HP ElitePad 900

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

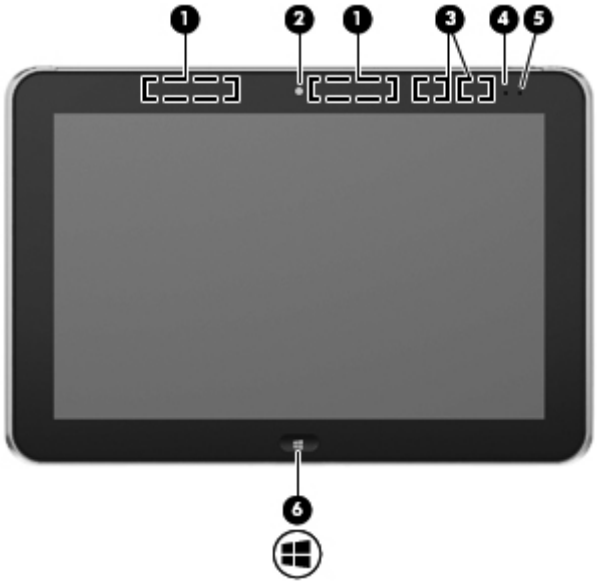
Category	Description
Product Name	HP ElitePad 900
Processor	Intel® Atom z2760 1.50-GHz processor (burst up to 1.80-GHz), 533-MHz front-side bus (FSB), 512-KB L2 cache, soldered to system board
Graphics	Intel universal memory architecture (UMA), shared with system memory
Panel	10.1-in., WXGA (1280×800), UWVA, 50% CG, 400-nit, active pen and MultiTouch capacitive digitizer, chemically-strengthened glass with antismudge
Memory	On-board 533-MHz, LPDDR2, 2048-MB memory (soldered to system board); system supports a 2048-MB × 1 (8 pieces, 128 MB × 16 chips) configuration
Primary storage	64- or 32-GB embedded MultiMedia Card (eMMC), soldered to the system board
Optical drive	No internal optical drive or USB-powered optical drive is supported
Audio and video	2 integrated stereo speakers, each 1.5 W HD Audio SRS Audio One digital microphone 2 fixed integrated webcams (user-facing webcam: 1080p camera; rear-facing webcam 8-MP camera with LED flash)
Ethernet	No Ethernet support
Wireless	Integrated wireless local area network (WLAN) options by way of wireless module Integrated WLAN antennas Support for the Qualcomm Atheros AR6004 802.11a/b/g/n 2×2 WiFi + AR3002 BT4.0 Combo Adapter

Category	Description
Wireless *(continued)*	Integrated wireless wide area network (WWAN) options by way of wireless module Integrated world-wide/5-band WWAN antennas Secured by subscriber identity module (SIM) Support for the following WWAN formats: • HP hs3120 HSPA+ Mobile Broadband Module • HP hs3121 HSPA+ Mobile Broadband Module • HP hs3124 HSPA+ Mobile Broadband Module Support for no WWAN option
	Integrated near field communication (NFC) module and antennas
External media cards	Flash Media slot (with push-push technology) supporting microHCSD cards up to 64-GB
Ports	• Audio-in (mono microphone)/audio-out (stereo headphone) combo jack • HP ElitePad 900-proprietary docking connector
Sensors	• Accelerometer + eCompass • Ambient light sensor • Gyroscope
Docking	HP ElitePad 900-proprietary dock with 4 standard 2.0 USB ports, VGA port, HDMI-out port, audio in/out jacks, and HP Smart AC adapter connector (40-W HP Smart AC adapter and power cord included)
Keyboard/pointing devices	No integrated keyboard or TouchPad Support for USB- or Bluetooth-connected external keyboard and mouse
Power requirements	Support for an HP ElitePad 900-proprietary 10-W AC adapter (RC, V, 3-wire, wall-mount); connector on AC Adapter connects to the tablet through the dock connector

Category	Description
Power requirements *(continued)*	Support for 2-cell, 25-Wh, 3.38-Ah, Li-ion battery
Operating system	**Preinstalled:** Windows® 8 ML 32-bit with Microsoft® Basics (available only for the education market) and Windows 8 Professional 32-bit with Microsoft Basics (supported only in Japan) **Preinstalled with Microsoft Office:** • Windows 8 ML 32-bit with Microsoft Office 2010 Transition OPK (available only for the education market; supported in all countries and regions except Japan) • Windows 8 EM 32-bit with Microsoft Office 2010 Trial Transition OPK (available only for the education market; supported in all countries and regions except Japan) • Windows 8 CM 32-bit with Microsoft Office 2010 Trial Transition OPK (available only for the education market; supported only in the People's Republic of China) • Windows 8 ML 32-bit with Microsoft Office 2010 Personal (available only for the education market; supported only in Japan, requires a configuration with Microsoft Office Personal Japan 2010 application AV) • Windows 8 ML 32-bit with Microsoft Office 2010 Home and Business (available only for the education market; supported only in Japan, requires a configuration with Microsoft Office Home and Business Japan 2010 application AV) • Windows 8 ML 32-bit with Microsoft Office 2010 Professional (available only for the education market; supported only in Japan, requires a configuration with Microsoft Office Professional Japan 2010 application AV) • Windows 8 Professional 32-bit with Microsoft Office 2010 Transition OPK (supported in all countries and regions except Japan) • Windows 8 Professional 32-bit with Microsoft Office 2010 Personal (supported only in Japan; requires a configuration with Microsoft Office Personal Japan 2010 application AV) • Windows 8 Professional 32-bit with Microsoft Office 2010 Home and Business (supported only in Japan; requires a configuration with Microsoft Office Home and Business Japan 2010 application AV) • Windows 8 Professional 32-bit with Microsoft Office 2010 Professional (supported only in Japan; requires a configuration with Microsoft Office Professional Japan 2010 application AV) **Restore USB (for service only):** USB recovery to align with customer image, to include base operating system, language packs, drivers, and QFE's.

2 External component identification

Front

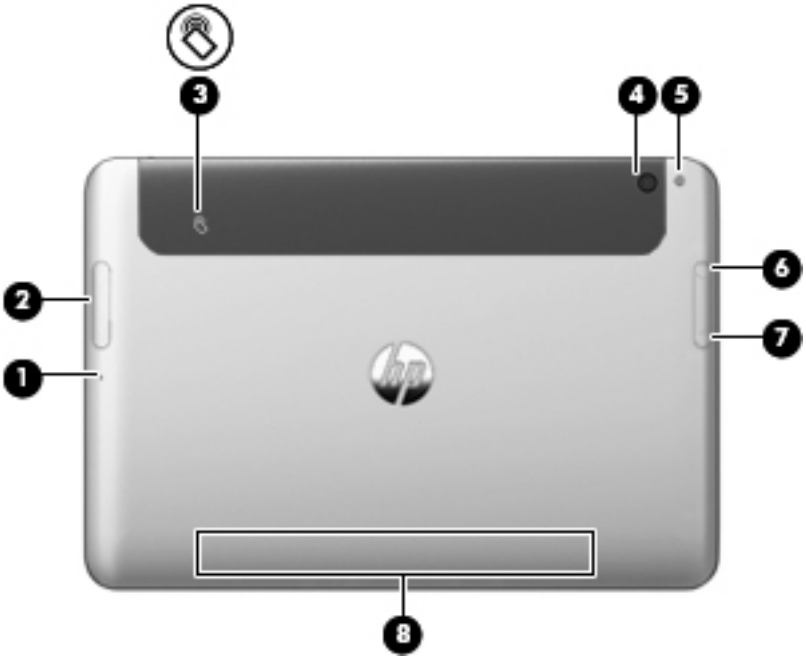


Item	Component	Description
(1)	WWAN antennas (2)* (select models only)	Send and receive wireless signals to communicate with WWANs.
(2)	Front webcam	Records video and captures still photographs. To use the webcam, tap the **YouCam** tile on the Start screen, or swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box. In the search box, type c, and then tap **CyberLink YouCam**.
(3)	WLAN antennas (2)*	Send and receive wireless signals to communicate with WLANs.
(4)	Ambient light sensor	The ambient light sensor automatically adjusts the display brightness based on the lighting conditions in your environment.
(5)	Webcam status light (front)	On: The webcam is on.

Item	Component	Description
(6)	Windows button	Displays the Start screen.

*The antennas are not visible on the outside of the tablet. For optimal transmission, keep the areas immediately around the antennas free from obstructions. To see wireless regulatory notices, see the section of the *Regulatory, Safety, and Environmental Notices* that applies to your country or region. To access the user guides, tap the **HP Support Assistant** app on the Start screen, tap **My computer**, and then tap **User guides**.

Rear



Item	Component	Description
(1)	Micro SD Card Reader/Micro SIM slot access hole	Allows you to insert the end of a paper clip to open the access door to insert or remove a micro SD card or micro SIM module.
(2)	Micro SD Card Reader/Micro SIM slot	Supports a micro SD High Capacity (SDHC) memory card or an optional wireless micro subscriber identity module (SIM) (select models only).
(3)	Near Field Communications (NFC) tapping area	Allows you to touch an NFC-compatible device to this area to wirelessly connect and communicate with the tablet and transfer data back and forth.
(4)	Rear webcam	Records video, captures still photographs, and allows video conferences and online chat by means of streaming video. To use the webcam, tap the **YouCam** tile on the Start screen, or swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box. In the search box, type c, and then tap **CyberLink YouCam**.
(5)	Webcam flash light (rear)	Provides flash lighting for the camera.

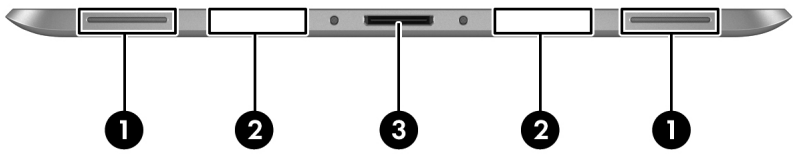
Item	Component	Description
(6)	Volume up button	To increase speaker volume, press the top edge of the button.
(7)	Volume down button	To decrease speaker volume, press the bottom edge of the button.
(8)	Regulatory information	Displays regulatory information (select models only).

Top

Item	Component	Description
(1)	Audio-out (headphone) jack/Audio-in (microphone) jack	Produces sound when connected to optional powered stereo speakers, headphones, earbuds, a headset, or television audio. Also connects an optional headset microphone. **WARNING!** To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, refer to the *Regulatory, Safety, and Environmental Notices*. To access the user guides, tap the **HP Support Assistant** app on the Start screen, tap **My computer**, and then tap **User guides**. **NOTE:** When a device is connected to the jack, the computer speakers are disabled. **NOTE:** Be sure that the device cable has a 4-conductor connector that supports both audio-out (headphone) and audio-in (microphone).
(2)	Autorotate switch	When the tablet is on, slide the autorotate switch to lock the autorotate feature of the display. To unlock the autorotate feature, slide the switch again. – or – Swipe from the right edge of the touch screen to display the charms, tap **Settings**, tap the screen icon, and then tap the autorotate icon. To unlock the autorotate feature, tap the autorotate icon again.

Item	Component	Description
(3)	Integrated microphones (2)	Record sound.
(4)	Power button	• When the tablet is off, press the button to turn on the tablet. • When the tablet is on, press the button briefly to initiate Sleep. • When the tablet is in the Sleep state, press the button briefly to exit Sleep. **CAUTION:** Pressing and holding down the power button will result in the loss of unsaved information. If the tablet has stopped responding and Windows shutdown procedures are ineffective, press and hold the power button for at least 5 seconds to turn off the tablet. Swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box. In the search box, type `power`, tap **Settings**, and then tap **Power Options**.

Bottom



Item	Component	Description
(1)	Speakers (2)	Produce sound.
(2)	Product and regulatory information	Displays product and regulatory information (select models only).
(3)	Docking connector	Connects an AC adapter or an optional docking device.

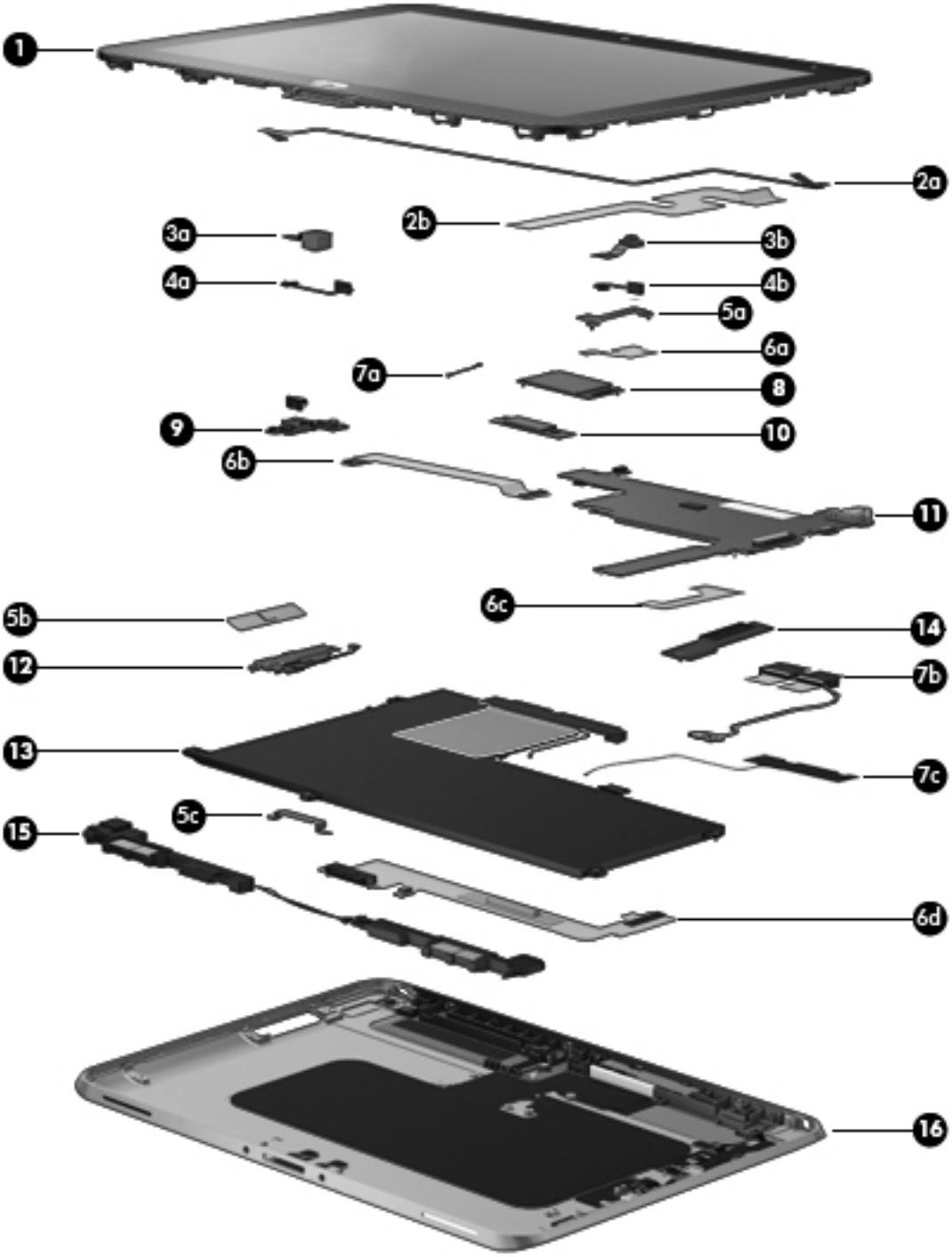
3 Illustrated parts catalog

Service tag

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

Item	Description	Function
(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 to determine what components and parts are needed.
(4)	Warranty period	This number describes the duration of the warranty period for the computer.
(5)	Model description	This is the alphanumeric identifier used to locate documents, drivers, and support for the computer.

Computer major components



Item	Component	Spare part number
(1)	**Display assembly**: (10.1-in., WXGA (1280×800), UWVA, 50% CG, 400-nit, active pen and MultiTouch capacitive digitizer, chemically-strengthened glass with anti-smudge; includes display panel, display LVDS cable, TouchScreen cable, and display panel support rubber)	718662-001

Item	Component	Spare part number
	Home button board (not illustrated, includes bracket)	718663-001
	Display Cable Kit, includes:	718758-001
(2a)	TouchScreen cable	
(2b)	Display LVDS cable	
	Webcam Kit, includes:	709455-001
(3a)	Rear-facing webcam	
(3b)	Front-facing webcam	
	Microphone Kit, includes:	709454-001
(4a)	Left microphone	
(4b)	Right microphone	
	Bracket Kit, includes:	718834-001
(5a)	Communications bracket	
(5b)	Volume button board bracket	
(5c)	Docking connector bracket	
	Cable Kit, includes:	709459-001
(6a)	Communications cable	
(6b)	Power button board cable	
(6c)	WLAN ribbon cable	
(6d)	Docking connector cable	
	Antenna Kit, includes:	709451-001
(7a)	GPS auxiliary antenna cable	
(7b)	WWAN auxiliary antenna cable	
(7c)	WLAN auxiliary and main antenna cables	
	NFC antenna cable (not illustrated)	
(8)	**WWAN module:**	
	HP hs3120 HSPA+ Mobile Broadband Module	714653-005
	HP hs3121 HSPA+ Mobile Broadband Module	696218-005
	HP hs3124 HSPA+ Mobile Broadband Module	714655-005
(9)	**Power button board** (includes cable)	709452-001
(10)	**GPS module**	
(11)	**System board** equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, (includes processor, memory, and eMMC)	

Item	Component	Spare part number
	Includes 64-GB of eMMC primary storage, the Windows 8 Professional operating system, and WWAN capability	714753-601
	Includes 64-GB of eMMC primary storage, the Windows 8 Standard operating system, and WWAN capability	714753-501
	Includes 64-GB of eMMC primary storage, and the Windows 8 Professional operating system, but not WWAN capability	714751-601
	Includes 64-GB of eMMC primary storage, and the Windows 8 Standard operating system, but not WWAN capability	714751-501
	Includes 32-GB of eMMC primary storage, the Windows 8 Professional operating system, and WWAN capability	714752-601
	Includes 32-GB of eMMC primary storage, the Windows 8 Standard operating system, and WWAN capability	714752-501
	Includes 32-GB of eMMC primary storage, and the Windows 8 Professional operating system, but not WWAN capability	714750-601
	Includes 32-GB of eMMC primary storage, and the Windows 8 Standard operating system, but not WWAN capability	714750-501
(12)	**Volume button board** (includes bracket and cable)	709453-001
(13)	**2-cell, 25-Wh, 3.38-Ah, Li-ion battery** (includes battery cable and WLAN transceiver and antenna cable)	685987-001
(14)	**Qualcomm Atheros AR6004 802.11a/b/g/n 2×2 WiFi + AR3002 BT4.0 Combo Adapter**	691921-005
(15)	**Speaker assembly** (includes left and right speakers and cables	709456-001
(16)	**Bottom case** (includes the power button actuator and the slot cover and brackets)	709450-001

Adapter cables

Item	Description	Spare part number
(1)	**HDMI/VGA adapter cable**	695551-001
(2)	**Ethernet adapter cable**	695555-001
(3)	**Serial adapter cable**	695556-001
(4)	**HP Smart AC adapter cable**	695553-001
(5)	**USB adapter cable**	695552-001
(6)	**Card Reader adapter**	695554-001

Docking station and accessories

Item	Description	Spare part number
(1)	**Docking station**	708621-001
(2)	**40-W HP Smart AC adapter** (RC, V, 3-wire)	693717-001
(3)	**Power cord** (3-pin, black, 1.83-m):	
	For use in Argentina	490371-D01
	For use in Australia	490371-011
	For use in Brazil	490371-202
	For use in Europe	490371-021
	For use in India	490371-D61
	For use in Israel	490371-BB1
	For use in Italy	490371-061
	For use in Japan	490371-291
	For use in North America	490371-001
	For use in the People's Republic of China	490371-AA1
	For use in South Africa	490371-AR1
	For use in South Korea	490371-AD1
	For use in Switzerland	490371-111

Item	Description	Spare part number
	For use in Taiwan	490371-AB1
	For use in the United Kingdom and Singapore	490371-031

Miscellaneous parts

Component	Spare part number
Carrying case:	
Carrying case	708773-001
Rugged carrying case	708772-001
HP ElitePad Service Tool	714222-001
HP ElitePad Service Tool suction cup	714223-001
HP executive tablet pen	716117-001
Jacket:	
Slate jacket with battery slot (includes battery)	709462-001
Slate jacket without battery slot	714297-001
Screw Kit	709461-001

Power components

Item	Component	Spare part number
(1)	**10-W AC adapter** (RC, V, 3-wire, wall-mount)	686120-001
(2)	**Duck head power adapter:**	
	For use in Argentina	720949-D01
	For use in Australia	720949-011
	For use in Brazil	720949-201
	For use in Denmark	720949-081
	For use in Europe	720949-021
	For use in India	720949-D61
	For use in Israel	720949-BB1
	For use in the People's Republic of China	720949-371
	For use in South Africa	720949-AR1
	For use in Switzerland	720949-BG1
	For use in the United Kingdom and Singapore	720949-031
	For use in the United States	720949-001
(3)	**Power cord** (3-pin, black, 1.83-m):	
	For use in Argentina	490371-D01
	For use in Australia	490371-011
	For use in Brazil	490371-202
	For use in Europe	490371-021

Item	Component	Spare part number
	For use in India	490371-D61
	For use in Israel	490371-BB1
	For use in Italy	490371-061
	For use in Japan	490371-291
	For use in North America	490371-001
	For use in the People's Republic of China	490371-AA1
	For use in South Africa	490371-AR1
	For use in South Korea	490371-AD1
	For use in Switzerland	490371-111
	For use in Taiwan	490371-AB1
	For use in the United Kingdom and Singapore	490371-031

Sequential part number listing

Spare part number	Description
490371-001	Power cord for use in North America (3-pin, black, 1.83-m)
490371-011	Power cord for use in Australia (3-pin, black, 1.83-m)
490371-021	Power cord for use in Europe (3-pin, black, 1.83-m)
490371-031	Power cord for use in the United Kingdom and Singapore (3-pin, black, 1.83-m)
490371-061	Power cord for use in Italy (3-pin, black, 1.83-m)
490371-111	Power cord for use in Switzerland (3-pin, black, 1.83-m)
490371-202	Power cord for use in Brazil (3-pin, black, 1.83-m)
490371-291	Power cord for use in Japan (3-pin, black, 1.83-m)
490371-AA1	Power cord for use in the People's Republic of China (3-pin, black, 1.83-m)
490371-AB1	Power cord for use in South Korea (3-pin, black, 1.83-m)
490371-AD1	Power cord for use in Taiwan (3-pin, black, 1.83-m)
490371-AR1	Power cord for use in South Africa (3-pin, black, 1.83-m)
490371-BB1	Power cord for use in Israel (3-pin, black, 1.83-m)
490371-D01	Power cord for use in Argentina (3-pin, black, 1.83-m)
490371-D61	Power cord for use in India (3-pin, black, 1.83-m)
685987-001	2-cell, 25-Wh, 3.38-Ah, Li-ion battery (includes battery cable and WLAN transceiver and antenna cable)

Spare part number	Description
686120-001	10-W AC adapter (RC, V, 3-wire, wall-mount)
691921-005	Qualcomm Atheros AR6004 802.11a/b/g/n 2×2 WiFi + AR3002 BT4.0 Combo Adapter
693717-001	40-W HP Smart AC adapter (RC, V, 3-wire)
695551-001	HDMI/VGA adapter cable
695552-001	USB adapter cable
695553-001	HP Smart AC adapter cable
695554-001	Card Reader adapter
695555-001	Ethernet adapter cable
695556-001	Serial adapter cable
696218-005	HP hs3121 HSPA+ Mobile Broadband Module
708621-001	Docking station
708772-001	Rugged carrying case
708773-001	Carrying case
709450-001	Bottom case (includes the power button actuator and the slot cover and brackets)
709451-001	Antenna Kit (includes GPS auxiliary and main antenna cables, NFC antenna, WLAN main antenna cable, and WWAN auxiliary and main antenna cables)
709452-001	Power button board
709453-001	Volume button board (includes bracket and cable)
709454-001	Microphone Kit (includes 2 microphones)
709455-001	Webcam Kit (includes forward-facing and rear-facing webcams)
709456-001	Speaker assembly (includes left and right speakers and cables
709459-001	Cable Kit (includes docking connector cable, RF cable, power connector cable, WLAN antenna cable, and WWAN antenna cable)
709461-001	Screw Kit
709462-001	Slate jacket with battery slot (includes battery)
714222-001	HP ElitePad Service Tool
714223-001	HP ElitePad Service Tool suction cup
714297-001	Slate jacket without battery slot
714653-005	HP hs3120 HSPA+ Mobile Broadband Module
714655-005	HP hs3124 HSPA+ Mobile Broadband Module
714750-501	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 32-GB of eMMC primary storage, and the Windows 8 Standard operating system, but not WWAN capability (includes processor, memory, and eMMC)

Spare part number	Description
714750-601	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 32-GB of eMMC primary storage, and the Windows 8 Professional operating system, but not WWAN capability (includes processor, memory, and eMMC)
714751-501	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 64-GB of eMMC primary storage, and the Windows 8 Standard operating system, but not WWAN capability (includes processor, memory, and eMMC)
714751-601	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 64-GB of eMMC primary storage, and the Windows 8 Professional operating system, but not WWAN capability (includes processor, memory, and eMMC)
714752-501	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 32-GB of eMMC primary storage, the Windows 8 Standard operating system, and WWAN capability (includes processor, memory, and eMMC)
714752-601	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 32-GB of eMMC primary storage, the Windows 8 Professional operating system, and WWAN capability (includes processor, memory, and eMMC)
714753-501	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 64-GB of eMMC primary storage, the Windows 8 Standard operating system, and WWAN capability (includes processor, memory, and eMMC)
714753-601	System board equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, 64-GB of eMMC primary storage, the Windows 8 Professional operating system, and WWAN capability (includes processor, memory, and eMMC)
716117-001	HP executive tablet pen
718662-001	Display assembly (10.1-in., WXGA (1280×800), UWVA, 50% CG, 400-nit, active pen and MultiTouch capacitive digitizer, chemically-strengthened glass with anti-smudge; includes the display panel and display panel support rubber)
718663-001	Home button board (includes bracket)
718758-001	Display Cable Kit (includes the display LVDS cable and the TouchScreen cable)
718834-001	Bracket Kit (includes the docking connector bracket, home button board bracket, and the WWAN module bracket)
720949-001	Duck head power adapter for use only in the United States
720949-011	Duck head power adapter for use only in Australia
720949-021	Duck head power adapter for use only in Europe
720949-031	Duck head power adapter for use only in the United Kingdom and Singapore
720949-081	Duck head power adapter for use only in the Denmark
720949-201	Duck head power adapter for use only in Brazil
720949-371	Duck head power adapter for use only in the People's Republic of China

Spare part number	Description
720949-AR1	Duck head power adapter for use only in South Africa
720949-BB1	Duck head power adapter for use only in Israel
720949-BG1	Duck head power adapter for use only in Switzerland
720949-D01	Duck head power adapter for use only in Argentina
720949-D61	Duck head power adapter for use only in India

4 Removal and replacement procedures

Preliminary replacement requirements

Tools required

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

- HP ElitePad Service Tool
- HP ElitePad Service Tool suction cup
- Magnetic tool
- Phillips P00 screw driver

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

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

Packaging and transporting guidelines

Follow these grounding guidelines when packaging and transporting equipment:

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

Workstation guidelines

Follow these grounding workstation guidelines:

- Cover the workstation with approved static-shielding material.
- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.
- Use conductive field service tools, such as cutters, screw drivers, and vacuums.
- When fixtures must directly contact dissipative surfaces, use fixtures made only of static-safe materials.
- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.
- Handle ESD-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting or removing connectors or test equipment.

Equipment guidelines

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

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

The following grounding equipment is recommended to prevent electrostatic damage:

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

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

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

Component replacement procedures

This chapter provides removal and replacement procedures.

There are as many as 38 screws that must be removed, replaced, and/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.

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.
(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.

Display assembly

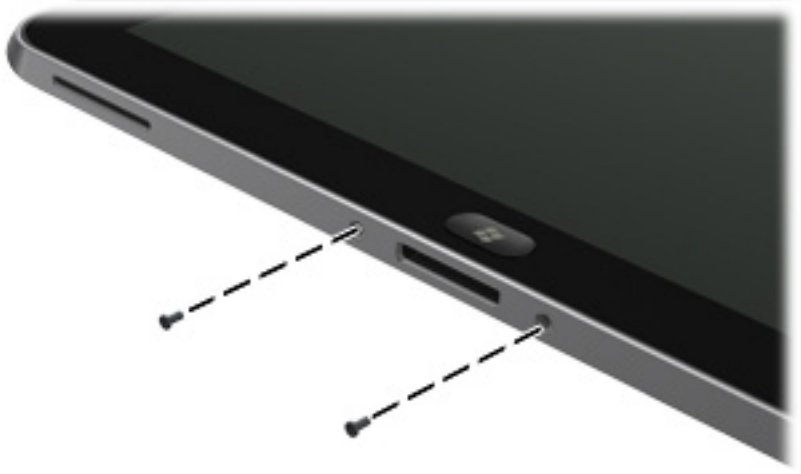
Description	Spare part number
Display assembly (10.1-in., WXGA (1280×800), UWVA, 50% CG, 400-nit, active pen and MultiTouch capacitive digitizer, chemically-strengthened glass with anti-smudge; includes display panel, display LVDS cable, TouchScreen cable, and display panel support rubber)	718662-001

Before disassembling the computer, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.

Remove the display assembly:

1. Remove the two Phillips PM1.4×3.2 screws that secure the display assembly on either side of the docking connector.

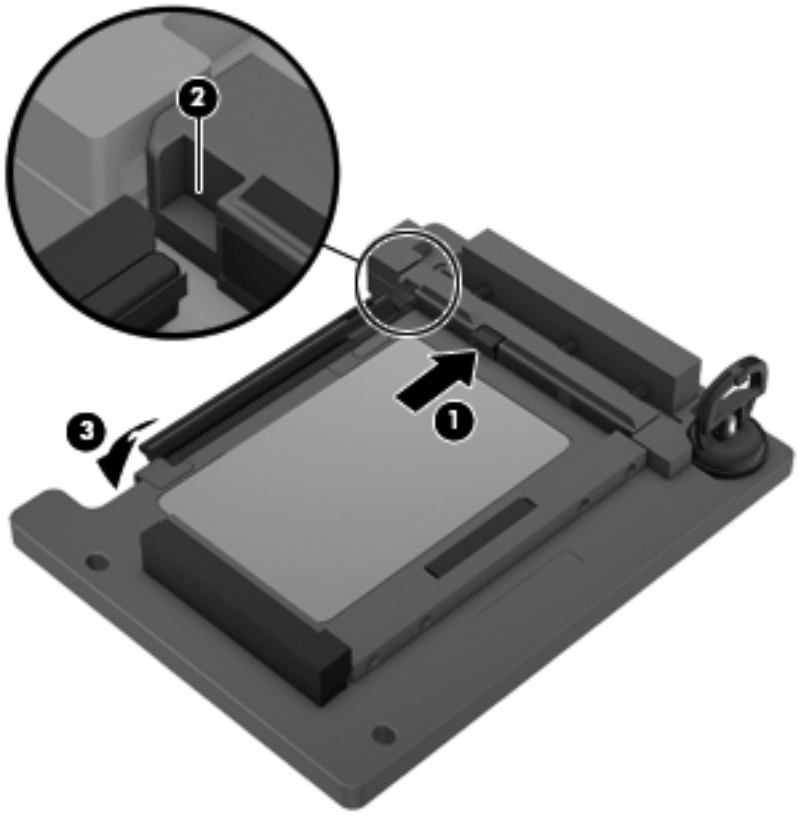


2. Place the HP ElitePad Service Tool on a flat, sturdy surface.

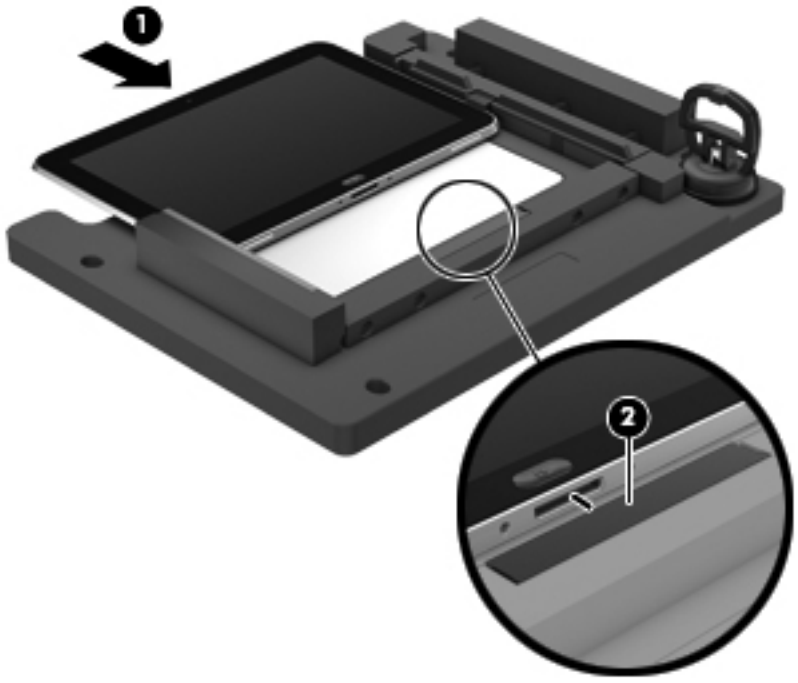
   The HP ElitePad Service Tool is available using spare part number 714222-001.

3. Move the HP ElitePad Service Tool retention bar **(1)** to the right until the notch **(2)** in the retention bar allows the retention gate to open.

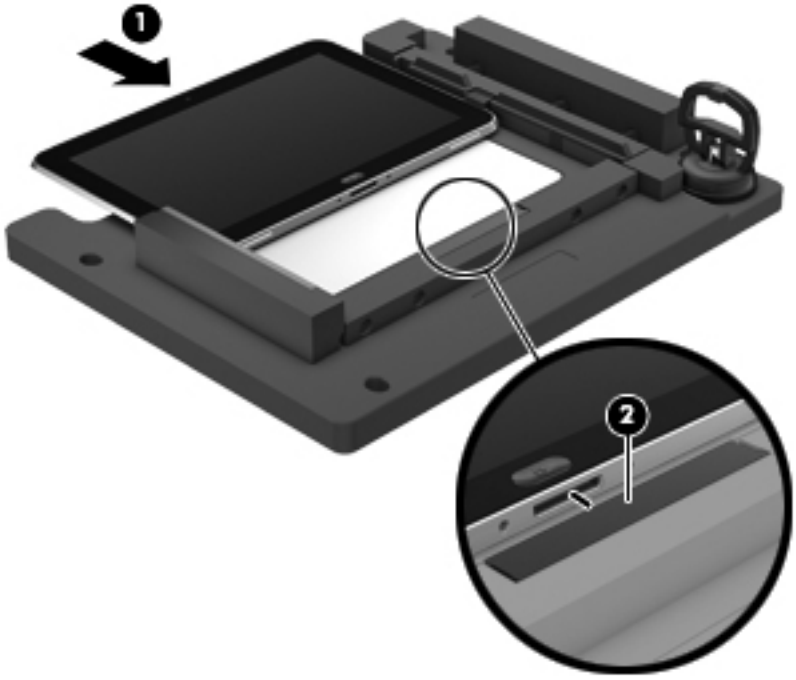
4. Open the retention gate **(3)**.



5. Place the tablet **(1)** on the service tool and slide it forward until the tablet docking connector engages with the service tool docking connector **(2)**.



6. Close the retention gate **(1)** and release the retention bar **(2)** to secure the tablet in the service tool.

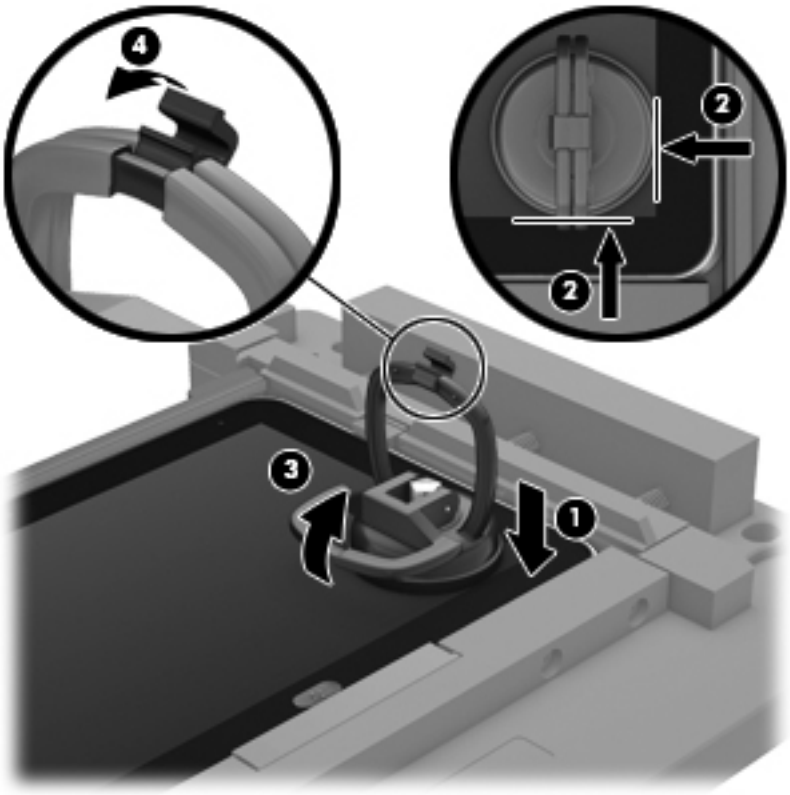


7. Place the suction cup **(1)** on the lower right corner of the tablet display glass, making sure to place the suction cup inside the edges of the border **(2)** of the display glass.

   The suction cup is available using spare part number 714223-001.

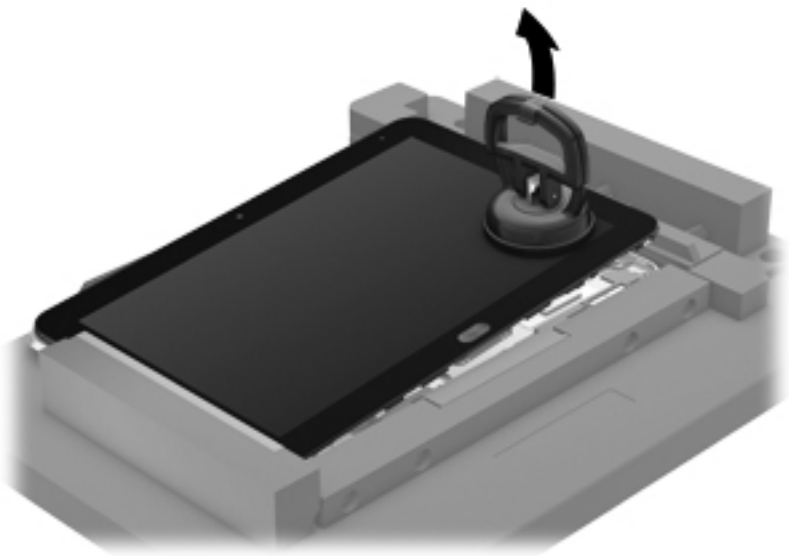
8. Raise the suction cup handle **(3)**.

9. Lock the two suction cup handles together **(4)**.



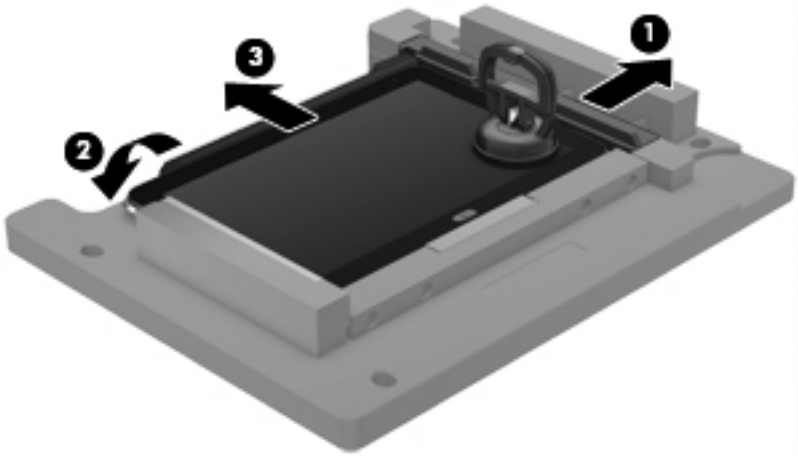
⚠ **CAUTION:** Do not lift the right edge of the display assembly more than ¼-inch from the tablet when releasing the display assembly. Failure to follow this caution can result in damage to the tablet components.

10. Firmly lift up on the suction cup to release the right side of the display assembly approximately ¼-inch from the tablet.



11. Move the retention bar **(1)** until the notch in the retention bar allows the retention gate to open.

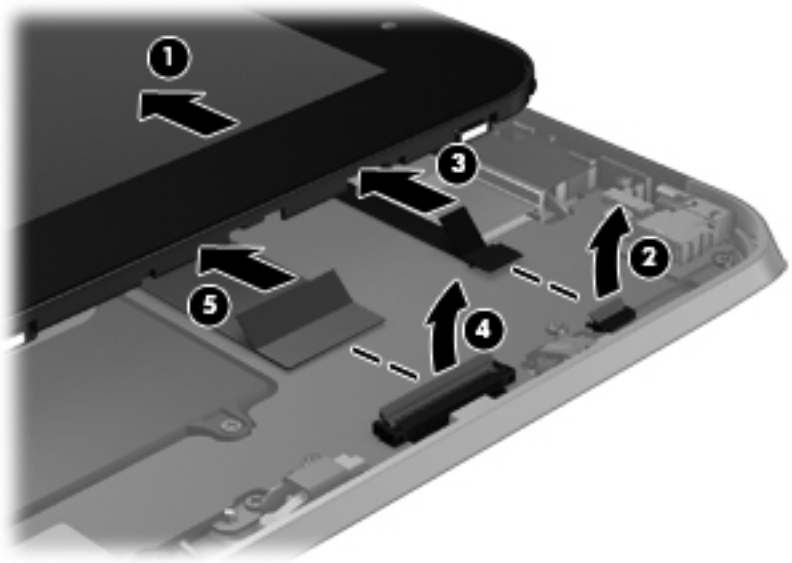
12. Open the retention gate **(2)**.
13. Slide the tablet out of the service tool **(3)**.



14. Disconnect the suction cup handles **(1)**.
15. Lower the suction cup handle **(2)**.
16. Remove the suction cup **(3)**.

17. Move the display assembly **(1)** to the left until the display assembly cables and connectors are accessible.
18. Release the zero insertion force (ZIF) connector **(2)** to which the TouchScreen cable is attached, and then disconnect the TouchScreen cable from the system board.

19. Release the ZIF connector **(2)** to which the LVDS cable is attached, and then disconnect the LVDS cable from the system board.



20. If it is necessary to replace the display assembly cables:

    a. Turn the display assembly upside down, with the bottom toward you.

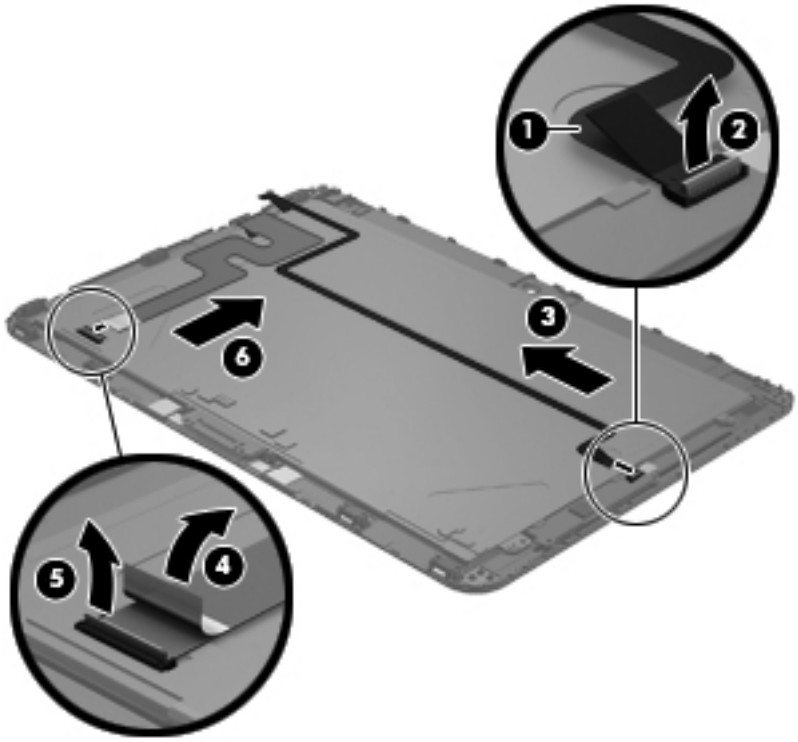
    b. Detach the TouchScreen cable **(1)** from the surface of the display assembly. (The TouchScreen cable is attached to the display assembly with double-sided adhesive.)

    c. Release the ZIF connector **(2)** to which the TouchScreen cable is attached, and then disconnect the TouchScreen cable **(3)** from the display assembly.

    d. Detach the display LVDS cable **(4)** from the surface of the display assembly. (The display LVDS cable is attached to the display assembly with double-sided adhesive.)

e. Release the ZIF connector **(5)** to which the display LVDS cable is attached, and then disconnect the display LVDS cable **(6)** from the display assembly.

The TouchScreen and display LVDS cables are included in the Display Cable Kit, spare part number 718758-001.



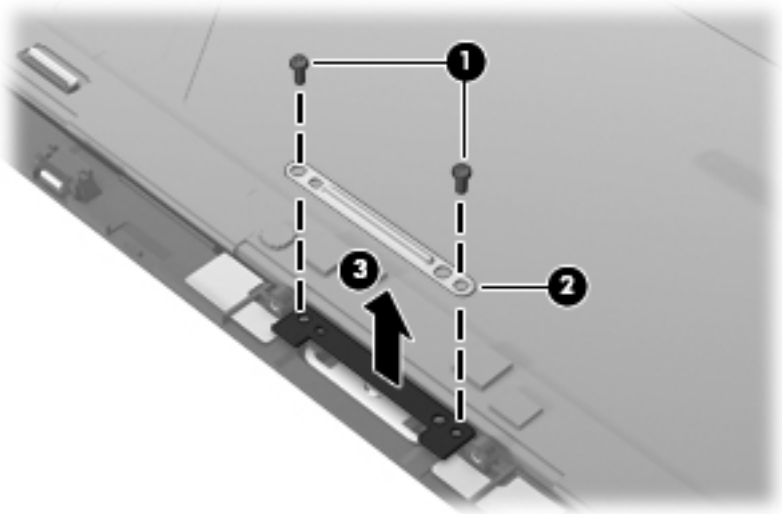
21. If it is necessary to replace the home button board and bracket:

a. Remove the two Phillips PM1.4×3.2 screws **(1)** that secure the home button board and bracket to the display assembly.

b. Remove the home button board bracket **(2)**.

c. Remove the home button board **(3)**.

The home button board and bracket are available using spare part number 718663-001. The home button board bracket is also included in the Bracket Kit, spare part number 718834-001.



Reverse this procedure to install the home button board and bracket.

To install the display assembly:

1. Reconnect the display LVDS and TouchScreen cables to the respective ZIF connectors on the display assembly.
2. Reconnect the display LVDS and TouchScreen cables to the respective ZIF connectors on the system board.
3. Toe the left side of the display assembly into the left side of the bottom case.
4. Swing the right side of the display assembly down into the right side of the bottom case.
5. Firmly press all edges of the display assembly surface to ensure it is fully engaged with the bottom case.

WWAN module

Description	Spare part number
HP hs3120 HSPA+ Mobile Broadband Module	714653-005
HP hs3121 HSPA+ Mobile Broadband Module	696218-005
HP hs3124 HSPA+ Mobile Broadband Module	714655-005

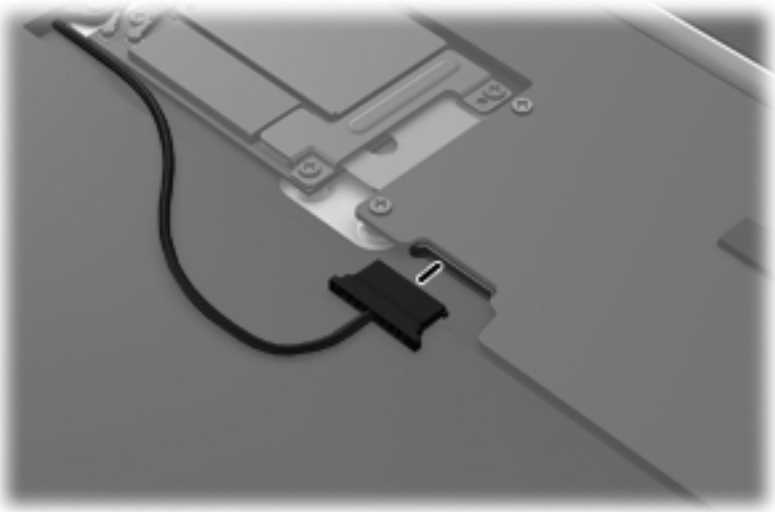
⚠ **CAUTION:** To prevent an unresponsive system, replace the wireless module only with a wireless module authorized for use in the computer by the governmental agency that regulates wireless devices in your country or region. If you replace the module and then receive a warning message, remove the module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

Before removing the WWAN module, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).

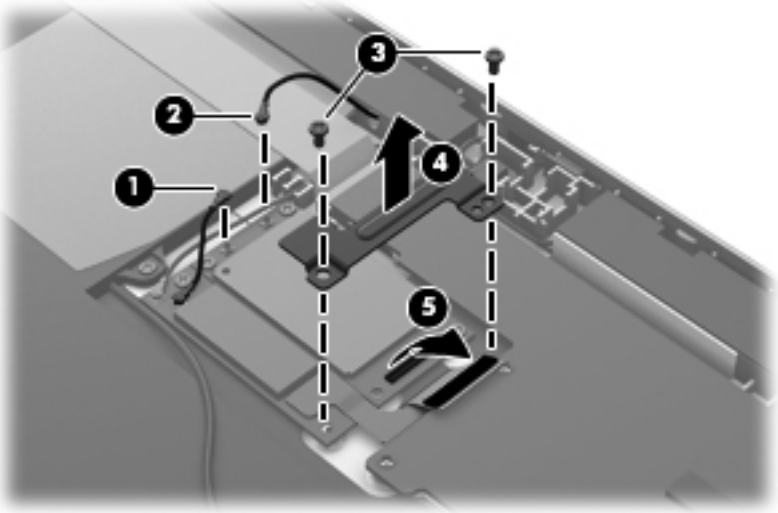
Remove the WWAN module:

1. Disconnect the battery cable from the system board.

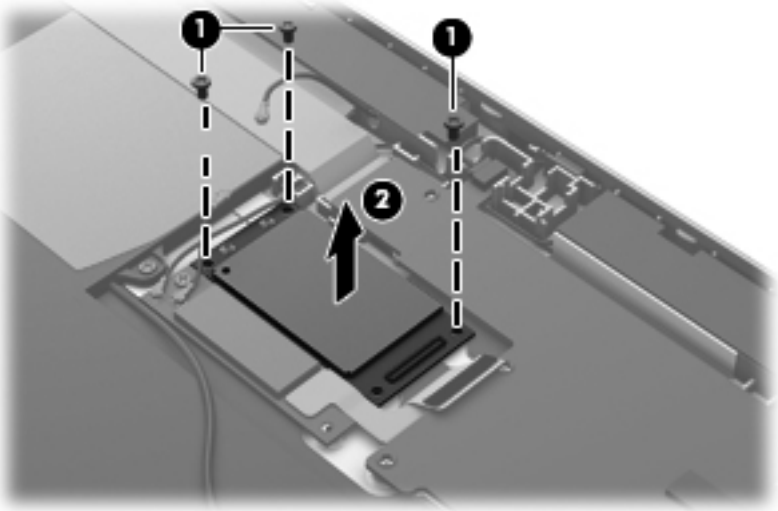


2. Disconnect the GPS module antenna cable **(1)** from the WWAN module “Aux” terminal.
3. Disconnect the WWAN antenna cable **(2)** from the WWAN module “Main” terminal.
4. Remove the two Phillips PM1.4×2.3 screws **(3)** that secure the communications bracket to the system board.

5. Remove the communications bracket **(4)**.
6. Disconnect the cable **(5)** that connects the WWAN module to the system board.



7. Remove the three Phillips PM1.4×2.0 screws **(1)** that secure the WWAN module to the bottom case.
8. Remove the WWAN module **(2)**.



Reverse this procedure to install the WWAN module.

GPS module

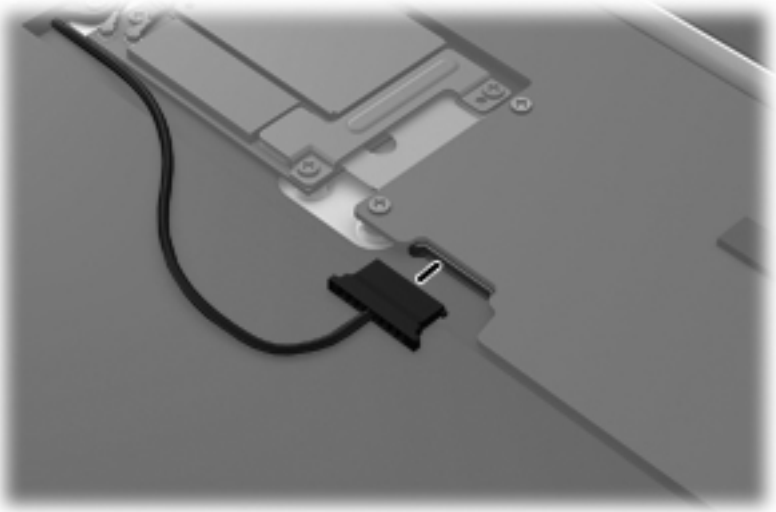
Description	Spare part number
GPS module	xxx-001

Before removing the GPS module, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).

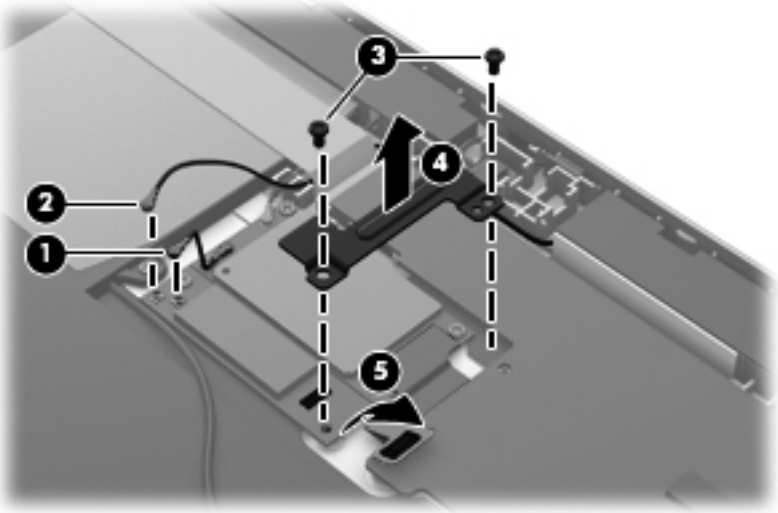
Remove the GPS module:

1. Disconnect the battery cable from the system board.

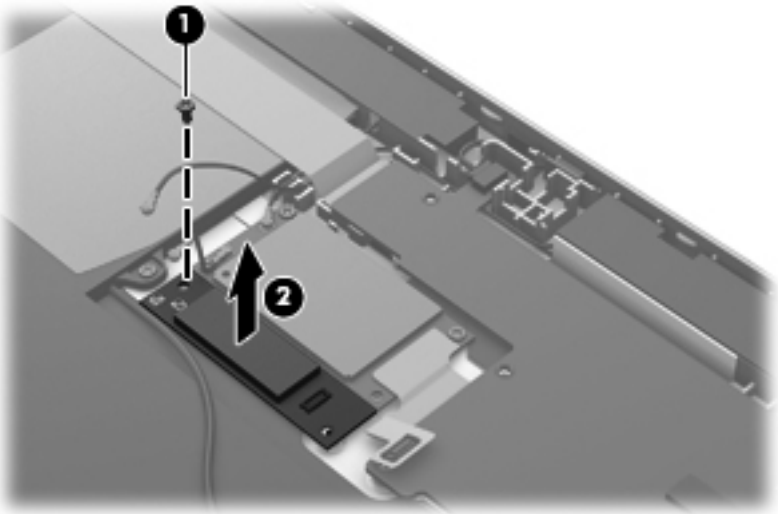


2. Disconnect the GPS antenna cable **(1)** from the GPS module "Con3" terminal.
3. Disconnect the WWAN module antenna cable **(2)** from the GPS module "Con2" terminal.
4. Remove the two Phillips PM1.4×2.3 screws **(3)** that secure the communications bracket to the system board.
5. Remove the communications bracket **(4)**.

6. Disconnect the cable **(5)** that connects the GPS module to the system board.



7. Remove the Phillips PM1.4×2.0 screw **(1)** that secures the GPS module to the bottom case.
8. Remove the GPS module **(2)**.



Reverse this procedure to install the GPS module.

Volume button board

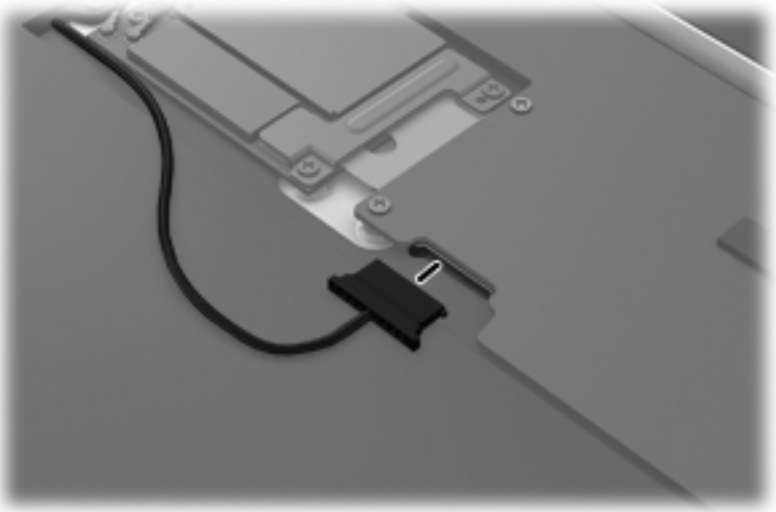
Description	Spare part number
Volume button board	709453-001

Before removing the volume button board, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).

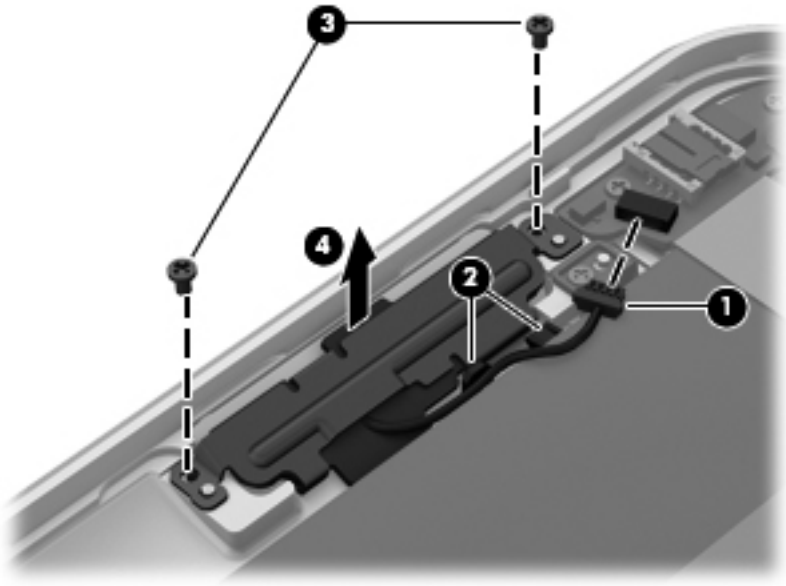
Remove the volume button board:

1. Disconnect the battery cable from the system board.



2. Disconnect the volume button board cable **(1)** from the power button board.
3. Release the volume button board cable from the clips **(2)** built into the battery.
4. Remove the two Phillips PM1.4×2.0 screws **(3)** that secure the volume button board to the bottom case.

5. Remove the volume button board **(4)** and cable.



Reverse this procedure to install the volume button board.

WLAN module

Description	Spare part number
Qualcomm Atheros AR6004 802.11a/b/g/n 2×2 WiFi + AR3002 BT4.0 Combo Adapter	691921-005

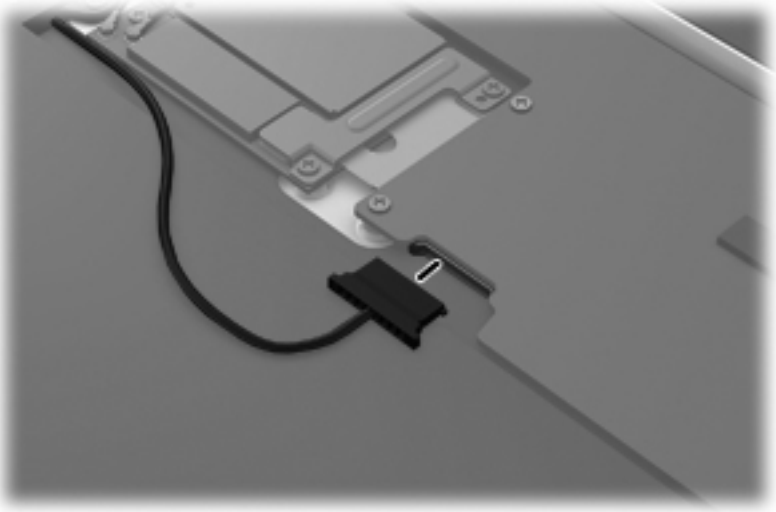
CAUTION: To prevent an unresponsive system, replace the wireless module only with a wireless module authorized for use in the computer by the governmental agency that regulates wireless devices in your country or region. If you replace the module and then receive a warning message, remove the module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

Before removing the WLAN module, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).

Remove the WLAN module:

1. Disconnect the battery cable from the system board.

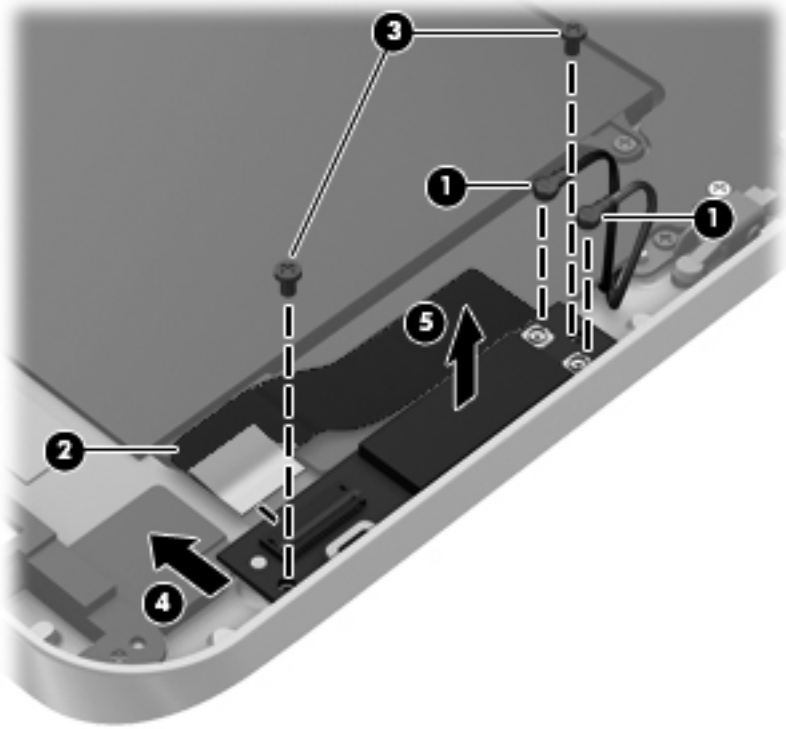


2. Disconnect the WLAN antenna cables **(1)** from the terminals on the WLAN module.

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

3. Release the ZIF connector to which the WLAN ribbon cable is attached, and then disconnect the WLAN ribbon cable **(2)** from the WLAN module.
4. Remove the two Phillips PM1.4×2.0 screws **(3)** that secure the WLAN module to the bottom case.

5. Release the WLAN module **(4)** by lifting it until it clears the alignment pin built into the bottom case.
6. Remove the WLAN module **(5)** by sliding it to the left and out of the bottom case.



Reverse this procedure to install the WLAN module.

System board

NOTE: The system board is equipped with an Intel Atom z2760 1.50-GHz processor (burst up to 1.80-GHz; 533-MHz FSB, 512-KB L2 cache), 2048-MB of system memory, and includes memory, and eMMC.

Description	Spare part number
Includes 64-GB of eMMC primary storage, the Windows 8 Professional operating system, and WWAN capability	714753-601
Includes 64-GB of eMMC primary storage, the Windows 8 Standard operating system, and WWAN capability	714753-501
Includes 64-GB of eMMC primary storage, and the Windows 8 Professional operating system, but not WWAN capability	714751-601
Includes 64-GB of eMMC primary storage, and the Windows 8 Standard operating system, but not WWAN capability	714751-501
Includes 32-GB of eMMC primary storage, the Windows 8 Professional operating system, and WWAN capability	714752-601
Includes 32-GB of eMMC primary storage, the Windows 8 Standard operating system, and WWAN capability	714752-501
Includes 32-GB of eMMC primary storage, and the Windows 8 Professional operating system, but not WWAN capability	714750-601
Includes 32-GB of eMMC primary storage, and the Windows 8 Standard operating system, but not WWAN capability	714750-501

Before removing the system board, follow these steps:

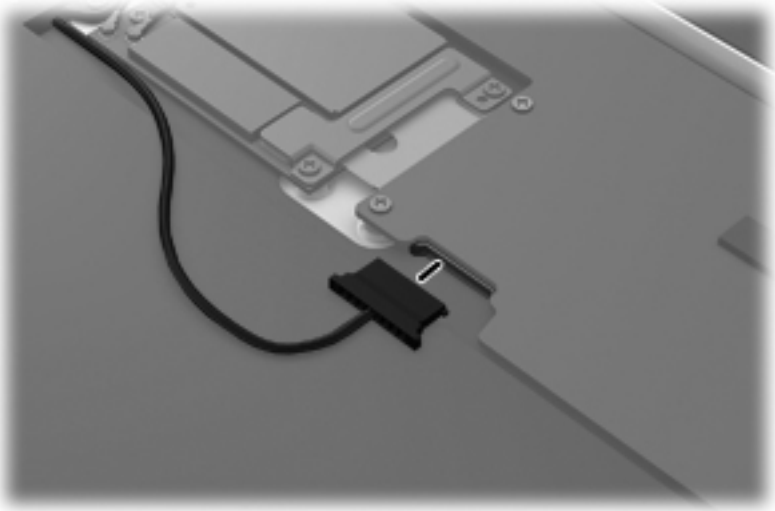
1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).

NOTE: 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:

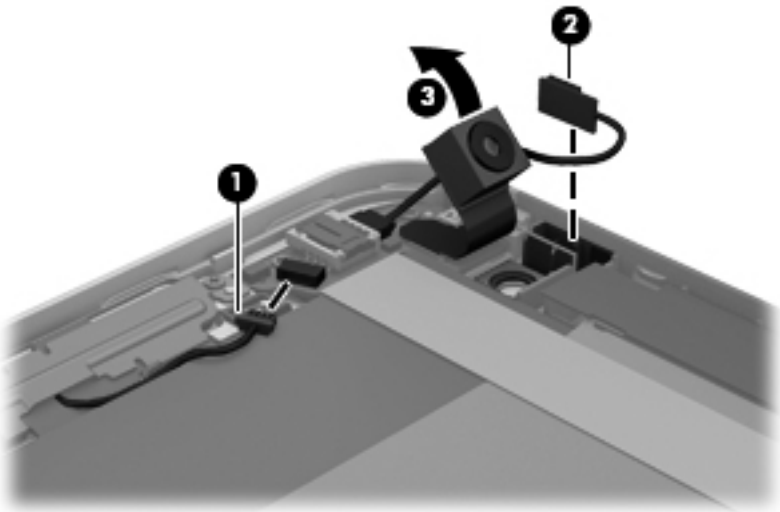
- Microphones (see Microphones on page 47)
- Webcams (see Webcams on page 48)
- Communications cable (see Communications cable on page 50)
- Power button board (see Power button board on page 51)
- WLAN ribbon cable (see WLAN ribbon cable on page 52)

Remove the system board:

1. Disconnect the battery cable from the system board.

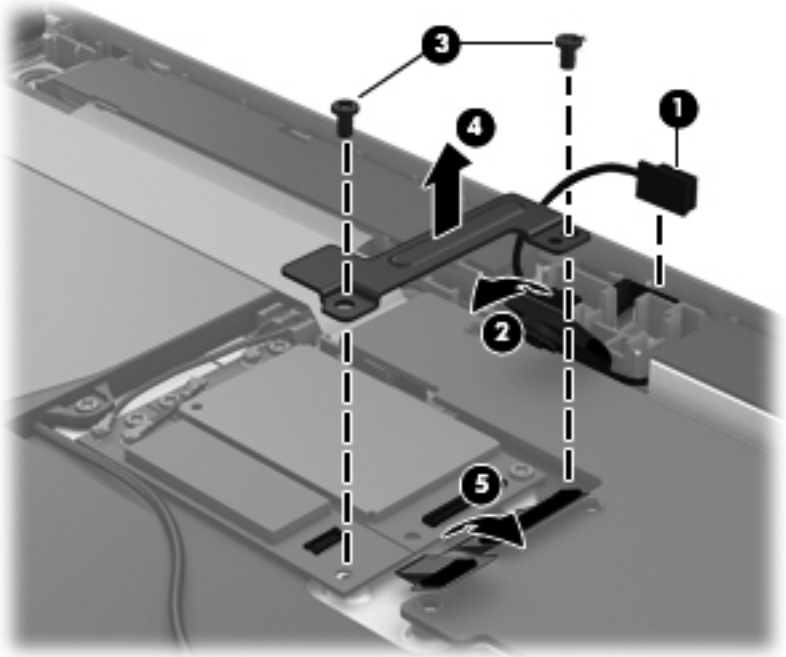


2. Disconnect the volume button board cable **(1)** from the power button board.
3. Release the left microphone **(2)** from the clip built into the bottom case.
4. Release the rear-facing webcam **(3)** from the clip built into the bottom case.



5. Release the right microphone **(1)** from the clip built into the bottom case.
6. Release the forward-facing webcam **(2)** from the clip built into the bottom case.
7. Remove the two Phillips PM1.4×2.3 screws **(3)** that secure the communications bracket to the system board.
8. Remove the communications bracket **(4)**.

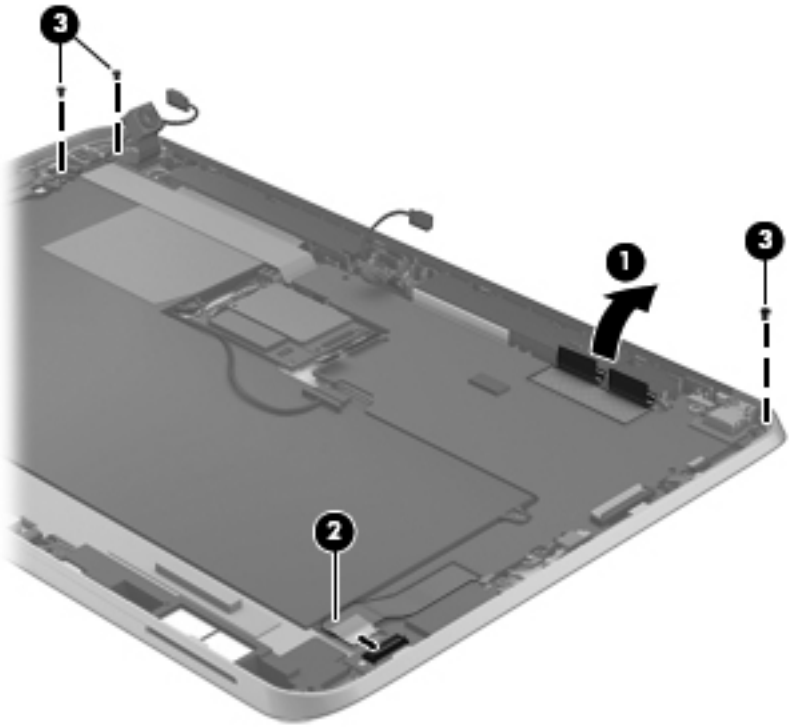
9. Disconnect the cables **(5)** that connect the WWAN module and the GPS module to the system board.



10. Detach the WLAN antenna transceivers **(1)** from the battery.

11. Release the ZIF connector to which the WLAN ribbon cable is attached, and then disconnect the WLAN ribbon cable **(2)** from the WLAN module.

12. Remove the three Phillips PM1.4×2.0 screws **(3)** that secure the power button board and the system board to the bottom case.

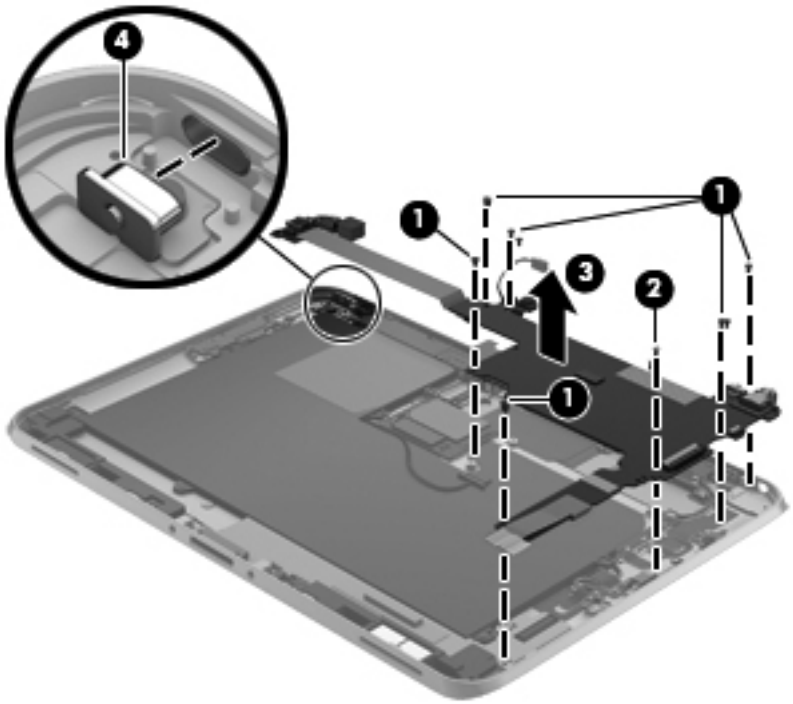


13. Remove the six Phillips PM1.4×2.3 screws **(1)** and the Phillips PM1.4×3.2 screw **(2)** that secure the system board to the bottom case.

14. Remove the system board **(3)**.

NOTE: When removing the system board, make note of the installation location of the power button actuator **(4)**. The power button actuator may become dislodged when the system board is removed and require reinstallation.

The power button actuator is included with the bottom case, spare part number 709450-001.



Reverse this procedure to install the system board.

Microphones

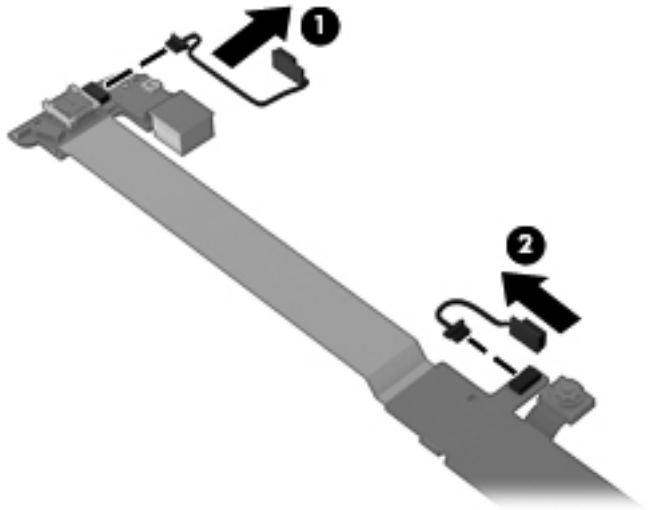
Description	Spare part number
Microphone Kit (includes left and right microphones and cables)	709454-001

Before removing the microphones, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).

Remove the microphones:

1. Disconnect the left microphone **(1)** from the power button board.
2. Disconnect the right microphone **(2)** from the power system board.



3. Remove the microphones.

Reverse this procedure to install the microphones.

Webcams

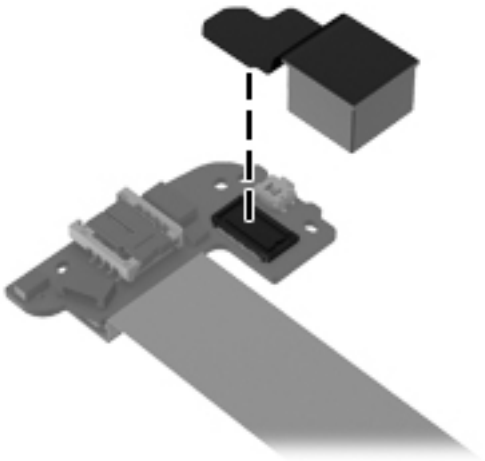
Description	Spare part number
Webcam Kit (includes forward-facing and rear-facing webcams and cables)	709455-001

Before removing the webcams, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).

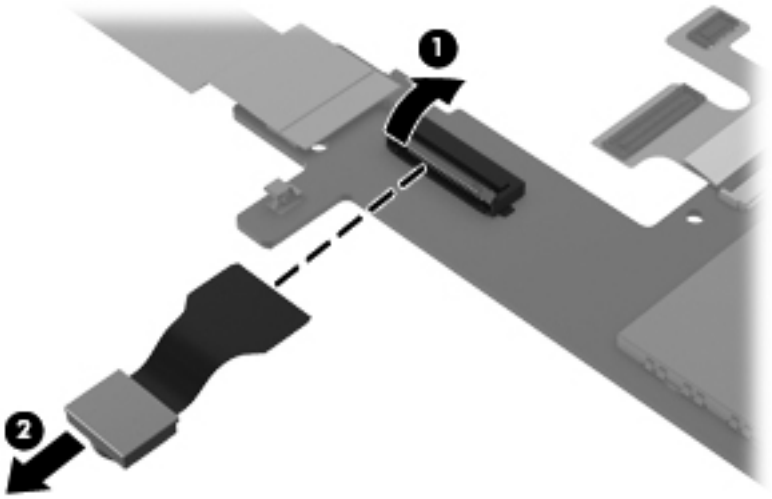
Remove the webcams:

1. To remove the forward-facing webcam, disconnect the webcam cable from the power button board and remove the webcam and cable.



2. To remove the rear-facing webcam, turn the system board upside down, with the webcam toward you.

3. Release the ZIF connector **(1)** to which the rear-facing webcam cable is attached, and then disconnect the rear-facing webcam cable **(2)** from the system board.



4. Remove the rear-facing webcam and cable.

Reverse this procedure to install the webcams.

Communications cable

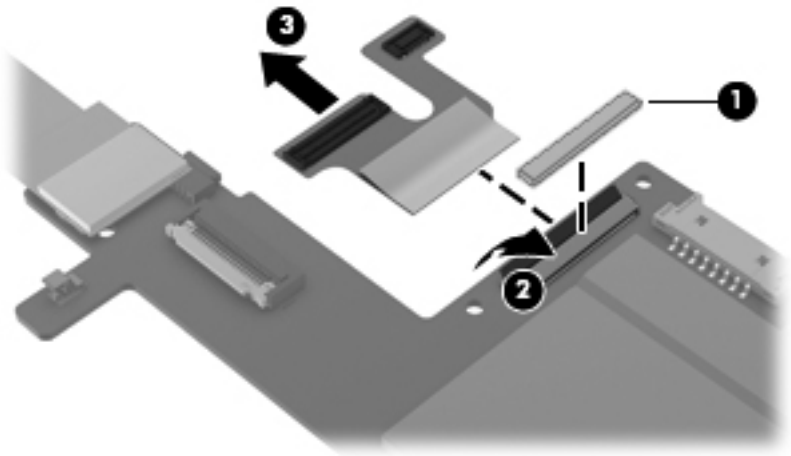
NOTE: The communications cable is included in the Cable Kit, spare part number 709459-001.

Before removing the communications cable, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).

Remove the communications cable:

1. Turn the system board upside down, with the top toward you.
2. Remove the protective pad **(1)** that covers the ZIF connector.
3. Release the ZIF connector **(2)** to which the communications cable is attached, and then disconnect the communications cable **(3)** from the system board.



4. Remove the communications cable.

Reverse this procedure to install the communications cable.

Power button board

Description	Spare part number
Power button board (includes cable)	709452-001

NOTE: The power button board is included in the power button board spare part kit, and is also included in the Cable Kit, spare part number .

Before removing the power button board, follow these steps:

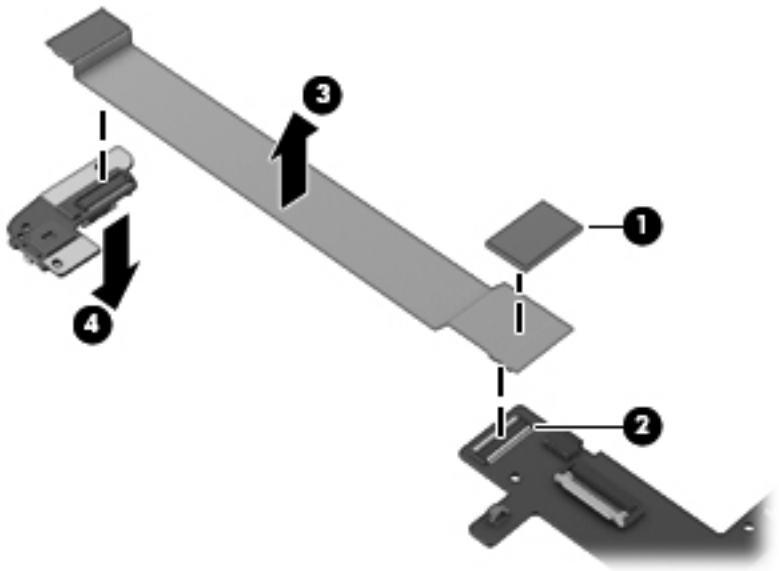
1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).

Remove the power button board:

1. Turn the system board upside down, with the top toward you.
2. Remove the protective pad **(1)** that covers the power button board connector.

CAUTION: When removing the protective pad, make sure not to damage the connector **(2)** on the system board.

3. Disconnect the power button board cable **(3)** from the system board.
4. Disconnect the power button board **(4)** from the power button board cable.



Reverse this procedure to install the power button board.

WLAN ribbon cable

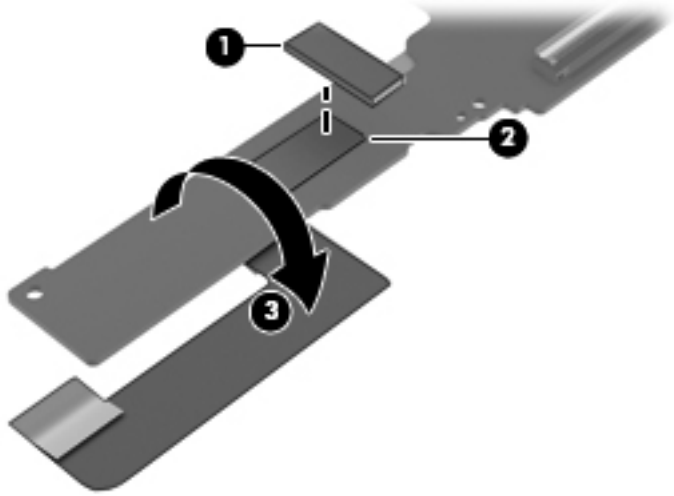
NOTE: The WLAN ribbon cable is included in the Cable Kit, spare part number 709459-001.

Before removing the WLAN ribbon cable, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).

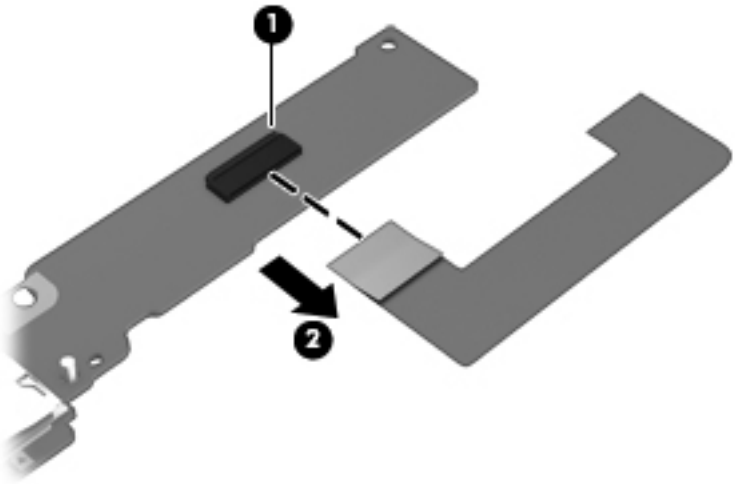
Remove the WLAN ribbon cable:

1. Remove the protective pad **(1)** that covers the WLAN ribbon cable tape.
2. Release the tape **(2)** that secures the WLAN ribbon cable to the system board.
3. Release the WLAN ribbon cable **(3)** from the system board.



4. Turn the system board upside down, with the top toward you.

5. Release the ZIF connector **(1)** to which the WLAN ribbon cable is attached, and then disconnect the WLAN ribbon cable **(2)** from the system board.



6. Remove the WLAN ribbon cable.

Reverse this procedure to install the WLAN ribbon cable.

Battery

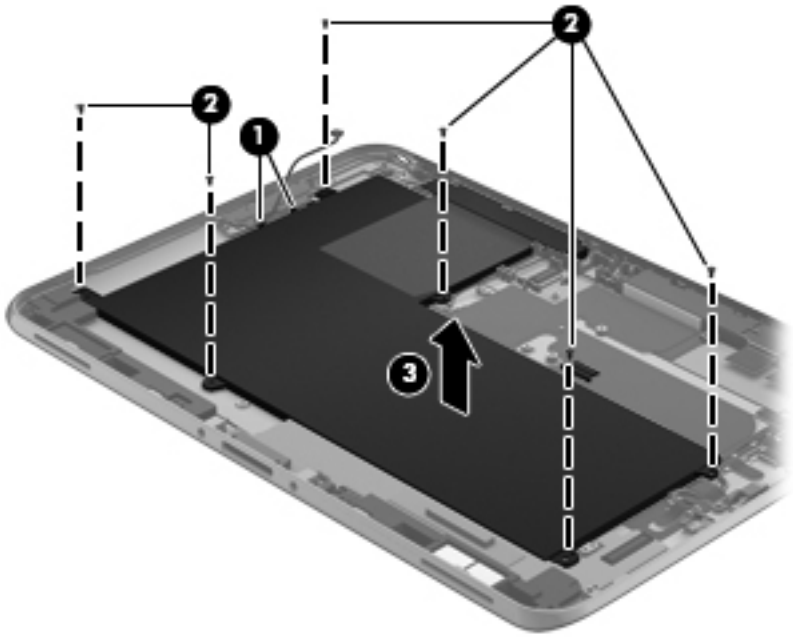
Description	Spare part number
2-cell, 25-Wh, 3.38-Ah, Li-ion battery (includes battery cable and WLAN transceiver and antenna cable)	685987-001

Before removing the battery, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).

Remove the battery:

1. Release the power button board cable **(1)** from the clips built into the battery.
2. Remove the four Phillips PM1.4×2.3 screws **(2)** that secure the battery to the bottom case.
3. Remove the battery **(3)** from the bottom case.



Reverse this procedure to install the battery.

WLAN antenna

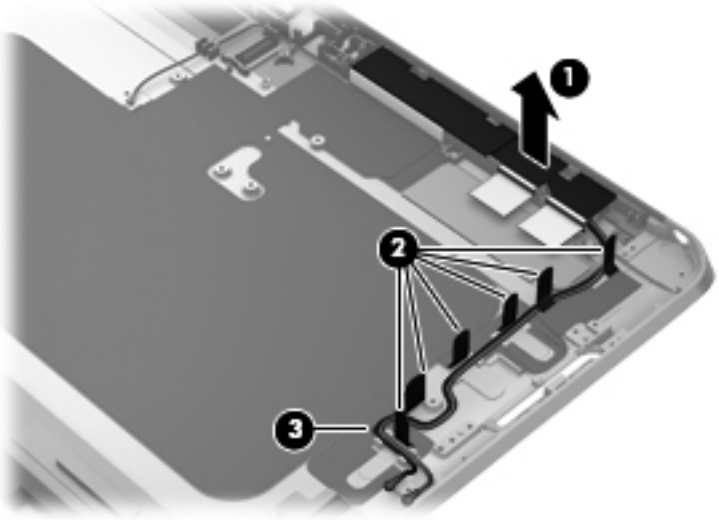
NOTE: The WLAN antenna is included in the Antenna Kit, spare part number 709451-001.

Before removing the WLAN antenna, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).
6. Remove the battery (see Battery on page 54).

Remove the WLAN antenna:

1. Release the WLAN antenna transceiver **(1)** from the bottom case. (The WLAN antenna transceiver is attached to the bottom case with double-sided adhesive.)
2. Release the tabs **(2)** built into the bottom case that secure the WLAN antenna cables.
3. Release the WLAN antenna cables **(3)**.



4. Remove the WLAN antenna cables and transceiver.

Reverse this procedure to install the WLAN antenna.

Docking connector cable

NOTE: The docking connector cable is included in the Cable Kit, spare part number 709459-001.

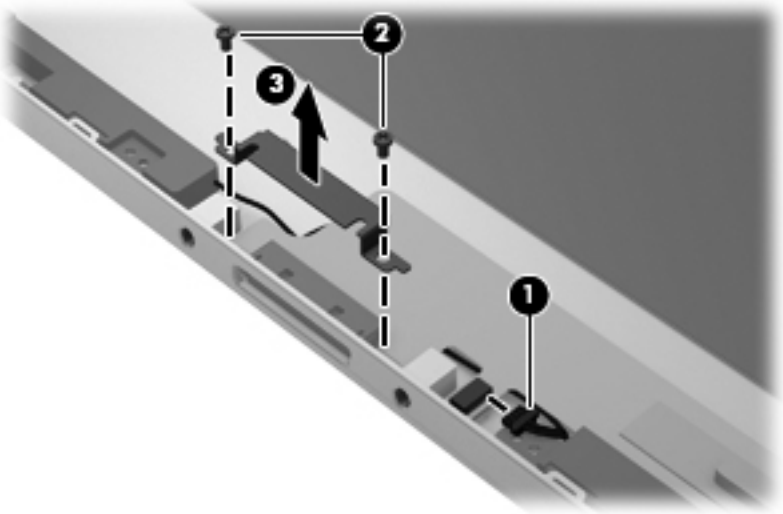
Before removing the docking connector cable, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).
6. Remove the battery (see Battery on page 54).

Remove the docking connector cable:

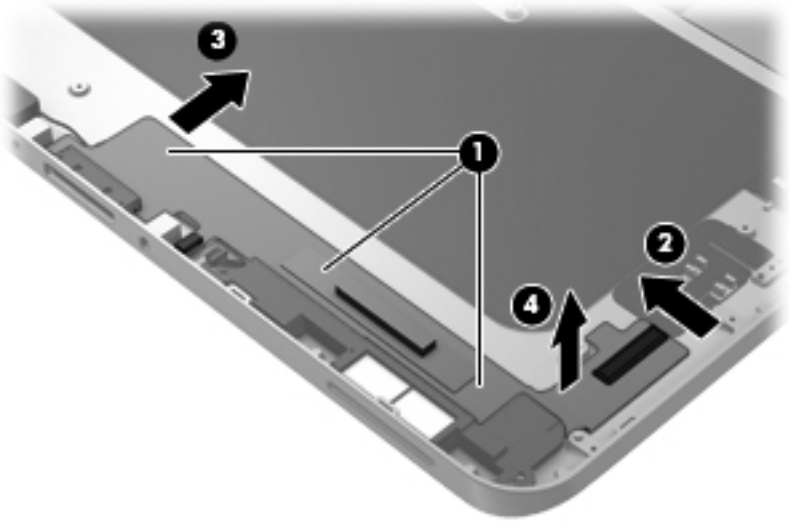
1. Disconnect the speaker cable **(1)** from the docking connector cable.
2. Remove the two Phillips PM1.4×2.0 screws **(2)** that secure the docking connector cable bracket to the bottom case.
3. Remove the docking connector cable bracket **(3)**.

NOTE: The docking connector cable bracket is included in the Bracket Kit, spare part number 718834-001.



4. Release the docking connector cable **(1)** from the bottom case surface. (The docking connector cable is attached to the bottom case in multiple locations with double-sided adhesive.)
5. Release the docking connector cable by sliding it forward **(2)** and to the left **(3)**.

6. Remove the docking connector cable **(4)**.



Reverse this procedure to install the docking connector cable.

Speaker assembly

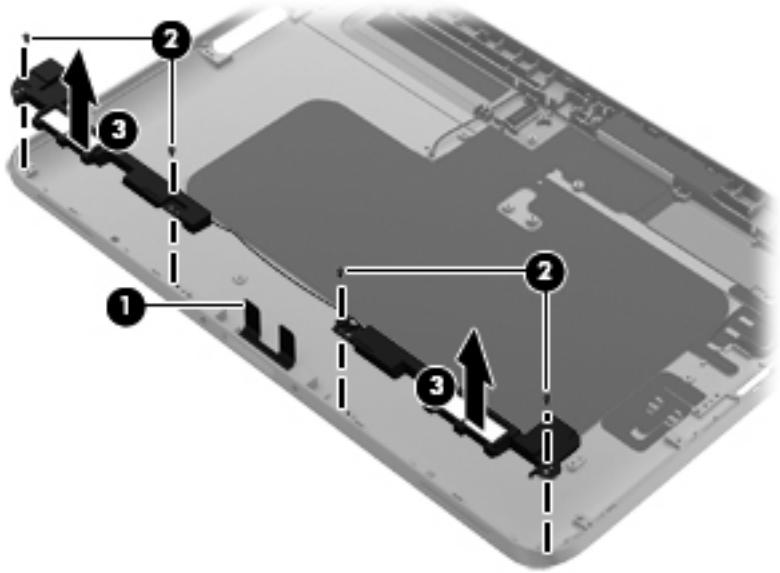
Description	Spare part number
Speaker assembly	709456-001

Before removing the speaker assembly, follow these steps:

1. Turn off 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 the power from the computer by unplugging the power cord from the computer.
3. Disconnect all external devices from the computer.
4. Remove the display assembly (see Display assembly on page 26).
5. Remove the system board (see System board on page 42).
6. Remove the battery (see Battery on page 54).
7. Remove the docking connector (see Docking connector cable on page 56).

Remove the speaker assembly:

1. Release the tabs **(1)** built into the bottom case that secure the speaker cable.
2. Remove the four Phillips PM1.4×2.3 screws **(2)** that secure the speaker assembly to the bottom case.
3. Remove the speaker assembly **(3)**.



Reverse this procedure to install the speaker assembly.

5 HP BIOS Settings

HP BIOS Settings controls communication between all the input and output devices on the system (such as disk drives, display, keyboard, mouse, and printer). HP BIOS Settings includes settings for the types of devices installed, the startup sequence of the tablet, and the amount of system and extended memory.

NOTE: Use extreme care when making changes in HP BIOS Settings. Errors can prevent the tablet from operating properly.

Using HP BIOS Settings

To start HP BIOS Settings, follow these steps:

1. Swipe from the right edge of the touch screen, tap **Search**, and then tap the search box.
2. In the search box, type c, tap **Control Panel**, tap **System and Security**, scroll down, and then tap **HP BIOS Settings**.
3. To make changes if a BIOS password has been set, enter the BIOS password, and then tap **Finish**.
4. To view system settings in read-only mode, tap **Cancel**.

Starting HP BIOS Settings

View Information

Information is displayed about your tablet, including product information, processor, memory, BIOS, system board, warranty date, and serial numbers.

BIOS Settings

Boot options

If you have entered the BIOS Administrator password correctly, you can change the following settings:

Item	Description
Ethernet Boot	Tap on or off.
USB Device Boot	Tap on or off.

- Tap **Apply** to apply the changes you have made on this page, or tap **Cancel** to close the app.

Device configurations

If you have entered the BIOS Administrator password correctly, you can change the following settings:

Item	Description
Shutdown on battery	Tap on or off.
Secure Boot	Tap on or off.
Boot Order	Use the arrow keys on an external keyboard or drag the boot devices to arrange. Options vary depending on whether the tablet is connected to an external dock or network.

- Tap **Apply** to apply the changes you have made on this page, or tap **Cancel** to close the app.

BIOS password

You can change the current BIOS password or create a new password if one has not been set. The supported BIOS policy is displayed.

⚠ **CAUTION:** If you have lost or forgotten the BIOS password, contact support.

1. Enter a new password, and then enter it again to confirm it.
2. Tap **Apply** to save the password, or tap **Cancel** to close the app.

Updating the BIOS

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

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

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

Determining the BIOS version

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

To display BIOS version information (also known as ROM date and System BIOS), see Using HP BIOS Settings on page 59.

6 Specifications

Tablet specifications

	Metric	U.S.
Dimensions		
Width	**17.80 cm**	7.0 in
Depth	**26.10 cm**	10.3 in
Height	**0.92 cm**	0.36 in
Weight	**0.69 kg**	1.52 lbs
Input power		
Operating voltage and current	6.4 to 9 V DC @ 1.5A to 1.1A – 10W	
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.

7 Backup and recovery

To protect your information, use Windows backup and restore utilities 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 flash drive, or 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 tablet.

1. Swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box.
2. In the search box, type `restore`, tap **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 HP Support Assistant. To access HP Support Assistant, on the Start screen, tap the **HP Support Assistant app**.

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 tablet. You may be prompted for your permission or password for tasks such as installing software, running utilities, or changing Windows settings. Refer to HP Support Assistant. To access HP Support Assistant on the Start screen, tap the **HP Support Assistant** app, or swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box. In the search box, type `HP`, and then tap **HP Support Assistant**.

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. The system repair media (select models only) are used to start up (boot) the tablet 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.

1. Swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box.
2. In the search box, type `backup`, tap **Settings**, and then tap **Save backup copies of your files with File History**.

You can back up your information to an optional external flash 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 tablet 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 tablet.

1. Swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box.
2. In the search box, type `recovery`, tap **Settings**, and then select from the list of displayed options.
3. 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, you can use Windows Recovery to recover information you have previously backed up. Swipe from the right edge of the touch screen to display the charms, tap **Search**, and then tap the search box. In the search box, type `recovery`, tap **Settings**, and then select from the displayed options:

NOTE: If you are unable to boot (start up) your tablet and you cannot use the system repair media you previously created (select models only), contact 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 tablet are permanently removed. The f11 recovery tool reinstalls the operating system, drivers, Windows updates, and language packs that were installed at the factory. All other software applications must be downloaded from HP.com or the Windows Store.

NOTE: An external keyboard, mouse, and external flash drive may be required to perform this procedure.

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: Swipe from the right edge of the touch screen, tap **Search**, and then tap the search box. Type c, and then tap **Computer**.

   NOTE: If the HP Recovery partition is not listed, see Changing the boot device order on page 65.
3. If the HP Recovery partition is listed, shut down the tablet.
4. Press and hold the volume down button and the power button simultaneously to turn on the tablet and display the Startup menu.
5. Tap **F11 HP Recovery**, and then follow the on-screen instructions.

Changing the boot device order

To change the boot order so that you can boot from an external device:

NOTE: An external flash drive is required to perform this procedure.

1. If possible, back up all personal files.
2. Shut down the tablet.
3. Connect the external flash drive.
4. Press and hold the volume down button and the power button simultaneously to turn on the tablet and display the Startup menu.
5. Tap **F9 Boot Options**.
6. Select the external flash drive as the boot device.
7. Restart the tablet.

Using Windows Refresh for quick and easy recovery

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

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

NOTE: During Refresh, a list of removed traditional applications will be saved so that you have a quick way to see what you might need to reinstall. See HP Support Assistant for instructions on reinstalling traditional applications. To access HP Support Assistant on the start screen, tap the **HP Support Assistant** app.

NOTE: You may be prompted for your permission or password when using Refresh. See HP Support Assistant for more information.

To start Refresh:

1. Swipe from the right edge of the touch screen to display the charms, and then tap **Settings**.
2. Tap **Change PC settings** in the bottom-right corner of the screen, and then tap **General** from the PC settings screen.
3. Scroll down the right side, and under **Refresh your PC without affecting your files**, tap **Get started**.
4. Then follow the on-screen instructions.

Remove everything and reinstall Windows

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

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

You can initiate this option on the Start screen.

To use the Start screen:

1. Swipe from the right edge of the touch screen to display the charms, and then tap **Settings**.
2. Tap **Change PC settings** in the bottom-right corner of the screen, and then tap **General** from the PC settings screen.
3. Scroll down the right side. Under **Remove everything and reinstall Windows**, tap **Get started**, and then follow the on-screen instructions.

8 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 **1.0 m** (3.3 ft) and no more than **2.0 m** (6.5 ft).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country or region where the power cord set will be used.
- The power cord sets must have a minimum current capacity of 10 amps 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
Australia	EANSW	1
Austria	OVE	1
Belgium	CEBC	1
Canada	CSA	2
Denmark	DEMKO	1
Finland	FIMKO	1
France	UTE	1
Germany	VDE	1
Italy	IMQ	1
Japan	METI	3
The Netherlands	KEMA	1
Norway	NEMKO	1
The People's Republic of China	COC	5
South Korea	EK	4
Sweden	SEMKO	1
Switzerland	SEV	1
Taiwan	BSMI	4
The United Kingdom	BSI	1
The United States	UL	2

1. The flexible cord must be Type HO5VV-F, 3-conductor, 1.0-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 SPT-3 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) configuration.
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 VCT or VCTF, 3-conductor, 1.00-mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V) 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 certification mark of the agency responsible for evaluation in the country or region where it will be used.
5. The flexible cord must be Type VCTF, 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.

9 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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