



HP 3115m Notebook PC
HP 3125 Notebook PC

Maintenance and Service Guide

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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

Category	Description	HP 3115m	HP 3125
Product Name	HP 3125 Notebook PC		√
	HP 3115m Notebook PC	√	
Processors	AMD® E450 1.65-GHz processor (1.0-MB L2 cache, 1333-MHz, dual core, 18 W)	√	
	AMD E300 1.30-GHz processor (1.0-MB L2 cache, 1066-MHz, dual core, 18 W)	√	
	AMD E2-2000, 1.75 GHz processor (1.0 MB L2 cache, 1333-MHz, dual core 18 W)		√
	AMD E1-1500, 1.48 GHz processor (1.0 MB L2 cache, 1066-MHz, dual core 18 W)		√
Chipset	AMD A50M fusion controller hub (FCH)	√	
	AMD A68M fusion controller hub (FCH)		√
Graphics	AMD Radeon™ HD 6320 discrete-class graphics on computer models equipped with an AMD E450 1.65-GHz processor	√	
	AMD Radeon HD 6310 discrete-class graphics on computer models equipped with an AMD E300 1.00-GHz processor	√	
	AMD Radeon HD 7340 discrete-class graphics on computer models equipped with an AMD E2-2000 processor		√
	AMD Radeon HD 7310 discrete-class graphics on computer models equipped with an AMD E1-1500 processor		√
	Support for Blu-ray playback with HD decode and DX11 support	√	√
Panel	11.6-in, high-definition (HD), light-emitting diode (LED), BrightView (1366×768) display; typical brightness: 200 nits	√	√
	All display assemblies include 2 wireless local area network (WLAN) antenna cables	√	√
	Supports 16:9 wide aspect ratio	√	√
	Support for non-flush glass panel cover (non-PMMA)	√	√
	Select computer model display assemblies include 2 wireless wide area network (WWAN) antenna cables	√	√
Memory	Two customer-accessible/upgradable memory module slots	√	√
	DDR3-1333-MHz single channel support (downgrade to DDR3-1066-MHz for the E300 APU and E1-1500 APU)	√	√

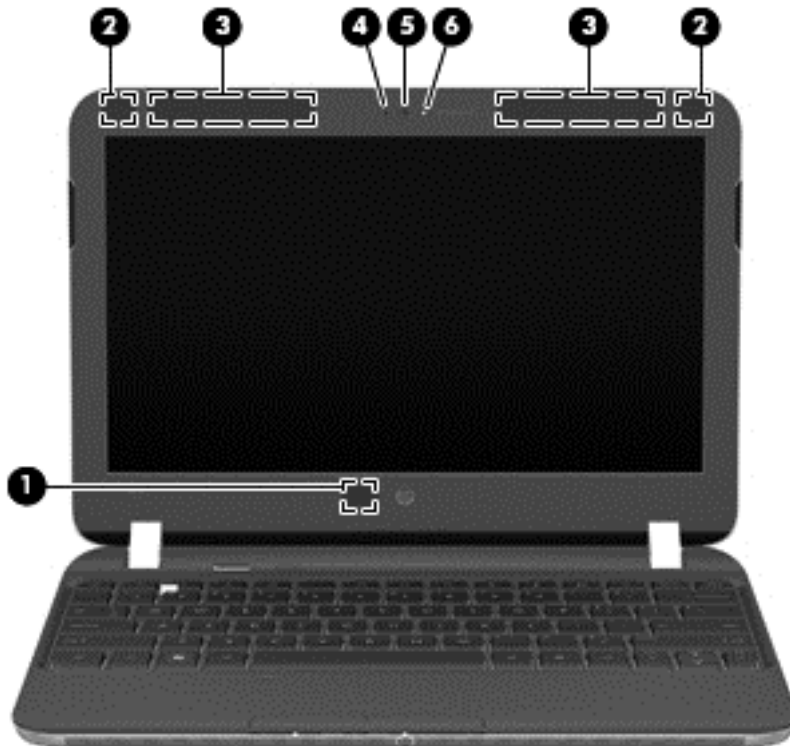
Category	Description	HP 3115m	HP 3125
	Supports up to 4096 GB of system RAM	√	√
	Supports the following configurations:	√	
	<ul style="list-style-type: none"> 4096-MB total system memory (4096×1 or 2048×2) 2048-MB total system memory (2048×1) 		
	Supports the following configurations:		√
	<ul style="list-style-type: none"> 4096-MB total system memory (4096×1 or 2048×2) 		
Hard drives	Supports 6.35-cm (2.5-in) hard drives in 9.5-mm (.37-in) and 7.0-mm (.28-in) thicknesses	√	√
	Customer-accessible	√	√
	Serial ATA (SATA)	√	√
	Supports Accelerometer hard drive protection	√	√
	Supports the following hard drives:	√	√
	<ul style="list-style-type: none"> 500-GB, 5400-rpm, 7.0-mm 320-GB, 5400-rpm, 7.0-mm 		
	Supports the following mSATA solid-state drives:	√	
	<ul style="list-style-type: none"> 160-GB solid-state drive 128-GB solid-state drive 		
Optical drive	External USB optical drive (computer USB ports support 2A current)	√	√
	SATA	√	√
	12.7mm tray load	√	√
	Supports the following external optical drives:	√	√
	<ul style="list-style-type: none"> Blu-ray ROM DVD±R/RW Super Multi Double-Layer Drive DVD±RW and CD-RW Super Multi Double-Layer Combo Drive 		
Audio and video	Single digital microphone	√	√
	Beats Audio with Beats logo (support Beats hotkey [fn+b])	√	√
	Two integrated stereo speakers	√	√
	HP TrueVision high-definition webcam (fixed, no tilt, 1280×800 by 30 frames per second)	√	√
Ethernet	Integrated Gigabit network interface card (NIC), PCIE interface	√	√
Wireless	Integrated WLAN options by way of wireless module	√	√
	Two WLAN antennas built into display assembly	√	√
	Supports a Ralink 3592BC8 802.11a/b/g/n 2×2 WiFi and Bluetooth 3.0+HS Combo Adapter WLAN module	√	
	Supports Intel Centrino® Advanced-N 6230 WLAN module	√	
	Intel Centrino Advanced-N 6235		√

Category	Description	HP 3115m	HP 3125
	Ralink RT3290LE 802.11bgn 1x1 Wi-Fi and Bluetooth 4.0 Combo Adapter		√
	Integrated WWAN options by way of wireless module	√	
	Two WWAN antennas built into display assembly (select models only)	√	
	Supports the HP hs2340 HSPA+ Mobile Broadband Module	√	
External media card	HP Multi-Format Digital Media Reader	√	√
	Push-push insertion/removal	√	√
	Subscriber identity module (SIM) slot (populated with WWAN; toolless user accessible)	√	√
Ports	<ul style="list-style-type: none"> • 3-pin AC power • Audio-in (mono microphone), supports jack detection • Audio-out (stereo headphone), supports jack detection • HDMI version 1.3b supporting 1080p, 1920 ×1080 @ 60Hz • RJ-45 (Ethernet, includes link and activity lights) • USB 2.0 (3 ports) • VGA (Dsub 15 pin) supporting 2048×1536 external resolution @ 60 Hz, hot plug and unplug and auto-detection for correct output to wide-aspect vs. standard aspect video 	√	√
Keyboard/pointing devices	97% Duracoat, island-style keyboard, no spill-resistance (in charcoal and linen white finishes)	√	√
	TouchPad with multi-touch gestures	√	√
	Taps enabled as default	√	√
Power requirements	Supports a 65-W PFC RC V 3-wire HP Smart AC adapter	√	√
	Supports a 6-cell, 55-Whr, 2.55-Ah Li-ion battery	√	√
Security	Security cable slot	√	√
Operating system	Preinstalled: <ul style="list-style-type: none"> • Windows 7 Home Basic (64- and 32-bit) • Windows 7 Home Premium (64- and 32-bit) • Windows 7 Professional (64- and 32-bit) • Windows 7 Starter 32-bit (only on computer models equipped with 2-GB memory) 	√	

Category	Description	HP 3115m	HP 3125
	Preinstalled: <ul style="list-style-type: none"> • Windows 8 Professional 64-bit • Windows 8 Multi-language (ML) 64-bit • Windows 8 Emerging Markets (EM) 64-bit • FreeDos 		√
Serviceability	End-user replaceable parts: <ul style="list-style-type: none"> • AC adapter • Battery • Hard drive • Memory modules • SIM (HP 3115m models only) • Solid-state drive • WLAN module • WWAN module (HP 3115m models only) 	√	√

2 External component identification

Display



Item	Component	Description
(1)	Internal display switch	Turns off the display or initiates Sleep if the display is closed while the power is on. NOTE: The display switch is not visible from the outside of the computer.
(2)	WLAN antennas (2)*	Send and receive wireless signals to communicate with WLANs.
(3)	WWAN antennas (2)* (select models only)	Send and receive wireless signals to communicate with WWANs.
(4)	Internal microphone	Records sound.

Item	Component	Description
(5)	Webcam	<p>Records video and captures still photographs.</p> <p>To use the webcam in Windows 7, select Start > All Programs > CyberLink and Chat > CyberLink YouCam.</p> <p>To use the webcam in Windows 8, from the Start screen, type <code>cyberlink</code>, and then select CyberLink YouCam from the list of apps.</p>
(6)	Webcam light	On: The webcam is in use.

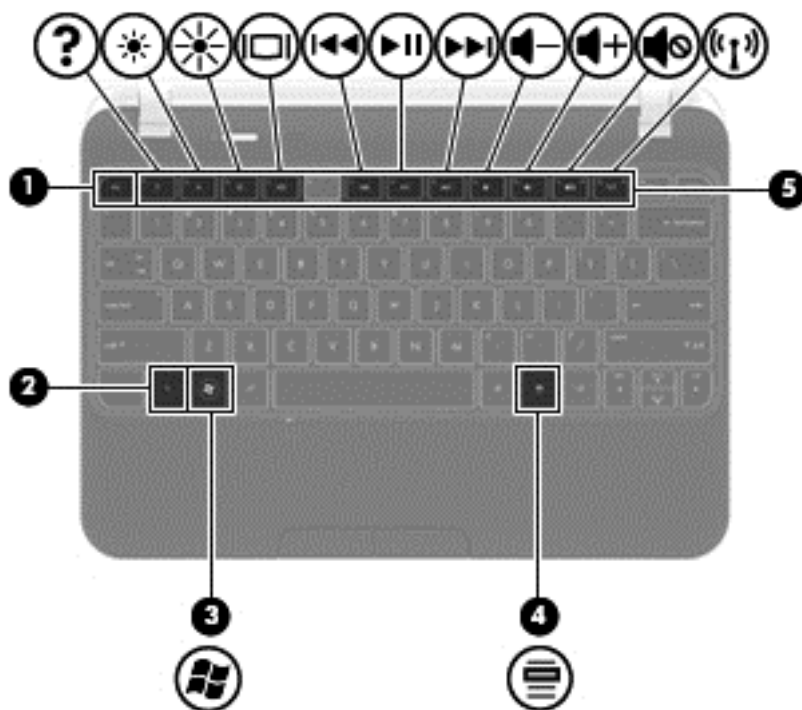
*The antennas are not visible from the outside of the computer. For optimal transmission, keep the areas immediately around the antennas free from obstructions. To see wireless regulatory notices, refer to the section of the *Regulatory, Safety and Environmental Notices* that applies to your country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

Buttons



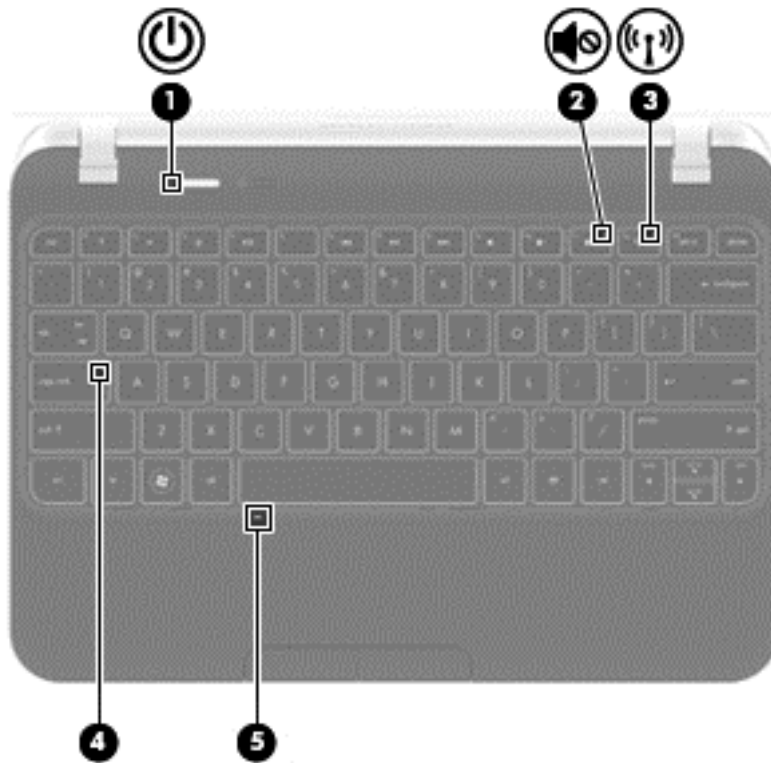
Item	Component	Description
(1)	Power button	<ul style="list-style-type: none"> • When the computer is off, press the button to turn on the computer. • When the computer is on, press the button briefly to initiate Sleep. • When the computer is in the Sleep state, press the button briefly to exit Sleep. • When the computer is in Hibernation, press the button briefly to exit Hibernation. <p>If the computer has stopped responding and Windows shutdown procedures are ineffective, press and hold the power button for at least 5 seconds to turn off the computer.</p> <p>To learn more about your power settings:</p> <ul style="list-style-type: none"> • In Windows 7, select Start > Control Panel > System and Security > Power Options. • In Windows 8, from the Start screen, type power options. Click Settings, and then select Power Options from the options displayed
(2)	<p>QuickWeb button (Windows 7; select models only)</p> <p>Web browser button (Windows 8)</p>	<ul style="list-style-type: none"> • When the computer is off or in Hibernation, press the button to open HP QuickWeb. • When the computer is in Microsoft Windows, press the button to open the default Web browser. • When the computer is in HP QuickWeb, press the button to open the Web browser. <p>QuickWeb allows you to browse the Internet, communicate with others using Skype, and explore other HP QuickWeb programs. When the computer is off or in Hibernation, you can press the QuickWeb button to access these features without waiting for the operating system to start.</p> <p>NOTE: For more information, refer to the HP QuickWeb software Help. If your computer does not have HP QuickWeb software, the button does not start QuickWeb or perform any action or function in QuickWeb.</p>

Keys



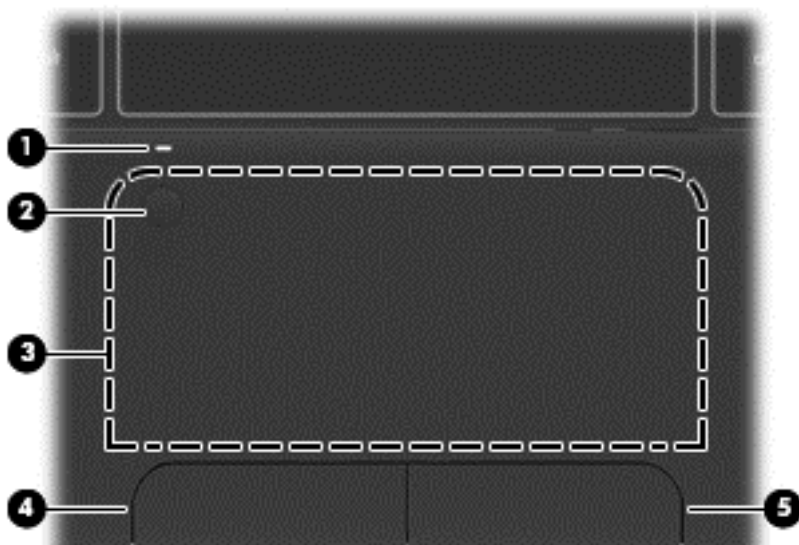
Item	Component	Description
(1)	esc key	Displays system information when pressed in combination with the fn key.
(2)	fn key	Displays system information when pressed in combination with the esc key.
(3)	Windows logo key	Windows 7: Displays the Windows Start menu. Windows 8: Displays the Start screen. NOTE: Pressing the Windows logo key again will return you to the previous screen.
(4)	Windows applications key	Windows 7: Displays a shortcut menu for items beneath the cursor. Windows 8: Displays options for a selected object.
(5)	Action keys	Execute frequently used system functions.

Lights



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

TouchPad



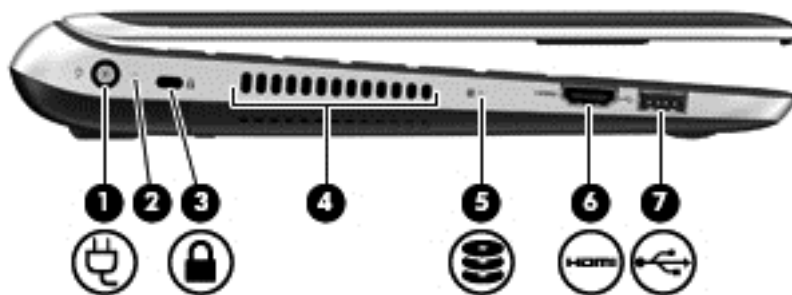
Item	Component	Description
(1)	TouchPad light	<ul style="list-style-type: none">On: The TouchPad is off.Off: The TouchPad is on.
(2)	TouchPad on/off button	Turns the TouchPad on and off. Quickly double-tap the TouchPad on/off button to turn the TouchPad on and off.
(3)	TouchPad zone	Moves the pointer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

Front



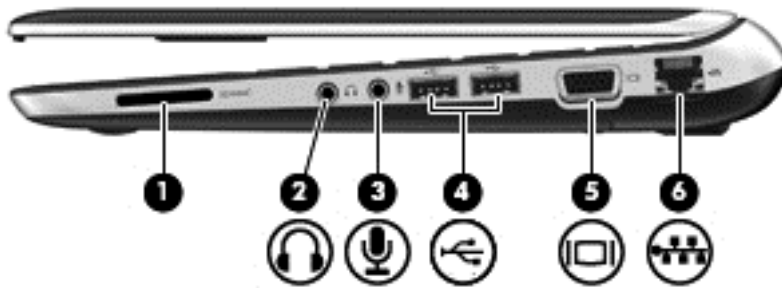
Component	Description
Speakers (2)	Produce sound.

Left side



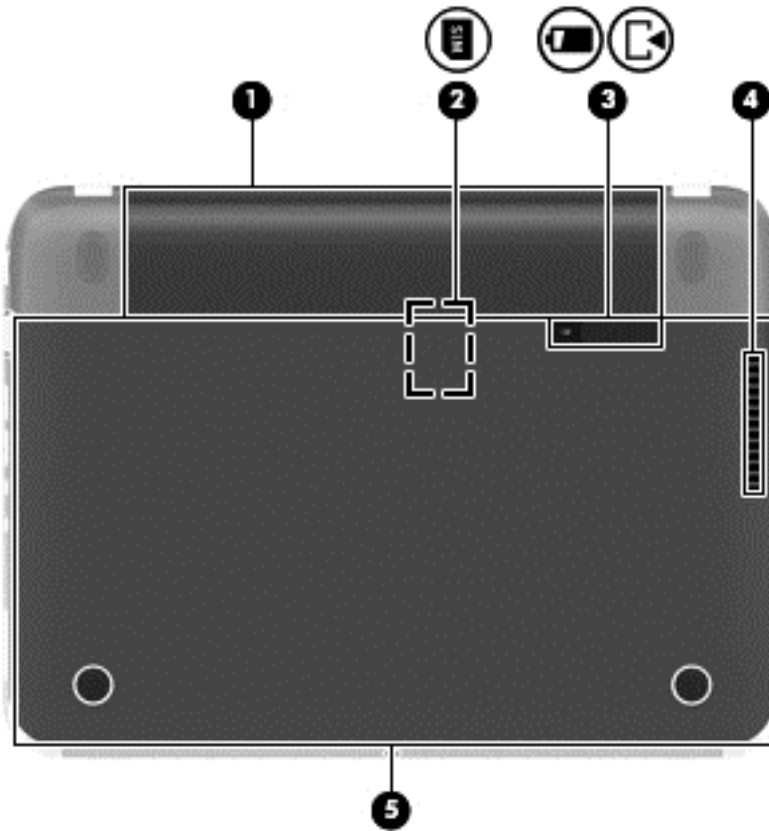
Item	Component	Description
(1)	Power connector	Connects an AC adapter.
(2)	Battery light	<ul style="list-style-type: none"> White: The computer is connected to external power. If a battery installed, the battery is fully charged. Amber: The computer is connected to external power and the battery is charging. Off: The computer is not connected to external power. Blinking: The computer is in the Sleep state.
(3)	Security cable slot	<p>Attaches an optional security cable to the computer.</p> <p>NOTE: The security cable is designed to act as a deterrent, but it may not prevent the computer from being mishandled or stolen.</p>
(4)	Vent	<p>Enables airflow to cool internal components.</p> <p>NOTE: The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.</p>
(5)	Hard drive light	<ul style="list-style-type: none"> Blinking white: The hard drive is being accessed. Amber: HP ProtectSmart Hard Drive Protection has temporarily parked the hard drive. <p>NOTE: For information on HP ProtectSmart Hard Drive Protection, refer to the <i>HP Notebook Reference Guide</i>.</p>
(6)	HDMI port (select models only)	Connects an optional video or audio device, such as a high-definition television, or any compatible digital or audio component.
(7)	USB port (2)	Connects an optional USB device.

Right side



Item	Component	Description
(1)	Digital Media Slot	Reads data from and writes data to digital memory cards such as Secure Digital (SD).
(2)	Audio-out (headphone) jack	Produce sound when connected to optional powered stereo speakers, headphones, ear buds, a headset, or television audio. WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, refer to the <i>Regulatory, Safety, and Environmental Notices</i> . NOTE: When a device is connected to the jack, the computer speakers are disabled.
(3)	Audio-in (microphone) jack	Connects an optional computer headset microphone, stereo array microphone, or monaural microphone.
(4)	USB 2.0 ports (2)	Connect optional USB 2.0 devices.
(5)	External monitor port	Connects an external VGA monitor or projector.
(6)	RJ-45 (network) jack	Connects a network cable.

Bottom



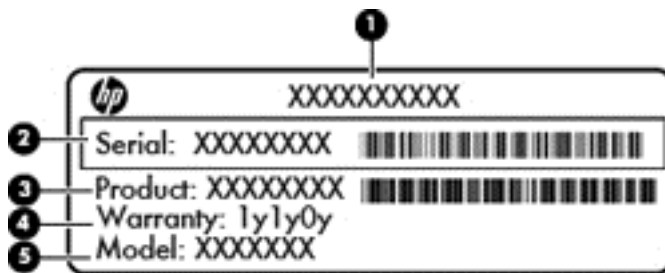
Item	Component	Description
(1)	Battery bay	Holds the battery.
(2)	SIM slot (select models only)	Supports a wireless subscriber identity module (SIM). The SIM slot is located inside the battery bay.
(3)	Battery/service cover latch	Releases the battery from the battery bay.
(4)	Vent	Enables airflow to 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.
(5)	Service cover	Provides access to the hard drive bay, a memory module slot, the SIM slot (select models only), the WLAN module, and the WWAN module (select models only).

3 Illustrated parts catalog

Service tag and PCID label

Service tag

When ordering parts or requesting information, provide the computer serial number and model description provided on the service tag.

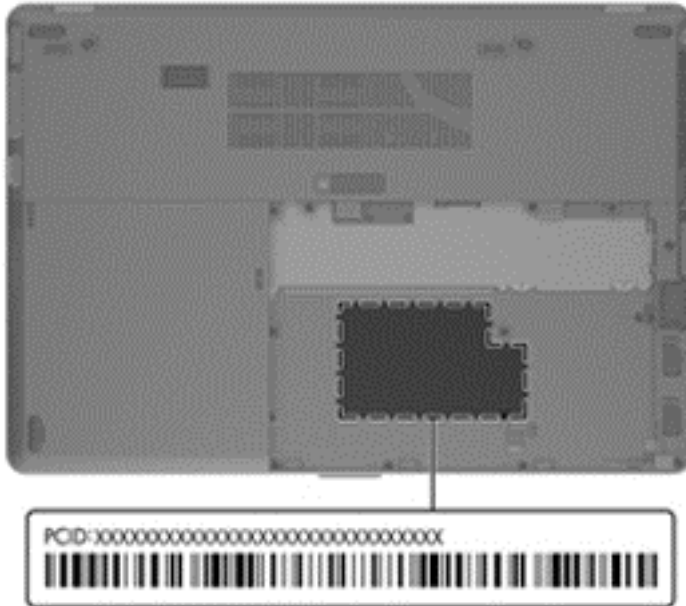


- Product name (1). This is the product name affixed to the front of the computer.
- Serial number (s/n) (2). This is an alphanumeric identifier that is unique to each product.
- Part number/Product number (p/n) (3). This number provides specific information about the product's hardware components. The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

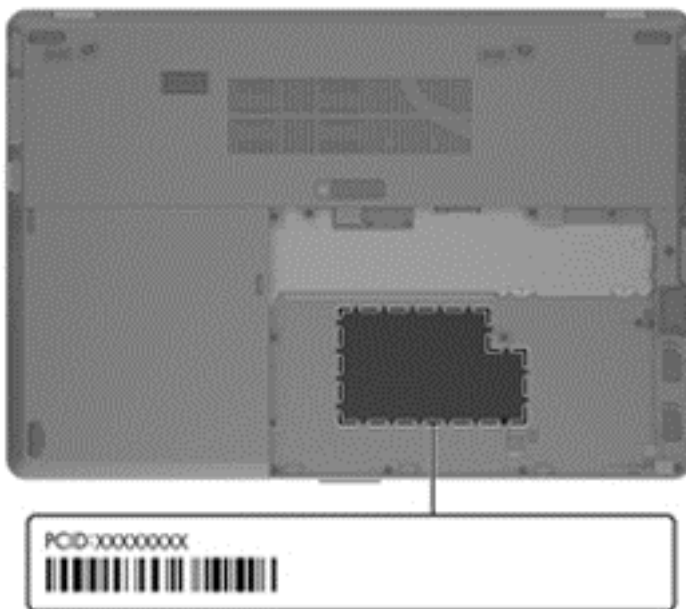
PCID label

The PCID label provides the information required to properly reset the notebook firmware (BIOS) back to factory shipped specifications when replacing the system board. The label may have a different number of characters depending on the operating system on the computer.

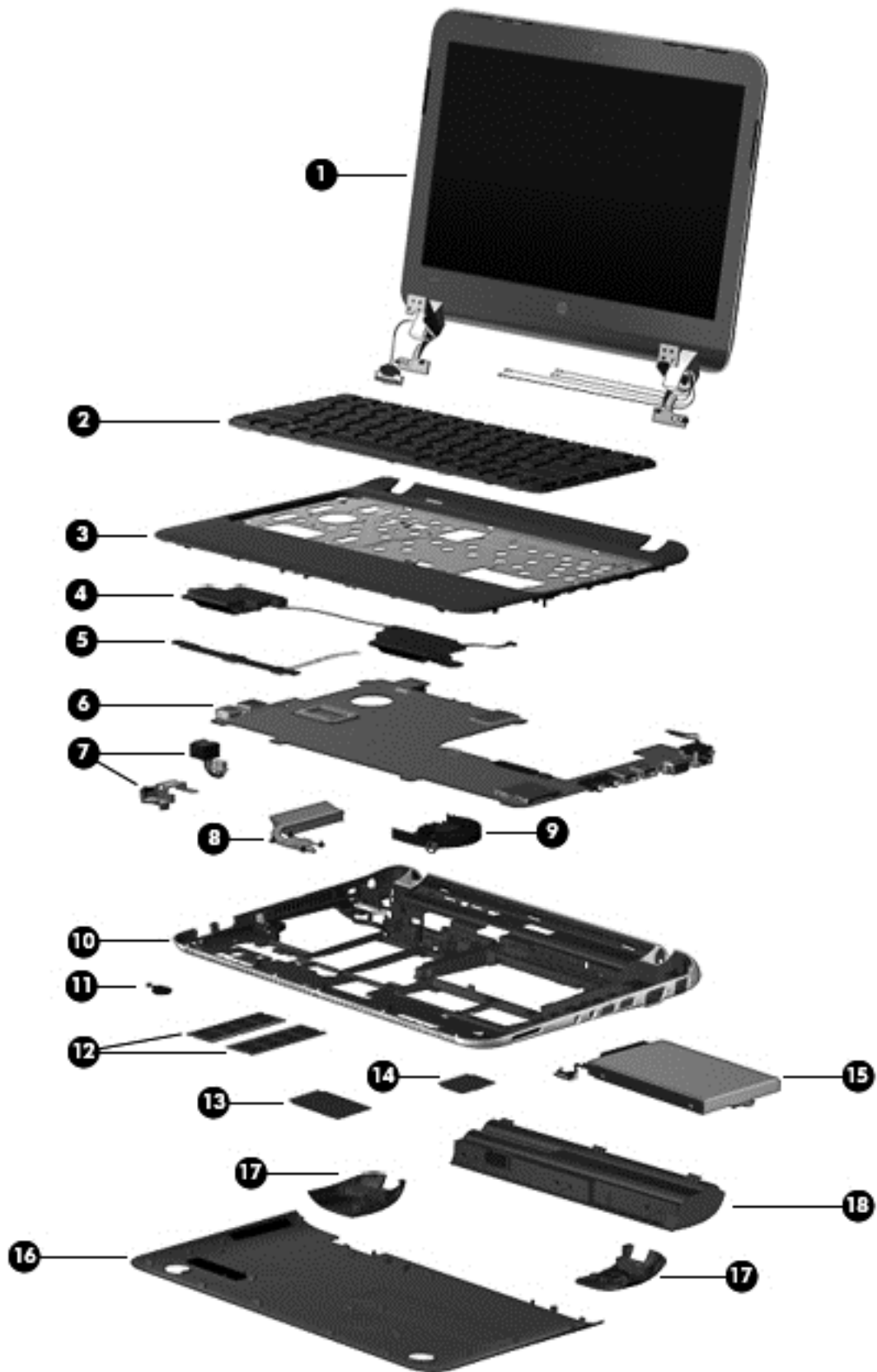
Windows 8 models



Non-Windows 8 models



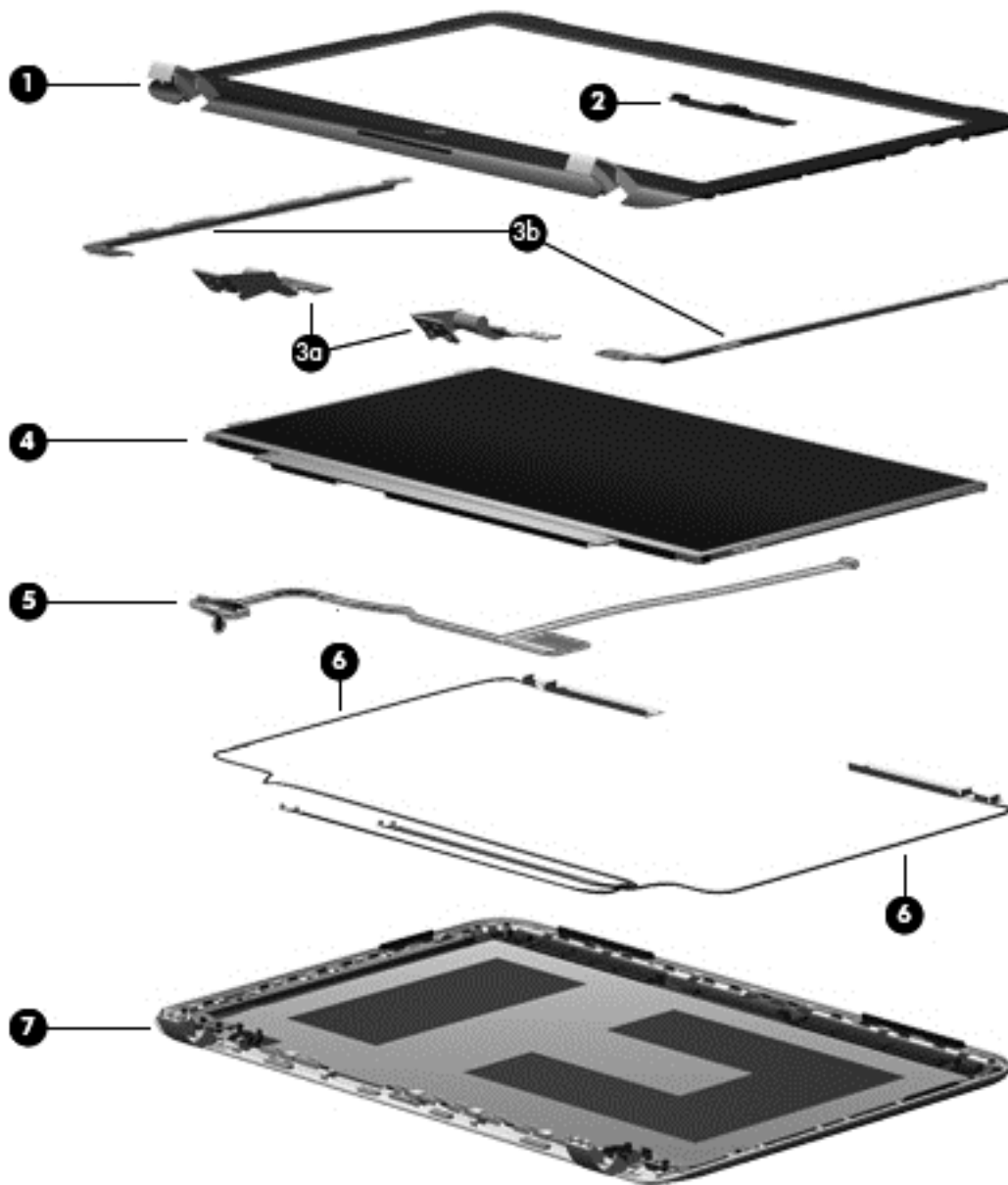
Computer major components



Item	Component	Spare part number
(1)	Display assembly: The display assembly is spared at the subcomponent level only. For display assembly spare part information, see Display assembly subcomponents on page 20 .	
(2)	Keyboard in charcoal finish (includes keyboard cable):	
	For use in HP 3115m models:	
	• For use in Canada	659500-121
	• For use in Latin America	659500-161
	• For use in the United States	659500-001
	For use in HP 3125 models:	
	• For use in Canada	699028-DB1
	• For use in Latin America	699028-161
	• For use in the United States	699028-001
(3)	Top cover in charcoal finish (includes power button board and cable and TouchPad and TouchPad cable):	659513-001
(4)	Speakers (includes cables)	659508-001
(5)	TouchPad button board (includes cable)	664993-001
(6)	System board (includes processor and replacement thermal material):	
	For use in HP 3115m models:	
	• AMD E450 processor and WWAN capability	659512-001
	• AMD E450 processor without WWAN capability	659511-001
	• AMD E300 processor and WWAN capability	659510-001
	• AMD E300 processor without WWAN capability	659509-001
	For use in HP 3125 models:	
	• AMD E2-2000 processor without WWAN capability and without Windows 8	702958-001
	• AMD E2-2000 processor without WWAN capability with Windows 8 Standard	702958-501
	• AMD E2-2000 processor without WWAN capability with Windows 8 Professional	702958-601
	• AMD E1-1500 processor without Windows 8	702960-001
	• AMD E1-1500 processor with Windows 8 Standard	702960-501
	• AMD E1-1500 processor with Windows 8 Professional	702960-601
(7)	Power connector cable (includes bracket)	664995-001
(8)	Heat sink (includes replacement thermal material)	664999-001
(9)	Fan	665000-001
(10)	Base enclosure (includes battery release latch)	659496-001
(11)	RTC battery:	
	For use only on computer models with WWAN compatibility	664994-001
	For use only on computer models without WWAN compatibility	599516-001

Item	Component	Spare part number
(12)	Memory modules (2, PC3, 12800, 1600-MHz):	
	4 GB	641369-001
	2 GB	652972-001
(13)	WWAN module	
	HP hs2340 HSPA+ Mobile Broadband Module WWAN module, for use in HP 3115m models	632155-001
(14)	WLAN modules	
	For use in HP 3115m models:	
	<ul style="list-style-type: none"> Ralink 3592BC8 802.11a/b/g/n 2x2 WiFi and Bluetooth 3.0+HS Combo Adapter 	630813-001
	<ul style="list-style-type: none"> Intel Centrino Advanced-N 6230 WLAN module (802.11a/b/g/n + Bluetooth) 	636672-001
	For use in HP 3125 models:	
	<ul style="list-style-type: none"> Intel Centrino Advanced-N 6235 	670292-001
	<ul style="list-style-type: none"> Ralink RT3290LE 802.11bgn 1x1 Wi-Fi and Bluetooth 4.0 Combo Adapter 	690020-001
(15)	Hard drive (does not include the hard drive bracket, connector cable, isolators, or screws. These components are included in the Hard Drive Hardware Kit, spare part number 664913-001):	
	500-GB, 5400-rpm, SATA, 7.0-mm	669299-001
	320-GB, 7200-rpm, SATA, 7.0-mm (for use only in HP 3115m models)	634862-002
	320-GB, 5400-rpm, SATA, 7.0-mm	645193-001
	Solid-state drive (for use only in HP 3115m models)	
	160-GB solid-state drive	659933-001
	128-GB solid-state drive	675097-001
	Hard Drive Hardware Kit (not illustrated, includes the hard drive bracket, connector cable, isolators, and screws)	664913-001
	NOTE: See Mass storage devices on page 22 for more Hard Drive Hardware Kit information.	
(16)	Service cover in charcoal finish (includes two rubber feet and shielding):	659503-001
(17)	Rubber Kit (includes two rear corner covers and two rubber feet)	664996-001
(18)	6-cell, 55-Whr, 2.55-Ah Li-ion battery	646757-001

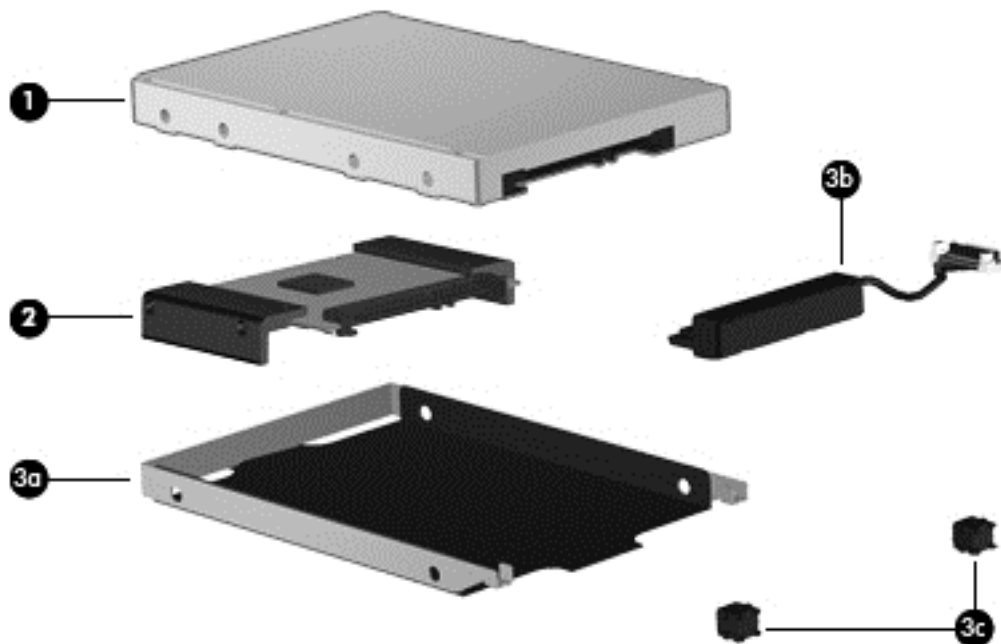
Display assembly subcomponents



Item	Component	Spare part number
(1)	Display bezel (includes display lid switch magnet)	
	For use in 3115m models	669025-001
	For use in 3125 models	714296-001
(2)	Webcamera module	659516-001
	Display Hinge Kit , includes:	659499-001
(3a)	Left and right hinges	
(3b)	Left and right hinge brackets	

Item	Component	Spare part number
(4)	11.6-in, LED, HD, BrightView SVA display panel	668353-001
(5)	Display Cable Kit (includes display panel cable and webcam module cable)	659498-001
(6)	Wireless Antenna Kit (includes left and right WLAN antenna cables and transceivers and left and right WWAN antenna cables and transceivers)	659492-001
(7)	Display enclosure (in charcoal finish):	
	For use with computer models equipped with WLAN only capability (includes WLAN antenna cables and transceivers):	659493-001
	For use with computer models equipped with WLAN and WWAN capability (WLAN antenna cables and transceivers and WWAN antenna cables and transceivers):	671685-001

Mass storage devices



Item	Component	Spare part number
(1)	Hard drive (does not include the hard drive bracket, connector cable, isolators, or screws):	
	500-GB, 5400-rpm, SATA, 7.0-mm	669299-001
	320-GB, 7200-rpm, SATA, 7.0-mm (for use only in HP 3115m models)	634862-002
	320-GB, 5400-rpm, SATA, 7.0-mm	645193-001
(2)	Solid-state drive (for use only in HP 3115m models):	
	160-GB solid-state drive	659933-001
	128-GB solid-state drive	675097-001
	Hard Drive Hardware Kit , includes:	
(3a)	Hard drive bracket	
(3b)	Hard drive connector cable	
(3c)	Hard drive isolators	
	Screws (not illustrated)	

Miscellaneous parts

Component	Spare part number
65-W PFC RC V 3-wire HP Smart AC adapter	693711-001
HP lock:	
HP keyed cable lock	626729-001
HP notebook combination lock	591699-001
HP USB optical mouse	434594-001
Power cord (3-pin, black, 1.83-m):	
For use in Argentina	490371-D01
For use in Brazil	490371-202
For use in North America	490371-001
Screw Kit	659507-001

Sequential part number listing

Spare part number	Description
434594-001	HP USB optical mouse
490371-001	Power cord for use in North America (3-pin, black, 1.83-m)
490371-202	Power cord for use in Brazil (3-pin, black, 1.83-m)
490371-D01	Power cord for use in Argentina (3-pin, black, 1.83-m)
591699-001	HP notebook combination lock
599516-001	RTC battery for use only with computer models without WWAN capability
626729-001	HP keyed cable lock
630813-001	Ralink 3592BC8 802.11a/b/g/n 2x2 WiFi and Bluetooth 3.0+HS Combo Adapter for use in HP 3115m models
632155-001	HP hs2340 HSPA+ Mobile Broadband Module for use in HP 3115m models
634862-002	320-GB, 7200-rpm hard drive only (does not include bracket, connector cable, isolators, or screws; SATA, 7.0-mm; for use only in HP 3115m models)
636672-001	Intel Centrino Advanced-N 6230 WLAN module (802.11a/b/g/n + Bluetooth) for use in HP 3115m models
641369-001	4-GB memory module (PC3, 12800, 1600-MHz)
645193-001	320-GB, 5400-rpm hard drive only (does not include bracket, connector cable, isolators, or screws; SATA, 7.0-mm)
646757-001	6-cell, 55-Whr, 2.55-Ah Li-ion battery
652972-001	2-GB memory module (PC3, 12800, 1600-MHz)
659492-001	Wireless Antenna Kit (includes WLAN and WWAN antenna cables and transceivers)

Spare part number	Description
659493-001	Display enclosure for use with computer models equipped with WLAN only capability in charcoal finish (includes WLAN antenna cables and transceivers)
659496-001	Base enclosure (includes battery release latch)
659498-001	Display Cable Kit (includes display panel cable and webcam module cable)
659499-001	Display Hinge Kit (includes left and right display hinges)
659500-001	Keyboard in charcoal finish for use in HP 3115m models in the United States (includes keyboard cable)
659500-121	Keyboard in charcoal finish for use in HP 3115m models in Canada (includes keyboard cable)
659500-161	Keyboard in charcoal finish for use in HP 3115m models in Latin America (includes keyboard cable)
659503-001	Service cover in charcoal finish (includes two rubber feet and shielding)
659507-001	Screw Kit
659508-001	Speaker Kit (includes left and right speakers and cable)
659509-001	System board for use only with computer models equipped with an AMD E300 processor but not WWAN capability (includes processor and replacement thermal material)
659510-001	System board for use only with computer models equipped with an AMD E300 processor and WWAN capability (includes processor and replacement thermal material)
659511-001	System board for use only with computer models equipped with an AMD E450 processor but not WWAN capability (includes processor and replacement thermal material)
659512-001	System board for use only with computer models equipped with an AMD E450 processor and WWAN capability (includes processor and replacement thermal material)
659513-001	Top cover in charcoal finish (includes power button board and cable and TouchPad and TouchPad cable)
659516-001	Webcamera module (includes double-sided adhesive)
659933-001	160-GB solid-state drive only (does not include bracket, connector cable, isolators, or screws; for use only in HP 3115m models)
664913-001	Hard Drive Hardware Kit (includes bracket, connector cable, isolators, and screws)
664993-001	TouchPad button board (includes cable)
664994-001	RTC battery for use only with computer models with WWAN capability
664995-001	Power connector cable (includes bracket)
664996-001	Rubber Kit (includes two rear corner covers and two rubber feet)
664999-001	Heat sink (includes replacement thermal material)
665000-001	Fan
668353-001	11.6-in, LED, HD, BrightView SVA display panel
669025-001	Display bezel for use in HP 3115m models (includes display lid switch magnet)
669299-001	500-GB, 5400-rpm hard drive only (does not include bracket, connector cable, isolators, or screws; SATA, 7.0-mm)
670292-001	Intel Centrino Advanced-N 6235

Spare part number	Description
671685-001	Display enclosure for use with computer models equipped with WLAN and WWAN capability in charcoal finish (includes WLAN antenna cables and transceivers and WWAN antenna cables and transceivers)
675097-001	128-GB solid-state drive only (does not include bracket, connector cable, isolators, or screws; for use only in HP 3115m models)
690020-001	Ralink RT3290LE 802.11bgn 1x1 Wi-Fi and Bluetooth 4.0 Combo Adapter
693711-001	HP Smart AC Adapter RC V 3-wire for use in all countries and regions except India
699028-001	Keyboard in charcoal finish for use in HP 3125 models in the United States
699028-161	Keyboard in charcoal finish for use in HP 3125 models Latin America
699028-DB1	Keyboard in charcoal finish for use in HP 3125 models in Canada
702958-001	System board for use in HP 3125 models with an AMD E2-2000 processor without WWAN capability and without Windows 8
702958-501	System board for use in HP 3125 models with an AMD E2-2000 processor without WWAN capability and with Windows 8 Standard
702958-601	System board for use in HP 3125 models with an AMD E2-2000 processor without WWAN capability and with Windows 8 Professional
702960-001	System board for use in HP 3125 models with an AMD E1-1500 processor without Windows 8
702960-501	System board for use in HP 3125 models with an AMD E1-1500 processor with Windows 8 Standard
702960-601	System board for use in HP 3125 models with an AMD E1-1500 processor with Windows 8 Professional
714296-001	Display bezel for use in HP 3125 models

4 Removal and replacement procedures

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 or optical 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, an optical 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			
Event	Relative humidity		
	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 $\pm 10\%$ 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

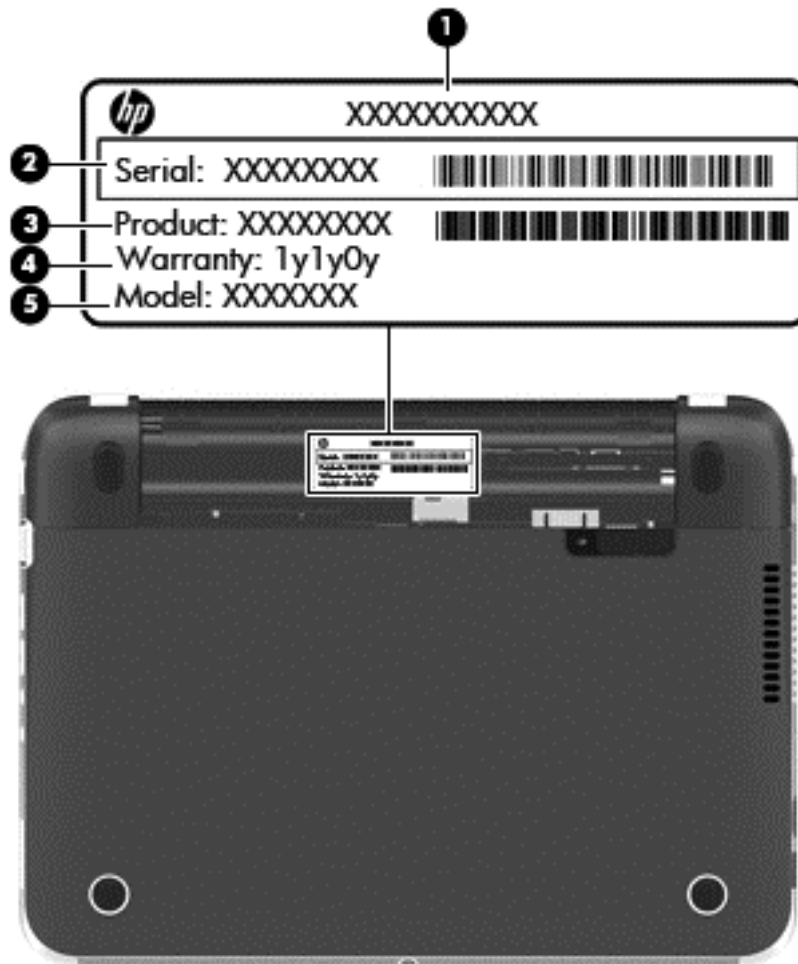
Component replacement procedures

This chapter provides removal and replacement procedures.

There are as many as 44 screws that must be removed, replaced, or loosened when servicing the computer. Make special note of each screw size and location during removal and replacement.

Service tag

When ordering parts or requesting information, provide the computer serial number and model number provided on the service tag. The battery must be removed to access the service tag. See [Battery on page 33](#) for battery removal procedures.



Item	Component	Description
(1)	Product name	This is the product name affixed to the front of the computer.
(2)	Serial number (s/n)	This is an alphanumeric identifier that is unique to each product.
(3)	Part number/Product number (p/n)	This number provides specific information about the product's hardware components. The part number helps a service technician determine what components and parts are needed.

Item	Component	Description
(4)	Warranty period	This number describes the duration of the warranty period for the computer.
(5)	Model description	This is the alphanumeric identifier used to locate documents, drivers, and support for the computer.

Computer feet

The computer feet are adhesive-backed rubber pads. There are 2 oblong rubber feet that attach to the rear corner covers as indicated in the following illustration. These feet are available in the Rubber Kit, spare part number 664996-001.



Battery

Description	Spare part number
6-cell, 55-Whr, 2.55-Ah Li-ion battery	646757-001

Before disassembling the computer, follow these steps:

1. 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.
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. Slide the battery/service cover latch **(1)** to release the battery.
2. Pivot the front edge of the battery **(2)** up and back.




3. Remove the battery from the computer.

To insert the battery:

1. Align the tabs on the rear edge of the battery with the notches on the rear edge of the battery bay.
2. Pivot the front edge of the battery down into the battery bay until it is seated. (The battery release latch will automatically lock into place.)

SIM

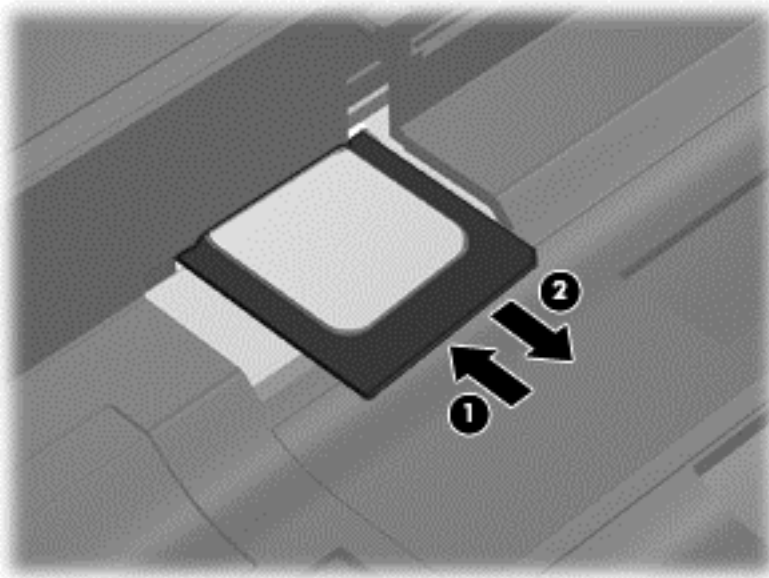
 **NOTE:** The SIM is provided by the end-user as a security measure for the WWAN module. The SIM should be removed, placed into a static-dissipative container, and then replaced when the computer is reassembled.

Before removing the SIM, follow these steps:

1. 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.
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 33](#)).

Remove the SIM:

1. Press in on the SIM **(1)** to release it from the SIM slot.
2. Remove the SIM **(2)** from the SIM slot.



Insert the SIM into the SIM slot, and gently push the SIM into the slot until it is firmly seated.

Display panel

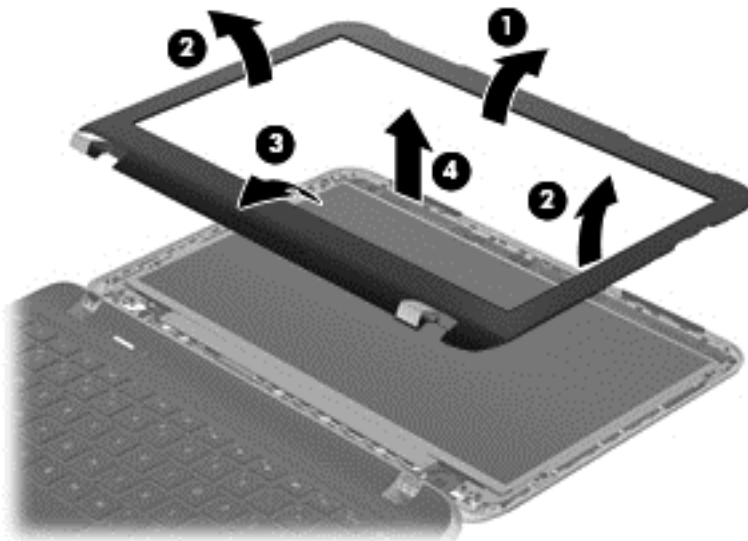
Description	Spare part number
11.6-in, LED, HD, BrightView SVA display panel	668353-001

Before removing the display panel, follow these steps:

1. 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.
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 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).

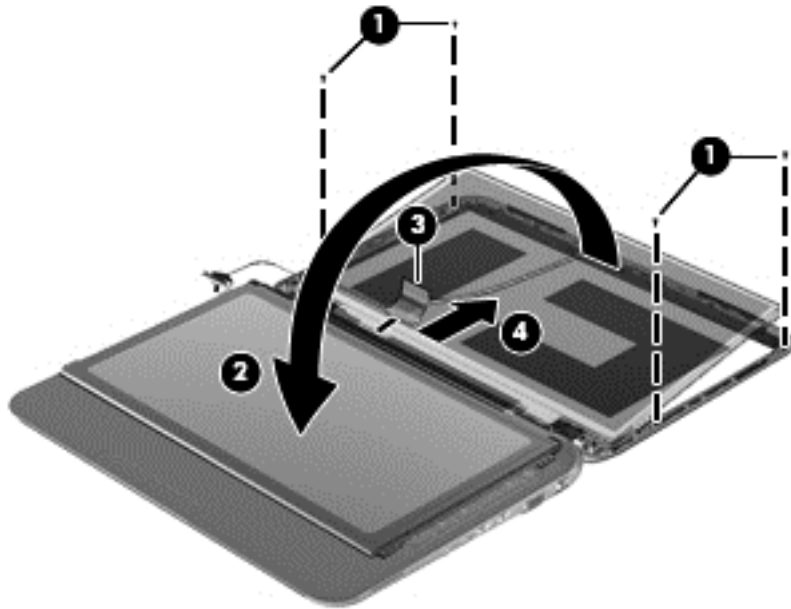
Remove the display panel:

1. Turn the computer right-side up, with the front toward you.
2. Open the computer.
3. Flex the inside edges of the top edge (1), the left and right sides (2), and the bottom edge (3) of the display bezel until the bezel disengages from the display enclosure.
4. Remove the display bezel (4). The display bezel includes the display hinge covers and the lid switch magnet and is available using spare part number 669025-001 for model HP 3115m and 714296-001 for model HP 3125.



5. Remove the four Phillips PM2.0×3.6 screws (1) that secure the display panel to the display enclosure.
6. Swing the top edge of the display panel (2) forward until it rests on the keyboard.

7. Detach the adhesive strip **(3)** that secures the display panel cable to the display panel.
8. Disconnect the display panel cable **(4)** from the display panel.



9. Remove the display panel.

Reverse this procedure to install the display bezel and panel.

Webcamera module

Description	Spare part number
Webcamera module	659516-001

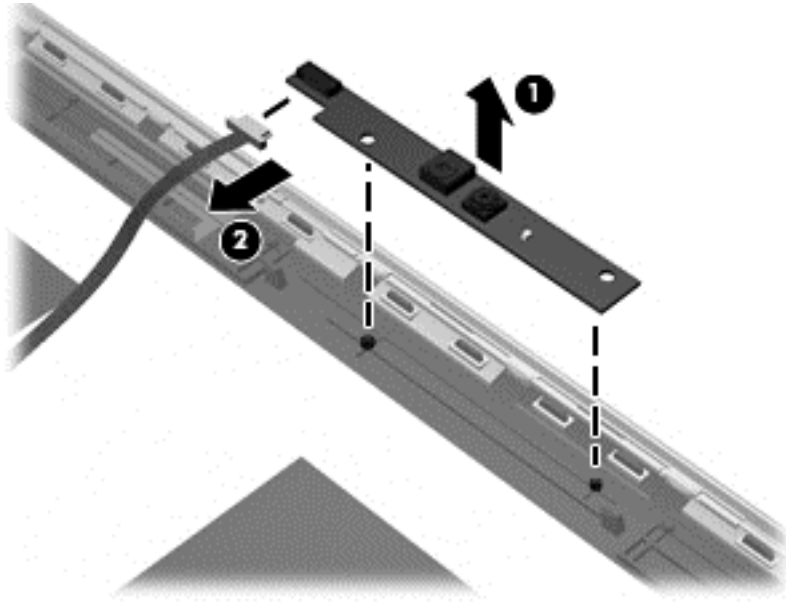
Before removing the webcamera module, follow these steps:

1. 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.
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 33](#)).
5. Remove the display bezel (see [Display panel on page 35](#)).
6. Remove the display panel (see [Display panel on page 35](#)).

Remove the webcamera module:

1. Release the webcamera module **(1)** from the display enclosure. (The webcamera module is attached to the display enclosure with double-sided tape)

2. Disconnect the webcam module cable (2) from the webcam module.




3. Remove the webcam module.

Reverse this procedure to install the webcam module.

WLAN module

Description	Spare part number
WLAN module for use in HP 3115m models:	
Ralink 3592BC8 802.11a/b/g/n 2×2 WiFi and Bluetooth 3.0+HS Combo Adapter	630813-001
Intel Centrino Advanced-N 6230 WLAN module (802.11a/b/g/n + Bluetooth)	636672-001
WLAN module for use in HP 3125 models:	
Intel Centrino Advanced-N 6235	670292-001
Ralink RT3290LE 802.11bgn 1x1 Wi-Fi and Bluetooth 4.0 Combo Adapter	690020-001

 **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. 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.
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 33](#)).

Remove the WLAN module:

1. Firmly slide and hold the battery/service cover latch **(1)** to the left to release the service cover, and then slide the service cover **(2)** toward the front of the computer as far as it will slide.

2. Remove the service cover (3) by lifting it straight up.




3. Remove the service cover. The service cover is available using spare part number 659503-001.
4. Disconnect the WLAN antenna cables (1) from the terminals on the WLAN module.

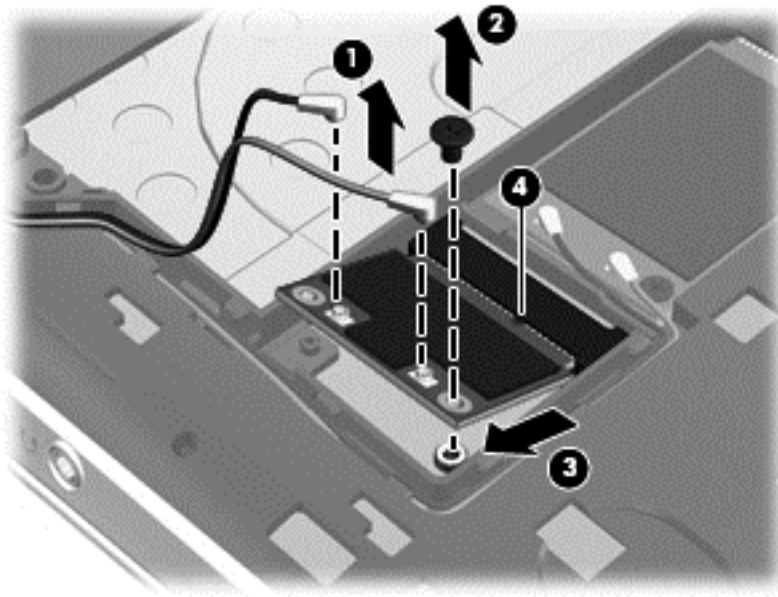



NOTE: The #1 WLAN antenna cable is connected to the WLAN module #1 terminal. The #2 WLAN antenna cable is connected to the WLAN module #2 terminal.

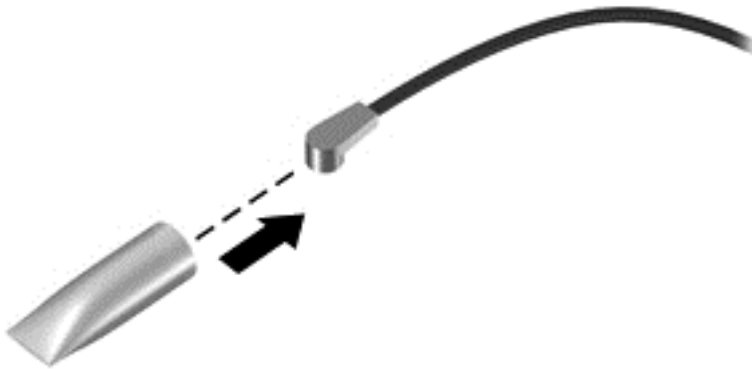
5. Remove the Phillips PM2.0×3.7 screw (2) that secures the WLAN module to the system board. (The WLAN module tilts up.)

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

 **NOTE:** WLAN modules are designed with a notch (4) to prevent incorrect insertion into the memory module slot.




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




Reverse this procedure to install the WLAN module.

WWAN module

 **NOTE:** This section applies only to computer models equipped with an Intel processor.

Description	Spare part number
HP hs2340 HSPA+ Mobile Broadband Module for use in HP 3115m models	632155-001


 **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 WWAN module, follow these steps:

1. 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.
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 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).


Remove the WWAN module:

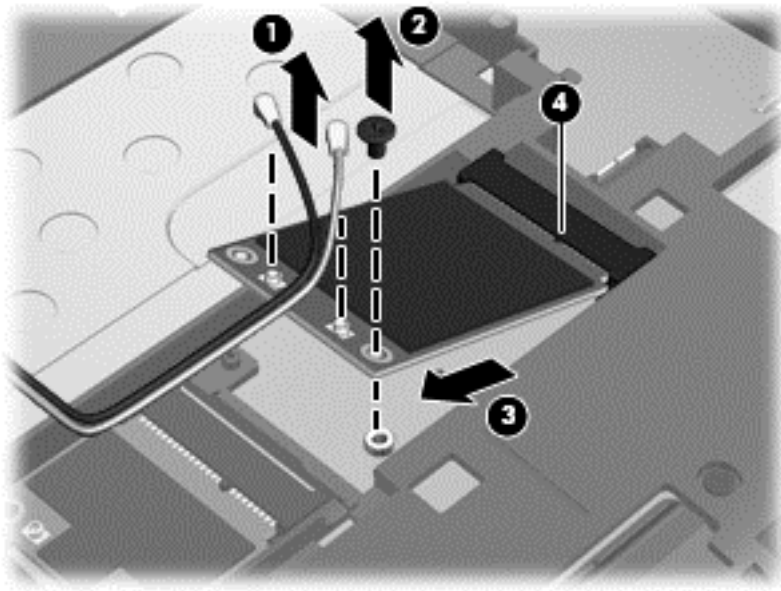
1. Disconnect the WWAN antenna cables **(1)** from the terminals on the WWAN module.


 **NOTE:** The red WLAN antenna cable is connected to the WWAN module #1 terminal. The blue WWAN antenna cable is connected to the WWAN module #2 terminal.

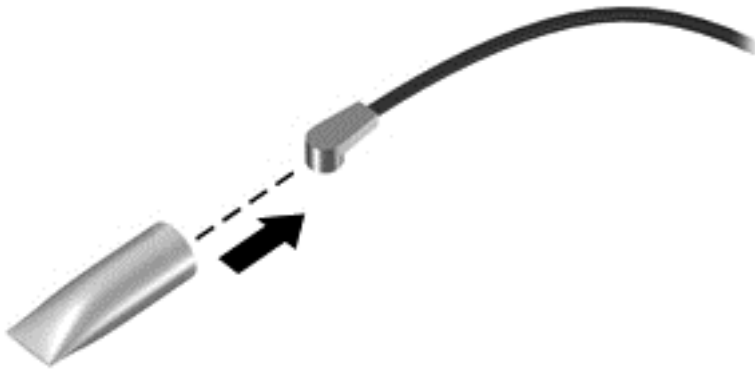
2. Remove the Phillips PM2.0×3.7 screw **(2)** that secures the WWAN module to the system board. (The WWAN module tilts up.)

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

 **NOTE:** WWAN modules are designed with a notch (4) to prevent incorrect insertion into the memory module slot.



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



Reverse this procedure to install the WWAN module.


RTC battery

Description	Spare part number
For use only on computer models with WWAN compatibility	664994-001
For use only on computer models without WWAN compatibility	599516-001

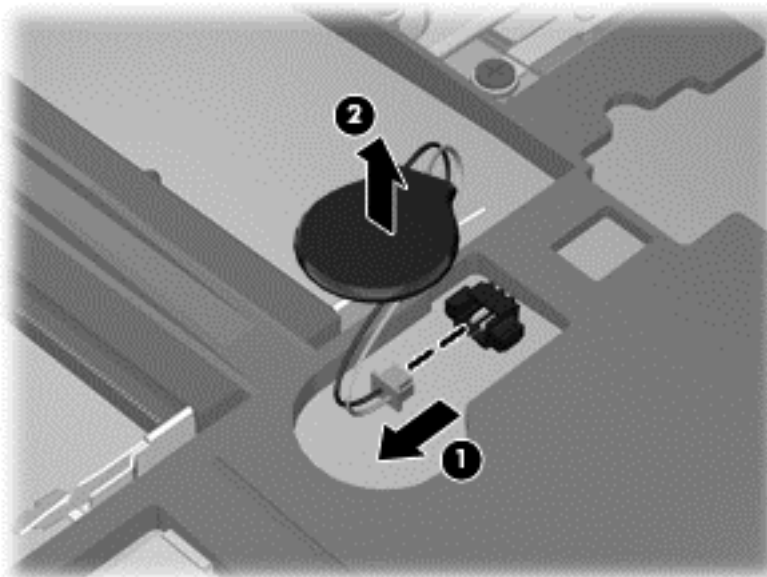
Before removing the RTC battery, follow these steps:

1. 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.
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 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).


Remove the RTC battery:

 **NOTE:** Steps 1 and 2 apply to computer models with WWAN capability. See step 3 for RTC battery removal information on computer models without WLAN capability.

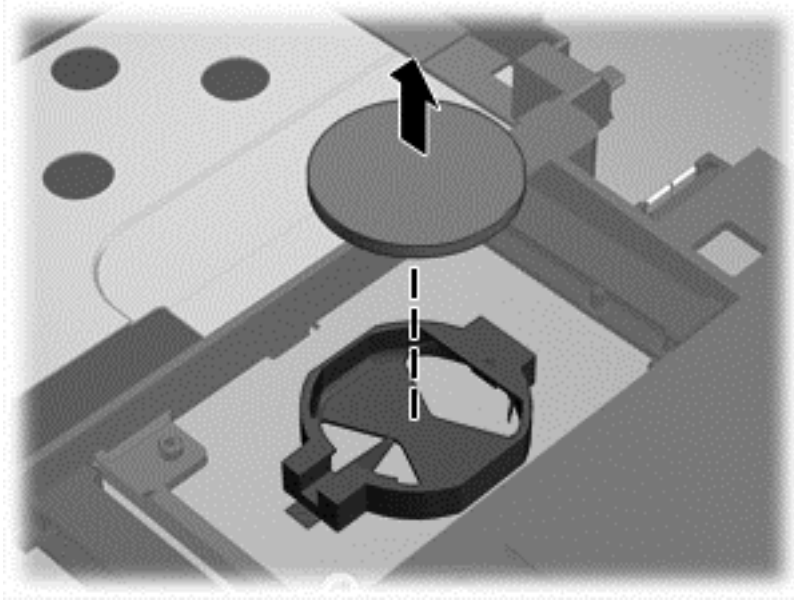
1. Disconnect the RTC battery cable (1) from the system board.
2. Remove the RTC battery (2). (The RTC battery is attached to the system board with double-sided tape.)



Reverse this procedure to install the RTC battery on a computer model with WWAN capability.

 **NOTE:** Step 3 applies to computer models without WLAN capability. See steps 1 and 2 for RTC battery removal information on computer models with WWAN capability.

3. Use a thin, non-conductive tool to remove the RTC battery from the socket on the system board.



Reverse this procedure to install the RTC battery on computer models with WLAN capability. When installing the RTC battery, make sure the “+” sign faces up.

Hard drive



NOTE: The hard drive spare part kit does not include the hard drive bracket, connector cable, isolators, or screws. These components are included in the Hard Drive Hardware Kit, spare part number 664913-001.

Description	Spare part number
Hard drives:	
500-GB, 5400-rpm, SATA, 7.0-mm	669299-001
320-GB, 7200-rpm, SATA, 7.0-mm (for use only in HP 3115m models)	634862-002
320-GB, 5400-rpm, SATA, 7.0-mm	645193-001
Solid-state drives (for use only in HP 3115m models):	
160-GB solid-state drive	659933-001
128-GB solid-state drive	675097-001

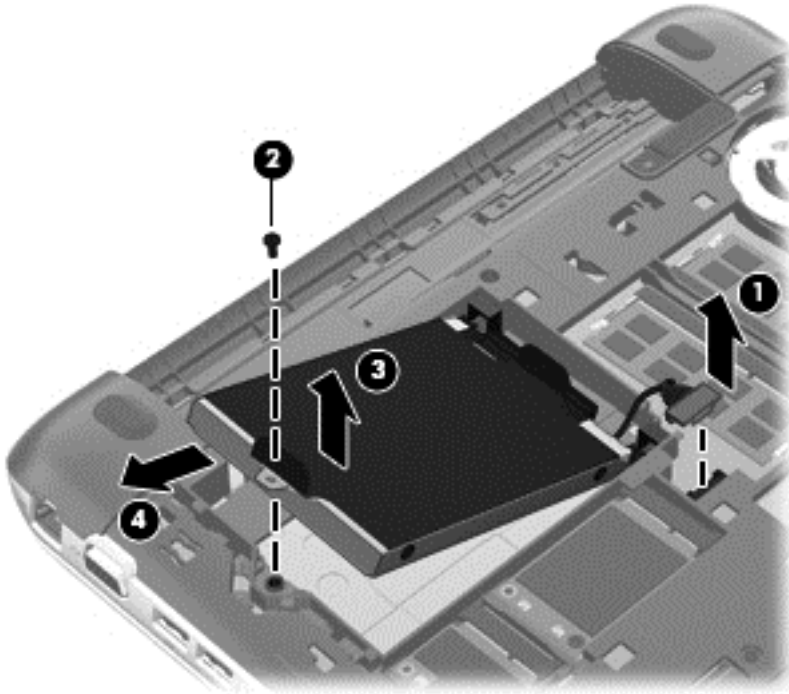
Before removing the hard drive, follow these steps:

1. 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.
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 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).

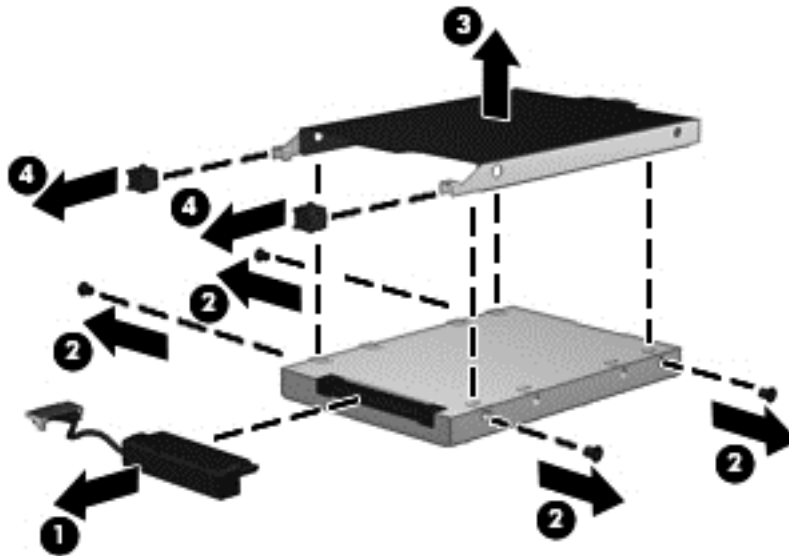
Remove the hard drive:

1. Disconnect the hard drive connector cable **(1)** from the system board.
2. Remove the Phillips PM2.5×5.7 screw **(2)** that secures the hard drive to the computer.
3. Use the tab **(3)** on the hard drive bracket to lift the left side of the hard drive until it rests at an angle.

- Slide the hard drive (4) up and to left at an angle and out of the hard drive bay.



- If it is necessary to replace the connector cable (1), the screws (2), the bracket (3), or the isolators (4), remove and replace the components. The bracket, connector cable, isolators, and screws are available in the Hard Drive Hardware Kit, spare part number 664913-001.



Reverse this procedure to reassemble and install the hard drive.

Memory module

Description	Spare part number
4-GB memory module (PC3, 12800, 1600-MHz)	641369-001
2-GB memory module (PC3, 12800, 1600-MHz)	652972-001

Before removing a memory module, follow these steps:

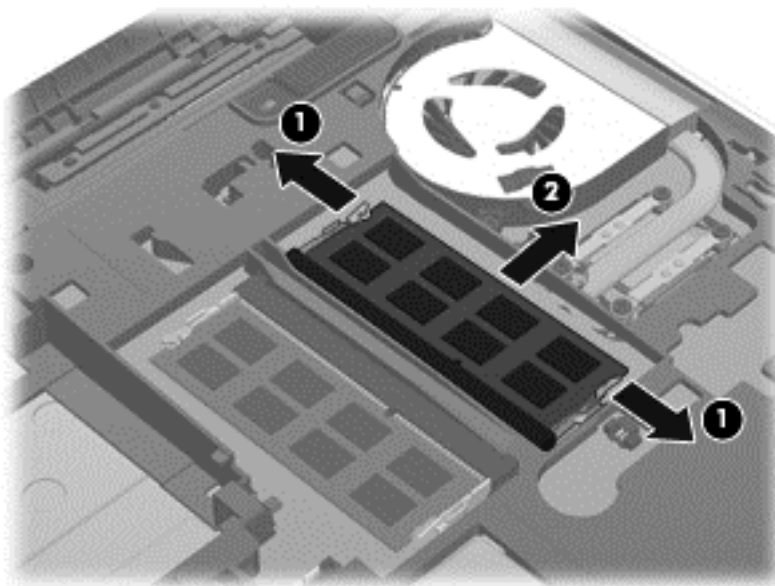
1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the battery (see [Battery on page 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).

Remove the memory module:

1. Spread the retaining tabs **(1)** on each side of the memory module slot to release the memory module. (The memory module tilts up.)

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

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



Reverse this procedure to install a memory module.

Keyboard



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

For use in country or region:	Spare part number:	For use in country or region:	Spare part number:
Keyboard in charcoal finish for use in HP 3115m models:			
Canada	659500-121	Latin America	659500-161
The United States	659500-001		
Keyboard in charcoal finish for use in HP 3125 models:			
The United States	699028-001	Latin America	699028-161
Canada	699028-DB1		

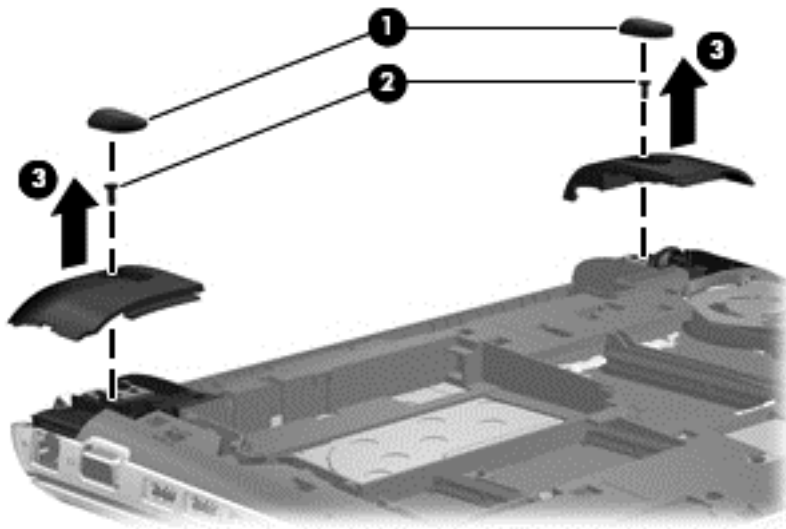
Before removing the keyboard, follow these steps:

1. 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.
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 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).

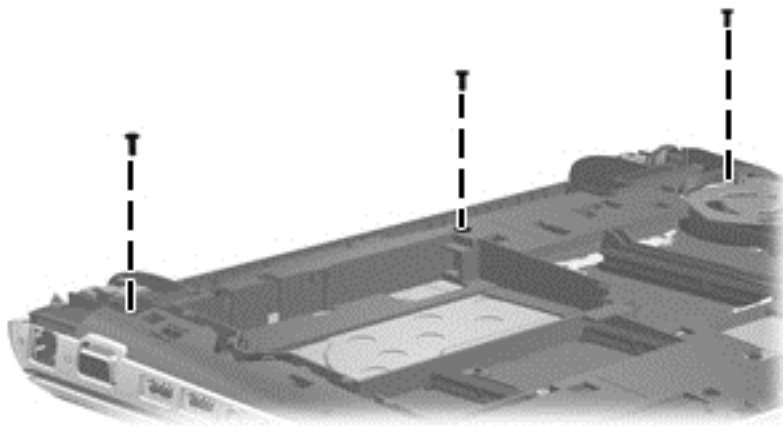
Remove the keyboard:

1. Remove the two rubber feet **(1)** that are attached to the rear corner covers. The rubber feet are attached to the rear corner covers by double-sided tape and are included in the Rubber Kit, spare part number 664996-001.
2. Remove the two Phillips PM2.0×5.7 screws **(2)** that secure the rear corner covers to the computer.

3. Remove the rear corner covers (3). The rear corner covers are included in the Rubber Kit, spare part number 664996-001.

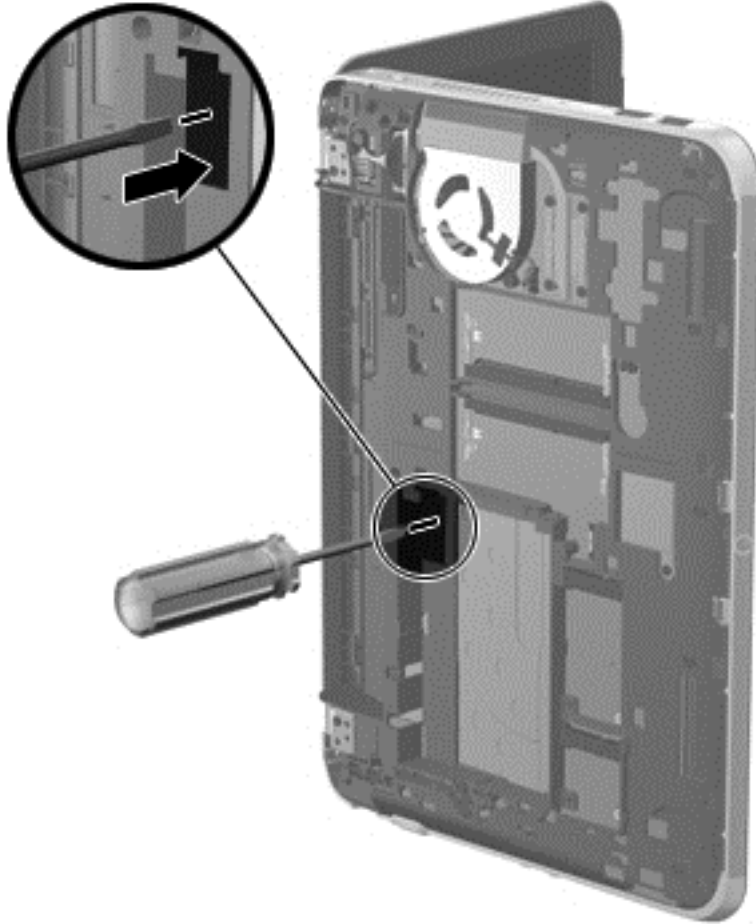


4. Remove the three Phillips PM2.0×5.7 screws that secure the keyboard to the computer.



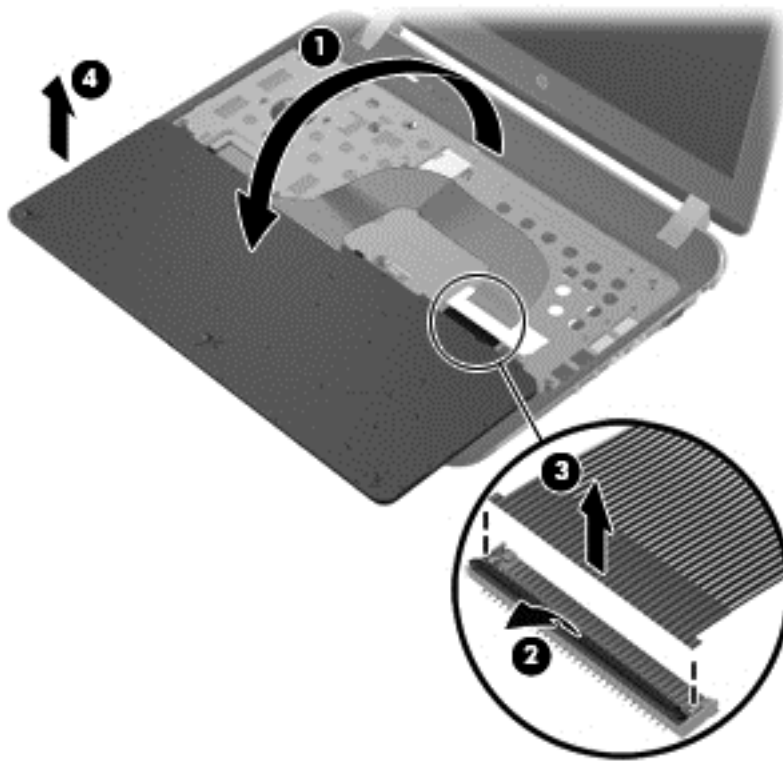
5. Rest and secure the computer on its right side.
6. Partially open the computer.

7. Insert a screwdriver or similar thin tool into the keyboard release opening, and then press on the back of the keyboard until the keyboard disengages from the computer.




8. Turn the computer right-side up with the front toward you.
9. Lift the rear edge of the keyboard (1), and then swing the keyboard up and forward until it rests upside down on the palm rest.
10. 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.

11. Remove the keyboard (3).



Reverse this procedure to install the keyboard.

Display assembly

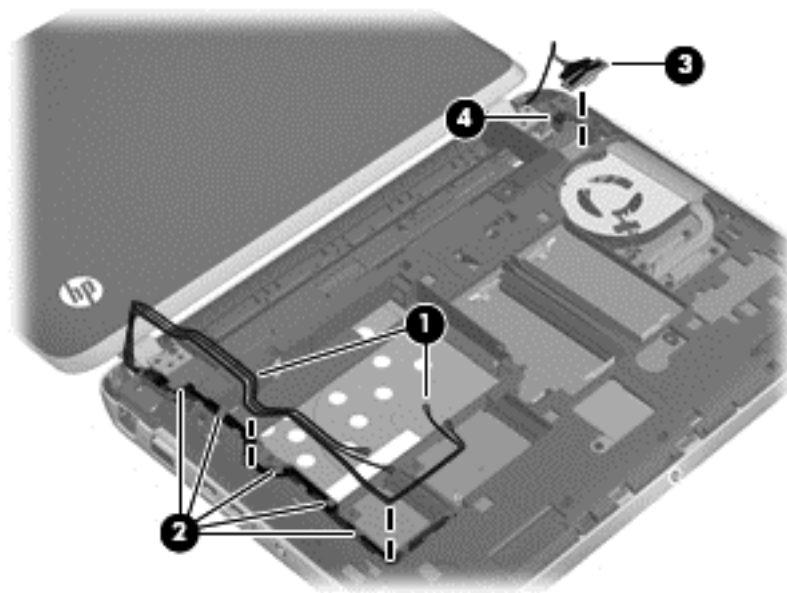
 **NOTE:** The display assembly subcomponents are spared as individual components.

Before removing the display assembly subcomponents, follow these steps:

1. 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.
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 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).
6. Remove the rear covers (see [Keyboard on page 48](#)).

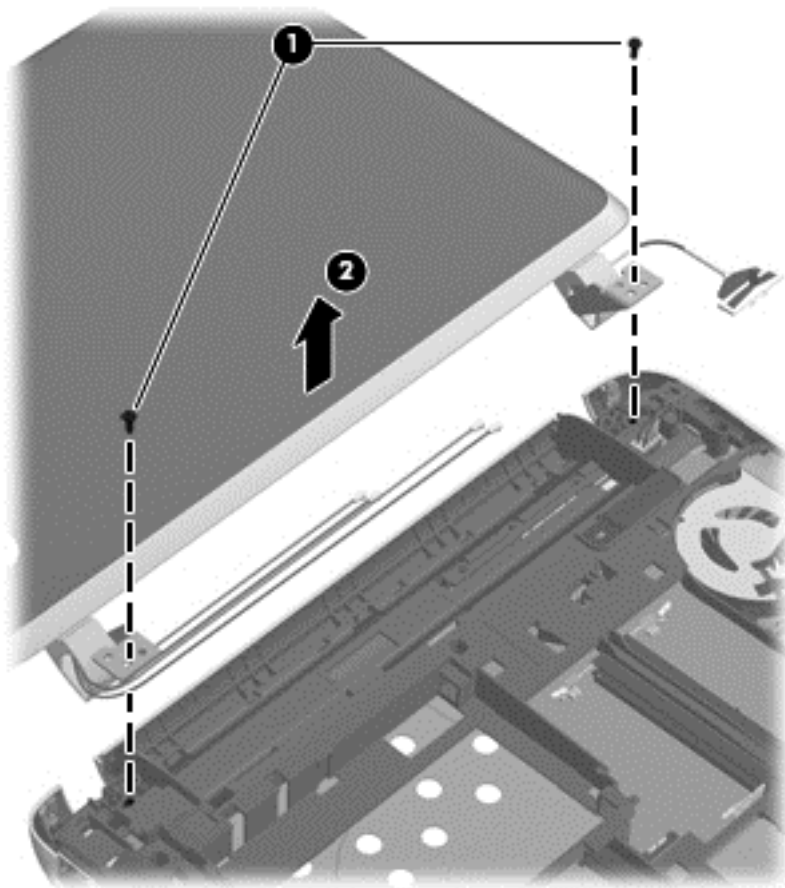
Remove the display assembly subcomponents:


1. Release the wireless antenna cables (1) from the clips (2) and routing channel built into the base enclosure.
2. Disconnect the display panel cable (3) from the system board.
3. Release the display panel cable (4) from the clip built into the base enclosure.



4. Remove the two Phillips PM2.0×5.7 screws (1) that secure the display assembly to the computer.

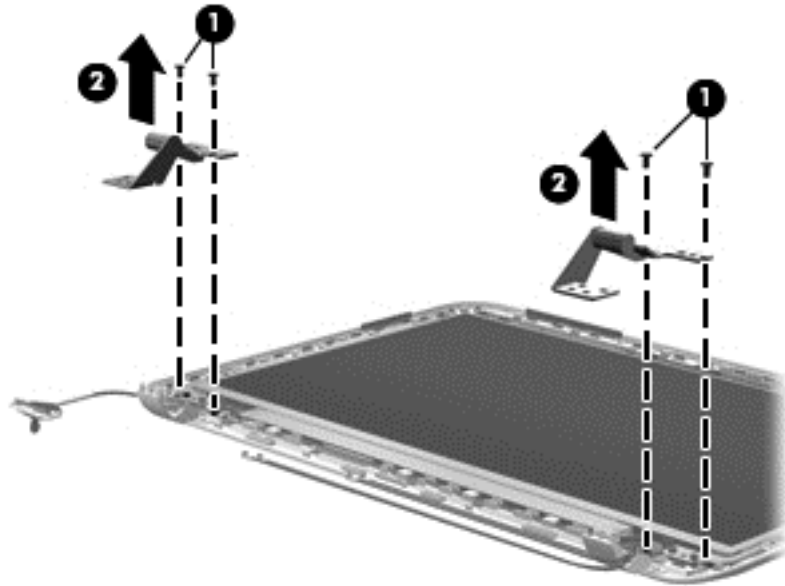
5. Remove the display assembly (2).



 **NOTE:** See [Display panel on page 35](#) and [Webcamera module on page 36](#) for display bezel, display panel, and webcamera module removal procedures.

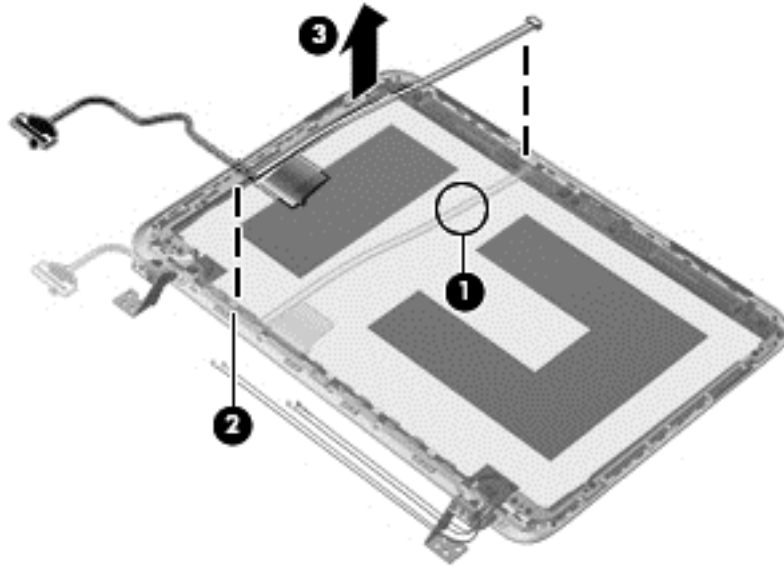
6. If it is necessary to replace the hinges:
 - a. Remove the display assembly.
 - b. Remove the display bezel.
 - c. Remove the display panel.
 - d. Remove the four Phillips PM2.0×4.2 (1) screws that secure the hinges to the display enclosure.

- e. Remove the hinges **(2)**. The hinges are available in the Display Hinge Kit, spare part number 659499-001.



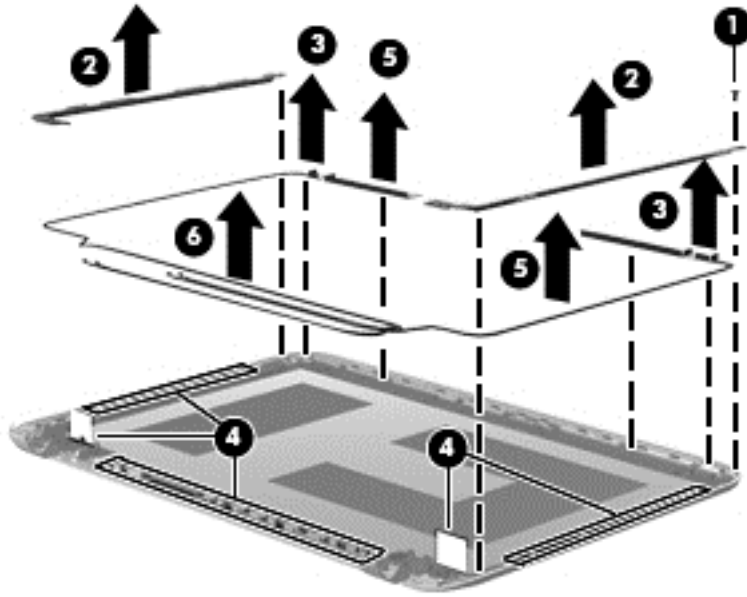
- 7. If it is necessary to replace the display panel cable:
 - a. Remove the display assembly.
 - b. Remove the display bezel.
 - c. Remove the display panel.
 - d. Remove the left display hinge.
 - e. Release the webcam cable **(1)** from the display enclosure. (The webcam cable is attached to the display enclosure with double-sided tape.)
 - f. Release the display panel cable from the clip **(2)** built into the display enclosure near the left display hinge area.

- g.** Remove the display panel cable (**3**). The display panel cable is available in the Display Cable Kit, spare part number 659498-001.



- 8.** If it is necessary to replace the wireless antenna cables and transceivers:
- a.** Remove the display assembly.
 - b.** Remove the display bezel.
 - c.** Remove the display panel.
 - d.** Remove the display hinges.
 - e.** Remove the Phillips PM2.0×4.2 screw (**1**) that secures the right enclosure bracket to the display enclosure.
 - f.** Remove the left and right enclosure brackets (**2**). The left and right display enclosure brackets are included in the Display Hinge Kit, spare part number 659499-001.
 - g.** Release the wireless antenna cables (**3**) from the clips (**4**) and routing channels built into the display enclosure.
 - h.** Detach the WLAN transceivers (**5**) from the display enclosure. (The transceivers are attached to the display enclosure with double-sided tape.)

- i. Remove the wireless antenna cables and transceivers (6). The WLAN antenna are available in the Wireless Antenna Kit, spare part number 659492-001.



Reverse this procedure to reassemble and install the display assembly.

Top cover

Description	Spare part number
Top cover in charcoal finish (includes power button board and cable and TouchPad and TouchPad cable)	659513-001

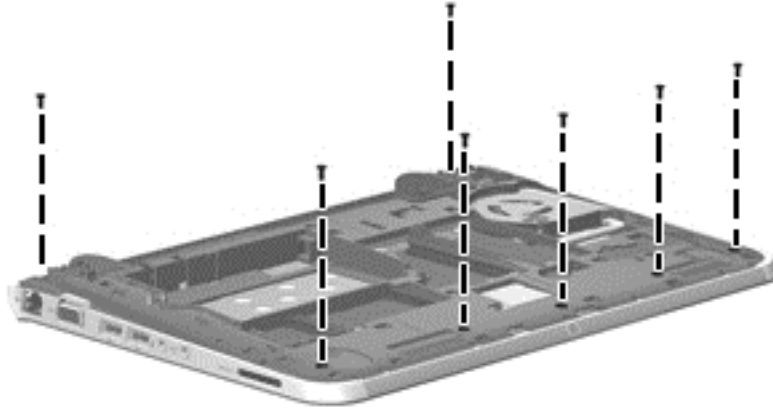
Before removing the top cover, follow these steps:

1. 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.
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 33](#)).
5. Remove the service cover (see [WLAN module on page 38](#)).
6. Remove the keyboard (see [Keyboard on page 48](#)).
7. Remove the display assembly (see [Display assembly on page 52](#)).

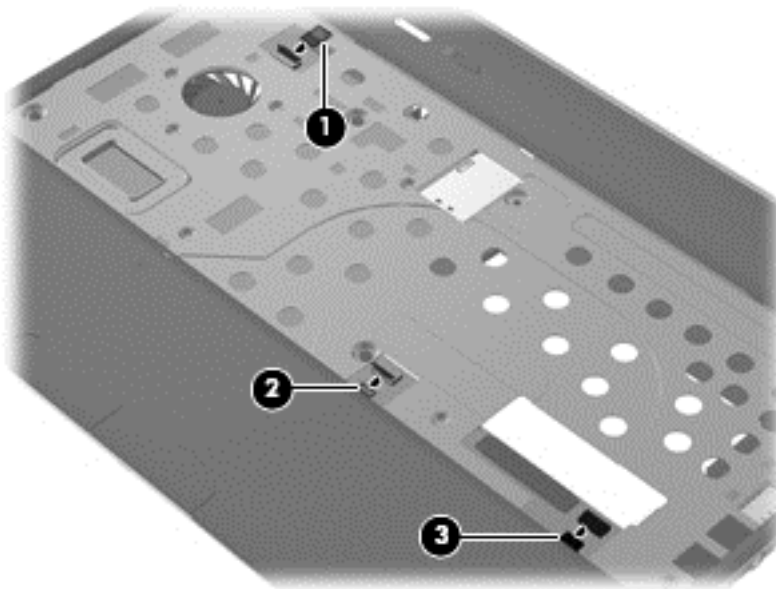
When replacing the top cover, be sure that the TouchPad button board and cable (see [TouchPad button board on page 60](#)) and speakers (see [Speakers on page 58](#)) are removed from the defective top cover and installed on the replacement top cover.

Remove the top cover:

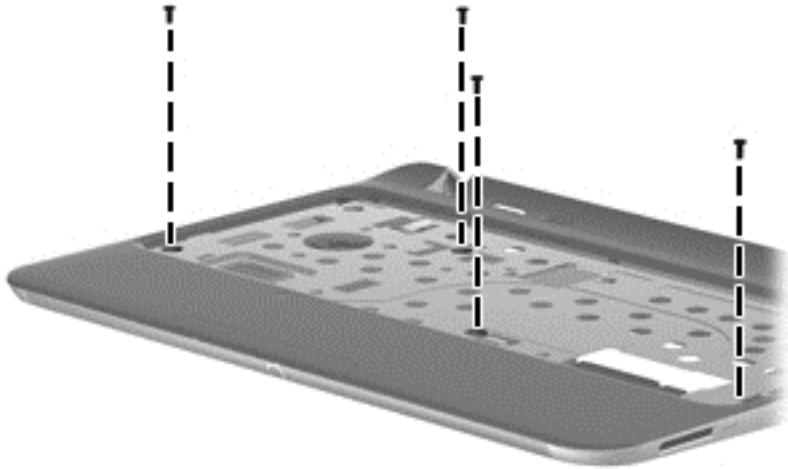
1. Close the computer.
2. Turn the computer upside down, with the front toward you.
3. Remove the seven Phillips PM2.5×7.0 screws that secure the top cover to the computer.



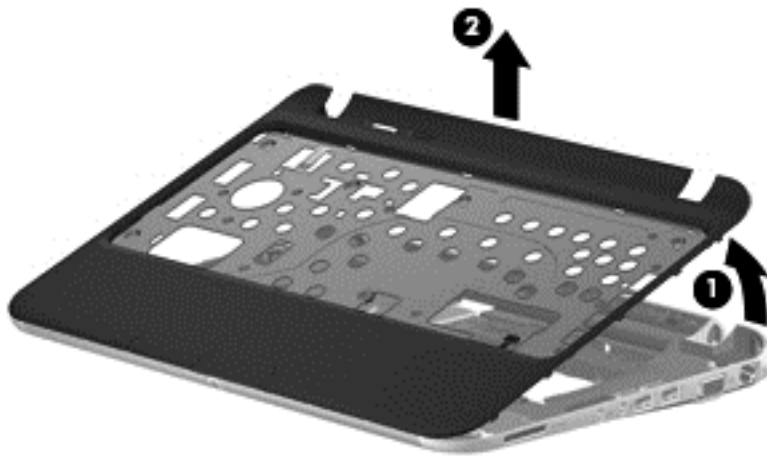
4. Turn the computer right-side up, with the front toward you.
5. Open the computer.
6. Disconnect the following cables from the system board:
 - (1) Power button board cable
 - (2) TouchPad button board cable
 - (3) Speaker cable



7. Remove the four Phillips PM2.5×7.0 screws that secure the top cover to the computer.



8. Lift the rear edge of the top cover (1) until the left and right sides disengage from the base enclosure.
9. Remove the top cover (2).



Reverse this procedure to install the top cover.

Speakers

Description	Spare part number
Speaker Kit (includes left and right speakers and cable)	659508-001

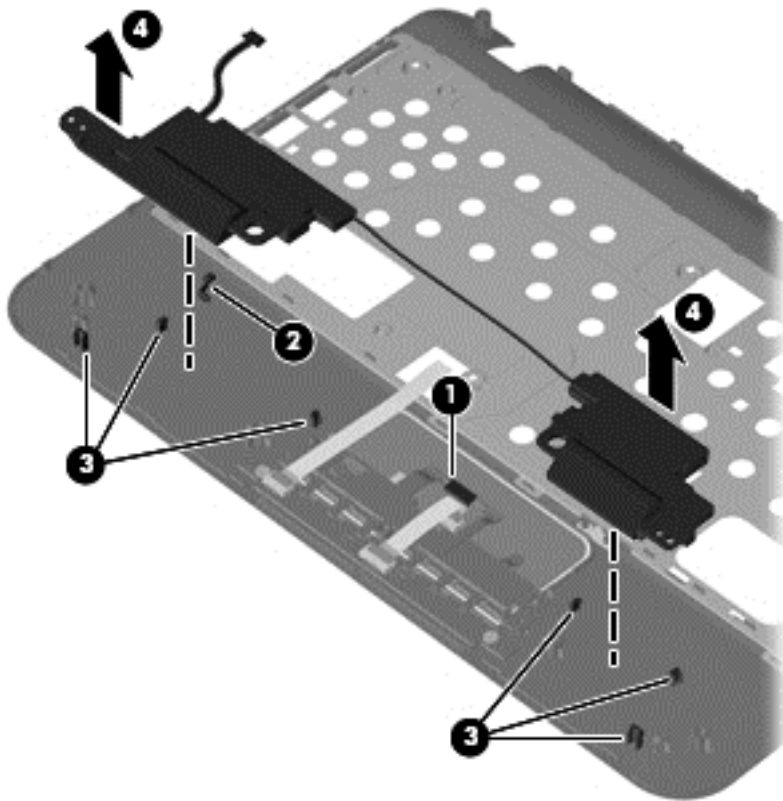
Before removing the speakers, follow these steps:

1. 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.
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 33](#)), and then remove the following components:
 - a. Service cover (see [WLAN module on page 38](#))
 - b. Keyboard (see [Keyboard on page 48](#))
 - c. Top cover (see [Top cover on page 56](#))

Remove the speakers:

1. Turn the top cover upside down, with the front edge toward you.
2. Release the speaker cables from the clips built into the TouchPad (1) and top cover (2).
3. Release the speakers from the clips (3) built into the top cover.
4. Remove the speakers and cables (4).



Reverse this procedure to install the speakers.

TouchPad button board

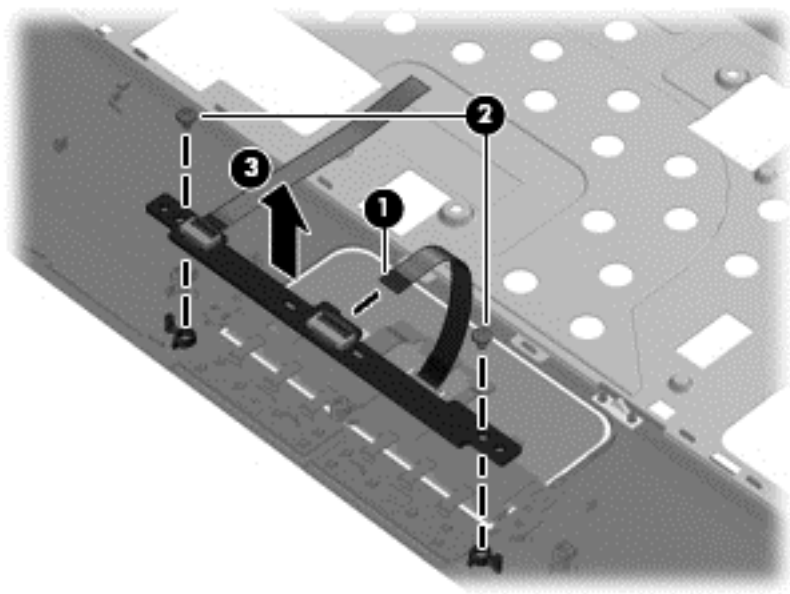
Description	Spare part number
TouchPad button board (includes cable)	664993-001

Before removing the TouchPad button board, follow these steps:

1. 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.
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 33](#)), and then remove the following components:
 - a. Service cover (see [WLAN module on page 38](#))
 - b. Keyboard (see [Keyboard on page 48](#))
 - c. Top cover (see [Top cover on page 56](#))

Remove the TouchPad button board and cable:

1. Turn the top cover upside down, with the front edge toward you.
2. Release the ZIF connector to which the TouchPad cable is attached, and then disconnect the TouchPad cable **(1)** from the TouchPad button board.
3. Remove the two Phillips PM2.0×3.8 screws **(2)** that secure the TouchPad button board to the top cover.
4. Remove the TouchPad button board **(3)** and cable.



Reverse this procedure to install the TouchPad button board and cable.

System board



NOTE: The system board spare part kit includes replacement thermal material.

Description	Spare part number
System board for use in HP 3115m models:	
AMD E450 processor and WWAN capability	659512-001
AMD E450 processor but not WWAN capability	659511-001
AMD E300 processor and WWAN capability	659510-001
AMD E300 processor but not WWAN capability	659509-001
System board for use in HP 3125 models:	
AMD E2-2000 processor without WWAN capability and without Windows 8	702958-001
AMD E2-2000 processor without WWAN capability with Windows 8 Standard	702958-501
AMD E2-2000 processor without WWAN capability with Windows 8 Professional	702958-601
AMD E1-1500 processor without Windows 8	702960-001
AMD E1-1500 processor with Windows 8 Standard	702960-501
AMD E1-1500 processor with Windows 8 Professional	702960-601

Before removing the system board, follow these steps:

1. 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.
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 33](#)).
5. Remove the WLAN module (see [WLAN module on page 38](#)).
6. Remove the WWAN module (see [WWAN module on page 41](#)).
7. Disconnect the hard drive connector cable from the system board (see [Hard drive on page 45](#)).
8. Remove the keyboard (see [Keyboard on page 48](#)).
9. Disconnect the display panel cable from the system board (see [Display assembly on page 52](#)).
10. Remove the top cover (see [Top cover on page 56](#)).

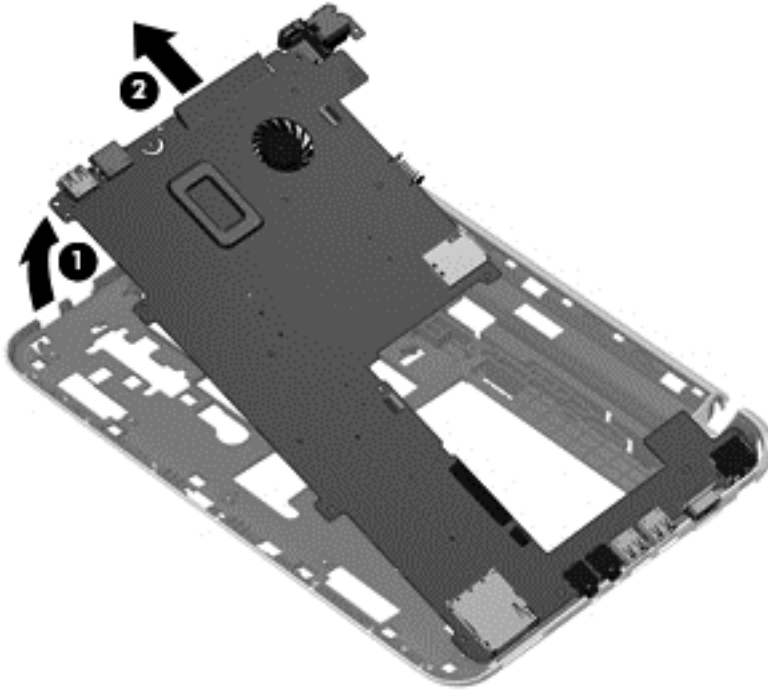
When replacing the system board, be sure that the following components are removed from the defective system board and installed on the replacement system board:

- SIM (see [SIM on page 34](#))
- RTC battery (see [RTC battery on page 43](#))

- Memory module (see [Memory module on page 47](#))
- Power connector cable (see [Power connector cable on page 63](#))
- Fan (see [Fan on page 64](#))
- Heat sink (see [Heat sink on page 66](#))

Remove the system board:

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



Reverse this procedure to install the system board.

Power connector cable

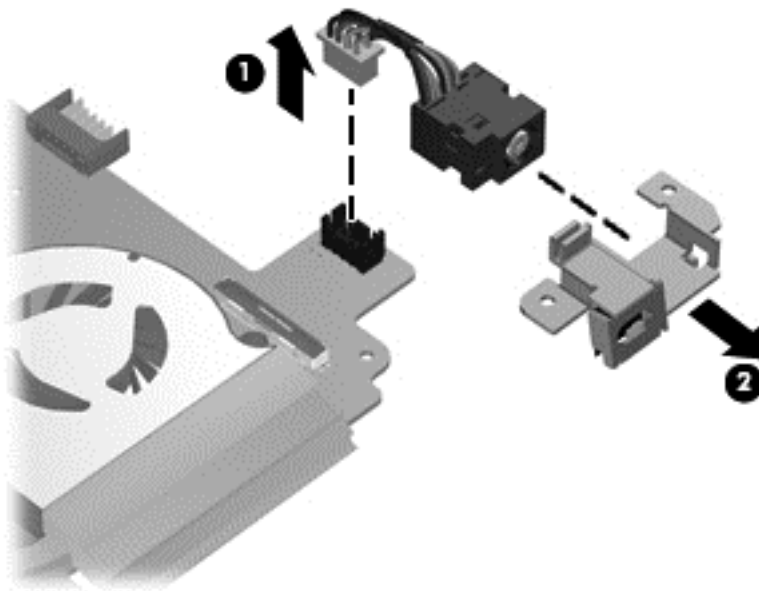
Description	Spare part number
Power connector cable (includes bracket)	664995-001

Before removing the power connector cable, follow these steps:

1. 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.
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 33](#)), and then remove the following components:
 - a. Service cover (see [WLAN module on page 38](#))
 - b. Keyboard (see [Keyboard on page 48](#))
 - c. Top cover (see [Top cover on page 56](#))
 - d. System board (see [System board on page 61](#))

Remove the power connector cable:

1. Turn the system board upside down, with the right side toward you.
2. Disconnect the power connector cable (1) from the system board.
3. If necessary, separate the power connector bracket (2) from the power connector.



Reverse this procedure to install the power connector cable and bracket.

Fan

Description	Spare part number
Fan	665000-001



NOTE: To properly ventilate the computer, allow at least 7.6 cm (3 in) of clearance on the left side of the computer. The computer uses an electric fan for ventilation. The fan is controlled by a temperature sensor and is designed to turn on automatically when high temperature conditions exist. These conditions are affected by high external temperatures, system power consumption, power management/battery conservation configurations, battery fast charging, and software requirements. Exhaust air is displaced through the ventilation grill located on the left side of the computer.

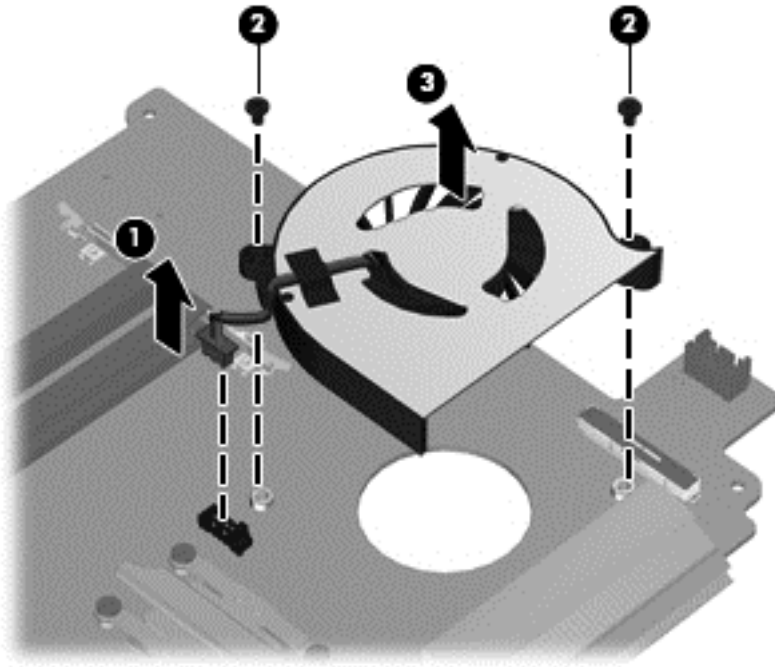
Before removing the fan, follow these steps:

1. 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.
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 33](#)), and then remove the following components:
 - a. Service cover (see [WLAN module on page 38](#))
 - b. Keyboard (see [Keyboard on page 48](#))
 - c. Top cover (see [Top cover on page 56](#))
 - d. System board (see [System board on page 61](#))

Remove the fan:

1. Turn the system board upside down, with the front toward you.
2. Disconnect the fan cable **(1)** from the system board.
3. Remove the two Phillips PM2.0×4.6 screws **(2)** that secure the fan to the system board.


4. Remove the fan (3).



Reverse this procedure to install the fan.

Heat sink

Description	Spare part number
Heat sink (includes replacement thermal material)	664999-001


 **NOTE:** To properly ventilate the computer, allow at least 7.6 cm (3 in) of clearance on the left side of the computer. The computer uses an electric fan for ventilation. The fan is controlled by a temperature sensor and is designed to turn on automatically when high temperature conditions exist. These conditions are affected by high external temperatures, system power consumption, power management/battery conservation configurations, battery fast charging, and software requirements. Exhaust air is displaced through the ventilation grill located on the left side of the computer.


Before removing the heat sink, follow these steps:

1. 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.
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 33](#)), and then remove the following components:
 - a. Service cover (see [WLAN module on page 38](#))
 - b. Keyboard (see [Keyboard on page 48](#))
 - c. Top cover (see [Top cover on page 56](#))
 - d. System board (see [System board on page 61](#))

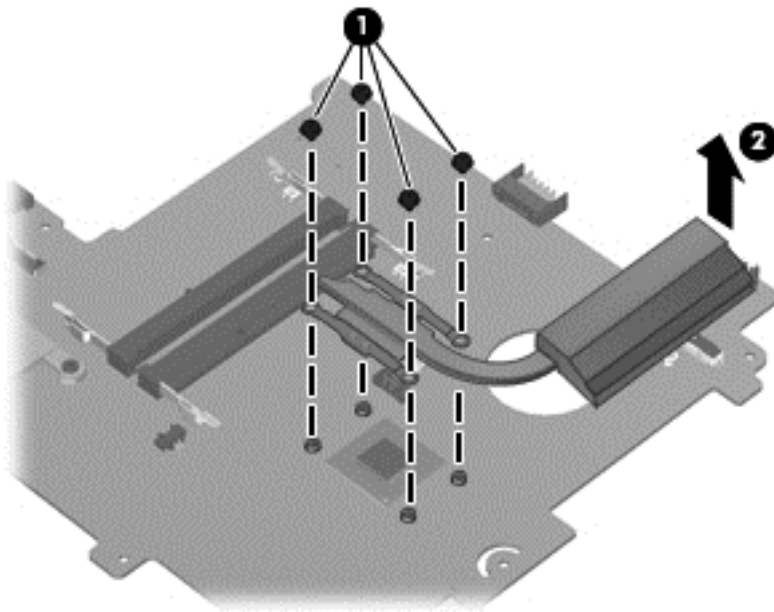
Remove the heat sink:


1. Turn the system board upside down, with the front toward you.
2. Loosen the captive screws **(1)** that secure the heat sink to the system board.

 **NOTE:** The number of screws used to secure the heat sink to the system board varies by computer model.

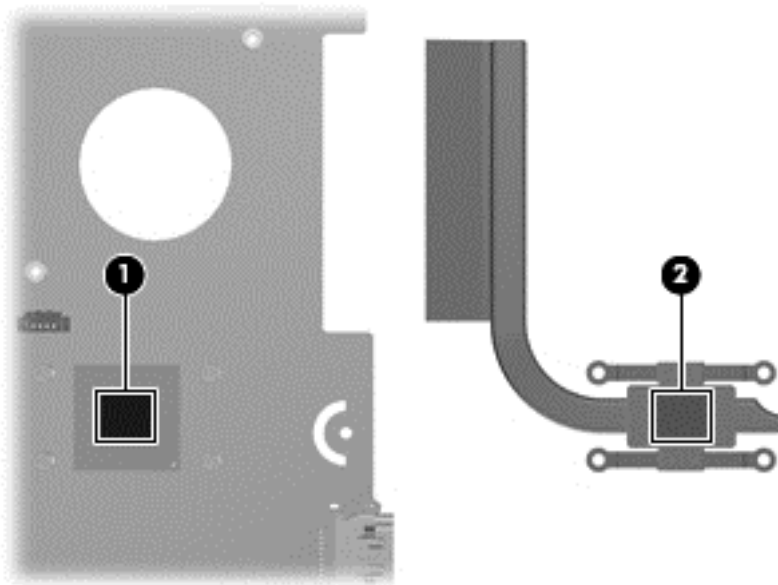
 **NOTE:** Due to the adhesive quality of the thermal material located between the heat sink and system board components, it may be necessary to move the heat sink from side to side to detach it.

3. Remove the heat sink **(2)**.



 **NOTE:** The thermal material must be thoroughly cleaned from the surfaces of the heat sink and the system board components each time the heat sink is removed. Replacement thermal material is included with the heat sink and system board spare part kits.

The following illustration shows the replacement thermal material locations on a computer model equipped with an AMD processor and a graphics subsystem with discrete memory. Thermal paste is used on the processor (1) and the heat sink section (2) that services it.




Reverse this procedure to install the heat sink.


5 Computer Setup (BIOS) and Advanced System Diagnostics in Windows 7

Using Computer Setup

Computer Setup, 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). Computer Setup includes settings for the types of devices installed, the startup sequence of the computer, and the amount of system and extended memory.

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

Starting Computer Setup

 **NOTE:** An external keyboard or mouse connected to a USB port can be used with Computer Setup only if USB legacy support is enabled.


To start Computer Setup, follow these steps:

1. Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
2. Press **f10** to enter Computer Setup.

Navigating and selecting in Computer Setup

To navigate and select in Computer Setup, follow these steps:

1. Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
 - To select a menu or a menu item, use the **tab** key and the keyboard arrow keys and then press **enter**, or use a pointing device to click the item.
 - To scroll up and down, click the up arrow or the down arrow in the upper-right corner of the screen, or use the up arrow key or the down arrow key.
 - To close open dialog boxes and return to the main Computer Setup screen, press **esc**, and then follow the on-screen instructions.

 **NOTE:** You can use either a pointing device (TouchPad, pointing stick, or USB mouse) or the keyboard to navigate and make selections in Computer Setup.

2. Press **f10** to enter Computer Setup.

To exit Computer Setup menus, choose one of the following methods:

- To exit Computer Setup menus without saving your changes:

Click the **Exit** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the **tab** key and the arrow keys to select **File > Ignore Changes and Exit**, and then press **enter**.

- To save your changes and exit Computer Setup menus:

Click the **Save** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the **tab** key and the arrow keys to select **File > Save Changes and Exit**, and then press **enter**.

Your changes go into effect when the computer restarts.

Restoring factory settings in Computer Setup



NOTE: Restoring defaults will not change the hard drive mode.

To return all settings in Computer Setup to the values that were set at the factory, follow these steps:

1. Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
2. Press **f10** to enter Computer Setup.
3. Use a pointing device or the arrow keys to select **File > Restore Defaults**.
4. Follow the on-screen instructions.
5. To save your changes and exit, click the **Save** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the arrow keys to select **File > Save Changes and Exit**, and then press **enter**.

Your changes go into effect when the computer restarts.



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

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 Computer Setup.

1. Start Computer Setup.
2. Use a pointing device or the arrow keys to select **File > System Information**.
3. To exit Computer Setup without saving your changes, click the **Exit** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the **tab** key and the arrow keys to select **File > Ignore Changes and Exit**, 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 on the computer by unplugging the power cord from the AC outlet.

Do not shut down the computer or initiate sleep.

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

1. From the Start screen, type `help` and then select **Help and Support**.
2. In the **Help and Support** search box, type `maintain`, and then follow the on-screen instructions to identify your computer and access the BIOS update you want to download.
3. At the download area, follow these steps:
 - a. Identify the BIOS update that is later than the BIOS version currently installed on your computer. Make a note of the date, name, or other identifier. You may need this information to locate the update later, after it has been downloaded to your hard drive.
 - b. Follow the on-screen instructions to download your selection to the hard drive.

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


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

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

1. From the Start screen, type `explorer`, and then select **File Explorer**.
2. Double-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 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:

- **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.
- **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 HP support to report the issue and purchase a replacement battery.
- **BIOS Management**—You can update or rollback the version of the BIOS on the system. Do not shut down or remove external power during the process. You will be given a confirmation screen before your BIOS is modified. Select **BIOS update**, **BIOS Rollback**, or **Back to main menu**.

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

To start Advanced System Diagnostics:

1. Turn on or restart the computer. While the “Press the ESC key for Startup Menu” message is displayed in the lower-left corner of the screen, 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**.


6 Computer Setup (BIOS) and Advanced System Diagnostics in Windows 8

Using Computer Setup

Computer Setup, 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). Computer Setup includes settings for the types of devices installed, the startup sequence of the computer, and the amount of system and extended memory.

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

Starting Computer Setup

 **NOTE:** An external keyboard or mouse connected to a USB port can be used with Computer Setup only if USB legacy support is enabled.


To start Computer Setup, follow these steps:

1. Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
2. Press **f10** to enter Computer Setup.

Navigating and selecting in Computer Setup

To navigate and select in Computer Setup, follow these steps:

1. Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
 - To select a menu or a menu item, use the **tab** key and the keyboard arrow keys and then press **enter**, or use a pointing device to click the item.
 - To scroll up and down, click the up arrow or the down arrow in the upper-right corner of the screen, or use the up arrow key or the down arrow key.
 - To close open dialog boxes and return to the main Computer Setup screen, press **esc**, and then follow the on-screen instructions.

 **NOTE:** You can use either a pointing device (TouchPad, pointing stick, or USB mouse) or the keyboard to navigate and make selections in Computer Setup.

2. Press **f10** to enter Computer Setup.

To exit Computer Setup menus, choose one of the following methods:

- To exit Computer Setup menus without saving your changes:

Click the **Exit** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the **tab** key and the arrow keys to select **File > Ignore Changes and Exit**, and then press **enter**.

- To save your changes and exit Computer Setup menus:

Click the **Save** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the **tab** key and the arrow keys to select **File > Save Changes and Exit**, and then press **enter**.

Your changes go into effect when the computer restarts.

Restoring factory settings in Computer Setup



NOTE: Restoring defaults will not change the hard drive mode.

To return all settings in Computer Setup to the values that were set at the factory, follow these steps:

1. Turn on or restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
2. Press **f10** to enter Computer Setup.
3. Use a pointing device or the arrow keys to select **File > Restore Defaults**.
4. Follow the on-screen instructions.
5. To save your changes and exit, click the **Save** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the arrow keys to select **File > Save Changes and Exit**, and then press **enter**.

Your changes go into effect when the computer restarts.



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

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 Computer Setup.

1. Start Computer Setup.
2. Use a pointing device or the arrow keys to select **File > System Information**.
3. To exit Computer Setup without saving your changes, click the **Exit** icon in the lower-left corner of the screen, and then follow the on-screen instructions.

– or –

Use the **tab** key and the arrow keys to select **File > Ignore Changes and Exit**, 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 on the computer by unplugging the power cord from the AC outlet.

Do not shut down the computer or initiate sleep.

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

1. From the Start screen, type `help` and then select **Help and Support**.
2. In the **Help and Support** search box, type `maintain`, and then follow the on-screen instructions to identify your computer and access the BIOS update you want to download.
3. At the download area, follow these steps:
 - a. Identify the BIOS update that is later than the BIOS version currently installed on your computer. Make a note of the date, name, or other identifier. You may need this information to locate the update later, after it has been downloaded to your hard drive.
 - b. Follow the on-screen instructions to download your selection to the hard drive.

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



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

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

1. From the Start screen, type `explorer`, and then select **File Explorer**.
2. Double-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 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:

- **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.
- **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 HP support to report the issue and purchase a replacement battery.
- **BIOS Management**—You can update or rollback the version of the BIOS on the system. Do not shut down or remove external power during the process. You will be given a confirmation screen before your BIOS is modified. Select **BIOS update**, **BIOS Rollback**, or **Back to main menu**.

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

To start Advanced System Diagnostics:

1. Turn on or restart the computer. While the “Press the ESC key for Startup Menu” message is displayed in the lower-left corner of the screen, 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**.

7 Specifications

Computer specifications

	Metric	U.S.
Dimensions		
Width	29.16 cm	11.48 in
Depth	2.15 cm	8.46 in
Height (front to back)	2.11 to 3.19 cm	0.83 to 1.26 in
Weight		
With 6-cell battery	1.60 kg	3.53 lb
With 3-cell battery	1.46 kg	3.22 lb
Input power		
Operating voltage and current	18.5 V dc @ 3.5 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 (noncondensing)		
Operating	10% to 90%	
Nonoperating	5% to 95%	
Maximum altitude (unpressurized)		
Operating	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating	-15 m to 12,192 m	-50 ft to 40,000 ft
NOTE: Applicable product safety standards specify thermal limits for plastic surfaces. The device operates well within this range of temperatures.		

11.6-inch display specifications

	Metric	U.S.
Dimensions		
Height	14.70 cm	5.79 in
Width	25.90 cm	10.20 in
Diagonal	29.50 cm	11.61 in
Number of colors	Up to 16.8 million	
Contrast ratio	200:1 (typical)	
Brightness	200 nits (typical)	
Pixel resolution		
Pitch	0.197 mm × 0.197 mm	
Format	1366 × 768	
Configuration	RGB vertical stripe	
Backlight	LED	
Character display	80 × 25	
Total power consumption	2.0 W	
Viewing angle	±65° horizontal, ±50° vertical (typical)	

Hard drive specifications


	*640-GB	*500-GB	*320-GB	*250-GB
Dimensions				
Height	9.5 mm	9.5 mm	9.5 and 7.0 mm	9.5 and 7.0 mm
Length	100.2 mm	100.4 mm	100.4 mm	100.4 mm
Width	69.9 mm	69.9 mm	69.9 mm	69.9 mm
Weight	98 g	110 g	110 g	110 g
Interface type	SATA	SATA	SATA	SATA
Transfer rate				
Synchronous (maximum)	106 MB/sec	1.1 GB/sec	1.1 GB/sec	1.1 GB/sec
Security	ATA security	ATA security	ATA security	ATA security
Seek times (typical read, including setting)				
Single track	1.5 ms	1.5 ms	1.5 ms	1.5 ms
Average (read/write)	12/13 ms	11/13 ms	11/13 ms	11/13 ms
Maximum	24 ms	22 ms	22 ms	22 ms
Logical blocks	1,250,263,728	976,773,168	628,142,448	488,397,168
Disk rotational speed	5400 rpm	7200 and 5400 rpm	7200 and 5400 rpm	5400 rpm
Operating temperature	0°C to 60°C (32°F to 140°F)			
*1 GB = 1 billion bytes when referring to hard drive storage capacity. Actual accessible capacity is less.				
NOTE: Certain restrictions and exclusions apply. Contact technical support for details.				

8 Backup and recovery in Windows 7


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

Windows Backup and Restore provides the following options:

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

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

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

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


Creating recovery media with HP Recovery Disc Creator

HP Recovery Disc Creator is a software program that offers an alternative way to create recovery media. After you successfully set up the computer, you can create recovery media using HP Recovery Disc Creator. This recovery media performs a system recovery if the hard drive becomes corrupted. A 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 Disc Creator can create two kinds of recovery DVDs as follows:

- **Windows DVD**—Installs the operating system without additional drivers or applications. Choosing this selection creates a DVD that restores the original operating system and the software programs installed at the factory.
- **Driver DVD**—Installs specific drivers and applications only, in the same way that the HP Software Setup utility installs drivers and applications.

Creating recovery media

 **NOTE:** Operating system recovery media can be created only once. Thereafter, the option to create that media will not be available.

1. Select **Start > All Programs > Security and Protection > HP Recovery Disc Creator**.
2. Select **Driver DVD** or **Windows DVD**.
3. From the drop-down menu, select the drive for burning the recovery media.
4. Click the **Burn** button to start the burning process.


Backing up your information

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

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


Note the following when backing up:


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

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

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

To create a backup using Backup and Restore:

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


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

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

Performing a system recovery

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

- Windows recovery tools: You can use Windows Backup and Restore to recover information you have previously backed up. You can also use Windows Startup Repair to fix problems that might prevent Windows from starting correctly.
- f11 recovery tools: You can use the f11 recovery tools to recover your original hard drive image. The image includes the Windows operating system and software programs installed at the factory.


 **NOTE:** If you are unable to boot (start up) your computer and you cannot use the system repair discs you previously created (select models only), you must purchase a Windows 7 operating system DVD to reboot the computer and repair the operating system. For additional information, see [Using a Windows 7 operating system DVD \(purchased separately\) on page 85](#).

Using the Windows recovery tools

To recover information you previously backed up:

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


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

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


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

To check for the Windows partition, select **Start > Computer**.


To check for the HP Recovery partition, click **Start**, right-click **Computer**, click **Manage**, and then click **Disk Management**.

 **NOTE:** If the HP Recovery partition has been deleted, the **f11** restore option will not function. You must recover your operating system and programs using the Windows 7 operating system DVD and the *Driver Recovery* disc (both purchased separately) if the Windows partition and the HP Recovery partition are not listed. For additional information, see [Using a Windows 7 operating system DVD \(purchased separately\) on page 85](#).

3. If the Windows partition and the HP Recovery partition are listed, restart the computer, and then press **f8** before the Windows operating system loads.
4. Select **Startup Repair**.
5. Follow the on-screen instructions.


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

Using f11 recovery tools

 **CAUTION:** Using **f11** recovery tools 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 **f11** recovery tool reinstalls the operating system and HP programs and drivers that were installed at the factory. Software not installed at the factory must be reinstalled.

To recover the original hard drive image using **f11**:


1. If possible, back up all personal files.
2. If possible, check for the presence of the HP Recovery partition: click **Start**, right-click **Computer**, click **Manage**, and then click **Disk Management**.

 **NOTE:** If the HP Recovery partition is not listed, you must recover your operating system and programs using the Windows 7 operating system DVD and the *Driver Recovery* disc (both purchased separately). For additional information, see [Using a Windows 7 operating system DVD \(purchased separately\) on page 85](#).


3. If the HP Recovery partition is listed, restart the computer, and then press **esc** while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
4. Press **f11** while the “Press <F11> for recovery” message is displayed on the screen.
5. Follow the on-screen instructions.

Using a Windows 7 operating system DVD (purchased separately)

To order a Windows 7 operating system DVD, go to 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. You can also order the DVD by calling support. For contact information, see the *Worldwide Telephone Numbers* booklet included with the computer.

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

To initiate recovery using a Windows 7 operating system DVD:

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

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


After the repair is completed:

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


9 Backup and recovery in Windows 8

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

From the Start screen, type `restore`, click **Settings**, and then select from the list of displayed options.

 **NOTE:** For detailed instructions on various backup and restore options, perform a search for these topics in Help and Support. From the Start screen, type `help`, and then select **Help and Support**.

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

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

Backing up your information

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


On Start screen, type `backup`, select **Settings**, and then select **Save backup copies of your files with File History**.


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

Note the following when backing up:

- Store personal files in the Documents library, and back it up regularly.
- Back up templates that are stored in their associated programs.
- Save customized settings that appear in a window, toolbar, or menu bar by taking a screen shot of your settings. The screen shot can be a time-saver if you have to reset your preferences.

To create a backup using Backup and Restore:

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


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

1. From the Start screen, type `backup`, select **Settings**, and then select from the list of displayed options.
2. Follow the on-screen instructions to set up your backup, create a system image (select models only), or create system repair media (select models only).

Performing a system recovery

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

- Windows recovery tools: You can use Windows Backup and Restore to recover information you have previously backed up. You can also use Windows Startup Repair to fix problems that might prevent Windows from starting correctly.
- f11 recovery tools: You can use the **f11** recovery tools to recover your original hard drive image. The image includes the Windows operating system and software programs installed at the factory.


 **NOTE:** If you are unable to boot (start up) your computer and you cannot use the system repair media you previously created (select models only), you must purchase Windows 8 operating system media to reboot the computer and repair the operating system.

Using the Windows recovery tools

To recover information you previously backed up:

- ▲ From the Start screen, type `help`, and then select **Help and Support**.

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


 **CAUTION:** Some Automatic Repair options will completely erase and reformat the hard drive. All files you have created and any software installed on the computer are permanently removed. When reformatting is complete, the recovery process restores the operating system, as well as the drivers, software, and utilities from the backup used for recovery.

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


From the Start screen, type `explorer`, and then select **File Explorer**.

– or –


From the Start screen, type `computer`, and then select **Computer**.

 **NOTE:** If the Windows partition and the HP Recovery partition are not listed, you must recover your operating system and programs using the Windows 8 operating system DVD and the *Driver Recovery* media (both purchased separately).

3. If the Windows partition and the HP Recovery partition are listed, restart the computer. After Windows has loaded, press and hold the **shift** key while clicking **Restart**.
4. Select **Troubleshoot**, select **Advanced Options**, and then select **Automatic Repair**.
5. Follow the on-screen instructions.


 **NOTE:** For additional information on recovering information using the Windows tools, perform a search for these topics in Help and Support. From the Start screen, type `help`, and then select **Help and Support**.

Using f11 recovery tools

 **CAUTION:** Using **f11** completely erases hard drive contents and reformats the hard drive. All files that you have created and any software that you have installed on the computer are permanently removed. The **f11** recovery tool reinstalls the operating system and HP programs and drivers that were installed at the factory. Software not installed at the factory must be reinstalled.

To recover the original hard drive image using **f11**:


1. If possible, back up all personal files.
2. If possible, check for the presence of the HP Recovery partition: From the Start screen, type `computer`, and then select **Computer**.

 **NOTE:** If the HP Recovery partition is not listed, you must recover your operating system and programs using the Windows 8 operating system media and the *Driver Recovery* media (both purchased separately).


3. If the HP Recovery partition is listed, restart the computer, and then press `esc` while the “Press the ESC key for Startup Menu” message is displayed at the bottom of the screen.
4. Press **f11** while the “Press <F11> for recovery” message is displayed on the screen.
5. Follow the on-screen instructions.

Using Windows 8 operating system media (purchased separately)

To order a Windows 8 operating system DVD, go to <http://www.hp.com/support>, select your country or region, and follow the on-screen instructions. You can also order the DVD by calling support. For contact information, see the *Worldwide Telephone Numbers* booklet included with the computer.

 **CAUTION:** Using a Windows 8 operating system media completely erases hard drive contents and reformats the hard drive. All files that you have created and any software that you have installed on the computer are permanently removed. When reformatting is complete, the recovery process helps you restore the operating system, as well as drivers, software, and utilities.

To initiate recovery using a Windows 8 operating system DVD:

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

1. If possible, back up all personal files.
2. Restart the computer, and then insert the Windows 8 operating system DVD into the optical drive before the Windows operating system loads.


3. When prompted, press any keyboard key.
4. Follow the on-screen instructions.


After the repair is completed:


1. Eject the Windows 8 operating system media and then insert the *Driver Recovery* media.
2. Install the Hardware Enabling Drivers first, and then install Recommended Applications.

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 `help`, and then select **Help and Support**.


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

Using HP Software Setup

HP Software Setup can be used to reinstall drivers or select software that has been corrupted or deleted from the system.

1. From the Start screen, type `HP Software Setup`, and select **Apps**.
2. Open HP Software Setup.
3. Follow the on-screen directions to reinstall drivers or select software.

10 Power cord set requirements

The wide-range input feature of the computer permits it to operate from any line voltage from 100 to 120 volts AC, or from 220 to 240 volts 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 and regions must meet the requirements of the country or 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 **1.5 m** (5.0 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
<ol style="list-style-type: none"> 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) 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 3X0.75-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 3×1.25-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 x 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 3×0.75-1.00-mm² conductor size, with plug BS 1363/A with BSI or ASTA marks. 		

11 Recycling

When a non-rechargeable or rechargeable 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 Web site at <http://www.hp.com/recycle>.

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