



## HP ElitePad 1000 G2

**Maintenance and Service Guide**  
**IMPORTANT! This document is intended for**  
**HP authorized service providers only.**

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#### Product notice

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

Not all features are available in all editions of Windows 10 or Windows 8. This computer may require upgraded and/or separately purchased hardware, drivers, and/or software to take full advantage of Windows 10 or Windows 8 functionality. See for <http://www.microsoft.com> details.


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## Safety warning notice

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 **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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# Table of contents

<b>1 Product description</b>	<b>1</b>
<b>2 External component identification</b>	<b>4</b>
Front	4
Rear	6
Top	7
Bottom	8
<b>3 Illustrated parts catalog</b>	<b>9</b>
Service tag	9
Tablet major components	10
Retail Jacket components	13
Security Jacket components	15
Healthcare Jacket components (not illustrated)	16
Rugged Jacket components (not illustrated)	17
Adapter cables	18
Docking station and accessories	19
Miscellaneous parts	20
Power components	22
<b>4 Removal and replacement preliminary requirements</b>	<b>24</b>
Tools required	24
Service considerations	24
Plastic parts	24
Cables and connectors	24
Grounding guidelines	25
Electrostatic discharge damage	25
Packaging and transporting guidelines	26
Workstation guidelines	26
<b>5 Removal and replacement procedures</b>	<b>28</b>
Tablet component replacement procedures	28
Display assembly	28
NFC antenna	35
WWAN module	36
WLAN module	38

Microphones .....	40
Rear-facing webcam .....	41
Power button board .....	42
Volume button board .....	44
Audio jack board .....	46
Vibrator module .....	47
Battery .....	48
System board .....	50
Forward-facing webcam .....	54
Slot cover .....	55
Docking connector cable .....	56
WLAN antenna .....	58
WWAN/GPS auxiliary antenna .....	60
Speakers .....	62
Retail Jacket component replacement procedures .....	63
Top cap .....	63
Battery .....	64
Front cover .....	65
Bar code scanner module and Cable connector board .....	69
Battery connector board .....	71
System board .....	72
Credit card reader board .....	74
Credit card reader .....	76
Security Jacket component replacement procedures .....	77
Card reader cover and Top cap .....	77
Front cover .....	80
System board .....	82
Docking connector cable .....	83
Card reader board .....	84
Fingerprint reader board .....	85
<b>6 Computer Setup (BIOS), TPM, and HP Sure Start – Windows 10 .....</b>	<b>86</b>
Using Computer Setup .....	86
Starting Computer Setup .....	86
Navigating and selecting in Computer Setup .....	87
Restoring factory settings in Computer Setup .....	87
Updating the BIOS .....	88
Determining the BIOS .....	88
Downloading a BIOS update .....	88
Changing the boot order using the f9 prompt .....	89
TPM BIOS settings (select products only) .....	90

Using HP Sure Start (select products only) .....	90
<b>7 HP PC Hardware Diagnostics (UEFI) – Windows 10 .....</b>	<b>91</b>
Downloading HP PC Hardware Diagnostics (UEFI) to a USB device .....	92
<b>8 Computer Setup and HP PC Hardware Diagnostics (UEFI – Windows 8 .....</b>	<b>93</b>
Using Computer Setup .....	93
Starting Computer Setup .....	93
Navigating and selecting in Computer Setup .....	94
Restoring factory settings in Computer Setup .....	94
Updating the BIOS .....	95
Determining the BIOS version .....	95
Downloading a BIOS Update .....	95
Using HP PC Hardware Diagnostics (UEFI) .....	96
<b>9 Specifications .....</b>	<b>97</b>
Tablet specifications .....	97
<b>10 Backup and recovery – Windows 10 .....</b>	<b>98</b>
Creating recovery media and backups .....	98
Creating HP Recovery media (select products only) .....	99
Using Windows Tools .....	100
Restore and recovery .....	100
Recovering using HP Recovery Manager .....	101
What you need to know before you get started .....	101
Using the HP Recovery partition (select products only) .....	102
Using HP Recovery media to recover .....	102
Changing the computer boot order .....	103
Removing the HP Recovery partition (select products only) .....	103
<b>11 Backup and recovery – Windows 8 .....</b>	<b>104</b>
Backing up your information .....	104
Performing a system recovery .....	104
Using the Windows recovery tools .....	104
Using f11 recovery tools .....	105
Changing the boot device order .....	105
Using Windows Refresh or Windows Reset .....	107
<b>12 Statement of Volatility .....</b>	<b>108</b>
Non-volatile memory usage .....	109

Questions and answers .....	112
<b>13 Power cord set requirements .....</b>	<b>113</b>
Requirements for all countries .....	113
Requirements for specific countries and regions .....	113
<b>14 Recycling .....</b>	<b>115</b>
<b>Index .....</b>	<b>116</b>



# 1 Product description

Category	Description
<b>Product Name</b>	HP ElitePad 1000 G2
<b>Processor</b>	Intel® Atom z3795 1.60-GHz processor (core burst up to 2.39-GHz), 1.60-GHz front-side bus (FSB), 2.0-MB L2 cache, up to 778-MHz graphics burst frequency, soldered to system board
<b>Graphics</b>	Intel HD Graphics
<b>Panel</b>	10.1-in., WUXGA (1900×1200), UWVA, 50% CG, 400-nit, active pen and MultiTouch capacitive digitizer, chemically-strengthened glass with anti-smudge
<b>Memory</b>	On-board 1067-MHz, LPDDR3, 4096-MB memory (soldered to system board); system supports a 4096-MB × 1 (4 pieces, 128 MB × 32 chips) configuration
<b>Primary storage</b>	128- or 64-GB embedded MultiMedia Card (eMMC), soldered to the system board
<b>Optical drive</b>	No internal optical drive or USB-powered optical drive is supported
<b>Audio and video</b>	2 integrated stereo speakers, each 1.5 W HD Audio DTS+ sound 2 digital microphones 2 fixed, integrated webcams (2.1-MP front-facing webcam; 8.0-MP rear-facing webcam with LED flash)
<b>Ethernet</b>	No Ethernet support
<b>Wireless</b>	Integrated wireless local area network (WLAN) options by way of wireless module Integrated WLAN antennas Support for the Broadcom BCM43241 802.11abgn 2x2 Wi-Fi + BT 4.0 Combo Adapter
<b>Wireless (continued)</b>	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: <ul style="list-style-type: none"><li>• HP hs3110 HSPA+ Mobile Broadband Module</li><li>• HP lt4111 LTE/EV-DO/HSPA+ Gobi 4G Module</li><li>• HP lt4112 LTE/HSPA+ Gobi 4G Module</li><li>• HP lt4225 LTE/EV-DO Gobi 4G Module</li><li>• HP lt4226 LTE/HSPA+ Gobi 4G Module</li></ul> Support for no WWAN option
	Integrated near field communication (NFC) module and antennas
<b>External media cards</b>	Flash Media slot (with push-push technology) supporting microHCS D cards up to 64-GB
<b>Ports</b>	<ul style="list-style-type: none"><li>• Audio-in (mono microphone)/audio-out (stereo headphone) combo jack</li></ul>

Category	Description
<b>Ports</b> <i>(continued)</i>	<ul style="list-style-type: none"> <li>HP ElitePad 900-proprietary docking connector</li> </ul>
<b>Sensors</b>	<ul style="list-style-type: none"> <li>Accelerometer + eCompass</li> <li>Ambient light sensor</li> <li>Gyroscope</li> <li>Haptics</li> </ul>
<b>Docking</b>	HP ElitePad-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)
<b>Keyboard/pointing devices</b>	<p>No integrated keyboard or TouchPad</p> <p>Support for USB- or Bluetooth-connected external keyboard and mouse</p>
<b>Power requirements</b>	<p>Support for an HP ElitePad-proprietary 10-W AC adapter (RC, V, 3-wire, wall-mount); connector on AC Adapter connects to the tablet through the docking connector</p> <p>Support for 2-cell, 30-Wh, 4.0-Ah, Li-ion battery</p>
<b>Security</b>	Support for trusted platform module (TPM; Infineon TPM is SLB9656VQ1.2FW4.32)
<b>Operating system</b>	<p><b>Preinstalled:</b></p> <ul style="list-style-type: none"> <li>Windows 10 Home 64-bit Chinese Market CPPP (available only in the People's Republic of China)</li> <li>Windows 10 Home 64-bit Entry Tablet + 2-in-1 Notebook</li> <li>Windows 10 Home 64-bit Entry Tablet + 2-in-1 Notebook Chinese Market</li> <li>Windows 10 Home 64-bit Entry Tablet + 2-in-1 Notebook Single Language</li> <li>Windows 10 Home Suite for Higher Education</li> <li>Windows 10 Professional 64-bit Suite for MSNA</li> <li>Windows 10 Professional 64-bit Suite for MSNA Emerging Markets</li> <li>Windows 10 Professional 64-bit Tablet + 2-in-1 Notebook</li> <li>Windows 10 Professional 64-bit Tablet + 2-in-1 Notebook (Healthcare)</li> <li>Windows 10 Professional 64-bit Tablet + 2-in-1 Notebook (Retail)</li> <li>Windows 10 Professional 64-bit Tablet + 2-in-1 Notebook (Rugged)</li> <li>Windows 10 Professional 64-bit Tablet + 2-in-1 Notebook Chinese Market</li> <li>Windows 10 Professional 64-bit Tablet + 2-in-1 Notebook Chinese Market (Healthcare)</li> <li>Windows 10 Professional 64-bit Tablet + 2-in-1 Notebook Chinese Market (Rugged)</li> <li>Microsoft Windows 8.1 ML 64-bit</li> <li>Microsoft Windows 8.1 EM 64-bit</li> <li>Microsoft Windows 8.1 CM 64-bit</li> <li>Microsoft Windows 8.1 Professional 64-bit</li> <li>Microsoft Windows 8.1 Professional 64-bit MSNA</li> <li>Microsoft Windows 8.1 Professional 64-bit Retail Solutions</li> <li>Microsoft Windows 8.1 SST 64-bit with Home and Student DPK</li> <li>Microsoft Windows 8.1 SST 64-bit China with Home and Student DPK</li> <li>Microsoft Windows 8.1 SST 64-bit without Home and Student DPK</li> </ul>

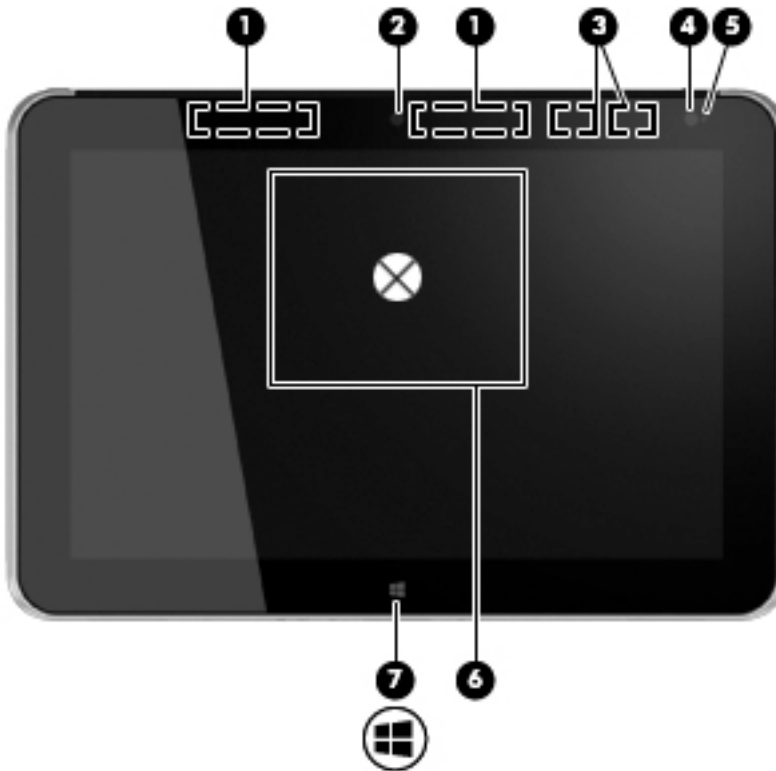
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Category	Description
	<ul style="list-style-type: none"><li>• Microsoft Windows 8.1 64-bit Embedded Industry</li></ul>

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## 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. For information on using the webcam: <ul style="list-style-type: none"><li>• <b>Windows 10</b> – Type <code>camera</code> in the taskbar search box, and then select <b>Camera</b>.</li><li>• <b>Windows 8</b> – Access HP Support Assistant. To access HP Support Assistant on the Start screen, select the <b>HP Support Assistant</b> app.</li></ul>
(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.

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<b>Item</b>	<b>Component</b>	<b>Description</b>
<b>(6)</b>	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.
<b>(7)</b>	Windows button	Displays the Start screen.

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

To access this document:

**Windows 10:**

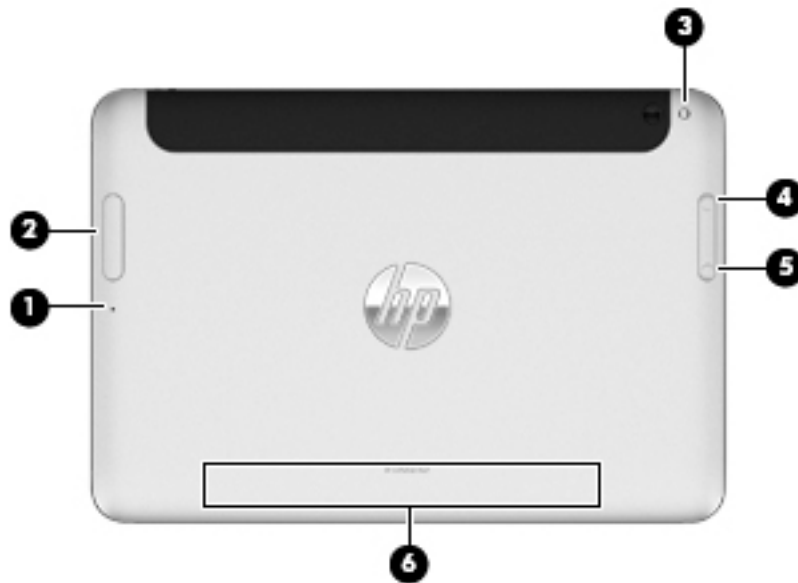
Select the **Start** button, select **All apps**, select **HP Help and Support**, and then select **HP Documentation**.

**Windows 8:**

▲ Select the **HP Support Assistant** app on the Start screen, select **My computer**, and then select **User guides**.

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## 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)	Memory card reader/Micro SIM slot	Reads optional micro memory cards that store, manage, share, or access information, and supports an optional wireless micro subscriber identity module (SIM) (select models only).
(3)	Rear webcam	Records video, captures still photographs, and allows video conferences and online chat by means of streaming video.  For information on using the webcam: <ul style="list-style-type: none"> <li>• <b>Windows 10</b> – Type <i>camera</i> in the taskbar search box, and then select <b>Camera</b>.</li> <li>• <b>Windows 8</b> – Access HP Support Assistant. To access HP Support Assistant on the Start screen, select the <b>HP Support Assistant</b> app.</li> </ul>
(4)	Volume up button	To increase speaker volume, press the top edge of the button.
(5)	Volume down button	To decrease speaker volume, press the bottom edge of the button.
(6)	Regulatory information	Displays regulatory information (select models only).

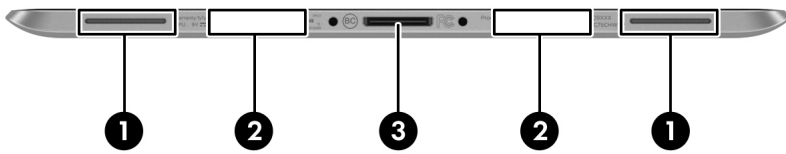
# Top



Item	Component	Description
(1)	Audio-out (headphone) jack/Audio-in (microphone) jack	<p>Produces sound when connected to optional powered stereo speakers, headphones, earbuds, a headset, or television audio. Also connects an optional headset microphone.</p> <p><b>NOTE:</b> When a device is connected to the jack, the computer speakers are disabled.</p> <p><b>NOTE:</b> Be sure that the device cable has a 4-conductor connector that supports both audio-out (headphone) and audio-in (microphone).</p> <p><b>WARNING!</b> 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>.</p> <p>To access this guide:</p> <p><b>Windows 10:</b></p> <p>Select the <b>Start</b> button, select <b>All apps</b>, select <b>HP Help and Support</b>, and then select <b>HP Documentation</b>.</p> <p><b>Windows 8:</b></p> <p>▲ Select the <b>HP Support Assistant</b> app on the Start screen, select <b>My computer</b>, and then select <b>User guides</b>.</p>
(2)	Autorotate switch	<p>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.</p> <p>– or –</p> <p>Swipe from the right edge of the touch screen to display the charms, tap <b>Settings</b>, tap the screen icon, and then tap the autorotate icon. To unlock the autorotate feature, tap the autorotate icon again.</p>
(3)	Integrated microphones (2)	Record sound.
(4)	Power button	<ul style="list-style-type: none"> <li>When the tablet is off, press the button to turn on the tablet.</li> <li>When the tablet is on, press the button briefly to initiate Sleep.</li> <li>When the tablet is in the Sleep state, press the button briefly to exit Sleep.</li> </ul> <p><b>CAUTION:</b> 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 for at least 5 seconds to turn off the tablet.</p> <p>To learn more about your power settings:</p>

Item	Component	Description
		<p><b>Windows 10:</b> Type <code>power</code> in the taskbar search box, and then select <b>Power and sleep settings</b>.</p> <p>– or –</p> <p>Right-click the <b>Start</b> button, and then select <b>Power Options</b>.</p> <p><b>Windows 8:</b> See your power options. From the Start screen, type <code>power</code>, select <b>Settings</b>, and then select <b>Power Options</b>.</p>


## 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.

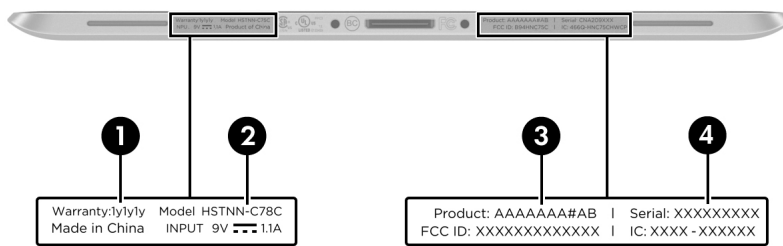


# 3 Illustrated parts catalog

 **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.

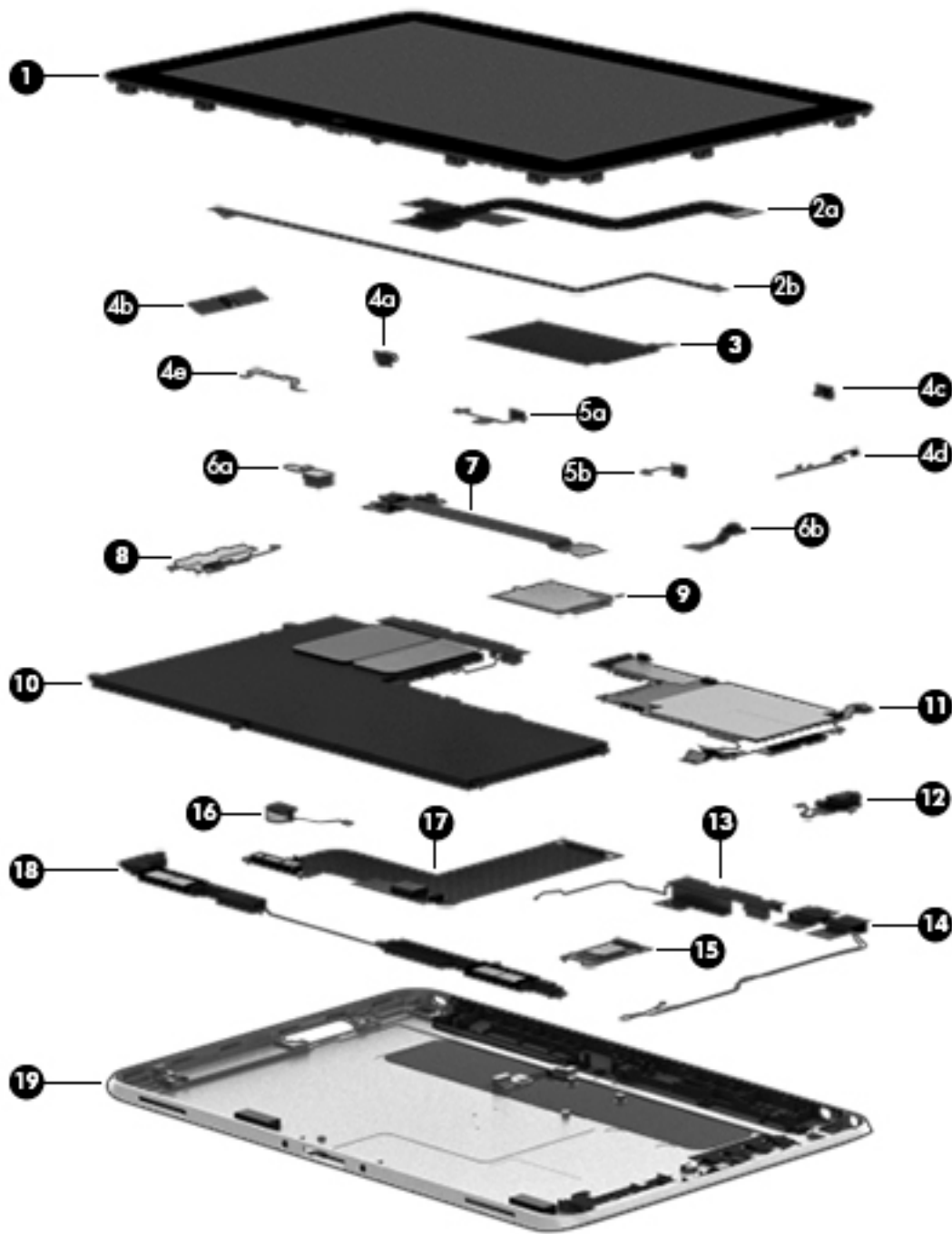
## Service tag

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



Item	Description	Function
(1)	Warranty period	This number describes the duration of the warranty period for the tablet.
(2)	Model description	This is the alphanumeric identifier used to locate documents, drivers, and support for the tablet.
(3)	Product name	This is the product name affixed to the front of the tablet.
(4)	Serial number (s/n)	This is an alphanumeric identifier that is unique to each product.

## Tablet major components

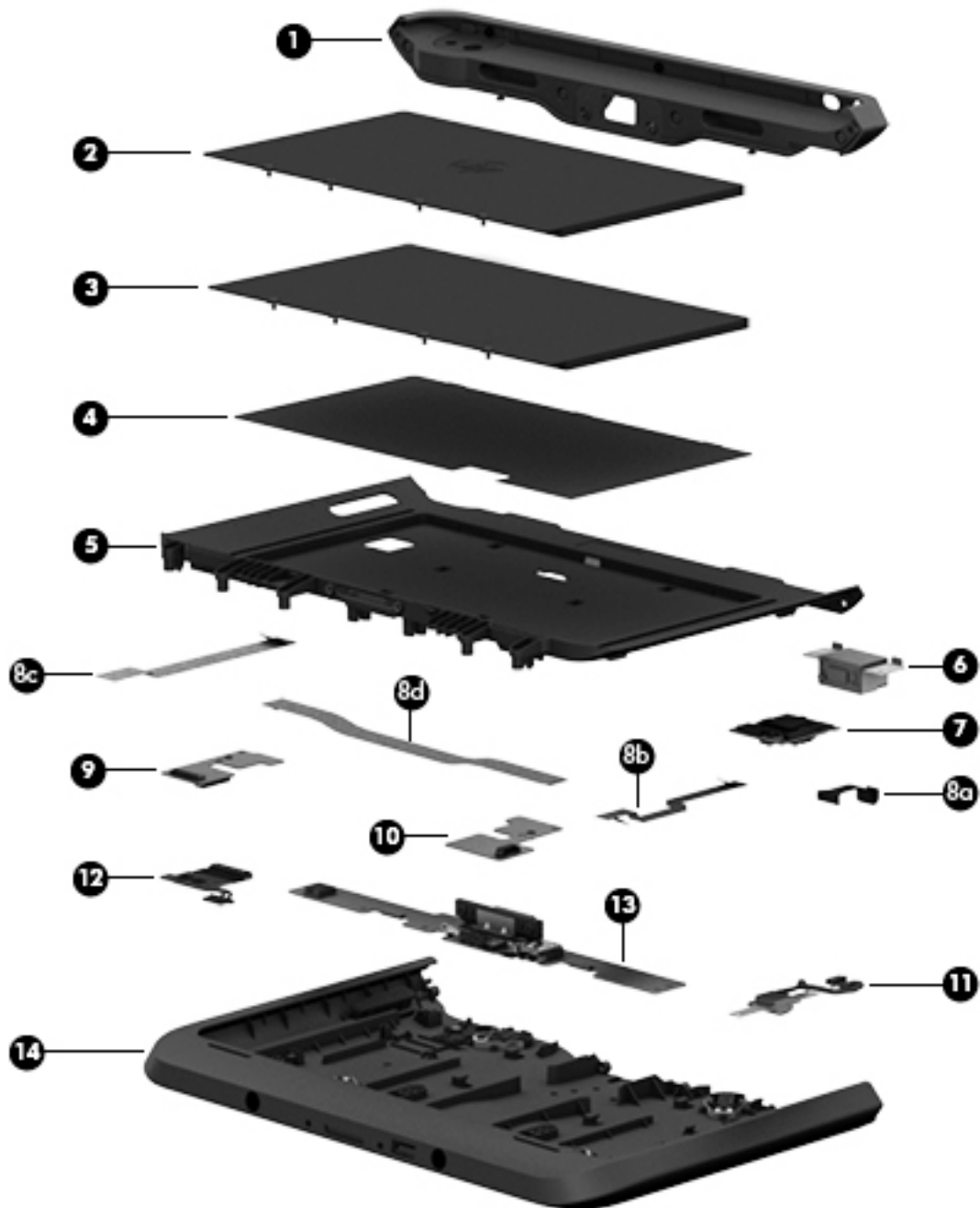


Item	Component	Spare part number
(1)	<b>Display assembly</b> (10.1-in., WUXGA (1900×1200), UWVA, 50% CG, 400-nit, active pen and MultiTouch capacitive digitizer, chemically-strengthened glass with anti-smudge; includes display panel, display LVDS cable, TouchScreen cable, and display panel support rubber):	
	With NFC module	747658-001
	Without NFC module	784956-001

Item	Component	Spare part number
	<b>Display Cable Kit</b> , includes:	747625-001
(2a)	TouchScreen cable	
(2b)	Display LVDS cable	
(3)	<b>NFC antenna</b> (includes double-sided adhesive)	747633-001
	<b>Button Kit</b> , includes:	747634-001
(4a)	Power button actuator	
(4b)	Volume button actuator	
(4c)	Autorotate switch actuator	
(4d)	Slot cover hardware (slot cover, retention bracket, spring bracket)	
(4e)	Docking connector bracket	
	<b>Webcam/Microphone Kit</b> , includes:	762828-001
(5a)	Left microphone	
(5b)	Right microphone	
(6a)	Rear-facing webcam	
(6b)	Front-facing webcam	
(7)	<b>Power button board</b> (includes cable)	
	For use only on tablet models equipped with the Windows 10 or Windows 8 Professional operating system	753976-601
	For use only on tablet models equipped with the Windows 10 or Windows 8 Standard operating system	753976-501
	For use only on tablet models equipped with the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	753976-401
	For use only on tablet models equipped with a non-Windows 10 or Windows 8 operating system	753976-001
(8)	<b>Volume button board</b> (includes bracket and cable)	759031-001
(9)	<b>WWAN module:</b>	
	HP lt4226 LTE/HSPA+ 4G Module	736675-005
	HP lt4225 LTE/EV-DO Gobi 4G Module	820019-005
	HP lt4112 LTE/HSPA+ 4G Module	740011-005
	HP lt4111 LTE/EV-DO/HSPA+ 4G Mobile Broadband Module	753080-005
	HP hs3110 HSPA+ Intel Mobile Broadband Module	822829-005
(10)	<b>2-cell, 30-Wh, 4.0-Ah, Li-ion battery</b> (includes battery cable and WWAN/GPS main transceiver and antenna cable)	728558-005
(11)	<b>System board</b> equipped with an Intel Atom z3795 quad core 1.60-GHz processor (burst up to 2.39-GHz; 2.0-MB L2 cache), and 4096-MB of system memory (includes power button actuator, processor, and replacement thermal material)	
	Equipped with 128-GB eMMC storage, an NFC module, and the Windows 10 or Windows 8 Professional operating system	824500-601

<b>Item</b>	<b>Component</b>	<b>Spare part number</b>
	Equipped with 128-GB eMMC storage, an NFC module, and the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	824500-401
	Equipped with 128-GB eMMC storage, an NFC module, and a non-Windows operating system	824500-001
	Equipped with 128-GB eMMC storage and the Windows 10 or Windows 8 Professional operating system	829007-601
	Equipped with 128-GB eMMC storage and a non-Windows operating system	829007-001
	Equipped with 64-GB eMMC storage, an NFC module, and the Windows 10 or Windows 8 Professional operating system	824499-601
	Equipped with 64-GB eMMC storage, an NFC module, and the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	824499-401
	Equipped with 64-GB eMMC storage, an NFC module, and a non-Windows operating system	824499-001
	Equipped with 64-GB eMMC storage and the Windows 10 or Windows 8 Professional operating system	824501-601
	Equipped with 64-GB eMMC storage and the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	824501-401
	Equipped with 64-GB eMMC storage and a non-Windows operating system	824501-001
<b>(12)</b>	<b>Audio jack board</b> (includes audio jack and cable)	747627-001
	<b>Antenna Kit</b> , includes:	
<b>(13)</b>	WWAN/GPS auxiliary antenna (includes auxiliary antenna cable and transceiver)	
<b>(14)</b>	WLAN antenna (includes WLAN main and auxiliary antenna cables and transceivers)	
	For use only in European countries and regions	767884-001
	For use only in Japan	767885-001
	For use only in the United States	767883-001
	<b>3G antenna</b> (not illustrated)	767882-001
<b>(15)</b>	<b>Broadcom BCM43241 802.11abgn 2x2 Wi-Fi + BT 4.0 Combo Adapter</b>	723677-005
<b>(16)</b>	<b>Vibrator module</b> (includes cable, double-sided adhesive, plastic cover)	747630-001
<b>(17)</b>	<b>Docking connector cable</b> (includes cable and double-sided adhesive)	747631-001
<b>(18)</b>	<b>Speakers</b> (include left and right speakers and cables)	747629-001
<b>(19)</b>	<b>Bottom case</b> (includes the power button actuator and the slot cover and brackets)	747628-001

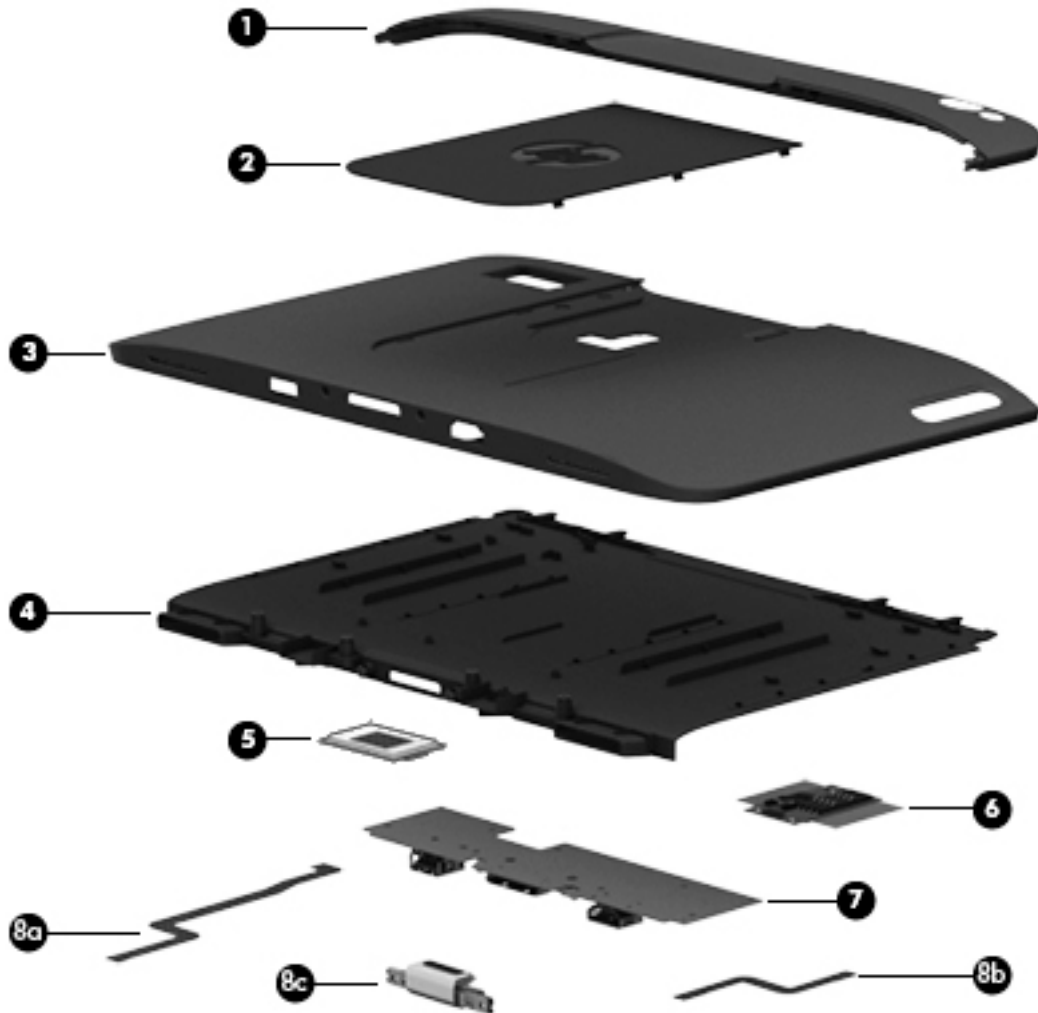
## Retail Jacket components



Item	Description	Spare part number
(1)	<b>Top cap</b> (includes 4 captive screws, secured by C-rings)	744025-001
(2)	<b>Battery</b> (2-cell, 21-Wh, 2.96-Ah, Li-ion)	687946-001
(3)	<b>Battery bay space saver</b>	742440-001
(4)	<b>Front cover adhesive liner</b> (included with front cover, spare part number 744030-001)	
(5)	<b>Front cover</b> (includes bar code scanner lens and adhesive liner)	744030-001

<b>Item</b>	<b>Description</b>	<b>Spare part number</b>
<b>(6)</b>	<b>Bar code scanner module</b>	744037-001
<b>(7)</b>	<b>Cable connector board</b>	744034-001
	<b>Cable Kit</b> , includes:	744031-001
<b>(8a)</b>	Bar code scanner module cable	
<b>(8b)</b>	Cable connector board cable	
<b>(8c)</b>	Credit card reader board/left board cable	
<b>(8d)</b>	Credit card reader board/right board cable	
	<b>Cable Retainer Kit</b> (20 pieces)	745882-001
<b>(9)</b>	<b>Left-side credit card reader board</b>	744027-001
<b>(10)</b>	<b>Right-side credit card reader board</b>	744028-001
<b>(11)</b>	<b>Credit card reader</b> (includes cable)	744026-001
<b>(12)</b>	<b>Battery connector board</b> (includes cable)	744033-001
<b>(13)</b>	<b>System board</b> (includes docking connector and USB port)	744032-001
<b>(14)</b>	<b>Rear cover</b>	744029-001
	<b>Retail Jacket</b> equipped with battery (not illustrated)	742441-001
	<b>Retail Jacket</b> equipped with a battery bay space saver (not illustrated)	742442-001
	<b>Handle</b> (not illustrated)	742439-001
	<b>Miscellaneous Rocker Button Mounting Kit</b> (not illustrated)	744038-001
	<b>Rubber Kit</b> for use only on the Retail Jacket (not illustrated)	742443-001
	<b>Screw Kit</b> for use only on the Retail Jacket (not illustrated)	744035-001

# Security Jacket components



Item	Description	Spare part number
(1)	<b>Top cap</b> (includes rubber trim)	744047-001
(2)	<b>Card reader cover</b>	744039-001
(3)	<b>Front cover</b>	744048-001
(4)	<b>Rear cover</b> (includes top cap release latch assembly)	744041-001
(5)	<b>Fingerprint reader board</b>	744042-001
(6)	<b>Card reader board</b>	744043-001
(7)	<b>System board</b>	744044-001
	<b>Cables/Connectors Kit</b> , includes:	744045-001
(8a)	Fingerprint reader board cable	
(8b)	Card reader board cable	
(8c)	Docking connector cable	

Item	Description	Spare part number
	<b>Security Jacket</b> equipped with a card reader and a fingerprint reader (not illustrated)	742446-001
	<b>Security Jacket</b> equipped with a card reader (not illustrated)	742444-001
	<b>Security Jacket Cover</b> (not illustrated)	756037-001
	<b>Rubber Kit</b> for use only on the Security Jacket (not illustrated)	744040-001
	<b>Screw Kit</b> for use only on the Security Jacket (not illustrated)	744046-001

## Healthcare Jacket components (not illustrated)

Component	Spare part number
<b>Healthcare Jacket:</b>	
Healthcare Jacket with barcode reader	791218-001
Healthcare Jacket without barcode reader	791216-001
<b>70-pin connector</b>	791199-001
<b>Back cover:</b>	
Back cover for use on Healthcare Jackets equipped with both a bar code reader and a SD Card reader	799306-001
Back cover for use on Healthcare Jackets equipped with only a bar code reader	799307-001
Back cover for use on Healthcare Jackets not equipped with a bar code reader or a SD Card reader	799308-001
Back cover for use on Healthcare Jackets equipped with only an SD Card reader	791205-001
<b>Back plate</b> (includes SD card reader and LED board)	791201-001
<b>Bar code scanner module</b>	791207-001
<b>Bar code scanner module button board</b>	791208-001
<b>Cable Kit</b>	791202-001
<b>Front Cover Kit</b>	791204-001
<b>Handle/Headphone Kit</b>	791213-001
<b>Hinge Kit</b>	791206-001
<b>I/O access cover</b>	791200-001
<b>I/O board:</b>	
With 70-pin connector	791209-001
Without 70-pin connector	791210-001
<b>Pen holder</b>	791214-001
<b>Quick Release Pin Kit</b>	791212-001
<b>Quick Release Plug Kit</b>	791215-001
<b>SD Card reader cover</b>	791203-001
<b>Screw Kit</b>	791211-001



## Rugged Jacket components (not illustrated)

Component	Spare part number
<b>Rugged Jacket:</b>	
Rugged Jacket with barcode reader	792815-001
Rugged Jacket with barcode reader	827582-001
Rugged Jacket without barcode reader	792813-001
Rugged Jacket without barcode reader	827581-001
<b>70-pin connector</b>	792810-001
<b>Access Covers Kit</b>	792819-001
<b>Back plate:</b>	
Back plate with SD card reader and USB board	792804-001
Back plate without SD card reader and USB board	793112-001
<b>Back Cover Kit</b> (includes back cover, resistance band, resistance band bracket, and screws):	
Back Cover Kit for use on Rugged Jackets equipped with both a bar code reader and a smart card reader	827580-001
Back Cover Kit for use on Rugged Jackets equipped with both a bar code reader and a smart card reader	799305-001
Back Cover Kit for use on Rugged Jackets equipped with only a smart card reader	827579-001
Back Cover Kit for use on Rugged Jackets equipped with only a smart card reader	799303-001
<b>Bar code scanner module</b>	792805-001
<b>Bar code scanner module button board</b>	792811-001
<b>Cable Kit</b>	792806-001
<b>Docking extension board</b>	792816-001
<b>Front Cover Kit</b>	792809-001
<b>Handle</b>	792812-001
<b>I/O board with 70-pin connector</b>	792820-001
<b>Quick Release Plug Kit</b>	792808-001
<b>Screw Kit</b>	792807-001
<b>Smart card reader board:</b>	
Smart card reader board	792822-001
Smart card reader board with USB door	792818-001
<b>USB card board</b>	792823-001

## 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)	<b>Docking station</b>	708621-001
(2)	<b>40-W HP Smart AC adapter</b> (RC, V, 3-wire)	693717-001
	<b>45-W HP Smart AC adapter</b> (non-PFC, 3-wire, 7.4-mm, non-slim)	744893-001
(3)	<b>Power cord</b> (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 Denmark	490371-081
	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

Item	Description	Spare part number
	For use in Switzerland	490371-111
	For use in Taiwan	490371-AB1
	For use in Thailand	490371-281
	For use in the United Kingdom and Singapore	490371-031

## Miscellaneous parts

Component	Spare part number
<b>Carrying case:</b>	
HP ElitePad dockable case	742720-001
HP ElitePad retail case	795131-001
HP ElitePad retail case hand strap	795132-001
HP ElitePad retail case PED mount with tape	795134-001
HP ElitePad rugged case	752759-001
HP ElitePad rugged carrying case	708772-001
<b>HP ElitePad Expansion Jacket cover</b>	736679-001
<b>HP ElitePad rugged shoulder strap</b>	809063-001
<b>HP ElitePad Service Tool</b> (includes suction cup)	714222-001
<b>HP ElitePad suction cup</b>	714223-001
<b>HP executive tablet pen</b>	751285-001
<b>HP ElitePad TXE board tool</b>	753977-001
<b>HP ElitePad USB charging cable</b>	752241-001
<b>HP ElitePad USB-3 adapter</b>	739321-001
<b>Jacket:</b>	
Slate jacket with battery slot (includes battery)	709462-001
Slate jacket without battery slot	714297-001
<b>Jacket keyboard:</b>	
For use in Belgium	724301-A41
For use in Brazil	724301-201
For use in Bulgaria	724301-261
For use in Canada	724301-DB1
For use in the Czech Republic and Slovakia	724301-FL1
For use in Denmark	724301-081
For use in France	724301-051

<b>Component</b>	<b>Spare part number</b>
For use in Germany	724301-041
For use in Greece	724301-151
For use in Hungary	724301-211
For use in Iceland	724301-DD1
For use in India	724301-D61
For use in Israel	724301-BB1
For use in Italy	724301-061
For use in Japan	724301-291
For use in Latin America	724301-161
For use in the Netherlands	724301-B31
For use in Norway	724301-091
For use in Northwest Africa	724301-FP1
For use in Portugal	724301-131
For use in Romania	724301-271
For use in Russia	724301-251
For use in Saudi Arabia	724301-171
For use in Slovenia	724301-BA1
For use in South Korea	724301-AD1
For use in Spain	724301-071
For use in Sweden and Finland	724301-B71
For use in Switzerland	724301-BG1
For use in Taiwan	724301-AB1
For use in Thailand	724301-281
For use in Turkey	724301-141
For use in the United Kingdom and Singapore	724301-031
For use in the United States	724301-001
<b>Pen tether</b> (10 pieces)	732251-001
<b>Screw Kit</b> for use only with the tablet	709461-001[d]

## Power components



Item	Component	Spare part number
<b>(1)</b>	<b>10-W AC adapter</b> for use only on the HP ElitePad 1000 G2:	
	Wall-mount, RC/V, 3-wire	686120-001
	Wall-mount, non-PFC, 2-wire	746156-001
<b>(2)</b>	<b>Duck head power adapter:</b>	
	For use in Argentina	755184-D01
	For use in Australia	755184-011
	For use in Brazil	755184-201
	For use in Denmark	755184-081
	For use in Europe	755184-021
	For use in India	755184-D61
	For use in Israel	755184-BB1
	For use in Italy	755184-061
	For use in the People's Republic of China	755184-371
	For use in South Africa	755184-AR1
	For use in Switzerland	755184-BG1
	For use in the United Kingdom and Singapore	755184-031
	For use in the United States	755184-001
<b>(3)</b>	<b>Power cord</b> (3-pin, black, 1.83-m):	
	For use in Argentina	490371-D01
	For use in Australia	490371-011
	For use in Brazil	490371-202

<b>Item</b>	<b>Component</b>	<b>Spare part number</b>
	For use in Denmark	490371-081
	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	490371-371
	For use in South Africa	490371-AR1
	For use in South Korea	490371-AD1
	For use in Switzerland	490371-BG1
	For use in Taiwan	490371-AB1
	For use in the United Kingdom and Singapore	490371-031
	<b>HP Smart AC Adapter for use with the ElitePad</b> (4.5-mm, not illustrated)	790129-001
	<b>Card Reader Cover Kit</b> (not illustrated)	747632-001
	<b>HP Mobile Connect SIM</b> (not illustrated)	714749-001
	<b>Screw Kit</b> for use only on the HP ElitePad 1000 G2 (not illustrated)	753735-001
	<b>Tape Support Kit</b>	762827-001

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# 4 Removal and replacement preliminary requirements

## Tools required


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

- Magnetic screw driver
- Phillips P0 screw driver
- Plastic case utility tool

## Service considerations

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


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

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## Plastic parts


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 **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.

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## Cables and connectors

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 **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.

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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.



# 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 computer or void the warranty.

 **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.

### Tablet component replacement procedures

This chapter provides removal and replacement procedures for Authorized Service Provider only parts.

There are as many as 34 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.

#### Display assembly

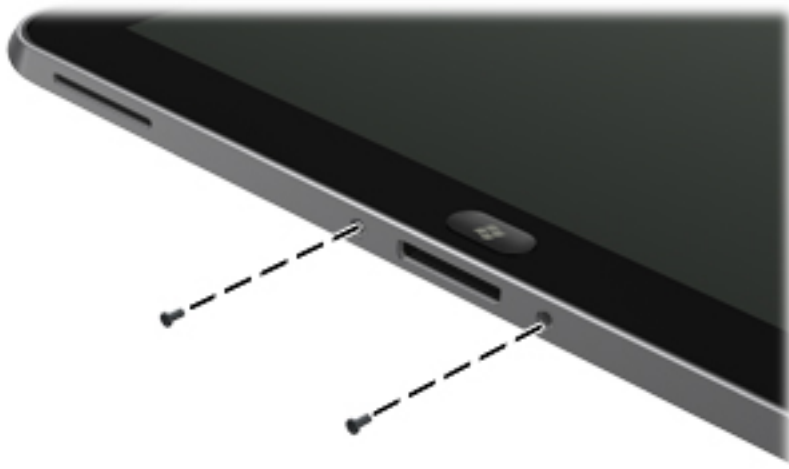
Description	Spare part number
10.1-in., WUXGA (1900×1200), UWVA, 50% CG, 400-nit, active pen and MultiTouch capacitive digitizer, chemically-strengthened glass with anti-smudge; includes display panel, display LVDS cable, TouchScreen cable, and display panel support rubber	
With NFC module	747658-001
Without NFC module	784956-001

Before disassembling the tablet, follow these steps:

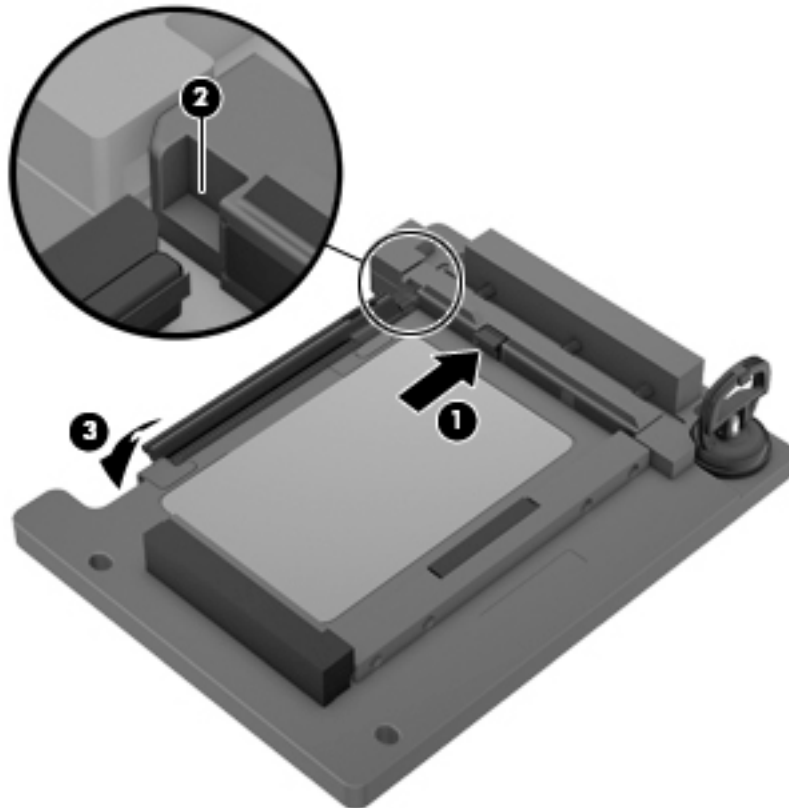
1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.

Remove the display assembly:

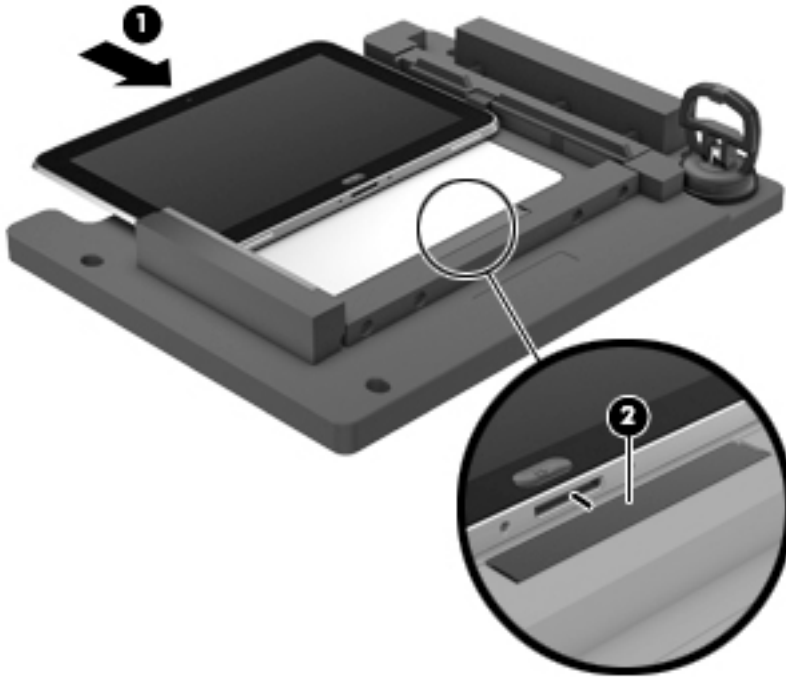
1. Remove the two Phillips PM1.4×3.2 screws that secure the display assembly to the tablet.



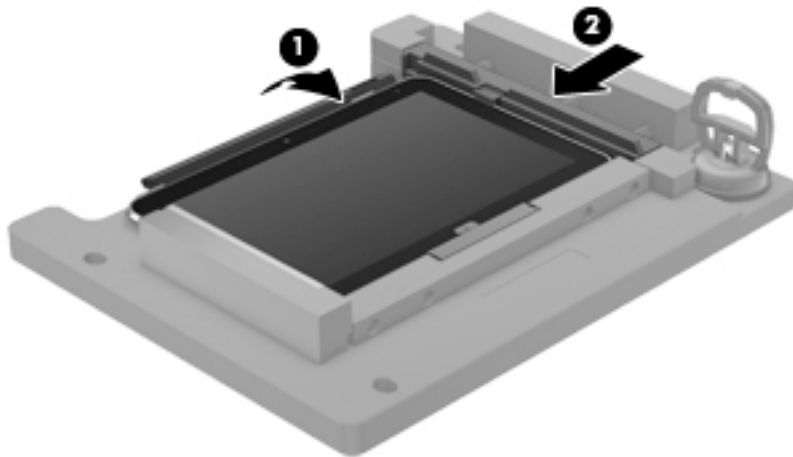
2. Place the HP ElitePad Service Tool on a flat, sturdy surface.  
The HP ElitePad Service Tool is available using spare part number 714222-001.
3. Move the HP ElitePad Service Tool retention bar **(1)** to the left until the notch **(2)** in the retention bar allows the retention gate to open.
4. Open the retention gate **(3)**.



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



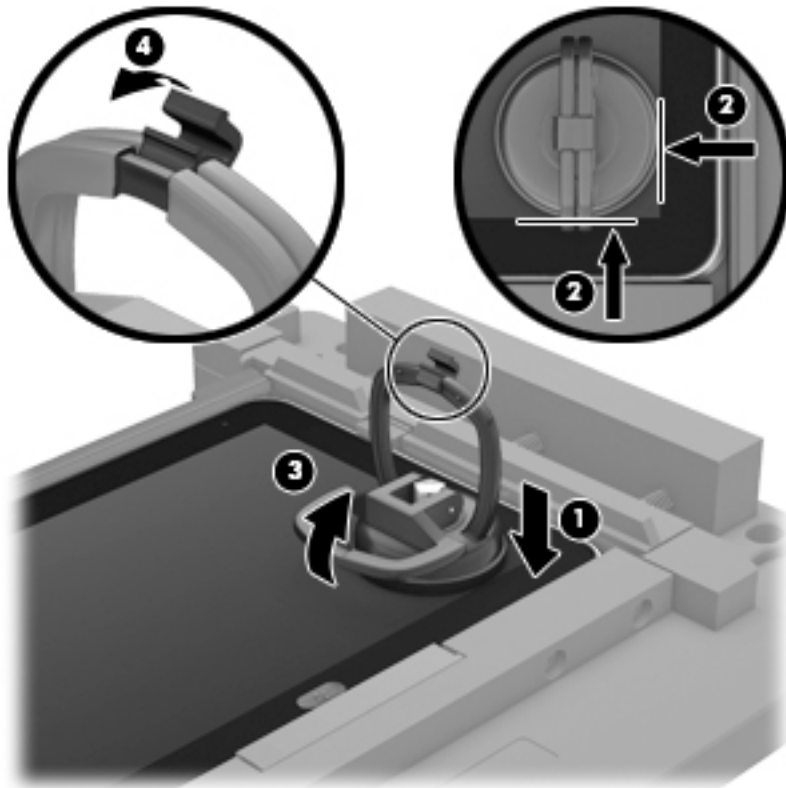
6. Close the retention gate **(1)** and release the retention bar **(2)** to secure the tablet in the service tool.



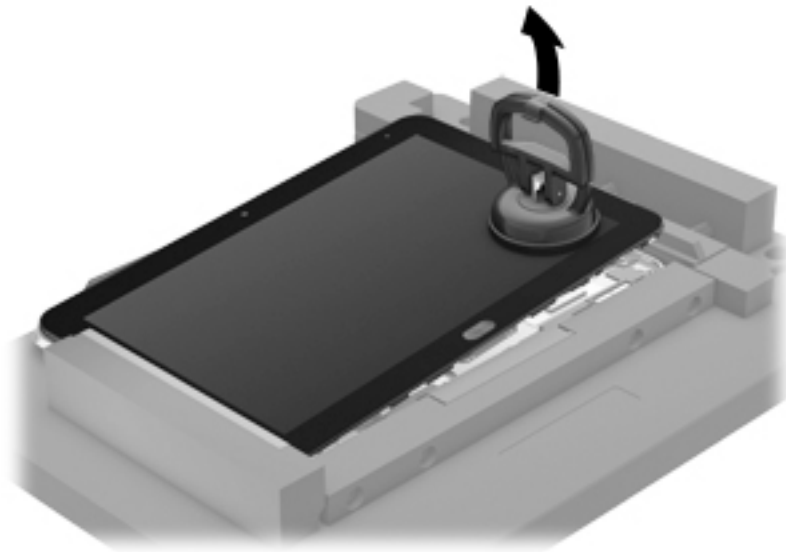
7. Place the suction cup **(1)** on the lower right corner of the tablet display glass, making sure to place the suction cup inside the edges of the border **(2)** of the display glass.  
The suction cup is available using spare part number 714223-001.
8. Raise the suction cup handle **(3)**.

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.

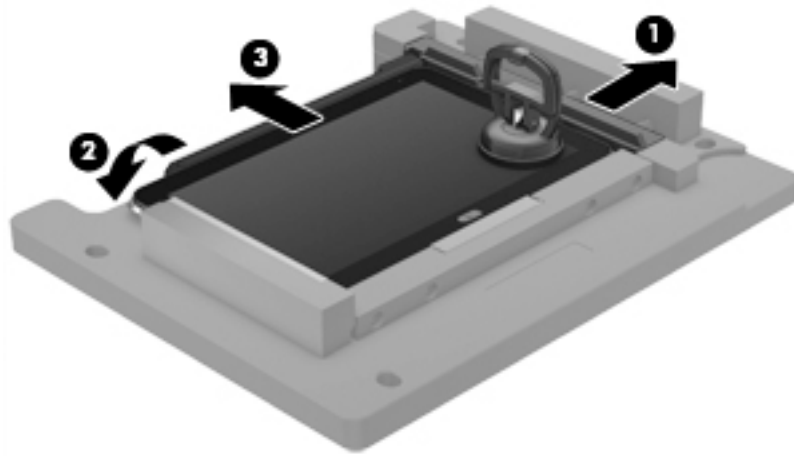


10. Firmly lift up on the suction cup to release the right side of the display assembly approximately ¼-inch from the tablet.



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).



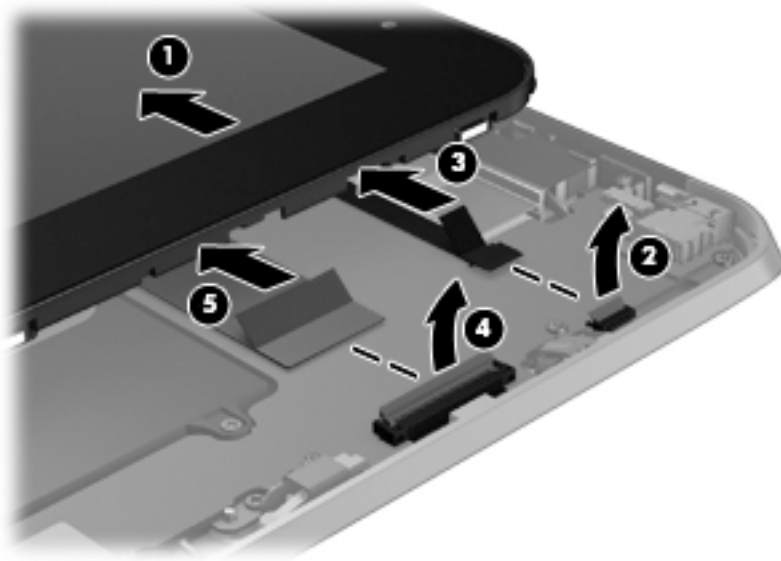
14. Disconnect the suction cup handles (1).
15. Lower the suction cup handle (2).
16. Remove the suction cup (3).



17. Slide 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 (3) from the system board.



19. Release the ZIF connector **(4)** to which the LVDS cable is attached, and then disconnect the LVDS cable **(5)** from the system board.



20. Remove the display assembly and cables.
21. 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.



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.

## NFC antenna

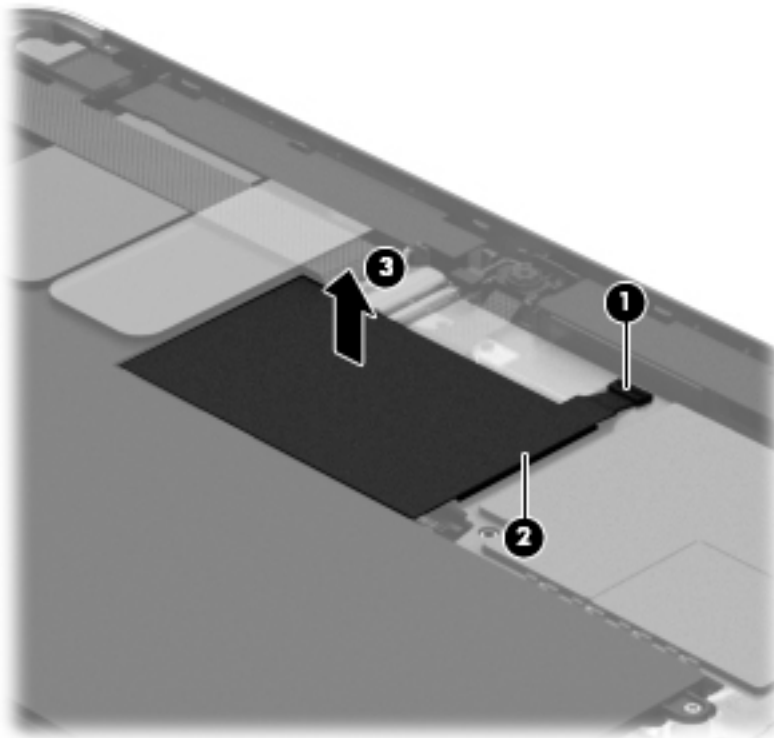
Description	Spare part number
NFC antenna	747633-001

Before removing the NFC antenna, 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 display assembly (see [Display assembly on page 28](#)).

Remove the NFC antenna:

1. Release the ZIF connector **(1)** to which the NFC antenna cable is attached, and then disconnect the NFC antenna cable from the system board.
2. Detach the NFC antenna **(2)** from the surface of the system board. (The NFC antenna is attached to the system board with double-sided adhesive.)
3. Remove the NFC antenna **(3)**.



Reverse this procedure to install the NFC antenna.

## WWAN module

Description	Spare part number
HP lt4226 LTE/HSPA+ 4G Module	736675-005
HP lt4225 LTE/EV-DO Gobi 4G Module	820019-005
HP lt4112 LTE/HSPA+ 4G Module	740011-005
HP lt4111 LTE/EV-DO/HSPA+ 4G Mobile Broadband Module	753080-005
HP hs3110 HSPA+ Intel Mobile Broadband Module	822829-005

Before removing the WWAN module, 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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).

Remove the WWAN module:

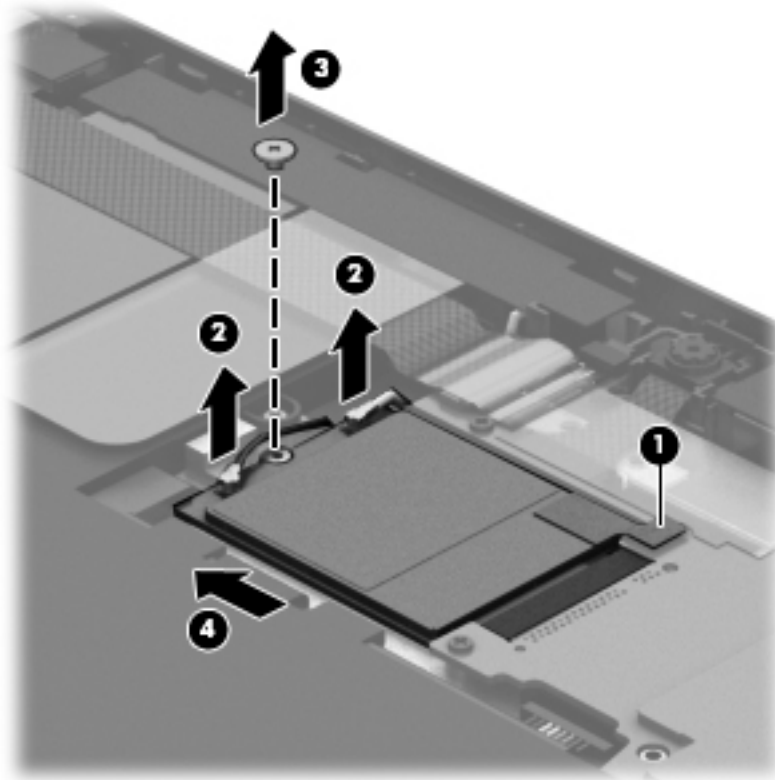
1. Release the grounding tape **(1)** that secures the WWAN module to the system board.
2. Disconnect the WWAN antenna cables **(2)** from the terminals on the WWAN module.




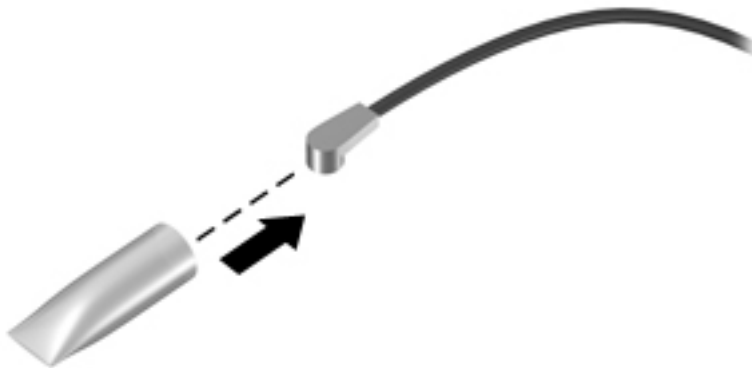
**NOTE:** The WWAN antenna cable labeled “5” connects to the WWAN module “MAIN” terminal labeled “5”. The WWAN antenna cable labeled “6” connects to the WWAN module “AUX/GPS” terminal labeled “6”.

3. Remove the Phillips PM1.3×1.5 broad head screw **(3)** that secures the WWAN module to the bottom cover.

4. Remove the WWAN module (4) by sliding it away from the socket on the system board.



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



Reverse this procedure to install the WWAN module.

## WLAN module

Description	Spare part number
Broadcom BCM43241 802.11abgn 2x2 Wi-Fi + BT 4.0 Combo Adapter	723677-005

Before removing the WLAN module, 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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).

Remove the WLAN module:

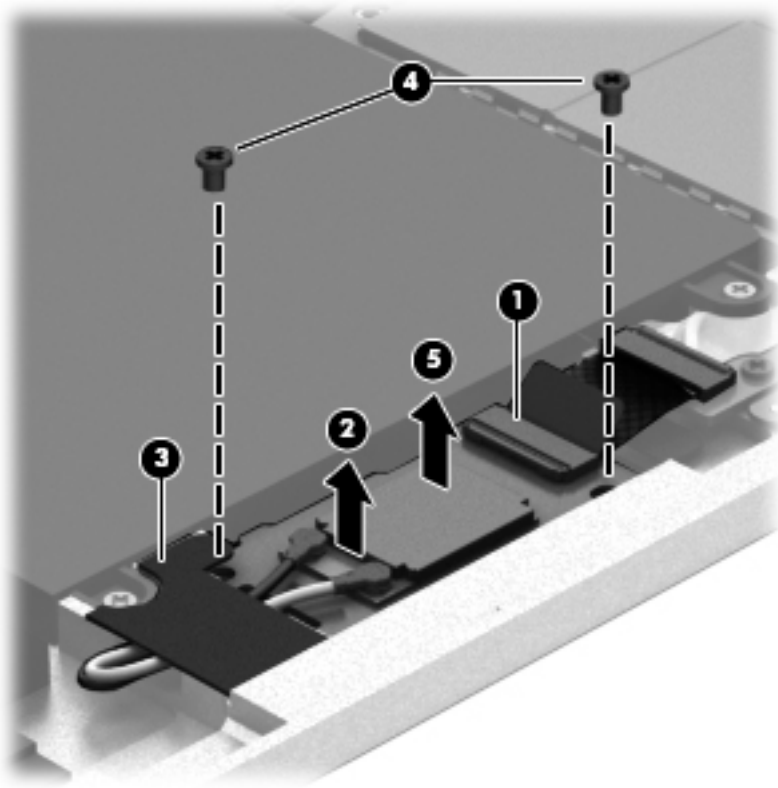
1. Release the ZIF connector **(1)** to which the WLAN ribbon cable is attached, and then disconnect the WLAN ribbon cable from the system board.
2. Disconnect the WLAN antenna cables **(2)** from the terminals on the WLAN module.




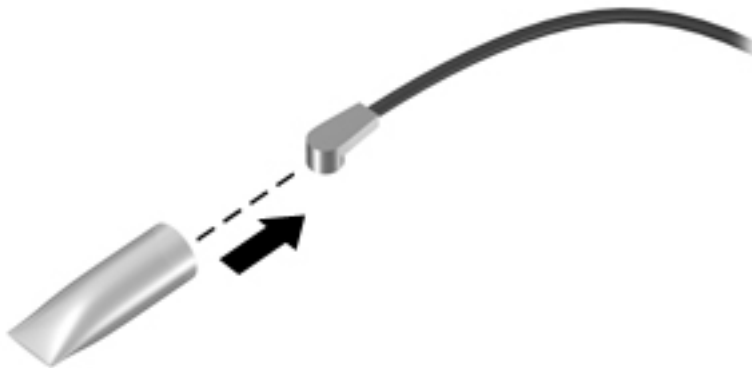
**NOTE:** The WLAN antenna cable labeled “1” connects to the WLAN module “MAIN” terminal labeled “1”. The WLAN antenna cable labeled “2” connects to the WLAN module “AUX” terminal labeled “2”.

3. Release the shielding **(3)** to gain access to the bottom screw that secures the WLAN module to the bottom cover.
4. Remove the two Phillips PM1.3×2.0 screws **(4)** that secure the WLAN module to the bottom cover.

5. Remove the WLAN module (5).




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



Reverse this procedure to install the WLAN module.

## Microphones

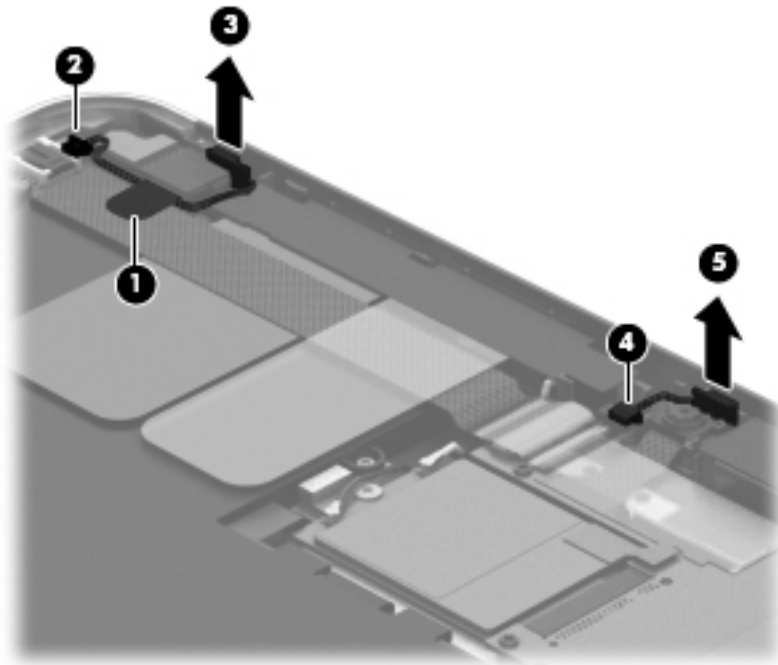
 **NOTE:** The microphones are included in the Webcam/Microphone Kit, spare part number 762828-001.

Before removing the microphones, 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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).

Remove the microphones:

1. Detach the tape **(1)** that secures the left microphone cable to the battery.
2. Disconnect the left microphone cable **(2)** from the power button board.
3. Release the left microphone **(3)** from the molding built into the bottom cover.
4. Disconnect the right microphone cable **(4)** from the system board.
5. Release the right microphone **(5)** from the molding built into the bottom cover.



6. Remove the microphones and cables.

Reverse this procedure to install the microphones.



## Rear-facing webcam

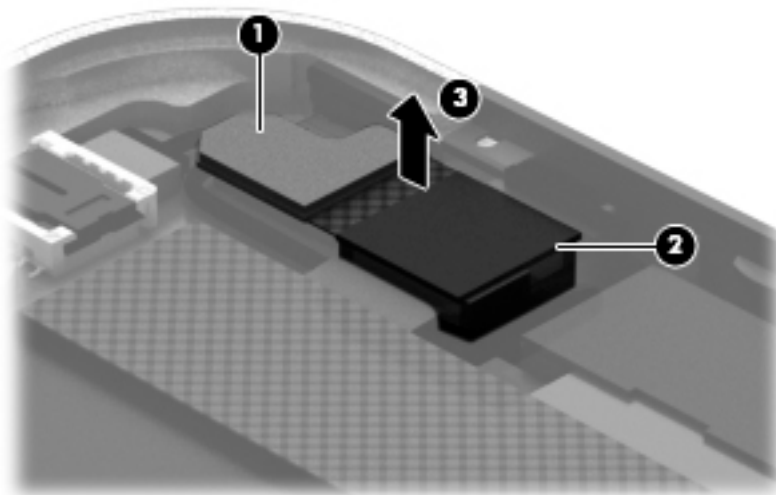
 **NOTE:** The rear-facing webcam is included in the Webcam/Microphone Kit, spare part number 762828-001.

Before removing the rear-facing webcam, 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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).

Remove the rear-facing webcam:

1. Disconnect the rear-facing webcam cable **(1)** from the power button board.
2. Release the rear-facing webcam **(2)** from the molding built into the bottom cover.
3. Remove the rear-facing webcam **(3)** and cable.



Reverse this procedure to install the rear-facing webcam.

## Power button board

Description	Spare part number
For use only on computer models equipped with the Windows 10 or Windows 8 Professional operating system	753976-601
For use only on computer models equipped with the Windows 10 or Windows 8 Standard operating system	753976-501
For use only on tablet models equipped with the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	753976-401
For use only on computer models equipped with a non-Windows 10 or Windows 8 operating system	753976-001

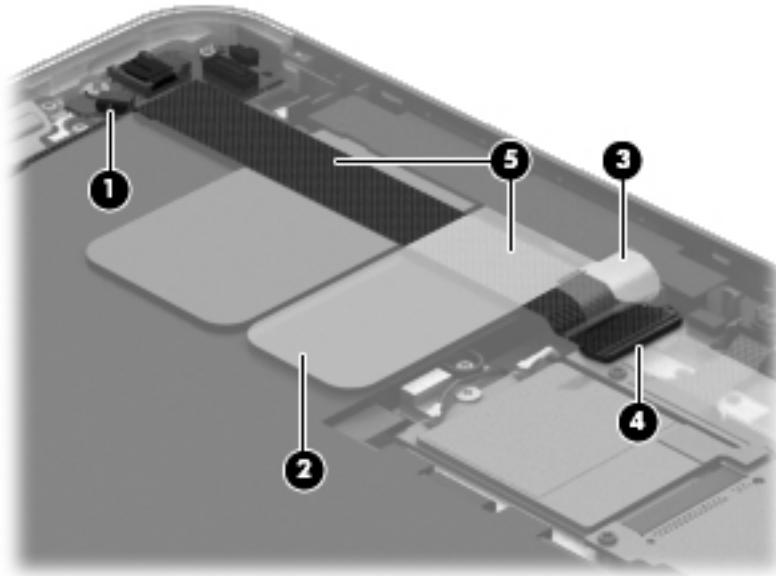
Before removing the power button board, follow these steps:

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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).
6. Disconnect the left microphone cable from the power button board (see [Microphones on page 40](#)).
7. Disconnect the rear-facing webcam cable from the power button board (see [Rear-facing webcam on page 41](#)).

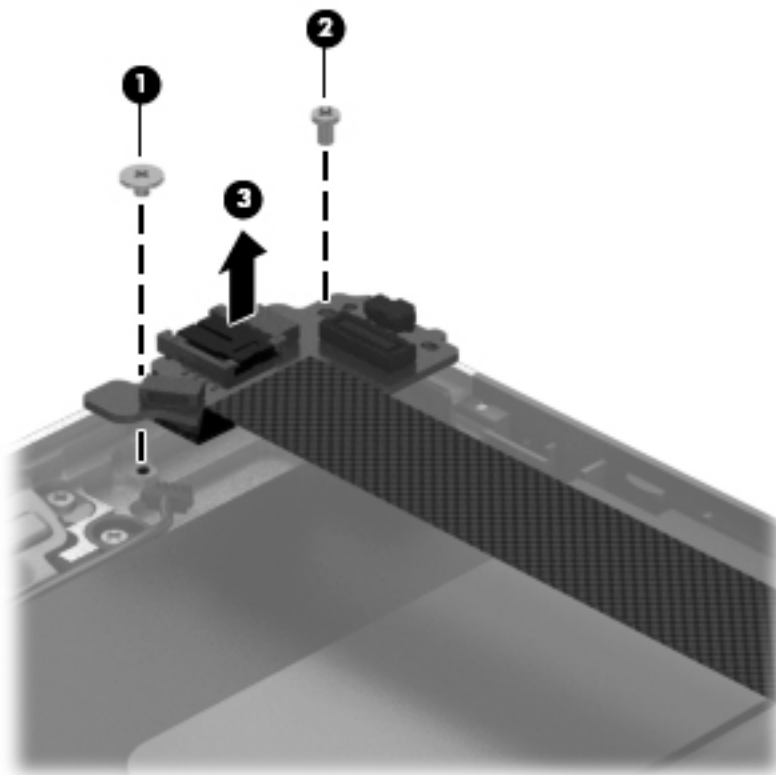
Remove the power button board:

1. Disconnect the volume button board cable **(1)** from the power button board.
2. Release the support strip **(2)** that secures the WWAN antenna transceiver to the battery.
3. Release the support strip **(3)** that secures the power button board cable to the system board.
4. Release the ZIF connector **(4)** to which the power button board cable is attached, and then disconnect the power button board cable from the system board.

5. Detach the power button board cable (5) from the surface of the battery. (The power button board cable is attached to the battery with double-sided adhesive.)



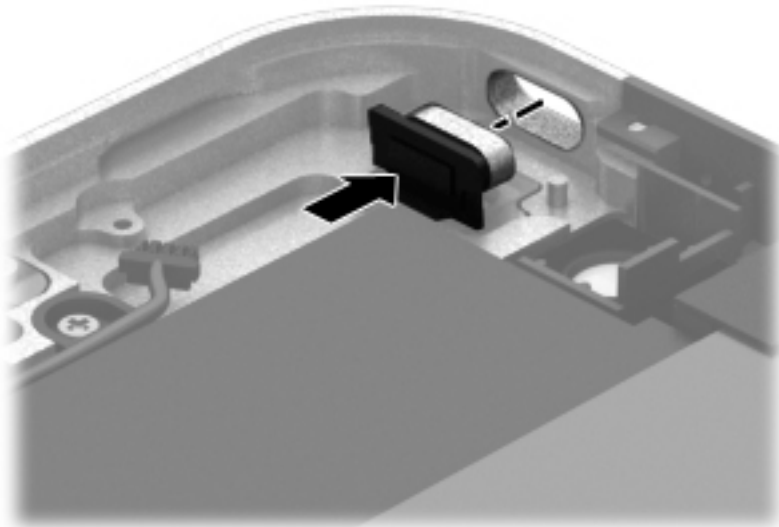
6. Remove the Phillips PM1.3×2.0 broad head screw (1) and the Phillips PM1.3×2.0 screw (2) that secure the power button board to the bottom cover.
7. Remove the power button board (3) and cable.





**NOTE:** In the process of removing the power button board, the power button actuator may be accidentally dislodged from the bottom cover. To replace the power button actuator, refer to the following illustration.

The power button actuator is included in the Button Kit, spare part number 747634-001.



Reverse this procedure to install the power button board.

## Volume button board

Description	Spare part number
Volume button board (includes bracket and cable)	759031-001

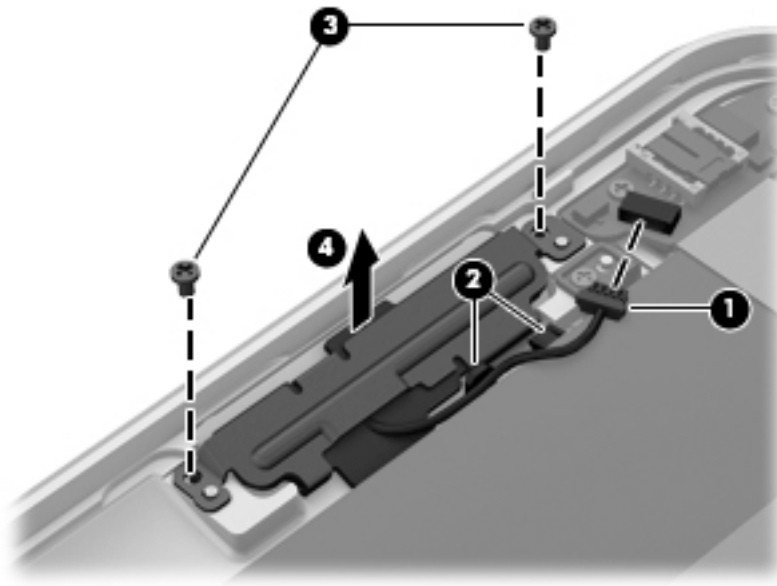
Before removing the volume button board, follow these steps:


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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).

Remove the volume button board:

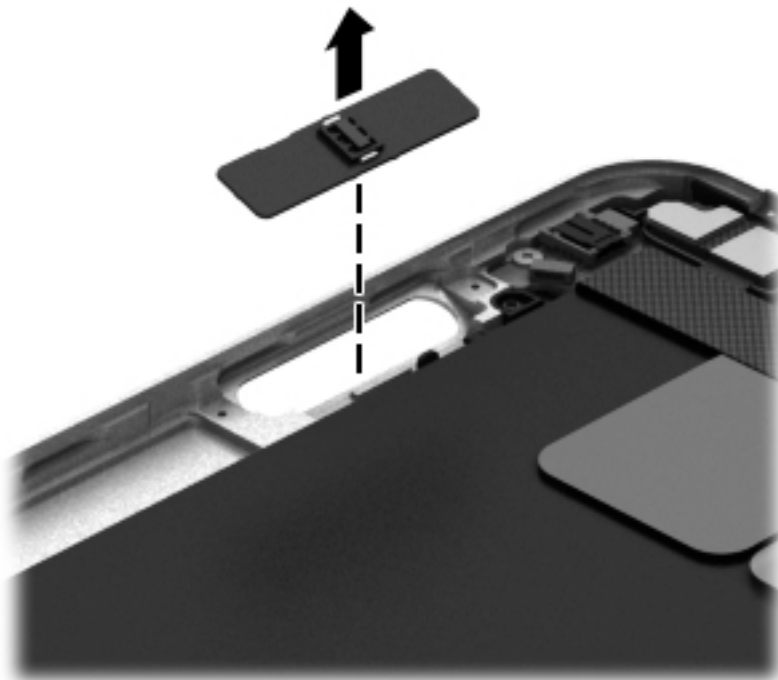
1. Disconnect the volume button board cable **(1)** from the power button board.
2. Release the volume button board cable from the retention clips **(2)** built into the battery.
3. Remove the two Phillips PM1.5×2.0 screws **(3)** that secure the volume button board to the bottom cover.

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



 **NOTE:** In the process of removing the volume button board, the volume button actuator may be accidentally dislodged from the bottom cover. To replace the volume button actuator, refer to the following illustration.

The volume button actuator is included in the Button Kit, spare part number 747634-001.



Reverse this procedure to install the volume button board.

## Audio jack board

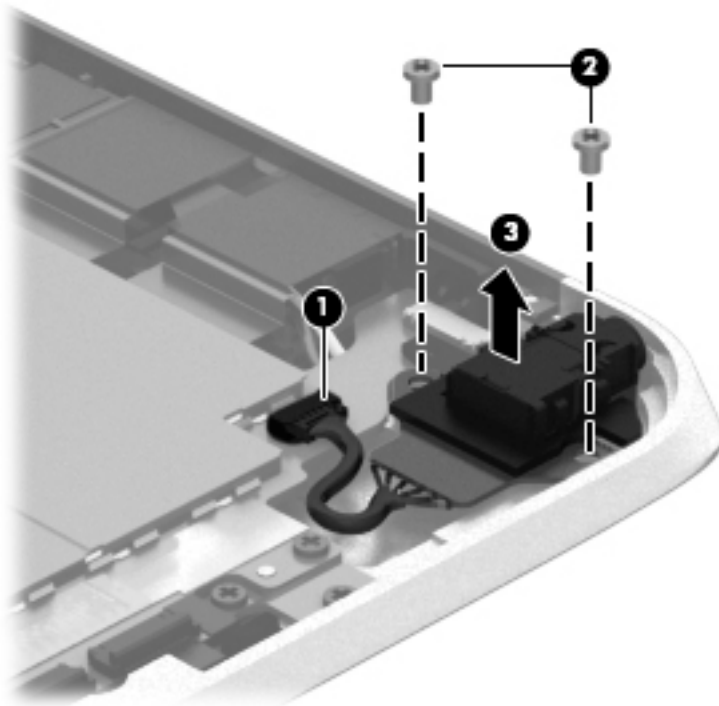
Description	Spare part number
Audio jack board (includes audio jack and cable)	747627-001

Before removing the audio jack 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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).

Remove the audio jack board:

1. Disconnect the audio jack board cable **(1)** from the system board.
2. Remove the two Phillips PM1.3×2.0 screws **(2)** that secure the audio jack board to the bottom cover.
3. Remove the audio jack board **(3)** and cable.



Reverse this procedure to install the audio jack board.

## Vibrator module

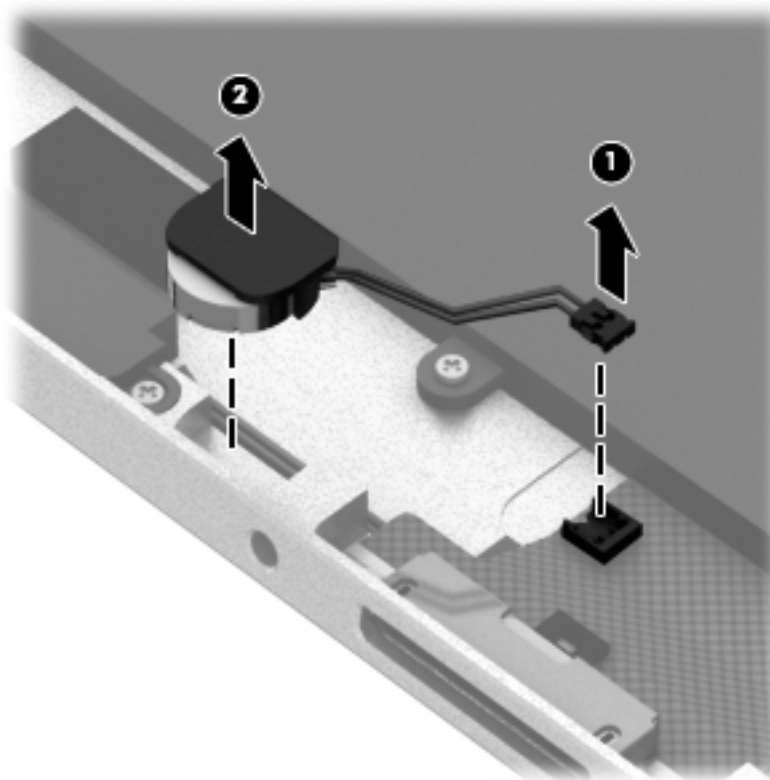
Description	Spare part number
Vibrator module (includes cable, double-sided adhesive, plastic cover)	747630-001

Before removing the vibrator module, 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 display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).

Remove the vibrator module:

1. Disconnect the vibrator module cable (1) from the system board.
2. Detach the vibrator module (2) from the bottom cover. (The vibrator module is attached to the bottom cover with double-sided adhesive.)



3. Remove the vibrator module and cable.



**NOTE:** The vibrator module cover is attached to the vibrator module with double-sided adhesive.

Reverse this procedure to install the vibrator module.

## Battery

Description	Spare part number
2-cell, 30-Wh, 4.0-Ah, Li-ion battery (includes battery cable and WWAN/GPS main transceiver and antenna cable)	728558-005

Before removing the battery, follow these steps:

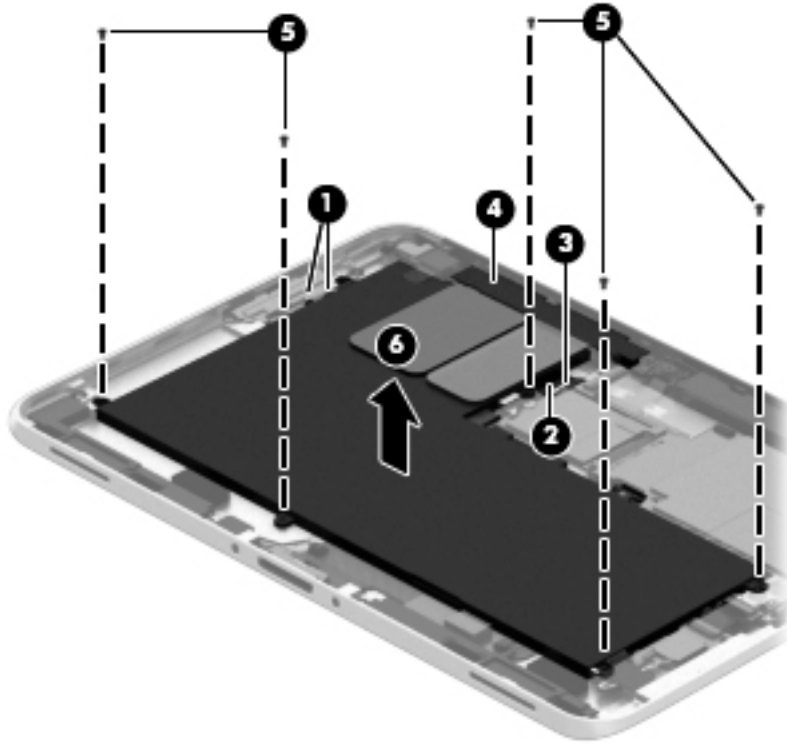
1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.
4. Remove the display assembly (see [Display assembly on page 28](#)).
5. Remove the NFC antenna (see [NFC antenna on page 35](#)).
6. Remove the power button board (see [Power button board on page 42](#)).

Remove the battery:

1. Release the volume button board cable from the retention clips **(1)** built into the battery.
2. Release the tab **(2)** built into the bottom cover that secures the WWAN/GPS antenna cables, and then release the antenna cables **(3)**.
3. Detach the WWAN/GPS main transceiver **(4)** from the bottom cover. (The WWAN/GPS main transceiver is attached to the bottom cover with double-sided adhesive.)
4. Remove the six Phillips PM1.3×2.0 screws **(5)** that secure the battery to the bottom cover.




5. Remove the battery (6).



Reverse this procedure to install the battery.

## System board

 **NOTE:** The system board spare part kit is equipped with an Intel Atom z3795 quad core 1.60-GHz processor (burst up to 2.39-GHz; 2.0-MB L2 cache), 4096-MB of system memory, and includes the power button actuator, processor, and replacement thermal material.

Description	Spare part number
Equipped with 128-GB eMMC storage, an NFC module, and the Windows 10 or Windows 8 Professional operating system	824500-601
Equipped with 128-GB eMMC storage, an NFC module, and the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	824500-401
Equipped with 128-GB eMMC storage, an NFC module, and a non-Windows operating system	824500-001
Equipped with 128-GB eMMC storage and the Windows 10 or Windows 8 Professional operating system	829007-601
Equipped with 128-GB eMMC storage and a non-Windows operating system	829007-001
Equipped with 64-GB eMMC storage, an NFC module, and the Windows 10 or Windows 8 Professional operating system	824499-601
Equipped with 64-GB eMMC storage, an NFC module, and the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	824499-401
Equipped with 64-GB eMMC storage, an NFC module, and a non-Windows operating system	824499-001
Equipped with 64-GB eMMC storage and the Windows 10 or Windows 8 Professional operating system	824501-601
Equipped with 64-GB eMMC storage and the Windows 10 or Windows Embedded Industry 8.1 64-bit Retail Solutions operating system	824501-401
Equipped with 64-GB eMMC storage and a non-Windows operating system	824501-001

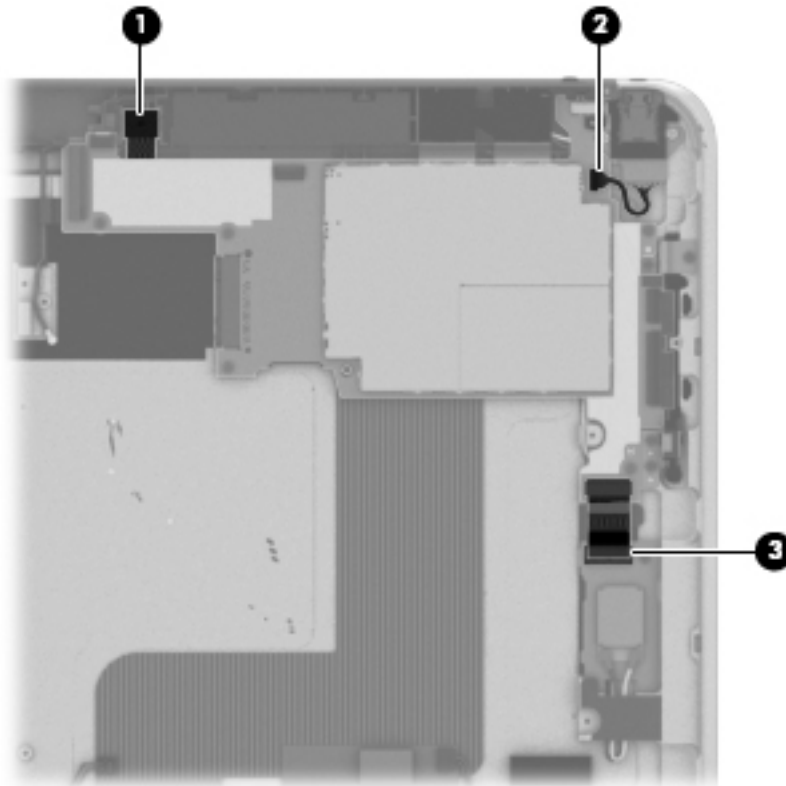
Before removing the system board, follow these steps:

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 display assembly (see [Display assembly on page 28](#)), and then remove the following components:
  - a. NFC antenna (see [NFC antenna on page 35](#))
  - b. WWAN module (see [WWAN module on page 36](#))
  - c. Power button board (see [Power button board on page 42](#))
  - d. Battery (see [Battery on page 48](#))

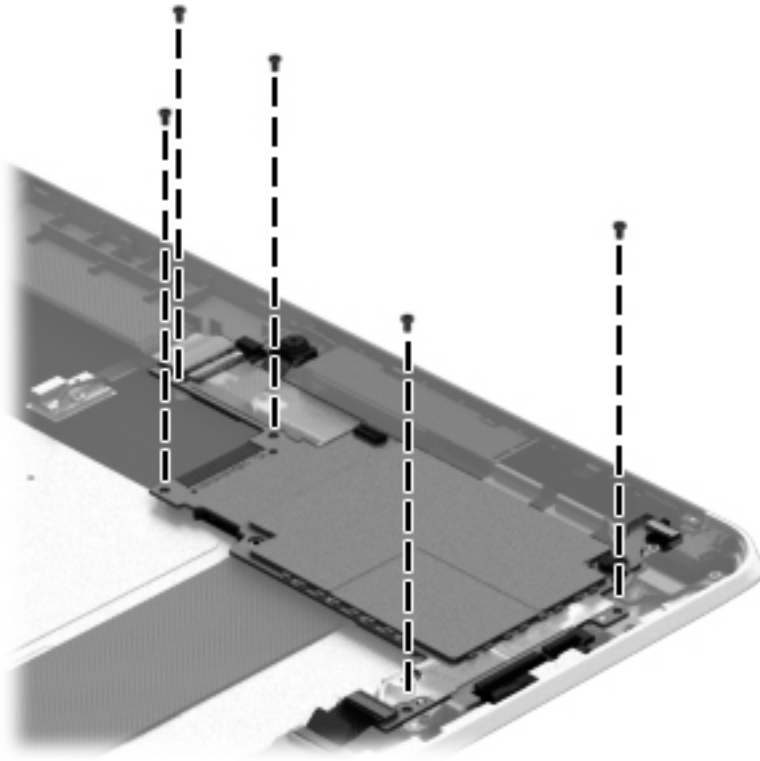
Remove the system board:

1. Release the forward-facing webcam **(1)** from the molding built into the bottom cover.
2. Disconnect the audio jack board cable **(2)** from the system board.

3. Release the ZIF connector **(3)** to which the WLAN ribbon cable is attached, and then disconnect the WLAN ribbon cable from the WLAN module.

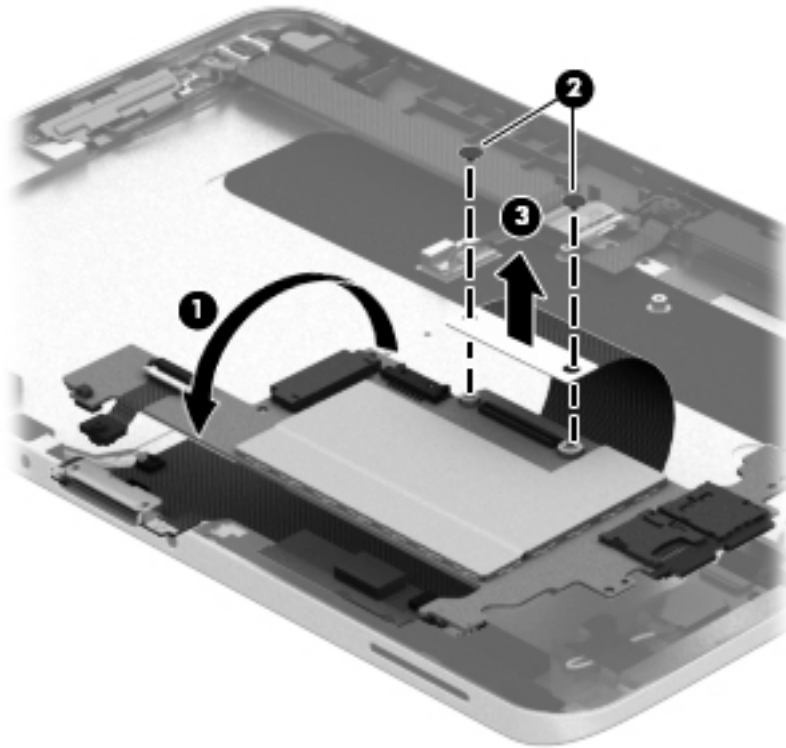


4. Remove the five Phillips PM1.3×2.0 screws that secure the battery to the bottom cover.



5. Lift the top edge of the system board **(1)** and swing it up and forward until it rests upside down above the tablet.
6. Remove the two Phillips PM1.3×1.5 broad head screws **(2)** that secure the docking connector cable to the system board.

7. Disconnect the docking connector cable (3) from the system board.

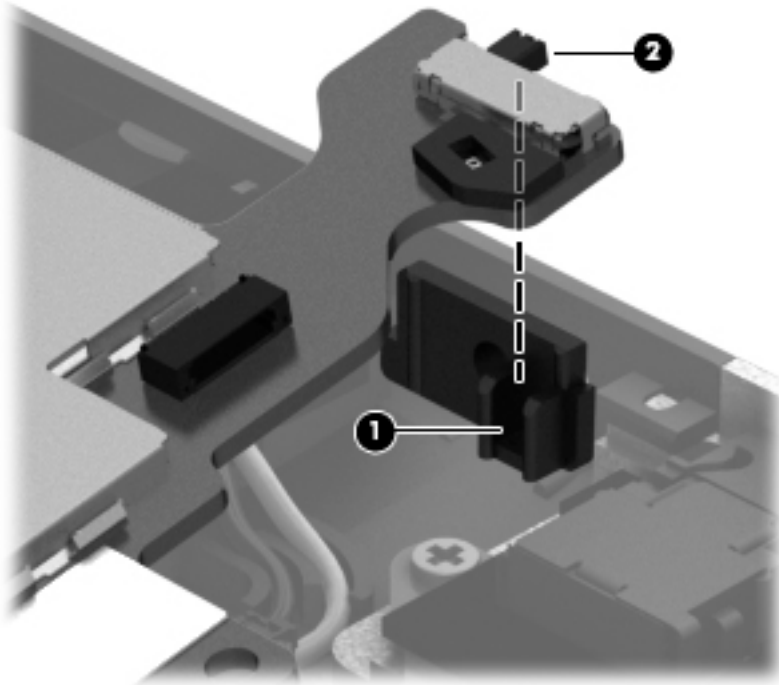


8. Remove the system board.




**NOTE:** In the process of removing the system board, the autorotate switch actuator may be accidentally dislodged from the bottom cover. To replace the autorotate switch actuator, refer to the following illustration. When installing the autorotate switch actuator, make sure the two tabs (1) on the autorotate switch actuator engage the autorotate switch (2) on the system board.

The autorotate switch actuator is included in the Button Kit, spare part number 747634-001.



Reverse this procedure to install the system board.

## Forward-facing webcam

 **NOTE:** The forward-facing webcam is included in the Webcam/Microphone Kit, spare part number 762828-001.

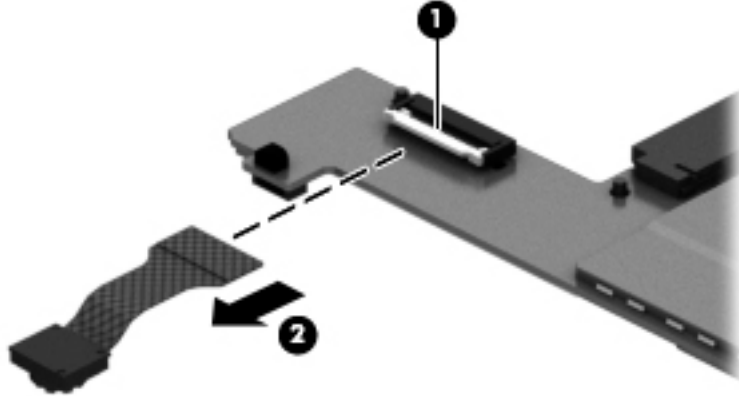
Before removing the forward-facing webcam, follow these steps:

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 display assembly (see [Display assembly on page 28](#)), and then remove the following components:
  - a. NFC antenna (see [NFC antenna on page 35](#))
  - b. WWAN module (see [WWAN module on page 36](#))
  - c. Power button board (see [Power button board on page 42](#))
  - d. Battery (see [Battery on page 48](#))
  - e. System board (see [System board on page 50](#))

Remove the forward-facing webcam:

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


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



3. Remove the forward-facing webcam and cable.

Reverse this procedure to install the forward-facing webcam.

## Slot cover

 **NOTE:** The slot cover is included in the Button Kit, spare part number 747634-001.

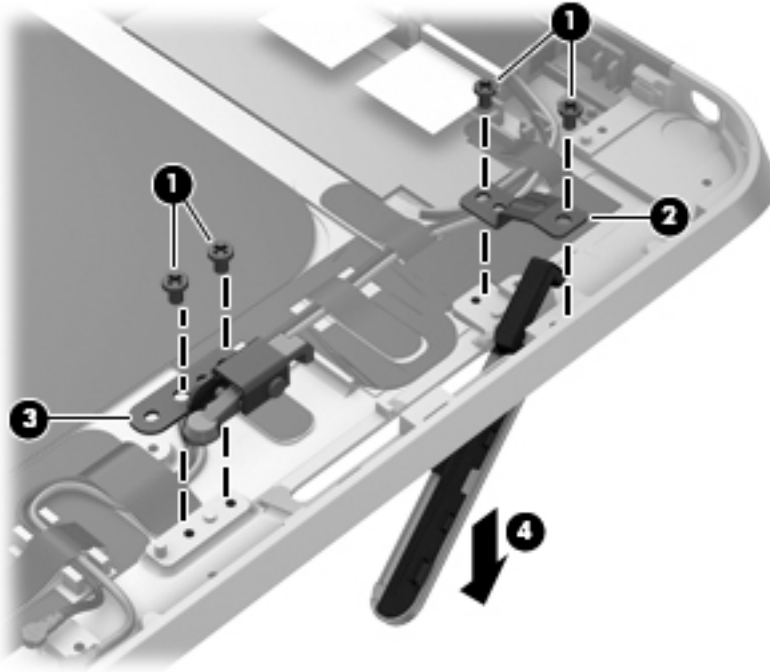
Before removing the slot cover, follow these steps:

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 display assembly (see [Display assembly on page 28](#)), and then remove the following components:
  - a. NFC antenna (see [NFC antenna on page 35](#))
  - b. WWAN module (see [WWAN module on page 36](#))
  - c. Power button board (see [Power button board on page 42](#))
  - d. Battery (see [Battery on page 48](#))
  - e. System board (see [System board on page 50](#))

Remove the slot cover:

1. Remove the four Phillips PM1.3×2.0 screws **(1)** that secure the slot cover retention bracket and spring bracket to the bottom cover.
2. Remove the slot cover retention bracket **(2)** and the slot cover spring bracket **(3)**.

3. Remove the slot cover (4) by pressing it through the bottom cover.



4. Remove the slot cover.

Reverse this procedure to install the slot cover.

## Docking connector cable

Description	Spare part number
Docking connector cable (includes double-sided adhesive)	747631-001

Before removing the docking connector cable, follow these steps:

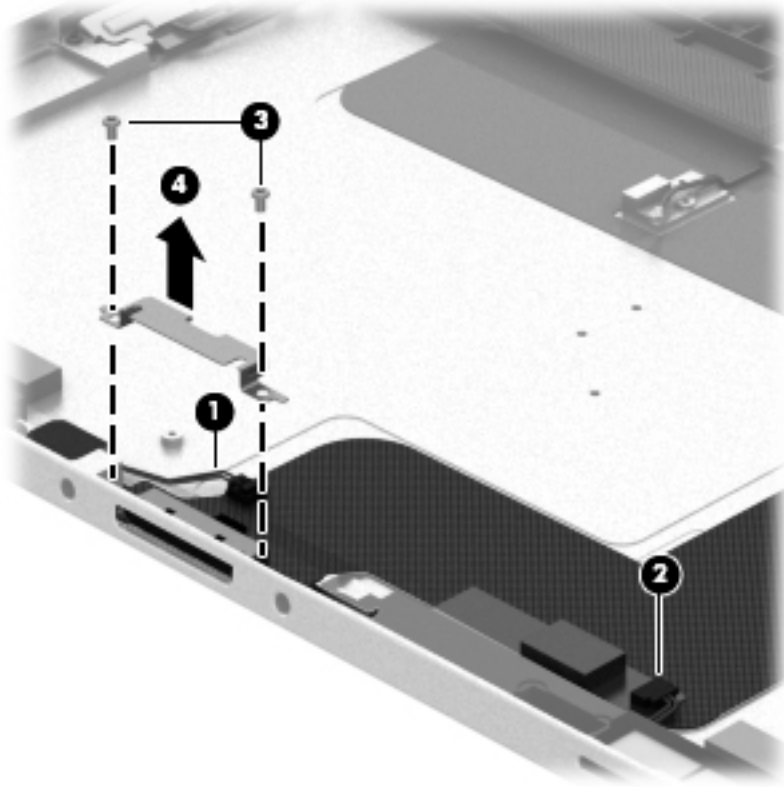
1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet.
3. Disconnect all external devices from the tablet.
4. Remove the display assembly (see [Display assembly on page 28](#)), and then remove the following components:
  - a. NFC antenna (see [NFC antenna on page 35](#))
  - b. WWAN module (see [WWAN module on page 36](#))
  - c. Power button board (see [Power button board on page 42](#))
  - d. Battery (see [Battery on page 48](#))
  - e. System board (see [System board on page 50](#))

Remove the docking connector cable:



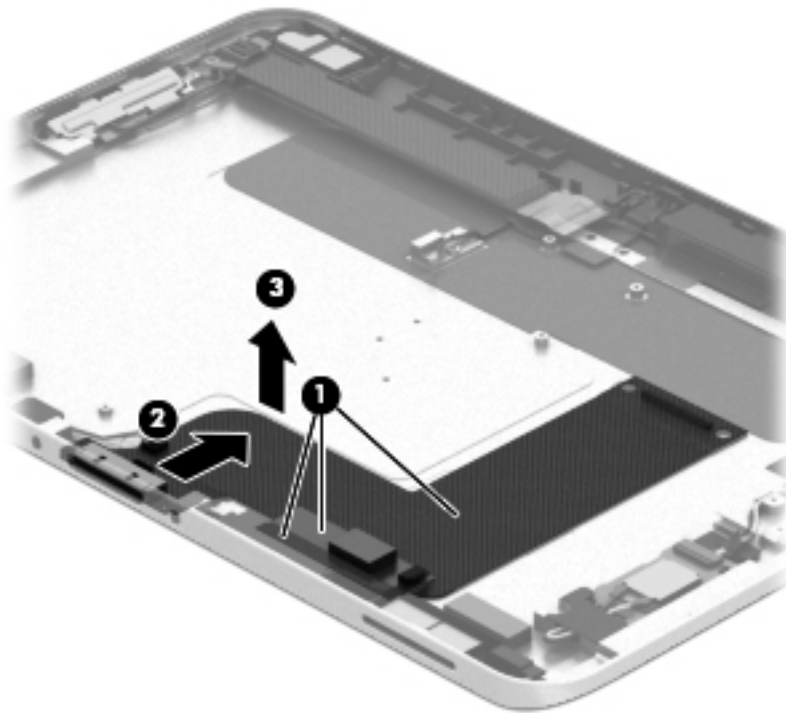
1. Disconnect the vibrator module cable **(1)** from the docking connector cable.
2. Disconnect the speaker cable **(2)** from the docking connector cable.
3. Remove the two Phillips PM1.3×2.0 screws **(3)** that secure the docking connector cable bracket to the bottom cover.
4. Remove the docking connector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

The docking connector bracket is included in the Button Kit, spare part number 747634-001.



5. Detach the docking connector cable **(1)** from the surface of the bottom cover. (The docking connector cable is attached to the bottom cover with double-sided adhesive.)
6. Release the docking connector **(2)** from the bottom cover by sliding it away from the opening in the bottom edge.

7. Remove the docking connector cable (3).



Reverse this procedure to install the docking connector cable.

## WLAN antenna



**NOTE:** The WLAN antenna are included in the Antenna Kits and include the WLAN antenna main and auxiliary cables and transceivers.

Description	Spare part number
Antenna Kit for use only in European countries and regions	767884-001
Antenna Kit for use only in Japan	767885-001
Antenna Kit for use only in the United States	767883-001
3G antenna	767882-001

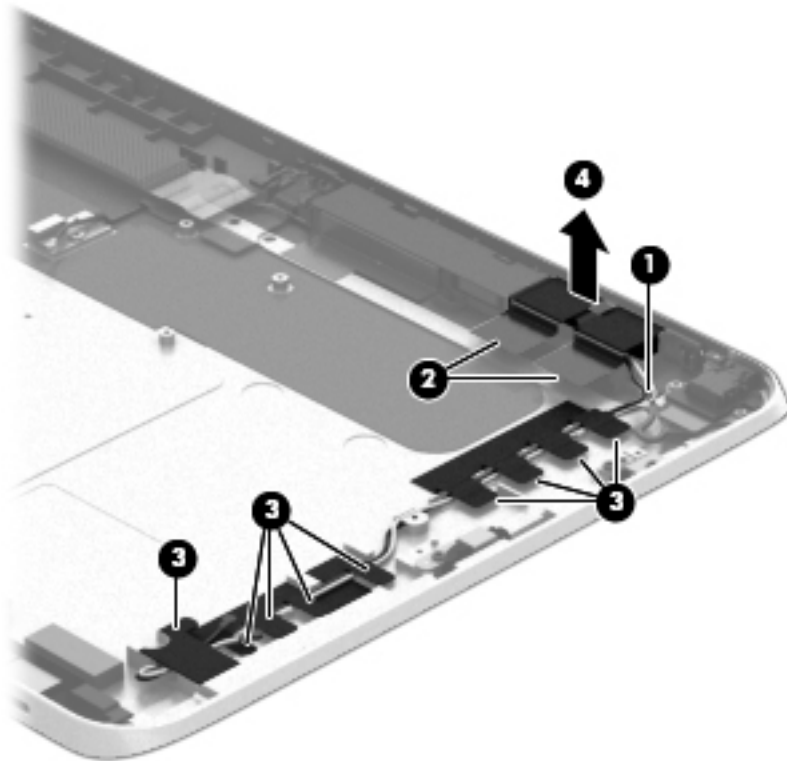
Before removing the WLAN antenna, follow these steps:

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 display assembly (see [Display assembly on page 28](#)), and then remove the following components:

- a. NFC antenna (see [NFC antenna on page 35](#))
- b. WWAN module (see [WWAN module on page 36](#))
- c. Power button board (see [Power button board on page 42](#))
- d. Battery (see [Battery on page 48](#))
- e. System board (see [System board on page 50](#))

Remove the WLAN antenna:

1. Release the WLAN antenna cables from the routing channel **(1)** built into the bottom cover.
2. Detach the WLAN antenna transceivers **(2)** from the bottom cover.
3. Release the tabs **(3)** built into the bottom cover that secure the speaker cable, and then release the WLAN antenna cables.
4. Remove the WLAN antenna cables and transceivers **(4)**.



Reverse this procedure to install the WLAN antenna.

## WWAN/GPS auxiliary antenna



**NOTE:** The WWAN/GPS auxiliary antenna are included in the Antenna Kits and include the WWAN/GPS auxiliary antenna cable and transceiver.

Description	Spare part number
Antenna Kit for use only in European countries and regions	767884-001
Antenna Kit for use only in Japan	767885-001
Antenna Kit for use only in the United States	767883-001

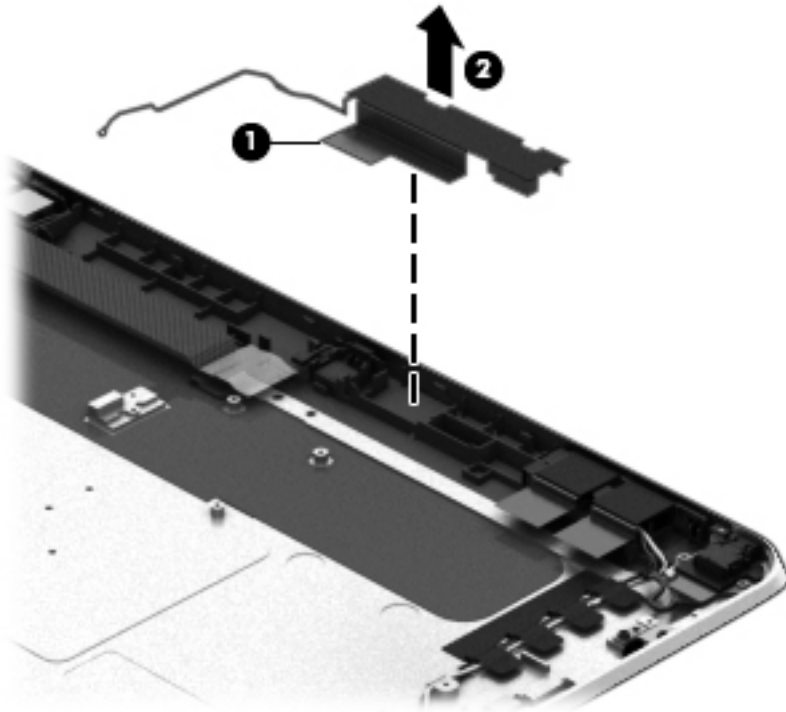
Before removing the WWAN/GPS auxiliary antenna, follow these steps:

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 display assembly (see [Display assembly on page 28](#)), and then remove the following components:
  - a. NFC antenna (see [NFC antenna on page 35](#))
  - b. WWAN module (see [WWAN module on page 36](#))
  - c. Power button board (see [Power button board on page 42](#))
  - d. Battery (see [Battery on page 48](#))
  - e. System board (see [System board on page 50](#))

Remove the WWAN/GPS auxiliary antenna:

1. Detach the WWAN/GPS auxiliary antenna transceiver **(1)** from the bottom cover.

2. Remove the WWAN/GPS auxiliary antenna cable and transceiver (2).



Reverse this procedure to install the WWAN/GPS auxiliary antenna.

## Speakers

Description	Spare part number
Speakers (include left and right speakers and cables)	747629-001

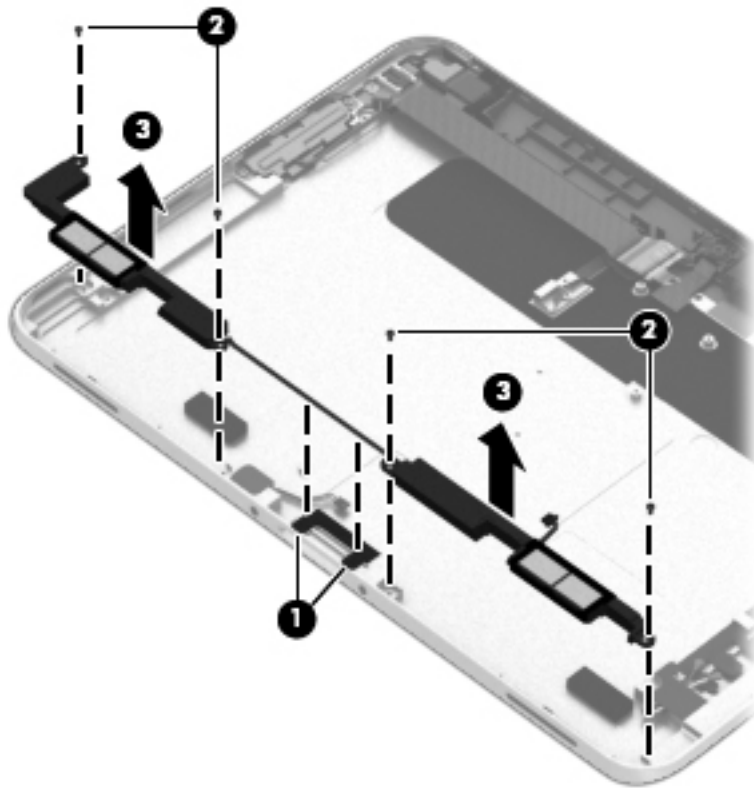
Before removing the speakers, follow these steps:

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 display assembly (see [Display assembly on page 28](#)), and then remove the following components:
  - a. NFC antenna (see [NFC antenna on page 35](#))
  - b. WWAN module (see [WWAN module on page 36](#))
  - c. Power button board (see [Power button board on page 42](#))
  - d. Battery (see [Battery on page 48](#))
  - e. System board (see [System board on page 50](#))
  - f. Docking connector cable (see [Docking connector cable on page 56](#))

Remove the speakers:

1. Release the tabs **(1)** built into the bottom cover that secure the speaker cable, and then release the speaker cable.
2. Remove the four Phillips PM1.3×2.0 screws **(2)** that secure the speakers to the bottom cover.

3. Remove the speakers (3).



Reverse this procedure to install the speakers.

## Retail Jacket component replacement procedures

There are as many as 31 screws that must be removed, replaced, and/or loosened when servicing the Retail Jacket. Make special note of each screw size and location during removal and replacement.

### Top cap

Description	Spare part number
Top cap (includes 4 captive screws, secured by C-rings)	744025-001

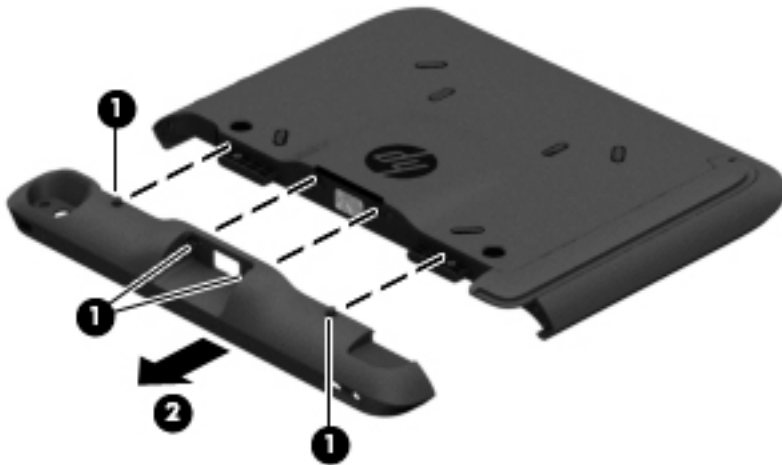
Before disassembling the Retail Jacket, follow these steps:

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 or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.

Remove the top cap:

1. Place the Retail Jacket face down on the work surface with the top cap toward you.
2. Loosen the 4 captive screws (1) that secure the top cap to the Retail Jacket.

3. Remove the top cap **(2)** from the Retail Jacket.



**CAUTION:** Before positioning the Retail Jacket with the tablet 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.

4. Turn the Retail Jacket right side up with the bottom toward you.
5. If installed, slide the tablet out of the Retail Jacket.



Reverse this procedure to install the top cap.

## Battery

Description	Spare part number
Battery (2-cell, 21-Wh, 2.96-Ah, Li-ion)	687946-001

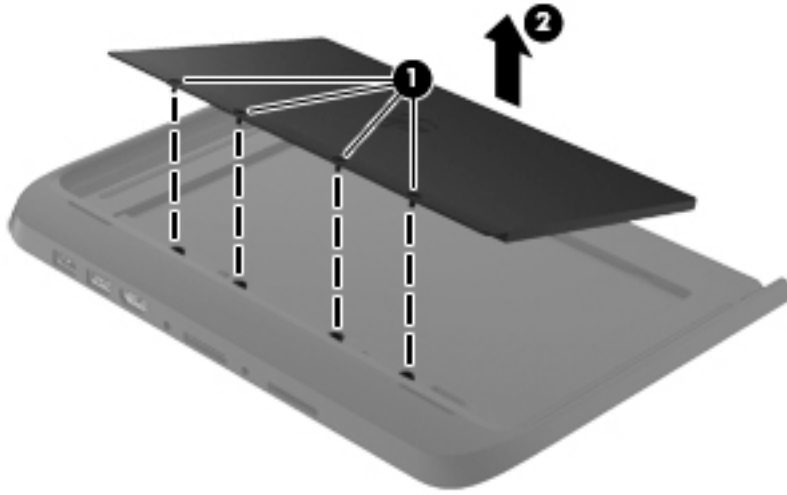
Before removing the battery, follow these steps:



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 or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.
4. If installed, remove the tablet from the Retail Jacket (see [Top cap on page 63](#)).

Remove the battery:

1. Loosen the 4 captive screws (1) that secure the battery to the Retail Jacket.
2. Remove the battery (2) from the Retail Jacket.



Reverse this procedure to install the battery.

## Front cover

Description	Spare part number
Front cover (includes bar code scanner lens and adhesive liner)	744030-001

Before removing the front cover, 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 or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.
4. Remove the top cap (see [Top cap on page 63](#)).
5. If installed, remove the tablet from the Retail Jacket (see [Top cap on page 63](#)).

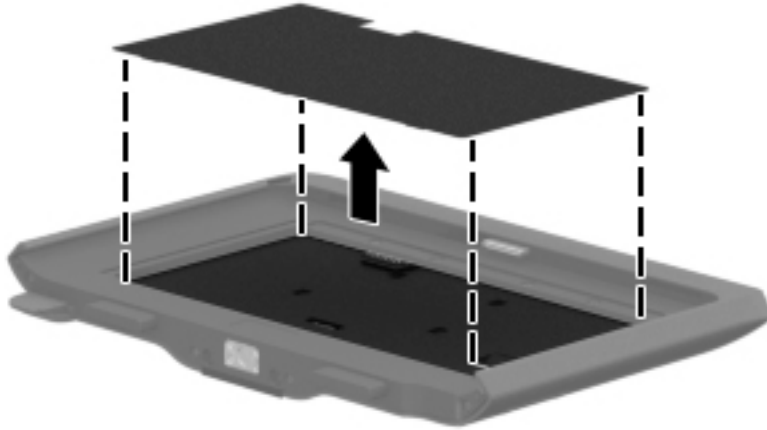
**NOTE:** When replacing the front cover, be sure the following components are removed from the defective front cover and installed on the replacement front cover:

- Bar code scanner module (see [Bar code scanner module and Cable connector board on page 69](#))
- Card connector board (see [Bar code scanner module and Cable connector board on page 69](#))

- Battery connector board (see [Battery connector board on page 71](#))
- System board (see [System board on page 72](#))

Remove the front cover:

1. Position the Retail Jacket with the top toward you.
2. Remove the adhesive-backed liner that covers the front cover.



3. Release the ZIF connector **(1)** to which the left-side credit card reader board cable is attached, and then disconnect the left-side credit card reader board cable **(2)** from the left-side credit card reader board.

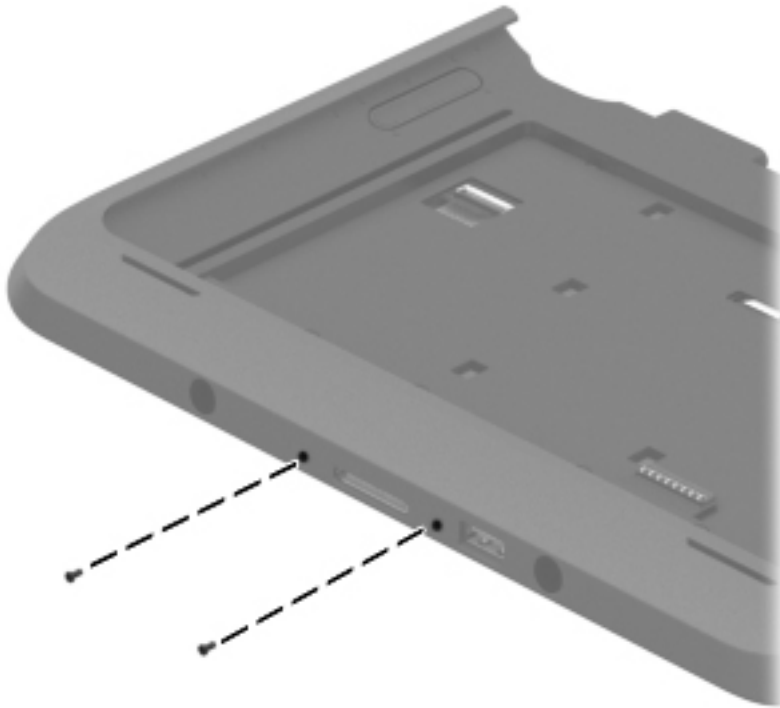
4. Close the ZIF connector **(3)**.

**⚠ CAUTION:** Failure to close the ZIF connector as instructed in step 4 can lead to damage to Retail Jacket components.

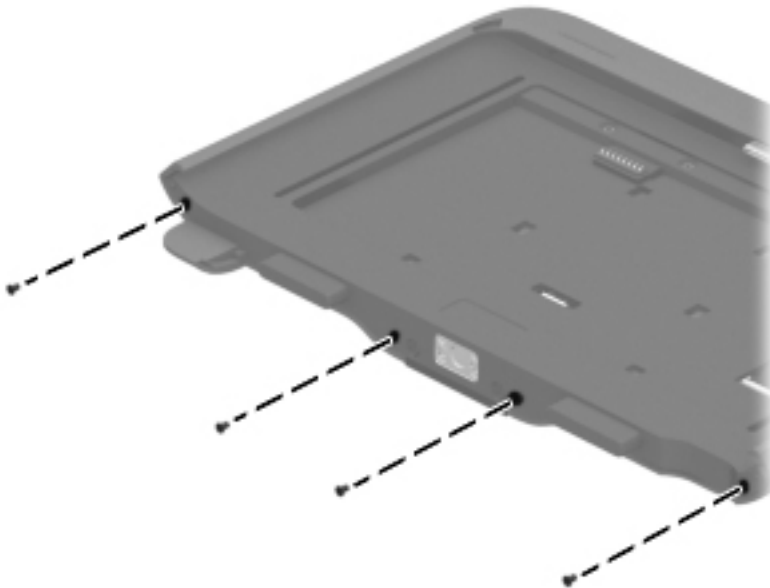


5. Position the Retail Jacket with the bottom toward you.

6. Remove the two Phillips PM1.3×3.0 screws that secure the front cover to the Retail Jacket.



7. Position the Retail Jacket with the top toward you.
8. Remove the four Phillips PM1.9×3.0 screws that secure the front cover to the Retail Jacket.



9. Remove the front cover by sliding it away from the Retail Jacket.



Reverse this procedure to install the front cover.

## Bar code scanner module and Cable connector board



**NOTE:** The bar code scanner module and cable connector board spare part kits do not include the respective cables. The cables are included in the Cable Kit, spare part number 744031-001.

Description	Spare part number
Bar code scanner module	744037-001
Cable connector board	744034-001

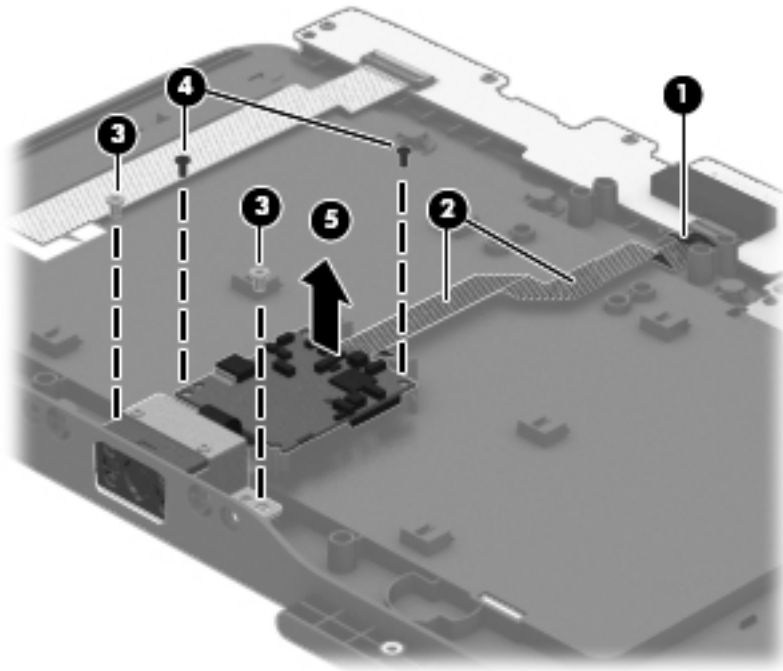
Before removing the bar code scanner module and cable connector board, follow these steps:

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 or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.
4. Remove the top cap (see [Top cap on page 63](#)).
5. If installed, remove the tablet from the Retail Jacket (see [Top cap on page 63](#)).
6. Remove the front cover (see [Front cover on page 65](#)).

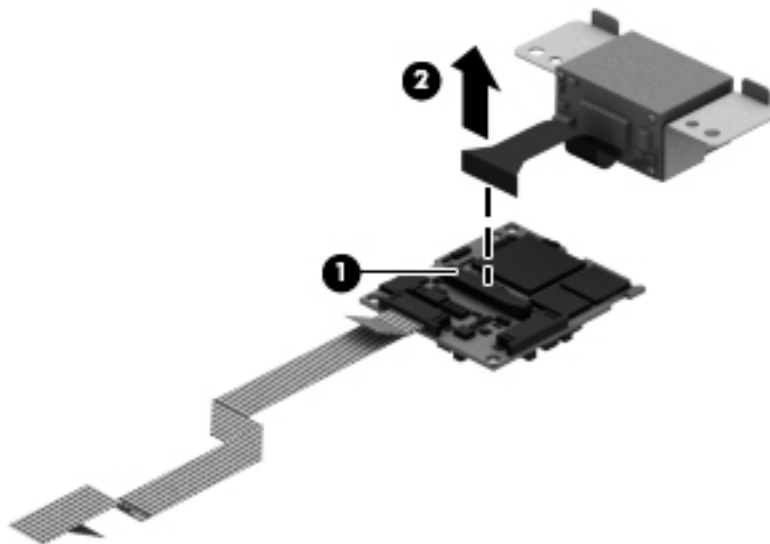
Remove the bar code scanner module and cable connector board:

1. Turn the front cover upside down with the top toward you.
2. Release the ZIF connector **(1)** to which the cable connector board cable is attached, and then disconnect the cable connector board cable from the system board.
3. Detach the cable connector board cable **(2)** from the front cover. (The cable connector board cable is attached to the front cover with double-sided adhesive.)
4. Remove the two Phillips PM1.3×3.0 screws **(3)** that secure the bar code scanner module to the front cover.
5. Remove the two Phillips PM1.9×3.0 screws **(4)** that secure the cable connector board to the front cover.

6. Remove the bar code scanner module (5) and the cable connector board and cable.



7. Turn the bar code scanner module and the cable connector board over so the ZIF connector on the back of the cable connector board is accessible.
8. Release the ZIF connector (1) to which the bar code scanner module cable is attached, and then disconnect the bar code scanner module cable (2) from the cable connector board.



Reverse this procedure to install the bar code scanner module and cable connector board.

## Battery connector board

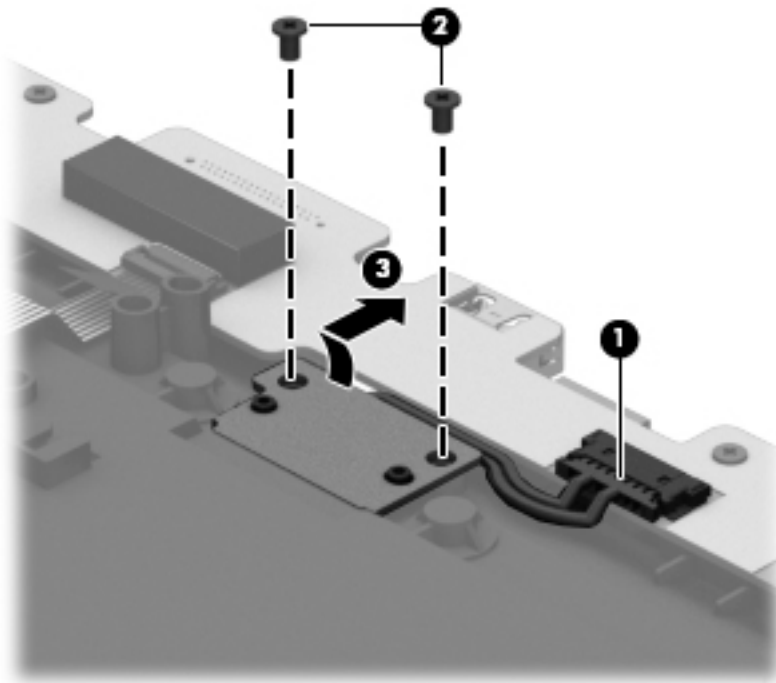
Description	Spare part number
Battery connector board (includes cable)	744033-001

Before removing the battery connector 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 or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.
4. Remove the top cap (see [Top cap on page 63](#)).
5. If installed, remove the tablet from the Retail Jacket (see [Top cap on page 63](#)).
6. Remove the front cover (see [Front cover on page 65](#)).

Remove the battery connector board:

1. Turn the front cover upside down with the top toward you.
2. Disconnect the battery connector board cable **(1)** from the system board.
3. Remove the two Phillips PM1.9×3.0 screws **(2)** that secure the battery connector board to the front cover.
4. Lift the bottom edge of the battery connector board **(3)** until the board rests at an angle, and then slide the board out of the opening in the front cover.



5. Remove the battery connector board and cable.

Reverse this procedure to install the battery connector board.

## System board

Description	Spare part number
System board (includes docking connector and USB port)	744032-001

Before removing the system board, follow these steps:

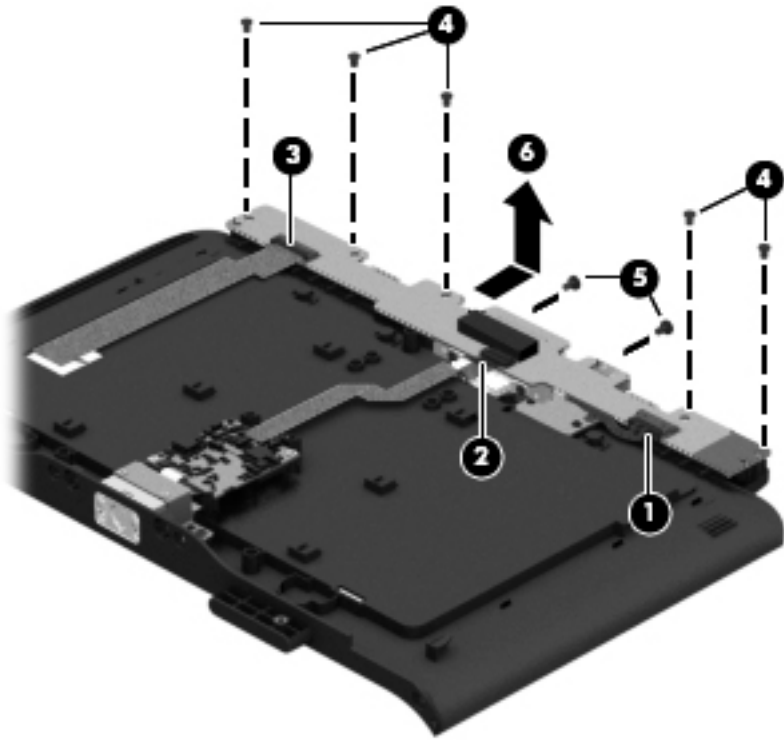
1. Turn off the tablet. If you are unsure whether the tablet is off or in Hibernation, turn the tablet on, and then shut it down through the operating system.
2. Disconnect the power from the tablet by unplugging the power cord from the tablet or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.
4. Remove the top cap (see [Top cap on page 63](#)).
5. If installed, remove the tablet from the Retail Jacket (see [Top cap on page 63](#)).
6. Remove the front cover (see [Front cover on page 65](#)).

Remove the system board:

1. Turn the front cover upside down with the top toward you.
2. Disconnect the battery connector board cable **(1)** from the system board.
3. Release the ZIF connector **(2)** to which the cable connector board cable is attached, and then disconnect the cable connector board cable from the system board.
4. Release the ZIF connector **(3)** to which the credit card reader/left board cable is attached, and then disconnect the credit card reader/left board cable from the system board.
5. Remove the five Phillips PM1.9×3.0 screws **(4)** that secure the system board to the front cover.
6. Remove the two Phillips PM1.9×3.0 screws **(5)** that secure the system board to the front cover.



7. Slide the docking connector **(6)** out of the opening in the front cover, and then remove the system board.



Reverse this procedure to install the system board.

## Credit card reader board



**NOTE:** The credit card reader board spare part kits do not include the respective cables. The cables are included in the Cable Kit, spare part number 744031-001.

Description	Spare part number
Left-side credit card reader board	744027-001
Right-side credit card reader board	744028-001

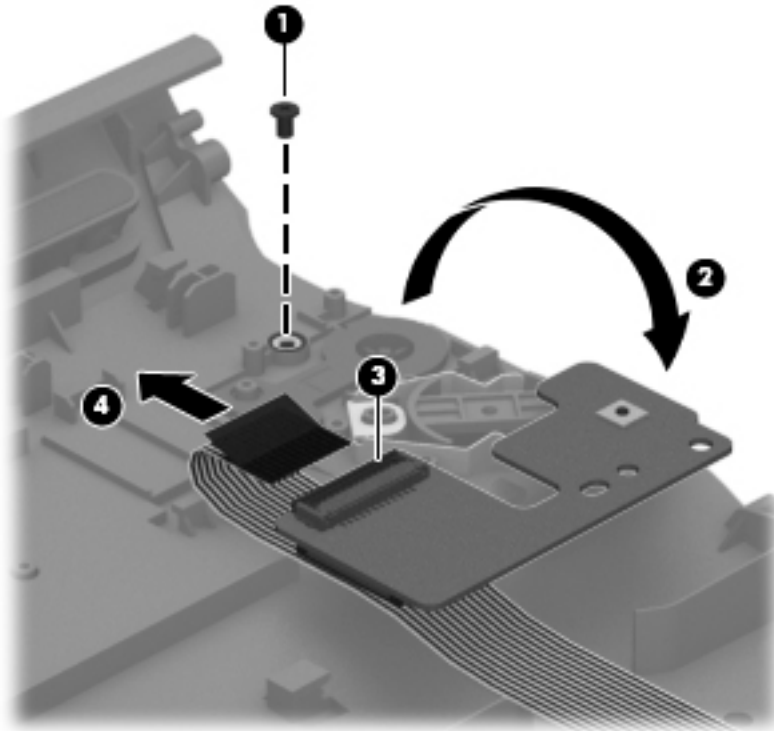
Before removing the credit card reader boards, follow these steps:

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 or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.
4. Remove the top cap (see [Top cap on page 63](#)).
5. If installed, remove the tablet from the Retail Jacket (see [Top cap on page 63](#)).
6. Remove the front cover (see [Front cover on page 65](#)).

Remove the credit card reader boards:

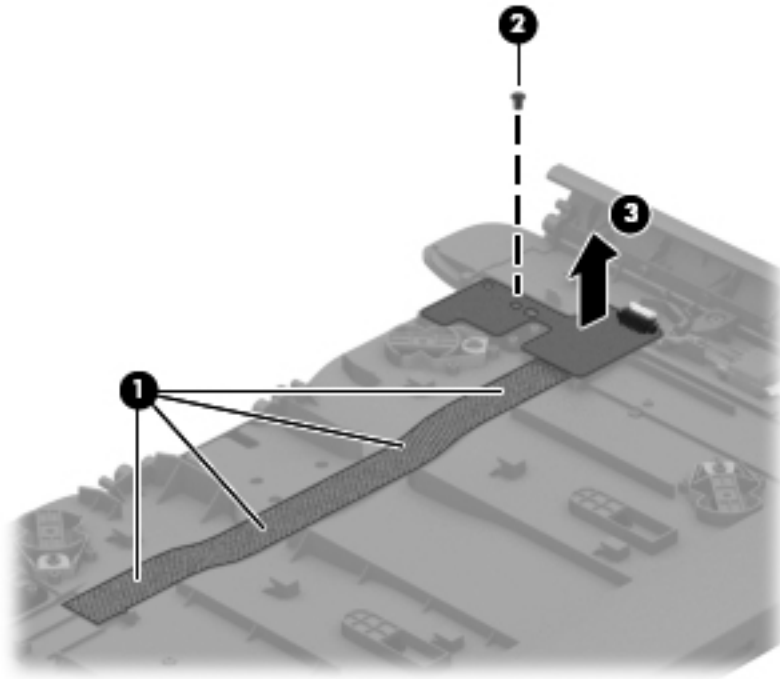
1. Remove the Phillips PM1.9×3.0 screw **(1)** that secures the left-side credit card reader board to the rear cover.
2. Turn the left-side credit card reader board **(2)** over so the ZIF connector on the back of the board is accessible.

3. Release the ZIF connector **(3)** to which the right-side credit card reader board cable is attached, and then disconnect the right-side credit card reader board cable **(4)** from the left-side credit card reader board.



4. Remove the left-side credit card reader board.
5. Detach the right-side credit card reader board cable **(1)** from the rear cover. (The right-side credit card reader board cable is attached to the rear cover with double-sided adhesive.)
6. Remove the Phillips PM1.9×3.0 screw **(2)** that secures the right-side credit card reader board to the rear cover.

7. Remove the right-side credit card reader board **(3)** and cable.



Reverse this procedure to install the credit card reader boards.

## Credit card reader

Description	Spare part number
Credit card reader	744026-001

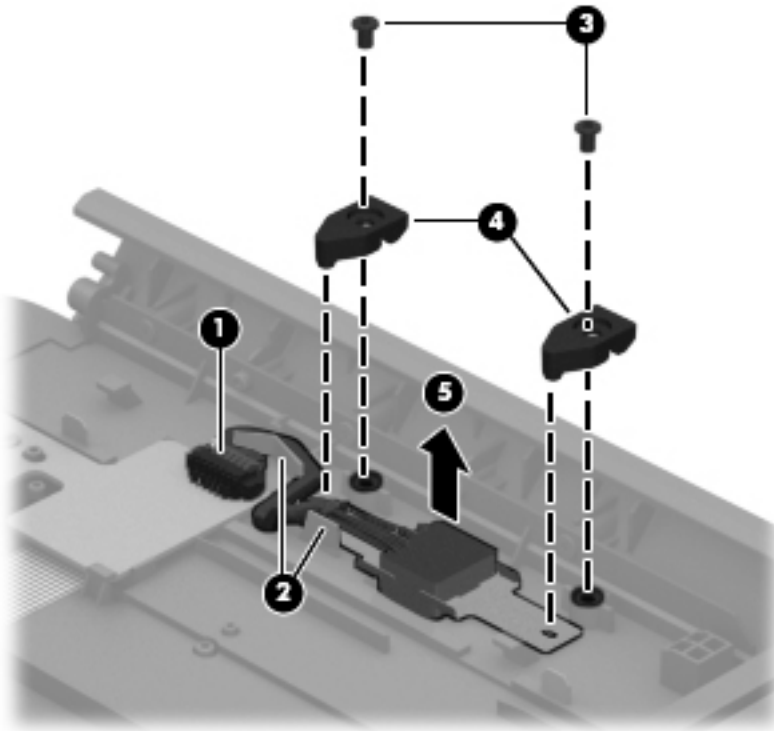
Before removing the credit card reader, follow these steps:

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 or the Retail Jacket.
3. Disconnect all external devices from the Retail Jacket.
4. Remove the top cap (see [Top cap on page 63](#)).
5. If installed, remove the tablet from the Retail Jacket (see [Top cap on page 63](#)).
6. Remove the front cover (see [Front cover on page 65](#)).

Remove the credit card reader:

1. Disconnect the credit card reader cable **(1)** from the right-side credit card reader board.
2. Release the credit card reader cable **(2)** from the routing channel built into the rear cover.
3. Remove the two Phillips PM1.9×3.0 screws **(3)** that secure the retention tabs and the credit card reader to the rear cover.
4. Remove the two retention tabs **(4)**.

5. Remove the credit card reader (5).



Reverse this procedure to install the credit card reader.

## Security Jacket component replacement procedures

There are as many as 13 screws that must be removed, replaced, and/or loosened when servicing the Security Jacket. Make special note of each screw size and location during removal and replacement.

### Card reader cover and Top cap

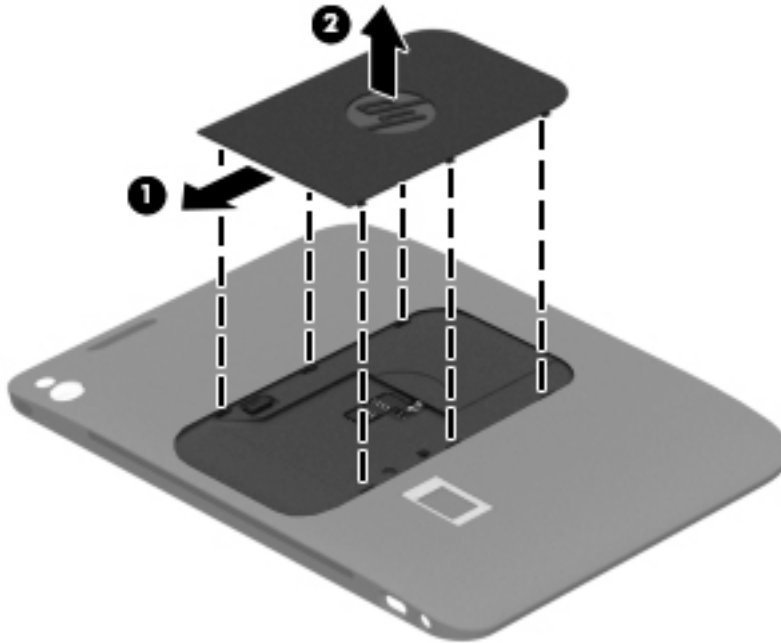
Description	Spare part number
Card reader cover	744039-001
Top cap (includes rubber trim)	744047-001

Before disassembling the Security Jacket, 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 or the Security Jacket.
3. Disconnect all external devices from the Security Jacket.

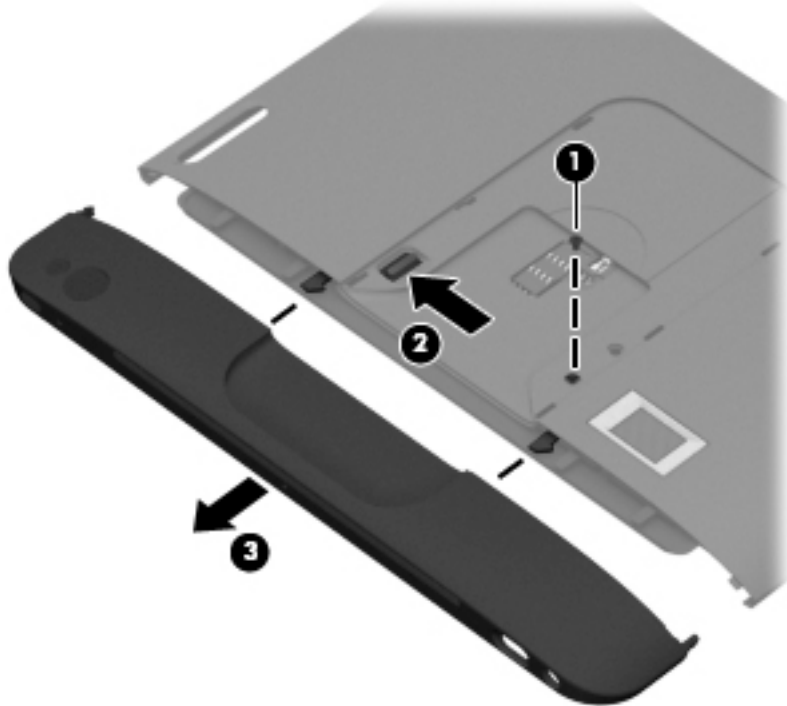
Remove the card reader cover and top cap:

1. Place the Security Jacket face down on the work surface with the top cap toward you.
2. Release the card reader cover (1) by sliding it toward the top of the Security Jacket.
3. Remove the card reader cover (2) by lifting it away from the Security Jacket.



4. Remove the Phillips PM1.9×3.0 screw (1) that secures the top cap to the Security Jacket.
5. Slide the top cap release latch (2) to release the top cap from the Security Jacket.

6. Remove the top cap **(3)** from the Security Jacket.



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**CAUTION:** Before positioning the Security Jacket with the tablet 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.

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7. Turn the Security Jacket right side up with the bottom toward you.
8. If installed, slide the tablet out of the Security Jacket.




Reverse this procedure to install the top cap.

## Front cover

Description	Spare part number
Front cover	744048-001

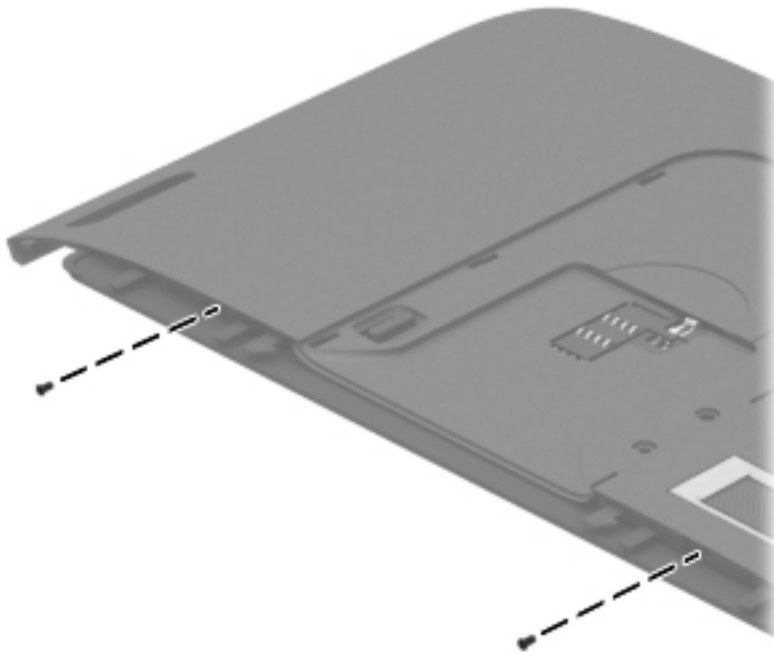
Before removing the front cover, follow these steps:

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 or the Security Jacket.
3. Disconnect all external devices from the Security Jacket.
4. Remove the card reader cover and top cap (see [Card reader cover and Top cap on page 77](#)).
5. If installed, remove the tablet from the Security Jacket (see [Card reader cover and Top cap on page 77](#)).

 **NOTE:** When replacing the front cover, be sure the system board is removed from the defective top cover and installed on the replacement front cover (see [System board on page 72](#)).

Remove the front cover:

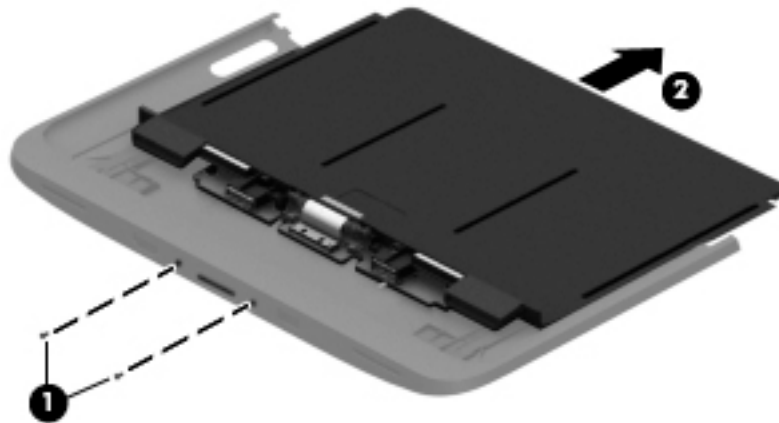
1. Turn the Security Jacket upside down with the top toward you.
2. Remove the two Phillips PM1.5×3.4 screws that secure the front cover to the Security Jacket.



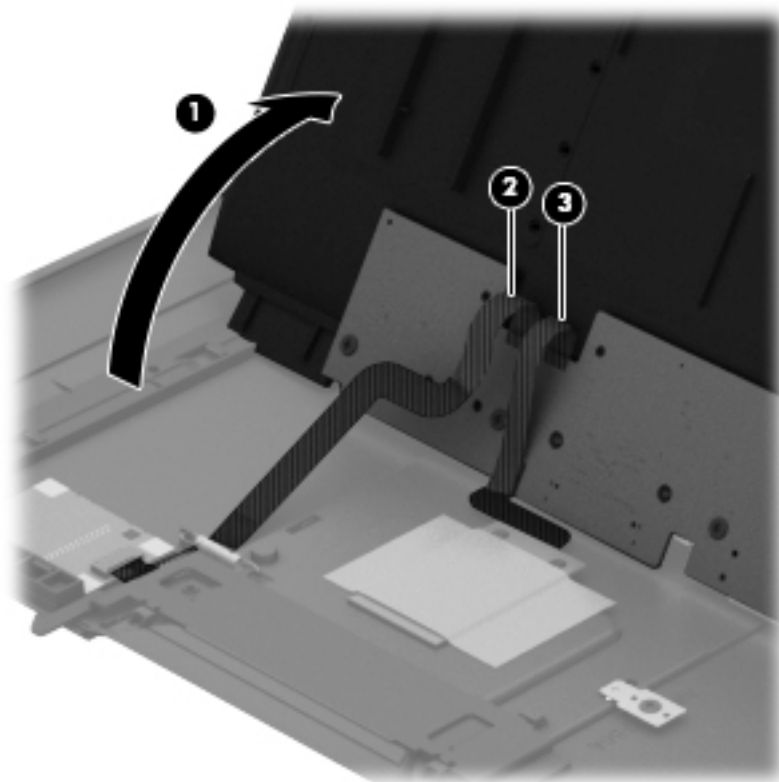
3. Turn the Security Jacket right side up with the bottom toward you.
4. Remove the two Phillips PM1.3×3.4 screws (1) that secure the front cover to the Security Jacket.



5. Release the front cover **(2)** by sliding it partially away from the Security Jacket.



6. Lift the bottom edge of the front cover **(1)** and swing it up and back until it rests upside down on the Security Jacket.
7. Disconnect the fingerprint reader board cable **(2)** from the low insertion force (LIF) connector on the system board.
8. Disconnect the card reader board cable **(3)** from the LIF connector on the system board.



9. Remove the front cover.

Reverse this procedure to install the front cover.

## System board

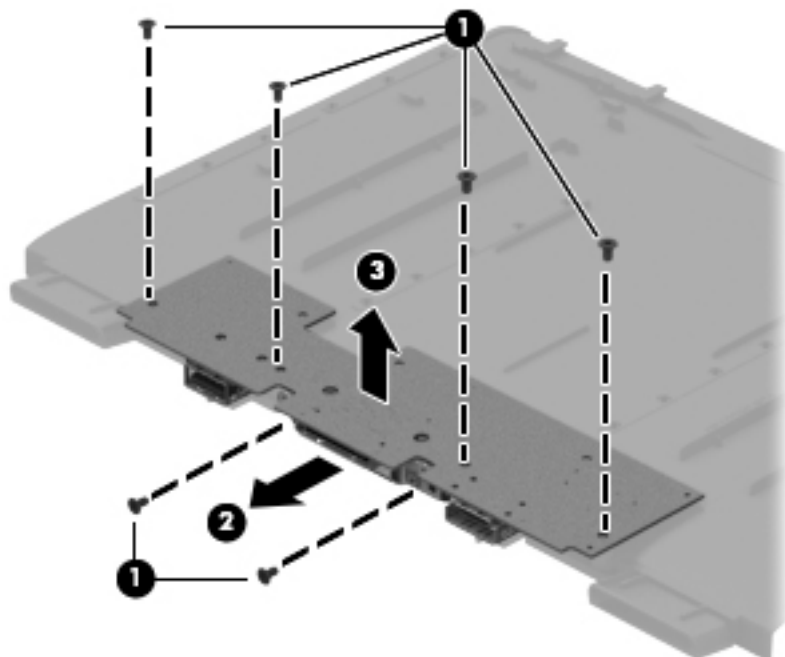
Description	Spare part number
System board (includes docking connector, HDMI port, and USB port)	744044-001

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 or the Security Jacket.
3. Disconnect all external devices from the Security Jacket.
4. Remove the card reader cover and top cap (see [Card reader cover and Top cap on page 77](#)).
5. If installed, remove the tablet from the Security Jacket (see [Card reader cover and Top cap on page 77](#)).
6. Remove the front cover (see [Front cover on page 80](#)).


Remove the system board:

1. Place the front cover face down on the work surface with the bottom toward you.
2. Remove the six Phillips PM1.9×3.4 screws (1) that secure the system board to the front cover.
3. Release the docking connector (2) from the opening in the front cover.
4. Remove the system board (3).



Reverse this procedure to install the system board.

## Docking connector cable

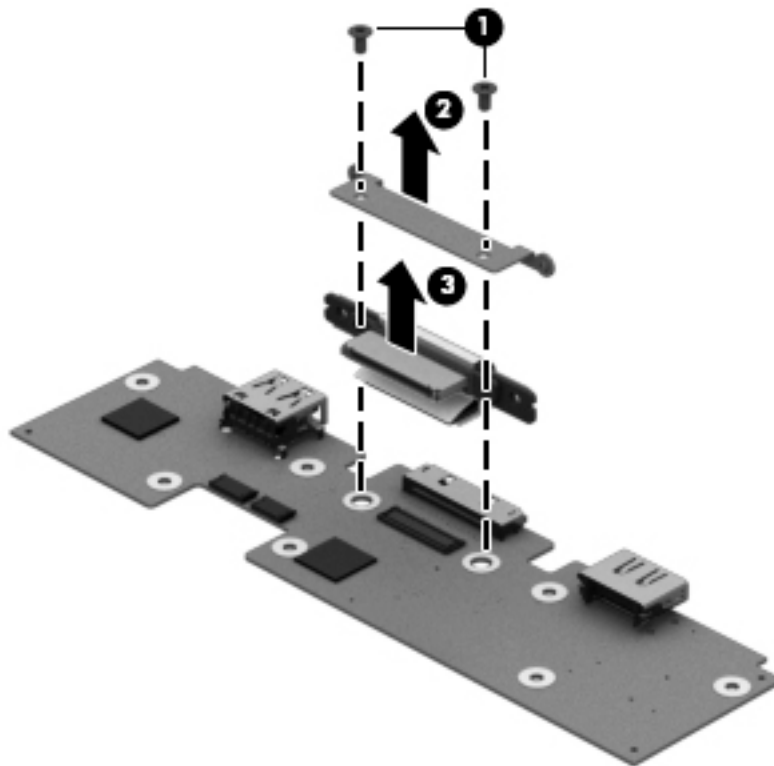
 **NOTE:** The docking connector cable is included in the Cables/Connectors Kit, spare part number 744045-001.

Before removing the docking connector cable, 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 or the Security Jacket.
3. Disconnect all external devices from the Security Jacket.
4. Remove the card reader cover and top cap (see [Card reader cover and Top cap on page 77](#)).
5. If installed, remove the tablet from the Security Jacket (see [Card reader cover and Top cap on page 77](#)).
6. Remove the front cover (see [Front cover on page 80](#)).
7. Remove the system board (see [System board on page 82](#)).

Remove the docking connector cable:

1. Turn the system board upside down with the top toward you.
2. Remove the two Phillips PM1.9×3.4 screws **(1)** that secure the docking connector cable to the system board.
3. Remove the docking connector bracket **(2)**.
4. Remove the docking connector cable **(3)**.



Reverse this procedure to install the docking connector cable.

## Card reader board

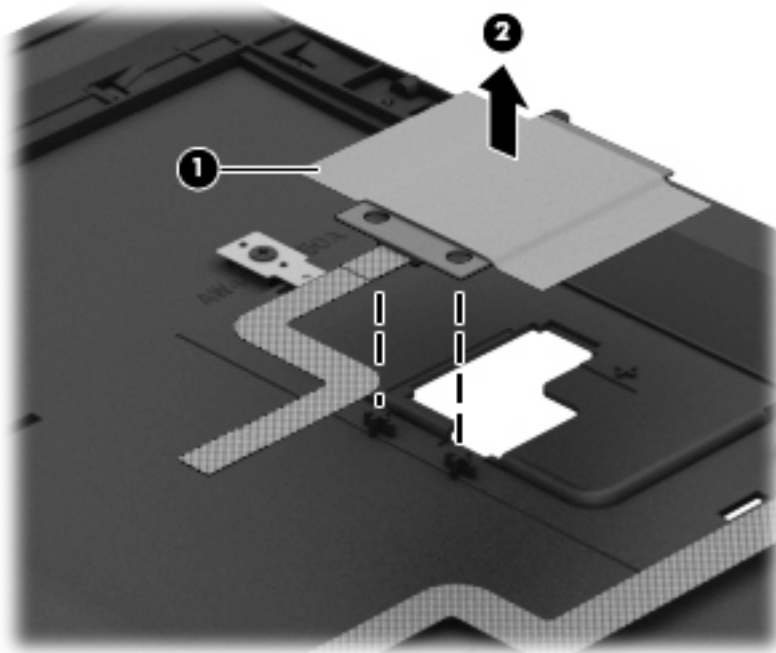
Description	Spare part number
Card reader board	744043-001

Before removing the card reader 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 or the Security Jacket.
3. Disconnect all external devices from the Security Jacket.
4. Remove the card reader cover and top cap (see [Card reader cover and Top cap on page 77](#)).
5. If installed, remove the tablet from the Security Jacket (see [Card reader cover and Top cap on page 77](#)).
6. Remove the front cover (see [Front cover on page 80](#)).

Remove the card reader board:

1. Position the rear cover with the bottom toward you.
2. Detach the tape **(1)** that secures the card reader board to the rear cover.
3. Remove the card reader board **(2)** and cable.



Reverse this procedure to install the card reader board.

## Fingerprint reader board

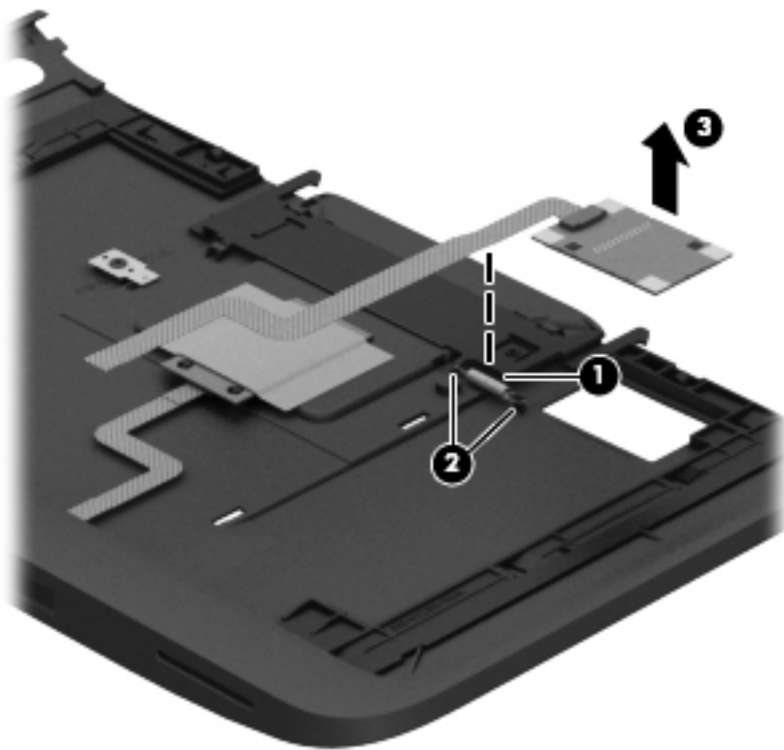
Description	Spare part number
Fingerprint reader board	744042-001

Before removing the fingerprint reader 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 or the Security Jacket.
3. Disconnect all external devices from the Security Jacket.
4. Remove the card reader cover and top cap (see [Card reader cover and Top cap on page 77](#)).
5. If installed, remove the tablet from the Security Jacket (see [Card reader cover and Top cap on page 77](#)).
6. Remove the front cover (see [Front cover on page 80](#)).

Remove the fingerprint reader board:

1. Position the rear cover with the bottom toward you.
2. Remove the spring (1) from the spring retention tabs (2).
3. Remove the fingerprint reader board (3) and cable.



Reverse this procedure to install the fingerprint reader board.

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# 6 Computer Setup (BIOS), TPM, and HP Sure Start – Windows 10

## Using Computer Setup

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


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

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## Starting Computer Setup

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

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To start Computer Setup, follow these steps:

- ▲ Start Computer Setup.
  - Computers or tablets with keyboards:
    - ▲ Turn on or restart the computer, and when the HP logo appears, press **F10** to enter Computer Setup.
  - Tablets without keyboards:
    - ▲ Turn off the tablet. Press the power button in combination with the volume down button until the Startup menu is displayed, and then tap **F10** to enter Computer Setup.

## Navigating and selecting in Computer Setup

- To select a menu or a menu item, use the **tab** key and the keyboard arrow keys and then press **enter**, or use a pointing device to select the item.



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**NOTE:** On tablets without keyboards, you can use your finger to make selections.

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- To scroll up and down, select the up arrow or the down arrow in the upper-right corner of the screen, or use the up arrow key or the down arrow key on the keyboard.
- To close open dialog boxes and return to the main Computer Setup screen, press **esc**, and then follow the on-screen instructions.

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

- To exit Computer Setup menus without saving your changes:  
Select the **Exit** icon in the lower-right corner of the screen, and then follow the on-screen instructions.  
– or –  
Select **Main**, select **Ignore Changes and Exit**, and then press **enter**.
- To save your changes and exit Computer Setup menus:  
Select the **Save** icon in the lower-right corner of the screen, and then follow the on-screen instructions.  
– or –  
Select **Main**, select **Save Changes and Exit**, and then press **enter**.

Your changes go into effect when the computer restarts.

## Restoring factory settings in Computer Setup



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

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

1. Start Computer Setup. See [Starting Computer Setup on page 86](#).
2. Select **Main**, and then select **Apply Factory Defaults and Exit**.



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**NOTE:** On select products, the selections may display **Restore Defaults** instead of **Apply Factory Defaults and Exit**.

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3. Follow the on-screen instructions.
4. To save your changes and exit, select the **Save** icon in the lower-right corner of the screen, and then follow the on-screen instructions.  
– or –  
Select **Main**, select **Save Changes and Exit**, and then press **enter**.

Your changes go into effect when the computer restarts.



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

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## 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

To decide whether you need to update Computer Setup (BIOS), first determine the BIOS version on your computer.

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

1. Start Computer Setup. See [Starting Computer Setup on page 86](#).
2. Select **Main**, and then select **System Information**.
3. To exit Computer Setup without saving your changes, select the Exit icon in the lower-right corner of the screen, and then follow the on-screen instructions.


– or –

Select **Main**, select **Ignore Changes and Exit**, and then press **enter**.

To check for later BIOS versions, see [Downloading a BIOS update on page 88](#).

## Downloading a BIOS update

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

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

Do not shut down the computer or initiate Sleep.

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

---

1. Type `support` in the taskbar search box, and then select the **HP Support Assistant** app.

– or –

Select the question mark icon in the taskbar.

2. Select **Updates**, and then select **Check for updates and messages**.

3. Follow the on-screen instructions.

4. At the download area, follow these steps:

- a. Identify the most recent BIOS update and compare it to the BIOS version currently installed on your computer. Make a note of the date, name, or other identifier. You may need this information to locate the update later, after it has been downloaded to your hard drive.

- b. Follow the on-screen instructions to download your selection to the hard drive.

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





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

---

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

1. Type `file` in the taskbar search box, and then select **File Explorer**.
2. Select 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 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.


---

## Changing the boot order using the f9 prompt


To dynamically choose a boot device for the current startup sequence, follow these steps:

1. Access the Boot Device Options menu:
  - Computers or tablets with keyboards:
    - ▲ Turn on or restart the computer, and when the HP logo appears, press **f9** to enter the Boot Device Options menu.
  - Tablets without keyboards:
    - ▲ Turn off the tablet. Press the power button in combination with the volume down button until the Startup menu is displayed, and then tap **F9** to enter the Boot Device Options menu.
2. Select a boot device, then press **enter**.

## TPM BIOS settings (select products only)

 **IMPORTANT:** Before enabling Trusted Platform Module (TPM) functionality on this system, you must ensure that your intended use of TPM complies with relevant local laws, regulations and policies, and approvals or licenses must be obtained if applicable. For any compliance issues arising from your operation/usage of TPM which violates the above mentioned requirement, you shall bear all the liabilities wholly and solely. HP will not be responsible for any related liabilities.

TPM provides additional security for your computer. You can modify the TPM settings in Computer Setup (BIOS).

 **NOTE:** If you change the TPM setting to Hidden, TPM is not visible in the operating system.

To access TPM settings in Computer Setup:

1. Start Computer Setup. See [Starting Computer Setup on page 86](#).
2. Select **Security**, select **TPM Embedded Security**, and then follow the on-screen instructions.

## Using HP Sure Start (select products only)

Select computer models are configured with HP Sure Start, a technology that continuously monitors the computer's BIOS for attacks or corruption. If the BIOS becomes corrupted or is attacked, HP Sure Start automatically restores the BIOS to its previously safe state, without user intervention.

HP Sure Start is configured and already enabled so that most users can use the HP Sure Start default configuration. The default configuration can be customized by advanced users.


To access the latest documentation on HP Sure Start, go to <http://www.hp.com/support>, and select your country. Select **Drivers & Downloads**, and then follow the on-screen instructions.

---

# 7 HP PC Hardware Diagnostics (UEFI) – Windows 10

HP PC Hardware Diagnostics is a Unified Extensible Firmware Interface (UEFI) that allows you to run diagnostic tests to determine whether the computer 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.

---

 **NOTE:** To start BIOS on a convertible computer, your computer must be in notebook mode and you must use the keyboard attached to your tablet. The on-screen keyboard, which displays in tablet mode, cannot access BIOS.

---

To start HP PC Hardware Diagnostics UEFI:


1. Start BIOS:
  - Computers or tablets with keyboards:
    - ▲ Turn on or restart the computer, quickly press [esc](#).
  - Tablets without keyboards:
    - ▲ Turn on or restart the tablet, and then quickly hold down the volume down button.
    - or –
    - Turn on or restart the tablet, and then quickly hold down the Windows button.

2. Press or tap [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 92](#).


---

- b. Hard drive

- c. BIOS

3. When the diagnostic tool opens, select the type of diagnostic test you want to run, and then follow the on-screen instructions. On a tablet, press the volume down button to stop a diagnostic test.

---

 **NOTE:** If you need to stop a diagnostic test on computers or tablets with a keyboard, press [esc](#).

---

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

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

## Download the latest UEFI version:

1. Go to <http://www.hp.com/go/techcenter/pcdiags>. The HP PC Diagnostics home page is displayed.
2. In the HP PC Hardware Diagnostics section, click the **Download** link, and then select **Run**.

## Download any version of UEFI for a specific product:

1. Go to <http://www.hp.com/support>, and then select your country. The HP Support page is displayed.
2. Click **Drivers & Downloads**.
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 computer, and then select your operating system.
5. In the **Diagnostic** section, follow the on-screen instructions to select and download the UEFI version you want.

---

# 8 Computer Setup and HP PC Hardware Diagnostics (UEFI – Windows 8)

## Using Computer Setup

Computer Setup, or F10 BIOS Setup (Basic Input/Output System), controls communication between all the input and output devices on the system (such as disk drives, display, keyboard, mouse, and printer). Computer Setup includes settings for the types of devices installed, the startup sequence of the tablet, and the amount of system and extended memory.



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

---

## Starting Computer Setup

To start Computer Setup, follow these steps:

1. Shut down the tablet.
2. To power on the tablet, press the **Power** button and **Volume down** button simultaneously. The Startup menu is displayed.
3. Press **f10** to enter Computer Setup.

## Navigating and selecting in Computer Setup

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

1. Shut down the tablet.
2. To power on the tablet, press the **Power** button and **Volume down** button simultaneously.  
The Startup menu is displayed.
3. Press **f10** to enter Computer Setup.
  - Tap a menu or a menu item to select it.
  - To close open dialog boxes and return to the main Computer Setup screen, tap **Escape**, and then follow the on-screen instructions.
4. To exit Computer Setup menus without saving your changes, select **Main**, select **Ignore Changes and Exit**, and then follow the on-screen instructions.
5. To save your changes and exit, select **Main**, select **Save Changes and Exit**, and then follow the on-screen instructions.

## Restoring factory settings in Computer Setup



---

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

---

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

1. Shut down the tablet.
2. To power on the tablet, press the **Power** button and **Volume down** button simultaneously.  
The Startup menu is displayed.
3. Press **f10** to enter Computer Setup.
4. Select **Main**, and then tap **Restore Defaults**.
5. Follow the on-screen instructions.
6. To save your changes and exit, select **Save Changes and Exit**, and then follow the on-screen instructions.

Your changes go into effect when the computer restarts.



---

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

---

## Updating the BIOS

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

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

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


## Determining the BIOS version

To determine whether available BIOS updates contain later BIOS versions than those currently installed on the 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 Computer Setup on page 93](#).

1. Shut down the tablet.
2. To power on the tablet, press the **Power** button and **Volume down** button simultaneously.  
The Startup menu is displayed.
3. Press **f10** to enter Computer Setup.
4. Select **Main**, and then select **System Information**.
5. Follow the on-screen instructions.
6. To exit Computer Setup menus without saving your changes, select **Main**, select **Ignore Changes and Exit**, 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 on 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. To access HP Support Assistant on the Start screen, tap the **HP Support Assistant** app.
2. Tap **Updates and tune-ups**, and then tap **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. 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. Swipe from the right edge of the touch screen, tap **Search**, and then tap the search box. Type *file*, and then tap **File Explorer**.
2. Select 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-tap 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 if the computer hardware is functioning properly. The tool runs outside of the operating system to isolate hardware failures from issues that may be caused by the operating system or other software components.

To start HP PC Hardware Diagnostics UEFI:

1. Shut down the tablet if it is not already powered off.
2. To power on the tablet, press the **Power** button and **Volume down** button simultaneously.
3. Select **System Diagnostics**.
4. Select the type of diagnostic test that you want to run, and then follow the on-screen instructions.

---

 **NOTE:** If you need to stop a diagnostic test while it is running, press anywhere on the screen.

---



# 9 Specifications

## Tablet specifications

	Metric	U.S.
<b>Dimensions</b>		
Width	<b>17.80 cm</b>	7.0 in
Depth	<b>26.10 cm</b>	10.28 in
Height	<b>0.92 cm</b>	0.36 in
<b>Weight</b>	<b>0.68 kg</b>	1.50 lbs
<b>Input power</b>		
Operating voltage and current	9 V DC @ 1.1A – 10W	
<b>Temperature</b>		
Operating	<b>5°C to 35°C</b>	41°F to 95°F
Nonoperating	<b>-20°C to 60°C</b>	-4°F to 140°F
<b>Relative humidity</b> (noncondensing)		
Operating	10% to 90%	
Nonoperating	5% to 95%	
<b>Maximum altitude</b> (unpressurized)		
Operating	<b>-15 m to 3,048 m</b>	-50 ft to 10,000 ft
Nonoperating	<b>-15 m to 12,192 m</b>	-50 ft to 40,000 ft
<b>NOTE:</b> Applicable product safety standards specify thermal limits for plastic surfaces. The device operates well within this range of temperatures.		

---

# 10 Backup and recovery – Windows 10

This chapter provides information about the following processes. The information in the chapter is standard procedure for most products.

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


For additional information, refer to the HP support assistant app.

▲ Type `support` in the taskbar search box, and then select the **HP Support Assistant** app.

– or –

Click the question mark icon in the taskbar.

---

 **IMPORTANT:** If you will be performing recovery procedures on a tablet, the tablet battery must be at least 70% charged before you start the recovery process.

**IMPORTANT:** For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning any recovery process.

---


## Creating recovery media and backups

The following methods of creating recovery media and backups are available on select products only. Choose the available method according to your computer model.

- Use HP Recovery Manager to create HP Recovery media after you successfully set up the computer. This step creates a backup of the HP Recovery partition on the computer. The backup can be used to reinstall the original operating system in cases where the hard drive is corrupted or has been replaced. For information on creating recovery media, see [Creating HP Recovery media \(select products only\) on page 99](#). For information on the recovery options that are available using the recovery media, see [Using Windows Tools on page 100](#).
- Use Windows tools to create system restore points and create backups of personal information.

For more information, see [Recovering using HP Recovery Manager on page 101](#).

---

 **NOTE:** If storage is 32 GB or less, Microsoft System Restore is disabled by default.

---

## Creating HP Recovery media (select products only)

If possible, check for the presence of the Recovery partition and the Windows partition. From the **Start** menu, select **File Explorer**, and then select **This PC**.

- If your computer does not list the Windows partition and the Recovery partition, you can obtain recovery media for your system from support. See the *Worldwide Telephone Numbers* booklet included with the computer. You can also find contact information on the HP website. Go to <http://www.hp.com/support>, select your country or region, and follow the on-screen instructions.

You can use Windows tools to create system restore points and create backups of personal information, see *Using Windows tools on page 61*.

- If your computer does list the Recovery partition and the Windows partition, you can use HP Recovery Manager to create recovery media after you successfully set up the computer. HP Recovery media can be used to perform system recovery if the hard drive becomes corrupted. System recovery reinstalls the original operating system and software programs that were 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 recovery media can be created. Handle these recovery tools carefully, and keep them in a safe place.
  - HP Recovery Manager examines the computer and determines the required storage capacity for the media that will be required.
  - To create recovery discs, your computer must have an optical drive with DVD writer capability, and you must use only high-quality blank DVD-R, DVD+R, DVD-R DL, or DVD+R DL discs. Do not use rewritable discs such as CD±RW, DVD±RW, double-layer DVD±RW, or BD-RE (rewritable Blu-ray) discs; they are not compatible with HP Recovery Manager software. Or, instead, you can use a high-quality blank USB flash drive.
  - If your computer does not include an integrated optical drive with DVD writer capability, but you would like to create DVD recovery media, you can use an external optical drive (purchased separately) to create recovery discs. If you use an external optical drive, it must be connected directly to a USB port on the computer; the drive cannot be connected to a USB port on an external device, such as a USB hub. If you cannot create DVD media yourself, you can obtain recovery discs for your computer from HP. See the *Worldwide Telephone Numbers* booklet included with the computer. You can also find contact information on the HP website. Go to <http://www.hp.com/support>, select your country or region, and follow the on-screen instructions.
  - Be sure that the computer is connected to AC power before you begin creating the recovery media.
  - The creation process can take 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.

To create HP Recovery media:



**IMPORTANT:** For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning these steps.


1. Type `recovery` in the taskbar search box, and then select **HP Recovery Manager**.
2. Select **Create recovery media**, and then follow the on-screen instructions.

If you ever need to recover the system, see [Recovering using HP Recovery Manager on page 101](#).

## Using Windows Tools

You can create recovery media, system restore points, and backups of personal information using Windows tools.

---

 **NOTE:** If storage is 32 GB or less, Microsoft System Restore is disabled by default.

---


For more information and steps, see the Get started app.

- ▲ Select the **Start** button, and then select the **Get started** app.

## Restore and recovery

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

---

 **IMPORTANT:** Not all methods are available on all products.

---

- Windows offers several options for restoring from backup, refreshing the computer, and resetting the computer to its original state. For more information see the Get started app.
  - ▲ Select the **Start** button, and then select the **Get started** app.
- If you need to correct a problem with a preinstalled application or driver, use the Reinstall drivers and/or applications option (select products only) of HP Recovery Manager to reinstall the individual application or driver.
  - ▲ Type `recovery` in the taskbar search box, select **HP Recovery Manager**, select **Reinstall drivers and/or applications**, and then follow the on-screen instructions.
- If you want to recover the Windows partition to original factory content, you can choose the System Recovery option from the HP Recovery partition (select products only) or use the HP Recovery media. For more information, see [Recovering using HP Recovery Manager on page 101](#). If you have not already created recovery media, see [Creating HP Recovery media \(select products only\) on page 99](#).
- On select products, if you want to recover the computer's original factory partition and content, or if you have replaced the hard drive, you can use the Factory Reset option of HP Recovery media. For more information, see [Recovering using HP Recovery Manager on page 101](#).
- On select products, if you want to remove the recovery partition to reclaim hard drive space, HP Recovery Manager offers the Remove Recovery Partition option.

For more information, see Removing the [Removing the HP Recovery partition \(select products only\) on page 103](#).

## Recovering using HP Recovery Manager

HP Recovery Manager software allows you to recover the computer to its original factory state by using the HP Recovery media that you either created or that you obtained from HP, or by using the HP Recovery partition (select products only). If you have not already created recovery media, see [Creating HP Recovery media \(select products only\) on page 99](#).

### What you need to know before you get started

- HP Recovery Manager recovers only software that was installed at the factory. For software not provided with this computer, you must either download the software from the manufacturer's website or reinstall the software from the media provided by the manufacturer.



---

**IMPORTANT:** Recovery through HP Recovery Manager should be used as a final attempt to correct computer issues.

---

- To use the Factory Reset option (select products only), you must use HP Recovery media. If you have not already created recovery media, see [Creating HP Recovery media \(select products only\) on page 99](#).
- If your computer does not allow the creation of HP Recovery media or 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 computer. 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 want to retain.

---

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



---

**NOTE:** Only the options available for your computer display when you start the recovery process.

---

- **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 computer to its original factory state by deleting all information from the hard drive and re-creating the partitions. Then it reinstalls the operating system and the software that was installed at the factory.

The HP Recovery partition (select products only) allows System Recovery only.

## Using the HP Recovery partition (select products only)

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

To start HP Recovery Manager from the HP Recovery partition:



---

**IMPORTANT:** For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning these steps (select products only).

---

1. Type `recovery` in the taskbar search box, select **Recovery Manager**, and then select **HP Recovery Environment**.

– or –

For computers or tablets with keyboards attached, press **f11** while the computer boots, or press and hold **f11** as you press the power button.

For tablets without keyboards:

Turn on or restart the tablet, and then quickly hold down the volume down button; then select **f11**.

– or –

Turn on or restart the tablet, and then quickly hold down the Windows button; then select **f11**.

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, and then restart the computer.



---

**NOTE:** If the computer does not automatically restart in HP Recovery Manager, change the computer boot order. See [Changing the computer boot order on page 103](#).

---


3. Follow the on-screen instructions.

## Changing the computer boot order

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

To change the boot order:

---

 **IMPORTANT:** For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning these steps.

---

1. Insert the HP Recovery media.
2. Access BIOS:

For computers or tablets with keyboards attached:

- ▲ Turn on or restart the computer or tablet, quickly press **esc**, and then press **f9** for boot options.

For tablets without keyboards:

- ▲ Turn on or restart the tablet, and then quickly hold down the volume down button; then select **f9**.

– or –


Turn on or restart the tablet, and then quickly hold down the Windows button; then select **f9**.

3. Select the optical drive or USB flash drive from which you want to boot.
4. Follow the on-screen instructions.


## Removing the HP Recovery partition (select products 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 will not be able to perform System Recovery or create HP recovery media from the HP Recovery partition. So before you remove the Recovery partition, create HP Recovery media; see [Creating HP Recovery media \(select products only\) on page 99](#).

---

 **NOTE:** The Remove Recovery Partition option is only available on products that support this function.

---

Follow these steps to remove the HP Recovery partition:

1. Type `recovery` in the taskbar search box, and then select **HP Recovery Manager**.
2. Select **Remove Recovery Partition**, and then follow the on-screen instructions.


---

# 11 Backup and recovery – Windows 8


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`, 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 Windows Help and Support.

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

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

---

## Backing up your information

Recovery after a system failure is as good as your most recent backup. You should create system repair media and your initial backup immediately after initial system setup. As you add new software and data files, you should continue to back up your system on a regular basis to maintain a reasonably current backup.


For more information on the Windows backup features, see Windows Help and Support.

## Performing a system recovery

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

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

---

 **NOTE:** If you are unable to boot (start up) your tablet and you cannot use the system repair media you previously created (select models only), contact support.

---


## Using the Windows recovery tools


To recover information you previously backed up, see Windows Help and Support for steps on restoring files and folders.

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




---

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

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

---


1. If possible, back up all personal files.
2. If possible, check for the presence of the Recovery Image partition and the Windows partition. Swipe from the right edge of the touch screen, tap **Search**, and then tap the search box. Type *file*, and then tap **File Explorer**.
3. If the Windows partition and the Recovery Image partition are listed, shut down the tablet.
4. To power on the tablet, press the **Power** button and **Volume down** button simultaneously. The Startup menu is displayed.
5. Select **Troubleshoot**, select **Advanced Options**, and then select **Startup Repair**.
6. Follow the on-screen instructions.


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

---

## Using f11 recovery tools

---

 **CAUTION:** Using **f11** completely erases hard drive contents and reformats the hard drive. All files that you have created and any software that you have installed on the 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 *pc*, and then tap **This PC**.
3. If the HP Recovery partition is listed, shut down the tablet.
4. To power on the tablet, press the **Power** button and **Volume down** button simultaneously. The Startup menu is displayed.
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. To power on the tablet, press the **Power** button and **Volume down** button simultaneously.  
The Startup menu is displayed.
5. Tap **F9 Boot Options**.
6. Select the external flash drive as the boot device.
7. Restart the tablet.

## Using Windows Refresh or Windows Reset

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.

The Windows Reset option allows you to perform detailed reformatting of your tablet, or remove personal information before you give away or recycle your tablet. For more information on these features, see Windows Help and Support.

---

## 12 Statement of Volatility

The purpose of this document is to provide general information regarding non-volatile memory in industry-standards based HP Business Notebook PC systems and provide general instructions for restoring nonvolatile memory that can contain personal data after the system has been powered off and the hard drive has been removed.

HP Business Notebook PC products that use Intel-based or AMD®-based system boards contain volatile DDR memory. The amount of nonvolatile memory present in the system depends upon the system configuration. Intel-based and AMD-based system boards contain nonvolatile memory subcomponents as originally shipped from HP assuming that no subsequent modifications have been made to the system and assuming that no applications, features, or functionality have been added to or installed on the system.

Following system shutdown and removal of all power sources from an HP Business Notebook PC system, personal data can remain on volatile system memory (DIMMs) for a finite period of time and will also remain in nonvolatile memory. The steps below will remove personal data from the notebook PC, including the nonvolatile memory found in Intel-based and AMD-based system boards. Some of these steps are disclosed in the Maintenance and Service Guides available for HP PC products available on the product support pages at [www.hp.com](http://www.hp.com).

1. Follow steps (a) through (i) below to restore the nonvolatile memory that can contain personal data. Restoring or re-programming nonvolatile memory that does not store personal data is neither necessary nor recommended.
  - a. Enter BIOS (F10) Setup by powering on the system and pressing **F10** when prompted near the bottom of the display, or press the **ESC** key to display the start up menu, then press **F10**. If the system has a BIOS administrator password, enter the password at the prompt.
  - b. Select the **File** menu, then **Restore Defaults**.
  - c. Select the **System Configuration** menu, then **Restore Security Defaults**.
  - d. If an asset or ownership tag is set, select the **Security** menu and scroll down to the **Utilities** menu. Select **System IDs**, and then select the tag that has been set. Press the spacebar once to clear the tag, then press **Enter** to return to the prior menu.
  - e. If a DriveLock password is set, select the **Security** menu, scroll down to **DriveLock**, then select **DriveLock password**. Select the desired hard drive. Click **Disable protection**, enter the existing master DriveLock password, then press **Enter** to confirm and return to the prior menu. Repeat this procedure if more than one hard drive has a DriveLock password.
  - f. If an Automatic DriveLock password is set, select the **Security menu**, scroll down to **Automatic DriveLock**, then select the desired hard drive and disable protection. Repeat this procedure if more than one hard drive has an Automatic DriveLock password.
  - g. Select the **File** menu, then **Reset BIOS Security** to factory default. Click **yes** at the warning message.
  - h. Select the **File** menu, then **Save Changes and Exit**.
  - i. Reboot the system. If the system has a Trusted Platform Module and/or fingerprint sensor, one or two prompts will appear: one to clear the TPM and the other to reset fingerprint sensor. Press **F1** to accept or **F2** to reject.

If the HP notebook model number ends in a 'p' or 'w' and includes Intel Centrino with VPro™, reboot the PC and enter BIOS Setup by pressing **F10** when prompted. Select **System**


**Configuration**, then **AMT Options**. Then select **Un-configure AMT on next boot**. Select **Save**, then **Yes**. Select the **File** menu, and then select **Save Changes and Exit**. Reboot the system and confirm that you want to un-configure AMT.

- j. If the optional Intel Anti-Theft Technology (AT) was activated, contact the provider to deactivate it.
  - k. If the optional Absolute® Software Computrace® management and tracking service was activated on the notebook PC, contact the provider to deactivate it.
  - l. Remove all power and system batteries for at least 24 hours.
2. Remove and retain the storage drive or clear the contents of the drive.

**a. Hard Disk Drive (HDD)**

Clear the HDD contents by using the HP Disk Sanitizer® utility or a third party application that, ideally, is U.S. Department of Defense (DOD) 5220.22-M approved.

To run HP Disk Sanitizer, enter BIOS Setup by powering on the system and pressing **F10** when prompted near the bottom of the display, or press **ESC** to display the start up menu, then press **F10**. Select the **Security** menu and scroll down to the **Utilities** menu. Select **Disk Sanitizer** and select the desired drive. For a higher level of protection, select **Optimum**.

 **NOTE:** This process will take a long time, and the amount of time varies based on the hard drive capacity.

**b. Solid State Drive (SSD)**

Clear the SSD contents by using the BIOS Setup Secure Erase command option, or by using a third party utility designed to erase data from an SSD. To run Secure Erase, enter BIOS Setup by powering on the system and pressing **F10** when prompted near the bottom of the display. Select the **Security** menu and scroll down to the **Utilities** menu. Select **Secure Erase** and select the desired hard drive.

## Non-volatile memory usage

Non Volatile Memory Type	Amount (Size)	Does this memory store customer data?	Does this memory retain data when power is removed?	What is the purpose of this memory?	How is data input into this memory?	How is this memory write protected?
Real Time Clock (RTC) battery backed-up CMOS configuration memory (CMOS)	256 Bytes	No	Yes	Stores system date and time and limited keyboard controller data.	Using the <b>F10</b> Setup utility or changing the Microsoft Windows date and time.	This memory is not write-protected. HP recommends password protecting the <b>F10</b> Setup utility.
Controller (NIC) EEPROM	64 KBytes (not customer accessible)	No	Yes	Store NIC configuration and NIC firmware.	Using a utility from the NIC vendor that can be run from DOS.	A utility is required to write data to this memory and is available from NIC vendor. Writing data to this ROM in an inappropriate manner will

Non Volatile Memory Type	Amount (Size)	Does this memory store customer data?	Does this memory retain data when power is removed?	What is the purpose of this memory?	How is data input into this memory?	How is this memory write protected?
						render the NIC nonfunctional.
Keyboard ROM	64 KBytes (not customer accessible)	No	Yes	Stores firmware code (keyboard, mouse, & battery management).	Programmed at the factory. Code is updated when the system BIOS is updated.	A utility is required for writing data to this memory and is available on the HP website. Writing data to this ROM in an inappropriate manner can render the PC nonfunctional.
DIMM Serial Presence Detect (SPD) configuration data	256 Bytes per memory module, 128 Bytes programmable (not customer accessible)	No	Yes	Stores memory module information.	Programmed by the memory vendor.	Data cannot be written to this memory when the module is installed in a PC. The specific write protection method varies by memory vendor.
System BIOS	4 to 5 MBytes	Yes	Yes	Store system BIOS code and PC configuration data.	System BIOS code is programmed at the factory. Code is updated when the system BIOS is updated. Configuration data and settings are input using the <b>F10</b> setup utility or a custom utility.	A utility is required for writing data to this memory and is available on the HP website. Writing data to this ROM in an inappropriate manner can render the PC nonfunctional.
Intel Management Engine Firmware (present only in models ending in a 'p' or 'w' or with Intel Centrino Pro technology)	1.5 or 5 MBytes	Yes	Yes	Stores Management Engine Code, Settings, Provisioning Data and iAMT third party data store.	Management Engine Code is programmed at the factory. Code is updated via Intel secure firmware update utility. Unique Provisioning Data can be entered at the factory or by an administrator using the Management Engine (MEBx)	The Intel chipset is configured to enforce hardware protection to block all direct read/write access to this area. An Intel utility is required for updating the firmware. Only firmware updates digitally signed by Intel

Non Volatile Memory Type	Amount (Size)	Does this memory store customer data?	Does this memory retain data when power is removed?	What is the purpose of this memory?	How is data input into this memory?	How is this memory write protected?
					setup utility. The third party data store contents can be populated by a remote management console or local applications registered by an administrator to have access to the space.	can be applied using this utility.
Bluetooth flash	2 MBits	No	Yes	Stores Bluetooth configuration and firmware.	Programmed at the factory. Tools for writing data to this memory are not publicly available but can be obtained from the silicon vendor.	A utility is required for writing data to this memory and is made available through newer versions of the driver if the flash requires an upgrade.
802.11 WLAN EEPROM	4 KBytes to 8 KBytes	No	Yes	Stores configuration and calibration data.	Programmed at the factory. Tools for writing data to this memory are not made public.	A utility is required for writing data to this memory and is typically not made available to the public unless a firmware upgrade is necessary to address a unique issue.
Webcam	64 KBits	No	Yes	Store webcam configuration and firmware.	Using a utility from the device manufacturer that can be run from Windows.	A utility is required for writing data to this memory and is typically not made available to the public unless a firmware upgrade is necessary to address a unique issue.
Fingerprint reader	512 KBytes flash	Yes	Yes	Stores fingerprint templates.	By enrolling in HP ProtectTools Security Manager.	Only a digitally signed application can make the call to

Non Volatile Memory Type	Amount (Size)	Does this memory store customer data?	Does this memory retain data when power is removed?	What is the purpose of this memory?	How is data input into this memory?	How is this memory write protected?
						write to the flash.

## Questions and answers

### 1. How can the BIOS settings be restored (returned to default settings)?

- Turn on or restart the computer and press **F10** when prompted near the bottom of the display.
- Select **File**, then select **Restore defaults**.
- Follow the on-screen instructions.
- Select **File**, save changes and exit, then press **Enter**.

### 2. What kind of configuration data is stored on the DIMM Serial Presence Detect (SPD) memory module? How would this data be written?

The DIMM SPD memory contains information about the memory module such as size, serial number, data width, speed/timing, voltage and thermal information. This information is written by the module manufacturer and stored on an EEPROM. This EEPROM cannot be written to when the memory module is installed in a PC. Third party tools do exist that can write to the EEPROM when the memory module is not installed in a PC. There are various third party tools available to read SPD memory.

### 3. Does the “Firmware Hub for System BIOS” contain the BIOS program? Is this chip writable, and if so how?

The Firmware Hub does contain the BIOS program and is writable. A utility is required to perform the write function.

### 4. In some PC systems, the Firmware Hub for System BIOS is a flash memory chip so that updates can be written by the customer. Is this true for these BIOS chips?

Yes, they are flash memory chips.

### 5. What is meant by “Restore the nonvolatile memory found in Intel-based system boards?”

This relates to clearing the Real Time Clock (RTC) CMOS memory that contains PC configuration data.

### 6. Does resetting the CMOS configuration memory return the PC back to factory defaults?

The process of resetting the CMOS will return certain system settings to factory default but will not reset many of the system data and configuration defaults to their default settings. To return these system data and configuration defaults to default settings, refer to question and answer 1 and follow the instructions for returning the BIOS settings to factory defaults.



# 13 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

Country/region	Accredited agency	Applicable note number
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 H05VV-F, 3-conductor, 1.0-mm<sup>2</sup> 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-mm<sup>2</sup> 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-mm<sup>2</sup> 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-mm<sup>2</sup> 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.

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## 14 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

## Symbols/Numerics

3G antenna, spare part number 12, 58

70-pin connector, spare part number 16, 17

## A

AC adapter cable, spare part number 18

AC adapter, spare part numbers 19, 22, 23

Access Covers Kit, spare part number 17

adapter cables

illustrated 18

spare part numbers 18

adhesive cover

spare part number 13

ambient light sensor 4

antenna

location 4

removal 58, 60

spare part numbers 12, 58, 60

Antenna Kit, spare part numbers 12, 58, 60

audio jack board

removal 46

spare part number 12, 46

audio, product description 1

audio-in jack 7

audio-out jack 7

autorotate switch actuator

installation 53

spare part number 11, 53

## B

Back Cover Kit, spare part numbers 17

back cover, spare part numbers 16

back plate, spare part number 16

back plate, spare part numbers 17

bar code scanner module

removal 69

spare part number 14, 69

bar code scanner module button

board, spare part number 16, 17

bar code scanner module, spare part number 16, 17

battery

removal 48, 64

spare part numbers 11, 13, 48, 64

battery bay space saver, spare part number 13

battery connector board

removal 71

spare part number 14, 71

bottom case, spare part number 12

bottom components 8

Button Kit, spare part number 11

buttons

power 7

volume down 6

volume up 6

Window 5

## C

cable connector board

removal 69

spare part number 14, 69

Cable Kit, spare part number 16, 17

Cable Kit, spare part numbers 14

Cable Retainer Kit

spare part number 14

cables, service considerations 24

Cables/Connectors Kit, spare part

number 15

Card Reader adapter, spare part

number 18

card reader board

removal 84

spare part number 15, 84

card reader cover

removal 77

spare part number 15, 77

Card Reader Cover Kit, spare part

number 23

carrying case, spare part numbers

20

components

bottom 8

front 4

rear 6

top 7

connectors, service considerations 24

cover, spare part number 20

credit card reader

removal 76

spare part number 14, 76

credit card reader board

removal 74

spare part numbers 14, 74

## D

display assembly

removal 28

spare part numbers 10, 28

Display Cable Kit, spare part

number 11, 34

display LVDS cable

removal 34

spare part number 11, 34

Display Panel Kit, spare part

numbers 10, 28

display panel, product description 1

docking connector 8

docking connector bracket

removal 57

spare part number 11, 57

docking connector cable

removal 56, 83

spare part numbers 12, 56, 83

docking extension board, spare part

number 17

docking station

illustrated 19

spare part number 19

docking, product description 2

duck head power adapter

illustrated 22

spare part numbers 22

## E

electrostatic discharge 25  
equipment guidelines 27  
Ethernet adapter cable, spare part number 18  
Ethernet, product description 1

## F

fingerprint reader board  
removal 85  
spare part number 15, 85  
forward-facing webcam  
removal 54  
spare part number 54  
front components 4  
front cover  
removal 65, 80  
spare part numbers 13, 15, 65, 80  
Front Cover Kit, spare part number 16, 17

## G

graphics, product description 1  
grounding guidelines 25  
guidelines  
equipment 27  
grounding 25  
packaging 26  
transporting 26  
workstation 26

## H

handle, spare part number 14, 17  
Handle/Headphone Kit, spare part number 16  
HDMI/VGA adapter cable, spare part number 18  
headphone jack 7  
Healthcare Jacket, spare part numbers 16  
Hinge Kit, spare part number 16  
HP ElitePad Service Tool, spare part number 29

## I

I/O access cover, spare part number 16  
I/O board, spare part numbers 16, 17

## J

jacket keyboard, spare part numbers 20  
jacket, spare part numbers 20  
jacks  
audio-in 7  
audio-out 7  
headphone 7  
microphone 7

## K

keyboard, product description 2

## M

memory card reader slot/micro SIM slot 6  
memory, product description 1  
micro SD Card Reader/micro SIM slot  
access hole 6  
microphone  
location 7  
product description 1  
removal 40  
spare part number 40  
microphone jack 7  
Miscellaneous Rocker Button  
Mounting Kit, spare part number 14  
model name 1

## N

NFC antenna  
removal 35  
spare part number 11, 35

## O

operating system, product description 2  
optical drive, product description 1

## P

packaging guidelines 26  
pen holder, spare part number 16  
pen tether, spare part number 21  
pen, spare part number 20  
plastic parts, service considerations 24  
pointing device, product description 2  
ports, product description 1, 2  
power button 7

power button actuator  
installation 44  
spare part number 11, 44  
power button board  
removal 42  
spare part numbers 11, 42  
power components 22  
power cord  
set requirements 113  
spare part numbers 19, 22  
power requirements, product description 2  
primary storage, product description 1  
processor, product description 1  
product description  
audio 1  
display panel 1  
docking 2  
Ethernet 1  
external media cards 1  
graphics 1  
keyboard 2  
memory 1  
microphone 1  
operating system 2  
optical drive 1  
pointing device 2  
ports 1, 2  
power requirements 2  
primary storage 1  
processor 1  
product name 1  
security 2  
sensors 2  
video 1  
wireless 1  
product information 8  
product name 1

## Q

Quick Release Pin Kit, spare part number 16  
Quick Release Plug Kit, spare part number 16, 17

## R

rear components 6  
rear cover, spare part numbers 14, 15

- rear-facing webcam
  - removal 41
  - spare part number 41
- regulatory information 6, 8
- removal/replacement procedures 28
- Retail Jacket, spare part numbers 14
- Rubber Kit, spare part numbers 14, 16
- Rugged Jacket, spare part numbers 17
- S**
- Screw Kit, spare part numbers 14, 16, 17, 21, 23
- SD Card reader cover, spare part number 16
- Security Jacket Cover, spare part numbers 16
- Security Jacket, spare part numbers 16
- security, product description 2
- sensors, product description 2
- serial adapter cable, spare part number 18
- service considerations
  - cables 24
  - connectors 24
  - plastic parts 24
- service tag 9
- service tool, spare part number 20
- shoulder strap, spare part number 20
- SIM, spare part number 23
- slot cover
  - removal 55
  - spare part number 11, 55
- smart card reader board, spare part numbers 17
- speakers
  - location 8
  - removal 62
  - spare part number 12, 62
- specifications 97
- suction cup, spare part number 20, 30

- system board
  - removal 50, 72, 82
  - spare part numbers 11, 14, 15, 50, 72, 82

## T

- tablet
  - major components 10
  - specifications 97
- Tape Support Kit, spare part number 23
- tools required 24
- top cap
  - removal 63, 77
  - spare part numbers 13, 15, 63, 77
- top components 7
- TouchScreen cable
  - removal 34
  - spare part number 11, 34
- transporting guidelines 26
- TXE board tool, spare part number 20

## U

- USB adapter cable, spare part number 18
- USB card board, spare part number 17
- USB charging cable, spare part number 20
- USB-3 adapter, spare part number 20

## V

- vibrator module
  - removal 47
  - spare part number 12, 47
- video, product description 1
- volume button actuator
  - installation 45
  - spare part number 11, 45
- volume button board
  - removal 44
  - spare part number 11, 44
- volume down 6
- volume up button 6

## W

- webcam
  - location 4, 6

- removal 41, 54
- spare part numbers 11, 41, 54
- webcam status light 4
- Webcam/Microphone Kit, spare part number 11
- Windows button 5
- wireless antenna
  - location 4
  - removal 58, 60
  - spare part numbers 12, 58, 60
- wireless, product description 1
- WLAN antenna
  - location 4
  - removal 58
  - spare part numbers 58
- WLAN module
  - removal 38
  - spare part number 12, 38
- workstation guidelines 26
- WWAN antenna
  - location 4
- WWAN module
  - removal 36
  - spare part numbers 11, 36
- WWAN/GPS auxiliary antenna
  - removal 60
  - spare part numbers 60