



HP ENVY x2 (model numbers 13-j000 through 13-j099)

Maintenance and Service Guide

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Product notice

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

Not all features are available in all editions of Windows 8. This tablet may require upgraded and/or separately purchased hardware, drivers, and/or software to take full advantage of Windows 8 functionality. See for <http://www.microsoft.com> details.

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).

Table of contents

1 Product description	1
2 External component identification	3
Finding your hardware and software information	3
Locating hardware	3
Locating software	3
Display	4
Top	5
Bottom	5
Rear	6
Left side	7
Right side	8
3 Illustrated parts catalog	9
Locating the model number, part number, serial number, and warranty information	9
Computer major components	10
Miscellaneous parts	12
Sequential part number listing	14
4 Removal and replacement preliminary requirements	17
Tools required	17
Service considerations	17
Plastic parts	17
Cables and connectors	18
Drive handling	18
Grounding guidelines	18
Electrostatic discharge damage	18
Packaging and transporting guidelines	20
Workstation guidelines	20
5 Removal and replacement procedures	22
Component replacement procedures	22
Back cover	22
Stand	24
Battery	25
Speakers	26

Power button board	27
Docking port board	28
WLAN module	29
Solid-state drive	31
Volume button board	32
Vibrator module	33
Connector board	34
System board	36
Display panel cable	39
6 Using Setup Utility (BIOS) and HP PC Hardware Diagnostics (UEFI)	41
Starting Setup Utility (BIOS)	41
Updating the BIOS	41
Determining the BIOS version	41
Downloading a BIOS update	42
Using HP PC Hardware Diagnostics (UEFI)	43
Downloading HP PC Hardware Diagnostics (UEFI) to a USB device	43
7 Specifications	44
8 Backing up, restoring, and recovering	45
Creating recovery media and backups	45
Creating HP Recovery media	45
Restore and recovery	46
Recovering using HP Recovery Manager	47
What you need to know	47
Using the HP Recovery partition (select models only)	47
Using HP Recovery media to recover	48
Changing the tablet boot order	48
Removing the HP Recovery partition (select models only)	48
9 Power cord set requirements	49
Requirements for all countries	49
Requirements for specific countries and regions	49
10 Recycling	51
Index	52

1 Product description

Category	Description
Product Name	HP ENVY x2
Processor	<ul style="list-style-type: none">• Intel® Core® M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W)• Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W)• Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W)• Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W)
Chipset	Intel integrated soldered-on-circuit (SoC) LP
Graphics	Internal Graphics: Intel HD graphics 5300, 2D/3D graphics Supports HD playback, streaming, and recording @ 1080p, 30fps Support DirectX11
Panel	13.3-in, AntiGlare (AG, 1920×1080), full-high definition (FHD), in-plane switching (IPS), light-emitting diode (LED), slim (3.0-mm), UWVA, typical brightness: 400 nits 13.3-in, AG (1368×768), high definition (HD), LED, slim (3.0-mm), UWVA, typical brightness: 200 nits TouchScreen solution with flush glass, multitouch enabled, and Active Stylus writing support, one glass solution (OGS), airgap bonding; 16:9 Ultra Wide Aspect Ratio support; eDP 1.3 with integrated panel self refresh (PSR)
Memory	Supports on-board, dual channel, LP-DDR3L system memory Supports 8192-MB (256-MB×16×4×4 pieces configuration) or 4096-MB (128-MB×32×2×4 pieces configuration) of system memory
Storage	Support one solid-state drive in M.2 2280 form factor. Support for SATA gen3 is required. Also supports M.2. 2280 TLC for factor. The following solid-state drives are supported: <ul style="list-style-type: none">• 512-GB, M2, SATA-3, TLC• 256-GB, M2, SATA-3, TLC• 128-GB, M2, SATA-3, TLC
Audio and video	Integrated 2.0-MP, FHD, fixed (10-degree tilt) webcam with wide-view angle lens (88 degrees) and activity light, shooting at 1080p by 30 frames per second Dual array digital microphones with appropriate beam-forming, echo-cancellation, noise-suppression software Supports voice recognition Dual speakers Beats Audio (Realtek ALC3227-CG)
Sensors	Accelerometer

Category	Description
Sensors <i>(continued)</i>	Gyroscope (ST Micro HP9DS0) eCompass
Wireless	Integrated wireless local area network (WLAN) options by way of wireless module Two built-in WLAN antennas Supports the following modules: <ul style="list-style-type: none"> • Intel Dual Band Wireless-AC 7265 802.11 ac 2×2 WiFi + Bluetooth® 4.0 Combo Adapter • Intel Dual Band Wireless-AC 3160 802.11 ac 1×1 WiFi + Bluetooth 4.0 Combo Adapter
Ports	<ul style="list-style-type: none"> • Docking port • HDMI port v1.4 supporting up to 1920×1080 @ 60Hz • Headphone/microphone combo jack • Micro Secure Digital (SD) media reader • Power connector • USB 3.0 ports (2)
Keyboard/pointing devices	Detachable keyboard base with Synaptic TouchPad (110×68mm) Touchpad requirements: Multitouch gestures enabled: <ul style="list-style-type: none"> • 2-finger scroll • Pinch • Rotate • 2-finger click • 3-finger flick Taps enabled as default Clickpad with image sensor Support for Windows 8 Modern Trackpad Gestures
Power requirements	Support for a 2-cell, 33-WHr, 4.58-AHr, Li-ion battery Support for a 45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm) AC adapter
Operating system	Preinstalled: Microsoft® Windows® 8.1 Standard 64-bit
Serviceability	End user replaceable parts: AC adapter and detachable keyboard

2 External component identification

Finding your hardware and software information

Locating hardware

To find out what hardware is installed on your tablet:

1. From the Start screen, type `control panel`, and then select **Control Panel**.
2. Select **System and Security**, select **System**, and then click **Device Manager** in the left column.

A list displays all the devices installed on your tablet.

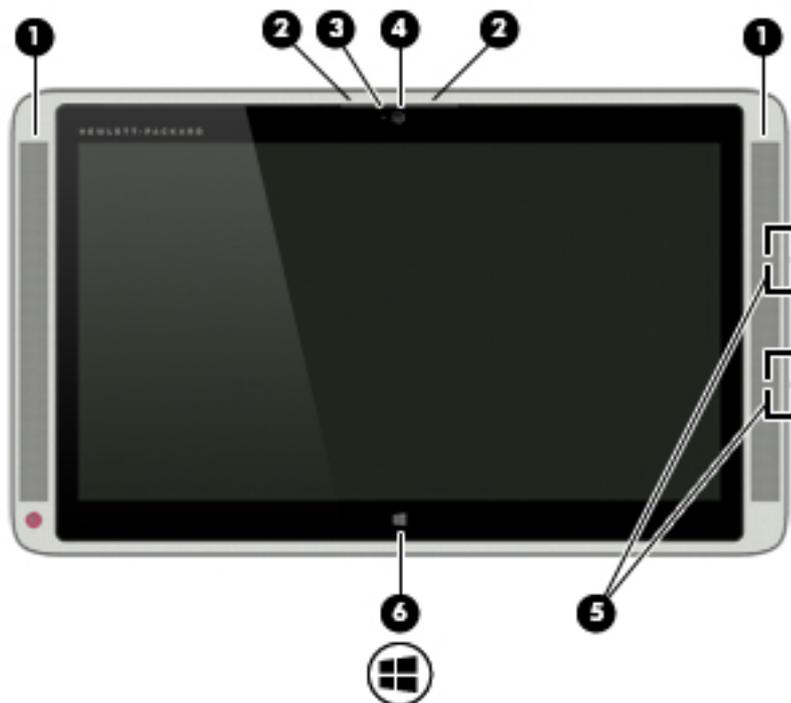
To find out information about system hardware components and the system BIOS version number, press `fn+esc`.

Locating software

To find out what software is installed on your tablet:

- ▲ From the Start screen, click the down arrow in the lower-left corner of the screen.

Display



Item	Component	Description
(1)	Speakers (2)	Produce sound.
(2)	Internal microphones (2)	Record sound.
(3)	Webcam light	On: The webcam is in use.
(4)	Webcam	Records video and captures photographs. Some models allow you to video conference and chat online using streaming video. To use the webcam, from the Start screen, type <code>camera</code> , and then select Camera from the list of applications.
(5)	Magnetic pen holder	Holds the digitizer pen (select models only) magnetically to the tablet.
(6)	Windows button	Returns you to the Start screen from an open app or the Windows desktop. NOTE: Pressing the Windows key again will return you to the previous screen.

Top



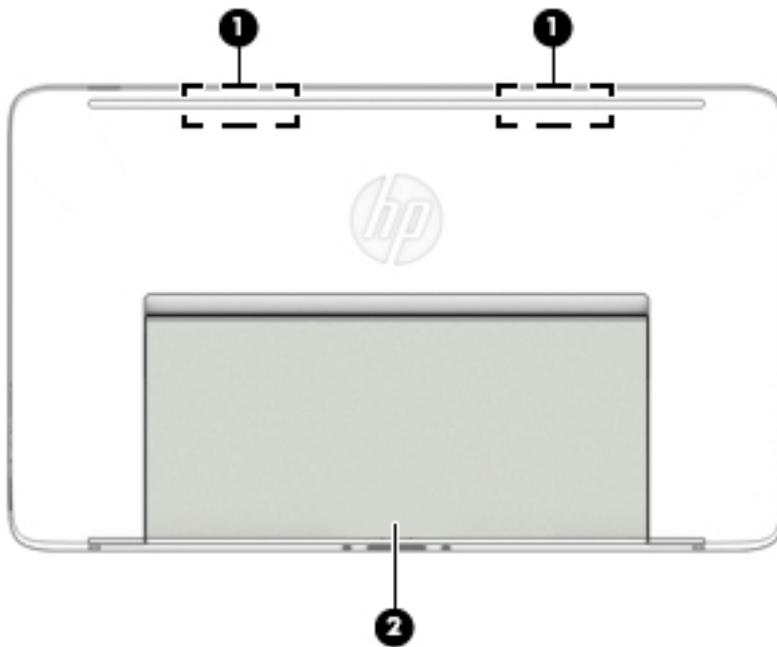
Item	Component	Description
(1)	Power button	<ul style="list-style-type: none">• When the tablet is off, press the button to turn on the tablet.• When the tablet is on, press the button briefly to initiate Sleep.• When the tablet is in the Sleep state, press the button briefly to exit Sleep.• When the tablet is in Hibernation, press the button briefly to exit Hibernation. <p>CAUTION: Pressing and holding down the power button will result in the loss of unsaved information.</p> <p>If the tablet has stopped responding and Windows shutdown procedures are ineffective, press and hold the power button down for at least 5 seconds to turn off the tablet.</p> <p>To learn more about your power settings, see your power options. From the Start screen, type <code>power</code>, select Power and sleep settings, and then select Power and sleep from the list of applications.</p>

Bottom



Item	Component	Description
(1)	Docking port	Connects the tablet to the keyboard base (for keyboard charging only).

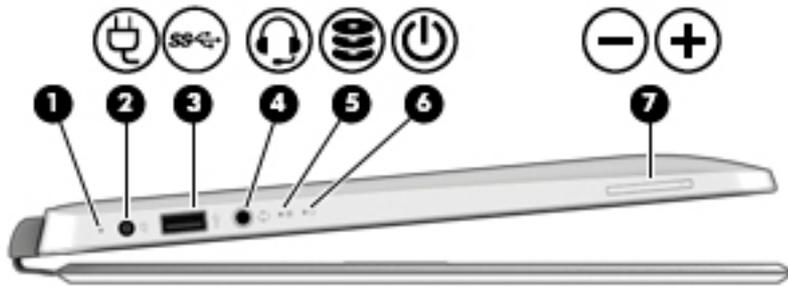
Rear



Item	Component	Description
(1)	WLAN antennas (2)*	Send and receive wireless signals.
(2)	Tablet stand	Positions the tablet at different angles.

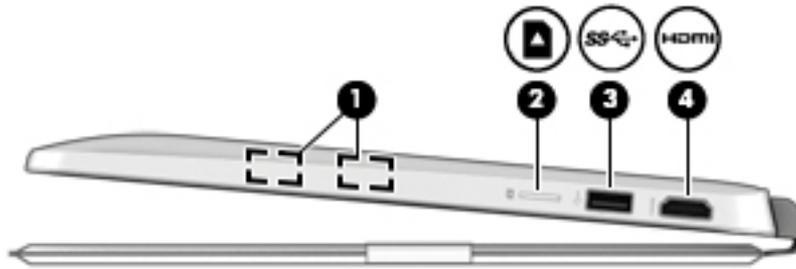
*The antennas are not visible from the outside of the tablet. For optimal transmission, keep the areas immediately around the antennas free from obstructions. For wireless regulatory notices, see the section of the *Regulatory, Safety, and Environmental Notices* that applies to your country or region. To access this guide, from the Start screen, type `support`, and then select the **HP Support Assistant** app.

Left side



Item	Component	Description
(1)	AC adapter light	<ul style="list-style-type: none"> On: The AC adapter is connected and the battery is charged. Off: The tablet is using battery power.
(2)	Power connector	Connects an AC adapter.
(3)	USB 3.0 port	Connects an optional USB device, such as a keyboard, mouse, external drive, printer, scanner or USB hub.
(4)	Audio-out (headphone)/Audio-in (microphone) jack	<p>Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television audio cable. Also connects an optional headset microphone. This jack does not support optional microphone-only devices.</p> <p>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>. To access this guide, from the Start screen, type <code>support</code>, and then select the HP Support Assistant app.</p> <p>NOTE: When a device is connected to the jack, the tablet speakers are disabled.</p> <p>NOTE: Be sure that the device cable has a 4-conductor connector that supports both audio-out (headphone) and audio-in (microphone).</p>
(5)	Hard drive light	Blinking white: The hard drive is being accessed.
(6)	Power light	<ul style="list-style-type: none"> On: The tablet is on. Blinking: The tablet is in the Sleep state, a power-saving state. The tablet shuts off power to the display and other unneeded components. Off: The tablet is off or in Hibernation. Hibernation is a power-saving state that uses the least amount of power.
(7)	Volume button	<p>Controls speaker volume on the tablet.</p> <ul style="list-style-type: none"> To increase speaker volume, press the + edge of the button. To decrease speaker volume, press the – edge of the button.

Right side



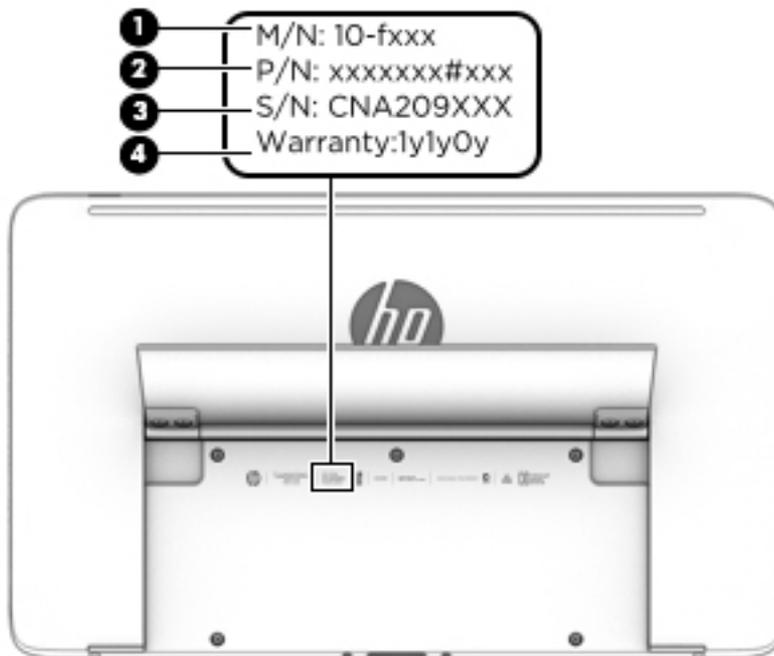
Item	Component	Description
(1)	Magnetic pen holder	Holds the digitizer pen (select models only) magnetically to the tablet.
(2)	Memory card reader	<p>Reads optional memory cards that store, manage, share, or access information.</p> <p>To insert a card:</p> <p>Hold the card label-side up, with connectors facing the slot, insert the card into the slot, and then push in on the card until it is firmly seated.</p> <p>To remove a card:</p> <p>Press in on the card it until it pops out.</p>
(3)	USB 3.0 port	Connects an optional USB device, such as a keyboard, mouse, external drive, printer, scanner or USB hub.
(4)	HDMI port	Connects an optional video or audio device, such as a high-definition television, any compatible digital or audio component, or a high-speed HDMI device.

3 Illustrated parts catalog

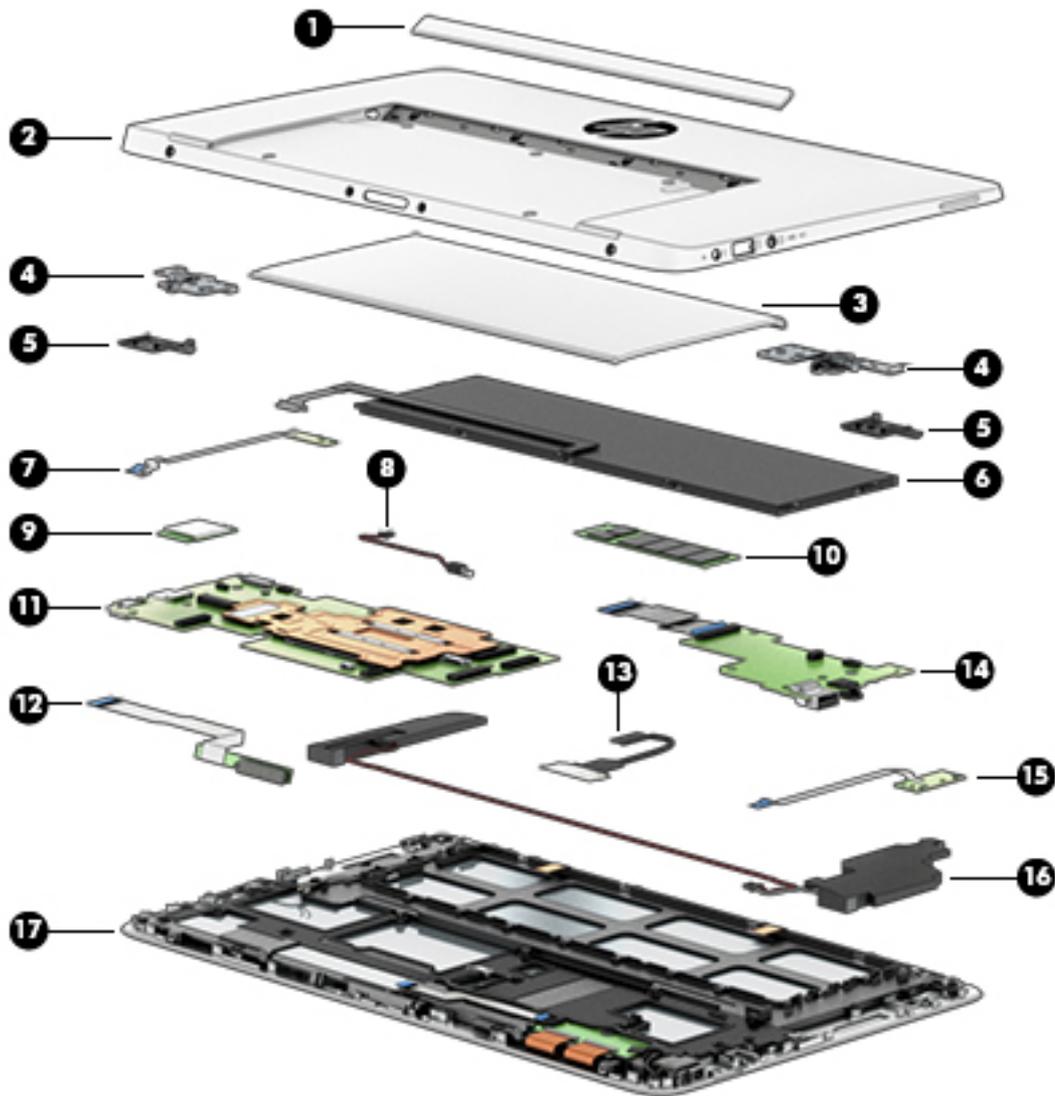
 **NOTE:** HP continually improves and changes product parts. For complete and current information on supported parts for your computer, go to <http://partsurfer.hp.com>, select your country or region, and then follow the on-screen instructions.

Locating the model number, part number, serial number, and warranty information

The model number (1), part number (2), serial number (3), and warranty information (4) are located on the back of the tablet, under the stand. This information may be needed when travelling internationally or contacting support.



Computer major components



Item	Description	Spare part number
(1)	Recess cover	787263-001
(2)	Back cover	787259-001
(3)	Stand	796694-001
(4)	Stand hinges (2)	787265-001
(5)	Stand hinge covers (2)	787286-001
(6)	Battery (2-cell, 33-WHr, 4.58-AHr, Li-ion; includes cable):	776621-006
(7)	Power button board (includes cable and double-sided adhesive)	787266-001
(8)	Vibrator module (includes cable)	783106-001
(9)	WLAN module:	

Item	Description	Spare part number
	Intel Dual Band Wireless-AC 7265 802.11 ac 2×2 WiFi + Bluetooth 4.0 Combo Adapter	756751-005
	Intel Dual Band Wireless-AC 3160 802.11 ac 1×1 WiFi + Bluetooth 4.0 Combo Adapter	784644-005
(10)	Solid-state drive , M2, SATA-3, TLC	
	512 GB	787264-001
	256 GB	787288-001
	128 GB	787287-001
(11)	System board equipped with a graphics subsystem with UMA memory (includes heat sink and replacement thermal material):	
	Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796717-501
	Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796717-001
	Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796715-501
	Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796715-001
	Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787280-501
	Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787280-001
	Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787278-501
	Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787278-001
	Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796716-501
	Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796716-001
	Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796714-501
	Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796714-001

Item	Description	Spare part number
	Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787281-501
	Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787281-001
	Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787279-501
	Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787279-001
(12)	Docking port board (includes cables)	787268-001
(13)	Display panel cable (includes adhesive support strip)	787261-001
(14)	Connector board (includes audio jack, USB port, and cable)	787267-001
(15)	Volume button board (includes cable)	787269-001
(16)	Speakers (include left and right speakers and cables)	787276-001
(17)	Display assembly (includes bezel, power connector cable, TouchScreen board and cable, webcam/microphone module and cable, and wireless antenna cables and transceivers):	
	13.3-in, AG, FHD, TouchScreen display assembly	787271-001
	13.3-in, AG, HD, TouchScreen display assembly	787272-001

Miscellaneous parts

Description	Spare part number
45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm)	741727-001
Cable Kit	787258-001
HDMI-to-VGA adapter	701943-001
Keyboard base with backlight and TouchPad in biscotti tan finish:	
For use in Canada	796693-DB1
For use in Denmark, Finland, and Norway	796693-DH1
For use in France	796693-051
For use in Germany	796693-041
For use in the Netherlands	796693-B31
For use in Saudi Arabia	796693-171
For use in Spain	796693-071
For use in Switzerland	796693-BG1
For use in the United Kingdom and Singapore	796693-031

Description	Spare part number
For use in the United States	796693-001
Keyboard base with backlight and TouchPad in moon stone gray finish:	
For use in Canada	796692-DB1
For use in Denmark, Finland, and Norway	796692-DH1
For use in France	796692-051
For use in Germany	796692-041
For use in the Netherlands	796692-B31
For use in Saudi Arabia	796692-171
For use in Spain	796692-071
For use in Switzerland	796692-BG1
For use in the United Kingdom and Singapore	796692-031
For use in the United States	796692-001
Active synaptics pen	773175-001
Power cord (3-pin, black, 1.00-m):	
For use in Australia	755530-011
For use in Denmark	755530-081
For use in Europe	755530-021
For use in North America	755530-001
For use in Switzerland	755530-111
For use in the United Kingdom and Singapore	755530-031
RJ45-to-USB adapter	539614-001
Screw Kit	787275-001

Sequential part number listing

Spare part number	Description
539614-001	RJ45-to-USB adapter
701943-001	HDMI-to-VGA adapter
741727-001	45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm)
755530-001	Power cord for use in North America (3-pin, black, 1.00-m)
755530-011	Power cord for use in Australia (3-pin, black, 1.00-m)
755530-021	Power cord for use in Europe (3-pin, black, 1.00-m)
755530-031	Power cord for use in the United Kingdom and Singapore (3-pin, black, 1.00-m)
755530-081	Power cord for use in Denmark (3-pin, black, 1.00-m)
755530-111	Power cord for use in Switzerland (3-pin, black, 1.00-m)
756751-005	Intel Dual Band Wireless-AC 7265 802.11 ac 2x2 WiFi + Bluetooth 4.0 Combo Adapter
773175-001	Active synaptics pen
776621-006	Battery (2-cell, 33-WHr, 4.58-AHr, Li-ion; includes cable)
783106-001	Vibrator module (includes cable)
784644-005	Intel Dual Band Wireless-AC 3160 802.11 ac 1x1 WiFi + Bluetooth 4.0 Combo Adapter
787258-001	Cable Kit
787259-001	Back cover
787261-001	Display panel cable (includes adhesive support strip)
787263-001	Recess cover
787264-001	Solid-state drive, 512-GB, M2 SATA-3 TLC
787265-001	Stand
787266-001	Power button board (includes cable and double-sided adhesive)
787267-001	Connector board (includes audio jack, USB port, and cable)
787268-001	Docking port board (includes cable)
787269-001	Volume button board (includes cable)
787271-001	Display assembly (13.3-in, AG, FHD, TouchScreen; includes bezel, power connector cable, TouchScreen board and cable, webcam/microphone module and cable, and wireless antenna cables and transceivers)
787272-001	Display assembly (13.3-in, AG, HD, TouchScreen; includes bezel, power connector cable, TouchScreen board and cable, webcam/microphone module and cable, and wireless antenna cables and transceivers)
787275-001	Screw Kit
787276-001	Speakers (include left and right speakers and cables)
787278-001	System board equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)

Spare part number	Description
787278-501	System board equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)
787279-001	System board equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)
787279-501	System board equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)
787280-001	System board equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)
787280-501	System board equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)
787281-001	System board equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)
787281-501	System board equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)
787286-001	Hinge covers
787287-001	Solid-state drive, 128-GB, M2 SATA-3 TLC
787288-001	Solid-state drive, 256-GB, M2 SATA-3 TLC
796692-001	Keyboard base with backlight and TouchPad in moon stone gray finish for use in the United States
796692-031	Keyboard base with backlight and TouchPad in moon stone gray finish for use in the United Kingdom and Singapore
796692-041	Keyboard base with backlight and TouchPad in moon stone gray finish for use in Germany
796692-051	Keyboard base with backlight and TouchPad in moon stone gray finish for use in France
796692-071	Keyboard base with backlight and TouchPad in moon stone gray finish for use in Spain
796692-171	Keyboard base with backlight and TouchPad in moon stone gray finish for use in Turkey
796692-B31	Keyboard base with backlight and TouchPad in moon stone gray finish for use in the Netherlands
796692-BG1	Keyboard base with backlight and TouchPad in moon stone gray finish for use in Switzerland
796692-DB1	Keyboard base with backlight and TouchPad in moon stone gray finish for use in Canada
796692-DH1	Keyboard base with backlight and TouchPad in moon stone gray finish for use in Denmark, Finland, and Norway
796693-001	Keyboard base with backlight and TouchPad in biscotti tan finish for use in the United States

Spare part number	Description
796693-031	Keyboard base with backlight and TouchPad in biscotti tan finish for use in the United Kingdom and Singapore
796693-041	Keyboard base with backlight and TouchPad in biscotti tan finish for use in Germany
796693-051	Keyboard base with backlight and TouchPad in biscotti tan finish for use in France
796693-071	Keyboard base with backlight and TouchPad in biscotti tan finish for use in Spain
796693-171	Keyboard base with backlight and TouchPad in biscotti tan finish for use in Turkey
796693-B31	Keyboard base with backlight and TouchPad in biscotti tan finish for use in the Netherlands
796693-BG1	Keyboard base with backlight and TouchPad in biscotti tan finish for use in Switzerland
796693-DB1	Keyboard base with backlight and TouchPad in biscotti tan finish for use in Canada
796693-DH1	Keyboard base with backlight and TouchPad in biscotti tan finish for use in Denmark, Finland, and Norway
796694-001	Stand
796714-001	System board equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)
796714-501	System board equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)
796715-001	System board equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)
796715-501	System board equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)
796716-001	System board equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)
796716-501	System board equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)
796717-001	System board equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and a non-Windows 8 operating system (includes heat sink and replacement thermal material)
796717-501	System board equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes heat sink and replacement thermal material)

4 Removal and replacement preliminary requirements

Tools required

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

- Flat-bladed screw driver
- Magnetic screw driver
- Phillips P0 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 tablet, 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 tablet, be sure that cables are placed in their proper locations during the reassembly process. Improper cable placement can damage the tablet.

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

Before removing or inserting a drive, shut down the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet 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 drive, place it in a static-proof bag.

Avoid exposing a 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 tablet 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, 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 $\pm 10\%$ 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

5 Removal and replacement procedures

 **CAUTION:** Components described in this chapter should only be accessed by an authorized service provider. Accessing these parts can damage the tablet or void the warranty.

 **NOTE:** HP continually improves and changes product parts. For complete and current information on supported parts for your tablet, go to <http://partsurfer.hp.com>, select your country or region, and then follow the on-screen instructions.

Component replacement procedures

There are as many as 46 screws that must be removed, replaced, and/or loosened when servicing the tablet. Make special note of each screw size and location during removal and replacement.

Back cover

Description	Spare part number
Back cover	787259-001

Before disassembling the tablet, follow these steps:

1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.

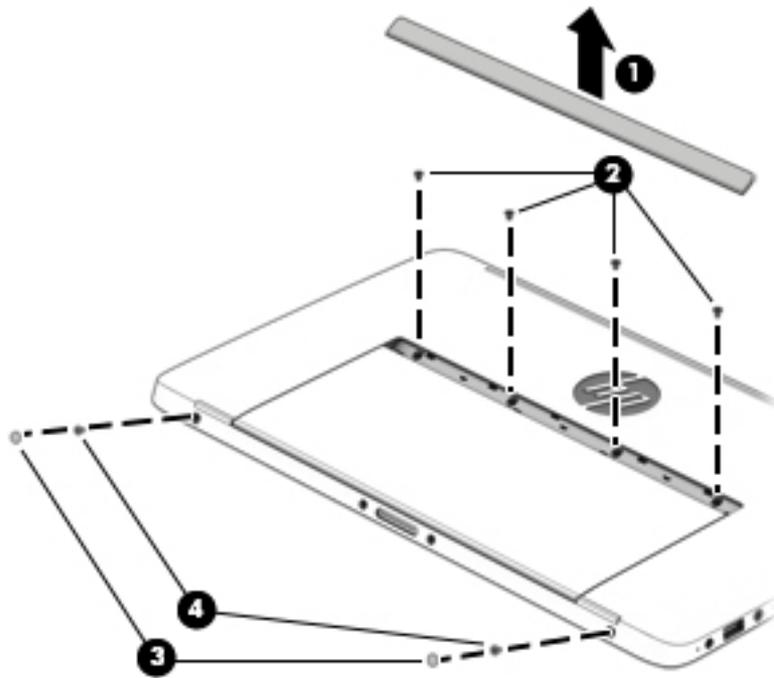
 **NOTE:** When replacing the back cover, be sure that the stand (see [Stand on page 24](#)) is removed from the defective back cover and installed on the replacement back cover.

 **CAUTION:** Before positioning the tablet with the display panel facing down, make sure the work surface is clear of tools, screws, and any other foreign objects. Failure to follow this caution can result in damage to the display panel assembly.

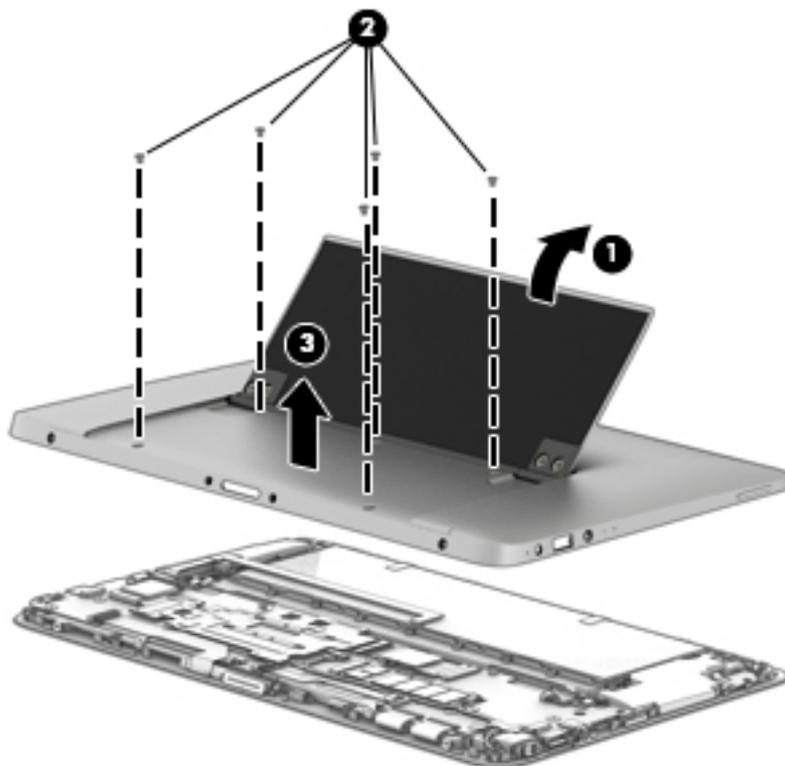
Remove the back cover:

1. Position the tablet with the display panel facing down and the and the tablet bottom edge toward you.
2. Remove the recess cover **(1)**.
The recess cover is available using spare part number 787263-001.
3. Remove the four Phillips PM1.9×3.7 screws **(2)** that secure the back cover to the tablet.
4. Remove the two screw covers **(3)** from the bottom edge of the tablet.

5. Remove the two Phillips PM1.9×3.7 screws (4) that secure the back cover to the tablet.



6. Release the tablet stand (1) to the upright position.
7. Remove the five Phillips PM1.9×3.7 screws (2) that secure the back cover to the tablet.
8. Remove the back cover (3).



Reverse this procedure to install the back cover.

Stand

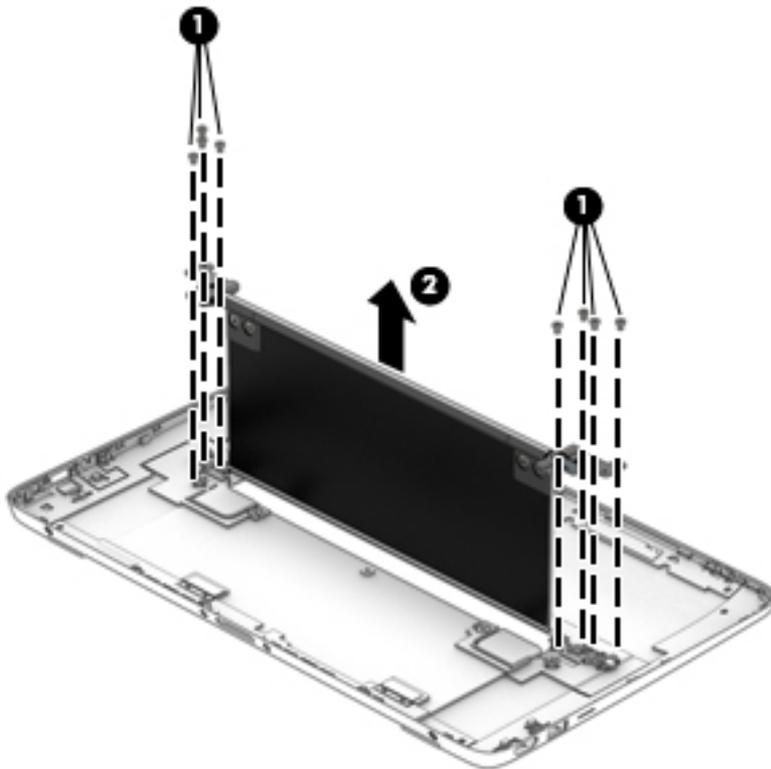
Description	Spare part number
Stand	796694-001

Before removing the stand, follow these steps:

1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.
4. Remove the back cover (see [Back cover on page 22](#)).

Remove the stand:

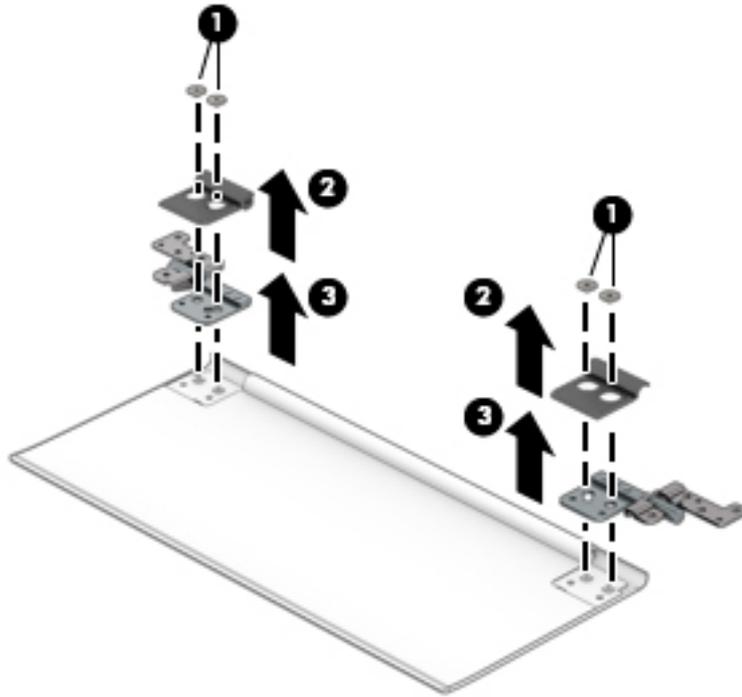
1. Turn the back cover upside down with the bottom edge toward you.
2. Remove the eight Phillips PM2.5×4.0 screws (1) that secure the stand to the back cover.
3. Remove the stand (2).



4. If it is necessary to replace the stand hinges or hinge covers, remove the four Phillips PM1.9×2.5 broad head screws (1) that secure the hinges and hinge covers to the stand.

5. Remove the hinge covers (2) and the hinges (3).

The hinge covers are available using spare part number 787286-001. The hinges are available using spare part number 787265-001.



Reverse this procedure to reassemble and install the stand.

Battery

Description	Spare part number
2-cell, 33-WHr, 4.58-AHr, Li-ion	776621-006

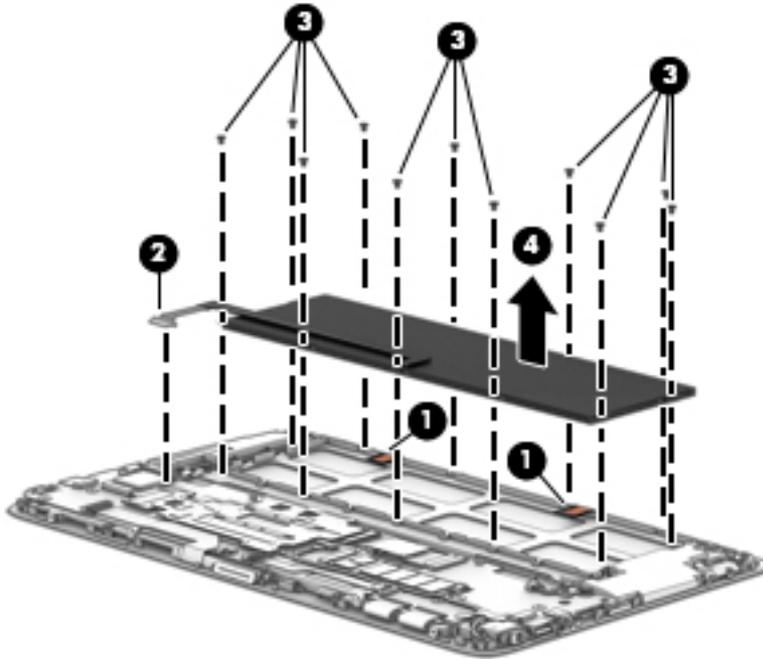
Before removing the battery, follow these steps:

1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.
4. Remove the back cover (see [Back cover on page 22](#)).

Remove the battery:

1. Detach the wireless antenna transceivers (1) from the battery. (The wireless antenna transceivers are attached to the battery with double-sided adhesive.)
2. Disconnect the battery cable (2) from the system board.
3. Remove the eleven Phillips PM1.9×3.3 screws (3) that secure the battery to the display panel assembly.

4. Remove the battery (4).



Reverse this procedure to install the battery.

Speakers

Description	Spare part number
Speakers (includes left and right speakers and cables)	787276-001

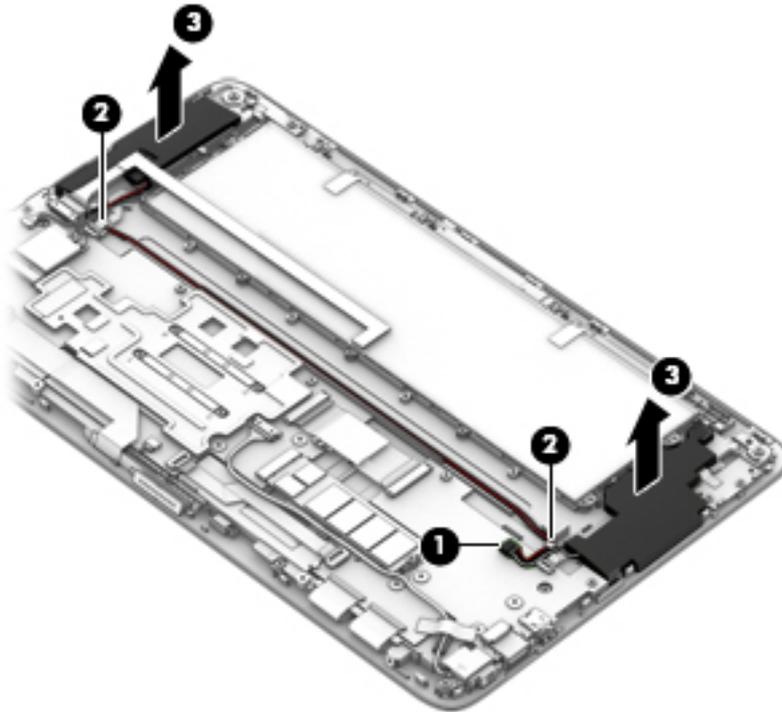
Before removing the speakers, follow these steps:

1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.
4. Remove the back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the speakers:

1. Disconnect the speaker cable (1) from the connector board.
2. Release the speaker cables from the routing clip (2) built into the display panel assembly.

3. Remove the speakers (3).



Reverse this procedure to install the speakers.

Power button board

Description	Spare part number
Power button board (includes cable and double-sided adhesive)	787266-001

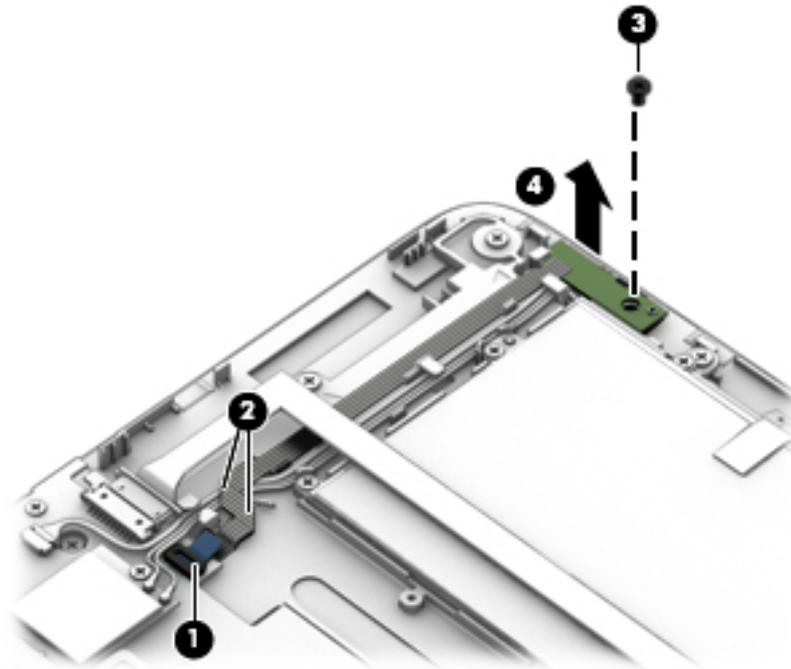
Before removing the power button board, follow these steps:

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 back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the power button board:

1. Release the zero insertion force (ZIF) connector (1) to which the power button board cable is attached, and then disconnect the power button board cable from the system board.
2. Detach the power button board cable (2) from the display panel assembly. (The power button board cable is attached to the display panel assembly with double-sided adhesive.)

3. Remove the Phillips PM1.9×3.3 screw (3) that secures the power button board to the display panel assembly.
4. Remove the power button board (4).



Reverse this procedure to install the power button board.

Docking port board

Description	Spare part number
Docking port board (includes cable)	787268-001

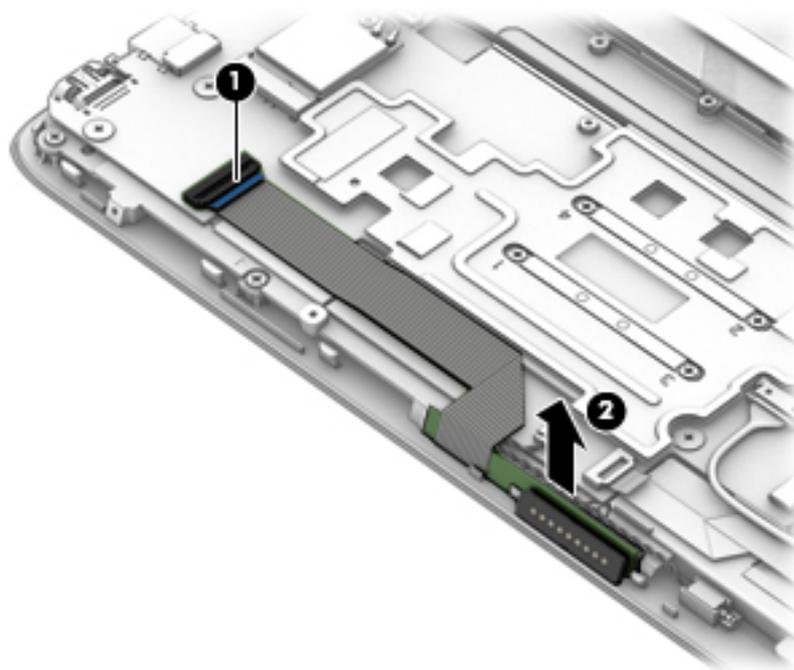
Before removing the docking port board, follow these steps:

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 back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the docking port board:

1. Release the ZIF connector (1) to which the docking port board cable is attached, and then disconnect the docking port board cable from the system board.

2. Remove the docking port board (2).



Reverse this procedure to install the docking port board.

WLAN module

Description	Spare part number
Intel Dual Band Wireless-AC 7265 802.11 ac 2x2 WiFi + Bluetooth 4.0 Combo Adapter	756751-005
Intel Dual Band Wireless-AC 3160 802.11 ac 1x1 WiFi + Bluetooth 4.0 Combo Adapter	784644-005

⚠ 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:

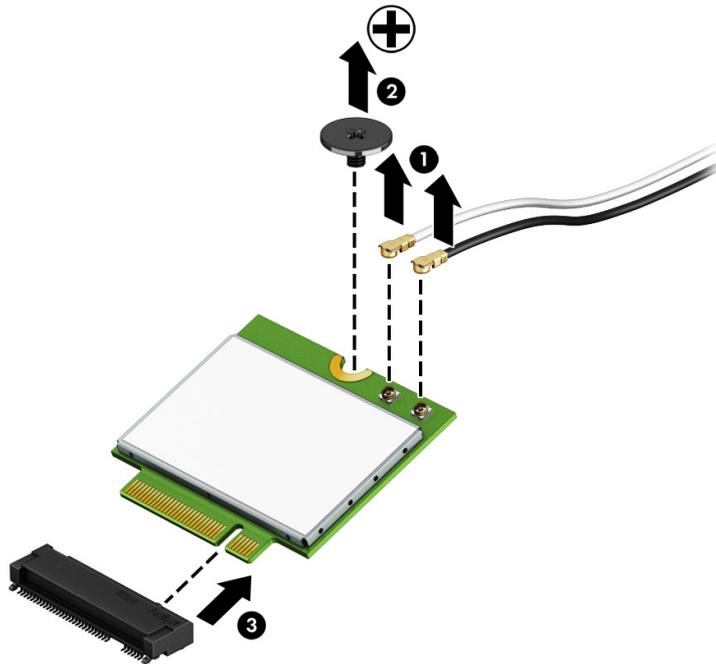
1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet and then unplugging the AC adapter from the computer.
4. Remove the back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the WLAN module:

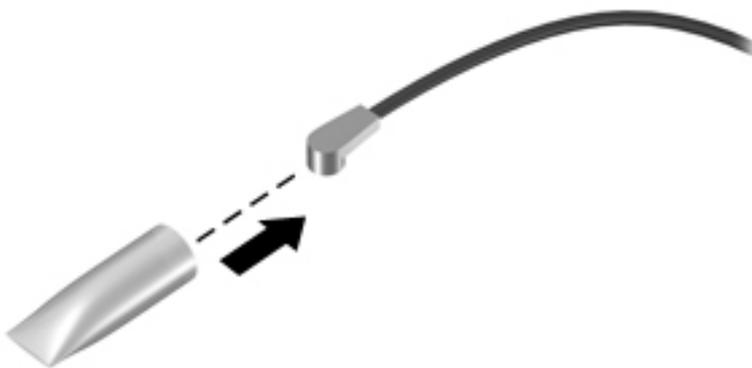
1. Disconnect the WLAN antenna cables (1) from the WLAN module terminals.

 **NOTE:** The #1/white WLAN antenna cable connects to the WLAN module #1/Main terminal. The #2/black WLAN antenna cable connects to the WLAN module #1/Aux terminal.

2. Remove the Phillips PM1.9×3.3 screw (2) that secures the WLAN module to the base enclosure. (The WLAN module tilts up.)
3. Remove the WLAN module (3) by pulling the module away from the slot at an angle.



 **NOTE:** If the WLAN antenna cable is not connected to a WLAN module terminal, a protective sleeve should be installed on the antenna connector, as shown in the following illustration.



Reverse this procedure to install the vibrator module.

Solid-state drive

Description	Spare part number
512-GB, M2, SATA-3, TLC	787264-001
256-GB, M2, SATA-3, TLC	787288-001
128-GB, M2, SATA-3, TLC	787287-001

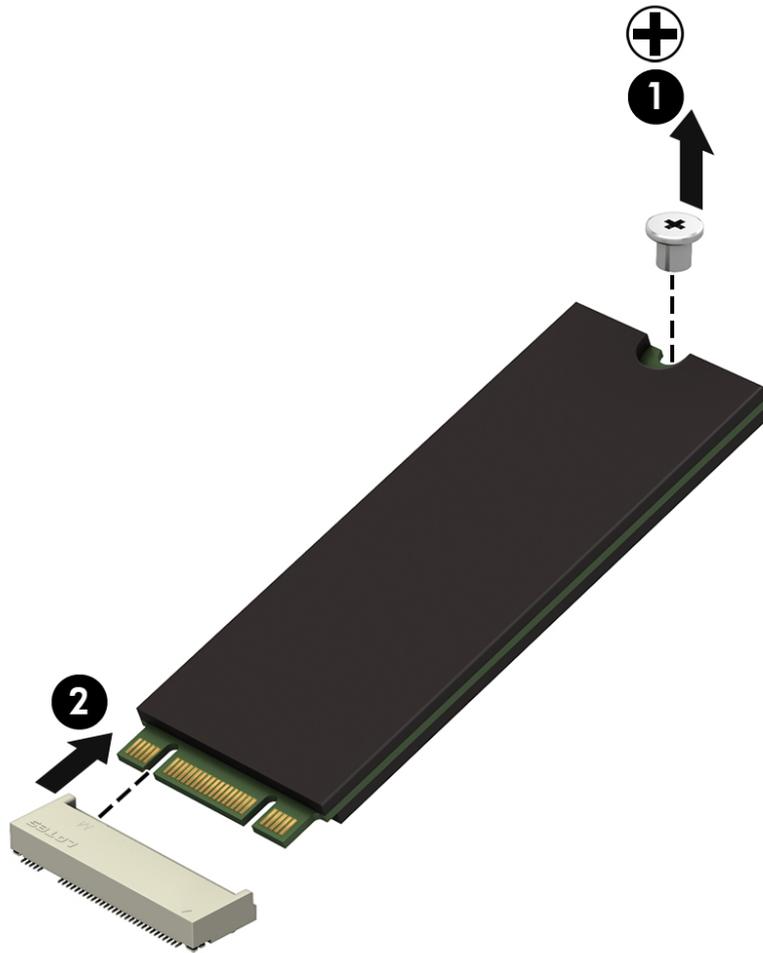
Before removing the solid-state drive, follow these steps:

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 back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the solid-state drive:

1. Remove the Phillips PM1.9×3.3 screw **(1)** that secures the solid-state drive to the display panel assembly. (The solid-state drive tilts up.)

2. Remove the solid-state drive (2) by pulling the module away from the slot at an angle.



Reverse this procedure to install the solid-state drive.

Volume button board

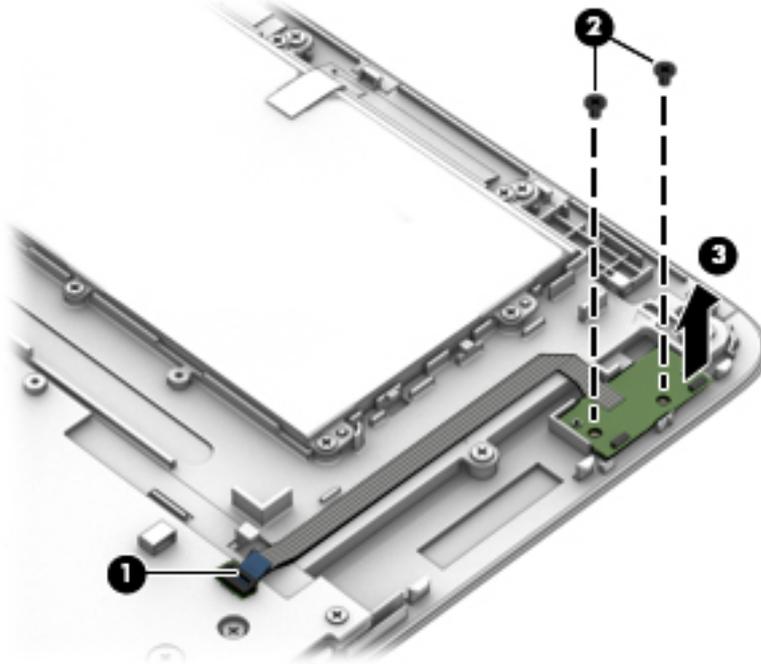
Description	Spare part number
Volume button board (includes cable)	787269-001

Before removing the volume 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 back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the volume button board:

1. Release the ZIF connector (1) to which the power button board cable is attached, and then disconnect the power button board cable from the connector board.
2. Remove the two Phillips PM1.9×3.3 screws (2) that secure the volume button board to the display panel assembly.
3. Remove the volume button board (3).



4. Remove the volume button board.

Reverse this procedure to install the volume button board.

Vibrator module

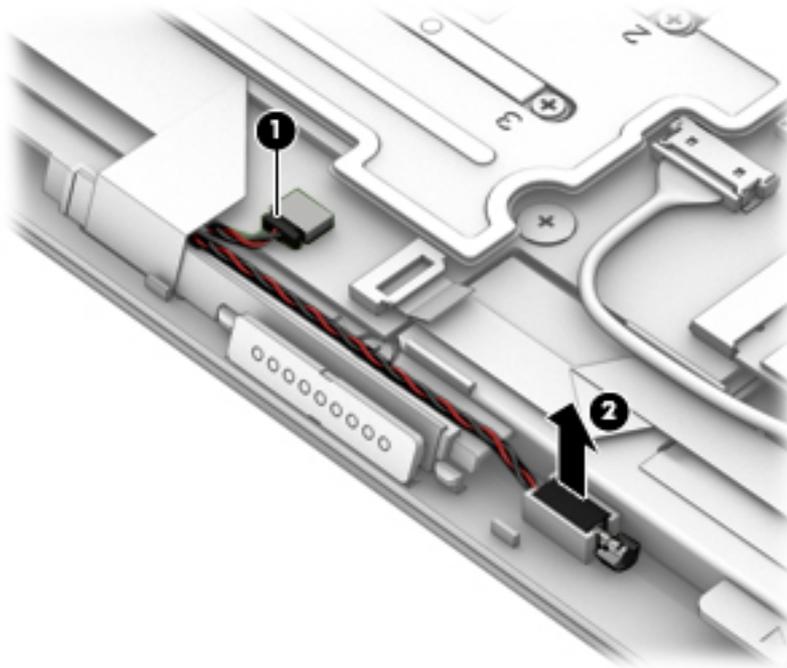
Description	Spare part number
Vibrator module (includes cable)	783106-001

Before removing the vibrator 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 back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the vibrator module:

1. Disconnect the vibrator module cable (1) from the system board.
2. Release the vibrator module (2) from the retention molding built into the display panel assembly.



3. Remove the vibrator module.

Reverse this procedure to install the vibrator module.

Connector board

Description	Spare part number
Connector board (includes audio jack, USB port, and cable)	787267-001

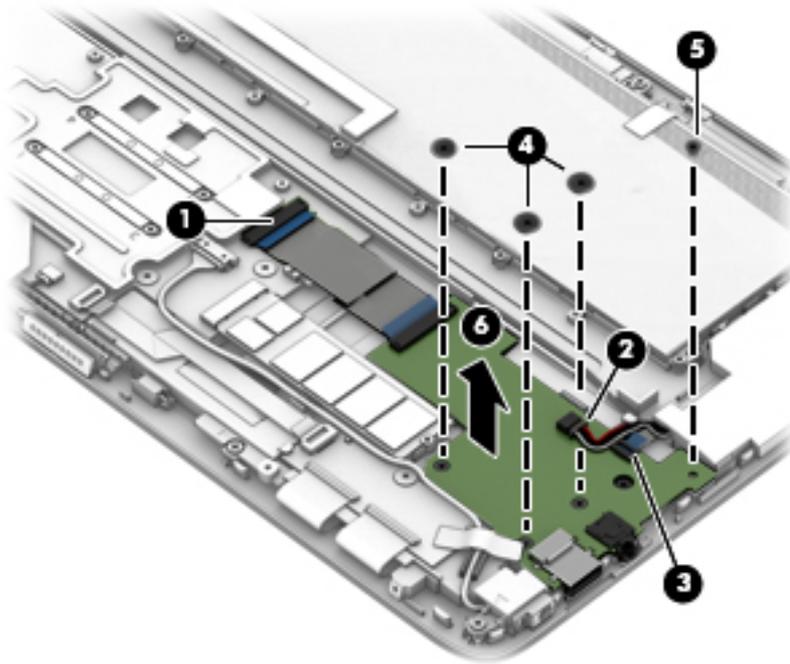
Before removing the connector board, follow these steps:

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 back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the connector board:

1. Release the ZIF connector (1) to which the connector board cable is attached, and then disconnect the connector board cable from the system board.
2. Disconnect the speaker cable (2) from the connector board.

3. Release the ZIF connector (3) to which the volume button board cable is attached, and then disconnect the volume button board cable from the system board.
4. Remove the three Phillips PM1.9×2.5 broad head screws (4) that secure the connector board to the display panel assembly.
5. Remove the Phillips PM1.9×3.3 screw (5) that secures the connector board to the display panel assembly.
6. Remove the connector board (6).



Reverse this procedure to install the connector board.

System board

 **NOTE:** The system board spare part kit includes a graphics subsystem with UMA memory, a heat sink, and replacement thermal material.

Description	Spare part number
Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796717-501
Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796717-001
Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796715-501
Equipped with an Intel Core M-5Y71 1.20-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796715-001
Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787280-501
Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787280-001
Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787278-501
Equipped with an Intel Core M-5Y70 1.10-GHz (SC turbo up to 2.60-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787278-001
Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796716-501
Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796716-001
Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	796714-501
Equipped with an Intel Core M-5Y10b 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	796714-001
Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787281-501
Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 8.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787281-001

Description	Spare part number
Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and the Windows 8 Standard operating system	787279-501
Equipped with an Intel Core M-5Y10 0.80-GHz (SC turbo up to 2.00-GHz) processor (4.0-MB L3 cache, dual core, TDP 4.5 W), 4.0-GB of LP-DDR3 system memory, and a non-Windows 8 operating system	787279-001

Before removing the system board, follow these steps:

1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.
4. Remove the back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).
6. Remove the solid-state drive (see [Solid-state drive on page 31](#)).



NOTE: When replacing the system board, be sure that the WLAN module (see [WLAN module on page 29](#)) is removed from the defective system board and installed on the replacement system board.

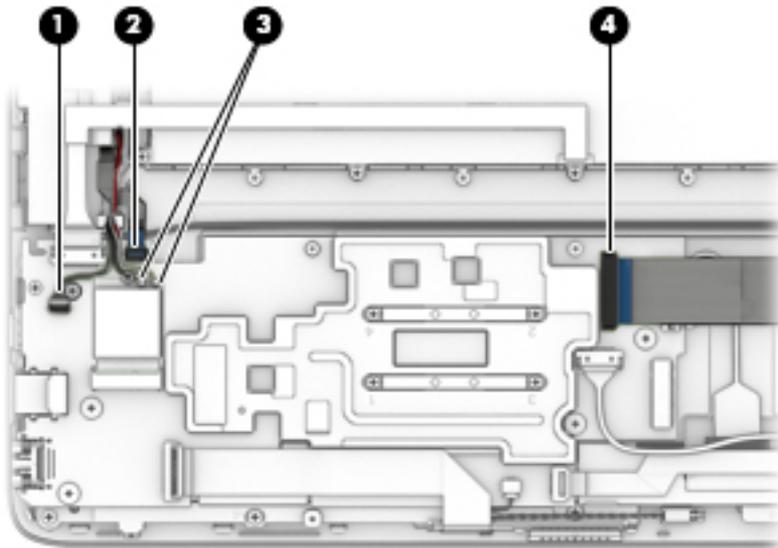
Remove the system board:

1. Disconnect the webcam/microphone module cable (1) from the system board.
2. Release the ZIF connector (2) to which the power button board cable is attached, and then disconnect the power button board cable from the system board.
3. Disconnect the WLAN antenna cables (3) from the WLAN module terminals.

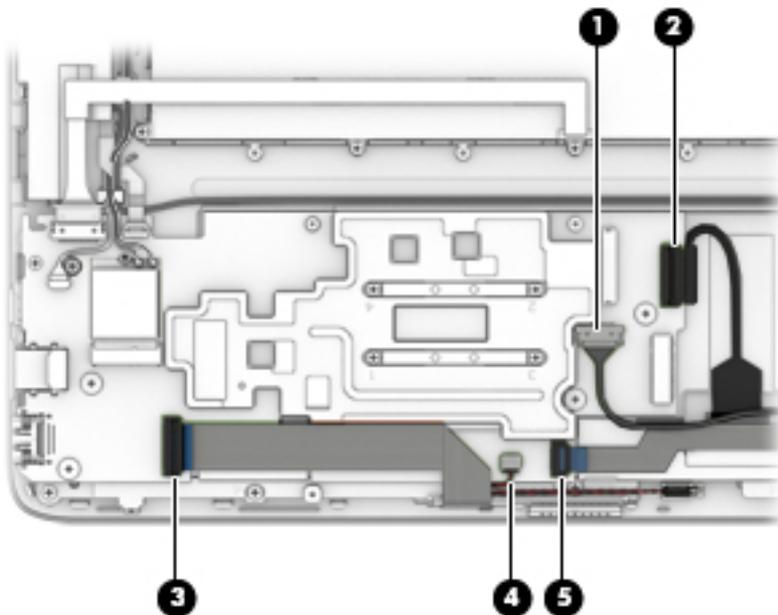


NOTE: The #1/white WLAN antenna cable connects to the WLAN module #1/Main terminal. The #2/black WLAN antenna cable connects to the WLAN module #1/Aux terminal.

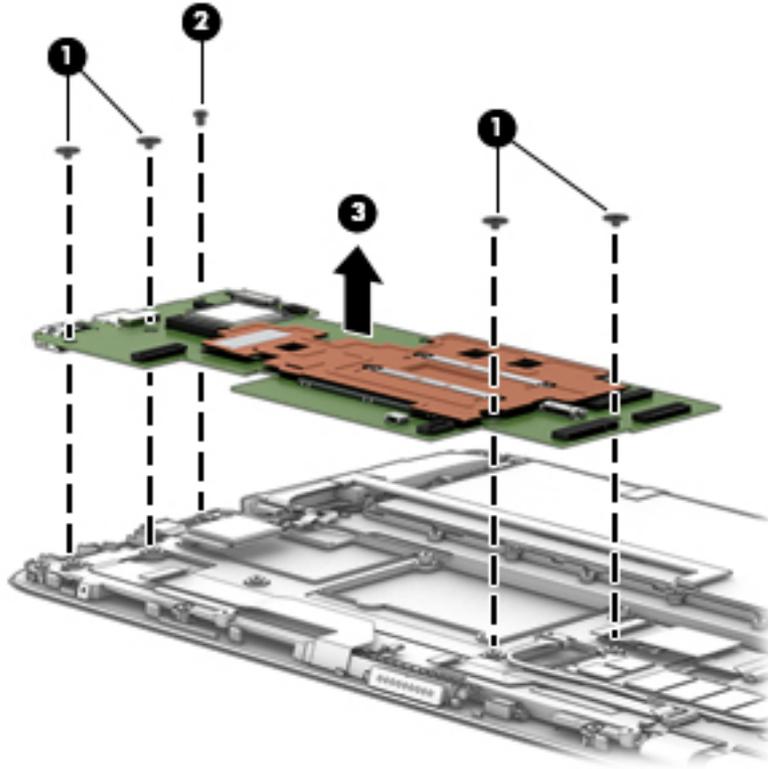
4. Release the ZIF connector (4) to which the connector board cable is attached, and then disconnect the connector board cable from the system board.



5. Disconnect the power connector cable (1) from the system board.
6. Release the ZIF connector (2) to which the display panel cable is attached, and then disconnect the display panel cable from the system board.
7. Release the ZIF connector (3) to which the docking port board cable is attached, and then disconnect the docking port board cable from the system board.
8. Disconnect the vibrator module cable (4) from the system board.
9. Release the ZIF connector (5) to which the TouchScreen board cable is attached, and then disconnect the TouchScreen board cable from the system board.



10. Remove the four Phillips PM1.9×2.5 broad head screws (1) that secure the system board to the display panel assembly.
11. Remove the Phillips PM1.9×3.3 screw (2) that secures the system board to the display panel assembly.
12. Remove the system board (3).



Reverse this procedure to install the system board.

Display panel cable

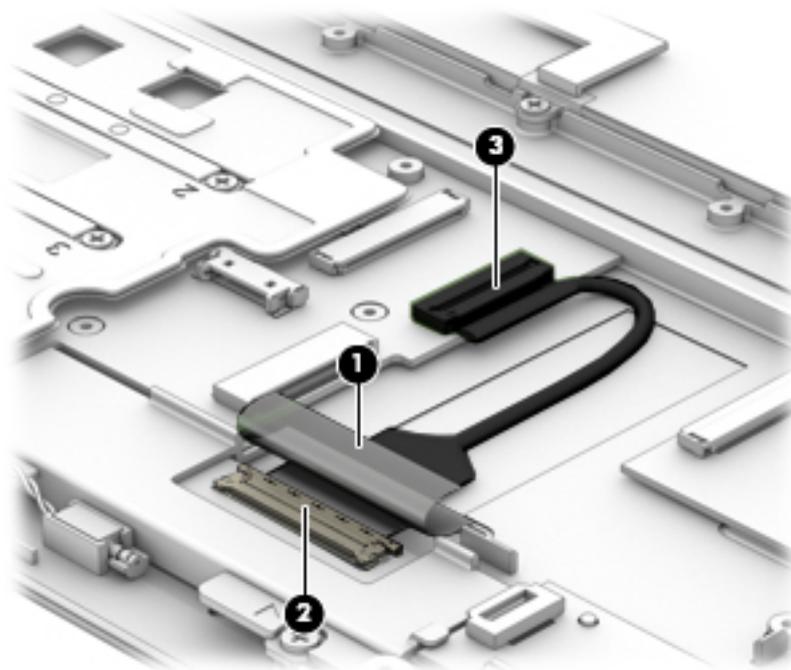
Description	Spare part number
Display panel cable (includes adhesive support strip)	787261-001

Before removing the display panel 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 back cover (see [Back cover on page 22](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 25](#)).

Remove the display panel cable:

1. Release the adhesive strip (1) that secures the display panel cable connector to the display panel.
2. Disconnect the display panel cable (2) from the display panel.
3. Release the ZIF connector (3) to which the display panel cable is attached, and then disconnect the display panel cable from the system board.



4. Remove the display panel cable.

Reverse this procedure to install the display panel cable.

6 Using Setup Utility (BIOS) and HP PC Hardware Diagnostics (UEFI)

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

Starting Setup Utility (BIOS)

You can open Setup Utility using the tablet only or an optional USB keyboard (purchased separately). The keyboard base that came with your tablet cannot be used to open Setup Utility.

- ▲ To start Setup Utility (BIOS), using the tablet only, turn on or restart the tablet, quickly press the Windows button on the tablet, and then tap **f10**.

– or –

To start Setup Utility (BIOS) using an optional USB keyboard (purchased separately):

1. Connect an optional USB keyboard (purchased separately) to the tablet.
2. Turn on or restart the tablet, quickly press **esc**, and then press **f10**.

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

Updating the BIOS

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

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.

BIOS version information (also known as ROM date and System BIOS) can be revealed by pressing **fn+esc** (if you are already in Windows) or by using Setup Utility (BIOS).

1. Start Setup Utility (BIOS) (see [Starting Setup Utility \(BIOS\) on page 41](#)).
2. Tap **Main**, and then make note of your current BIOS version.
3. To exit Setup Utility (BIOS) without saving your changes, tap **Exit**, tap **Exit Discarding Changes**, and then follow the on-screen instructions.

Downloading a BIOS update

 **CAUTION:** To reduce the risk of damage to the tablet or an unsuccessful installation, download and install a BIOS update only when the tablet is connected to reliable external power using the AC adapter. Do not download or install a BIOS update while the tablet is running on battery power, docked in an optional docking device, or connected to an optional power source. During the download and installation, follow these instructions:

Do not disconnect power from the tablet by unplugging the power cord from the AC outlet.

Do not shut down the tablet or initiate Sleep.

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

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

If the update is more recent than your BIOS, 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 tablet 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 revealed on the screen after the download is complete. If no instructions are revealed, follow these steps:

1. From the Start screen, type `file`, and then select **File Explorer**.
2. Click your hard drive designation. The hard drive designation is typically Local Disk (C:).
3. Using the hard drive path you recorded earlier, open the folder on your hard drive that contains the update.
4. Double-click the file that has an `.exe` extension (for example, `filename.exe`). The BIOS installation begins.
5. Complete the installation by following the on-screen instructions.

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

Using HP PC Hardware Diagnostics (UEFI)

HP PC Hardware Diagnostics is a Unified Extensible Firmware Interface (UEFI) that allows you to run diagnostic tests to determine whether the tablet hardware is functioning properly. The tool runs outside the operating system so that it can isolate hardware failures from issues that are caused by the operating system or other software components.

To start HP PC Hardware Diagnostics UEFI:

1. Turn on or restart the tablet, quickly press the Windows button on the tablet, and then press **f2**.

The BIOS searches three places for the diagnostic tools, in the following order:

- a. Connected USB drive

 **NOTE:** To download the HP PC Hardware Diagnostics (UEFI) tool to a USB drive, see [Downloading HP PC Hardware Diagnostics \(UEFI\) to a USB device on page 43](#).

- b. Hard drive
- c. BIOS

2. When the diagnostic tool opens, use the keyboard arrow keys to select the type of diagnostic test you want to run, and then follow the on-screen instructions.

 **NOTE:** If you need to stop a diagnostic test, press **esc**.

Downloading HP PC Hardware Diagnostics (UEFI) to a USB device

 **NOTE:** Instructions for downloading HP PC Hardware Diagnostics (UEFI) are provided in English only.

There are two options to download HP PC Hardware Diagnostics to a USB device:

Option 1: HP PC Diagnostics homepage— Provides access to the latest UEFI version

1. Go to <http://hp.com/go/techcenter/pcdiags>.
2. Click the **UEFI Download** link, and then select **Run**.

Option 2: Support and Drivers page—Provides downloads for a specific product for earlier and later versions

1. Go to <http://www.hp.com>.
2. Point to **Support**, located at the top of the page, and then click **Download Drivers**.
3. In the text box, enter the product name, and then click **Go**.

– or –

Click **Find Now** to let HP automatically detect your product.

4. Select your tablet model, and then select your operating system.
5. In the **Diagnostic** section, click **HP UEFI Support Environment**.

– or –

Click **Download**, and then select **Run**.

7 Specifications

	Metric	U.S.
Computer dimensions		
Width	35.5 cm	13.9 in
Depth	21.6 cm	8.5 in
Height	1.4 cm	0.6 in
Weight	1.3 kg	2.8 lbs
Input power	Rating	
Operating voltage and current	19.5 V dc @ 2.31 A – 45 W 19.5 V dc @ 3.33 A – 65 W	
NOTE: This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 V rms.		
NOTE: The tablet operating voltage and current can be found on the system regulatory label.		
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.		

8 Backing up, restoring, and recovering

This chapter provides information about the following processes:

- Restoring and recovering your system
- Restoring and recovering your system

Creating recovery media and backups

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

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

- System Recovery—Reinstalls the original operating system and the programs that were installed at the factory.
- Factory Reset—Restores the tablet to its original factory state by deleting all information from the hard drive and re-creating the partitions. Then it reinstalls the operating system and the software that was installed at the factory.

See [Creating HP Recovery media on page 45](#).

2. Use the Windows tools to create system restore points and create backups of personal information. For more information and steps, see **Help and Support**. From the Start screen, type `help`, and then select **Help and Support**.

Creating HP Recovery media

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

- Only one set of HP Recovery media can be created. Handle these recovery tools carefully, and keep them in a safe place.
- HP Recovery Manager examines the tablet and determines the required storage capacity for the blank USB flash drive or the number of blank DVD discs that will be required.
- If your tablet does not include an integrated optical drive with DVD writer capability, but you would like to create DVD recovery media, you can use an external optical drive (purchased separately) to create recovery discs, or you can obtain recovery discs for your tablet from support. If you create your own recovery discs, you must use only high-quality blank DVD-R, DVD+R, DVD-R DL, or DVD+R DL discs. Do not use rewritable discs such as CD±RW, DVD ±RW, double-layer DVD±RW, or BD-RE (rewritable Blu-ray) discs; they are not compatible with HP Recovery Manager software. See the *Worldwide Telephone Numbers* booklet included with the tablet. You can also find contact information from the HP website. Go to <http://www.hp.com/support>, select your country or region, and follow the on-screen instructions. If you use an

external optical drive, it must be connected directly to a USB port on the tablet; the drive cannot be connected to a USB port on an external device, such as a USB hub.

- You can also use a high-quality blank USB flash drive to create recovery media.
- Be sure that the tablet is connected to AC power before you begin creating the recovery media.
- The creation process can take up to an hour or more. Do not interrupt the creation process.
- If necessary, you can exit the program before you have finished creating all of the recovery DVDs. HP Recovery Manager will finish burning the current DVD. The next time you start HP Recovery Manager, you will be prompted to continue, and the remaining discs will be burned.

To create HP Recovery media:



IMPORTANT: For tablets, connect to the keyboard dock before beginning these steps (select models only).

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

If you ever need to recover the system, see [Recovering using HP Recovery Manager on page 47](#).

Restore and recovery

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

- Windows offers several options for restoring from backup, refreshing the tablet, and resetting the tablet to its original state. For more information and steps, see Help and Support. From the Start screen, type `help`, and then select **Help and Support**.
- If you need to correct a problem with a preinstalled application or driver, use the Drivers and Applications Reinstall option of HP Recovery Manager to reinstall the individual application or driver.

From the Start screen, type `recovery`, select **HP Recovery Manager**, select **Drivers and Applications Reinstall**, and then follow the on-screen instructions.

- If you want to recover the tablet's original factory partitioning and content, you can choose the System Recovery option from the HP Recovery partition (select models only) or use the HP Recovery media that you have created. For more information, see [Recovering using HP Recovery Manager on page 47](#). If you have not already created recovery media, see [Creating HP Recovery media on page 45](#).
- If you have replaced the hard drive, you can use the Factory Reset option of HP Recovery media to restore the factory image to the replacement drive. For more information, see [Recovering using HP Recovery Manager on page 47](#).

Recovering using HP Recovery Manager

HP Recovery Manager software allows you to recover the tablet to its original factory state by using the HP Recovery media that you created or by using the HP Recovery partition (select models only). If you have not already created recovery media, see [Creating HP Recovery media on page 45](#).

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

- **System Recovery**—Reinstalls the original operating system, and then configures the settings for the programs that were installed at the factory.
- **Factory Reset**—Restores the tablet to its original factory state by deleting all information from the hard drive and re-creating the partitions. Then it reinstalls the operating system and the software that was installed at the factory.

The HP Recovery partition (select models only) allows System Recovery and Minimized Image Recovery.

What you need to know

- HP Recovery Manager recovers only software that was installed at the factory. For software not provided with this tablet, you must either download the software from the manufacturer's website or reinstall the software from the media provided by the manufacturer.
- Recovery through HP Recovery Manager should be used as a final attempt to correct tablet issues.
- HP Recovery media must be used if the tablet hard drive fails. If you have not already created recovery media, see [Creating HP Recovery media on page 45](#).
- To use the Factory Reset option, you must use HP Recovery media. If you have not already created recovery media, see [Creating HP Recovery media on page 45](#).
- If the HP Recovery media does not work, you can obtain recovery media for your system from support. See the Worldwide Telephone Numbers booklet included with the tablet. You can also find contact information from the HP website. Go to <http://www.hp.com/support>, select your country or region, and follow the on-screen instructions.

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

Using the HP Recovery partition (select models only)

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

To start HP Recovery Manager from the HP Recovery partition:

 **IMPORTANT:** For tablets, connect to the keyboard dock before beginning these steps (select models only).

1. Press **f11** while the tablet boots.
– or –
Press and hold **f11** as you press the power button.
2. Select **Troubleshoot** from the boot options menu.
3. Select **Recovery Manager**, and then follow the on-screen instructions.

Using HP Recovery media to recover

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

1. If possible, back up all personal files.
2. Insert the HP Recovery media that you created, and then restart the tablet.

 **NOTE:** If the tablet does not automatically restart in HP Recovery Manager, change the tablet boot order. See [Changing the tablet boot order on page 48](#).

3. Follow the on-screen instructions.

Changing the tablet boot order

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

To change the boot order:

1. Insert the HP Recovery media you created.
2. Restart the tablet, quickly press the Windows button on your tablet, and then press **F9** for boot options.
3. Select the optical drive or USB flash drive you want to boot from.
4. Follow the on-screen instructions.

Removing the HP Recovery partition (select models only)

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

 **IMPORTANT:** After you remove the HP Recovery partition, you can no longer use the Windows Refresh option or the Windows option to remove everything and reinstall Windows. In addition, you will not be able to perform System Recovery or Minimized Image Recovery from the HP Recovery partition. So before you remove the Recovery partition, create HP Recovery media; see [Creating HP Recovery media on page 45](#).

Follow these steps to remove the HP Recovery partition:

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

9 Power cord set requirements

The wide-range input feature of the tablet 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 tablet 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 tablet 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 tablet.
- Requirements for all countries 113

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

Country/region	Accredited agency	Applicable note number
South Korea	EK	4
Sweden	CEMKO	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.

10 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>.

Index

- A**
 - AC adapter light 7
 - AC adapter, spare part number 12, 14
 - antenna, location 6
 - audio, product description 1
 - audio-in jack 7
 - audio-out jack 7
- B**
 - back cover
 - removal 22
 - spare part number 10, 14, 22
 - battery
 - removal 25
 - spare part number 10, 14, 25
 - bottom component 5
 - buttons
 - volume 7
 - Windows 4
- C**
 - Cable Kit, spare part number 12, 14
 - cables, service considerations 18
 - chipset, product description 1
 - components
 - bottom 5
 - display 4
 - left side 7
 - rear 6
 - right side 8
 - top 5
 - computer major components 10
 - connector board
 - removal 34
 - spare part number 12, 14, 34
 - connectors, service considerations 18
- D**
 - display assembly, spare part numbers 12, 14
 - display components 4
- display panel cable
 - removal 39
 - spare part number 12, 14, 39
- display panel, product description 1
- docking port 5
- docking port board
 - removal 28
 - spare part number 12, 14, 28
- drives
 - precautions 18
 - preventing damage 18
- E**
 - electrostatic discharge 18
 - equipment guidelines 21
- G**
 - graphics, product description 1
 - grounding guidelines 18
 - guidelines
 - equipment 21
 - grounding 18
 - packaging 20
 - transporting 20
 - workstation 20
- H**
 - hard drive light 7
 - HDMI port 8
 - HDMI-to-VGA adapter, spare part number 12, 14
 - headphone jack 7
 - hinge
 - removal 24
 - spare part number 10, 25
 - hinge cover
 - removal 24
 - spare part number 10, 15, 25
- J**
 - jacks
 - audio-in 7
 - audio-out 7
- headphone 7
- microphone 7
- K**
 - keyboard base, spare part numbers 12, 13, 15, 16
- L**
 - left-side component 7
 - lights
 - AC adapter 7
 - hard drive 7
 - power 7
 - webcam 4
- M**
 - memory card reader 8
 - memory, product description 1
 - microphone
 - location 4
 - product description 1
 - microphone jack 7
 - model name 1
- O**
 - operating system, product description 2
- P**
 - packaging guidelines 20
 - pen holder 4, 8
 - pen, spare part number 13, 14
 - plastic parts, service considerations 17
 - ports
 - HDMI 8
 - product description 2
 - USB 3.0 7, 8
 - power button 5
 - power button board
 - removal 27
 - spare part number 10, 14, 27
 - power connector 7

- power cord
 - set requirements 49
 - spare part numbers 13, 14
- power light 7
- power requirements, product description 2
- processor, product description 1
- product description
 - audio 1
 - chipset 1
 - display panel 1
 - graphics 1
 - memory 1
 - microphone 1
 - operating system 2
 - ports 2
 - power requirements 2
 - processors 1
 - product name 1
 - sensors 1
 - serviceability 2
 - storage 1
 - video 1
 - wireless 2
- product name 1

R

- rear component 6
- recess cover
 - removal 22
 - spare part number 10, 14, 22
- removal/replacement procedures 22
- right-side components 8
- RJ45-to-USB adapter, spare part number 13, 14

S

- Screw Kit, spare part number 13, 14
- sensors, product description 1
- service considerations
 - cables 18
 - connectors 18
 - plastic parts 17
- serviceability, product description 2

- solid-state drive
 - removal 31
 - spare part numbers 11, 14, 15, 31
- speakers
 - location 4
 - removal 26
 - spare part number 12, 14, 26
- stand
 - location 6
 - removal 24
 - spare part number 10, 14, 16, 24
- storage, product description 1
- system board
 - removal 36
 - spare part numbers 11, 14, 15, 16, 36

T

- tools required 17
- top component 5
- transporting guidelines 20

U

- USB 3.0 port 7, 8

V

- vibrator module
 - removal 33
 - spare part number 10, 14, 33
- video, product description 1
- volume button 7
- volume button board
 - removal 32
 - spare part number 12, 14, 32

W

- webcam light 4
- webcam, location 4
- Windows button 4
- wireless antenna, location 6
- wireless, product description 2
- WLAN antenna, location 6
- WLAN module
 - removal 29
 - spare part numbers 10, 14, 29
- workstation guidelines 20