HP Pavilion TouchSmart 14 Ultrabook
HP Pavilion TouchSmart 14 Sleekbook
HP Pavilion 14 Ultrabook
HP Pavilion 14 Sleekbook

Maintenance and Service Guide

SUMMARY

CAUTION: Your computer has user-replaceable parts and *non-user-replaceable parts that should only be replaced by an authorized service provider*. Accessing some internal parts can damage the computer or void your warranty. Go to Removal and replacement procedures on page 37 for details.

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Safety warning notice

WARNING! To reduce the possibility of heat-related injuries or of overheating the device, do not place the device directly on your lap or obstruct the device air vents. Use the device 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 device and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950).

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1 Product description for Intel models

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	Switchable discrete graphics computer model	Internal graphics (UMA) computer model with TouchSmart	Switchable discrete graphics computer model with TouchSmart
Product Name	HP Pavilion 14 Ultrabook	√	√		
	HP Pavilion 14 Sleekbook	√	√		
	HP Pavilion TouchSmart 14 Ultrabook			√	
	HP Pavilion TouchSmart 14 Sleekbook			√	√
Color	Ruby red with modern mesh pattern	√	√		
	Sparkling black	√	√	√	√
	Silver with modern mesh pattern	√	√		
Processors	**3rd Generation Intel® Core™ i5:**				
	Intel Core i5-3337U (1.8 GHz,turbo up to 2.7 GHz 1600 MHz/3 MB L3 cache, dual core 17 W)	√	√	√	√
	Intel Core i5-3317U (1.7 GHz, turbo up to 2.6 GHz, 1600 MHz/3 MB L3 cache, dual core, 17 W)	√	√		
	3rd Generation Intel Core i3:				
	Intel Core i3-3227U (1.9 GHz 1600 MHz/3 MB L3 cache, dual core 17 W)	√	√	√	√
	Intel Core i3-3217U (1.8 GHz, 1600 MHz/3 MB L3 cache, dual core, 17 W)	√			
	2nd Generation Intel Core i3:				
	Intel Core i3-2375M (1.5 GHz, 1333 MHz/3 MB L3 cache, dual core, 17 W)	√	√	√	

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	Switchable discrete graphics computer model	Internal graphics (UMA) computer model with TouchSmart	Switchable discrete graphics computer model with TouchSmart
	Intel Pentium® processors:				
	Pentium 987 (1.5 GHz, 1333 MHz/2 MB L3 cache, dual core, 17 W)			√	
	Low power BGA	√	√	√	√
Chipsets	Intel HM77 Express chipset for use with computer models with Intel Core processors	√	√	√	√
	Intel HM70 Express chipset for use with computer models with Pentium processors			√	
Graphics	Supports HD Decode, DX11, and HDMI	√	√	√	√
	Supports Optimus		√		√
	Internal graphics:				
	• Intel HD Graphics 4000 for use with computer models with 3rd Generation Intel Core processors	√	√	√	√
	• Intel HD Graphics 3000 for use with computer models with 2nd Generation Intel Core processors	√	√	√	
	• Intel HD Graphics for use with computer models with Pentium processors			√	
	Switchable discrete graphics:				
	• GeForce GT630M with 2 GB of dedicated video memory (256 MB × 16 DDR3 @ 900 MHz × 4 PCs); 64 bit, (no support for Ubuntu Linux)		√		

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	**Switchable discrete graphics computer model**	**Internal graphics (UMA) computer model with TouchSmart**	**Switchable discrete graphics computer model with TouchSmart**
	• GeForce GT630M with 1 GB of dedicated video memory (128 MB × 16 DDR3 @ 900 MHz × 4 PCs); 64 bit (no support for Ubuntu Linux)		√		√
Display panel	**35.6 cm** (14.0 in), high-definition (HD), white light-emitting diode (WLED), SVA BrightView (1366×768) flat (3.6 mm) display: • Typical brightness: 200 cd/m^2 (nits) • All display assemblies include two wireless local area network (WLAN) antenna cables • Supports 16:9 ultra-wide aspect ratio	√	√		
	35.6 cm (14.0 in), high-definition (HD), white light-emitting diode (WLED), SVA BrightView (1366×768) slim (3.0 mm) display: • Touchscreen, multitouch enabled • Typical brightness: 2 00 cd/m^2 (nits) • All display assemblies include two wireless local area network (WLAN) antenna cables • Supports 16:9 ultra-wide aspect ratio			√	√
Memory	Two SODIMM memory module slots	√	√	√	√
	Dual-channel memory support	√	√	√	√

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	**Switchable discrete graphics computer model**	**Internal graphics (UMA) computer model with TouchSmart**	**Switchable discrete graphics computer model with TouchSmart**
	DDR3-1600 MHz Dual Channel support for use with computer models with 3rd Generation Intel Core processors	√	√	√	√
	DDR3L-1600 MHz Dual Channel support for use with computer models with 3rd Generation Intel Core processors	√	√	√	√
	DDR3-1333 MHz support (DDR3-1600/DDR3L-1600 downgrade to DDR3-1333), for use with computer models with 2nd Generation Intel Core processors	√	√	√	
	DDR3-1333 MHz support (DDR3-1600/DDR3L-1600 downgrade to DDR3-1333), for use with computer models with Pentium processors			√	
	Supports up to 8 GB of system RAM in the following configurations: • 8192 MB total system memory (8192 MB or 4096 MB × 2) (no support for 32 bit operating systems) • 6144 MB total system memory (4096 MB × 1 + 2048 MB × 1) (no support for 32 bit operating systems) • 4096 MB total system memory (4096 MB × 1 or 2048 × 2) • 2048 MB total system memory (2048 MB × 1)	√	√	√	√
Drives	Supports **6.35 cm** (2.5 in) hard drives in **9.5 mm** (.37 in) and **7.0 mm** (.28 in) thicknesses	√	√	√	√

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	**Switchable discrete graphics computer model**	**Internal graphics (UMA) computer model with TouchSmart**	**Switchable discrete graphics computer model with TouchSmart**
	Serial ATA (SATA)	√	√	√	√
	HP 3D Drive Guard support	√	√	√	√
	Intel Smart Response Technology support	√	√	√	
	Supports the following single hard drive configurations:				
	• 1 TB, 5400 rpm, 9.5 mm	√	√	√	√
	• 750 GB, 7200 rpm, 9.5 mm	√	√	√	√
	• 750 GB, 5400 rpm, 9.5 mm	√	√	√	√
	• 640 GB, 5400 rpm, 9.5 mm	√	√	√	√
	• 500 GB, 7200 rpm, 9.5 mm	√	√	√	√
	• 500 GB, 5400 rpm, 9.5 mm	√	√	√	√
	• 500 GB, 5400 rpm, 7.0 mm	√	√	√	√
	• 320 GB, 5400 rpm, 9.5 mm	√	√	√	√
	• 320 GB, 5400 rpm, 7.0 mm	√	√	√	√
	Supports 32 GB mSATA solid-state drive with system memory up to 8 GB (not supported on Ubuntu Linux)	√	√	√	
	Supports 24 GB mSATA solid-state drive with system memory up to 8 GB	√	√		
Audio and video	One digital microphone	√	√	√	√
	HD audio	√	√	√	√
	Supports Dolby Advanced Audio	√	√	√	√

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	Switchable discrete graphics computer model	Internal graphics (UMA) computer model with TouchSmart	Switchable discrete graphics computer model with TouchSmart
	Two Altec Lansing speakers	√	√	√	√
	Supports Microsoft® Premium requirements	√	√	√	√
	HP TrueVision HD camera (fixed, no tilt) with activity LED, USB 2.0, M-JPEG, 1280 x 720 by 30 frames per second	√	√	√	√
Ethernet	Integrated 10/100 network interface card (NIC)	√	√	√	√
Wireless	Integrated wireless local area network (WLAN) options by way of wireless module	√	√	√	√
	Two WLAN antennas built into display assembly	√	√	√	√
	Support for Intel Wireless Display	√	√	√	√
	Support for the following WLAN formats:				
	• Intel Centrino® Wireless-N 2230 802.11 b/g/n 2×2 WiFi and Bluetooth® 4.0 Combination Adapter	√	√	√	√
	• Qualcomm Atheros AR9485 802.11 b/g/n 1×1 WiFi Adapter	√	√	√	√
	• Qualcomm Atheros AR9565 802.11 b/g/n 1×1 WiFi and Bluetooth 4.0 Combination Adapter, not supported on Ubuntu Linux (select models only)	√	√	√	√
	• Ralink RT3290LE 802.11 b/g/n 1x1 WiFi and Bluetooth 4.0 Combination Adapter (select models only)	√	√	√	√

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	Switchable discrete graphics computer model	Internal graphics (UMA) computer model with TouchSmart	Switchable discrete graphics computer model with TouchSmart
	• Ralink RT5390R 802.11 b/g/n 1×1 WiFi (select models only)	√	√	√	√
External media card	HP Multi-Format Media Card Reader slot with push-push technology.	√	√	√	√
Internal media cards	• One half-size mini-card slot for WLAN	√	√	√	√
	• One full-size mini-card slot for mSATA cache, supports system memory up to 8 GB	√	√	√	√
Ports	• Audio-in/audio-out (combination headphone/ microphone)	√	√	√	√
	• HDMI version 1.4 supporting up to 1920×1200 @ 60Hz	√	√	√	√
	• HP AC power adapter	√	√	√	√
	• RJ-45 (Ethernet, includes link and activity lights)	√	√	√	√
	• USB 3.0 (2 ports)	√	√	√	√
	• USB 2.0 (1 port)	√	√	√	√
Keyboard/ pointing devices	Full-size, island-style keyboard; standard keyboard 1.5 mm key travel distance	√	√	√	√
	TouchPad with two buttons: • Multitouch gesture support enabled as default • Taps enabled by default • Supports edge-swipe gestures	√	√	√	√

Category	Description	Intel HM77			
		Internal graphics (UMA) computer model	Switchable discrete graphics computer model	Internal graphics (UMA) computer model with TouchSmart	Switchable discrete graphics computer model with TouchSmart
Power requirements	**AC adapter** 65 W RC V AC adapter with localized cable plug support (3-wire plug with ground pin, supports 3-pin DC connector)	√	√	√	√
	Battery 4 cell, 37 Whr, 2.55 Ah, Li-ion battery Supports fast charge	√	√	√	√
	Battery 4 cell, 41 Whr, 2.8 Ah, Li-ion battery Supports fast charge			√	
Security	Security cable slot	√	√	√	√
	Intel AT-p Ready support	√	√	√	√
Operating system	**Preinstalled:**				
	• Windows® 8 Standard 64 bit	√	√	√	√
	• FreeDOS 1.0	√	√		
	• Ubuntu Linux	√			
Serviceability	**End-user replaceable parts:** • AC adapter • Battery • Keyboard	√	√	√	√

2 Product description for AMD models

Category	Description	AMD A68M	AMD 70M
		Internal graphics (UMA) computer model	Internal graphics (UMA) computer model
Product Name	HP Pavilion 14 Sleekbook	√	√
Color	Ruby red with modern mesh pattern	√	√
	Sparkling black	√	√
	Silver with modern mesh pattern	√	√
Processors	AMD A6-4455M (2.6 GHz/2.1 GHz, 1 MB L2 cache, 1333 MHz DDR3), dual core 17 W)		√
	AMD A4-4355M (2.4 GHz/1.9 GHz, 1 MB L2 cache, 1333 MHz DDR3), dual core 17 W)		√
	AMD E2-2000 (1.75 GHz, 1 MB L2 cache, 1333 MHz DDR3, dual core 18 W)	√	
	AMD E2-1800 (1.7 GHz, 1333 MHz/1 MB, DDR3 L2 cache, dual core 18 W)	√	
	AMD E1-1500 (1.48 GHz, 1 MB L2 cache, 1066 MHz DDR3, dual core 18 W)	√	
	AMD E1-1200 (1.4 GHz, 1066 MHz/1 MB, DDR3 L2 cache, dual core 18 W)	√	
	Low power BGA	√	√
Chipsets	AMD A70M chipset		√
	AMD A68M chipset	√	
Graphics	Supports HD Decode, DX11, and HDMI	√	
	Internal graphics:		
	• AMD Radeon™ HD 7500 graphics (for use with computer models with AMD A6-4475M processors)		√
	• AMD Radeon HD 7400G graphics (for use with computer models with AMD A4-4375M processors)		√

Category	Description	AMD A68M	AMD 70M
		Internal graphics (UMA) computer model	Internal graphics (UMA) computer model
	• AMD Radeon HD 7340 graphics (for use with computer models with AMD E2-2000 or AMD E2-1800 processors)	√	
	• AMD Radeon HD 7310 graphics (for use with computer models with AMD E1-1500 or AMD E1-1200 processors)	√	
Display panel	**35.6 cm** (14.0 in), high-definition (HD), white light-emitting diode (WLED), SVA BrightView (1366×768) flat (3.6 mm) display: • Typical brightness: 200 cd/m^2 (nits) • All display assemblies include two wireless local area network (WLAN) antenna cables • Supports 16:9 ultra-wide aspect ratio	√	√
Memory	Two SODIMM memory module slots	√	√
	Dual-channel memory support	√	√
	DDR3-1333 MHz support (DDR3-1600/DDR3L-1600 downgrade to DDR3-1333), for use with computer models with AMD E2-2000, AMD E2-1800, AMD A6-4455, or AMD A4-4355M processors	√	√
	DDR3-1066 MHz support (DDR3-1600 downgraded to DDR3-1066), for use with computer models with AMD E1-1500 or AMD E1-1200 processors	√	
	DDR3L-1066 MHz support (DDR3-1600 downgraded to DDR3-1066), for use with computer models with AMD E1-1500 or AMD E1-1200 processors	√	

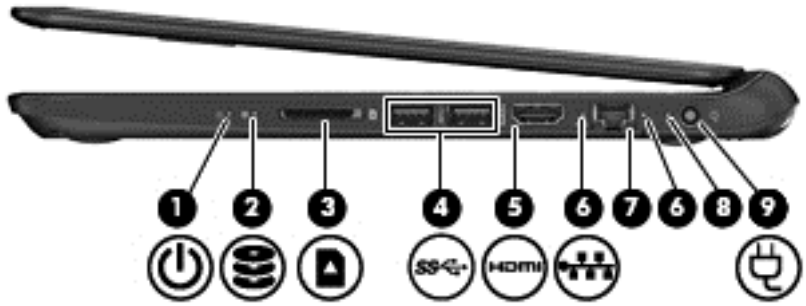
Category	Description	AMD A68M	AMD 70M
		Internal graphics (UMA) computer model	Internal graphics (UMA) computer model
	Supports up to 8 GB of system RAM in the following configurations: • 8192 MB total system memory (4096 MB × 2) (no support for 32 bit operating systems) • 6144 MB total system memory (4096 MB × 1 + 2048 MB × 1) (no support for 32 bit operating systems) • 4096 MB total system memory (4096 MB × 1 or 2048 × 2) • 2048 MB total system memory (2048 MB × 1)	√	√
Drives	Supports **6.35 cm** (2.5 in) hard drives in **9.5 mm** (.37 in) and **7.0 mm** (.28 in) thicknesses	√	√
	Serial ATA (SATA)	√	√
	HP 3D Drive Guard support	√	√
	Supports the following single hard drive configurations:		
	• 1 TB, 5400 rpm, 9.5 mm	√	√
	• 750 GB, 7200 rpm, 9.5 mm	√	√
	• 750 GB, 5400 rpm, 9.5 mm	√	√
	• 640 GB, 5400 rpm, 9.5 mm	√	√
	• 500 GB, 7200 rpm, 9.5 mm	√	√
	• 500 GB, 5400 rpm, 9.5 mm	√	√
	• 500 GB, 5400 rpm, 7.0 mm	√	√
	• 320 GB, 5400 rpm, 9.5 mm	√	√
	• 320 GB, 5400 rpm, 7.0 mm	√	√
Audio and video	One digital microphone	√	√
	HD audio	√	√
	Supports Dolby Advanced Audio	√	√
	Two Altec Lansing speakers	√	√
	Supports Microsoft® Premium requirements	√	√

Category	Description	AMD A68M	AMD 70M
		Internal graphics (UMA) computer model	Internal graphics (UMA) computer model
	HP TrueVision HD camera (fixed, no tilt) with activity LED, USB 2.0, M-JPEG, 1280 x 720 by 30 frames per second	√	√
Ethernet	Integrated 10/100 network interface card (NIC)	√	√
Wireless	Integrated wireless local area network (WLAN) options by way of wireless module	√	√
	Two WLAN antennas built into display assembly	√	√
	Support for the following WLAN formats:		
	• Qualcomm Atheros AR9485 802.11 b/g/n 1×1 WiFi Adapter	√	√
	• Ralink RT3290LE 802.11 b/g/n 1x1 WiFi and Bluetooth 4.0 Combination Adapter (select models only)	√	√
	• Ralink RT5390R 802.11 b/g/n 1×1 WiFi (select models only)	√	√
External media card	HP Multi-Format Media Card Reader slot with push-push technology.	√	√
Internal media cards	• One half-size mini-card slot for WLAN	√	√
Ports	• Audio-in/audio-out (combination headphone/ microphone)	√	√
	• HDMI version 1.4 supporting up to 1920×1200 @ 60Hz	√	√
	• HP AC power adapter	√	√
	• RJ-45 (Ethernet, includes link and activity lights)	√	√
	• USB 3.0 (2 ports)	√	√
	• USB 2.0 (1 port)	√	√
Keyboard/pointing devices	Full-size, island-style keyboard; standard keyboard 1.5 mm key travel distance	√	√

Category	Description	AMD A68M	AMD 70M
		Internal graphics (UMA) computer model	Internal graphics (UMA) computer model
	TouchPad with two buttons: • Multitouch gesture support enabled as default • Taps enabled by default • Supports edge-swipe gestures	√	√
Power requirements	**AC adapter** 65 W RC V AC adapter with localized cable plug support (3-wire plug with ground pin, supports 3-pin DC connector)	√	√
	Battery 4 cell, 37 Whr, 2.55 Ah, Li-ion battery Supports fast charge	√	√
Security	Security cable slot	√	√
Operating system	**Preinstalled:**		
	• Windows® 8 Standard 64 bit	√	√
	• FreeDOS 2.0	√	√
	• Ubuntu Linux	√	√
Serviceability	**End-user replaceable parts:** • AC adapter • Battery • Keyboard	√	√

3 External component identification

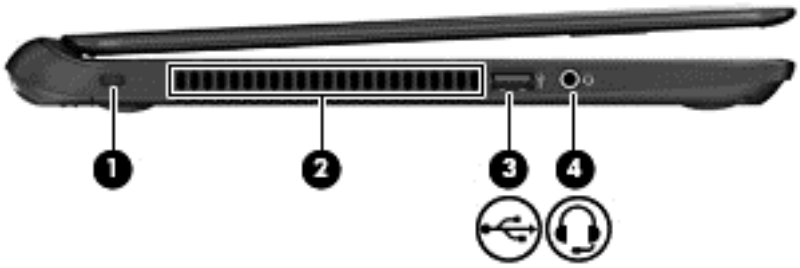
Right side



Component			Description
(1)		Power light	• White: The computer is on. • Blinking white: The computer is in the Sleep (Suspend) state, which is an energy-saving mode. The computer shuts off power to the display and other unneeded components. • Off: The computer is off or in Hibernation. Hibernation is an energy-saving mode that uses the least amount of power. **NOTE:** For select models, the Intel Rapid Start Technology feature is enabled at the factory. Rapid Start Technology allows your computer to resume quickly from inactivity.
(2)		Hard drive light	• Blinking white: The hard drive is being accessed. • Amber: HP 3D DriveGuard has temporarily parked the hard drive (select models only).
(3)		Media Card Reader	Reads data from and writes data to digital media cards such as Secure Digital (SD).
(4)		USB 3.0 ports (2)	Connect optional USB 3.0 devices and provide enhanced USB power performance.
(5)		HDMI port	Connects an optional video or audio device, such as a high-definition television, or any compatible digital or audio device.
(6)		RJ-45 (network) jack lights	• White—Computer is connected to a network. • Blinking amber—Data is being transferred. **NOTE:** When both lights are off the computer is not connected to a network.
(7)		RJ-45 (network) jack	Connects a network cable.

Component		Description
(8)	AC adapter light	• White: The AC adapter is connected and the battery is charged. • Blinking white: The battery has reached a low battery level. • Amber: The AC adapter is connected and the battery is charging. • Off: The computer is using DC power.
(9)	Power connector	Connects an AC adapter.

Left side



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 it may not prevent the computer from being mishandled or stolen.
(2)	Vent	Enables airflow to cool internal components. **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.
(3)	USB 2.0 port	Connects an optional USB 2.0 device.
(4)	Audio-out (headphone) jack/audio-in (microphone) jack	Produces sound when connected to optional powered stereo speakers, headphones, earbuds, a headset, or television audio. Also connects an optional headset microphone. The jack does not support optional microphone-only devices. **WARNING!** To reduce the risk of personal injury, adjust the volume before using headphones, earbuds, or a headset. For additional safety information, see the *Regulatory, Safety and Environmental Notices*. **NOTE:** When a device is connected to the jack, the computer speakers are disabled. **NOTE:** Be sure that the device cable has a 4-conductor connector that supports both audio-out (headphone) and audio-in (microphone).

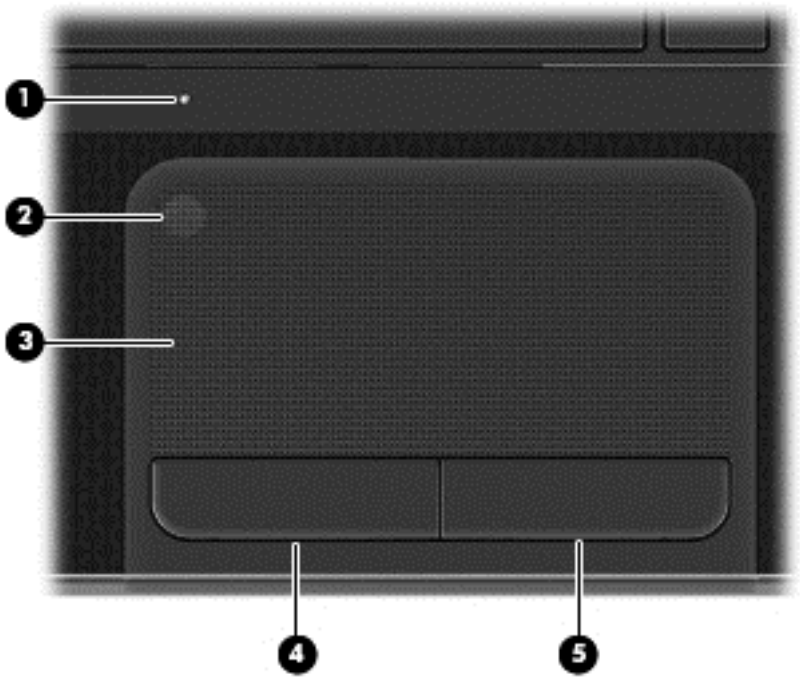
Display

Component		Description
(1)	WLAN antennas (2)*	Send and receive wireless signals to communicate with wireless local area networks (WLANs).
(2)	Webcam light	On: The webcam is in use.
(3)	HP TrueVision HD Webcam	Records video, captures still photographs, and allows you to video conference and chat online using streaming video.
(4)	Internal microphone	Records sound.

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

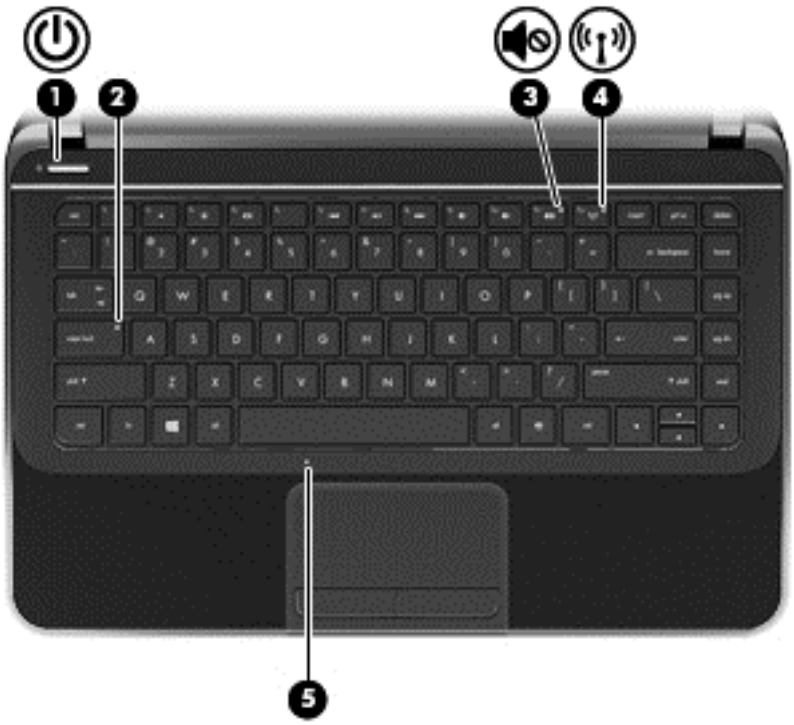
Top

TouchPad



Component		Description
(1)	TouchPad light (not supported on Ubuntu Linux)	• Amber: The TouchPad is off. • Off: The TouchPad is on.
(2)	TouchPad on/off button (not supported on Ubuntu Linux)	Turns the TouchPad on or off.
(3)	TouchPad zone	Moves the on-screen pointer and selects or activates items on the screen. **NOTE:** The TouchPad also supports edge-swipe gestures.
(4)	Left TouchPad button	Functions like the left button on an external mouse.
(5)	Right TouchPad button	Functions like the right button on an external mouse.

Lights

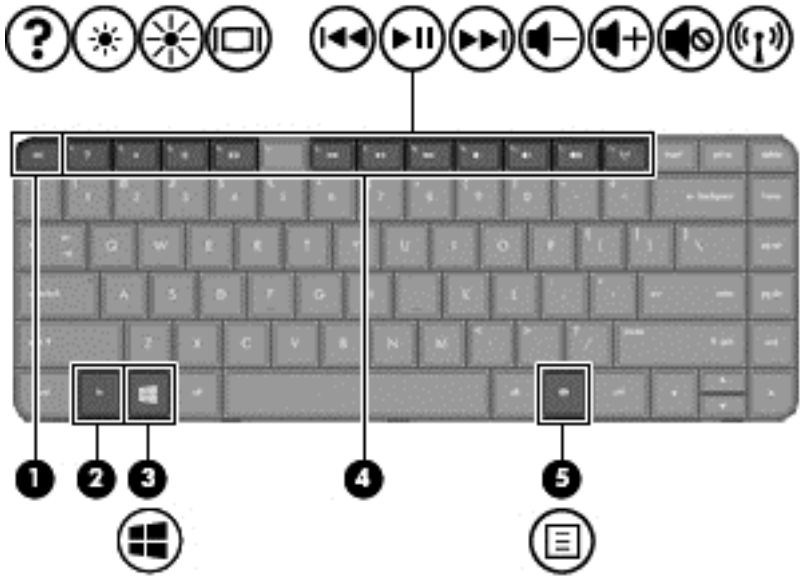


Component		Description
(1)	Power light	• White: The computer is on. • Blinking white: The computer is in the Sleep (Suspend) state, which is an energy-saving mode. The computer shuts off power to the display and other unneeded components. • Off: The computer is off or in Hibernation. Hibernation is an energy-saving mode that uses the least amount of power.
(2)	Caps lock light	White: Caps lock is on, which switches the letter keys to all capital letters.
(3)	Mute light	• Amber: Computer sound is off. • Off: Computer sound is on.
(4)	Wireless light	• White: An integrated wireless device, such as a wireless local area network (WLAN) device and/or a Bluetooth device, is on. • Amber: All wireless devices are off.
(5)	TouchPad light (not supported on Ubuntu Linux)	• Amber: The TouchPad is off. • Off: The TouchPad is on.

Buttons and speakers

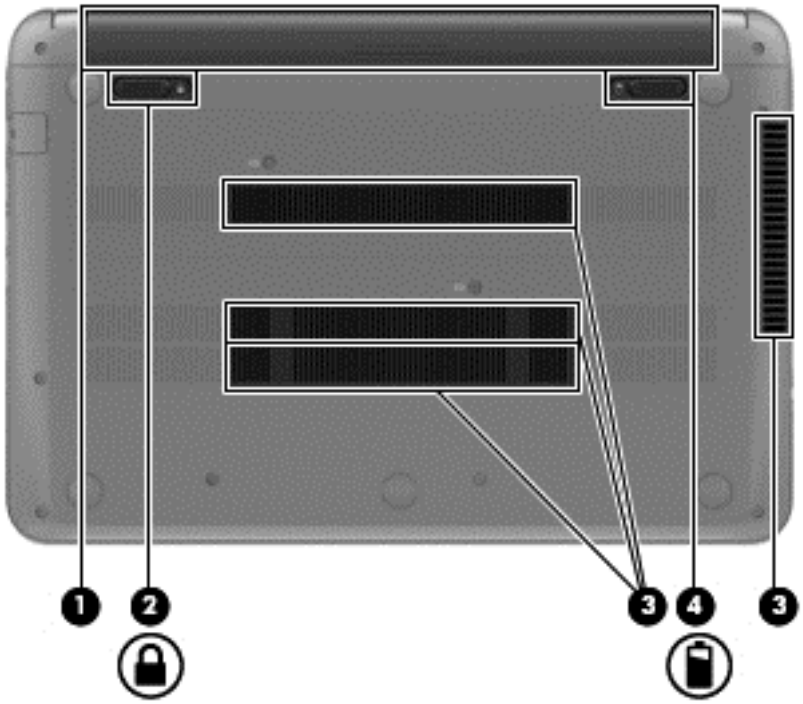
Component		Description
(1)	Power button	• When the computer is off, press the button to turn on the computer. • When the computer is in the Sleep (Suspend) state, press the button briefly to exit that state. • When the computer is in Hibernation, press the button down briefly to exit Hibernation. **CAUTION:** Pressing and holding down the power button will result in the loss of unsaved information. If the computer has stopped responding and shutdown procedures are ineffective, press and hold the power button down for at least 5 seconds to turn off the computer. **NOTE:** For select models, the Intel Rapid Start Technology feature is enabled at the factory. Rapid Start Technology allows your computer to resume quickly from inactivity.
(2)	Speakers (2)	Produce sound.

Keys



Component			Description
(1)		esc key	Displays system information when pressed in combination with the fn key (for Windows computer models).
(2)		fn key	Displays system information when pressed in combination with the esc key (for Windows computer models).
(3)		Operating system key	For Windows computer models, returns you to the Start screen from an open app or the Desktop. **NOTE:** Pressing the operating system logo key again will return you to the previous screen. For Linux computer models, displays the operating system menu.
(4)		Action keys	Execute frequently used system functions.
(5)		Applications key	Displays options for a selected object.

Bottom



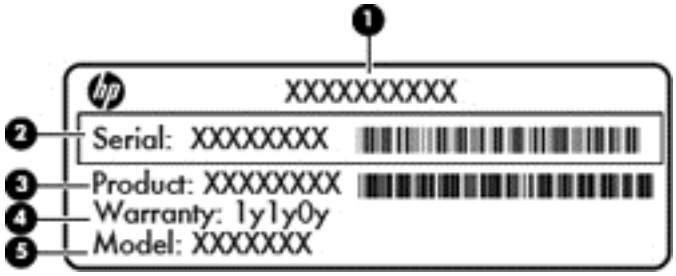
Component		Description
(1)	Battery bay	Holds the battery.
(2)	Battery lock	Unlocks and locks the battery.
(3)	Vents (4)	Enable airflow to cool internal components. **NOTE:** The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.
(4)	Battery release latch	Releases the battery from the battery bay.

4 Illustrated parts catalog

Service label

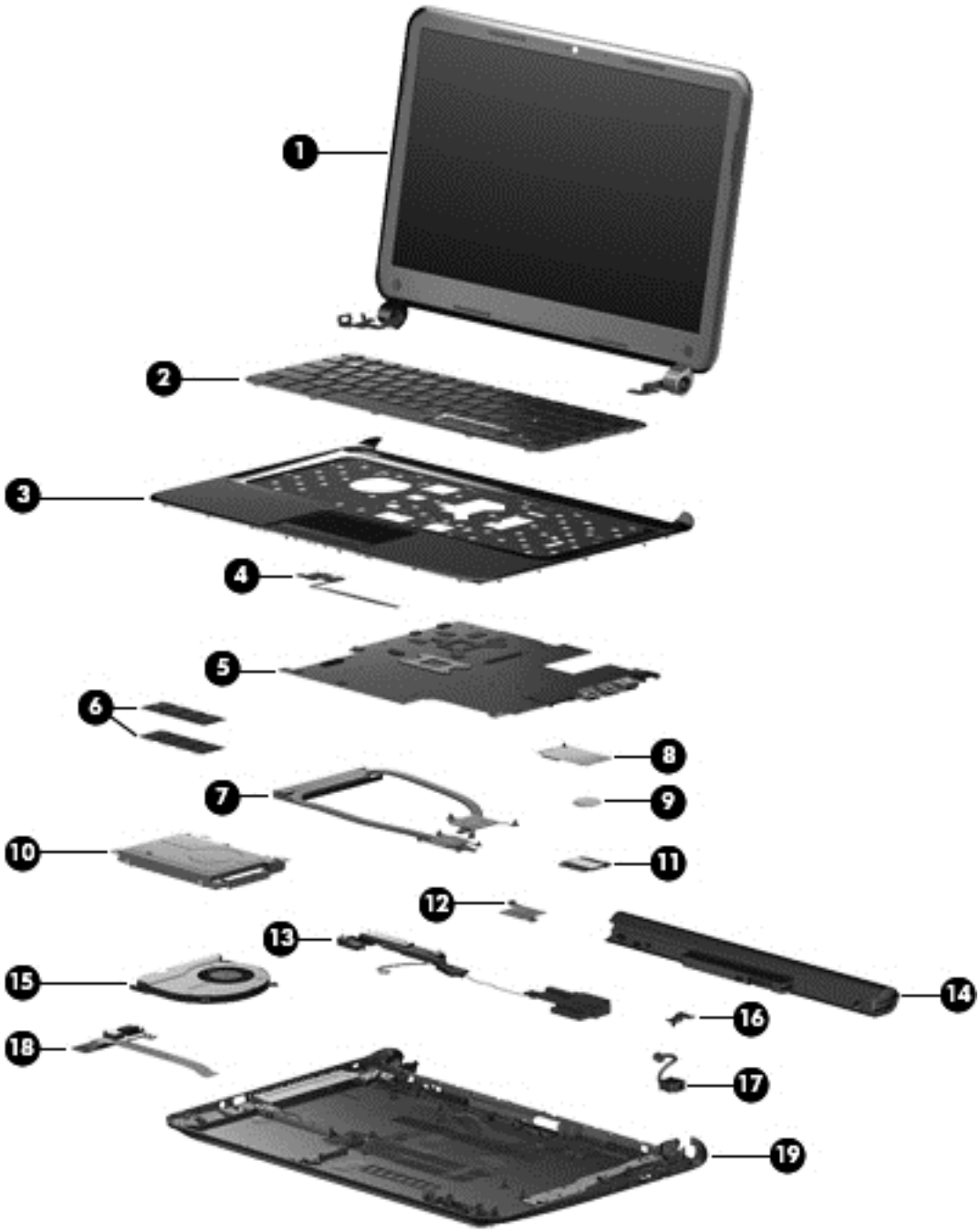
When ordering parts or requesting information, provide the computer serial number and model description provided on the service label. The service label is located on the bottom of the computer.

NOTE: Your label may look slightly different from the illustration in this section.



Item	Description	Function
(1)	Product name	This is the model name for the computer.
(2)	Serial number	This is an alphanumeric identifier that is unique to each product.
(3)	Product part number	This number provides specific information about the product's hardware components. The part number helps a service technician to determine what components and parts are needed.
(4)	Warranty period	This number describes the duration of the warranty period for the computer.
(5)	Model description (select models only)	This is the alphanumeric identifier needed to locate documents, drivers, and support for the computer.

Computer major components



Item	Component	Spare part number
(1)	**35.6 cm (14.0 in), high definition (HD), WLED, SVA BrightView flat display assembly**, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models The display assembly is spared at the subcomponent level only. **NOTE:** For a full list of display spare parts, see Display assembly subcomponents on page 29.	

Item	Component	Spare part number
	35.6 cm (14.0 in), high definition (HD), WLED, SVA BrightView TouchSmart slim display assembly, for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models	721218-001
(2)	**Keyboard**, black finish (includes keyboard cable):	
	• For use in Canada	697904-DB1
	• For use in France, for use with computer models with Intel processors	697904-051
	• For use in Germany, for use with computer models with Intel processors	697904-041
	• For use internationally, for use with computer models with Intel processors	697904-B31
	• For use in Israel, for use with computer models with Intel processors	697904-BB1
	• For use in Japan	697904-291
	• For use in Latin America	697904-161
	• For use in the Nordic Region, for use with computer models with Intel processors	697904-DH1
	• For use in Portugal, for use with computer models with Intel processors	697904-131
	• For use in Saudi Arabia, for use with computer models with Intel processors	697904-171
	• For use in South Korea	697904-AD1
	• For use in Spain, for use with computers models with Intel processors	697904-071
	• For use in Taiwan	697904-AB1
	• For use in Thailand	697904-281
	• For use in Turkey, for use with computer models with Intel processors	697904-141
	• For use in the United Kingdom, for use with computer models with Intel processors	697904-031
	• For use in the United States	697904-001
(3)	**Top cover** (includes TouchPad):	
	• Ruby red, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models	697920-001
	• Silver, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models	704382-001
	• Sparkling black	698488-001
(4)	**Power button board** (includes cable)	697901-001
(5)	**System board** (includes processor and replacement thermal material):	
	For use with HP Pavilion TouchSmart Sleekbook models with switchable discrete graphics, and Intel processors:	
	• For use with computer models with Intel HM77 chipsets, I5-3337U processors, 1 GB of dedicated video memory, and Windows 8 Standard	721215-501
	• For use with computer models with Intel HM77 chipsets, I3-3227U processors, and 1 GB of dedicated video memory, and Windows 8 Standard	721216-501
	For use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models with UMA graphics, and Intel processors:	
	• For use with computer models with Intel HM77 chipsets i5-3337U processors, and Windows 8 Standard	721212-501

Item	Component	Spare part number
	• For use with computer models with Intel HM77 chipsets i3-3227U processors, and Windows 8 Standard	721213-501
	• For use with computer models with Intel HM77 chipsets i3-2375M processors, and Windows 8 Standard	721214-501
	• For use with computer models with Intel HM70 chipsets, Pentium 987 processors, and Windows 8 Standard	730137-501
	For use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models with switchable discrete graphics and Intel processors:	
	For use with computer models with Intel HM77 chipsets, i5-3337U processors, and 2 GB of dedicated video memory:	
	• For Windows 8 Standard	718729-501
	• For FreeDOS 1.0	718729-001
	For use with computer models with Intel HM77 chipsets, i5-3337U processors, and 1 GB of dedicated video memory:	
	• For Windows 8 Standard	718727-501
	• For FreeDOS 1.0	718727-001
	For use with computer models with Intel HM77 chipsets, i3-3227U processors, and 1 GB of dedicated video memory:	
	• For Windows 8 Standard	718728-501
	• For FreeDOS 1.0	718728-001
	For use with computer models with Intel HM77 chipsets, i5-3317U processors, and 1 GB of dedicated video memory:	
	• For Windows 8 Standard	700701-501
	• For FreeDOS 1.0	700701-001
	For use with computer models with Intel HM77 chipsets, i3-2375M processors, and 1 GB of dedicated memory:	
	• For Windows 8 Standard	718918-501
	• For FreeDOS 1.0	718918-001
	For use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models with UMA graphics and Intel processors:	
	For use with computer models with Intel HM77 chipsets and i5-3337U processors:	
	• For Windows 8 Standard	718725-501
	• For Ubuntu Linux or FreeDOS 1.0	718725-001
	For use with computer models with Intel HM77 chipsets and i5-3317U processors:	
	• For Windows 8 Standard	698491-501
	• For Ubuntu Linux or FreeDOS 1.0	698491-001
	For use with computer models with Intel HM77 chipsets and i3-3227U processors:	
	• For Windows 8 Standard	718726-501
	• For Ubuntu Linux or FreeDOS 1.0	718726-001

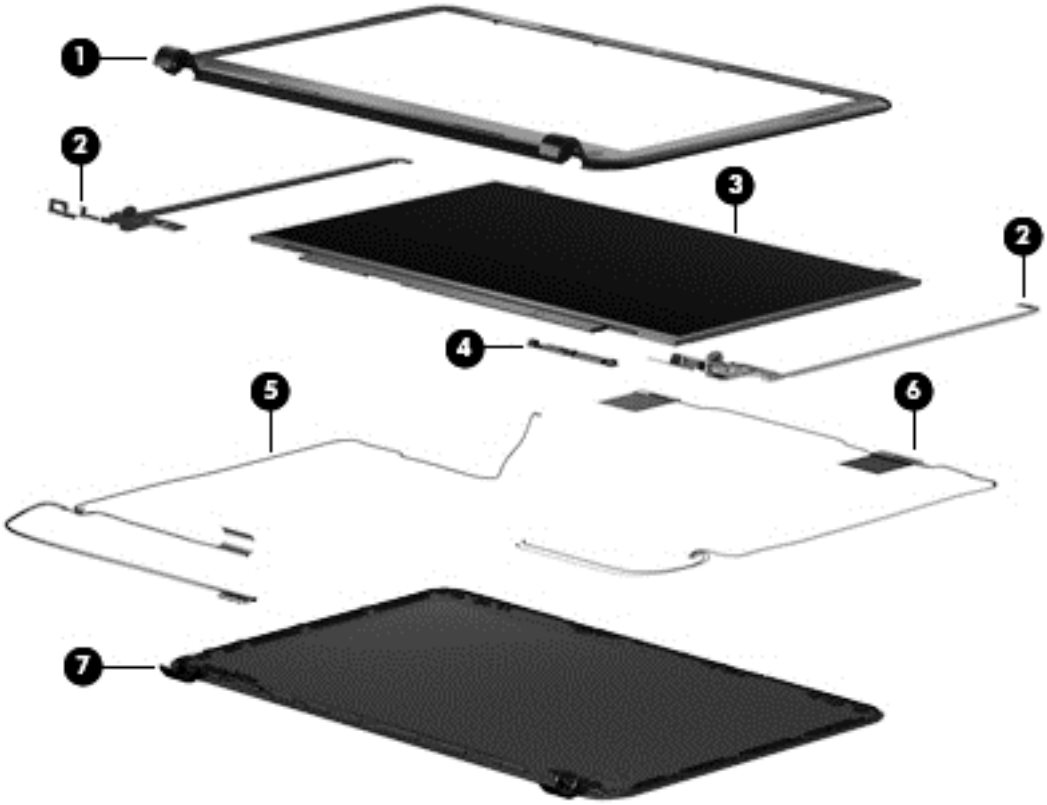
Item	Component	Spare part number
	For use with computer models with Intel HM77 chipsets and i3-3217U processors:	
	• For Windows 8 Standard	698492-501
	• For Ubuntu Linux or FreeDOS 1.0	698492-001
	For use with computer models with Intel HM77 chipsets and i3-2375M processors:	
	• For Windows 8 Standard	718917-501
	• For Ubuntu Linux or FreeDOS 1.0	718917-001
	For use with HP Pavilion Sleekbook models with UMA graphics:	
	For use with computer models with AMD A70M chipsets and A6-4455M processors:	
	• For Windows 8 Standard	703858-501
	• For Ubuntu Linux or FreeDOS 2.0	703858-001
	For use with computer models with AMD A70M chipsets and A4-4355M processors:	
	• For Windows 8 Standard	703857-501
	• For Ubuntu Linux or FreeDOS 2.0	703857-001
	For use with computer models with AMD A68M chipsets and E2-2000 processors:	
	• For Windows 8 Standard	703856-501
	• For Ubuntu Linux or FreeDOS 2.0	703856-001
	For use with computer models with AMD A68M chipsets and E2-1800 processors:	
	• For Windows 8 Standard	699812-501
	• For Ubuntu Linux or FreeDOS 2.0	699812-001
	For use with computer models with AMD A68M chipsets and E1-1500 processors:	
	• For Windows 8 Standard	703855-501
	• For Ubuntu Linux or FreeDOS 2.0	703855-001
	For use with computer models with AMD A68M chipsets and E1-1200 processors:	
	• For Windows 8 Standard	699811-501
	• For Ubuntu Linux or FreeDOS 2.0	699811-001
(6)	**Memory modules** (two, DDR3-1600 MHz, PC3-12800):	
	• 8 GB (for use with computer models with Intel processors, no support for 32 bit operating systems)	670034-005
	• 4 GB	641369-005
	• 2 GB	652972-005
(7)	**Heat sink** (includes replacement thermal material):	
	• Heat sink for computer models with switchable discrete graphics	697916-001
	• Heat sink for computer models with UMA graphics, not illustrated	697915-001
(8)	**mSATA solid-state drive, 32 GB** (for use with computer models with Intel processors, not supported on Ubuntu Linux)	698524-001

Item	Component	Spare part number
	mSATA solid-state drive, 24 GB (for use with computer models Intel processors)	717579-001
(9)	**RTC battery**	697917-001
(10)	**Hard drive** SATA, (does not include hard drive bracket or cable):	
	9.5 mm (0.37 in) x **6.35 cm** (2.50 in):	
	• 1 TB, 5400 rpm	676521-005
	• 750 GB, 7200 rpm	633252-005
	• 750 GB, 5400 rpm	634250-005
	• 640 GB, 5400 rpm	669300-005
	• 500 GB, 7200 rpm	634925-005
	• 500 GB, 5400 rpm	669299-005
	• 320 GB, 5400 rpm	622643-005
	7.0 mm (0.28 in) × **6.35 cm** (2.50 in):	
	• 500 GB, 5400 rpm	683802-005
	• 320 GB, 5400 rpm	645193-005
	Hard Drive Hardware Kit, not illustrated, (includes hard drive bracket, screws, and cable)	697905-001
(11)	**WLAN module:**	
	• Intel Centrino Wireless-N 2230 802.11 b/g/n 2×2 WiFi and Bluetooth 4.0 Combination Adapter, for use with computer models with Intel processors	670290-005
	• Qualcomm Atheros AR9485 802.11 b/g/n 1×1 WiFi Adapter	675794-005
	• Qualcomm Atheros AR9565 802.11 b/g/n 1×1 WiFi and Bluetooth 4.0 Combination Adapter for use with computer models with Intel processors, not supported on Ubuntu Linux, (select models only)	690019-005
	• Ralink RT3290LE 802.11 b/g/n 1x1 WiFi and Bluetooth 4.0 Combination Adapter (select models only)	690020-005
	• Ralink RT5390R 802.11 b/g/n 1×1 WiFi (select models only)	691415-005
(12)	**Platform Controller Hub (PCH) heat sink**	699248-001
(13)	**Speaker assembly** (includes left and right speakers and cable)	697918-001
(14)	**Battery**	
	• 4 cell, 37 Whr, (2.55 Ah)	695192-001
	• 4 cell, 41 Whr, (2.80 Ah), for use with HP Pavilion TouchSmart Sleekbook models with UMA memory and HP Pavilion TouchSmart Ultrabook models	708462-001
(15)	**Fan**	697914-001
(16)	**RJ-45 cover**	700428-001
(17)	**Power connector**	697921-001
(18)	**USB board** (includes cable and audio-out/audio-in jack)	697902-001
(19)	**Base enclosure:**	

Item	Component	Spare part number
	• For use with computer models with Intel processors	697919-001
	• For use with computer models with AMD processors	709330-001
	Rubber Feet Kit, not illustrated	697906-001

Display assembly subcomponents

NOTE: The display assembly subcomponent spares are for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models only.



Item	Component	Spare part number
(1)	**Display bezel**	697907-001
(2)	**Display Hinge Kit** (includes left and right display hinges and brackets)	697908-001
(3)	**35.6 cm (14.0 in), HD, WLED, SVA BrightView flat display panel**	698523-001
(4)	**Webcam/microphone module**	697903-001
(5)	**Antenna Kit** (includes left and right wireless antenna cables and transceivers)	697913-001
(6)	**Display Panel Cable Kit** (includes display panel cable and webcam/microphone module cable)	697911-001
(7)	**Back cover:**	
	• Ruby red	697909-001

Item	Component	Spare part number
	• Silver	704381-001
	• Sparkling black	697910-001

Miscellaneous parts

Component	Spare part number
AC adapter:	
• 65 W nPFC	693715-001
• 65 W nPFC (select models only)	707750-001
Power cord (3-pin, black, 1.83 m):	
• For use in Australia	490371-011
• For use in Argentina, for use with computer models with Intel processors	490371-D01
• For use in Denmark, for use with computer models with Intel processors	490371-081
• For use in Europe	490371-021
• For use in India	490371-D61
• For use in Israel, for use with computer models with Intel processors	490371-BB1
• For use in Italy	490371-061
• For use in Japan	490371-291
• For use in North America	490371-001
• For use in the People's Republic of China	490371-AA1
• For use in South Africa, for use with computer models with Intel processors	490371-AR1
• For use in South Korea	490371-AD1
• For use in Taiwan	490371-AB1
• For use in Thailand	490371-201
• For use in the United Kingdom and Singapore	490371-031
Counterweight, for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models	721217-001
Optional external optical drive	
• DVD±RW Super Multi Double-Layer Combination Drive	659940-001
Screw Kit	697912-001
Thermal Material Kit	680571-001

Sequential part number listing

Spare part number	Description
490371-001	Power cord for use in North America (black, 3-pin, 1.83 m)
490371-011	Power cord for use in Australia (black, 3-pin, 1.83 m)
490371-021	Power cord for use in Europe (black, 3-pin, 1.83 m)
490371-031	Power cord for use in the United Kingdom and Singapore (black, 3-pin, 1.83 m)
490371-061	Power cord for use in Italy (black, 3-pin, 1.83 m)
490371-081	Power cord for use in Denmark (black, 3-pin, 1.83 m), for use with computer models with Intel processors
490371-201	Power cord for use in Thailand (black, 3-pin, 1.83 m)
490371-291	Power cord for use in Japan (black, 3-pin, 1.83 m)
490371-AA1	Power cord for use in the People's Republic of China (black, 3-pin, 1.83 m)
490371-AB1	Power cord for use in Taiwan (black, 3-pin, 1.83 m)
490371-AD1	Power cord for use in South Korea (black, 3-pin, 1.83 m)
490371-AR1	Power cord for use in South Africa (black, 3-pin, 1.83 m), for use with computer models with Intel processors
490371-BB1	Power cord for use in Israel (black, 3-pin, 1.83 m), for use with computer models with Intel processors
490371-D01	Power cord for use in Argentina (black, 3-pin, 1.83 m), for use with computer models with Intel processors
490371-D61	Power cord for use in India (black, 3-pin, 1.83 m)
622643-005	320 GB, 5400 rpm hard drive (9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
633252-005	750 GB, 7200 rpm hard drive (9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
634250-005	750 GB, 5400 rpm hard drive (9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
634925-005	500 GB, 7200 rpm hard drive (9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
641369-005	4 GB memory module (DDR3-1600 MHz, PC3-12800)
645193-005	320 GB, 5400 rpm hard drive (7.0 mm (0.28 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
652972-005	2 GB memory module (DDR3-1600 MHz, PC3-12800)
659940-001	External optional DVD±RW Super Multi Double-Layer Combination Drive
669299-005	500 GB, 5400 rpm hard drive (9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
669300-005	640 GB, 5400 rpm hard drive (9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
670034-005	8 GB memory module (DDR3-1600 MHz, PC3-12800), for use with computer models with Intel processors, no support for 32 bit operating systems

Spare part number	Description
670290-005	Intel Centrino Wireless-N 2230 802.11 b/g/n 2×2 WiFi and Bluetooth 4.0 combination adapter, for use with computer models with Intel processors
675794-005	Qualcomm Atheros AR9485 802.11 b/g/n 1×1 WiFi Adapter
676521-005	1 TB, 5400 rpm hard drive (9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
680571-001	Thermal Material Kit (includes replacement thermal paste and pads)
683802-005	500 GB, 5400 rpm hard drive (7.0 mm (0.28 in) × 6.35 cm (2.50 in) SATA, does not include hard drive bracket or cable)
690019-005	Qualcomm Atheros AR9565 802.11 b/g/n 1×1 WiFi and Bluetooth 4.0 Combination Adapter for use with computer models with Intel processors, not supported on Ubuntu Linux, (select models only)
690020-005	Ralink RT3290LE 802.11 b/g/n 1x1 WiFi and Bluetooth 4.0 Combination Adapter (select models only)
691415-005	Ralink RT5390R 802.11 b/g/n 1×1 WiFi Adapter (select models only)
693715-001	65 W nPFC AC adapter
695192-001	4 cell, 37 Whr, 2.55 Ah Li-ion battery
697901-001	Power button board (includes cable)
697902-001	USB board (includes cable and audio-out/audio-in jack)
697903-001	Webcam/microphone module, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697904-001	Keyboard with black finish for use in the United States (includes cable)
697904-031	Keyboard with black finish for use in the United Kingdom (includes cable), for use with computer models with Intel processors
697904–041	Keyboard with black finish for use in Germany (includes cable), for use with computer models with Intel processors
697904-051	Keyboard with black finish for use in France (includes cable), for use with computer models with Intel processors
697904-071	Keyboard with black finish for use in Spain (includes cable), for use with computer models with Intel processors
697904-131	Keyboard with black finish for use in Portugal (includes cable), for use with computer models with Intel processors
697904-141	Keyboard with black finish for use in Turkey (includes cable), for use with computer models with Intel processors
697904-161	Keyboard with black finish for use in Latin America (includes cable)
697904-171	Keyboard with black finish for use in Saudi Arabia (includes cable), for use with computer models with Intel processors
697904-281	Keyboard with black finish for use in Thailand (includes cable)
697904-291	Keyboard with black finish for use in Japan (includes cable)
697904-AB1	Keyboard with black finish for use in Taiwan (includes cable)
697904-AD1	Keyboard with black finish for use in South Korea (includes cable)

Spare part number	Description
697904-B31	Keyboard with black finish for use internationally (includes cable), for use with computer models with Intel processors
697904-BB1	Keyboard with black finish for use in Israel (includes cable), for use with computer models with Intel processors
697904-DB1	Keyboard with black finish for use in Canada (includes cable)
697904-DH1	Keyboard with black finish for use in the Nordic Region (includes cable), for use with computer models with Intel processors
697905-001	Hard Drive Hardware Kit (includes hard drive bracket, screws, and cable)
697906-001	Rubber Feet Kit
697907-001	Display bezel for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697908-001	Display Hinge Kit (includes left and right display hinges and brackets), for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697909-001	Back cover, ruby red, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697910-001	Back cover, sparkling black, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697911-001	Display Panel Cable Kit (includes display panel cable and webcam/microphone module cable), for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697912-001	Screw Kit
697913-001	Antenna Kit (includes left and right wireless antenna cables and transceivers), for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697914-001	Fan
697915-001	Heat sink for use with computer models with a graphics subsystem with UMA graphics (includes replacement thermal material)
697916-001	Heat sink for use with computer models with a graphics subsystem with switchable discrete graphics (includes replacement thermal material)
697917-001	RTC battery
697918-001	Speaker assembly (includes left and right speakers and cable)
697919-001	Base enclosure, for use with computer models with Intel processors
697920-001	Top cover, ruby red (includes TouchPad), for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
697921-001	Power connector
698488-001	Top cover, sparkling black (includes TouchPad)
698491-001	System board for use with computer models with UMA memory, Intel HM77 chipsets, i5-3317U processors, and Ubuntu Linux or FreeDOS 1.0
698491-501	System board for use with computer models with UMA memory, Intel HM77 chipsets, i5-3317U processors, and Windows 8 Standard
698492-001	System board for use with computer models with UMA memory, Intel HM77 chipsets, i3-3217U processors, and Ubuntu Linux or FreeDOS 1.0
698492-501	System board for use with computer models with UMA memory, Intel HM77 chipsets, i3-3217U processors, and Windows 8 Standard

Spare part number	Description
698523-001	35.6 cm (14.0 in), HD, WLED, SVA BrightView flat display panel, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
698524-001	mSATA solid-state drive, 32 GB (for use with computer models with Intel Core processors, not supported on Ubuntu Linux)
699248-001	PCH heat sink
699811-001	System board for use with computer models with UMA video memory, AMD A68M chipsets, E1-1200 processors, and Ubuntu Linux or FreeDOS 2.0
699811-501	System board for use with computer models with UMA video memory, AMD A68M chipsets, E1-1200 processors, and Windows 8 Standard
699812-001	System board for use with computer models with UMA video memory, AMD A68M chipsets, E2-1800 processors, and Ubuntu Linux or FreeDOS 2.0
699812-501	System board for use with computer models with UMA video memory, AMD A68M chipsets, E1-1800 processors, and Windows 8 Standard
700428-001	RJ-45 cover
700701-001	System board for use with computer models with switchable discrete graphics, Intel HM77 chipsets, i5-3317U, 1 GB of dedicated video memory, and FreeDOS 1.0
700701-501	System board for use with computer models with switchable discrete graphics, Intel HM77 chipsets, i5-3317U, 1 GB of dedicated video memory, and Windows 8 Standard
703855-001	System board for use with computer models with UMA memory, AMD A68M chipsets, E1-1500 processors, and Ubuntu Linux or FreeDOS 2.0
703855-501	System board for use with computer models with UMA memory, AMD A68M chipsets, E1-1500 processors, and Windows 8 Standard
703856-001	System board for use with computer models with UMA memory, AMD A68M chipsets, E2-2000 processors, and Ubuntu Linux or FreeDOS 2.0
703856-501	System board for use with computer models with UMA memory, AMD A68M chipsets, E2-2000 processors, and Windows 8 Standard
703857-001	System board for use with computer models with UMA memory, AMD A70M chipsets, A4-4355 processors, and Ubuntu Linux or FreeDOS 2.0
703857-501	System board for use with computer models with UMA memory, AMD A70M chipsets, A4-4355 processors, and Windows 8 Standard
703858-001	System board for use with computer models with UMA memory, AMD A70M chipsets, A6-4455 processors, and Ubuntu Linux or FreeDOS 2.0
703858-501	System board for use with computer models with UMA memory, AMD A70M chipsets, A6-4455 processors, and Windows 8 Standard
704381-001	Back cover, silver, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
704382-001	Top cover, silver (includes TouchPad), for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models
707750-001	65 W nPFC AC adapter (select models only)
708462-001	4 cell, 41 Whr, 2.80 Ah Li-ion battery, for use with HP Pavilion TouchSmart Sleekbook models with UMA memory and HP Pavilion TouchSmart Ultrabook models
709330-001	Base enclosure, for use with computer models with AMD processors
717579-001	mSATA solid-state drive, 24 GB (for use with computer models Intel Core processors)

Spare part number	Description
718725-001	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with UMA memory, Intel HM77 chipsets, I5-3337U processors, and Ubuntu Linux or FreeDOS 1.0
718725-501	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with UMA memory, Intel HM77 chipsets, I5-3337U processors, and Windows 8 Standard
718726-001	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with UMA memory, Intel HM77 chipsets, I3-3227U processors, and Ubuntu Linux or FreeDOS 1.0
718726-501	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with UMA memory, Intel HM77 chipsets, I3-3227U processors, and Windows 8 Standard
718727-001	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, I5-3337U processors, 1 GB of dedicated video memory, and FreeDOS 1.0
718727-501	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, I5-3337U processors, 1 GB of dedicated video memory, and Windows 8 Standard
718728-001	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, I3-3227U processors, 1 GB of dedicated video memory, and FreeDOS 1.0
718728-501	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, I3-3227U processors, 1 GB of dedicated video memory, and Windows 8 Standard
718729-001	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, I5-3337U processors, 2 GB of dedicated video memory, and FreeDOS 1.0
718729-501	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, I5-3337U processors, 2 GB of dedicated video memory, and Windows 8 Standard
718917-001	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with UMA memory, Intel HM77 chipsets, i3-2375M processors, and Ubuntu Linux or FreeDOS 1.0
718917-501	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with UMA memory, Intel HM77 chipsets, i3-2375M processors, and Windows 8 Standard
718918-001	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, i3-2375M processors, 1 GB of dedicated video memory, and FreeDOS 1.0
718918-501	System board for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models, with switchable discrete graphics, Intel HM77 chipsets, i3-2375M processors, 1 GB of dedicated video memory, and Windows 8
721212-501	System board for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models, with UMA memory, Intel HM77 chipsets, i5-3337U processors, and Windows 8
721213-501	System board for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models, with UMA memory, Intel HM77 chipsets, i3-3227U processors, and Windows 8
721214-501	System board for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models, with UMA memory, Intel HM77 chipsets, i3-2375M processors, and Windows 8
721215-501	System board for use with HP Pavilion TouchSmart Sleekbook models, with switchable discrete graphics, Intel HM77 chipsets, i5-3337U processors, 1 GB of dedicated video memory, and Windows 8

Spare part number	Description
721216-501	System board for use with HP Pavilion TouchSmart Sleekbook models, with switchable discrete graphics, Intel HM77 chipsets, i3-3227U processors, 1 GB of dedicated video memory, and Windows 8
721217-001	Counterweight for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models
721218-001	35.6 cm (14.0 in), high definition (HD), WLED, SVA BrightView TouchSmart slim display assembly, for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models
730137-501	System board for use with computer models with UMA memory, HM70 chipsets, Pentium 987 processors, and Windows 8 Standard

5 Removal and replacement procedures

CAUTION: The user-replaceable parts for this computer are:

AC adapter

Battery

Keyboard

For all parts that are **not** user-replaceable, only HP authorized service providers should perform the removal and replacement procedures described here. Accessing the internal part could damage the computer or void the warranty.

Preliminary replacement requirements

Tools required

You will need the following tools to complete the removal and replacement procedures:

- Flat-bladed screwdriver
- Magnetic screwdriver
- Phillips P0 and P1 screwdrivers

Service considerations

The following sections include some of the considerations that you must keep in mind during disassembly and assembly procedures.

NOTE: As you remove each subassembly from the computer, place the subassembly (and all accompanying screws) away from the work area to prevent damage.

Plastic parts

CAUTION: Using excessive force during disassembly and reassembly can damage plastic parts. Use care when handling the plastic parts. Apply pressure only at the points designated in the maintenance instructions.

Cables and connectors

CAUTION: When servicing the computer, be sure that cables are placed in their proper locations during the reassembly process. Improper cable placement can damage the computer.

Cables must be handled with extreme care to avoid damage. Apply only the tension required to unseat or seat the cables during removal and insertion. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing cables. Be sure that cables are routed in such a way that they cannot be caught or snagged by parts being removed or replaced. Handle flex cables with extreme care; these cables tear easily.

Drive handling

⚠ **CAUTION:** Drives are fragile components that must be handled with care. To prevent damage to the computer, damage to a drive, or loss of information, observe these precautions:

Before removing or inserting a hard drive, shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

Before handling a drive, be sure that you are discharged of static electricity. While handling a drive, avoid touching the connector.

Before removing a diskette drive, be sure that a diskette or disc is not in the drive and be sure that the optical drive tray is closed.

Handle drives on surfaces covered with at least one inch of shock-proof foam.

Avoid dropping drives from any height onto any surface.

After removing a hard drive, or a diskette drive, place it in a static-proof bag.

Avoid exposing an internal hard drive to products that have magnetic fields, such as monitors or speakers.

Avoid exposing a drive to temperature extremes or liquids.

If a drive must be mailed, place the drive in a bubble pack mailer or other suitable form of protective packaging and label the package “FRAGILE.”

Grounding guidelines

Electrostatic discharge damage

Electronic components are sensitive to electrostatic discharge (ESD). Circuitry design and structure determine the degree of sensitivity. Networks built into many integrated circuits provide some protection, but in many cases, ESD contains enough power to alter device parameters or melt silicon junctions.

A discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Even if the spark is neither felt nor heard, damage may have occurred.

An electronic device exposed to ESD may not be affected at all and can work perfectly throughout a normal cycle. Or the device may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

⚠ **CAUTION:** To prevent damage to the computer when you are removing or installing internal components, observe these precautions:

Keep components in their electrostatic-safe containers until you are ready to install them.

Before touching an electronic component, discharge static electricity by using the guidelines described in this section.

Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.

If you remove a component, place it in an electrostatic-safe container.

The following table shows how humidity affects the electrostatic voltage levels generated by different activities.

⚠ **CAUTION:** A product can be degraded by as little as 700 V.

Typical electrostatic voltage levels			
	Relative humidity		
Event	**10%**	**40%**	**55%**
Walking across carpet	35,000 V	15,000 V	7,500 V
Walking across vinyl floor	12,000 V	5,000 V	3,000 V
Motions of bench worker	6,000 V	800 V	400 V
Removing DIPS from plastic tube	2,000 V	700 V	400 V
Removing DIPS from vinyl tray	11,500 V	4,000 V	2,000 V
Removing DIPS from Styrofoam	14,500 V	5,000 V	3,500 V
Removing bubble pack from PCB	26,500 V	20,000 V	7,000 V
Packing PCBs in foam-lined box	21,000 V	11,000 V	5,000 V

Packaging and transporting guidelines

Follow these grounding guidelines when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe tubes, bags, or boxes.
- Protect ESD-sensitive parts and assemblies with conductive or approved containers or packaging.
- Keep ESD-sensitive parts in their containers until the parts arrive at static-free workstations.
- Place items on a grounded surface before removing items from their containers.
- Always be properly grounded when touching a component or assembly.
- Store reusable ESD-sensitive parts from assemblies in protective packaging or nonconductive foam.
- Use transporters and conveyors made of antistatic belts and roller bushings. Be sure that mechanized equipment used for moving materials is wired to ground and that proper materials are selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

Workstation guidelines

Follow these grounding workstation guidelines:

- Cover the workstation with approved static-shielding material.
- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.
- Use conductive field service tools, such as cutters, screwdrivers, and vacuums.
- When fixtures must directly contact dissipative surfaces, use fixtures made only of static-safe materials.
- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.

- Handle ESD-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting or removing connectors or test equipment.

Equipment guidelines

Grounding equipment must include either a wrist strap or a foot strap at a grounded workstation.

- When seated, wear a wrist strap connected to a grounded system. Wrist straps are flexible straps with a minimum of one megohm ±10% resistance in the ground cords. To provide proper ground, wear a strap snugly against the skin at all times. On grounded mats with banana-plug connectors, use alligator clips to connect a wrist strap.
- When standing, use foot straps and a grounded floor mat. Foot straps (heel, toe, or boot straps) can be used at standing workstations and are compatible with most types of shoes or boots. On conductive floors or dissipative floor mats, use foot straps on both feet with a minimum of one megohm resistance between the operator and ground. To be effective, the conductive must be worn in contact with the skin.

The following grounding equipment is recommended to prevent electrostatic damage:

- Antistatic tape
- Antistatic smocks, aprons, and sleeve protectors
- Conductive bins and other assembly or soldering aids
- Nonconductive foam
- Conductive tabletop workstations with ground cords of one megohm resistance
- Static-dissipative tables or floor mats with hard ties to the ground
- Field service kits
- Static awareness labels
- Material-handling packages
- Nonconductive plastic bags, tubes, or boxes
- Metal tote boxes
- Electrostatic voltage levels and protective materials

The following table lists the shielding protection provided by antistatic bags and floor mats.

Material	Use	Voltage protection level
Antistatic plastics	Bags	1,500 V
Carbon-loaded plastic	Floor mats	7,500 V
Metallized laminate	Floor mats	5,000 V

Component replacement procedures

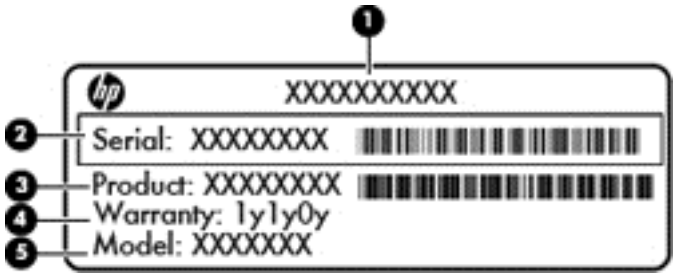
This chapter provides removal and replacement procedures.

There may be as many as 67 screws that must be removed, replaced, or loosened when servicing the computer. Make special note of each screw and screw lock size and location during removal and replacement.

Service label

When ordering parts or requesting information, provide the computer serial number and model number provided on the service label. The service label is located on the bottom of the computer.

NOTE: Your label may look slightly different from the illustration in this section.



Item	Description	Function
(1)	Product name	The name affixed to the front of the computer.
(2)	Serial number	This is an alphanumeric identifier that is unique to each product.
(3)	Product part number	This number provides specific information about the product's hardware components. The part number helps a service technician to determine what components and parts are needed.
(4)	Warranty period	This number describes the duration of the warranty period for the computer.
(5)	Model description (select models only)	This is the alphanumeric identifier needed to locate documents, drivers, and support for the computer.

Battery

Description	Spare part number
4 cell, 37 Whr, 2.55 Ah Li-ion battery	695192-001
4 cell, 41 Whr, 2.80 Ah Li-ion battery, for use with HP Pavilion TouchSmart Sleekbook models with UMA memory and HP Pavilion TouchSmart Ultrabook models	708462-001

Before disassembling the computer, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.

Remove the battery:

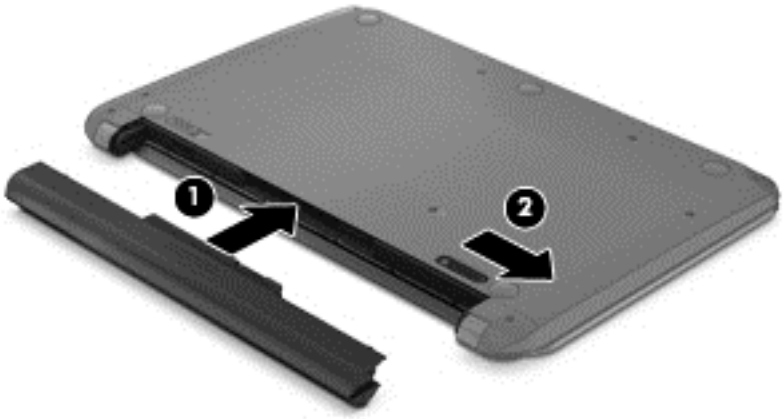
1. Turn the computer upside down on a flat surface.
2. Slide the battery release lock **(1)** far enough that it rests in the unlocked position.
3. Slide the battery release latch **(2)** to release the battery.
4. Slide the battery **(3)** from the middle to remove it from the computer.

To insert the battery, follow these steps:

⚠ **CAUTION:** Do not slant the battery as you insert it.

1. Holding the battery in the middle, slide the battery **(1)** straight into the computer until the battery release latch locks into place.

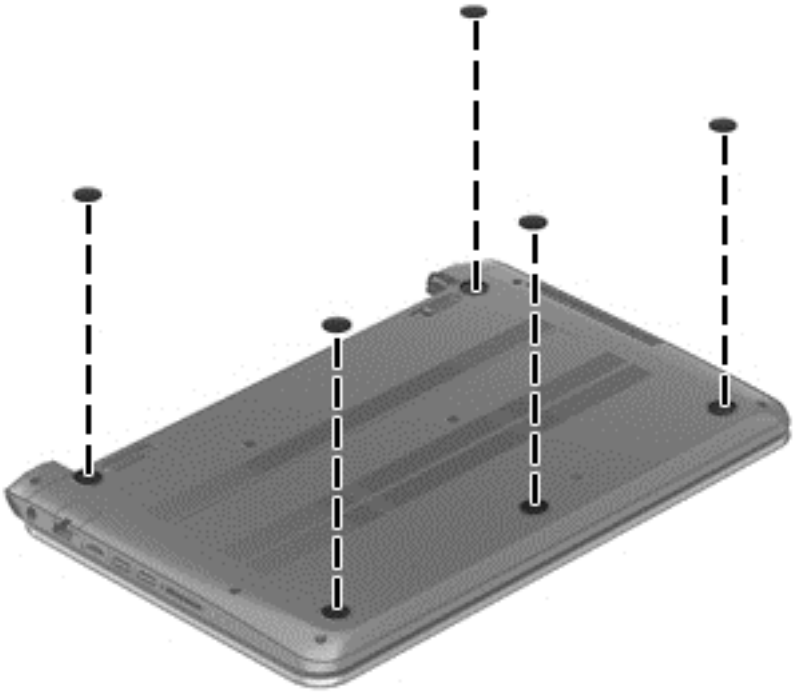
2. Reset the battery release lock **(2)** to the locked position.



Computer feet

Description	Spare part number
Rubber Feet Kit	697906-001

The computer feet are adhesive-backed rubber pads. There are 5 rubber feet that attach to the base enclosure in the locations illustrated below.



Display panel

NOTE: These procedures are for replacing the display panel for HP Pavilion Sleekbook and HP Pavilion Ultrabook models.

Description	Spare part number
Display bezel	697907-001
35.6 cm (14.0 in), HD, WLED, SVA BrightView flat display panel	698523-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

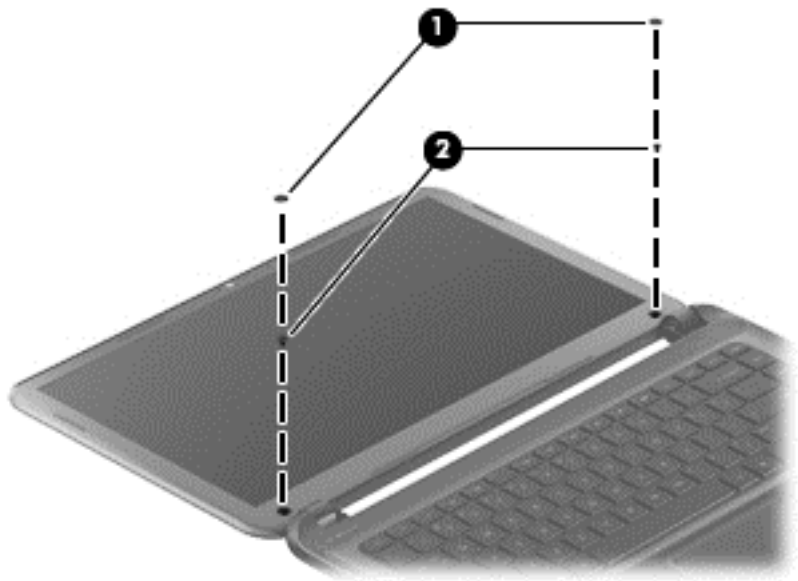
Before removing the display panel, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).

NOTE: To replace the entire display assembly, additional steps are required (see Display assembly on page 78).

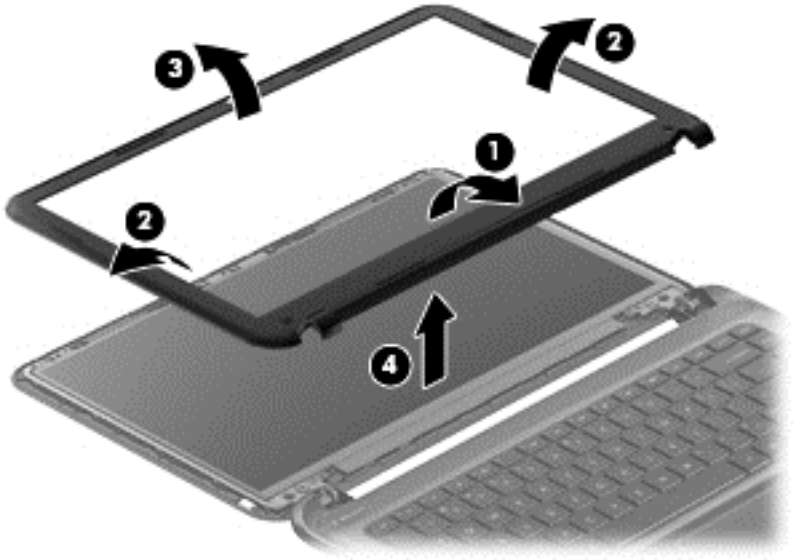
Remove the panel:

1. Remove the plastic screw covers **(1)** and the two Phillips screws **(2)** that secure the display bezel to the display assembly.

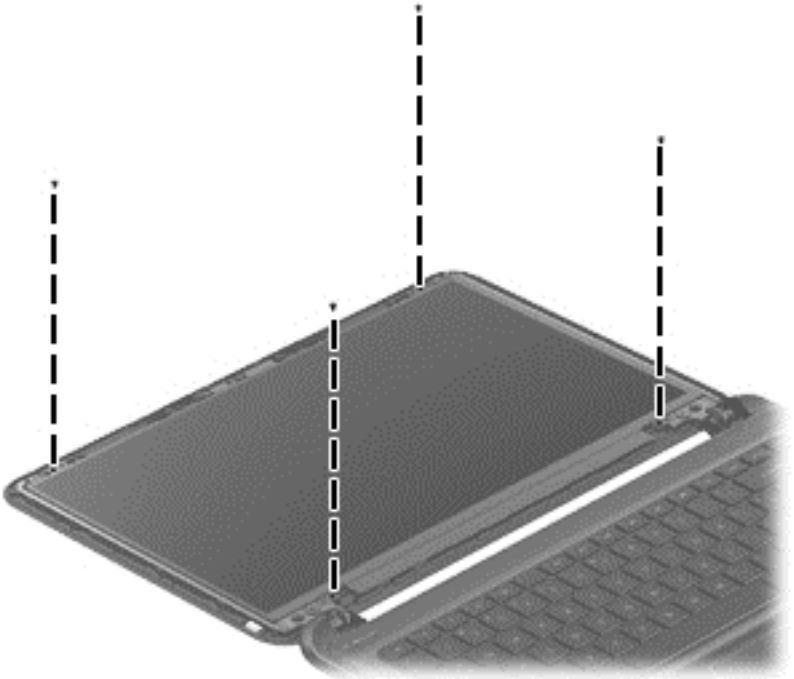


2. Flex the inside edges of the bottom edge **(1)**, the left and right sides **(2)**, and the top edge **(3)** of the display bezel until the bezel disengages from the display enclosure.

3. Remove the display bezel **(4)**.



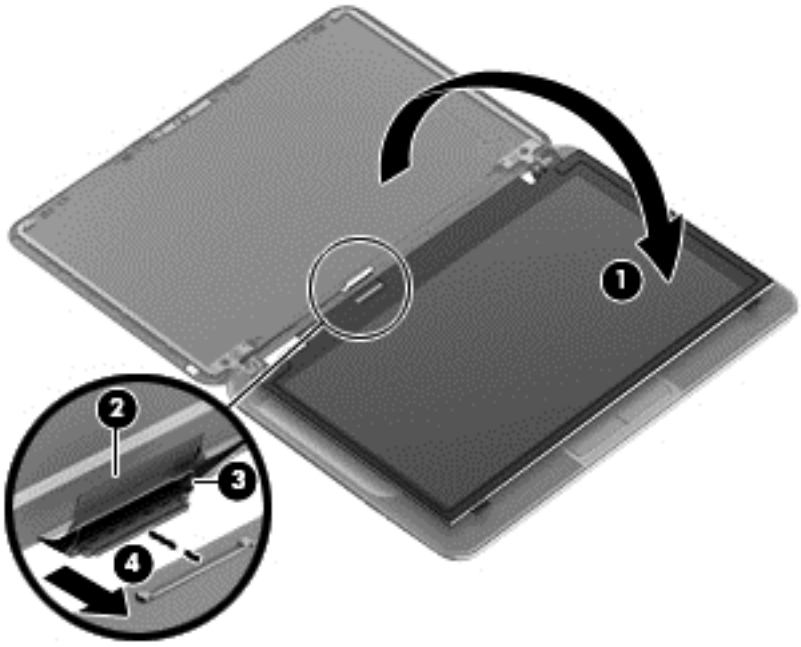
4. Remove the four Phillips screws for the display panel.



NOTE: Support the display panel as you lean the panel forward.

5. Move the panel toward the keyboard **(1)**.
6. Release the adhesive support strip **(2)** that secures the display panel cable connector to the display panel.

7. Disconnect the display panel cable **(3)** from the display panel, and then remove the panel **(4)**.



Reverse this procedure to replace the panel.

Keyboard

NOTE: The keyboard spare part kit includes a keyboard cable.

Description	Spare part number
Black keyboard:	
• For use in Canada	697904-DB1
• For use in France, for use with computer models with Intel processors	697904-051
• For use in Germany, for use with computer models with Intel processors	697904-041
• For use internationally, for use with computer models with Intel processors	697904-B31
• For use in Israel, for use with computer models with Intel processors	697904-BB1
• For use in Japan	697904-291
• For use in Latin America	697904-161
• For use in Nordic countries, for use with computer models with Intel processors	697904-DH1
• For use in Portugal, for use with computer models with Intel processors	697904-131
• For use in Saudi Arabia, for use with computer models with Intel processors	697904-171
• For use in South Korea	697904-AD1
• For use in Spain, for use with computer models with Intel processors	697904-071
• For use in Taiwan	697904-AB1
• For use in Thailand	697904-281

Description	Spare part number
• For use in Turkey, for use with computer models with Intel processors	697904-141
• For use in the United Kingdom, for use with computer models with Intel processors	697904-031
• For use in the United States	697904-001

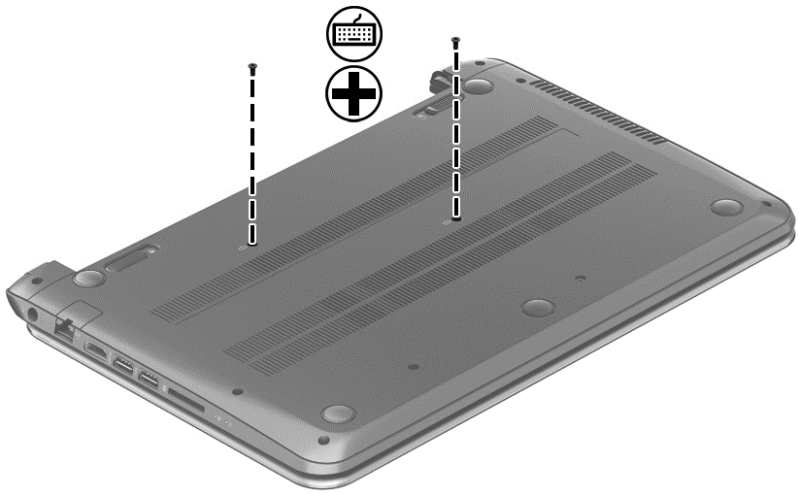
IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the keyboard, follow these steps:

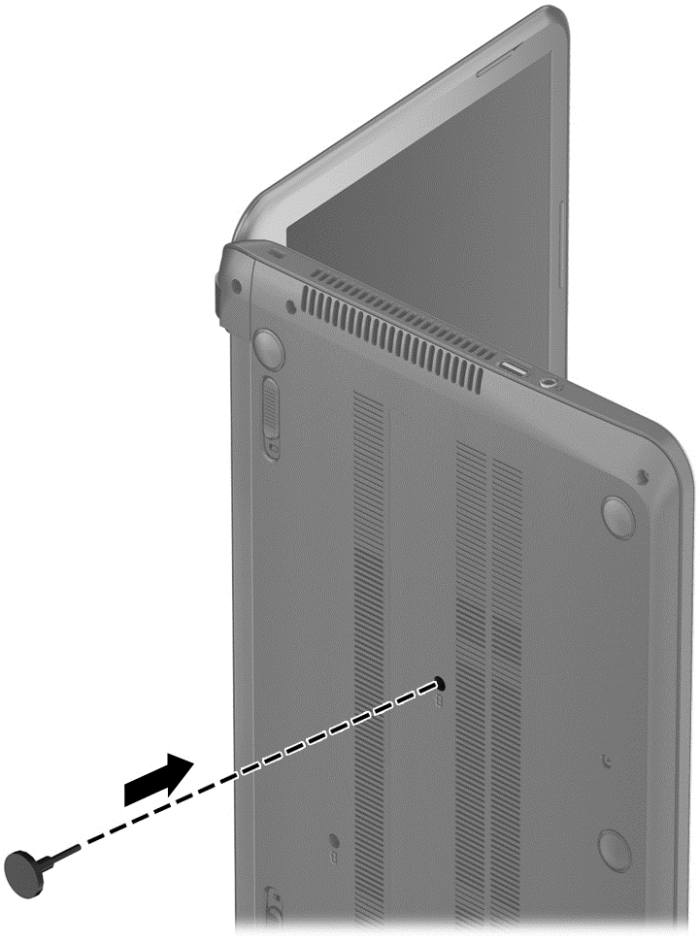
1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).

Remove the keyboard:

1. Remove the two Phillips screws that secure the keyboard to the computer.



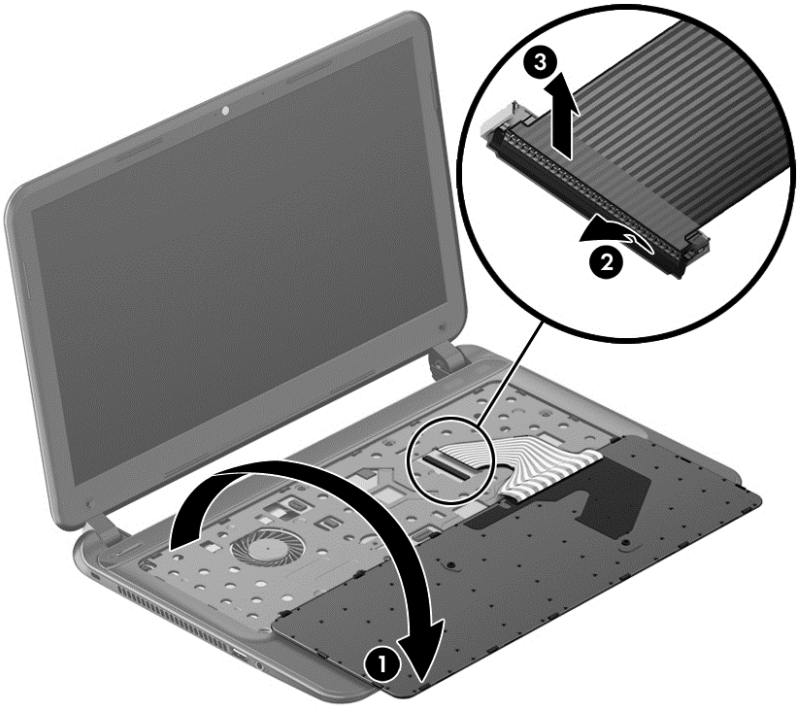
2. Turn the computer right-side up with the front toward you. Open the display and stand the computer on its right side. Insert a thin tool through the keyboard access hole. (The keyboard icon indicates the keyboard access hole.) Push firmly on the bottom of the keyboard until it disengages from the computer.



3. Turn the computer right-side up with the front toward you and open the display.

4. Gently slide your finger along the top edge of the keyboard to release the keyboard clips. Lift up on the rear of the keyboard.

5. Tilt the keyboard forward **(1)** onto the palm rest. Release the zero insertion force (ZIF) connector **(2)** to which the keyboard cable is attached, and then disconnect the keyboard cable **(3)** from the system board.



6. Remove the keyboard.

Reverse this procedure to install the keyboard.

Top cover

NOTE: The top cover spare part kit includes the TouchPad support, TouchPad board and TouchPad cable.

Description	Spare part number
Ruby red for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models	697920-001
Silver for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models	704382-001
Sparkling black	698488-001

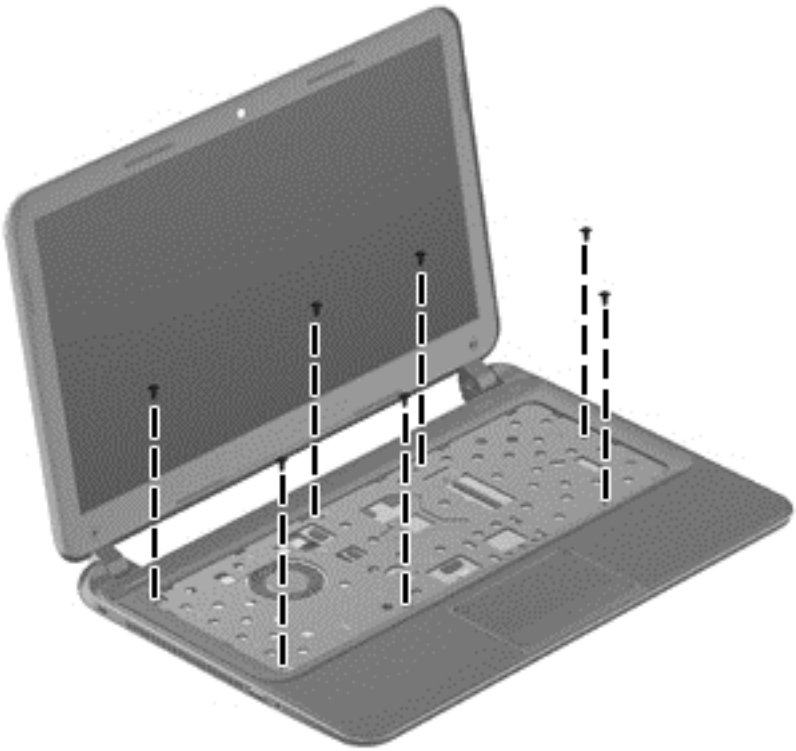
IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the top cover, follow these steps:

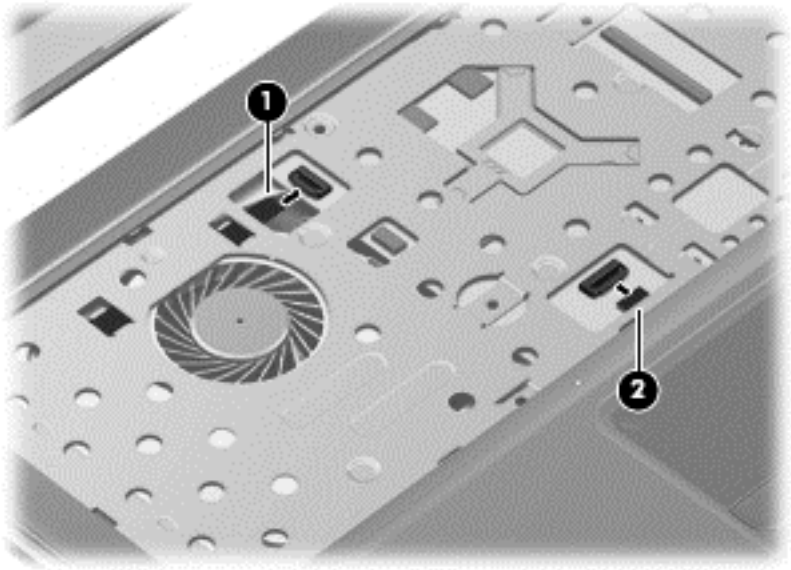
1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).

Remove the top cover:

1. Remove the seven Phillips screws that secure the top cover to the base enclosure.

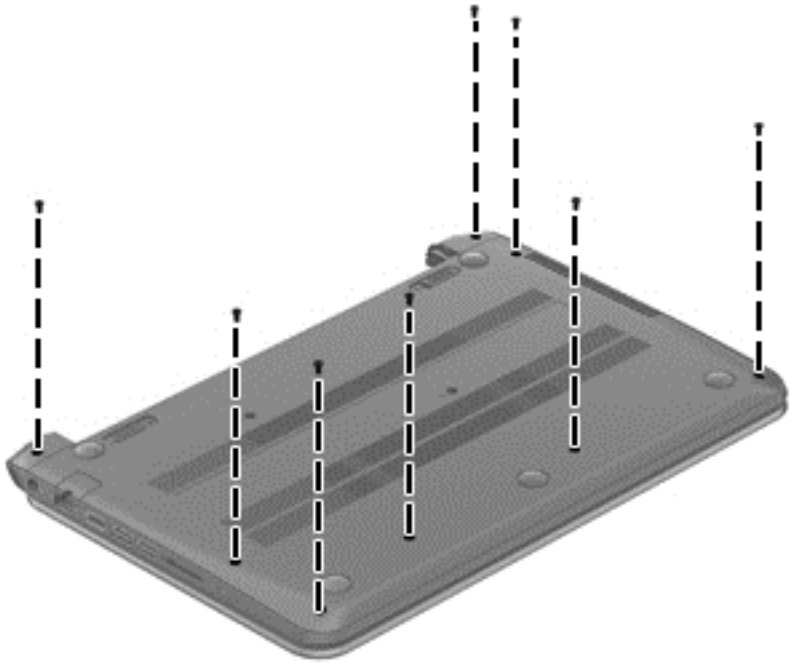


2. Disconnect the power button cable **(1)** and the TouchPad cable **(2)**.

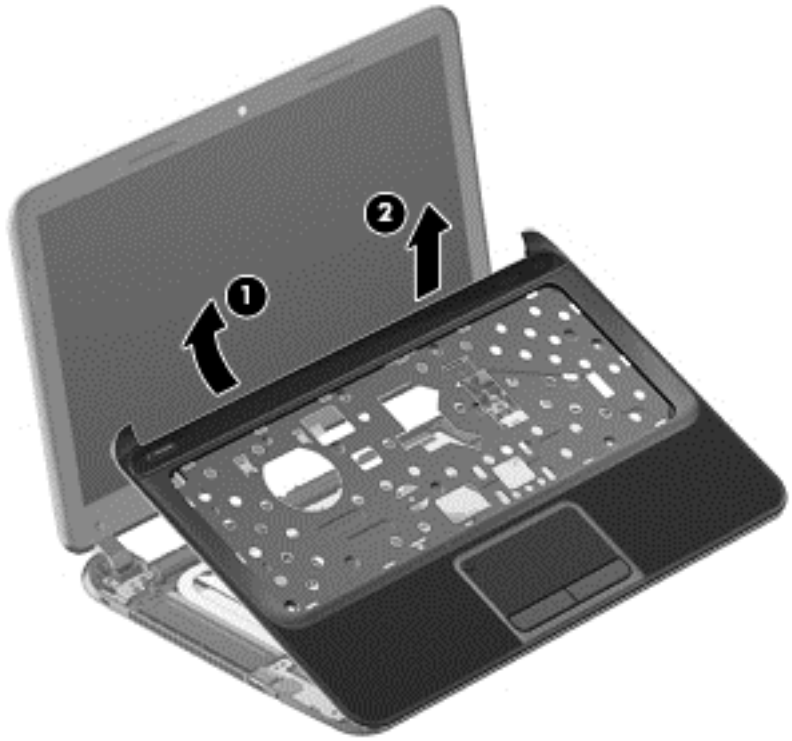


3. Close the display and turn the computer upside down.

4. Remove the eight Phillips screws from the bottom of the computer.



5. Turn the computer over and open the display.
6. Gently lift around the edges of the top cover **(1)** and lift to remove the top cover **(2)**.



When replacing the top cover, be sure that the power button board and cable (see Power button board on page 53) are removed from the defective top cover and installed on the replacement top cover.

Reverse this procedure to install the top cover.

Power button board

Description	Spare part number
Power button board (includes cable)	697901-001

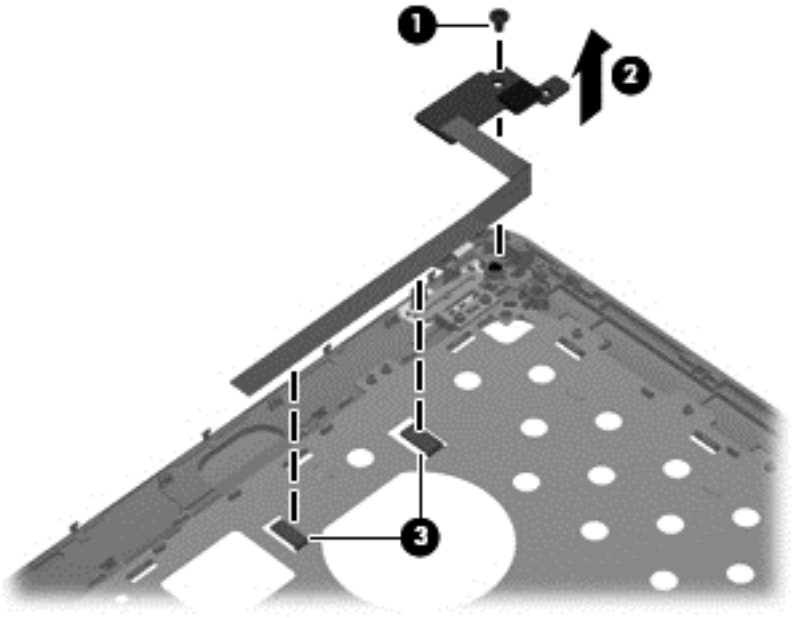
IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the power button board, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).

Remove the power button board:

1. Turn the top cover upside down, with the front toward you.
2. Remove the Phillips screw **(1)** and tape that secure the power button board to the top cover.
3. Release the clips, lift the power button board **(2)**, and carefully slide the power button cable out from the guides **(3)** to remove the power button board.



Reverse this procedure to install the power button board.

Hard drive

NOTE: The hard drive spare part kit does not include the hard drive cable, or hard drive bracket and screws.

Description	Spare part number
9.5 mm (0.37 in) × 6.35 cm (2.50 in) SATA	
1 TB, 5400 rpm	676521-005
750 GB, 7200 rpm	633252-005
750 GB, 5400 rpm	634250-005
640 GB, 5400 rpm	669300-005
500 GB, 7200 rpm	634925-005
500 GB, 5400 rpm	669299-005
320 GB, 5400 rpm	622643-005
7.0 mm (0.28 in) × 6.35 cm (2.50 in) SATA	
500 GB, 5400 rpm	683802-005
320 GB, 5400 rpm	645193-005
Hard Drive Hardware Kit (includes hard drive cable, and hard drive bracket and screws)	697905-001

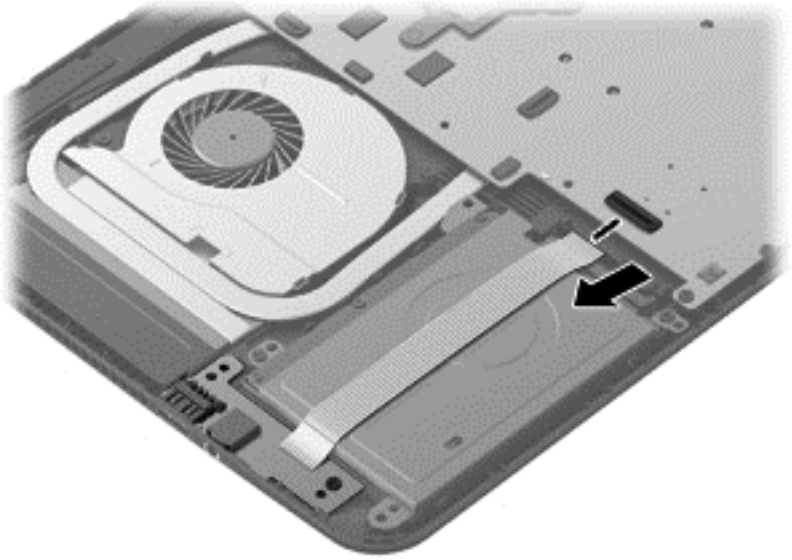
IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the hard drive, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).

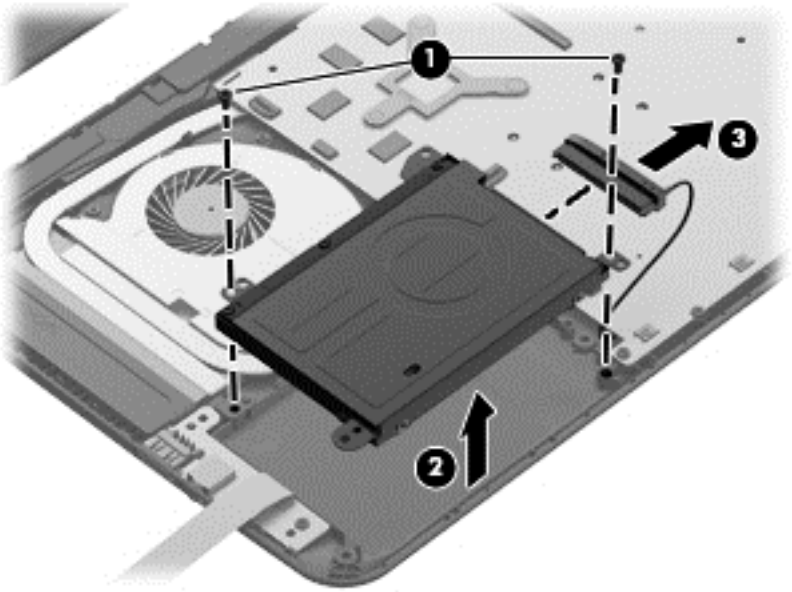
Remove the hard drive:

1. Disconnect the USB cable on top of the hard drive from the computer.

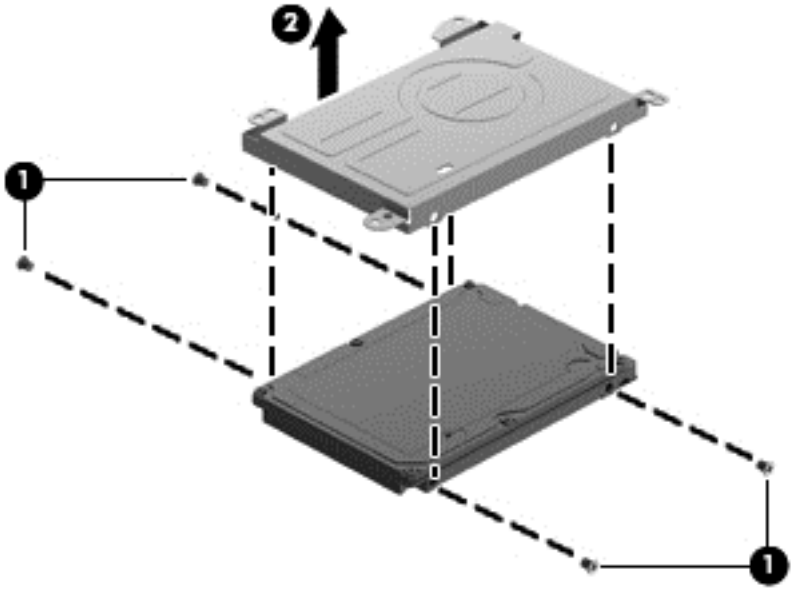


NOTE: If it is necessary to replace the hard drive cable, see System board on page 61.

2. Remove the two Phillips screws **(1)**. Lift the hard drive **(2)** to remove and disconnect the hard drive cable **(3)**.



3. Remove the four Phillips screws **(1)**, and then remove the bracket **(2)** from the hard drive.



To install a hard drive, reverse the removal procedure.

USB board/audio jack

Description	Spare part number
USB board (includes cable and audio-out/audio-in jack)	697902-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

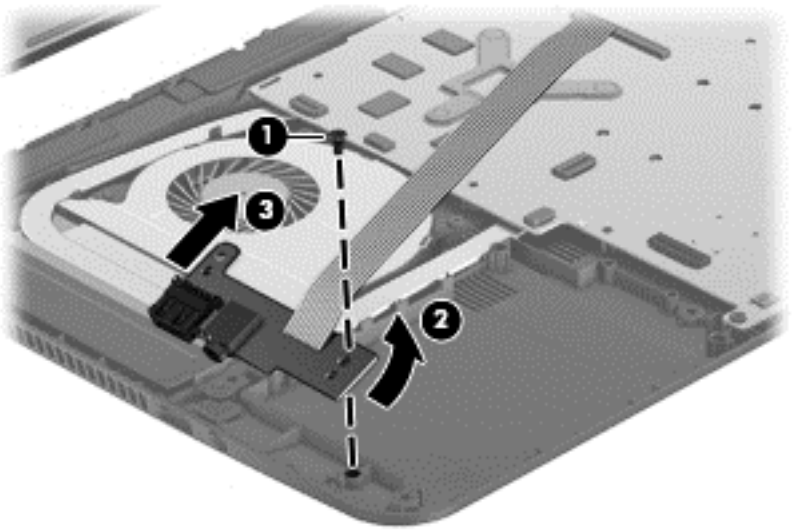
Before removing the USB board, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).

Remove the USB board:

NOTE: One side of the USB cable lies across the hard drive. It is disconnected during the hard drive removal process.

1. Remove the screw **(1)** and gently lift the USB board **(2)** up.
2. Slide the USB board **(3)** out to remove it.



Reverse this procedure to install the USB board.

WLAN module

Description	Spare part number
Intel Centrino Wireless-N 2230 802.11 b/g/n 2×2 WiFi and Bluetooth 4.0 combination adapter, for use with computer models with Intel processors	670290-005
Qualcomm Atheros AR9485 802.11 b/g/n 1×1 WiFi Adapter	675794-005
Qualcomm Atheros AR9565 802.11 b/g/n 1×1 WiFi and Bluetooth 4.0 Combination Adapter for use with computer models with Intel processors, not supported on Ubuntu Linux, (select models only)	690019-005
Ralink RT3290LE 802.11 b/g/n 1x1 WiFi and Bluetooth 4.0 Combination Adapter (select models only)	690020-005
Ralink RT5390R 802.11 b/g/n 1×1 WiFi Adapter (select models only)	691415-005

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

CAUTION: To prevent an unresponsive system, replace the wireless module only with a wireless module authorized for use in the computer by the governmental agency that regulates wireless devices in your country or region. If you replace the module and then receive a warning message, remove the module to restore device functionality, and then contact technical support.

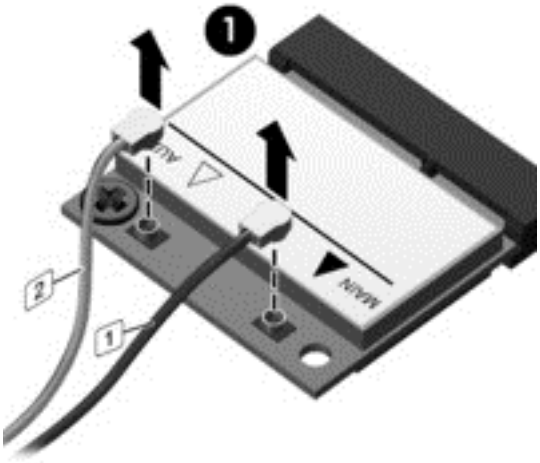
Before removing the WLAN module, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).

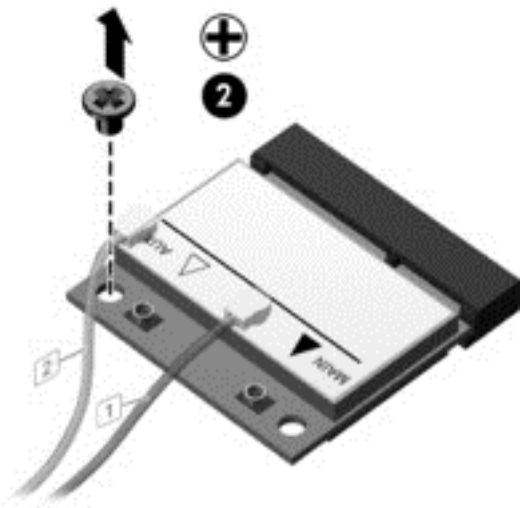
Remove the WLAN module:

1. Disconnect the WLAN antenna cables **(1)** from the terminals on the WLAN module.

NOTE: The 1/black WLAN antenna cable is connected to the WLAN module 1/Main terminal. The 2/white WLAN antenna cable is connected to the WLAN module 2/Aux terminal.

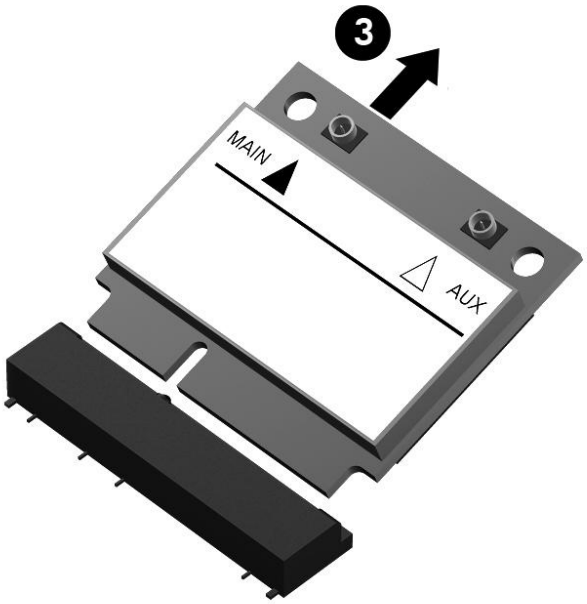


2. Remove the Phillips screw **(2)** that secures the WLAN module to the system board. (The WLAN module tilts up.)



3. Remove the WLAN module by pulling the module away from the slot at an angle **(3)**.

NOTE: The WLAN module is designed with a notch to prevent incorrect installation into the WLAN module socket.



NOTE: If the WLAN antennas are not connected to the terminals on the WLAN module, the protective sleeves should be installed on the antenna connectors, as shown in the following illustration.

Reverse this procedure to install the WLAN module.

System board

NOTE: The processor is included on the system board.

The system board Thermal Material Kit, part number 680571-001, includes replacement thermal paste and pads.

Description	Spare part number
System boards for use with HP Pavilion TouchSmart Sleekbook models supporting switchable discrete graphics	
• For use with computer models with Intel HM77 chipsets, i5-3337U processors, 1 GB of dedicated video memory, and Windows 8 Standard	721215-501
• For use with computer models with Intel HM77 chipsets, i3-3227U processors, 1 GB of dedicated video memory, and Windows 8 Standard	721216-501
System boards for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models supporting UMA graphics	
• For use with computer models with Intel HM77 chipsets, i5-3337U processors and Windows 8 Standard	721212-501
• For use with computer models with Intel HM77 chipsets, i3-3227U processors, and Windows 8 Standard	721213-501
• For use with computer models with Intel HM77 chipsets, i3-2375M processors, and Windows 8 Standard	721214-501
• For use with computer models with UMA memory, HM70 chipsets, Pentium 987 processors, and Windows 8 Standard	730137-501
System boards for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models supporting switchable discrete graphics	
For use with computer models with Intel HM77 chipsets, i5-3337U processors and 2 GB of dedicated video memory:	
• For Windows 8 Standard	718729-501
• For FreeDOS 1.0	718729-001
For use with computer models with Intel HM77 chipsets, i5-3337U processors and 1 GB of dedicated video memory:	
• For Windows 8 Standard	718727-501
• For FreeDOS 1.0	718727-001
For use with computer models with Intel HM77 chipsets, i5-3317U and 1 GB of dedicated video memory:	
• For Windows 8 Standard	700701-501
• For FreeDOS 1.0	700701-001
For use with computer models with Intel HM77 chipsets, i3-3227U processors, and 1 GB of dedicated video memory:	
• For Windows 8 Standard	718728-501
• For FreeDOS 1.0	718728-001
For use with computer models with Intel HM77 chipsets, i3-2375M processors, and 1 GB of dedicated video memory:	

Description	Spare part number
• For Windows 8 Standard	718918-501
• For FreeDOS 1.0	718918-001
System boards for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models supporting UMA graphics and Intel processors	
For use with computer models with Intel HM77 chipsets, i5-3337U processors:	
• For Windows 8 Standard	718725-501
• For Ubuntu Linux or FreeDOS 1.0	718725-001
For use with computer models with Intel HM77 chipsets and i5-3317U processors:	
• For Windows 8 Standard	698491-501
• For Ubuntu Linux or FreeDOS 1.0	698491-001
For use with computer models with Intel HM77 chipsets, i3-3227U processors:	
• For Windows 8 Standard	718726-501
• For Ubuntu Linux or FreeDOS 1.0	718726-001
For use with computer models with Intel HM77 chipsets and i3-3217U processors:	
• For Windows 8 Standard	698492-501
• For Ubuntu Linux or FreeDOS 1.0	698492-001
For use with computer models with Intel HM77 chipsets and i3-2375M processors:	
• For Windows 8 Standard	718917-501
• For Ubuntu Linux or FreeDOS 1.0	718917-001
System boards for use with HP Pavilion Sleekbook models supporting UMA graphics and AMD processors	
For use with computer models with AMD A70M chipsets and A6-4455M processors:	
• For Windows 8 Standard	703858-501
• For Ubuntu Linux or FreeDOS 2.0	703858-001
For use with computer models with AMD A70M chipsets and A4-4355M processors:	
• For Windows 8 Standard	703857-501
• For Ubuntu Linux or FreeDOS 2.0	703857-001
For use with computer models with AMD A68M chipsets and E2-2000 processors:	
• For Windows 8 Standard	703856-501
• For Ubuntu Linux or FreeDOS 2.0	703856-001
For use with computer models with AMD A68M chipsets and E2-1800 processors:	
• For Windows 8 Standard	699812-501
• For Ubuntu Linux or FreeDOS 2.0	699812-001
For use with computer models with AMD A68M chipsets and E1-1500 processors:	
• For Windows 8 Standard	703855-501

Description	Spare part number
• For Ubuntu Linux or FreeDOS 2.0	703855-001
For use with computer models with AMD A68M chipsets and E1-1200 processors:	
• For Windows 8 Standard	699811-501
• For Ubuntu Linux or FreeDOS 2.0	699811-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the system board, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).

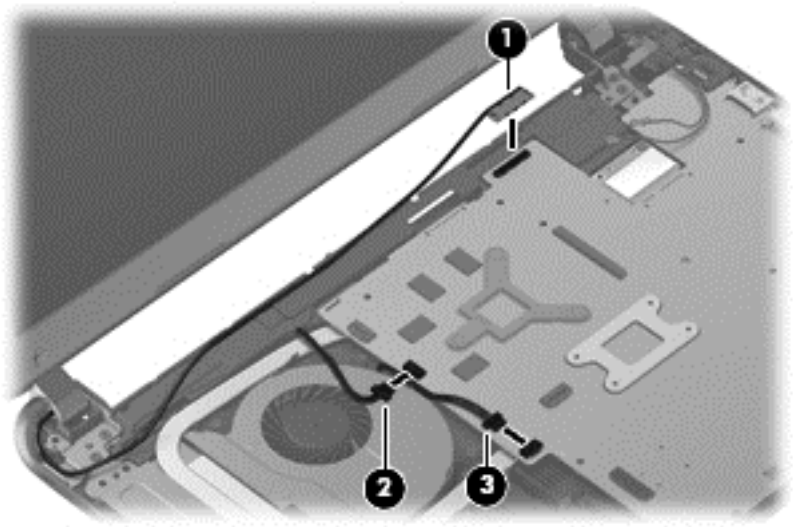
After removing the system board, be sure that the following components are removed from the defective system board and installed on the replacement system board:

- Memory module (see Memory module on page 66)
- RTC battery (see RTC battery on page 69)
- Heat sink (see Heat sink on page 73)
- PCH heat sink (see PCH heat sink on page 72)
- mSATA solid-state drive (see mSATA solid-state drive on page 70)

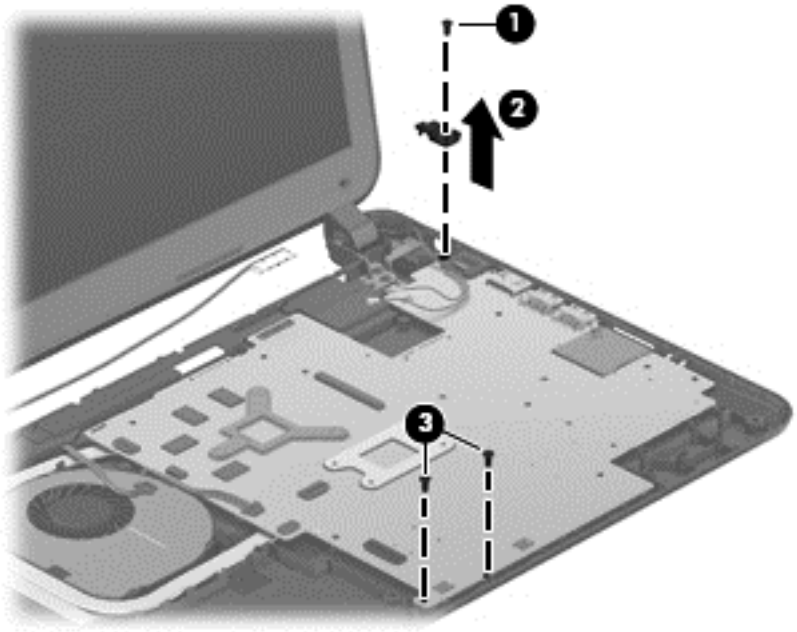
Remove the system board:

NOTE: The heat sink on your system board may appear different from the heat sink shown.

1. Disconnect the following cables from the system board:
   - Display panel cable **(1)**
   - Speaker cable **(2)**
   - Fan power connector **(3)**

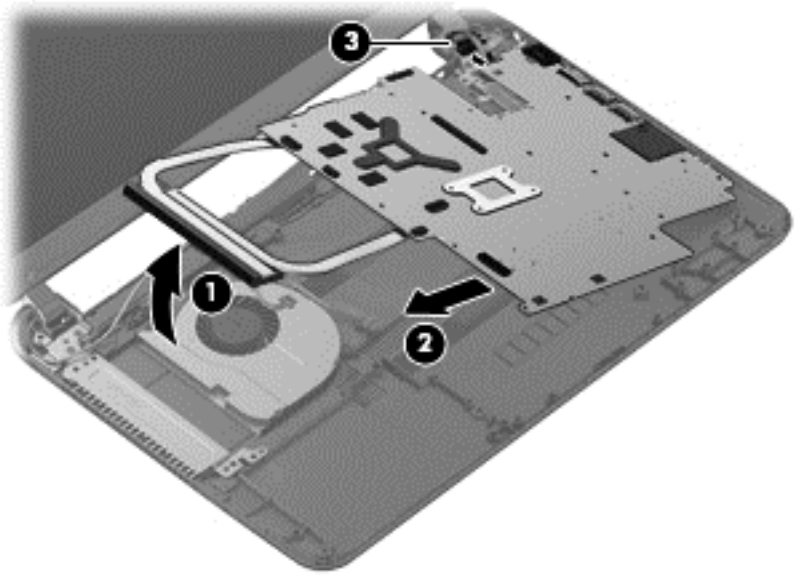


2. Remove the power connector bracket Phillips screw **(1)** and remove the power connector bracket **(2)**.
3. Remove the two Phillips screws **(3)** that secure the system board to the base enclosure.



4. Lift the left side of the system board **(1)** until it rests at an angle.
5. Remove the system board by sliding it up and to the left at an angle **(2)**.

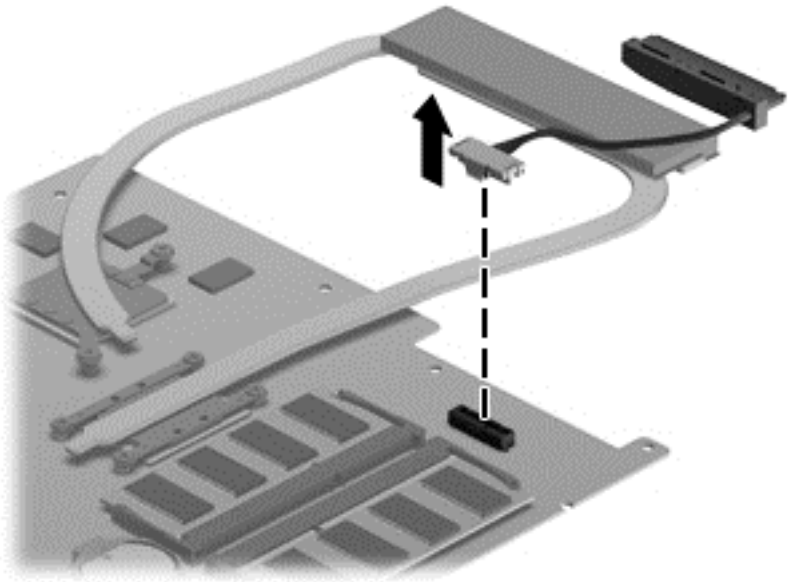
6. Disconnect the power connector cable **(3)**.



7. Remove the hard drive cable:

   a. Turn the system board upside down, with the front toward you.

   b. Disconnect the hard drive cable from the system board.



Reverse this procedure to install the system board.

Memory module

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

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

Description	Spare part number
8 GB (DDR3-1600 MHz, PC3-12800), for use with computer models with Intel processors, no support for 32 bit operating systems	670034-005
4 GB (DDR3-1600 MHz, PC3-12800)	641369-005
2 GB (DDR3-1600 MHz, PC3-12800)	652972-005

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing a memory module, follow these steps:

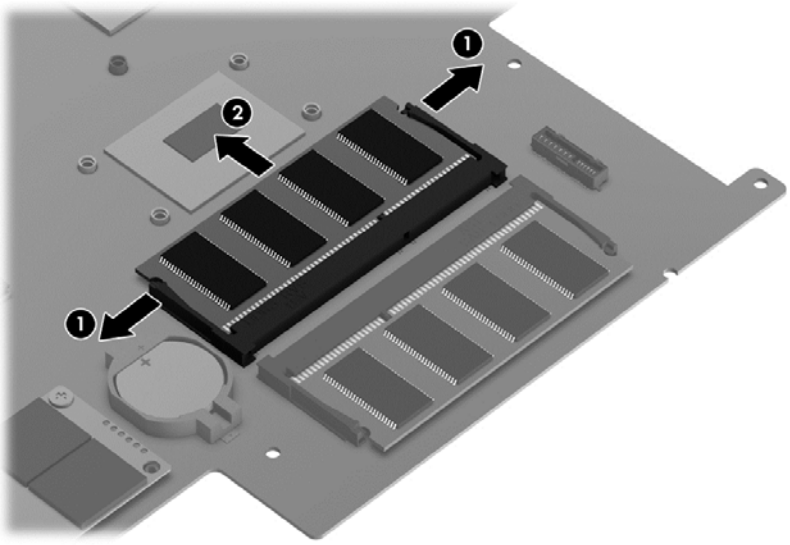
1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

To remove a memory module:

1. Turn the system board upside down to access the memory module.
2. Spread the retention clips **(1)** on each side of the memory module slot to release the memory module. (The memory module tilts up.)

3. Remove the memory module **(2)** by pulling it away from the slot at an angle.

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

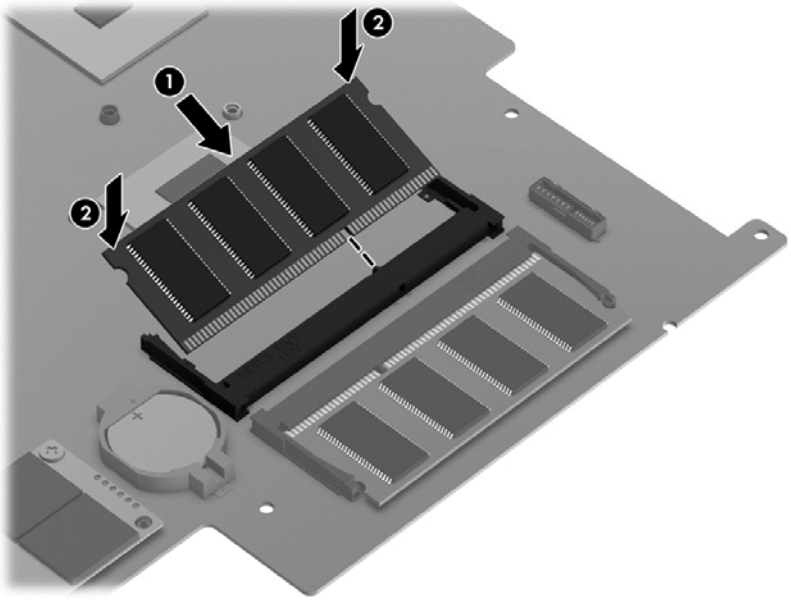


CAUTION: To protect a memory module after removal, place it in an electrostatic-safe container.

To replace the memory module:

1. Align the notched edge of the replacement memory module with the tab in the memory module slot, and then press the module **(1)** into the slot at a 45-degree angle until it is firmly seated.

2. Press down on the left and right sides of the memory module **(2)** until the side retention clips snap back into place.



3. Reverse the previous removal steps to replace the following items:
   - System board
   - WLAN
   - USB board
   - Hard drive
   - Top cover
   - Keyboard
   - Battery
   - Any external devices and the AC adapter

RTC battery

Description	Spare part number
RTC battery	697917-001

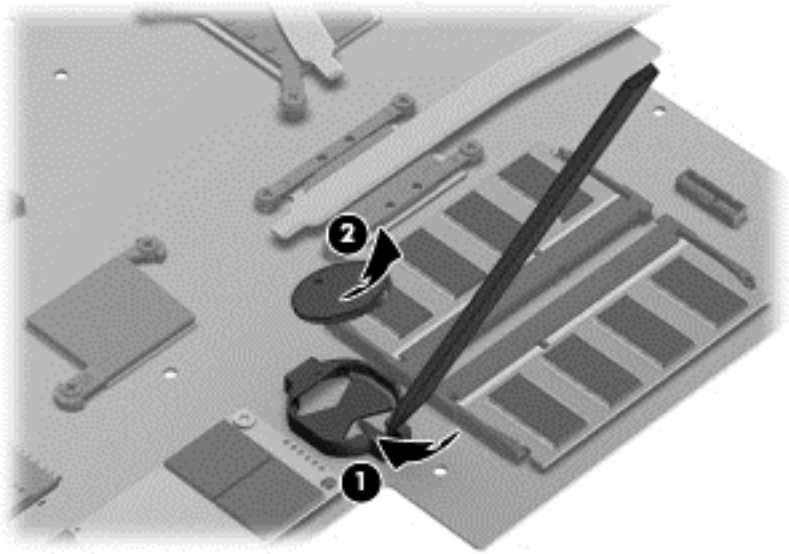
IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the RTC battery, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

Remove the RTC battery:

1. Turn the system board upside down, with the front toward you.
2. Remove the RTC battery **(1)** by pressing down with a thin plastic tool or your finger. The battery is spring loaded and will pop up. Lift and remove the RTC battery **(2)**.



Reverse this procedure to install the RTC battery.

mSATA solid-state drive

Description	Spare part number
mSATA solid-state drive, 32 GB drive (for use with computer models with Intel processors, not supported on Ubuntu Linux)	698524-001
mSATA solid-state drive, 24 GB drive (for use with computer models with Intel processors)	717579-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the mSATA solid state drive, follow these steps:

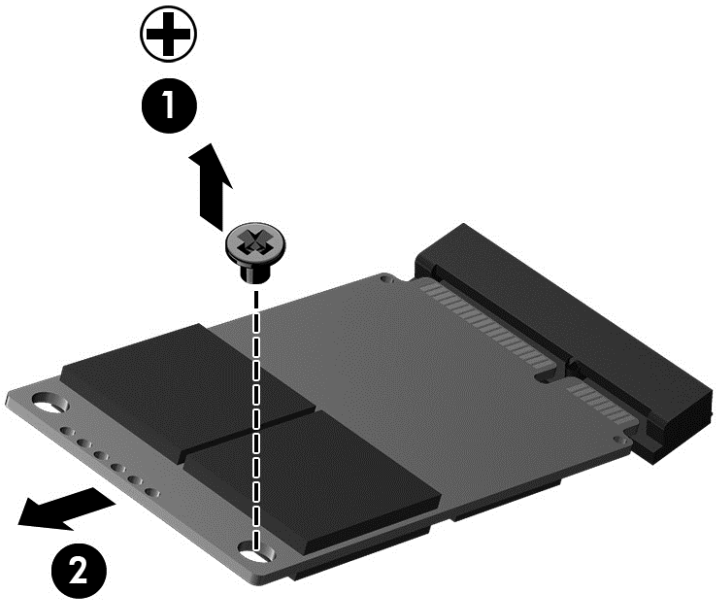
1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

Remove the mSATA drive:

1. Turn the system board upside down, with the front toward you.

2. Remove the Phillips screw **(1)** and slide out the mSATA solid-state drive **(2)**.

NOTE: The drive tilts up to remove. The drive is designed with a notch to prevent incorrect installation into mSATA drive socket.



Reverse this procedure to install the mSATA drive onto a replacement system board.

PCH heat sink

Description	Spare part number
PCH heat sink	699248-001

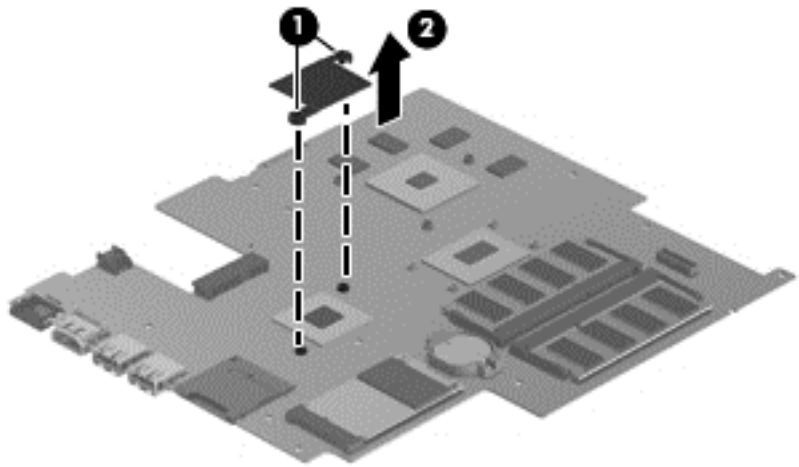
IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the PCH heat sink, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

Remove the PCH heat sink:

1. Turn the system board upside down, with the front toward you.
2. Remove the two Phillips screws **(1)** and lift off the PCH heat sink **(2)**.



Reverse this procedure to install the PCH heat sink onto a replacement system board.

Heat sink

Description	Spare part number
UMA graphics heat sink	697915-001
Switchable discrete graphics heat sink	697916-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the heat sink, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

Remove the heat sink:

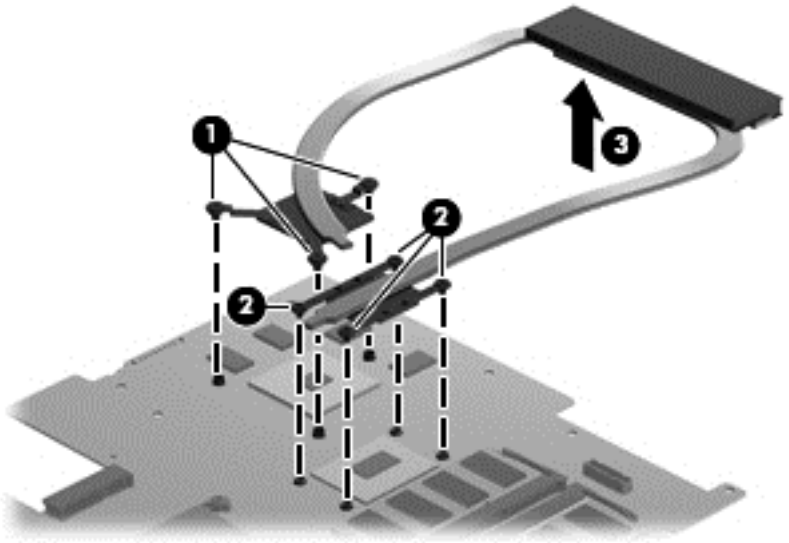
1. Turn the system board upside down, with the front toward you.

NOTE: Computer models with UMA graphics and switchable discrete graphics have different types of heat sinks depending on the computer model.

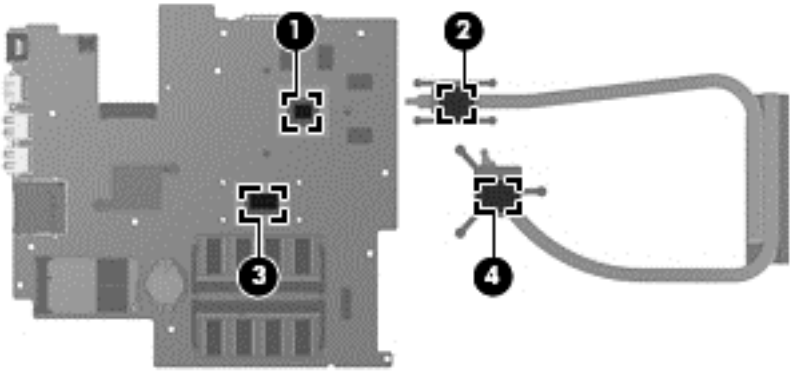
2. Remove the heat sink. If you have an UMA graphics heat sink, go to step c.

   a. Loosen all of the captive screws **(1)** and **(2)** and then lift the switchable discrete graphics heat sink **(3)** from the system board.

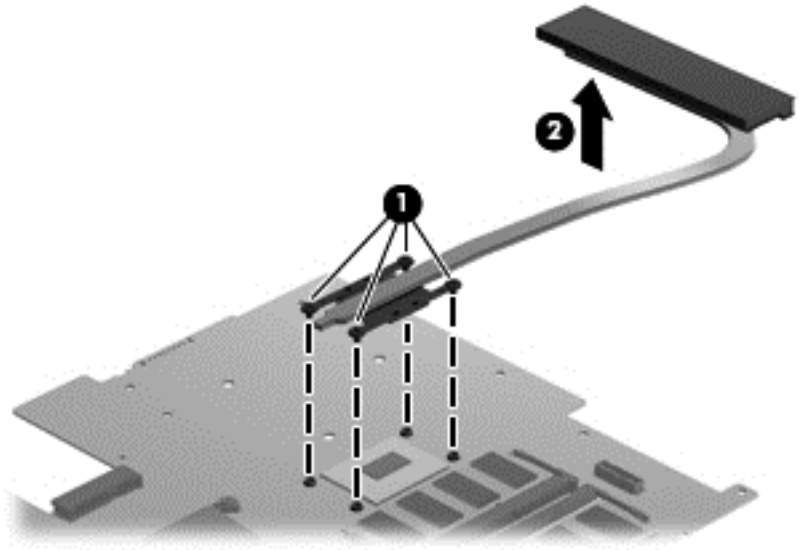
   CAUTION: To prevent damage to the cooling tubes, do not lift the assembly by the cooling tubes. The tubes bend easily.



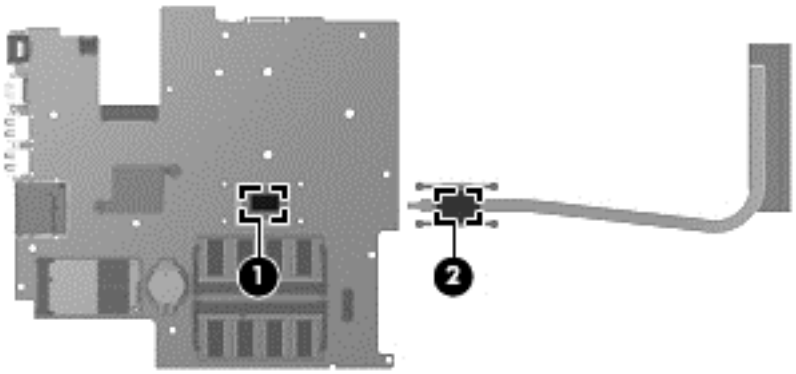
   b. Thoroughly clean the thermal connections **(1)** and **(3)** on the system board and the heat sink **(2)** and **(4)** before replacing a heat sink onto a system board. Continue to step 3.



c. Loosen the captive screws **(1)** and lift the UMA graphics heat sink **(2)** from the system board.



d. Thoroughly clean the thermal connections **(1)** on the system board and the heat sink **(2)** before replacing a heat sink onto a system board.



3. Reverse this procedure to replace the heat sink. Replace the thermal material that ships with the replacement heat sink.

Fan

Description	Spare part number
Fan	697914-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

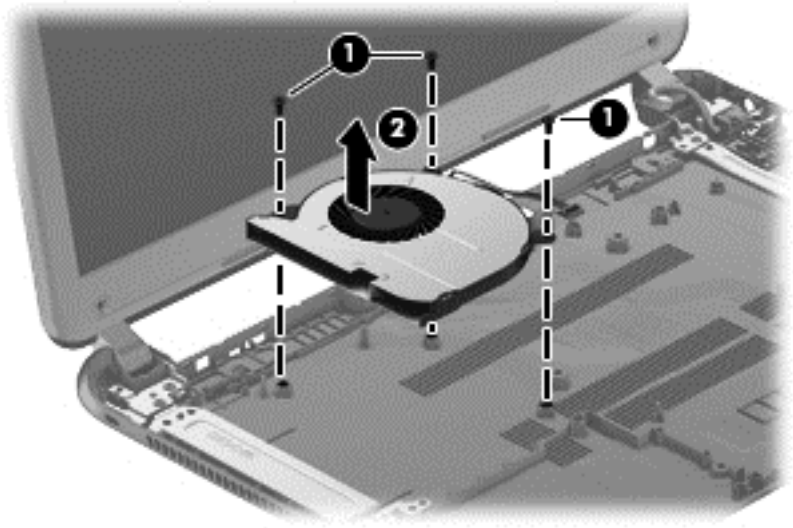
Before removing the fan, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.

3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

To remove the fan from the base enclosure:

1. Disconnect the fan cable.
2. Remove the three Phillips screws **(1)** from the fan **(2)** and lift up to remove the fan.



Reverse this procedure to install the cooling fan in the base enclosure.

Speaker assembly

Description	Spare part number
Speaker assembly	697918-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the speaker assembly, follow these steps:

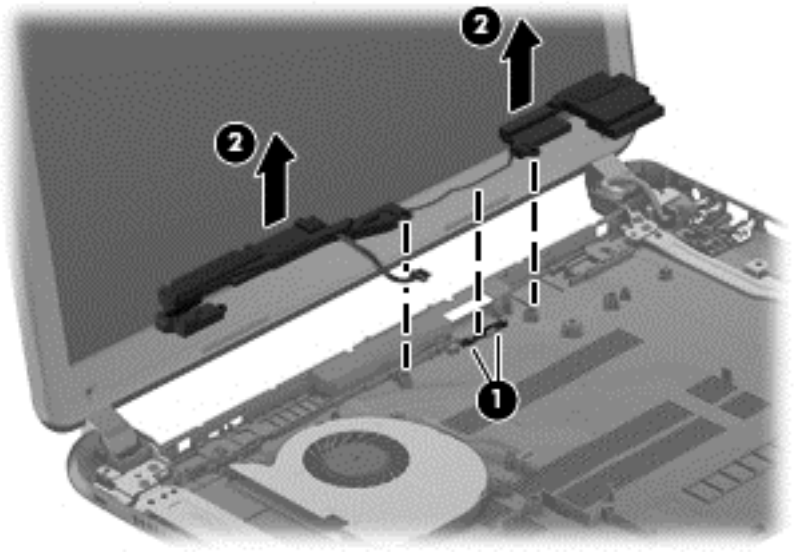
1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.

4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

Remove the speaker assembly:

NOTE: The speaker screws were removed during the process to remove the top cover.

1. Gently release the wires **(1)** routed along the top of the base enclosure.
2. Lift both pieces of the speaker assembly **(2)**.



Reverse this procedure to install the speaker assembly on the base enclosure.

RJ-45 cover

Description	Spare part number
RJ-45 cover	700428-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

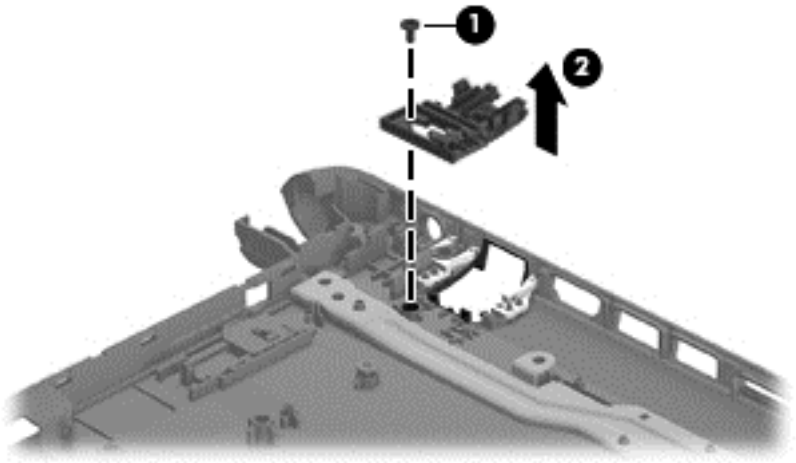
Before removing the RJ-45 cover, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.

3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).

Remove the RJ-45 cover:

1. Remove the Phillips M screw **(1)** for the RJ-45 cover.
2. Lift the RJ-45 cover **(2)** to remove it from the base enclosure.



Reverse these procedures to replace the RJ-45 cover.

Display assembly

Description	Spare part number
35.6 cm (14.0 in), high definition (HD), WLED, SVA BrightView TouchSmart slim display assembly, for use with HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook models	721218-001
35.6 cm (14.0 in), high definition (HD), WLED, SVA BrightView flat display assembly, for use with HP Pavilion Sleekbook and HP Pavilion Ultrabook models. The display assembly is spared at the subcomponent level only.	

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the display assembly, follow these steps:

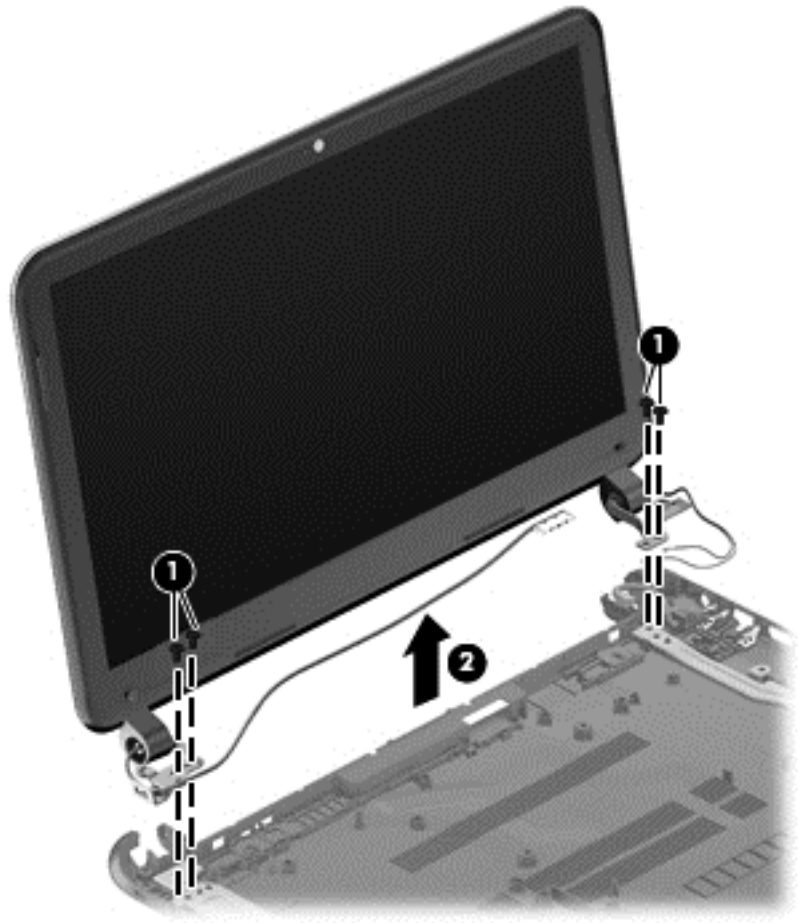
1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the display panel (see Display panel on page 44).
6. Remove the keyboard (see Keyboard on page 46).
7. Remove the top cover (see Top cover on page 50).
8. Remove the hard drive (see Hard drive on page 54).
9. Remove the USB board (see USB board/audio jack on page 57).
10. Remove the WLAN (see WLAN module on page 58).
11. Remove the system board (see System board on page 61).

Remove the display assembly:

CAUTION: Support the display assembly when removing the following screws. Failure to support the display assembly can result in damage to the display assembly and other computer components.

1. Remove the four Phillips screws from the display hinges **(1)**.

2. Lift the display assembly **(2)**.



NOTE: For instructions on removing the display assembly subcomponents for a HP Pavilion Sleekbook or HP Pavilion Ultrabook model, see Display assembly subcomponents on page 80.

Reverse this procedure to reinstall the display assembly.

Display assembly subcomponents

NOTE: These procedures are for replacing the display assembly internal components for the HP Pavilion Sleekbook and HP Pavilion Ultrabook models.

Description	Spare part number
Antenna Kit (includes left and right wireless antenna cables and transceivers)	697913-001
Display Panel Cable Kit (includes display panel cable and webcam/microphone module cable)	697911-001
Back cover:	
• Ruby red	697909-001
• Silver	704381-001
• Sparkling black	697910-001
Display Hinge Kit (includes left and right display hinges and brackets)	697908-001
Webcam/microphone module	697903-001

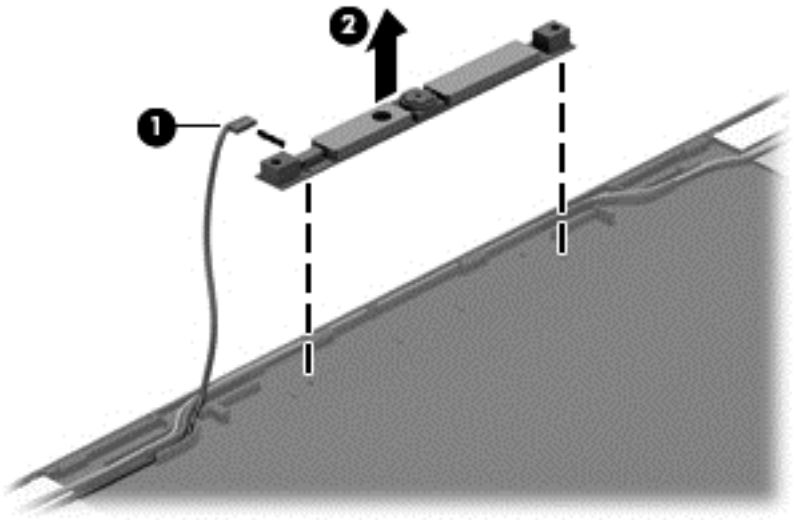
IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

Before removing the display assembly, follow these steps:

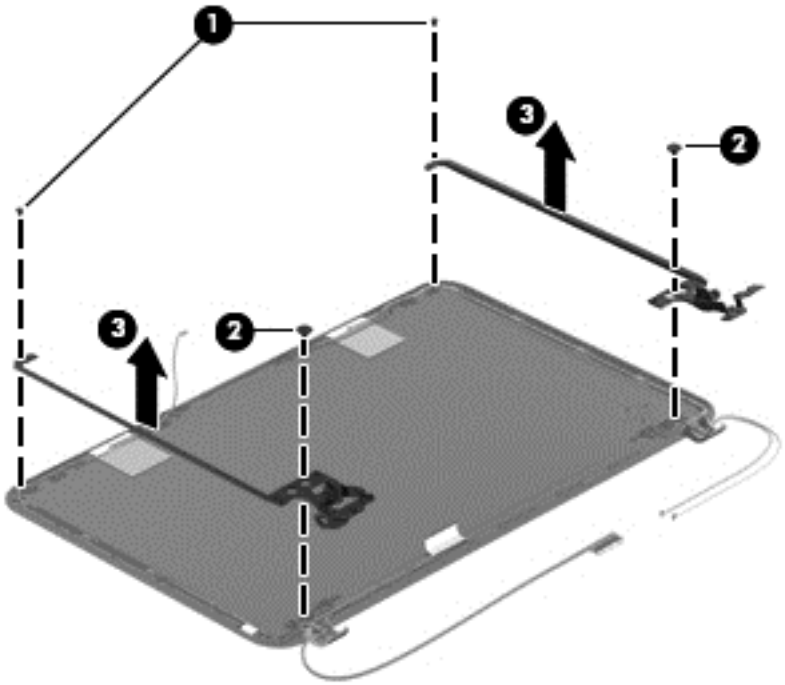
1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the display panel (see Display panel on page 44).
6. Remove the keyboard (see Keyboard on page 46).
7. Remove the top cover (see Top cover on page 50).
8. Remove the hard drive (see Hard drive on page 54).
9. Remove the USB board (see USB board/audio jack on page 57).
10. Remove the WLAN (see WLAN module on page 58).
11. Remove the system board (see System board on page 61).
12. Remove the display assembly (see Display assembly on page 78

Remove the display assembly subcomponents:

1. If it is necessary to replace the webcam/microphone module:
   a. Detach and release the webcam/microphone module as far as the webcam/microphone module cable allows. (The webcam/microphone module is attached to the back cover with double-sided tape.)
   b. Disconnect the webcam/microphone cable **(1)** from the webcam/microphone module.
   c. Remove the webcam/microphone module **(2)**.



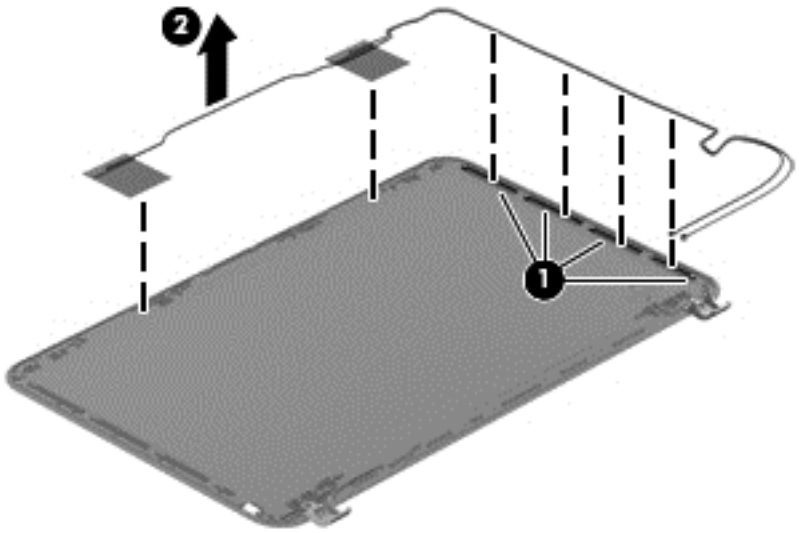
2. Remove the two top screws **(1)** and two bottom screws **(2)** from the display bracket and lift the display brackets **(3)** to remove them.



3. If it is necessary to replace the display panel cable:

   a. Gently remove the cable from the routing clips **(1)**.

   b. Detach and release the cable (it is attached to the back cover with double-sided tape), and remove the cable **(2)**.

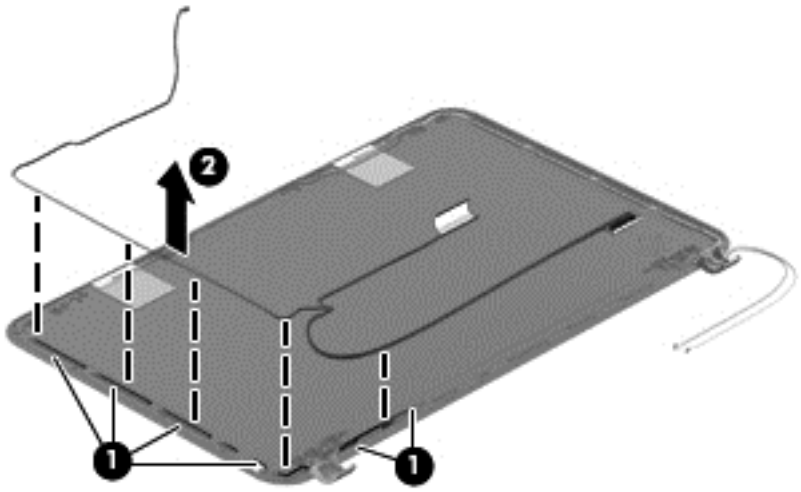


4. If it is necessary to replace the wireless antenna cables and transceivers:

   a. Release the wireless antenna cables from the clips **(1)** built into the back cover.

   b. Release the wireless antenna transceivers from the back cover. (The wireless antenna transceivers are attached to the back cover with double-sided tape.)

c. Remove the wireless antenna cables and transceivers **(2)**.



Reverse this procedure to reassemble the display assembly subcomponents.

Power connector

Description	Spare part number
Power connector	697921-001

IMPORTANT: Make special note of each screw and screw lock size and location during removal and replacement.

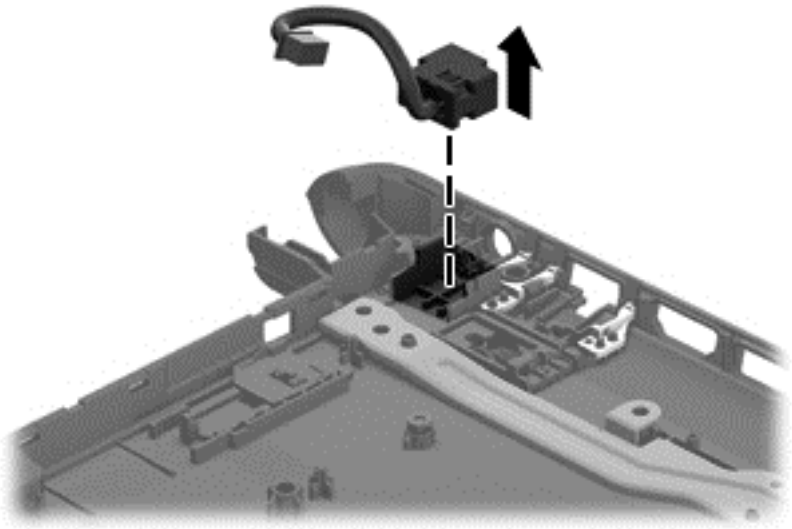
Before removing the power connector, follow these steps:

1. Shut down the computer.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see Battery on page 42).
5. Remove the keyboard (see Keyboard on page 46).
6. Remove the top cover (see Top cover on page 50).
7. Remove the hard drive (see Hard drive on page 54).
8. Remove the USB board (see USB board/audio jack on page 57).
9. Remove the WLAN (see WLAN module on page 58).
10. Remove the system board (see System board on page 61).
11. Remove the display assembly (see Display assembly on page 78).

Remove the power connector:

NOTE: The power connector screw and bracket were removed during the process to remove the system board.

▲ Lift out the power connector to remove it from the base enclosure.



Reverse these procedures to replace the power connector.

6 Windows 8 – Using Setup Utility (BIOS) and System Diagnostics

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

Starting Setup Utility (BIOS)

To start Setup Utility (BIOS), turn on or restart the computer, quickly press esc, and then press f10.

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

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

Updating the BIOS

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

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

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

Determining the BIOS version

To determine whether available BIOS updates contain later BIOS versions than those currently installed on the 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. Start Setup Utility (BIOS).
2. Use the arrow keys to select **Main**.
3. To exit Setup Utility (BIOS) without saving your changes, use the arrow keys to select **Exit**, select **Exit Discarding Changes**, and then press enter.

Downloading a BIOS update

CAUTION: To reduce the risk of damage to the 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 (Suspend).

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

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

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

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

   The BIOS installation begins.
5. Complete the installation by following the on-screen instructions.

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

Using System Diagnostics

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

To start System Diagnostics:

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

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

7 Ubuntu Linux – Using Setup Utility (BIOS) and System Diagnostics

Setup Utility, or Basic Input/Output System (BIOS), controls communication between all the input and output devices on the system (such as disk drives, display, keyboard, mouse, and printer). Setup Utility includes settings for the types of peripherals 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. Errors can prevent the computer from operating properly.

Starting Setup Utility

- Turn on or restart the computer. While the computer is booting press esc. When the Startup menu is displayed, press f10.

Using Setup Utility

Changing the language of Setup Utility

1. Start Setup Utility.
2. Use the arrow keys to select **System Configuration > Language**, and then press enter.
3. Use the arrow keys to select a language, and then press enter.
4. When a confirmation prompt with your language selected is displayed, press enter.
5. To save your change and exit Setup Utility, use the arrow keys to select **Exit > Exit Saving Changes**, and then press enter.

Your change takes effect immediately.

Navigating and selecting in Setup Utility

Setup Utility does not support the TouchPad. Navigation and selection are by keystroke.

- To choose a menu or a menu item, use the arrow keys.
- To choose an item in a list or to toggle a field—for example an Enable/Disable field—use either the arrow keys or f5 and f6.
- To select an item, press enter.
- To close a text box or return to the menu display, press esc.
- To display additional navigation and selection information while Setup Utility is open, press f1.

Displaying system information

1. Start Setup Utility.
2. Select the **Main** menu. System information such as the system time and date, and identification information about the computer is displayed.
3. To exit Setup Utility without changing any settings, use the arrow keys to select **Exit > Exit Discarding Changes**, and then press enter.

Restoring factory default settings in Setup Utility

1. Start Setup Utility.
2. Use the arrow keys to select **Exit > Load Setup Defaults**, and then press enter.
3. When the Setup Confirmation is displayed, press enter.
4. To save your change and exit Setup Utility, use the arrow keys to select **Exit > Exit Saving Changes**, and then press enter.

The Setup Utility factory settings take effect when the computer restarts.

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

Exiting Setup Utility

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

  If the Setup Utility menus are not visible, press esc to return to the menu display. Then use the arrow keys to select **Exit > Exit Saving Changes**, and then press enter.

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

  If the Setup Utility menus are not visible, press esc to return to the menu display. Then use the arrow keys to select **Exit > Exit Discarding Changes**, and then press enter.

Updating the BIOS

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

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

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

Determining the BIOS version

To determine whether available BIOS updates contain later BIOS versions than those currently installed on the 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 using Setup Utility.

1. Start Setup Utility.
2. If the system information is not displayed, use the arrow keys to select the **Main** menu.

   BIOS and other system information is displayed.
3. To exit Setup Utility, use 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, 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 Suspend or Hibernation.

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

1. Access the page on the HP website that provides software for your computer.
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.

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

Using Advanced System Diagnostics

Advanced System Diagnostics allows you to run diagnostic tests to determine if the computer hardware is functioning properly. The following diagnostic tests are available in Advanced 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 and calibrates the battery if necessary. If the battery fails the test, contact support to report the issue and purchase a replacement battery.
- System Tune-Up—This group of additional tests checks your computer to make sure that the main components are functioning correctly. System Tune-Up runs longer and more comprehensive tests on memory modules, hard drive SMART attributes, the hard drive surface, the battery (and battery calibration), video memory, and the WLAN module status.

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

To start Advanced System Diagnostics:

1. Turn on or restart the computer. While the computer is booting press esc. When the Startup menu is displayed, press f2.
2. Click the diagnostic test you want to run, and then follow the on-screen instructions.

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

8 Specifications

Computer specifications

	Metric	U.S.
Dimensions:		
Width	**34.7 cm**	13.67 in
Depth	**23.8 cm**	9.37 in
Height (front to back)	**2.1 cm**	.83 in
Weight:		
HP Pavilion Sleekbook and HP Pavilion Ultrabook	**<1.8 kg**	<3.96 lbs
HP Pavilion TouchSmart Sleekbook and HP Pavilion TouchSmart Ultrabook	**<2.00 kg**	<4.41 lbs
Input power		
Operating voltage and current	19.5 V dc @ 3.33 A – 65 W	
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		
Operating	10% to 90%	
Nonoperating	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
Shock		
Operating	125 g, 2 ms, half-sine	
Nonoperating	200 g, 2 ms, half-sine	
Random vibration		
Operating	0.75 g zero-to-peak, 10 Hz to 500 Hz, 0.25 oct/min sweep rate	
Nonoperating	1.50 g zero-to-peak, 10 Hz to 500 Hz, 0.5 oct/min sweep rate	

NOTE: Applicable product safety standards specify thermal limits for plastic surfaces. The computer operates well within this range of temperatures.

35.6 cm (14.0 in) display specifications

	Metric	U.S.
Dimensions		
Width	**30.9 cm**	12.2 in
Height	**17.4 cm**	6.9 in
Diagonal	**35.6 cm**	14.0 in
Number of colors	262 K (6 bit)	
Contrast ratio	500:1 (typical)	
Brightness	200 cd/m^2 (nits) (typical)	
Backlight	WLED	
Total power consumption	3.2 W (max)	
Viewing angle	±45° horizontal, +15° up & -35° down vertical (typical)	

Hard drive specifications

	1 TB*	750 GB*	640 GB*	500 GB*	320 GB*
Dimensions					
Height	9.5 mm	9.5 mm	9.5 mm	9.5 mm and 7.0 mm	9.5 mm and 7.0 mm
Width	70 mm	70 mm	70 mm	70 mm	70 mm
Weight	107 g max	107 g max	107 g max	107 g max	107 g max
Interface type	SATA	SATA	SATA	SATA	SATA
Transfer rate	300 MB/sec	300 MB/sec	300 MB/sec	300 MB/sec	300 MB/sec
Security	ATA security	ATA security	ATA security	ATA security	ATA security
Seek times (typical read, including setting)					
Single track	1.5 ms	1.0 ms	1.0 ms	1.5 ms	2.0 ms
Average	11.0 ms	14.0 ms	14.0 ms	12.0 ms	12.0 ms
Maximum	22.0 ms	24.0 ms	22.0 ms	22.0 ms	22.0 ms
Logical blocks	1,953,525,168	1,465,128,359	1,250,242,867	976,752,240	625,121,433
Disk rotational speed	5400 rpm	7200 and 5400 rpm	5400 rpm	7200 and 5400 rpm	5400 rpm
Operating temperature	**5°C to 55°C** (41°F to 131°F)				
*Size refers to hard drive storage capacity. Actual accessible capacity is less. Actual drive specifications may differ slightly.					
NOTE: Certain restrictions and exclusions apply. Contact support for details.					

9 Windows 8 – Backing up, restoring, and recovering

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

This chapter provides information about the following processes:

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

NOTE: This guide describes an overview of backing up, restoring and recovering options. For more details about the tools provided, see Help and Support. From the Start screen, type h, and then select **Help and Support**.

Creating recovery media and backups

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

1. After you successfully set up the computer, create HP Recovery media. This step creates a backup of the HP Recovery partition on the computer. The backup can be used to reinstall the original operating system in cases where the hard drive is corrupted or has been replaced.

   HP Recovery media you create will provide the following recovery options:

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

   See Creating HP Recovery media on page 95.

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

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

choose to reset the computer by reinstalling Windows or choose to recover using HP Recovery Manager.

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

For more information and steps for enabling Windows File History, see Windows Help and Support. From the Start screen, type `h`, and then select **Help and Support**.

Creating HP Recovery media

HP Recovery Manager is a software program that offers a way to create recovery media after you successfully set up the computer. HP Recovery media can be used to perform system recovery if the hard drive becomes corrupted. System recovery reinstalls the original operating system and the software programs installed at the factory, and then configures the settings for the programs. HP Recovery media can also be used to customize the system or aid in the replacement of a hard drive.

- Only one set of HP Recovery media can be created. Handle these recovery tools carefully, and keep them in a safe place.
- HP Recovery Manager examines the computer and determines the required storage capacity for the blank USB flash drive or the number of blank DVD discs that will be required.
- To create recovery discs, your computer must have an optical drive with DVD writer capability, and you must use only high-quality blank DVD-R, DVD+R, DVD-R DL, or DVD+R DL discs. Do not use rewritable discs such as CD±RW, DVD±RW, double-layer DVD±RW, or BD-RE (rewritable Blu-ray) discs; they are not compatible with HP Recovery Manager software. Or instead you can use a high-quality blank USB flash drive.
- If your computer does not include an integrated optical drive with DVD writer capability, but you would like to create DVD recovery media, you can use an external optical drive (purchased separately) to create recovery discs, or you can obtain recovery discs for your computer from the HP website. For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html. If you use an external optical drive, it must be connected directly to a USB port on the computer; the drive cannot be connected to a USB port on an external device, such as a USB hub.
- Be sure that the computer is connected to AC power before you begin creating the recovery media.
- The creation process can take up to an hour or more. Do not interrupt the creation process.
- If necessary, you can exit the program before you have finished creating all of the recovery DVDs. HP Recovery Manager will finish burning the current DVD. The next time you start HP Recovery Manager, you will be prompted to continue, and the remaining discs will be burned.

To create HP Recovery media:

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

If you ever need to recover the system, see Recovering using HP Recovery Manager on page 98.

Restore and recovery

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

- If you need to restore your personal files and data, you can use Windows File History to restore your information from the backups you created. For more information and steps for using File History, see Windows Help and Support. From the Start screen, type `h`, and then select **Help and Support**.
- If you need to correct a problem with a preinstalled application or driver, use the Drivers and Applications Reinstall option of HP Recovery Manager to reinstall the individual application or driver.

  From the Start screen, type `recovery`, select **HP Recovery Manager**, and then select **Drivers and Applications Reinstall**, and follow the on-screen instructions.
- If you want to restore the system to a previous state without losing any personal information, Windows System Restore is an option. System Restore allows you to restore without the requirements of Windows Refresh or a reinstallation. Windows creates system restore points automatically during a Windows update and other system maintenance events. Even if you did not manually create a restore point, you can choose to restore to an automatically created restore point. For more information and steps for using Windows System Restore, see Windows Help and Support. From the Start screen, type `h`, and then select **Help and Support**.
- If you want a quick and easy way to recover the system without losing your personal information, settings, or apps that came preinstalled on your computer or were purchased from the Windows Store, consider using Windows Refresh. This option does not require backing up data to another drive. See Using Windows Refresh for quick and easy recovery on page 97.
- If you want to reset your computer to its original state, Windows provides an easy way to remove all personal data, apps, and settings, and reinstall Windows.

  For more information, see Remove everything and reinstall Windows on page 97.
- If you want to reset your computer using a minimized image, you can choose the HP Minimized Image Recovery option from the HP Recovery partition or HP Recovery media. Minimized Image Recovery installs only drivers and hardware-enabling applications. Other applications included in the image continue to be available for installation through the Drivers and Applications Reinstall option in HP Recovery Manager.

  For more information, see Recovering using HP Recovery Manager on page 98.
- If you want to recover the computer's original factory partitioning and content, you can choose the System Recovery option from the HP Recovery media that you have created. For more information, see Recovering using HP Recovery Manager on page 98.
- If you have replaced the hard drive, you can use the Factory Reset option of HP Recovery media to restore the factory image to the replacement drive. For more information, see Recovering using HP Recovery Manager on page 98.
- If you wish to remove the recovery partition to reclaim hard drive space, HP Recovery Manager offers the Remove Recovery Partition option.

  For more information, see Removing the HP Recovery partition on page 99.

Using Windows Refresh for quick and easy recovery

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

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

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

NOTE: You may be prompted for your permission or password when using Refresh. See Windows Help and Support for more information. From the Start screen, type h, and then select **Help and Support**.

To start Refresh:

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

Remove everything and reinstall Windows

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

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

You can initiate this option by using the f11 key or from the Start screen.

To use the f11 key:

1. Press f11 while the computer boots.

   – or –

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

To use the Start screen:

1. On the Start screen, point to the far-right upper or lower corner of the screen to display the charms.
2. Click **Settings**.

3. Click **Change PC settings** in the bottom-right corner of the screen, and then select **General** from the PC settings screen.
4. Under **Remove everything and reinstall Windows**, select **Get started**, and follow the on-screen instructions.

Recovering using HP Recovery Manager

HP Recovery Manager software allows you to recover the computer to its original factory state by using the HP Recovery media you created or by using the HP Recovery partition. See Creating HP Recovery media on page 95, if you have not already created recovery media.

Using HP Recovery media, you can choose from one of the following recovery options:

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

The HP Recovery partition allows Minimized Image Recovery.

What you need to know

- HP Recovery Manager recovers only software that was installed at the factory. For software not provided with this computer, you must either download the software from the manufacturer's website or reinstall the software from the media provided by the manufacturer.
- Recovery through HP Recovery Manager should be used as a final attempt to correct computer issues.
- HP Recovery media must be used if the computer hard drive fails. See Creating HP Recovery media on page 95, if you have not already created recovery media.
- To use the Factory Reset or System Recovery options, you must use HP Recovery media. See Creating HP Recovery media on page 95, if you have not already created recovery media.
- If the HP Recovery media do not work, you can obtain recovery media for your system from the HP website. For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

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

Using the HP Recovery partition to recover a minimized image

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

To start HP Recovery Manager from the HP Recovery partition:

1. Press f11 while the computer boots.

   – or –

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

Using HP Recovery media to recover

You can use HP Recovery media to recover the original system. This method can be used if your system does not have an HP Recovery partition or if the hard drive is not working properly.

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

   – or –

   Insert the HP Recovery USB flash drive you created into a USB port on your computer, and then restart the computer.

NOTE: If the computer does not automatically restart in HP Recovery Manager, change the computer boot order. See Changing the computer boot order on page 99.

3. Follow the on-screen instructions.

Changing the computer boot order

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

To change the boot order:

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

Removing the HP Recovery partition

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

IMPORTANT: After you remove the HP Recovery partition, you can no longer use the Windows Refresh option, the Windows option to remove everything and reinstall Windows, or the HP Recovery Manager option. So before you remove the Recovery partition, create HP Recovery media; see Creating HP Recovery media on page 95.

Follow these steps to remove the HP Recovery partition:

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

10 Ubuntu Linux – Backing up, restoring, and recovering

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

Performing a system recovery

The Deja Dup Restore Tool allows you to repair or restore the computer to its original factory state. You can create an image restore DVD using an optional external DVD±RW optical drive. You can also create a restore image on a USB storage device.

CAUTION: Using Restore completely erases hard drive contents and reformats the hard drive. All files you have created and any software installed on the computer are permanently removed. The recovery tool reinstalls the original operating system and programs and drivers that were installed at the factory. Software, drivers, and updates not installed at the factory must be manually reinstalled. Personal files must be restored from a backup.

NOTE: HP recommends that you create the image restore in the event of a system failure.

Creating the restore DVDs

The restore creation software creates a set of system restore discs using blank, writable DVDs (DVD-R or DVD+R). HP recommends using blank DVD+R discs from a manufacturer you trust, because these recovery DVDs are so important. You need approximately 3 blank DVD+R discs. The program states how many discs are needed at the beginning of the process.

To create restore DVDs:

1. Click the **System menu** icon at the far right of the top panel, and then click **System Settings > Backup**.
2. Select **Storage** from the panel on the left side of the window, click the down-arrow next to **Backup Location**, and select the DVD from the drop-down list.
3. Select **Overview** from the panel on the left side of the window, and then click **Back Up Now**.
4. Follow the on-screen instructions.

Creating a restore image on a USB device

NOTE: Be sure AC power is connected to the computer you begin.

Verify the exact amount of free space on your storage device before you begin the creation process. For most models, you will need at least 8 GB of free space on the storage device. However, depending on the drivers and software installed on your computer, you may need slightly more than 8 GB of space. **HP recommends that you use a 16 GB device or above for best results.**

IMPORTANT: Remember to insert your USB device into the USB port on the computer before starting this procedure.

To create the restore image:

1. Click the **System menu** icon at the far right of the top panel, and then click **System Settings > Backup**.
2. Select **Storage** from the panel on the left side of the window, click the down-arrow next to **Backup location**, and select the USB device from the drop-down list.

NOTE: If the USB device is not listed in the drop-down list for Backup Location, select **Local Folder**, and then click the **Choose Folder** button. Select the USB device from the panel on the left side of the **Choose Folder** window, and click **OK**.

3. Select **Overview** from the panel on the left side of the window, and then click **Backup Now**.
4. Follow the on-screen instructions.

Performing recovery using the restore media

NOTE: The following procedure uses the F11 BIOS Recovery feature to perform the recovery.

1. If possible, back up all personal files.
2. Shut down the computer.
3. Be sure the restore DVD or USB device is connected to the computer.
4. Restart the computer.
5. Using the arrow keys, select **Recovery**, and then press enter.
6. Follow the on-screen instructions.

NOTE: If you are unable to boot (start up) your computer with the primary operating system, and you did not create a system recovery disc, you must purchase an *Ubuntu Operating System* DVD to reinstall the operating system. For additional information, refer to the *Worldwide Telephone Numbers* booklet for more information.

Backing up your information

You should back up your computer files on a regular schedule to maintain a current backup. You can manually back up your information to an optional external drive, a network drive, discs, or the Ubuntu One website. Back up your system at the following times:

- At regularly scheduled times
- Before the computer is repaired or restored
- Before you add or modify hardware or software

To back up your home directory files to the Ubuntu One website using the Deja Dup Backup Tool:

NOTE: Before you back up your information, be sure you have designated a location to save the backup files.

1. Click the **System menu** icon at the far right of the top panel, and then click **System Settings > Backup** icon.
2. Select **Folders** from the panel on the left side of the window, and beneath **Folders to back up**, select the folders to back up.

3. Select **Storage** from the panel on the left side of the window, click the down-arrow next to **Backup Location**, and select **Ubuntu One** from the drop-down list.
4. Select **Overview** from the panel on the left side of the window, and then click **Back Up Now**.

NOTE: The first time you back up your files to Ubuntu One, you will need to create an account to sign into Ubuntu One. Enter your email address and password into the account sign-in boxes and follow the on-screen instructions to complete the sign-in process.

To restore backup files:

1. Click the **System menu** icon at the far right of the top panel, and then click **System Settings > Backup** icon.
2. Click **Restore**, select the location of the backup files and the folder name, and then click **Forward**.
3. Under **Restore from When?**, select the date of the files to be restored, and then click **Forward**.
4. Select the location and folder where the files are to be restored, and then click **Forward**.
5. Follow the on-line instructions.
6. Click **Restore** to start restoring the files, or click **Cancel** to cancel the operation.

NOTE: You may also back up to cloud storage services provided by various companies. For a small fee, they will keep your backup for you. A cloud service is recommended since it is an easy way to keep your backups off-site and safe from any disaster.

11 Power cord set requirements

The wide-range input feature of the computer permits it to operate from any line voltage from 100 to 120 V ac, or from 220 to 240 V ac.

The 3-conductor power cord set included with the computer meets the requirements for use in the country or region where the equipment is purchased.

Power cord sets for use in other countries or regions must meet the requirements of the country and region where the computer is used.

Requirements for all countries

The following requirements are applicable to all countries and regions:

- The length of the power cord set must be at least **1.0 m** (3.3 ft) and no more than **2.0 m** (6.5 ft).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country or region where the power cord set will be used.
- The power cord sets must have a minimum current capacity of 10 A and a nominal voltage rating of 125 or 250 V ac, as required by the power system of each country or region.
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C13 connector for mating with the appliance inlet on the back of the computer.

Requirements for specific countries and regions

Country/region	Accredited agency	Applicable note number
Argentina	IRAM	1
Australia	SAA	1
Austria	OVE	1
Belgium	CEBEC	1
Brazil	ABNT	1
Canada	CSA	2
Chile	IMQ	1
Denmark	DEMKO	1
Finland	FIMKO	1
France	UTE	1
Germany	VDE	1
India	ISI	1
Israel	SII	1
Italy	IMQ	1
Japan	JIS	3
The Netherlands	KEMA	1
New Zealand	SANZ	1
Norway	NEMKO	1
The People's Republic of China	CCC	4
Saudi Arabia	SASO	7
Singapore	PSB	1
South Africa	SABS	1
South Korea	KTL	5
Sweden	SEMKO	1
Switzerland	SEV	1
Taiwan	BSMI	6
Thailand	TISI	1
The United Kingdom	ASTA	1

Country/region	Accredited agency	Applicable note number
The United States	UL	2

1. The flexible cord must be Type HO5VV-F, 3-conductor, 0.75 mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.
2. The flexible cord must be Type SVT/SJT or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V ac) or NEMA 6-15P (15 A, 250 V ac) configuration. CSA or C-UL mark. UL file number must be on each element.
3. The appliance coupler, flexible cord, and wall plug must bear a “T” mark and registration number in accordance with the Japanese Dentori Law. The flexible cord must be Type VCTF, 3-conductor, 0.75 mm² or 1.25 mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V ac) configuration.
4. The flexible cord must be Type RVV, 3-conductor, 0.75 mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the CCC certification mark.
5. The flexible cord must be Type H05VV-F 3-conductor, 0.75 mm² conductor size. KTL logo and individual approval number must be on each element. Corset approval number and logo must be printed on a flag label.
6. The flexible cord must be Type HVCTF 3-conductor, 1.25 mm² conductor size. Power cord set fittings (appliance coupler, cable, and wall plug) must bear the BSMI certification mark.
7. For 127 V ac, the flexible cord must be Type SVT or SJT 3-conductor, 18 AWG, with plug NEMA 5-15P (15 A, 125 V ac), with UL and CSA or C-UL marks. For 240 V ac, the flexible cord must be Type H05VV-F 3-conductor, 0.75 mm² or 1.00 mm2 conductor size, with plug BS 1363/A with BSI or ASTA marks.

12 Recycling

When a battery has reached the end of its useful life, do not dispose of the battery in general household waste. Follow the local laws and regulations in your area for battery disposal. HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries.

For more information about recycling programs, see the HP website at www.hp.com/recycle.

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