

Dell Pro Essential Micro PVM1265

Service Manual

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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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 is 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 laptops, 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.

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 from the 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.

 **NOTE:** You can protect against ESD and discharge static electricity from your body by touching a metal-grounded object before you interact with anything electronic, for example, an unpainted metal surface on your computer's I/O panel. When connecting a peripheral (including handheld digital assistants) to your computer, you should always ground both yourself and the peripheral before connecting it to the computer. In addition, as you work inside the computer, periodically touch a metal-grounded object to remove any static charge that your body may have accumulated.

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 the ESD Field Service kit is deployed, conduct an evaluation of the site to ensure proper setup and readiness. 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** – If an anti-static mat is not being used, the wrist strap and bonding wire should be connected directly between your wrist and an exposed metal part of the hardware. If you are using an anti-static mat, connect the wrist strap and bonding wire to the anti-static mat to ensure protection for any hardware 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 ESD kit, it is recommended to test the wrist strap regularly—ideally before each service session, and at a minimum, once per week. The most reliable method for testing is with a wrist strap tester. To perform the test, connect the bonding wire of the wrist strap to the tester while wearing the strap. Press the test button to initiate the check. A green LED indicates a successful test, while a red LED and audible alarm signal a failure.

 **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.

Information on repairability for Québec - From Dell Canada Inc. - to Quebec consumers

Dell does not guarantee the availability of replacement parts, repair services, or information necessary for maintenance or repair.

BitLocker

When updating the BIOS on a computer with BitLocker enabled, consider the following precautions.

 **CAUTION:** If BitLocker is not suspended before updating the BIOS, the BitLocker key will not be recognized the next time that you reboot the computer. You are 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 1. Screw list

Component	Screw type	Quantity	Screw image
Side cover	#6-32	1	
M.2 2230 solid-state drive in a single SSD configuration	M2x3.5	2	
M.2 2280 solid-state drive in a single SSD configuration	M2x3.5	1	
M.2 2230 solid-state drive in a dual SSD configuration	M2x3.5	1	
	M2x6	1	
M.2 2280 solid-state drive in a dual SSD configuration	M2x3.5	1	
Wireless card	M2x3.5	1	
SMA antenna module	M3x3	1	
Heat sink	Captive	3	
System board/Speaker holder	M3x5	4	

Table 1. Screw list (continued)

Component	Screw type	Quantity	Screw image
System board/Wireless card	M3 Nutx4.8	1	

Major components of Dell Pro Essential Micro PVM1265

The following image shows the major components of Dell Pro Essential Micro PVM1265.

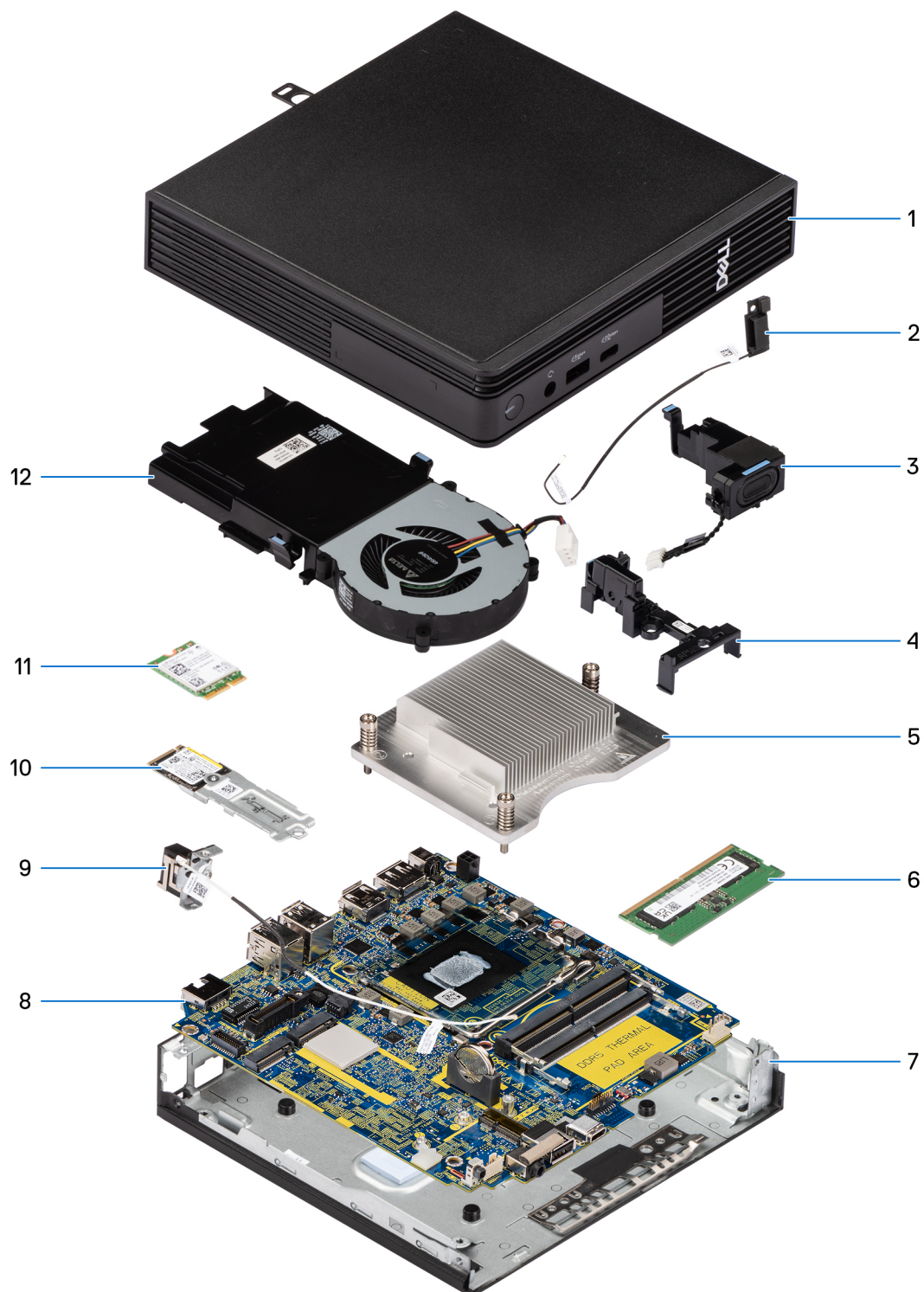


Figure 1. Major components of Dell Pro Essential Micro PVM1265

1. Side cover
2. Internal antenna module (black cable)
3. Speaker
4. Speaker holder
5. Heat sink
6. Memory module
7. Chassis
8. Motherboard
9. Front panel connector
10. Wi-Fi module
11. SSD
12. Cooling fan

8. System board
9. Internal antenna module (white cable)
10. Solid-state drive assembly
11. Wireless card
12. Fan

 **NOTE:** Dell Technologies 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.

Customer Replaceable Units (CRUs) and Field Replaceable Units (FRUs) list

The replaceable components in Dell Pro Essential Micro PVM1265 are either Customer Replaceable Units (CRUs) or Field Replaceable Units (FRUs).

 **CAUTION:** CRUs may be replaced by the customer, following the safety precautions and replacement procedures.

 **CAUTION:** FRUs should be replaced by an authorized service technician, who is a trained technical repair specialist.

 **CAUTION:** Replacement of FRUs by persons other than authorized service technicians may result in damage to the computer or data loss.

 **NOTE:** Damages resulting from improper replacement or from failure to follow instructions are not covered by your warranty. Consider having a trained technical repair specialist perform replacements of FRU components.

Table 2. CRU and FRU list

Customer Replaceable Unit (CRU)	Field Replaceable Unit (FRU)
Solid-state drive	Fan assembly
Wireless card	Heat sink
Fan	Internal antenna module
Memory module	System board
External puck antenna	
SMA antenna module	

Removing and installing side cover

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

 **CAUTION:** CRUs may be replaced by the customer, following the safety precautions and replacement procedures.

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

Removing the side cover

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).

About this task

The following images indicate the location of the side cover and provide a visual representation of the removal procedure.

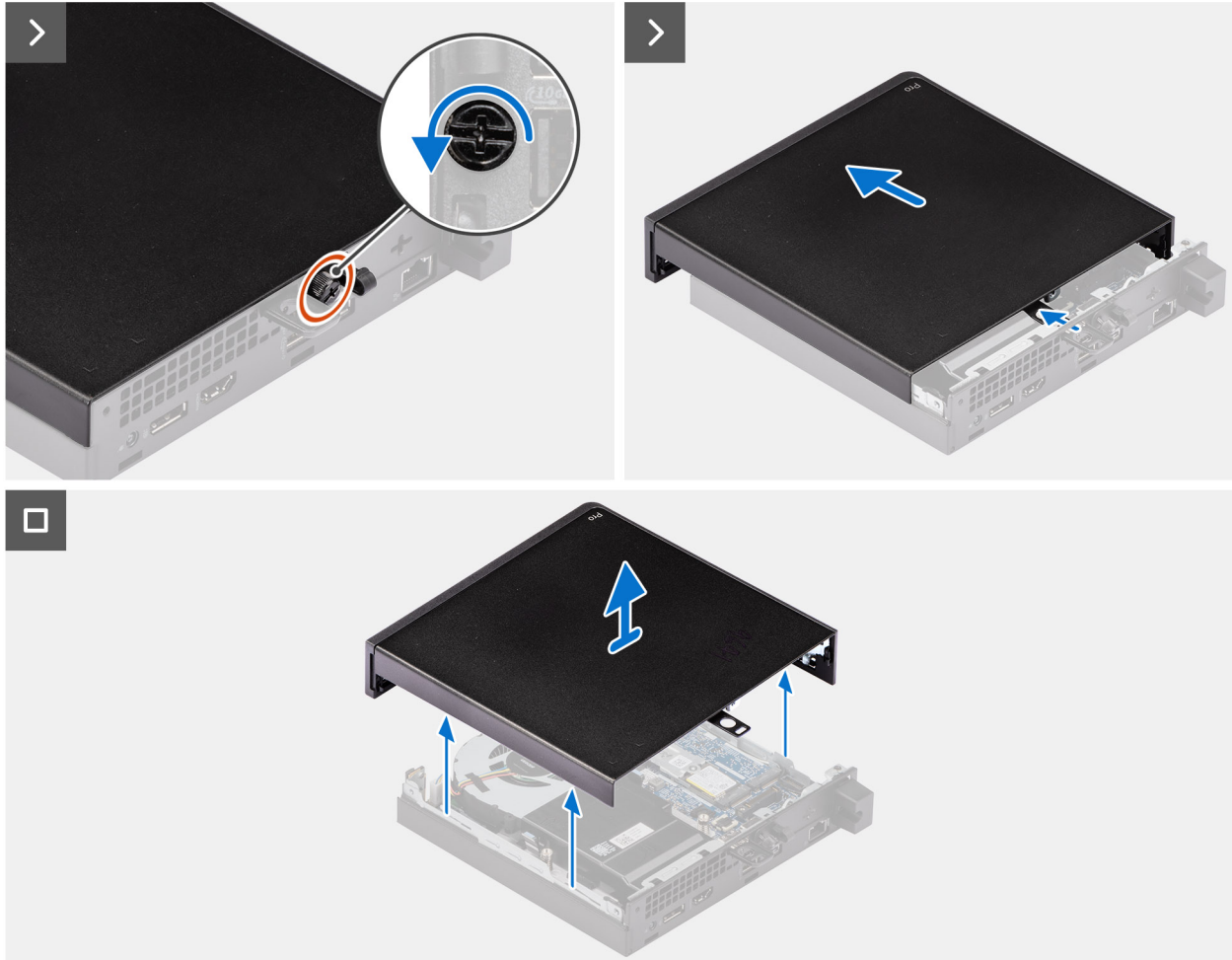


Figure 2. Removing the side cover

Steps

1. Place your computer on its side with the side cover facing up.
2. Loosen the thumbscrew (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 images indicate the location of the side cover and provide a visual representation of the installation procedure.

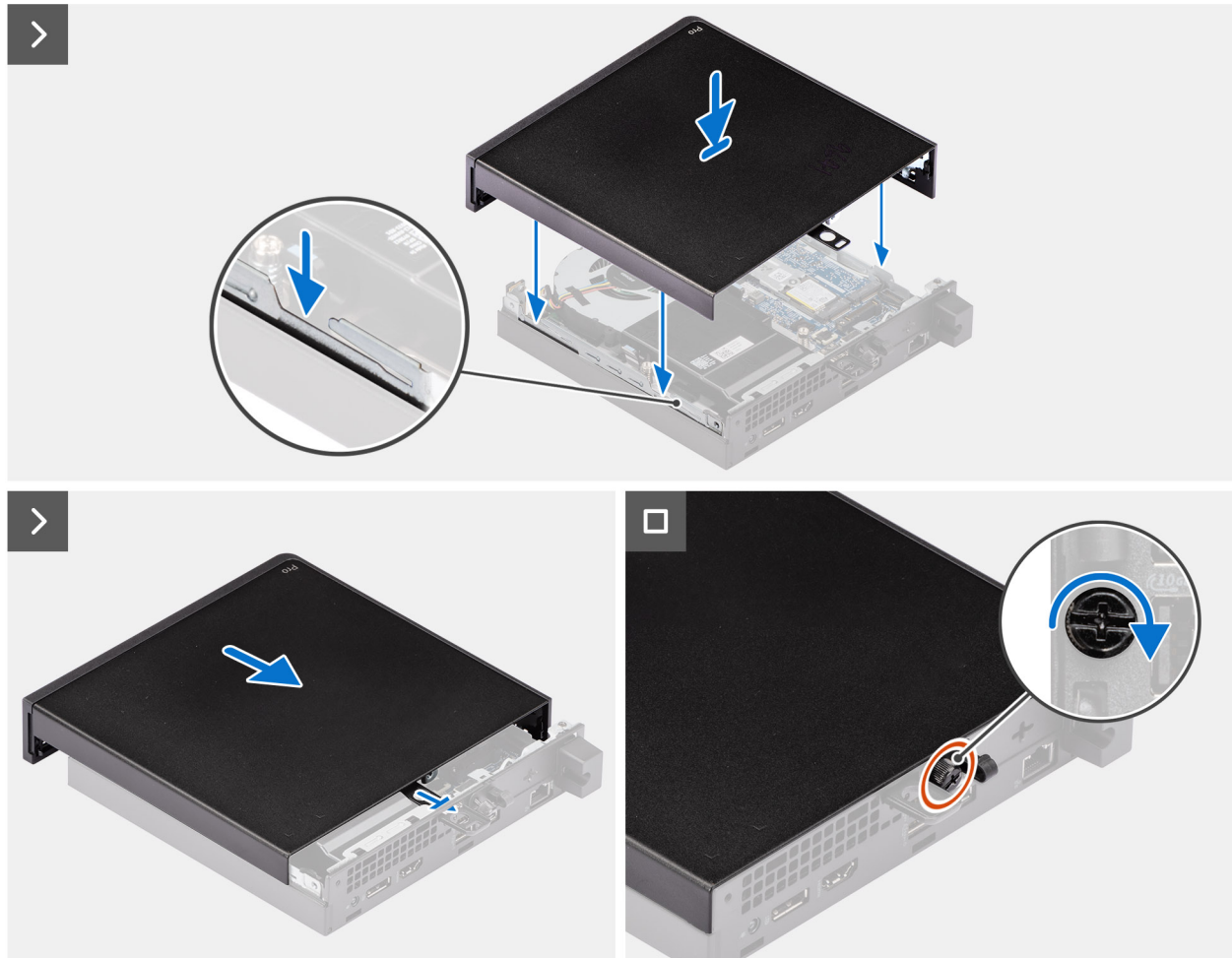


Figure 3. Installing the side cover

Steps

1. Align the tabs on the side cover with the slots on the chassis, then place the side cover onto the chassis.
2. Slide the side cover towards the rear of the chassis until it fully seats into place.
3. Tighten the thumbscrew (6x32) that secures the side cover to the chassis.

Next steps

1. Follow the procedure in [After working inside your computer.](#)

Removing and installing Customer Replaceable Units (CRUs)

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

 **CAUTION:** CRUs may be replaced by the customer, following the safety precautions and replacement procedures.

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

Coin-cell battery

Removing the coin-cell battery

 **CAUTION:** Removing the coin-cell battery clears the CMOS and resets BIOS settings.

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 coin-cell battery and provide a visual representation of the removal procedure.

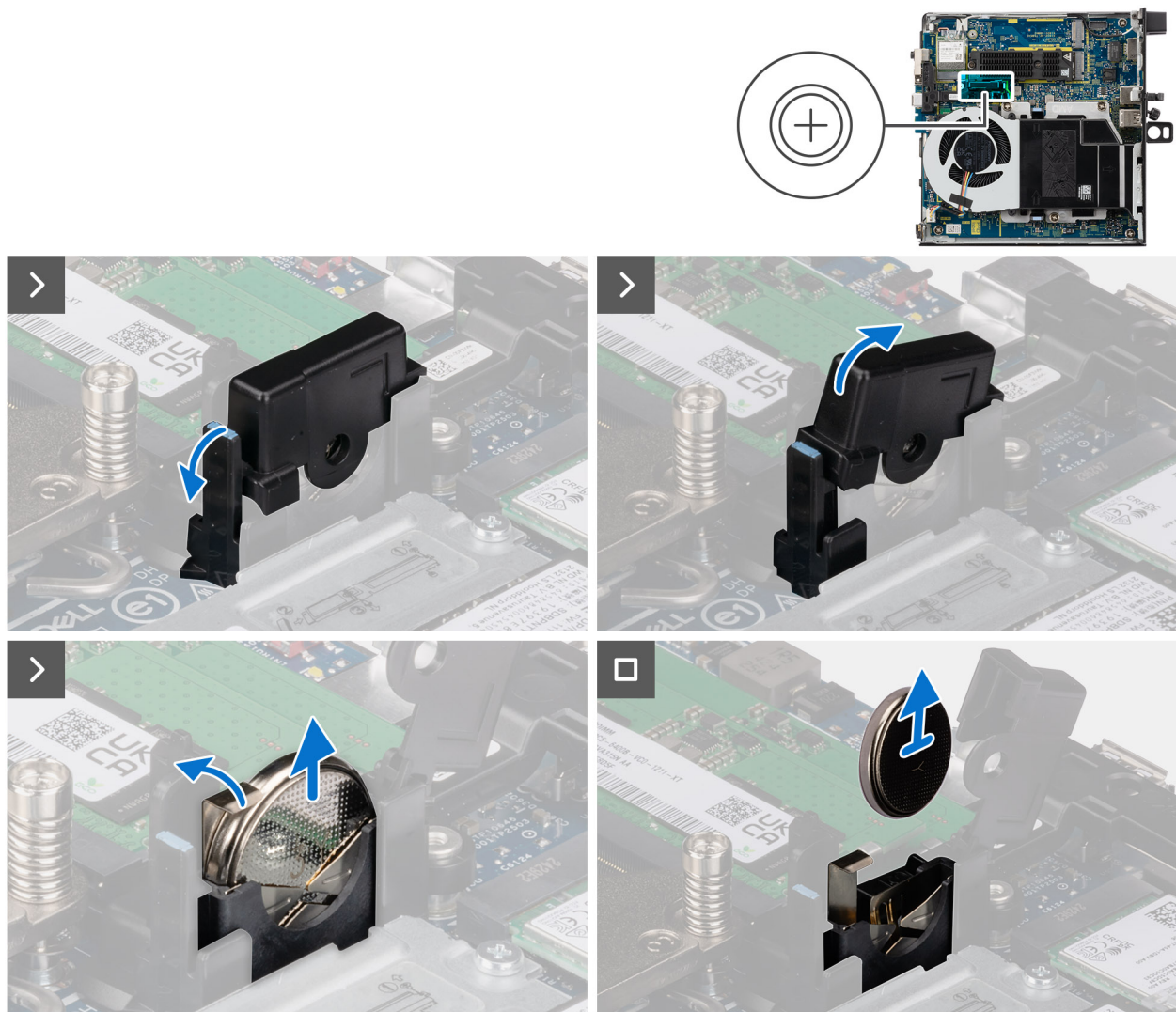


Figure 4. Removing the coin-cell battery

Steps

1. Pull the coin-cell battery-cover tab and rotate the coin-cell battery cover to access the coin-cell battery.
2. Press the coin-cell battery-release lever on the coin-cell battery socket and pull the coin-cell battery slightly upwards.
3. Lift and remove the coin-cell battery from the coin-cell battery socket.

Installing the coin-cell battery

Prerequisites

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

About this task

The following images indicate the location of the coin-cell battery and provide a visual representation of the installation procedure.

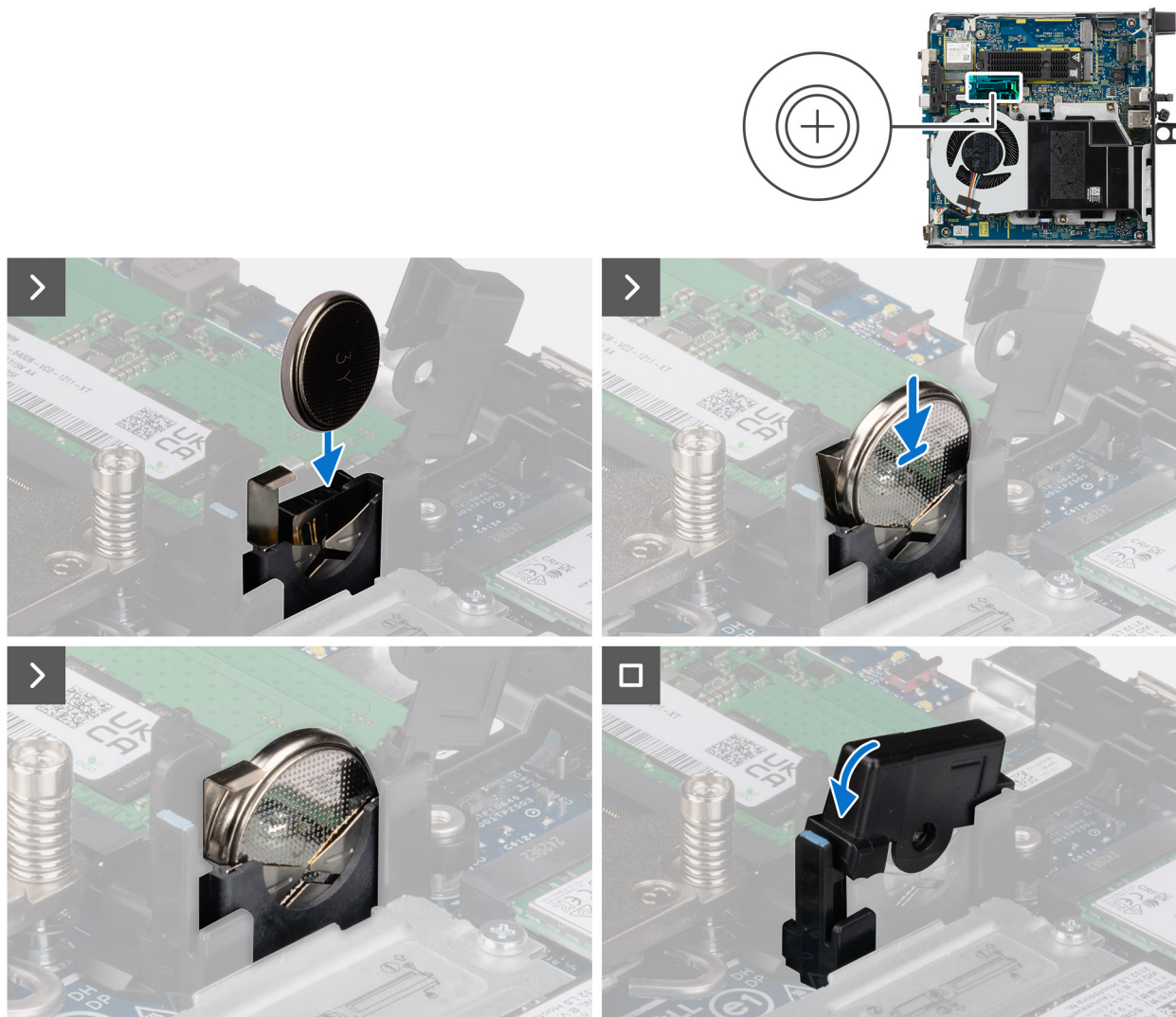


Figure 5. Installing the coin-cell battery

Steps

1. With the positive side (+) facing towards the front side of the computer, insert the coin-cell battery into the coin-cell battery socket and snap the battery into place.
2. Rotate and press the coin-cell battery cover until it snaps into its place.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Solid state drive

NOTE: Your computer supports two SSD configurations.

- **Single SSD configuration:** One SSD is installed in either of the two slots.
- **Dual SSD configuration:** SSDs are installed in both slots.

To upgrade from a single SSD configuration to a dual configuration by adding an SSD, users must install SSD thermal pads on both SSDs to ensure optimal performance. These thermal pads must be purchased separately.

Removing the M.2 2230 solid state drive in a single SSD configuration

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 M.2 2230 solid state drive and provide a visual representation of the removal procedure.

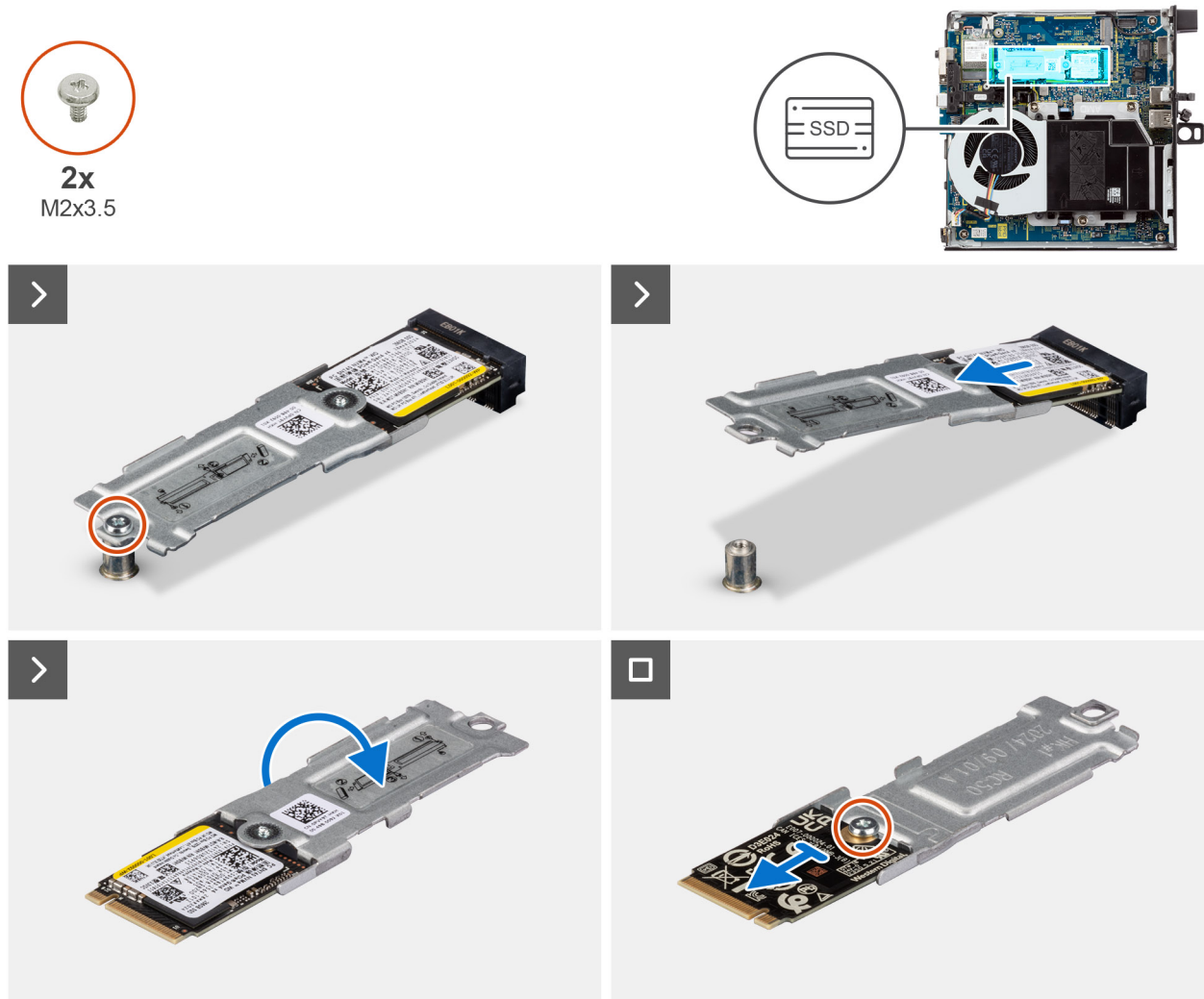


Figure 6. Removing the 2230 solid state drive

Steps

1. Remove the screw (M2x3.5) that secures the M.2 2230 solid state drive assembly to the system board.
2. Slide and lift the M.2 2230 solid state drive assembly off the solid state drive slot (M.2 PCIe SSD-0) on the system board.
3. Hold the M.2 2230 solid state drive assembly and flip it over.
4. Remove the screw (M2x3.5) that secures the M.2 2230 solid state drive to its bracket.
5. Slide the M.2 2230 solid state drive from its bracket.

Installing the M.2 2230 solid state drive in a single SSD configuration

Prerequisites

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

About this task

NOTE: Ensure that a thermal pad is installed in the solid state drive slot 1 (M.2 PCIe SSD-0) before installing the M.2 2230 solid state drive.

The following images indicate the location of the M.2 2230 solid state drive and provide a visual representation of the installation procedure.

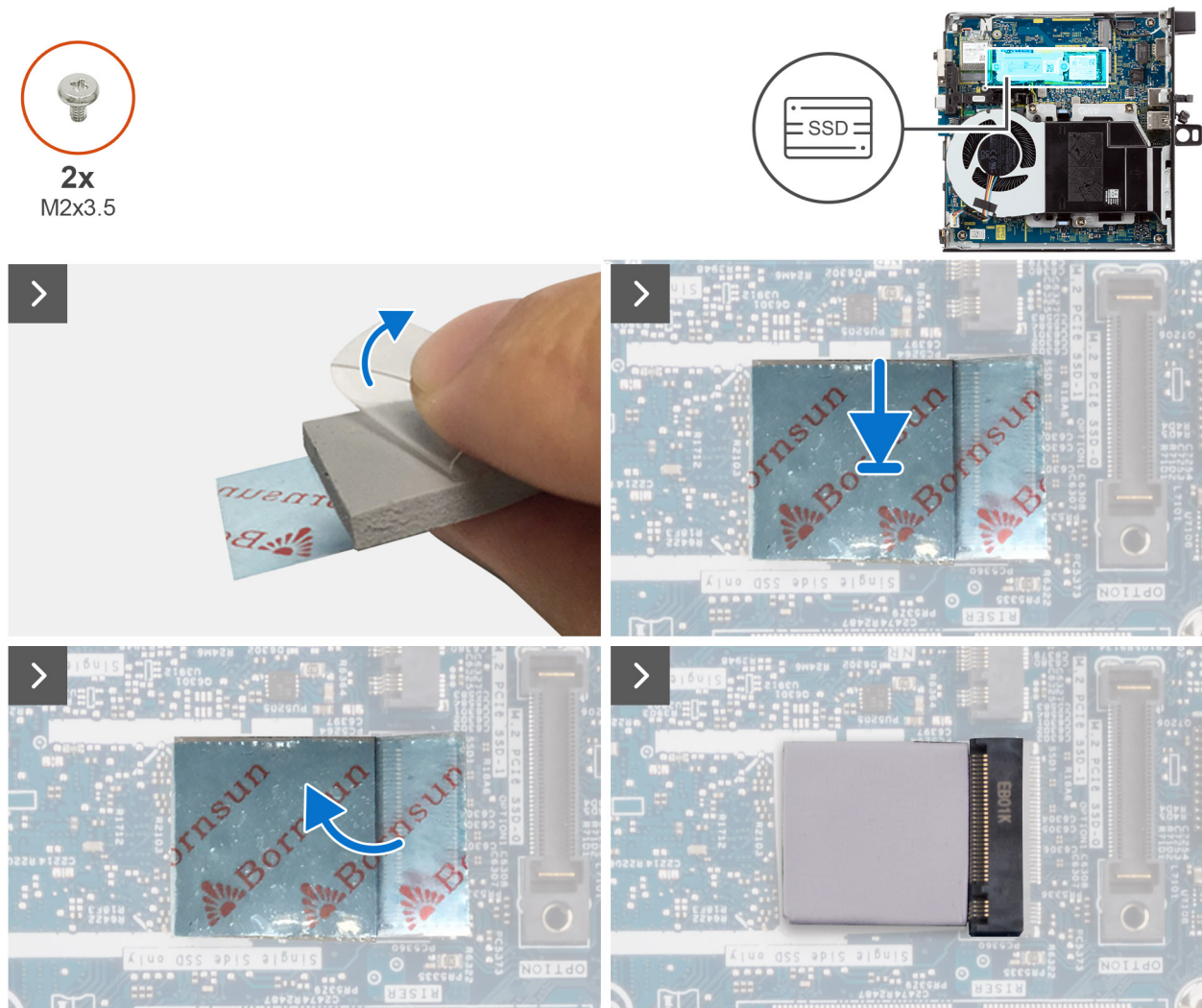


Figure 7. Installing the 2230 solid state drive

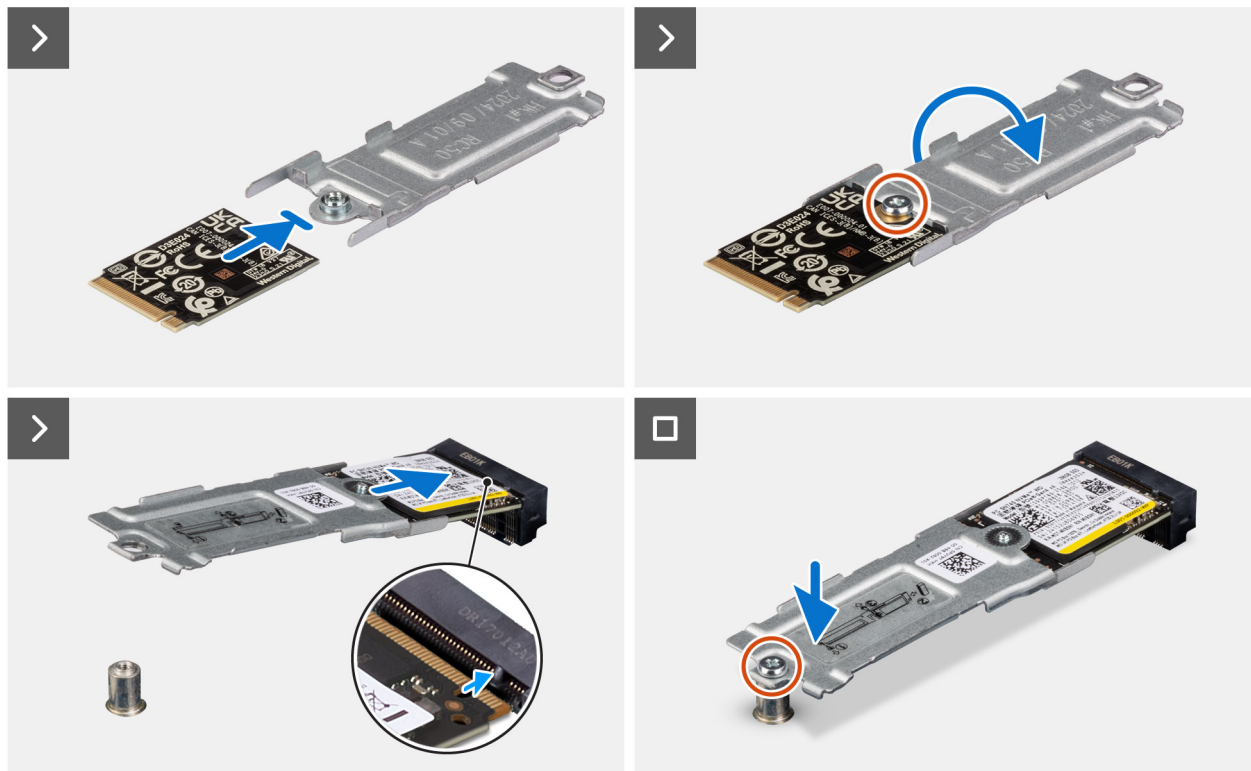


Figure 8. Installing the 2230 solid state drive

Steps

NOTE: Step 1 to Step 5 are applicable only to the installation of the SSD thermal pad on **Slot 1 (M.2 PCIe SSD-0)** of the system board.

1. Remove the plastic liner covering the solid state drive thermal pad, exposing the adhesive surface halfway.
2. Place the solid state drive thermal pad over the M.2 solid state drive thermal pad area, ensuring accurate alignment and secure positioning.
3. Remove the remaining plastic liner from the solid state drive thermal pad, and carefully apply the pad to the M.2 solid state drive thermal pad area, ensuring a secure and even bond.
4. Use a plastic scraper to gently press and flatten the solid state drive thermal pad onto the M.2 solid state drive thermal pad area, ensuring a smooth and even surface for optimal adhesion.
5. Remove the remaining plastic liner from the solid state drive thermal pad.
6. Align the screw hole on the M.2 2230 solid state drive with the screw hole on the solid state drive bracket.
7. Replace the screw (M2x3.5) that secures the M.2 2230 solid state drive to the solid state drive bracket and flip over the solid state drive assembly.
8. Align the notch on the M.2 2230 solid state drive with the tab on the solid state drive slot (M.2 PCIe SSD-0).
9. Slide the M.2 2230 solid state drive assembly into the solid state drive slot (M.2 PCIe SSD-0) on the system board.
10. Replace the screw (M2x3.5) that secures the M.2 2230 solid state drive assembly to the system board.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Removing the M.2 2280 solid state drive in a single SSD configuration

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 M.2 2280 solid state drive and provide a visual representation of the removal procedure.

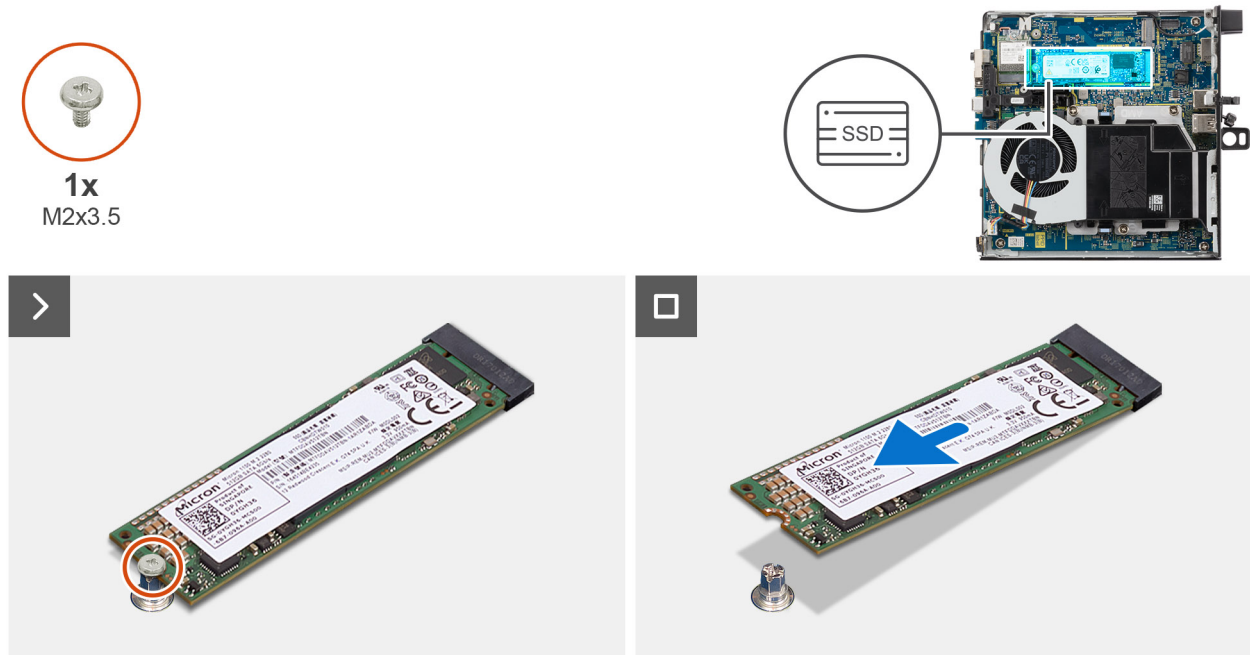


Figure 9. Removing the M.2 2280 solid state drive

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-0) on the system board.

Installing the M.2 2280 solid state drive in a single SSD configuration

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 in the solid state drive slot 1 (M.2 PCIe SSD 0).
- NOTE:** Ensure that a thermal pad is installed in the solid state drive slot 1 (M.2 PCIe SSD-0) before installing the M.2 2280 solid state drive.

The following images indicate the location of the M.2 2280 solid state drive and provide a visual representation of the installation procedure.

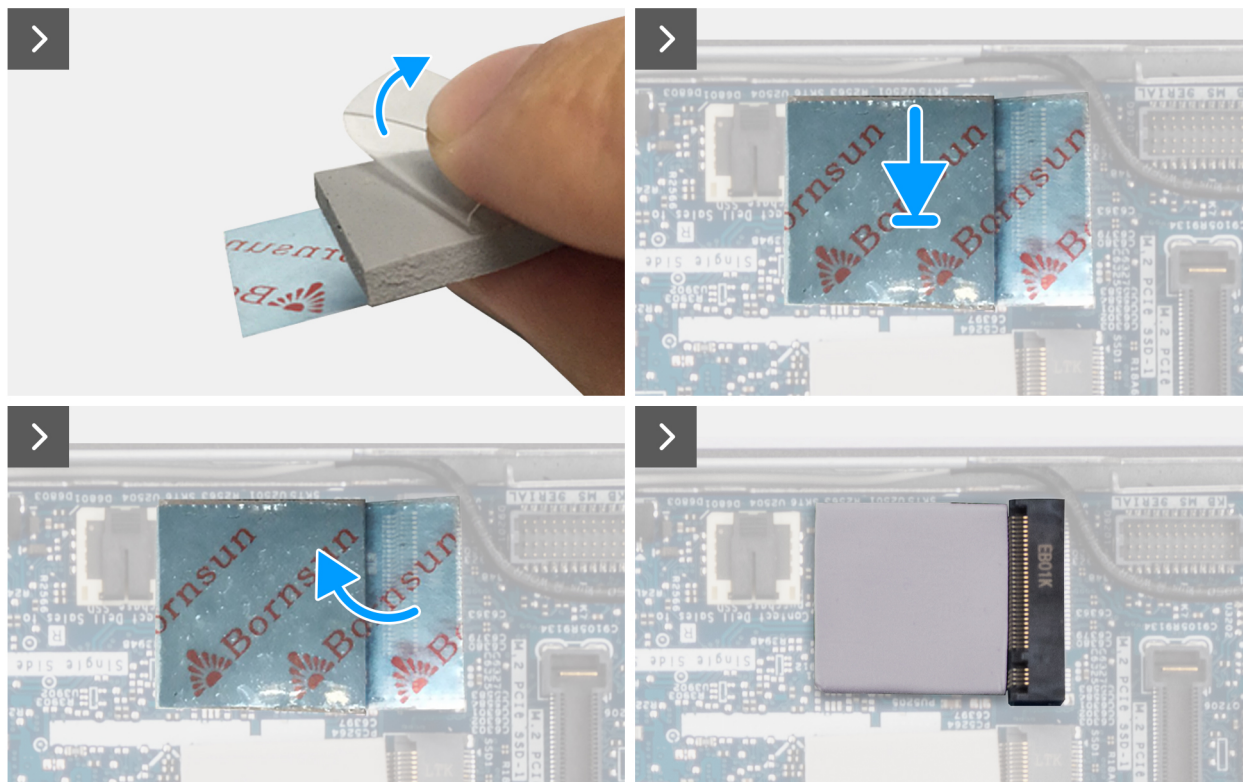
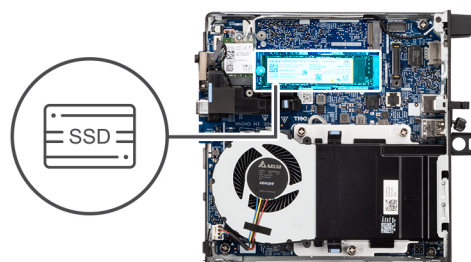


Figure 10. Installing the M.2 2280 solid state drive

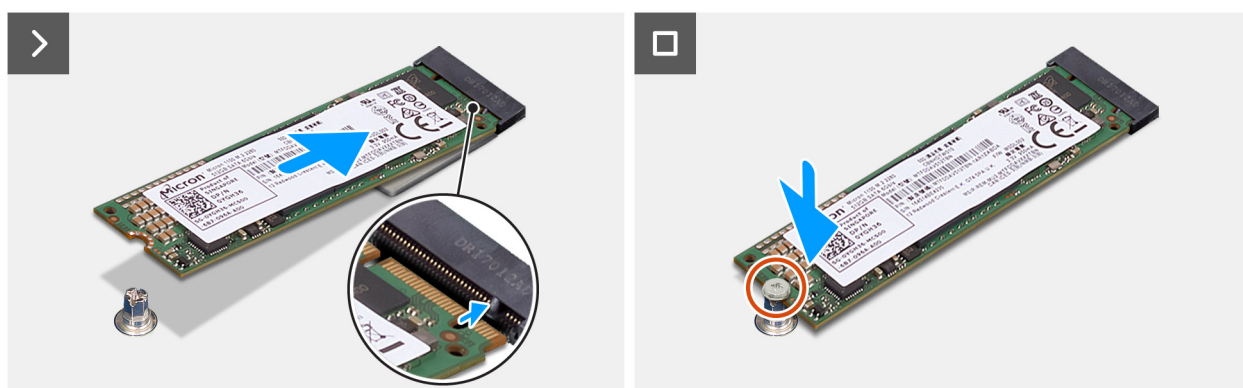


Figure 11. Installing the M.2 2280 solid state drive

Steps

NOTE: Step 1 to Step 5 are applicable only to the installation of the SSD thermal pad on **Slot 1 (M.2 PCIe SSD-0)** of the system board.

1. Remove the plastic liner covering the solid state drive thermal pad, exposing the adhesive surface halfway.
2. Place the solid state drive thermal pad over the M.2 solid state drive thermal pad area, ensuring accurate alignment and secure positioning.

3. Remove the remaining plastic liner from the solid state drive thermal pad, and carefully apply the pad to the M.2 solid state drive thermal pad area, ensuring a secure and even bond.
4. Use a plastic scraper to gently press and flatten the solid state drive thermal pad onto the M.2 solid state drive thermal pad area, ensuring a smooth and even surface for optimal adhesion.
5. Remove the remaining plastic liner from the solid state drive thermal pad.
6. Align the notch on the M.2 2280 solid state drive with the tab on the solid state drive slot (M.2 PCIe SSD-0).
7. Slide the M.2 2280 solid state drive into the solid state drive slot (M.2 PCIe SSD-0) on the system board.
8. Replace the screw (M2x3.5) that secures the M.2 2280 solid state drive to the system board.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Removing the M.2 2230 solid-state drive in a dual SSD configuration

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 SSD and provide a visual representation of the removal procedure.

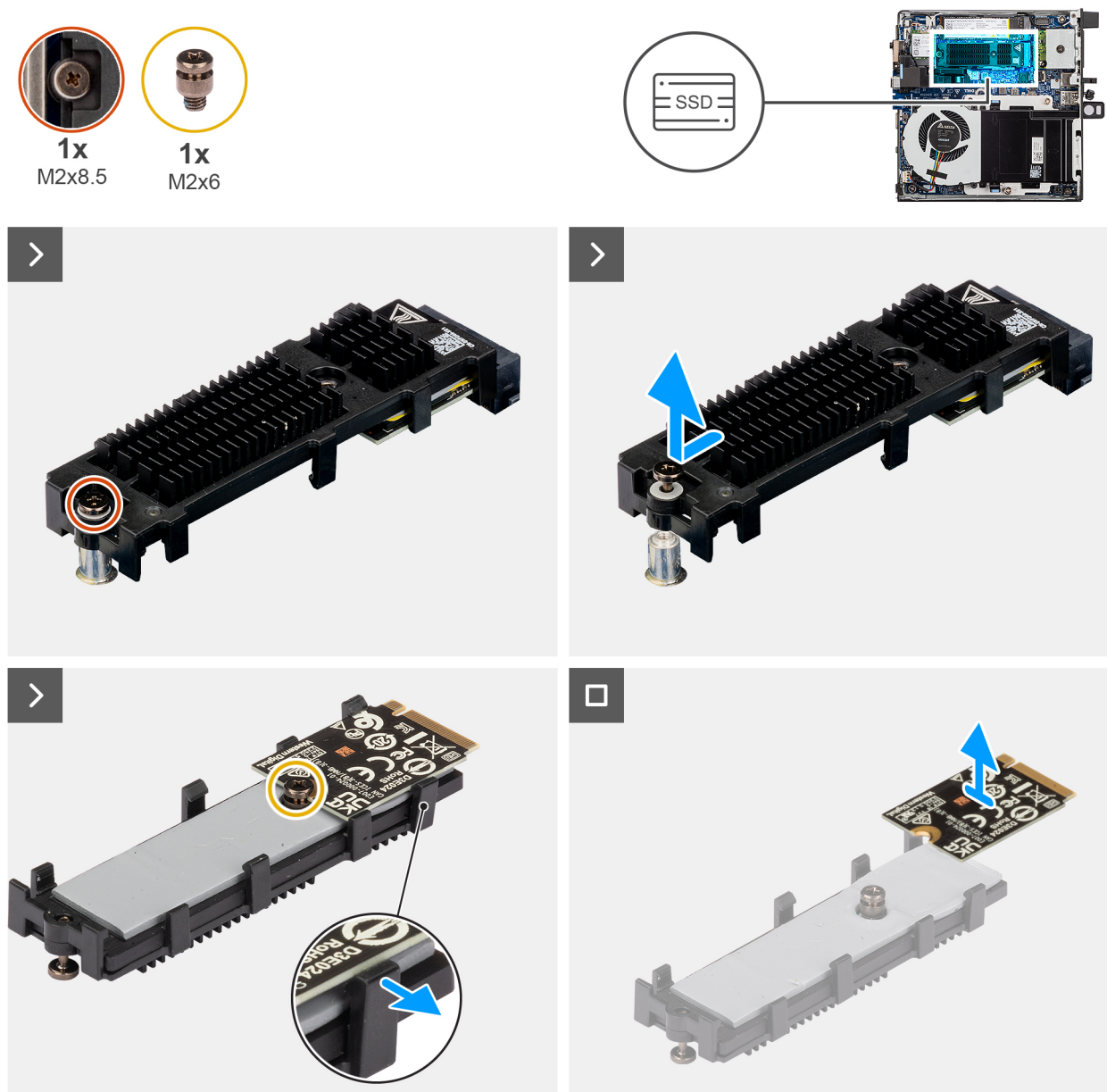


Figure 12. Removing the M.2 2230 PCIe solid state drive

Steps

1. Loosen the screw (M2x8.5) that secures the SSD-extender bracket to the system board.
2. Slide and lift the SSD-extender bracket from the system board.
3. Flip over the extender bracket.
4. Loosen the screw (M2x6) that secures the M.2 2230 SSD card to the SSD-extender bracket.
5. Release the four snaps holding the M.2 2230 SSD card.
6. Remove the M.2 2230 SSD from the extender bracket.

NOTE: Repeat steps 1 to 5 for removing M.2 2230 SSD from slot-two (if applicable)

Installing the M.2 2230 solid-state drive in a dual SSD configuration

Prerequisites

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

About this task

The following image indicates the location of the SSD and provides a visual representation of the installation procedure.

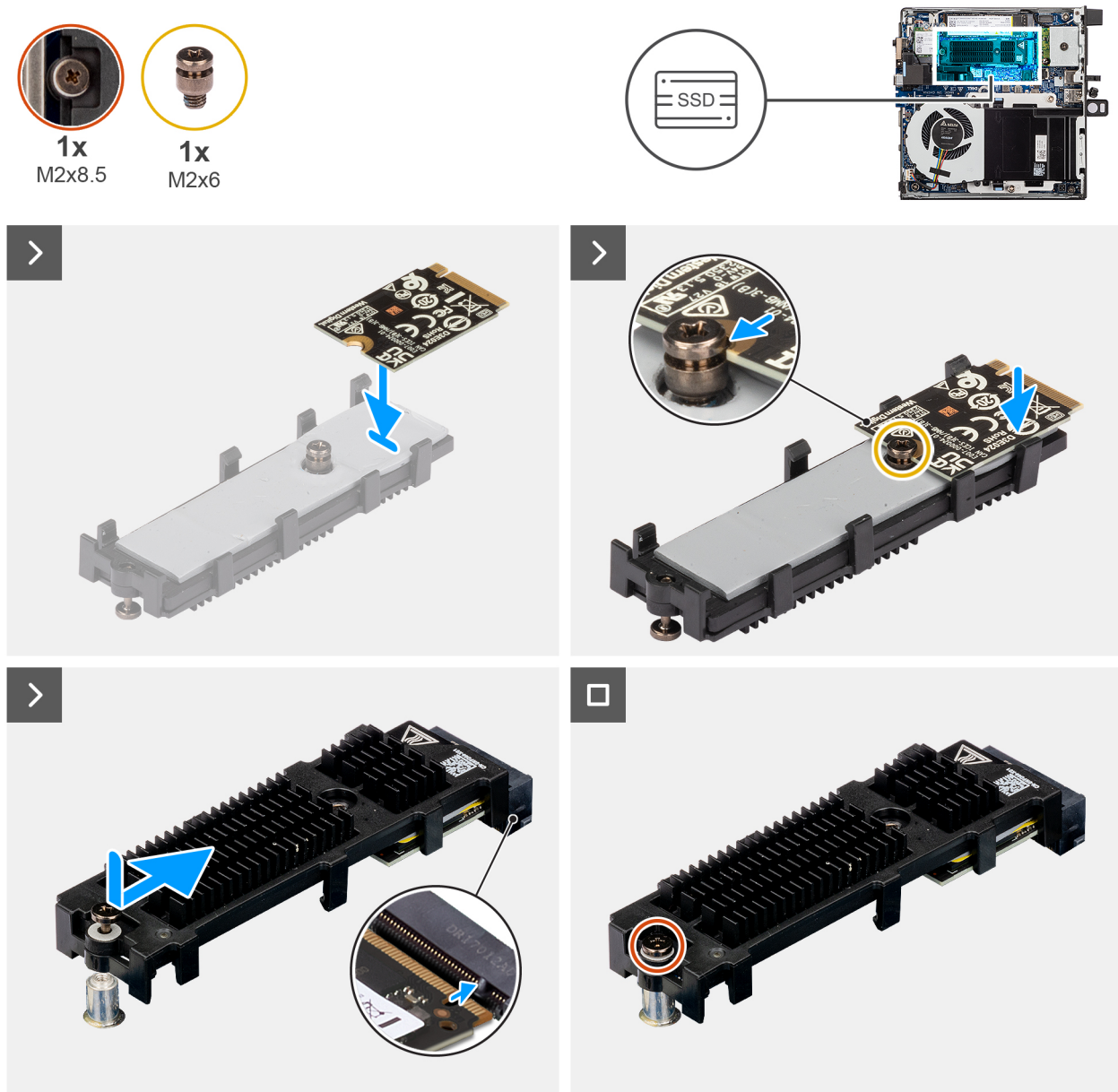


Figure 13. Installing the M.2 2230 PCIe solid state drive

Steps

1. Place the M.2 2230 SSD card on the extender bracket at a 45-degree angle.
2. Align the notch of the card with the screw (M2x6) on the extender bracket.
3. Press down until the M.2 2230 SSD card snaps into place.
4. Flip the extender bracket and align the notch with the tab on the SSD connector on the system board.

5. Insert the SSD-extender bracket at a 45-degree angle into the M.2 connector on the system board.
6. Replace the screw (M2x8.5) that secures the M.2 2230 SSD-extender bracket to the system board.

 **NOTE:** Repeat steps 1 to 6 for installing the M.2 2230 SSD in slot-two (if applicable).

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Removing the M.2 2280 solid-state drive in a dual SSD configuration

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 SSD and provide a visual representation of the removal procedure.



1x
M2x8.5

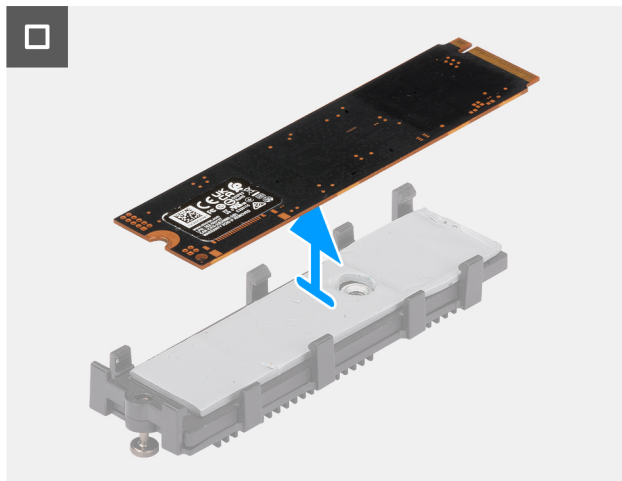
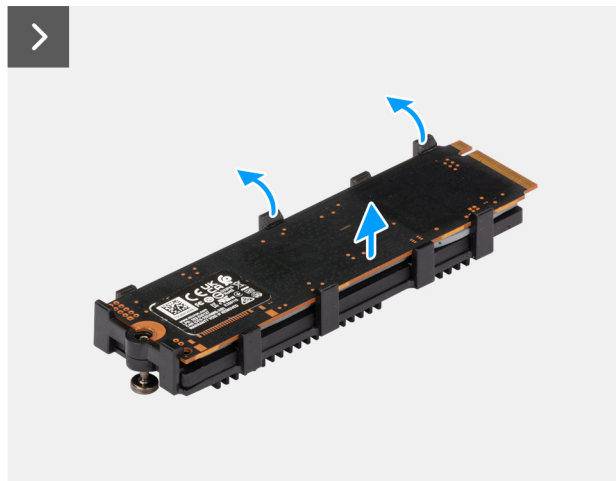
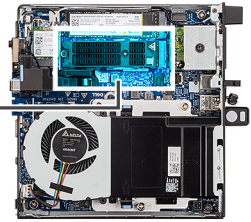


Figure 14. Removing the M.2 2280 PCIe solid state drive

Steps

1. Loosen the screw (M2x8.5) that secures the SSD-extender bracket to the system board.
2. Slide and lift the SSD-extender bracket from the system board.
3. Flip over the bracket and remove the M.2 2280 SSD from the extender bracket.

Installing the M.2 2280 solid-state drive in a dual SSD configuration

Prerequisites

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

About this task

The following image indicates the location of the SSD and provides a visual representation of the installation procedure.



1x
M2x8.5

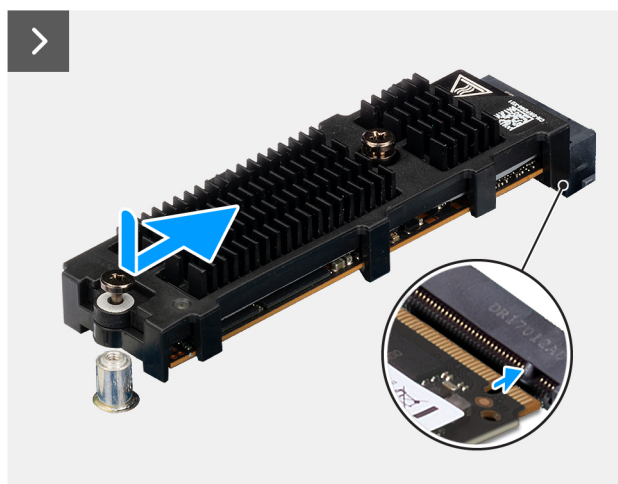
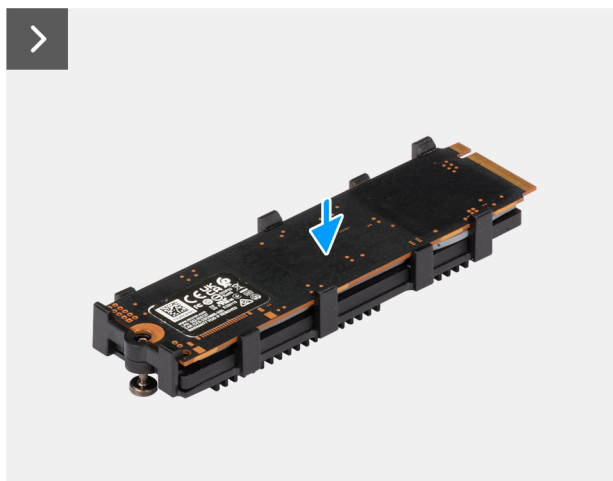
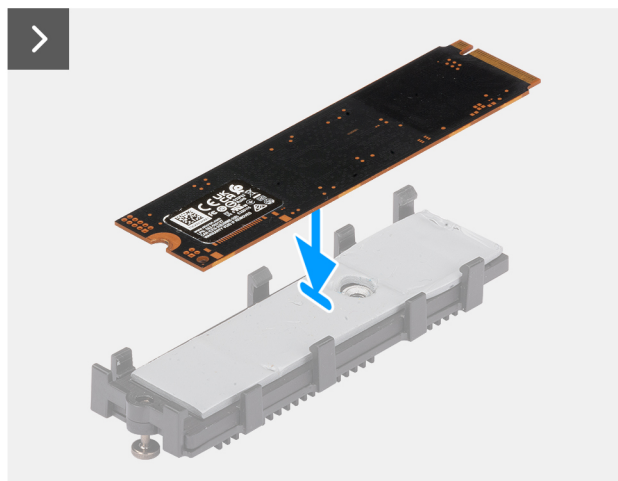
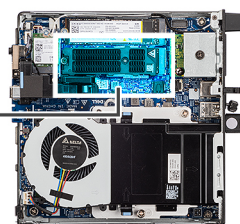


Figure 15. Installing the M.2 2280 PCIe solid state drive

Steps

1. Place the M.2 2280 SSD on the SSD-extender bracket.
2. Flip over the bracket and align the notch with the tab on the SSD connector on the system board.
3. Insert the SSD-extender bracket at a 45-degree angle into the M.2 connector on the system board.
4. Replace the screw (M2x8.5) that secures the M.2 2280 SSD-extender bracket to the system board.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Wireless card

Removing the wireless card

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 wireless card and provide a visual representation of the removal procedure.

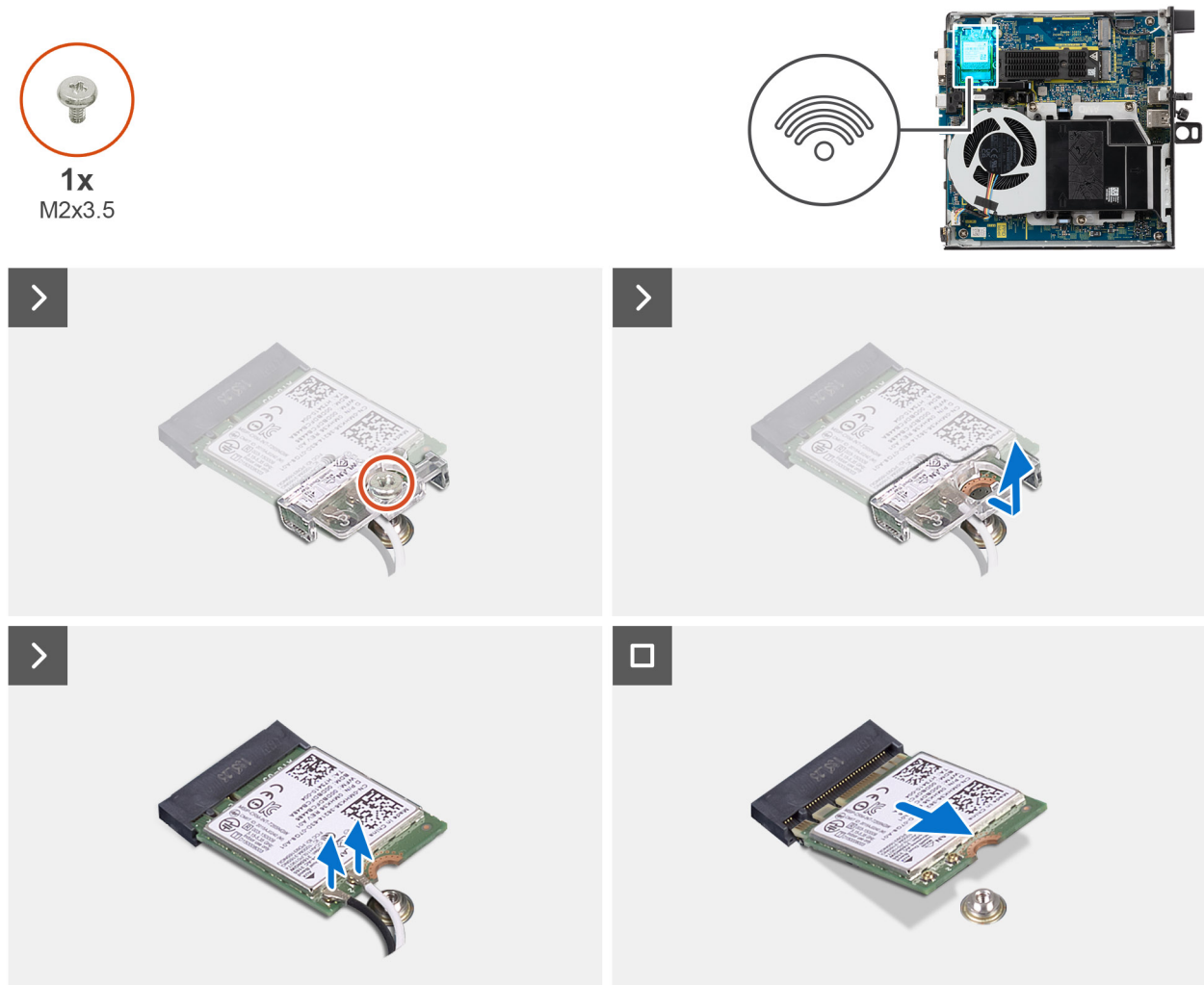


Figure 16. Removing the wireless card

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 connectors on 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 images indicate the location of the wireless card and provide a visual representation of the installation procedure.

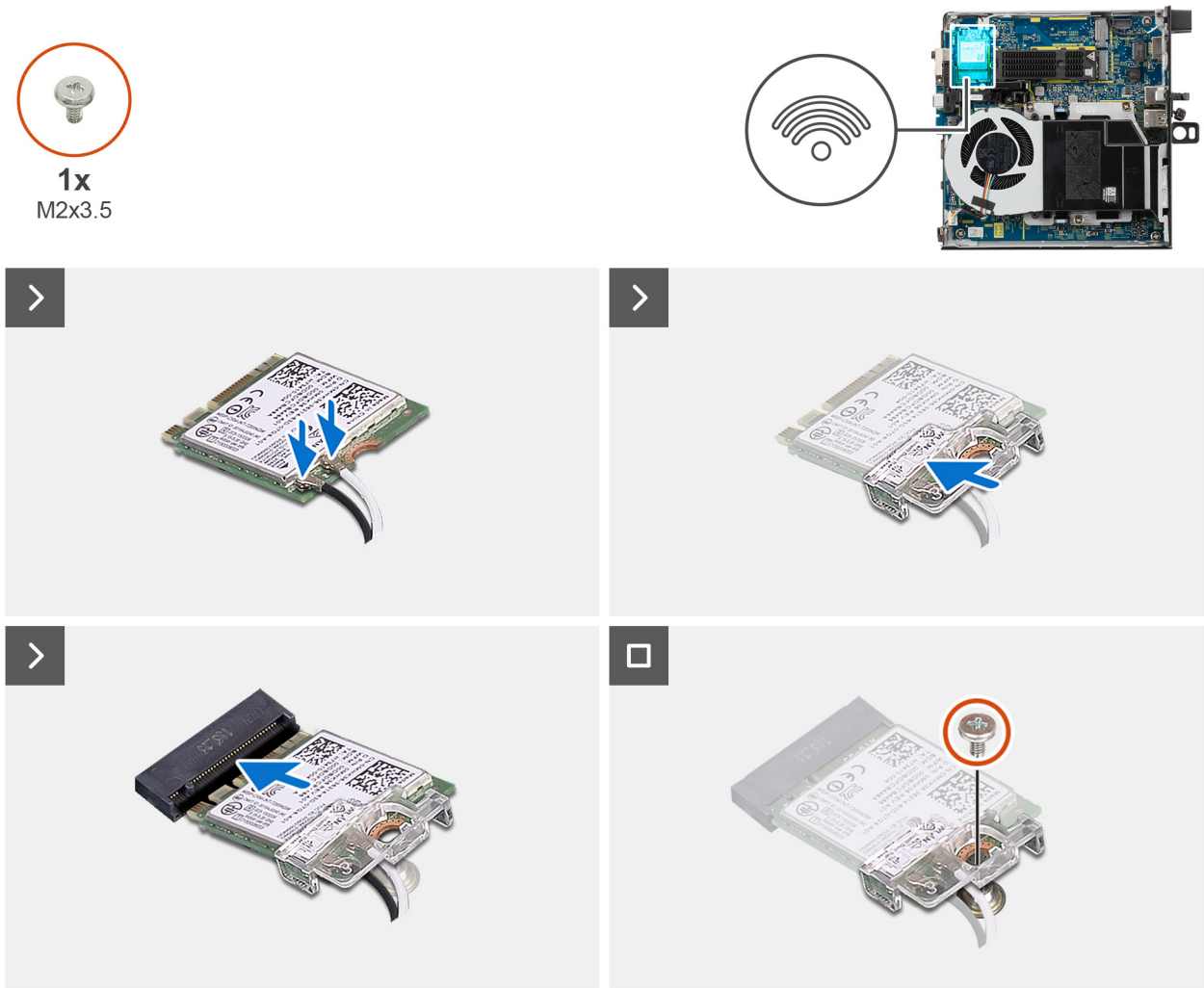


Figure 17. Installing the wireless card

Steps

1. Connect the antenna cables to the connectors on the wireless card.

Table 3. 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. Align the notch on the wireless card with the tab on the wireless-card slot (M.2 WLAN).
3. Slide the wireless card at an angle into the wireless-card slot (M.2 WLAN).
4. Place the wireless-card bracket on the wireless card.

5. Replace the screw (M2x3.5) that secures the wireless-card bracket to the wireless card.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Memory

Removing the memory module

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [side cover](#).
3. Remove the [fan](#).

About this task

The following images indicate the location of the memory modules and provide a visual representation of the removal procedure.

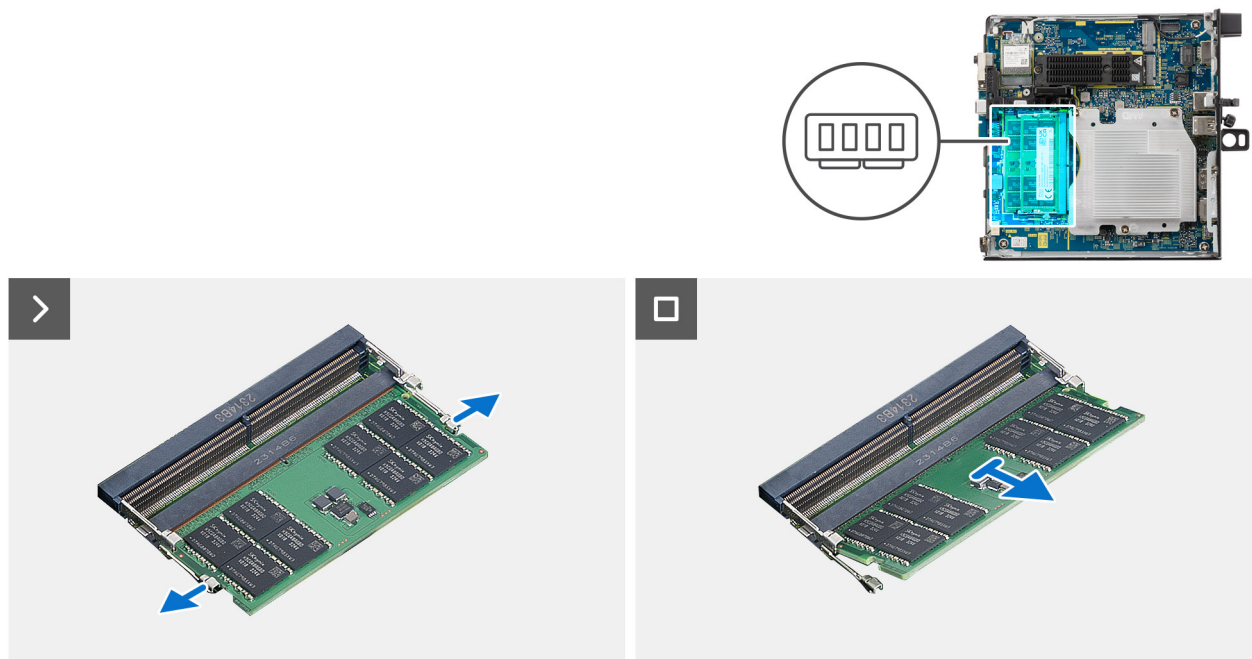


Figure 18. Removing the memory module

Steps

1. Carefully spread apart the securing-clips on each end of the memory-module slot (DIMM1 or DIMM2).
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** and **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 module

Prerequisites

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

About this task

NOTE: A DDR5 thermal pad is required when installing 64 GB of memory in your computer.

The following images indicate the location of the memory modules and provide a visual representation of the installation procedure.

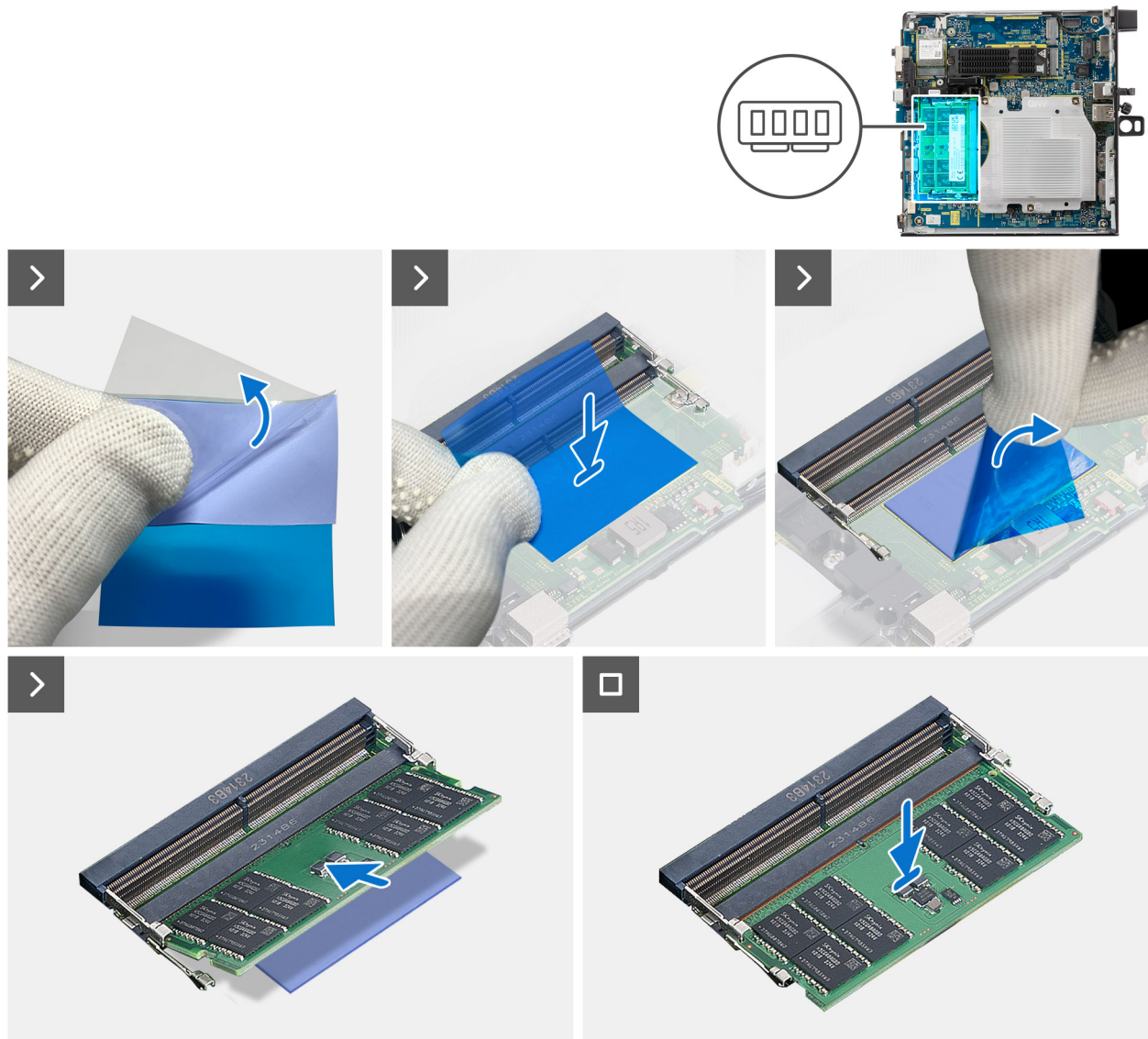


Figure 19. Installing the memory module

Steps

NOTE: Step 1 to Step 5 are applicable when installing the DDR5 thermal pad.

1. Peel back the protective film the DDR5 thermal pad halfway.
2. Align the DDR5 thermal pad over the DDR5 thermal pad area.

NOTE: Ensure the corners of the DDR5 thermal pad are aligned to the corners of the DDR5 thermal pad area.

3. Peel the rest of the backing off the DDR5 thermal pad and paste the DDR5 thermal pad onto the DDR5 thermal pad area.
4. Flatten the DDR5 thermal pad with a plastic scrapper to ensure proper adhesion.
5. Peel off the protective layer from the DDR5 thermal pad.
6. Align the notch on the memory module with the tab on the memory-module slot (DIMM1 or DIMM2).
7. Press down on the memory module until the memory module snaps into position and the securing clips lock 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 6** and **Step 7** when installing more than one memory module in your computer.

Next steps

1. Install the [fan](#).
2. Install the [side cover](#).
3. Follow the procedure in [After working inside your computer](#).

Removing and installing Field Replaceable Units (FRUs)

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

CAUTION: FRUs should be replaced by an authorized service technician, who is a trained technical repair specialist.

NOTE: Damages resulting from improper replacement or from failure to follow instructions are not covered by your warranty. Consider having a trained technical repair specialist perform replacements of FRU components.

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

Fan assembly

Removing the fan assembly

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 fan and provide a visual representation of the removal procedure.

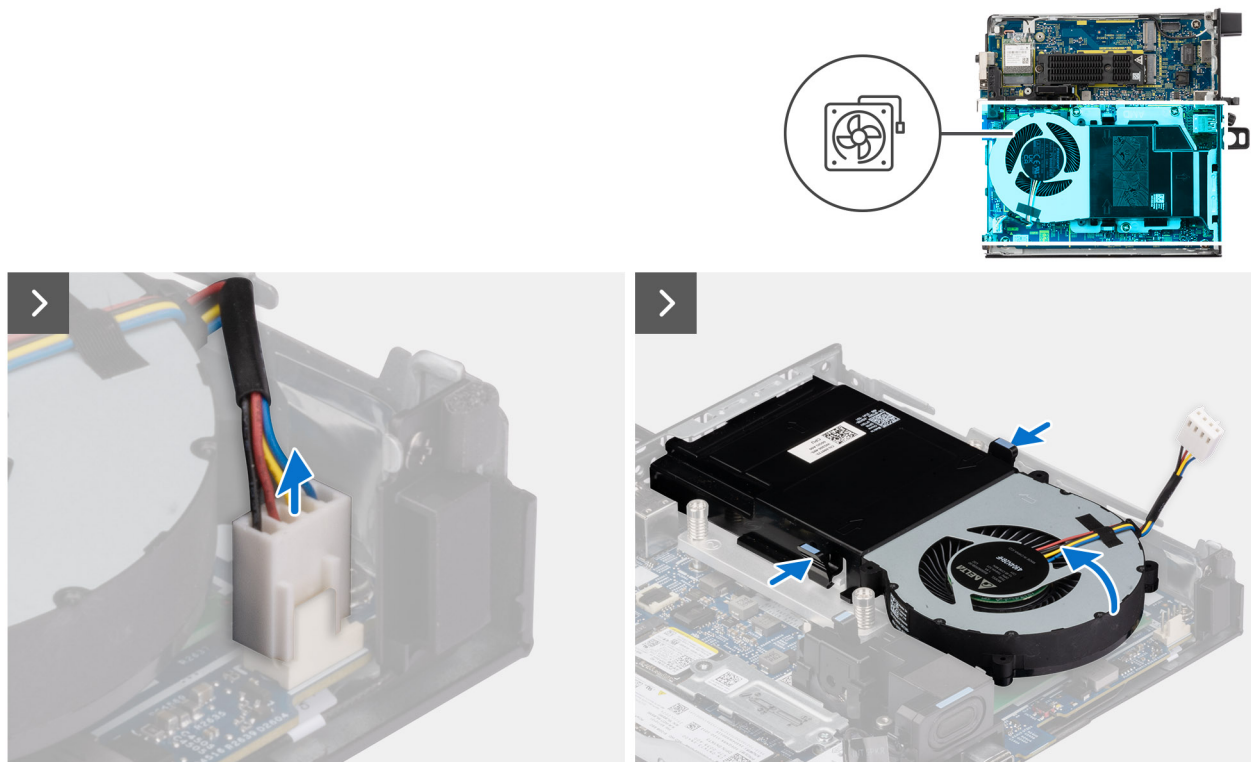


Figure 20. Removing the fan

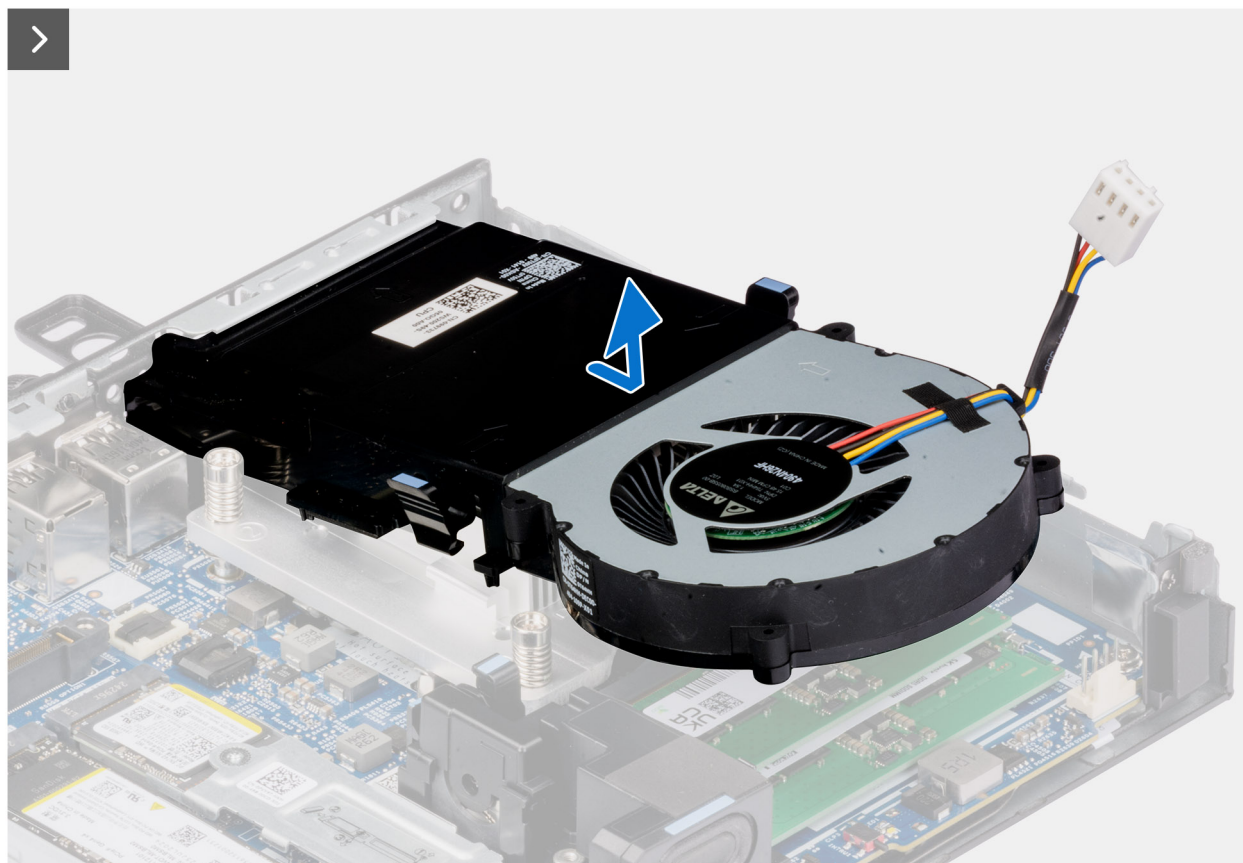


Figure 21. Removing the fan

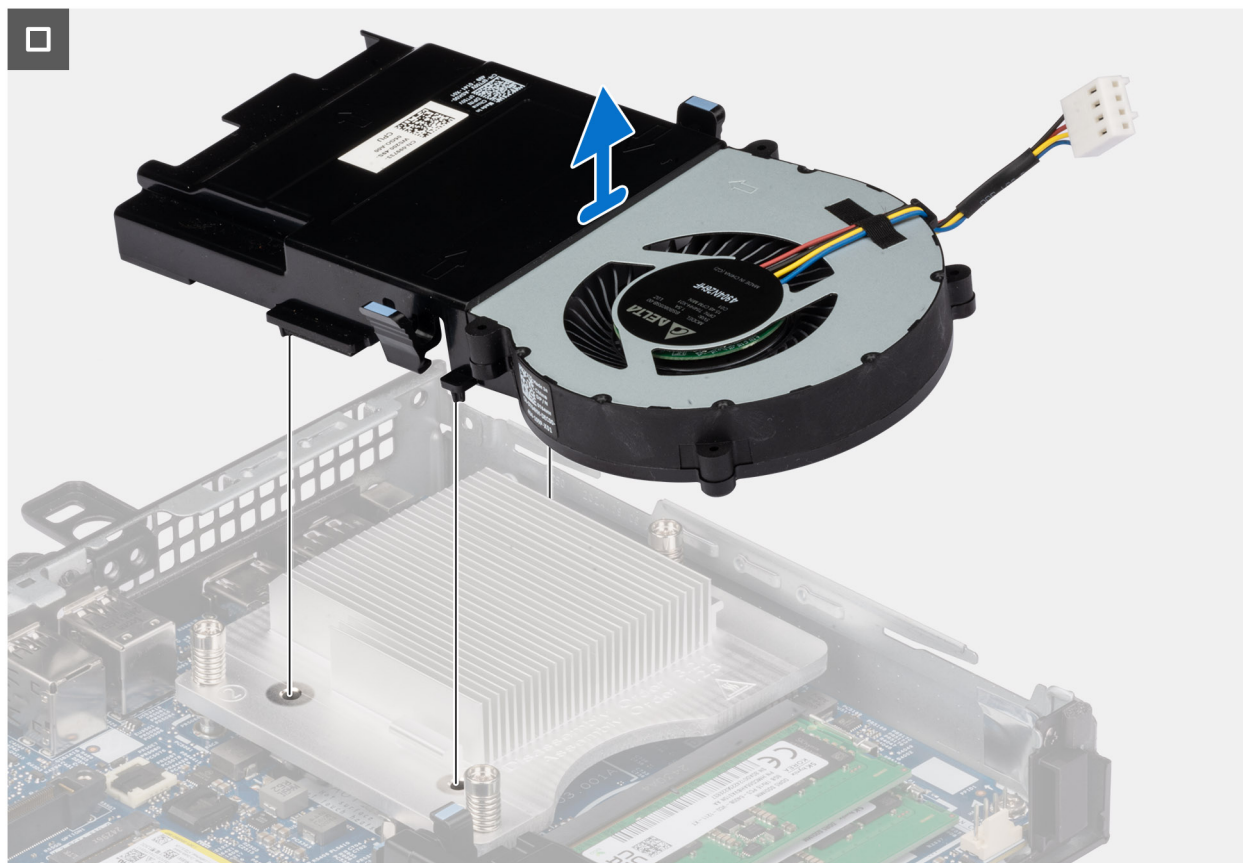


Figure 22. Removing the fan

Steps

1. Disconnect the fan cable from its connector (FAN CPU) on the system board.
2. Press the retaining tabs on the sides of the fan assembly to release it from the chassis and lift the fan assembly upward.
3. Lift the fan assembly off the chassis.

Installing the fan assembly

Prerequisites

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

About this task

The following images indicate the location of the fan and provide a visual representation of the installation procedure.

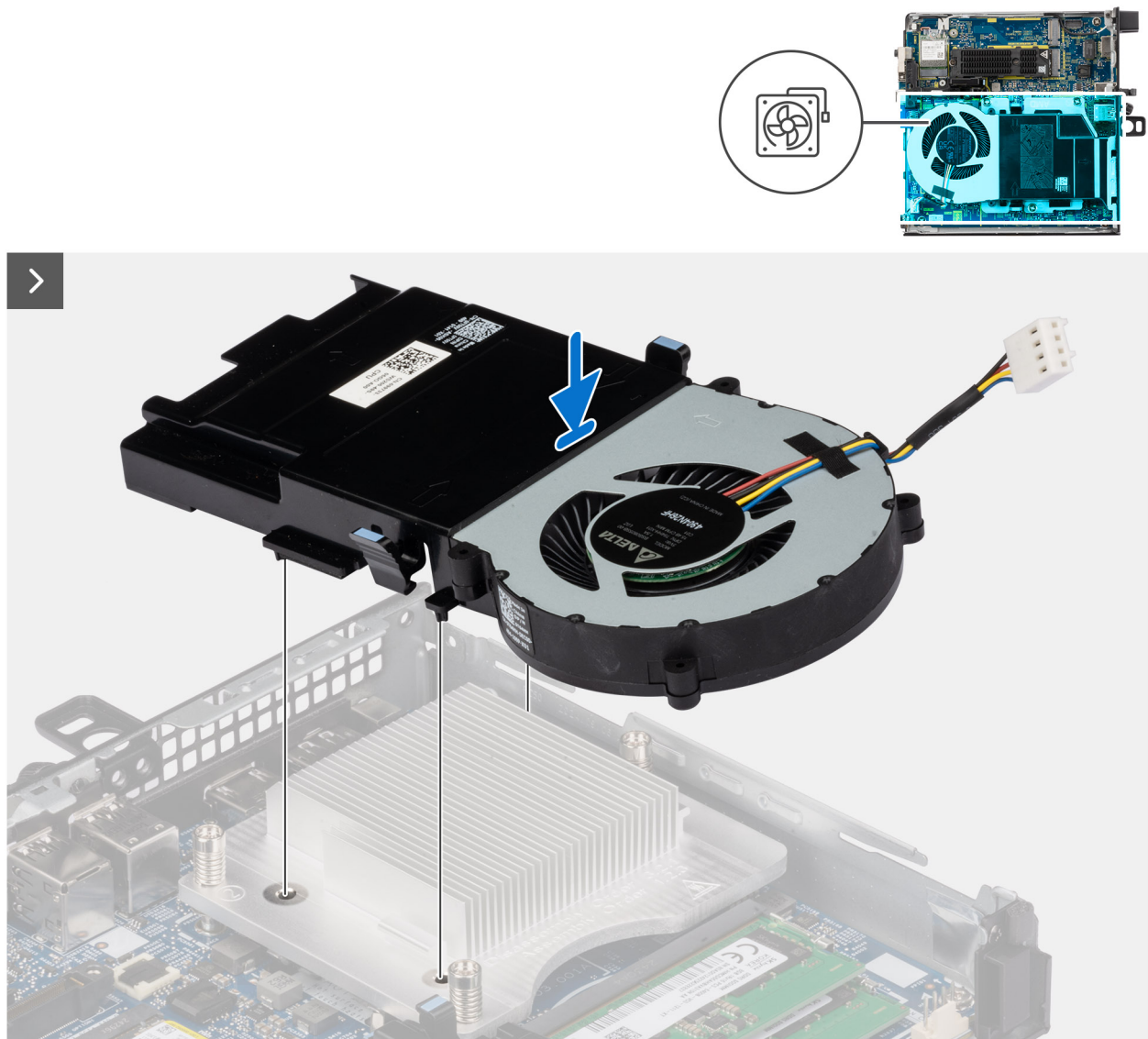


Figure 23. Installing the fan

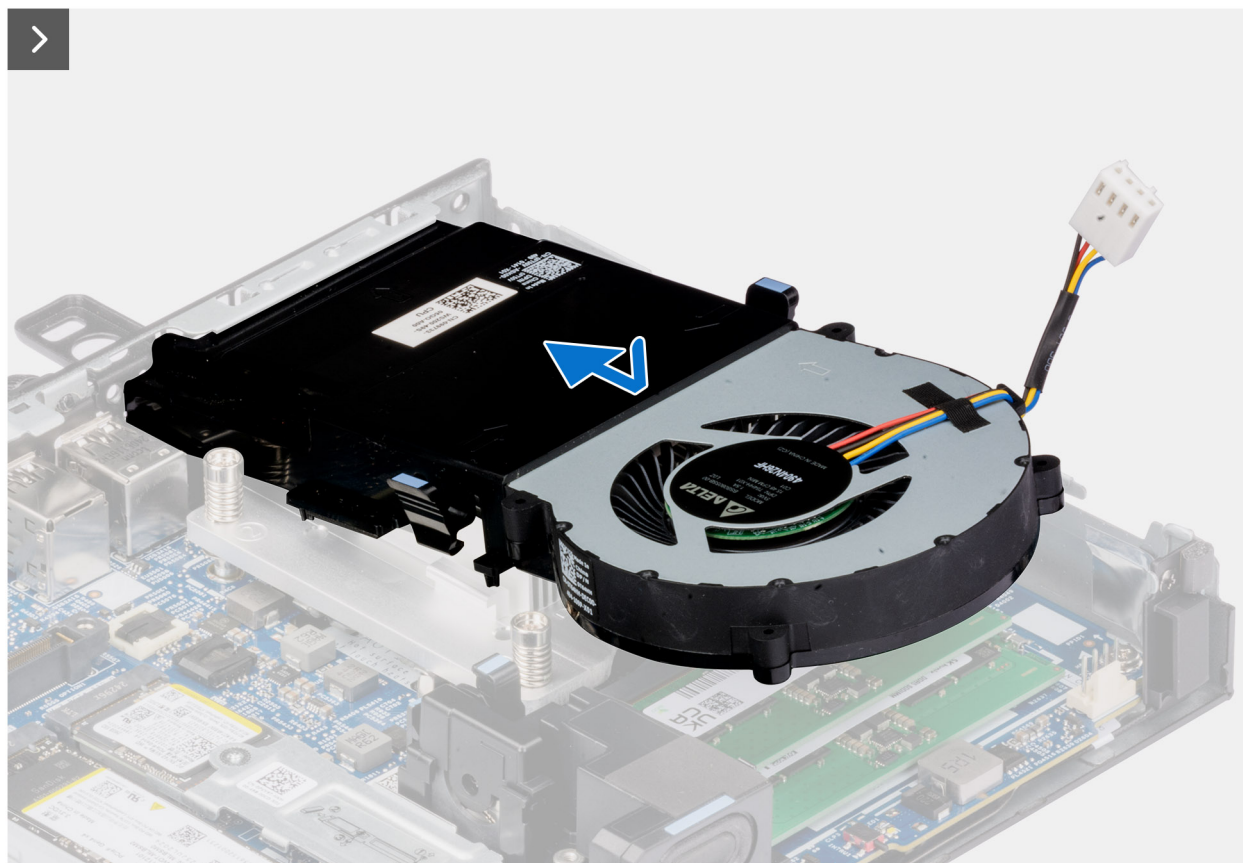


Figure 24. Installing the fan



Figure 25. Installing the fan

Steps

1. Align the tabs on the fan with the posts on the heat sink.
2. Place the fan assembly at an angle onto the chassis and slide the fan assembly to lock the tabs into place on the chassis.
3. Press and hold the tabs on the fan assembly, then push the fan assembly downward until it snaps securely into place.
 ⓘ **NOTE:** Ensure that the tabs are snapped into position on the heat sink.
4. Connect the fan cable to its connector (FAN CPU) on the system board.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

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 [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 paste.

The following images indicate the location of the heat sink and provide a visual representation of the removal procedure.

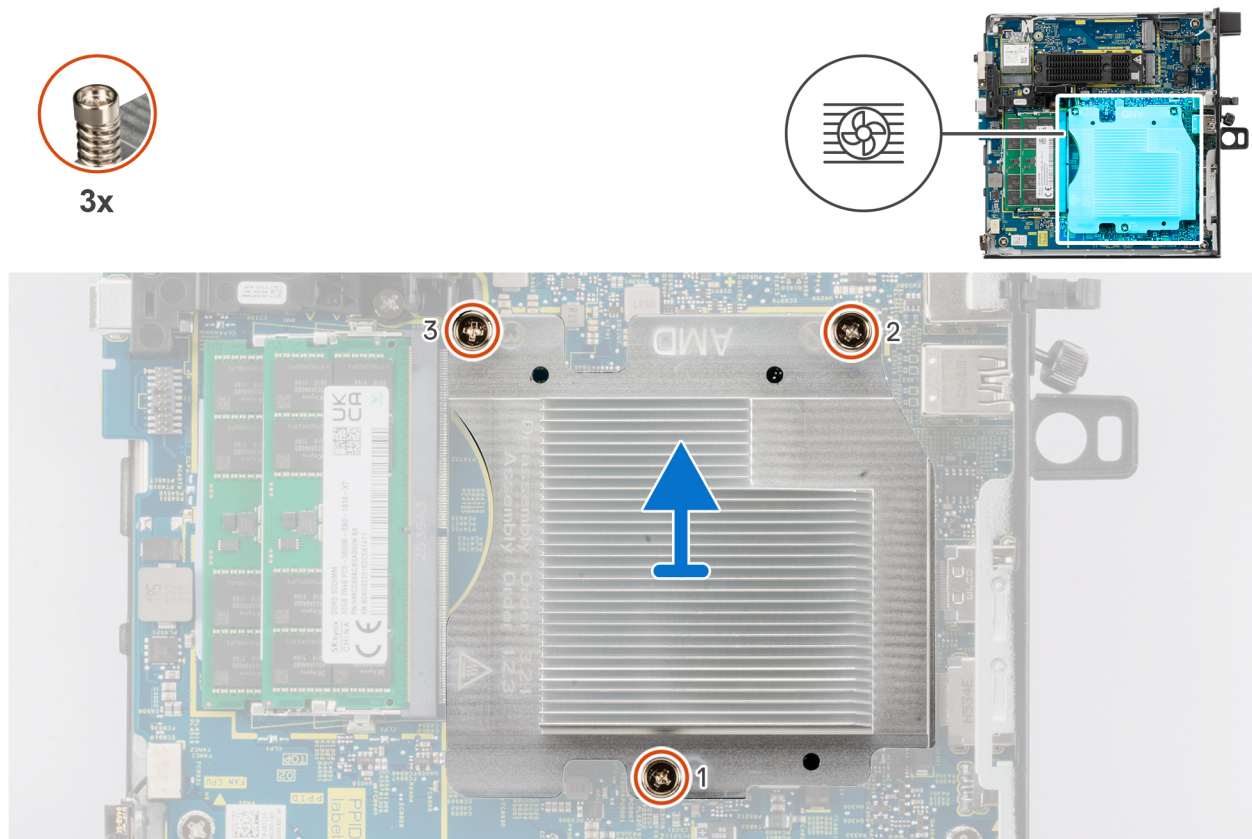


Figure 26. Removing the heat sink

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 heat sink is replaced, use the thermal paste that is provided in the kit to ensure that thermal conductivity is achieved.

The following images indicate the location of the heat sink and provide a visual representation of the installation procedure.

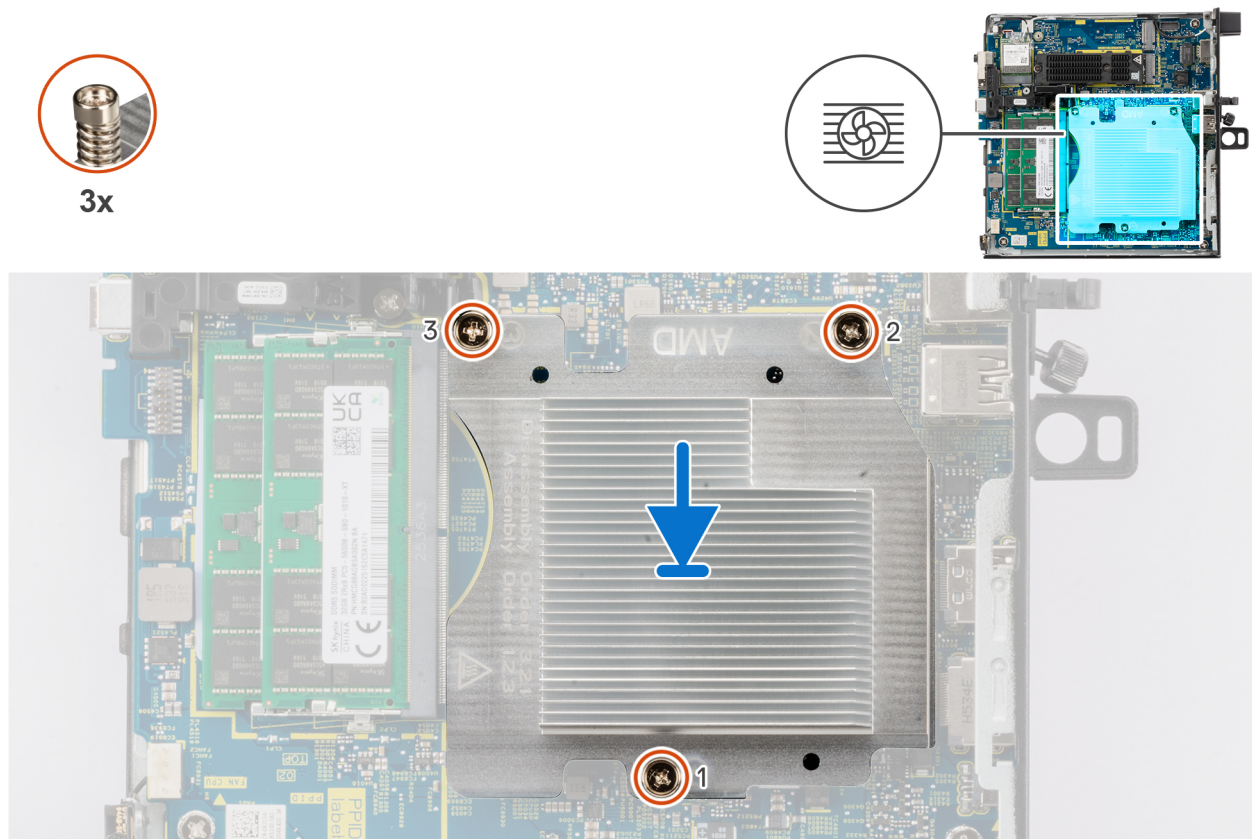


Figure 27. Installing the heat sink

Steps

1. Place the heat sink on 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 [side cover](#).
3. Follow the procedure in [After working inside your computer](#).

Internal antenna module

Removing the antenna module (black cable)

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 wireless antenna module (black cable) and provide a visual representation of the removal procedure.

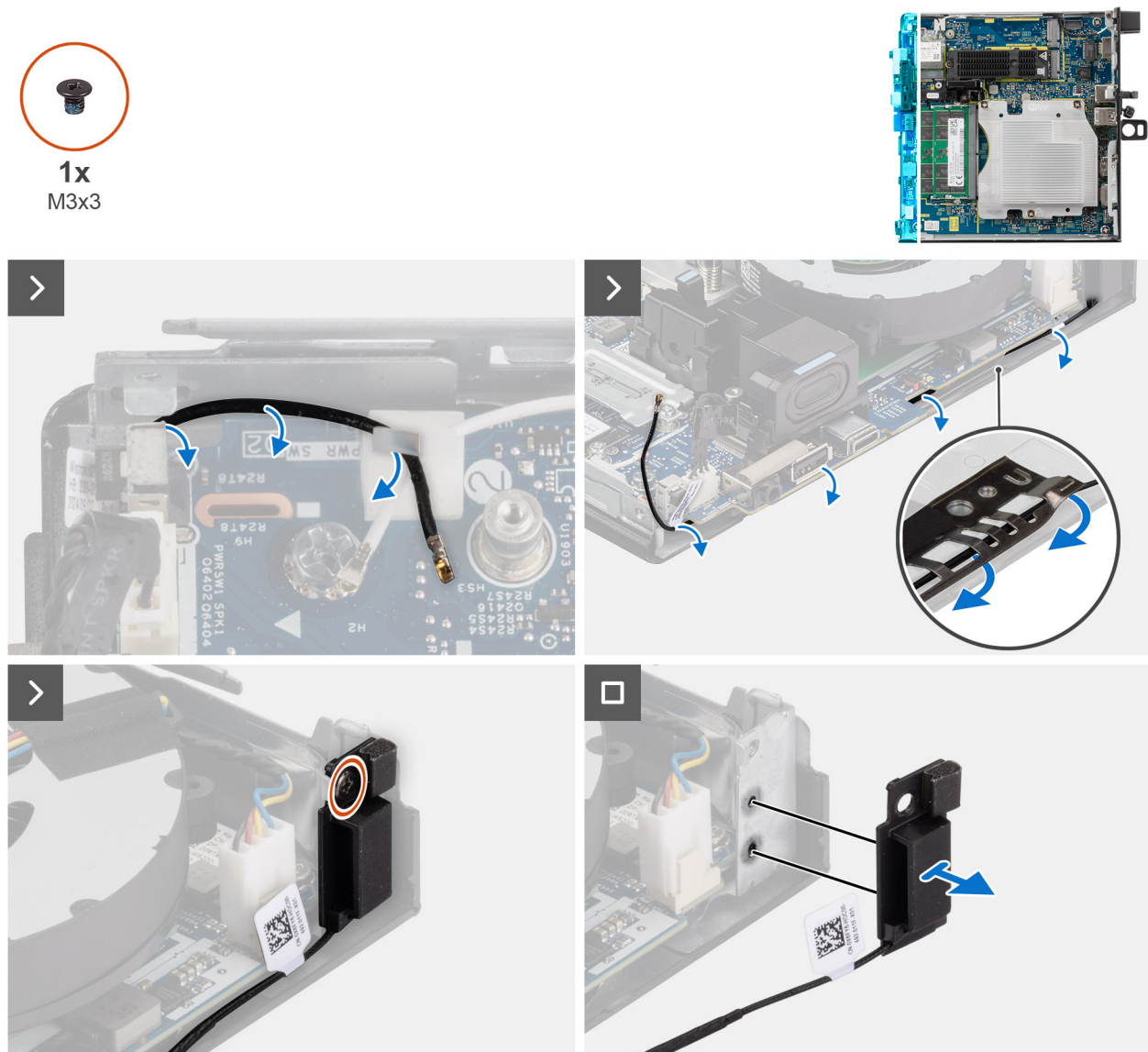


Figure 28. Removing the antenna module (black cable)

Steps

1. Remove the antenna cable from the routing guides on the chassis.
2. Remove the screw (M3x3) that secures the antenna module to the chassis.
3. Lift the antenna module away 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 images indicate the location of the antenna module (black cable) and provide a visual representation of the installation procedure.

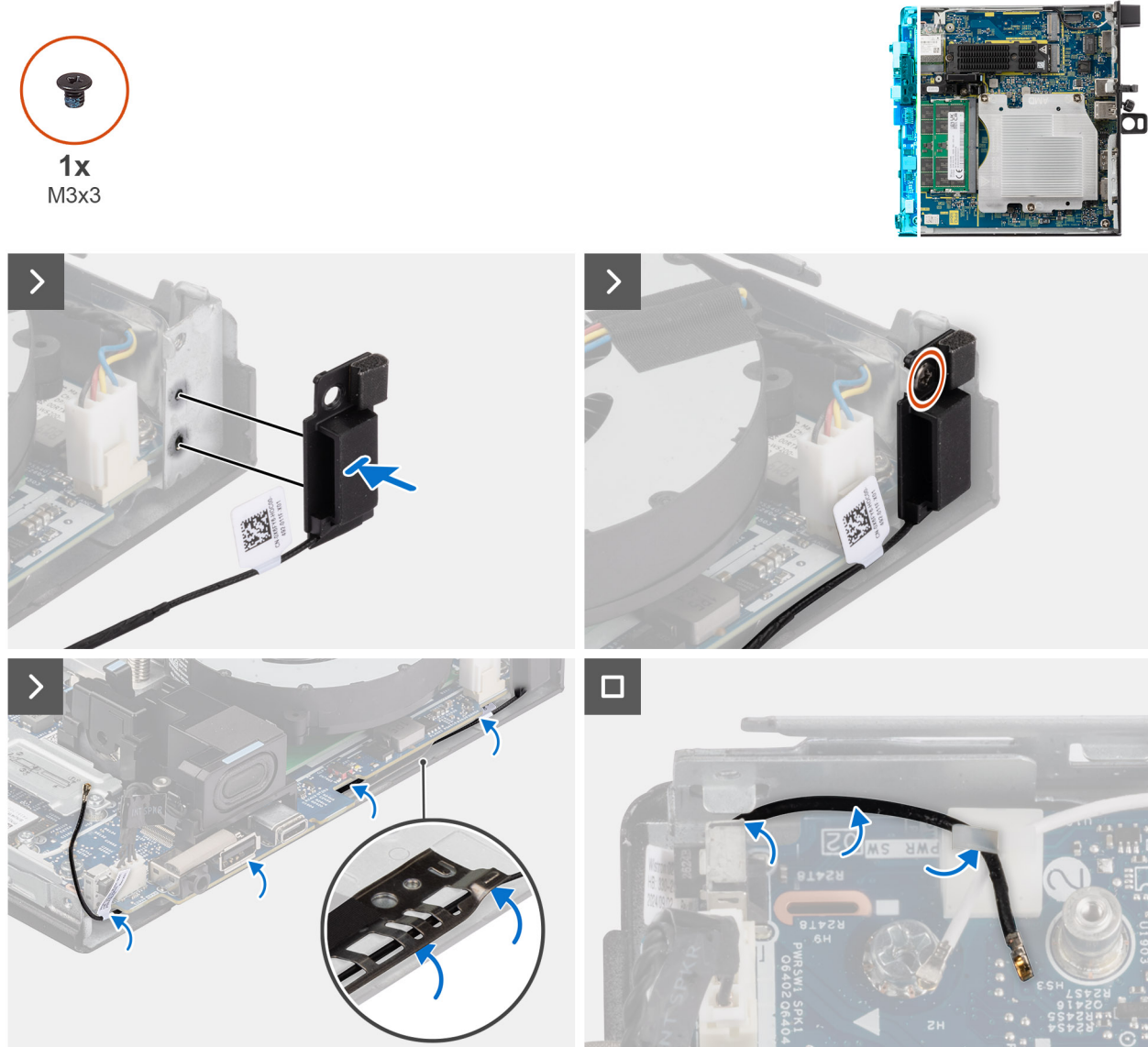


Figure 29. Installing the antenna module (black cable)

Steps

1. Align the tabs on the antenna module with the holes on the chassis and place it on the chassis.
2. Replace the screw (M3x3) that secures the antenna module to the chassis.
3. Using a plastic scribe, route the black antenna cable under the EMI shield below the system board on the chassis.

CAUTION: Do not press the Intrusion switch while routing the black antenna cable under the EMI shield.

4. Route the black antenna cable through the routing guides on the system board.

Next steps

1. Install the [side cover](#).
2. 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](#).

About this task

The following images indicate the location of the antenna module (white cable) and provide a visual representation of the removal procedure.

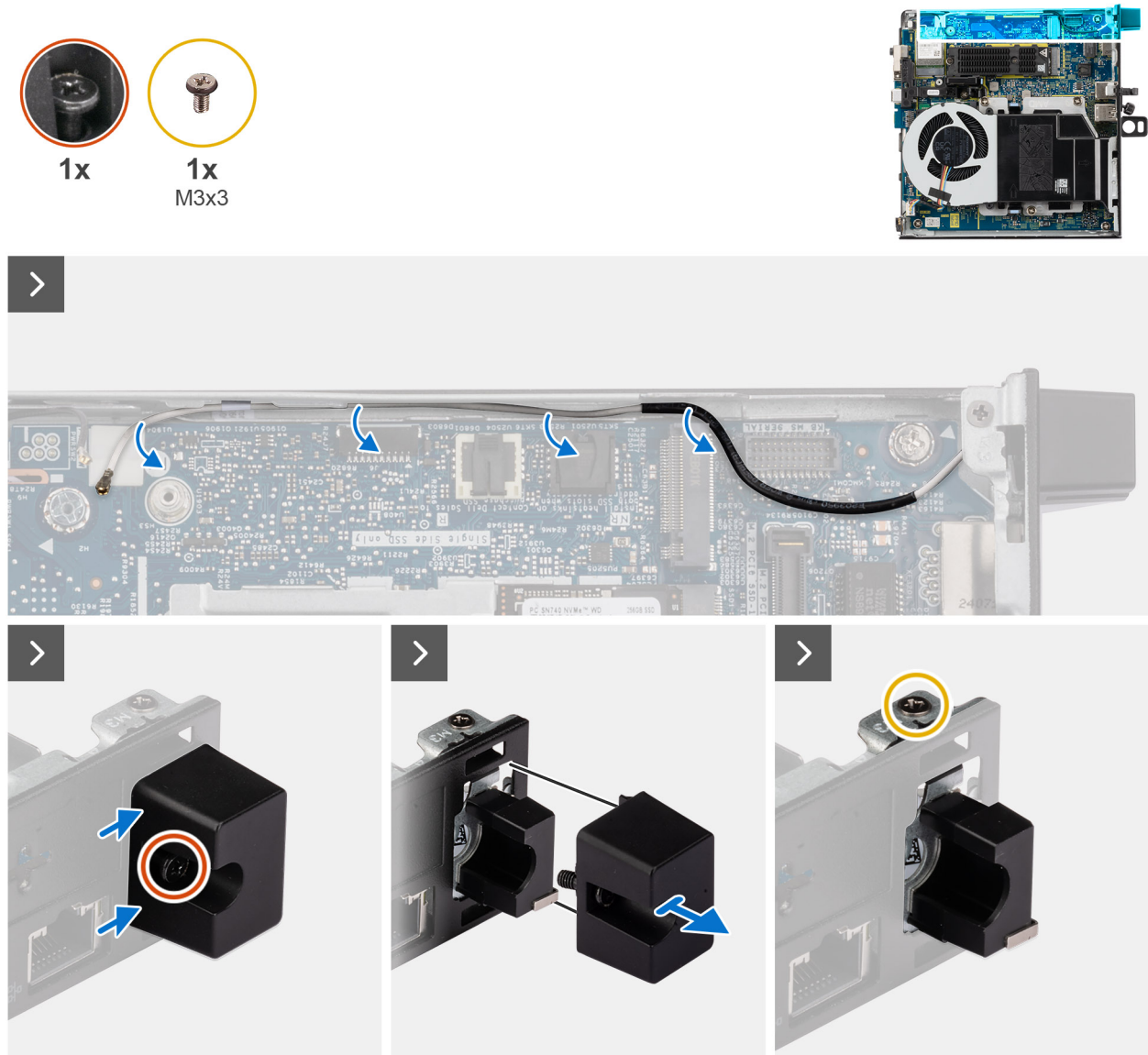


Figure 30. Removing the antenna module (white cable)

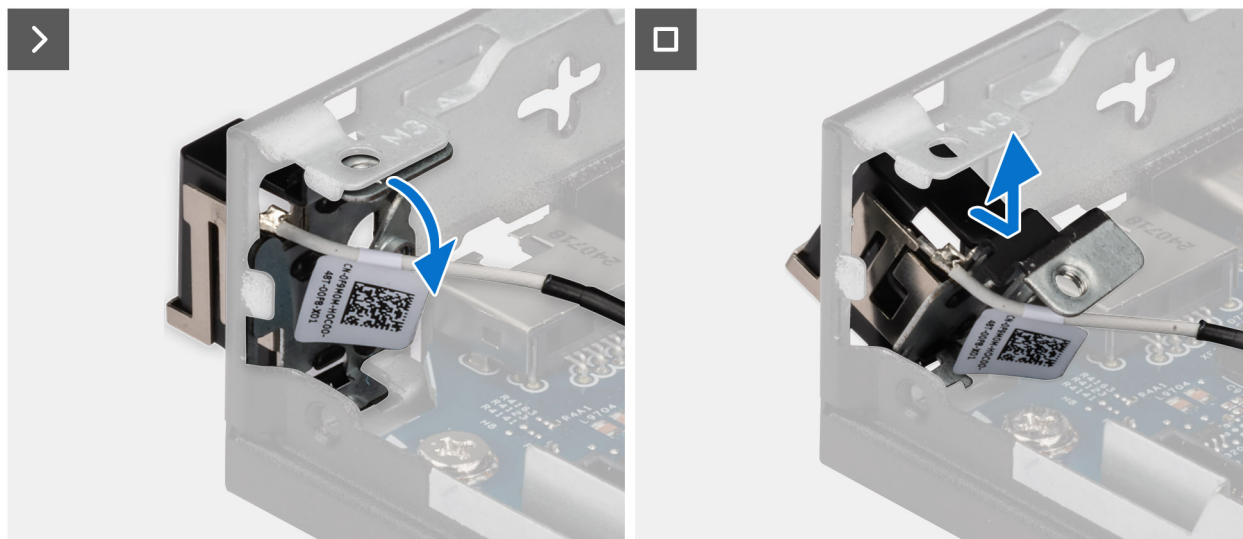


Figure 31. Removing the antenna module (white cable)

Steps

1. Remove the white antenna cable from the routing guides on the chassis and system board.
2. Loosen the captive screw that secures the antenna module cover to the antenna module (white cable).
3. Remove the antenna module cover from the chassis.
4. Remove the screw (M3x3) that secures the antenna module to the chassis.
5. Gently push the antenna module downwards, allowing it to slide through its slot on the chassis.
6. Pull the antenna module and lift it away from 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 images indicate the location of the antenna module (white cable) and provide a visual representation of the installation procedure.

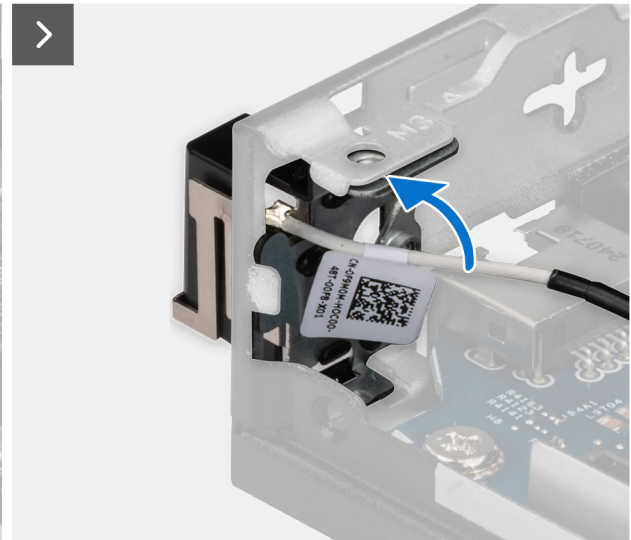
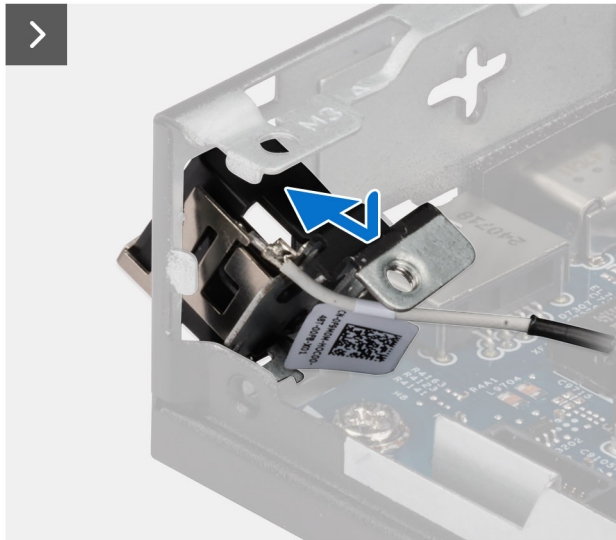
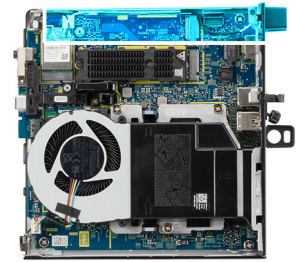


Figure 32. Installing the antenna module (white cable)

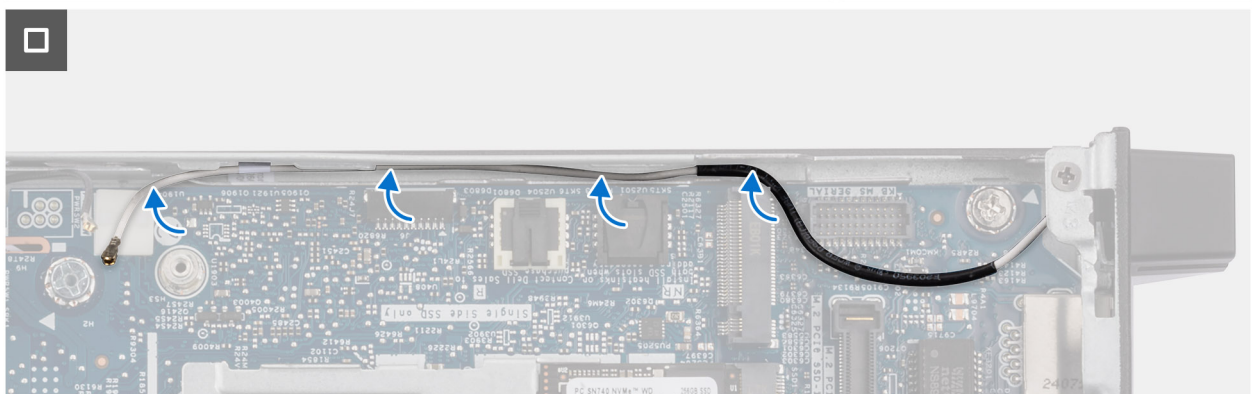
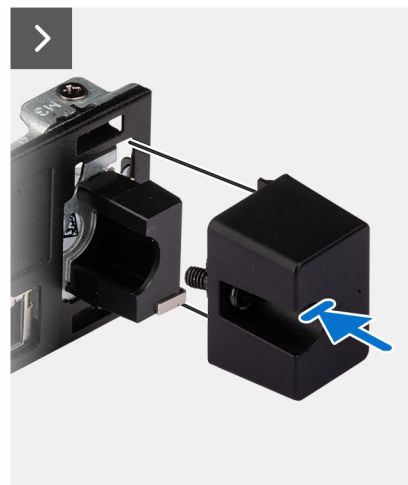


Figure 33. Installing the antenna module (white cable)

Steps

1. Place the antenna module at a certain angle and push it into the slot on the chassis.
2. Align the screw hole and captive screw on the antenna module to the screw holes on the chassis.
3. Replace the screw (M3x3) to secure the antenna module to the chassis.
4. Replace the antenna module cover into its slot on the chassis.
5. Tighten the captive screw to secure the antenna module cover to the chassis.
6. Route the white antenna cable through the routing guides on the chassis and system board.

Next steps

1. Install the [wireless card](#).
2. Install the [side cover](#).
3. Follow the procedure in [After working inside your computer](#).

SMA antenna module

Removing SMA antenna 3 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 SMA antenna 3 module and provide a visual representation of the removal procedure.

 **NOTE:** To upgrade to an SMA antenna, the internal antenna ([white cable](#)) must be removed.

Steps

1. Remove the SMA antenna module cables from the routing guides on the chassis.
2. Remove the screw (M3x3) that secures the SMA antenna module to the chassis.
3. Push the SMA antenna module inward through the opening on the back of the chassis, and then lift it upward and away from the mounting points.

Installing SMA antenna 3 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 SMA antenna 3 module and provide a visual representation of the removal procedure.

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

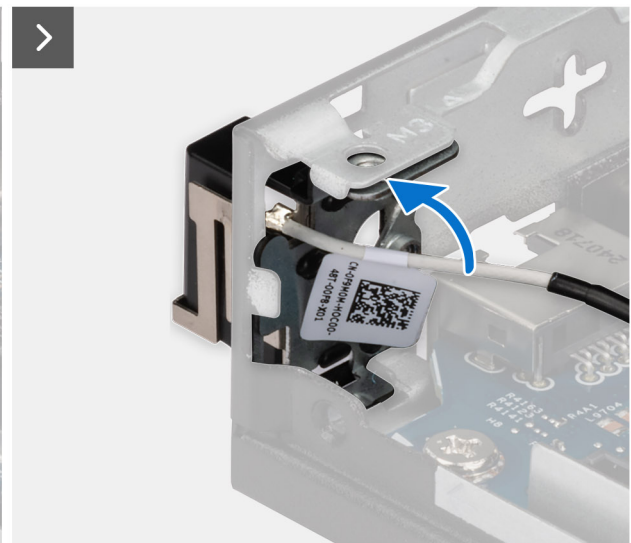
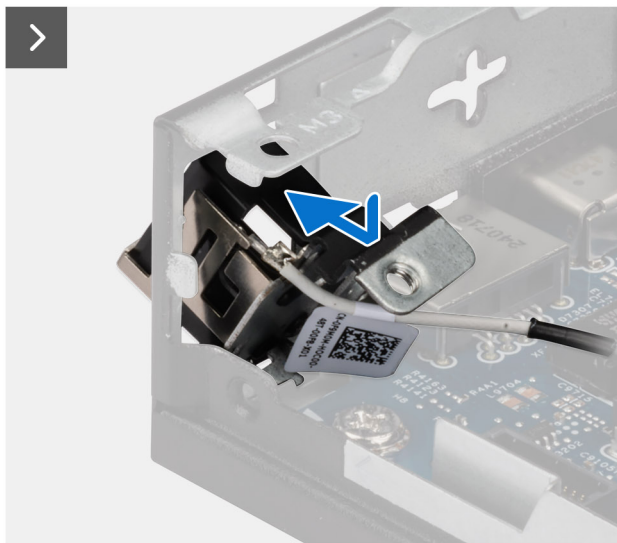
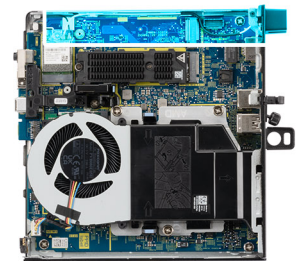
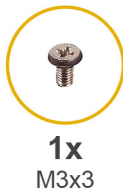


Figure 36. Installing SMA antenna 3 module

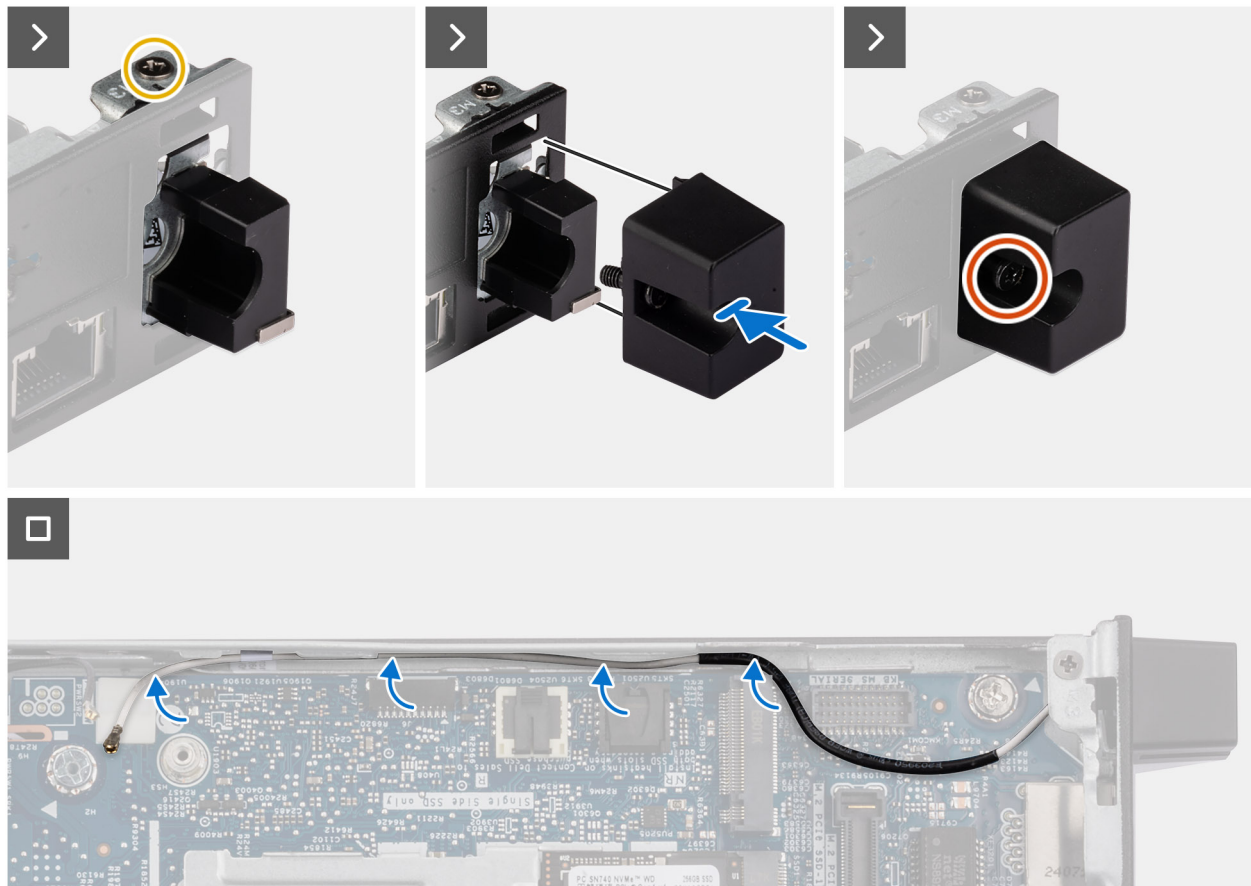


Figure 37. Installing SMA antenna 3 module

Steps

1. Remove the fillers on the side cover, if applicable.
2. Tilt the SMA antenna module and place it on the chassis.
3. Insert the SMA antenna module through the opening at the back of the chassis.
4. Replace the screw (M3x3) that secures the SMA module assembly to the chassis.
5. Route the SMA antenna module cables through the routing guides on the chassis.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Removing SMA antenna 1 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 SMA antenna module and provide a visual representation of the removal procedure.

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



1x
M3x3

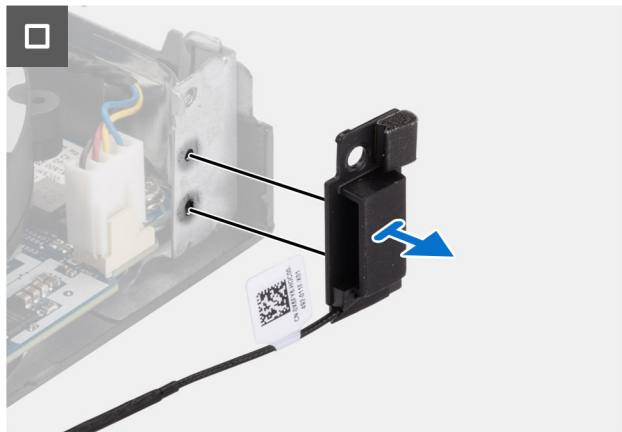
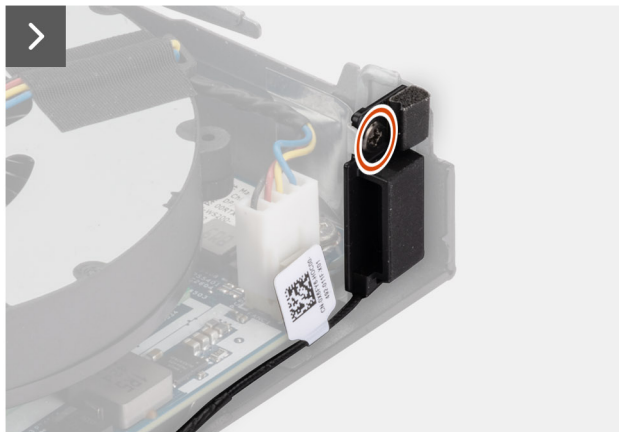
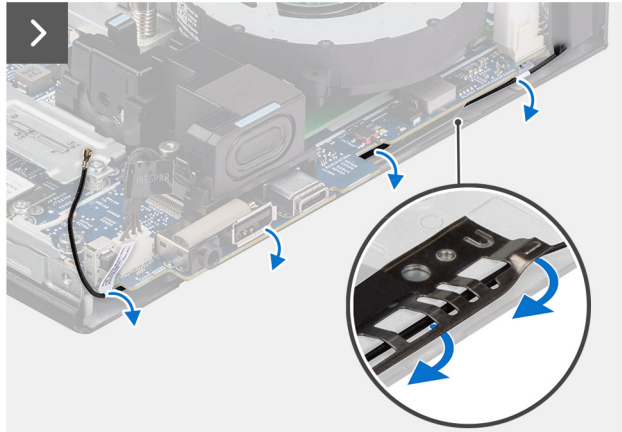
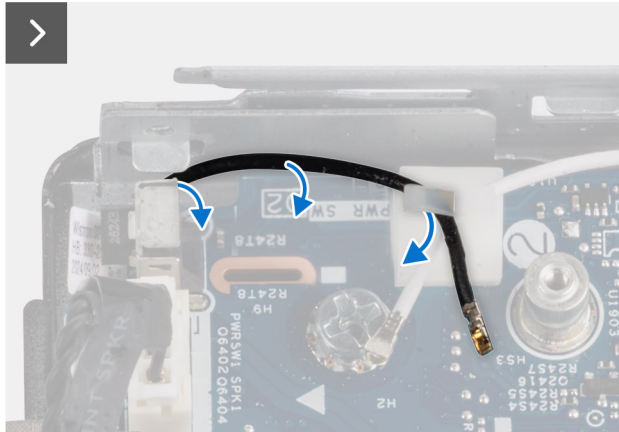
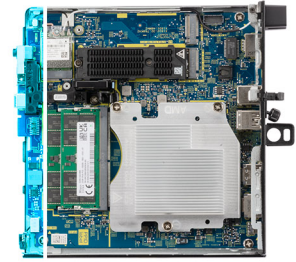


Figure 38. Removing SMA antenna 1

Steps

1. Remove the SMA antenna module cables from the routing guides on the chassis.
2. Remove the screw (M3x3) that secures the SMA antenna module to the chassis.
3. Pull the SMA antenna module off the chassis.

Installing SMA antenna 1 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 SMA antenna module and provide a visual representation of the removal procedure.

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



1x
M3x3

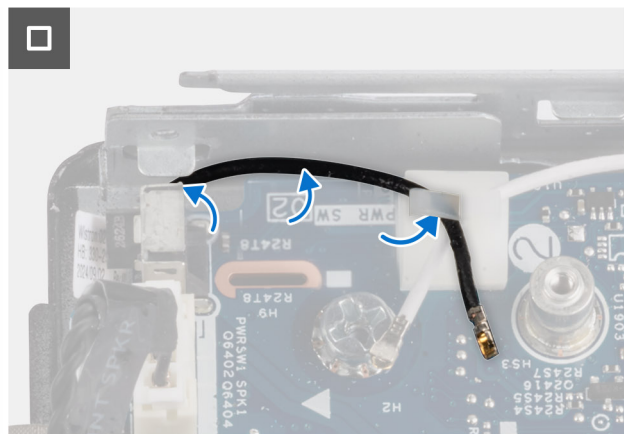
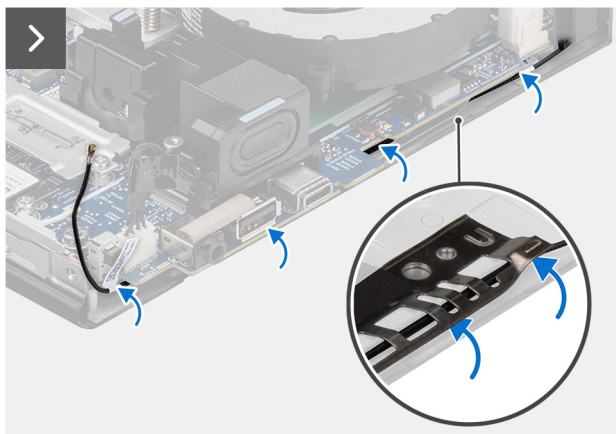
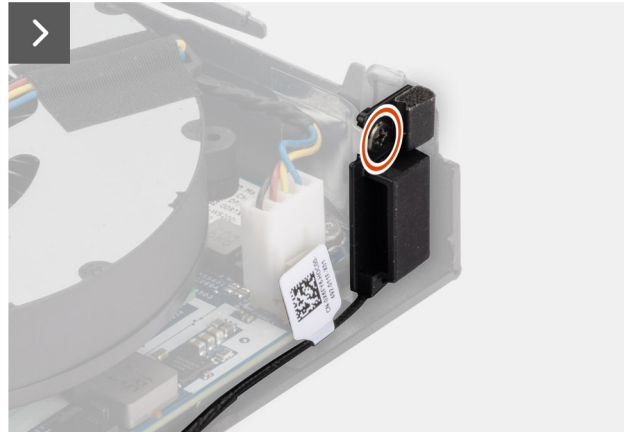
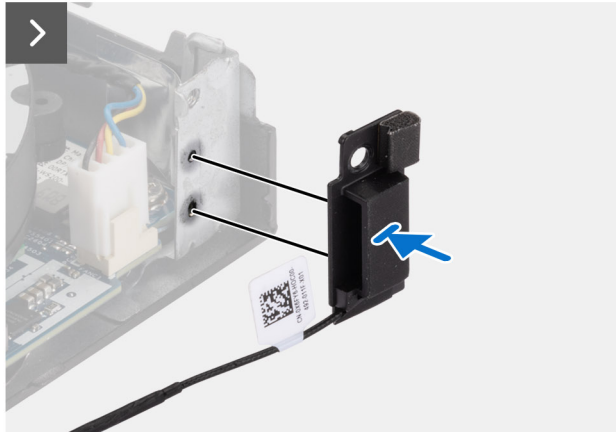
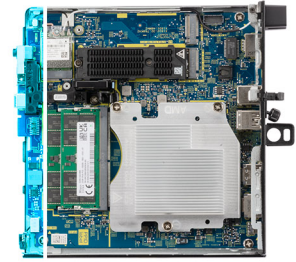


Figure 39. Installing SMA antenna 1 module

Steps

1. Remove the fillers on the side cover, if applicable.
2. Align the screw hole on the SMA antenna module with the screw hole on the chassis.
3. Replace the screw (M3x3) that secures the SMA module assembly to the chassis.
4. Route the SMA antenna module cables through the routing guides on the chassis.

Next steps

1. Install the [side cover](#).
2. Follow the procedure in [After working inside your computer](#).

Speaker holder

Removing the speaker holder

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 speaker and provide a visual representation of the removal procedure.

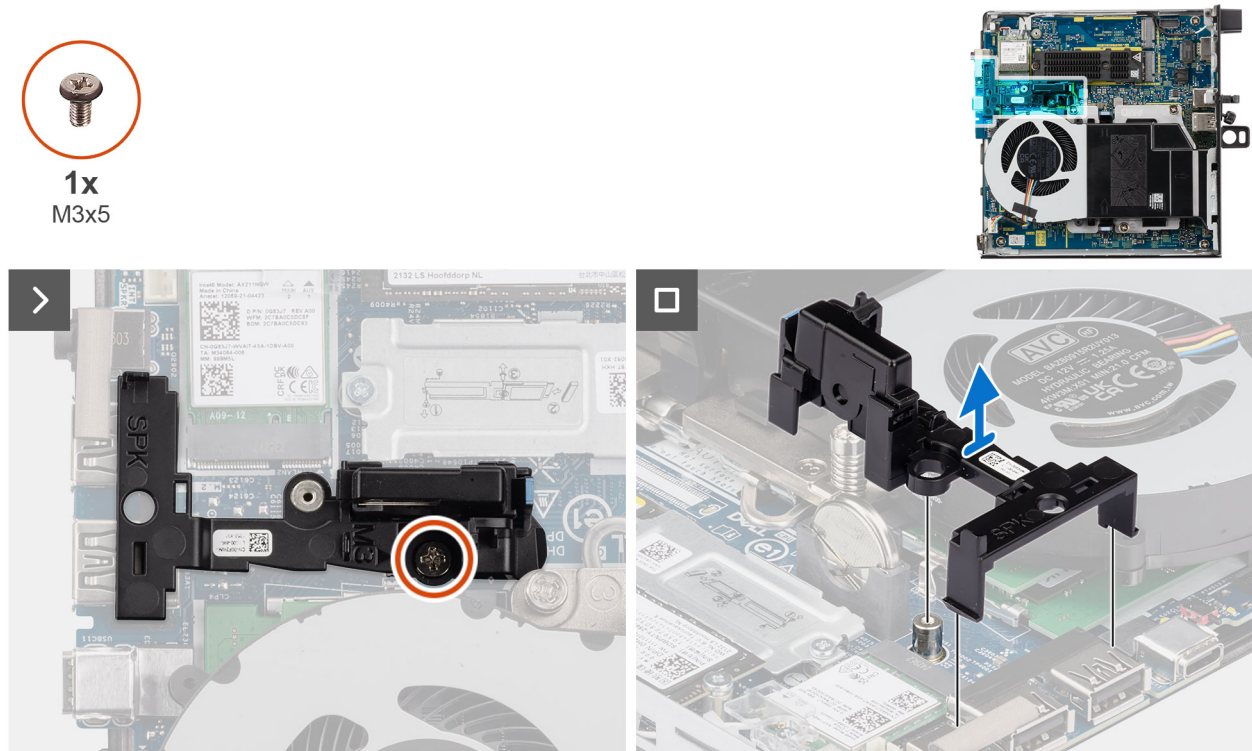


Figure 40. Removing the speaker holder

Steps

1. Loosen and remove the screw (M3x5) that secures the speaker holder to the system board .
2. Lift the speaker holder away from the system board.

Installing the speaker holder

Prerequisites

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

About this task

The following images indicate the location of the speaker holder and provide a visual representation of the installation procedure.



1x
M3x5

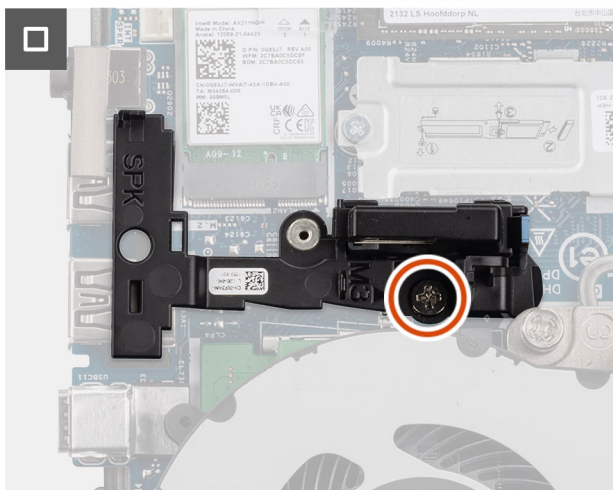
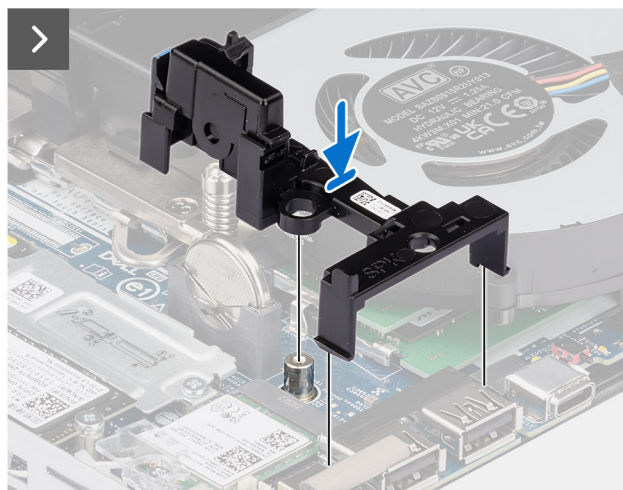


Figure 41. Installing the speaker holder

Steps

1. Align and insert the speaker holder into the slots on the system board and press it until the release tab clicks.
2. Replace the screw (M3x5) that secures the speaker holder to the system board.

Next steps

1. Install the [side cover](#).
2. 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 [coin-cell battery](#).
4. Remove the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#) in single SSD configuration, if applicable.
5. Remove the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#) in dual SSD configuration, if applicable.
6. Remove the [wireless card](#).
7. Remove the [memory](#).
8. Remove the [internal antenna black cable](#) and [internal antenna white cable](#).
9. Remove the [SMA antenna 3](#) and [SMA antenna 1](#).
10. Remove the [fan assembly](#).
11. Remove the [heat sink](#).
12. Remove the [speaker holder](#).

About this task

The following images indicate the system board connectors.

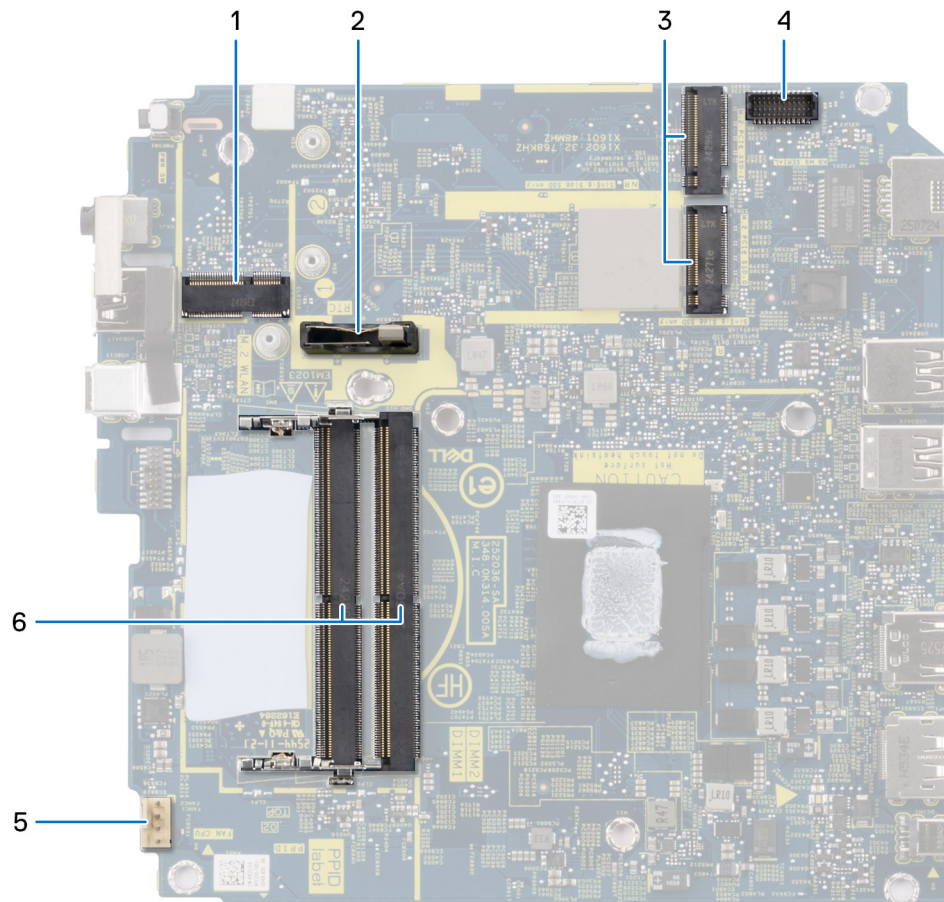


Figure 42. System board connectors

1. Wireless card slot (M.2 WLAN)
2. Coin-cell battery
3. M.2 Solid-state drive slots (M.2 PCIe SSD-0 and M.2 PCIe SSD-1)
4. Optional PS/2, serial port connector (KB MS SERIAL)
5. Fan connector (FAN CPU)
6. Memory-module slots (DIMM1 and DIMM2)

The following images indicate the location of the system board and provide a visual representation of the removal procedure.

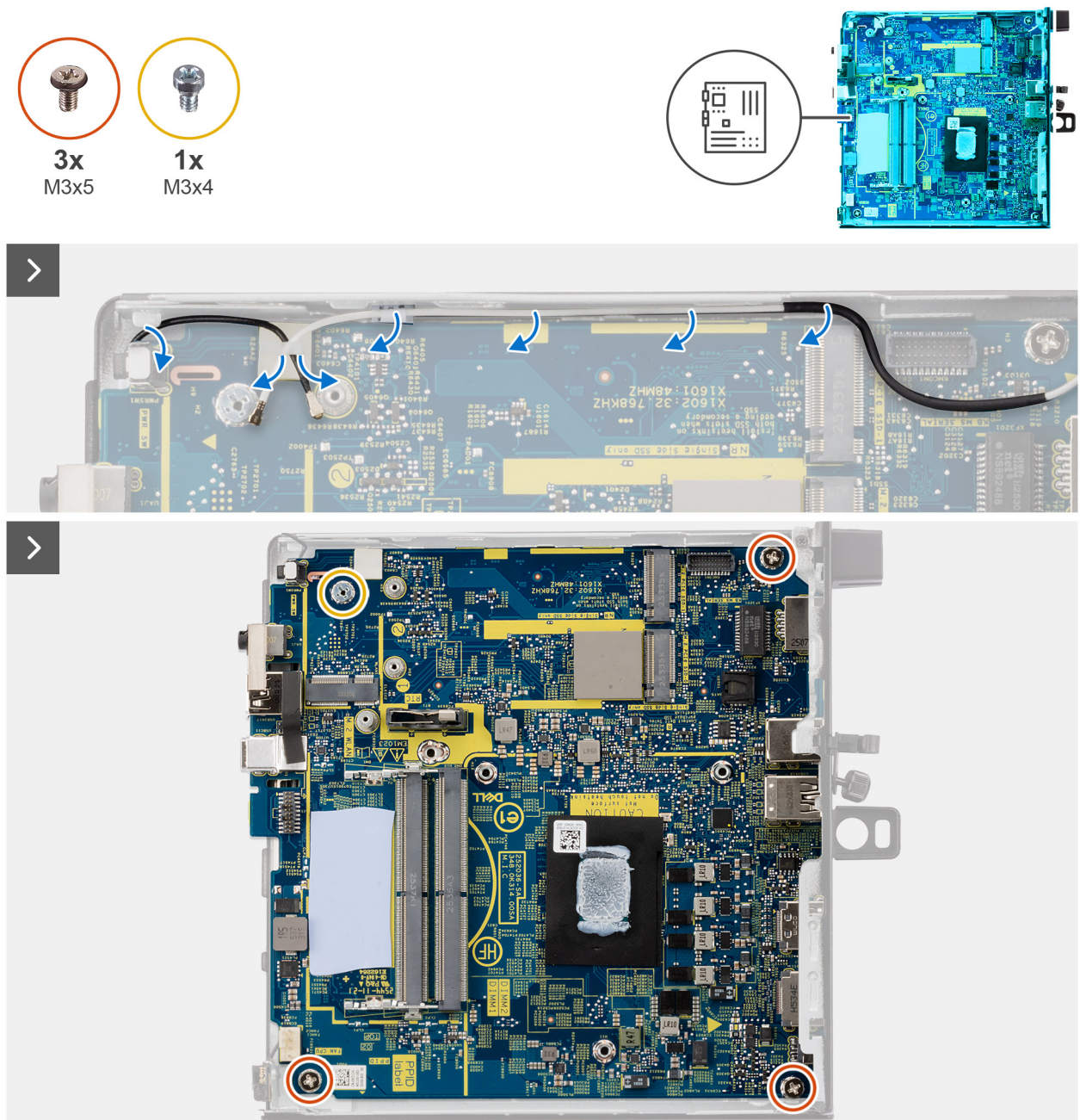


Figure 43. Removing the system board

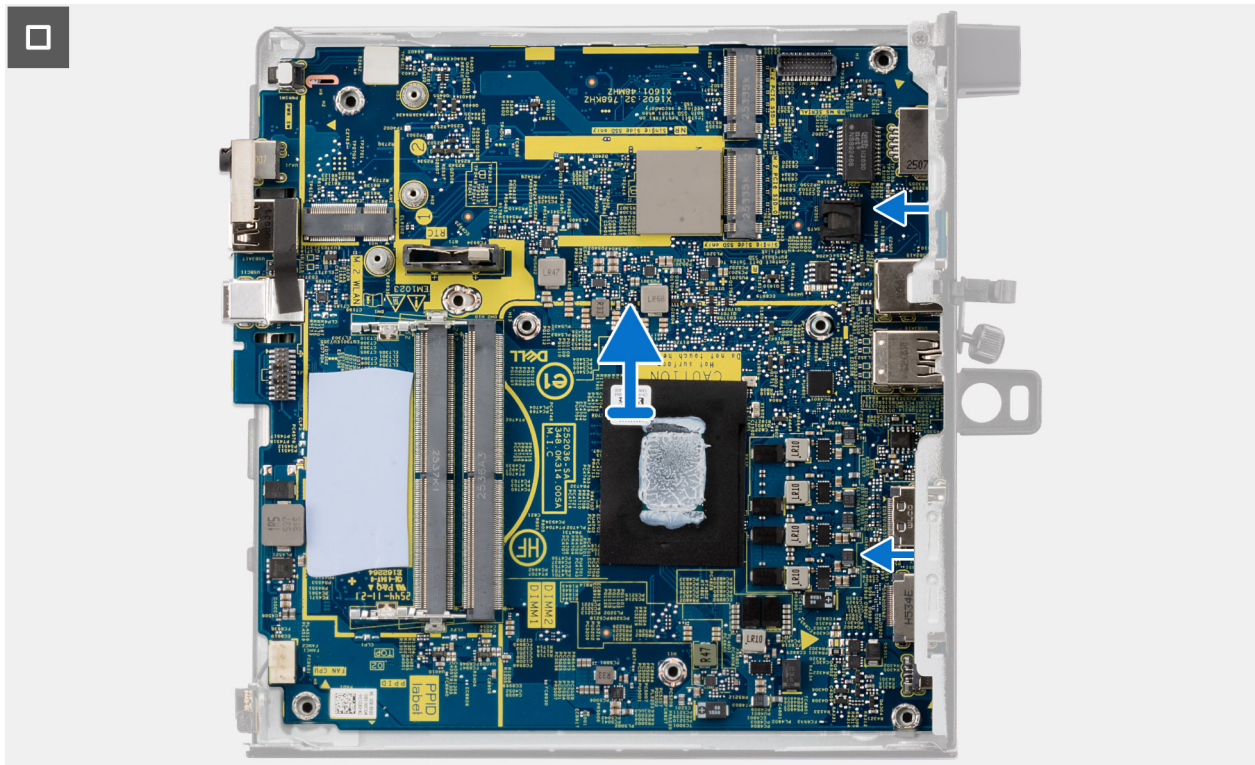


Figure 44. Removing the system board

Steps

1. Remove the wireless-card cables from their routing guides on the system board.
2. Remove the three screws (M3x5) that secure the system board to the chassis.
3. Remove the screw mount (M3x4) that secure the system board to the chassis.
4. 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.

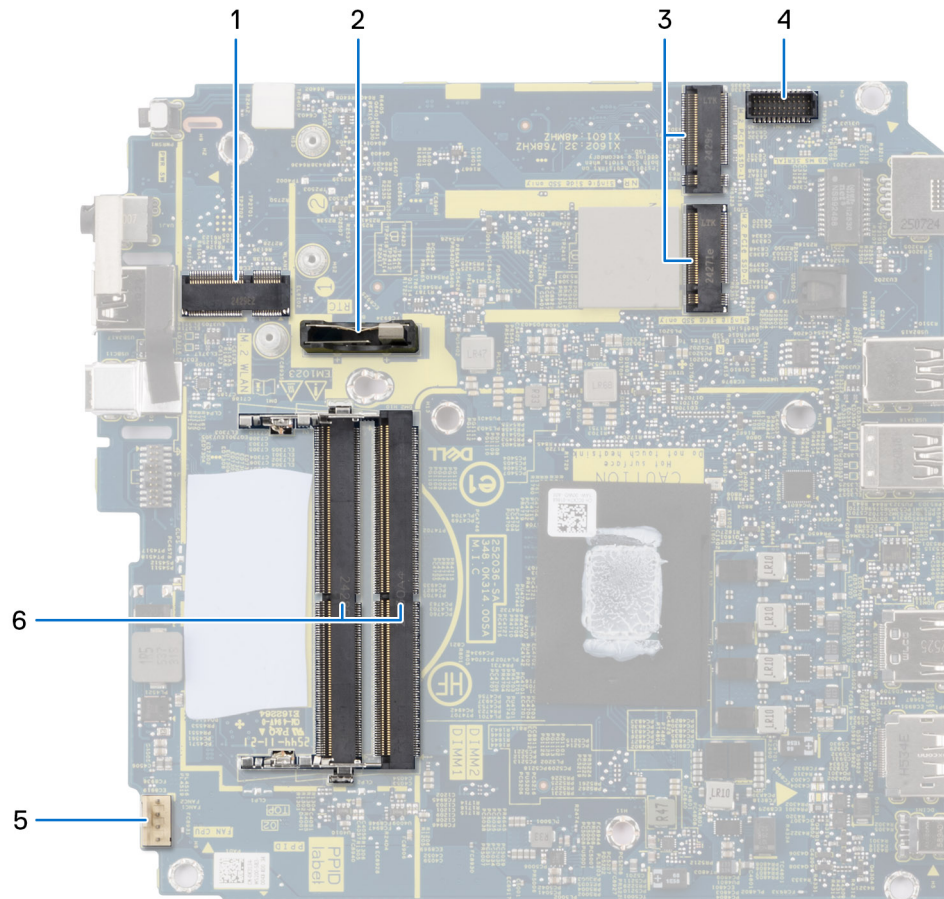


Figure 45. System board connectors

1. Wireless card slot (M.2 WLAN)
2. Coin-cell battery
3. M.2 Solid-state drive slots (M.2 PCIe SSD-0 and M.2 PCIe SSD-1)
4. Optional PS/2, serial port connector (KB MS SERIAL)
5. Fan connector (FAN CPU)
6. Memory-module slots (DIMM1 and DIMM2)

The following images indicate the location of the system board and provide a visual representation of the installation procedure.



3x
M3x5



1x
M3x4

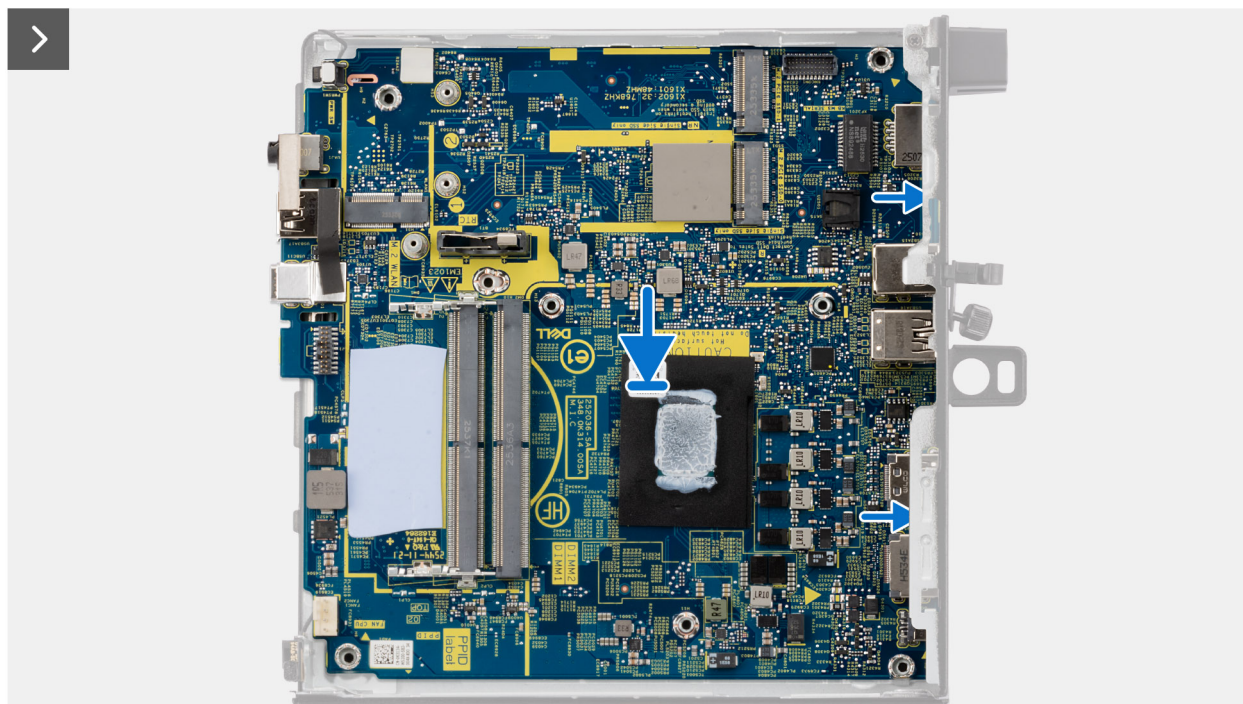
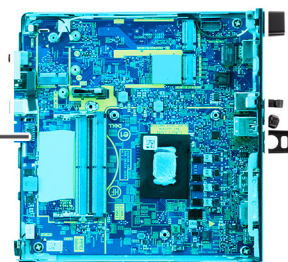


Figure 46. Installing the system board

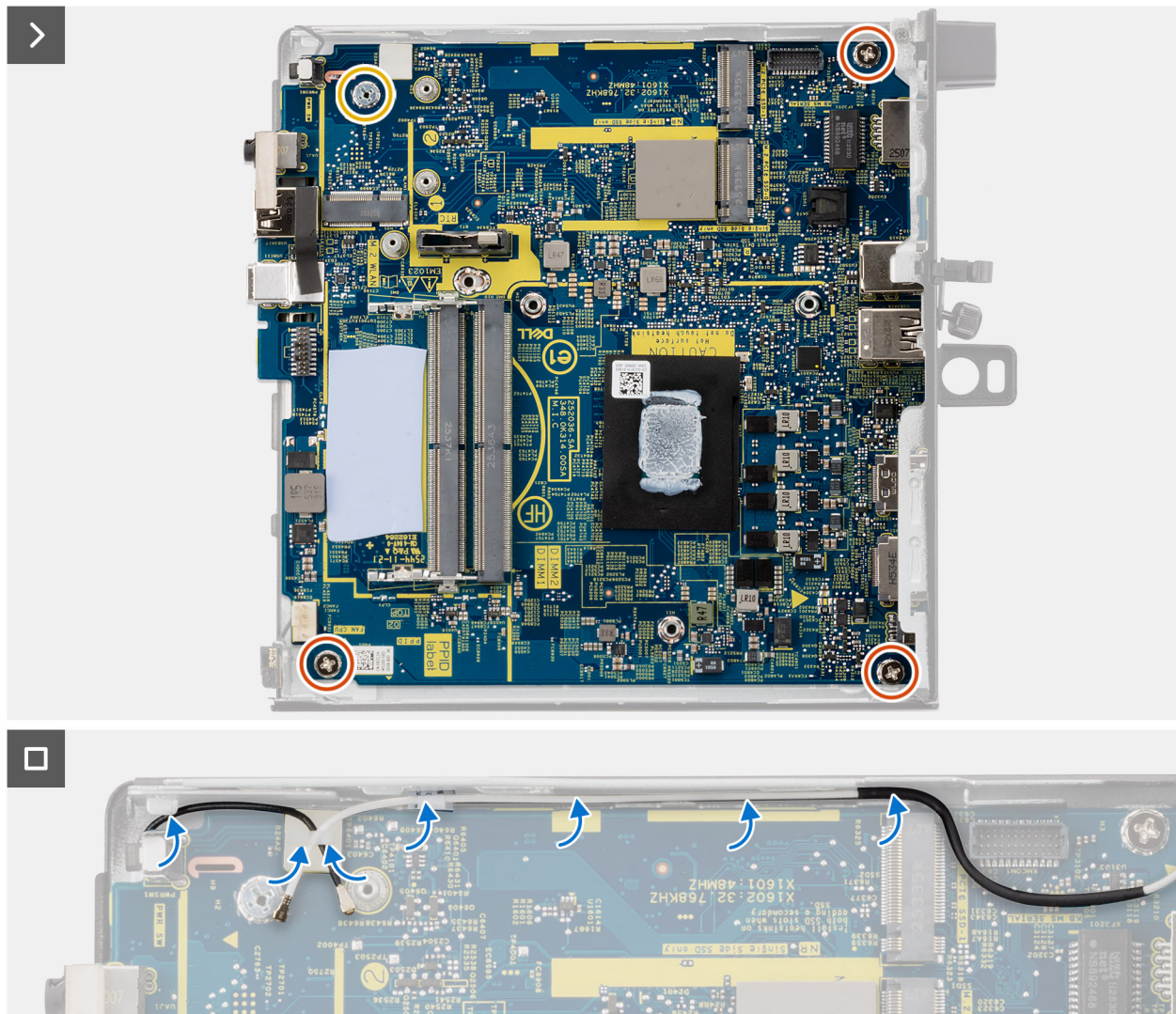


Figure 47. Installing the system board

Steps

1. With a plastic scraper, scrape the old thermal pad from the chassis.
2. Ensure that you are installing the new thermal pad in the correct location.
3. Peel off the plastic film from one side of the thermal pad.
4. With your finger in contact with the plastic film on the other side of the thermal pad, adhere the new thermal pad on the chassis.
5. Peel off the plastic film from the other side of the thermal pad.
6. Align and lower the system board into the chassis until the standoff points at the back of the system board align with those on the chassis.
7. Replace the screw mount (M3x4) that secure the system board to the chassis.
8. Replace the three screws (M3x5) that secure the system board to the chassis.
9. Rout the wireless-card cables into their routing guides on the system board.

Next steps

1. Install the [speaker holder](#).
2. Install the [heat sink](#).
3. Install the [memory](#).
4. Install the [fan assembly](#).
5. Install the [SMA antenna 3](#) and [SMA antenna 1](#).
6. Install the [internal antenna black cable](#) and [internal antenna white cable](#).

7. Install the [wireless card](#).
8. Install the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#) in single SSD configuration, if applicable.
9. Install the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#) in dual SSD configuration, if applicable.
10. Install the [coin-cell battery](#).
11. Install the [side cover](#).
12. Follow the procedure in [After working inside your computer](#).

Software

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

Operating system

Your Dell Pro Essential Micro PVM1265 supports the following operating systems:

- Windows 11 Home
- Windows 11 Pro
- Windows 11 Pro Education
- No Operating System

Drivers and downloads

When troubleshooting, downloading, or installing drivers, it is recommended that you read the [Dell Knowledge Base article Drivers and Downloads FAQs](#).

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 differ.

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 user-selectable options such as the user password, enabling or disabling base devices, and configuring hard drive settings.

Entering BIOS Setup program

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 4. 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:** XXXX 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.

BIOS Setup options

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

Table 5. BIOS Setup options—Main menu

Main	Description
Dell Pro Essential Micro PVM1265	
System Time	Displays the system time.
System Date	Displays the system date.
BIOS Version	Displays the BIOS version number.
Product Name	Displays the product name.
Service Tag	Displays the Service Tag of the computer.
CPU Type	Displays the processor type.
CPU Speed	Displays the CPU speed.
CPU ID	Displays the CPU ID.
CPU Cache	Displays the CPU cache.
L1 Cache	Displays the L1 cache of your CPU.
L2 Cache	Displays the L2 cache of your CPU.
L3 Cache	Displays the L3 cache of your CPU.
Integrated Graphics	Displays the integrated graphics on your CPU.
Discrete Graphics 1	Displays the discrete graphics processor installed on your computer.
First HDD	Displays the hard drive installed on your computer.
M.2 PCIe SSD-0	Displays the solid-state drive installed on your computer.
System Memory	Displays the system memory.
Memory Speed	Displays the memory speed.

Table 6. BIOS Setup options— Advance Configuration menu

Advance	Description
Virtualization	Enable or disable virtualization.
VT for Direct I/O	Enable or disable virtualisation for direct I/O.
Integrated NIC	Controls the on-board LAN controller.
SATA/NVMe Operation mode	Sets the operating mode of the integrated SATA hard drive controller. By default, the AHCI/NVMe option is selected. The storage device is configured for AHCI/NVMe mode.
Enable Audio	Enables all integrated audio controller.

Table 6. BIOS Setup options— Advance Configuration menu (continued)

Advance	Description
	By default, all the options are enabled.
Microphone	Enables the microphone. By default, the Enable Microphone option is enabled.  NOTE: Depending on the configuration ordered, the microphone setup option may not be available.
Enable PCIe Resizable Base Address Register (BAR)	Enables or disables PCIe Resizable Base Address Register (BAR) support.
USB Configuration	
Enable USB Boot Support	Enables booting from USB mass storage devices that are connected to external USB ports. By default, the Enable USB Boot Support option is enabled.
Front USB configuration	Click each checkbox to enable each individual USB port option.
Rear USB configuration	Click each checkbox to enable each individual USB port option.
IPv4 HTTP Support	Enables or disables IPv6 HTTP support.
IPv6 HTTP Support	Enables or disables IPv6 HTTP support.
Power option	
AC Recovery	Configure start up behavior after loss of power.
Deep Sleep Control	Enables or disables Deep Sleep.
Auto Power On	Enables or disables Auto Power On.
Auto Power On Mode	Configures Auto Power On behavior.
Num Lock Key	Enables or disables Num Lock key at start up.
Maintenance	
Data Wipe on Next Boot	Enables or disables Data Wipe on next start up.
BIOS Recovery from Hard Drive	Enables or disables BIOS recovery from hard drive.
BIOS Auto Recovery	Enables or disables BIOS Auto Recovery.
SupportAssist System Resolution	
Auto OS Recovery Threshold	Configure Auto OS Recovery Threshold.
SupportAssist OS Recovery	Enables or disables SupportAssist operating system recovery.
Keyboard Error	Enables keyboard error alert.

Table 7. BIOS Setup options—Security menu

Security	Description
Admin Password	Displays if an admin password has been set.
System Password	Displays if a system password has been set.
Asset Tag	Creates a computer Asset Tag that can be used by an IT administrator to uniquely identify a particular computer.  NOTE: Once set in BIOS, the Asset Tag cannot be changed.
Admin Password	Manage Admin Password.
System Password	Manage System Password.

Table 7. BIOS Setup options—Security menu (continued)

Security	Description
Password Change	Sets permissions for password changes.
Absolute	Absolute Software provides various cyber security solutions, some requiring software preloaded on Dell computers and integrated into the BIOS. To use these features, you must enable the Absolute BIOS setting and contact Absolute for configuration and activation. By default, the Absolute option is enabled. For additional security, Dell Technologies recommends keeping the Absolute option enabled.  NOTE: When the Absolute features are activated, the Absolute integration cannot be disabled from the BIOS setup screen.
Absolute Status	Displays if Absolute features are activated.
WINDOWS SMM SECURITY MITIGATIONS TABLE (WMST)	Enables or disables Windows SMM security mitigations table.
Enable Master Password Lockout	The Master Password Lockout setting allows you to disable the Recovery Password feature. If the computer, administrator, or hard drive password is forgotten, the computer becomes unusable.  NOTE: When the owner password is set, the Master Password Lockout option is not available.  NOTE: When an internal hard drive password is set, it must first be cleared before Master Password Lockout can be changed. By default, the Enable Master Password Lockout option is disabled. Dell does not recommend enabling the Master Password Lockout unless you have implemented your own password recovery computer.
TPM Security	
Trusted Platform Module (TPM) 2.0 security	The Trusted Platform Module (TPM) provides various cryptographic services which serve as the cornerstone for many platform security technologies. Trusted Platform Module (TPM) is a security device that stores computer-generated keys for encryption and features such as BitLocker, Virtual Secure Mode, remote Attestation. By default, the Trusted Platform Module (TPM) option is enabled. For additional security, Dell Technologies recommends keeping Trusted Platform Module (TPM) enabled to allow these security technologies to fully function.  NOTE: The options that are listed apply to computers with a discrete Trusted Platform Module (TPM) chip.
TPM 2.0 Security On	Allows you to enable or disable TPM. By default, the TPM On option is enabled. For additional security, Dell Technologies recommends keeping TPM On enabled to allow these security technologies to fully function.
Physical Presence Interface (PPI) Bypass for Enable Commands	The Physical Presence Interface (PPI) Bypass options can be used to allow the operating system to manage certain aspects of the TPM. If these options are enabled, you are not prompted to confirm certain changes to the TPM configuration. By default, the PPI Bypass for Enable Commands option is enabled. For additional security, Dell Technologies recommends keeping the PPI Bypass for Enable Commands option enabled.

Table 7. BIOS Setup options—Security menu (continued)

Security	Description
Attestation Enable	The Attestation Enable option controls the endorsement hierarchy of TPM. Disabling the Attestation Enable option prevents TPM from being used to digitally sign certificates. By default, the Attestation Enable option is enabled. For additional security, Dell Technologies recommends keeping the Attestation Enable option enabled.  NOTE: When disabled, this feature may cause compatibility issues or loss of functionality in some operating systems.
Key Storage Enable	SHA-256
Clear	Clear TPM State.
Enable Pre-Boot DMA Support	Enables or disables pre-boot DMA support.
Enable OS Kernel DMA Support	Enables or disables OS Kernel DMA support.
Internal Port DMA Compatibility Mode	Enables or disables internal port DMA compatibility.
UEFI Firmware Capsule Updates	Enables or disables UEFI firmware capsule updates.
Secure Boot	Manage Secure Boot options.

Table 8. BIOS Setup options—Boot menu

Boot	Description
File Browser Add Boot Option	Add boot option.
File Browser Del Boot Option	Delete boot option.
UEFI BOOT:	Displays the UEFI BOOT options.

Table 9. BIOS Setup options—Exit menu

Performance	Description
Exit Saving Changes	Exit and save changes to BIOS settings.
Save Change Without Exit	Save changes to BIOS settings without exiting the BIOS.
Exit Discarding Changes	Exit without saving changes to BIOS settings.
Load Optimal Default	Sets the recommended default BIOS settings.
Discard Charges	Discard all changes made to BIOS settings in this session.

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, refer [Updating the BIOS on Dell systems with BitLocker enabled](#).

 **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. Go to [Dell Support Site](#).
2. Go to **Identify your product or ask 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, click **Detect This PC**. The site automatically detects your device, and you can then click **Explore Product Support** to go to the support page for your device. You can also use the product ID or manually browse for your computer model.
3. Click **Drivers & Downloads**.
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, navigate to the folder where the BIOS update file has been saved.
8. Double-click the BIOS update file and follow the on-screen instructions.

For more information, search [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, refer [Updating the BIOS on Dell systems with BitLocker enabled](#).
-  **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. Go to [Dell Support Site](#).
2. Go to **Identify your product or ask 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, click **Detect This PC**. The site automatically detects your device, and you can then click **Explore Product Support** to go to the support page for your device. You can also use the product ID or manually browse for your computer model.
3. Click **Drivers & Downloads**.
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 [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

To update the BIOS from the One-Time boot menu, see [Updating the BIOS from the One Time Boot Menu](#) at [Dell Support Site](#).

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 10. 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. To enter the **System Setup**, press **F2** immediately after a power-on or reboot.
2. In the **System BIOS** or **System Setup** screen, select **Security** and press Enter.
The **Security** screen is displayed.
3. 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.
4. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
5. 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. To enter the **System Setup**, press **F2** immediately after a power-on or reboot.
2. In the **System BIOS** or **System Setup** screen, select **System Security** and press Enter.
The **System Security** screen is displayed.
3. In the **System Security** screen, verify that the **Password Status** is Unlocked.

4. Select **System Password**. Update or delete the existing system password, and press Enter or Tab.
5. 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.

6. Press Esc. A message prompts you to save the changes.
7. 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.

Clearing CMOS settings

About this task

 **CAUTION:** Clearing CMOS settings resets the BIOS settings on your computer.

Steps

1. Remove the [side cover](#).
2. Disconnect the battery cable from the system board.
3. Remove the [coin-cell battery](#).
4. Wait for one minute.
5. Replace the [coin-cell battery](#).
6. Connect the battery cable to the system board.
7. Replace the [side cover](#).

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 [How to Run Dell Preboot Diagnostics and Hardware Tests on Your Dell Computer](#).

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.

System-diagnostic lights

This section lists the system-diagnostic lights of your Dell Pro Essential Micro PVM1265.

The following table shows different Service LED blinking patterns and associated problems. The diagnostic light codes consist of a two-digit number, and the digits are separated by a comma. The number stands for a blinking pattern; the first digit shows the number of blinks in amber color, and the second digit shows the number of blinks in white color. The Service LED blinks in the following manner:

- The Service LED blinks the number of times equal to the value of the first digit and turns off with a short pause.
- After that, the Service LED blinks the number of times equal to the value of the second digit.
- The Service LED turns off again with a longer pause.
- After the second pause, the blinking pattern will be repeated.

Table 11. Diagnostic light codes

Diagnostic light codes (Amber, White)	Problem description
1,1	TPM Detection Failure
1,2	Unrecoverable SPI Flash Failure
1,5	EC unable to program i-Fuse
1,6	Generic catch-all for ungraceful EC code flow errors
2,1	CPU configuration or CPU failure
2,2	System board: BIOS or Read-Only Memory (ROM) failure
2,3	No memory or Random-Access Memory (RAM) detected
2,4	Memory or Random-Access Memory (RAM) failure
2,5	Invalid memory installed
2,6	System board/Chipset Error
3,1	CMOS battery failure
3,2	PCI of Video card/chip failure
3,3	Recovery image not found
3,4	Recovery image found but invalid
3,5	EC power-rail error
3,6	Flash corruption detected by SBIOS
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 on 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 enables you or the service technician to recover Dell computers from No POST/No Power/No Boot situations.

Start the RTC reset with the computer powered off and connected to AC power. Press and hold the power button for thirty seconds. The computer RTC Reset occurs after you release the power button.

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.

Getting help and contacting Dell Technologies

Self-help resources

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

Table 12. Self-help resources

Self-help resources	Resource location
Information about Dell Technologies products and services	Dell Site
Contact Support	In Windows search, type <code>Contact Support</code> , and press Enter.
Online help for operating system	Windows Support Site
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals, and documents.	Your Dell Technologies computer is uniquely identified using a Service Tag or Express Service Code. To view relevant support resources for your Dell Technologies computer, enter the Service Tag or Express Service Code at Dell Support Site . For more information about how to find the Service Tag for your computer, see Instructions on how to find your Service Tag or Serial Number .
Dell Technologies knowledge base articles	1. Go to Dell Support Site. 2. On the menu bar at the top of the Support page, select Support > Support Library. 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 Technologies

To contact Dell Technologies for sales, technical support, or customer service issues, see [Contact Support at 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 about your purchase invoice, packing slip, bill, or Dell Technologies product catalog.

Revision history

Tracks all updates that are made to the document. It typically includes the date of change, version number, and a brief description of the modification. This log helps maintain transparency, accountability, and a clear timeline of progress.

Table 13. Revision history

Revision	Date	Description
A01	06-2026	Updated the removal and installation topics of multiple components.
A00	02-2026	Original publish date.