



# Hardware Reference Guide

HP 260 G1 DM Business PC

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## Product Notice

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

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

This computer may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See <http://windows.microsoft.com/en-us/windows7/get-know-windows-7> for details.

## 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 refund subject to the refund policy of your place of purchase.


For any further information or to request a full refund of the computer, please contact your local point of sale (the seller).

## About This Book

This guide provides basic information for upgrading the HP Desktop Mini Business PC.

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 **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

## Standard configuration features

Features may vary depending on the model. For a complete listing of the hardware and software installed in the computer, run the diagnostic utility (included on some computer models only).



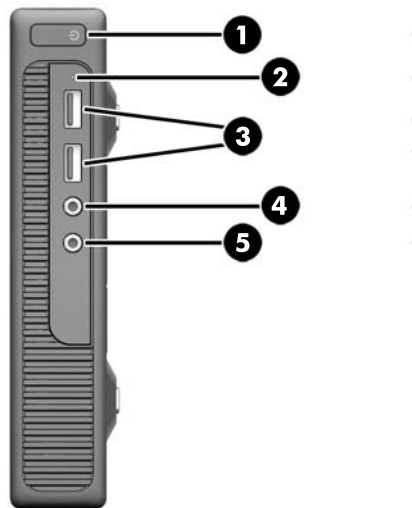
**NOTE:** This computer model can be used in a tower orientation or a desktop orientation. The tower stand is sold separately.

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# Front panel components

Drive configuration may vary by model.

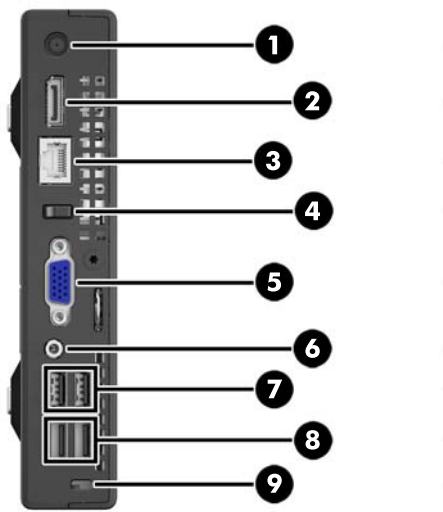










1	Dual-State Power Button	4	Microphone Connector
2	Hard Drive Activity Light	5	Headphone Connector
3	USB 3.0 Ports		

**NOTE:** The Power On Light is normally white when the power is on. If it is flashing red, there is a problem with the computer and it is displaying a diagnostic code. Refer to the *Maintenance and Service Guide* to interpret the code.



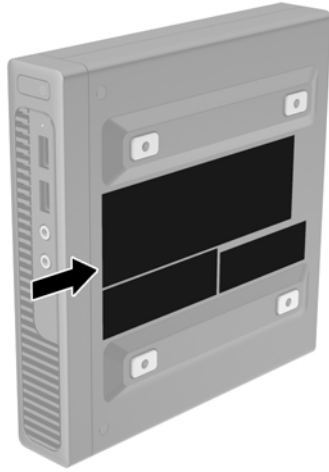
# Rear panel components



1		AC Power Cord Connector	6		Line-Out Connector for powered audio devices (green)
2		DisplayPort Monitor Connector	7		USB 2.0 Ports (black) with keyboard wakeup function
3		RJ-45 (network) Jack	8		USB 3.0 Ports (blue)
4		Power Cord Retainer Clip	9		Cable lock slot
5		VGA Monitor Connector (blue)			

## Serial number location

Each computer has a unique serial number and a product ID number that are located on the exterior of the computer. Keep these numbers available for use when contacting customer service for assistance.



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## 2 Hardware upgrades


### Serviceability features

The computer includes features that make it easy to upgrade and service.

### Warnings and cautions

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

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


Disconnect the power cord from the wall outlet and allow the internal system components to cool before touching.

Do not plug telecommunications or telephone connectors into 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) outlet that is easily accessible at all times.

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

 **WARNING!** Energized and moving parts inside.

Disconnect power to the equipment before removing the enclosure.

Replace and secure the enclosure before re-energizing the equipment.

 **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 26](#) for more information.

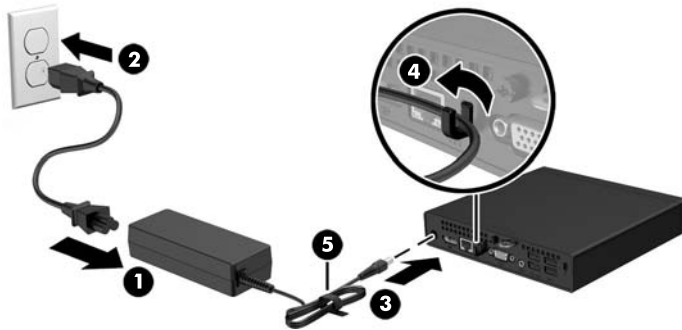
When the computer is plugged into an AC power source, voltage is always applied to the system board. You must disconnect the power cord from the power source before opening the computer to prevent damage to internal components.

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## Connecting the power cord

When connecting the power supply, it is important to follow the steps below to ensure the power cord does not pull free from the computer.

1. Plug the female end of the power cord into the power supply brick (1).
2. Connect the other end of the power cord to an electrical outlet (2).
3. Connect the round end of the power supply cord to the power supply connector on the rear of the computer (3).
4. Route the power cord through the retainer clip to prevent the cord from becoming disconnected from the computer (4).
5. Bundle any excess power cord with the supplied strap (5).



**CAUTION:** Failure to secure the power cable with the retainer clip may result in the power cord becoming disconnected and loss of data.

## Removing the computer access panel

To access internal components, you must remove the access panel:

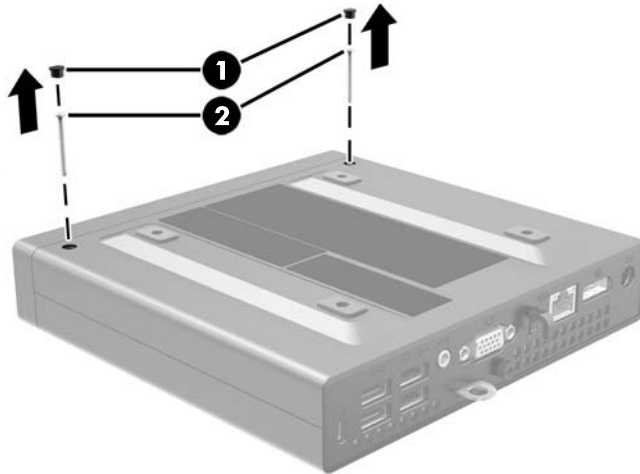
1. Remove/disengage any security devices that prohibit opening the computer.
2. Remove all removable media, such as a USB flash drive, from the computer.
3. Turn off the computer properly through the operating system, then turn off any external devices.
4. Disconnect the power cord from the power outlet and disconnect any external devices.

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**⚠ CAUTION:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the computer.

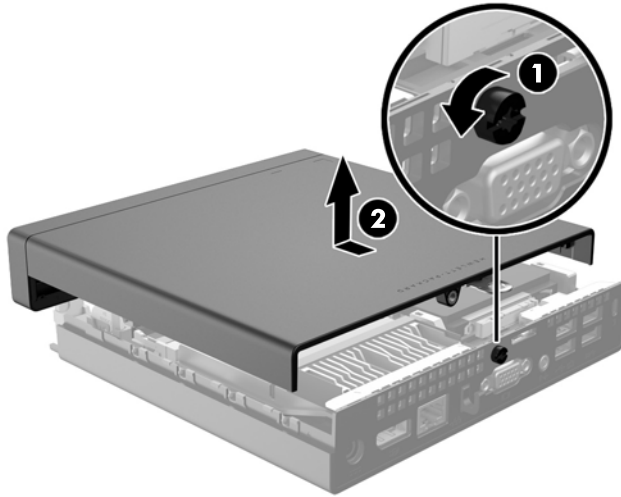
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5. If the computer is on a stand, remove the computer from the stand and lay the computer down with the VESA holes facing up.
6. Remove the rubber plugs from the two holes closest to the front of the computer (1).
7. Remove the screws from the two holes closest to the front of the computer (2).



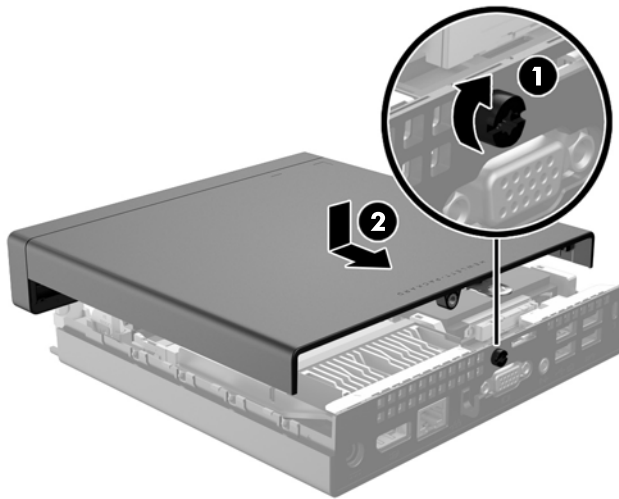
8. Turn the computer over.

9. Loosen the screw on the rear of the computer (1) then slide the panel forward and lift it off the computer (2).

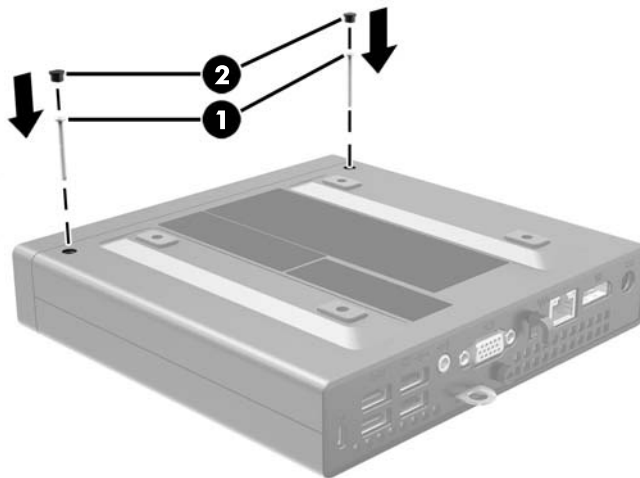


## Replacing the computer access panel

1. Place the panel on the computer then slide it back (1) and tighten the screw (2) to secure the panel in place.



2. Turn the computer over.
3. Insert screws into the two holes closest to the front of the computer (1) and tighten them.
4. Insert rubber plugs into the two holes closest to the front of the computer (2).



## Changing from desktop to tower configuration

The computer can be used in a tower orientation with an optional tower stand that can be purchased from HP.

1. Remove/disengage any security devices that prohibit opening the computer.
2. Remove all removable media, such as a USB flash drive, from the computer.
3. Turn off the computer properly through the operating system, then turn off any external devices.
4. Disconnect the power cord from the power outlet and disconnect any external devices.

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**CAUTION:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the computer.

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5. Orient the computer so that its right side is facing up and place the computer in the optional stand.



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**NOTE:** To stabilize the computer in a tower orientation, HP recommends the use of the optional tower stand.

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6. Reconnect the power cord and any external devices, then turn on the computer.

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**NOTE:** Ensure at least 10.2 centimeters (4 inches) of space on all sides of the computer remains clear and free of obstructions.

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7. Lock any security devices that were disengaged when the access panel was removed.



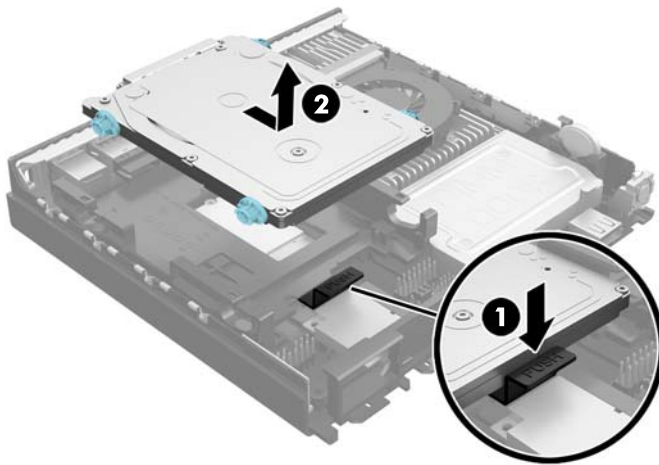
## Removing and replacing a hard drive

 **NOTE:** Before you remove the old hard drive, be sure to back up the data from the old hard drive so that you can transfer the data to the new hard drive.

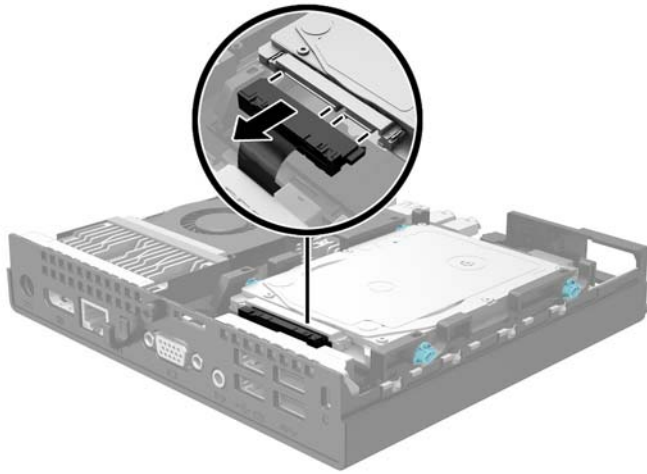
1. Remove/disengage any security devices that prohibit opening the computer.
2. Remove all removable media, such as a USB flash drive, from the computer.
3. Turn off the computer properly through the operating system, then turn off any external devices.
4. Disconnect the power cord from the power outlet and disconnect any external devices.

 **CAUTION:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the computer.

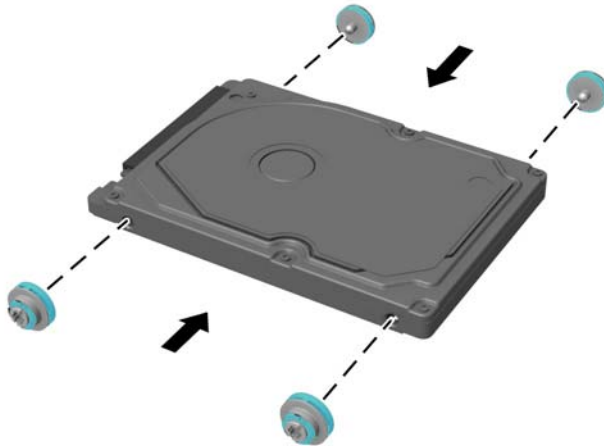
5. If the computer is on a stand, remove the computer from the stand.
6. Remove the computer access panel.
7. Push down the release lever next to the rear of the hard drive (1). Hold the release lever down and slide the drive back until it stops, then lift the drive up and out of the bay (2).



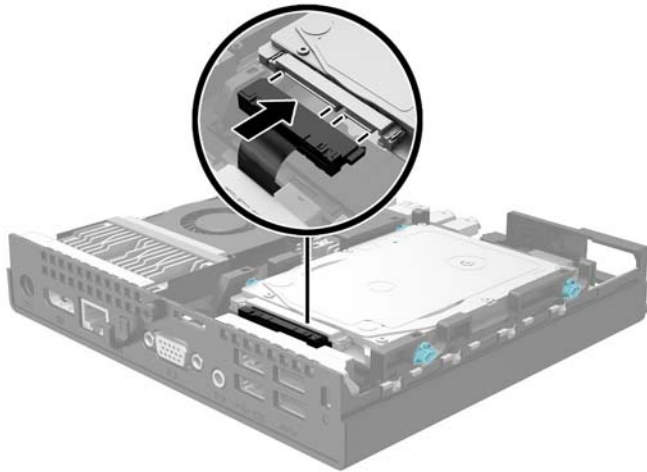
8. Unplug the combined power and data cable from the hard drive.



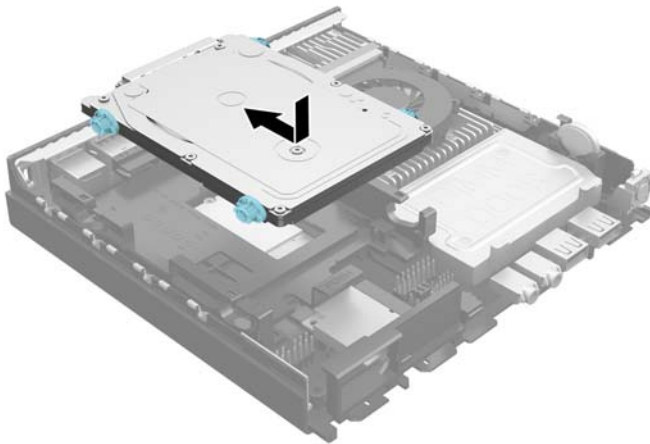
9. Transfer the silver and blue isolation mounting guide screws from the old hard drive to the new hard drive.



10. Hold the new hard drive over the bay and plug the combined power and data cable into the hard drive.



11. Align the guide screws with the slots on the chassis drive cage, press the hard drive down into the bay, then slide it forward until it stops and locks in place.



12. Replace the access panel.
13. If the computer was on a stand, replace the stand.
14. Reconnect the power cord and turn on the computer.
15. Lock any security devices that were disengaged when the access panel was removed.

## Installing additional memory

The computer comes with double data rate 3 synchronous dynamic random access memory (DDR3L-SDRAM) small outline dual inline memory modules (SODIMMs).

### SODIMMs

The memory sockets on the system board can be populated with up to two industry-standard SODIMMs. These memory sockets are populated with at least one preinstalled SODIMM. To achieve the maximum memory support, you can populate the system board with up to 16 GB of memory.

### DDR3L-SDRAM SODIMMs

For proper system operation, the SODIMMs must be:

- industry-standard 204-pin
- unbuffered non-ECC PC3-12800 DDR3L-1333 MHz-compliant
- 1.35 volt DDR3L-SDRAM SODIMMs

The DDR3L-SDRAM SODIMMs must also:

- support CAS latency 11 DDR3L 1333 MHz (11-11-11 timing)
- contain the mandatory Joint Electronic Device Engineering Council (JEDEC) specification

In addition, the computer supports:

- 512-Mbit, 1-Gbit, and 2-Gbit non-ECC memory technologies
- single-sided and double-sided SODIMMS
- SODIMMs constructed with x8 and x16 devices; SODIMMs constructed with x4 SDRAM are not supported



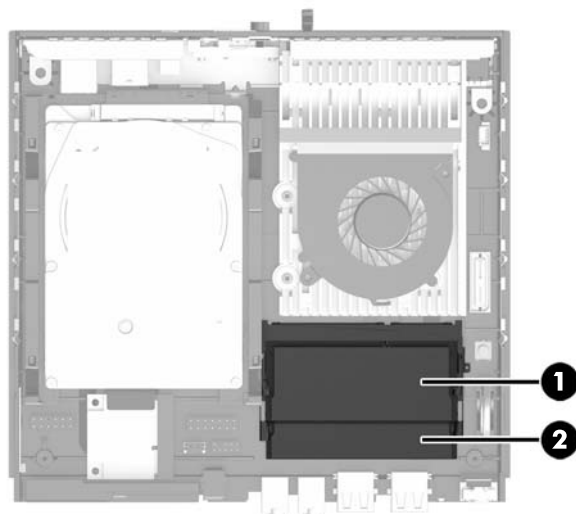
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**NOTE:** The system will not operate properly if you install unsupported SODIMMs.

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## Populating SODIMM sockets

There are two SODIMM sockets on the system board, with one socket per channel. The sockets are labeled DIMM1 and DIMM2. The DIMM1 socket operates in memory channel B. The DIMM2 socket operates in memory channel A.



Item	Description	System Board Label	Socket Color
1	SODIMM1 socket, Channel B	DIMM1	Black
2	SODIMM2 socket, Channel A	DIMM2	Black

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

- The system will operate in single channel mode if the SODIMM sockets are populated in one channel only.
- The system will operate in a higher-performing dual channel mode if the memory capacity of the SODIMM in Channel A is equal to the memory capacity of the SODIMM in Channel B.
- The system will operate in flex mode if the memory capacity of the SODIMM in Channel A is not equal to the memory capacity of the SODIMM 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 SODIMM in the system.

## Installing SODIMMs

**⚠ 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.

The memory module sockets have gold-plated metal contacts. When upgrading the memory, it is important to use memory modules with gold-plated metal contacts to prevent corrosion and/or oxidation resulting from having incompatible metals in contact with each other.

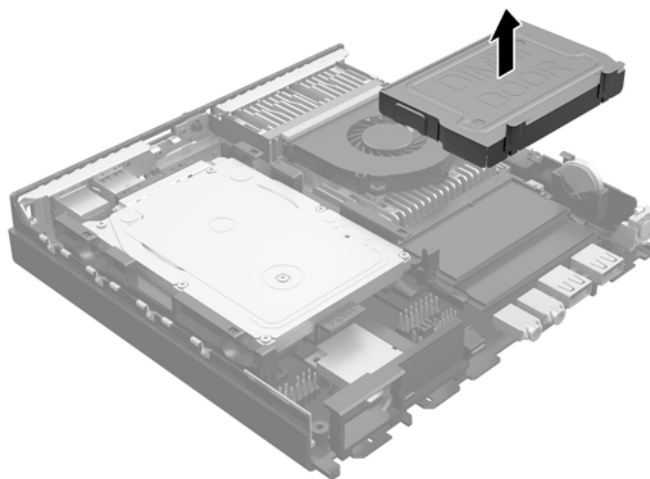
Static electricity can damage the electronic components of the computer or optional cards. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object. For more information, refer to [Electrostatic discharge on page 26](#).

When handling a memory module, be careful not to touch any of the contacts. Doing so may damage the module.

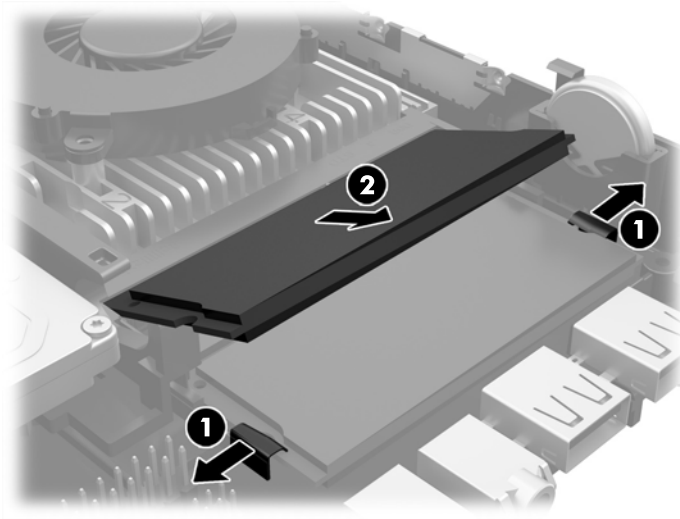
1. Remove/disengage any security devices that prohibit opening the computer.
2. Remove all removable media, such as a USB flash drive, from the computer.
3. Turn off the computer properly through the operating system, then turn off any external devices.
4. Disconnect the power cord from the power outlet 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.

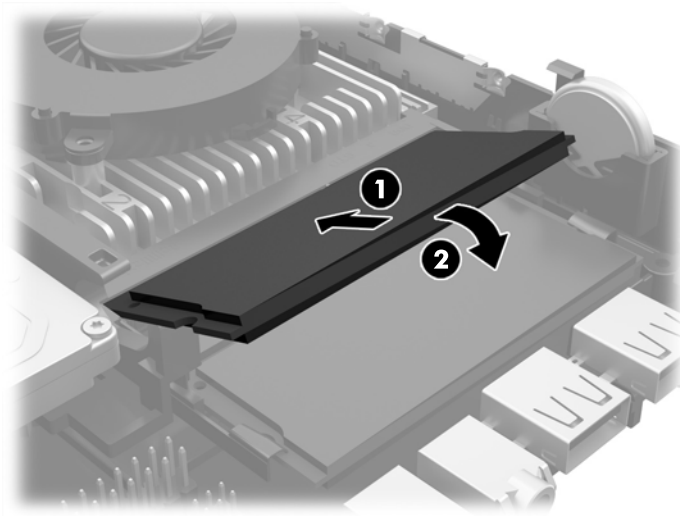
5. If the computer is on a stand, remove the computer from the stand and lay the computer down.
6. Remove the computer access panel.
7. Pry up the edge of the memory door closest to the side of the computer and lift the door off the computer.




8. To remove a SODIMM, press outward on the two latches on each side of the SODIMM (1) then pull the SODIMM out of the socket (2).

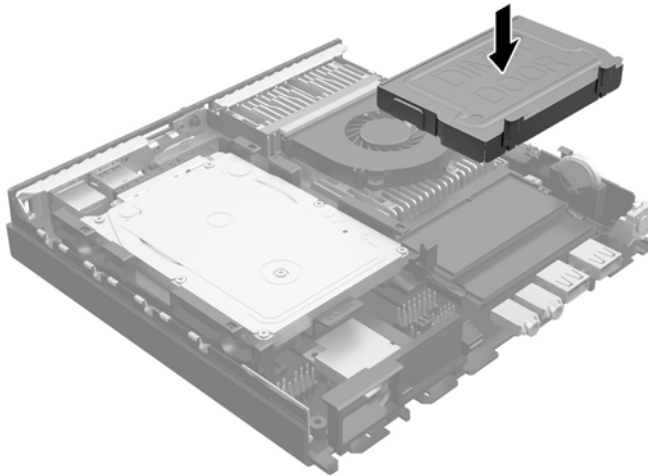


9. Slide the new SODIMM into the socket at approximately a 30° angle (1) then press the SODIMM down (2) so that the latches lock it in place.



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

10. Align the memory door over the SODIMMs, lower the door, and then press the door into place.




11. Replace the access panel.
  12. If the computer was on a stand, replace the stand.
  13. Reconnect the power cord and turn on the computer.
  14. Lock any security devices that were disengaged when the computer cover or access panel was removed.
- The computer automatically recognizes the additional memory when you turn on the computer.



# Replacing the battery

The 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.

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 **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 wall socket. 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>.

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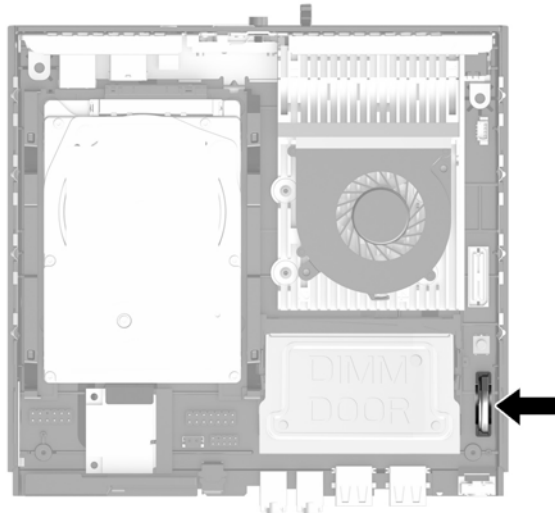
1. Remove/disengage any security devices that prohibit opening the computer.
  2. Remove all removable media, such as a USB flash drive, from the computer.
  3. Turn off the computer properly through the operating system, then turn off any external devices.
  4. Disconnect the power cord from the power outlet and disconnect any external devices.
- 

 **CAUTION:** Regardless of the power-on state, voltage is always present on the system board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the computer.

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5. Remove the computer access panel.

6. Locate the battery and battery holder on the system board.

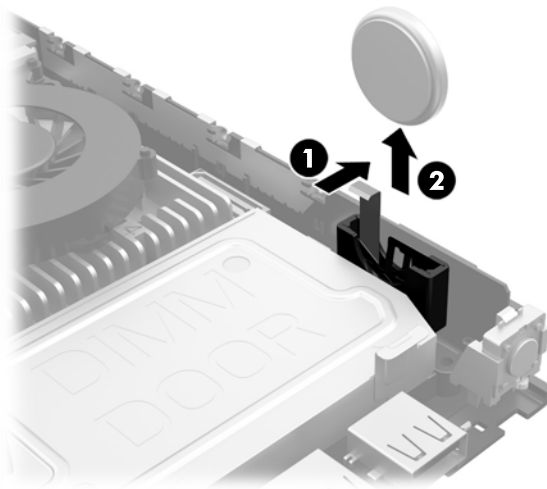


7. Depending on the type of battery holder on the system board, complete the following instructions to replace the battery.



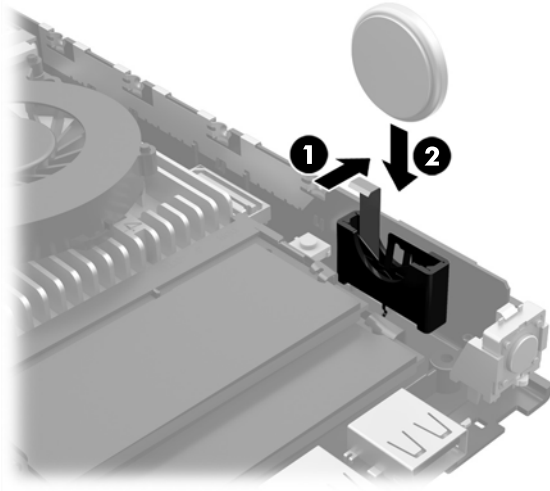
**NOTE:** You may need to use a small tool, such as tweezers or needle-nose pliers, to remove and replace the battery.

- a. Pull back on the clip (1) that is holding the battery in place, and lift the battery out of the holder (2).



- b. Pull back on the clip (1) and slide the replacement battery down into the holder (2).

**CAUTION:** Be sure the + symbol on the battery is facing the outer edge of the computer.



**NOTE:** After the battery has been replaced, use the following steps to complete this procedure.

8. Replace the computer access panel.
9. Plug in the computer and turn on power to the computer.
10. Reset the date and time, your passwords, and any special system setups using Computer Setup.
11. Lock any security devices that were disengaged when the computer access panel was removed.

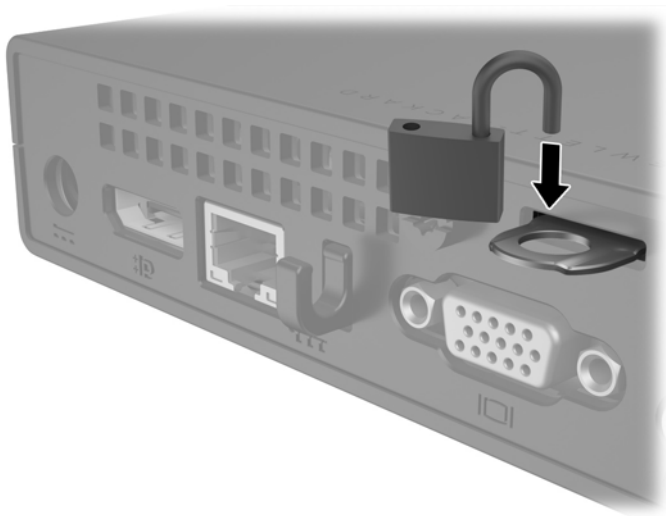
## Installing a security lock

The security locks displayed below and on the following pages can be used to secure the computer.

### Cable lock



## Padlock



## Mounting the computer

HP recommends mounting the computer in the vertical (tower) orientation, with the power button up.

**CAUTION:** Do not mount the computer with the I/O ports oriented towards the ground.

This computer incorporates four mounting points on the right side of the computer. These mounting points follow the VESA (Video Electronics Standards Association) standard, which provides industry-standard mounting interfaces for Flat Displays (FDs), such as flat-panel monitors, flat displays, and flat TVs. The HP Quick Release connects to the VESA-standard mounting points, allowing you to mount the computer in a variety of orientations.

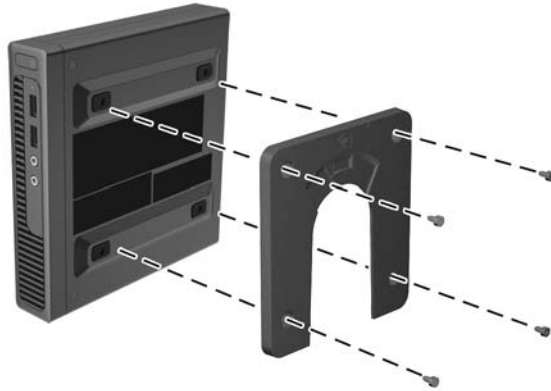
**NOTE:** When mounting to the computer, use the 15 mm screws supplied with the HP Quick Release.



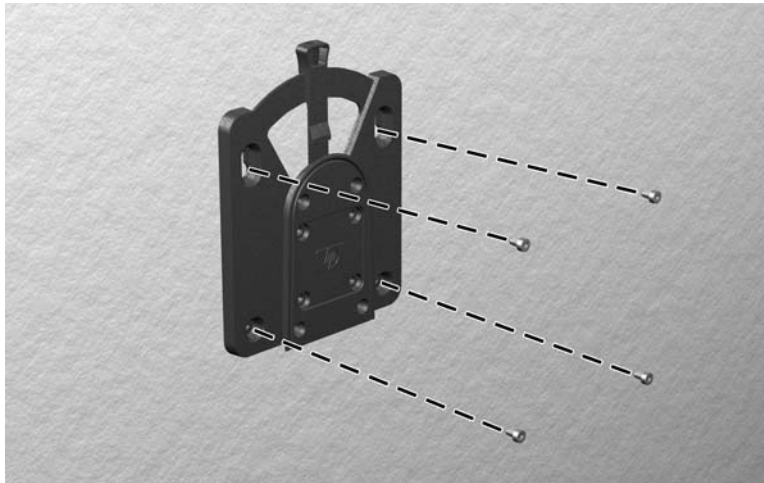
To use the HP Quick Release:

1. Remove four screws from the right side of the computer.

2. Using four 15 mm screws included in the mounting device kit, attach one side of the HP Quick Release to the computer as shown in the following illustration.

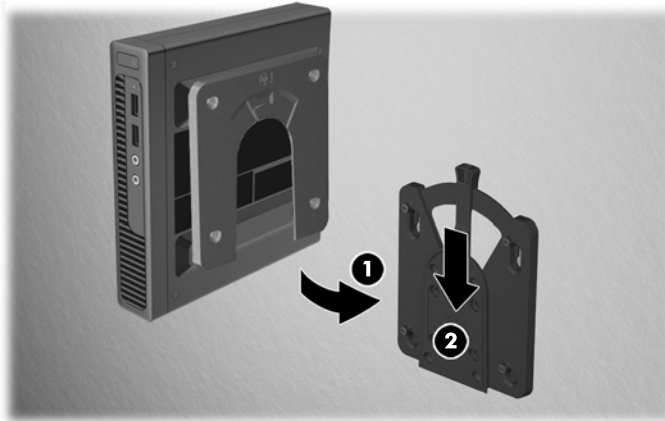


3. Using four screws included in the mounting device kit, attach the other side of the HP Quick Release to the device to which you will mount the computer.



Be sure the release lever points upward.

4. Slide the side of the mounting device attached to the computer (1) over the other side of the mounting device (2) on the device on which you want to mount the computer. An audible 'click' indicates a secure connection.



When attached, the HP Quick Release automatically locks in position. You only need to slide the lever to one side to remove the computer.

## Supported mounting options

The following illustrations demonstrate some of the supported mounting options for the mounting bracket.

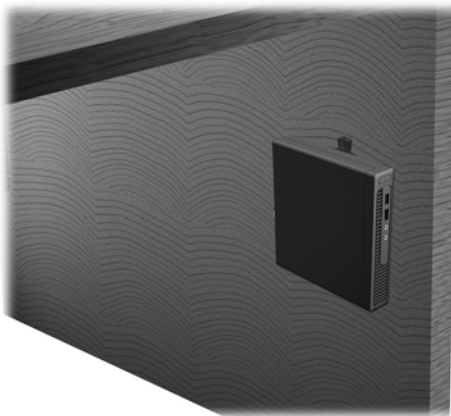
- On the back of a flat panel monitor



- On a wall



- Under a desk, allowing at least 2.5 cm (1 in) clearance



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# 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

There are several methods for grounding. 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  $\pm$  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.



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

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## **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-inch) 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 the access panel or any of the expansion card slot covers removed.
- Do not stack computers on top of each other or place computers so near each other that they are subject to each other's re-circulated 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 on the monitor with any type of material.
- Install or enable power management functions of the operating system or other software, including sleep states.
- Turn off the computer before you do either of the following:
  - Wipe the exterior of the computer with a soft, damp cloth as needed. Using cleaning products may discolor or damage the finish.
  - 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.

## 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.



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

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



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

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

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## 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.



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

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### 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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