



Hardware Reference Guide

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Product notice

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

Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. Go to <http://www.microsoft.com> for details.

To access the latest user guides, go to <http://www.hp.com/support>, and follow the instructions to find your product. Then select **User Guides**.

Software terms

By installing, copying, downloading, or otherwise using any software product preinstalled on this computer, you agree to be bound by the terms of the HP End User License Agreement (EULA). If you do not accept these license terms, your sole remedy is to return the entire unused product (hardware and software) within 14 days for a full refund subject to the refund policy of your seller.

For any further information or to request a full refund of the price of the computer, please contact your seller.

About This Guide

This guide provides basic information for upgrading this computer model.

-  **WARNING!** Indicates a hazardous situation that, if not avoided, **could** result in death or serious injury.
 -  **CAUTION:** Indicates a hazardous situation that, if not avoided, **could** result in minor or moderate injury.
 -  **IMPORTANT:** Indicates information considered important but not hazard-related (for example, messages related to property damage). Warns the user that failure to follow a procedure exactly as described could result in loss of data or in damage to hardware or software. Also contains essential information to explain a concept or to complete a task.
 -  **NOTE:** Contains additional information to emphasize or supplement important points of the main text.
 -  **TIP:** Provides helpful hints for completing a task.
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1 Product features

Overview



NOTE: To access the latest user guides, go to <http://www.hp.com/support>, and follow the instructions to find your product. Then select **User Guides**.

This product employs electronic labeling for indication of regulatory mark or statement. See [Locating the serial number and product number on page 6](#) for the operation to display.

Front components

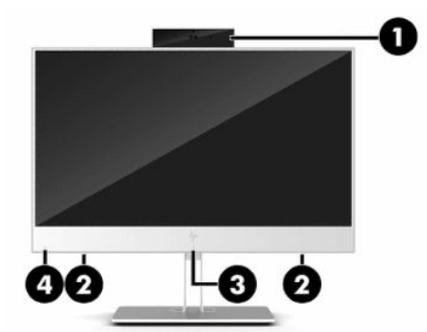


Table 1-1 Front components

Front components	
(1) Webcam	(3) Radio Frequency identification (RFID) tapping area and antenna* (select models only)
(2) Speakers (2)	(4) HP Sure View icon (select models only)

*The antenna is not visible from the outside of the computer. For optimal transmission, keep the area immediately around the antenna free from obstructions.

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

To access this guide:

- ▲ Select the **Start** button, select **HP Help and Support**, and then select **HP Documentation**.

– or –

- ▲ Select the **Start** button, select **HP**, and then select **HP Documentation**.

Top components

Infrared (IR) webcam (optional)

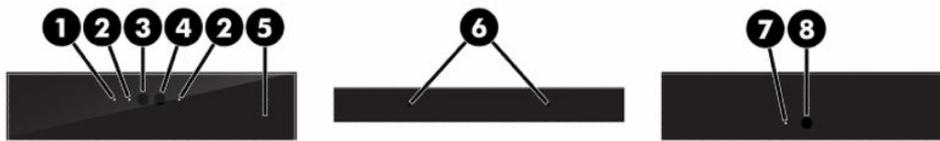


Table 1-2 Infrared (IR) webcam components

Infrared (IR) webcam components	
Front View	
(1) Webcam light	(4) IR webcam
(2) IR light	(5) Rear webcam adjustment wheel
(3) Full High Definition (FHD) webcam	
Top view	
(6) Digital microphones	
Rear view	
(7) Webcam light	(8) FHD webcam

Full High Definition (FHD) webcam (optional)



Table 1-3 Full High Definition (FHD) webcam components

Full High Definition (FHD) webcam components	
Front view	
(1) Webcam light	
(2) FHD webcam	
Top view	
(3) Digital microphones	

Side components

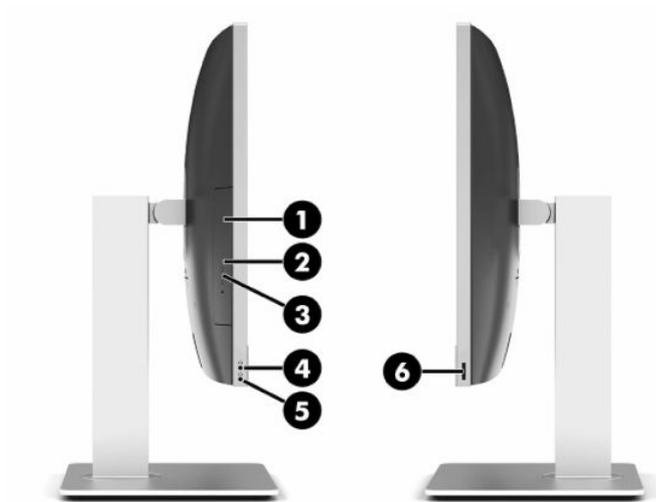


Table 1-4 Side components

Side components	
(1)	Optical disc drive (optional)
(2)	Optical disc drive light (optional)
(3)	Optical disc drive eject button (optional)
(4)	Audio-out (headphone)/Audio-in (microphone) combo jack
(5)	Audio-out (headphone) jack
(6)	Fingerprint reader (select models only)

NOTE: The fingerprint reader is not available on the Healthcare Edition All-in-One.

Rear components

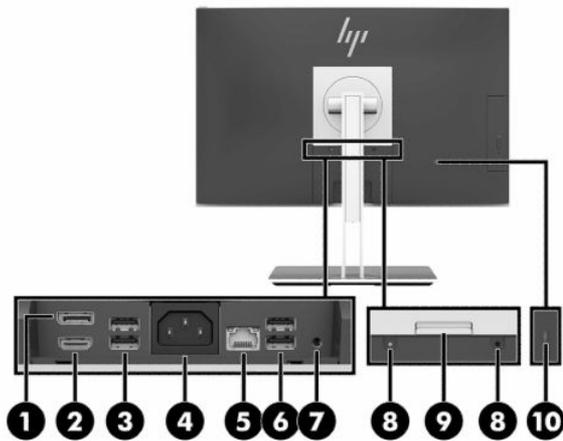


Table 1-5 Rear components

Rear components	
(1)	DisplayPort connector
(2)	HDMI port
(6)	USB SuperSpeed ports (2)
(7)	Stereo audio-out jack

Table 1-5 Rear components (continued)

Rear components	
(3) USB SuperSpeed ports with wake from keyboard or mouse (2)	(8) Security lock screws
(4) Power connector	(9) Stand release
(5) RJ-45 (network) jack	(10) Security cable slot

Bottom components

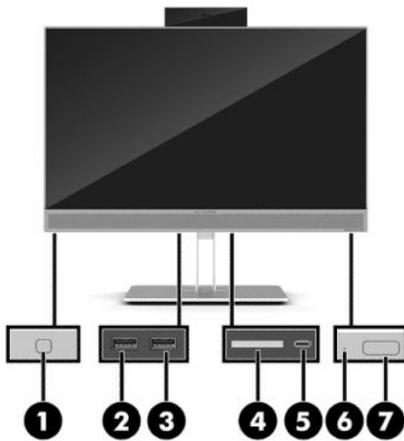


Table 1-6 Bottom components

Bottom components	
(1) HP Sure View button (select models only)	(5) USB Type-C port
(2) USB SuperSpeed port	(6) Hard drive activity light
(3) USB SuperSpeed port with HP Sleep and Charge	(7) Power button
(4) SD card reader	

Keyboard features

Your keyboard may be different than the one shown below.

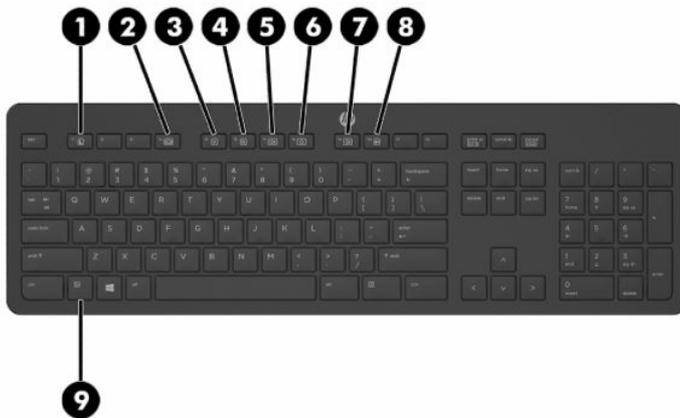


Table 1-7 Keyboard components

Keyboard components	
(1) Sleep	(6) Mute Volume
(2) Fast Reverse	(7) Decrease Volume
(3) Play/Pause	(8) Increase Volume
(4) Stop	(9) Function
(5) Fast Forward	

Locating the serial number and product number

The serial number and product number are located on a label on the bottom edge of the bezel. You may need these numbers when contacting HP about your computer model.



2 Setup

Overview

Set up the computer in the following order:

- Attach a stand. See [Attaching and removing a stand on page 7](#).
Or
Attach the computer to a mounting fixture. See [Attaching the computer to a mounting fixture on page 10](#).
- Connect the cables for peripherals and power. See [Connecting and disconnecting cables on page 11](#).
- Connect an additional display, if desired. See [Connecting a monitor on page 11](#).
- Install and secure the rear port cover. See [Installing the rear port cover on page 14](#).
- Select a comfortable computer position and viewing angle. See [Positioning the computer on page 15](#).
- Install a security cable for security. See [Installing a security cable on page 19](#).
- Turn on the power. See [Connecting power on page 19](#).
- The mouse and keyboard are synchronized at the factory. Should you ever need to synchronize the mouse and keyboard again, see [Synchronizing the optional wireless keyboard and mouse on page 23](#).

Attaching and removing a stand

Two stands are available for the computer:

- Recline stand
- Adjustable height stand

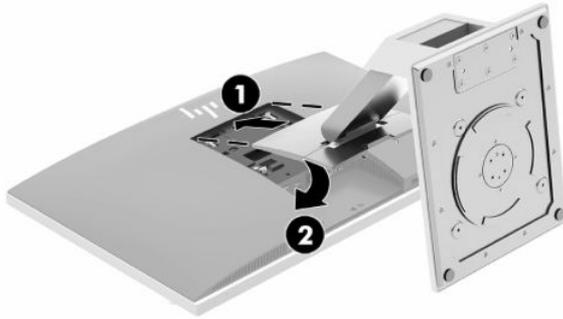
Attaching and removing a recline stand

Attaching a recline stand

To install the stand:

1. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
2. Engage the hooks in the top of the stand in the two large holes in the upper part of the back of the computer (1).

3. Lower the stand onto the computer and press down until it clicks into place (2).



Removing a recline stand

To remove the stand:

1. Remove all removable media, such as optical discs or USB flash drives, from the computer.
2. Turn off the computer properly through the operating system, then turn off any external devices.
3. Disconnect the AC power cord from the AC outlet and disconnect any external devices.
4. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
5. Remove the rear port cover, if it is installed. For instructions, see [Removing the rear port cover on page 13](#).
6. Press the release latch under the stand (1).
7. Lift the stand up (2), and then pull the stand hooks out of the computer (3).

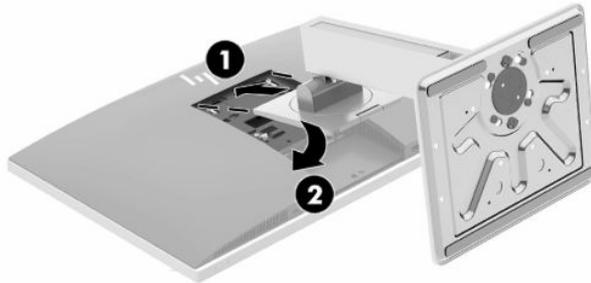


Attaching and removing an adjustable height stand

Attaching an adjustable height stand

To install the stand:

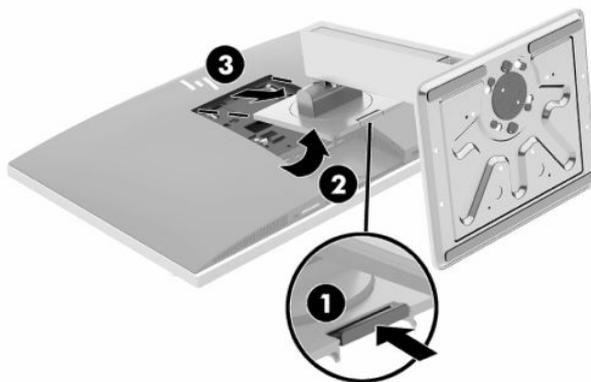
1. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
2. Engage the hooks in the top of the stand in the two large holes in the upper part of the back of the computer (1).
3. Lower the stand onto the computer and press down until it clicks into place (2).



Removing an adjustable height stand

To remove the stand:

1. Remove all removable media, such as optical discs or USB flash drives, from the computer.
2. Turn off the computer properly through the operating system, then turn off any external devices.
3. Disconnect the AC power cord from the AC outlet and disconnect any external devices.
4. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
5. Remove the rear port cover, if it is installed. For instructions, see [Removing the rear port cover on page 13](#).
6. Press the release latch under the stand (1).
7. Lift the stand up (2), and then pull the stand hooks out of the computer (3).



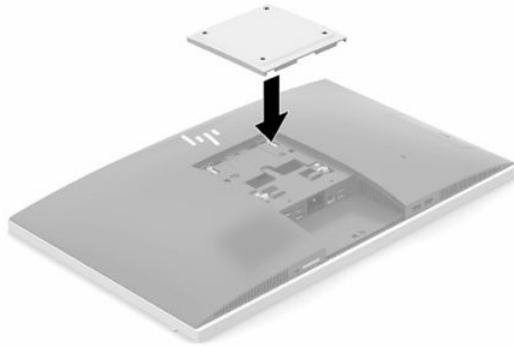
Attaching the computer to a mounting fixture

The computer can be attached to a wall, swing arm, or other mounting fixture.

IMPORTANT: This computer supports the VESA industry standard 100 mm mounting holes. To attach a third-party mounting solution to the computer, four 4 mm, 0.7 pitch, and 20 mm long screws are required. These screws are supplied with the computer. Longer screws must not be used because they may damage the computer. It is important to verify that the manufacturer's mounting solution is compliant with the VESA standard and is rated to support the weight of the computer. For best performance, it is important to use the power and other cables provided with the computer.

NOTE: This apparatus is intended to be supported by UL- or CSA-Listed wall-mount bracket.

1. Press the supplied VESA trim plate onto the VESA opening until it snaps into place.



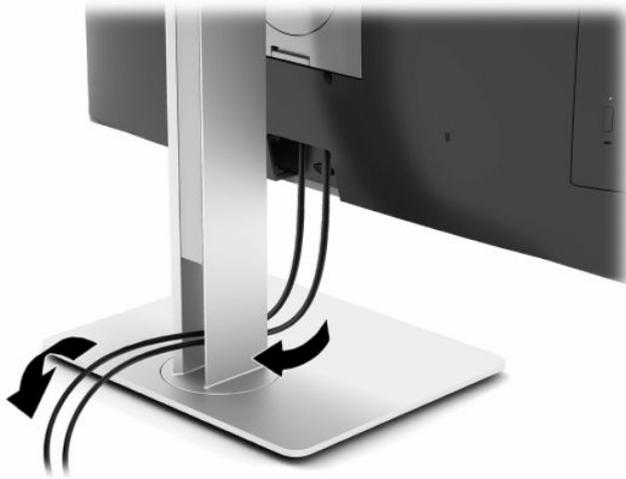
2. To attach the computer to a swing arm (sold separately), insert the four 20 mm screws that are supplied with the computer through the holes on the swing arm plate and into the mounting holes on the computer.

To attach the computer to other mounting fixtures, follow the instructions included with the mounting fixture to ensure that the computer is safely attached.

Connecting and disconnecting cables

Connecting cables

1. If the rear port cover is installed, remove the cover.
See [Removing the rear port cover on page 13](#).
2. Route the power and all peripheral cables through the opening in the base of the stand.



3. Connect the peripheral cables to the appropriate ports.
4. Replace the rear port cover.
See [Installing the rear port cover on page 14](#).
5. Connect the power cord to the power connector on the rear of the computer.

Connecting a monitor

The DisplayPort and HDMI connectors on the rear of the computer allow you to connect monitors to the computer.

- If your computer has Intel graphics, you can connect up to two monitors in one of the following configurations:
 - Two monitors daisy-chained to the DisplayPort connector
 - One monitor connected to the DisplayPort connector and one monitor connected to the HDMI port
- If your computer has AMD graphics, you can connect up to four monitors in one of the following configurations:
 - All four monitors daisy-chained to the DisplayPort connector
 - Three monitors daisy-chained to the DisplayPort connector and one monitor connected to the HDMI port

If you are adding a monitor that has a DisplayPort or an HDMI connector, then no video adapter is required. If you are adding a monitor that does not have a DisplayPort or HDMI connector, you can purchase a video adapter from HP for your configuration.

DisplayPort adapters, HDMI adapters, and video cables are purchased separately. HP offers the following adapters:

- DisplayPort to VGA adapter
- DisplayPort to DVI adapter
- HDMI to VGA adapter
- HDMI to DVI adapter

To connect a monitor:

1. Turn off power to the computer and the monitor that you are connecting to the computer.
2. Remove the rear port cover on the computer.
3. If your monitor has a DisplayPort connector, connect a DisplayPort cable directly between the DisplayPort connector on the rear of the computer and the DisplayPort connector on the monitor.

If your monitor has an HDMI port, connect an HDMI cable directly between the HDMI port on the rear of the computer and the HDMI port on the monitor.

4. If your monitor does not have a DisplayPort connector, connect a DisplayPort video adapter to the DisplayPort connector on the computer. Then connect a cable (VGA or DVI, depending on your application) between the adapter and the monitor.

If your monitor does not have an HDMI port, connect an HDMI video adapter to the HDMI port on the computer. Then connect a cable (VGA or DVI, depending on your application) between the adapter and the monitor.

5. Replace the rear port cover on the computer.
6. Turn on power to the computer and the monitor.



NOTE: Use the graphics card software or the Windows Display Settings to configure the monitor as a mirrored image of the computer display or an extension of the computer display.

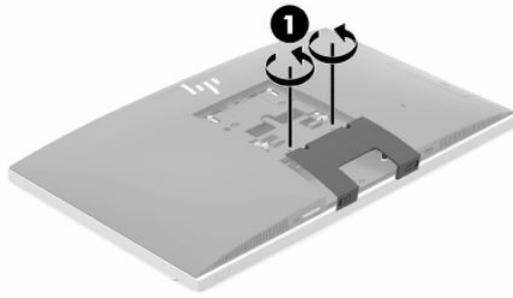
Disconnecting cables

1. You may need to remove the security cable, if one is installed on the rear of the computer.
2. If the rear port cover is installed, remove the cover.
3. Disconnect the cables from the ports.

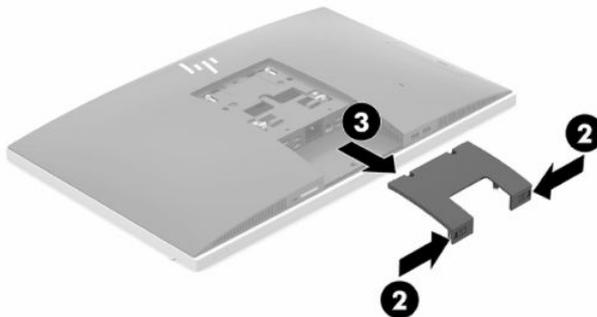
Removing and installing the rear port cover

Removing the rear port cover

1. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
2. If the security lock screws are secured, use a T15 tamper-resistant Torx security screwdriver to remove both screws (1).

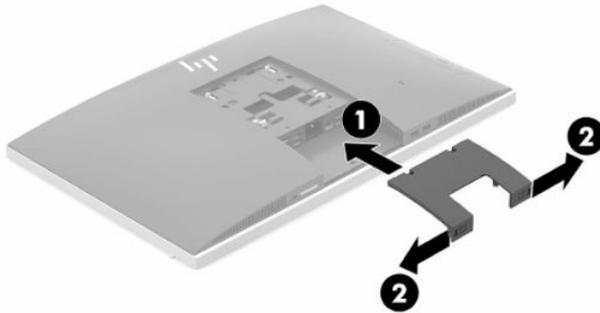


3. Slide the rear port cover retainer tabs toward each other (2) to release the port cover.
4. Pull the port cover (3) toward the bottom and off the computer.

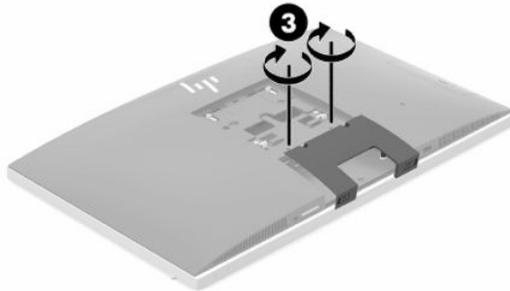


Installing the rear port cover

1. Be sure that all cables are connected.
2. Hold the port cover parallel to the computer and align the two tabs on the port cover with the slots in the top of the rear port compartment.
3. Slide the port cover (1) in until the tabs click into place.
4. Slide the rear port cover retainer tabs away from each other (2) to lock the port cover in place.



5. You may prevent access to internal components and ports by securing the rear port cover. Use a T15 tamper-resistant Torx screwdriver to screw the two security lock screws into the chassis (3).



Positioning the computer

This computer may ship with a recline stand or an adjustable height stand.

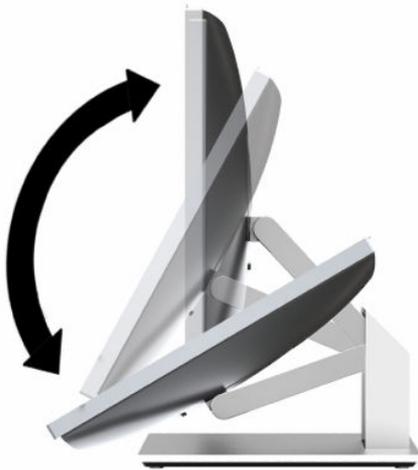
Adjusting a recline stand

 **IMPORTANT:** Use caution when reclining a computer if a cable lock is installed. The cable or the lock may interfere with the rotation or the angle of recline.

This stand allows you to position the computer from a reclining position to an upright position.

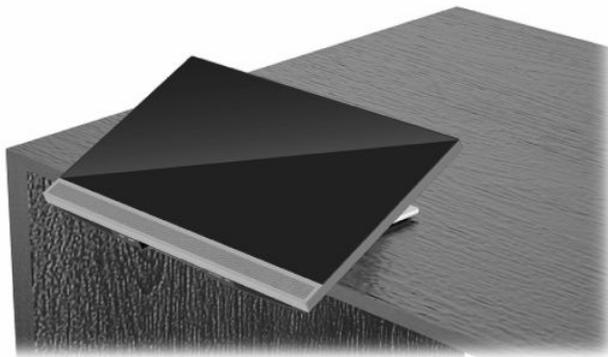
To adjust the computer position from the reclining position to an upright position:

1. Grasp both top and bottom of the computer and lift the computer to the highest point.
2. Press the bottom of the computer down and adjust to the appropriate tilt.



To adjust the computer position from an upright position to the reclining position:

1. Lift the bottom of the computer until it is level with the top.
2. Grasp both top and bottom of the computer and press down until the computer is in the desired position.



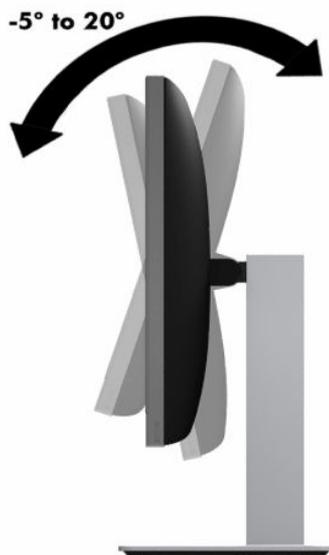
Adjusting an adjustable height stand

 **IMPORTANT:** Use caution when rotating or reclining a computer if a cable lock is installed. The cable or the lock may interfere with the rotation or the angle of recline.

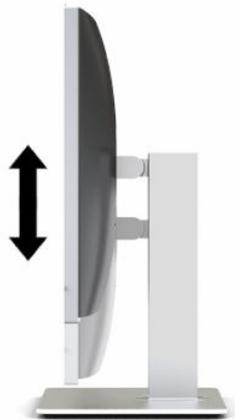
This stand allows you to:

- Tilt the computer from -5° to 20° from the desktop
- Adjust the computer height within a range of 110 mm (4.3 in)
- Rotate the computer from the landscape to portrait orientation
- Swivel the computer up to 45° to either side

To tilt the computer, grasp the top and bottom of the computer and adjust to the appropriate tilt.



To change the height of the computer, grasp both sides of the computer and lift or lower to the appropriate height.



To recline the computer:

 **IMPORTANT:** In portrait mode, the recline is limited if a cable lock is installed.

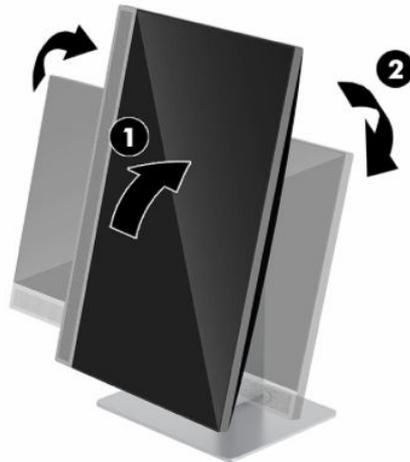
1. Move the stand next to the edge of the desk.
2. Grasp both sides of the computer and lower the computer to your preferred position.
3. Grasp the top and bottom of the computer and tilt the computer to the desired position.



To change from landscape to portrait view:

 **IMPORTANT:** When changing the computer orientation between landscape and portrait, be sure that the HP logo on the front of the computer is either on the bottom or the left side.

1. Lift the computer to the highest position to provide clearance.
2. Grasp the upper right and lower left corners of the computer and lift the lower left corner until the computer is in the portrait position.



To change from portrait to landscape view:

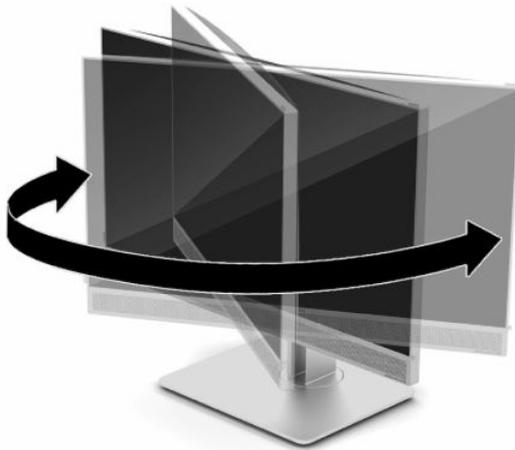
1. Lift the computer to the highest position to provide clearance.

2. Grasp the upper left and lower right corners of the computer and lift the lower right corner until the computer is in the landscape position.



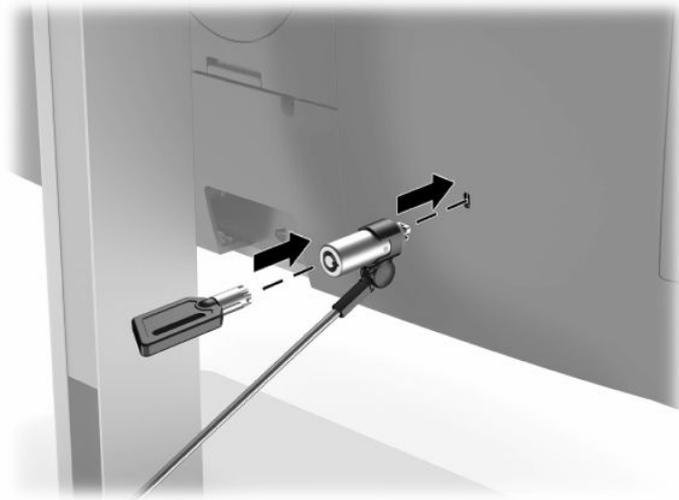
To swivel the computer from side to side:

- ▲ Grasp both sides of the computer and swivel it up to 45° to one side or the other.



Installing a security cable

A security cable is a key lock device that has a wire cable attached. You attach one end of the cable to your desk (or other stationary object) and the other end of the cable to the security cable slot on the computer. Secure the security cable lock with the key.

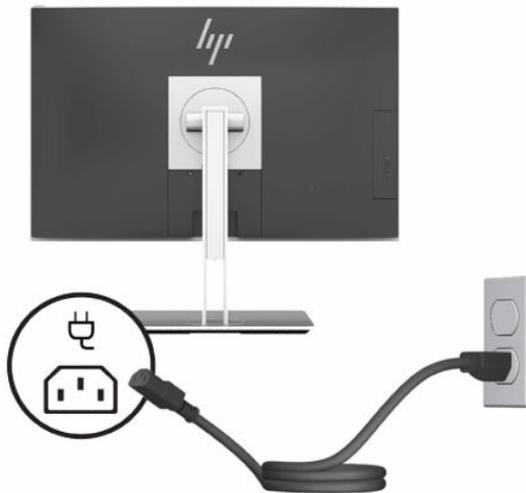


IMPORTANT: Use caution when adjusting the tilt, swivel, or height of the computer if a security cable is installed. The cable or the lock may interfere with the adjustment.

Connecting and disconnecting power

Connecting power

1. Connect one end of the AC power cord to the computer and the other end to a grounded AC outlet.



2. Press the power button on the computer to turn it on.

Disconnecting power

1. Remove all removable media, such as optical discs or USB flash drives, from the computer.
2. Turn off the computer properly through the operating system, then turn off any external devices.
3. Disconnect the power cord from the AC outlet and disconnect any external devices.

Webcam

With Skype for Business installed on your external source device, you can use the webcam on the monitor in the following ways:

- Stream online video conferences
- Maintain security over conversations

Webcam operation

1. To release the webcam, press it down to unlock it.
2. To close the webcam, press it down until it locks.

Setting up Windows Hello

If the Windows 10 operating system is installed on your computer, follow these steps to set up Windows Hello facial recognition:

1. Select the **Start** button, select **Settings**, select **Accounts**, and then select **Sign-in options**.
2. Under **Windows Hello**, follow the on-screen instructions to add both a password and a 4-digit PIN. Then enroll your fingerprint or facial ID.

Using the RFID reader (select models only)

Your computer supports radio frequency identification (RFID), which allows you to wirelessly share information between a RFID tag or card and your computer. Information is transferred by tapping the tapping area on the front bezel of the computer with your RFID tag or card. With RFID-enabled single sign-on software, RFID allows you to sign in to your software application using the appropriate RFID card or tag.

 **NOTE:** To locate the tapping area on your computer, see [Front components on page 2](#). The RFID icon is lit when the computer is turned on.

- ▲ To transfer information, tap the RFID tapping area on the front bezel of the computer with your RFID tag or card.

To confirm that your RFID device is enabled, check the settings in BIOS (F10) Setup.

Computers or tablets with keyboards:

1. Turn on or restart the computer, and when the HP logo appears, press **F10** to enter BIOS (F10) Setup.
2. Select **Advanced**, and then select **Built-in Device Options**.
3. Confirm that the check box for **RFID** is selected.

 **NOTE:** To turn off the RFID reader, clear the check box.

4. To save your changes and exit BIOS (F10) Setup menus:

- ▲ Select the **Save** icon in the lower-right corner of the screen, and then follow the on-screen instructions.

– or –

Select **Main**, select **Save Changes and Exit**, and then press **Enter**.

Your changes go into effect when the computer restarts.

RFID Asset Tag (select models only)



NOTE: The RFID Asset Tag is an optional feature available on the Healthcare Edition All-in-One only.

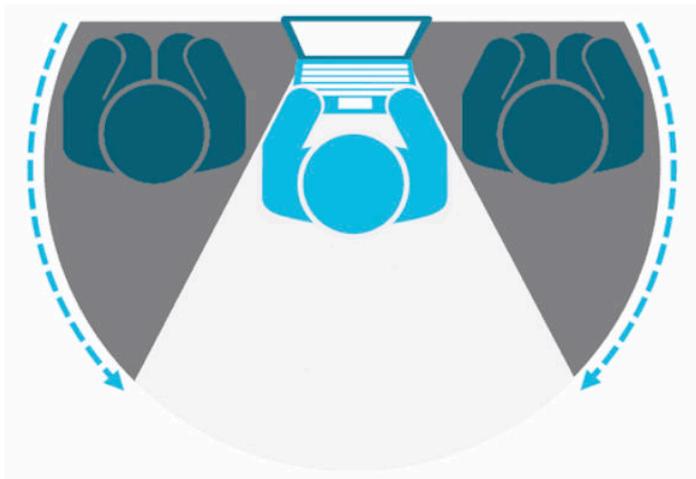
The RFID Asset Tag is used to track the location of the physical Healthcare Edition All-in-One unit. It has no visible indicator that it is installed. However, you can determine if it is present on your system in the BIOS (F10) Setup utility. If it is installed, the System Information list will show the text “RFID Asset Management Tag Installed” near the bottom of the list.

To access the BIOS (F10) Setup utility, turn on or restart the computer, and when the HP logo appears, press **F10** to enter BIOS (F10) Setup.

Using HP Sure View (select models only)

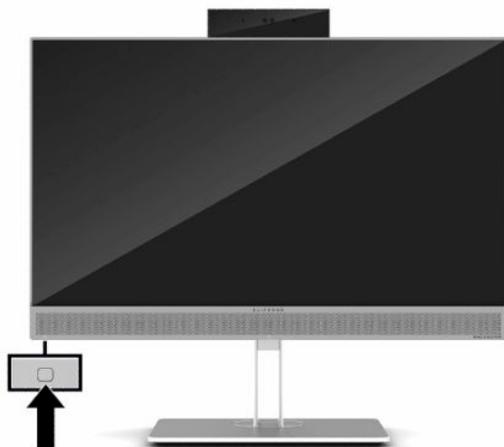
HP Sure View uses a unique system and LCD module design in order to achieve the switchable privacy function.

With Sure View turned ON, the screen switches to a privacy mode that makes content easily visible for a user sitting in a "viewing cone" directly in front of the screen. Those viewing outside the cone will have difficulty seeing the screen.



With HP Sure View turned OFF, the screen returns to a non-privacy mode where it can be viewed easily from any position.

You can turn HP Sure View on or off by pressing the HP Sure View button on the bottom of the front bezel.



When the Sure View button is pressed, the Sure View application displays the status of Sure View using the following icons and allows you to change the status of Sure View by pressing the Sure View button. Double-clicking the Sure View application also allows you to adjust the brightness of the Sure View mode. Normal brightness adjustment methods do not apply to Sure View mode.



NOTE: The area surrounding the bottom of the computer may get noticeably warmer when Sure View is turned on. This is a normal condition.

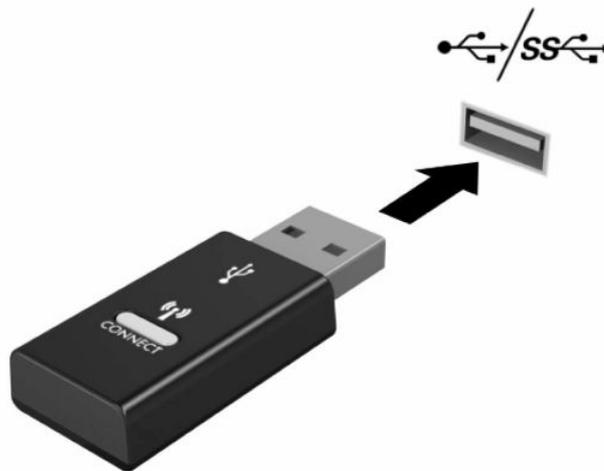
Table 2-1 HP Sure View icons and descriptions

Icon	Status
	HP Sure View is turned on for privacy viewing.
	HP Sure View is turned off for shared viewing.

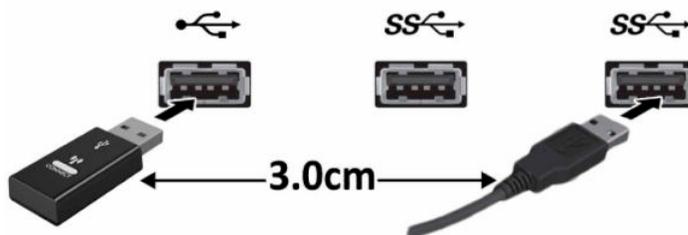
Synchronizing the optional wireless keyboard and mouse

The wireless keyboard and mouse are optional components. The mouse and keyboard are synchronized at the factory. If they do not work, remove and replace the batteries. If the mouse and keyboard are still not synchronized, then follow this procedure to manually re-synchronize the pair.

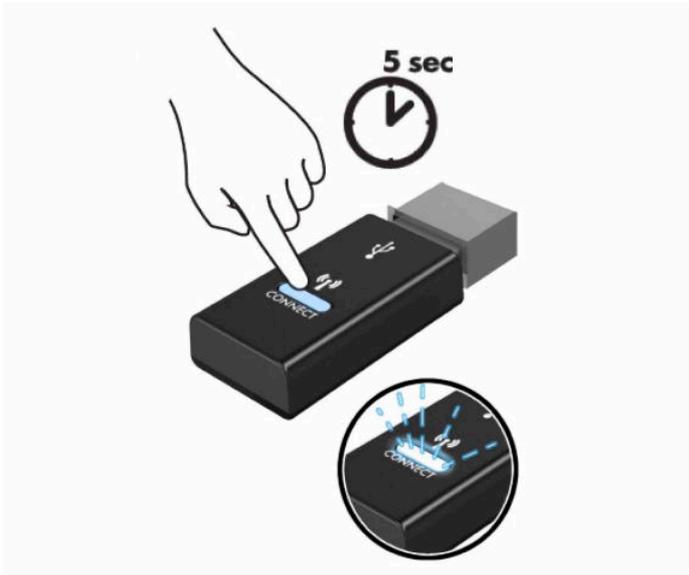
1. Connect the receiver to a USB port on the computer. If your computer only has USB SuperSpeed ports, connect the receiver to a USB SuperSpeed port.



2. To avoid signal interference with a USB SuperSpeed device, distance the receiver at least 3.0 cm from the USB SuperSpeed device.



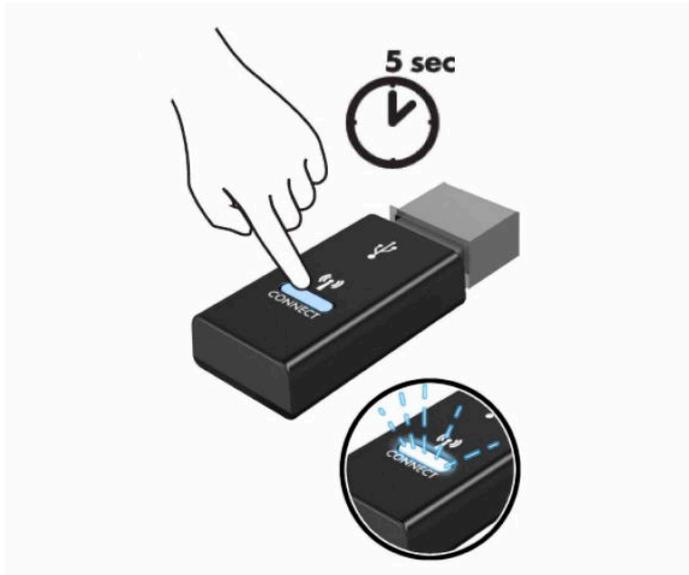
3. Press the Connect button on the receiver for approximately five seconds. The status light on the receiver will flash for approximately 30 seconds after the Connect button is pressed.



4. While the status light on the receiver is flashing, press the Connect button on the underside of the keyboard for five to ten seconds. After the Connect button is released, the status light on the receiver will stop flashing, indicating that the devices have been synchronized.



5. Press the Connect button on the receiver for approximately five seconds. The status light on the receiver will flash for approximately 30 seconds after the Connect button is pressed.



6. While the status light on the receiver is flashing, press the Connect button on the underside of the mouse for five to ten seconds. After the Connect button is released, the status light on the receiver will stop flashing, indicating that the devices have been synchronized.



 **NOTE:** If the mouse and keyboard still do not work, then remove and replace the batteries. If the mouse and keyboard are still not synchronized, then synchronize the keyboard and mouse again.

3 Hardware repair and upgrade

Warnings and cautions

Before performing upgrades be sure to carefully read all of the applicable instructions, cautions, and warnings in this guide.

 **WARNING!** To reduce the risk of personal injury from electrical shock, hot surfaces, or fire:

Disconnect the power cord from the AC outlet before removing the enclosure. Energized parts are inside.

Allow the internal system components to cool before you touch them.

Replace and secure the enclosure before restoring power to the equipment.

Do not connect telecommunications or telephone connectors to the network interface controller (NIC) receptacles.

Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

Plug the power cord in a grounded (earthed) AC outlet that is easily accessible at all times.

If the power cord has a 3-pin attachment plug, plug the cord into a grounded (earthed) 3-pin outlet.

Disconnect power from the computer by unplugging the power cord from the AC outlet. When unplugging the power cord from the AC outlet, grasp the cord by the plug.

For your safety, do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable.

To reduce the risk of serious injury, read the *Safety & Comfort Guide* provided with your user guides. It describes proper workstation setup and proper posture, health, and work habits for computer users. The *Safety & Comfort Guide* also provides important electrical and mechanical safety information. The *Safety & Comfort Guide* is also available on the Web at <http://www.hp.com/ergo>.

 **IMPORTANT:** Static electricity can damage the electrical components of the computer or optional equipment. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object. See [Electrostatic discharge on page 38](#) for more information.

When the computer is plugged into an AC power source, voltage is always applied to the system board. You must disconnect the power cord from the power source before opening the computer to prevent damage to internal components.

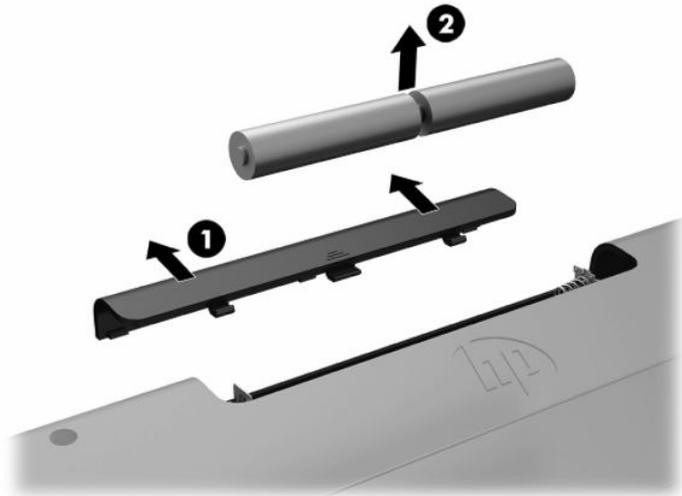
Additional information

For more information about removing and replacing hardware components, the BIOS (F10) Setup utility, and troubleshooting, refer to the *Maintenance and Service Guide* (available in English only) for your computer model at <http://www.hp.com/support>.

Removing batteries from the optional wireless keyboard or mouse

 **NOTE:** The wireless keyboard and mouse are optional components.

To remove batteries from the wireless keyboard, remove the battery door on the underside of the keyboard (1) and lift the batteries out of the battery compartment (2).



To remove batteries from the wireless mouse, remove the battery door on the underside of the mouse (1) and lift the batteries out of the battery compartment (2).



Removing and replacing the computer access panel

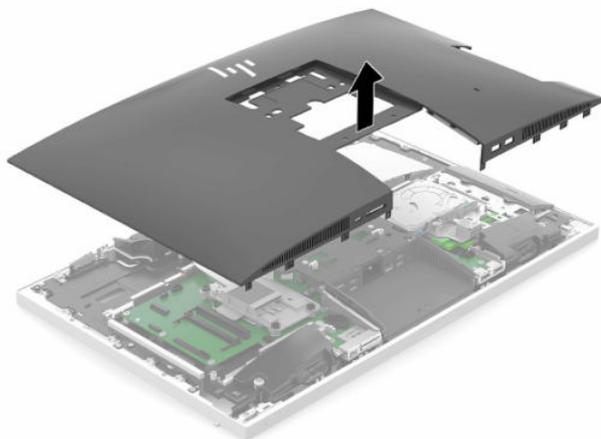
Removing the computer access panel

The access panel must be removed to access internal components.

1. Remove all removable media, such as optical discs or USB flash drives, from the computer.
2. Turn off the computer properly through the operating system, and then turn off any external devices.
3. Disconnect the power cord from the AC outlet and disconnect any external devices.

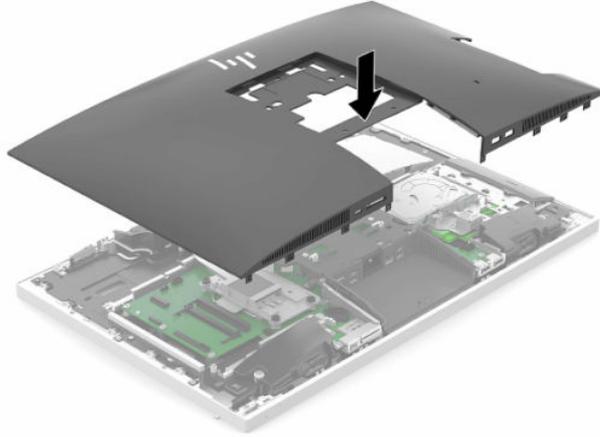
 **IMPORTANT:** You must disconnect the power cord and wait approximately 30 seconds for the power to drain before adding or removing memory modules. Regardless of the power-on state, voltage is always supplied to the memory modules as long as the computer is plugged into an active AC outlet. Adding or removing memory modules while voltage is present may cause irreparable damage to the memory modules or system board.

4. Remove/disengage any security devices that prohibit opening the computer.
5. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
6. Remove the rear port cover.
See [Removing the rear port cover on page 13](#).
7. Disconnect cables connected to the computer.
See [Disconnecting cables on page 12](#).
8. Remove the stand.
See [Attaching and removing a stand on page 7](#).
9. Pull up the edges of the access panel and then lift the access panel off the computer.



Replacing the computer access panel

1. Align the edges of the access panel with the computer. Press in the tabs around all sides of the panel until it is in place.



2. Reinstall the stand.
See [Attaching and removing a stand on page 7](#).
3. Reconnect all cables to the computer.
See [Connecting cables on page 11](#).
4. Reinstall the rear port cover.
See [Installing the rear port cover on page 14](#).
5. Relock any security devices that were disengaged when the access panel was removed.
6. Place the computer in the upright position.
7. Plug the power cord into a AC outlet.

Locating internal components

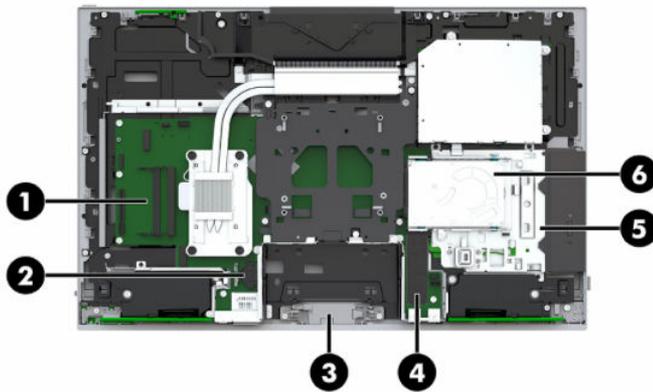


Table 3-1 Internal components

Internal components			
(1)	Memory modules	(4)	M.2 card (optional)
(2)	RTC battery	(5)	Optical disc drive (optional)
(3)	RFID Asset Tag module (optional on the Healthcare Edition All-in-One only)	(6)	Hard drive

Removing and installing memory

The memory slots on the system board can be populated with up to two industry-standard small outline dual inline memory modules (SODIMMs). These memory slots are populated with at least one preinstalled memory module.

Memory module specifications

For proper system operation, the memory modules must meet the following qualifications:

Table 3-2 Memory components and specifications

Component	Specification
Memory modules	1.2 volt DDR4-SDRAM memory modules
Compliance	Unbuffered non-ECC DDR4-2667 MHz-compliant
Pins	Industry-standard 260 pins containing the mandatory Joint Electronic Device Engineering Council (JEDEC) specification
Support	Support CAS latency DDR4 2667 MHz (15-15-15 timing)
Slots	2
Maximum Memory	16 GB per memory slot, 32 GB total
Supported	4 Gbit and 8 Gbit non-ECC memory technologies single-sided and double-sided SODIMMs
Note	The system will not operate properly if you install unsupported SODIMM memory. SODIMMs constructed with x8 and x16 DDR devices are supported; memory modules constructed with x4 SDRAM are not supported.

HP offers upgrade memory for this computer and advises that the consumer purchase it to avoid compatibility issues with unsupported third-party memory.

Populating memory module sockets

The system will automatically operate in single channel mode, dual channel mode, or flex mode, depending on how the memory modules are installed. Refer to the following table to identify the memory module channel locations.

Table 3-3 Populating memory module sockets

Location	System board label	Channel
Lower socket	SODIMM1	Channel B
Upper socket	SODIMM3	Channel A

The system will automatically operate in single channel mode, dual channel mode, or flex mode, depending on how the memory modules are installed.

- The system will operate in single channel mode if the memory module slots are populated in one channel only.
- The system will operate in a higher-performing dual channel mode if the memory capacity of the memory module in Channel A is equal to the memory capacity of the memory module in Channel B.
- The system will operate in flex mode if the memory capacity of the memory module in Channel A is not equal to the memory capacity of the memory module in Channel B. In flex mode, the channel populated with the least amount of memory describes the total amount of memory assigned to dual channel and the remainder is assigned to single channel. If one channel will have more memory than the other, the larger amount should be assigned to channel A.
- In any mode, the maximum operational speed is determined by the slowest memory module in the system.

Installing memory modules

There are two memory slots on the system board. To remove or install memory modules:

1. Remove the access panel.
For instructions, see [Removing the computer access panel on page 28](#).
2. To locate the memory modules on the system board, see [Locating internal components on page 30](#).

3. To remove a memory module, press outward on the two latches (1) on each side of the memory module, then pull the memory module (2) out of the slot.



4. Slide the new memory module into the slot (1) at approximately a 30° angle, then press the memory module down (2) so that the latches lock it in place.



 **NOTE:** A memory module can be installed in only one way. Match the notch on the module with the tab on the memory slot.

5. Reinstall the access panel.
For instructions, see [Replacing the computer access panel on page 29](#).
6. Turn on the computer. The computer automatically recognizes the additional memory when you turn on the computer.

Replacing the RTC Battery

The RTC battery that comes with the computer provides power to the real-time clock. When replacing the battery, use a battery equivalent to the battery originally installed in the computer. The computer comes with a 3-volt lithium coin cell battery.

 **WARNING!** The computer contains an internal lithium manganese dioxide battery. There is a risk of fire and burns if the battery is not handled properly. To reduce the risk of personal injury:

Do not attempt to recharge the battery.

Do not expose to temperatures higher than 60°C (140°F).

Do not disassemble, crush, puncture, short external contacts, or dispose of in fire or water.

Replace the battery only with the HP spare designated for this product.

 **IMPORTANT:** Removing the battery with the AC power cord removed will cause the system to load default BIOS settings the next time the computer is turned on, and the system's real-time clock may also need to be set. If the system's current BIOS settings have been modified from the factory configuration and not saved, then the resulting BIOS configuration will be set back to the factory defaults. To save the current settings before replacing the battery, select the **Save Custom Defaults** link in the BIOS (F10) Setup Main menu. These saved settings will be restored after the battery replacement.

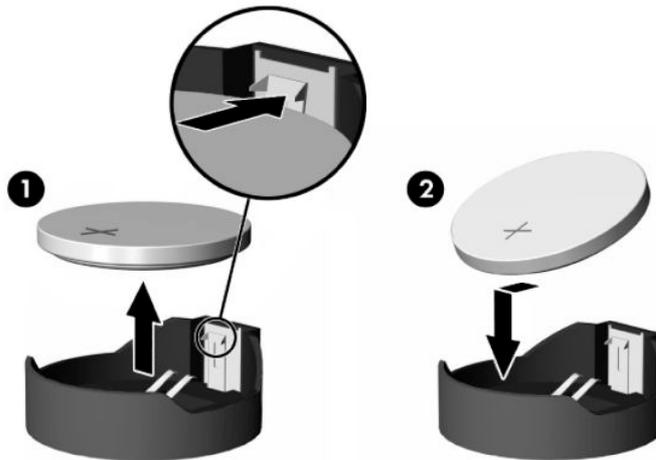
Static electricity can damage the electronic components of the computer or optional equipment. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object.

 **NOTE:** The lifetime of the lithium battery can be extended by plugging the computer into a live AC outlet. The lithium battery is only used when the computer is NOT connected to AC power.

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

To locate the battery on the system board, see [Locating internal components on page 30](#).

1. Remove the access panel.
For instructions, see [Removing the computer access panel on page 28](#).
2. To release the battery from its holder, squeeze the metal clamp that extends above one edge of the battery. When the battery pops up, lift it out (1).
3. To insert the new battery, slide one edge of the replacement battery under the holder's lip with the positive side up (2). Push the other edge down until the clamp snaps over the other edge of the battery.



4. Reinstall the access panel.
For instructions, see [Replacing the computer access panel on page 29](#).
5. Turn on the computer.
6. Reset the date and time if necessary.

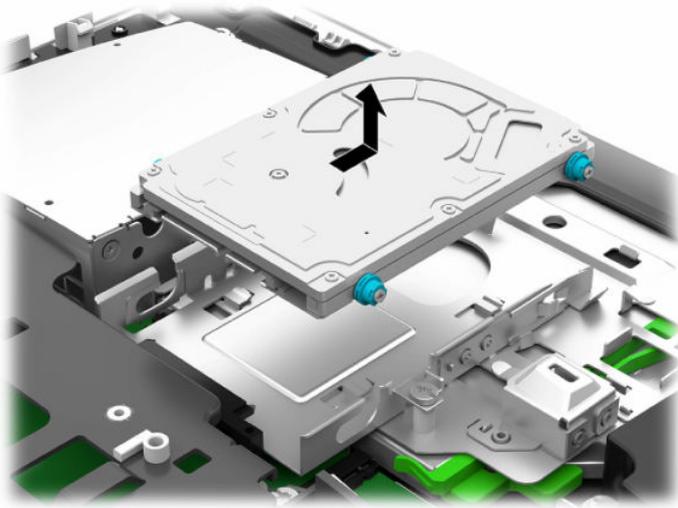
Replacing drives

Replacing a hard drive

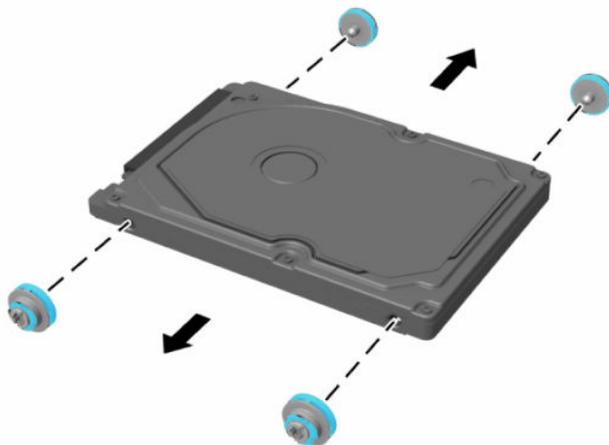
The 2.5-inch primary hard drive is installed on the right side of the computer on top of the optical disc drive (ODD). To locate the hard drive on the system board, see [Locating internal components on page 30](#).

Removing a hard drive

1. Remove the access panel.
For instructions, see [Removing the computer access panel on page 28](#).
2. Pull the hard drive latch away from the hard drive to release the drive.
3. Slide the hard drive toward the edge of the computer and lift the hard drive out of the drive cage.



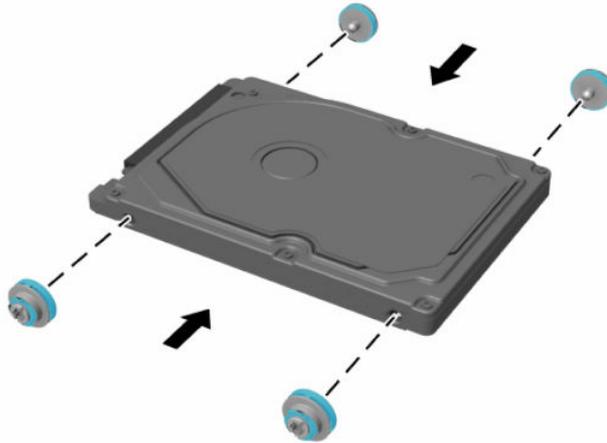
4. Remove the four mounting screws from the 2.5-inch hard drive. Be sure to keep the screws together with the blue rubber grommets to use when installing a replacement drive.



For instructions on installing a hard drive, see [Installing a 2.5-inch hard disk drive on page 35](#).

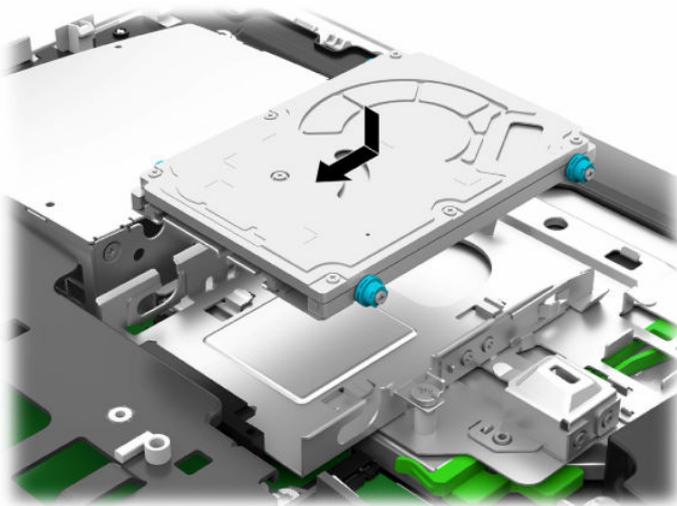
Installing a 2.5-inch hard disk drive

1. Fasten four mounting screws with grommets onto the new 2.5-inch hard drive.



2. Position the hard drive above the drive cage with the connectors facing the center of the computer.
3. Place the hard drive into the drive cage and slide it firmly toward the center of the computer until the hard drive snaps into place.

Be sure that the hard drive latch has moved back into place to cover the grommet on the side of the hard drive.



4. Install the access panel.

For instructions, see [Replacing the computer access panel on page 29](#).

Replacing the optical disc drive

The optical disc drive is located under the hard drive on the right side of the computer. To locate the optical disc drive on the system board, see [Locating internal components on page 30](#).

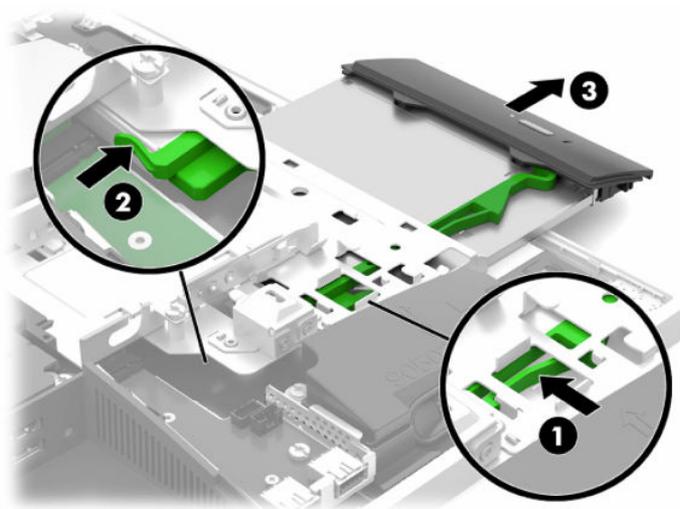
1. Remove the access panel.

For instructions, see [Removing the computer access panel on page 28](#).

2. Remove the hard drive.

For instructions see [Removing a hard drive on page 34](#).

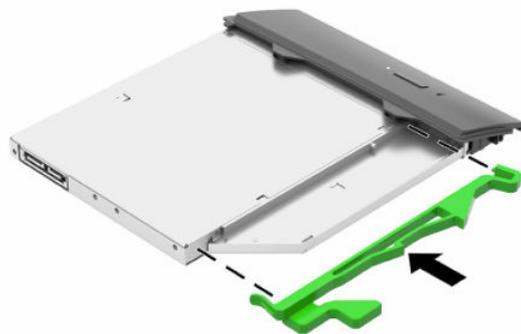
3. Push and hold the green tab (1) while pushing in the green latch (2) at the back of the optical disc drive enclosure and slide the drive (3) out of the chassis.



4. Pull the green latch off the optical disc drive.

Keep this latch to install on the new optical disc drive.

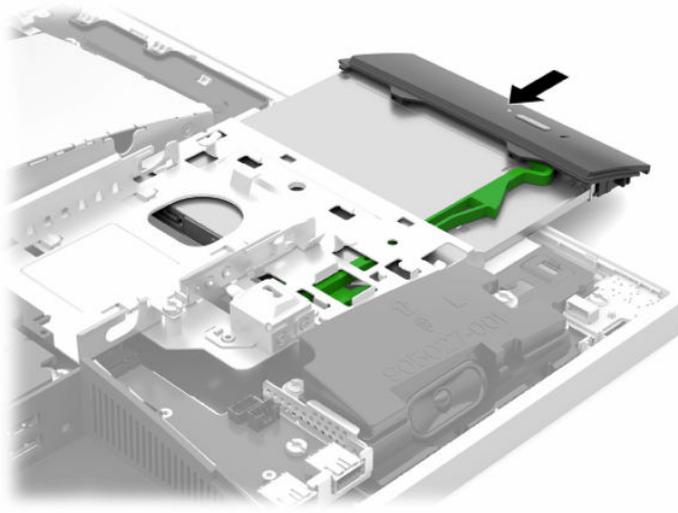
5. Align the three pins on the latch with the holes in the new optical disc drive and press the latch firmly onto the new drive.



NOTE: You must reuse the latch removed from the old optical disc drive.

6. Align the new optical disc drive with the opening in the side of the computer. Push the drive in firmly until it snaps into place.

 **NOTE:** The optical disc drive can be installed in only one way.



7. Replace the hard drive.
For instructions, see [Installing a 2.5-inch hard disk drive on page 35](#).
8. Replace the access panel.
For instructions, see [Replacing the computer access panel on page 29](#).

A Electrostatic discharge

A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device.

Preventing electrostatic damage

To prevent electrostatic damage, observe the following precautions:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly.

Grounding methods

Use one or more of the following methods when handling or installing electrostatic-sensitive parts:

- Use a wrist strap connected by a ground cord to a grounded workstation or computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm +/- 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.
- Use heelstraps, toestraps, or bootstraps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
- Use conductive field service tools.
- Use a portable field service kit with a folding static-dissipating work mat.

If you do not have any of the suggested equipment for proper grounding, contact an HP authorized dealer, reseller, or service provider.



NOTE: For more information on static electricity, contact an HP authorized dealer, reseller, or service provider.

B Computer operating guidelines, routine care, and shipping preparation

Computer operating guidelines and routine care

Follow these guidelines to properly set up and care for the computer and monitor:

- Keep the computer away from excessive moisture, direct sunlight, and extremes of heat and cold.
- Operate the computer on a sturdy, level surface. Leave a 10.2 cm (4 in) clearance on all vented sides of the computer and above the monitor to permit the required airflow.
- Never restrict the airflow into the computer by blocking any vents or air intakes. Do not place the keyboard, with the keyboard feet down, directly against the front of the desktop unit as this also restricts airflow.
- Never operate the computer with any of the access panels or any of the expansion card slot covers removed.
- Do not stack computers or place computers so near each other that they are subject to each other's recirculated or preheated air.
- If the computer is to be operated within a separate enclosure, intake and exhaust ventilation must be provided on the enclosure, and the same operating guidelines listed above will still apply.
- Keep liquids away from the computer and keyboard.
- Never cover the ventilation slots with any type of material.
- Install or enable power management functions of the operating system or other software, including sleep states.
- To clean the computer, first turn off the computer.
 - Disconnect AC power.
 - Disconnect all powered external devices.
 - Occasionally clean the air vents on all vented sides of the computer. Lint, dust, and other foreign matter can block the vents and limit the airflow.
 - In addition to the standard care guidelines, to clean the healthcare model, use any of the following germicidal wipe formulations to clean all exposed surfaces of the computer. Start with the display and finish with any flexible cables. Allow the computer to air-dry before use. (For more information, see the directions provided by the manufacturer of the wipes.)

 **IMPORTANT:** Do not use cleaners that contain any petroleum based materials such as benzene, thinner, or any volatile substance to clean the display screen or cabinet. These chemicals may damage the display.

Table B-1 Recommended Healthcare Edition All-in-One cleaning formulas

Recommended cleaning formulas

Benzyl-C12-18-alkyldimethyl ammonium chlorides: <0.1%, quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides: <0.1%

Table B-1 Recommended Healthcare Edition All-in-One cleaning formulas (continued)

Recommended cleaning formulas
Isopropanol: 10–20%, benzyl-C12–18-alkyldimethyl ammonium chlorides: <0.5%, quaternary ammonium compounds, C12–18-alkyl[(ethylphenyl)methyl]dimethyl, chlorides: <0.5%
Quaternary ammonium compounds, C12–18-alkyl[(ethylphenyl)methyl]dimethyl, chlorides: <0.5%, benzyl-C12–18-alkyldimethyl ammonium chlorides: <0.5%
Isopropyl alcohol: 55%, alkyl dimethyl benzyl ammonium chlorides: 0.25%, alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride: 0.25%
Isopropanol: 10–20%, ethylene glycol monobutyl ether (2-butoxyethanol): 1–5%, diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride: 0.1–0.5%
Sodium hypochlorite 0.1–1%
Cellulose: 10–30%, ethyl alcohol: 0.1–1%
Isopropanol: 30–40%, water 60–70%

 **NOTE:** Contact your local HP sales representative for recommended brands of germicidal wipes which have been tested for cleaning the computer.

 **IMPORTANT:** Using cleaning methods or disinfectants that are not approved could damage the device.

Do not immerse the device in liquid.

Always follow the instructions provided by the cleaning product manufacturer.

Do not use petroleum-based cleaning fluids, such as acetone.

Do not use abrasive cleaning aids or products.

Do not expose the device to temperatures above 70° C.

Optical disc drive precautions

Be sure to observe the following guidelines while operating or cleaning the optical disc drive.

- Do not move the drive during operation. This may cause it to malfunction during reading.
- Avoid exposing the drive to sudden changes in temperature, as condensation may form inside the unit. If the temperature suddenly changes while the drive is on, wait at least one hour before you turn off the power. If you operate the unit immediately, it may malfunction while reading.
- Avoid placing the drive in a location that is subject to high humidity, extreme temperatures, mechanical vibration, or direct sunlight.



IMPORTANT: If any object or liquid falls into the drive, immediately unplug the computer and have it checked by an authorized HP service provider.

Shipping preparation

Follow these suggestions when preparing to ship the computer:

1. Back up the hard drive files to an external storage device. Be sure that the backup media is not exposed to electrical or magnetic impulses while stored or in transit.



NOTE: The hard drive locks automatically when the system power is turned off.

2. Remove and store all removable media.
3. Turn off the computer and external devices.
4. Disconnect the power cord from the AC outlet, and then from the computer.
5. Disconnect the system components and external devices from their power sources, and then from the computer.



NOTE: Ensure that all boards are seated properly and secured in the board slots before shipping the computer.

6. Pack the system components and external devices in their original packing boxes or similar packaging with sufficient packing material to protect them.

C Accessibility

Accessibility

HP is working to weave diversity, inclusion and work/life into the fabric of our company, so it is reflected in everything we do. Here are some examples of how we are putting differences to work to create an inclusive environment focused on connecting people to the power of technology throughout the world.

Finding the technology tools you need

Technology can unleash your human potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology helps increase, maintain, and improve the functional capabilities of electronic and information technology. For more information, see [Finding the best assistive technology on page 43](#).

Our commitment

HP is committed to providing products and services that are accessible for people with disabilities. This commitment supports our company's diversity objectives and helps us ensure that the benefits of technology are available to all.

Our accessibility goal is to design, produce, and market products and services that can be effectively used by everyone, including people with disabilities, either on a stand-alone basis or with appropriate assistive devices.

To achieve our goal, this Accessibility Policy establishes seven key objectives to guide our actions as a company. All HP managers and employees are expected to support these objectives and their implementation in accordance with their roles and responsibilities:

- Raise the level of awareness of accessibility issues within our company, and provide our employees with the training they need to design, produce, market, and deliver accessible products and services.
- Develop accessibility guidelines for products and services, and hold product development groups accountable for implementing these guidelines where competitively, technically, and economically feasible.
- Involve people with disabilities in the development of accessibility guidelines, and in the design and testing of products and services.
- Document accessibility features and make information about our products and services publicly available in an accessible form.
- Establish relationships with leading assistive technology and solution providers.
- Support internal and external research and development that will improve assistive technology relevant to our products and services.
- Support and contribute to industry standards and guidelines for accessibility.

International Association of Accessibility Professionals (IAAP)

IAAP is a not-for-profit association focused on advancing the accessibility profession through networking, education, and certification. The objective is to help accessibility professionals develop and advance their careers and to better enable organizations to integrate accessibility into their products and infrastructure.

HP is a founding member, and we joined to participate with other organizations to advance the field of accessibility. This commitment supports our company's accessibility goal of designing, producing, and marketing products and services that can be effectively used by people with disabilities.

IAAP will make our profession strong by globally connecting individuals, students, and organizations to learn from one another. If you are interested in learning more, go to <http://www.accessibilityassociation.org> to join the online community, sign up for newsletters, and learn about membership options.

Finding the best assistive technology

Everyone, including people with disabilities or age-related limitations, should be able to communicate, express themselves, and connect with the world using technology. HP is committed to increasing accessibility awareness within HP and with our customers and partners. Whether it's large fonts that are easy on the eyes, voice recognition that lets you give your hands a rest, or any other assistive technology to help with your specific situation—a variety of assistive technologies make HP products easier to use. How do you choose?

Assessing your needs

Technology can unleash your potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology (AT) helps increase, maintain, and improve the functional capabilities of electronic and information technology.

You may choose from many AT products. Your AT assessment should allow you to evaluate several products, answer your questions, and facilitate your selection of the best solution for your situation. You will find that professionals qualified to do AT assessments come from many fields, including those licensed or certified in physical therapy, occupational therapy, speech/language pathology, and other areas of expertise. Others, while not certified or licensed, may also provide evaluation information. You will want to ask about the individual's experience, expertise, and fees to determine if they are appropriate for your needs.

Accessibility for HP products

The following links provide information about accessibility features and assistive technology, if applicable, included in various HP products. These resources will help you select the specific assistive technology features and product(s) most appropriate for your situation.

- [HP Elite x3—Accessibility Options \(Windows 10 Mobile\)](#)
- [HP PCs—Windows 7 Accessibility Options](#)
- [HP PCs—Windows 8 Accessibility Options](#)
- [HP PC's—Windows 10 Accessibility Options](#)
- [HP Slate 7 Tablets—Enabling Accessibility Features on Your HP Tablet \(Android 4.1/Jelly Bean\)](#)
- [HP SlateBook PCs—Enabling Accessibility Features \(Android 4.3, 4.2/Jelly Bean\)](#)
- [HP Chromebook PCs—Enabling Accessibility Features on Your HP Chromebook or Chromebox \(Chrome OS\)](#)
- [HP Shopping—peripherals for HP products](#)

If you need additional support with the accessibility features on your HP product, see [Contacting support on page 48](#).

Additional links to external partners and suppliers that may provide additional assistance:

- [Microsoft Accessibility information \(Windows 7, Windows 8, Windows 10, Microsoft Office\)](#)
- [Google Products accessibility information \(Android, Chrome, Google Apps\)](#)

- [Assistive Technologies sorted by impairment type](#)
- [Assistive Technologies sorted by product type](#)
- [Assistive Technology vendors with product descriptions](#)
- [Assistive Technology Industry Association \(ATIA\)](#)

Standards and legislation

Standards

Section 508 of the Federal Acquisition Regulation (FAR) standards was created by the US Access Board to address access to information and communication technology (ICT) for people with physical, sensory, or cognitive disabilities. The standards contain technical criteria specific to various types of technologies, as well as performance-based requirements which focus on functional capabilities of covered products. Specific criteria cover software applications and operating systems, web-based information and applications, computers, telecommunications products, video and multi-media, and self-contained closed products.

Mandate 376 – EN 301 549

The EN 301 549 standard was created by the European Union within Mandate 376 as the basis for an online toolkit for public procurement of ICT products. The standard specifies the functional accessibility requirements applicable to ICT products and services, together with a description of the test procedures and evaluation methodology for each accessibility requirement.

Web Content Accessibility Guidelines (WCAG)

Web Content Accessibility Guidelines (WCAG) from the W3C's Web Accessibility Initiative (WAI) helps web designers and developers create sites that better meet the needs of people with disabilities or age-related limitations. WCAG advances accessibility across the full range of web content (text, images, audio, and video) and web applications. WCAG can be precisely tested, is easy to understand and use, and allows web developers flexibility for innovation. WCAG 2.0 has also been approved as [ISO/IEC 40500:2012](#).

WCAG specifically addresses barriers to accessing the web experienced by people with visual, auditory, physical, cognitive, and neurological disabilities, and by older web users with accessibility needs. WCAG 2.0 provides characteristics of accessible content:

- **Perceivable** (for instance, by addressing text alternatives for images, captions for audio, adaptability of presentation, and color contrast)
- **Operable** (by addressing keyboard access, color contrast, timing of input, seizure avoidance, and navigability)
- **Understandable** (by addressing readability, predictability, and input assistance)
- **Robust** (for instance, by addressing compatibility with assistive technologies)

Legislation and regulations

Accessibility of IT and information has become an area of increasing legislative importance. This section provides links to information about key legislation, regulations, and standards.

- [United States](#)
- [Canada](#)
- [Europe](#)

- [United Kingdom](#)
- [Australia](#)
- [Worldwide](#)

United States

Section 508 of the Rehabilitation Act specifies that agencies must identify which standards apply to the procurement of ICT, perform market research to determine the availability of accessible products and services, and document the results of their market research. The following resources provide assistance in meeting Section 508 requirements:

- www.section508.gov
- [Buy Accessible](#)

The U.S. Access Board is currently updating the Section 508 standards. This effort will address new technologies and other areas where the standards need to be modified. For more information, go to [Section 508 Refresh](#).

Section 255 of the Telecommunications Act requires telecommunications products and services to be accessible to people with disabilities. FCC rules cover all hardware and software telephone network equipment and telecommunications equipment used in the home or office. Such equipment includes telephones, wireless handsets, fax machines, answering machines, and pagers. FCC rules also cover basic and special telecommunications services, including regular telephone calls, call waiting, speed dialing, call forwarding, computer-provided directory assistance, call monitoring, caller identification, call tracing, and repeat dialing, as well as voice mail and interactive voice response systems that provide callers with menus of choices. For more information, go to [Federal Communication Commission Section 255 information](#).

21st Century Communications and Video Accessibility Act (CVAA)

The CVAA updates federal communications law to increase the access of persons with disabilities to modern communications, updating accessibility laws enacted in the 1980s and 1990s to include new digital, broadband, and mobile innovations. Regulations are enforced by the FCC and documented as 47 CFR Part 14 and Part 79.

- [FCC Guide on the CVAA](#)

Other U.S. legislation and initiatives

- [Americans with Disabilities Act \(ADA\), Telecommunications Act, the Rehabilitation Act and others](#)

Canada

The Accessibility for Ontarians with Disabilities Act was established to develop and implement accessibility standards to make goods, services, and facilities accessible to Ontarians with disabilities and to provide for the involvement of persons with disabilities in the development of the accessibility standards. The first standard of the AODA is the customer service standard; however, standards for transportation, employment, and information and communication are also being developed. The AODA applies to the Government of Ontario, the Legislative Assembly, every designated public sector organization, and to every other person or organization that provides goods, services, or facilities to the public or other third parties and that has at least one employee in Ontario; and accessibility measures must be implemented on or before January 1, 2025. For more information, go to [Accessibility for Ontarians with Disability Act \(AODA\)](#).

Europe

EU Mandate 376 ETSI Technical Report ETSI DTR 102 612: "Human Factors (HF); European accessibility requirements for public procurement of products and services in the ICT domain (European Commission Mandate M 376, Phase 1)" has been released.

Background: The three European Standardization Organizations have set up two parallel project teams to carry out the work specified in the European Commission "Mandate 376 to CEN, CENELEC and ETSI, in Support of Accessibility Requirements for Public Procurement of Products and Services in the ICT Domain."

ETSI TC Human Factors Specialist Task Force 333 has developed ETSI DTR 102 612. Further details about the work performed by STF333 (e.g., Terms of Reference, specification of the detailed work tasks, time plan for the work, previous drafts, listing of comments received and means to contact the task force) can be found at the [Special Task Force 333](#).

The parts relating to the assessment of suitable testing and conformity schemes were carried out by a parallel project, detailed in CEN BT/WG185/PT. For further information, go to the CEN project team website. The two projects are closely coordinated.

- [CEN project team](#)
- [European Commission mandate for e-accessibility \(PDF 46KB\)](#)

United Kingdom

The Disability Discrimination Act of 1995 (DDA) was enacted to ensure that websites are accessible to blind and disabled users in the United Kingdom.

- [W3C UK Policies](#)

Australia

The Australian government has announced their plan to implement [Web Content Accessibility Guidelines 2.0](#).

All Australian government websites will require Level A compliance by 2012, and Double A by 2015. The new standard replaces WCAG 1.0, which was introduced as a mandated requirement for agencies in 2000.

Worldwide

- [JTC1 Special Working Group on Accessibility \(SWG-A\)](#)
- [G3ict: The Global Initiative for Inclusive ICT](#)
- [Italian accessibility legislation](#)
- [W3C Web Accessibility Initiative \(WAI\)](#)

Useful accessibility resources and links

The following organizations may be good resources for information about disabilities and age-related limitations.



NOTE: This is not an exhaustive list. These organizations are provided for informational purposes only. HP assumes no responsibility for information or contacts you may encounter on the Internet. Listing on this page does not imply endorsement by HP.

Organizations

- American Association of People with Disabilities (AAPD)
- The Association of Assistive Technology Act Programs (ATAP)
- Hearing Loss Association of America (HLAA)
- Information Technology Technical Assistance and Training Center (ITTATC)
- Lighthouse International
- National Association of the Deaf
- National Federation of the Blind
- Rehabilitation Engineering & Assistive Technology Society of North America (RESNA)
- Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)
- W3C Web Accessibility Initiative (WAI)

Educational institutions

- California State University, Northridge, Center on Disabilities (CSUN)
- University of Wisconsin - Madison, Trace Center
- University of Minnesota computer accommodations program

Other disability resources

- ADA (Americans with Disabilities Act) Technical Assistance Program
- Business & Disability network
- EnableMart
- European Disability Forum
- Job Accommodation Network
- Microsoft Enable
- U.S. Department of Justice - A Guide to disability rights Laws

HP links

[Our contact webform](#)

[HP comfort and safety guide](#)

[HP public sector sales](#)

Contacting support



NOTE: Support is in English only.

- Customers who are deaf or hard of hearing that have questions about technical support or accessibility of HP products:
 - Use TRS/VRS/WebCapTel to call (877) 656-7058 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.
- Customers with other disabilities or age-related limitations who have questions about technical support or accessibility of HP products, choose one of the following options:
 - Call (888) 259-5707 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.
 - Complete the [Contact form for people with disabilities or age-related limitations](#).

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