

1. Open the Startup Menu by turning on or restarting the Slate, and then, while the hyphen is displayed in the upper-left corner of the screen, repeatedly pressing the Volume down button (-) on the Slate or **f10** on an external keyboard.
2. Press the Volume down button (-) on the Slate, or use the arrow keys on an external keyboard, to advance to **BIOS Setup**, and then select it by pressing the Home button on the Slate or **enter** on an external keyboard.
3. If Setup Utility does not open with the system information displayed, press and hold the Home button and then press the Volume up button (+) on the Slate, or use the arrow keys on an external keyboard, to select the **Main** menu.

When the Main menu is selected, system information is displayed.

4. To exit Setup Utility without changing any settings, press the Ctrl+alt+del (Security) button on the top edge of the Slate or the arrow keys on an external keyboard to select **Exit > Exit Discarding Changes**. Then press the Home button on the Slate or the **enter** key on an external keyboard.

Restoring factory settings in Setup Utility

The following procedure explains how to restore the Setup Utility factory settings. If Setup Utility is not already running, begin at step 1. If Setup Utility is already running, begin at step 3.



NOTE: An external keyboard may be connected to the USB port to perform these steps.

1. Open the Startup Menu by turning on or restarting the Slate, and then, while the hyphen is displayed in the upper-left corner of the screen, repeatedly pressing the Volume down button (-) on the Slate or **f10** on an external keyboard.
2. Press the Volume down button (-) on the Slate, or use the arrow keys on an external keyboard, to advance to **BIOS Setup**, and then select it by pressing the Home button on the Slate or **enter** on an external keyboard.
3. Press and hold the Home button and then press the Volume up button (+) on the Slate or the arrow keys on an external keyboard to select **Exit > Load Setup Defaults**. Then press the Home button on the Slate or the **enter** key on an external keyboard.
4. When the Setup Confirmation is displayed, press the Home button on the Slate or the **enter** key on an external keyboard.
5. To save your changes and exit Setup Utility, press the Ctrl+alt+del (Security) button on the top edge of the Slate, or use the arrow keys on an external keyboard, to select **Exit > Exit Saving Changes**. Then press the Home button on the Slate or the **enter** key on an external keyboard.

The Setup Utility factory settings go into effect when the Slate restarts.



NOTE: Your password, security, and language settings are not changed when you restore the factory default settings.

Exiting Setup Utility

You can exit Setup Utility with or without saving changes.



NOTE: An external keyboard may be connected to the USB port to perform these steps.

- To exit Setup Utility and save your changes from the current session:

Press the Ctrl+alt+del (Security) button on the top edge of the Slate, or use the arrow keys on an external keyboard, to select **Exit > Exit Saving Changes**. Then press the Home button on the Slate or the [enter](#) key on an external keyboard.

- To exit Setup Utility without saving your changes from the current session:

Press the Ctrl+alt+del (Security) button on the top edge of the Slate, or use the arrow keys on an external keyboard, to select **Exit > Exit Discarding Changes**. Then press the Home button on the Slate or the [enter](#) key on an external keyboard.

After either choice, the Slate restarts in Windows.

Updating the BIOS

Updated versions of the BIOS may be available on the HP Web site.

Most BIOS updates on the HP Web site 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 computer, 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. Open the Startup Menu by turning on or restarting the Slate, and then, while the hyphen is displayed in the upper-left corner of the screen, repeatedly pressing the Volume down button (-) on the Slate or [f10](#) on an external keyboard.
2. Press the Volume down button (-) on the Slate, or use the arrow keys on an external keyboard, to advance to **BIOS Setup**, and then select it by pressing the Home button on the Slate or [enter](#) on an external keyboard.
3. If Setup Utility does not open with the system information displayed, press and hold the Home button and then press the Volume up button (+) on the Slate, or use the arrow keys on an external keyboard, to select the **Main** menu.
4. To exit Setup Utility without changing any settings, press the Ctrl+alt+del (Security) button on the top edge of the Slate or the arrow keys on an external keyboard to select **Exit > Exit Discarding Changes**. Then press the Home button on the Slate or the [enter](#) key on an external keyboard.
5. To exit Setup Utility (BIOS) without saving your changes, use the tab key and the arrow keys to select **Exit > Exit Discarding Changes**, and then press [enter](#).

Downloading a BIOS update

 **CAUTION:** To reduce the risk of damage to the computer or an unsuccessful installation, download and install a BIOS update only when the computer is connected to reliable external power using the AC adapter. Do not download or install a BIOS update while the computer 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 computer by unplugging the power cord from the AC outlet.

Do not shut down the computer or initiate Sleep or Hibernation.

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

1. Tap **Start**, tap **Help and Support**, and then tap **Maintain**.
2. Follow the on-screen instructions to identify your computer and access the BIOS update you want to download.
3. At the download area, follow these steps:
 - a. Identify the BIOS update that is later than the BIOS version currently installed on your computer. 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 computer 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. Open Windows Explorer by tapping **Start**, and then tapping **Computer**.
2. Double-tap 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-tap 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 computer hardware is functioning properly. Depending on your computer, the following diagnostic tests may be available in System Diagnostics:

- **Start-up test**—This test analyzes the main computer components that are required to start the computer.
- **Run-in test**—This test repeats the start-up test and checks for intermittent problems that the start-up test does not detect.
- **Hard disk test**—This test analyzes the physical condition of the hard drive, and then checks all data in every sector of the hard drive. If the test detects a damaged sector, it attempts to move the data to a good sector.
- **Memory test**—This test analyzes the physical condition of the memory modules. If it reports an error, replace the memory modules immediately.
- **Battery test**—This test analyzes the condition of the battery. If the battery fails the test, contact HP Customer Support to report the issue and purchase a replacement battery.

You can also view system information and error logs in the System Diagnostics window.

To start System Diagnostics:

1. Turn on or restart the computer. While the “Press the (-) key for Startup Menu” message is displayed in the lower-left corner of the screen, press the Volume down button(-) repeatedly. When the Startup Menu is displayed, press the Volume down button (-).
2. Tap the diagnostic test you want to run, and then follow the on-screen instructions.



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

A Traveling with the Slate

For best results, follow these traveling and shipping tips:

- Prepare the computer for traveling or shipping:
 - Back up your information.
 - Remove all discs and all external media cards, such as digital cards.
-  **CAUTION:** To reduce the risk of damage to the Slate, damage to a drive, or loss of information, remove the media from a drive before removing the drive from a drive bay and before shipping, storing, or traveling with a drive.
- Turn off and then disconnect all external devices.
- Shut down the Slate.
- Take along a backup of your information. Keep the backup separate from the computer.
- When traveling by air, carry the Slate as hand luggage; do not check it in with the rest of your bags.

 **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.

- In-flight computer use is at the discretion of the airline. If you plan to use the Slate during a flight, check with the airline in advance.
- If you are shipping the Slate, use suitable protective packaging and label the package “FRAGILE.”
- If the Slate has a wireless device or an HP Mobile Broadband Module installed, such as an 802.11b/g device, a Global System for Mobile Communications (GSM) device, or a General Packet Radio Service (GPRS) device, 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 it before you turn it on.
- If you are traveling internationally, follow these suggestions:
 - Check the computer-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 Slate. 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 Slate with a voltage converter kit sold for appliances.

B Troubleshooting resources

- Access Web site links and additional information about the computer through Help and Support. Tap **Start**, and then tap **Help and Support**.



NOTE: Some checkup and repair tools require an Internet connection. HP also provides additional tools that do not require an Internet connection.

- Contact HP Customer Support at <http://www.hp.com/go/contactHP>.



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

Choose from the following types of support:

- Chat online with an HP technician.



NOTE: When chat is not available in a particular language, it is available in English.

- E-mail HP Customer Support.
- Find HP Customer Support worldwide telephone numbers.
- Locate an HP service center.

C 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 computer, damage to a drive, or loss of information, observe these precautions:

- If removal or installation instructions direct you to unplug the Slate, 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 HP Customer Support.

D Specifications

Input power

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

The Slate 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 Slate can be powered from a standalone DC power source, it should be powered only with an HP Slate 30W AC adapter or a DC power source supplied and approved by HP for use with this Slate.

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

Input Power	Rating
Operating voltage and current	19.0 V dc @ 1.58 A - 30W

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

 **NOTE:** The Slate's operating voltage and current can be found on the system regulatory label, located inside the label tray on the right edge of the Slate.

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

Index

A

- AC adapter, connecting 41
- airport security devices 44
- antennas, WLAN 14
- antivirus software, using 54
- audio functions, checking 33
- audio-in (microphone) jack 14, 31
- audio-out (headphone) jack 14, 31

B

- backing up software and information 55
- Backup and Restore 57
- battery
 - discharging 40
 - low battery levels 40
 - power 39
- BIOS
 - determining version 66
 - downloading an update 67
 - updating 66
- Bluetooth
 - device 22
 - label 19
- Bluetooth device 29
- buttons 16
 - Ctrl+alt+del 16
 - Home 12, 16
 - Keyboard 15
 - volume 12, 16

C

- cables, USB 47
- camera 17, 18, 30, 34
- caring for your Slate 60
- Certificate of Authenticity label 19
- changing Setup Utility language 63

- checking audio functions 33
- cleaning your Slate 60
- components
 - bottom edge 12
 - display 17
 - left edge 14
 - rear 18
 - right edge 13
 - top edge 12
- computer, traveling 69
- connecting to
 - existing wireless network 25
- Connection Manager 23
- connection, external power 41
- connector, power 12
- creating a wireless connection 22
- critical battery level 40
- critical security updates, installing 54
- Ctrl+alt+del button, identifying 12, 16

D

- digital card
 - inserting 46
 - removing 46
 - supported formats 46
- digital pen, using 11
- Disk Cleanup software 45
- Disk Defragmenter software 45
- displaying system information 64
- dragging touch screen gesture 6
- drive media 37
- drives
 - external 49
 - handling 44
 - hard 49
 - optical 49
 - using 45

E

- earbuds 14, 31
- electrostatic discharge 72
- existing wireless network, connecting to 25
- exiting Setup Utility 65
- external devices 49
- external drive 49

F

- firewall software 26, 54
- flicking touch screen gesture 6
- flicks
 - changing assignments 9
 - creating assignments 9

G

- GPS 29

H

- hard drive
 - external 49
- headphone (audio-out) jack 14, 31
- headphones 14, 31
- Hibernation
 - exiting 37
 - initiated during critical battery level 40
 - initiating 37
- Home button 12, 16
- HP and third-party software updates, installing 54
- HP Connection Manager 23
- HP Mobile Broadband Module 27, 28
- HP Slate Camera 34
- HP Slate Dock 43
- hubs 47

I

icons
 network 22
 wireless 22
input power 73
Internet connection setup 21, 26
Internet security software, using 53
ISP, using 20

J

jacks
 audio-in (microphone) 14, 31
 audio-out (headphone) 14, 31

K

keyboard
 Swype 10
Keyboard button 15, 16

L

label tray 19
 identifying 13
 opening 14
labels
 Bluetooth 19
 HP Mobile Broadband Module 19
 Microsoft Certificate of Authenticity 19
 regulatory 19
 serial number 19
 SIM 19
 wireless certification 19
 WLAN 19
landscape view 4
light, power 13
low battery level 40

M

maintenance
 Disk Cleanup 45
 Disk Defragmenter 45
microphone (audio-in) jack 14, 31
microphone, identifying 15
Microsoft Certificate of Authenticity label 19
multimedia components, identifying 30

N

navigating in Setup Utility 64
network icon 22

O

on-screen keyboard
 marker 9
 options 10
operating environment 73
operating system 36
 controls 24
 Microsoft Certificate of Authenticity label 19
 Product Key 19
optical drive 49
optional external devices, using 49
orientation, changing 4

P

passwords
 Setup Utility (BIOS) 53
 Windows 52
pen, using 11
pinching touch screen gesture 8
portrait view 4
ports, USB 12
power light, identifying 13
power switch, identifying 13
power, connecting 41
PowerLock 13
Product Key 19
product name and number, Slate 19
programs, updating 61
protecting your wireless network 26

R

readable media 37
regulatory information
 regulatory label 19
 wireless certification labels 19
restoring default settings 65
roaming to another network 27
rotating touch screen gesture 7

S

screen brightness, adjusting 5
scrolling touch screen gesture 7
SD Card Reader, identifying 15

security, wireless 26
selecting in Setup Utility 64
serial number 19
serial number, Slate 19
setup of WLAN 21, 26
Setup Utility (BIOS) passwords 53
shutdown 36
SIM
 inserting 28
 removing 28
Sleep
 exiting 37
 initiating 37
SoftPaqs, downloading 61
software 11
 Disk Cleanup 45
 Disk Defragmenter 45
 HP Connection Manager 23
 HP Slate Camera 34
software updates, installing 54
software, updating 11
speakers 12, 31
switch, power 13
system repair disc 56
system restore points 56

T

tapping touch screen gesture 6
touch screen
 performing screen actions 9
 preferences 9
 using 4
touch screen gestures
 dragging 6
 flicking 6
 pinching 8
 rotating 7
 scrolling 7
 tapping 6
 zooming 8
traveling with the computer 69
traveling with the Slate 19
troubleshooting resources 71
turning off the Slate 36
turning wireless devices on or off 23

U

unresponsive system 36

- USB cable, connecting 47
- USB devices
 - connecting 47
 - description 47
 - removing 48
- USB hubs 47
- USB ports, identifying 12
- using passwords 51

- Z**
- zooming screen gesture 8

- V**
- view, changing 4
- volume buttons, identifying 16
- Volume down button 12
- Volume up button 12
- volume, adjusting 32

- W**
- Windows 7 operating system
 - DVD 58
- Windows Backup and Restore 56
- Windows passwords 52
- Windows security updates,
 - installing 54
- wireless
 - icons 22
 - protecting 26
 - set up 26
- wireless certification label 19
- wireless connection, creating 22
- wireless devices, turning on or
 - off 23
- wireless encryption 26
- wireless network (WLAN)
 - connecting to existing 25
 - equipment needed 26
 - security 26
- wireless network (WLAN),
 - equipment needed 21
- wireless network, connecting 21
- wireless network, securing 55
- wireless router, configuring 22
- wireless setup 21
- WLAN
 - connecting 21
 - protecting 22
- WLAN device 19
- WLAN label 19
- writable media 37
- WWAN device 27