# OptiPlex Micro 7010

## Owner's Manual

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DELL Technologies

## Notes, cautions, and warnings

**NOTE:** A NOTE indicates important information that helps you make better use of your product.

**CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.**

**WARNING: A WARNING indicates a potential for property damage, personal injury, or death.**

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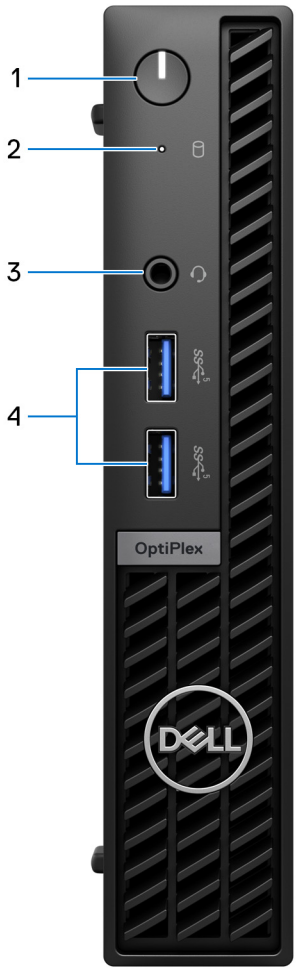
# 1

# Views of OptiPlex Micro 7010

## Front




1. **Power button**

   Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

   When the computer is turned on, press the power button to put the computer into sleep state; press and hold the power button for 10 seconds to force shut-down the computer.

   **NOTE:** The power-button behavior can be customized in the operating system.

2. **Storage drive activity light**

   The activity light turns on when the computer reads from or writes to storage drives.

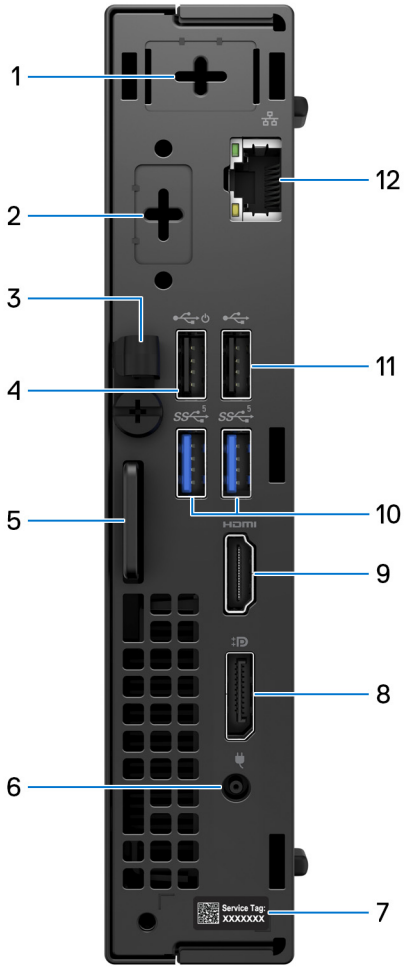
3. **Universal audio jack**

   Connect headphones or a headset (headphone and microphone combo).

4. **Two USB 3.2 Gen 1 ports**

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.

# Back




1. **One optional external antenna port**

   Supports an optional external antenna module.

2. **One optional video module port**

   Supports an optional module for HDMI 2.1/Displayport 1.4a (HBR3)/VGA/PS2/serial/USB Type-C with DisplayPort Alt mode + power delivery in.

   **NOTE:** You may connect a 90 W Dell USB-C hub monitor to the optional Type-C port as a consolidated power, display and USB I/O solution for your computer.

3. **DC-in cable clip**

   For power-adapter cable routing.

4. **USB 2.0 port with Smart Power on**

   Connect devices such as external storage devices and printers. Provides data transfer speeds up to 480 Mbps.

   **NOTE:** When USB wake is enabled in the BIOS the computer will power on or wake from hibernation when a USB mouse or keyboard that is connected to this port is used.

5. **Kensington security-cable slot and padlock ring**

Connect a security cable to prevent unauthorized movement of your computer and/or attach a standard padlock to prevent unauthorized access to the interior of your computer.

6. **Power-adapter port**

   Connect the power adapter to charge your computer battery.

7. **Service Tag label**

   The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information.

8. **DisplayPort 1.4a**

   Connect an external display or a projector. Can support video output of up to 5120 x 3200 at 60 Hz.

9. **HDMI 1.4b port**

   Connect a gaming console, Blu-ray player, or other HDMI-out enabled device.

10. **Two USB 3.2 Gen 1 ports**

    Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.

11. **USB 2.0 port**

    Connect devices such as external storage devices and printers. Provides data transfer speeds up to 480 Mbps.

12. **Network port**

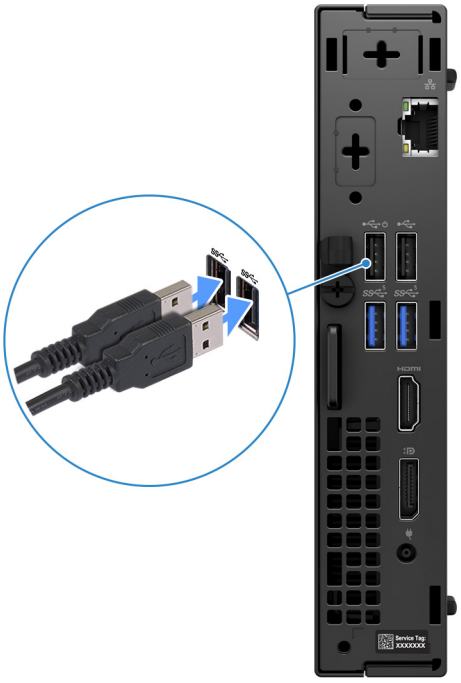
    Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access.

# 2

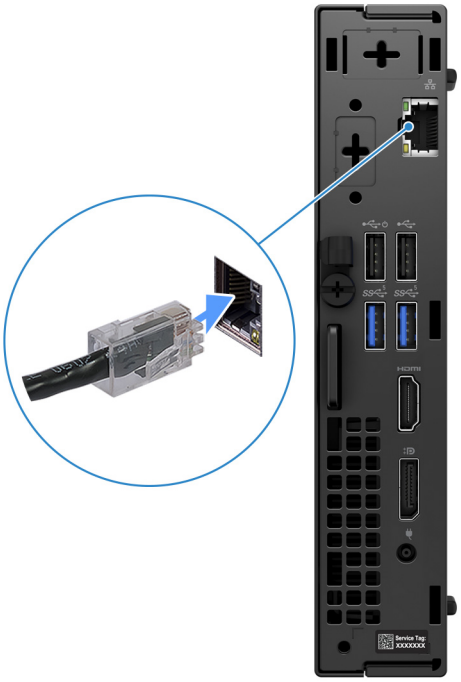
# Set up your computer

**Steps**

1. Connect the keyboard and mouse.



2. Connect to your network using a cable, or connect to a wireless network.



3. Connect the display.



4. Connect the power cable.



5. Press the power button.




6. Finish operating system setup.

   **For Ubuntu:**

   Follow the on-screen instructions to complete the setup. For more information about installing and configuring Ubuntu, search in the Knowledge Base Resource at Dell Support Site.

   **For Windows:**

   Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:

   - Connect to a network for Windows updates.

**NOTE:** If connecting to a secured wireless network, enter the password for the wireless network access when prompted.

- If connected to the internet, sign-in with or create a Microsoft account. If not connected to the internet, create an offline account.
- On the **Support and Protection** screen, enter your contact details.

7. Locate and use Dell apps from the Windows Start menu—Recommended

**Table 1. Locate Dell apps**

| Resources | Description |
|---|---|
|  | **SupportAssist**<br>SupportAssist proactively and predictively identifies hardware and software issues on your computer and automates the engagement process with Dell Technical support. It addresses performance and stabilization issues, prevents security threats, monitors, and detects hardware failures. For more information, see *SupportAssist for Home PCs User's Guide* at Serviceability Tools at the Dell Support Site. Click **SupportAssist** and then, click **SupportAssist for Home PCs**.<br>**NOTE:** In SupportAssist, click the warranty expiry date to renew or upgrade your warranty. |
|  | **Dell Update**<br>Updates your computer with critical fixes and latest device drivers as they become available. For more information on using Dell Update, search in the Knowledge Base Resource at Dell Support Site. |
|  | **Dell Digital Delivery**<br>Download software applications, which are purchased but not preinstalled on your computer. For more information on using Dell Digital Delivery, search in the Knowledge Base Resource at Dell Support Site. |

3

# Specifications of OptiPlex Micro 7010

## Dimensions and weight

The following table lists the height, width, depth, and weight of your OptiPlex Micro 7010.

**Table 2. Dimensions and weight**

| Description | Values |
|---|---|
| Height | 182 mm (7.17 in.) |
| Width | 36 mm (1.42 in.) |
| Depth | 178 mm (7.01 in.) |
| Weight<br>**NOTE:** The weight of your computer depends on the configuration ordered and manufacturing variability. | • Minimum:1.09 kg (2.41 lb)<br>• Maximum: 1.34 kg (2.95 lb) |

## Processor

The following table lists the details of the processors supported by your OptiPlex Micro 7010.

### Table 3. Processor

| Description | Option one | Option two | Option three | Option four |
|---|---|---|---|---|
| Processor type | Intel Celeron G6900T | Intel Pentium Gold G7400T | 13th Generation Intel Core i3-13100T | 13th Generation Intel Core i5-13400T |
| Processor wattage | 35 W | 35 W | 35 W | 35 W |
| Processor total core count | 2 | 2 | 4 | 10 |
| Performance-cores | 2 | 2 | 4 | 6 |
| Efficient-cores | 0 | 0 | 0 | 4 |
| Processor total thread counts<br>**NOTE:** Intel® Hyper-Threading Technology is only available on Performance-cores. | 2 | 4 | 8 | 16 |
| Processor speed | Up to 2.80 GHz | Up to 3.10 GHz | Up to 4.20 GHz | Up to 4.40 GHz |
| Performance-cores frequency | | | | |
| Processor base frequency | 2.80 GHz | 3.10 GHz | 2.50 GHz | 1.30 GHz |
| Maximum turbo frequency | Not applicable | Not applicable | 4.20 GHz | 4.40 GHz |
| Efficient-cores frequency | | | | |
| Processor base frequency | Not applicable | Not applicable | Not applicable | 1 GHz |
| Maximum turbo frequency | Not applicable | Not applicable | Not applicable | 3 GHz |
| | **NOTE:** Processor clock speeds and thermal design power differ according to the thermal mode selected in the My Dell app on your computer. | | | |
| Processor cache | 4 MB | 6 MB | 12 MB | 20 MB |
| Integrated graphics | Intel UHD Graphics 710 | Intel UHD Graphics 710 | Intel UHD Graphics 730 | Intel UHD Graphics 730 |

### Table 4. Processor

| Description | Option five | Option six | Option seven | Option eight | Option nine |
|---|---|---|---|---|---|
| Processor type | 13th Generation Intel Core i5-13500T | 13th Generation Intel Core i5-13600T | 13th Generation Intel Core i7-13700T | 12th Generation Intel Core i3-12100T | 12th Generation Intel Core i5-12500T |
| Processor wattage | 35 W | 35 W | 35 W | 35 W | 35 W |
| Processor total core count | 14 | 14 | 16 | 4 | 6 |
| Performance-cores | 6 | 6 | 8 | 4 | 6 |
| Efficient-cores | 8 | 8 | 8 | 0 | 0 |
| Processor total thread counts<br>**NOTE:** Intel® Hyper-Threading Technology is only available on Performance-cores. | 20 | 20 | 24 | 8 | 12 |
| Processor speed | Up to 4.60 GHz | Up to 4.80 GHz | Up to 4.80 GHz | Up to 4.10 GHz | Up to 4.40 GHz |
| Performance-cores frequency | | | | | |
| Processor base frequency | 1.60 GHz | 1.80 GHz | 1.40 GHz | 2.20 GHz | 2 GHz |
| Maximum turbo frequency | 4.60 GHz | 4.80 GHz | 4.80 GHz | 4.10 GHz | 4.40 GHz |
| Efficient-cores frequency | | | | | |
| Processor base frequency | 1.20 GHz | 1.30 GHz | 1 GHz | Not applicable | Not applicable |
| Maximum turbo frequency | 3.20 GHz | 3.40 GHz | 3.60 GHz | Not applicable | Not applicable |
| | **NOTE:** Processor clock speeds and thermal design power differ according to the thermal mode selected in the My Dell app on your computer. | | | | |
| Processor cache | 24 MB | 24 MB | 30 MB | 12 MB | 18 MB |
| Integrated graphics | Intel UHD Graphics 770 | Intel UHD Graphics 770 | Intel UHD Graphics 770 | Intel UHD Graphics 730 | Intel UHD Graphics 770 |

# Chipset

The following table lists the details of the chipset that is supported by your OptiPlex Micro 7010.

### Table 5. Chipset

| Description | Values |
|---|---|
| Chipset | Intel Q670 |
| Processor | • Intel Core i3/i5/i7<br>• Intel Pentium Gold |

### Table 5. Chipset (continued)

| Description | Values |
|---|---|
| | • Intel Celeron |
| DRAM bus width | 64/128-bit |
| Flash EPROM | 32 MB RPMC+16 MB nRPMC |
| PCIe bus | Up to Gen3 |

# Operating system

Your OptiPlex Micro 7010 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Downgrade (Windows 10 image)
- Windows 11 Pro National Education, 64-bit
- Windows 11 CMIT Government Edition, 64-bit (China only)
- Ubuntu Linux 20.04 LTS, 64-bit
- Windows 10 Pro, 64-bit

# Memory

The following table lists the memory specifications that are supported by your OptiPlex Micro 7010.

### Table 6. Memory specifications

| Description | Values |
|---|---|
| Memory slots | Two SODIMM slots |
| Memory type | DDR4 |
| Memory speed | 3200 MT/s |
| Maximum memory configuration | 64 GB |
| Minimum memory configuration | 4 GB |
| Memory size per slot | 4 GB, 8 GB, 16 GB, 32 GB, 64 GB |
| Memory configurations supported | • 4 GB, 1 x 4 GB, DDR4, 3200 MT/s, single-channel<br>• 8 GB, 1 x 8 GB, DDR4, 3200 MT/s, single-channel<br>• 8 GB, 2 x 4 GB, DDR4, 3200 MT/s, dual-channel<br>• 16 GB, 1 x 16 GB, DDR4, 3200 MT/s, single-channel<br>• 16 GB, 2 x 8 GB, DDR4, 3200 MT/s, dual-channel<br>• 32 GB, 1 x 32 GB, DDR4, 3200 MT/s, single-channel<br>• 32 GB, 2 x 16 GB, DDR4, 3200 MT/s, dual-channel<br>• 64 GB, 2 x 32 GB, DDR4, 3200 MT/s, dual-channel |

# Memory matrix

The following table lists the memory configurations supported on your OptiPlex Micro 7010.

### Table 7. Memory matrix

| Configuration | Slot | |
|---|---|---|
| | SO-DIMM1 | SO-DIMM2 |
| 4 GB DDR4 | 4 GB | |
| 8 GB DDR4 | 8 GB | |
| 8 GB DDR4 | 4 GB | 4 GB |
| 16 GB DDR4 | 16 GB | |
| 16 GB DDR4 | 8 GB | 8 GB |
| 32 GB DDR4 | 32 GB | |
| 32 GB DDR4 | 16 GB | 16 GB |
| 64 GB DDR4 | 32 GB | 32 GB |

# External ports and slots

The following table lists the external ports and slots of your OptiPlex Micro 7010.

### Table 8. External ports and slots

| Description | Values |
|---|---|
| Network port | One RJ45 Ethernet port 10/100/1000 Mbps |
| USB ports | • Two USB 3.2 Gen 1 ports (Front)<br>• Two USB 3.2 Gen 1 ports (Rear)<br>• One USB 2.0 port (Rear)<br>• One USB 2.0 port with Smart Power On (Rear) |
| Audio port | One universal audio jack (Front) |
| Video port(s) | • One optional video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA/PS2/serial/USB Type-C with DisplayPort Alt mode + power delivery in) (Rear)<br>**NOTE:** You may connect a 90 W Dell USB-C hub monitor to the optional Type-C port as a consolidated power, display and USB I/O solution for your computer.<br>• One DisplayPort 1.4a (HBR2) (Rear)<br>• One HDMI 1.4b |
| Media-card reader | Not supported |
| Power-adapter port | • One DC-in port with 4.50 mm barrel<br>• One Type-C power in (optional)<br>**NOTE:** You may connect a 90 W Dell USB-C hub monitor to the optional Type-C port as a consolidated power, display and I/O solution for your computer. |

### Table 8. External ports and slots (continued)

| Description | Values |
|---|---|
| Security-cable slot | • One Kensington lock slot<br>• One padlock ring |

# Internal slots

The following table lists the internal slots on your OptiPlex Micro 7010.

### Table 9. Internal slots

| Description | Values |
|---|---|
| M.2 | • One M.2 2230 slot for WiFi and Bluetooth card<br>• One M.2 2230/2280 slot for SSD<br>**NOTE:** To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at Dell Support Site. |
| SATA | One SATA slot for 2.5-inch HDD |

# Ethernet

The following table lists the wired ethernet Local Area Network (LAN) specifications of your OptiPlex Micro 7010.

### Table 10. Ethernet specifications

| Description | Values |
|---|---|
| Model | Intel WGI219LM |
| Transfer rate | 10/100/1000 Mbps |

# Wireless module

The following table lists the Wireless Local Area Network (WLAN) module specifications of your OptiPlex Micro 7010.

### Table 11. Wireless module specifications

| Description | Option one | Option two | Option three |
|---|---|---|---|
| Model number | Realtek RTL8821CE | Realtek RTL8852BE | Intel AX211 |
| Transfer rate | Up to 433 Mbps | Up to 1201 Mbps | Up to 2400 Mbps |
| Frequency bands supported | 2.40 GHz/5 GHz | 2.40 GHz/5 GHz | 2.40 GHz/5 GHz/6 GHz |
| Wireless standards | • WiFi 802.11a/b/g<br>• Wi-Fi 4 (WiFi 802.11n)<br>• Wi-Fi 5 (WiFi 802.11ac) | • WiFi 802.11a/b/g<br>• Wi-Fi 4 (WiFi 802.11n)<br>• Wi-Fi 5 (WiFi 802.11ac)<br>• Wi-Fi 6 (WiFi 802.11ax) | • WiFi 802.11a/b/g<br>• Wi-Fi 4 (WiFi 802.11n)<br>• Wi-Fi 5 (WiFi 802.11ac)<br>• Wi-Fi 6E (WiFi 802.11ax) |
| Encryption | • 64-bit/128-bit WEP<br>• AES-CCMP<br>• TKIP | • 64-bit/128-bit WEP<br>• AES-CCMP<br>• TKIP | • 64-bit/128-bit WEP<br>• AES-CCMP<br>• TKIP |

### Table 11. Wireless module specifications (continued)

| Description | Option one | Option two | Option three |
|---|---|---|---|
| Bluetooth wireless card | Bluetooth wireless card | Bluetooth wireless card | Bluetooth wireless card |
| | **NOTE:** The functionality of the Bluetooth wireless card may vary depending on the operating system that is installed on your computer. | | |

# Audio

The following table lists the audio specifications of your OptiPlex Micro 7010.

### Table 12. Audio specifications

| Description | | Values |
|---|---|---|
| Audio controller | | Realtek ALC3246 |
| Stereo conversion | | Not supported |
| Internal audio interface | | High definition audio interface |
| External audio interface | | Universal audio jack |
| Number of speakers | | One |
| Internal-speaker amplifier | | Supported |
| External volume controls | | Keyboard shortcut controls |
| Speaker output: | | |
| | Average | 2 W |
| | Peak | 2.5 W |
| Microphone | | Not supported |

# Storage

This section lists the storage options on your OptiPlex Micro 7010.

### Table 13. Storage matrix

| Storage | | 1st 2.5-inch hard drive | 1st M.2 socket | 1st Bootable Device |
|---|---|---|---|---|
| 2.5-inch hard drive | | Yes | | 2.5-inch hard drive |
| M.2 solid-state drive | | | Yes | 1st M.2 solid-state drive |
| M.2 solid-state drive | 2.5-inch hard drive | Yes | Yes | 1st M.2 solid-state drive |

### Table 14. Storage specifications

| Storage type | Interface type | Capacity |
|---|---|---|
| 2.5-inch, 7200 RPM, hard-disk drive | SATA 3.0 | Up to 1 TB |

### Table 14. Storage specifications (continued)

| Storage type | Interface type | Capacity |
|---|---|---|
| M.2 2230, Class 25 solid-state drive | PCIe NVMe | Up to 1 TB |
| M.2 2230, Class 35 solid-state drive | PCIe NVMe | Up to 1 TB |
| M.2 2230, Class 35, Opal Self-Encrypting solid-state drive | PCIe NVMe | 256 GB |
| M.2 2230, Class 40 solid-state drive | PCIe NVMe | Up to 2 TB |
| M.2 2280, Class 40, Opal Self-Encrypting solid-state drive | PCIe NVMe | Up to 2 TB |

# Power adapter

The following table lists the power adapter specifications of your OptiPlex Micro 7010.

### Table 15. Power-adapter specifications

| Description | | Option one | Option two |
|---|---|---|---|
| Type | | 65 W | 90 W |
| Connector dimensions: | | | |
| | External diameter | 4.50 mm | 4.50 mm |
| | Internal diameter | 2.90 mm | 2.90 mm |
| Power-adapter dimensions: | | | |
| | Height | 28 mm (1.10 in.) | 32 mm (1.26 in.) |
| | Width | 47 mm (1.85 in.) | 52 mm (2.05 in.) |
| | Depth | 108 mm (4.25 in.) | 128 mm (5.04 in.) |
| Input voltage | | 100 VAC x 240 VAC | 100 VAC x 240 VAC |
| Input frequency | | 50 Hz x 60 Hz | 50 Hz x 60 Hz |
| Input current (maximum) | | 1.60 A / 1.70 A | 1.50 A |
| Output current (continuous) | | 3.34 A | 4.62 A |
| Rated output voltage | | 19.50 VDC | 19.50 VDC |
| Temperature range: | | | |
| | Operating | 0°C to 40°C (32°F to 104°F) | 0°C to 40°C (32°F to 104°F) |
| | Storage | -40°C to 70°C (-40°F to 158°F) | -40°C to 70°C (-40°F to 158°F) |

**CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.**

# GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your OptiPlex Micro 7010.

### Table 16. GPU—Integrated

| Controller | External display support | Memory size | Processor |
|---|---|---|---|
| Intel UHD Graphics 710 | • One DisplayPort 1.4a HBR2<br>• One HDMI 1.4b | Shared system memory | Intel Celeron G6900T and Intel Pentium Gold G7400T processors |
| Intel UHD Graphics 730 | • One DisplayPort 1.4a HBR2<br>• One HDMI 1.4b | Shared system memory | • 12th Generation Intel Core i3-12100T<br>• 13th Generation Intel Core i5-13400T and i3-13100T processors |
| Intel UHD Graphics 770 | • One DisplayPort 1.4a HBR2<br>• One HDMI 1.4b | Shared system memory | • 12th Generation Intel Core i5-12500T<br>• 13th Generation Intel Core i5-13500T, i5-13600T, and i7-13700T processors |

## Video port resolution (GPU—Integrated)

### Table 17. Video port resolution (GPU—Integrated)

| Graphics card | Video ports | Maximum supported resolution |
|---|---|---|
| Intel UHD Graphics 710/730/770 | One DisplayPort 1.4a HBR2 and One HDMI 1.4b | • DisplayPort 1.4a: 4096 x 2304 at 60 Hz<br>• HDMI 1.4b: 1920 x 1200 at 60 Hz |

# External display support (GPU—Integrated)

### Table 18. External display support (GPU—Integrated)

| Integrated graphics card | Number of supported external display |
|---|---|
| One HDMI 1.4b + One DisplayPort 1.4a | • 2<br>• 4, with MST |
| One HDMI 1.4b + One DisplayPort 1.4a + Optional module | • 3<br>• 4, with MST |

# Hardware security

The following table lists the hardware security of your OptiPlex Micro 7010.

### Table 19. Hardware security

| Hardware security |
|---|
| Kensington security-cable slot |
| Padlock ring |

### Table 19. Hardware security (continued)

| Hardware security |
|---|
| Chassis lock slot support |
| Chassis intrusion switch |

# Environmental

The following table lists the environmental specifications of your OptiPlex Micro 7010.

### Table 20. Environmental

| Feature | Values |
|---|---|
| Recyclable packaging | Yes |
| BFR/PVC—free chassis | Yes |
| Vertical orientation packaging support | No |
| Multi-Pack packaging | Yes |
| Energy-Efficient Power Supply | Standard |
| ENV0424 compliant | Yes |

**NOTE:** Wood-based fiber packaging contains a minimum of 35% recycled content by total weight of wood-based fiber. Packaging that contains without wood-based fiber can be claimed as Not Applicable. The anticipated required criteria for EPEAT 2018.

# Regulatory compliance

The following table lists the regulatory compliance of your OptiPlex Micro 7010.

### Table 21. Regulatory compliance

| Regulatory compliance |
|---|
| Product Safety, EMC and Environmental Datasheets |
| Dell Regulatory Compliance Home page |
| Dell and the Environment |

# Operating and storage environment

This table lists the operating and storage specifications of your OptiPlex Micro 7010.

**Airborne contaminant level:** G1 as defined by ISA-S71.04-1985

### Table 22. Computer environment

| Description | Operating | Storage |
|---|---|---|
| Temperature range | 10°C to 35°C (50°F to 95°F) | -40°C to 65°C (-40°F to 149°F) |
| Relative humidity (maximum) | 20% to 80% (non-condensing, Max dew point temperature = 26°C) | 5% to 95% (non-condensing, Max dew point temperature = 33°C) |
| Vibration (maximum)* | 0.26 GRMS random at 5 Hz to 350 Hz | 1.37 GRMS random at 5 Hz to 350 Hz |

### Table 22. Computer environment (continued)

| Description | Operating | Storage |
|---|---|---|
| Shock (maximum) | Bottom half-sine pulse with a change in velocity of 50.80 cm/sec (20 in./sec) | 105G half-sine pulse with a change in velocity of 133 cm/sec (52.5 in./sec) |
| Altitude range | -15.2 m to 3048 m (-49.87 ft to 10000 ft) | -15.2 m to 10668 m (-49.87 ft to 35000 ft) |
| **CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.** | | |

* Measured using a random vibration spectrum that simulates the user environment.

† Measured using a 2 ms half-sine pulse.

4

# Working inside your computer

## Safety instructions

Use the following safety guidelines to protect your computer from potential damage and to ensure your personal safety. Unless otherwise noted, each procedure in this document assumes that you have read the safety information that shipped with your computer.

**WARNING: Before working inside your computer, read the safety information that is shipped with your computer. For more safety best practices, see Dell Regulatory Compliance Home Page.**

**WARNING: Disconnect your computer from all power sources before opening the computer cover or panels. After you finish working inside the computer, replace all covers, panels, and screws before connecting your computer to an electrical outlet.**

**WARNING: For laptop computers, discharge the battery completely before removing it. Disconnect the AC power adapter from the computer and operate the computer solely on battery power—the battery is fully discharged when the computer no longer turns on when the power button is pressed.**

**CAUTION: To avoid damaging the computer, ensure that the work surface is flat, dry, and clean.**

**CAUTION: You should only perform troubleshooting and repairs as authorized or directed by the Dell technical support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty.**

**CAUTION: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity which could harm internal components.**

**CAUTION: To avoid damaging the components and cards, handle them by their edges, and avoid touching the pins and the contacts.**

**CAUTION: When you disconnect a cable, pull it by its connector or its pull tab, not the cable itself. Some cables have connectors with locking tabs or thumbscrews that you must disengage before disconnecting the cable. When disconnecting cables, keep them evenly aligned to avoid bending the connector pins. When connecting cables, ensure that the connector on the cable is correctly oriented and aligned with the port.**

**CAUTION: Press and eject any installed card from the media-card reader.**

**CAUTION: Exercise caution when handling rechargeable Li-ion batteries in laptops. Swollen batteries should not be used and should be replaced and disposed properly.**

## Before working inside your computer

### About this task

**NOTE:** The images in this document may differ from your computer depending on the configuration you ordered.

### Steps

1. Save and close all open files and exit all open applications.
2. Shut down your computer. For Windows operating system, click **Start** > **Power** > **Shut down**.

**NOTE:** If you are using a different operating system, see the documentation of your operating system for shut-down instructions.

3. Turn off all the attached peripherals.
4. Disconnect your computer and all attached devices from their electrical outlet.
5. Disconnect all attached network devices and peripherals, such as keyboard, mouse, and monitor from your computer.

   **CAUTION: To disconnect a network cable, unplug the cable from your computer.**

6. Remove any media card and optical disc from your computer, if applicable.

# Safety precautions

This section details the primary steps to be followed before disassembling any device or component.

Observe the following safety precautions before any installation or break-fix procedures involving disassembly or reassembly:

- Turn off the computer and all attached peripherals.
- Disconnect the computer from AC power.
- Disconnect all network cables and peripherals from the computer.
- Use an ESD field service kit when working inside your computer to avoid electrostatic discharge (ESD) damage.
- Place the removed component on an anti-static mat after removing it from the computer.
- Press and hold the power button for 15 seconds to discharge the residual power in the system board.

## Bonding

Bonding is a method for connecting two or more grounding conductors to the same electrical potential. This is done by using a field service electrostatic discharge (ESD) kit. When connecting a bonding wire, ensure that it is connected to bare metal and never to a painted or nonmetal surface. Ensure that the wrist strap is secure and in full contact with your skin. Remove all jewelry, watches, bracelets, or rings before grounding yourself and the equipment.

# Electrostatic discharge—ESD protection

ESD is a major concern when you handle electronic components, especially sensitive components such as expansion cards, processors, memory modules, and system boards. A slight charge can damage circuits in ways that may not be obvious, such as intermittent problems or a shortened product life span. As the industry pushes for lower power requirements and increased density, ESD protection is an increasing concern.

Two recognized types of ESD damage are catastrophic and intermittent failures.

- **Catastrophic** – Catastrophic failures represent approximately 20 percent of ESD-related failures. The damage causes an immediate and complete loss of device functionality. An example of catastrophic failure is a memory module that has received a static shock and immediately generates a "No POST/No Video" symptom with a beep code that is emitted for missing or nonfunctional memory.
- **Intermittent** – Intermittent failures represent approximately 80 percent of ESD-related failures. The high rate of intermittent failures means that most of the time when damage occurs, it is not immediately recognizable. The memory module receives a static shock, but the tracing is merely weakened and does not immediately produce outward symptoms that are related to the damage. The weakened trace may take weeks or months to melt, and in the meantime may cause degradation of memory integrity, intermittent memory errors, and so on.

Intermittent failures that are also called latent or "walking wounded" are difficult to detect and troubleshoot.

Perform the following steps to prevent ESD damage:

- Use a wired ESD wrist strap that is properly grounded. Wireless anti-static straps do not provide adequate protection. Touching the chassis before handling parts does not ensure adequate ESD protection on parts with increased sensitivity to ESD damage.
- Handle all static-sensitive components in a static-safe area. If possible, use anti-static floor pads and workbench pads.
- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the anti-static packing material until you are ready to install the component. Before unwrapping the anti-static packaging, use the anti-static wrist strap to discharge the static electricity from your body. For more information about the wrist strap and ESD wrist strap tester, see Components of an ESD Field Service Kit.
- Before transporting a static-sensitive component, place it in an anti-static container or packaging.

# ESD Field Service kit

The unmonitored field service kit is the most commonly used service kit. Each Field Service kit includes three main components: anti-static mat, wrist strap, and bonding wire.

**CAUTION: It is critical to keep ESD-sensitive devices away from internal parts that are insulated and often highly charged, such as plastic heat sink casings.**

## Working Environment

Before deploying the ESD Field Service kit, assess the situation at the customer location. For example, deploying the kit for a server environment is different than for a desktop or laptop environment. Servers are typically installed in a rack within a data center; desktops or laptops are typically placed on office desks or cubicles. Always look for a large open flat work area that is free of clutter and large enough to deploy the ESD kit with additional space to accommodate the type of computer that is being repaired. The workspace should also be free of insulators that can cause an ESD event. On the work area, insulators such as styrofoam and other plastics should always be moved at least 12 inches or 30 centimeters away from sensitive parts before physically handling any hardware components.

## ESD Packaging

All ESD-sensitive devices must be shipped and received in static-safe packaging. Metal, static-shielded bags are preferred. However, you should always return the damaged component using the same ESD bag and packaging that the new part arrived in. The ESD bag should be folded over and taped shut and all the same foam packing material should be used in the original box that the new part arrived in. ESD-sensitive devices should be removed from packaging only at an ESD-protected work surface, and parts should never be placed on top of the ESD bag because only the inside of the bag is shielded. Always place parts in your hand, on the anti-static mat, in the computer, or inside an ESD bag.

## Components of an ESD Field Service kit

The components of an ESD Field Service kit are:

- **Anti-Static Mat** – The anti-static mat is dissipative and parts can be placed on it during service procedures. When using an anti-static mat, your wrist strap should be snug and the bonding wire should be connected to the anti-static mat and to any bare metal on the computer being worked on. Once deployed properly, service parts can be removed from the ESD bag and placed directly on the anti-static mat. ESD-sensitive items are safe in your hand, on the anti-static mat, in the computer, or inside an ESD bag.
- **Wrist Strap and Bonding Wire** – The wrist strap and bonding wire can be either directly connected between your wrist and bare metal on the hardware if the anti-static mat is not required, or connect to the anti-static mat to protect hardware that is temporarily placed on the mat. The physical connection of the wrist strap and bonding wire between your skin, the anti-static mat, and the hardware is known as bonding. Use only Field Service kits with a wrist strap, anti-static mat, and bonding wire. Never use wireless wrist straps. Always be cautious that the internal wires of a wrist strap are prone to damage from normal wear and tear, and must be checked regularly with a wrist strap tester in order to avoid accidental ESD hardware damage. It is recommended to test the wrist strap and bonding wire at least once per week.
- **ESD Wrist Strap Tester** – The wires inside an ESD strap are prone to damage over time. When using an unmonitored kit, it is a best practice to regularly test the strap before each service, and at a minimum, test once per week. A wrist strap tester is the best method for doing this test. To perform the test, plug the bonding-wire of the wrist-strap into the tester while it is strapped to your wrist and push the button to test. A green LED is lit if the test is successful; a red LED is lit and an alarm sounds if the test fails.

**NOTE:** It is recommended to always use the traditional wired ESD grounding wrist strap and protective anti-static mat when servicing Dell products. In addition, it is critical to keep sensitive parts separate from all insulator parts while servicing the computer.

# Transporting sensitive components

When transporting ESD sensitive components such as replacement parts or parts to be returned to Dell, it is critical to place these parts in anti-static bags for safe transport.

## Lifting equipment

Adhere to the following guidelines when lifting heavy equipment:

**CAUTION: Do not lift greater than 50 pounds. Always obtain additional resources or use a mechanical lifting device.**

1. Get a firm balanced footing. Keep your feet apart for a stable base, and point your toes out.
2. Tighten stomach muscles. Abdominal muscles support your spine when you lift, offsetting the force of the load.
3. Lift with your legs, not your back.
4. Keep the load close. The closer it is to your spine, the less force it exerts on your back.
5. Keep your back upright, whether lifting or setting down the load. Do not add the weight of your body to the load. Avoid twisting your body and back.
6. Follow the same technique in reverse to set the load down.

# After working inside your computer

**About this task**

**CAUTION: Leaving stray or loose screws inside your computer may severely damage your computer.**

**Steps**

1. Replace all screws and ensure that no stray screws remain inside your computer.
2. Connect any external devices, peripherals, or cables you removed before working on your computer.
3. Replace any media cards, discs, or any other components that you removed before working on your computer.
4. Connect your computer and all attached devices to their electrical outlets.
5. Turn on your computer.

# BitLocker

**CAUTION: If BitLocker is not suspended before updating the BIOS, the BitLocker key is not recognized the next time that you reboot the computer. You will be prompted to enter the recovery key to progress, and the computer displays a prompt for the recovery key on each reboot. If the recovery key is not known, this can result in data loss or an operating system reinstall. For more information, see Knowledge Article: updating the BIOS on Dell computers with BitLocker enabled.**

The installation of the following components triggers BitLocker:

- Hard disk drive or solid state drive
- System board

# Recommended tools

The procedures in this document may require the following tools:

- Phillips screwdriver #0
- Phillips screwdriver #1
- Plastic scribe

# Screw list

**NOTE:** When removing screws from a component, it is recommended to note the screw type and the quantity of screws, and then place them in a screw storage box. This is to ensure that the correct number of screws and correct screw type is restored when the component is replaced.

**NOTE:** Some computers have magnetic surfaces. Ensure that the screws are not left attached to such surfaces when replacing a component.

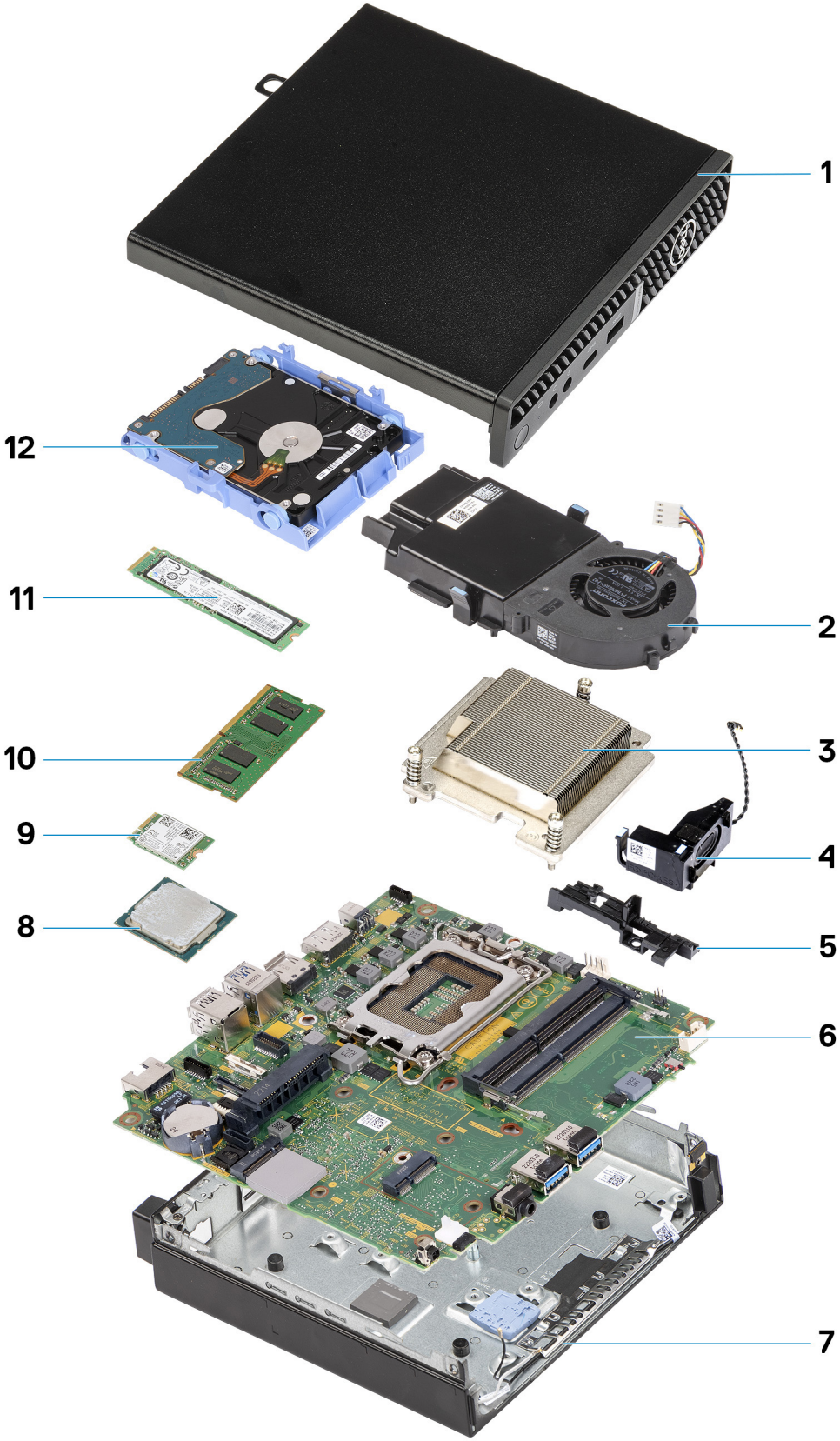
**NOTE:** Screw color may vary depending on the configuration ordered.

### Table 23. Screw list

| Component | Screw type | Quantity |
|---|---|---|
| Side cover | #6-32 (Captive screws) | 1 |
| System board | M3x5<br>M3x4 | 5<br>3 |
| Wireless card | M2x3.5 | 1 |
| M.2 2230/2280 solid-state drive | M2x3.5 | 1 |
| Internal antenna | M3x3 | 3 |
| I/O module | M3x3<br>or<br>M2x5, cross type | 2 |
| Type-C module | M2x3 | 2 |

# Major components of OptiPlex Micro 7010

The following image shows the major components of OptiPlex Micro 7010.




1. Side cover
2. Fan assembly
3. Heat sink
4. Speaker
5. Speaker holder
6. System board
7. Chassis
8. Processor

9. Wireless card
10. Memory module
11. M.2 2280 solid-state drive
12. Hard-drive assembly

**NOTE:** Dell provides a list of components and their part numbers for the original system configuration purchased. These parts are available according to warranty coverages purchased by the customer. Contact your Dell sales representative for purchase options.

# 5

# Side cover

## Removing the side cover

### Prerequisites

1. Follow the procedure in Before working inside your computer.

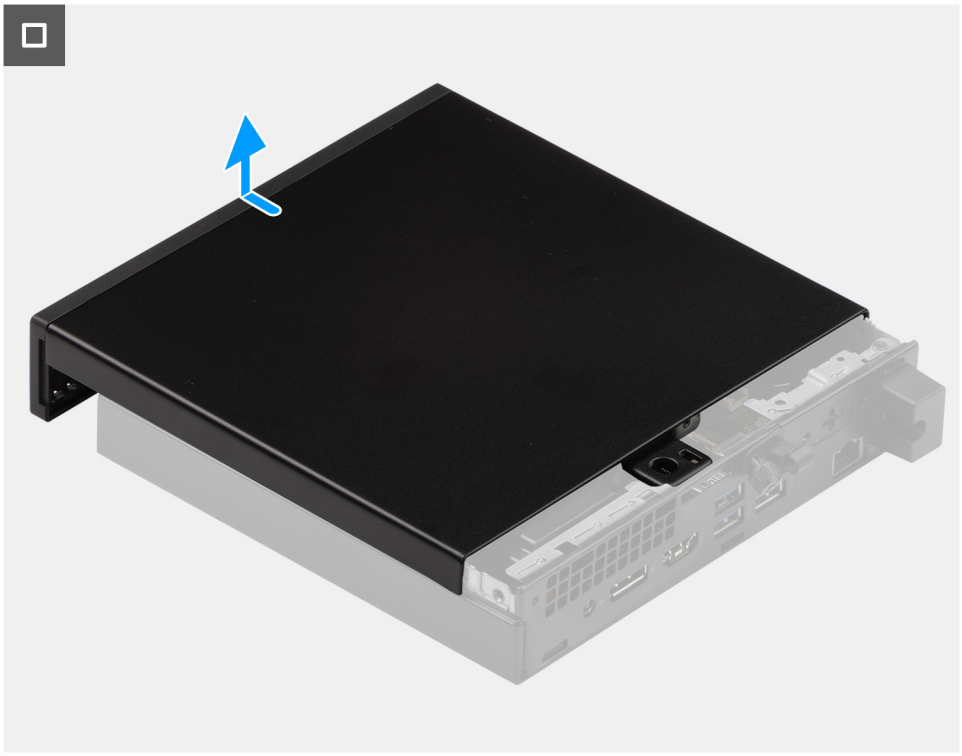
### About this task

The following image(s) indicate the location of the side cover and provides a visual representation of the removal procedure.



1x
6x32





### Steps

1. Place your computer on its side with the side cover facing up.
2. Loosen the thumb-screw (6x32) that secures the side cover to the chassis.
3. Slide and lift the side cover off the chassis.

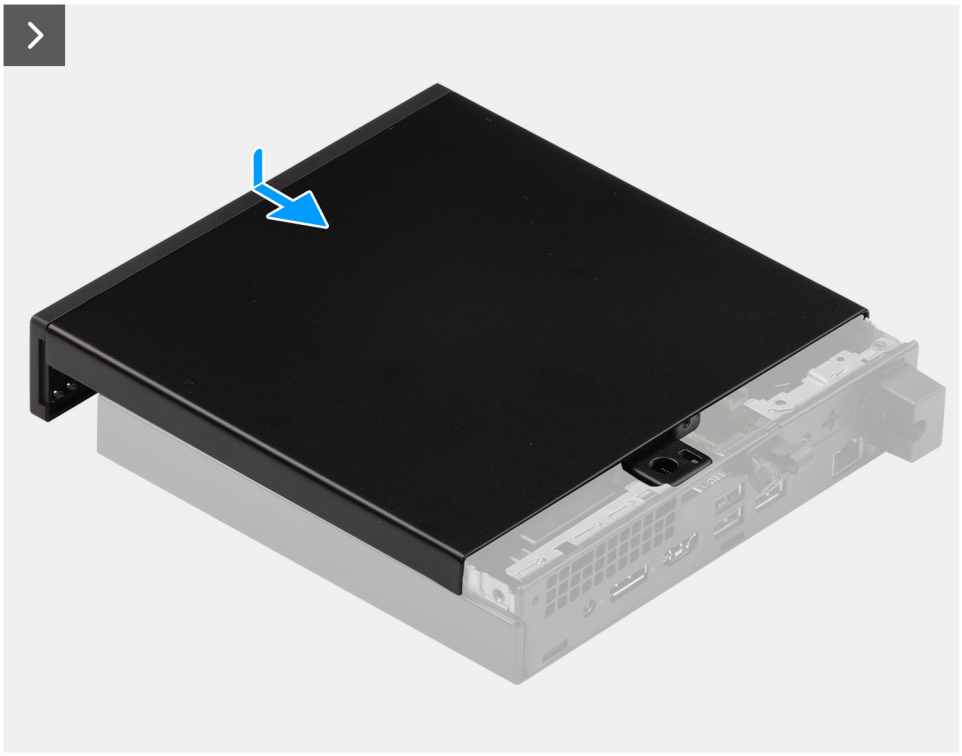
# Installing the side cover

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the side cover and provides a visual representation of the installation procedure.





1x
6x32



**Steps**

1. Place the side cover on the chassis.

2. Align the tabs on the side cover with the slots on the chassis.
3. Slide the side cover into place towards the front of the computer.
4. Tighten the thumb-screw (6x32) that secure the side cover to the chassis.

### Next steps

1. Follow the procedure in After working inside your computer.

# 6

# Coin-cell battery

## Removing the coin-cell battery

**WARNING: This computer contains a coin-cell battery and requires trained technicians for handling guidance.**

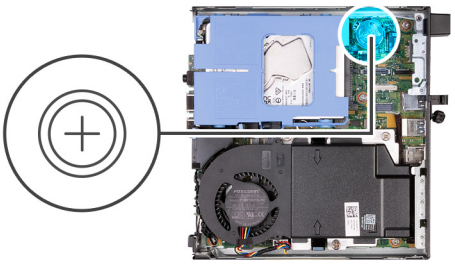
### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.

### About this task

**NOTE:** Removing the coin-cell battery resets the BIOS settings to default. It is recommended that you note the BIOS settings before removing the coin-cell battery.

The following image(s) indicate the location of the coin-cell battery and provides a visual representation of the removal procedure.







### Steps

1. Push the coin-cell battery-release lever on the coin-cell battery socket to release the coin-cell battery out of the socket.
2. Lift the coin-cell battery from the coin-cell battery socket.

## Installing the coin-cell battery

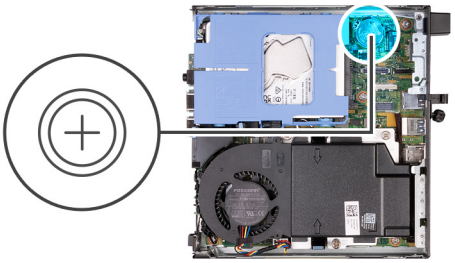
**WARNING: This computer contains a coin-cell battery and requires trained technicians for handling guidance.**

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the coin-cell battery and provides a visual representation of the installation procedure.







### Steps

With the positive side (+) facing up, insert the coin-cell battery into the battery socket on the system board and snap the battery into place.

### Next steps

1. Install the side cover.
2. Follow the procedure in After working inside your computer.

# 7

# Removing and installing Customer Replaceable Units (CRUs)

The replaceable components in this chapter are Customer Replaceable Units (CRUs).

**CAUTION: Customers can replace only the Customer Replaceable Units (CRUs) following the safety precautions and replacement procedures.**

**NOTE:** The images in this document may differ from your computer depending on the configuration you ordered.

# Front bezel

## Removing the front bezel

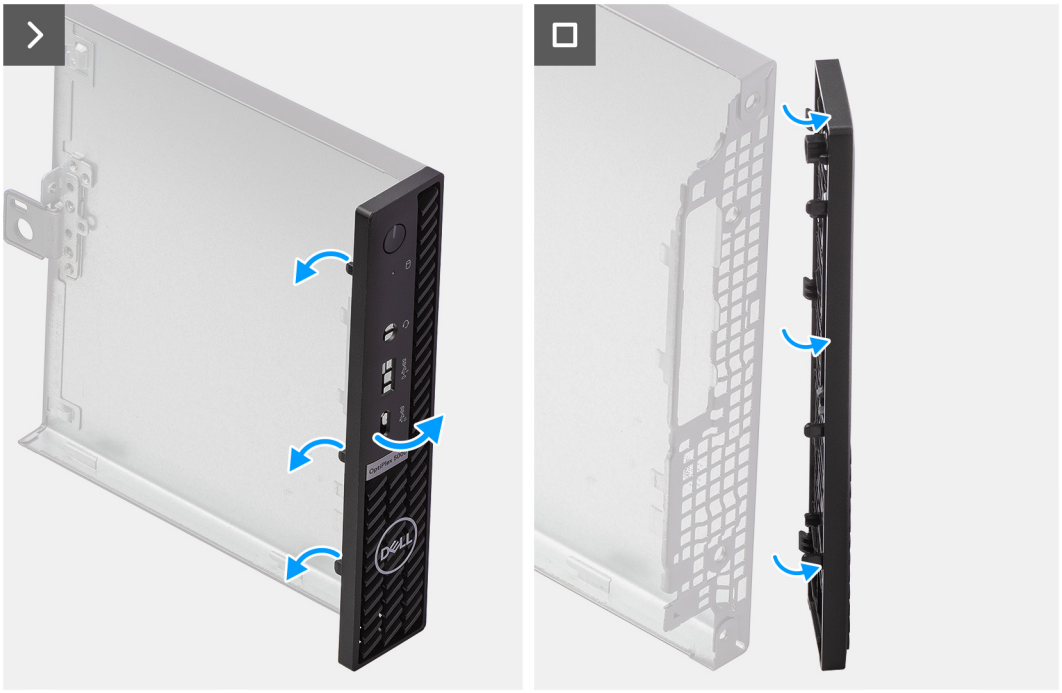
### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.

### About this task

The following image(s) indicate the location of the front bezel and provides a visual representation of the removal procedure.





### Steps

1. Gently pry and release the front-cover tabs from the top-right, working down sequentially to the bottom-right tab.
2. Swing the front bezel outwards, away from the side cover.
3. Lift the front bezel off the side cover.

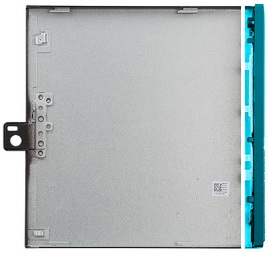
## Installing the front bezel

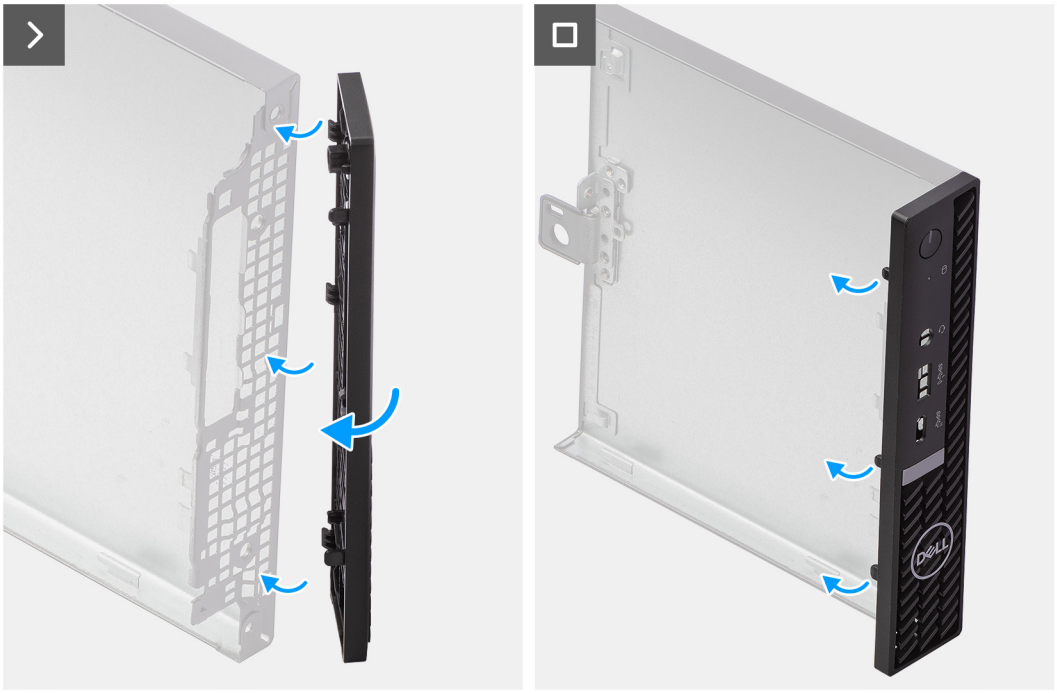
### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the front bezel and provides a visual representation of the installation procedure.





### Steps

1. Insert the right-side front-bezel tabs into the corresponding slots on the side cover.
2. Push the left-side of the front bezel towards the side cover, snapping the tabs into position.

### Next steps

1. Install the side cover.
2. Follow the procedure in After working inside your computer.

# Hard drive

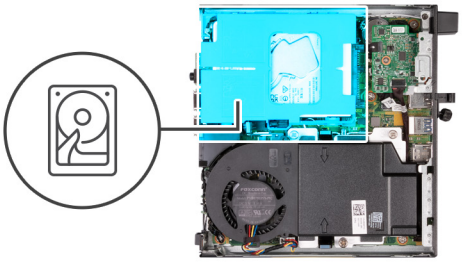
## Removing the hard drive

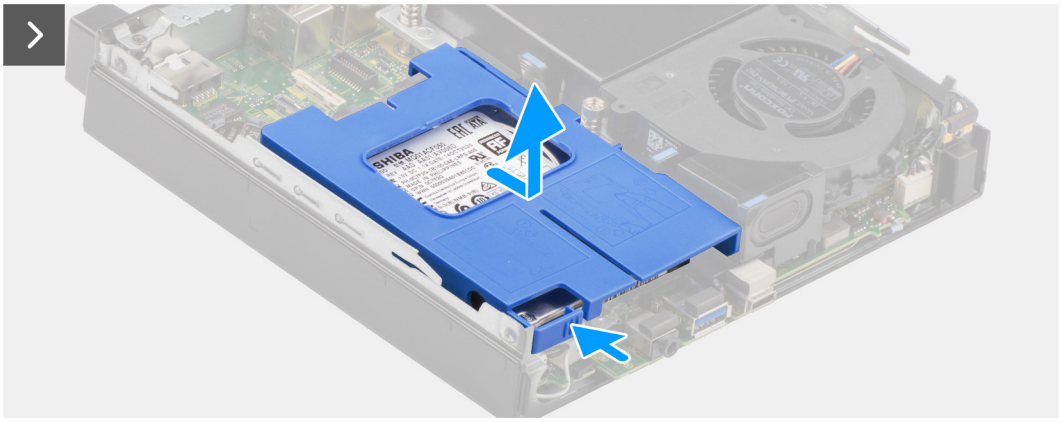
### Prerequisites

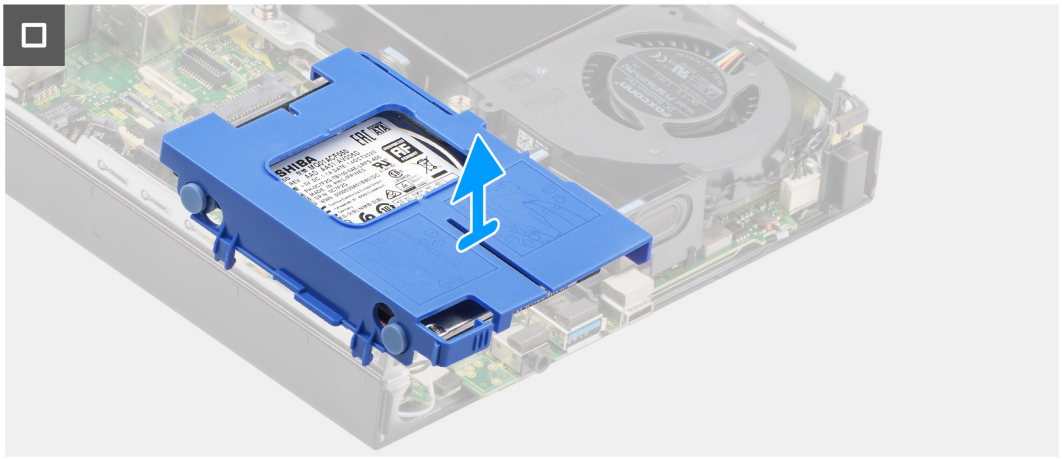
1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.

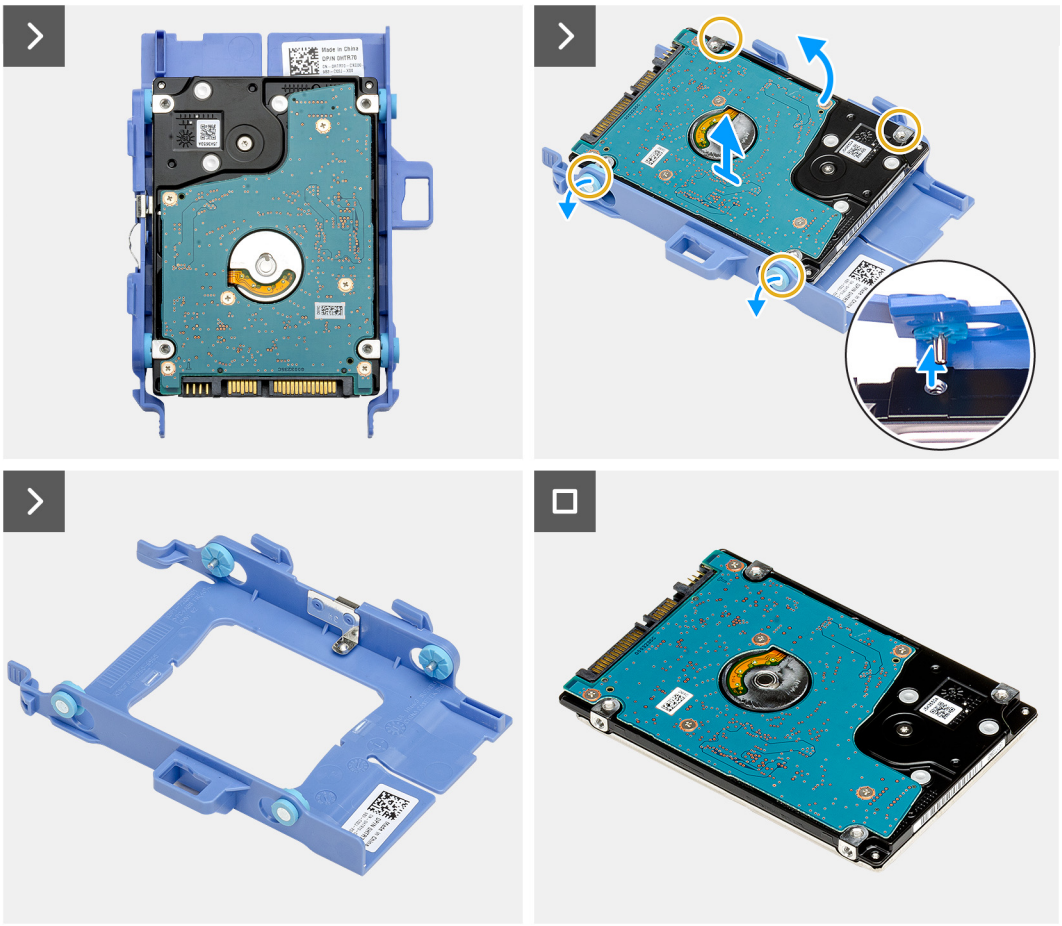
### About this task

The following image(s) indicate the location of the hard drive and provides a visual representation of the removal procedure.









### Steps

1. Press and hold the tab that secures the hard-drive assembly to the chassis.
2. Slide and release the hard drive assembly from the chassis.
3. Lift the hard-drive assembly off the chassis.
4. Flip over the hard-drive assembly.
5. Pry the hard-drive carrier to release the tabs on the carrier from the slots on the 2.5-inch hard drive.
6. Lift the 2.5-inch hard drive off the hard-drive carrier.

**NOTE:** Note the orientation of the hard drive so that you can replace it correctly.

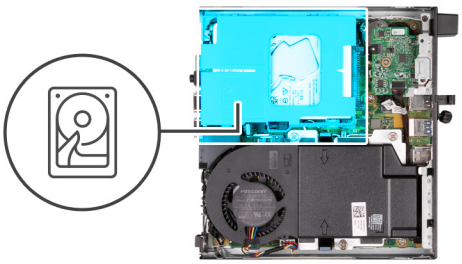
## Installing the hard drive

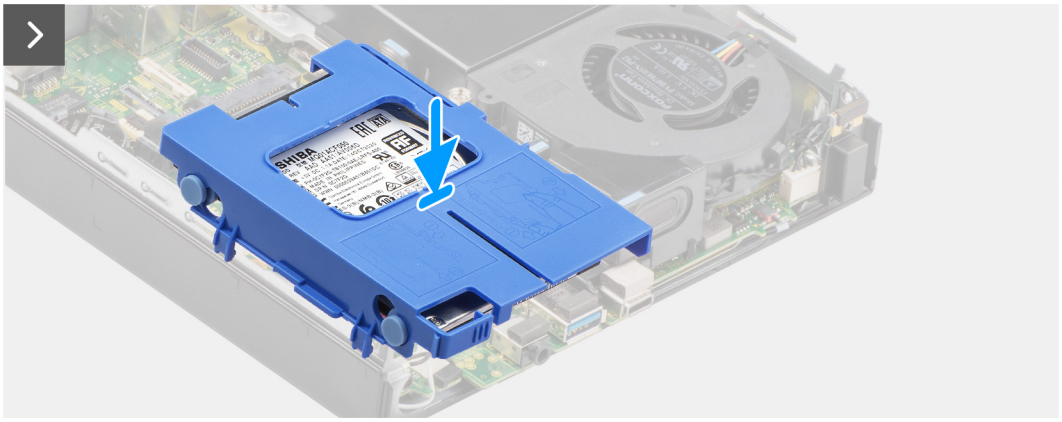
### Prerequisites

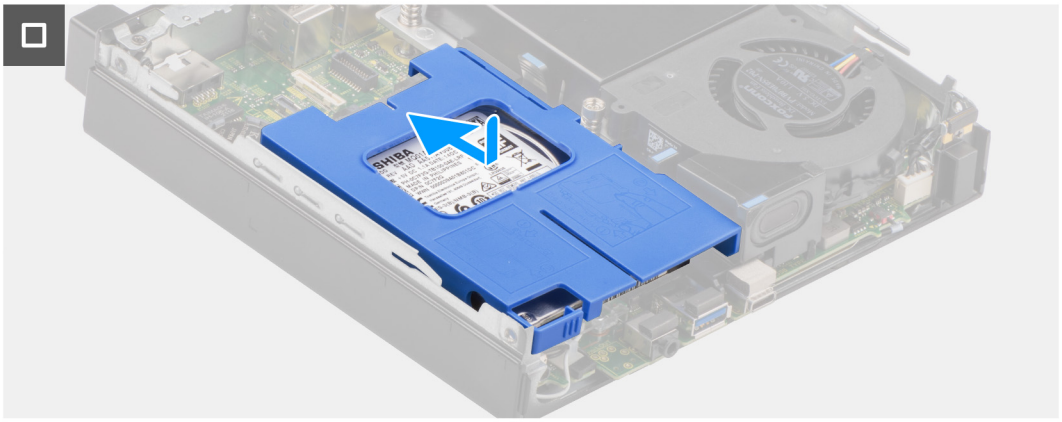
If you are replacing a component, remove the existing component before performing the installation process.

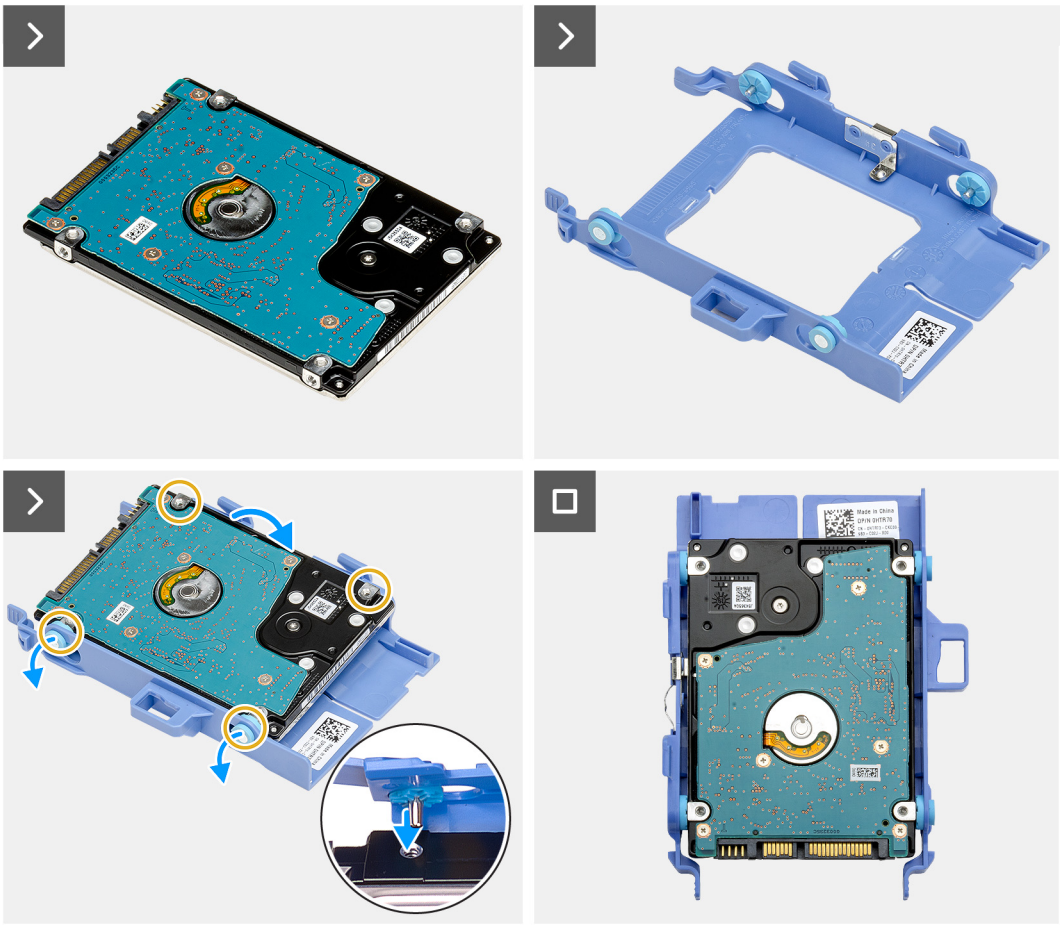
### About this task

The following image(s) indicate the location of the hard drive and provides a visual representation of the installation procedure.









### Steps

1. Place the 2.5-inch hard drive into the hard-drive carrier and align the tabs on the carrier with the slots on the hard drive.
2. Snap the hard-drive carrier onto the 2.5-inch hard drive.
3. Flip over the hard-drive assembly.
4. Place the hard-drive assembly on the chassis.
5. Align the tabs on the hard-drive assembly with the slots on the chassis.
6. Slide and hard-drive assembly into place on the chassis.

### Next steps

1. Install the side cover.
2. Follow the procedure in After working inside your computer.

# Solid state drive

## Removing the M.2 2230 solid-state drive

### Prerequisites

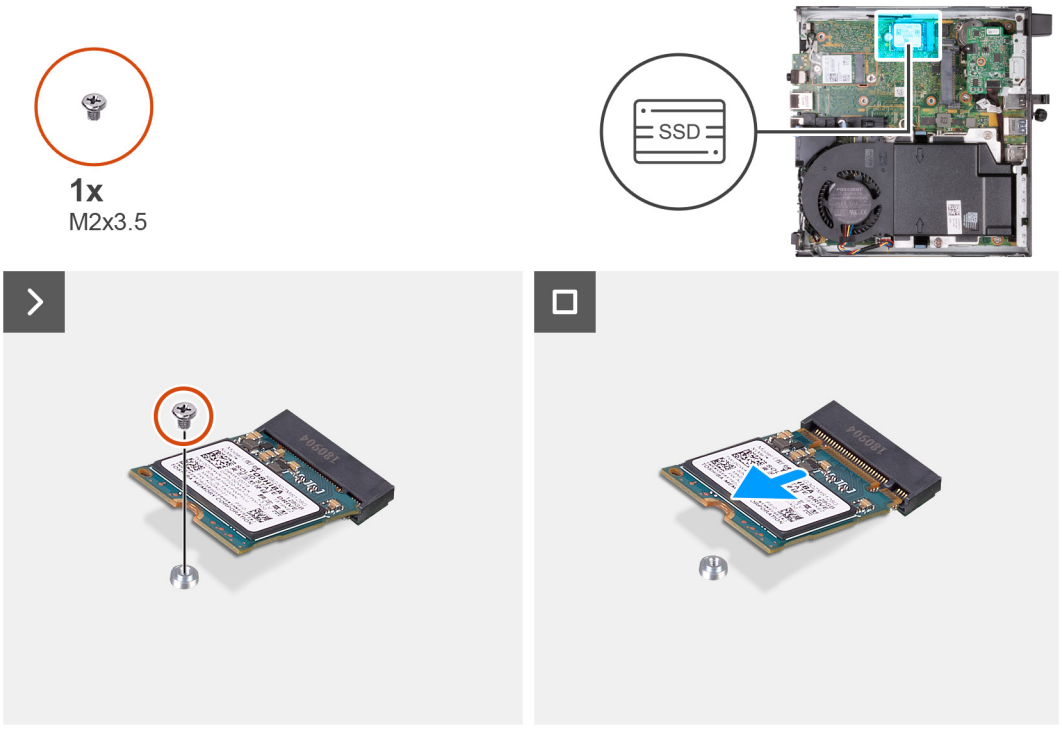
1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.

### About this task

**NOTE:** Depending on the configuration ordered, your computer may have an M.2 2230 or an M.2 2280 solid-state drive installed in the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

**NOTE:** This procedure is applicable for computers where an M.2 2230 solid-state drive is installed in the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

The following image(s) indicate the location of the M.2 2230 solid-state drive and provides a visual representation of the removal procedure.




### Steps

1. Remove the screw (M2x3.5) that secures the M.2 2230 solid-state drive to the system board
2. Slide and lift the M.2 2230 solid-state drive off the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

## Installing the M.2 2230 solid-state drive

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

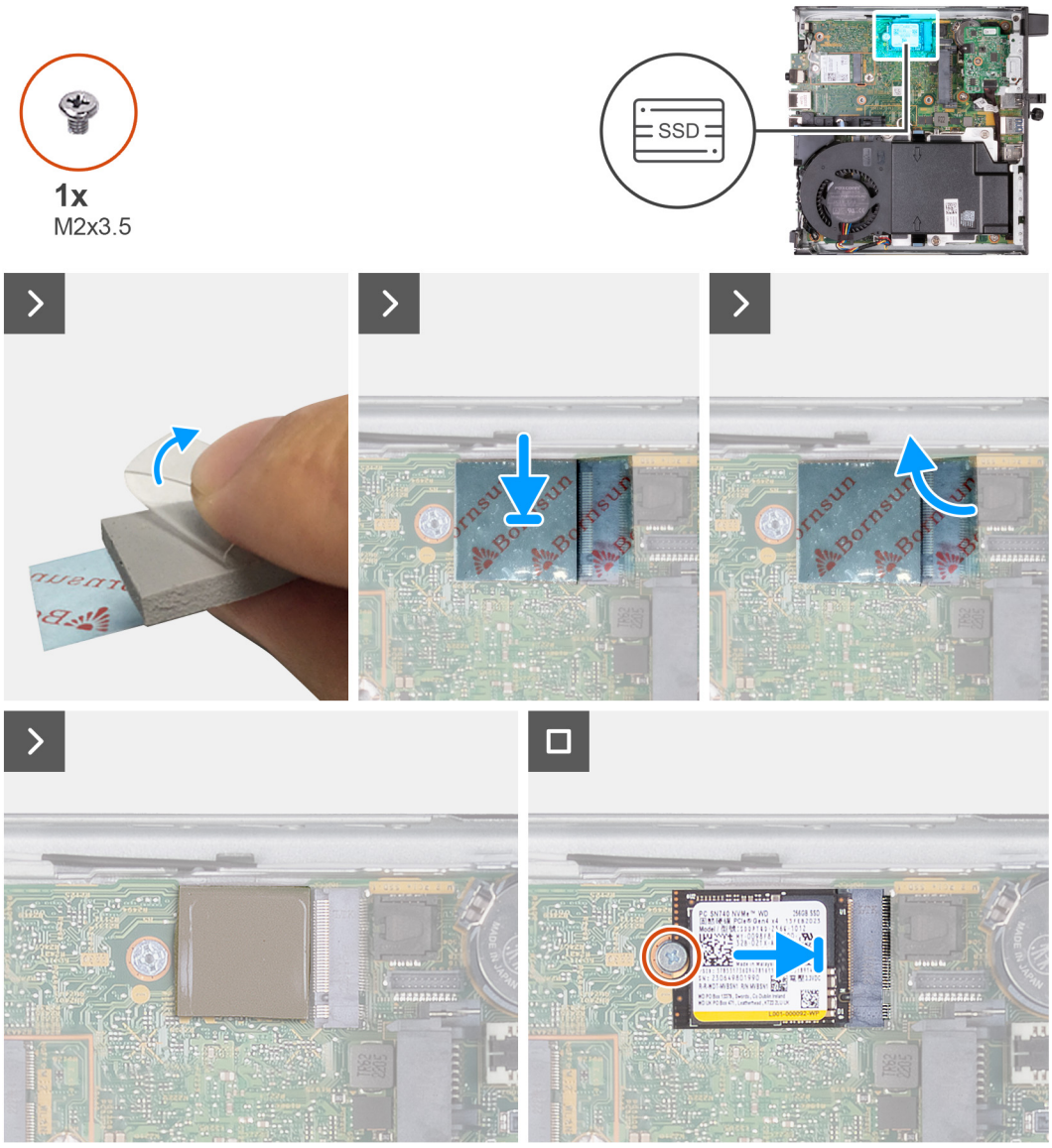
**NOTE:** This procedure is only applicable if you are installing an M.2 2230 solid-state drive into the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

The SSD custom installation kit has to be purchased in order to install an M.2 2230 solid-state drive into the solid-state drive slot 1 (M.2 PCIe SSD 1) on the system board.

Each SSD custom installation kit consists of the following:

1. Solid-state drive (SSD) thermal pad
2. Solid-state drive (SSD) screw (M2x3.5)

The following image(s) indicate the location of the M.2 2230 solid-state drive and provides a visual representation of the installation procedure.




### Steps

**NOTE: Steps 1** through **6** are applicable to the installation of the SSD thermal pad on the system board.

1. Peel back the backing of the SSD thermal pad halfway.
2. Position the SSD thermal pad over the M.2 SSD thermal pad area.
3. Align the SSD thermal pad over the M.2 SSD thermal pad area.
4. Peel the rest of the backing off the SSD thermal pad and paste the SSD thermal pad onto the M.2 SSD thermal pad area.
5. Flatten the SSD thermal pad with a plastic scrapper to ensure proper adhesion.
6. Peel off the protective layer from the SSD thermal pad.
7. Align the notch on the M.2 2230 solid-state drive with the tab on the solid-state drive slot (M.2 PCIe SSD 1).
8. Slide the M.2 2230 solid-state drive into the solid-state drive slot (M.2 PCIe SSD 1) on the system board.
9. Replace the screw (M2x3.5) that secures the M.2 2230 solid-state drive to the system board.

### Next steps

1. Install the hard drive, if applicable.
2. Install the side cover.
3. Follow the procedure in After working inside your computer.

# Removing the M.2 2280 solid-state drive

### Prerequisites

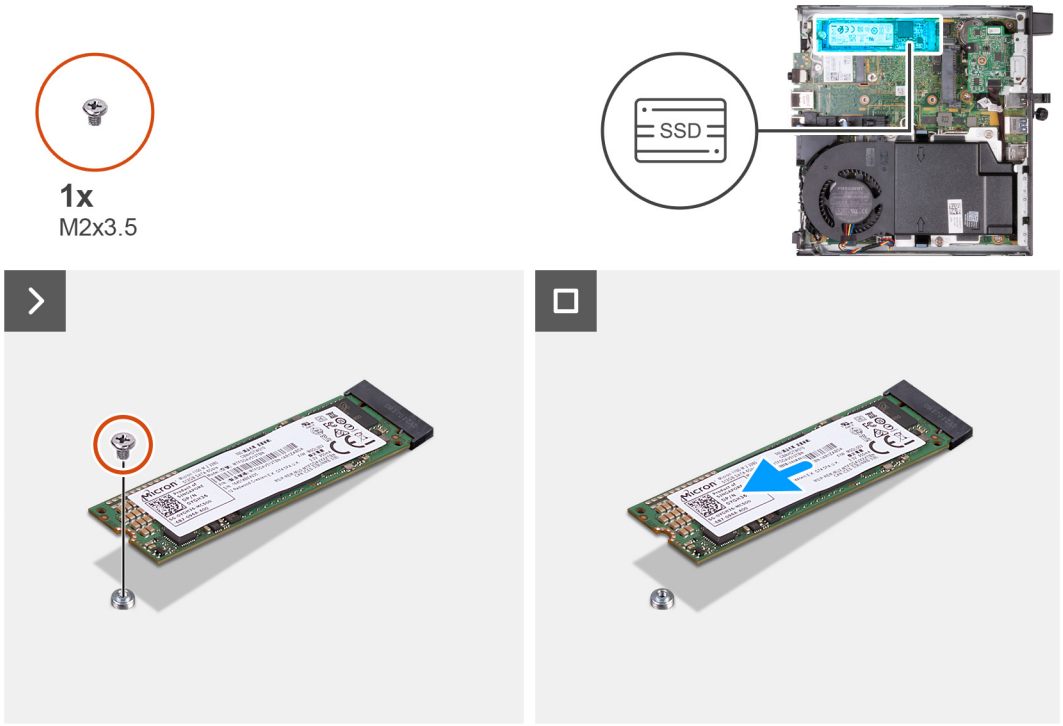
1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.

### About this task

**NOTE:** Depending on the configuration ordered, your computer may have an M.2 2230 or an M.2 2280 solid-state drive installed in the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

**NOTE:** This procedure is applicable for computers where an M.2 2280 solid-state drive is installed in the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

The following image(s) indicate the location of the M.2 2280 solid-state drive and provides a visual representation of the removal procedure.




### Steps

1. Remove the screw (M2x3.5) that secures the M.2 2280 solid-state drive to the system board
2. Slide and lift the M.2 2280 solid-state drive off the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

# Installing the M.2 2280 solid-state drive

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

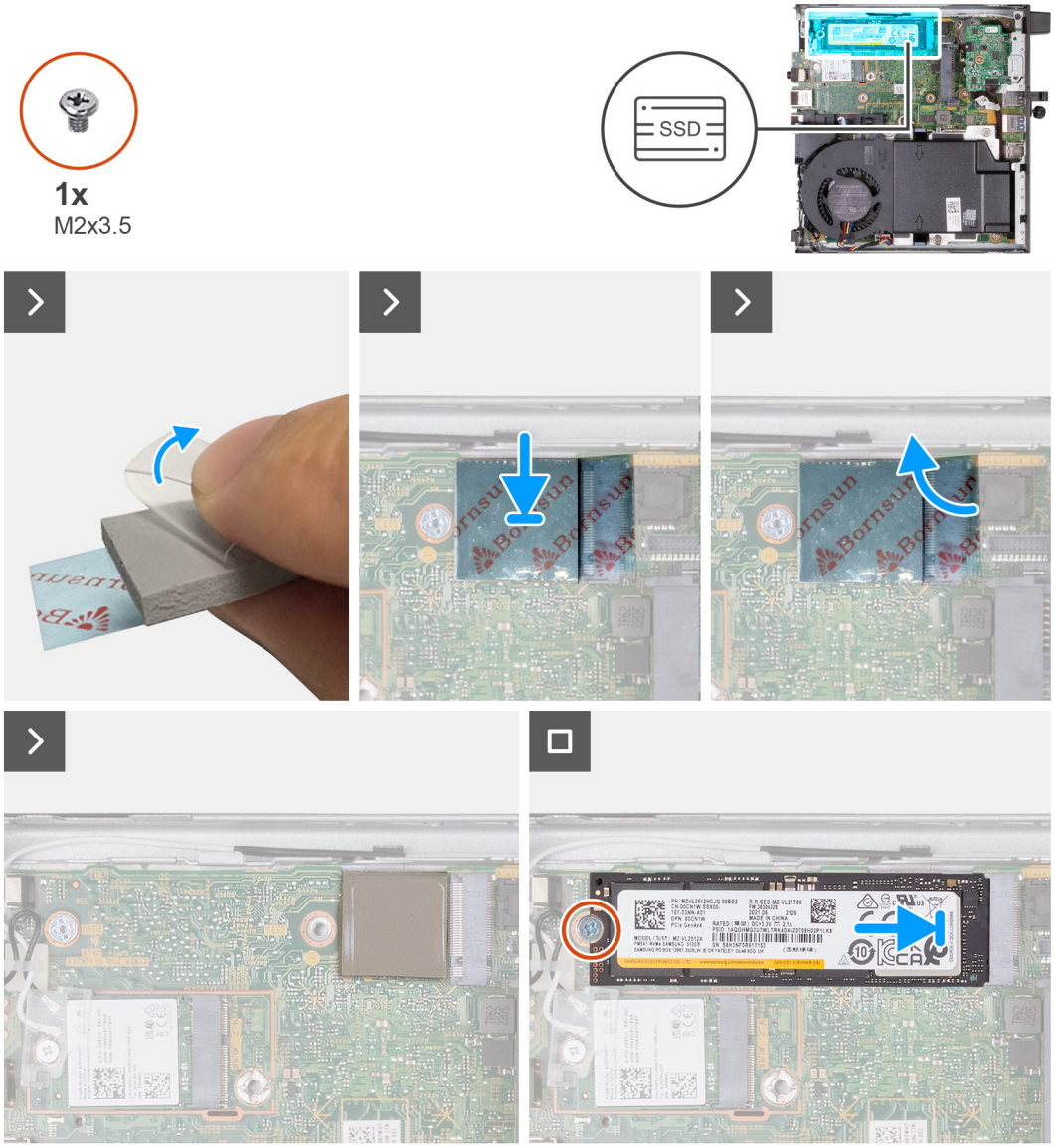
**NOTE:** This procedure is only applicable if you are installing an M.2 2280 solid-state drive into the solid-state drive slot (M.2 PCIe SSD 1) on the system board.

The SSD custom installation kit has to be purchased in order to install an M.2 2280 solid-state drive into the solid-state drive slot 1 (M.2 PCIe SSD 1) on the system board.

Each SSD custom installation kit consists of the following:

1. Solid-state drive (SSD) thermal pad
2. Solid-state drive (SSD) screw (M2x3.5)

The following image(s) indicate the location of the M.2 2280 solid-state drive and provides a visual representation of the installation procedure.




### Steps

**NOTE: Steps 1** through **6** are applicable to the installation of the SSD thermal pad on the system board.

1. Peel back the backing of the SSD thermal pad halfway.
2. Position the SSD thermal pad over the M.2 SSD thermal pad area.
3. Align the SSD thermal pad over the M.2 SSD thermal pad area.
4. Peel the rest of the backing off the SSD thermal pad and paste the SSD thermal pad onto the M.2 SSD thermal pad area.
5. Flatten the SSD thermal pad with a plastic scrapper to ensure proper adhesion.
6. Peel off the protective layer from the SSD thermal pad.
7. Align the notch on the M.2 2280 solid-state drive with the tab on the solid-state drive slot (M.2 PCIe SSD 1).
8. Slide the M.2 2280 solid-state drive into the solid-state drive slot (M.2 PCIe SSD 1) on the system board.
9. Replace the screw (M2x3.5) that secures the M.2 2280 solid-state drive to the system board.

### Next steps

1. Install the hard drive, if applicable.
2. Install the side cover.
3. Follow the procedure in After working inside your computer.

## Location of the screw mount on the M.2 slot

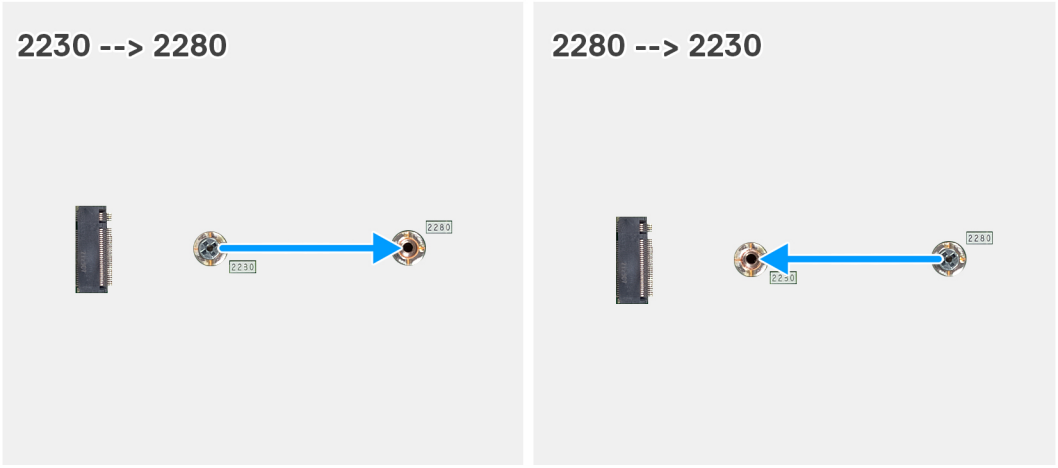
### Prerequisites

To install an M.2 solid-state drive of a different form factor on the M.2 slot, the location of the screw mount on the M.2 slot has to be changed in order to install the M.2 solid-state drive of a different form factor.

### About this task

**NOTE:** This procedure only applies to the screw mount located on the M.2 slot for the solid-state drive.

The following image(s) indicate the location of the screw mount on the M.2 slot and provides a visual representation of the procedure to change the position of the screw mount.




### Steps

1. Remove the screw mount on the system board.
2. Install the screw mount on the system board.

# Wireless card

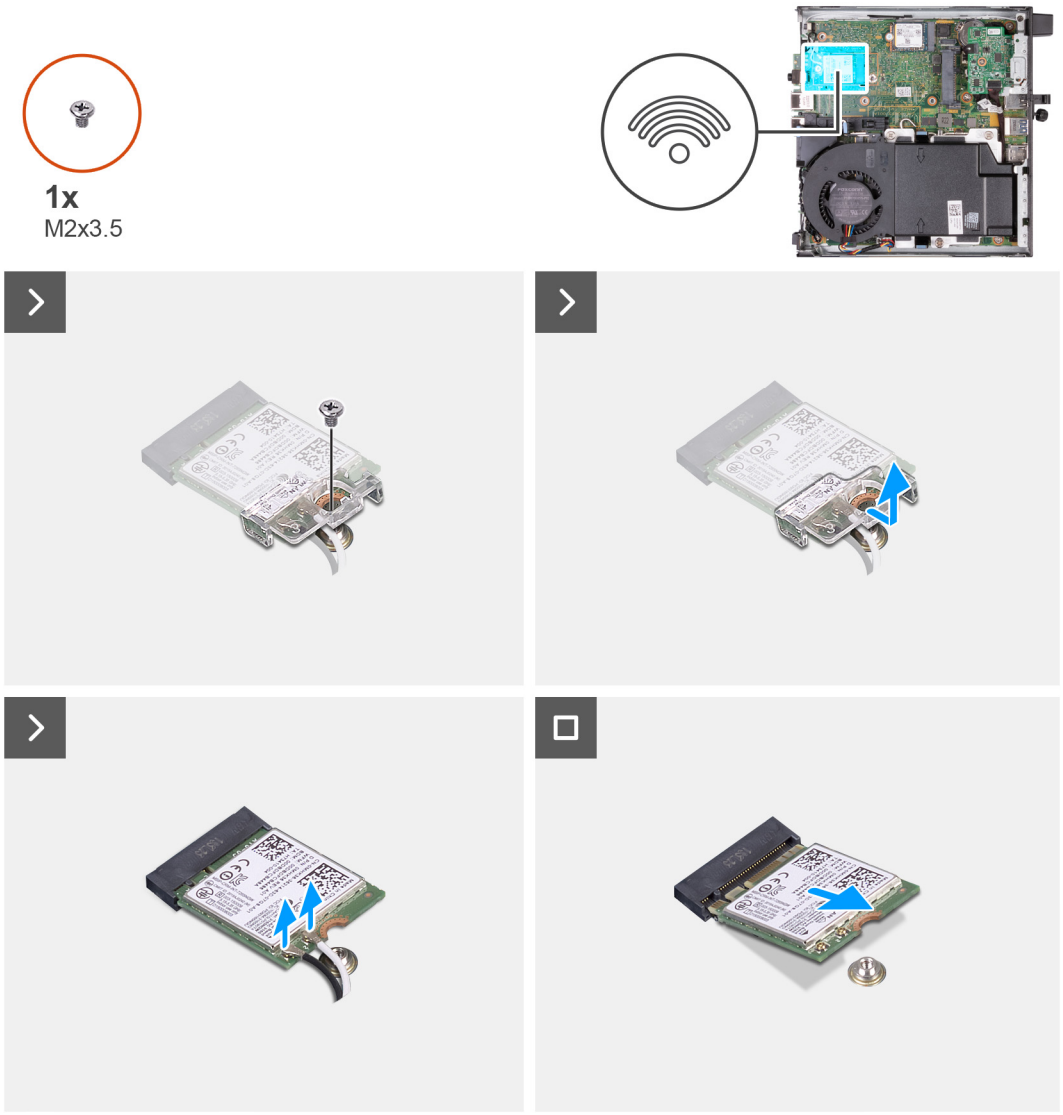
## Removing the wireless card

### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.

### About this task

The following image(s) indicate the location of the wireless card and provides a visual representation of the removal procedure.




### Steps

1. Remove the screw (M2x3.5) that secures the wireless-card bracket to the wireless card.
2. Lift the wireless-card bracket off the wireless card.
3. Disconnect the antenna cables from the wireless card.
4. Slide and remove the wireless card from the wireless-card slot (M.2 WLAN).

## Installing the wireless card

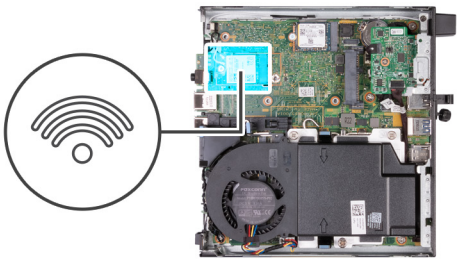
### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the wireless card and provides a visual representation of the installation procedure.

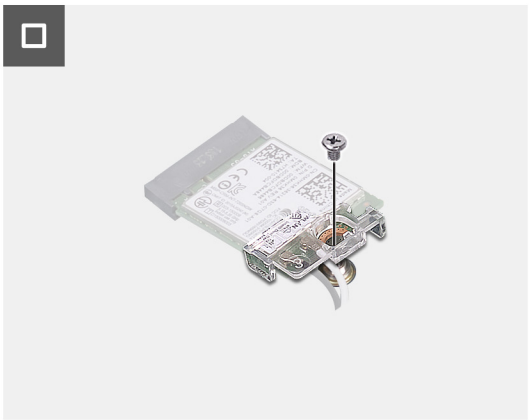










### Steps

1. Connect the antenna cables to the wireless card.

#### Table 24. Antenna-cable color scheme

| Connector on the wireless card | Antenna-cable color | Silkscreen marking | |
|---|---|---|---|
| Main | White | MAIN | ▵ (white triangle) |
| Auxiliary | Black | AUX | ▲ (black triangle) |

2. Place the wireless-card bracket on the wireless card
3. Align the notch on the wireless card with the tab on the wireless-card slot (M.2 WLAN).
4. Slide the wireless card at an angle into the wireless-card slot (M.2 WLAN).
5. Replace the screw (M2x3.5) that secures the wireless-card bracket to the wireless card.

### Next steps

1. Install the hard drive, if applicable.
2. Install the side cover.
3. Follow the procedure in After working inside your computer.

# Speaker

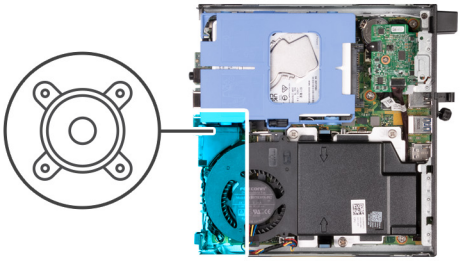
## Removing the speaker

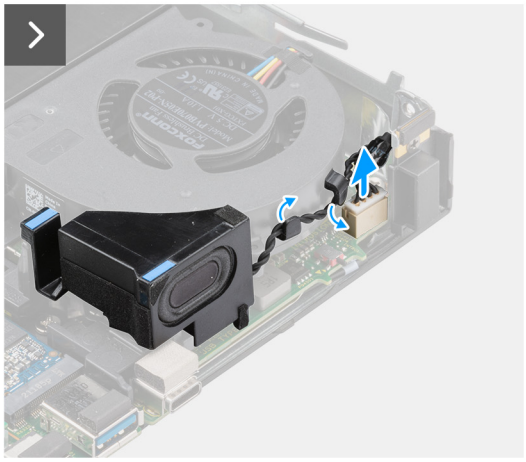
### Prerequisites

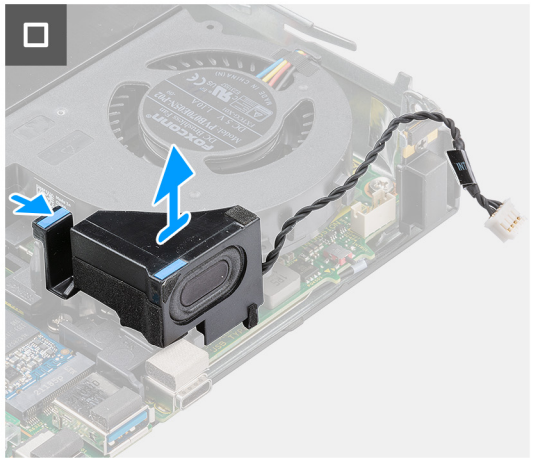
1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.

### About this task

The following image(s) indicate the location of the speaker and provides a visual representation of the removal procedure.







### Steps

1. Disconnect the speaker cable from the system board.
2. Press on the tab that secures the speaker to the system board.
3. Lift the speaker off the system board.

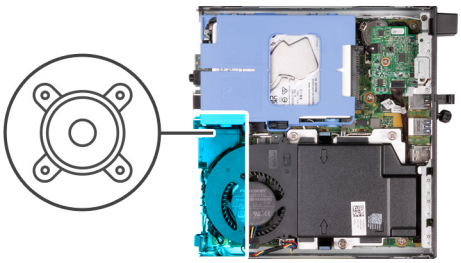
## Installing the speaker

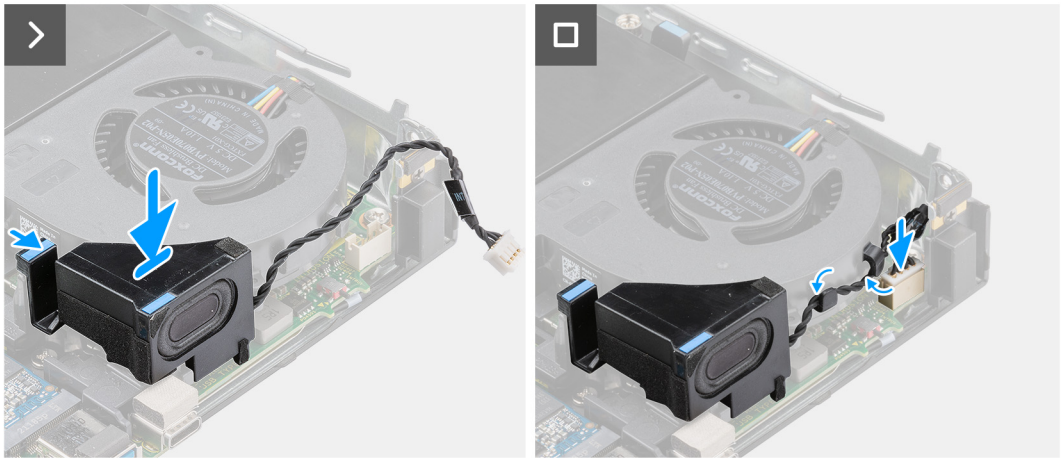
### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the speaker and provides a visual representation of the installation procedure.





### Steps

1. Connect the speaker cable to the system board.
2. Press and hold on the tab that secures the speaker to the system board.
3. Place the speaker on the system board.
4. Release the tab that secures the speaker to the system board.

### Next steps

1. Install the side cover.
2. Follow the procedure in After working inside your computer.

# Fan

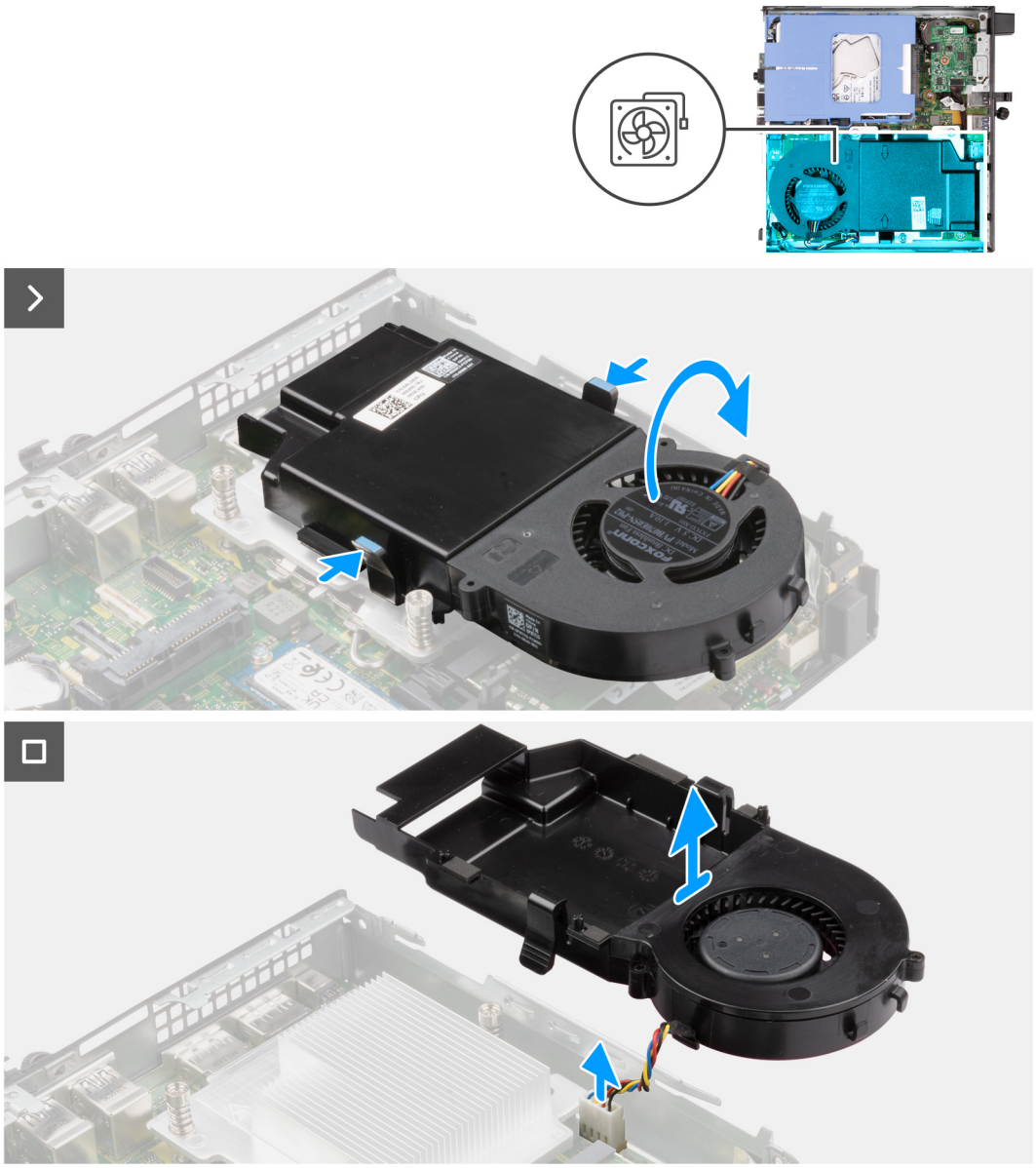
## Removing the fan

### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the speaker.

### About this task

The following image(s) indicate the location of the fan and provides a visual representation of the removal procedure.



### Steps

1. Press and hold the tabs that secures the fan assembly to the system board.
2. Lift the fan assembly off the system board and hold it in place.
3. Flip over the fan assembly.
4. Disconnect the fan cable from the system board.
5. Lift the fan off the fan shroud.

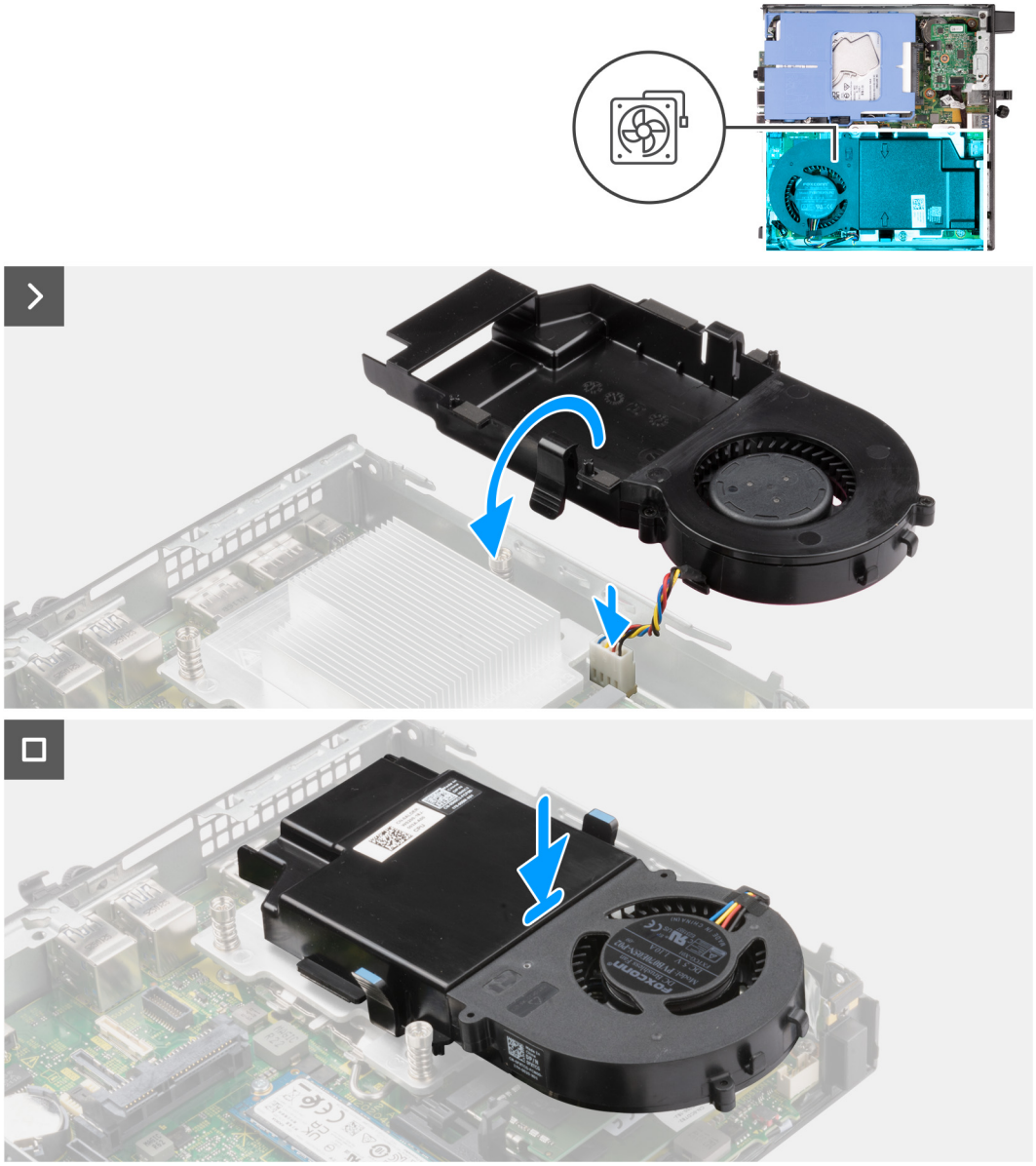
## Installing the fan

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the fan and provides a visual representation of the installation procedure.



### Steps

1. Place the fan on the fan shroud.
2. Align the tabs on the fan with the slots on the fan shroud.
3. Snap the fan into place on the fan shroud.
4. Connect the fan cable to the system board.
5. Flip over the fan assembly.
6. Press and hold the tabs on the fan assembly.
7. Place the fan assembly into the slot on the system board and release the tabs.
8. Press and hold on the tab that secures the speaker to the system board.
9. Place the speaker on the system board.
10. Release the tab that secures the speaker to the system board.

### Next steps

1. Install the speaker.
2. Install the side cover.
3. Follow the procedure in After working inside your computer.

# Memory

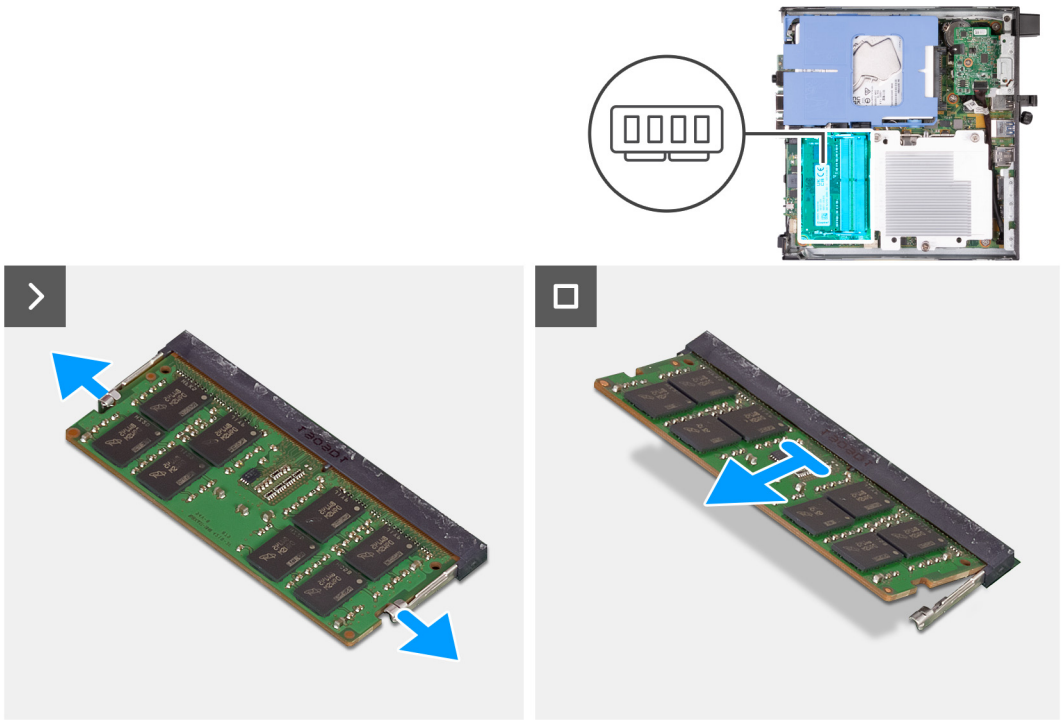
## Removing the memory

### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the speaker.
4. Remove the fan.

### About this task

The following image(s) indicate the location of the memory and provides a visual representation of the removal procedure.



### Steps

1. Carefully spread apart the securing-clips on each end of the memory-module slot.
2. Grasp the memory module near the securing clip, and then gently ease the memory module out of the memory-module slot.

**CAUTION: To prevent damage to the memory module, hold the memory module by the edges. Do not touch the components on the memory module.**

**NOTE:** Repeat step 1 to step 2 to remove any other memory modules installed in your computer.

**NOTE:** Note the slot and the orientation of the memory module in order to replace it in the correct slot.

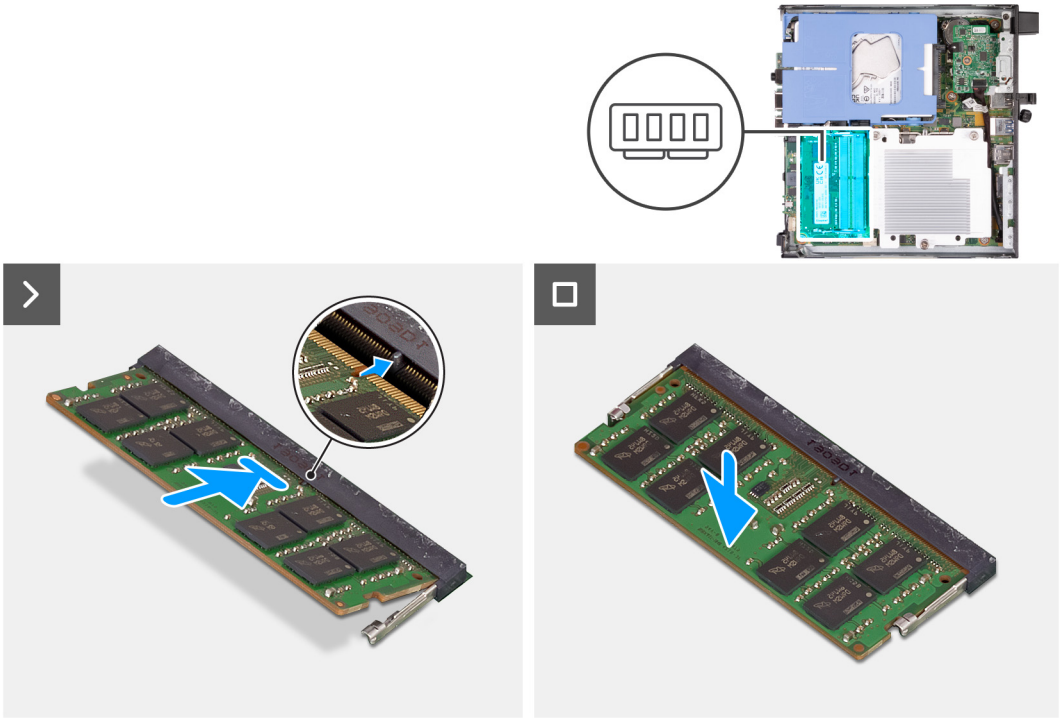
## Installing the memory

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the memory and provides a visual representation of the installation procedure.



### Steps

1. Ensure that the securing clips are in an open position
2. Align the notch on the memory module with the tab on the memory-module slot.
3. Press down on the memory module until the memory module snaps into position and the securing clip locks in place

**CAUTION: To prevent damage to the memory module, hold the memory module by the edges. Do not touch the components on the memory module.**

**NOTE:** Repeat step 1 to step 3 when installing more than one memory module in your computer.

### Next steps

1. Install the fan.
2. Install the speaker.
3. Install the side cover.
4. Follow the procedure in After working inside your computer.

# 8

# Removing and installing Field Replaceable Units (FRUs)

The replaceable components in this chapter are Field Replaceable Units (FRUs).

**CAUTION: The information in this removing and installing FRUs section is intended for authorized service technicians only.**

**CAUTION: To avoid any potential damage to the component or loss of data, Dell Technologies recommends that an authorized service technician replaces the Field Replaceable Units (FRUs).**

**CAUTION: Your warranty does not cover damages that may occur during FRU repairs that are not authorized by Dell Technologies.**

**NOTE:** The images in this document may differ from your computer depending on the configuration you ordered.

# Heat sink

## Removing the heat sink

### Prerequisites

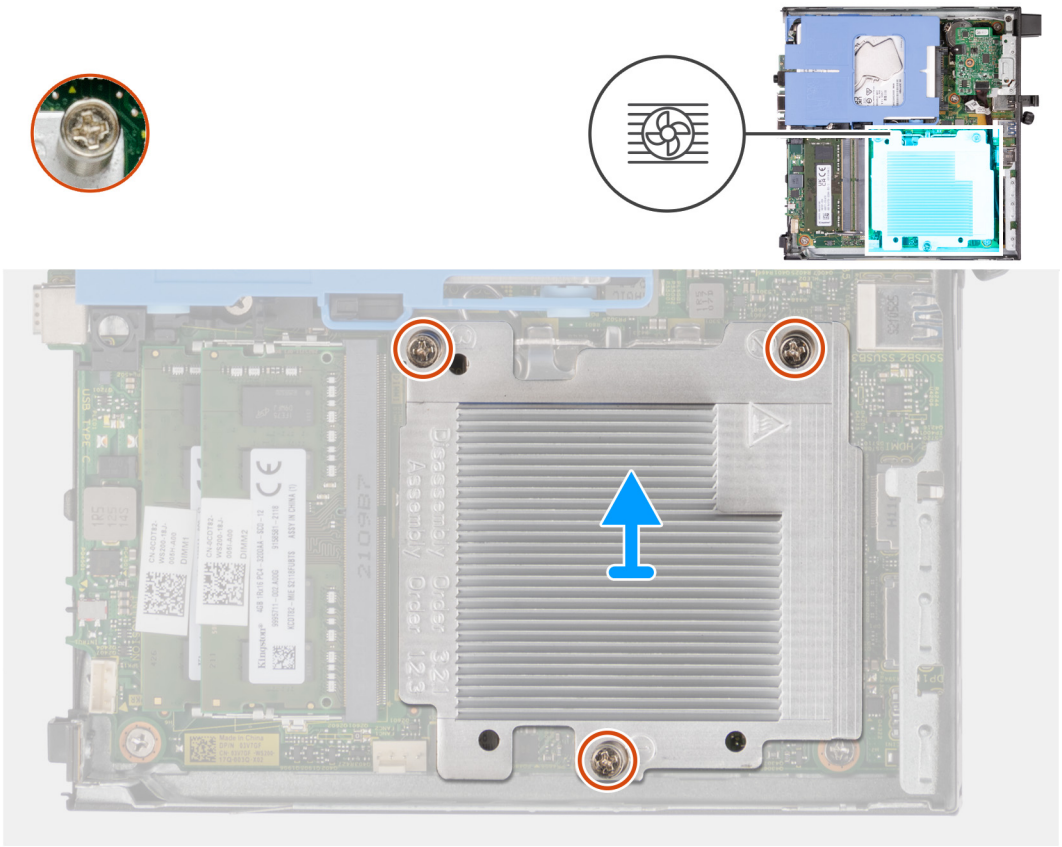
1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the speaker.
4. Remove the fan.

### About this task

**NOTE:** The heat sink may become hot during normal operation. Allow sufficient time for the heat sink to cool before you touch it.

**NOTE:** For maximum cooling of the processor, do not touch the heat transfer areas on the heat sink. The oils in your skin can reduce the heat transfer capability of the thermal grease.

The following image(s) indicate the location of the heat sink and provides a visual representation of the removal procedure.



### Steps

1. In reverse sequential order (3>2>1) loosen the three captive screws that secure the heat sink to the system board.
2. Lift the heat sink off the system board.

## Installing the heat sink

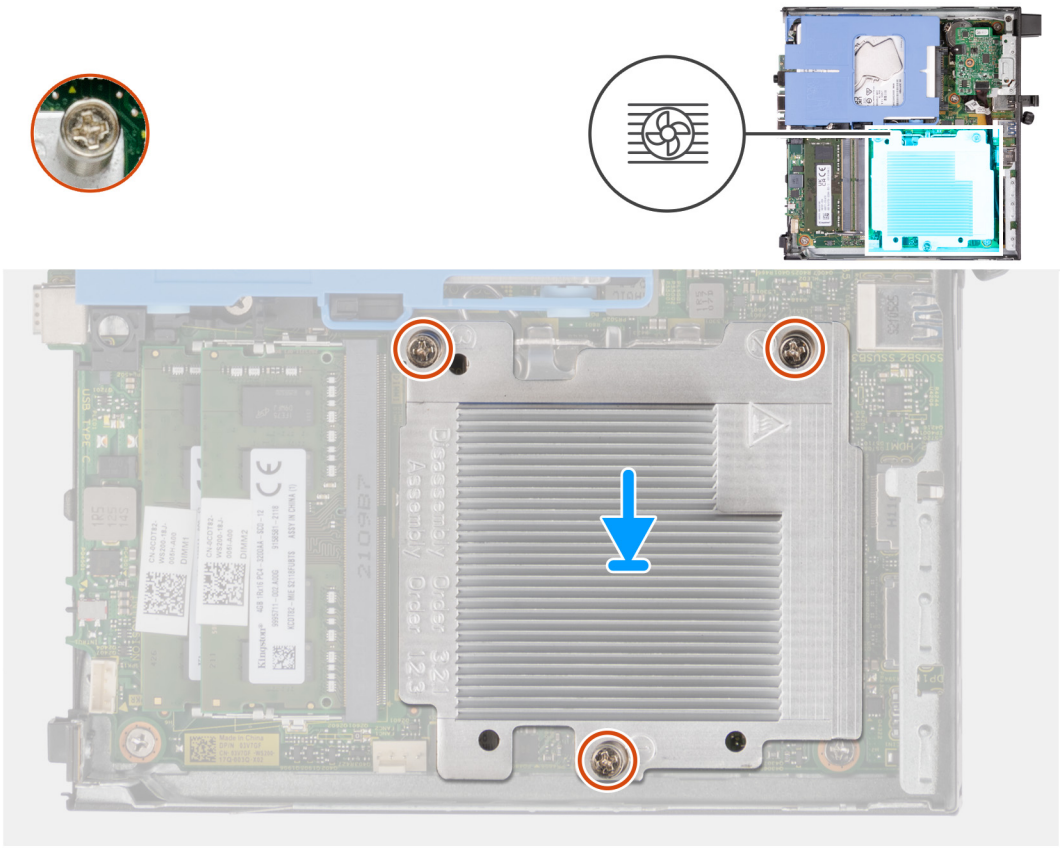
### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

**NOTE:** If either the processor or the fan and heat sink is replaced, use the thermal grease provided in the kit to ensure that thermal conductivity is achieved.

The following image(s) indicate the location of the heat sink and provides a visual representation of the installation procedure.



### Steps

1. Place the heat sink on the system board and the system board.
2. Align the screw holes on the heat sink with the screw holes on the system board.
3. In sequential order (1>2>3) tighten the three captive screws that secure the heat sink to the system board.

### Next steps

1. Install the fan.
2. Install the speaker.
3. Install the side cover.
4. Follow the procedure in After working inside your computer.

# Optional I/O modules (HDMI/VGA/DP/Serial)

## Removing the optional I/O module (HDMI/VGA/DP/Serial/PS2)

### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.

### About this task

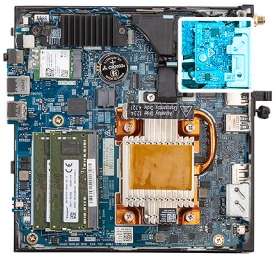
**NOTE:** The optional PS2 module comes with a custom Dell adapter cable that is required to access the PS2 I/O ports. Plug in the adapter cable to access the PS2 I/O and COM ports of your computer.

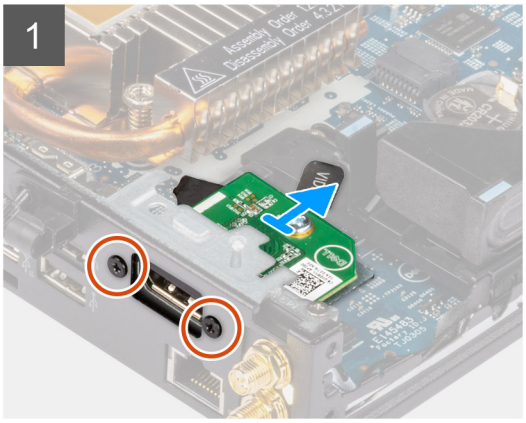
**NOTE:** This is an example of the procedure and removal steps are applicable for optional I/O module (HDMI/VGA/DP/Serial/PS2).

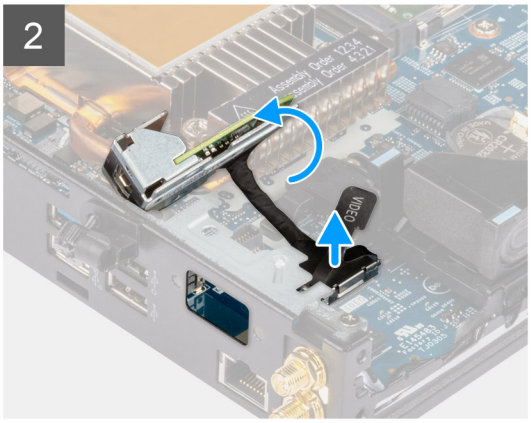
The following images indicate the location of the optional I/O module and provide a visual representation of the removal procedure.



**2x**
M3x3

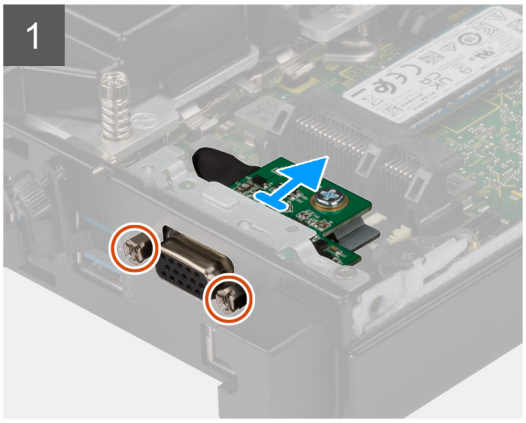


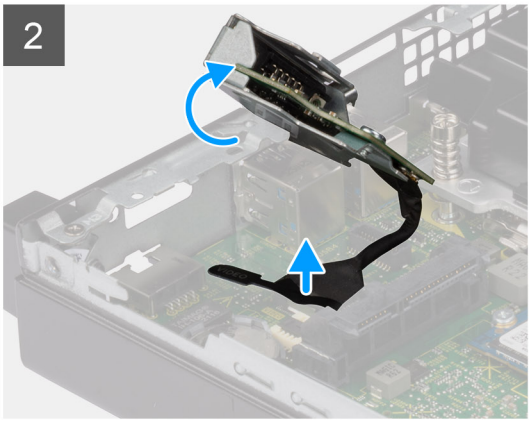





**2x**
M2x5




### Steps

1. Remove the two (M3x3) screws that secure the optional I/O module (HDMI/DP/PS2) or two (M2x5) cross type screws that secure the optional I/O module (VGA/Serial) to the computer chassis.
2. Disconnect the I/O-module cable from the connector on the system board.
3. Remove the optional I/O module from the computer.

# Installing the optional I/O module (HDMI/VGA/DP/Serial/PS2)

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation procedure.

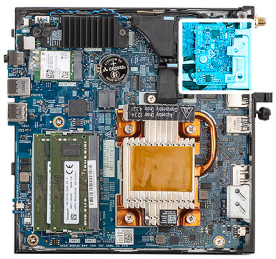
### About this task

**NOTE:** The optional PS2 module comes with a custom Dell adapter cable that is required to access the PS2 I/O ports. Plug in the adapter cable to access the PS2 I/O and COM ports of your computer.

**NOTE:** This is an example of the procedure and installation steps are applicable for optional I/O module (HDMI/VGA/DP/Serial/PS2).

The following images indicate the location of the optional I/O module and provide a visual representation of the installation procedure.

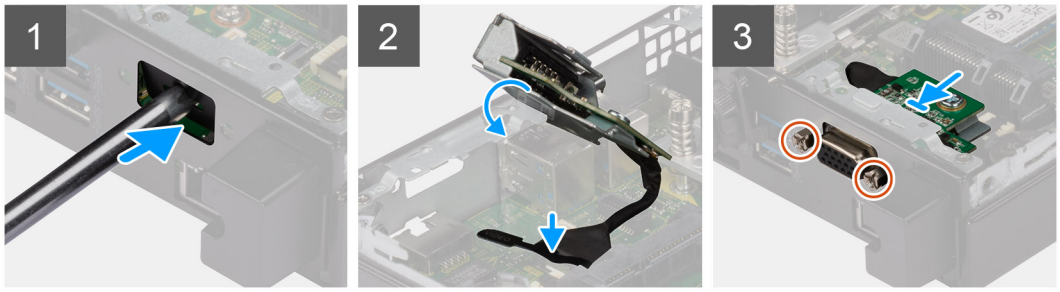











### Steps

1. To remove the dummy metal bracket, insert a flat-head screwdriver in the hole of the bracket. Push the bracket to release the bracket, and then lift the bracket out from the system.

   **NOTE:** This step applies if you are upgrading the system with no existing I/O module.

2. Insert the optional I/O module into its slot from the inside of your computer.
3. Connect the I/O cable to the connector on the system board.
4. Replace the two (M3x3) screws that secure the optional I/O module (HDMI/DP/PS2) or two (M2x5) cross type screws that secure the optional I/O module (VGA/Serial) to the computer chassis.

### Next steps

1. Install the side cover.
2. Follow the procedure in After working inside your computer.

# Optional Type-C module

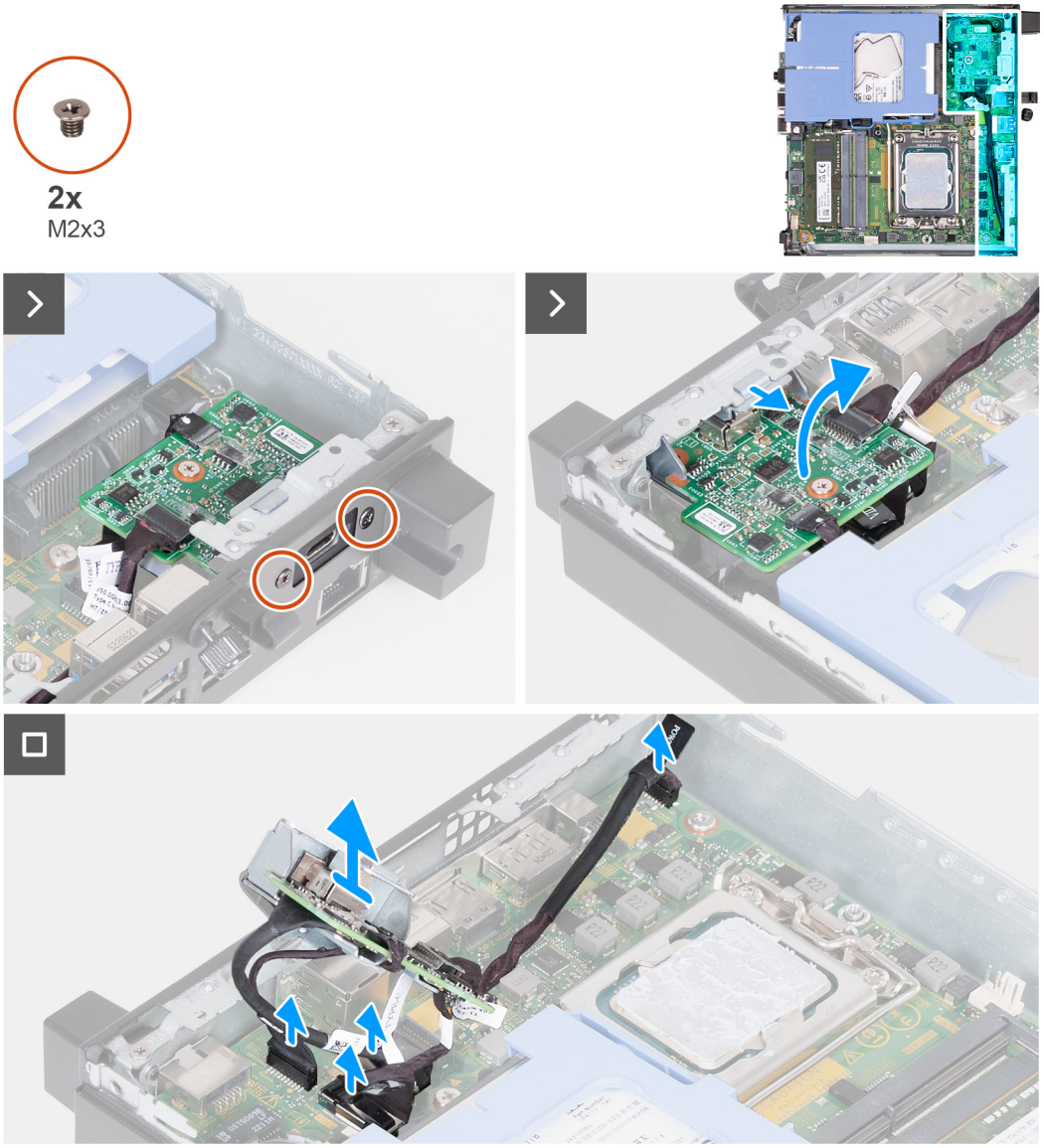
## Removing the optional Type-C module

### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.

### About this task

The following images indicate the location of the optional Type-C module and provide a visual representation of the removal procedure.




### Steps

1. Remove the two (M2x3) screws that secure the optional Type-C module.
2. Remove the optional Type-C module from its slot on the chassis.
3. Lift and hold the optional Type-C module in place above the system board.
4. Disconnect the Type-C DisplayPort cable from the system board.
5. Disconnect the Type-C USB cable from the system board.
6. Disconnect the Type-C power cable from the system board.
7. Disconnect the Type-C signal cable from the system board.
8. Remove the optional Type-C module from the computer.

## Installing the optional Type-C module

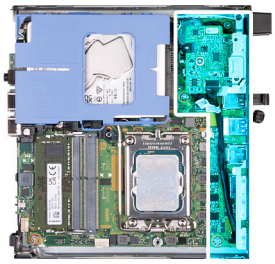
### Prerequisites

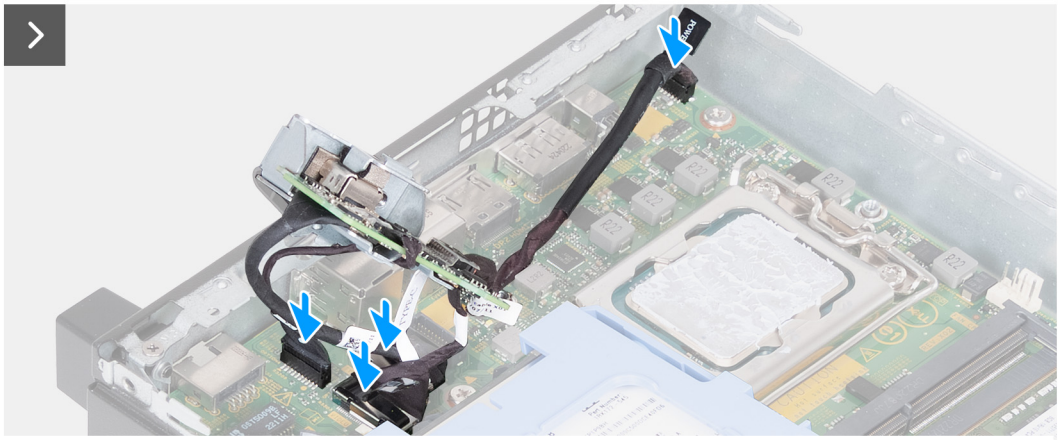
If you are replacing a component, remove the existing component before performing the installation procedure.

### About this task

The following images indicate the location of the optional Type-C module and provide a visual representation of the installation procedure.





### Steps

1. To remove the dummy metal bracket, insert a flat-head screwdriver in the hole of the bracket. Push the bracket to release the bracket, and then lift the bracket out from the system.

   **NOTE:** This step applies if you are upgrading the system with no existing I/O module.

2. Connect the Type-C DisplayPort cable to the system board.
3. Connect the Type-C USB cable to the system board.
4. Connect the Type-C power cable to the system board.
5. Connect the Type-C signal cable to the system board.
6. Insert the optional Type-C module into its slot from the inside of your computer.
7. Replace the two (M2x3) screws that secure the optional Type-C module.

### Next steps

1. Install the side cover.
2. Follow the procedure in After working inside your computer.

# Processor

## Removing the processor

### Prerequisites

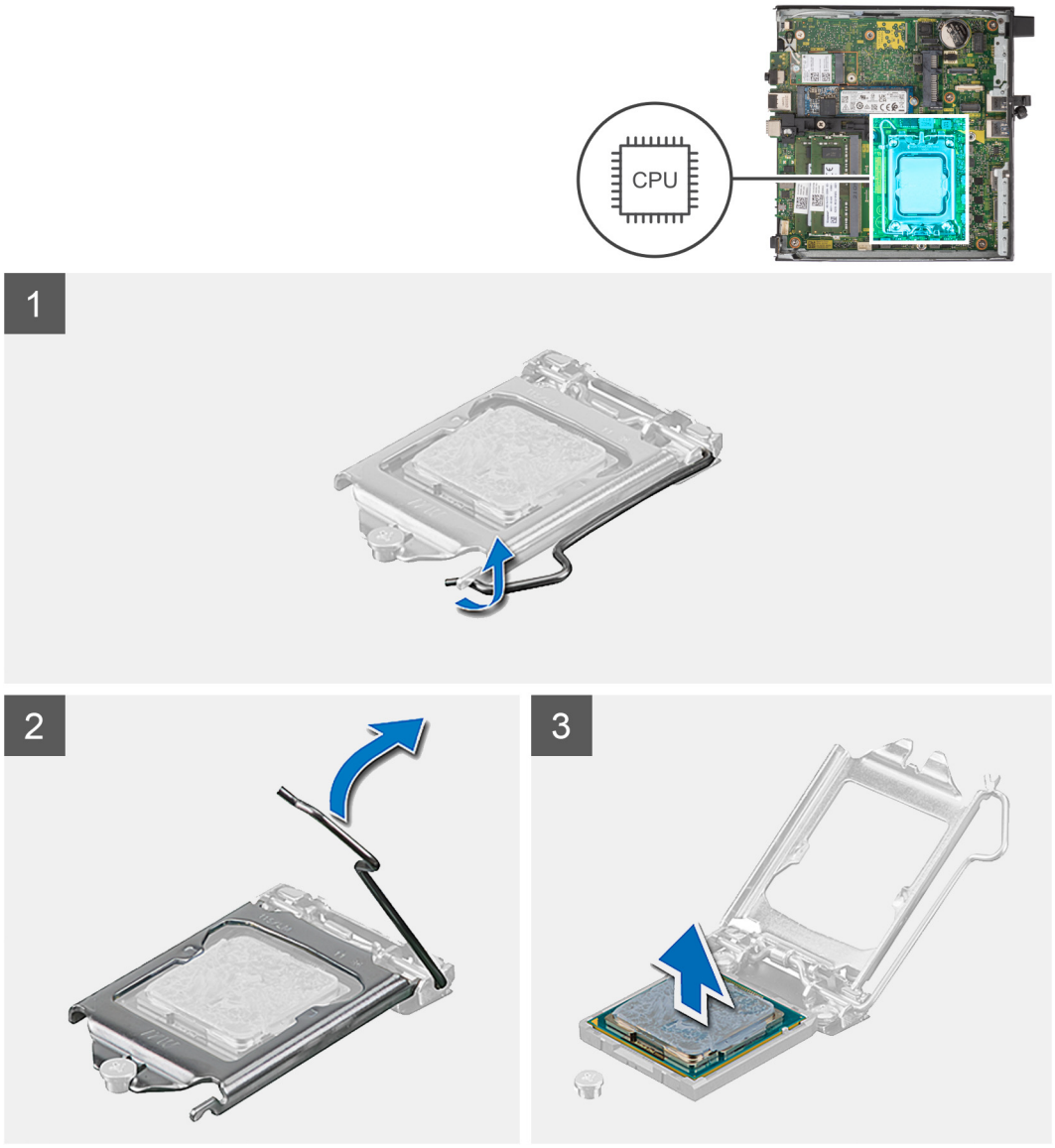
1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.
4. Remove the speaker.
5. Remove the fan.
6. Remove the heat sink.

### About this task

**NOTE:** The heat sink may become hot during normal operation. Allow sufficient time for the heat sink to cool before you touch it.

**NOTE:** For maximum cooling of the processor, do not touch the heat transfer areas on the heat sink. The oils in your skin can reduce the heat transfer capability of the thermal grease.

The following image(s) indicate the location of the processor and provides a visual representation of the removal procedure.




### Steps

1. Press the release lever down and then push it away from the processor to release it from the securing tab.
2. Extend the release lever completely and open the processor cover.

   **CAUTION: When removing the processor, do not touch any of the pins inside the socket or allow any objects to fall on the pins in the socket.**

3. Gently lift the processor from the processor socket.

## Installing the processor

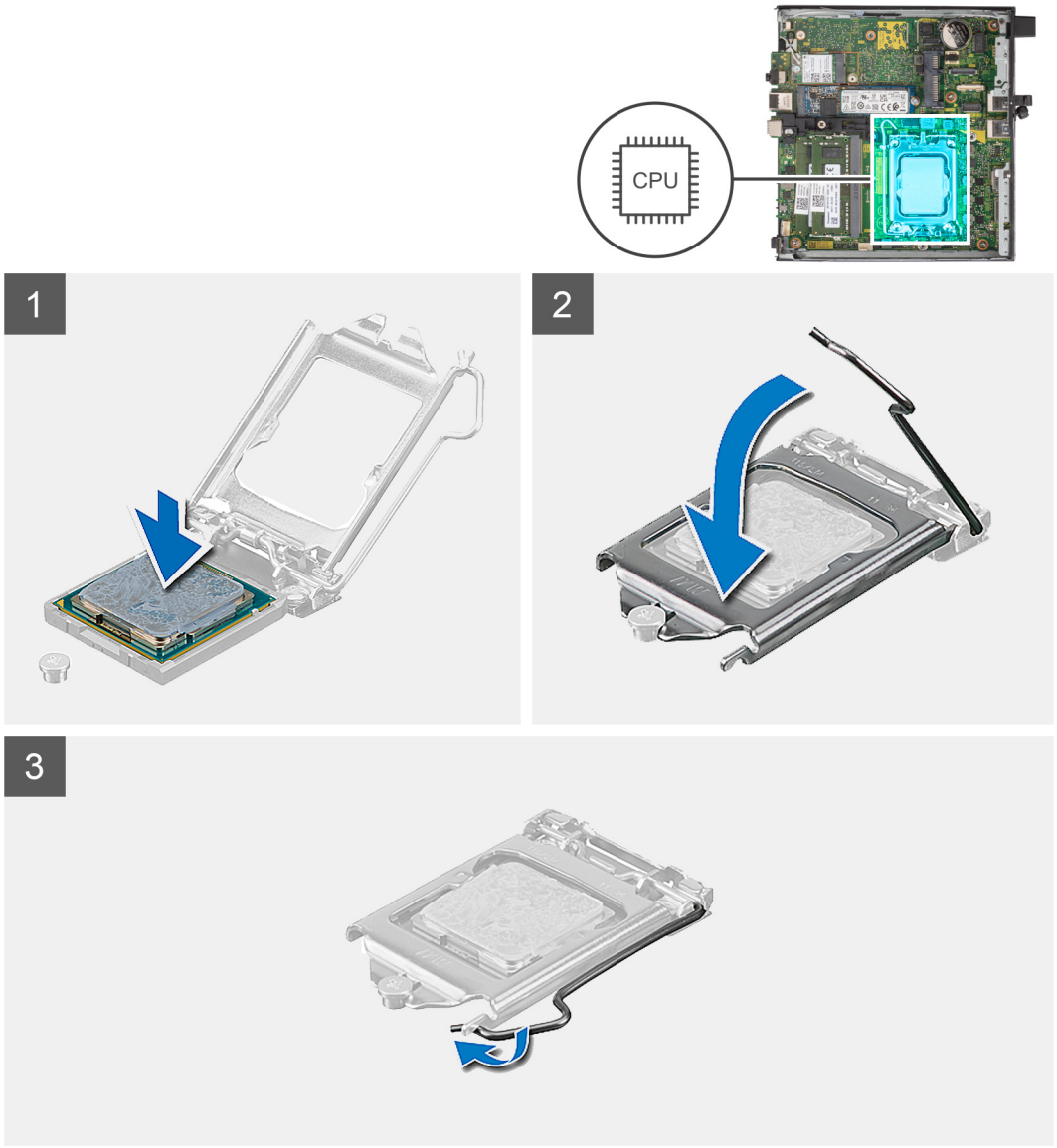
### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

**NOTE:** If either the processor or the fan and heat sink is replaced, use the thermal grease provided in the kit to ensure that thermal conductivity is achieved.

The following image(s) indicate the location of the processor and provides a visual representation of the installation procedure.




### Steps

1. Ensure that the release lever on the processor socket is fully extended in the open position.

   **NOTE:** The pin-1 corner of the processor has a triangle that aligns with the triangle on the pin-1 corner on the processor socket. When the processor is properly seated, all four corners are aligned at the same height. If one or more corners of the processor are higher than the others, the processor is not seated properly.

2. Align the notches on the processor with the tabs on the processor socket and place the processor in the processor socket.

   **CAUTION: Ensure that the processor-cover notch is positioned underneath the alignment post.**

3. When the processor is fully seated in the socket, pivot the release-lever down and place it under the tab on the processor cover.

### Next steps

1. Install the heat sink.
2. Install the fan.
3. Install the speaker.
4. Install the hard drive, if applicable.
5. Install the side cover.
6. Follow the procedure in After working inside your computer.

# System board

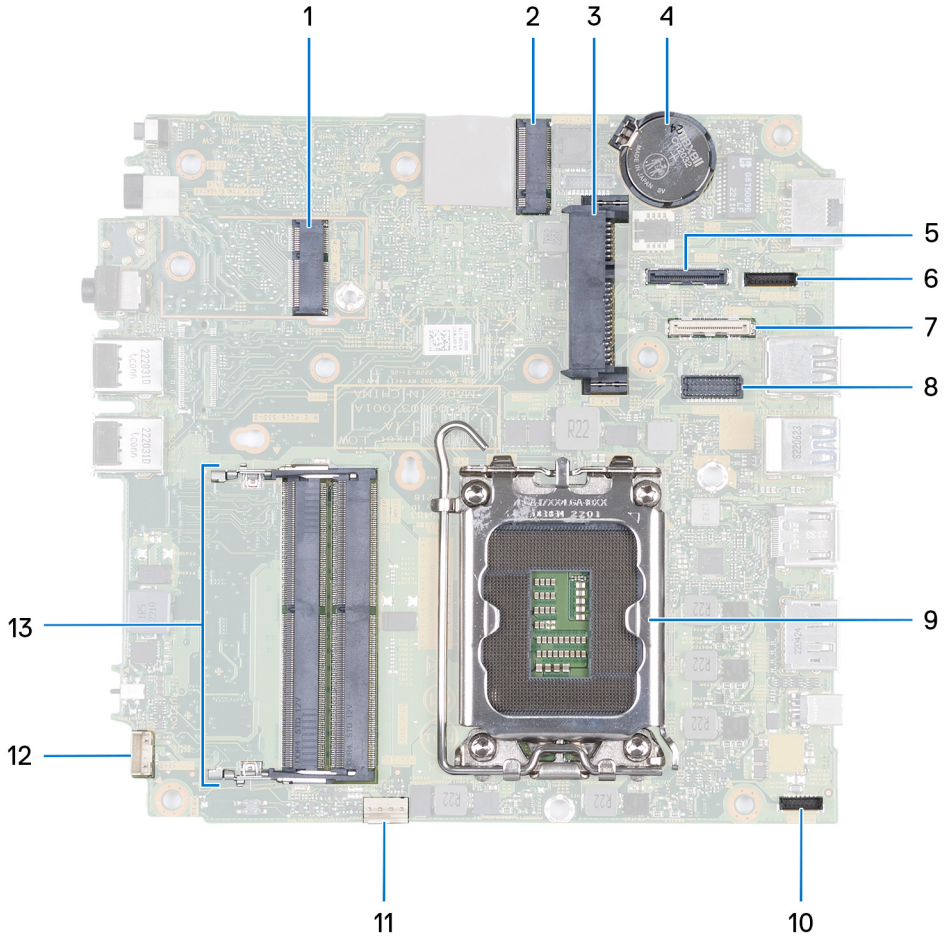
## Removing the system board

### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.
4. Remove the coin-cell battery.
5. Remove the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever applicable.
6. Remove the wireless card.
7. Remove the speaker.
8. Remove the fan.
9. Remove the memory.
10. Remove the heat sink.
11. Remove the processor.
12. Remove the optional I/O module (VGA/HDMI/DP/Serial)or the optional Type-C module, whichever applicable.

### About this task

The following images indicate the system board connectors.

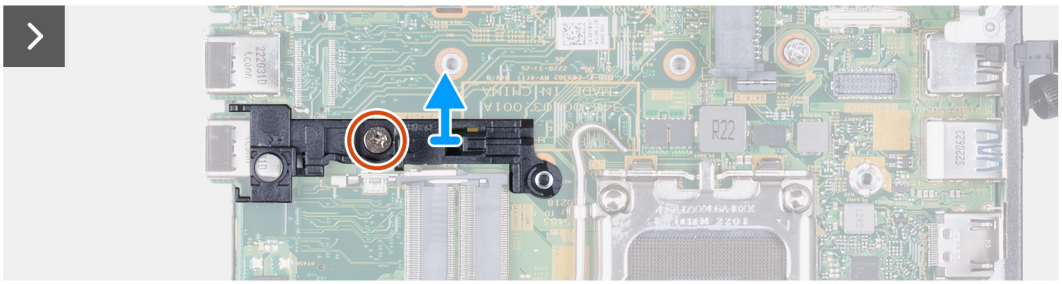


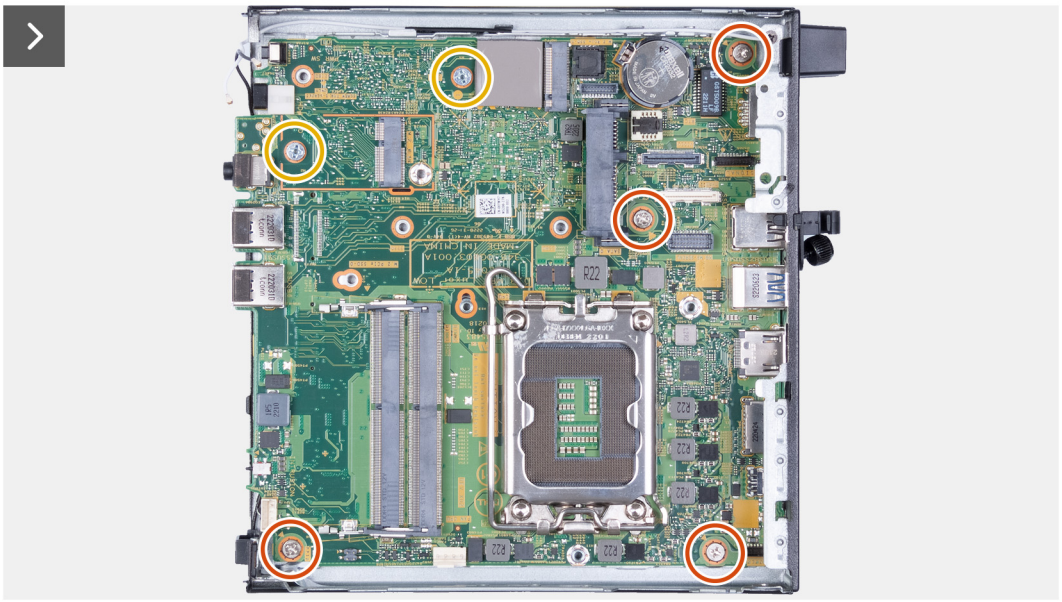

1. M.2 WLAN connector
2. M.2 SSD PCIe connector (2230/2280)

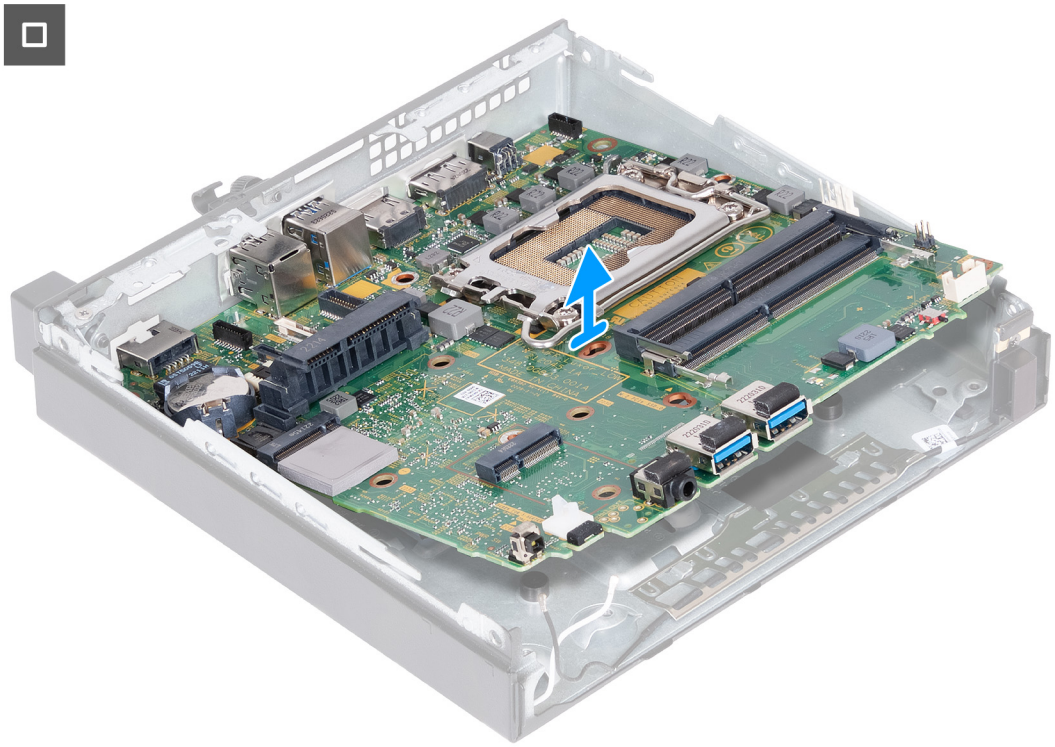
3. 2.5-inch hard-drive connector
4. Coin-cell battery
5. Optional video connector (VGA Port/DisplayPort 1.4a (HBR3)/HDMI 2.1 Port/Type-C DisplayPort)
6. Type-C signal connector
7. Type-C USB connector
8. Optional PS/2, serial port connector
9. Processor socket
10. Type-C power connector
11. Fan connector
12. Internal speaker connector
13. Memory-module slots

The following image(s) indicate the location of the system board and provides a visual representation of the removal procedure.







### Steps

1. Remove the screw (M3x5) that secures the speaker-support bracket to the system board.
2. Lift the speaker-support bracket off the system board.
3. Remove the four screws (M3x5) that secures the system board to the chassis.
4. Remove the two screws (M3x4) that secures the system board to the chassis.
5. Lift the system board at an angle and remove it from the chassis.

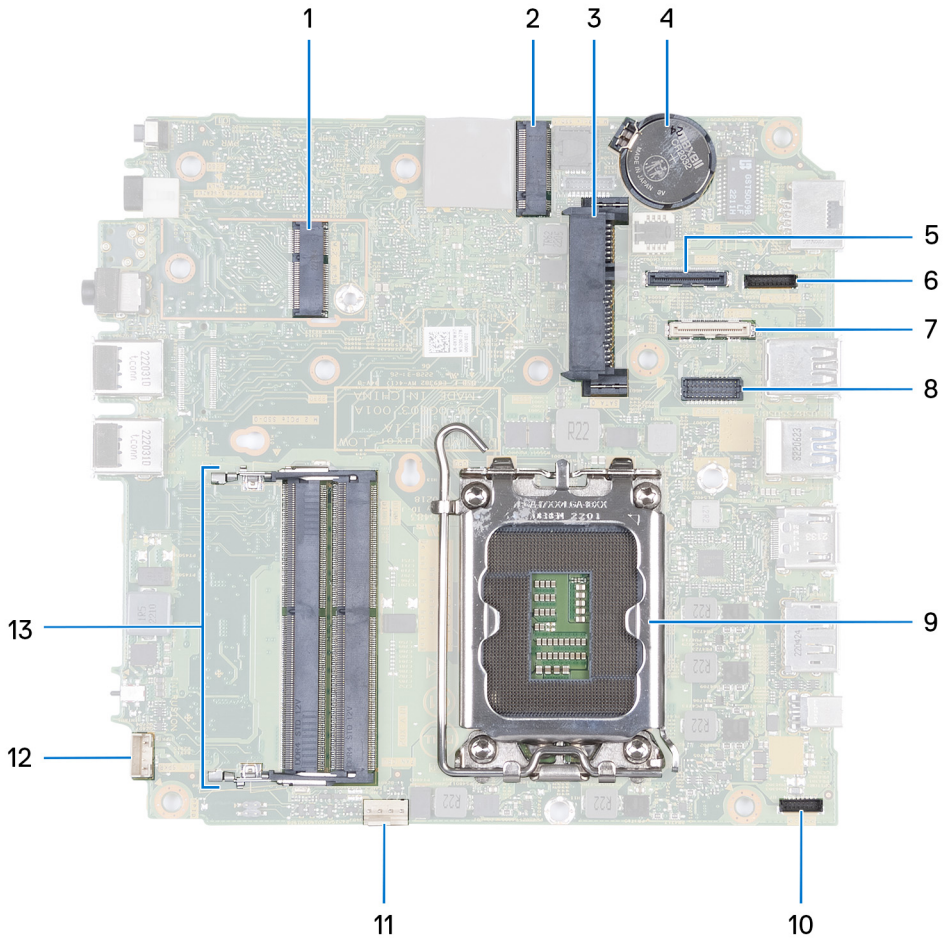
## Installing the system board

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

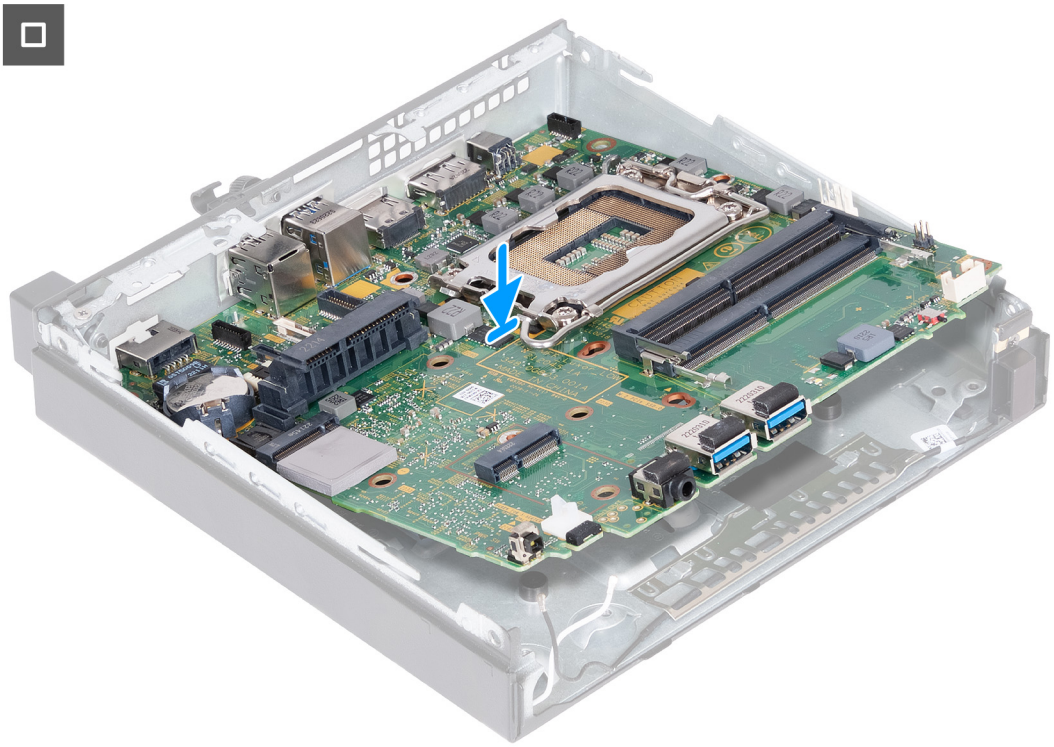
### About this task

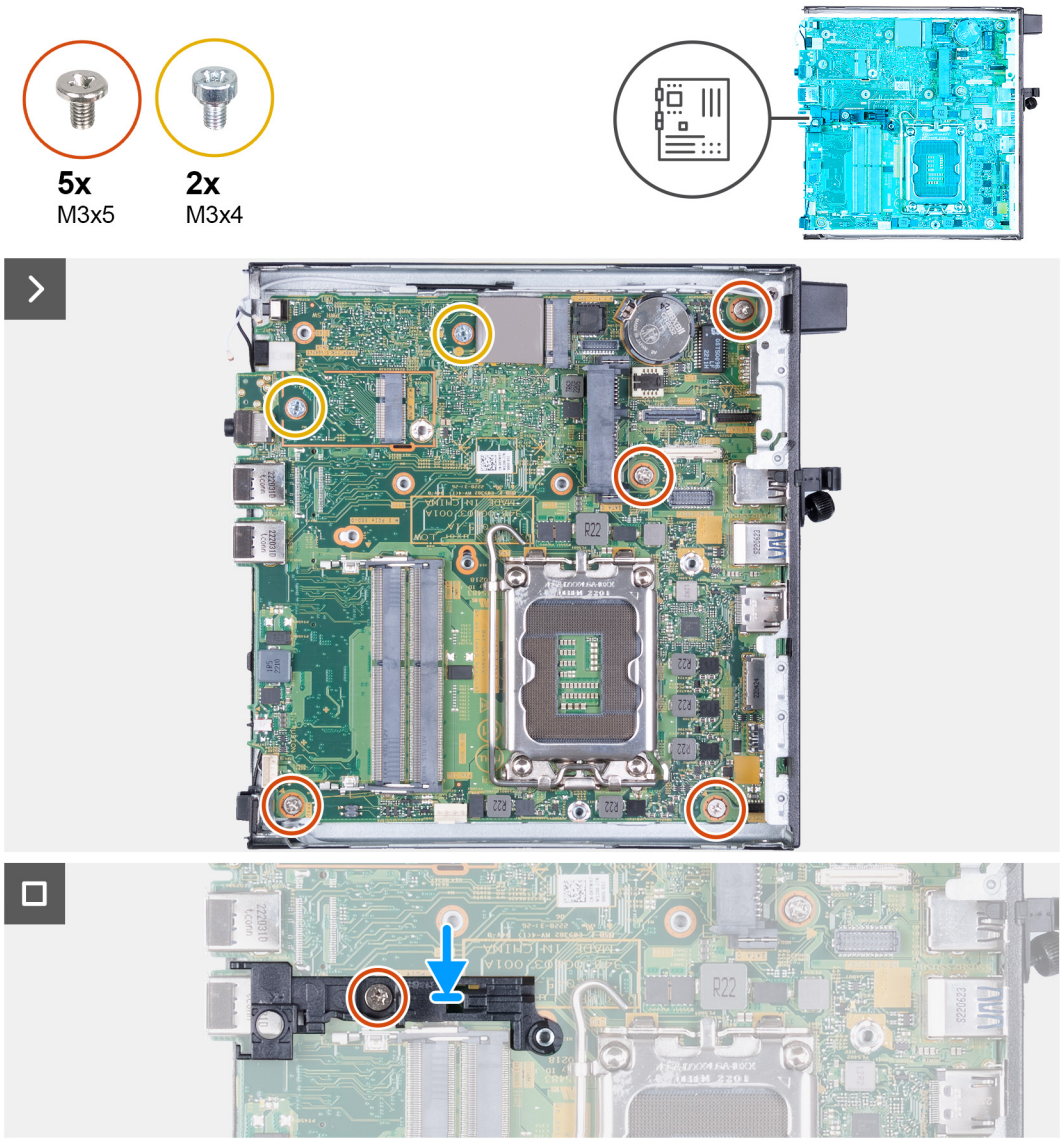
The following images indicate the system board connectors.




1. M.2 WLAN connector
2. M.2 SSD PCIe connector (2230/2280)
3. 2.5-inch hard-drive connector
4. Coin-cell battery
5. Optional video connector (VGA Port/DisplayPort 1.4a (HBR3)/HDMI 2.1 Port/Type-C DisplayPort)
6. Type-C signal connector
7. Type-C USB connector
8. Optional PS/2, serial port connector
9. Processor socket
10. Type-C power connector
11. Fan connector
12. Internal speaker connector
13. Memory-module slots

The following image(s) indicate the location of the system board and provides a visual representation of the installation procedure.






### Steps

1. At an angle, insert the front of the system board through the front of the chassis.
2. Place the system board on the chassis.
3. Align the screw holes on the system board to the screw holes on the chassis.
4. Replace the four screws (M3x5) that secures the system board to the chassis.
5. Replace the two screws (M3x4) that secures the system board to the chassis.
6. Place the speaker-support bracket on the system board.
7. Align the screw holes on the speaker-support bracket to the screw holes on the system board.
8. Replace the screw (M3x5) that secures the speaker-support bracket to the system board.

### Next steps

1. Install the optional I/O module (VGA/HDMI/DP/Serial) or the optional Type-C module, whichever applicable.
2. Install the processor.
3. Install the heat sink.
4. Install the memory.
5. Install the fan.
6. Install the speaker.
7. Install the wireless card.
8. Install the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever applicable.

9. Install the coin-cell battery.
10. Install the hard drive, if applicable.
11. Install the side cover.
12. Follow the procedure in After working inside your computer.

# Internal antenna

## Removing the antenna module (black cable)

### Prerequisites

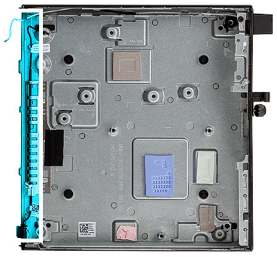
1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.
4. Remove the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever applicable.
5. Remove the wireless card.
6. Remove the speaker.
7. Remove the fan.
8. Remove the heat sink.
9. Remove the optional I/O module (VGA/HDMI/DP/Serial) or the optional Type-C module, whichever applicable.
10. Remove the system board

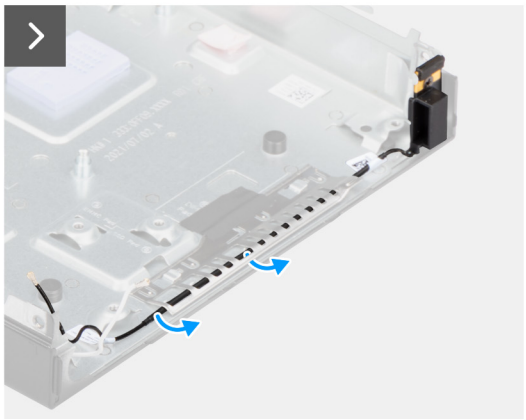
**NOTE:** The system board can be removed with the memory, coin-cell battery, and processor attached

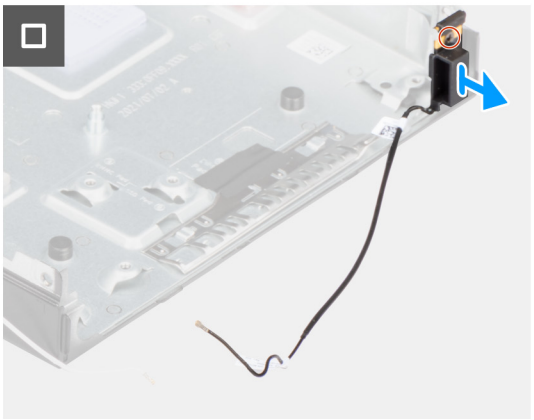
.

### About this task

The following image(s) indicate the location of the antenna module (black cable) and provides a visual representation of the removal procedure.







### Steps

1. Remove the antenna cable from the routing guides on the chassis.

2. Loosen the captive screw that secures the antenna module (while cable) to the chassis.
3. Lift the antenna module (black cable) from the chassis.

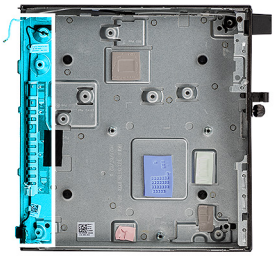
# Installing the antenna module (black cable)

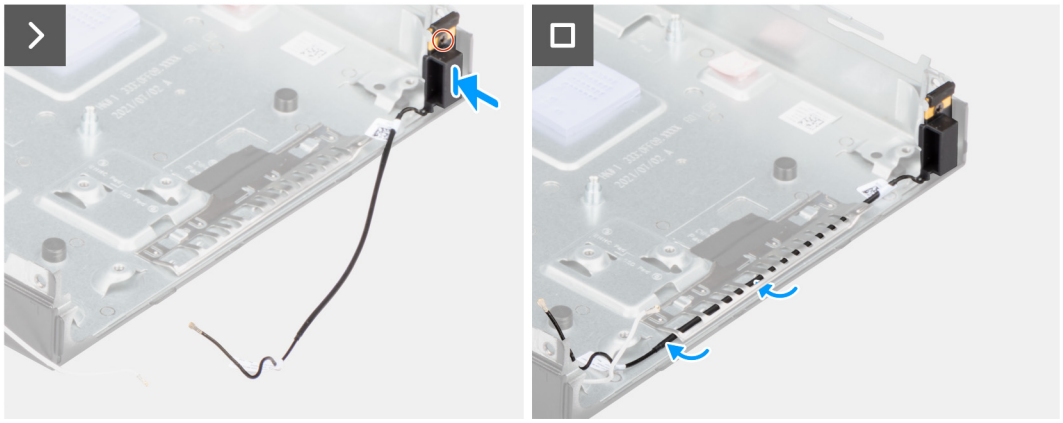
### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the antenna module (black cable) and provides a visual representation of the installation procedure.





### Steps

1. Place the antenna module (black cable) on the chassis.
2. Align the captive screw on the antenna module (black cable) to the screw hole on the chassis.
3. Tighten the captive screw that secures the antenna module (black cable) to the chassis.
4. Route the antenna cable through the routing guides on the chassis.

### Next steps

1. Install the system board

   **NOTE:** The system board can be installed with the memory, coin-cell battery, and processor preattached.

2. Install the optional I/O module (VGA/HDMI/DP/Serial) or the optional Type-C module, whichever applicable.
3. Install the heat sink.
4. Install the fan.
5. Install the speaker.
6. Install the wireless card.
7. Install the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever applicable.
8. Install the hard drive, if applicable.
9. Install the side cover.
10. Follow the procedure in After working inside your computer.

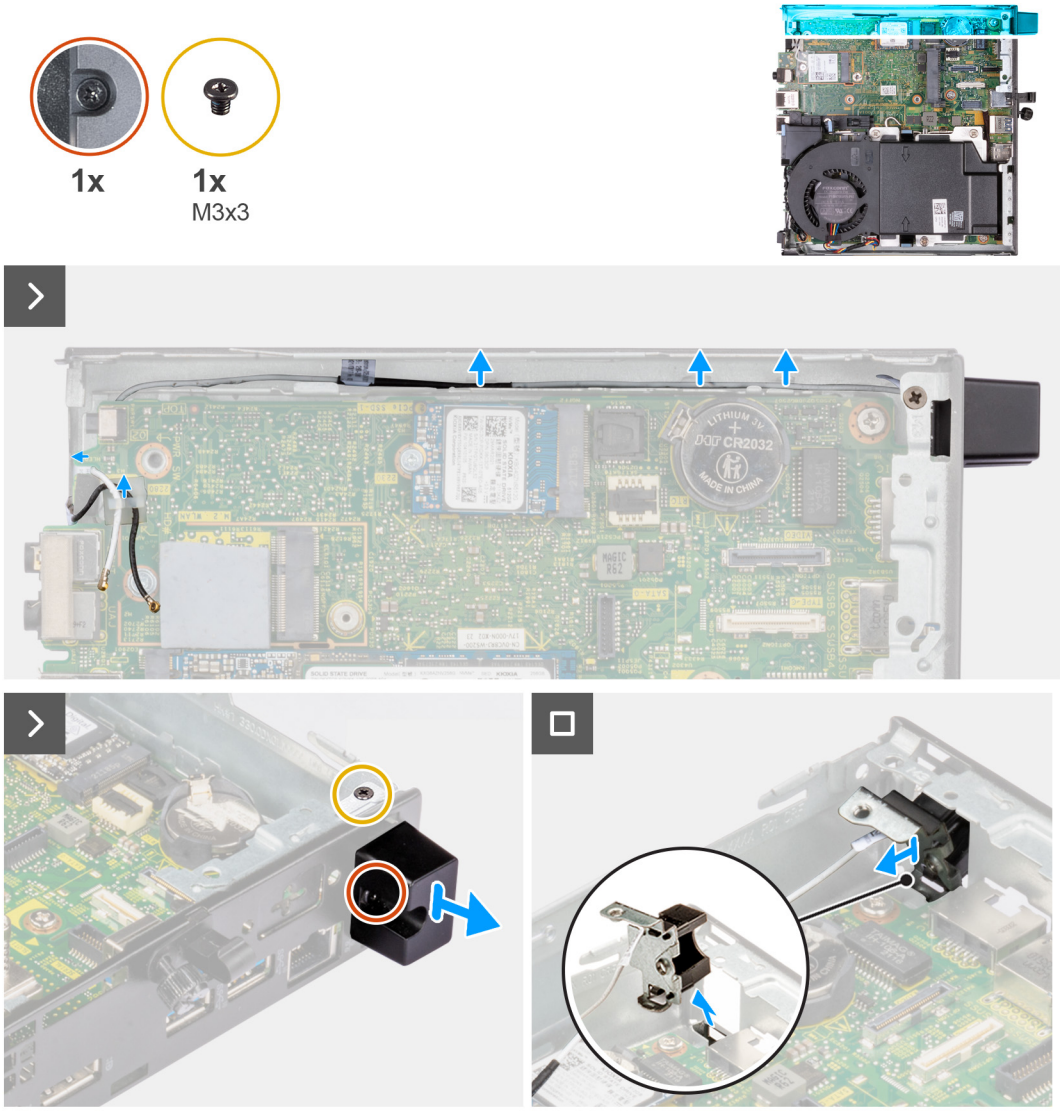
# Removing the antenna module (white cable)

### Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.

### About this task

The following image(s) indicate the location of the antenna module (white cable) and provides a visual representation of the removal procedure.




### Steps

1. Remove the antenna cable from the routing guides on the chassis and system board.
2. Remove the screw (M3x3) that secures the antenna module (white cable) to the chassis.
3. Listen the captive screw that secures the antenna module (white cable) to the chassis.
4. Push the antenna module (white cable) through the slot on the chassis.
5. Lift the antenna module (white cable) off the chassis.

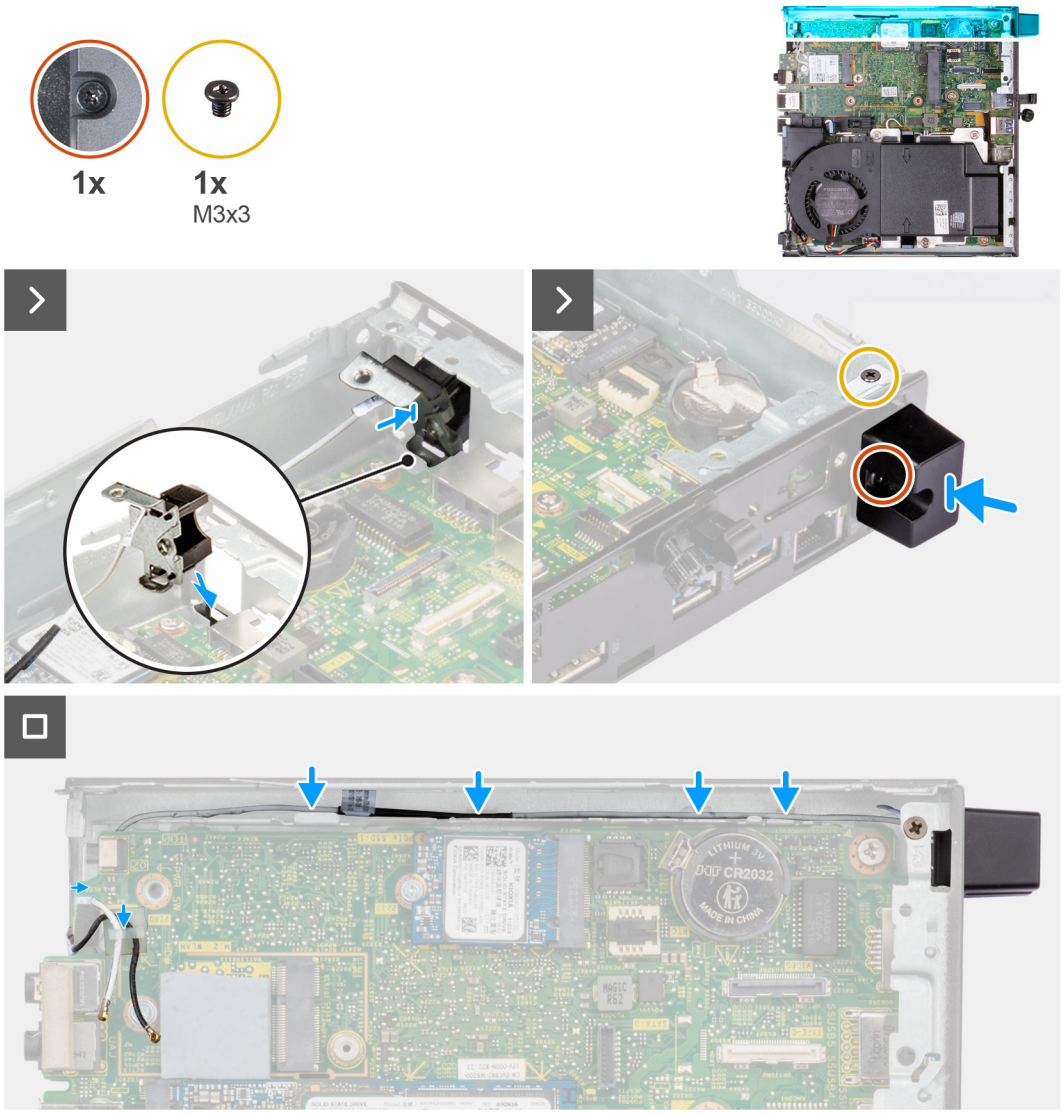
# Installing the antenna module (white cable)

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the antenna module (white cable) and provides a visual representation of the installation procedure.




### Steps

1. Push the antenna module (white cable) though the slot the chassis.
2. Align the screw hole and captive screw on the antenna module (white cable) to the screw holes on the chassis.
3. Tighten the captive screw that secures the antenna module (white cable) to the chassis.
4. Replace the screw (M3x3) that secures the antenna module (white cable) to the chassis.
5. Route the antenna cable through the routing guides on the chassis and system board.

### Next steps

1. Install the hard drive, if applicable.
2. Install the side cover.

3. Follow the procedure in After working inside your computer.

# Removing SMA antenna assembly

### Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the hard drive, if applicable.
4. Remove the wireless card.

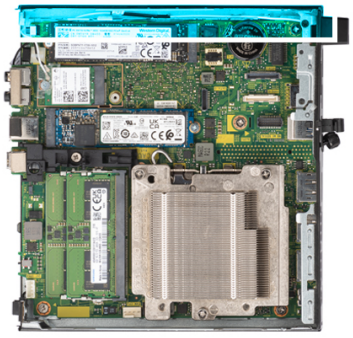
### About this task

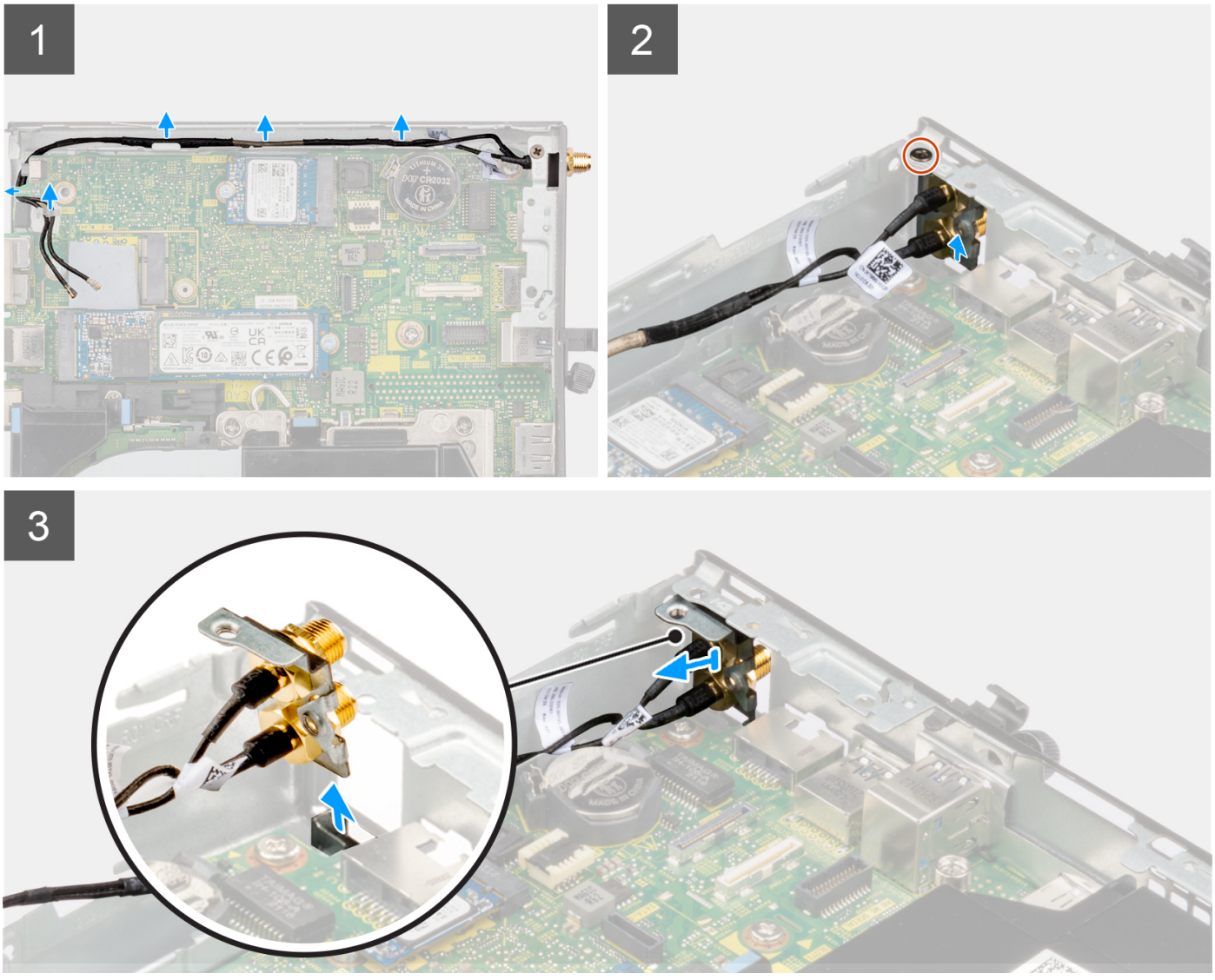
The following images indicate the location of SMA antenna assembly and provide a visual representation of the removal procedure.

**NOTE:** To upgrade to SMA antenna, the internal antenna (white cable) needs to be removed.



**1x**
M3x3






**Steps**

1. Remove the SMA antenna assembly cables from the routing guides on the chassis.
2. Remove the screw (M3x3) that secures the SMA antenna assembly to the chassis.
3. Push the SMA antenna assembly inside from the opening on the back view and lift it away from the chassis.

# Installing SMA antenna assembly

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation procedure.

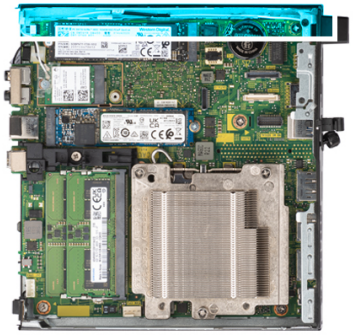
### About this task

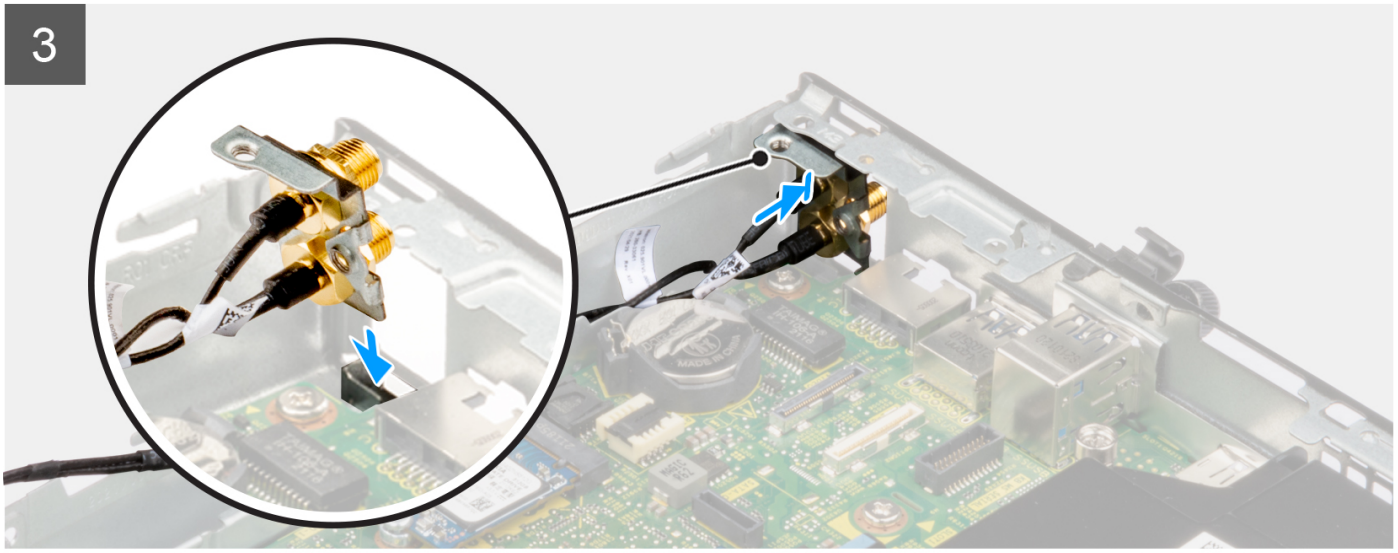
The following images indicate the location of SMA antenna assembly and provide a visual representation of the removal procedure.

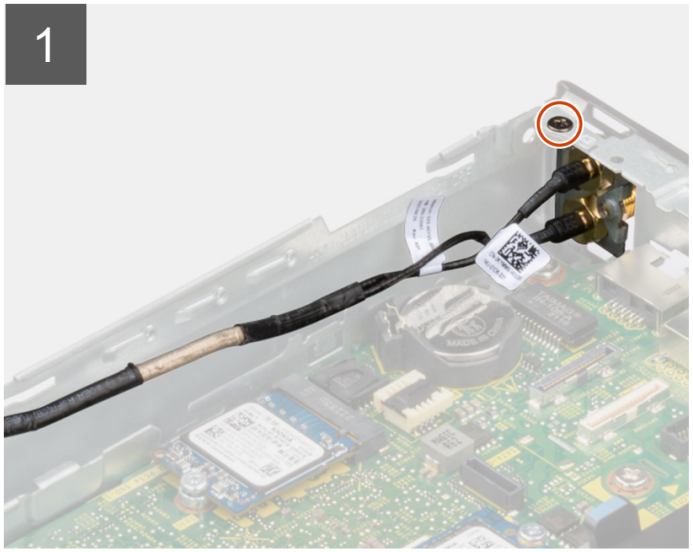
**NOTE:** To upgrade to SMA antenna, the internal antenna (white cable) needs to be removed.

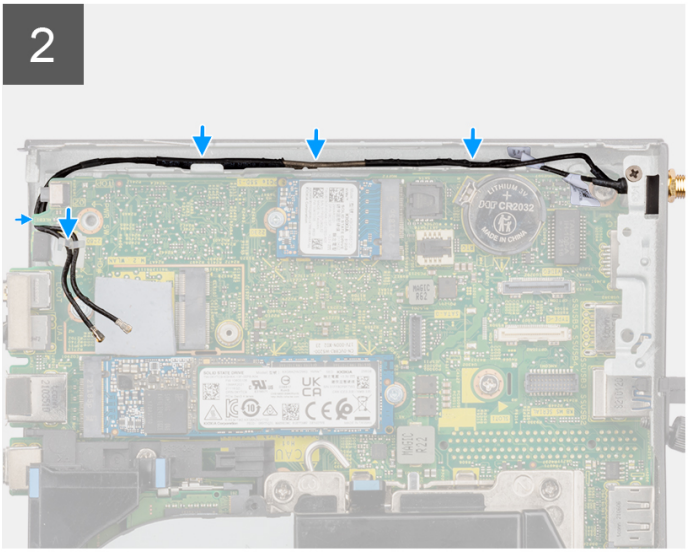


**1x**
M3x3





### Steps

1. Remove the fillers on the side cover.
2. Tilt the SMA antenna assembly.
3. Align and place the antenna bracket on the system board.
4. Insert the SMA antenna assembly in the back view opening.
5. Align the screw hole on the SMA antenna assembly with the screw hole on the back view.
6. Replace the screw (M3x3) that secures the SMA antenna assembly to the chassis.
7. Route the SMA antenna assembly cables through the routing guides on the chassis.

### Next steps

1. Install the wireless card.
2. Install the hard drive, if applicable.
3. Install the side cover.
4. Follow the procedure in after working inside your computer.

# 9

# Software

This chapter details the supported operating systems along with instructions on how to install the drivers.

## Operating system

Your OptiPlex Micro 7010 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Downgrade (Windows 10 image)
- Windows 11 Pro National Education, 64-bit
- Windows 11 CMIT Government Edition, 64-bit (China only)
- Ubuntu Linux 20.04 LTS, 64-bit
- Windows 10 Pro, 64-bit

## Drivers and downloads

When troubleshooting, downloading, or installing drivers, it is recommended that you read the Dell Knowledge Base article Drivers and Downloads FAQs 000123347.

# 10

# BIOS Setup

**CAUTION: Certain changes can make your computer work incorrectly. Before you change the settings in BIOS Setup, it is recommended that you note down the original settings for future reference.**

**NOTE:** Depending on the computer and the installed devices, the options that are listed in this section may or may not be displayed.

Use BIOS Setup for the following purposes:

- Get information about the hardware installed in your computer, such as the amount of RAM and the capacity of the storage device.
- Change the system configuration information.
- Set or change a user-selectable option, such as the user password, type of storage device that is installed, and enable or disable base devices.

## Entering BIOS Setup program

**About this task**

Turn on (or restart) your computer and press F2 immediately.

## Navigation keys

**NOTE:** For most of the BIOS Setup options, changes that you make are recorded but do not take effect until you restart the computer.

**Table 25. Navigation keys**

| Keys | Navigation |
|---|---|
| Up arrow | Moves to the previous field. |
| Down arrow | Moves to the next field. |
| Enter | Selects a value in the selected field (if applicable) or follows the link in the field. |
| Spacebar | Expands or collapses a drop-down list, if applicable. |
| Tab | Moves to the next focus area. |
| Esc | Moves to the previous page until you view the main screen. Pressing Esc in the main screen displays a message that prompts you to save any unsaved changes and restart the computer. |

## F12 One Time Boot menu

To enter the One Time Boot menu, turn on or restart your computer, and then press F12 immediately.

**NOTE:** If you are unable to enter the One Time Boot menu, repeat the above action.

The One Time Boot menu displays the devices that you can boot from and also display the options to start diagnostics. The boot menu options are:

- Removable Drive (if available)

- STXXXX Drive (if available)

  **NOTE:** XXX denotes the SATA drive number.

- Optical Drive (if available)
- SATA Hard Drive (if available)
- Diagnostics

The One Time Boot menu screen also displays the option to access BIOS Setup.

# System setup options

**NOTE:** Depending on your computer and its installed devices, the items that are listed in this section may or may not appear.

### Table 26. System setup options—System information menu

| **Overview** | |
|---|---|
| BIOS Version | Displays the BIOS version number. |
| Service Tag | Displays the Service Tag of the computer. |
| Asset Tag | Displays the Asset Tag of the computer. |
| Manufacture Date | Displays the manufacture date of the computer. |
| Ownership Date | Displays the ownership date of the computer. |
| Express Service Code | Displays the express service code of the computer. |
| Ownership Tag | Displays the Ownership Tag of the computer. |
| Signed Firmware Update | Displays whether the Signed Firmware Update is enabled on your computer. |
| **Processor Information** | |
| Processor Type | Displays the processor type. |
| Maximum Clock Speed | Displays the maximum processor clock speed. |
| Minimum Clock Speed | Displays the minimum processor clock speed. |
| Current Clock Speed | Displays the current processor clock speed. |
| Core Count | Displays the number of cores on the processor. |
| Processor ID | Displays the processor identification code. |
| Processor L2 Cache | Displays the processor L2 Cache size. |
| Processor L3 Cache | Displays the processor L3 Cache size. |
| Microcode Version | Displays the microcode version. |
| Intel Hyper-Threading Capable | Displays whether the processor is Hyper-Threading (HT) capable. |
| 64-Bit Technology | Displays whether 64-bit technology is used. |
| **Memory Information** | |
| Memory Installed | Displays the total computer memory installed. |
| Memory Available | Displays the total computer memory available. |
| Memory Speed | Displays the memory speed. |
| Memory Channel Mode | Displays single or dual channel mode. |
| Memory Technology | Displays the technology that is used for the memory. |
| DIMM 1 Size | Displays the DIMM 1 memory size. |
| DIMM 2 Size | Displays the DIMM 2 memory size. |

### Table 26. System setup options—System information menu (continued)

| Overview | |
|---|---|
| **Devices Information** | |
| Video Controller | Displays the video controller type of the computer. |
| Video Memory | Displays the video memory information of the computer. |
| Wi-Fi Device | Displays the wireless device information of the computer. |
| Native Resolution | Displays the native resolution of the computer. |
| Video BIOS Version | Displays the video BIOS version of the computer. |
| Audio Controller | Displays the audio controller information of the computer. |
| Bluetooth Device | Displays the Bluetooth device information of the computer. |
| LOM MAC Address | Displays the LAN On Motherboard (LOM) MAC address of the computer. |
| Slot 1 | Displays the SATA hard drive information of the computer. |
| Slot 2 | Displays the SATA hard drive information of the computer. |
| Slot 3 | Displays the SATA hard drive information of the computer. |

### Table 27. System setup options—Boot Configuration menu

| Boot Configuration | |
|---|---|
| **Boot Sequence** | |
| Boot Mode: UEFI only | Displays the boot mode. |
| Boot Sequence | Displays the boot sequence. |
| Force PXE On Next Boot | Enables or disables the Force PXE feature on next boot. |
| **Secure Boot** | |
| Enable Secure Boot | Enable or disable the secure boot feature.<br>By default, the option is not enabled. |
| Enable Microsoft UEFI CA | Enable or disable Microsoft UEFI Certificate Authority.<br>By default, the option is enabled.<br>⚠ **CAUTION: Disabling Microsoft UEFI CA could render your system being unable to boot. System graphics may not function, some devices may not function properly and the system may be unrecoverable.** |
| Secure Boot Mode | Change the secure boot mode options.<br>By default, the **Deployed Mode** is enabled. |
| **Expert Key Management** | |
| Enable Custom Mode | Enable or disable custom mode.<br>By default, the **custom mode** option is not enabled. |
| Custom Mode Key Management | Select the custom values for expert key management. |

### Table 28. System setup options—Integrated Devices menu

| Integrated Devices | |
|---|---|
| **Date/Time** | Displays the current date in MM/DD/YYYY format and current time in HH:MM:SS AM/PM format. |
| **Memory Mapped I/O above 4 Gig** | |

### Table 28. System setup options—Integrated Devices menu (continued)

| Integrated Devices | |
|---|---|
| Memory Mapped I/O above 4 Gig | Allows 64-bit capable PCI devices to be decoded in above 4 GB address space, freeing up memory resources under 4 GB.<br>By default, this option is enabled. |
| **Audio** | |
| Enable Audio | Enable or disable the integrated audio controller.<br>By default, all the options are enabled. |
| **Serial Port** | |
| Serial Port Configuration | Enable or disable the serial port address.<br>By default, the **COM1: Port is configured at 3F8h with IRQ4** option is enabled. |
| **USB Configuration** | • Enable or disable booting from USB mass storage devices through the boot sequence or boot menu.<br>By default, all the options are enabled. |
| **Front USB Configuration** | Enable or disable the individual front USB ports.<br>By default, all the options are enabled. |
| **Rear USB Configuration** | Enable or disable the individual rear USB ports.<br>By default, all the options are enabled. |
| **Dust Filter Maintenance** | Enable or disable the dust filter maintenance.<br>By default, the **Disabled** option is enabled. |

### Table 29. System setup options—Storage menu

| Storage | |
|---|---|
| **SATA Operation** | Enable or disable the operating mode of the integrated SATA hard drive controller.<br>By default, the **RAID On** option is enabled.<br>**NOTE:** Although the default operating mode of the integrated SATA hard drive controller is set to RAID ON, this computer does not support RAID functionality. |
| **Storage Interface** | |
| Port Enablement | Enable or disable the onboard drives.<br>By default, all the options are enabled. |
| **SMART Reporting** | |
| Enable SMART Reporting | Enable or disable Self-Monitoring, Analysis, and Reporting Technology (SMART) during computer startup.<br>By default, the **Enable SMART Reporting** option is not enabled. |
| **Drive Information** | |
| **SATA-0** | |
| Type | Displays the SATA HDD type information of the computer. |
| Device | Displays the SATA HDD device information of the computer. |
| **SATA-1** | |
| Type | Displays the SATA HDD type information of the computer. |

### Table 29. System setup options—Storage menu (continued)

| Storage | |
|---|---|
| Device | Displays the SATA HDD device information of the computer. |
| **SATA-2** | |
| Type | Displays the SATA HDD type information of the computer. |
| Device | Displays the SATA HDD device information of the computer. |
| **SATA-3** | |
| Type | Displays the SATA HDD type information of the computer. |
| Device | Displays the SATA HDD device information of the computer. |
| **M.2 PCIe SSD** | |
| Type | Displays the M.2 PCIe SSD-0 type information of the computer. |
| Device | Displays the M.2 PCIe SSD-0 device information of the computer. |

### Table 30. System setup options—Display menu

| Display | |
|---|---|
| **Multi-Display** | |
| Enable Multi-Display | Enable or disable the Enable Multi-Display buttons on the computer.<br>By default, the option is enabled. |
| **Primary Display** | |
| Video Primary Display | Determines the primary display when multiple controllers are available on the computer<br>By default, the **Auto** option is enabled. |
| **Full Screen Logo** | Enable or disable full screen logo.<br>By default, the option is not enabled. |

### Table 31. System setup options—Connection menu

| Connection | |
|---|---|
| **Network Controller Configuration** | |
| Integrated NIC | Controls the on-board LAN controller.<br>By default, the **Enabled with PXE** option is enabled. |
| **Wireless Device Enable** | |
| WLAN | Enable or disable the internal WLAN device.<br>By default, the option enabled. |
| Bluetooth | Enable or disable the internal Bluetooth device.<br>By default, the option enabled. |
| **Enable UEFI Network Stack** | Enable or disable UEFI Network Stack and controls the on-board LAN Controller.<br>By default, the option is enabled. |
| **HTTPs Boot Feature** | |
| HTTPs Boot | Enable or disable the HTTPs Boot feature.<br>By default, the **HTTPs Boot** option is enabled. |
| HTTPs Boot Mode | With Auto Mode, the HTTPs Boot extracts Boot URL from the DHCP. With Manual Mode, the HTTPs Boot reads Boot URL from the user-provided data. |

### Table 31. System setup options—Connection menu (continued)

| Connection | |
|---|---|
| | By default, the **Auto Mode** option is enabled. |

### Table 32. System setup options—Power menu

| Power | |
|---|---|
| **USB Wake Support** | |
| Enable USB Wake Support | When enabled, you can use the USB devices like a mouse or keyboard to wake your computer from standby.<br>By default, the option is enabled. |
| **AC Behavior** | |
| AC Recovery | Enables the system to turn on automatically, when AC is inserted.<br>By default, the **Power Off** option is enabled. |
| **Active State Power Management** | |
| ASPM | Enables or disables the Active State Power Management (ASPM) level<br>By default, the **Auto** option is enabled. |
| **Block Sleep** | Enables to block entering sleep (S3) mode in the operating system.<br>By default, the **Block Sleep** option is disabled. |
| **Deep Sleep Control** | Enable or disable the Deep Sleep mode support.<br>By default, the **Disabled** option is enabled. |
| **Fan Control Override** | Enable or disable the fan control override feature.<br>By default, the option is disabled. |
| **Intel Speed Shift Technology** | Enable or disable the Intel speed shift technology support.<br>By default, the **Intel Speed Shift Technology** option is enabled. |

### Table 33. System setup options—Security menu

| Security | |
|---|---|
| **TPM 2.0 Security** | |
| TPM 2.0 Security On | Enable or disable TPM 2.0 security options.<br>By default, the **TPM 2.0 Security On** option is enabled. |
| Attestation Enable | Enables to control whether the Trusted Platform Module (TPM) Endorsement Hierarchy is available to the operating system.<br>By default, the **Attestation Enable** option is enabled. |
| Key Storage Enable | Enables to control whether the Trusted Platform Module (TPM) Storage Hierarchy is available to the operating system.<br>By default, the **Key Storage Enable** option is enabled. |
| SHA-256 | BIOS and the TPM will use the SHA-256 hash algorithm to extend measurements into the TPM PCRs during BIOS boot.<br>By default, the **SHA-256** option is enabled. |
| Clear | Enables to clear the TPM owner information and returns the TPM to the default state.<br>By default, the **Clear** option is disabled. |
| PPI ByPass for Clear Commands | Controls the TPM Physical Presence Interface (PPI). |

### Table 33. System setup options—Security menu (continued)

| Security | |
|---|---|
| | By default, the **PPI ByPass for clear Commands** option is disabled. |
| **Chassis intrusion** | Controls the chassis intrusion feature.<br>By default, the option is disabled. |
| **SMM Security Mitigation** | Enable or disable SMM Security Mitigation.<br>By default, the option is enabled. |
| **Data Wipe on Next Boot** | |
| Start Data Wipe | Enable or disable the data wipe on next boot.<br>By default, the option is disabled. |
| Absolute | Enable or disable or permanently disable the BIOS module interface of the optional Absolute Persistence Module service from Absolute software.<br>By default, the **Enable Absolute** option is enabled. |
| UEFI Boot Path Security | Controls whether or not the computer will prompt the user to enter the admin password (if set) when booting to a UEFI boot device from the F12 boot menu.<br>By default, the **Always Except Internal HDD** option is enabled. |
| **Authenticated BIOS Interface** | Enable or disables Authenticated BIOS interface.<br>By default, the **Authenticated BIOS interface** option is disabled. |
| Clear Certificate Store | Clears all certificates in KMS storage.<br>By default, the **Clear Certificate Store** option is disabled. |
| **Legacy Manageability Interface Access** | Allows the platform administrator to control access via the Legacy Manageability Interface when Authenticated BIOS interface is enabled. This allows for the platform administrator to read and change BIOS settings through the Legacy Manageability Interface.<br>By default, the **Legacy Manageability Interface Access** option is enabled when **Authenticated BIOS Interface** is enabled.. |

### Table 34. System setup options—Passwords menu

| Passwords | |
|---|---|
| **Admin Password** | Set, change, or delete the administrator password. |
| **System Password** | Set, change, or delete the computer password. |
| **Internal HDD-0 Password** | Set, change, or delete the Internal HDD-0 password. |
| **NVMe SSD0** | Set, change, or delete the NVMe SSD0 password. |
| **Password Configuration** | |
| Upper Case Letter | Reinforces password must have at least one upper case letter.<br>By default, the option is disabled. |
| Lower Case Letter | Reinforces password must have at least one lower case letter.<br>By default, the option is disabled. |
| Digit | Reinforces password must have at least one digit.<br>By default, the option is disabled. |
| Special Character | Reinforces password must have at least one special character.<br>By default, the option is disabled. |

### Table 34. System setup options—Passwords menu (continued)

| Passwords | |
|---|---|
| Minimum Characters | Set the minimum characters allowed for password. |
| Password Bypass | When enabled, this always prompts for computer and internal hard drive passwords when powered on from the off state.<br>By default, the **Disabled** option is enabled. |
| **Password Changes** | |
| Enable Non-Admin Password Changes | Enable or disable to change computer and hard drive password without the need for admin password.<br>By default, the option is enabled. |
| **Admin Setup Lockout** | |
| Enable Admin Setup Lockout | Enables administrators control over how their users can or cannot access BIOS setup.<br>By default, the option is disabled. |
| **Master Password Lockout** | |
| Enable Master Password Lockout | When enabled, this will disable the master password support.<br>By default, the option is disabled. |
| **Allow Non-Admin PSID Revert** | |
| Enable Allow Non-Admin PSID Revert | Controls access to the Physical Security ID (PSID) revert of NVMe hard-drives from the Dell Security Manager prompt.<br>By default, the option is disabled. |

### Table 35. System setup options—Update, Recovery menu

| Update, Recovery | |
|---|---|
| **UEFI Capsule Firmware Updates** | Enable or disable BIOS updates through UEFI capsule update packages.<br>By default, the option is enabled. |
| **BIOS Recovery from Hard Drive** | Enables the user to recover from certain corrupted BIOS conditions from a recovery file on the user primary hard drive or an external USB key.<br>By default, the option is enabled. |
| **BIOS Downgrade** | |
| Allow BIOS Downgrade | Enable or disable the flashing of the computer firmware to previous revision is blocked.<br>By default, the option is enabled. |
| **SupportAssist OS Recovery** | Enable or disable the boot flow for SupportAssist OS Recovery tool in the event of certain computer errors.<br>By default, the option is enabled. |
| **BIOSConnect** | Enable or disable cloud Service OS recovery if the main operating system fails to boot with the number of failures equal to or greater than the value specified by the Auto OS Recovery Threshold setup option and local Service OS does not boot or is not installed.<br>By default, the option is enabled. |
| **Dell Auto OS Recovery Threshold** | Controls the automatic boot flow for SupportAssist System Resolution Console and for Dell OS Recovery Tool.<br>By default, the threshold value is set to 2. |

### Table 36. System setup options—System Management menu

| System Management | |
|---|---|
| **Service Tag** | Display the Service Tag of the computer. |
| **Asset Tag** | Create a computer Asset Tag. |
| **Wake on LAN/WLAN** | Enable or disable the computer to power on by special LAN signals when it receives a wakeup signal from the WLAN.<br>By default, the **Disabled** option is selected. |
| **Auto on Time** | Configure the computer to turn on automatically every day or on a preselected date and time. This option can be configured only if the Auto On Time is set to Everyday, Weekdays, or Selected Days.<br>By default, the option is disabled. |
| **Intel AMT Capability** | |
| Enable Intel AMT Capability | Enable or disable the Intel AMT capability.<br>By default, the **Restrict MEBx Access** option is enabled. |
| **MEBx Hotkey** | Enable or disable MEBx hotkey.<br>By default, the option is disabled. |
| **USB Provision** | |
| Enable USB Provision | Enable or disable the Intel AMT provisioning using the local provisioning file through a USB storage device.<br>By default, the option is disabled. |
| **SERR Messages** | Enable or disable SERR messages.<br>By default, the option is enabled. |
| **First Power On Date** | Set ownership date<br>By default, the option is disabled. |
| **Diagnostics** | Enables OS agent request to schedule onboard diagnostics.<br>By default, the option is enabled. |
| **Power-On-Self-Test Automatic Recovery** | Enables automatic recovery when the computer becomes unresponsibe when performing a BIOS Power-On-Self-Test (POST). This may revert BIOS settings to a recoverable state.<br>By default, the option is enabled. |

### Table 37. System setup options—Keyboard menu

| Keyboard | |
|---|---|
| **Keyboard Errors** | |
| Enable Keyboard Error Detection | Enable or disable the keyboard error detection.<br>By default, the option is enabled. |
| **Numlock LED** | |
| Enable Numlock LED | Enable or disable Numlock LED.<br>By default, the option is enabled. |
| **Device Configuration Hotkey Access** | |
| Device Configuration Hotkey Access | Enable or disable users to access device configuration by using hotkeys.<br>By default, the option is enabled. |

### Table 38. System setup options—Pre-boot Behavior menu

| Pre-boot Behavior | |
|---|---|
| **Adapter Warnings** | Enable or disable adapter warnings to display a warning message if a power adapter with too little power capacity is detected.<br>By default, the **Adapter Warnings** option is enabled. |
| **Warning and Errors** | Enable or disable the action to be done when a warning or error is encountered.<br>By default, the **Prompt on Warnings and Errors** option is enabled. |
| **Fastboot** | Configure the speed of the boot process.<br>By default, the **Thorough** option is enabled. |
| **Extend BIOS POST Time** | Set the BIOS POST time.<br>By default, the **0 seconds** option is enabled. |

### Table 39. System setup options—Virtualization menu

| Virtualization | |
|---|---|
| **Intel Virtualization Technology** | |
| Enable Intel Virtualization Technology (VT) | Specify whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities that are provided by Intel Virtualization Technology.<br>By default, the option is enabled. |
| **VT for Direct I/O** | Specify whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities that are provided by Intel Virtualization Technology for Direct I/O.<br>By default, the option is enabled. |
| **Intel Trusted Execution Technology (TXT)** | |
| Enable Intel Trusted Execution Technology (TXT) | Specifies whether a measured Virtual Machine Monitor (MVMM) can utilize the additional hardware capabilities that are provided by Intel Trusted Execution Technology.<br>By default, the option is disabled. |
| **DMA Protection** | |
| Enable Pre-Boot DMA support. | Controls Pre-Boot DMA protection for both internal and external ports.<br>By default, the option is enabled. |
| Enable OS Kernel DMA support | If the operating system supports DMA protection this setting will indicate to the operating system that the BIOS supports Kernel DMA protection.<br>By default, the option is enabled. |

### Table 40. System setup options—Performance menu

| Performance | |
|---|---|
| **Multi-Core Support** | |
| Active Cores | Configure the number of CPU cores available to the operating system.<br>By default, the **All Cores** options are enabled. |
| Multiple Atom Cores | Allows you to change the number of Atom cores available to the operating system.<br>By default, the **All Cores** options are enabled. |
| **Intel SpeedStep** | |

**Table 40. System setup options—Performance menu (continued)**

| Performance | |
|---|---|
| Enable Intel SpeedStep Technology | Enables the computer to dynamically adjust processor voltage and core frequency, decreasing average power consumption and heat production.<br>By default, the option is enabled. |
| **C-States Control** | |
| Enable C-State Control | Enable or disable additional processor sleep states.<br>By default, the option is enabled. |
| **Intel Turbo Boost Technology** | |
| Enable Intel Turbo Boost Technology | Enable or disable Intel TurboBoost mode of the processor.<br>By default, the option is enabled. |
| **Intel Hyper-Threading Technology** | |
| Enable Intel Hyper-Threading Technology | Enable or disable Hyper-Threading in the processor.<br>By default, the option is enabled. |
| **PCIe Resizable Base Address Register (BAR)** | |
| Enable PCIe Resizable Base Address Register (BAR) support | Enable or disable PCIe Resizable BAR in the processor.<br>By default, the option is disabled. |

**Table 41. System setup options—System Logs menu**

| System Logs | |
|---|---|
| **BIOS Event Log** | |
| Clear BIOS Event Log | Display BIOS events.<br>By default, the **Keep log** option is enabled. |

# Updating the BIOS

## Updating the BIOS in Windows

### About this task

**CAUTION: If BitLocker is not suspended before updating the BIOS, the BitLocker key is not recognized the next time you reboot the computer. You will then be prompted to enter the recovery key to proceed, and the computer displays a prompt for the recovery key on each reboot. Failure to provide the recovery key can result in data loss or an operating system reinstall. For more information, see the Knowledge Base Resource updating the BIOS on Dell systems with BitLocker enabled.**

### Steps

1. Go to Dell Support Site.
2. Go to **Identify your product or search support**. In the box, enter the product identifier, model, service request or describe what you are looking for, and then click **Search**.

   **NOTE:** If you do not have the Service Tag, use the SupportAssist to automatically identify your computer. You can also use the product ID or manually browse for your computer model.

3. Click **Drivers & Downloads**. Expand **Find drivers**.
4. Select the operating system installed on your computer.

5. In the **Category** drop-down list, select **BIOS**.
6. Select the latest version of BIOS, and click **Download** to download the BIOS file for your computer.
7. After the download is complete, browse the folder where you saved the BIOS update file.
8. Double-click the BIOS update file icon and follow the on-screen instructions.
   For more information, search in the Knowledge Base Resource at Dell Support Site.

## Updating the BIOS in Linux and Ubuntu

To update the system BIOS on a computer that is installed with Linux or Ubuntu, see the knowledge base article 000131486 at Dell Support Site.

## Updating the BIOS using the USB drive in Windows

**About this task**

**CAUTION: If BitLocker is not suspended before updating the BIOS, the BitLocker key is not recognized the next time you reboot the computer. You will then be prompted to enter the recovery key to proceed, and the computer displays a prompt for the recovery key on each reboot. Failure to provide the recovery key can result in data loss or an operating system reinstall. For more information, see the Knowledge Base Resource updating the BIOS on Dell systems with BitLocker enabled.**

**Steps**

1. Go to Dell Support Site.
2. Go to **Identify your product or search support**. In the box, enter the product identifier, model, service request or describe what you are looking for, and then click **Search**.

   **NOTE:** If you do not have the Service Tag, use the SupportAssist to automatically identify your computer. You can also use the product ID or manually browse for your computer model.

3. Click **Drivers & Downloads**. Expand **Find drivers**.
4. Select the operating system installed on your computer.
5. In the **Category** drop-down list, select **BIOS**.
6. Select the latest version of BIOS, and click **Download** to download the BIOS file for your computer.
7. Create a bootable USB drive. For more information, search in the Knowledge Base Resource at Dell Support Site.
8. Copy the BIOS setup program file to the bootable USB drive.
9. Connect the bootable USB drive to the computer that needs the BIOS update.
10. Restart the computer and press **F12**.
11. Select the USB drive from the **One Time Boot Menu**.
12. Type the BIOS setup program filename and press **Enter**.
    The **BIOS Update Utility** appears.
13. Follow the on-screen instructions to complete the BIOS update.

## Updating the BIOS from the One-Time boot menu

You can run the BIOS flash update file from Windows using a bootable USB drive or you can also update the BIOS from the One-Time boot menu on the computer. To update your computers BIOS, copy the BIOS XXXX.exe file onto a USB drive formatted with the FAT32 file system. Then, restart your computer and boot from the USB drive using the One-Time Boot Menu.

**About this task**

**CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the computer it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress, and the computer will ask for this on each reboot. If the recovery key is not known this can result in data loss or an**

**unnecessary operating system reinstall. For more information about this subject, search in the Knowledge Base Resource at Dell Support Site.**

### BIOS Update

To confirm if the BIOS Flash Update is listed as a boot option, you can boot your computer to the **One Time Boot** Menu. If the option is listed, then the BIOS can be updated using this method.

To update your BIOS from the One-Time boot menu, you need the following:

- USB drive formatted to the FAT32 file system (the drive does not have to be bootable)
- BIOS executable file that you downloaded from the Dell Support website and copied to the root of the USB drive
- AC power adapter must be connected to the computer
- A functional computer battery to flash the BIOS

Perform the following steps to update the BIOS from the One-Time boot menu:

**CAUTION: Do not turn off the computer during the BIOS flash update process. The computer may not boot if you turn off your computer.**

### Steps

1. Turn off the computer, insert the USB drive that contains the BIOS flash update file.
2. Turn on the computer and press **F12** to access the **One Time Boot** Menu. Select **BIOS Update** using the mouse or arrow keys then press Enter.
   The flash BIOS menu is displayed.
3. Click **Flash from file**.
4. Select the external USB device.
5. Select the file and double-click the flash target file, and then click **Submit**.
6. Click **Update BIOS**. The computer restarts to flash the BIOS.
7. The computer will restart after the BIOS flash update is completed.

# System and setup password

**CAUTION: The password features provide a basic level of security for the data on your computer.**

**CAUTION: Ensure that your computer is locked when it is not in use. Anyone can access the data that is stored on your computer, when left unattended.**

**Table 42. System and setup password**

| Password type | Description |
|---|---|
| System password | Password that you must enter to boot to your operating system. |
| Setup password | Password that you must enter to access and change the BIOS settings of your computer. |

You can create a system password and a setup password to secure your computer.

**NOTE:** The System and setup password feature is disabled by default.

## Assigning a System Setup password

### Prerequisites

You can assign a new System or Admin Password only when the status is set to **Not Set**. To enter BIOS System Setup, press F2 immediately after a power-on or reboot.

### Steps

1. In the **System BIOS** or **System Setup** screen, select **Security** and press Enter.
   The **Security** screen is displayed.
2. Select **System/Admin Password** and create a password in the **Enter the new password** field.
   Use the following guidelines to create the system password:
   - Password can be up to 32 characters.
   - Password must contain at least one special character: "( ! " # $ % & ' * + , - . / : ; < = > ? @ [ \ ] ^ _ ` { | } )"
   - The password can contain numbers from 0 to 9.
   - The password can contain alphabets A to Z and a to z.
3. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
4. Press Y to save the changes.
   The computer restarts.

## Deleting or changing an existing system password or setup password

### Prerequisites

Ensure that the **Password Status** is Unlocked in the System Setup before attempting to delete or change the existing system password and/or setup password. You cannot delete or change an existing system password or setup password if the **Password Status** is Locked. To enter the System Setup, press F2 immediately after a power-on or reboot.

### Steps

1. In the **System BIOS** or **System Setup** screen, select **System Security** and press Enter.
   The **System Security** screen is displayed.
2. In the **System Security** screen, verify that the **Password Status** is Unlocked.
3. Select **System Password**. Update or delete the existing system password, and press Enter or Tab.
4. Select **Setup Password**. Update or delete the existing setup password, and press Enter or Tab.

   **NOTE:** If you change the system password and/or setup password, reenter the new password when prompted. If you delete the system password and/or setup password, confirm the deletion when prompted.

5. Press Esc. A message prompts you to save the changes.
6. Press Y to save the changes and exit from **System Setup**.
   The computer restarts.

# Clearing system and setup passwords

### About this task

To clear the system or setup passwords, contact Dell technical support as described at Contact Support.

**NOTE:** For information about how to reset Windows or application passwords, see the documentation accompanying Windows or your application.

# 11

# Troubleshooting

## Dell SupportAssist Pre-boot System Performance Check diagnostics

**About this task**

SupportAssist diagnostics (also known as system diagnostics) performs a complete check of your hardware. The Dell SupportAssist Pre-boot System Performance Check diagnostics is embedded within the BIOS and launched by the BIOS internally. The embedded system diagnostics provides options for particular devices or device groups allowing you to:

- Run tests automatically or in an interactive mode.
- Repeat the tests.
- Display or save test results.
- Run thorough tests to add more options and obtain details about any failed devices.
- View status messages that inform you when the tests are completed successfully.
- View error messages that inform you of problems encountered during testing.

**NOTE:** Some tests for specific devices require user interaction. Always ensure that you are present at the computer when the diagnostic tests are performed.

For more information, see the knowledge base article 000181163.

### Running the SupportAssist Pre-Boot System Performance Check

**Steps**

1. Turn on your computer.
2. As the computer boots, press the F12 key.
3. On the boot menu screen, select **Diagnostics**.
   The diagnostic quick test begins.
   **NOTE:** For more information about running the SupportAssist Pre-Boot System Performance Check on a specific device, see Dell Support Site.
4. If there are any issues, error codes are displayed.
   Note the error code and validation number and contact Dell.

## Power-Supply Unit Built-in Self-Test

Built-in Self-Test (BIST) helps determine if the power-supply unit is working. To run self-test diagnostics on the power-supply unit of a desktop or all-in-one computer, search in the Knowledge Base Resource at Dell Support Site.

## System-diagnostic lights

This section lists the system-diagnostic lights of your OptiPlex Micro 7010.

**Table 43. Diagnostic LED behavior**

| Blinking pattern | | Problem description |
|---|---|---|
| **Amber** | **White** | |
| 1 | 2 | Unrecoverable SPI Flash Failure |

**Table 43. Diagnostic LED behavior (continued)**

| Blinking pattern | | Problem description |
|---|---|---|
| **Amber** | **White** | |
| 2 | 1 | CPU failure |
| 2 | 2 | System board failure (included BIOS corruption or ROM error) |
| 2 | 3 | No memory/RAM detected |
| 2 | 4 | Memory/RAM failure |
| 2 | 5 | Invalid memory installed |
| 2 | 6 | System board/Chipset Error/Clock failure/Gate A20 failure/Super I/O failure/Keyboard controller failure |
| 3 | 1 | CMOS battery failure |
| 3 | 2 | PCI or Video card/chip failure |
| 3 | 3 | BIOS Recovery image not found |
| 3 | 4 | BIOS Recovery image found but invalid |
| 3 | 5 | Power rail failure |
| 3 | 6 | SBIOS Flash corruption |
| 3 | 7 | Intel ME (Management Engine) Error |
| 4 | 1 | Memory DIMM power rail failure |
| 4 | 2 | CPU Power Cable Connection Issue |

# Recovering the operating system

When your computer is unable to boot to the operating system even after repeated attempts, it automatically starts Dell SupportAssist OS Recovery.

Dell SupportAssist OS Recovery is a stand-alone tool that is preinstalled in Dell computers running the Windows operating system. It consists of tools to diagnose and troubleshoot issues that may occur before your computer boots to the operating system. It enables you to diagnose hardware issues, repair your computer, back up your files, and restore your computer to its factory state.

You can also download it from the Dell Support website to troubleshoot and fix your computer when it fails to boot into the primary operating system due to software or hardware failures.

For more information about the Dell SupportAssist OS Recovery, see *Dell SupportAssist OS Recovery User's Guide* at Serviceability Tools at the Dell Support Site. Click **SupportAssist** and then click **SupportAssist OS Recovery**.

**NOTE:** Windows 11 IoT Enterprise LTSC 2024 and Dell ThinOS 10 do not support Dell SupportAssist. For more information about recovering ThinOS 10, see Recovery mode using R-Key.

# Real-Time Clock—RTC reset

The Real-Time Clock (RTC) reset function allows you or the service technician to recover the recently launched model Dell Pro and Pro Max computers from **No POST/No Boot/No Power** situations. You can initiate the RTC reset on the computer from a power-off state only if it is connected to AC power. Press and hold the power button for 25 seconds. The system RTC reset occurs after you release the power button.

**NOTE:** If AC power is disconnected from the computer during the process or the power button is held longer than 40 seconds, the RTC reset process gets aborted.

The RTC reset will reset the BIOS to its default settings, disable Intel vPro, and reset the computer date and time. The following items are not affected by the RTC reset:

- Service Tag
- Asset Tag
- Ownership Tag
- Admin Password
- System Password
- Storage Password
- Key Databases
- System Logs

**NOTE:** The IT administrator's vPro account and password on the computer will be unprovisioned. The computer must go through the setup and configuration process again to reconnect it to the vPro server.

The below items may or may not be reset based on your custom BIOS setting selections:

- Boot List
- Enable Legacy Option ROMs
- Secure Boot Enable
- Allow BIOS Downgrade

# Backup media and recovery options

It is recommended to create a recovery drive to troubleshoot and fix problems that may occur with Windows. Dell provides multiple options for recovering the Windows operating system on your Dell computer. For more information, see Dell Windows Backup Media and Recovery Options.

# Network power cycle

### About this task

If your computer is unable to access the Internet due to network connectivity issues, reset your network devices by performing the following steps:

### Steps

1. Turn off the computer.
2. Turn off the modem.
   **NOTE:** Some Internet service providers (ISPs) provide a modem and router combo device.
3. Turn off the wireless router.
4. Wait for 30 seconds.
5. Turn on the wireless router.
6. Turn on the modem.
7. Turn on the computer.

# 12

# Getting help and contacting Dell

## Self-help resources

You can get information and help on Dell products and services using these self-help resources:

**Table 44. Self-help resources**

| Self-help resources | Resource location |
|---|---|
| Information about Dell products and services | Dell Site |
| Tips |  |
| Contact Support | In Windows search, type `Contact Support`, and press Enter. |
| Online help for operating system | Windows Support Site<br>Linux Support Site |
| Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals, and documents. | Your Dell computer is uniquely identified using a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at Dell Support Site.<br>For more information about how to find the Service Tag for your computer, see Locate the Service Tag on your computer. |
| Dell knowledge base articles | 1. Go to Dell Support Site.<br>2. On the menu bar at the top of the Support page, select **Support** > **Support Library**.<br>3. In the Search field on the Support Library page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles. |

## Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see Dell Support Site.

**NOTE:** Availability of the services may vary depending on the country or region, and product.

**NOTE:** If you do not have an active Internet connection, you can find contact information in your purchase invoice, packing slip, bill, or Dell product catalog.