



HP Chromebook x360 11

Maintenance and Service Guide

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Product notice

This user 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. This computer may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. Go to <http://www.microsoft.com> for details.

Safety warning notice


 **WARNING!** To reduce the possibility of heat-related injuries or of overheating the device, do not place the device directly on your lap or obstruct the device air vents. Use the device only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The device and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950).

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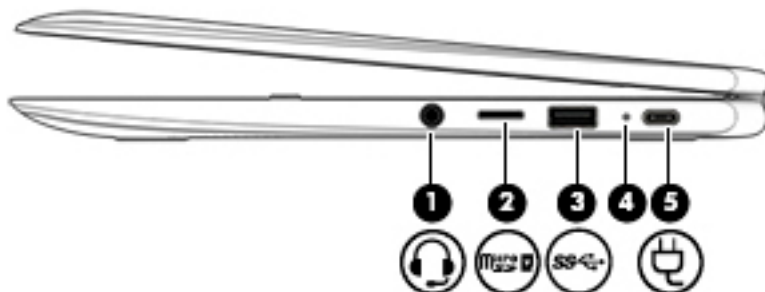
1 Product description





Category	Description
Product Name	HP Chromebook x360 11 Model number: 11-ae1xx
Processors	Intel® Celeron™ N3350 1.10-GHz (turbo up to 2.40-GHz) dual core processor (2.0-MB L2 cache, 650-MHz FSB, 6-W)
Chipset	Integrated soldered-on-circuit (SoC)
Graphics	Internal graphics: Intel HD Graphics 500 Support for HD decode, DX12, and high-definition multimedia interface (HDMI)
Panel	11.6-in, high-definition (HD), white light-emitting diode (WLED), BrightView (1366×768), UWVA, eDP 1.2 without PSR, 220 nits, 16:9 ultra wide aspect ratio
Memory	System memory soldered onto system board, non-customer-accessible/non-upgradable Support for up to 16-GB of system memory LPDDR4-3733 dual channel support (DDR4-3733 downgrade to LPDDR4-2400) Supports the following configurations: 16384-MB 8192-MB
Storage	Onboard embedded Multi-Media Controller (eMMC) v.5.0: 64 GB 32 GB 16 GB
Camera and microphone	Front-facing camera Fixed single microphone, no keyboard light, integrated M-JPEG, VDS2 Software includes: beam forming, echo cancellation, noise suppression
Audio	HD audio Dual speakers
Wireless	Integrated wireless local area network (WLAN) options with dual antennas Intel Dual Band Wireless-AC 7265 802.11 AC 2×2 WiFi + Bluetooth 4.2 Combo Adapter (non-vPro)
External media cards	HP Multi-Format Digital Media Card Reader Supports SD/SDHC/SDXC up to UHS-50 Push-push insertion/removal
Input/Output	Hot plug/unplug and auto detect for correct output to wide-aspect vs. standard aspect video HDMI v1.4b supporting up to 1920x1080 @ 60Hz via USB Type-C

Category	Description
	Audio-out (headphone)/audio-in (microphone) combo jack
	(2) USB Type-C 3.1 Gen 1 ports; support charging, power delivery, video, data
	(2) USB Type-A 3.1 Gen 1 ports; support HP USB Boost (Sleep & Charge)
Keyboard/pointing devices	Full-sized, textured, island-style Google keyboard (spill-resistant)
	TouchPad requirements:
	MultiTouch gestures enabled
	Taps enabled as default
Power requirements	2-cell, 47.36-WHr, li-ion battery
	45-W, USB Type-C, nPFC, straight type, AC adapter
	1.0-m power cord with a C5 connector
Security	Supports Kensington Mini Security Lock
Operating system	Preinstalled: Google Chrome operating system
Serviceability	End user replaceable part: AC adapter

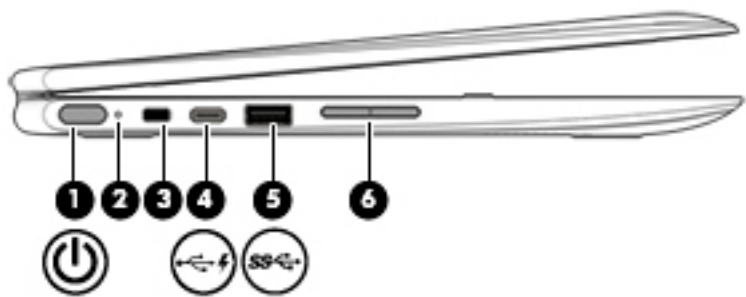
2 Getting to know your computer




Right side



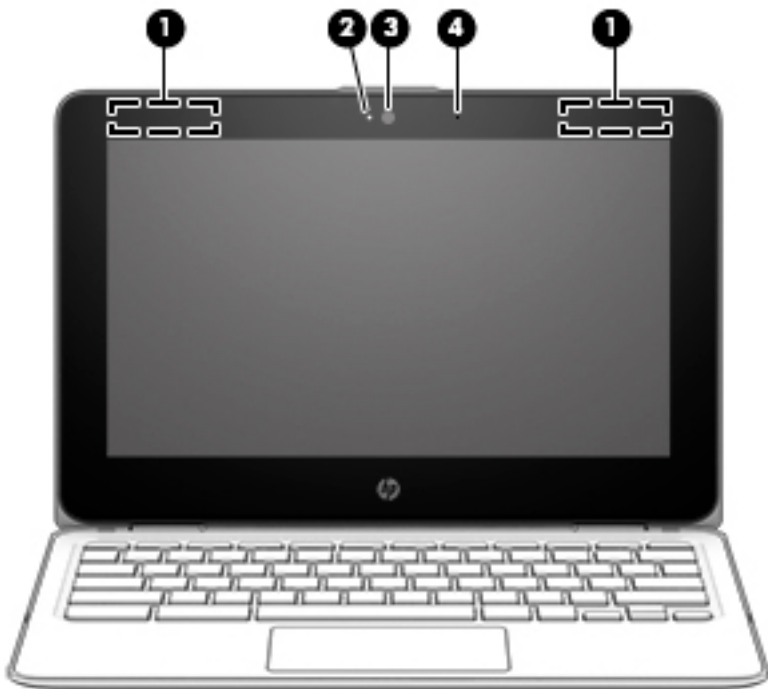
Component	Description	
(1) 	Audio-out (headphone)/ Audio-in (microphone) combo jack	<p>Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television audio cable. Also connects an optional headset microphone. This jack does not support optional standalone microphones.</p> <p>WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, see the <i>Regulatory, Safety, and Environmental Notices</i>.</p> <p>NOTE: When a device is connected to the jack, the computer speakers are disabled.</p>
(2) 	MicroSD memory card reader	<p>Reads optional memory cards that enable you to store, manage, share, or access information.</p> <p>To insert a card:</p> <ol style="list-style-type: none">1. Hold the card label-side up, with connectors facing the computer.2. Insert the card into the memory card reader, and then press in on the card until it is firmly seated. <p>To remove a card:</p> <p>▲ Press in on the card, and then remove it from the memory card reader.</p>
(3) 	USB SuperSpeed port	<p>Connects a USB device, such as a cell phone, camera, activity tracker, or smartwatch, and provides high-speed data transfer.</p>
(4)	AC adapter and battery light	<ul style="list-style-type: none">• White: The AC adapter is connected and the battery is fully charged.• Amber: The AC adapter is connected and the battery is charging.• Off: The battery is not charging.
(5) 	USB Type-C power connector and port	<p>Connects an AC adapter that has a USB Type-C connector, supplying power to the computer and, if needed, charging the computer battery.</p> <p>– and –</p> <p>Connects a USB device that has a Type-C connector, such as a cell phone, camera, activity tracker, or smartwatch, and provides data transfer.</p>

Left side



Component		Description
(1)		<div>Power button</div> <ul style="list-style-type: none">When the computer is off, press the button to turn on the computer.When the computer is in the Sleep state, press the button briefly to exit Sleep.When the computer is on and you want to lock the screen, press the button until you see the sign-in screen appear. Pressing the power button during screen-lock mode turns off the computer.When the computer is on and you want to turn it off, press and hold the button to lock the screen, and then continue to press the button until the computer turns off.
(2)		<div>Power light</div> <ul style="list-style-type: none">On: The computer is on.Blinking: The computer is in the Sleep state, a power saving state. The computer shuts off power to the display and other unneeded components.Off: The computer is off.
(3)		<div>Security cable slot</div> <p>Attaches an optional security cable to the computer.</p> <p>NOTE: The security cable is designed to act as a deterrent, but it may not prevent the computer from being mishandled or stolen.</p>
(4)		<div>USB Type-C port with HP Sleep and Charge</div> <p>Connects a USB device that has a Type-C connector, provides data transfer, and even when the computer is off, charges most products such as a cell phone, camera, activity tracker, or smartwatch.</p> <p>NOTE: Cables and/or adapters (purchased separately) may be required.</p>
(5)		<div>USB SuperSpeed port</div> <p>Connects a USB device, such as a cell phone, camera, activity tracker, or smartwatch, and provides high-speed data transfer.</p>
(6)		<div>Volume button</div> <p>Controls speaker volume on the computer.</p>

Display



Component		Description
(1)	WLAN antennas*	Send and receive wireless signals to communicate with wireless local area networks (WLANs).
(2)	Camera light	On: The camera is in use.
(3)	Camera	Allows you to video chat, record video, and record still images.
(4)	Internal microphone	Records sound.

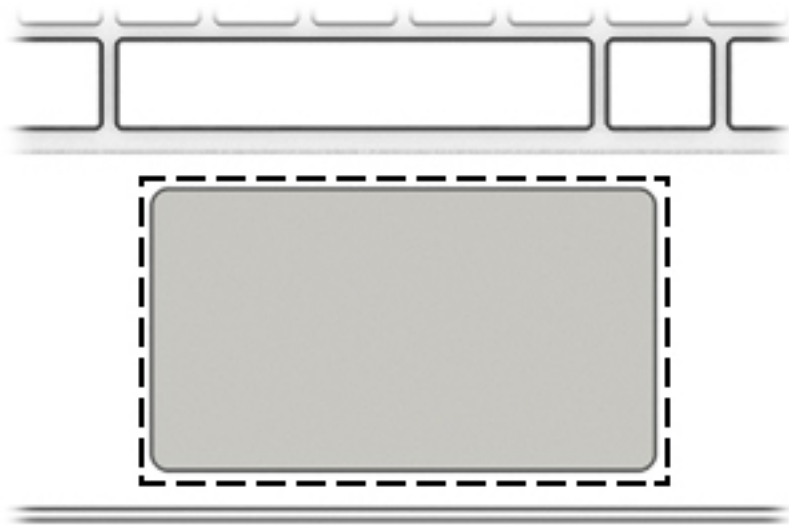
*The antennas are not visible from the outside of the computer, and antenna location varies. For optimal transmission, keep the areas immediately around the antennas free from obstructions.

For wireless regulatory notices, see the section of the *Regulatory, Safety, and Environmental Notices* that applies to your country or region.

This guide is provided in the box.

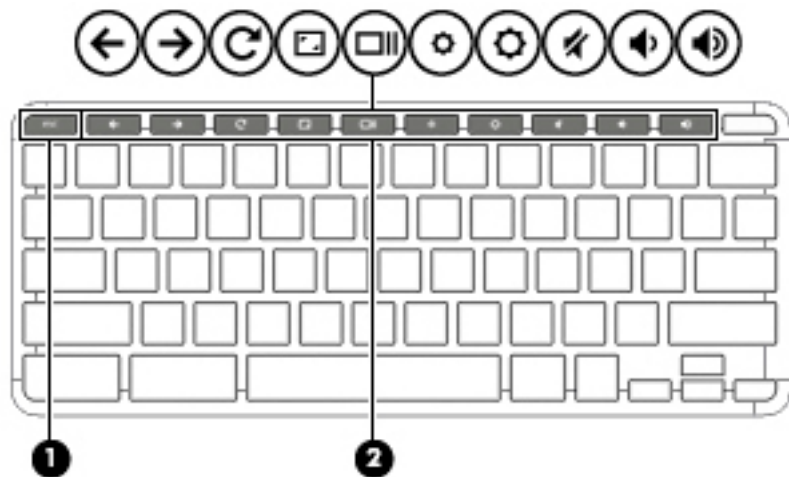
Keyboard area

TouchPad



Component	Description
TouchPad zone	Reads your finger gestures to move the pointer or activate items on the screen.

Special keys















Component	Description	
(1)	esc key	Activates certain computer functions when pressed in combination with other keys, such as tab or shift.
(2)	Action keys	Execute frequently used system functions.

Action keys

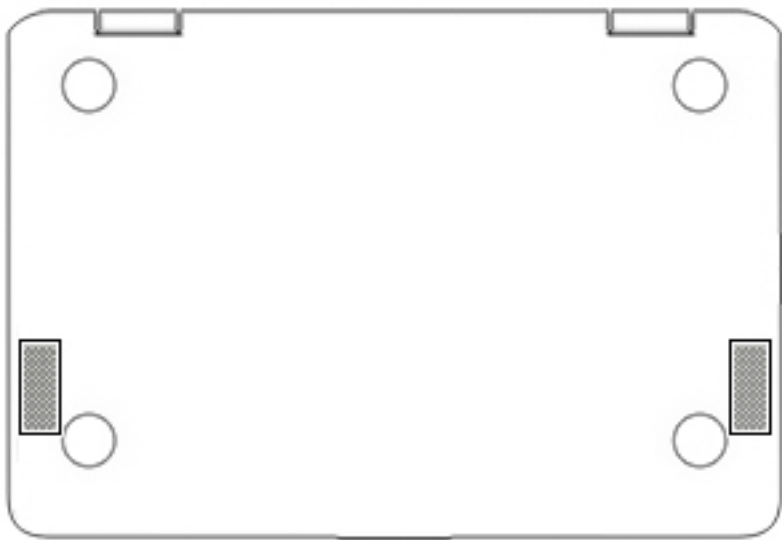
An action key performs the function indicated by the icon on the key. To determine which keys are on your product, see [Special keys on page 6](#).

▲ To use an action key, press and hold the key.

For more information on action keys and keyboard shortcuts, go to <https://support.google.com/chromebook/answer/183101>. Select your language at the bottom of the page.

Icon	Key	Description
	Back	Displays the previous page in your browser history.
	Forward	Displays the next page in your browser history.
	Reload	Reloads your current page.
	Full screen	Opens your page in full-screen mode.
	Display apps	Displays open apps. NOTE: Pressing this button in conjunction with ctrl takes a screenshot.
	Brightness down	Decreases the screen brightness incrementally as long as you hold down the key.
	Brightness up	Increases the screen brightness incrementally as long as you hold down the key.
	Mute	Mutes speaker sound.
	Volume down	Decreases speaker volume incrementally as long as you hold down the key.
	Volume up	Increases speaker volume incrementally as long as you hold down the key.
	Keyboard backlight brightness up	Increases the keyboard backlight brightness.
	Keyboard backlight brightness down	Decreases the keyboard backlight brightness.


Bottom



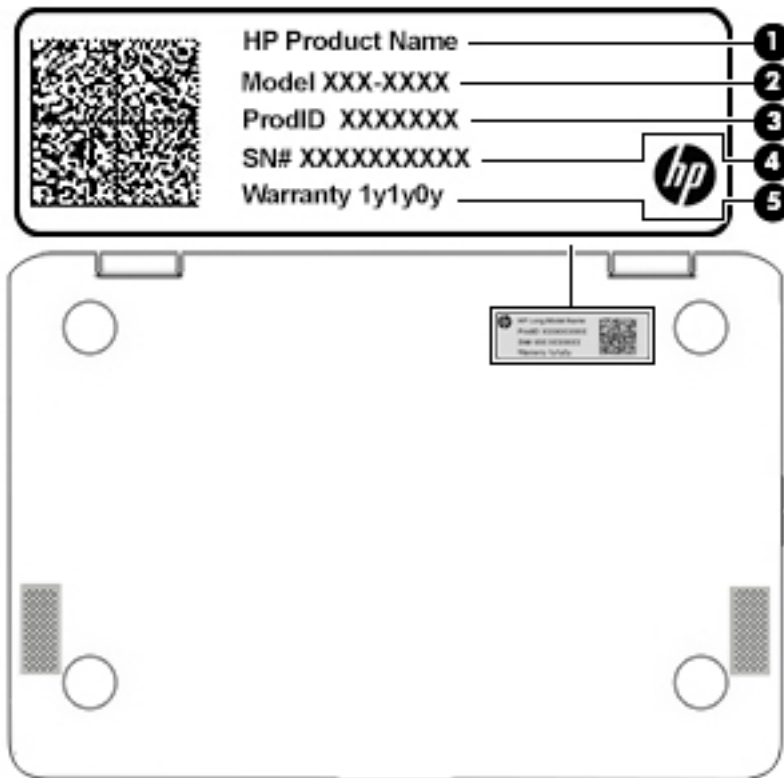
Components	Description
Speakers (2)	Produce sound.

Labels

The labels affixed to the computer provide information you may need when you troubleshoot system problems or travel internationally with the computer. Labels may be in paper form or imprinted on the product.

 **IMPORTANT:** Check the following locations for the labels described in this section: the bottom of the computer, inside the battery bay, under the service door, on the back of the display, or on the bottom of a tablet kickstand.

- **Service label**—Provides important information to identify your computer. When contacting support, you may be asked for the serial number, the product number, or the model number. Locate this information before you contact support.



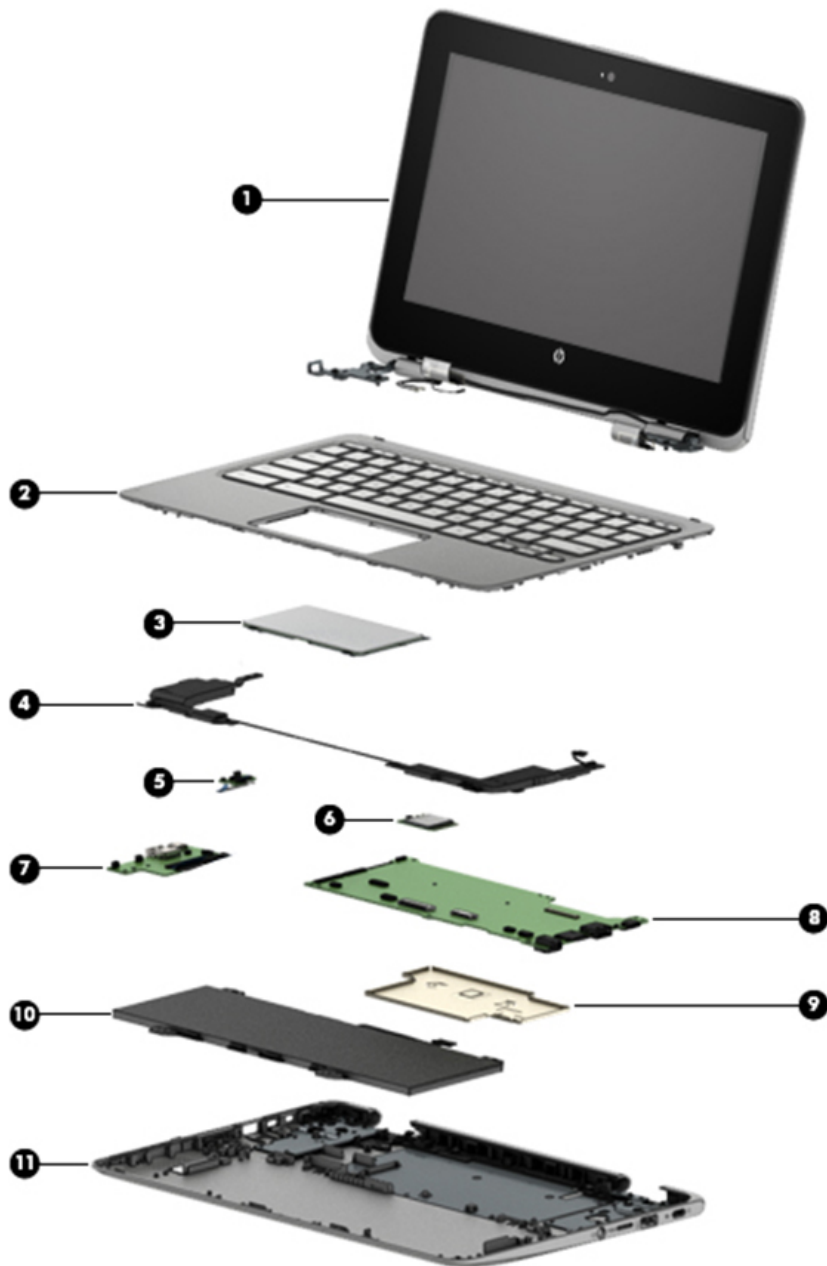
Component	
(1)	HP product name
(2)	Model number
(3)	Product ID
(4)	Serial number
(5)	Warranty period

- **Regulatory label(s)**—Provide(s) regulatory information about the computer.
- **Wireless certification label(s)**—Provide(s) information about optional wireless devices and the approval markings for the countries or regions in which the devices have been approved for use.

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.

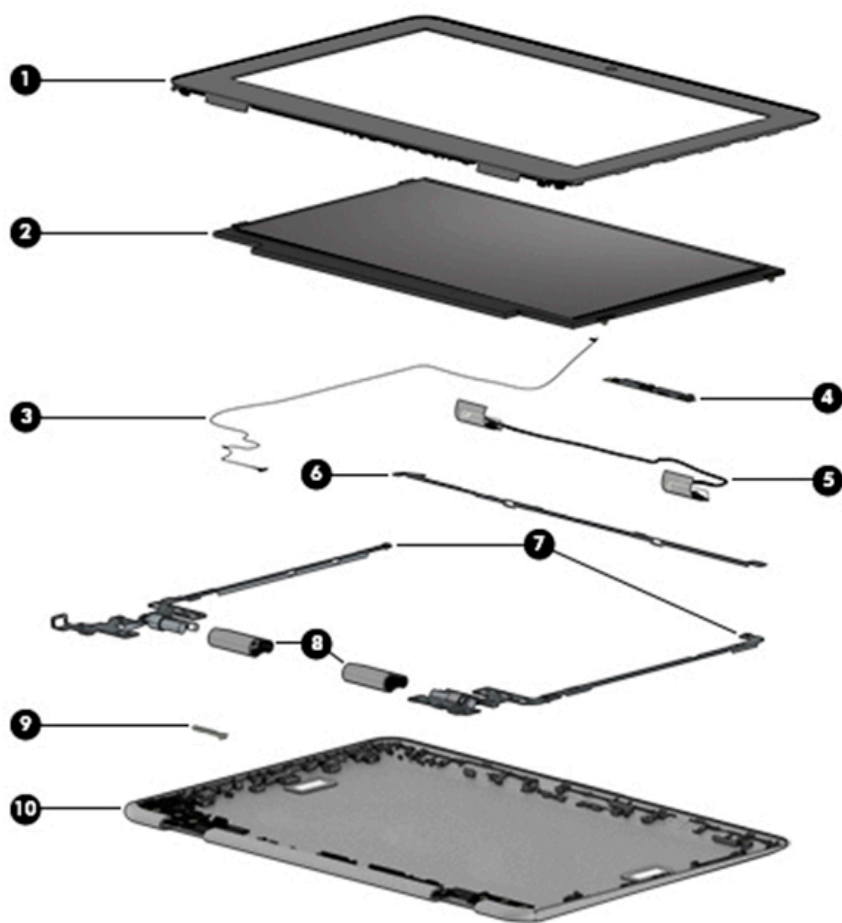
Computer major components



Item	Component	Spare part number
(1)	Display assembly: The display assembly is spared at the subcomponent level only. For more display assembly spare part information, see Display assembly subcomponents on page 12 .	
(2)	Keyboard/top cover (includes keyboard cable):	
	Snow white models for use in the United States	L00457-001
	Snow white (non-rugged) models for use in the United States	L36472-001
	Snow white (non-rugged) models for use in France	L36472-051
	Snow white models for use in the United Kingdom	L00457-031
	Snow white models for use in The Netherlands	L00457-B31
	Snow white models for use in Denmark, Finland, and Norway	L00457-DH1
	Smoke gray models for use in the United States	L01240-001
	Smoke gray models for use in the United Kingdom	L01240-031
	Smoke gray models for use in The Netherlands	L01240-B31
	Smoke gray models for use in Denmark, Finland, and Norway	L01240-DH1
(3)	TouchPad (does not include bracket or cable):	
	For use in snow white models	L00456-001
	For use in smoke grey models	928084-001
	NOTE: The TouchPad bracket is included in the Bracket Kit, spare part number 928089-001.	
	NOTE: The TouchPad cable is available using spare part number 929337-001.	
(4)	Speakers (include cables)	928586-001
(5)	Power button board (does not include cable)	928083-001
	NOTE: The power button board cable available using spare part number 929336-001.	
(6)	WLAN module (Intel Dual Band Wireless-AC 7265 802.11 AC 2×2 WiFi + Bluetooth 4.2 Combo Adapter (non-vPro))	860883-001
(7)	USB port board (does not include cable)	928082-001
	NOTE: The USB port board cable is available using spare part number 929338-001 (high speed) or 929339-001 (low speed).	
(8)	System board (includes processor and replacement thermal material) equipped with:	
	Intel Celeron N3350 processor, 8-GB of system memory, and 64-GB of eMMC storage	927657-001
	Intel Celeron N3350 processor, 8-GB of system memory, and 32-GB of eMMC storage	927656-001
	Intel Celeron processor, 4-GB of system memory, and 64-GB of eMMC storage	927655-001
	Intel Celeron N3350 processor, 4-GB of system memory, and 32-GB of eMMC storage	927654-001
	Intel Celeron N3350 processor, 4-GB of system memory, and 16-GB of eMMC storage	L01750-001
(9)	Heat sink (includes replacement thermal material)	928840-001
(10)	Battery (2-cell, 47-WHr, 6.15-AHr, Li-ion, includes cable)	917725-855
(11)	Base enclosure:	

Item	Component	Spare part number
	For use in snow white models	L00454-001
	For use in snow white (non-rugged) models	L36471-001
	For use in grey models	928079-001

Display assembly subcomponents



Item	Component	Spare part number
(1)	Display bezel	L36467-001
(2)	Display panel	L36473-001
(3)	Webcam/microphone module cable	929334-001
(4)	Webcam/microphone module (includes double-sided adhesive):	929212-001
(5)	Display panel cable	L36468-001
(6)	Top bracket	not spared
(7)	Hinges (left and right):	

Item	Component	Spare part number
	Standard models	L02352-001
	Non-rugged models	L36469-001
(8)	Hinge covers	
	For use in smoke gray models	L03086-001
	For use in snow white models	L03087-001
	For use in snow white (non-rugged) models	L36470-001
(9)	G-sensor board (includes double-sided adhesive)	928081-001
(10)	Display enclosure (includes wireless antenna, rubber padding, and shielding):	
	In snow white finish	L00453-001
	In snow white (non-rugged) finish	L36466-001
	In grey finish	928078-001

Miscellaneous parts

Component	Spare part number
AC adapter (45-W AC adapter USB Type-C straight [non-PFC, 3-pin])	934739-850
Power cord (C5 connector, 1.0-m):	
For use in Australia	L19358-001
For use in Denmark	L19360-001
For use in Europe	L19361-001
For use in India	L19363-001
For use in North America	920688-001
For use in the United Kingdom and Singapore	L19373-001
Mylar	
For use with display panels	L10266-001
For use with display panels (non-rugged)	L36474-001
For use with the battery	L36475-001
For use with the USB board and the power button board	941876-001
Screw Kit	928090-001

4 Removal and replacement procedures preliminary requirements

Tools required

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

- Magnetic screwdriver
- Phillips PH Type #0 and #1 screwdrivers
- Flat-bladed screwdriver

Service considerations

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



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

Plastic parts



CAUTION: Using excessive force during disassembly and reassembly can damage plastic parts. Use care when handling the plastic

Cables and connectors



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

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

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

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

 **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.

CAUTION: This computer does not have user-replaceable parts. Only HP authorized service providers should perform the removal and replacement procedures described here. Accessing the internal part could damage the computer or void the warranty.

Component replacement procedures

 **NOTE:** Details about your computer, including model, serial number, product key, and length of warranty, are on the service tag at the bottom of your computer. See [Labels on page 9](#) for details.

 **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.

There are as many as 47 screws that must be removed, replaced, and/or loosened when servicing Authorized Service Provider only parts. Make special note of each screw size and location during removal and replacement.

Keyboard/top cover

Description	Spare part number
Snow white models for use in the United States	L00457-001
Snow white (non-rugged) models for use in the United States	L36472-001
Snow white (non-rugged) models for use in France	L36472-051
Snow white models for use in the United Kingdom	L00457-031
Snow white models for use in The Netherlands	L00457-B31
Snow white models for use in Denmark, Finland, and Norway	L00457-DH1
Smoke gray models for use in the United States	L01240-001
Smoke gray models for use in the United Kingdom	L01240-031
Smoke gray models for use in The Netherlands	L01240-B31
Smoke gray models for use in Denmark, Finland, and Norway	L01240-DH1

Before disassembling the computer, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.

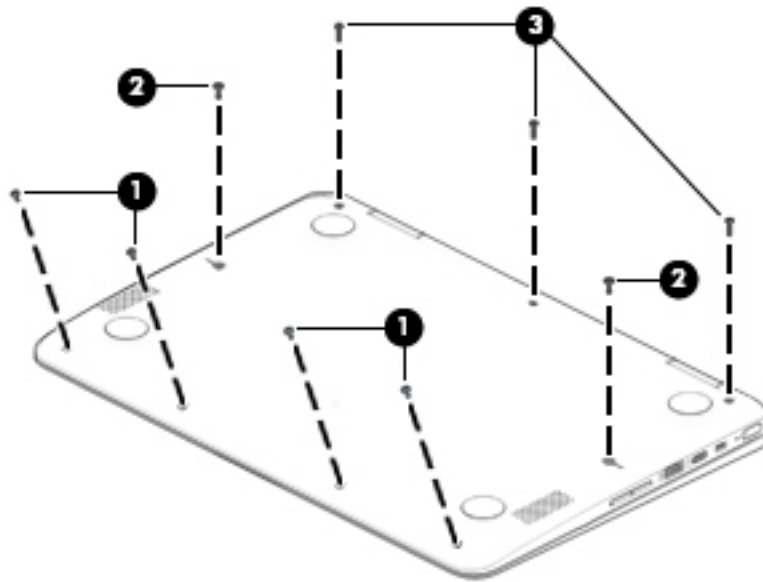
Remove the keyboard/top cover:

1. Turn the computer upside down on a flat surface.
2. Position the computer with the front toward you.
3. Remove the following screws that secure the keyboard/top cover to the base enclosure:

(1) Four Phillips M2.0×5.7 screws

(2) Two Phillips M2.5×7.3 screws

(3) Three Phillips M2.5×8.7 screws

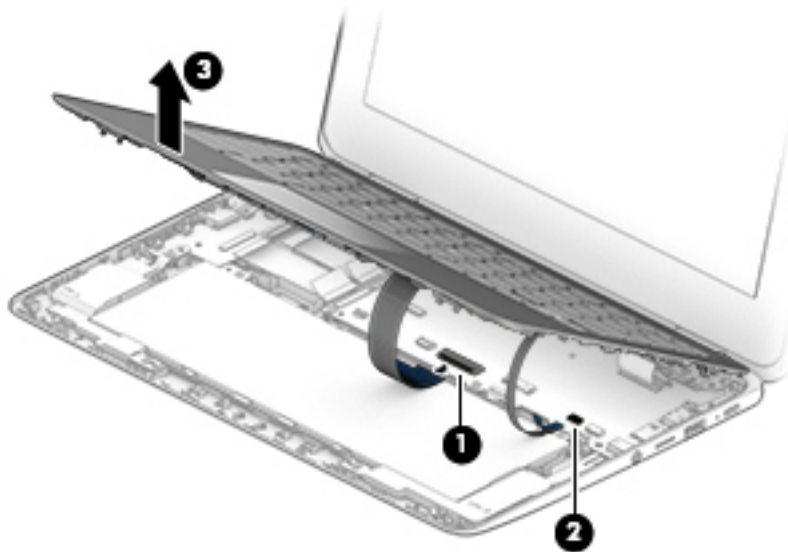


4. Turn the computer upright and open it.
5. Pull upward near the hinges to disengage the top cover **(1)**.

6. Lift the left **(2)**, right **(3)**, and bottom **(4)** sides of the top cover until it releases from the computer.



7. Release the zero insertion force (ZIF) connector **(1)** to which keyboard cable is connected, and then disconnect the keyboard cable from the system board.
8. Release the ZIF connector **(2)** to which TouchPad cable is connected, and then disconnect the TouchPad cable from the system board.
9. Remove the keyboard/top cover **(3)**.



Reverse this procedure to install the keyboard/top cover.

TouchPad cable

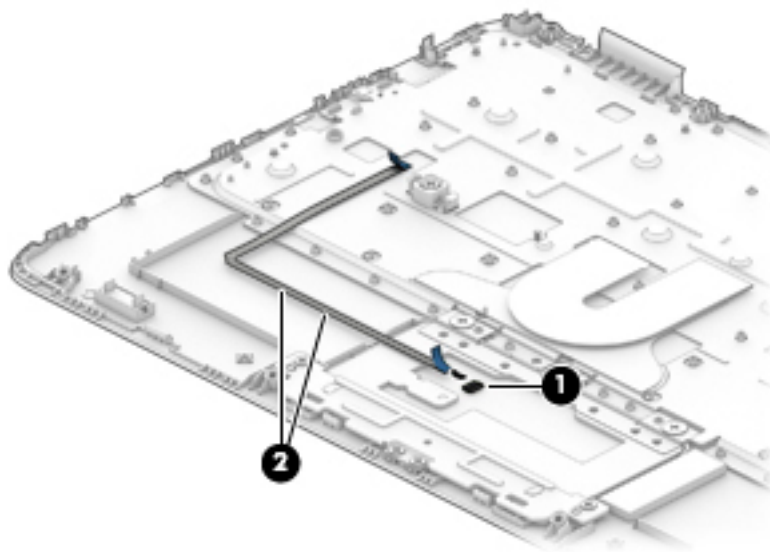
Description	Spare part number
TouchPad cable	929337-001

Before removing the TouchPad cable, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).

Remove the TouchPad cable:

1. Turn the keyboard/top cover upside down with the front toward you.
2. Release the ZIF connector **(1)** to which TouchPad cable is connected, and then disconnect the TouchPad cable from the TouchPad.
3. Detach the TouchPad cable **(2)** from the keyboard/top cover. (The TouchPad cable is attached to the keyboard/top cover with double-sided adhesive.)



4. Remove the TouchPad cable.

Reverse this procedure to install the TouchPad cable.

TouchPad



NOTE: The TouchPad spare part kit does not include the TouchPad bracket of the TouchPad cable. The TouchPad bracket is included in the Bracket Kit, spare part number 928089-001. The TouchPad cable is available using spare part number 929337-001.

Description	Spare part number
TouchPad in smoke grey finish	928084-001
TouchPad in snow white finish	L00456-001

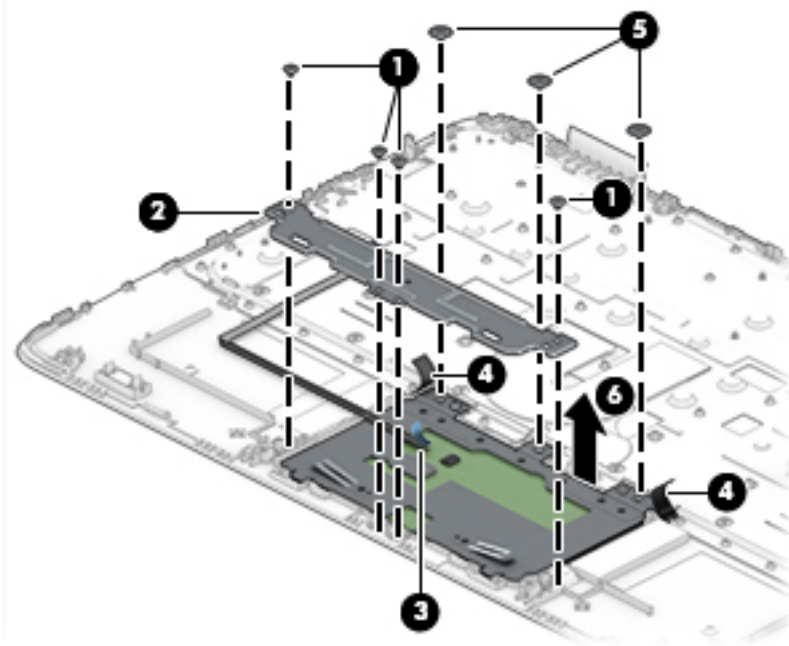
Before removing the TouchPad, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).

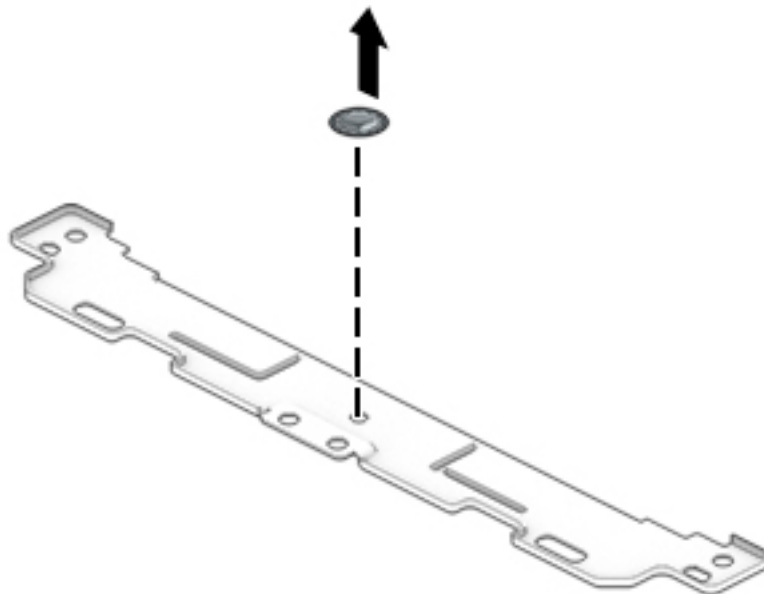
Remove the TouchPad:

1. Turn the keyboard/top cover upside down with the front toward you.
2. Remove the four Phillips M2.0×2.5 screws **(1)** that secure the TouchPad bracket to the keyboard/top cover.
3. Remove the TouchPad bracket **(2)**.
4. Disconnect the TouchPad cable **(3)** from the TouchPad.
5. Lift the two pieces of Mylar from atop the two outer TouchPad screws **(4)**.
6. Remove the three Phillips M2.0×1.8 broad head screws **(5)** that secure the TouchPad to the keyboard/top cover.

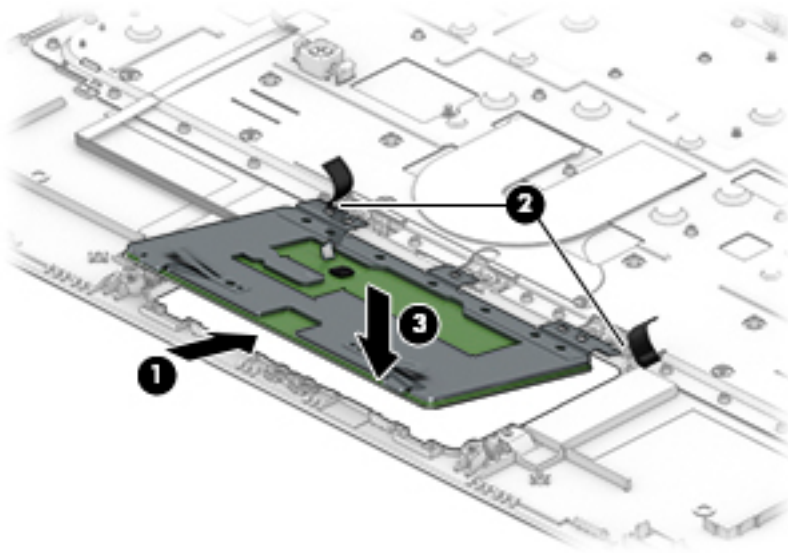
7. Remove the TouchPad from the keyboard/top cover (6).



8. If replacing the TouchPad bracket, remove the rubber piece from the old bracket and install it into the new bracket.



To install the TouchPad, insert the top edge of the TouchPad near the screw holes (1), slide the edge of the TouchPad under the Mylar (2), and then rotate the TouchPad down into place (3).



Replace the bracket, making sure to remove the rubber piece from the old bracket and install into the new bracket.

Speakers

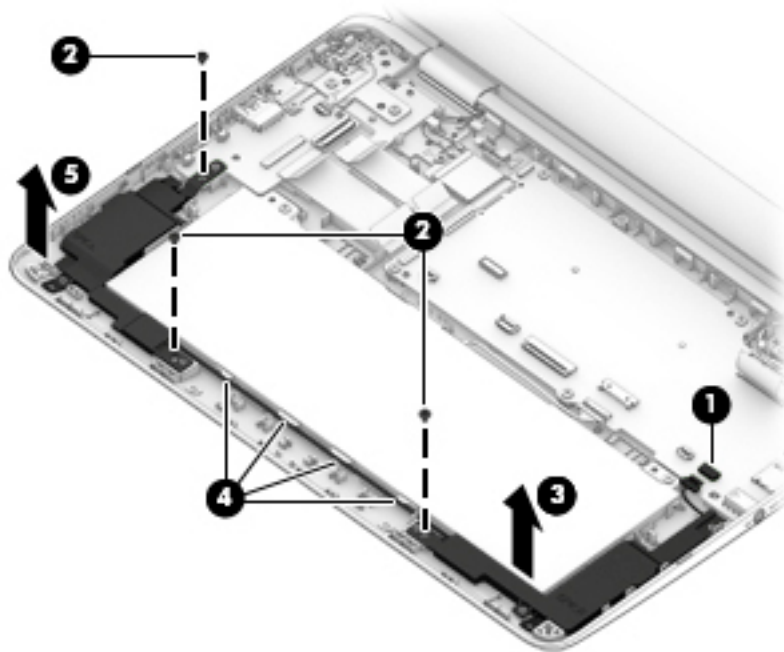
Description	Spare part number
Speakers (include cables)	928586-001

Before removing the speakers, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
3. Disconnect all external devices from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).

Remove the speakers:

1. Disconnect the speaker cable **(1)** from the system board.
2. Remove the three Phillips M2.0×3.5 screws **(2)** that secure the speakers to the base enclosure.
3. Remove the left speaker **(3)**, remove the cable from the clips between the speakers **(4)**, and then remove the right speaker **(5)**.



Reverse this procedure to install the speakers.

Battery

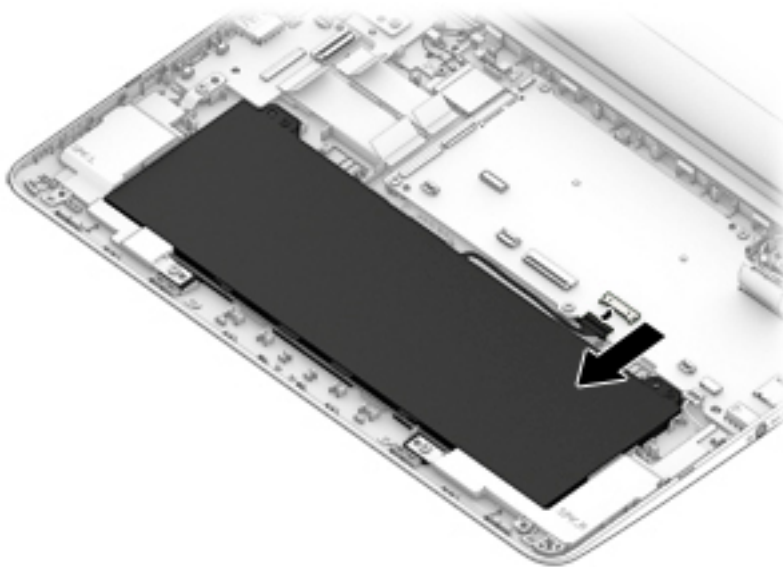
Description	Spare part number
2-cell, 47-WHr, 6.15-AHr, Li-ion battery (includes cable)	917725-855

Before removing the battery, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Remove the speakers (see [Speakers on page 25](#)).

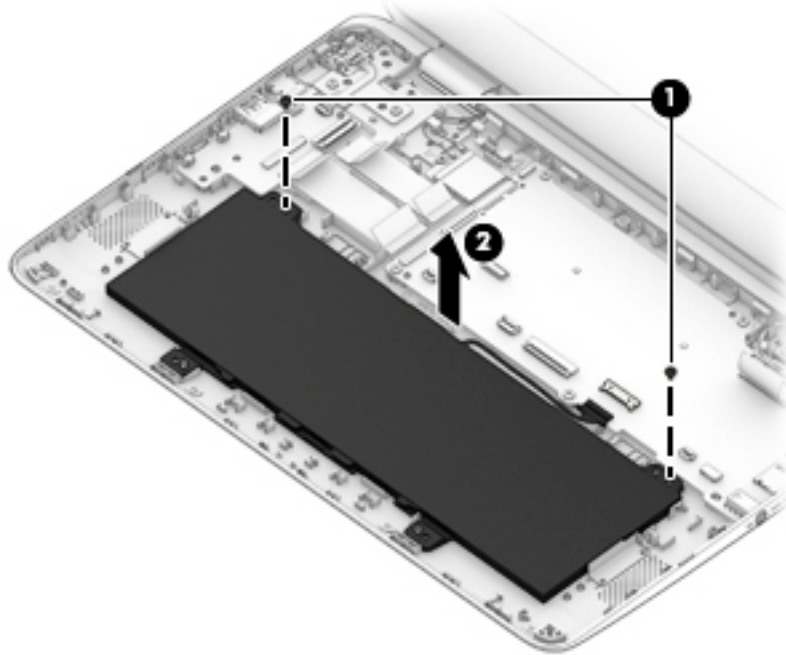
Remove the battery:

1. Disconnect the battery cable from the system board.



2. Remove the two Phillips M2.0×3.5 screws **(1)** that secure the battery to the base enclosure.


3. Remove the battery (2).



Reverse this procedure to install the battery.

WLAN module

Description	Spare part number
Intel Dual Band Wireless-AC 7265 802.11 AC 2×2 WiFi + Bluetooth 4.2 Combo Adapter (non-vPro)	860883-001


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

Before removing the WLAN module, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
3. Disconnect all external devices from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).

Remove the WLAN module:

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

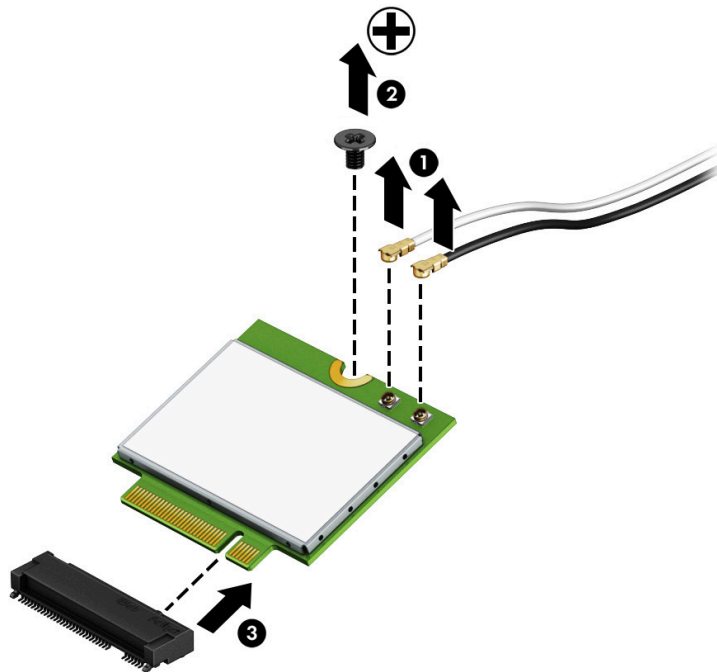
 **NOTE:** The WLAN antenna cable labeled "1/MAIN" connects to the WLAN module "Main" terminal. The WLAN antenna cable labeled "2/AUX" connects to the WLAN module "Aux" terminal.

2. Remove the Phillips M2.0×2.5 screw **(2)** that secures the WLAN module to the computer. (The WLAN module tilts up.)

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



NOTE: WLAN modules are designed with a notch to prevent incorrect insertion.



Reverse this procedure to install the WLAN module.

USB port board cable

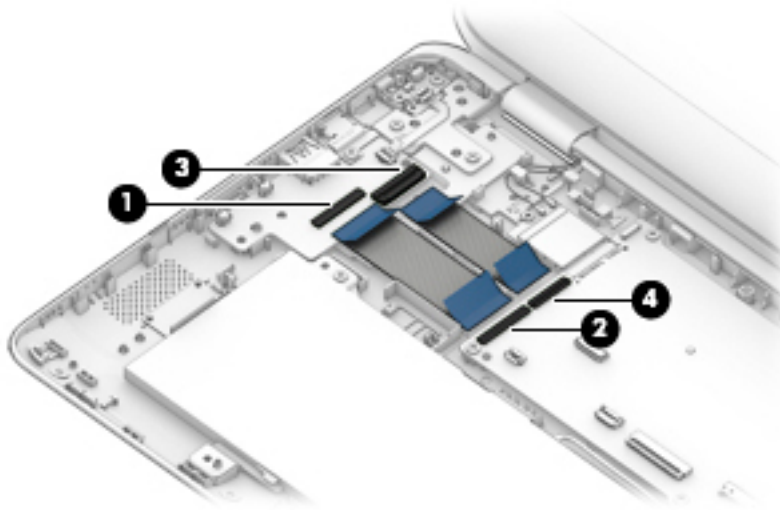
Description	Spare part number
USB port board cable (high speed)	929338-001
USB port board cable (low speed)	929339-001

Before removing the USB port board cables, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).

Remove the USB port board cables:

1. Release the ZIF connector **(1)** to which the USB port cable is connected, and then disconnect the USB port cable from the USB port board.
2. Release the ZIF connector **(2)** to which the USB port cable is connected, and then disconnect the USB port cable from the system board.
3. Release the ZIF connector **(3)** to which the USB Type-C port cable is connected, and then disconnect the USB Type-C port cable from the USB port board.
4. Release the ZIF connector **(4)** to which the USB Type-C port cable is connected, and then disconnect the USB Type-C port cable from the system board.



5. Remove the USB port board cables.

Reverse this procedure to install the USB port board cables.

USB port board

Description	Spare part number
USB port board (includes USB port, and volume control actuators; does not include cables)	928082-001
NOTE: The USB port board cable is available using spare number 929338-001 (high speed) and 929339-001 (low speed).	

Before removing the USB port board, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).

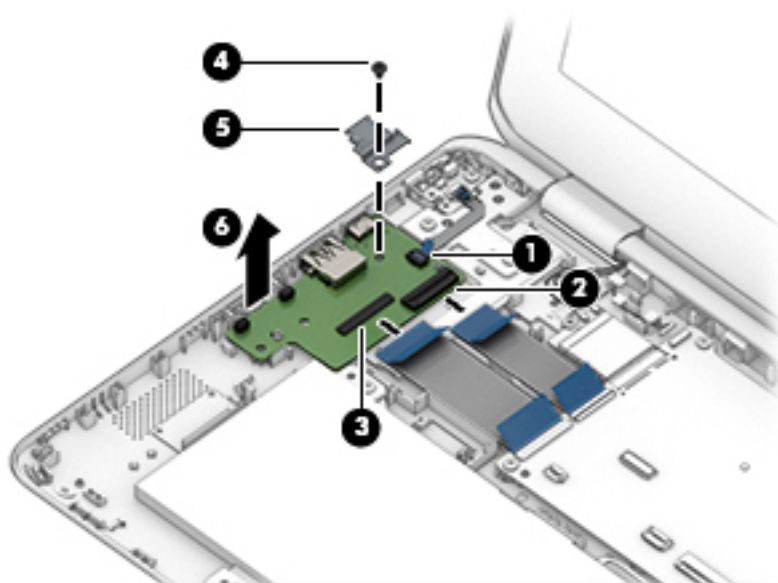
Remove the USB port board:

1. Release the ZIF connector **(1)** to which the power button board cable is connected, and then disconnect the power button board cable from the USB port board.
2. Release the ZIF connector **(2)** to which the USB Type-C port cable is connected, and then disconnect the USB Type-C port cable from the USB port board.
3. Release the ZIF connector **(3)** to which the USB port cable is connected, and then disconnect the USB port cable from the USB port board.
4. Remove the Phillips M2.0×3.5 screw **(4)** that secures the USB port board to the base enclosure.
5. Remove the USB Type-C bracket **(5)**.

 **NOTE:** The USB Type-C bracket is included in the Bracket Kit, spare part number 928089-001.

 **IMPORTANT:** Be sure to replace the black tape atop the bracket.

6. Remove the USB port board **(6)**.



Reverse this procedure to install the USB port board.

Power button board cable

Description	Spare part number
Power button board cable	929336-001

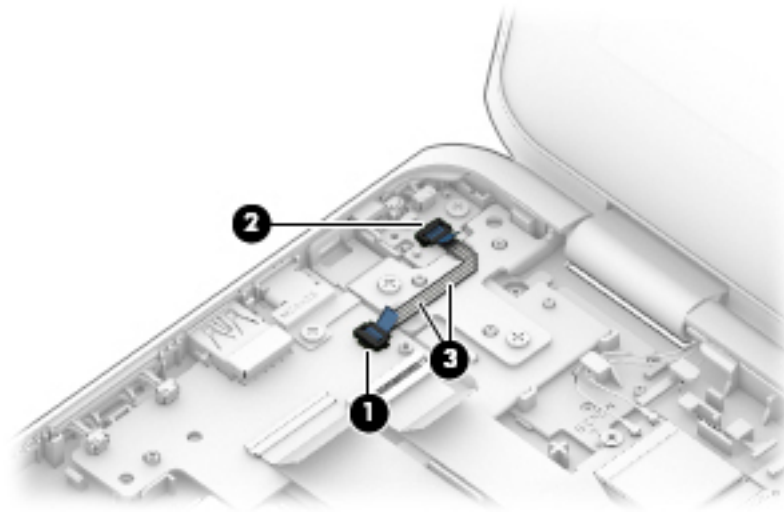
Before removing the power button board cable, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.

4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).

Remove the power button board cable:

1. Release the ZIF connector (1) to which power button board cable is connected, and then disconnect the power button board cable from the USB port board.
2. Release the ZIF connector (2) to which power button board cable is connected, and then disconnect the power button board cable from the power button board.
3. Detach the power button board cable (3) from the display hinge. (The power button board cable is attached to the display hinge with double-sided adhesive.)



4. Remove the power button board cable.

Reverse this procedure to install the power button board cable.

Power button board

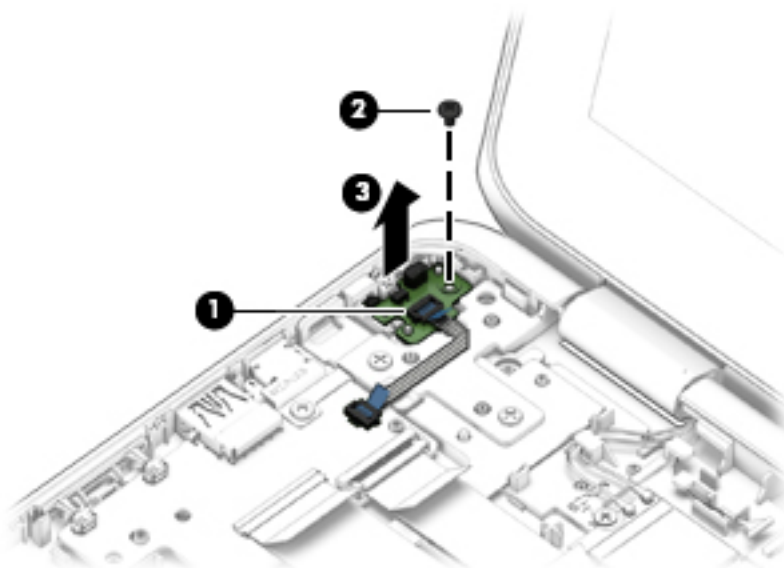
Description	Spare part number
Power button board (does not include cable)	928083-001
NOTE: The power button board cable is available using spare part number 929336-001.	

Before removing the power button board, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).

Remove the power button board:

1. Release the ZIF connector **(1)** to which power button board cable is connected, and then disconnect the cable from the power button board.
2. Remove the Phillips M2.0×3.5 screw **(2)** that secures the power button board to the base enclosure.
3. Remove the power button board **(3)**.



Reverse this procedure to install the power button board.

System board



NOTE: All system board spare part kits include a processor and replacement thermal material.

Description	Spare part number
System board equipped with an Intel Celeron N3350 processor, 8-GB of system memory, and 64-GB of eMMC storage	927657-001
System board equipped with an Intel Celeron N3350 processor, 8-GB of system memory, and 32-GB of eMMC storage	927656-001
System board equipped with an Intel Celeron processor, 4-GB of system memory, and 64-GB of eMMC storage	927655-001
System board equipped with an Intel Celeron N3350 processor, 4-GB of system memory, and 32-GB of eMMC storage	927654-001
System board equipped with an Intel Celeron N3350 processor, 4-GB of system memory, and 16-GB of eMMC storage	L01750-001

Before removing the system board, follow these steps:

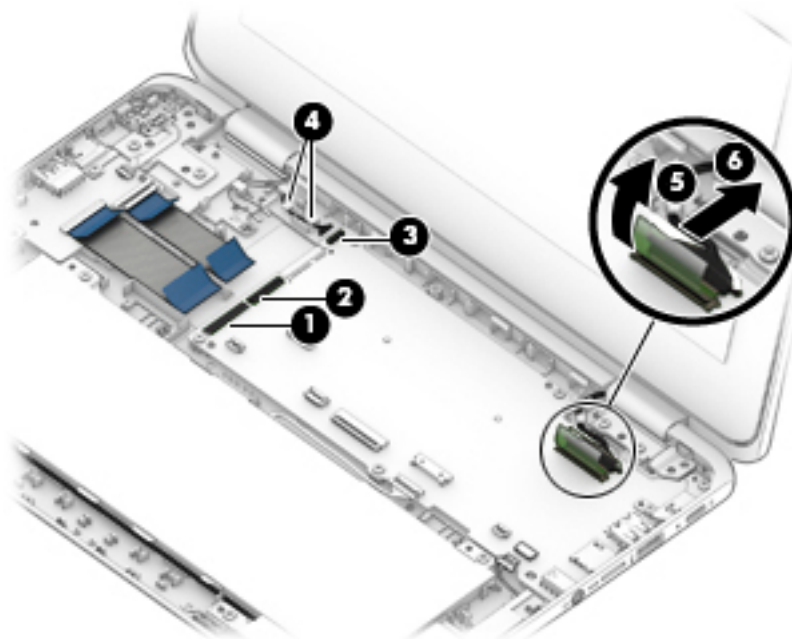
1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.

4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).
6. Remove the WLAN module (see [WLAN module on page 28](#)).

When replacing the system board, be sure to remove the heat sink (see [Heat sink on page 36](#)) from the defective system board and install it on the replacement system board.

Remove the system board:

1. Release the ZIF connector **(1)** to which the USB port cable is connected, and then disconnect the USB port cable from the system board
2. Release the ZIF connector **(2)** to which the USB Type-C port cable is connected, and then disconnect the USB Type-C port cable from the system board.
3. Disconnect the camera cable **(3)** from the system board.
4. Release the camera cable from the retention clips **(4)** and routing channel built into the base enclosure.
5. Release the adhesive support strip **(5)** the secures the display panel cable to the system board.
6. Disconnect the display panel cable **(6)** from the system board.

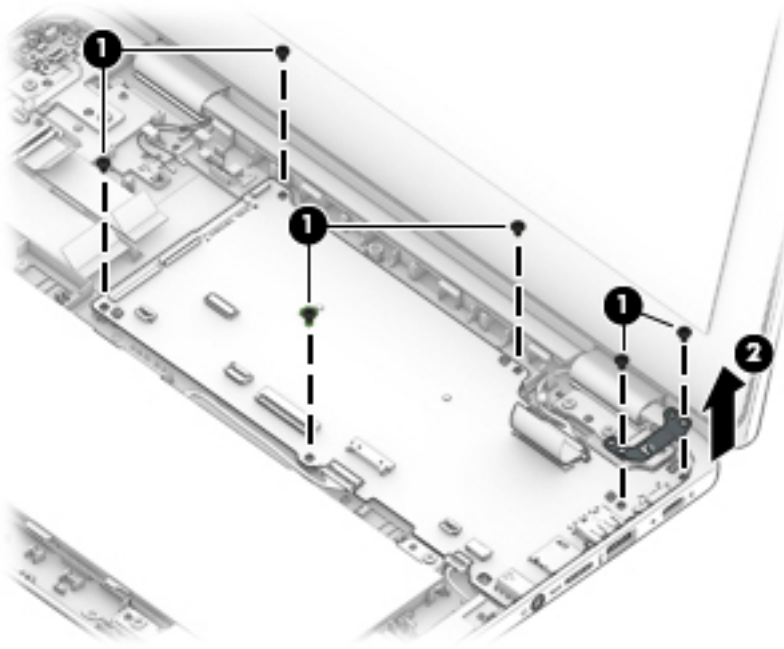


7. Remove the six Phillips M2.0×3.5 screws **(1)** that secure the system board to the base enclosure.

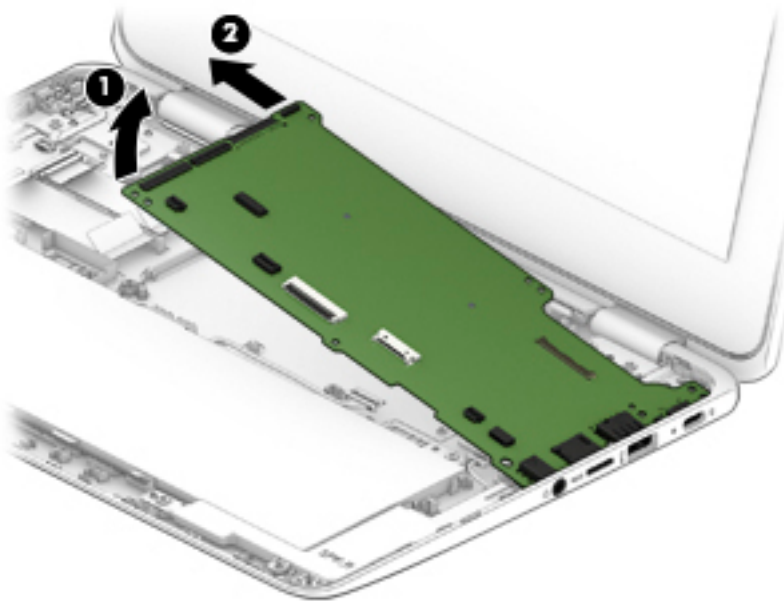
8. Remove the USB Type-C bracket (2).



NOTE: The USB Type-C bracket is included in the Bracket Kit, spare part number 928089-001.



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



Reverse this procedure to install the system board.

Heat sink

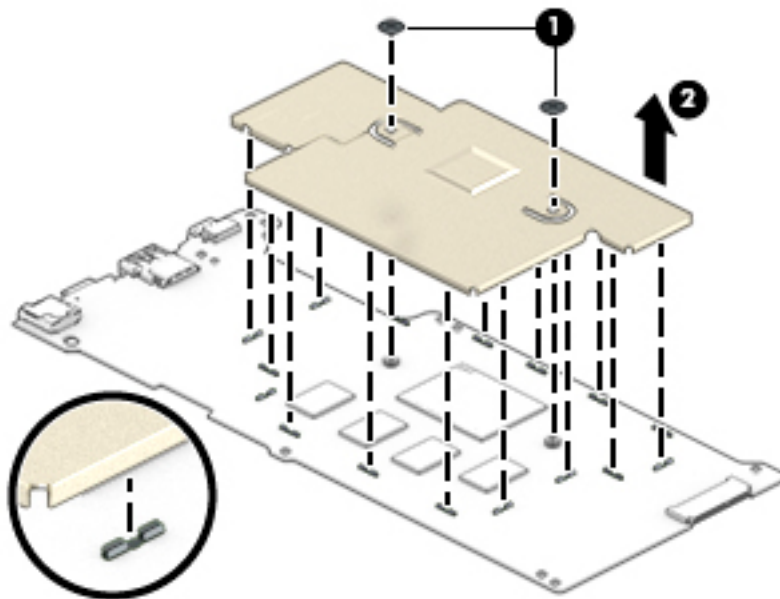
Description	Spare part number
Heat sink (includes replacement thermal material)	928840-001

Before removing the heat sink, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
3. Disconnect all external devices from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).
6. Remove the WLAN module (see [WLAN module on page 28](#)).
7. Remove the system board (see [System board on page 33](#)).

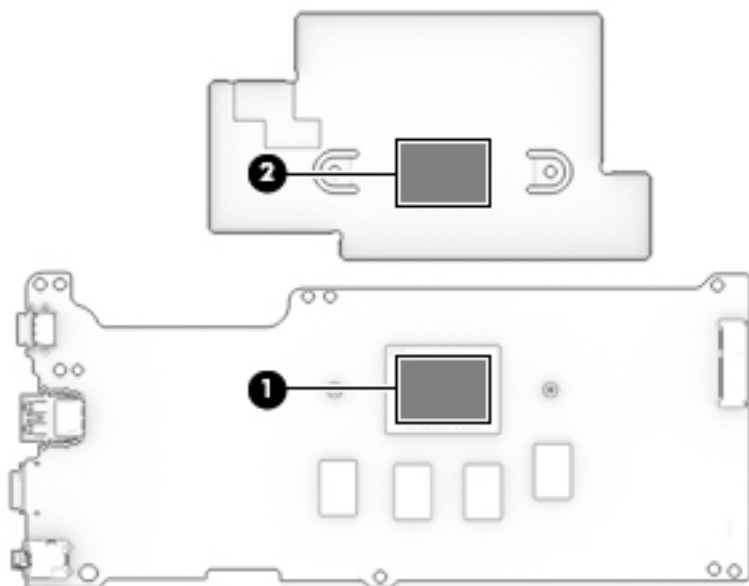
Remove the heat sink:

1. Turn the system board upside down with the front toward you.
2. Remove the two Phillips M2.0×2.2 broad head screws **(1)** that secure the heat sink to the system board.
3. Remove the heat sink **(2)**.



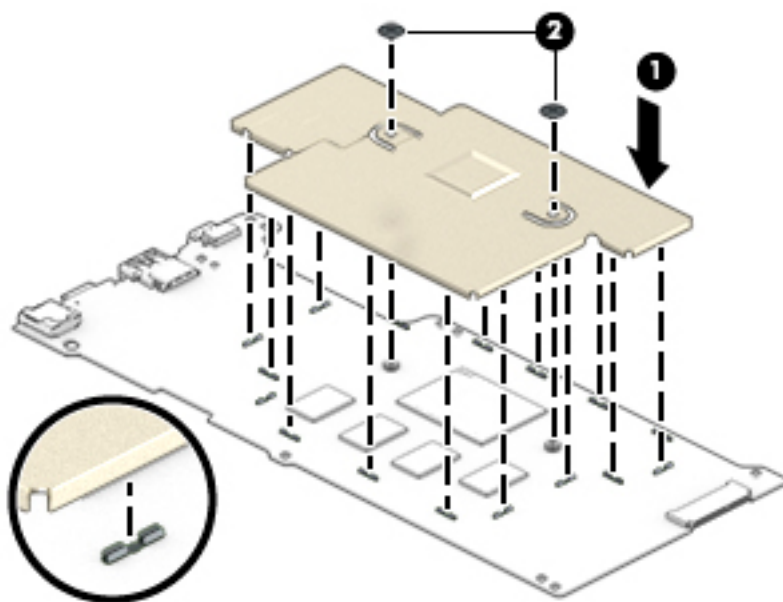
NOTE: The thermal material must be thoroughly cleaned from the surfaces of the heat sink and the system board components each time the heat sink is removed. Replacement thermal material is included with the heat sink and system board spare part kits.

Thermal paste is used on the processor **(1)** and the heat sink section **(2)** that services it.



Reverse this procedure to install the heat sink.

When installing the heat sink, install the edges of the heat sink into the small clips on the system board **(1)**, and then replace the screws **(2)**.



Display assembly



NOTE: The display assembly is spared at the subcomponent level. For display assembly spare part information, see the individual removal subsections.

Before removing the display assembly, follow these steps:

1. Shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power from the computer by first unplugging the power cord from the AC outlet, and then unplugging the AC adapter from the computer.
4. Remove the keyboard/top cover (see [Keyboard/top cover on page 18](#)).
5. Disconnect the battery cable from the system board (see [Battery on page 26](#)).

Remove the display assembly:

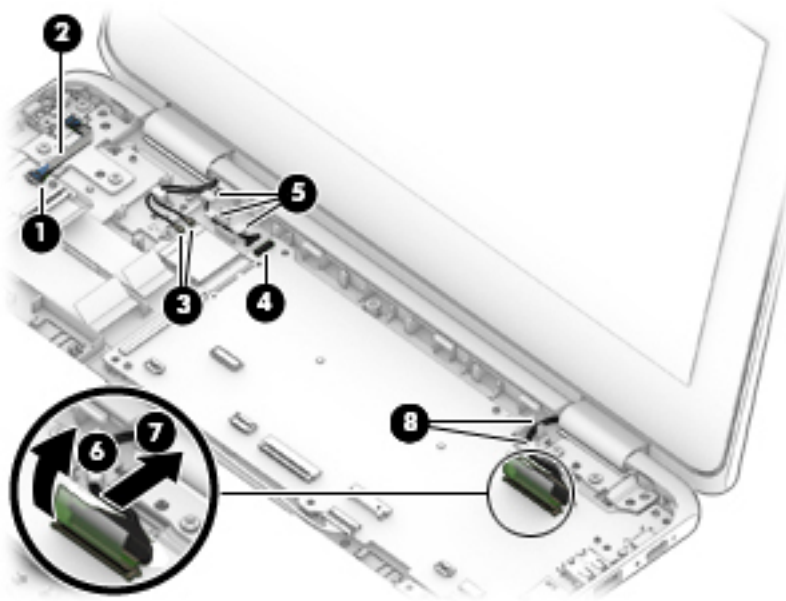
1. Release the ZIF connector **(1)** to which power button board cable is connected, and then disconnect the power button board cable from the USB port board.
2. Detach the power button board cable **(2)** from the display hinge. (The power button board cable is attached to the display hinge with double-sided adhesive.)
3. Disconnect the WLAN antenna cables **(3)** from the terminals on the WLAN module.



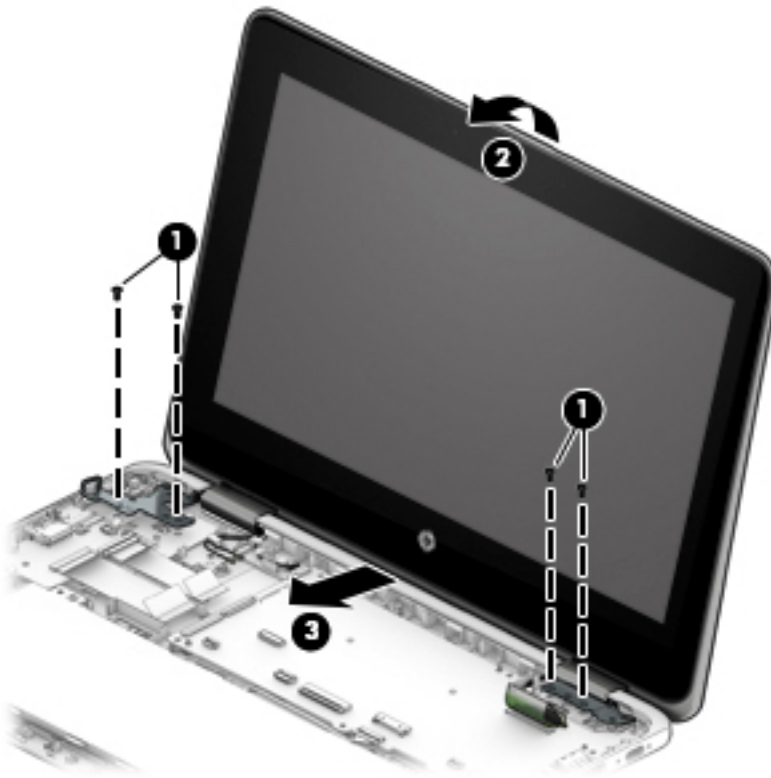
NOTE: The WLAN antenna cable labeled "1/MAIN" connects to the WLAN module "Main" terminal. The WLAN antenna cable labeled "2/AUX" connects to the WLAN module "Aux" terminal.

4. Disconnect the camera cable **(4)** from the system board.
5. Release the camera cable from the retention clips **(5)** and routing channel built into the base enclosure.
6. Release the adhesive support strip **(6)** the secures the display panel cable to the system board.
7. Disconnect the display panel cable **(7)** from the system board.

8. Release the display panel cable from the retention clips **(8)** and routing channel built into the base enclosure.



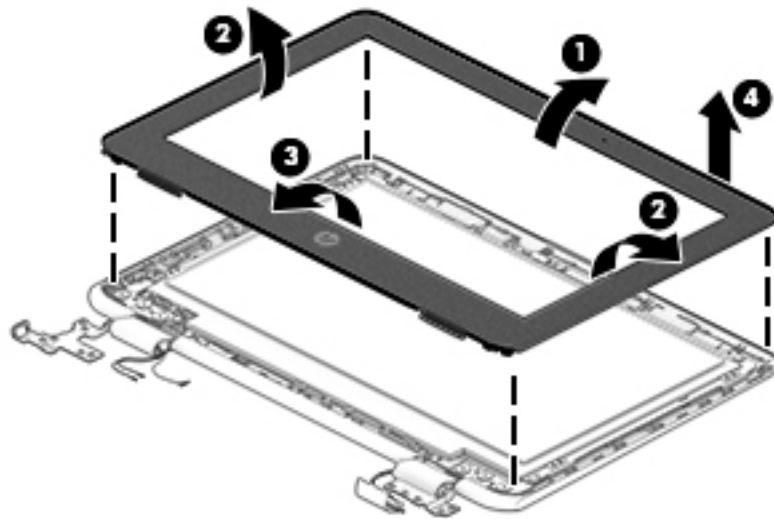
9. Remove the four Phillips M2.5×4.5 screws **(1)** that secure the display assembly to the base enclosure.
10. Tilt the top edge of the display assembly **(2)** slightly forward to release the hinges from the base enclosure.
11. Slide the display assembly **(3)** forward and remove it.



12. If it is necessary to replace the display panel assembly or any of the display assembly subcomponents:

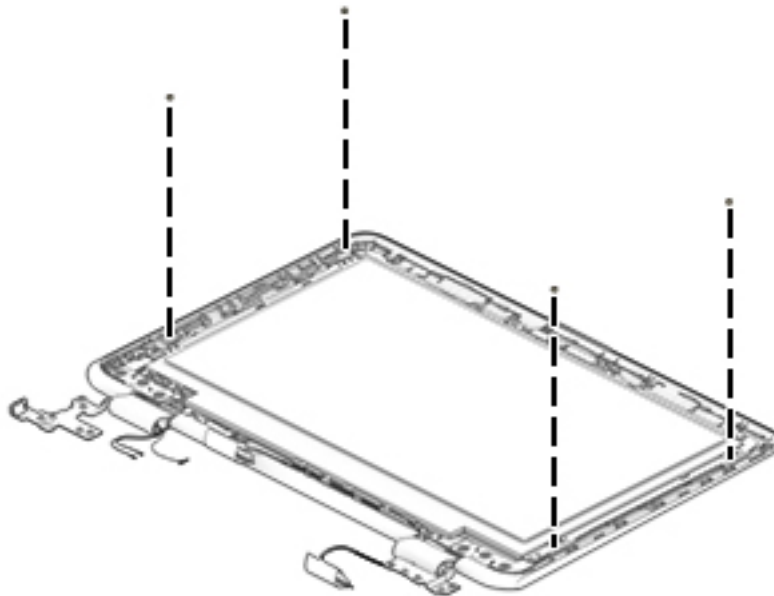
- a. Release the top edge of the display bezel **(1)** from the display assembly.
- b. Release the left and right edges of the display bezel **(2)** from the display assembly.
- c. Release the bottom edge of the display bezel **(3)** from the display assembly.
- d. Remove the display bezel **(4)** from the display assembly.

The display bezel is available using spare part number L36467-001.



13. If it is necessary to replace the display panel:

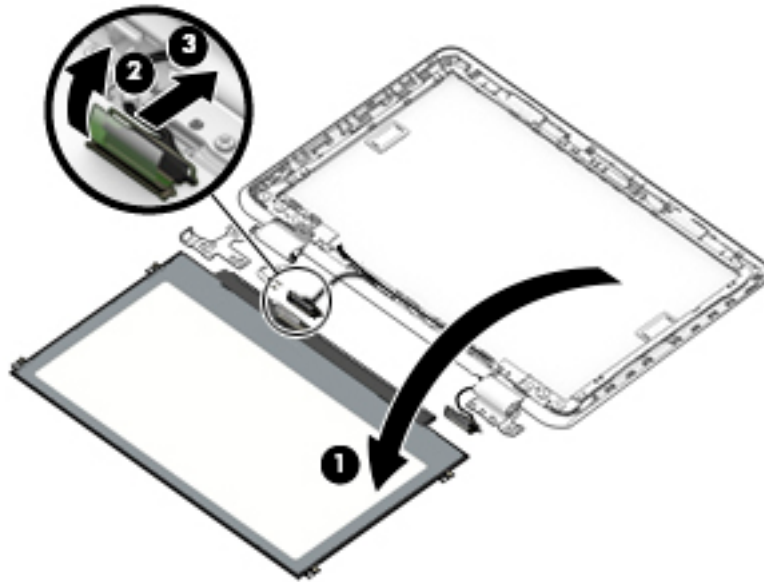
- a. Remove the four Phillips M2.0×2.5 screws that secure the display panel to the display back cover.



- b. Swing the top edge of the display panel **(1)** up and forward until the panel rests upside down next to the display enclosure.
- c. Release the adhesive support strip **(2)** that secures the display panel cable connector to the display panel.

- d. Disconnect the display panel cable **(3)** from the display panel.

The display panel is available using spare part number L36473-001.



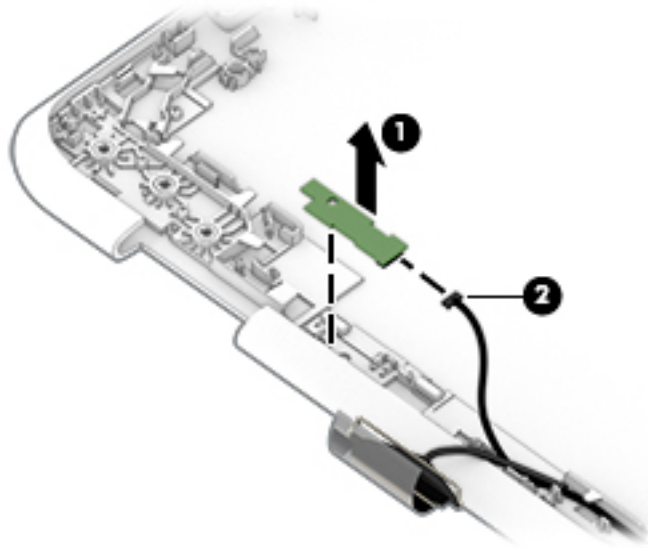
14. If it is necessary to replace the G-sensor board:



NOTE: The G-sensor board can be removed and replaced without removing the display assembly from the base enclosure.

- ▲ Detach the G-sensor board from the display panel assembly **(1)**, and then disconnect the cable from the board **(2)**. (The G-sensor board is attached to the display panel assembly with double-sided adhesive.)

The G-sensor board is available using spare part number 928081-001.

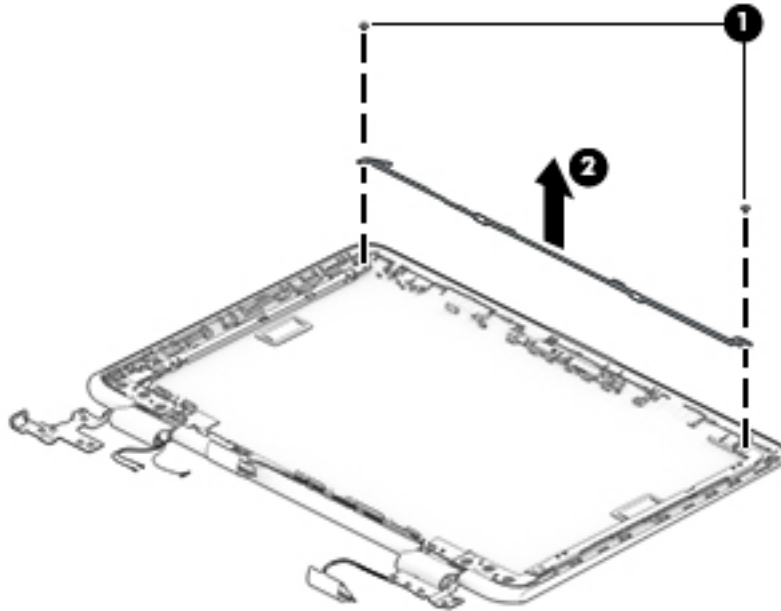


15. If it is necessary to remove the top bracket from the display:




NOTE: You must remove the top bracket to remove the webcam/microphone module and display hinges/brackets.

- a. Remove the two Phillips M2.0×2.5 screws **(1)** that secure the top bracket to the display back cover
- b. Lift the bracket out of the display **(2)** from the webcam/microphone module.

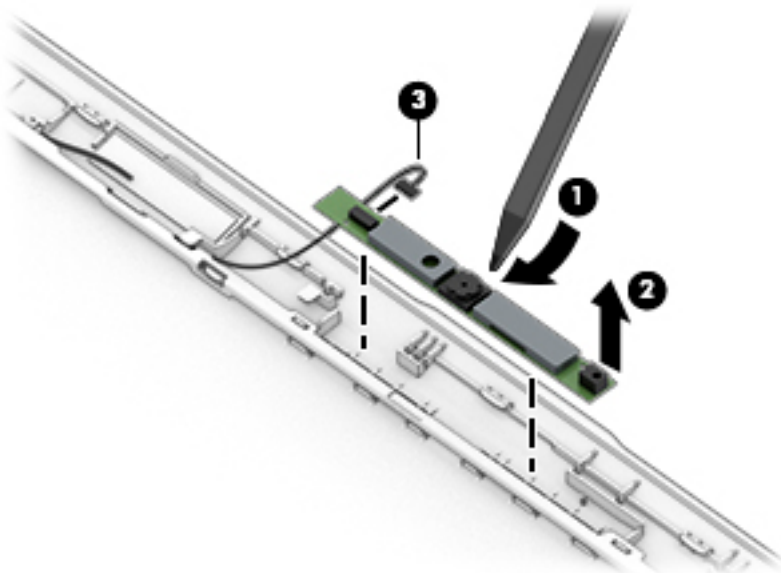


16. If it is necessary to replace the webcam/microphone module:

 **NOTE:** The webcam/microphone module can be removed and replaced without removing the display assembly from the base enclosure.

- a. Detach the webcam/microphone module **(1)** from the display back cover. (The webcam/microphone module is attached to the display back cover with double-sided adhesive.)
- b. Lift the module enough to access the cable **(2)**, and then disconnect the cable **(3)** from the webcam/microphone module.

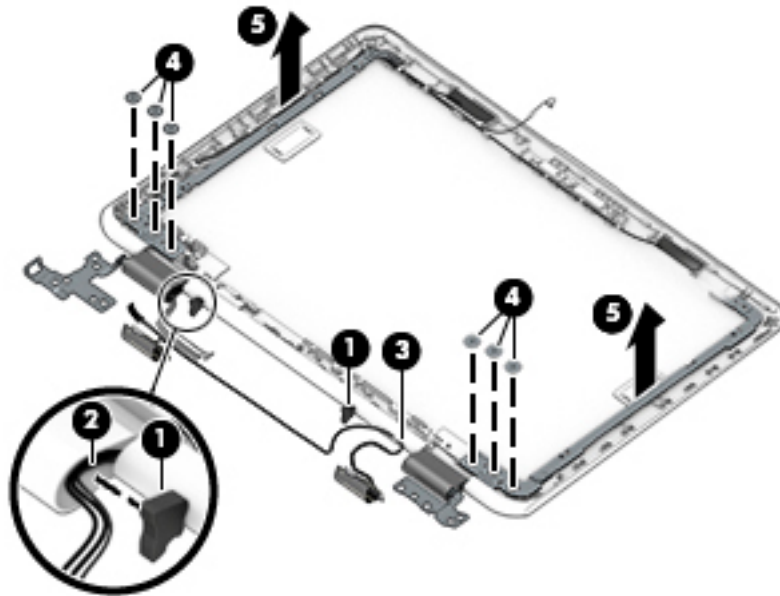
The webcam/microphone module is available using spare part number 929212-001.



17. If it is necessary to replace the display hinges:

- a. Remove the display panel assembly.
- b. Remove the rubber inserts **(1)** that secure the display panel cable, camera cable, and wireless antenna cables inside the display hinges.
- c. Release the wireless antenna cables **(2)** and camera cable and the display panel cable **(3)** from the cavities inside the display hinges.
- d. Remove the six Phillips M2.5×3.0 broad head screws **(4)** that secure the hinges to the display back cover.
- e. Remove the display hinges **(5)**.

The display hinges are available using spare part numbers L02352-001 for standard models and L36469-001 for non-rugged models.

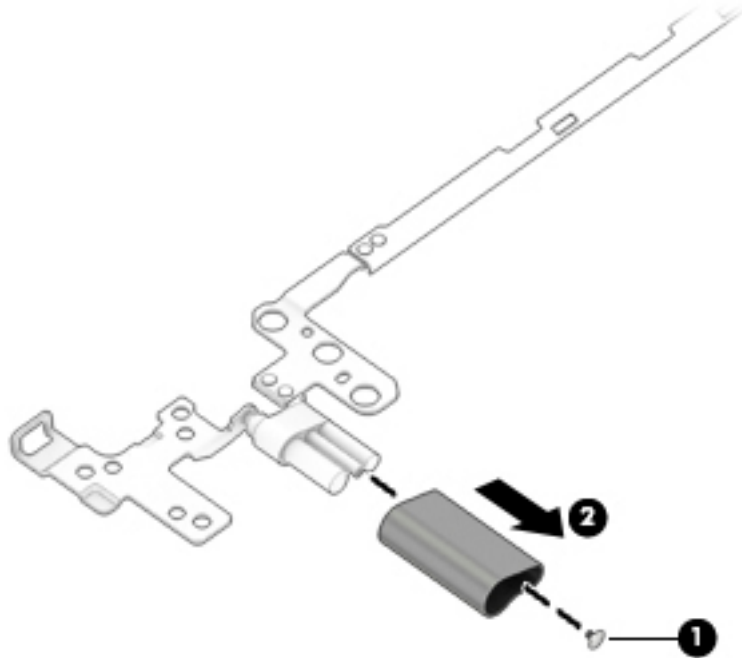


18. If it is necessary to replace the hinge covers from the hinges:

- a. Remove the Phillips M2.0×2.2 screw **(1)** that secures the hinge cover to the hinge.

- b.** Remove the hinge cover **(2)**.

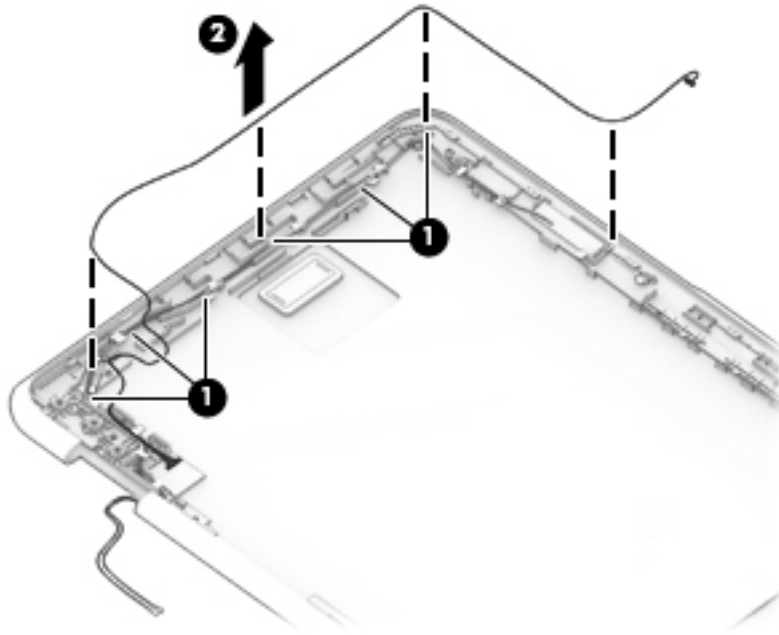
The display hinge covers are available using spare part number L03086-001 for smoke gray models, L03087-001 for snow white models, and L36470-001 for snow white (non-rugged) models.



- 19.** If it is necessary to replace the webcam/microphone module cable:
 - a.** Remove the display panel assembly.
 - b.** Remove the webcam/microphone module.
 - c.** Release the webcam/microphone module cable from the retention clips **(1)** and routing channel built into the top, left, and bottom edges of the display back cover.

- d. Remove the webcam/microphone module cable (2).

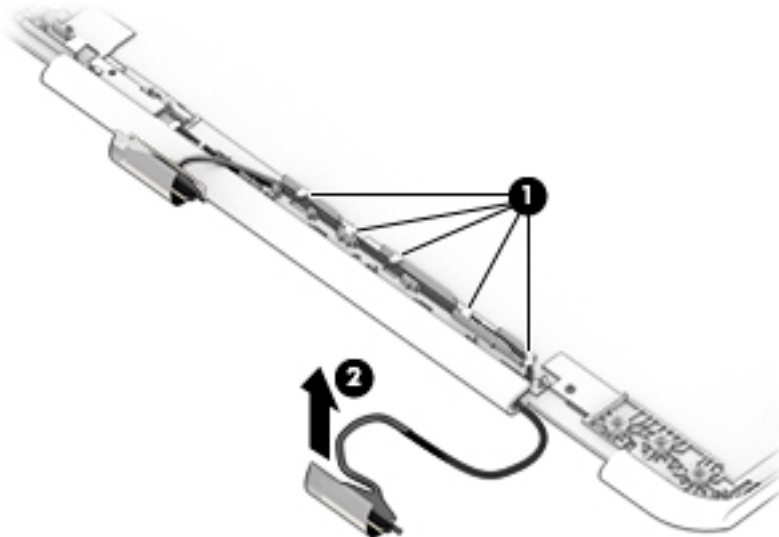
The webcam/microphone module cable is available using spare part number 929334-001.



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

- a. Release the cable from the retention clips (1) and routing channel built into the bottom edge of the display back cover.
- b. Remove the display panel cable (2).

The display panel cable is available using spare part number L36468-001.



Reverse this procedure to reassemble and install the display assembly.

6 Backing up, resetting, and recovering

Backing up

You can back up your data to an optional flash drive or SD memory card or through Google Drive. For detailed information on creating a backup, go to <http://www.support.google.com>.

Resetting

A factory reset erases all the information on your computer hard drive, including all the files in the Downloads folder. Before you reset, make sure to back up your files to an optional flash drive, SD memory card, or through Google Drive. The factory reset won't delete any of your files on Google Drive or an external storage device.



IMPORTANT: Resetting permanently erases everything on your computer hard drive, including your downloaded files. If possible, back up your files before you reset your computer.

You might want to reset your computer in the following circumstances:

- You see the message "Reset this Chrome device"
- You are having problems with your user profile or settings
- You have tried restarting your computer and it's still not working properly
- You want to change the owner of your computer

To reset your computer:

1. Under the **Settings** menu, click **Advanced**.
2. In the **Powerwash** section, click **Powerwash**.
3. Click **Restart**, and then sign in with your Google Account.



NOTE: The account you sign in with after you reset your computer will be recognized as the owner account.

4. Follow the on-screen instructions to reset your computer.
5. Once you complete the reset, you can set up your computer and check to see whether the problem is fixed.

Recovering

When your computer operating system isn't working properly, you can perform a recovery. A recovery reinstalls the operating system and software programs and restores the original factory settings. Locally saved files and saved networks are deleted for all accounts. Your Google Accounts and any data synced to your Google Drive are not affected by a system recovery.



IMPORTANT: Recovery permanently erases everything on your computer hard drive, including your downloaded files. If possible, back up your files before you recover your computer.



NOTE: For more information on performing a system recovery on your computer, go to <http://www.support.google.com>.

Before beginning the recovery process, you need the following:

- A flash drive or SD memory card with a capacity of 4 GB or greater. All data is erased from this storage device when the recovery media is created, so back up any files from the device before you begin.
- A computer with Internet access. You must also have administrative rights to the computer.
- Computer AC adapter. The computer must be plugged into AC power during recovery.
- The “Chrome OS is missing or damaged” screen displaying on your computer. If this message is not already displayed:
 - Turn on the computer, press and hold the **esc+f3** keys, and then press the power button. The computer restarts, and the screen shows the “Chrome OS is missing or damaged” screen.

Installing the Chromebook Recovery Utility

The Chromebook Recovery Utility is an app used to recover the original operating system and software programs that were installed at the factory. This utility can be installed from the Chrome Web store on any computer.

To install the Chromebook Recovery Utility:

- ▲ Open the Chrome Web Store, search for `chrome recovery`, click **Chromebook Recovery Utility** from the Apps list, and follow the on-screen instructions.

Creating recovery media

Recovery media is used to recover the original operating system and software programs that were installed at the factory.

To create recovery media:

1. Turn on a computer with Internet access.
-
2. Click the **Launcher** icon, and then click **All Apps**.
 3. In the Apps window, click **Recovery**, and then click **Get started**.
 4. Follow the on-screen instructions to create the recovery media.
-



NOTE: You must have administrative rights to the computer.



NOTE: All data and partitions on your recovery media will be deleted. Do not remove the flash drive or SD memory card until the process is complete.

Recovering the Chrome operating system

To recover the Chrome operating system on your computer using the recovery media you created:

1. Disconnect any external devices connected to your computer, plug in the power cord, and then turn on the computer.
2. To enter recovery mode, press and hold **esc+f3**, and then press the power button. When the “Chrome OS is missing or damaged” screen displays, insert the recovery media into your computer. The recovery process begins immediately.
3. Wait while Chrome verifies the integrity of the recovery media.



NOTE: If you need to cancel the recovery during the verification process, press and hold the power button until the computer turns off. Do not disrupt the system recovery process after the verification step is complete.



NOTE: If an error message displays, you might need to run the Chrome Recovery Utility again, or use a different flash drive or SD memory card.

4. When the “System Recovery is complete” message displays, remove the recovery media.

The computer restarts with Chrome OS reinstalled.

Setting up your computer after a reset or recovery

After a reset or recovery is complete, perform the initial setup process. For details on setting up the computer, go to <http://www.support.google.com>.

Erase and reformat the recovery media

During the process of creating recovery media, the flash drive or SD memory card is formatted for use as a recovery tool. After you recover your computer, you will need to erase the recovery media if you want to reuse your flash drive or SD memory card to store other files. Use the steps in this section to erase the recovery media using the Chromebook Recovery Utility.

1. Click the **Launcher** icon, and then click **All Apps**.
2. In the apps window, click **Recovery**.
3. Click the **Settings** icon, and then click **Erase recovery media**.
4. Select the flash drive or SD memory card you inserted, click **Continue**, and then click **Erase now**.
5. After the recovery media is erased, click **Done** to close the Chromebook Recovery Utility, and then remove the flash drive or SD memory card.

The media is ready to be formatted using a formatting tool provided by your operating system.

7 Specifications

	Metric	U.S.
Computer dimensions		
Width	306 mm	12.04 in
Depth	208.8 mm	8.19 in
Height	19.5 mm	0.76 in
Weight	1406 g	3.1 lbs
Temperature		
Operating	5°C to 35°C	41°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	
Nonoperating	5% to 95%	
Maximum altitude (unpressurized)		
Operating	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating	-15 m to 12,192 m	-50 ft to 40,000 ft
NOTE: Applicable product safety standards specify thermal limits for plastic surfaces. The device operates well within this range of temperatures.		

8 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 all countries 113

Requirements for specific countries and regions

Country/region	Accredited agency	Applicable note number
Australia	EANSW	1
Austria	OVE	1
Belgium	CEBC	1
Canada	CSA	2
Denmark	DEMKO	1
Finland	FIMKO	1
France	UTE	1
Germany	VDE	1
Italy	IMQ	1
Japan	METI	3
The Netherlands	KEMA	1
Norway	NEMKO	1
The People's Republic of China	COC	5

Country/region	Accredited agency	Applicable note number
South Korea	EK	4
Sweden	CEMKO	1
Switzerland	SEV	1
Taiwan	BSMI	4
The United Kingdom	BSI	1
The United States	UL	2

1. The flexible cord must be Type H05VV-F, 3-conductor, 1.0-mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.
2. The flexible cord must be Type SPT-3 or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V) or NEMA 6-15P (15 A, 250 V) configuration.
3. The appliance coupler, flexible cord, and wall plug must bear a "T" mark and registration number in accordance with the Japanese Dentori Law. The flexible cord must be Type VCT or VCTF, 3-conductor, 1.00-mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V) configuration.
4. The flexible cord must be Type RVV, 3-conductor, 0.75-mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.
5. The flexible cord must be Type VCTF, 3-conductor, 0.75-mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.

9 Recycling

When a non-rechargeable or rechargeable battery has reached the end of its useful life, do not dispose of the battery in general household waste. Follow the local laws and regulations in your area for battery disposal.

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, see the HP Web site at <http://www.hp.com/recycle>.

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