HP ProBook x360 11 G2 Education Edition and
HP ProBook x360 11 G1 Education Edition

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

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	HP ProBook x360 11 G2 Education Edition	HP ProBook x360 11 G1 Education Edition
Processors	Intel Core m5 i5-7Y54 1.20-GHz (turbo up to 3.2-GHz) processor Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor	Intel® Pentium™ N4200 1.10-GHz (turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6 W) Intel Celeron™ N3350 1.10-GHz (turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6 W)
Chipset	Integrated soldered-on-circuit (SoC)	Integrated SoC
Graphics	Intel universal memory architecture (UMA) Support for DirectX 12	Intel UMA Support for DirectX 12
Panel	11.6-in, high-definition (HD) (1366×768), light-emitting diode (LED), SVA, EDP, slim, 220N, TouchScreen display with air-bonding; 16:9 ultra wide aspect ratio	11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display with air-bonding; 16:9 ultra wide aspect ratio 11.6-in, HD, AntiGlare (AG) (1366×768), LED, SVA, EDP, slim, 220N, non-TouchScreen display; 16:9 ultra wide aspect ratio
Memory module	System memory affixed to system board Support for LPDDR3-1866 dual channel memory Support for up to 8-GB maximum system memory in 8192-MB (256-M×16-GB×4×4 pieces) and 4096-MB (256-M×8-GB×4×4 pieces) configurations	Support for DDR3-1600 dual channel Supports up to 4-GB maximum on-board system memory Support for up to 8-GB maximum system memory in the following configurations: ● 8192-MB: (256 MB × 16 × 16 pieces) ● 4096-MB: (256 MB × 16 × 8 pieces) ● 2048-MB: (256 MB × 16 × 4 pieces; only allowed on computer models equipped with an Intel Celeron processor, no HPSP v2 and no NPRM)
Storage	**Solid-state drive:** Support for 256- and 128-GB SATA-3 solid-state drives with and without triple-level cell (TLC) support	**eMMC:** Support for 64-GB eMMC storage **Solid-state drive:** Support for 256- and 128-GB SATA-3 solid-state drives (not available on computer models equipped with eMMC storage)
Audio and video	Front-facing webcam: 1-MP HD @ 1280×720p Second webcam: 2-MP full high-definition (FHD) @ 1920×1080p Integrated dual digital microphones HP HD audio Dual speakers Conexant CX7700	Front-facing webcam: 1-MP HD @ 1280×720p Second webcam: 2-MP full high-definition (FHD) @ 1920×1080p Integrated dual digital microphones HP HD audio Dual speakers Conexant CX7700
Ethernet	Realtek PCIe GbE Family Controller 10/100/1000 (RTL8111HSH)	Realtek PCIe GbE Family Controller 10/100/1000 (RTL8111HSH)

Category	HP ProBook x360 11 G2 Education Edition	HP ProBook x360 11 G1 Education Edition
Wireless	• Integrated wireless local area network (WLAN) options by way of wireless module • Two built-in WLAN antennas • Support for the Intel Dual Band Wireless AC 7265 802.11 AC 2×2 WiFi + Bluetooth 4.2 Combo Adapter (non-vPro)	• Integrated wireless local area network (WLAN) options by way of wireless module • Two built-in WLAN antennas • Support for the Intel Dual Band Wireless AC 7265 802.11 AC 2×2 WiFi + Bluetooth 4.2 Combo Adapter (non-vPro)
External media cards	Micro-Secure Digital (SD®) media reader slot	Micro-Secure Digital (SD®) media reader slot
Ports	• Audio-in (mono microphone)/audio-out (stereo headphone) combination • AC Smart Pin adapter plug • HDMI v1.4b supporting up to 4096×2160 @ 24-Hz • USB 3.1 Type-A port (2) • USB 3.1 Type-C port	• Audio-in (mono microphone)/audio-out (stereo headphone) combination • AC Smart Pin adapter plug • HDMI v1.4b supporting up to 3840×2160 @ 30-Hz • USB 3.1 Gen 1 port with Type-A connector (2) • USB 3.1 port with Type-C connector
Keyboard/ pointing devices	Full-sized, chiclet-style keyboard in radiant red and smoke gray finish ClickPad requirements: • Multitouch gestures enabled • Support for Windows 10 trackpad gestures • Taps enabled as default	Full-sized, chiclet-style keyboard in radiant red and smoke gray finish ClickPad requirements: • Multitouch gestures enabled • Support for Windows 10 trackpad gestures • Taps enabled as default
Pen input	• Available only on computer models equipped with a TouchScreen display assembly • Wacom AES pen • Support for no pen option	• Available only on computer models equipped with a TouchScreen display assembly • Wacom AES pen • Support for no pen option
Power requirements	Support for the following AC adapters: • 65-W HP Smart AC adapter (non-PFC, EM, RC, 4.5-mm) • 45-W AC adapter (non-PFC, RA, SB, 4.5-mm; for use only in Argentina) • 45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm, non-slim) • 45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm) Support for C5 receptacle, 1.83-meter (6.00-feet) and C5 receptacle, 1.00-meter (3.28-feet) power cords Support for a 3-cell, 41-WHr, 3.615-AHr, Li-ion battery	Support for the following AC adapters: • 65-W HP Smart AC adapter (non-PFC, EM, 4.5-mm) • 45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm) • 45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm) Support for C5 receptacle, 1.83-meter (6.00-feet) and C5 receptacle, 1.00-meter (3.28-feet) power cords Support for a 3-cell, 41-WHr, 3.615-AHr, Li-ion battery
Security	Support for security cable lock Support for Trusted Platform Module (TPM) 2.0 discrete	Support for security cable lock Support for Trusted Platform Module (TPM) 2.0 discrete
Operating system	Preinstalled: • Windows 10 Home 64-bit • Windows 10 Home 64-bit Single Language • Windows 10 Professional 64-bit	Preinstalled: • Windows 10 Home 64-bit • Windows 10 Professional 64-bit StF MSNA (only on computer models with system memory of 4-GB or

Category	HP ProBook x360 11 G2 Education Edition	HP ProBook x360 11 G1 Education Edition
Operating system *(continued)*	• Windows 10 Professional 64-bit StF MSNA Standard **Restore media–DRDVD:** Windows 10 Professional 64-bit (For service and/or purchase only) **Restore media–OSDVD:** Windows 10 Professional 64-bit RS2 **Web support OS:** Windows 10 Enterprise 64-bit Web Support and Windows 10 Enterprise 64-bit LTSB 1607 **Certified:** Microsoft WHQL	• less and system storage equal to or less than 128-GB [solid-state drive or eMMC]) • Windows 10 Professional 64-bit StF MSNA Standard • Windows 10 Professional 64-bit StF MSNA Strategic (only on computer models with system memory of 4-GB or less and system storage equal to or less than 128-GB [solid-state drive or eMMC]) • Windows 10 Professional 64-bit StF MSNA EM (only on computer models with system memory of 4-GB or less and system storage equal to or less than 128-GB [solid-state drive or eMMC]) • Windows 10 Professional 64-bit StF MSNA Standard • Windows 10 Professional 64-bit StF MSNA Strategic (only on computer models with system memory of 4-GB or less and system storage equal to or less than 128-GB [solid-state drive or eMMC]) **Restore media–DRDVD:** Windows 10 Professional 64-bit (For service and/or purchase only) **Restore media–RS1 OSDVD:** Windows 10 Professional 64-bit (For service and/or purchase only) **Web support OS:** Windows 10 Enterprise 64-bit Web Support **Certified:** Microsoft WHQL and Windows 10 Enterprise 64-bit LTSB
Serviceability	**End user replaceable part**: AC adapter and pen	**End user replaceable part**: AC adapter and pen

2   Illustrated parts catalog

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

Service label

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

> **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, or on the back of the display.

- Service label—Provides important information to identify your computer. When contacting support, you will probably be asked for the serial number, and possibly for the product number or the model number. Locate these numbers before you contact support.

  The service label will resemble one of the examples shown below. Refer to the illustration that most closely matches the service label on the computer.

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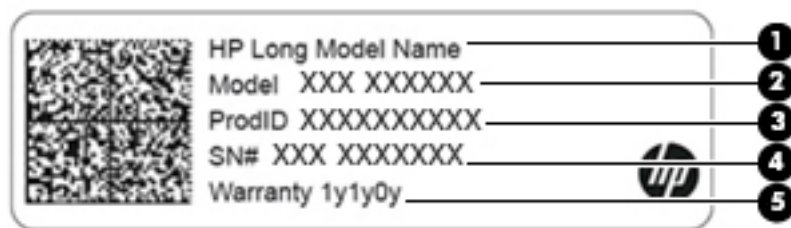
Component	
(1)	HP product name (select products only)
(2)	Model name (select products only)
(3)	Product number
(4)	Serial number
(5)	Warranty period

- 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.

Computer major components
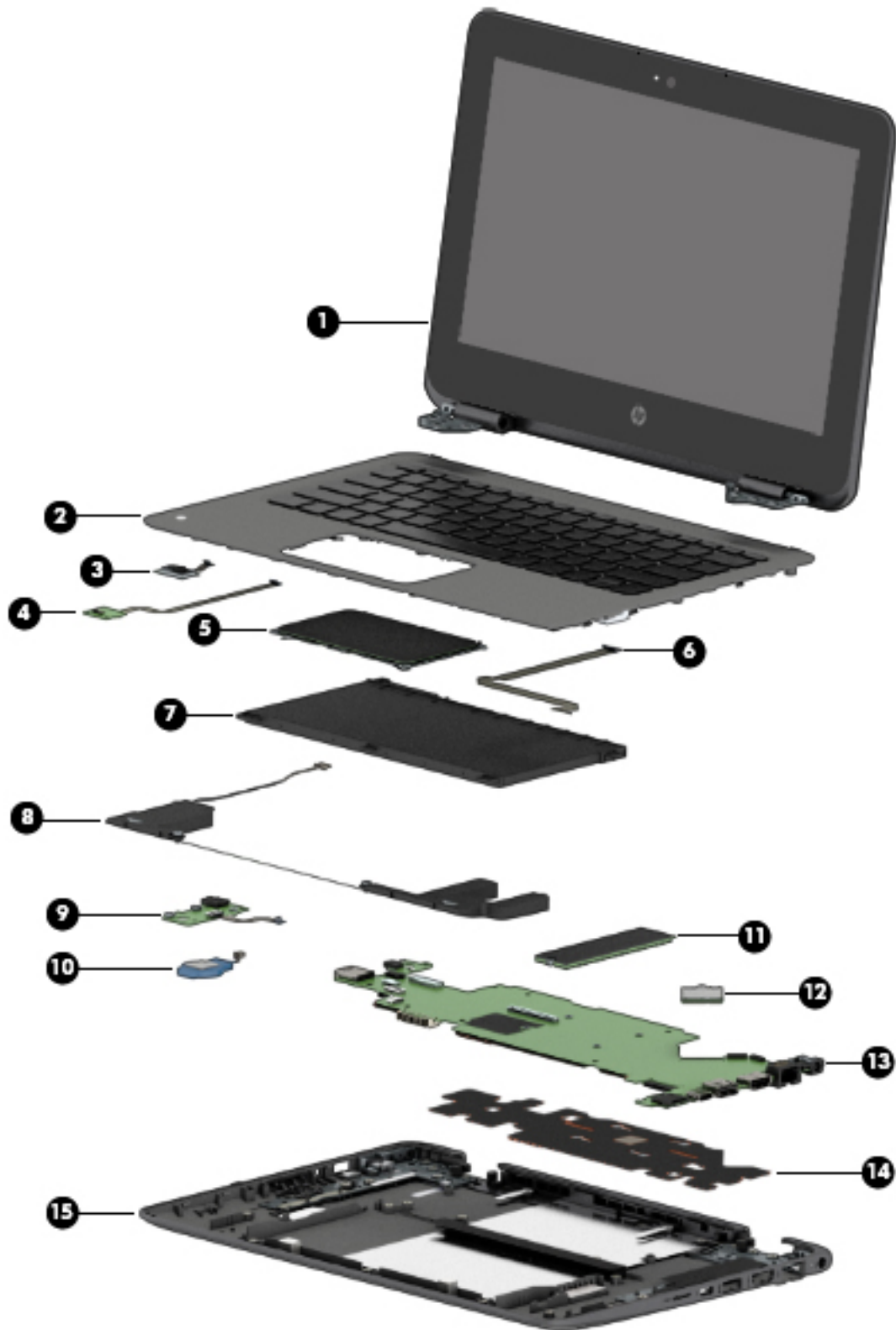
Item	Component	Spare part number
(1)	**Display assembly**: The TouchScreen display is spared only as an entire assembly. The non-TouchScreen display is spared at the subcomponent level. For more non-TouchScreen display assembly spare part information, see Display assembly subcomponents on page 12.	
	For use only on HP ProBook x360 11 G2 computer models:	
	11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in radiant red finish	932685-001
	11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly with NPTD in radiant red finish	932683-001
	11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in smoke gray finish	932686-001
	11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly with NPTD in smoke gray finish	932684-001
	For use only on HP ProBook x360 11 G1 computer models:	
	11.6-in, HD, AntiGlare (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in radiant red finish	918429-001
	11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in smoke gray finish	917100-001
(2)	**Keyboard/top cover** in radiant red finish (includes keyboard cable, top cover shielding, and magnets):	
	For use in Belgium	918554-A41
	For use in Bulgaria	918554-261
	For use in Canada	918554-DB1
	For use in the Czech Republic and Slovakia	918554-FL1
	For use in Denmark, Finland, and Norway	918554-DH1
	For use in France	918554-051
	For use in Germany	918554-041
	For use in Greece	918554-151
	For use in Hungary	918554-211
	For use in India	918554-D61
	For use in Israel	918554-BB1
	For use in Italy	918554-061
	For use in Latin America	918554-161
	For use in the Netherlands	918554-B31
	For use in the Northwest Africa	918554-FP1
	For use in Portugal	918554-131
	For use in Russia	918554-251
	For use in Saudi Arabia	918554-171
	For use in Slovenia	918554-BA1
	For use in South Korea	918554-AD1

Item	Component	Spare part number
	For use in Spain	918554-071
	For use in Sweden and Finland	918554-BG1
	For use in Switzerland	918554-BG1
	For use in Taiwan	918554-AB1
	For use in Thailand	918554-281
	For use in Turkey	918554-141
	For use in the United Kingdom	918554-031
	For use in the United States	918554-001
	Keyboard/top cover in smoke gray finish (includes keyboard cable):	
	For use in Belgium	918555-A41
	For use in Bulgaria	918555-261
	For use in Canada	918555-DB1
	For use in the Czech Republic and Slovakia	918555-FL1
	For use in Denmark, Finland, and Norway	918555-DH1
	For use in France	918555-051
	For use in Germany	918555-041
	For use in Greece	918555-151
	For use in Hungary	918555-211
	For use in India	918555-D61
	For use in Israel	918555-BB1
	For use in Italy	918555-061
	For use in Latin America	918555-161
	For use in the Netherlands	918555-B31
	For use in the Northwest Africa	918555-FP1
	For use in Portugal	918555-131
	For use in Russia	918555-251
	For use in Saudi Arabia	918555-171
	For use in Slovenia	918555-BA1
	For use in South Korea	918555-AD1
	For use in Spain	918555-071
	For use in Sweden and Finland	918555-BG1
	For use in Switzerland	918555-BG1
	For use in Taiwan	918555-AB1
	For use in Thailand	918555-281

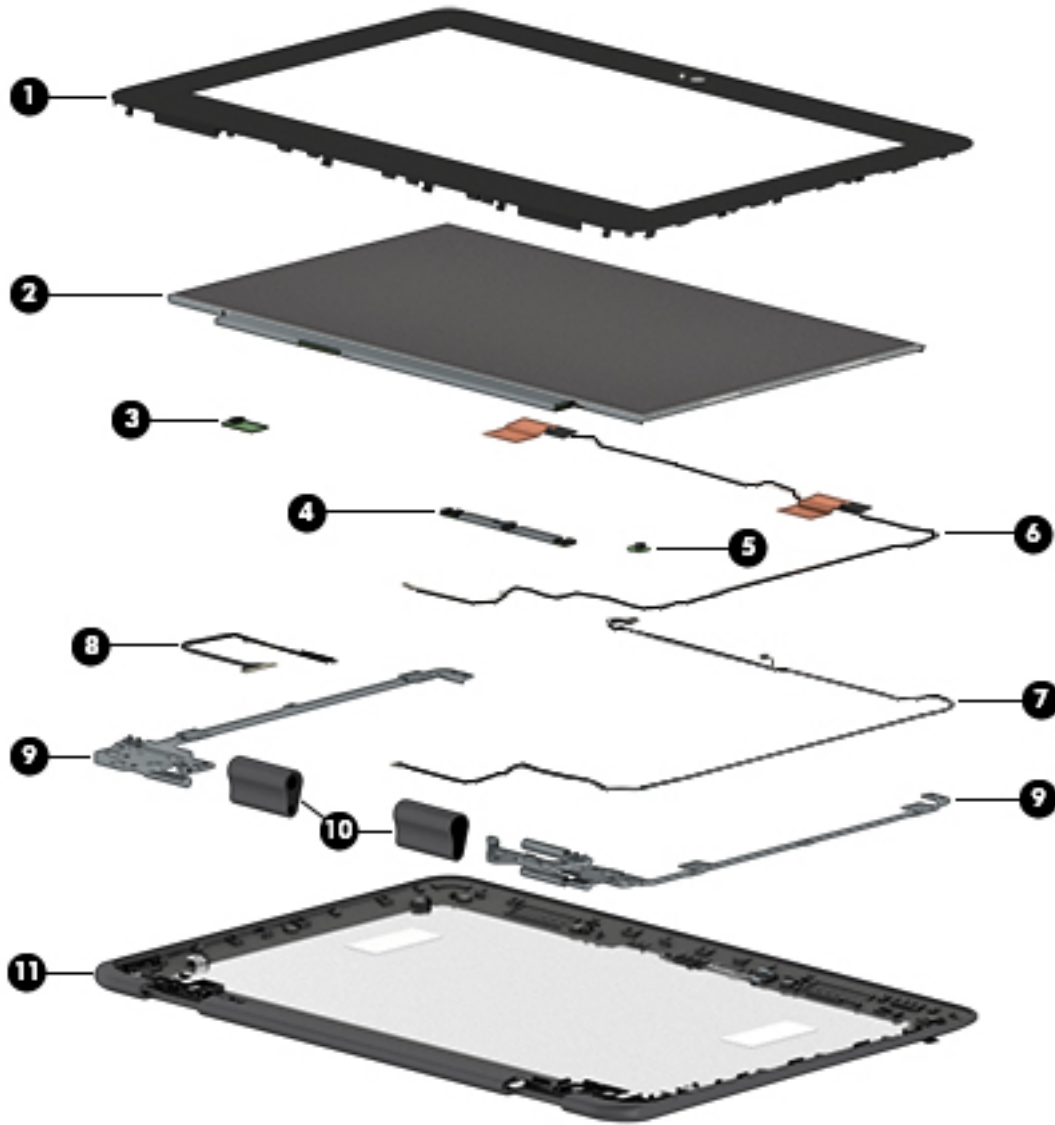| Item	Component	Spare part number
	For use in Turkey	918555-141
	For use in the United Kingdom	918555-031
	For use in the United States	918555-001
(3)	**Second webcam** (includes cable)	917055-001
(4)	**Webcam transfer board** (includes cable):	
	For use only on HP ProBook x360 11 G2 computer models	932716-001
	For use only on HP ProBook x360 11 G1 computer models	917053-001
(5)	**TouchPad:**	
	NOTE: The TouchPad spare part kit does not include the TouchPad bracket or the TouchPad cable. The TouchPad cable is included in the Cable Kit, spare part numbers 938134-001 (for use only on HP ProBook x360 11 G2 computer models) and 917064-001 (for use only on HP ProBook x360 11 G1 computer models). The TouchPad bracket is not spare as a separate component.	
	In radiant red finish	917051-001
	In smoke gray finish	917052-001
(6)	**TouchPad cable** (The TouchPad cable is included in the Cable Kit, spare part numbers 938134-001 (for use only on HP ProBook x360 11 G2 computer models) and 917064-001 (for use only on HP ProBook x360 11 G1 computer models), and includes double-sided adhesive.)	
(7)	**3-cell, 41-WHr, 3.615-AHr, Li-ion battery** (includes cable)	844203-850
(8)	**Speakers** (includes cables, left and right speakers, and four rubber isolators)	917060-001
(9)	**Audio board** (includes audio jack, volume control buttons, and cable):	
	For use only on HP ProBook x360 11 G2 computer models	932714-001
	For use only on HP ProBook x360 11 G1 computer models	917048-001
(10)	**RTC battery** (includes cable, pad, and double-sided adhesive)	917056-001
(11)	**Solid-state drive:**	
	For use only on HP ProBook x360 11 G2 computer models:	
	256-GB, M.2, SATA-3 solid-state drive with TLC	939195-001
	256-GB, M.2, SATA-3 solid-state drive	939197-001
	128-GB, M.2, SATA-3 solid-state drive with TLC	939194-001
	128-GB, M.2, SATA-3 solid-state drive	939196-001
	For use only on HP ProBook x360 11 G1 computer models:	
	256-GB, M.2, SATA-3 solid-state drive	917099-001
	128-GB, M.2, SATA-3 solid-state drive	917098-001
(12)	**Intel Dual Band Wireless AC 7265 802.11 AC 2×2 WiFi + Bluetooth 4.2 Combo Adapter (non-vPro)**	860883-001
(13)	**System board** (includes processor, graphics subsystem with UMA memory, and replacement thermal material):	
	For use only on HP ProBook x360 11 G2 computer models:	

Item	Component	Spare part number
	Equipped with an Intel Core m5 i5-7Y54 1.20-GHz (turbo up to 3.2-GHz) processor, 8.0-GB of system memory, and the Windows 10 operating system	938552-001
	Equipped with an Intel Core m5 i5-7Y54 1.20-GHz (turbo up to 3.2-GHz) processor, 8.0-GB of system memory, and a non-Windows 10 operating system	938552-001
	Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 8.0-GB of system memory, and the Windows 10 operating system	932688-001
	Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 8.0-GB of system memory, and a non-Windows 10 operating system	932688-001
	Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 4.0-GB of system memory, and the Windows 10 operating system	932687-001
	Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 4.0-GB of system memory, and a non-Windows 10 operating system	932687-001
	For use only on HP ProBook x360 11 G1 computer models:	
	Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 8.0-GB of system memory, and the Windows 10 operating system	917105-601
	Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 8.0-GB of system memory, and a non-Windows 10 operating system	917105-001
	Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 4.0-GB of system memory, and the Windows 10 operating system	917104-601
	Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 4.0-GB of system memory, and a non-Windows 10 operating system	917104-001
	Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 4.0-GB of system memory, and the Windows 10 operating system	917102-601
	Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 4.0-GB of system memory, and a non-Windows 10 operating system	917102-001
	Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 4.0-GB of system memory, and the Windows 10 operating system	917103-601
	Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 4.0-GB of system memory, and a non-Windows 10 operating system	917103-001
	Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 2.0-GB of system memory, and the Windows 10 operating system	917101-601
	Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 2.0-GB of system memory, and a non-Windows 10 operating system	917101-001
	Thermal Material Kit	917061-001
(14)	**Heat sink** (includes replacement thermal material):	
	For use only on HP ProBook x360 11 G2 computer models	933325-001

Item	Component	Spare part number
	For use only on HP ProBook x360 11 G1 computer models	918174-001
	Thermal Material Kit	917061-001
(15)	**Bottom cover** (includes rubber feet strips, shielding, and vents):	
	For use only on HP ProBook x360 11 G2 computer models:	
	In radiant red finish	932712-001
	In smoke gray finish	932713-001
	For use only on HP ProBook x360 11 G1 computer models:	
	In radiant red finish	917046-001
	In smoke gray finish	917047-001
	Rubber Kit (not illustrated, includes bottom cover rubber feet)	917058-001

Display assembly subcomponents

📝 **NOTE:** This section applies only to HP ProBook x360 11 G1 computer models.

Item	Component	Spare part number
(1)	**Display bezel**	917043-001
	Display bezel adhesive (not illustrated, included in the Miscellaneous Kit, spare part number 917062-001)	
(2)	**11.6-in, HD, AG (1366×768), LED, SVA, EDP, slim, 220N, non-TouchScreen display panel**	912370-001
(3)	**G-sensor module** (includes double-sided adhesive):	917049-001
(4)	**Webcam/microphone module** (includes double-sided adhesive):	912367-001
(5)	**LED board** (includes double-sided adhesive):	917050-001
(6)	**Wireless antenna** (2, includes auxiliary and main cables, transceivers, and double-sided adhesive)	918173-001

Item	Component	Spare part number
(7)	**Webcam/microphone module cable** (available in the Cable Kit, spare part number 917064-001; includes LED board cable)	
(8)	**Display panel cable** (available in the Cable Kit, spare part number 917064-001; includes G-sensor cable, adhesive support strip, and double-sided adhesive)	
(9)	**Display hinges** (2)	917065-001
(10)	**Display hinge covers** (2, included in display hinge spare part kit, spare part number 917065-001)	
(11)	**Display back cover** (includes shielding)	
	In radiant red finish	917044-001
	In smoke gray finish	917045-001

Miscellaneous parts

Component	Spare part number
AC adapter:	
For use only on HP ProBook x360 11 G2 computer models:	
65-W HP Smart AC adapter (non-PFC, EM, RC, 4.5-mm)	913691-850
45-W AC adapter for use only in Argentina (non-PFC, RA, SB, 4.5-mm)	741553-852
45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm, non-slim)	741553-850
45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm) for use on all computer models	741727-001
65-W HP Smart AC adapter (non-PFC, EM, 4.5-mm) for use only on HP ProBook x360 11 G1 computer models:	
65-W HP Smart AC adapter (non-PFC, EM, 4.5-mm)	714635-850
45-W HP Smart AC adapter (non-PFC, RC, 4.5-mm)	741553-850
HP comfort grip wireless mouse	691922-001
HP Elite USB-C docking station	844550-001
HP Essential backpack	679921-001
HP Essential top load case	679923-001
HP external DVD±RW DL SuperMulti Drive	747080-001
HP HDMI–to–VGA adapter	701943-001
HP keyed cable lock (10 mm)	840158-001
HP Slim UltraBook top load case	747078-001
HP Slim UltraBook backpack	747079-001
HP Smart AC adapter dongle (7.4 mm)	734734-001
HP USB laser mouse	674318-001
HP USB travel docking station	844551-001
Pen holder	924151-001
Power cord (C5 connector, 3-pin, black, 1.83-m):	

Component	Spare part number
For use in Argentina	401300-001
For use in Australia	213356-001
For use in Europe	213350-001
For use in India	404827-001
For use in Israel	398063-001
For use in Italy	213352-001
For use in North America	213349-001
For use in the People's Republic of China	286497-001
For use in South Korea	267836-001
For use in Switzerland	213354-001
For use in Taiwan	393313-001
For use in the United Kingdom and Singapore	213351-001
Power cord (C5 connector, 3-pin, black, 1.00-m):	
For use in Argentina	401300-007
For use in Australia	213356-008
For use in Europe	213350-009
For use in India	404827-003
For use in Israel	398063-003
For use in Italy	213352-008
For use in North America	213349-009
For use in the People's Republic of China	286497-008
For use in South Korea	267836-008
For use in Switzerland	213354-008
For use in Taiwan	393313-003
For use in Thailand	285096-006
For use in the United Kingdom and Singapore	213351-008
Power cord (Option-917, 3-cord, 1.83-m, ROHS)	361240-001
Power cord (Option-917, 3-cord, 1.00-m, ROHS)	361240-002
Rubber Kit	917058-001
Stylus (active)	920839-001
Screw Kit	917059-001

3   Removal and replacement preliminary requirements

Tools required

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

- Flat-bladed screw driver
- Magnetic screw driver
- Phillips P0 screw driver
- T8 Torx screw driver

Service considerations

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

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

Plastic parts

CAUTION: Using excessive force during disassembly and reassembly can damage plastic parts. Use care when handling the plastic parts. Apply pressure only at the points designated in the maintenance instructions.

Cables and connectors

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

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

Drive handling

⚠ **CAUTION:**   Drives are fragile components that must be handled with care. To prevent damage to the computer , damage to a drive, or loss of information, observe these precautions:

Before removing or inserting a drive, shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

Before handling a drive, be sure that you are discharged of static electricity. While handling a drive, avoid touching the connector.

Before removing a diskette drive or optical drive, be sure that a diskette or disc is not in the drive and be sure that the optical drive tray is closed.

Handle drives on surfaces covered with at least one inch of shock-proof foam.

Avoid dropping drives from any height onto any surface.

After removing drive, place it in a static-proof bag.

Avoid exposing a drive to products that have magnetic fields, such as monitors or speakers.

Avoid exposing a drive to temperature extremes or liquids.

If a drive must be mailed, place the drive in a bubble pack mailer or other suitable form of protective packaging and label the package "FRAGILE."

Grounding guidelines

Electrostatic discharge damage

Electronic components are sensitive to electrostatic discharge (ESD). Circuitry design and structure determine the degree of sensitivity. Networks built into many integrated circuits provide some protection, but in many cases, ESD contains enough power to alter device parameters or melt silicon junctions.

A discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Even if the spark is neither felt nor heard, damage may have occurred.

An electronic device exposed to ESD may not be affected at all and can work perfectly throughout a normal cycle. Or the device may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

⚠ **CAUTION:** To prevent damage to the computer when you are removing or installing internal components, observe these precautions:

Keep components in their electrostatic-safe containers until you are ready to install them.

Before touching an electronic component, discharge static electricity by using the guidelines described in this section.

Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.

If you remove a component, place it in an electrostatic-safe container.

The following table shows how humidity affects the electrostatic voltage levels generated by different activities.

⚠ **CAUTION:** A product can be degraded by as little as 700 V.

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

Packaging and transporting guidelines

Follow these grounding guidelines when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe tubes, bags, or boxes.

- Protect ESD-sensitive parts and assemblies with conductive or approved containers or packaging.

- Keep ESD-sensitive parts in their containers until the parts arrive at static-free workstations.

- Place items on a grounded surface before removing items from their containers.

- Always be properly grounded when touching a component or assembly.

- Store reusable ESD-sensitive parts from assemblies in protective packaging or nonconductive foam.

- Use transporters and conveyors made of antistatic belts and roller bushings. Be sure that mechanized equipment used for moving materials is wired to ground and that proper materials are selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

Workstation guidelines

Follow these grounding workstation guidelines:

- Cover the workstation with approved static-shielding material.

- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.

- Use conductive field service tools, such as cutters, screw drivers, and vacuums.

- When fixtures must directly contact dissipative surfaces, use fixtures made only of static-safe materials.

- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.

- Handle ESD-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.

- Avoid contact with pins, leads, or circuitry.

- Turn off power and input signals before inserting or removing connectors or test equipment.

Equipment guidelines

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

- When seated, wear a wrist strap connected to a grounded system. Wrist straps are flexible straps with a minimum of one megohm ±10% resistance in the ground cords. To provide proper ground, wear a strap snugly against the skin at all times. On grounded mats with banana-plug connectors, use alligator clips to connect a wrist strap.

- When standing, use foot straps and a grounded floor mat. Foot straps (heel, toe, or boot straps) can be used at standing workstations and are compatible with most types of shoes or boots. On conductive floors or dissipative floor mats, use foot straps on both feet with a minimum of one megohm resistance between the operator and ground. To be effective, the conductive must be worn in contact with the skin.

The following grounding equipment is recommended to prevent electrostatic damage:

- Antistatic tape

- Antistatic smocks, aprons, and sleeve protectors

- Conductive bins and other assembly or soldering aids

- Nonconductive foam

- Conductive computer op 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

4   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.

Component replacement procedures

📝 **NOTE:**   Details about the computer , including model, serial number, product key, and length of warranty, are on the service tag on the bottom of the computer. See Service label on page 4 for details.

This chapter provides removal and replacement procedures.

There are as many as 68 screws that must be removed, replaced, and/or loosened when servicing the computer. Make special note of each screw size and location during removal and replacement.

Keyboard/top cover

Keyboard/top cover in radiant red finish (includes keyboard cable, top cover shielding, and magnets):					
For use in Belgium	918554-A41	For use in India	918554-D61	For use in South Korea	918554-AD1
For use in Bulgaria	918554-261	For use in Israel	918554-BB1	For use in Spain	918554-071
For use in Canada	918554-DB1	For use in Italy	918554-061	For use in Sweden and Finland	918554-BG1
For use in the Czech Republic and Slovakia	918554-FL1	For use in Latin America	918554-161	For use in Switzerland	918554-BG1
For use in Denmark, Finland, and Norway	918554-DH1	For use in the Netherlands	918554-B31	For use in Taiwan	918554-AB1
For use in France	918554-051	For use in Northwest Africa	918554-FP1	For use in Thailand	918554-281
For use in Germany	918554-041	For use in Portugal	918554-131	For use in Turkey	918554-141
For use in Greece	918554-151	For use in Russia	918554-251	For use in the United Kingdom	918554-031
For use in Hungary	918554-211	For use in Saudi Arabia	918554-171	For use in the United States	918554-001
		For use in Slovenia	918554-BA1		
Keyboard/top cover in smoke gray finish (includes keyboard cable, top cover shielding, and magnets):					
For use in Belgium	918555-A41	For use in India	918555-D61	For use in South Korea	918555-AD1
For use in Bulgaria	918555-261	For use in Israel	918555-BB1	For use in Spain	918555-071
For use in Canada	918555-DB1	For use in Italy	918555-061	For use in Sweden and Finland	918555-BG1

| For use in the Czech Republic and Slovakia	918555-FL1	For use in Latin America	918555-161	For use in Switzerland	918555-BG1
For use in Denmark, Finland, and Norway	918555-DH1	For use in the Netherlands	918555-B31	For use in Taiwan	918555-AB1
For use in France	918555-051	For use in Northwest Africa	918555-FP1	For use in Thailand	918555-281
For use in Germany	918555-041	For use in Portugal	918555-131	For use in Turkey	918555-141
For use in Greece	918555-151	For use in Russia	918555-251	For use in the United Kingdom	918555-031
For use in Hungary	918555-211	For use in Saudi Arabia	918555-171	For use in the United States	918555-001
		For use in Slovenia	918555-BA1		

Before disassembling the computer , follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

NOTE: When replacing the keyboard/top cover, be sure that the TouchPad (see TouchPad on page 25) and the second webcam (see Second webcam on page 27) are removed from the defective keyboard/top cover and installed on the replacement keyboard/top cover.

Remove the keyboard/top cover:

1. Close the computer.

2. Turn the computer upside down with the front toward you.

3. Remove the six Torx T8 M2.5×4.1 screws **(1)** that secure the bottom cover to the computer.

4. Loosen the two Phillips PM2.5×4.1 captive screws **(2)** that secure the bottom cover to the computer.
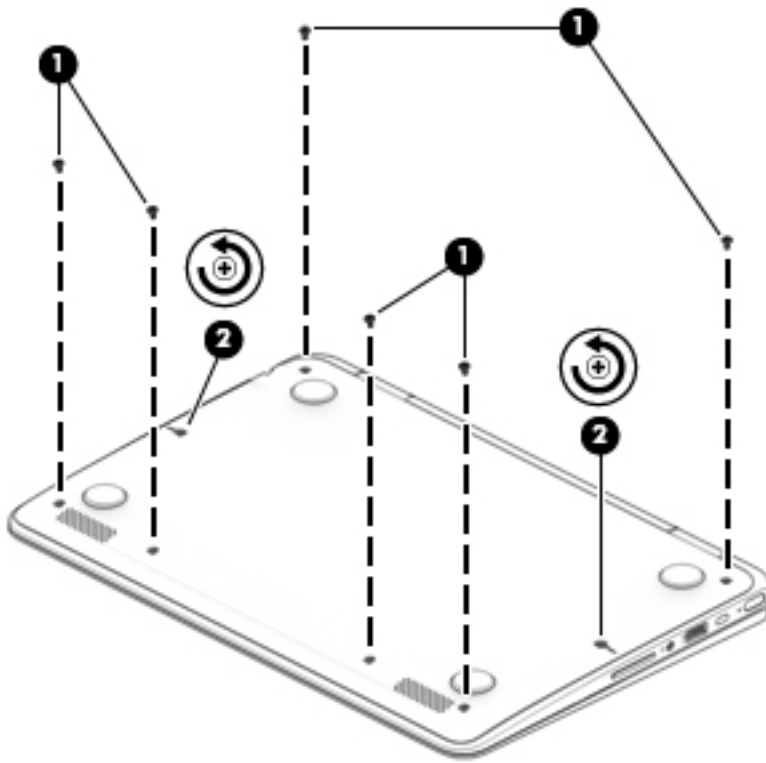
5. Open the computer.
6. Insert a keyboard release tool **(1)** or similar plastic, thin tool into the front edge screw holes.
7. Press down on the tool and release the front edge of the keyboard/top cover **(2)**.
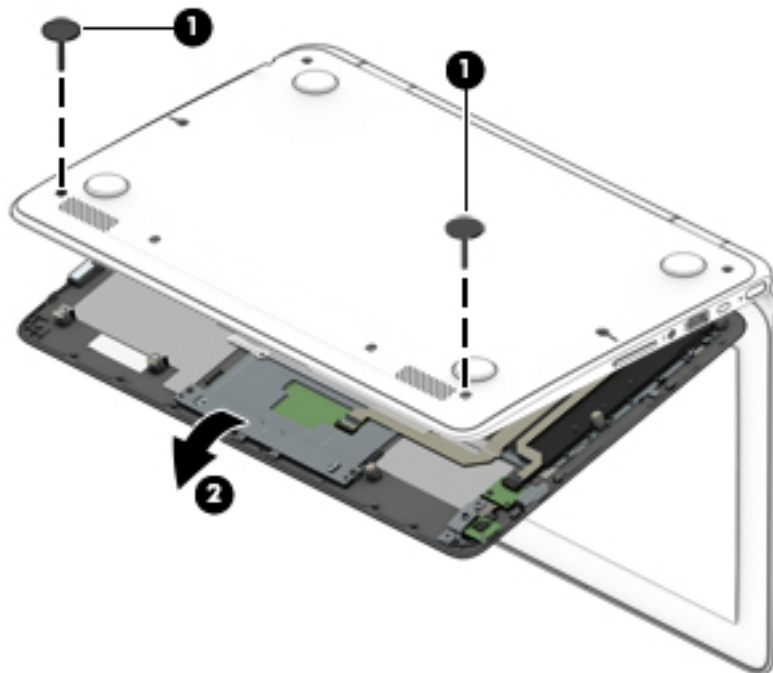
8. Position the computer right side up with the front toward you.

9. Swing the front edge of the keyboard/top cover **(1)** up and back until the webcam module cable, TouchPad cable, and keyboard cable connectors are accessible.

10. Release the zero insertion force (ZIF) connector **(2)** to which the webcam module cable is connected, and then disconnect the webcam module cable from the system board.

11. Release the ZIF connector **(3)** to which the TouchPad cable is connected, and then disconnect the TouchPad cable from the system board.

12. Release the ZIF connector **(4)** to which the keyboard cable is connected, and then disconnect the keyboard cable from the system board.

13. Remove the keyboard/top cover **(5)**.
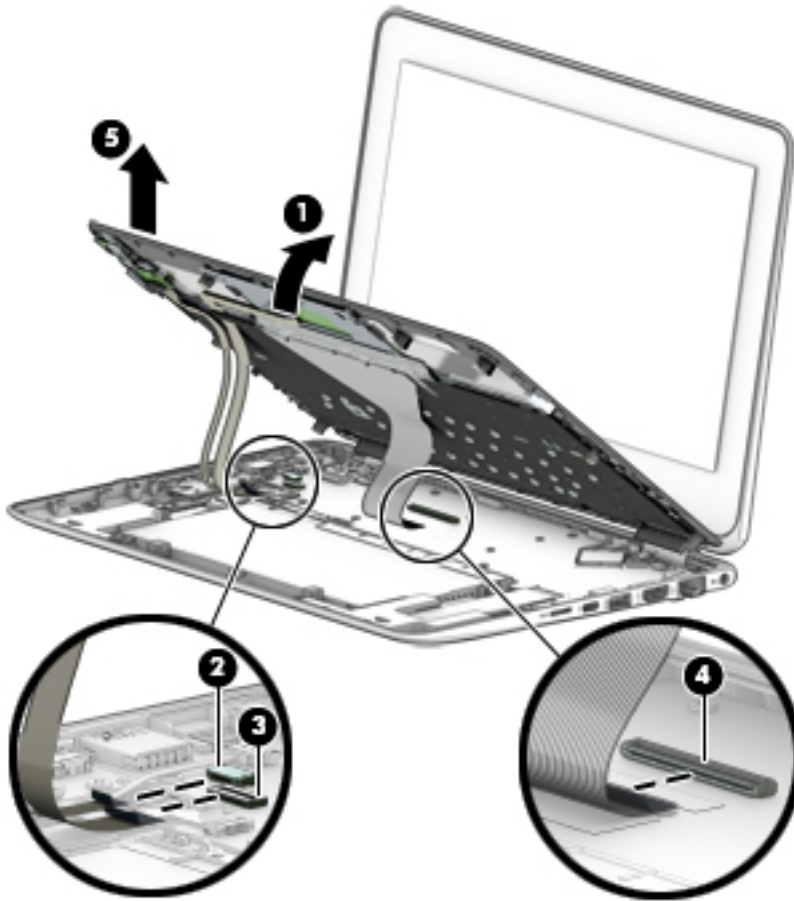
Reverse this procedure to install the keyboard/top cover.

TouchPad cable

📝 **NOTE:** The TouchPad cable is included in the Cable Kit, spare part numbers 938134-001 (for use only on HP ProBook x360 11 G2 computer models) and 917064-001 (for use only on HP ProBook x360 11 G1 computer models).

Before removing the TouchPad cable, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see).

Remove the TouchPad cable:

1. Turn the keyboard/top cover upside down with the front edge toward you.

2. Release the ZIF connector **(1)** to which the TouchPad cable is connected, and then disconnect the TouchPad cable **(3)** from the TouchPad board.

3. Detach the TouchPad cable **(2)** from the keyboard/top cover. (The TouchPad cable is secured to the keyboard/top cover with double-sided adhesive at two locations.)

4. Remove the TouchPad cable **(3)**.
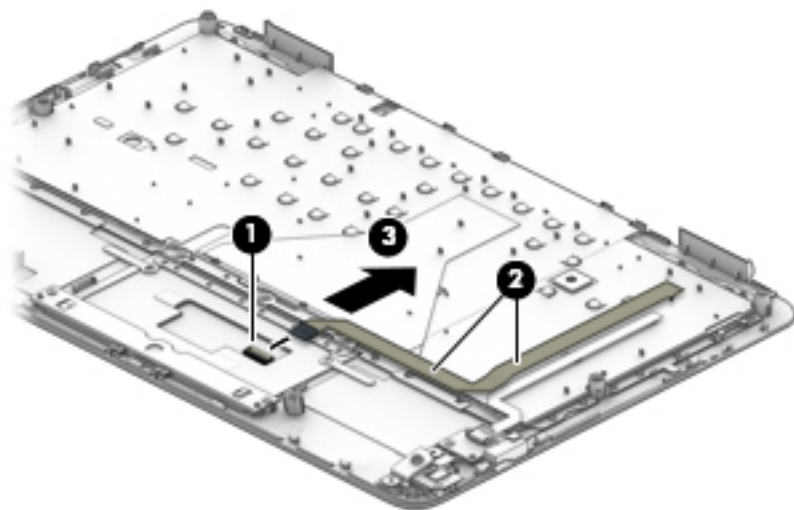
Reverse this procedure to install the TouchPad cable.

TouchPad

NOTE: The TouchPad spare part kit does not include the TouchPad bracket or the TouchPad cable. The TouchPad cable is included in the Cable Kit, spare part numbers 938134-001 (for use only on HP ProBook x360 11 G2 computer models) and 917064-001 (for use only on HP ProBook x360 11 G1 computer models). The TouchPad bracket is not spared as a separate component.

Description	Spare part number
In radiant red finish	917051-001
In smoke gray finish	917052-001

Before removing the TouchPad, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20).

5. Remove the TouchPad cable (see TouchPad cable on page 24).

Remove the TouchPad:

1. Turn the keyboard/top cover upside down with the front edge toward you.

2. Detach the adhesive strip **(1)** the secures the TouchPad to the keyboard/top cover.

3. Release the two pieces of grounding tape **(2)** that secure the TouchPad to the keyboard/top cover.

4. Remove the five Phillips PM2.0×2.3 screws **(3)** that secure the TouchPad and TouchPad bracket to the keyboard/top cover.

5. Remove the two Phillips PM1.6×2.0 screws **(4)** that secure the TouchPad and TouchPad bracket to the keyboard/top cover.

6. Remove the TouchPad bracket **(5)**.

7. Remove the TouchPad **(6)**.
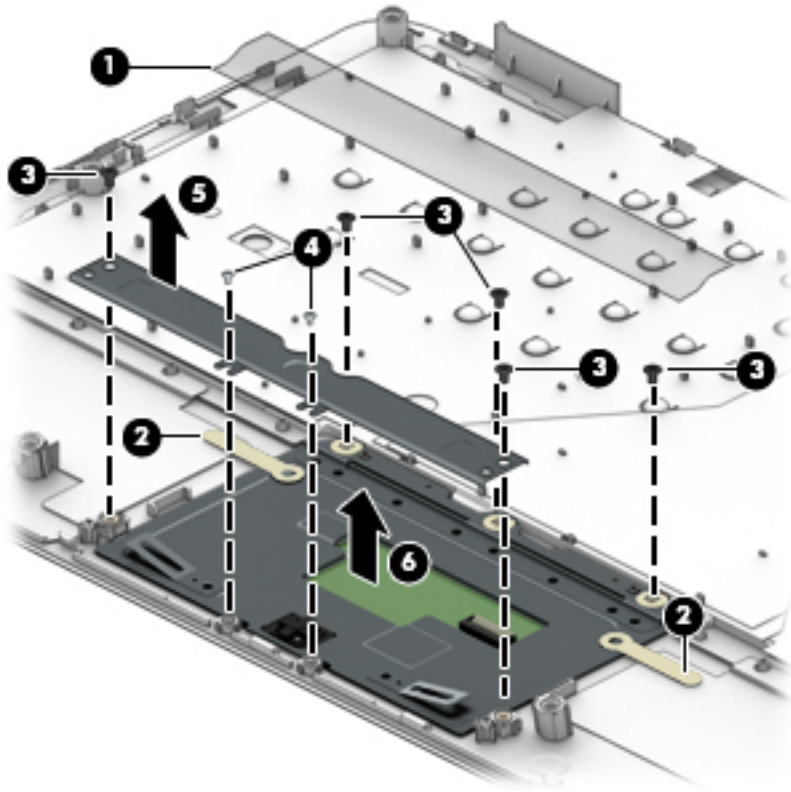
Reverse this procedure to install the TouchPad.

Second webcam

NOTE: The second webcam cable and webcam transfer board cable are also included in the Cable Kit, spare part numbers 938134-001 (for use only on HP ProBook x360 11 G2 computer models) and 917064-001 (for use only on HP ProBook x360 11 G1 computer models).

Description	Spare part number
Second webcam (includes cable)	917055-001
Webcam transfer board (includes cable):	
For use only on HP ProBook x360 11 G2 computer models	932716-001
For use only on HP ProBook x360 11 G1 computer models	917053-001

Before removing the second webcam, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20).

Remove the second webcam:

1. Turn the keyboard/top cover upside down with the front edge toward you.

2. Remove the Phillips PM2.0×2.3 screw **(1)** that secures the webcam transfer board to the keyboard/top cover.

3. Remove the two Phillips PM2.0×2.0 broad head screws **(2)** that secure the second webcam bracket to the keyboard/top cover.

4. Remove the Phillips PM1.6×2.0 screw **(3)** that secures the second webcam to the keyboard/top cover.

5. Detach the second webcam cable **(4)** from the keyboard/top cover. (The second webcam cable is secured to the keyboard/top cover with double-sided adhesive.)

6. Remove the second webcam bracket **(5)**.

   The second webcam bracket is included in the Bracket Kit, spare part number 917057-001.

7. Remove the second webcam **(6)** and webcam transfer board **(7)**.
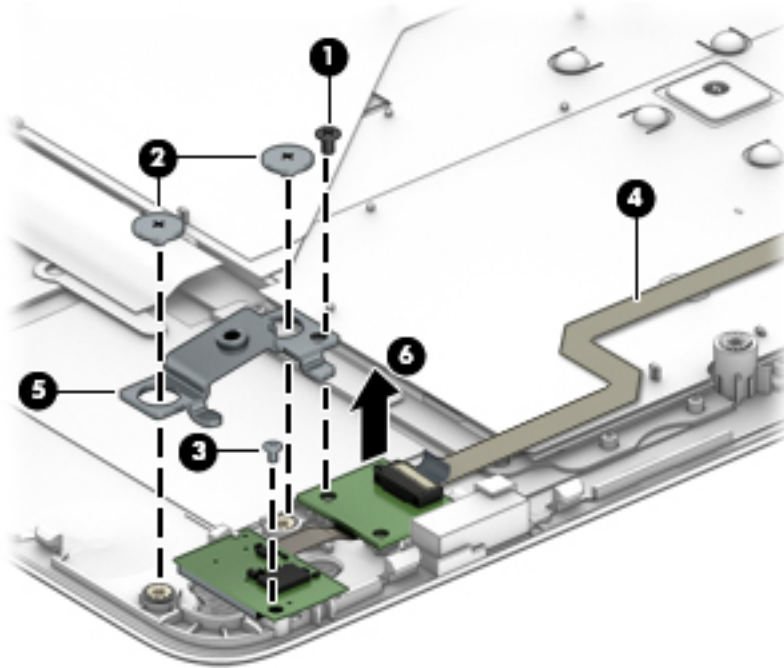
8. If it is necessary to separate the webcam transfer board from the second webcam, release the ZIF connector **(1)** to which the second webcam cable is connected, and then disconnect the second webcam cable **(2)** from the webcam transfer board.
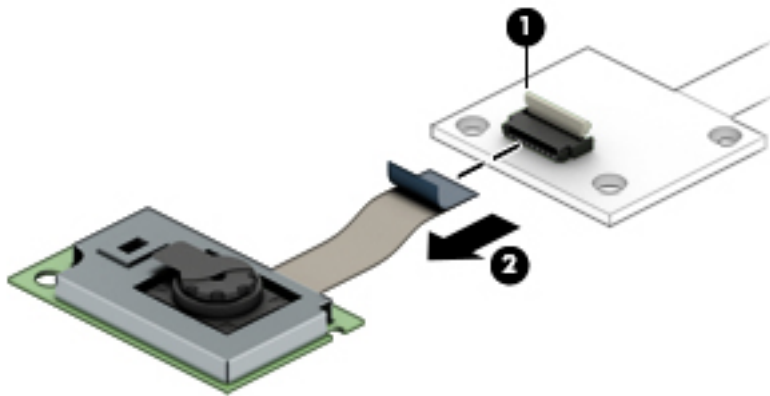
Reverse this procedure to install the second webcam and webcam transfer board.

Battery

Description	Spare part number
3-cell, 41-WHr, 3.615-AHr, Li-ion battery (includes cable)	844203-850

Before removing the battery, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20).

Remove the battery:

1. Remove the six Phillips M2.0×3.0 screws **(1)** that secure the battery to the bottom cover.

2. Lift the rear edge of the battery **(2)** to disconnect it from the system board.

3. Remove the battery **(3)**.
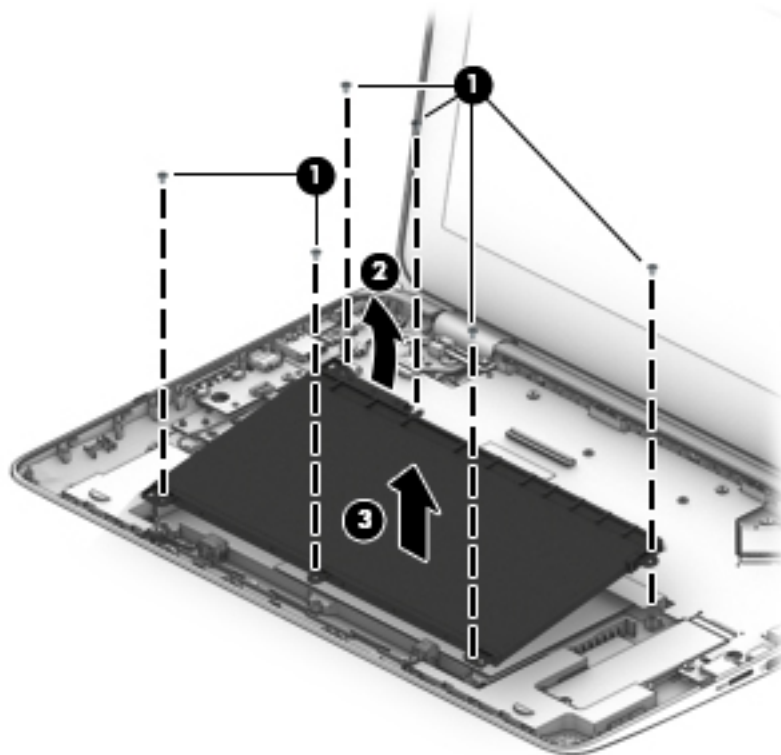
Reverse this procedure to install the battery.

Solid-state drive

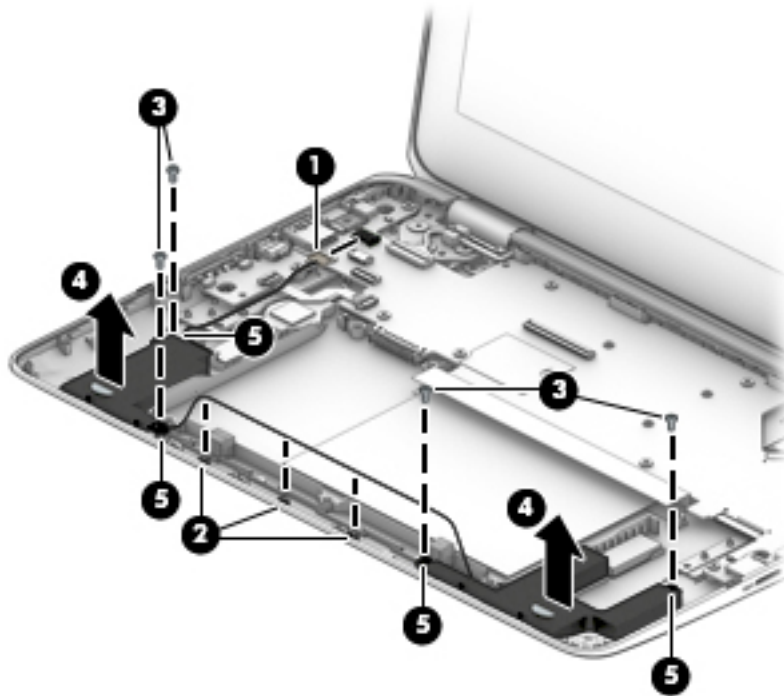| Description	Spare part number
For use only on HP ProBook x360 11 G2 computer models:	
256-GB, M.2, SATA-3 solid-state drive with TLC	939195-001
256-GB, M.2, SATA-3 solid-state drive	939197-001
128-GB, M.2, SATA-3 solid-state drive with TLC	939194-001
128-GB, M.2, SATA-3 solid-state drive	939196-001
For use only on HP ProBook x360 11 G1 computer models:	
256-GB, M.2, SATA-3 solid-state drive	917099-001
128-GB, M.2, SATA-3 solid-state drive	917098-001

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

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see).

5. Remove the battery (see).

Remove the solid-state drive:

1. Remove the Phillips PM2.0×3.0 screw **(1)** that secures the solid-state drive to the bottom cover. (The solid-state drive tilts up.)

2. Remove the solid-state drive **(2)** by pulling the drive away from the slot at an angle.
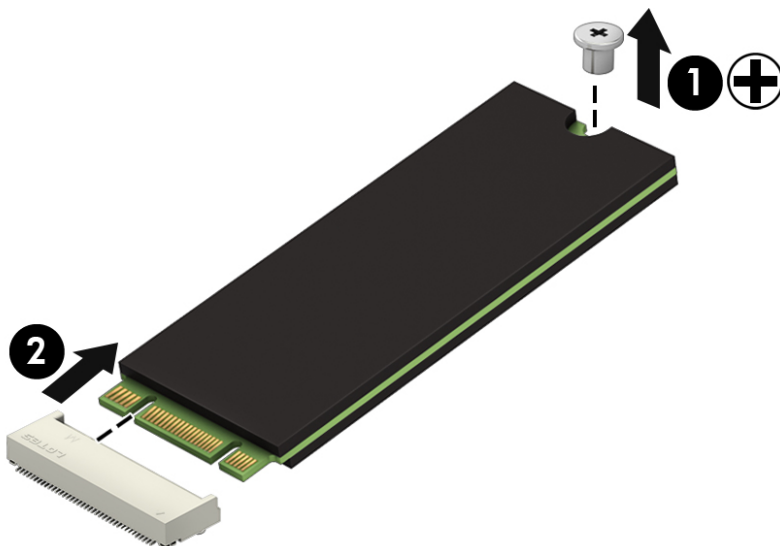
Reverse this procedure to install the solid-state drive.

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 unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20).

5. Remove the battery (see Battery on page 29).

Remove the WLAN module:

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

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

2. Remove the Phillips PM2.0×3.0 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.
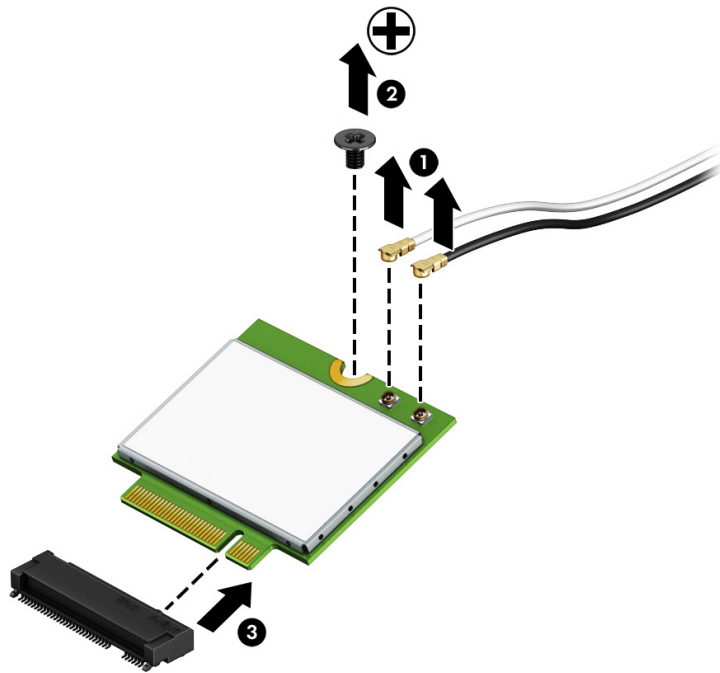
NOTE: If the wireless antenna cables are not connected to the WLAN module terminal, the protective sleeves should be installed on the antenna connectors, as shown in the following illustration.
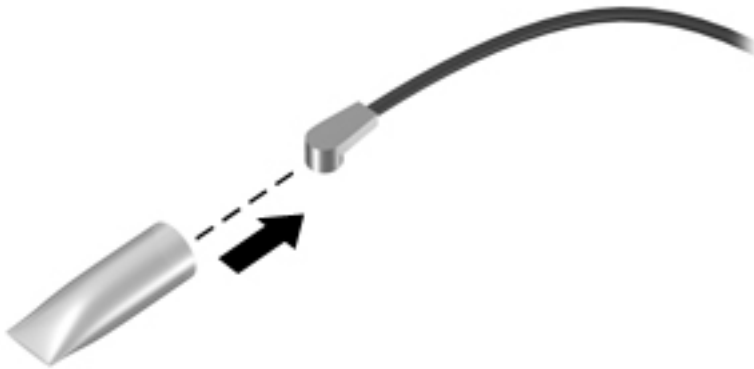
Reverse this procedure to install the WLAN module.

RTC battery

Description	Spare part number
RTC battery (includes cable, pad, and double-sided adhesive)	917056-001

Before removing the RTC battery, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20).

5. Remove the battery (see Battery on page 29).

Remove the RTC battery:

1. Disconnect the RTC battery cable **(1)** from the system board.

2. Detach the RTC battery **(2)** from the bottom cover. (The RTC battery is secured to the bottom cover with double-sided adhesive.)
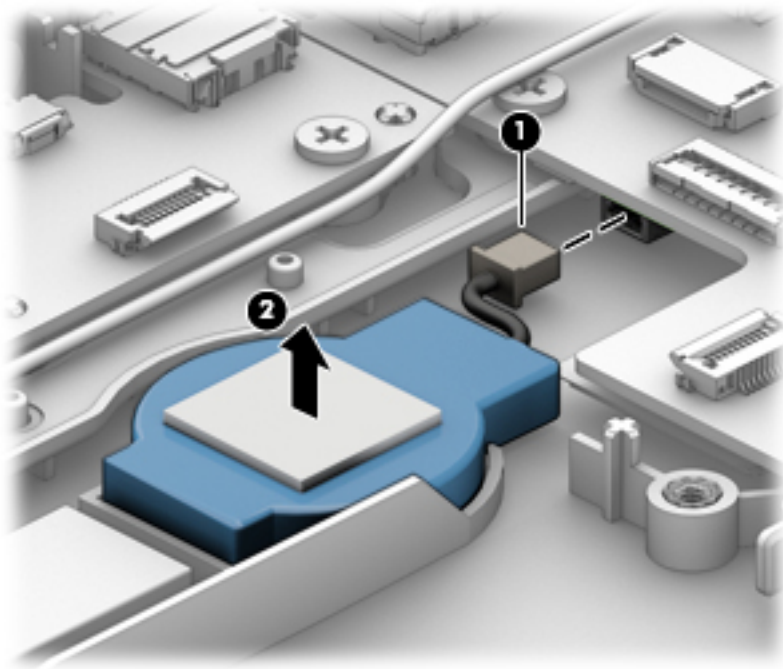
3. Remove the RTC battery.

Reverse this procedure to install the RTC battery.

Speakers

Description	Spare part number
Speakers (includes cables, left and right speakers, and four rubber isolators)	917060-001

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 unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20).

5. Remove the battery (see Battery on page 29).

Remove the speakers:

1. Disconnect the speaker cable **(1)** from the system board.

2. Release the speaker cable from the routing channel **(2)** and retention clips built into the bottom cover.

3. Remove the four Phillips PM2.0×5.0 shoulder screws **(3)** that secure the speakers to the bottom cover.

4. Remove the speakers **(4)**.

> **NOTE:** When removing the speakers, make note of the location of the four rubber isolators **(5)**. Failure to properly install or damage to these isolators can result in degraded speaker performance.

Reverse this procedure to install the speakers.

Audio board

📝 **NOTE:** The audio board spare part kit includes the audio jack, volume control buttons, and cable.

| Description	Spare part number
For use only on HP ProBook x360 11 G2 computer models	932714-001
For use only on HP ProBook x360 11 G1 computer models	917048-001

Before removing the audio board, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see).

5. Remove the battery (see).

Remove the audio board:

1. Release the ZIF connector **(1)** to which the audio board cable is connected, and then disconnect the audio board cable from the system board.

2. Remove the Phillips PM2.5×3.0 screw **(2)** that secures the audio board to the bottom cover.

3. Release the audio board **(3)** by lifting the right side until it rests at an angle.

4. Remove the audio board **(4)** by sliding it up and to the right at an angle.
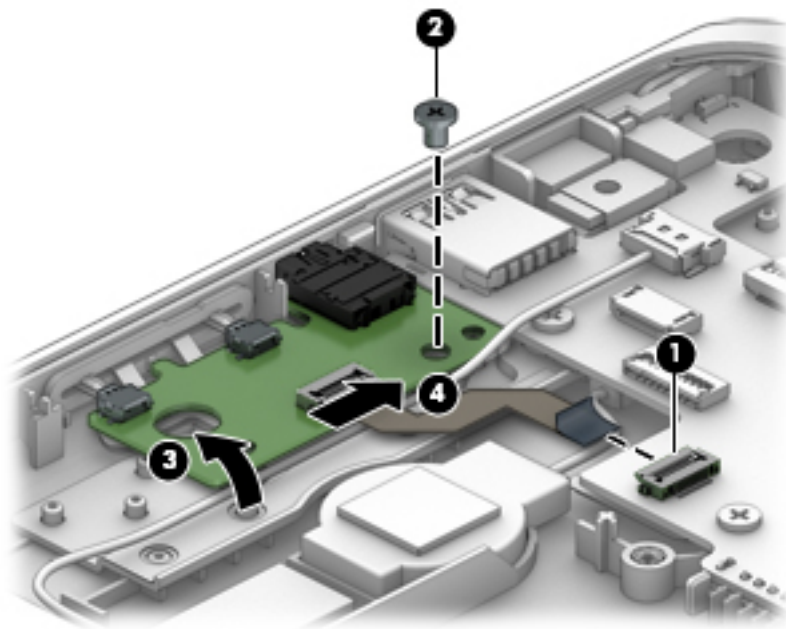
Reverse this procedure to install the audio board.

System board

📝 **NOTE:** The system board spare part kit includes the processor, a graphics subsystem with UMA memory, and replacement thermal material. Replacement thermal material is also available in the Thermal Material Kit, spare part number 917061-001.

| Description	Spare part number
For use only on HP ProBook x360 11 G2 computer models:	
Equipped with an Intel Core m5 i5-7Y54 1.20-GHz (turbo up to 3.2-GHz) processor, 8.0-GB of system memory, and the Windows 10 operating system	938552-001
Equipped with an Intel Core m5 i5-7Y54 1.20-GHz (turbo up to 3.2-GHz) processor, 8.0-GB of system memory, and a non-Windows 10 operating system	938552-001
Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 8.0-GB of system memory, and the Windows 10 operating system	932688-001
Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 8.0-GB of system memory, and a non-Windows 10 operating system	932688-001
Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 4.0-GB of system memory, and the Windows 10 operating system	932687-001
Equipped with an Intel Core m3-7Y30 1.00-GHz (turbo up to 2.6-GHz) processor, 4.0-GB of system memory, and a non-Windows 10 operating system	932687-001
For use only on HP ProBook x360 11 G1 computer models:	
Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 8.0-GB of system memory, and the Windows 10 operating system	917105-601
Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 8.0-GB of system memory, and a non-Windows 10 operating system	917105-001
Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 4.0-GB of system memory, and the Windows 10 operating system	917104-601
Equipped with an Intel Pentium N4200 1.10-GHz (SC turbo up to 2.50-GHz) processor (750-MHz FSB, 2.0-MB L2 cache, quad core, 6-W), 4.0-GB of system memory, and a non-Windows 10 operating system	917104-001
Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 4.0-GB of system memory, and the Windows 10 operating system	917102-601
Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 4.0-GB of system memory, and a non-Windows 10 operating system	917102-001
Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 4.0-GB of system memory, and the Windows 10 operating system	917103-601
Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 4.0-GB of system memory, and a non-Windows 10 operating system	917103-001
Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 2.0-GB of system memory, and the Windows 10 operating system	917101-601
Equipped with an Intel Celeron N3350 1.10-GHz (SC turbo up to 2.40-GHz) processor (650-MHz FSB, 2.0-MB L2 cache, dual core, 6-W), 64-GB of eMMC system storage, 2.0-GB of system memory, and a non-Windows 10 operating system	917101-001

Before removing the system board, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20), and then remove the following components:

    a. Battery (see Battery on page 29)

    b. Solid-state drive (see Solid-state drive on page 30)

    c. WLAN module (see WLAN module on page 31)

NOTE: When replacing the system board, be sure that the heat sink (see Heat sink on page 40) is removed from the defective system board and installed on the replacement system board.

Remove the system board:

1. Disconnect the following cables from the system board:

    (1) Display panel ZIF connector cable

    (2) Webcam/microphone module cable

    (3) Display TouchScreen cable (only on computer models equipped with a TouchScreen display assembly)

    (4) Speaker cable

    (5) RTC battery cable

    (6) Audio board ZIF connector cable
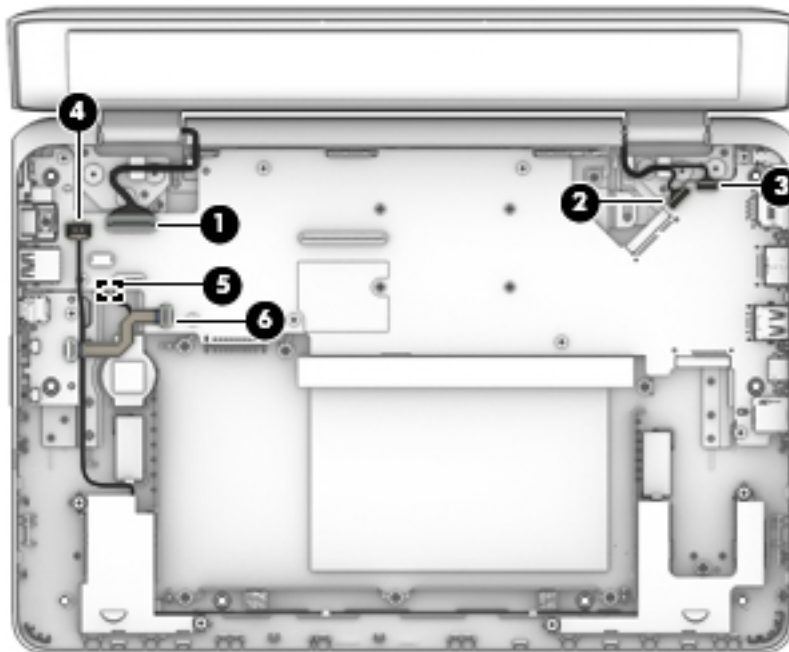
> 📝 **NOTE:** Not all computer models are equipped with a security cable slot bracket. Steps 2 and 3 may not be necessary on all computer models.

2. Remove the Phillips PM2.5×5.6 screw **(1)** that secures the security cable slot bracket to the bottom cover.

3. Remove the security slot bracket **(2)**.
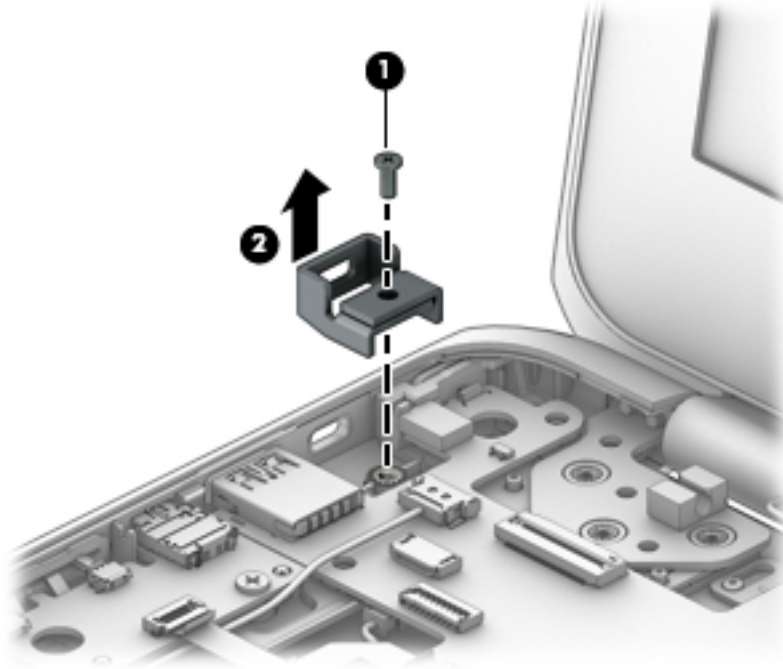
> 📝 **NOTE:** Not all computer models are equipped with system board shielding material. Step 4 may not be necessary on all computer models.

4. Release the shielding material **(1)** that secures the system board to the bottom cover.

5. Remove the nine Phillips PM2.5×3.0 screws **(2)** that secure the system board to the bottom cover.
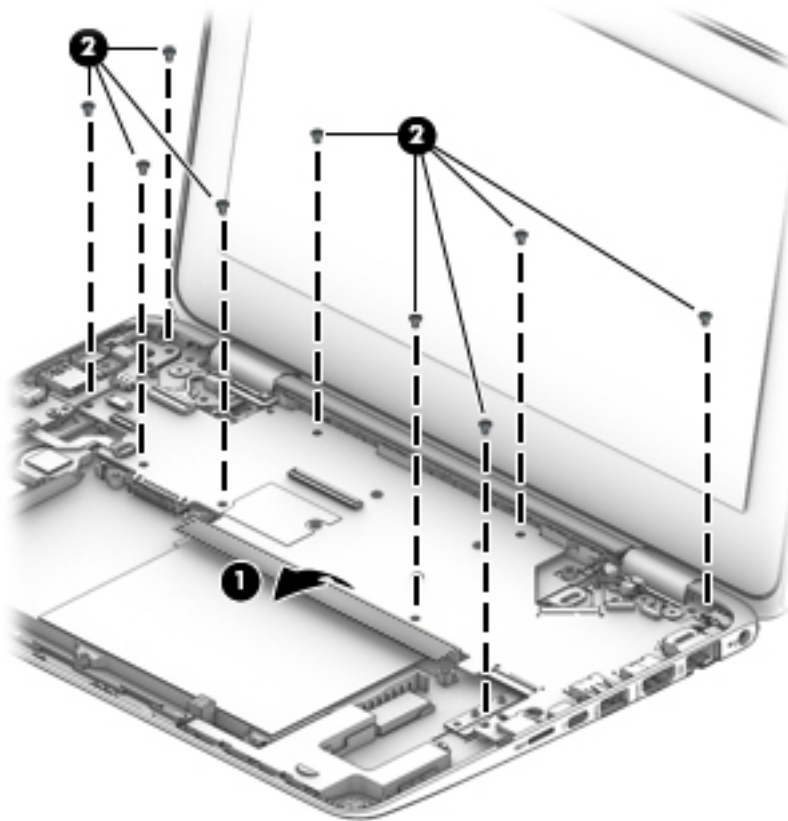
6. Lift the left side of the system board **(1)** until it rests at an angle.

7. Remove the system board **(2)** by sliding it up and to the left at an angle.
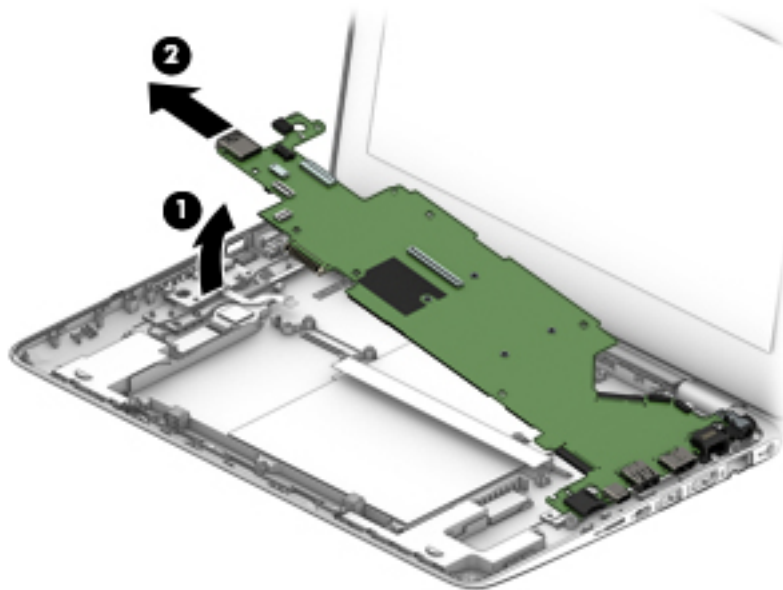
Reverse this procedure to install the system board.

Heat sink

NOTE: The heat sink spare part kit includes replacement thermal material. Replacement thermal material is also available in the Thermal Material Kit, spare part number 917061-001.

Description	Spare part number
For use only on HP ProBook x360 11 G2 computer models	933325-001
For use only on HP ProBook x360 11 G1 computer models	918174-001

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 unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20), and then remove the following components:

    a. Battery (see Battery on page 29)

    b. Solid-state drive (see Solid-state drive on page 30)

    c. WLAN module (see WLAN module on page 31)

    d. System board (see System board on page 36)

Remove the heat sink:

1. Turn the system board upside down with the rear toward you.

2. Remove the four Phillips PM2.0×2.3 screws **(1)** that secure the heat sink to the system board.

3. Remove the heat sink **(2)**.
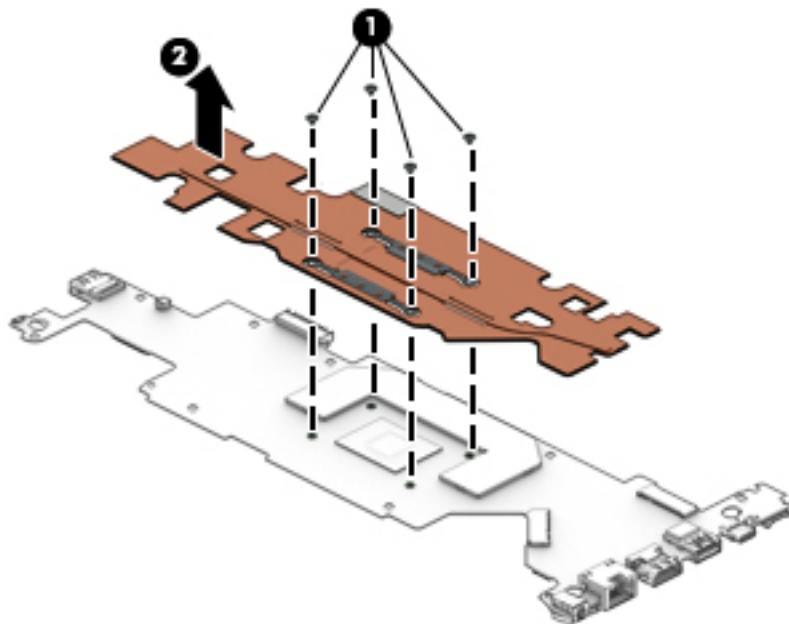
NOTE: The thermal material must be thoroughly cleaned from the surfaces of the heat sink and the system board each time the heat sink is removed. Thermal paste is used on the processor **(1)** and the heat sink section **(2)** that services it.
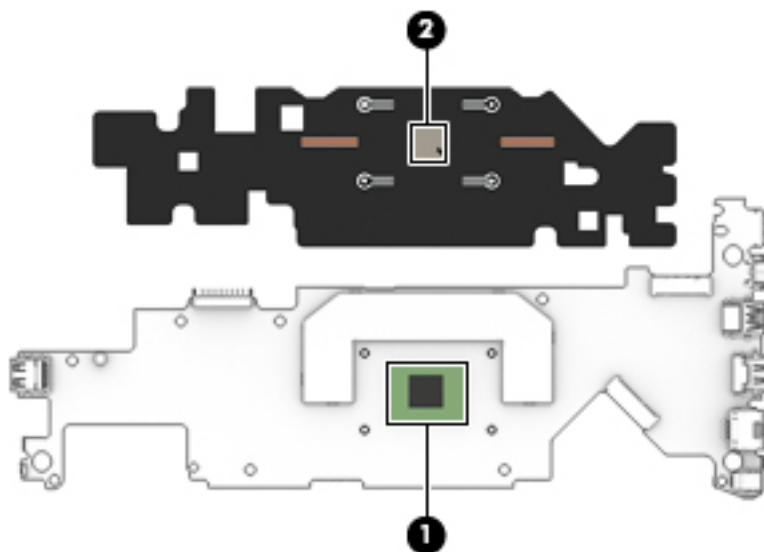
Reverse this procedure to install the heat sink.

Display assembly

NOTE: The TouchScreen display assembly is spared as an entire assembly. The non-TouchScreen display assembly is spared at the subcomponent level. For non-TouchScreen display assembly spare part information, see the individual removal subsections.

Description	Spare part number
For use only on HP ProBook x360 11 G2 computer models:	
11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in radiant red finish	932685-001
11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly with NPTD in radiant red finish	932683-001
11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in smoke gray finish	932686-001
11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly with NPTD in smoke gray finish	932684-001
For use only on HP ProBook x360 11 G1 computer models:	
11.6-in, HD (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in radiant red finish	918429-001
11.6-in, HD, AntiGlare (1366×768), LED, SVA, EDP, slim, 220N, TouchScreen display panel assembly in smoke gray finish	917100-001

Before removing the display assembly, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the keyboard/top cover (see Keyboard/top cover on page 20).

5. Remove the battery (see Battery on page 29).

Remove the display assembly:

1. Release the ZIF connector **(1)** to which the display panel cable is connected, and then disconnect the display panel cable from the system board.

2. Release the display panel cable **(2)** from the retention clip built into the bottom cover.

3. Disconnect the wireless antenna cables **(3)** from the terminals on the WLAN module.

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

4. Disconnect the webcam/microphone module cable **(4)** from the system board.

5. Disconnect the display TouchScreen cable **(5)** from the system board (only on computer models equipped with a TouchScreen display assembly).

6. Release the wireless antenna cables, webcam/microphone module cable, and display TouchScreen cable (only on computer models equipped with a TouchScreen display assembly) from the retention clip **(6)** built into the bottom cover.

7. Remove the six Phillips PM2.5×2.5 broad head screws that secure the display assembly to the bottom cover.
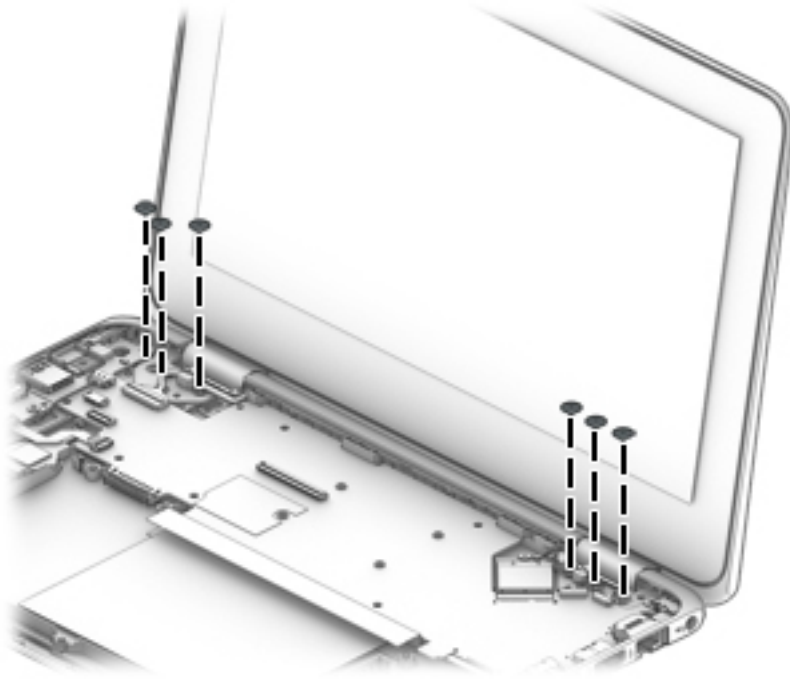
8. Swing the top edge of the display assembly back until the display hinges release from the bottom cover.

9. Slide the bottom edge of the display assembly **(2)** forward and separate it from the bottom cover.

> **NOTE:** Steps 10 through 16 apply only to computer models equipped with a non-TouchScreen display assembly.

10. If it is necessary to replace the display bezel or any of the display assembly subcomponents:

    a. Flex the inside edges of the top edge **(1)**, left **(2)** and right edges, and bottom edge **(3)** of the display bezel until the bezel disengages from the display back cover.

b. Remove the display bezel **(4)**.

The display bezel is available using spare part number 917043-001.

The display bezel adhesive is included in the Miscellaneous Kit, spare part number 917062-001.
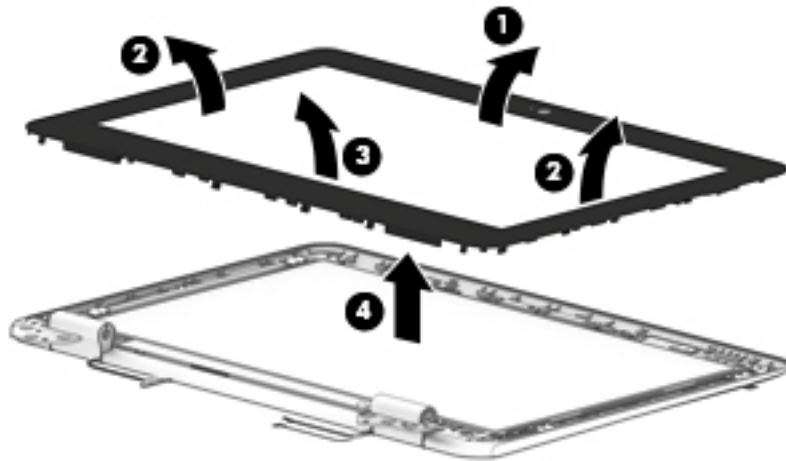
11. If it is necessary to replace the G-sensor module:

a. Remove the display bezel.

b. Release the ZIF connector **(1)** to which the G-sensor module cable is connected, and then disconnect the G-sensor module cable from the G-sensor module.

c. Detach the G-sensor module **(2)** from the display back cover. (The G-sensor module is secured to the display back cover with double-sided adhesive.)
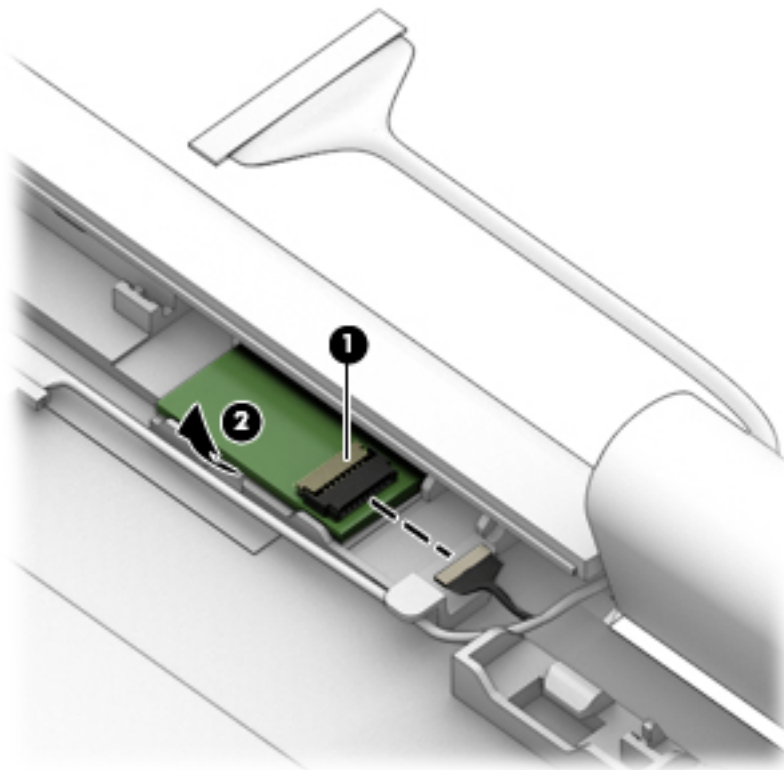
d. Remove the G-sensor module.

The G-sensor module is available using spare part number 917049-001.

12. If it is necessary to replace the LED board:

a. Remove the display bezel.

b. Detach the LED board **(1)** from the display back cover. (The LED board is secured to the display back cover with double-sided adhesive.)

c. Disconnect the LED board cable **(2)** from the LED board.
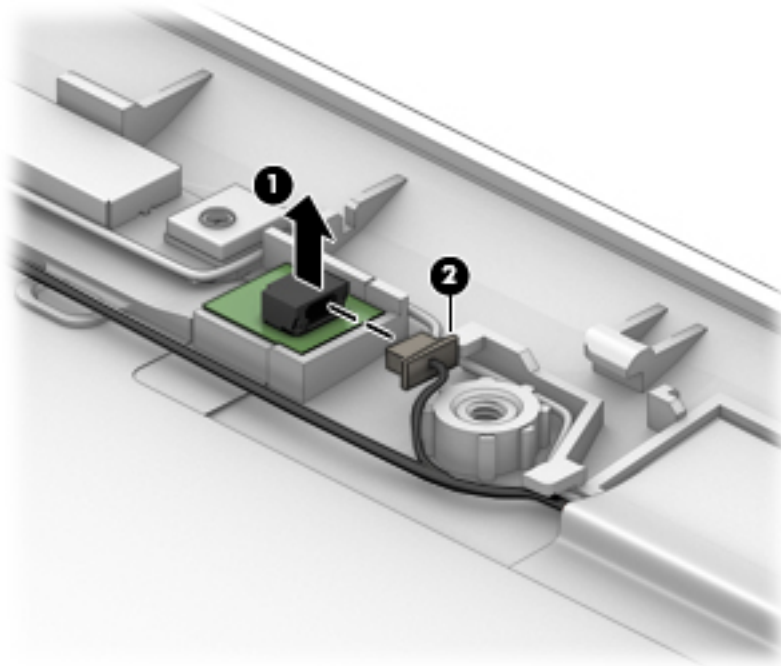
d. Remove the LED board.

The LED board is available using spare part number 917050-001.

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

a. Remove the display bezel.

b. Remove the four Phillips PM2.0×2.3 screws **(1)** that secure the display panel to the display back cover.

c. Detach the piece of protective tape **(2)** that secures and protects the display panel cable.

⚠ **CAUTION:** Before turning the display panel upside 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.

d. Lift the top edge of the display panel **(3)** and swing it up and forward until it rests upside down in front of the display back cover.
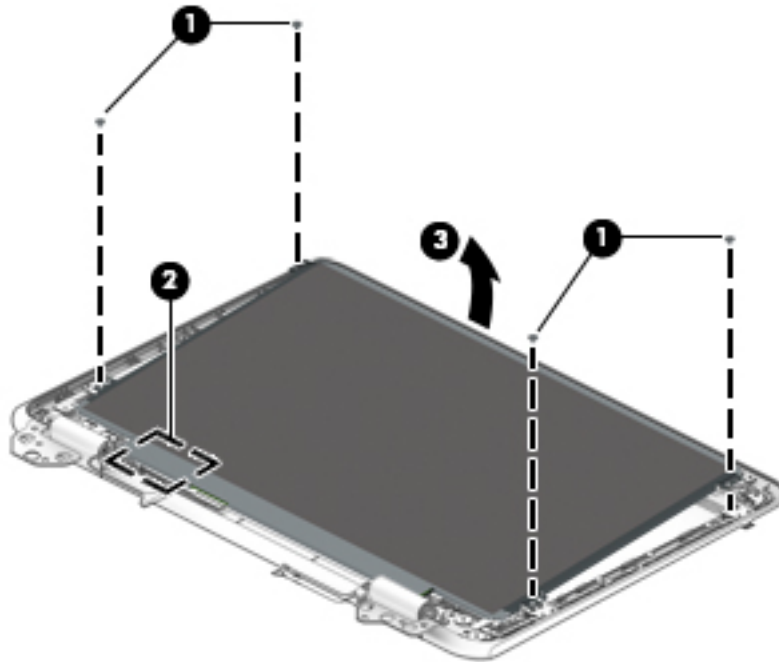
e. Release the adhesive strip **(1)** that secures the display panel cable connector to the display panel.

f. Disconnect the display panel cable **(2)** from the display panel.
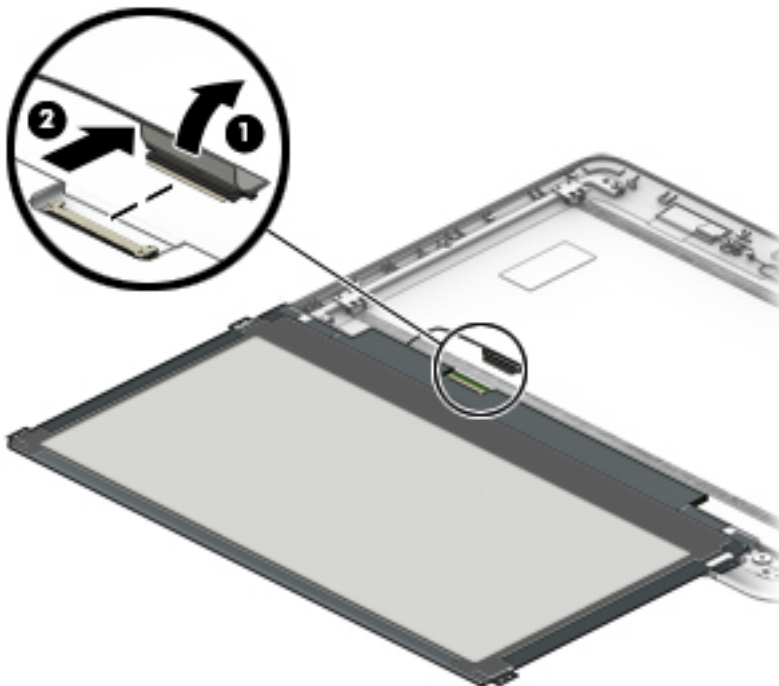
g. Remove the display panel.

The display panel is available using spare part number 912370-001.

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

a. Remove the display bezel.

b. Remove the display panel.

c. Release the rubber cable clip **(1)** containing the display panel cable from the left display hinge.

d. Release the rubber cable clip **(2)** containing the wireless antenna cables and webcam/microphone module cable from the right display hinge.

e. Remove the four Phillips PM2.0×2.3 screws **(3)** that secure the display hinges to the display back cover.

f. Remove the six Phillips PM2.5×2.5 broad head screws **(4)** that secure the display hinges to the display back cover.

g. Remove the display hinges **(5)**.

The display hinges are available using spare part number 917065-001.
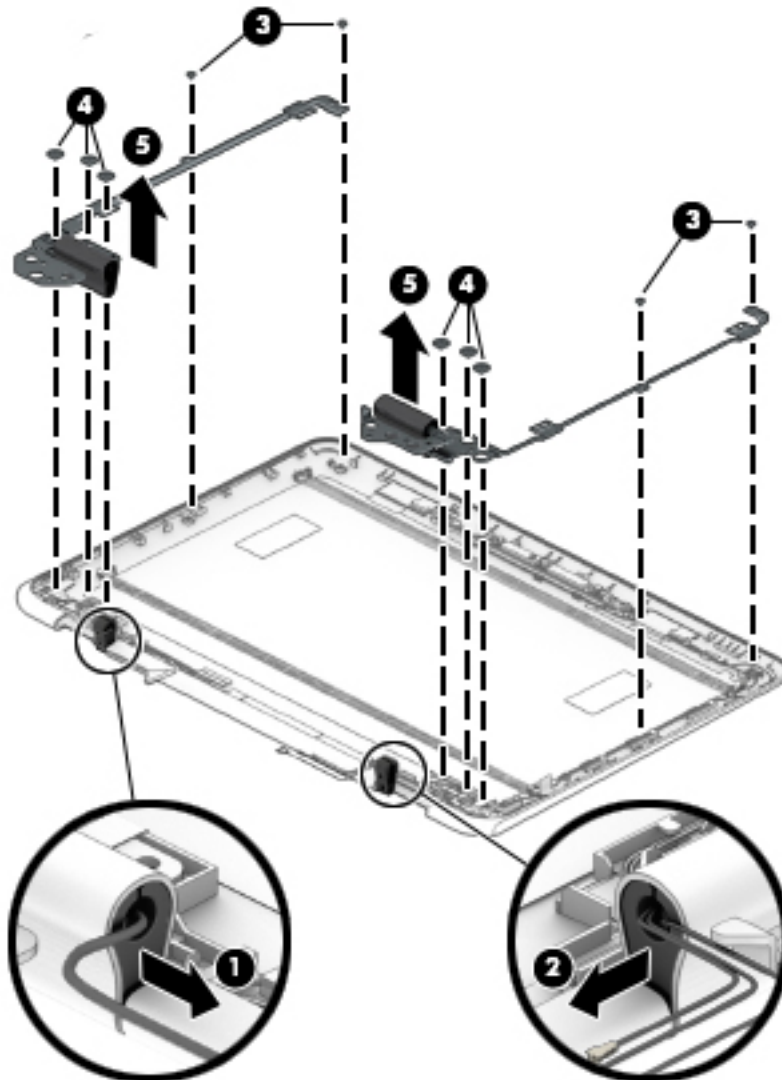
h. If it is necessary to replace the hinge cover, remove the Phillips PM1.6×3.5 screw **(1)** that secures the hinge cover to the display hinge.

i. Remove the display hinge cover **(2)**.

The display hinge cover is included in the display hinge spare part kit, spare part number 917064-001.
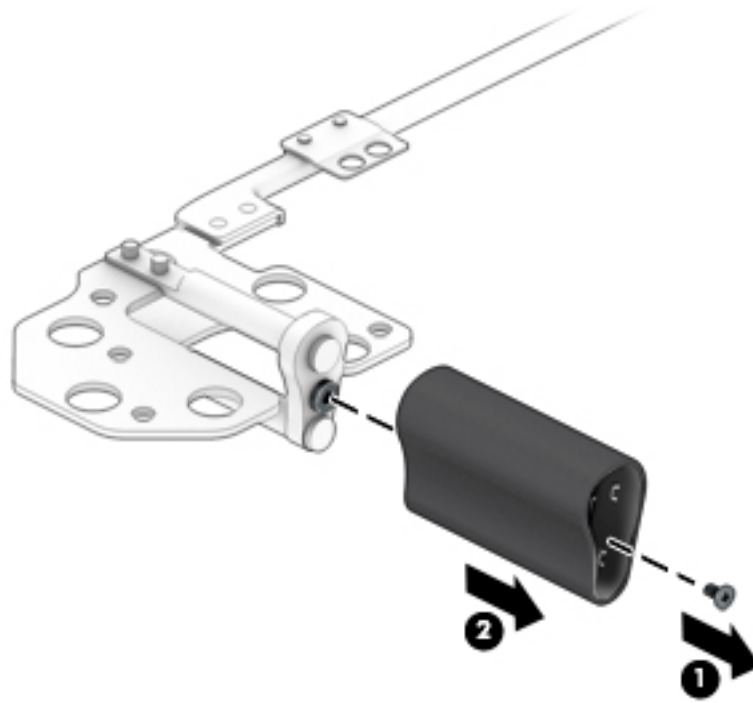
15. If it is necessary to replace the display panel cable:

a. Remove the display bezel.

b. Remove the G-sensor module.

c. Remove the display panel.

d. Remove the display hinges.

e. Remove the display panel cable **(1)** from the rubber cable clip **(2)** that was removed from the left display hinge.

The display panel cable is included in the Cable Kit, spare part number 917064-001.
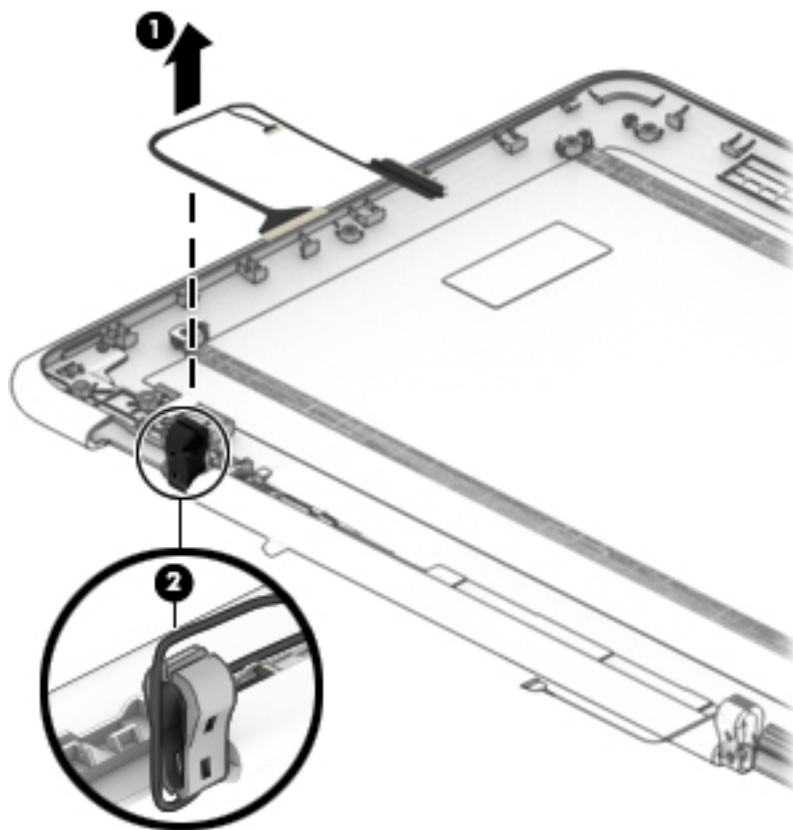
16. If it is necessary to replace the wireless antenna cables and transceivers:

a. Remove the display bezel.

b. Remove the display panel.

c. Remove the display hinges.

d. Detach the retention tape **(1)** that secures the wireless antenna cables to the display back cover near the right hinge.

e. Release the wireless antenna cables from the retention clips **(2)** built into the bottom right corner of the display back cover.

f. Release the wireless antenna cables from the retention tabs **(3)** on the right edge of the display back cover.

g. Release the wireless antenna cables from the retention clips **(4)** and routing channel **(5)** built into the right edge of the display back cover.

h. Release the wireless antenna cables **(6)** from the rubber cable clip that was removed from the right display hinge.

i. Detach the wireless antenna transceivers **(7)** from the display back cover. (The wireless antenna transceivers are attached to the display back cover with double-sided adhesive.)
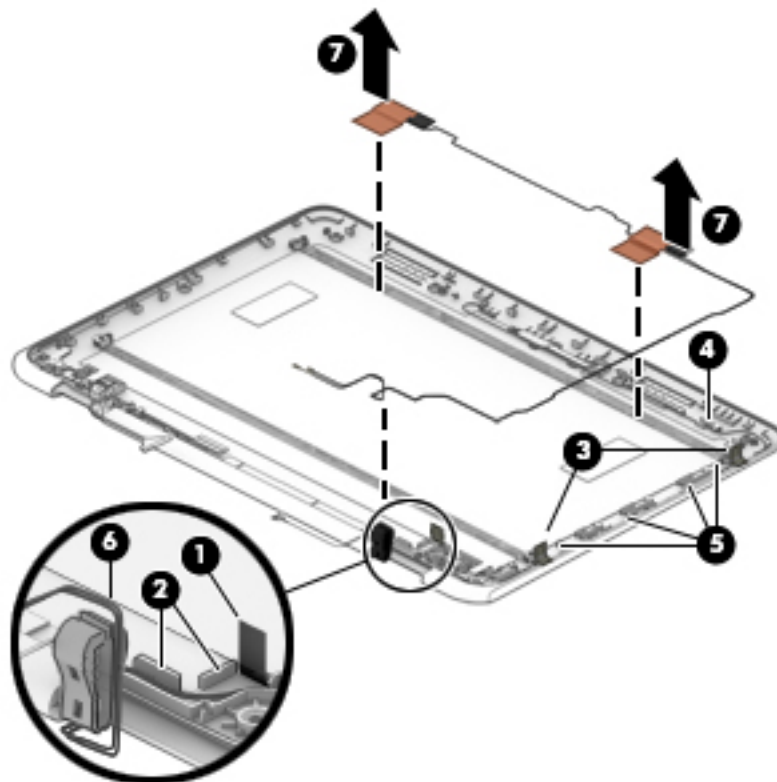
j. Remove the wireless antenna cables and transceivers.

The wireless antenna cables and transceivers are available using spare part number 918173-001.

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

a. Remove the display bezel.

b. Remove the display panel.

c. Remove the display hinges.

d. Remove the wireless antenna cables and transceivers.

e. Release the webcam/microphone module cable from the retention clips **(1)** and routing channel built into the right edge of the display back cover.

f. Disconnect the LED board cable **(2)** from the LED board.

g. Detach the webcam/microphone module **(3)** from the display back cover. (The webcam/microphone module is attached to the display back cover with double-sided adhesive.)
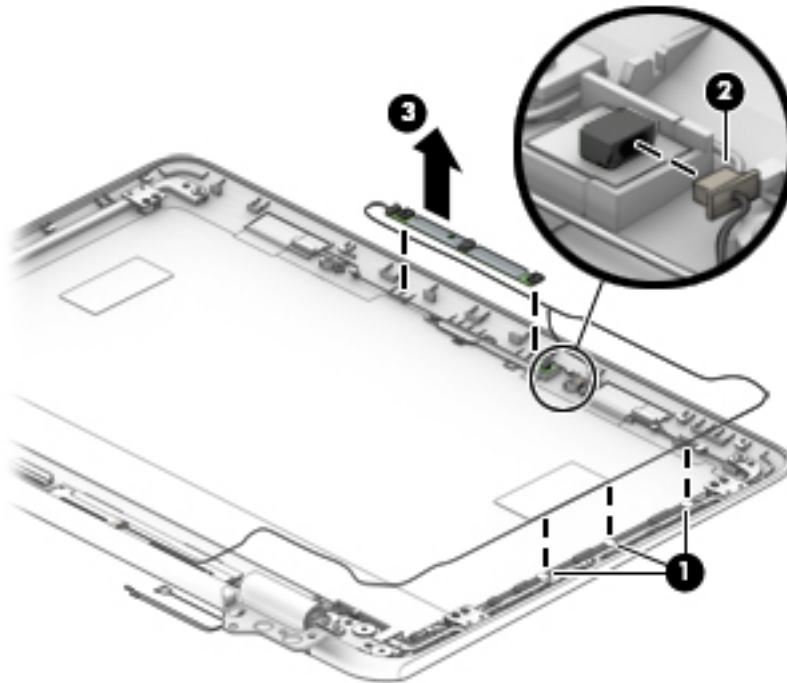
h. Remove the webcam/microphone module.

The webcam/microphone module is available using spare part number 912367-001.

The webcam/microphone module cable is included in the Cable Kit, spare part number 917064-001.

Reverse this procedure to reassemble and install the display assembly.

5   Using Setup Utility (BIOS)

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

NOTE: To start Setup Utility on convertible computers, your computer must be in notebook mode and you must use the keyboard attached to your notebook.

Starting Setup Utility (BIOS)

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

▲   Turn on or restart the computer, quickly press esc, and then press f10.

Updating Setup Utility (BIOS)

Updated versions of Setup Utility (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 decide whether you need to update Setup Utility (BIOS), first determine the BIOS version on your computer.

To reveal the BIOS version information (also known as *ROM date* and *System BIOS*), use one of these options.

- HP Support Assistant

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

      – or –

      Click the question mark icon in the taskbar.

   2.   Select **My PC**, and then select **Specifications**.

- Setup Utility (BIOS)

   1.   Start Setup Utility (BIOS) (see).

   2.   Select **Main**, select **System Information**, and then make note of the BIOS version.

   3.   Select **Exit**, select **No**, and then follow the on-screen instructions.

To check for later BIOS versions, see .

Downloading a BIOS update

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

- Do not disconnect power from 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.

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

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

   – or –

   Click the question mark icon in the taskbar.

2. Click **Updates**, and then click **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. If the update is more recent than your BIOS version, 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.

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

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

2. Click your hard drive designation. The hard drive designation is typically Local Disk (C:).

3. Using the hard drive path you recorded earlier, open the folder 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.

6 Using HP PC Hardware Diagnostics (UEFI)

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

When HP PC Hardware Diagnostics (UEFI) detects a failure that requires hardware replacement, a 24-digit Failure ID code is generated. This ID code can then be provided to support to help determine how to correct the problem.

NOTE: To start diagnostics on a convertible computer , your computer must be in notebook mode and you must use the keyboard attached.

To start HP PC Hardware Diagnostics (UEFI), follow these steps:

1. Turn on or restart the computer , and quickly press esc.

2. Press f2.

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

    a. Connected USB drive

    NOTE: To download the HP PC Hardware Diagnostics (UEFI) tool to a USB drive, see .

    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.

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

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

NOTE: The HP PC Hardware Diagnostics (UEFI) download instructions are provided in English only, and you must use a Windows computer to download and create the HP UEFI support environment because only .exe files are offered.

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, select the **Download** link, and then select **Run**.

Download any version of UEFI for a specific product

1. Go to http://www.hp.com/support.

2. Select **Get software and drivers**.

3. Enter the product name or number.

   – or –

   Select **Identify 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.

7 Specifications

Computer specifications

The power information in this section may be helpful if you plan to travel internationally with the computer.

The computer operates on DC power, which can be supplied by an AC or a DC power source. The AC power source must be rated at 100–240 V, 50–60 Hz. Although the computer can be powered from a standalone DC power source, it should be powered only with an AC adapter or a DC power source that is supplied and approved by HP for use with this computer.

The computer can operate on DC power within the following specifications. Operating voltage and current varies by platform. The voltage and current for your computer is located on the regulatory label.

	Metric	U.S.
Dimensions		
Depth	**30.24 cm**	11.91 in
Width	**20.80 cm**	8.19 in
Height	**1.99 cm**	0.78 in
Weight (equipped with a TouchScreen display assembly, 3-cell battery, and eMMC)	**1.45 kg**	3.19 lbs
Weight (equipped with a non-TouchScreen display assembly, 3-cell battery, and eMMC)	**1.35 kg**	2.98 lbs
Input power		
Operating voltage and current	5 V dc @ 2 A / 12 V dc @ 3 A / 15 V dc @ 3 A – 45 W USB-C	
	5 V dc @ 3 A / 9 V dc @ 3 A / 10 V dc @ 3.75 A / 12 V dc @ 3.75 A / 15 V dc @ 3 A / 20 V dc @ 2.25 A - 45 W USB-C	
	5 V dc @ 3 A / 9 V dc @ 3 A / 10 V dc @ 5.0 A / 12 V dc @ 5.0 A / 15 V dc @ 4.33 A / 20 V dc @ 3.25 A - 65 W USB-C	
	5 V dc @ 3 A / 9 V dc @ 3 A / 10 V dc @ 5.0 A / 12 V dc @ 5.0 A / 15 V dc @ 5.0 A / 20 V dc @ 4.5 A - 90 W USB-C	
	19.5 V dc @ 2.31 A – 45 W	
	19.5 V dc @ 3.33 A – 65 W	
	19.5 V dc @ 4.62 A – 90 W	
	19.5 V dc @ 6.15 A – 120 W	
	19.5 V dc @ 7.70 A – 150 W	
	19.5 V dc @ 10.3 A – 200 W	

NOTE: This product is designed for IT power systems in Norway with phase–to–phase voltage not exceeding 240 V rms.

Temperature		
Operating	**5℃ to 35℃**	41°F to 95°F
Non-operating	**-20℃ to 60℃**	-4°F to 140°F

	Metric	U.S.
Relative humidity (non-condensing)		
Operating	10% to 90%	
Non-operating	5% to 95%	
Maximum altitude (unpressurized)		
Operating	**-15 m to 3,048 m**	-50 ft to 10,000 ft
Non-operating	**-15 m to 12,192 m**	-50 ft to 40,000 ft

NOTE: Applicable product safety standards specify thermal limits for plastic surfaces. The device operates well within this range of temperatures.

8   Backing up, restoring, and recovering

This chapter provides information about the following processes. 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 61. For information on the recovery options that are available using the recovery media, see Using Windows tools on page 62.

- 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 63.

  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 62.

- 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 63.

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 63. If you have not already created recovery media, see Creating HP Recovery media (select products only) on page 61.

- 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 63.

- 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 HP Recovery partition (select products only) on page 66.

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 61.

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.

- HP Recovery media must be used if the computer hard drive fails. If you have not already created recovery media, see Creating HP Recovery media (select products only) on page 61.

- 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 61.

- 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 .

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 <u>Creating HP Recovery media (select products only) on page 61</u>.

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.

9 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** (3.2 ft) and no more than **1.8 m** (6 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 HO5VV-F, 3-conductor, 1.0-mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.

2. The flexible cord must be Type SPT-3 or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V) or NEMA 6-15P (15 A, 250 V) configuration.

3. The appliance coupler, flexible cord, and wall plug must bear a "T" mark and registration number in accordance with the Japanese Dentori Law. The flexible cord must be Type VCT or VCTF, 3-conductor, 1.00-mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V) configuration.

4. The flexible cord must be Type RVV, 3-conductor, 0.75-mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.

5. The flexible cord must be Type VCTF, 3-conductor, 0.75-mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.

10   Recycling

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

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

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