Hardware Reference Guide

HP EliteOne 800 G4 23-inch All-in-One Business PC

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About This Book

This guide provides basic information for upgrading this computer model.

WARNING! Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner provides important supplemental information.

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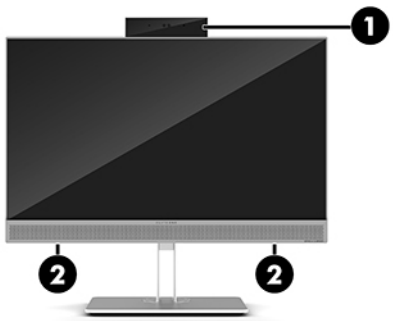
1 Product features

Overview

NOTE: For the latest manuals on this product, go to http://www.hp.com/support. Select **Find your product**, and then follow the on-screen instructions.

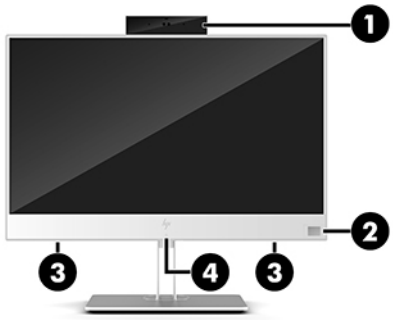
This product employs electronic labeling for indication of regulatory mark or statement. See Labels on page 6 for the operation to display.

HP EliteOne 800 G4 front components



Component	
1	Webcam
2	Speakers (select products only)

HP EliteOne 800 G4 Healthcare front components



Component		Component	
1	Webcam	3	Speakers (2)
2	Fingerprint reader (select products only)	4	Radio Frequency identification (RFID) tapping area and antenna*

*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:

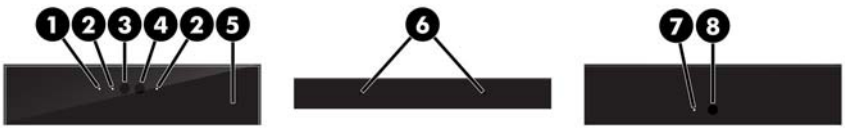
▲ Select the **Start** button, select **HP Help and Support**, and then select **HP Documentation**.

– or –

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

Top components

Infrared (IR) webcam (optional)

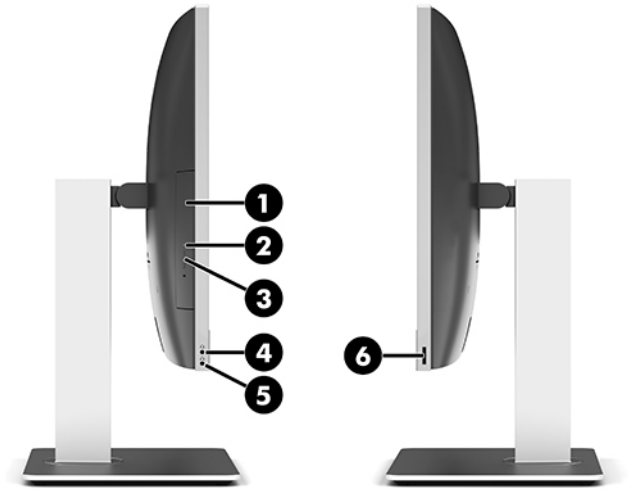


Component		Component	
	Front View		
1	Webcam light	4	IR webcam
2	IR light	5	Rear webcam adjustment wheel
3	Full High Definition (FHD) webcam		
	Top view		
6	Digital microphones		
	Rear view		
7	Webcam light	8	FHD webcam

Full High Definition (FHD) webcam (optional)

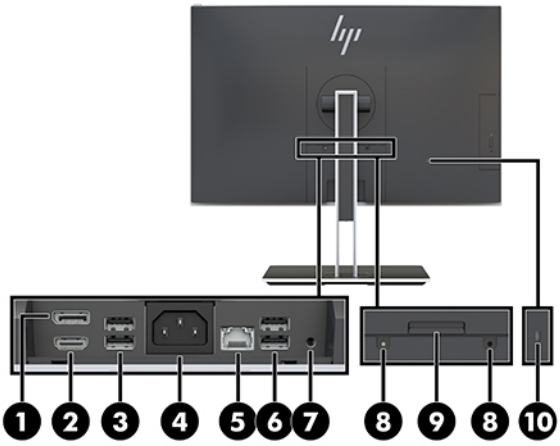
Component	
Front view	
1	Webcam light
2	FHD webcam
Top view	
3	Digital microphones

Side components



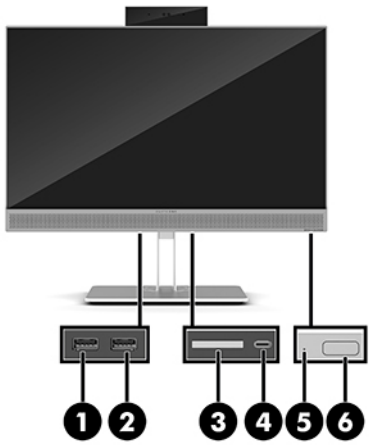
Component		Component	
1	Optical disc drive (optional)	4	Audio-out (headphone)/Audio-in (microphone) combo jack
2	Optical disc drive light (select products only)	5	Audio-out (headphone) jack
3	Optical disc drive eject button (optional)	6	Fingerprint reader (select products only)

Rear components



Component		Component	
1	DisplayPort	6	USB 3.1 Type-A ports (2)
2	HDMI port	7	Stereo audio-out jack
3	USB 3.1 Type-A ports (2)	8	Security lock screws
4	Power connector	9	Stand release
5	RJ-45 (network) jack	10	Security cable slot

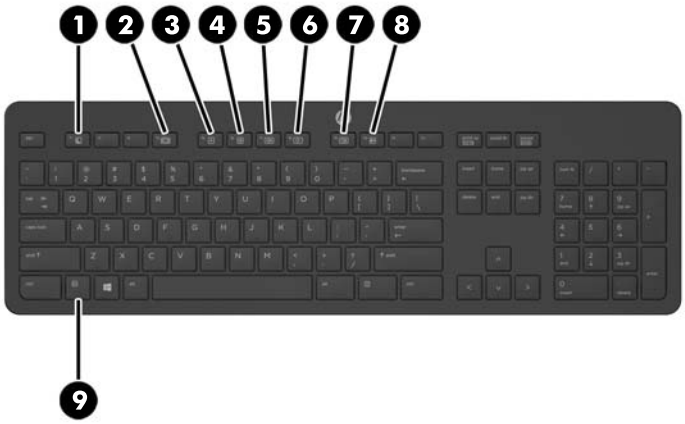
Bottom components



Component		Component	
1	USB 3.1 Type-A port	4	USB 3.1 Type-C port
2	USB 3.1 Type-A (charging) port	5	Hard drive activity light
3	SD card reader	6	Power button

Keyboard features

Your keyboard and mouse may be different.



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

Labels

The labels affixed to the computer provide information you may need when you troubleshoot system problems or travel internationally with the computer.

IMPORTANT: All labels described in this section will be located under the stand or affixed to the bottom of the computer.

1. Microsoft® Certificate of Authenticity label (select models only prior to Windows 8)—Contains the Windows Product Key. You may need the Product Key to update or troubleshoot the operating system. HP platforms preinstalled with Windows 8 or Windows 8.1 do not have the physical label, but have a Digital Product Key electronically installed.

   NOTE: This Digital Product Key is automatically recognized and activated by Microsoft Operating Systems on a reinstall of the Windows 8 or Windows 8.1 operating system with HP-approved recovery methods.

2. 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.

Component	
(1)	Serial number
(2)	Product number
(3)	Warranty period

3. Serial number label

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 display on page 11.
- Install and secure the rear port cover. See Installing the rear port cover on page 13.
- Select a comfortable computer position and viewing angle. See Positioning the computer on page 14.
- Install a security cable for security. See Installing a security cable on page 18.
- 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 21.

Attaching and removing a stand

Two stands are available for the computer:

- Attaching and removing a recline stand
- Attaching and removing an adjustable height stand

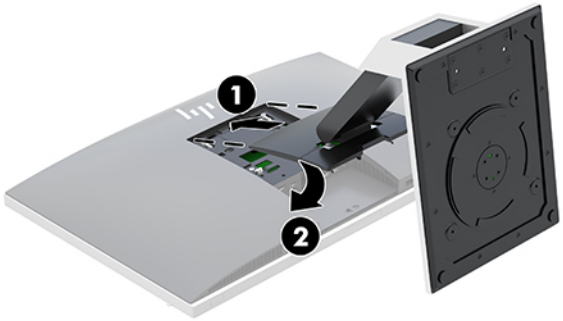
Attaching and removing a recline stand

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).

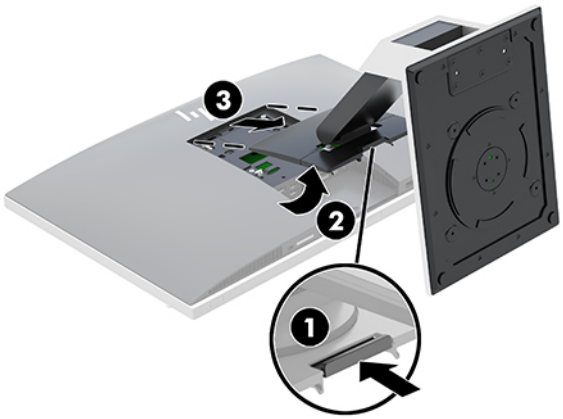
3. Lower the stand onto the computer and press down until it clicks into place (2).



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 12.
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).

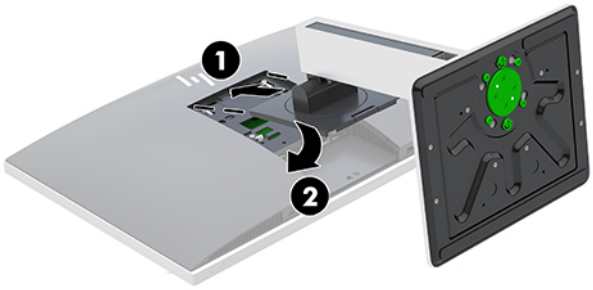


Attaching and removing an adjustable height stand

Attaching an adjustable height stand

To install the stand:

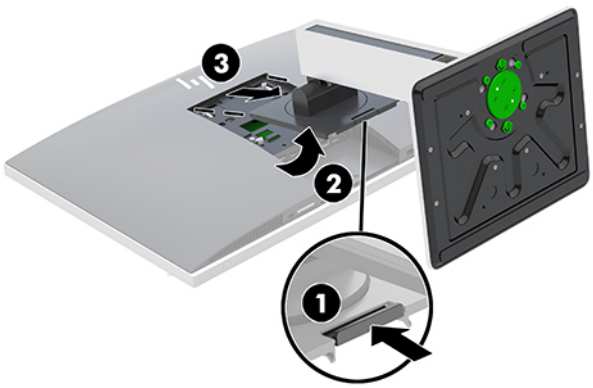
1. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
2. Engage the hooks in the top of the stand in the two large holes in the upper part of the back of the 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 12.
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).

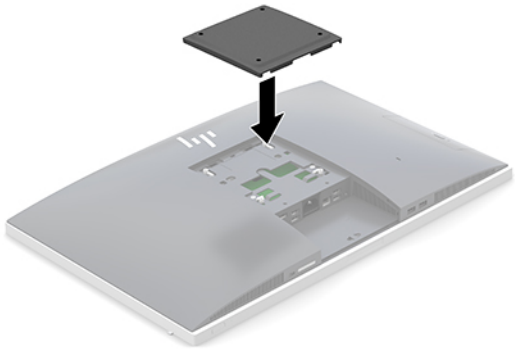


Attaching the computer to a mounting fixture

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

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.

CAUTION: 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.

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. 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 rear port cover is installed, remove the cover.

   See Removing the rear port cover on page 12.
3. Route the power and all peripheral cables through the opening in the base of the stand.

4. Connect the peripheral cables to the appropriate ports.
5. Replace the rear port cover.

   See Installing the rear port cover on page 13.
6. Connect the power cord to the power connector on the rear of the computer.

Connecting a display

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

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

If you are adding a display that has a DisplayPort or an HDMI connector, then no video adapter is required. If you are adding a display that does not have a DisplayPort or HDMI connector, you can purchase a video adaptor 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 display:

1. Turn off power to the computer and the display that you are connecting to the computer.
2. Remove the rear port cover on the computer.
3. If your display 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 display.

   If your display has an HDMI connector, connect an HDMI cable directly between the HDMI connector on the rear of the computer and the HDMI connector on the display.
4. If your display does not have a DisplayPort connector, connect a DisplayPort video adapter to the DisplayPort connector of the computer. Then connect a cable (VGA or DVI, depending on your application) between the adapter and a display.

   If your display does not have an HDMI connector, connect an HDMI video adapter to the HDMI connector of the computer. Then connect a cable (VGA or DVI, depending on your application) between the adapter and a display.
5. Replace the rear port cover on the computer.
6. Turn on power to the computer and the display.

NOTE: Use the graphics card software or the Windows Display Settings to configure the display 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. 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.
3. If the rear port cover is installed, remove the cover.
4. Disconnect the cables from the ports.

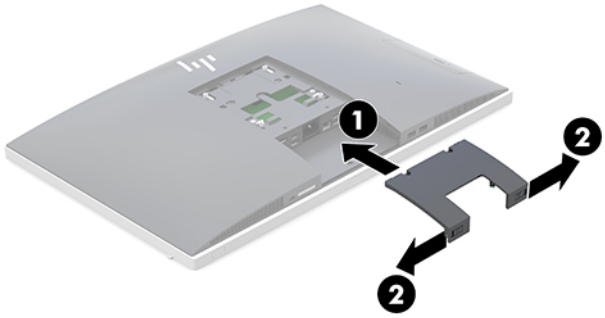
Removing and installing the rear port cover

Removing the rear port cover

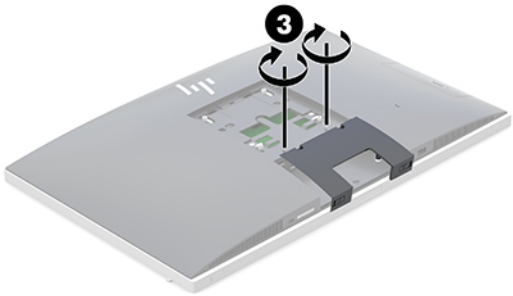
1. Place the computer facedown on a soft flat surface. HP recommends that you set down a blanket, towel, or other soft cloth to protect the bezel and screen surface from scratches or other damage.
2. If the security lock screws are secured, use a T15 tamper-resistant Torx security screwdriver to remove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

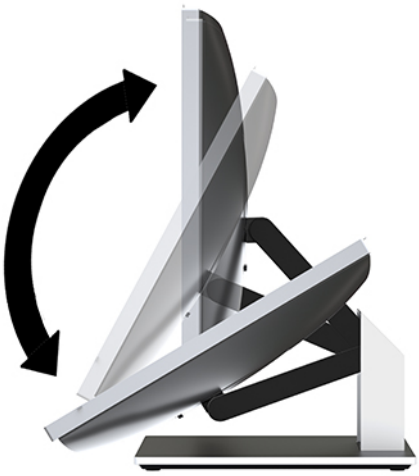
Adjusting a recline stand

⚠ **CAUTION:** 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:

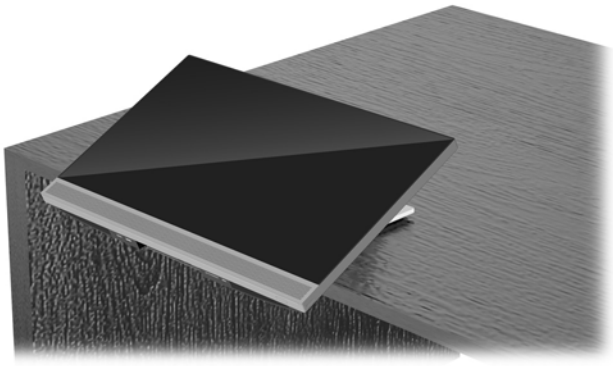
1. Grasp both top and bottom of the computer and lift the computer to the highest point.
2. Press the bottom of the computer down and adjust to the appropriate tilt.



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.



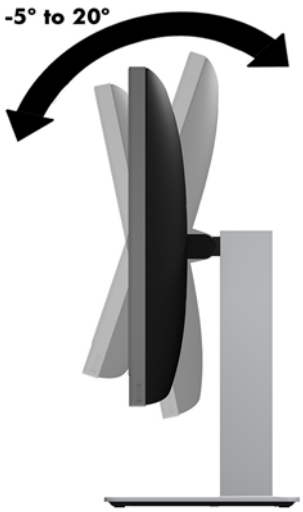
Adjusting an adjustable height stand

⚠ **CAUTION:** 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.

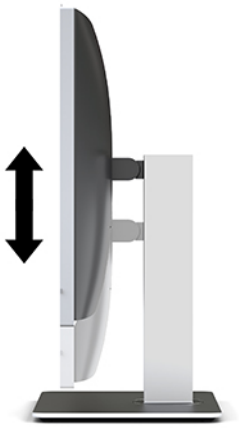
This stand allows you to:

- 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 view
- 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.

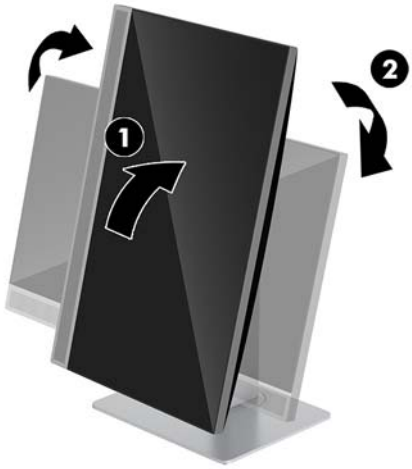
1. Move the stand next to the edge of the desk.
2. Grasp both sides of the computer and lower the computer to your preferred position.
3. Grasp the top and bottom of the computer and tilt the computer to the desired position.

CAUTION: 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.

To change from landscape to portrait view:

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.

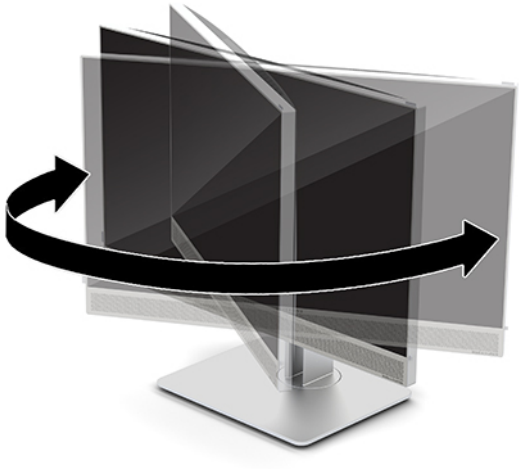


To change from portrait to landscape view:

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.

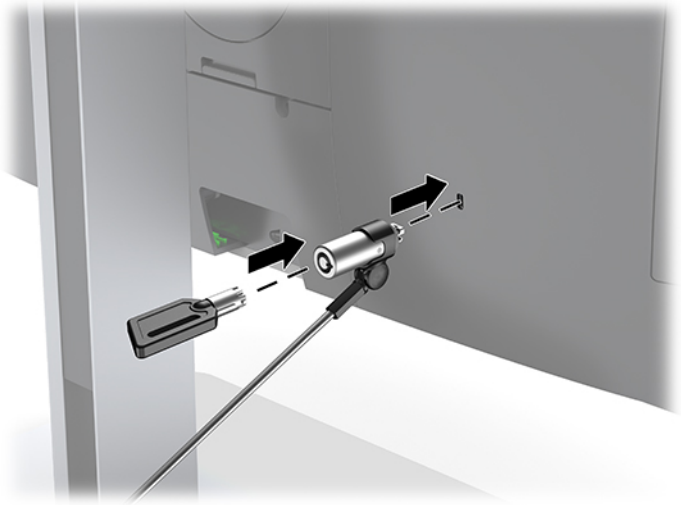
To swivel the computer from side to side:

- 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.

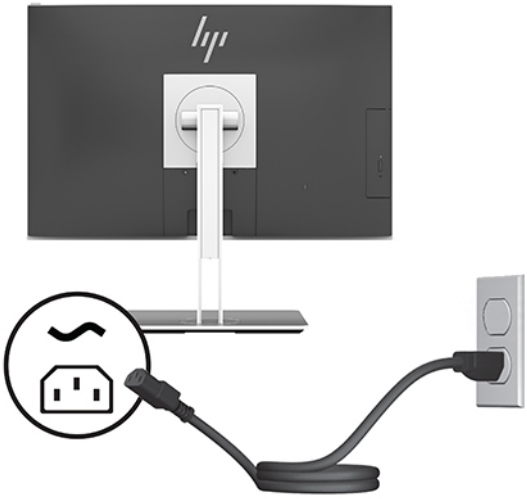


⚠ **CAUTION:** Use caution when adjusting the tilt, swivel, or height of the computer if a security cable is installed. The cable or the lock may interfere with the adjustment.

Connecting and disconnecting power

Connecting power

1. Plug the power cord into a AC outlet.



2. Press the power button on the side of 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
- Send and receive instant messages
- Schedule meetings
- Maintain security over conversations

Webcam operation

▲ To release the webcam, press it down to unlock it.

▲ 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 RFID (select products 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 TouchPad of the computer with your RFID tag or card. With an 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 HP EliteOne 800 G4 front components on page 1.

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

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

Computers or tablets with keyboards:

1. Turn on or restart the computer, and when the HP logo appears, press f10 to enter Computer 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 RFID, clear the check box.
4. To save your changes and exit Computer Setup menus:

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

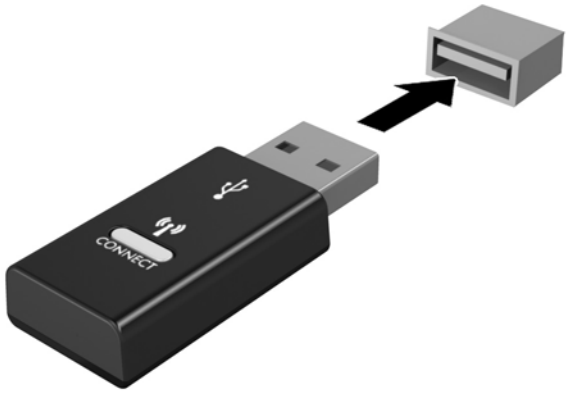
     – or –

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

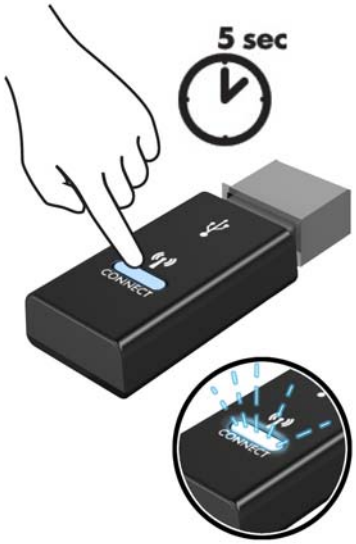
Your changes go into effect when the computer restarts.

Synchronizing the optional wireless keyboard and mouse

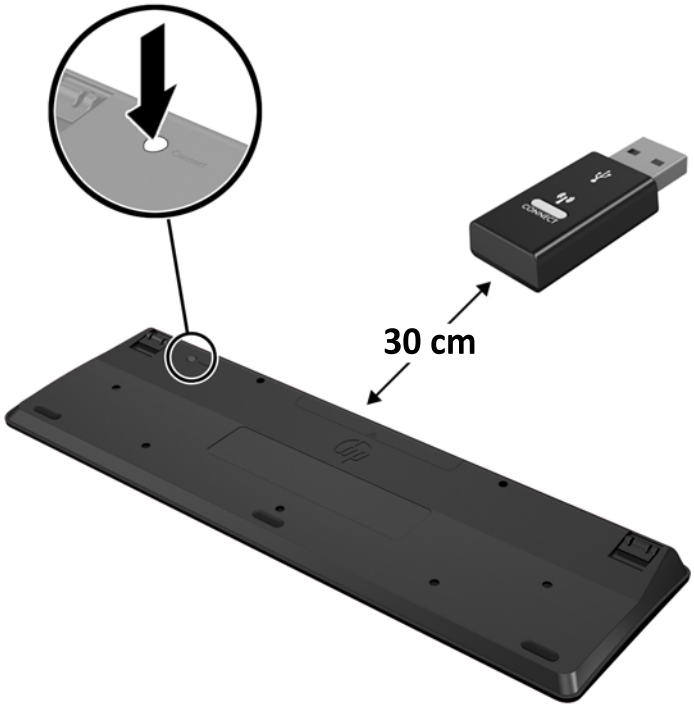
The wireless keyboard and mouse are optional components. The mouse and keyboard are synchronized at the factory. If they do not work, remove and replace the batteries. If the mouse and keyboard are still not synchronized, then follow this procedure to manually re-synchronize the pair.



1.



2.



3.

4.

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.

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

To reduce the risk of serious injury, read the *Safety & Comfort Guide*. It describes proper workstation setup and provides guidelines for posture and work habits that increase your comfort and decrease your risk of injury. It also provides electrical and mechanical safety information. This guide is located on the web at http://www.hp.com/ergo.

⚠ **CAUTION:** 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 35 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.

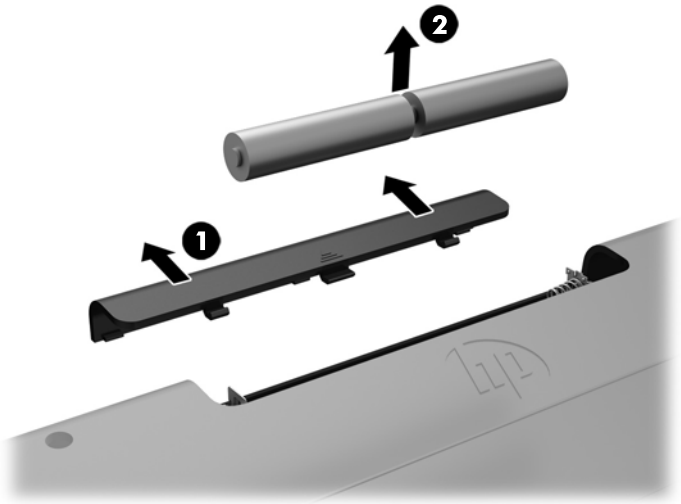
Additional information

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

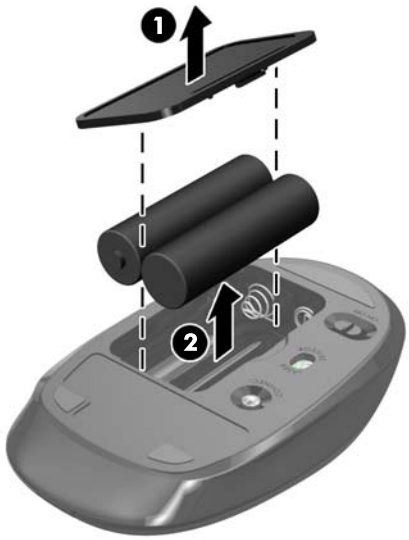
Removing batteries from the optional wireless keyboard or mouse

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.

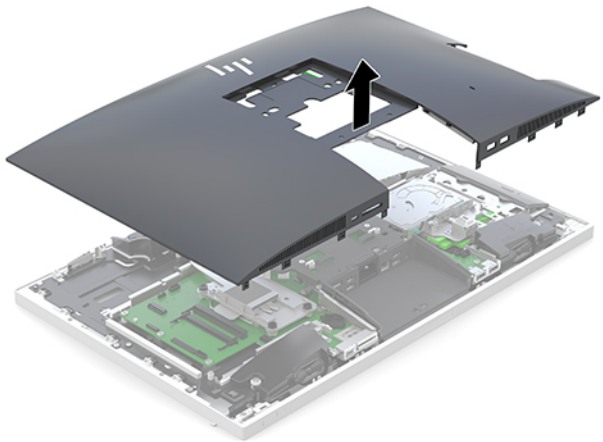
CAUTION: You must disconnect the power cord and wait approximately 30 seconds for the power to drain before adding or removing memory modules. Regardless of the power-on state, voltage is always supplied to the memory modules as long as the computer is plugged into an active AC outlet. Adding or removing 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 12.
7. Disconnect cables connected to the computer.

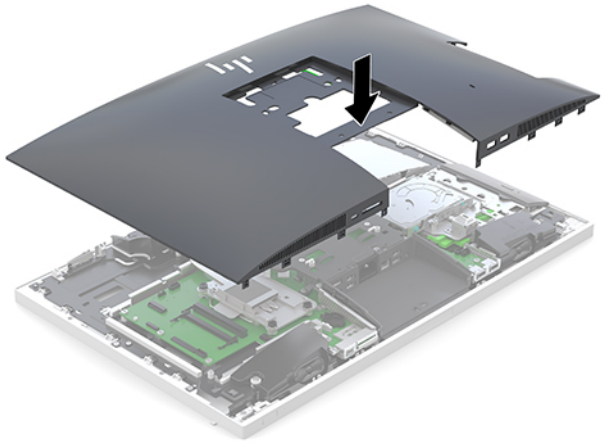
   See Disconnecting cables on page 12.
8. Remove the stand.

   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.

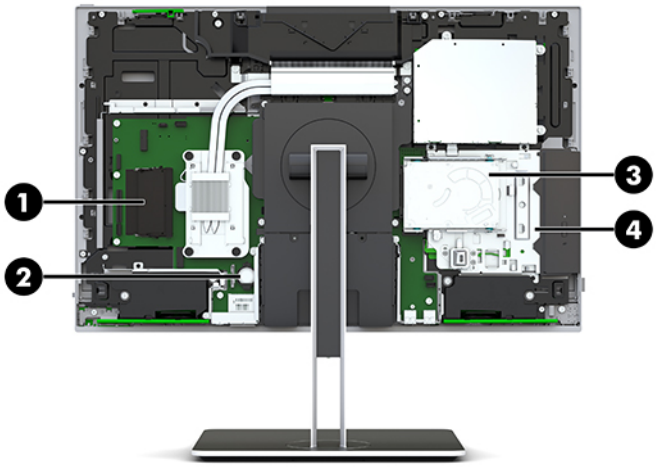
   See Connecting cables on page 11.

4. Reinstall the rear port cover.

   See Installing the rear port cover on page 13.

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



Component		Component	
1	Memory modules	3	Hard drive
2	RTC battery	4	Optical disc drive (optional)

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:

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 slots

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.

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 25.

2. To locate the memory modules on the system board, see Locating internal components on page 27.

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

4. Slide the new memory module into the slot at approximately a 30° angle (1), 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 26.

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.

CAUTION: Before replacing the battery, it is important to back up the computer CMOS settings. When the battery is removed or replaced, the CMOS settings will be cleared.

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.

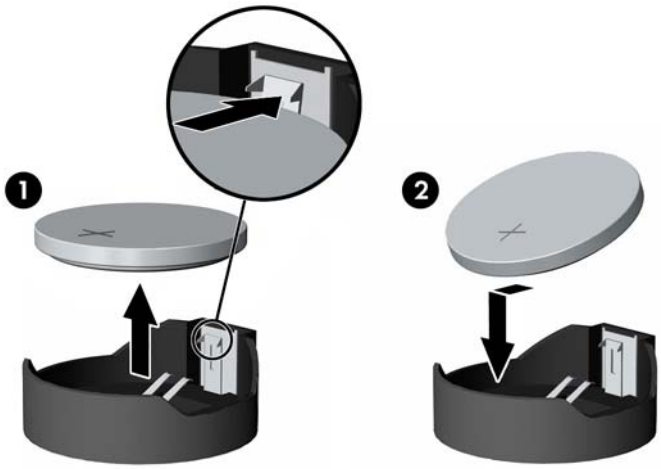
To locate the battery on the system board, see Locating internal components on page 27.

1. Remove the access panel.

   For instructions, see Removing the computer access panel on page 25.

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. Push the other edge down until the clamp snaps over the other edge of the battery (2).



4. Reinstall the access panel.

   For instructions, see Replacing the computer access panel on page 26.

5. Turn on the computer.

6. Reset the date and time, your passwords, and any special system setups using Computer Setup.

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 27.

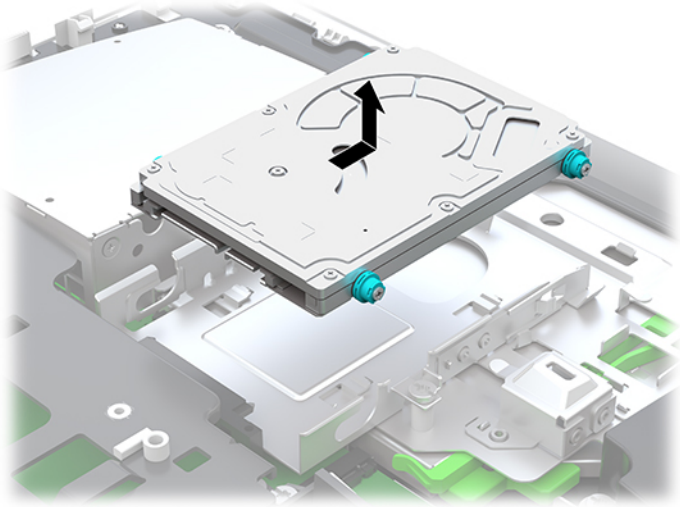
Removing a hard drive

1. Remove the access panel.

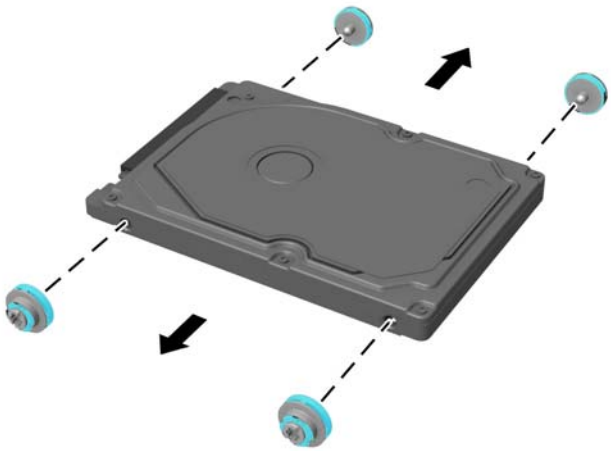
   For instructions, see Removing the computer access panel on page 25.

2. Pull the hard drive latch away from the hard drive to release the drive (1).

3. Slide the hard drive toward the edge of the computer and lift the hard drive out of the drive cage (2).



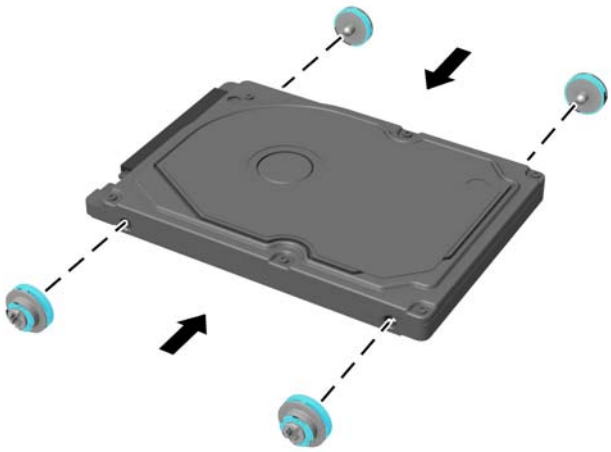
4. Remove the four mounting screws from the 2.5 inch hard drive. Be sure to keep the screws together with the blue rubber grommets to use to install a replacement drive.



For instructions on installing a hard drive, see Installing a 2.5 inch hard disk drive on page 32.

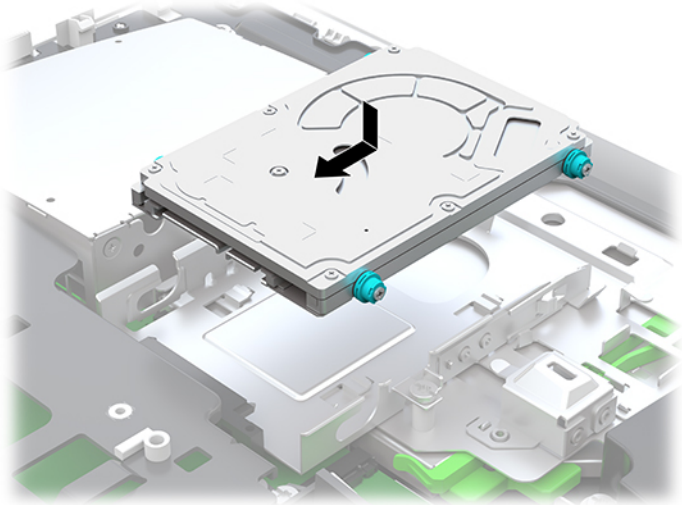
Installing a 2.5 inch hard disk drive

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 26.

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 27.

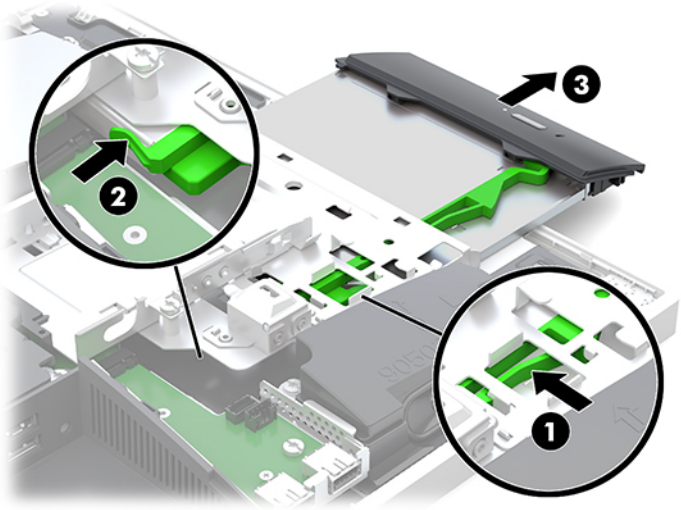
1. Remove the access panel.

   For instructions, see Removing the computer access panel on page 25.

2. Remove the hard drive.

   For instructions see Removing a hard drive on page 30.

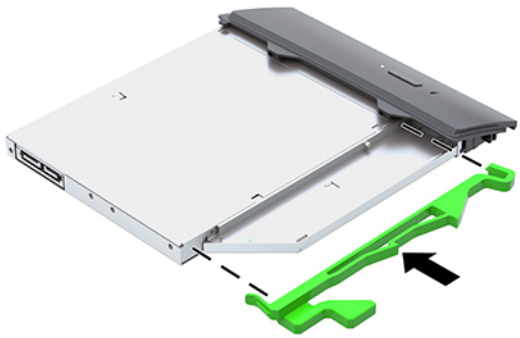
3. Push and hold the green tab (1) while pushing in the green latch (2) at the back of the optical disc drive enclosure and slide the drive (3) out of the chassis.



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

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

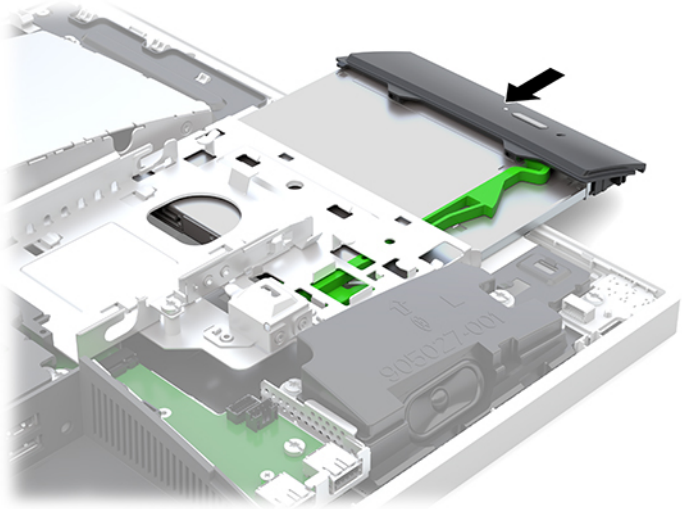
5. Align the three pins on the latch with the holes in the new optical disc drive and press the latch firmly onto the new drive.



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 32.

8. Replace the access panel.

   For instructions, see Replacing the computer access panel on page 26.

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.

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

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.

WARNING!

- 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.

CAUTION: 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

HP designs, produces, and markets products and services that can be used by everyone, including people with disabilities, either on a stand-alone basis or with appropriate assistive devices.

Supported assistive technologies

HP products support a wide variety of operating system assistive technologies and can be configured to work with additional assistive technologies. Use the Search feature on your device to locate more information about assistive features.

NOTE: For additional information about a particular assistive technology product, contact customer support for that product.

Contacting support

We are constantly refining the accessibility of our products and services and welcome feedback from users. If you have an issue with a product or would like to tell us about accessibility features that have helped you, please contact us at (888) 259-5707, Monday through Friday, 6 a.m. to 9 p.m. Mountain Time. If you are deaf or hard-of-hearing and use TRS/VRS/WebCapTel, contact us if you require technical support or have accessibility questions by calling (877) 656-7058, Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.

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