

User Guide

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# 1 Components

This chapter explains the hardware features of the computer.

To see a list of hardware installed in the computer:

- Select Start > Computer > System properties.
- In the left pane, click Device Manager.

You can also add hardware or modify device configurations using Device Manager.

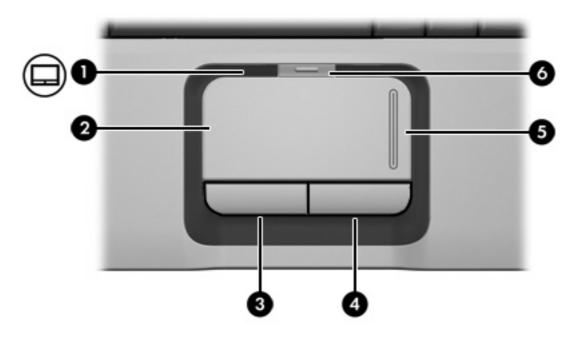


**NOTE** Components included with the computer may vary by region and by model. The illustrations in this chapter identify the standard features included in most computer models.

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## **Top components**

#### **TouchPad**



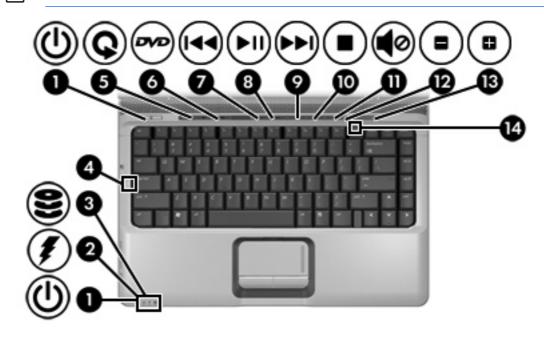
Component		Description
(1)	TouchPad light	Blue: TouchPad is enabled.
		Amber: TouchPad is disabled.
(2)	TouchPad*	Moves the pointer and selects or activates items on the screen.
(3)	Left TouchPad button*	Functions like the left button on an external mouse.
(4)	Right TouchPad button*	Functions like the right button on an external mouse.
(5)	TouchPad scroll zone*	Scrolls up or down.
(6)	TouchPad on/off button	Enables/disables the TouchPad.

<sup>\*</sup>This table describes factory settings. To view and change pointing device preferences, select **Start > Control Panel > Hardware and Sound > Mouse**.

### Lights



**NOTE** Refer to the illustration that most closely matches your computer.



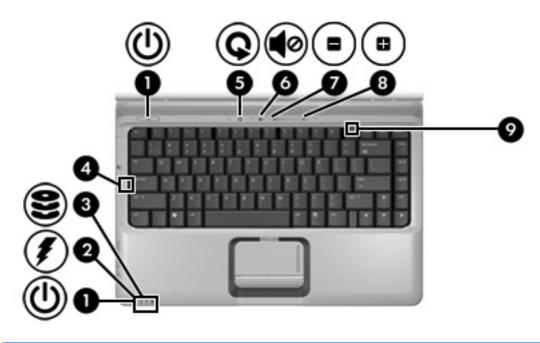
Comp	ponent	Description
(1)	Power lights (2)*	On: The computer is on.
		Blinking: The computer is in the Sleep state.
		Off: The computer is off or in Hibernation.
(2)	Battery light	On: A battery is charging.
		Blinking: A battery that is the only available power source has reached a low battery level. When the battery reaches a critical battery level, the battery light begins blinking rapidly.
		Off: If the computer is plugged into an external power source, the light is turned off when all batteries in the computer are fully charged. If the computer is not plugged into an external power source, the light stays off until the battery reaches a low battery level.
(3)	Drive light	Blinking: The hard drive or optical drive is being accessed.
(4)	Caps lock light	On: Caps lock is on.
(5)	Media button light	Blinks once: The media button has been pressed.
(6)	DVD button light	Blinks once: The DVD button has been pressed.
(7)	Previous/rewind light	Blinks once: The previous/rewind button has been pressed.
(8)	Play/pause light	Blinks once: The play/pause button has been pressed.
(9)	Next/fast forward light	Blinks once: The next/fast forward button has been pressed.
(10)	Stop light	Blinks once: The stop button has been pressed.

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Component		Description
(11)	Volume mute light	Blue: Computer sound is turned on.
		Amber: Computer sound is turned off.
(12)	Volume down light	Blinking: The volume scroll zone is being used to decrease speaker volume.
(13)	Volume up light	Blinking: The volume scroll zone is being used to increase speaker volume.
(14)	Num lock light	On: Num lock is on or the embedded numeric keypad is enabled.

There are 2 power lights. Both display the same information. The light on the power button is visible only when the computer is open; the other power light is always visible on the front of the computer.



Component		Description
(1)	Power lights (2)*	On: The computer is on.
		Blinking: The computer is in the Sleep state.
		Off: The computer is off or in Hibernation.
(2)	Battery light	On: A battery is charging.
		Blinking: A battery that is the only available power source has reached a low battery level or a critical battery level.
		Off: If the computer is plugged into an external power source, the light is turned off when all batteries in the computer are fully charged. If the computer is not plugged into an external power source, the light stays off until the battery reaches a low battery level.
(3)	Drive light	Blinking: The hard drive or optical drive is being accessed.
(4)	Caps lock light	On: Caps lock is on.

Component		Description
(5)	Media button light	Blinks once: The media button has been pressed.
(6)	Volume mute light	Blue: Computer sound is turned on.
		Red: Computer sound is turned off.
(7)	Volume down light	Blinking: The volume scroll zone is being used to decrease speaker sound.
(8)	Volume up light	Blinking: The volume scroll zone is being used to increase speaker sound.
(9)	Num lock light	Blinking: Num lock is on or the embedded numeric keypad is enabled.

There are 2 power lights. Both display the same information. The light on the power button is visible only when the computer is open; the other power light is always visible on the front of the computer.

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#### **Buttons, switches, and speakers**



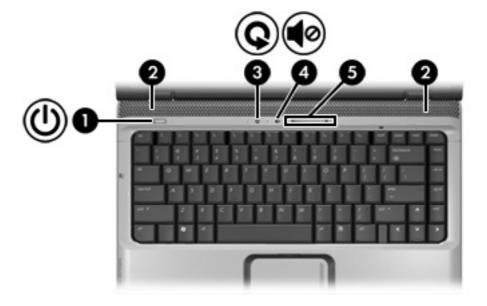
**NOTE** Refer to the illustration that most closely matches your computer.



Component		Description
(1)	Power button*	When the computer is off, press the power button to turn on the computer.
		If the computer has stopped responding and Windows® shutdown procedures cannot be used, press and hold the power button for at least 5 seconds to turn off the computer.
		To learn more about your power settings, select <b>Start &gt; Control Panel &gt; System and Maintenance &gt; Power Options</b> .
(2)	Speakers (2)	Produce sound.
(3)	Media button	Launches the QuickPlay program.
		NOTE If the computer has been set up to require a logon password, you may be asked to log on to Windows.  QuickPlay launches after you log on. Refer to the QuickPlay online Help for more information.
(4)	DVD button	Launches the DVD playback feature of the QuickPlay program.
		NOTE If the computer has been set up to require a logon password, you may be asked to log on to Windows.  QuickPlay launches after you log on. Refer to the QuickPlay online Help for more information.
(5)	Previous/rewind button	When a disc is playing in the optical drive:
		Press to play the previous track or chapter.
		Press fn+ this button to rewind.

Component		Description
(6)	Play/pause button	When a disc is in the optical drive and is
		<ul> <li>Not playing, press to play the disc.</li> </ul>
		<ul> <li>Playing, press to pause the disc.</li> </ul>
(7)	Next/fast forward button	When a disc is playing in the optical drive:
		<ul> <li>Press once to play the next track or chapter.</li> </ul>
		<ul> <li>Press fn+ this button to fast forward.</li> </ul>
(8)	Stop button	When a disc is playing in the optical drive, press to stop the current disc activity.
(9)	Volume mute button	Mutes and restores speaker sound.
(10)	Volume scroll zone	Adjusts volume. Slide your finger to the left to decrease volume and to the right to increase volume. Alternatively, you can tap the left half of the scroll zone to decrease volume, or you can tap the right half of the scroll zone to increase volume.

<sup>\*</sup>This table describes factory settings. For information about changing factory settings, refer to the user guides located in Help and Support.



Component		Description
(1)	Power button*	When the computer is off, press the power button to turn on the computer.
		If the computer has stopped responding and Windows shutdown procedures cannot be used, press and hold the power button for at least 5 seconds to turn off the computer.
		To learn more about your power settings, select <b>Start &gt; Control Panel &gt; System and Maintenance &gt; Power Options</b> .
(2)	Speakers (2)	Produce system sound.

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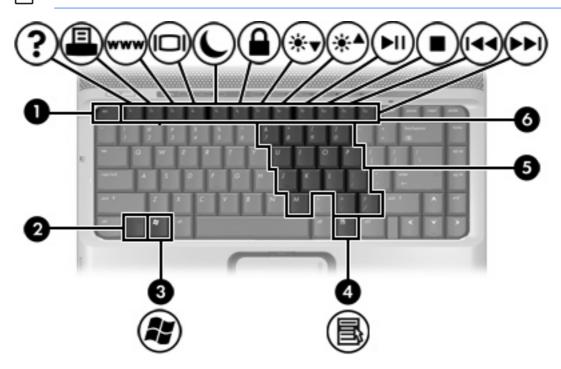
Com	ponent	Description
(3)	Media button	Launches the QuickPlay program.
		NOTE If the computer has been set up to require a logon password, you may be asked to log on to Windows.  QuickPlay launches after you log on. Refer to the QuickPlay online Help for more information.
(4)	Volume mute button	Mutes and restores speaker sound.
(5)	Volume scroll zone	Adjusts volume. Slide your finger to the left to decrease volume and to the right to increase volume. Alternatively, you can tap the left half of the scroll zone to decrease volume, or you can tap the right half of the scroll zone to increase volume.

#### Keys



and Support.

**NOTE** Your computer may look slightly different from the illustration in this section.



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

Comp	ponent	Description
(5)	Embedded numeric keypad keys	Can be used like the keys on an external numeric keypad.
(6)	Function keys	Execute frequently used system functions when pressed in combination with the fn key.

## **Hotkey quick reference**

Press
fn+esc
fn+esc or press enter
fn+f1
fn+f2
fn+f3
fn+f4
fn+f5
fn+f6
fn+f7
fn+f8
fn+f9
fn+f10
fn+f11
fn+12

ENWW Top components

## **Front components**



**NOTE** Your computer may look slightly different from the illustration in this section.



Com	ponent	Description	
(1)	Wireless switch (select models only)	Turns the wireless feature on or off, but does not create a wireless connection.  NOTE To establish a wireless connection, a wireless network must already be set up.	
(2)	Wireless light	Blue: An integrated wireless device, such as a wireless local area network (LAN) device and/or a Bluetooth® device, is turned on.  Amber: an integrated wireless device is turned off.	
(3)	Consumer infrared lens	Links the computer to the HP Remote Control.	
(4)	Audio-in (microphone) jack	Connects an optional computer headset microphone, stereo array microphone, or monaural microphone.	
(5)	Audio-out (headphone) jacks (2)	Produce sound when connected to optional powered stereo speakers, headphones, ear buds, a headset, or television audio.  NOTE Depending on your computer model, the computer may have 1 or 2 audio-out (headphone) jacks.	

#### **Rear components**



_	
Component	Description

Vent

Enables airflow to cool internal components.



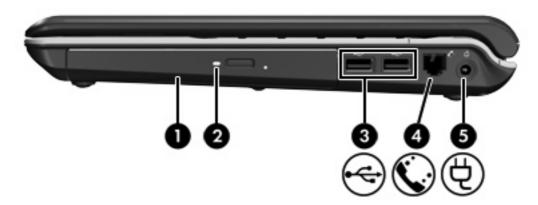
**CAUTION** To prevent overheating, do not obstruct vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or thick rugs or clothing, to block airflow.



**NOTE** The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.

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# **Right-side components**

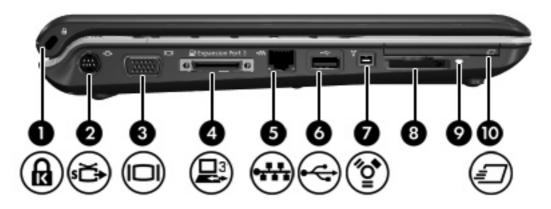


Comp	onent	Description
(1)	Optical drive	Reads an optical disc.
(2)	Optical drive light	Blinking: The optical drive is being accessed.
(3)	USB ports (2)	Connect optional USB devices.
(4)	RJ-11 (modem) jack	Connects a modem cable.
(5)	Power connector	Connects an AC adapter.

## **Left-side components**

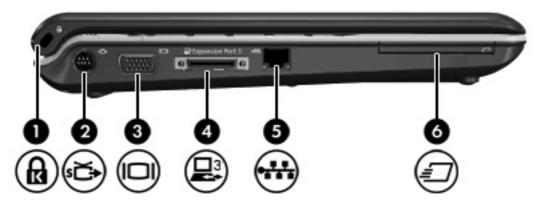


**NOTE** Refer to the illustration that most closely matches your computer.



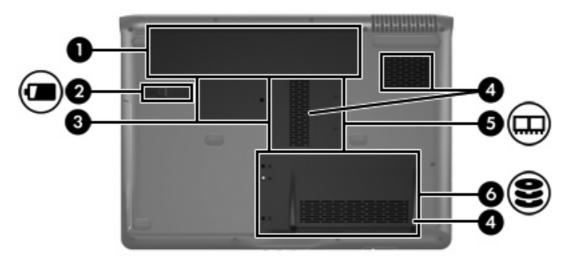
Com	onent	Description	
(1)	Security cable slot	Attaches an optional security cable to the computer.  NOTE The security cable is designed to act as a deterrent, but may not prevent the computer from being mishandled or stolen.	
(2)	S-Video-out jack	Connects an optional S-Video device such as a television, VCR, camcorder, overhead projector, or video capture card.	
(3)	External monitor port	Connects an external VGA monitor or projector.	
(4)	Expansion port 3	Connects the computer to an optional expansion product.  NOTE The computer has only one expansion port. The term <i>expansion port 3</i> describes the type of expansion port.	
(5)	RJ-45 (network) jack	Connects a network cable.	
(6)	USB port	Connects an optional USB device.	
(7)	1394 port	Connects an optional IEEE 1394 or 1394a device, such as a camcorder.	
(8)	Digital Media Slot	Supports the following optional digital card formats: Secure Digital (SD) Memory Card, MultiMediaCard (MMC), Secure Digital Input/Output (SD I/O), Memory Stick (MS), Memory Stick Pro (MSP), xD-Picture Card (XD), xD-Picture Card (XD) Type M.	
(9)	Digital Media Slot light	On: A digital card is being accessed.	
(10)	ExpressCard slot	Supports optional ExpressCard/54 cards.	

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	Component	Description	
(1)	Security cable slot	Attaches an optional security cable to the computer.  NOTE The security cable is designed to act as a deterrent, but may not prevent the computer from bei mishandled or stolen.	Attache
(2)	S-Video-out jack	Connects an optional S-Video device such as a television, VCR, camcorder, overhead projector, or video capture card.	
(3)	External monitor port	Connects an external VGA monitor or projector.	
(4)	Expansion port 3	Connects the computer to an optional expansion product.  NOTE The computer has only one expansion port. The term expansion port 3 describes the type of expansion port.	
(5)	RJ-45 (network) jack	Connects a network cable.	
(6)	ExpressCard slot	Supports optional ExpressCard/54 cards.	

## **Bottom components**



Component		Description	
(1)	Battery bay	Holds the battery.	
(2)	Battery release latch	Releases the battery from the battery bay.	
(3)	Mini Card compartment	Holds a wireless LAN device (select models only).	
		NOTE To prevent an unresponsive system and the display of a warning message, replace with only a Mini Card device authorized for use in the computer by the governmental agency that regulates wireless devices in your country. If you replace the device and then receive a warning message, remove the device to restore computer functionality. Then contact Customer Care through Help and Support.	
(4)	Vents (3)	Enable airflow to cool internal components.	
		CAUTION To prevent overheating, do not obstruct 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 thick rugs or clothing, to block airflow.	
		NOTE The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.	
(5)	Memory module compartment	Contains the memory module slots.	
(6)	Hard drive bay	Holds the hard drive.	

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## **Display components**



Component Description			
(1)	Internal microphones (2) (select models only)	Record sound.	
		NOTE If there is a microph microphone opening, your comicrophones.	one icon next to each omputer has internal
(2)	Integrated camera light (select models only)	n: The integrated camera is in use.	
(3)	Integrated camera (select models only)	Records video and captures still photographs.	
(4)	Internal display switch	Turns off the display if the display is closed while the computer is turned on.	

#### Wireless antennae (select models only)

On select computer models, at least 2 antennae send and receive signals from one or more wireless devices. These antennae are not visible from the outside of the computer.

To see wireless regulatory notices, refer to your country's section of the *Regulatory, Safety and Environmental Notices* located in Help and Support.





**NOTE** For optimal transmission, keep the areas immediately around the antennae free from obstructions.

# **Additional hardware components**



Component		Description
(1)	Power cord*	Connects an AC adapter to an AC outlet.
(2)	AC adapter	Converts AC power to DC power.
(3)	Battery*	Powers the computer when the computer is not plugged into external power.

#### **Labels**

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

- Service tag—Provides the product brand and series name, serial number (s/n), and product number (p/n) of your computer. Have this information available when you contact Customer Care. The service tag label is affixed to the bottom of the computer.
- Microsoft Certificate of Authenticity—Contains the Microsoft® Windows® Product Key. You may need the Product Key to update or troubleshoot the operating system. This certificate is affixed to the bottom of the computer.
- Regulatory label—Provides regulatory information about the computer. The regulatory label is affixed to the bottom of the computer.
- Modem approval label—Provides regulatory information about the modem and lists the agency
  approval markings required by some of the countries in which the modem has been approved for
  use. You may need this information when traveling internationally. The modem approval label is
  affixed inside the memory module compartment.
- Wireless certification label(s)—Provide information about optional wireless devices available on select models, and the approval markings of some of the countries in which the devices have been approved for use. An optional device may be a wireless local area network (WLAN) device or an optional Bluetooth® device. If your computer model includes one or more wireless devices, one or more certification labels are included with your computer. You may need this information when traveling internationally. Wireless certification labels are affixed inside the memory module compartment.

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# 2 Specifications

## **Operating environment**

The operating environment information in the following table may be helpful if you plan to use or transport the computer in extreme environments.

Factor	Metric	U.S.	
Temperature			
Operating	10°C to 35°C	50°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 (14.7 to 10.1 psia*)	-15 m to 3,048 m	-50 ft to 10,000 ft	
Nonoperating (14.7 to 4.4 psia*)	-15 m to 12,192 m	-50 ft to 40,000 ft	
*Pounds per square inch absolute (psia) is another unit of measurement for altitude.			

#### Rated input power

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

The computer operates on DC power, which can be supplied by an AC or a DC power source. Although the computer can be powered from a standalone DC power source, it should be powered only with an AC adapter or a DC power source supplied and approved by HP for use with the computer.

The computer is capable of accepting DC power within the following specifications.

Input power	Rating
Operating voltage	18.5 V dc to 19.0 V dc
Operating current	3.5 A or 4.74 A

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

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