Dell Pro Max Micro

FCM2250

Owner's Manual

Regulatory Model: D20U
Regulatory Type: D20U001
May 2025
Rev. A01

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.

Contents

1

Views of Dell Pro Max Micro FCM2250

Front

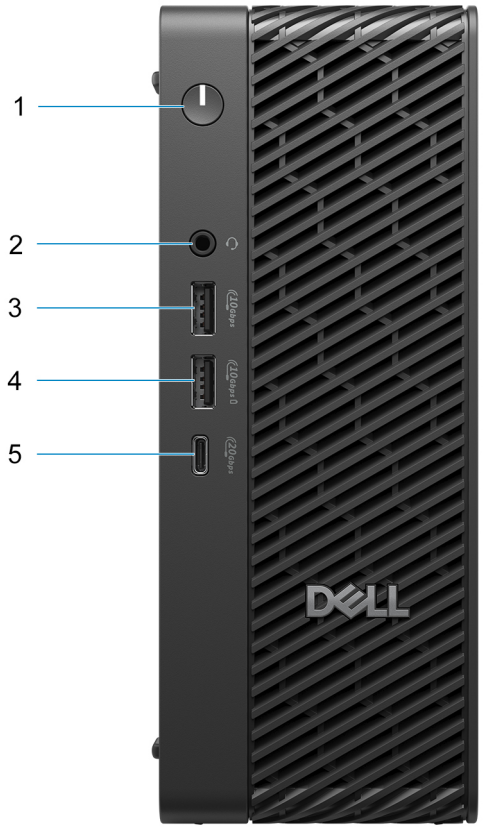


Figure 1. Front view

1. **Power button with diagnostic LED**

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

2. **Headset port**

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

3. **USB 3.2 Gen 2 port**

   Connect devices such as external storage devices and printers. Provides data transfer speeds up to 10 Gbps.

4. **USB 3.2 Gen 2 port with PowerShare**

   Connect devices such as external storage devices and printers.

   Provides data transfer speeds up to 10 Gbps. PowerShare enables you to charge connected USB devices.

NOTE: Connected USB devices will not charge when the computer is turned off or in a sleep state. To start charging connected devices, turn on the computer.

5. **USB 3.2 Gen 2x2 Type-C port**

   Connect devices such as external storage devices and printers. Provides data transfer rate of up to 20 Gbps.

Back

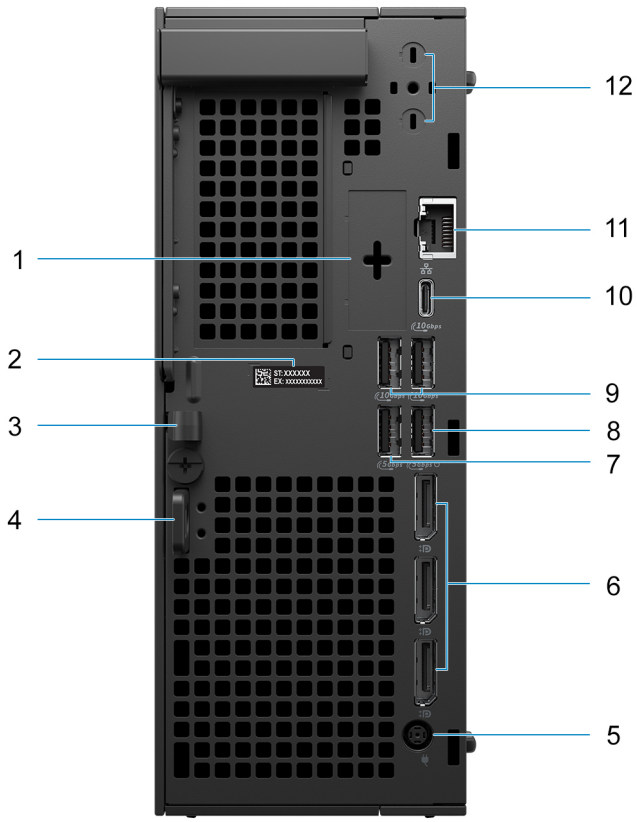


Figure 2. Back view

1. **Optional module**

   NOTE: Optional module port, which can be configured with one of the following options:

   - One VGA port
   - One HDMI 2.1 FRL port
   - One DisplayPort 2.1 (UHBR20)
   - One Serial port
   - One PS2 port
   - One USB Type-C with DisplayPort Alt Mode
   - Two USB Type-A ports
   - One Thunderbolt 4 port and one USB Type-C port
   - One 5G Optical Fiber port
   - One 5GbE LAN NIC port

2. **Service Tag**

   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.

3. **Power-cable clip**

   For power-adapter cable routing.

4. **Security-cable slot**

   Connect a security cable to prevent unauthorized movement of your computer.

5. **Power port**

   Connect a power cable to provide power to your computer.

6. **Three DisplayPort 1.4a (HBR3) ports**

   Connect an external display or a projector.

7. **USB 3.2 Gen 1 (5 Gbps) port**

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

8. **USB 3.2 Gen 1 (5 Gbps) with Smart Power On port**

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

9. **Two USB 3.2 Gen 2 (10 Gbps) ports**

   Connect devices such as external storage devices and printers. Provides data transfer speeds up to 10 Gbps.

10. **USB 3.2 Gen 2 (10 Gbps) Type-C port**

    Connect devices such as external storage devices and printers.

    Provides data transfer speeds up to 10 Gbps. PowerShare enables you to charge connected USB devices.

    NOTE: Connected USB devices will not charge when the computer is turned off or in a sleep state. Turn on the computer to charge the connected USB devices.

11. **RJ45 ethernet port (1 Gbps)**

    Connect an RJ45 ethernet cable from a router or a broadband modem for network or Internet access, with a transfer rate of 10/100/1000 Mbps (maximum 1 Gbps).

12. **External antenna connector ports**

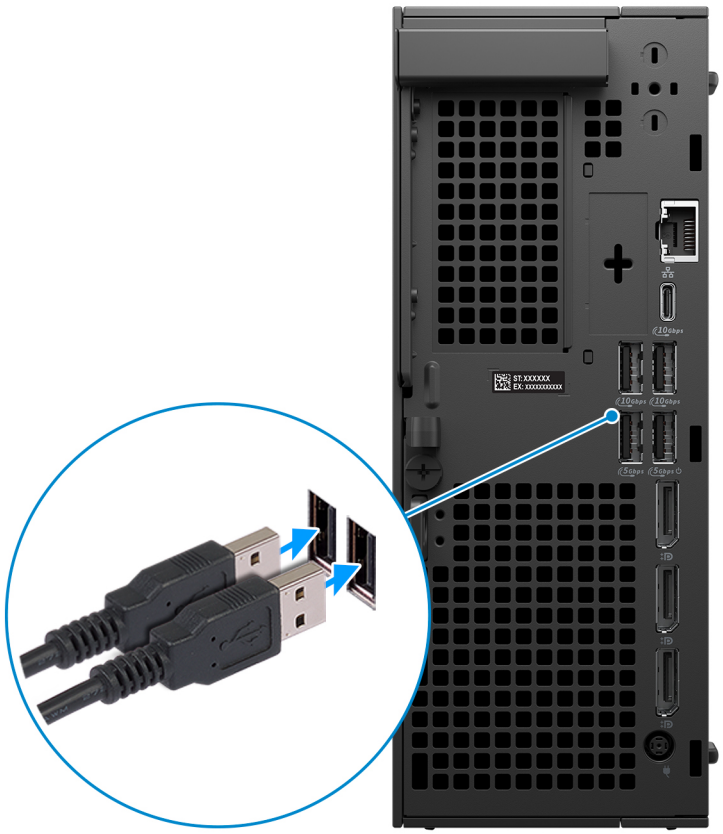
    Ports for an optional external antenna.

2

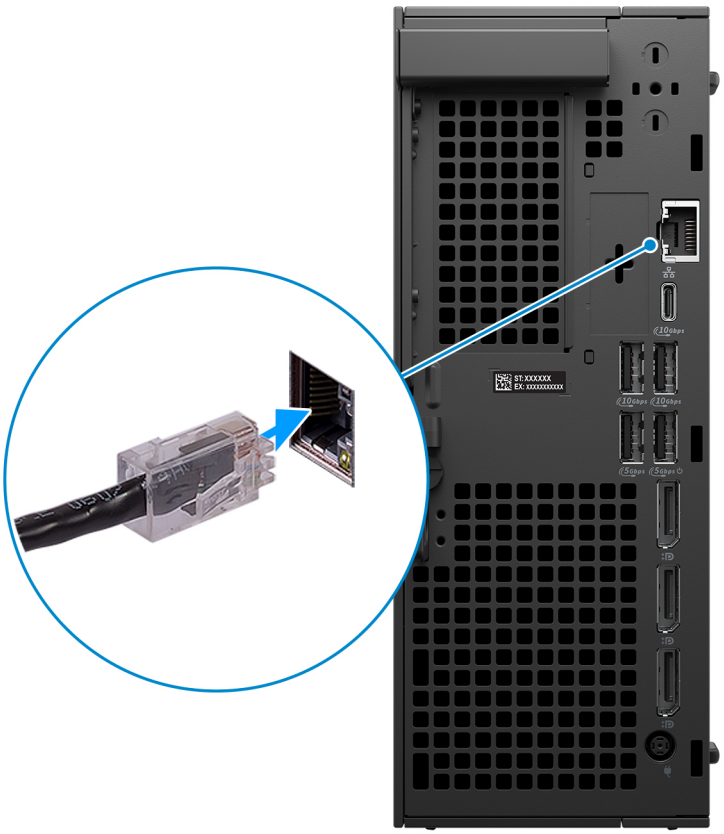
Set up your computer

Steps

1. Connect the wired keyboard and mouse to the available ports. To connect a wireless keyboard and mouse, see the instructions on how to connect in the documentation that ships with the wireless keyboard and mouse.

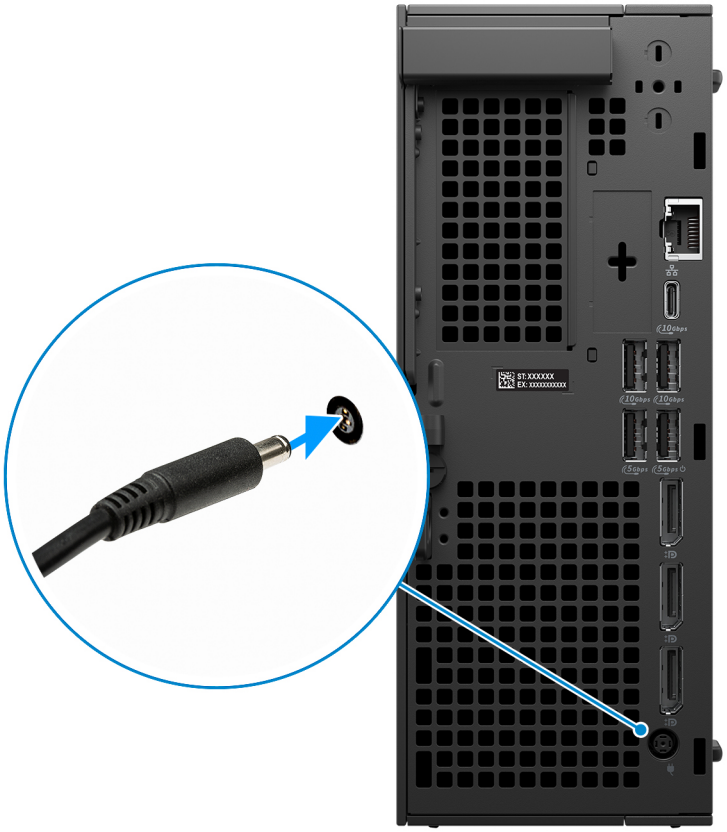


2. Connect to your network using a cable, or connect to a wireless network.



3. Connect the display. For more information about setting up the display, see the documentation that is shipped with your display.

4. Connect the power cable to the computer and then connect it to the wall outlet.



5. Press the power button at the front of the computer to turn on the computer.

6. Finish the 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 Technologies 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
Dell Optimizer	Dell Optimizer is an application is designed to enhance computer performance and productivity by optimizing settings for power, battery, display, collaboration touchpad, and presence detection. It also provides access to applications purchased with your new computer. For more information, see Dell Optimizer User's Guide at Dell Support Site

Table 1. Locate Dell apps (continued)

Resources	Description
	**Dell Product Registration** Register your computer with Dell.
	**Dell Help & Support** Access help and support for your computer.
	**SupportAssist** SupportAssist is a proactive and predictive technology that offers automated technical support for Dell computers. It proactively monitors both hardware and software, addressing performance issues, preventing security threats, and automating engagement with Dell Technical Support. . For more information, see Support Assist documentation at Dell Support Site. **NOTE:** In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.

3

Specifications of Dell Pro Max Micro FCM2250

Dimensions and weight

The following table lists the height, width, depth, and weight of your Dell Pro Max Micro FCM2250.

Table 2. Dimensions and weight

Description	Values
Height	206.00 mm (8.11 in.)
Width	79.30 mm (3.12 in.)
Depth	178 mm (7.00 in.)
Weight **NOTE:** The weight of your computer depends on the configuration ordered and manufacturing variability.	• Maximum: 2.54 kg (5.59 lb) • Minimum: 1.89 kg (4.16 lb)

Processor

The following table lists the details of the processors that are supported on your Dell Pro Max Micro FCM2250.

Table 3. Processor

Description	Option one	Option two	Option three	Option four
Type	Intel Core Ultra 9 285 vPro	Intel Core Ultra 7 265 vPro	Intel Core Ultra 5 245 vPro	Intel Core Ultra 5 235 vPro
Wattage	65 W	65 W	65 W	65 W
Core count	24	20	14	14
Thread count	24	20	14	14
Speed	2.50 GHz to 5.60 GHz	2.40 GHz to 5.30 GHz	3.50 GHz to 5.10 GHz	3.40 GHz to 5 GHz
Cache	36 MB	30 MB	24 MB	24 MB
Integrated graphics	Intel Graphics	Intel Graphics	Intel Graphics	Intel Graphics

Chipset

The following table lists the details of the chipset supported by your Dell Pro Max Micro FCM2250.

Table 4. Chipset

Description	Values
Chipset	W880
Processor	Intel Core Ultra 9/7/5 vPro processors
DRAM bus width	64-bit
Flash EPROM	32 MB + 32 MB
PCIe bus	Up to Gen4
Non-volatile memory	Yes
BIOS configuration Serial Peripheral Interface (SPI)	256 Mbit (32 MB) located at SPI_FLASH
Trusted Platform Module (TPM) 2.0 (Discrete TPM Enabled)	24 KB located at TPM 2.0 on chipset
Firmware-TPM (Discrete TPM disabled)	By default the Platform Trust Technology feature is visible to the operating system.
NIC EEPROM	LOM configuration contained within SPI flash ROM instead of LOM e-fuse

Operating system

Your Dell Pro Max Micro FCM2250 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Pro National Education, 64-bit
- Windows 11 Pro for Workstations
- Ubuntu Linux 24.04 LTS, 64-bit

Memory

The following table lists the memory specifications that are supported by your Dell Pro Max Micro FCM2250.

Table 5. Memory specifications

Description	Values
Memory slots	Two-SODIMM slots
Memory type	DDR5
Memory speed	• 5600 MT/s • 6400 MT/s
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB

Table 5. Memory specifications (continued)

Description	Values
Memory size per slot	8 GB, 16 GB, 32 GB
Memory configurations supported	• 8 GB: 1 x 8 GB, DDR5, 5600 MT/s, Non-ECC, single-channel • 16 GB: 1 x 16 GB, DDR5, 5600 MT/s, Non-ECC, single-channel • 16 GB: 2 x 8 GB, DDR5, 5600 MT/s, Non-ECC, dual-channel • 32 GB: 1 x 32 GB, DDR5, 5600 MT/s, Non-ECC, single-channel • 32 GB: 2 x 16 GB, DDR5, 5600 MT/s, Non-ECC, dual-channel • 64 GB: 2 x 32 GB, DDR5, 5600 MT/s, Non-ECC, dual-channel • 16 GB: 1 x 16 GB, DDR5, 5600 MT/s, ECC, single-channel • 16 GB: 2 x 8 GB, DDR5, 5600 MT/s, ECC, dual-channel • 32 GB: 1 x 32 GB, DDR5, 5600 MT/s, ECC, single-channel • 32 GB: 2 x 16 GB, DDR5, 5600 MT/s, ECC, dual-channel • 64 GB: 2 x 32 GB, DDR5, 5600 MT/s, ECC, dual-channel • 8 GB: 1 x 8 GB, DDR5, 6400 MT/s, Non-ECC, single-channel • 16 GB: 1 x 16 GB, DDR5, 6400 MT/s, Non-ECC, single-channel • 16 GB: 2 x 8 GB, DDR5, 6400 MT/s, Non-ECC, dual-channel • 32 GB: 1 x 32 GB, DDR5, 6400 MT/s, Non-ECC, single-channel • 32 GB: 2 x 16 GB, DDR5, 6400 MT/s, Non-ECC, dual-channel • 64 GB: 2 x 32 GB, DDR5, 6400 MT/s, Non-ECC, dual-channel

Memory matrix

The following table lists the memory configurations supported on your Dell Pro Max Micro FCM2250.

Table 6. Memory matrix

	Memory matrix for Non-ECC		Memory matrix for ECC	
Configuration	**SODIMM1**	**SODIMM2**	**SODIMM1**	**SODIMM2**
8 GB DDR5	8 GB	N/A	8 GB	N/A
16 GB DDR5	8 GB	8 GB	8 GB	8 GB
16 GB DDR5	16 GB	N/A	16 GB	N/A
32 GB DDR5	16 GB	16 GB	16 GB	16 GB
32 GB DDR5	32 GB	N/A	32 GB	N/A
64 GB DDR5	32 GB	32 GB	32 GB	32 GB

External ports and slots

The following table lists the external ports and slots of your Dell Pro Max Micro FCM2250.

Table 7. External ports and slots

Description	Values
Network port	One RJ45 ethernet port (1 Gbps)
USB ports	Front: ● One USB 3.2 Gen 2x2 (20 Gbps) Type-C port ● One USB 3.2 Gen 2 (10 Gbps) with PowerShare port ● One USB 3.2 Gen 2 (10 Gbps) port Rear: ● One USB 3.2 Gen 2 (10 Gbps) Type-C port ● Two USB 3.2 Gen 2 (10 Gbps) ports ● One USB 3.2 Gen 1 (5 Gbps) with Smart Power On port ● One USB 3.2 Gen 1 (5 Gbps) ports ● One serial port (optional) ● One serial and PS2 port using fan out cable (optional)
Audio port	One headset (headphone and microphone combo) port
Video port(s)	Three DisplayPort 1.4a (HBR3 support) ports
Power-adapter port	● 280 W AC adapter, 7.40 mm barrel ● 180 W AC adapter, 7.40 mm barrel
Security-cable slot	● One Kensington lock slot ● One padlock ring
Optional port	One optional module port which can be configured with one of the following options: ● One VGA port ● One HDMI 2.1 FRL port ● One DisplayPort 2.1 (UHBR20) ● One Serial/PS2 port ● One USB Type C with DisplayPort Alt Mode ● Two USB Type-A ports ● One Thunderbolt 4 port + One USB Type-C port ● One 5G Optical Fiber port ● One 5GbE LAN NIC port

Internal slots

The following table lists the internal slots of your Dell Pro Max Micro FCM2250.

Table 8. Internal slots

Description	Values
Expansion slots	Two half-height Gen4 PCIe x8 slots (x8 and x1 electrically)
M.2	● One M.2 2230 slot for Wi-Fi and Bluetooth combo card ● One M.2 2280 Gen5 PCIe NVMe single-sided SSD ● One M.2 2280 Gen4 PCIe NVMe single-sided SSD

Table 8. Internal slots (continued)

Description	Values
	NOTE: To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at Dell Support Site.

Ethernet

The following table lists the wired ethernet Local Area Network (LAN) specifications of your Dell Pro Max Micro FCM2250.

Table 9. Ethernet specifications

Description	Values
Model	Intel ethernet connection I219-LM
Transfer rate	10/100/1000 Mbps

Wireless module

The following table lists the Wireless Local Area Network (WLAN) modules that are supported on your Dell Pro Max Micro FCM2250.

Table 10. Wireless module specifications

Description	Option one	Option two
Model number	Intel BE200	Qualcomm FastConnect 7800 DBS
Transfer rate	5760 Mbps	5760 Mbps
Frequency bands supported	2.40 GHz/5 GHz/6 GHz	2.40 GHz/5 GHz/6 GHz
Wireless standards	• Wi-Fi 802.11a/b/g • Wi-Fi 4 (Wi-Fi 802.11n) • Wi-Fi 5 (Wi-Fi 802.11ac) • Wi-Fi 6E (Wi-Fi 802.11ax) • Wi-Fi 7 (Wi-Fi 802.11be)	• Wi-Fi 802.11a/b/g • Wi-Fi 4 (Wi-Fi 802.11n) • Wi-Fi 5 (Wi-Fi 802.11ac) • Wi-Fi 6E (Wi-Fi 802.11ax) • Wi-Fi 7 (Wi-Fi 802.11be)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • TKIP	• 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth wireless card **NOTE:** The functionality of the Bluetooth wireless card may vary based on the operating system.	Bluetooth 5.4 wireless card	Bluetooth 5.4 wireless card

Audio

The following table lists the audio specifications of your Dell Pro Max Micro FCM2250.

Table 11. Audio specifications

Description	Values
Audio type	4 Channel High Definition Audio
Audio controller	Realtek ALC3204 Codec
Internal audio interface	Intel HDA (high-definition audio)
External audio interface	One headset (headphone and microphone combo) port

Storage

This section lists the storage options on your Dell Pro Max Micro FCM2250.

Table 12. Storage matrix

Storage type	M.2 PCIe SSD-0	M.2 PCIe SSD-1	RAID support
M.2 Solid-State Drive (Boot/Primary)	2230	None	None
M.2 Solid-State Drive (Boot/Primary)	2280	None	None
M.2 Solid-State Drive (Boot/Primary) + M.2 SSD (Secondary)	2230	2230	RAID 0 or RAID 1
M.2 Solid-State Drive (Boot/Primary) + M.2 SSD (Secondary)	2280	2280	RAID 0 or RAID 1 (same capacity only)
M.2 Solid-State Drive (Boot/Primary) + M.2 SSD (Secondary)	2230	2280	None
M.2 Solid-State Drive (Boot/Primary) + M.2 SSD (Secondary)	2230	2280	None

NOTE: For more information about RAID, see Redundant Array of Independent Disks (RAID).

Table 13. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 solid-state drive	TLC Gen4 PCIe NVMe	256 GB
M.2 2230 solid-state drive	TLC Gen4 PCIe NVMe	512 GB
M.2 2280 solid-state drive	TLC Gen4 PCIe NVMe, Self-Encrypting Opal 2.0	512 GB
M.2 2280 solid-state drive	TLC Gen4 PCIe NVMe, Self-Encrypting Opal 2.0	1 TB
M.2 2280 solid-state drive	TLC Gen4 PCIe NVMe, Self-Encrypting Opal 2.0	2 TB
M.2 2280 solid-state drive	TLC Gen4 PCIe NVMe, Self-Encrypting Opal 2.0	4 TB

Table 13. Storage specifications (continued)

Storage type	Interface type	Capacity
NOTE: Contact your Independent Software Vendor (ISV) for assistance with enabling multiple SED SSD encryption.		

Redundant Array of Independent Disks (RAID)

For optimal performance when configuring drives as a RAID volume, Dell Technologies recommends using identical drive models.

RAID 0 (Striped, Performance) volumes benefit from higher performance when drives are matched because the data is split across multiple drives: However, any I/O operations with block sizes larger than the stripe size will be constrained by the slowest drive in the array. For RAID 0 I/O operations where block sizes are smaller than the stripe size, whichever drive the I/O operation targets, determines the performance, which increases variability and results in inconsistent latencies. This variability is particularly pronounced for write operations, and it can be problematic for applications that are latency sensitive. One such example of this is any application that performs thousands of random writes per second in very small block sizes.

RAID 1 (Mirrored, Data Protection) volumes benefit from higher performance when drives are matched because the data is mirrored across multiple drives all I/O operations must be performed identically to both drives, thus variations in drive performance when the models are different result in the I/O operations completing only as fast as the slowest drive. While this does not suffer from the variable latency issue in small random I/O operations as with RAID 0 across heterogeneous drives, the impact is nonetheless large because the higher performing drive becomes limited in all I/O types. One of the worst examples of constrained performance here is when using unbuffered I/O. To ensure that that writes are fully committed to nonvolatile regions of the RAID volume, unbuffered I/O bypasses cache (for example by using the Force Unit Access bit in the NVMe protocol) and the I/O operation will not complete until all the drives in the RAID volume have completed the request to commit the data. This kind of I/O operation completely negates any advantage of a higher performing drive in the volume.

Care must be taken to match not only the drive vendor, capacity, and class, but also the specific model. Drives from the same vendor, with the same capacity, and even within the same class, can have different performance characteristics for certain types of I/O operations. Thus, matching by model ensures that the RAID volume consists of a homogeneous array of drives that deliver all the benefits of a RAID volume without incurring the additional penalties when one or more drives in the volume are lower performing.

RAID support for this model is shown in Storage matrix.

Power adapter

The following table lists the power adapter specifications of your Dell Pro Max Micro FCM2250.

Table 14. Power adapter specifications

Description	Option one	Option two
Type	180 W AC adapter, 7.4mm barrel	280 W AC adapter, 7.4mm barrel
Connector dimensions:		
External diameter	7.40 mm (0.29 in.)	7.40 mm (0.29 in.)
Internal diameter	5.10 mm (0.20 in.)	5.10 mm (0.20 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)	2.34 A	4 A
Output current (continuous)	9.23 A	14.36 A
Rated output voltage	19.50 VDC	19.50 VDC
Temperature range:		

Table 14. Power adapter specifications (continued)

Description		Option one	Option two
	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 Dell Pro Max Micro FCM2250.

Table 15. GPU—Integrated

Controller	Memory size	Processor
Intel Graphics	Shared system memory	Intel Core Ultra 9/7/5

Multiple display support matrix

The following table lists the multiple display support matrix for your Dell Pro Max Micro FCM2250.

Table 16. Multiple display support matrix

Description	Option
Integrated Graphics Card	Intel Graphics
Optional Module	• HDMI 2.1 FRL - 5120 x 3200 at 60 Hz • DisplayPort 2.1 (UHBR20) - Up to 7680 x 4320 at 60 Hz • VGA - Up to 1920 x 1200 at 60 Hz • USB Type-C with DisplayPort Alt Mode - Up to 5120 x 3200 at 60 Hz
Supported 4K Displays	• Onboard DisplayPort 1.4a (HBR3) • Optional module HDMI 2.1 • Optional module DisplayPort 2.1 • Optional module USB Type-C with DisplayPort Alt Mode
Supported 5K Displays	• Optional module DisplayPort 2.1 • Optional module USB Type-C with DisplayPort Alt Mode • Optional module HDMI 2.1

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Dell Pro Max Micro FCM2250.

Table 17. GPU—Discrete

Controller	Memory size	Memory type
NVIDIA RTX A400	4 GB	GDDR6

Table 17. GPU—Discrete (continued)

Controller	Memory size	Memory type
NVIDIA RTX A1000	8 GB	GDDR6
NVIDIA RTX 2000 Ada Generation	16 GB	GDDR6
NVIDIA RTX 4000 SFF Ada Generation	20 GB	GDDR6

Video port resolution

The following table lists the video port resolution for your Dell Pro Max Micro FCM2250.

Table 18. Video port resolution

Graphics card	Video ports	Maximum supported resolution
NVIDIA RTX A400	Four mini-DisplayPort 1.4a connectors	Up to 7680 x 4320 at 24 bbp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a and DSC. DisplayPort 1.2 Certified, DisplayPort 1.3 and 1.4 ready.
NVIDIA RTX A1000	Four mini-DisplayPort 1.4a connectors	Up to 7680 x 4320 at 24 bbp at 120 Hz **NOTE:** . Requires two DisplayPort 1.4a and DSC. DisplayPort 1.2 Certified, DisplayPort 1.3 and 1.4 ready.
NVIDIA RTX 2000 Ada Generation	Four mini-DisplayPort 1.4a connectors	Up to 7680 x 4320 at 24 bbp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a and DSC. DisplayPort 1.2 Certified, DisplayPort 1.3 and 1.4 ready.
NVIDIA RTX 4000 SFF Ada Generation	Four mini-DisplayPort 1.4a connectors	Up to 7680 x 4320 at 24 bbp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a and DSC. DisplayPort 1.2 Certified, DisplayPort 1.3 and 1.4 ready.

Hardware security

The following table lists the hardware security of your Dell Pro Max Micro FCM2250.

Table 19. Hardware security

Hardware security
Kensington security-cable slot
Padlock loop
Chassis intrusion switch
Chassis lock slot support
Lockable cable covers
Supply chain tamper alerts
SafeID including Trusted Platform Module (TPM) 2.0
Smart card keyboard (FIPS)
Microsoft 10 Device Guard and Credential Guard (Enterprise SKU)
Microsoft Windows BitLocker
Local hard drive data wipe through BIOS (Secure Erase)
Self-encrypting storage drives (Opal, FIPS)
Trusted Platform Module TPM 2.0
China TPM
Intel Secure Boot
Intel Authenticate
SafeBIOS: includes Dell Off-host BIOS
Verification, BIOS Resilience, BIOS Recovery, and additional BIOS Controls

Environmental

The following table lists the environmental specifications of your Dell Pro Max Micro FCM2250.

Table 20. Environmental

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

Table 20. Environmental (continued)

Feature	Values
ENV0424 compliant	Yes

Regulatory compliance

The following table lists the regulatory compliance of your Dell Pro Max Micro FCM2250.

Table 21. Regulatory compliance

Regulatory compliance
Product Safety, EMC and Environmental Datasheets
Dell Regulatory Compliance Home Page
Responsible Business Alliance policy

Operating and storage environment

This table lists the operating and storage specifications of your Dell Pro Max Micro FCM2250.

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

Table 22. Computer environment

Description	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	110 G†	160 G†
Altitude range	-15.2 m to 3048 m (4.64 ft to 5518.4 ft)	-15.2 m to 10668 m (4.64 ft to 19234.4 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.

Dell support policy

For information about Dell support policy, search in the Knowledge Base Resource at Dell Support Site.

Dell Optimizer

This section details the Dell Optimizer specifications of your Dell Pro Max Micro FCM2250.

Dell Optimizer is an AI-based software application that allows you to customize your computer settings for power and more. Learn more: Optimizer at Dell Site

For Dell Pro Max Micro FCM2250 with Dell Optimizer, you can:

- Tune the performance, power consumption, cooling, and fan noise with selectable thermal modes.
- Download and redeem the apps that are purchased with your computer.

For more information about configuring and using these features, see Dell Optimizer User Guide.

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 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** – 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
- Torx #5 (T5) screwdriver
- 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

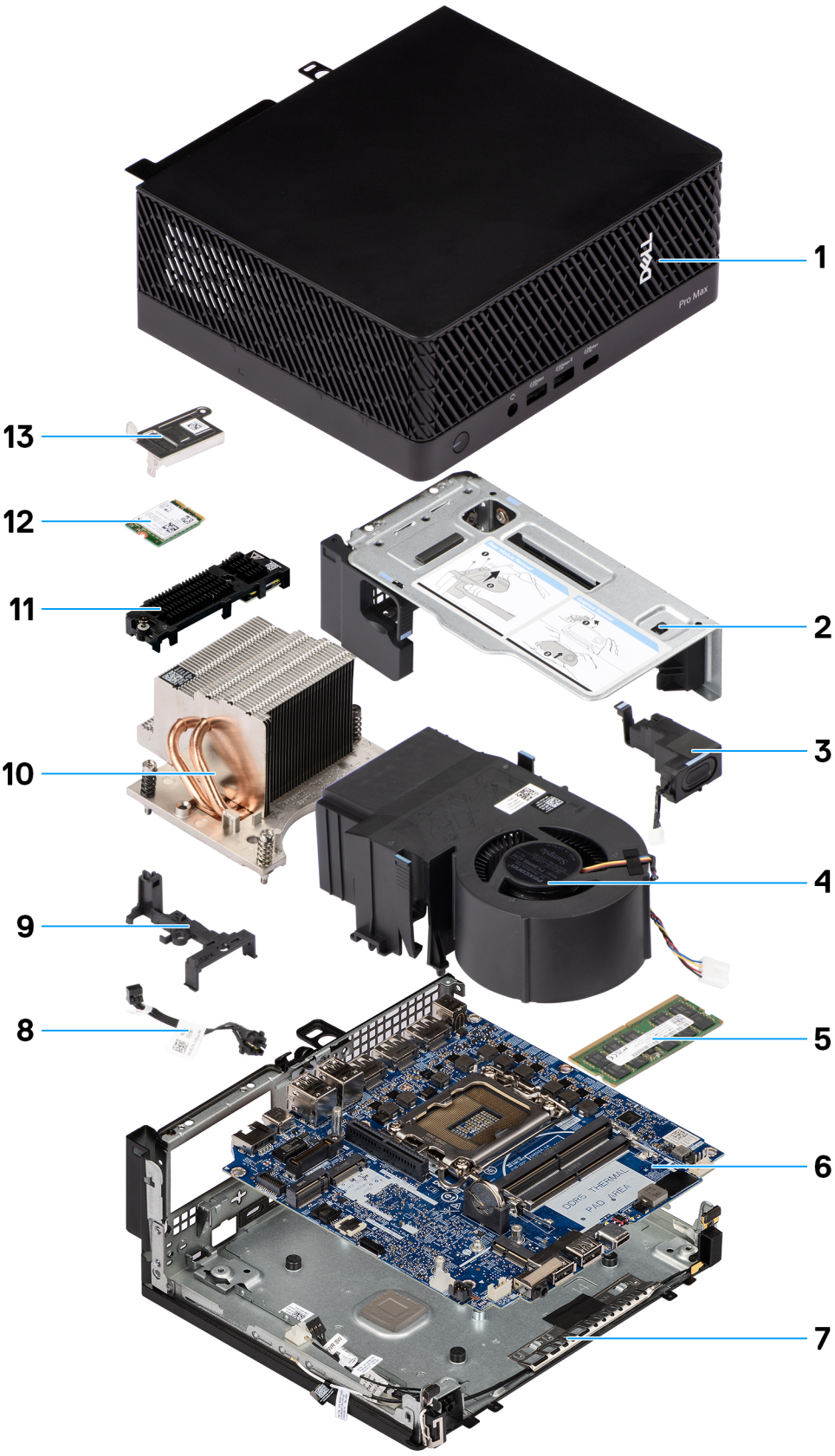
Component	Screw type	Quantity	Screw image
CRU			
Side cover	#6-32x9.3	1	
Riser-card module	M3x3	2	
M.2 2230 SSD (slot-one/slot-two)	M2x8.5	1	
M.2 2230 SSD (slot-one/slot-two)	M2x6	1	
M.2 2280 SSD (slot-one/slot-two)	M2x8.5	1	
Wireless card	M2x3.5	2	
Speaker holder	M3x5	1	
Option modules			
5G optical fiber port	M3x8.5	1	
	M3x6	2	
PS2 port	M3x8.5	1	
	M3x6	1	

Table 23. Screw list (continued)

Component	Screw type	Quantity	Screw image
DisplayPort	M3x8.5	1	
	M3x6	1	
Thunderbolt	M3x8.5	1	
	M3x6	1	
HDMI	M3x8.5	1	
	M3x6	1	
FRU			
Heat sink	Captive (6-32x6.66)	3	
System board	M3x5	3	
	M2x4.8 (Standoff)	1	
Internal antenna - location one	M3x3	1	
Internal antenna - location two	M3x3	1	

Major components of Dell Pro Max Micro FCM2250

The following image shows the major components of Dell Pro Max Micro FCM2250.



1. Side cover
2. Riser-card bracket
3. Speaker
4. System fan
5. Memory module
6. System board
7. Chassis
8. Power button

9. Speaker holder
10. Heat sink
11. SSD-extender bracket with M.2 SSD
12. Wireless card
13. Wireless card bracket

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

5

Removing and installing side cover

Removing the side cover

Prerequisites

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

NOTE: Ensure that you remove the security cable from the security-cable slot (if applicable).

About this task

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

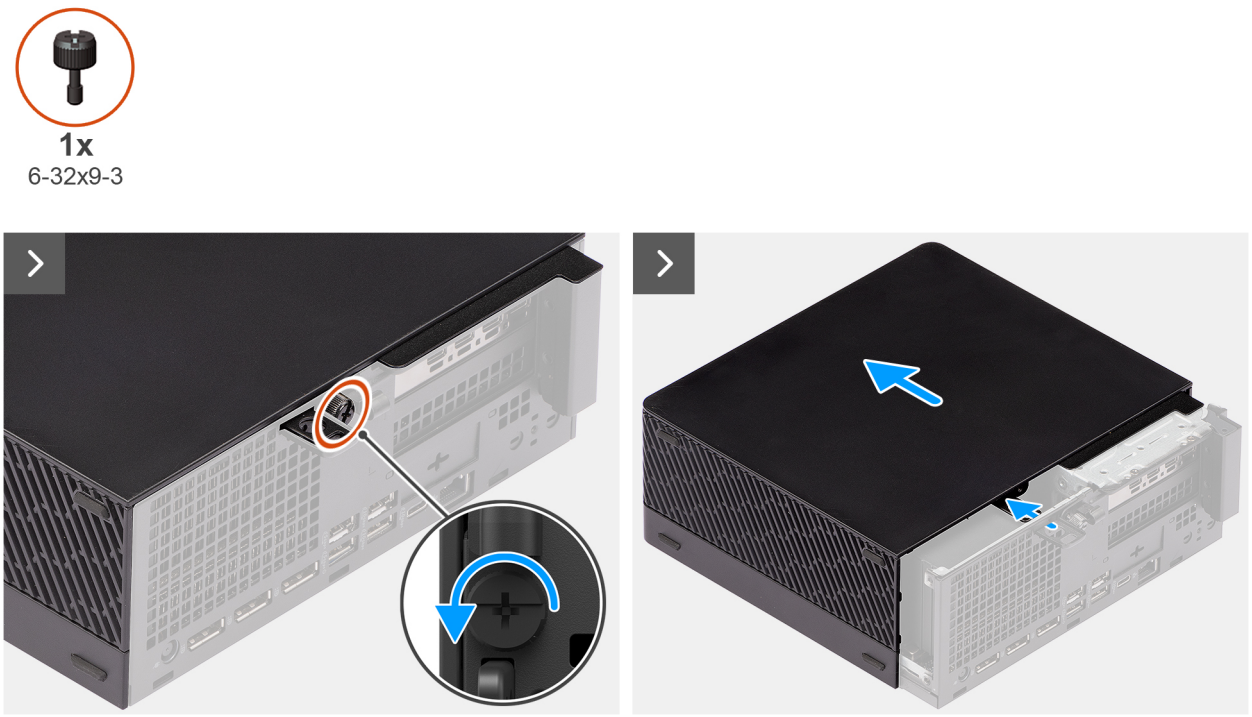


Figure 3. Removing the side cover

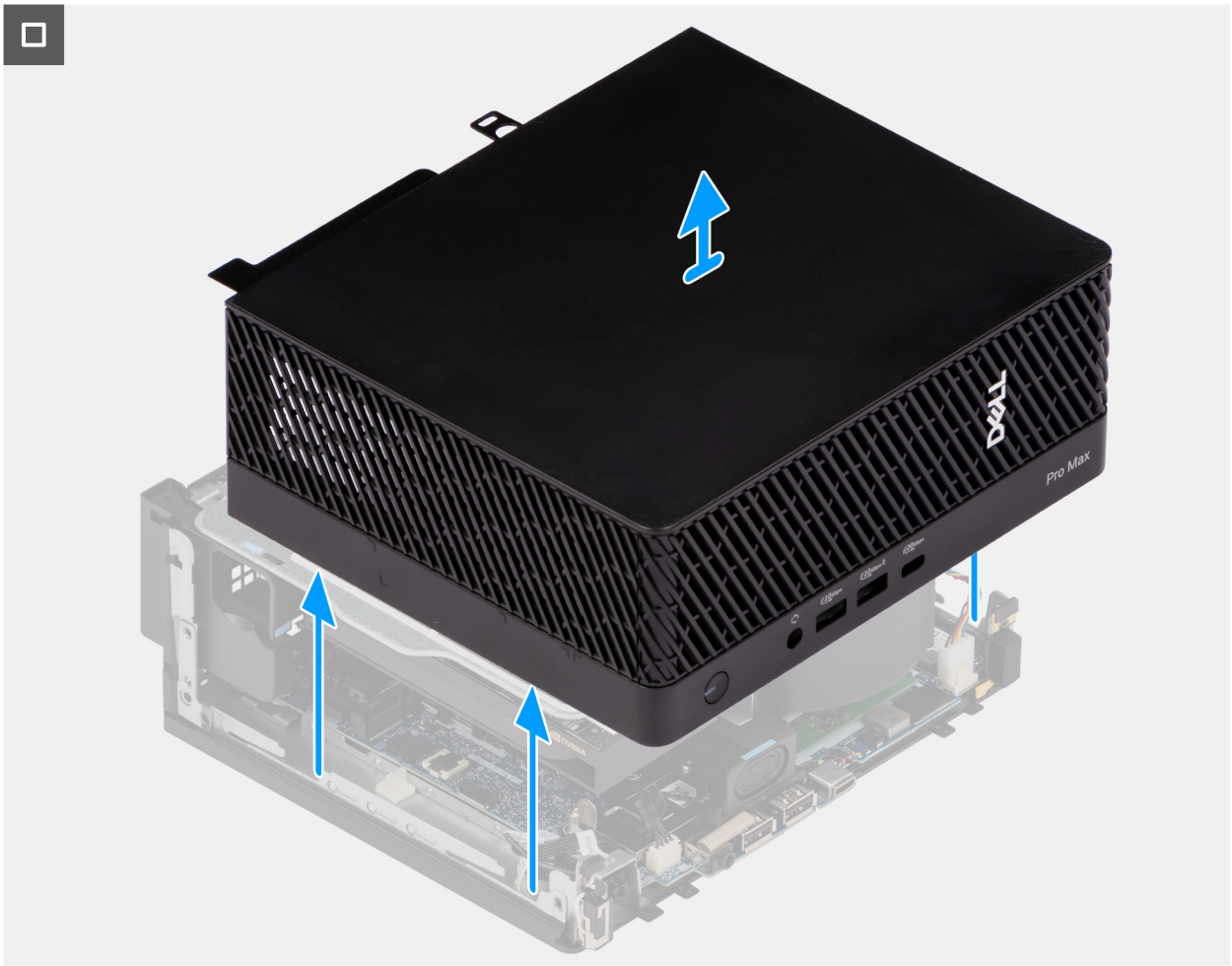


Figure 4. Removing the side cover

Steps

1. Loosen the thumbscrew (#6-32x9.3) that secures the side cover to the chassis.
2. Slide the side cover towards the front of the computer to remove the padlock ring through the slot in the chassis.
3. Lift to remove it from the chassis.

Installing the side cover

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 side cover and provides a visual representation of the installation procedure.

1x

6-32x9-3

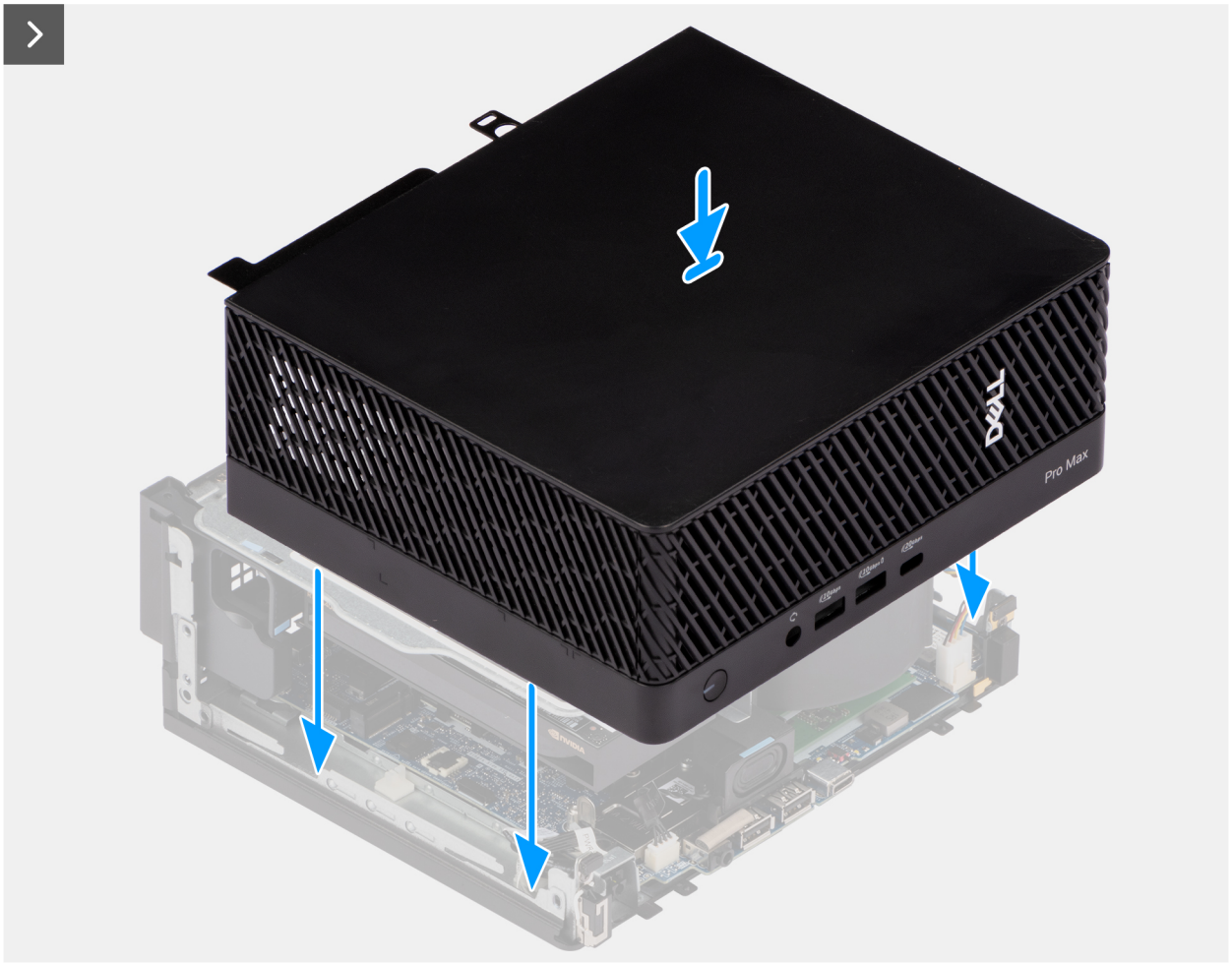


Figure 5. Installing the side cover

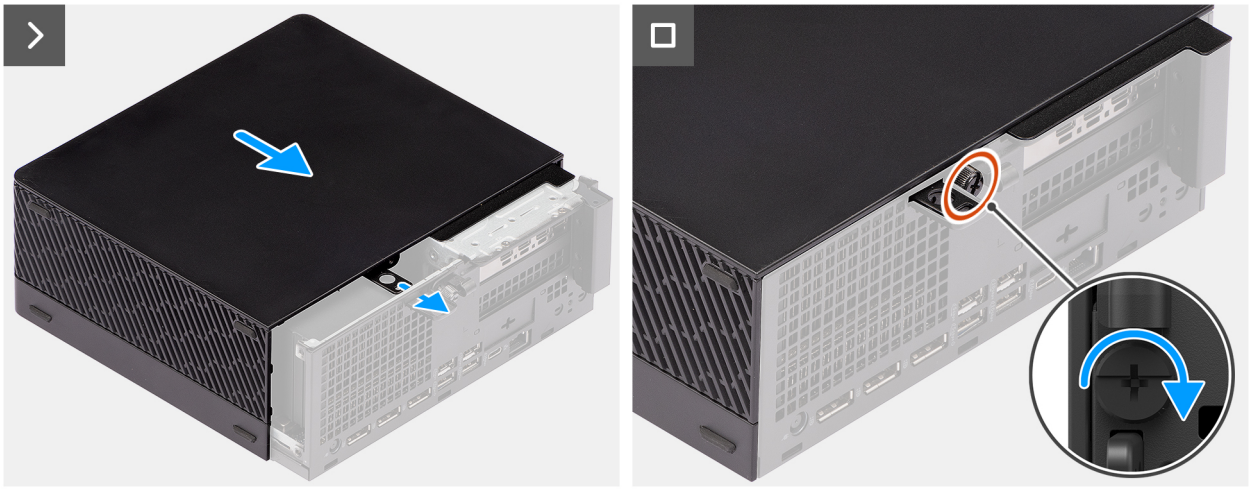


Figure 6. Installing the side cover

Steps

1. Align the side cover with the grooves on the chassis.
2. Slide the side cover into the chassis towards the front of the computer.

   NOTE: Ensure to slide the padlock ring through the slot in the chassis.

3. Tighten the thumbscrew (#6-32x9.3) to secure the side cover to the chassis.

Next steps

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

6

Removing and installing 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.
3. Remove the riser-card module.

About this task

The following image indicates the location of the coin-cell battery and provides a visual representation of the removal procedure.

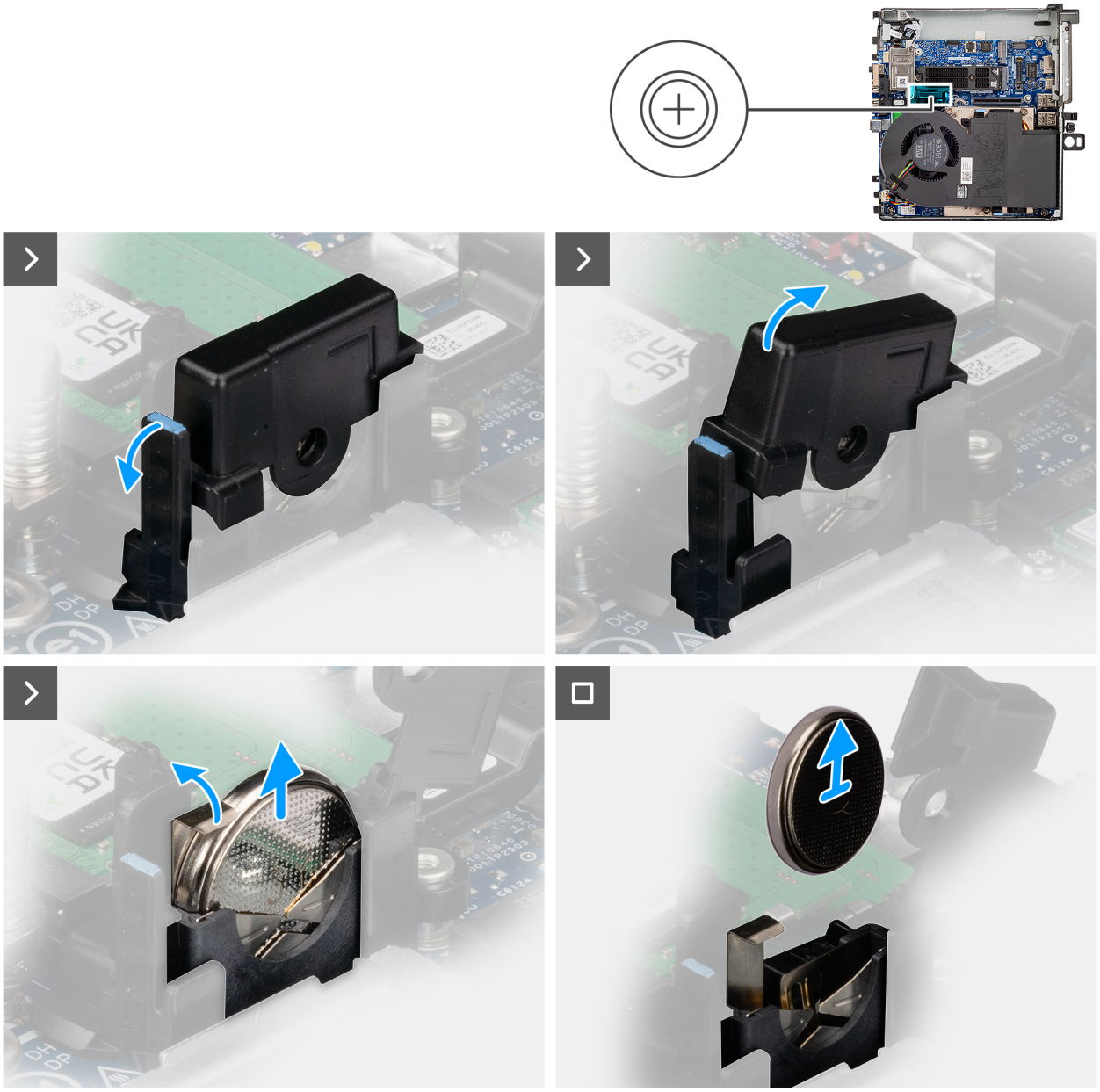


Figure 7. Removing the coin-cell battery

Steps

1. Pull the tab to open and release the coin-cell battery cover.
2. Push the coin-cell battery securing-clip on the coin-cell battery socket to release the coin-cell battery.
3. Remove the coin-cell battery from the computer.

Installing the coin-cell battery

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 coin-cell battery and provides a visual representation of the installation procedure.

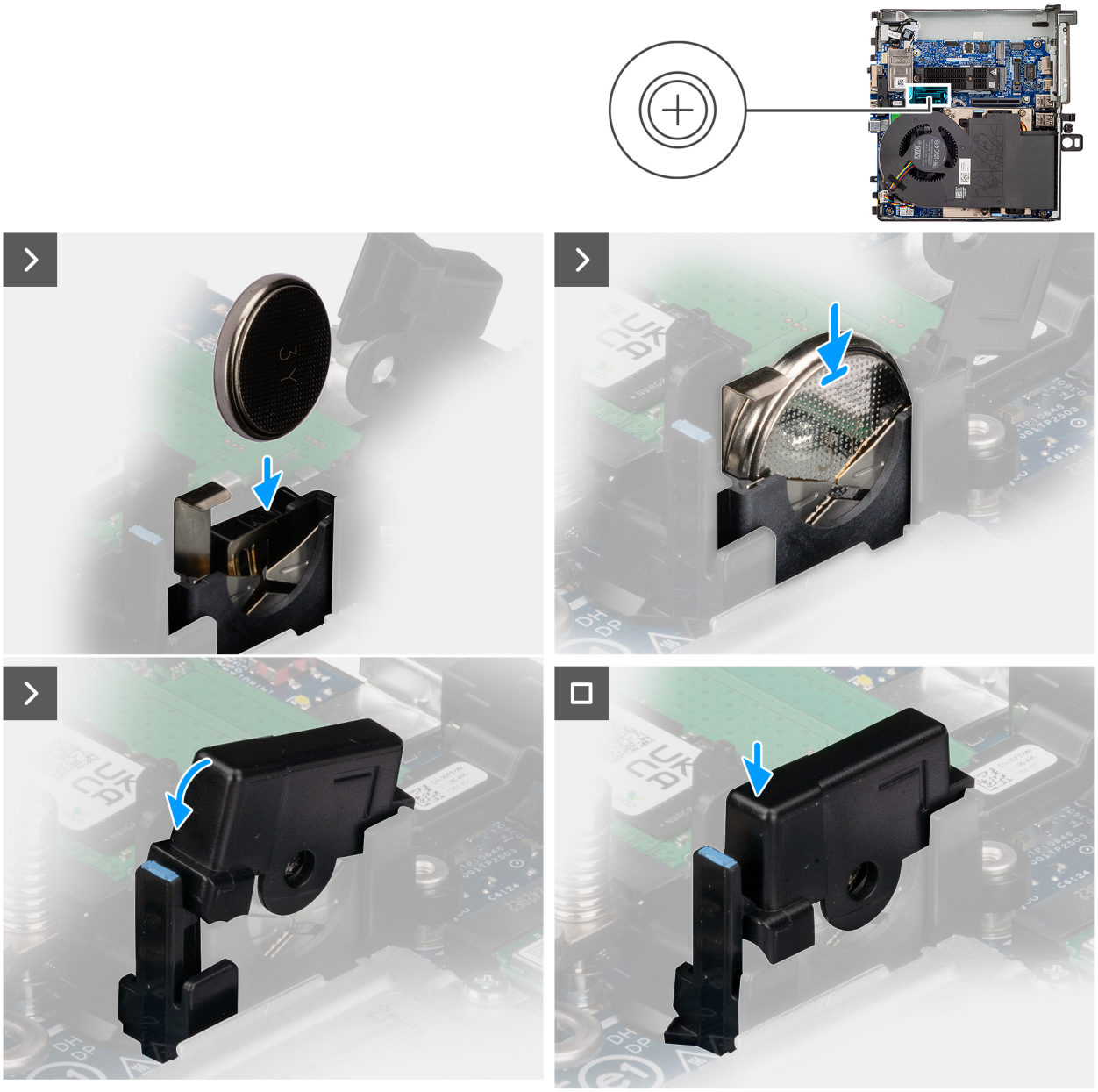


Figure 8. Installing the coin-cell battery

Steps

1. Insert the coin-cell battery into the socket with the positive side (+) label facing up and snap the battery in the socket.
2. Close and press the cover until it latches into place.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. 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.

Riser-card module

Removing the riser-card module

Prerequisites

NOTE: The riser-card module contains graphic card.

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

About this task

The following image indicates the location of the riser-card module and provides a visual representation of the removal procedure.

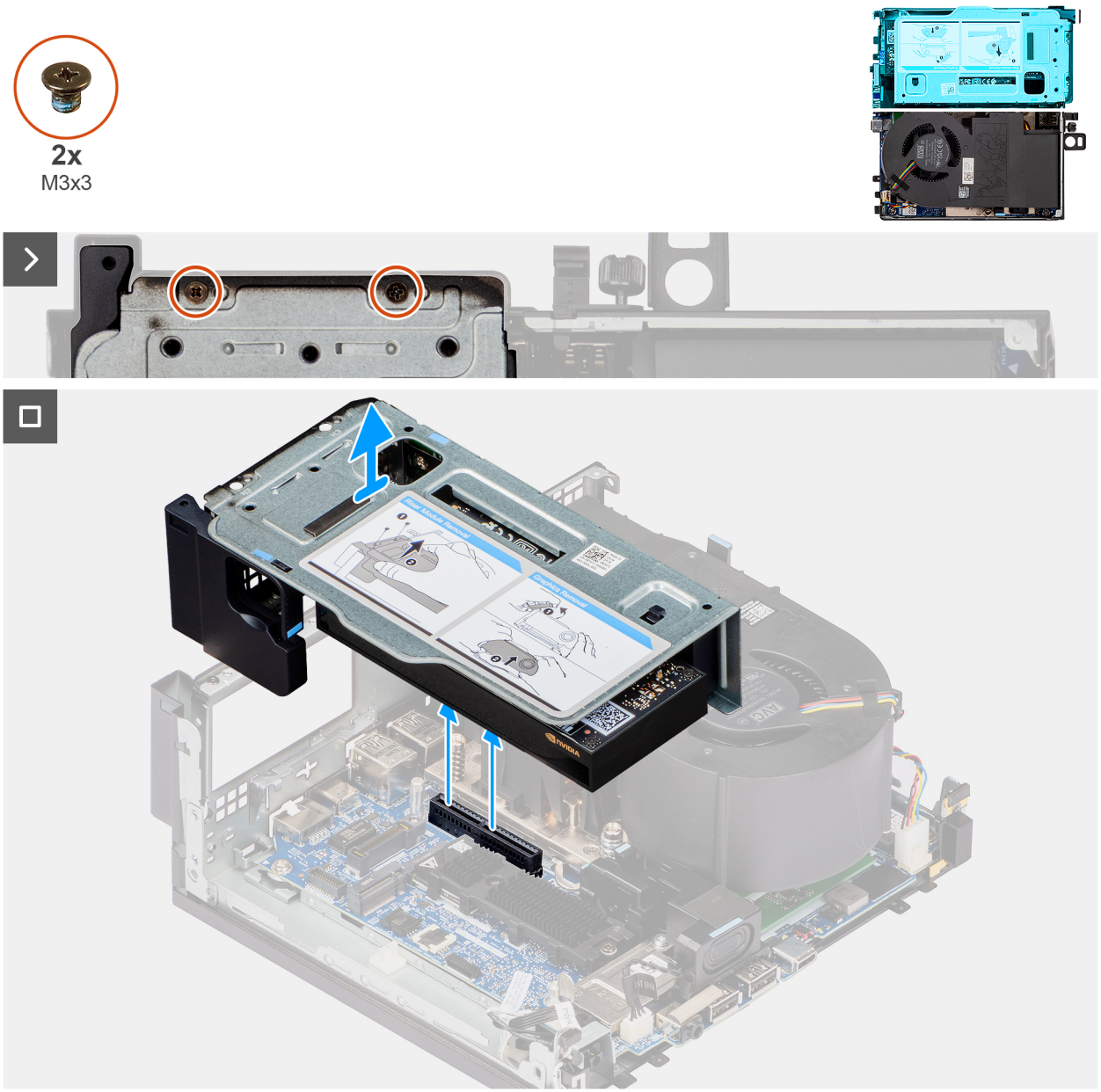


Figure 9. Removing the riser-card module

Steps

1. Remove the two (M3x3) screws that secure the riser-card module to the chassis.
2. Lift the riser-card module away from the computer.

Installing the riser-card module

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 riser-card module and provides a visual representation of the installation procedure.

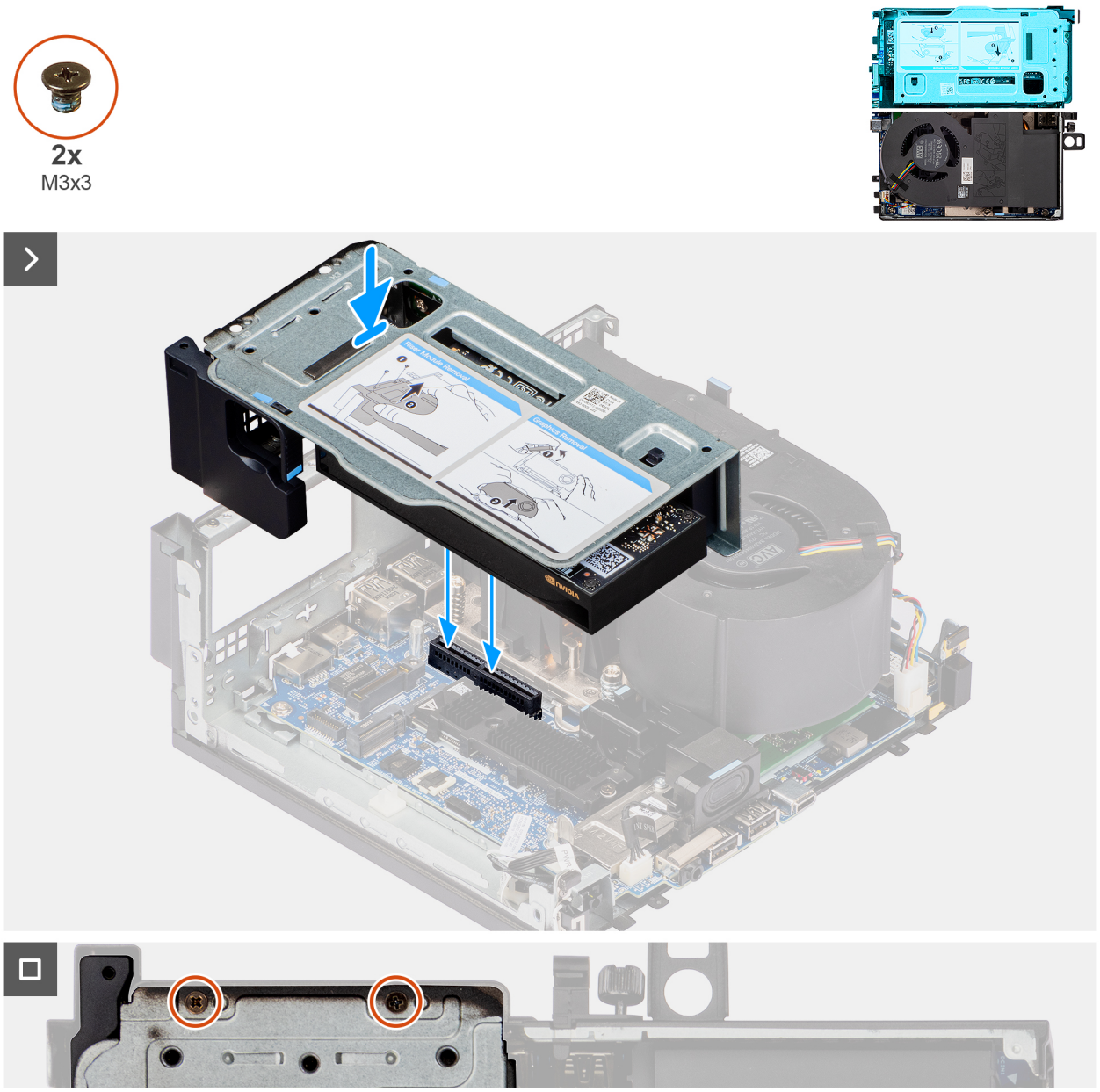


Figure 10. Installing the riser-card module

Steps

1. Align and place the module on the PCIe slot on the system board.
2. Align the screw holes on the riser-card module with the screw holes on the chassis.
3. Replace the two (M3x3) screws to secure the riser-card module to the chassis.

Next steps

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

Graphics card

Removing the graphics card

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following image indicates the location of the graphics card and provides a visual representation of the removal procedure.

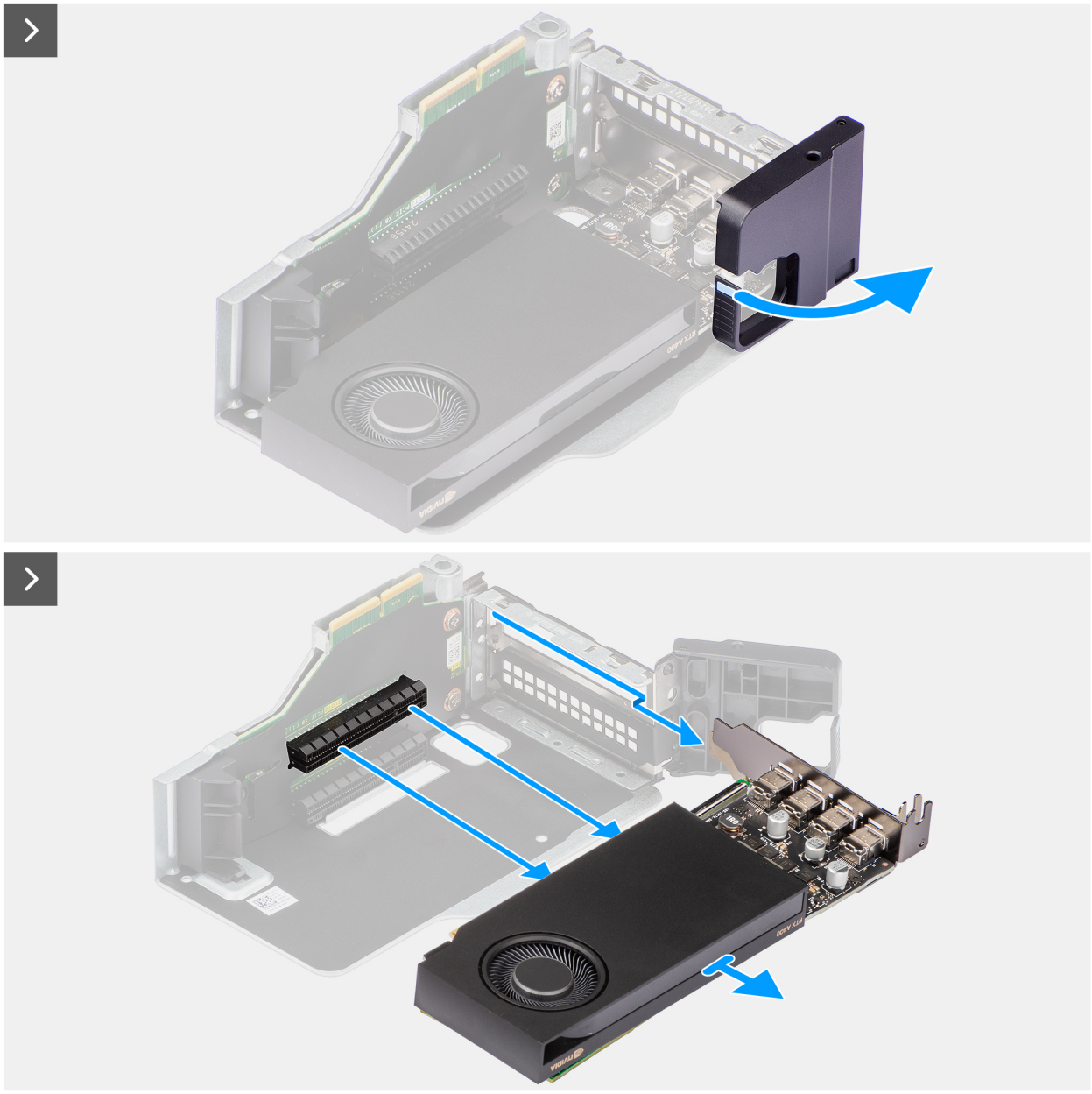


Figure 11. Removing the graphics card

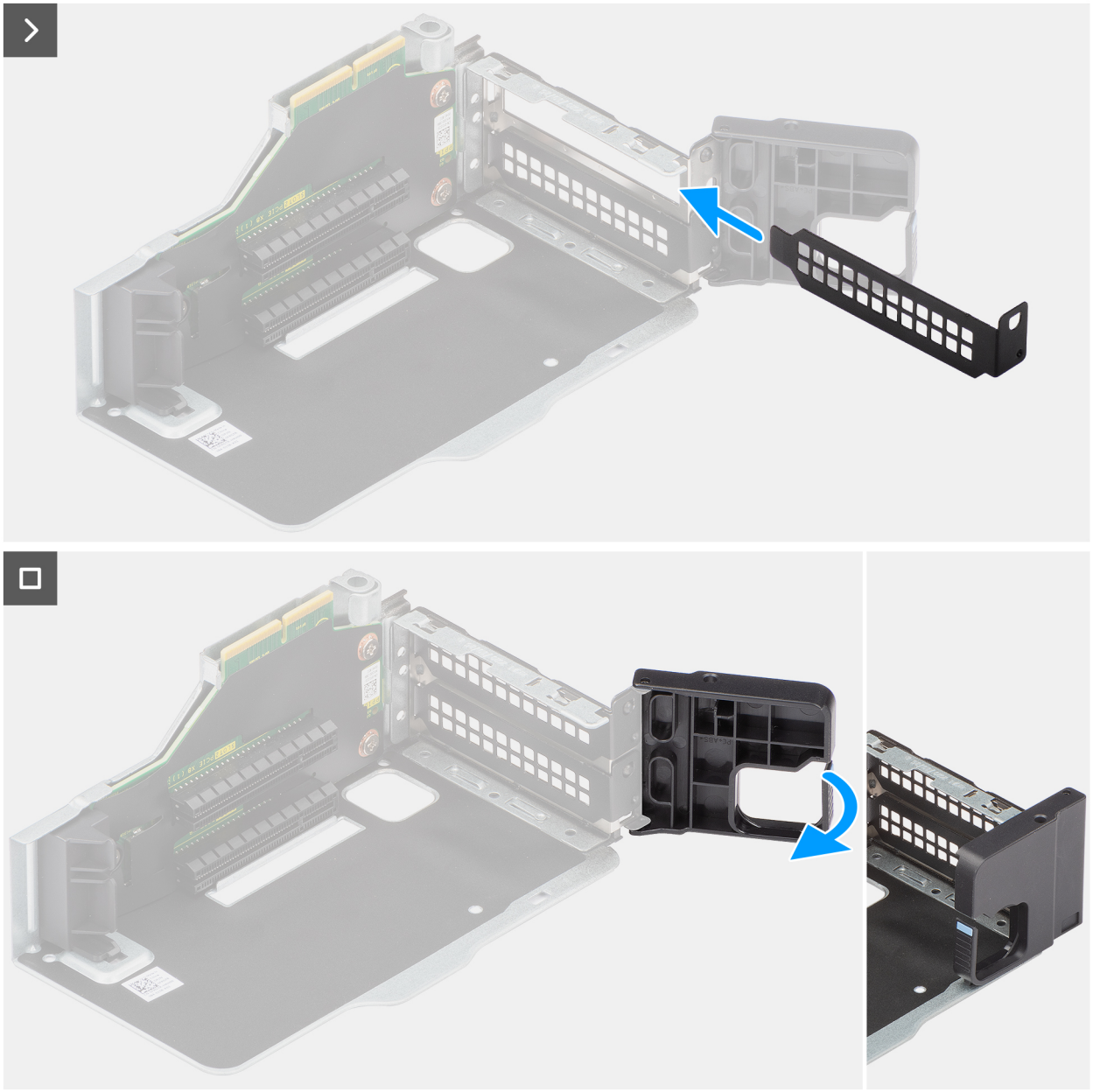


Figure 12. Removing the graphics card

Steps

1. On the riser-card module, press the retainer arm to release the hook and swing open the retainer.
2. Slide the graphics card along the edges of the riser-card module to detach it.
3. Slide and insert the expansion-card slot-cover into position.
4. Swing the retainer back into the closed position.

Installing the graphics card

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 graphics card and provides a visual representation of the installation procedure.

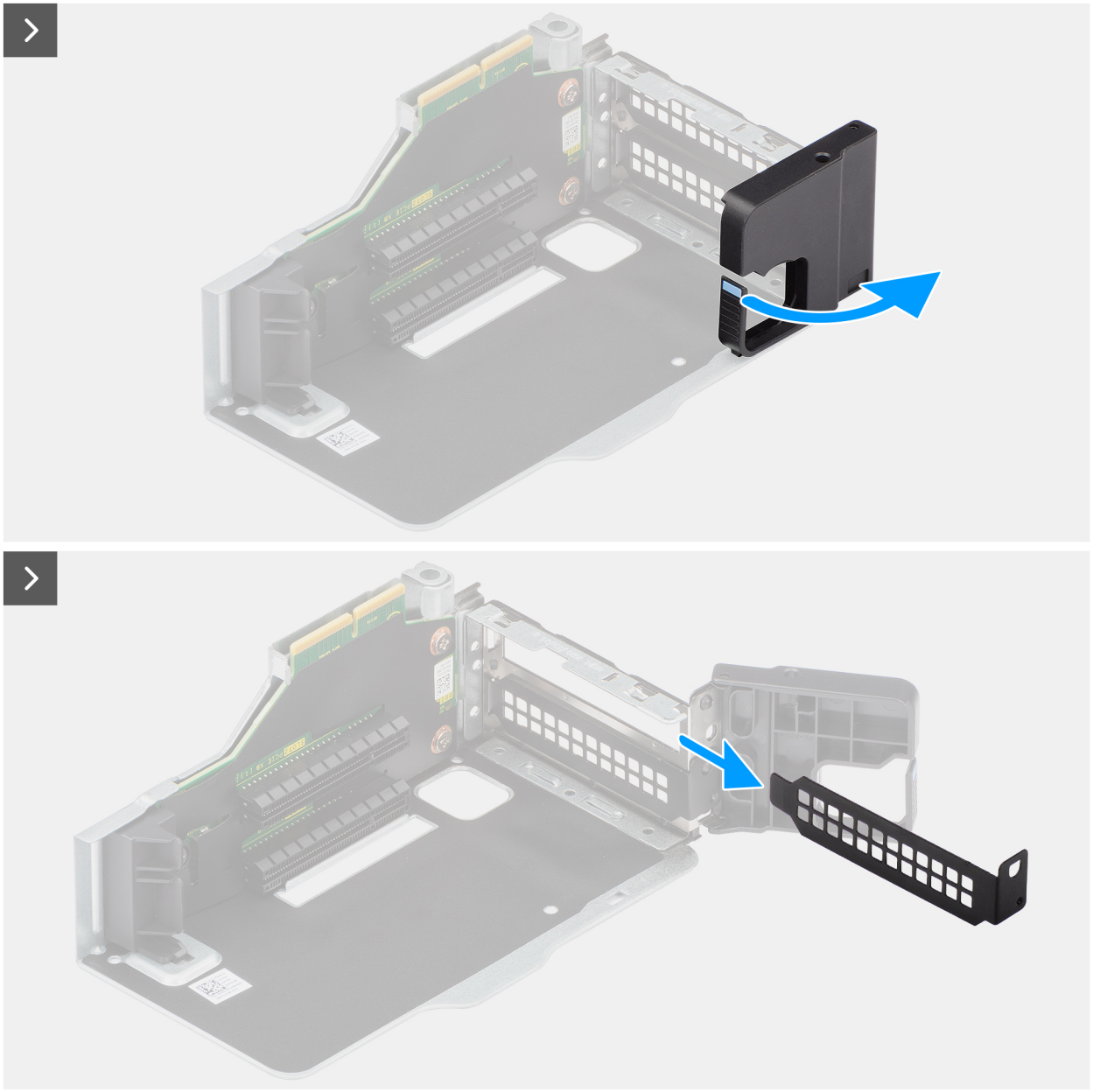


Figure 13. Installing the graphics card

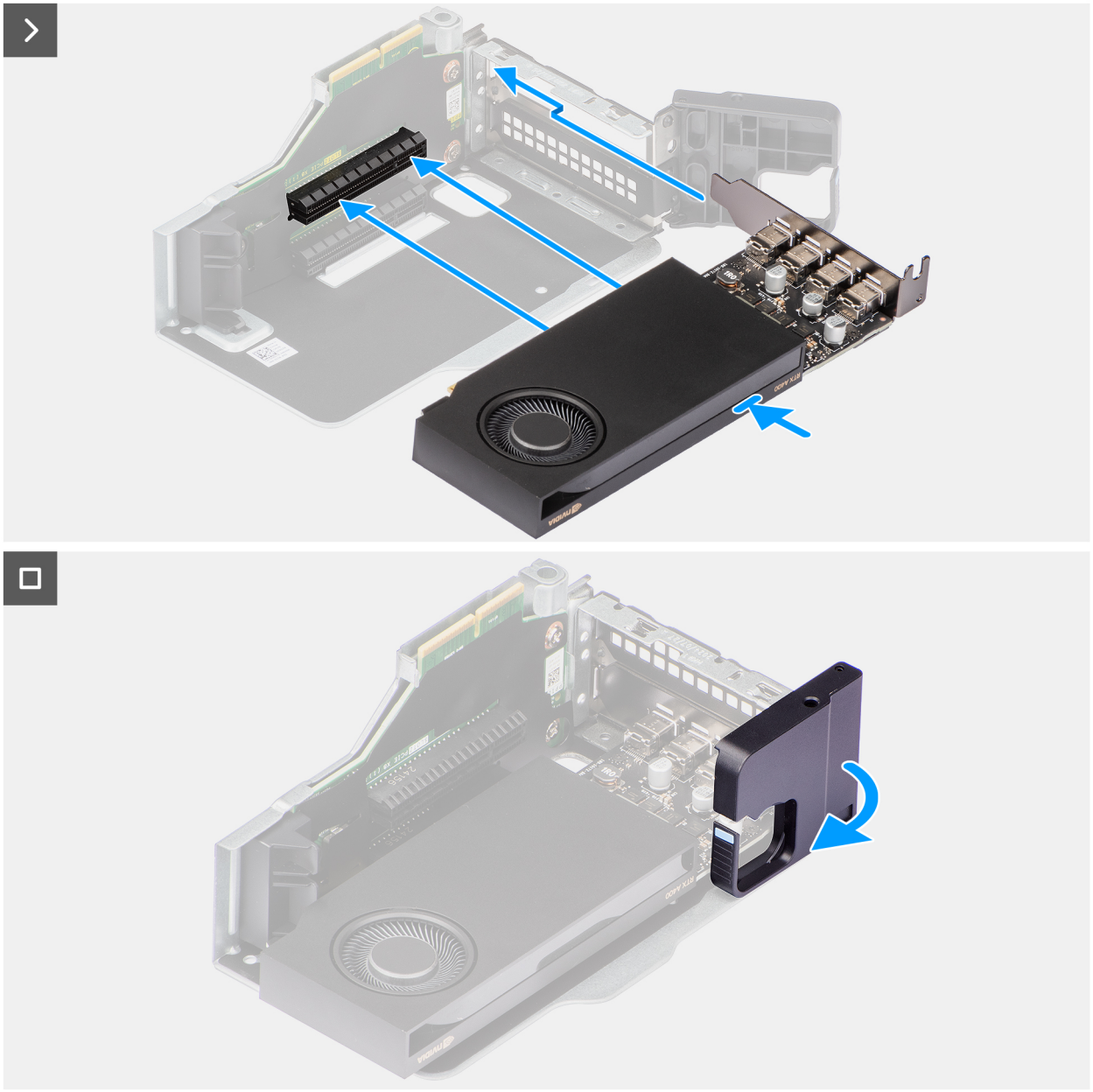


Figure 14. Installing the graphics card

Steps

1. On the riser-card module, press the retainer arm to release the hook and swing open the retainer.
2. Slide to remove the expansion-card slot-cover from the riser-card module.
3. Slide the graphics card into the slot on the riser-card module until it clicks into place securely.
4. Swing the retainer back into the closed position.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

System fan

Removing the system fan

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

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

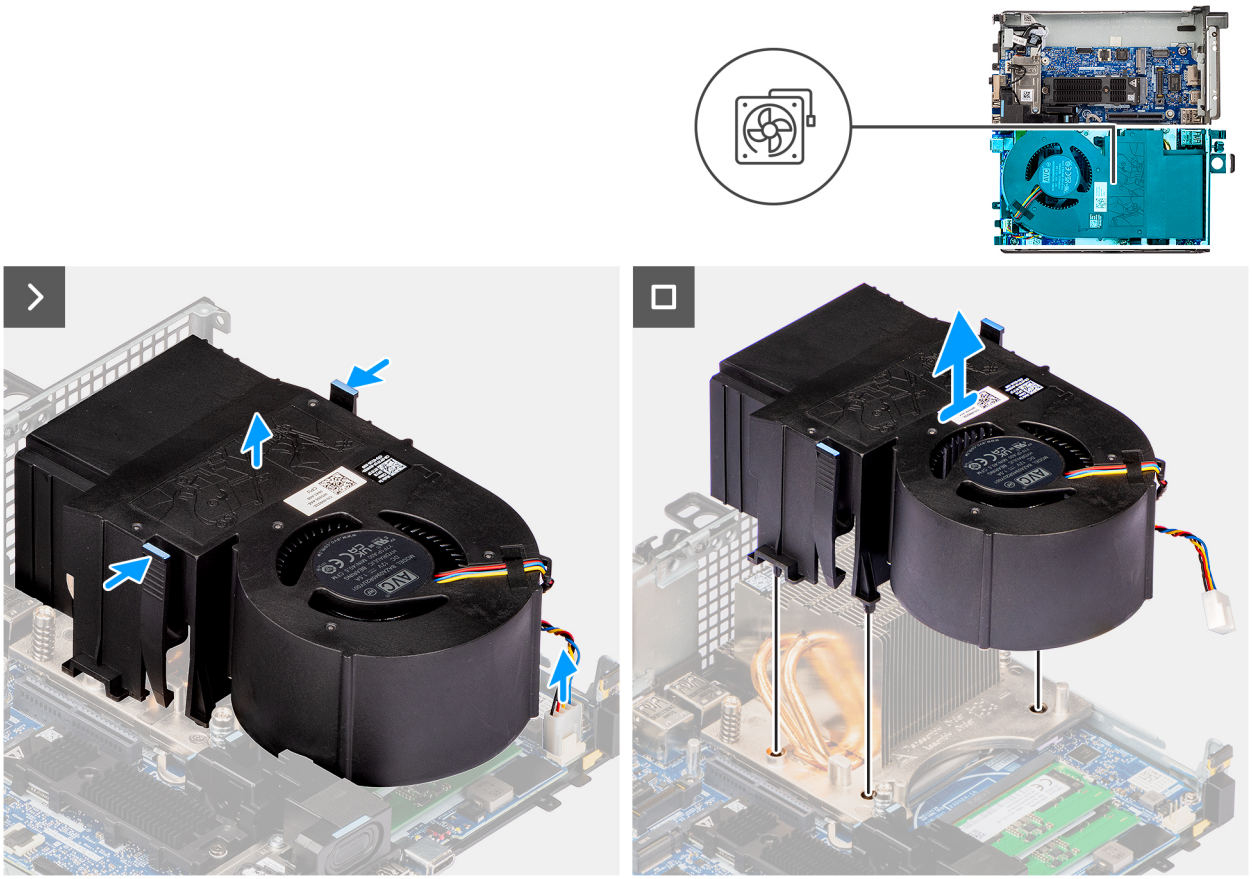


Figure 15. Removing the system fan

Steps

1. Disconnect the fan cable from the connector (FANC1 and FANC2) on the system board.
2. Press the blue tabs on both sides of the system fan and lift the system fan away from the computer.

Installing the system fan

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 system fan and provide a visual representation of the installation procedure.

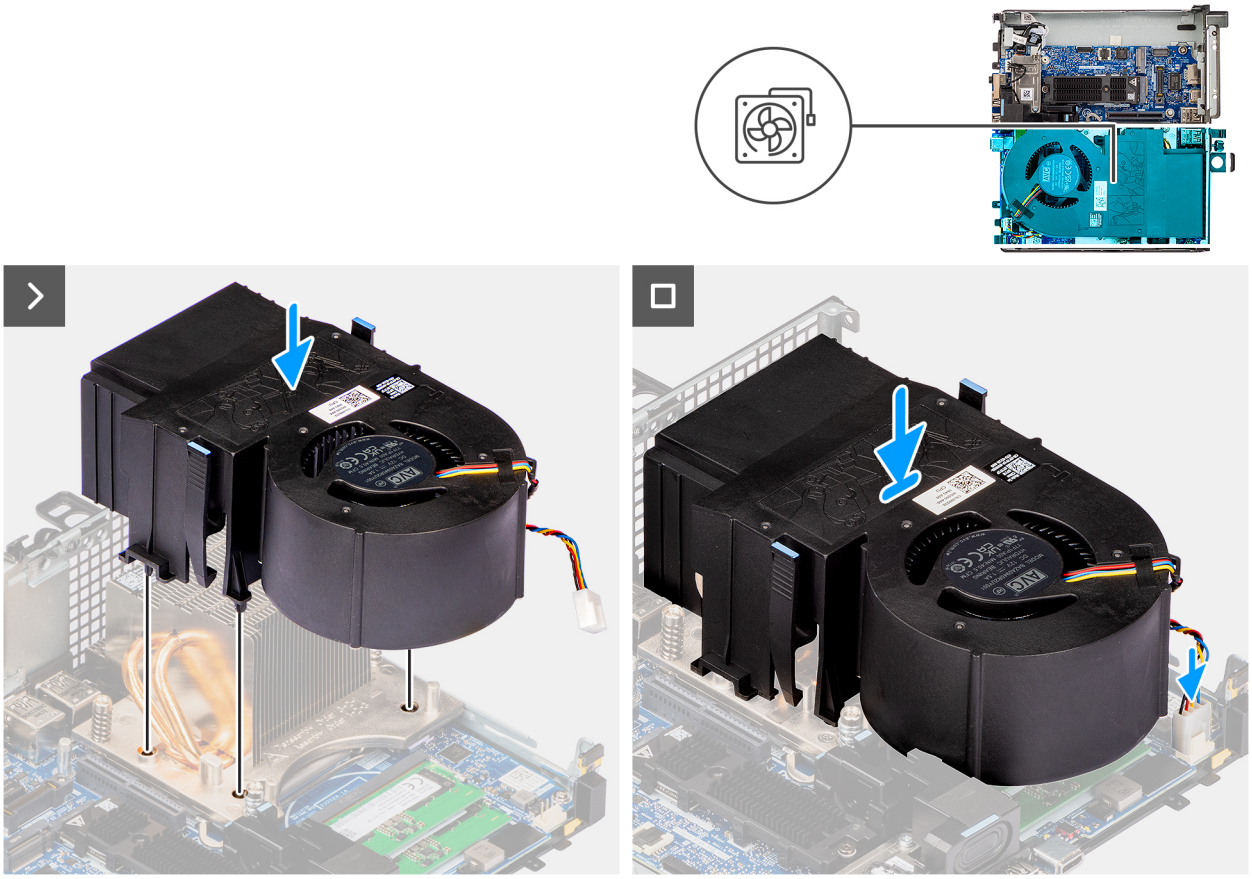


Figure 16. Installing the system fan

Steps

1. Align the stands of the system fan with the mounting holes on the heat sink.
2. Push firmly down onto the system fan until it clicks into place.
3. Connect the fan cable to the connector (FANC1 and FANC2) on the system board.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Memory module

Removing the memory modules

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.
4. Remove the system fan.

About this task

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

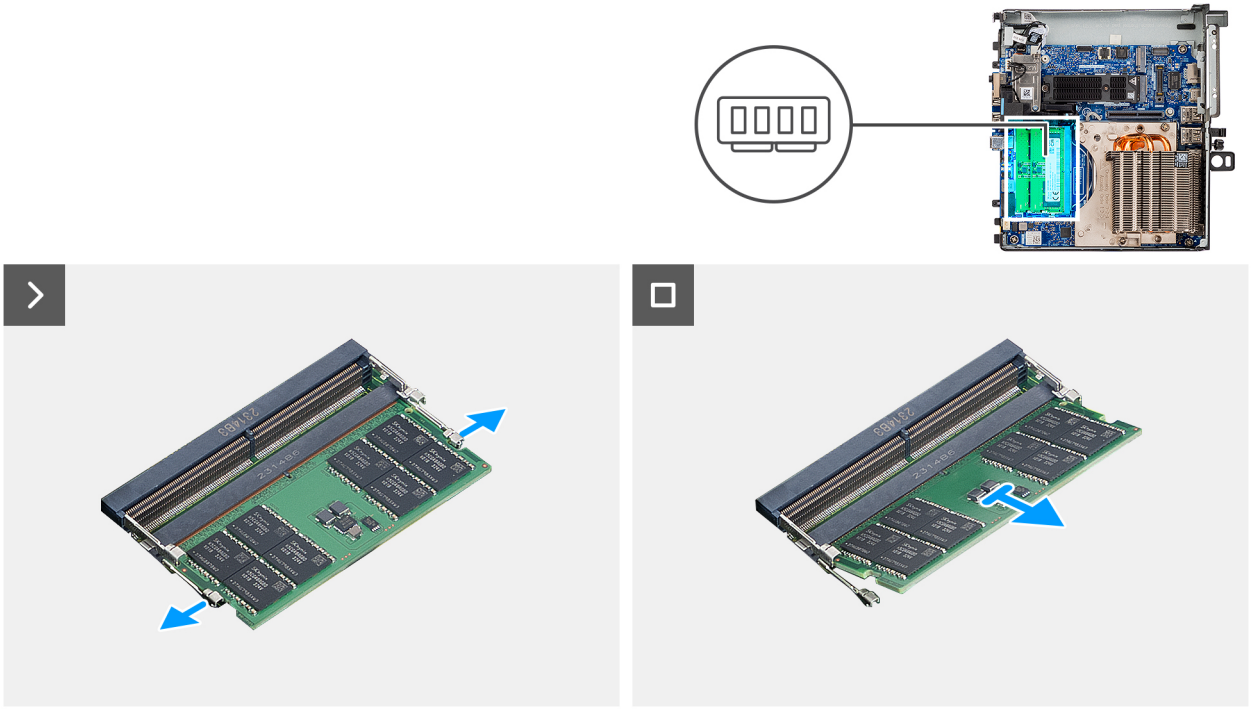


Figure 17. Removing the memory modules

Steps

1. Place the computer on its side.
2. Pull the securing clips from both sides of the memory module until the memory module pops up.
3. Slide to remove the memory module from the memory-module slot.

CAUTION: To prevent damage to the memory module, hold the memory module by the edges. Do not touch the components or metallic contacts on the memory module as electrostatic discharge(ESD) can inflict severe damage on the components. To read more about ESD protection, see ESD protection.

NOTE: Repeat step 2 to step 3 to remove any other memory module 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 modules

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 memory modules and provide a visual representation of the installation procedure.

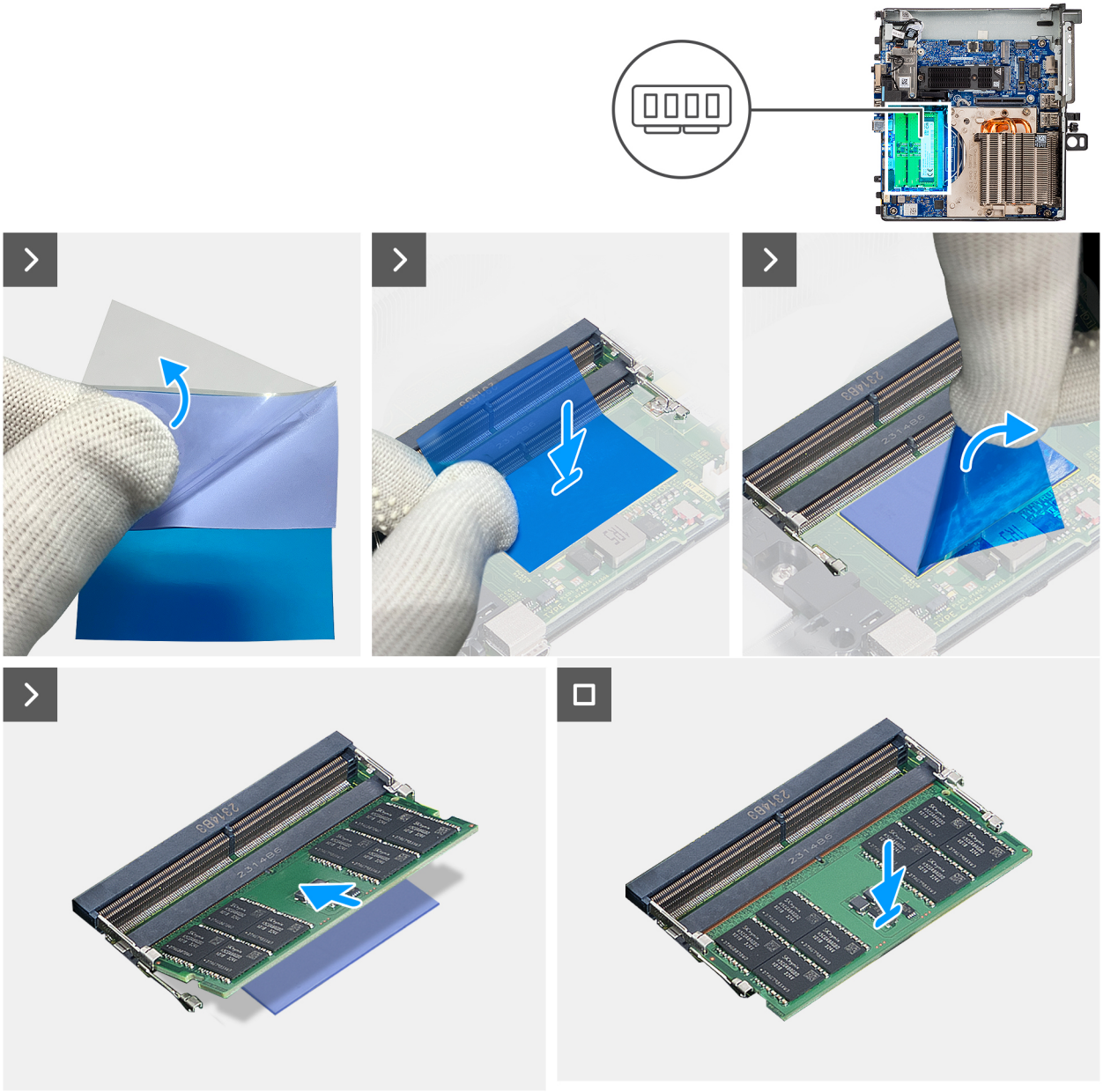


Figure 18. Installing the memory modules

Steps

1. **NOTE:** The replacement memory modules that are purchased from Dell come with thermal pads and must be adhered to the system board.

   If the thermal pad needs to be replaced, peel the transparent cover off the new thermal pad.
2. Align the sticky side of the thermal pad to the area of the system board where the memory module is installed.
3. Peel the blue tape off the thermal pad.
4. Align the notch on the memory module with the tab on the memory-module slot.
5. Slide the memory module firmly into the slot at an angle and press the memory module down until it secures into place.

   CAUTION: To prevent damage to the memory module, hold the memory module by the edges. Do not touch the components or metallic contacts on the memory module as electrostatic discharge(ESD) can inflict severe damage on the components. To read more about ESD protection, see ESD protection.

   NOTE: The securing clips return to the locked position. If you do not hear the click, remove the memory module and reinstall it.

NOTE: Repeat steps 4 to 5 when installing more than one memory module in your computer.

Next steps

1. Install the system fan.
2. Install the riser-card module.
3. Install the side cover.
4. Follow the procedure in after working inside your computer.

Solid State Drive (SSD)

Removing the M.2 2230 SSD (slot-one)

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

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

NOTE: The procedure is the same for removal of M.2 2230 SSD from slot-two.

NOTE: There is no M.2 SSD thermal pad in slot-two.

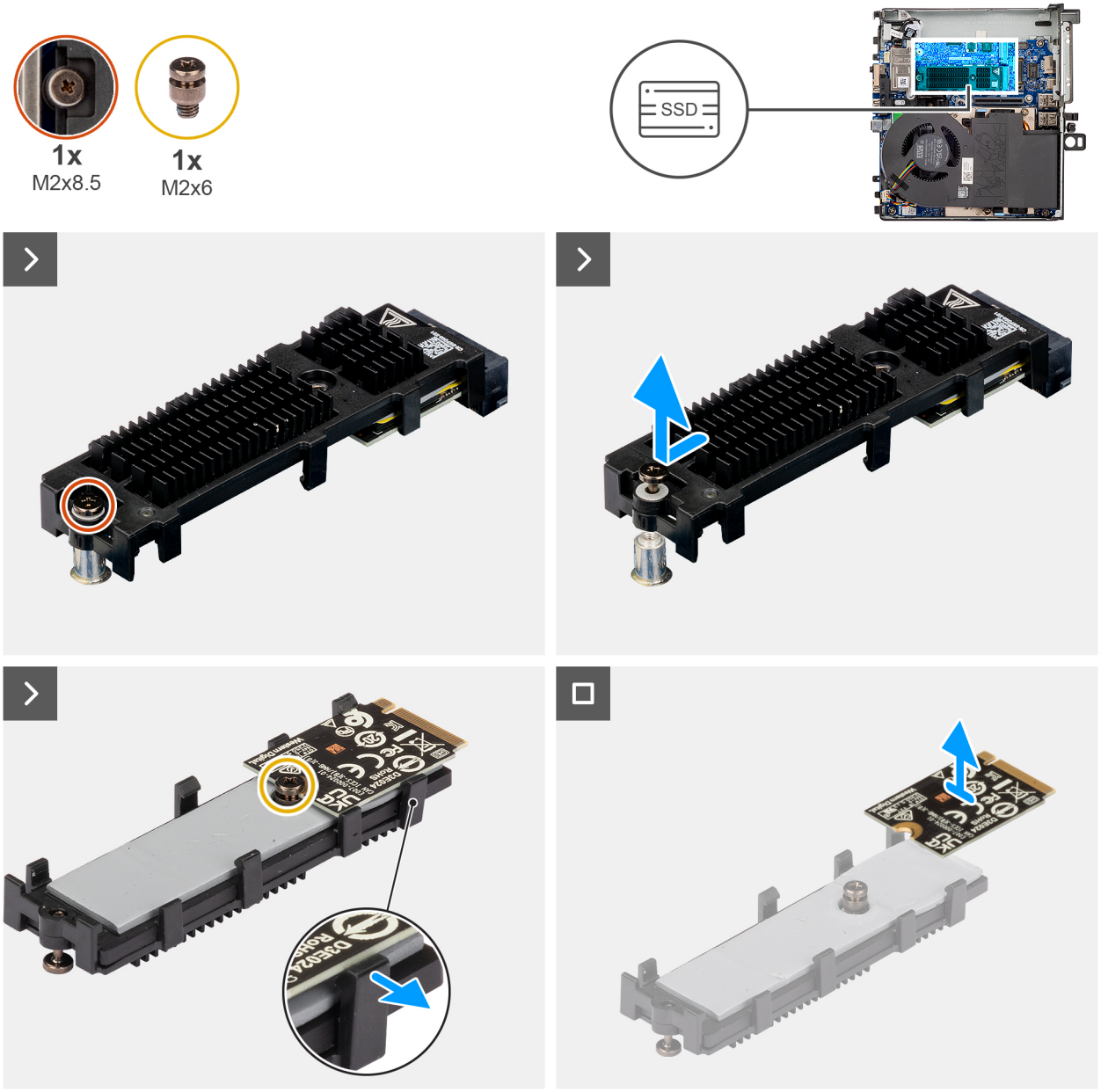


Figure 19. Removing the M.2 2230 PCIe solid state drive (slot-one)

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. Release the four snaps holding the M.2 2230 SSD card.
5. 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 SSD (slot-one)

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.

NOTE: The same procedure applies to installation of M.2 2230 SSD in slot-two.

NOTE: There is no thermal pad in slot-two.

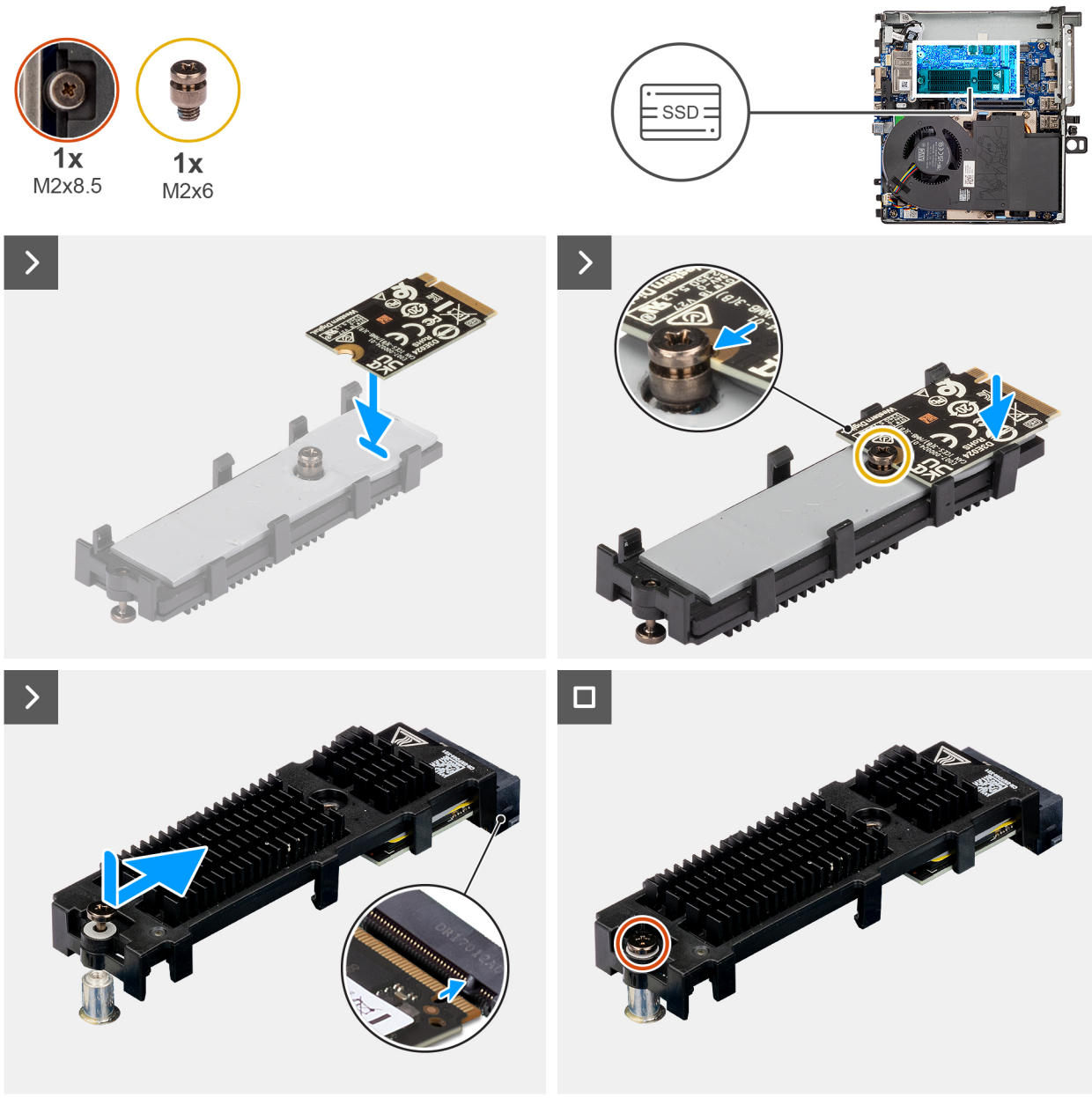


Figure 20. Installing the M.2 2230 PCIe solid state drive (slot-one)

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 riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Removing the M.2 2280 SSD (slot-one)

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

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

NOTE: The same procedure applies to removal of M.2 2280 SSD from slot-two.

NOTE: There is no thermal pad in slot-two.

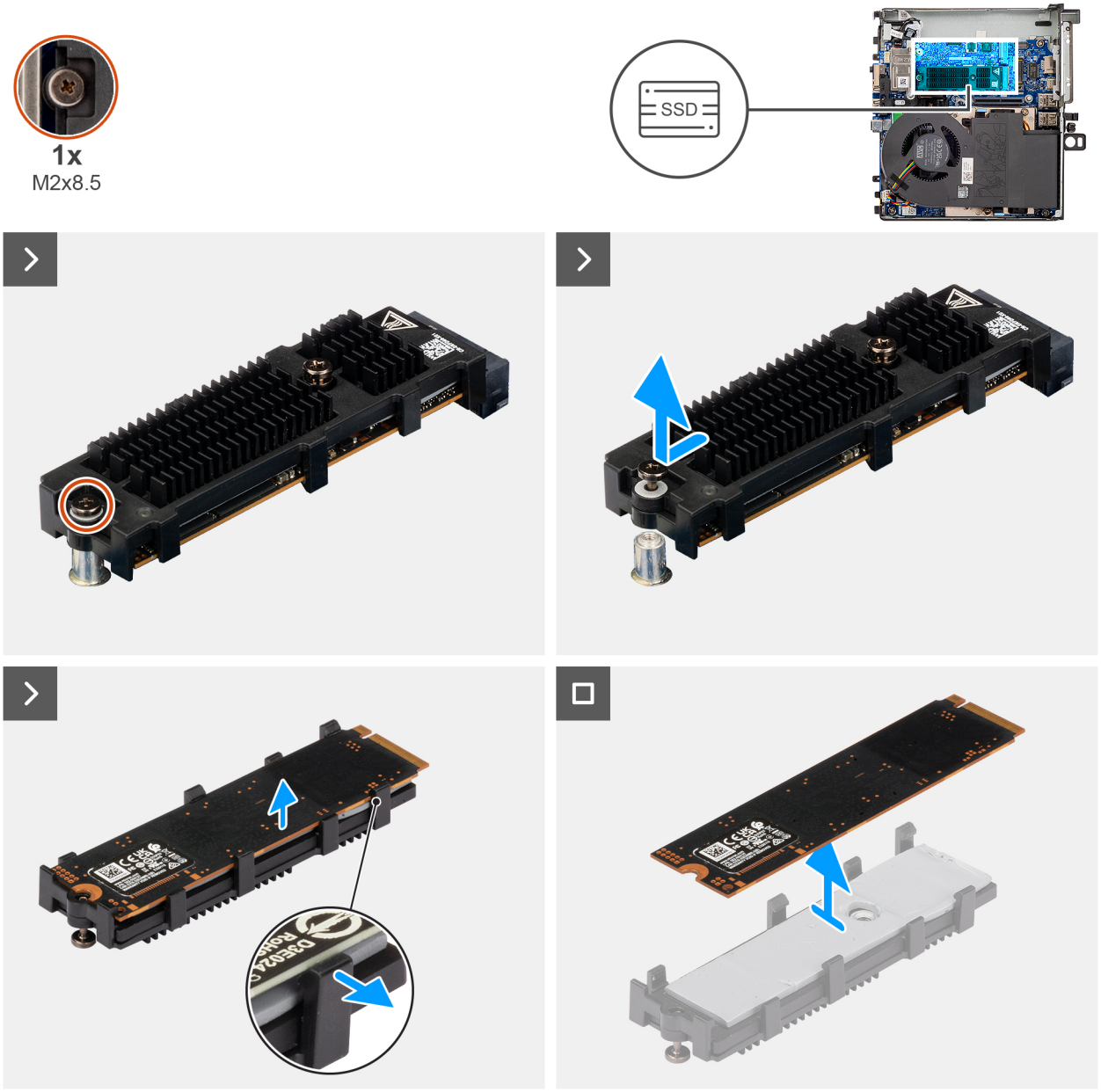


Figure 21. Removing the M.2 2280 PCIe solid state drive (slot-one)

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.

NOTE: Repeat steps 1 to 3 for removing M.2 2280 SSD from slot-two (if applicable).

Installing the M.2 2280 SSD (slot-one)

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.

NOTE: The same procedure applies to installation of M.2 2280 SSD in slot-two.

NOTE: There is no thermal pad in slot-two.

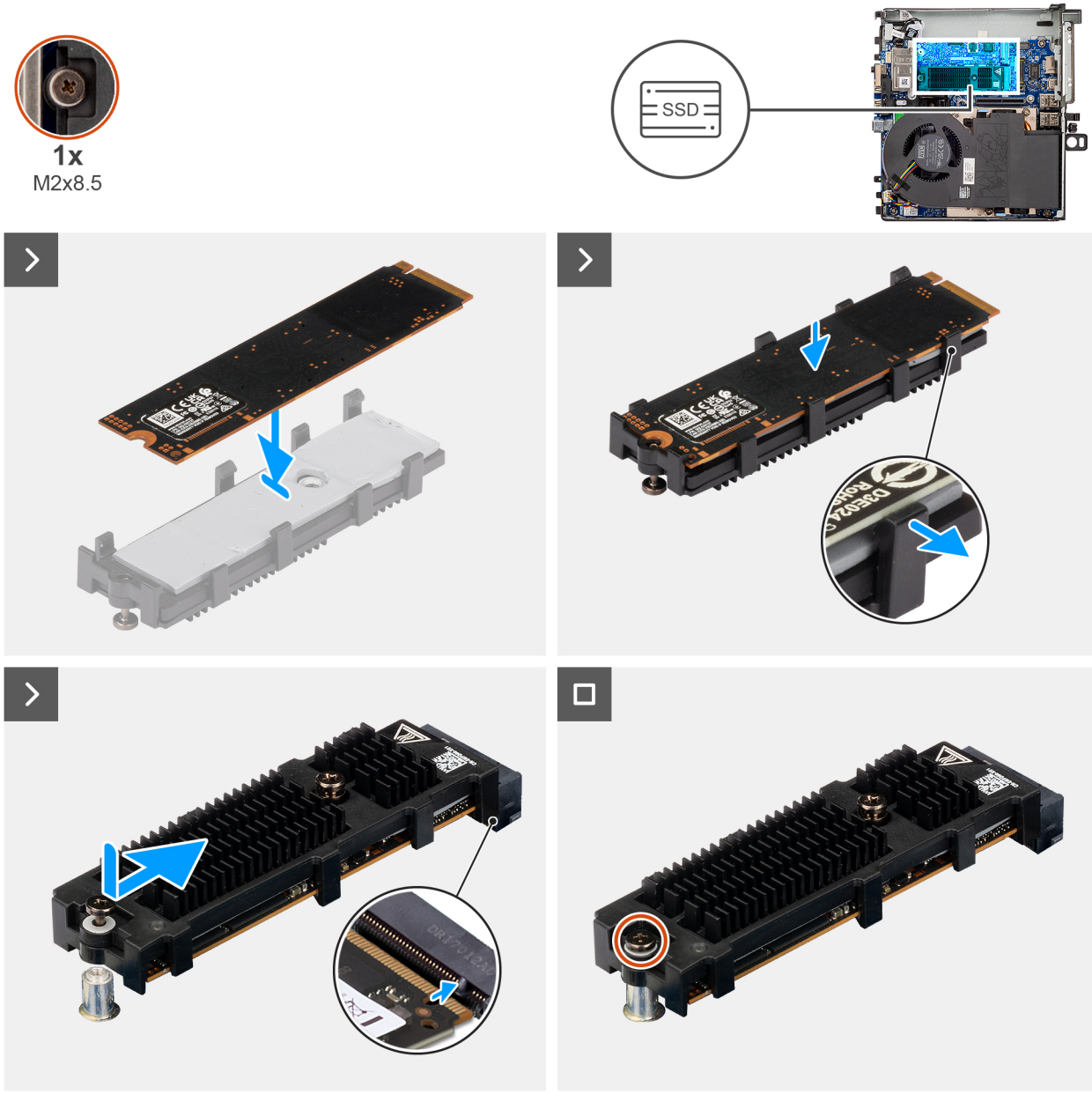


Figure 22. Installing the M.2 2280 PCIe solid state drive (slot-one)

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.

   NOTE: Repeat steps 1 to 4 for installing the M.2 2280 SSD in slot-two (if applicable).

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Replacing the M.2 2230 SSD with an M.2 2280 SSD

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following images provide a visual representation of the procedure to remove the M.2230 and replace it with a M.2 2280 SSD.

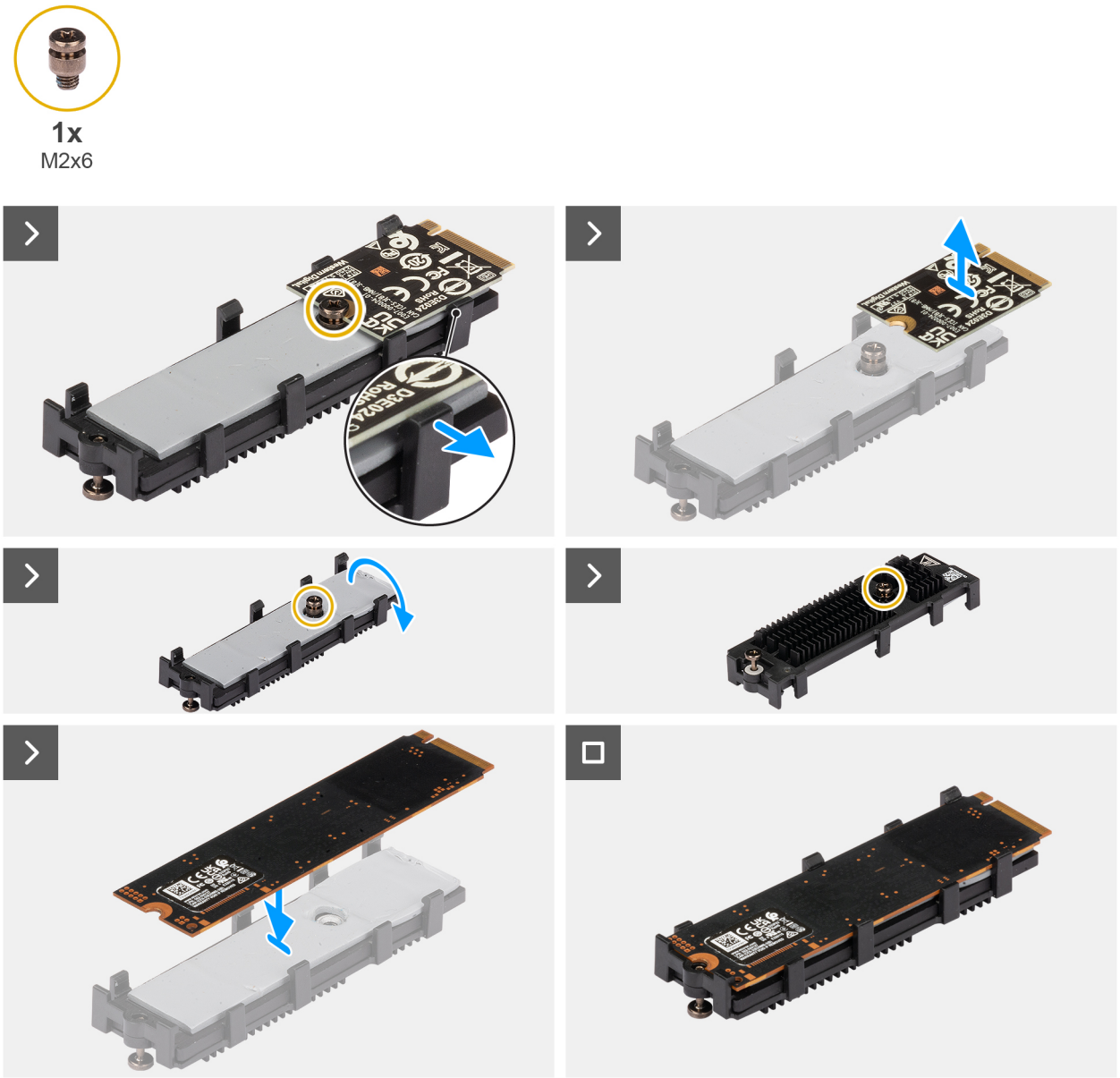


Figure 23. Replacing the M.2 2230 SSD with an M.2 2280 SSD

Steps

1. Release the four snaps holding the M.2 2230 SSD card.
2. Remove the M.2 2230 SSD from the SSD-extender bracket.
3. Remove the screw (M2x6) to allow placement of the M.2 2280 SSD card on the thermal pad.
4. Flip the SSD-extender bracket and replace the screw (M2x6) on the SSD-extender bracket.
5. Flip back the SSD-extender bracket and place the M.2 2280 solid state drive on the thermal pad of the SSD-extender bracket.
6. Press down the M.2 SSD card until it snaps into place.
7. Install the M.2 2280 SSD (slot-1).

Replacing the M.2 2280 SSD with an M.2 2230 SSD

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following images provide a visual representation of the procedure to remove the M.2280 and replace it with a M.2 2230 SSD.

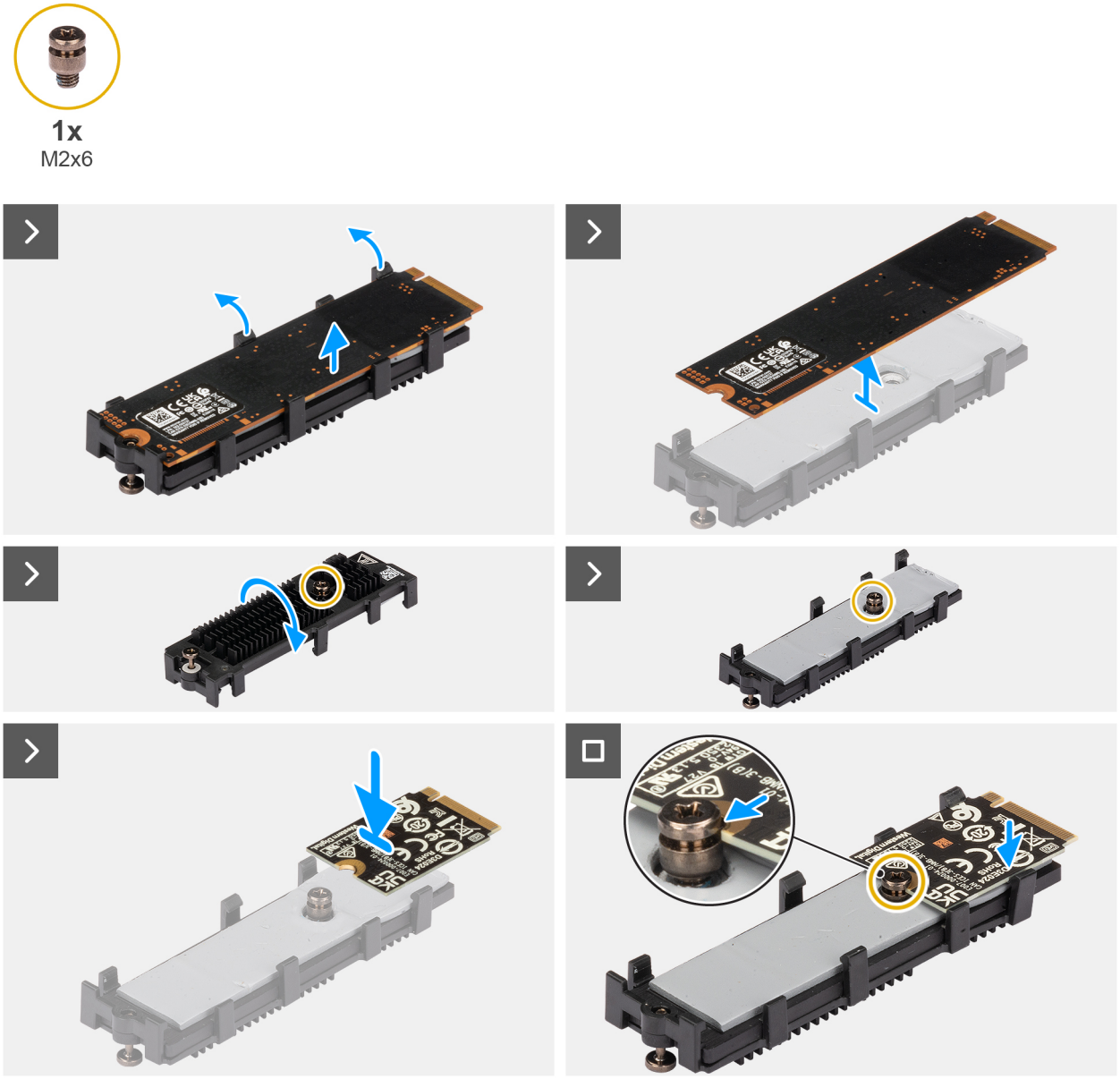


Figure 24. Replacing the M.2 2280 SSD with an M.2 2230 SSD

Steps

1. Release the snaps holding the M.2 2280 SSD card.
2. Remove the M.2 2280 solid state drive from the SSD-extender bracket.
3. Remove the screw (M2x6) from the SSD-extender bracket.
4. Flip the SSD-extender bracket and replace the screw (M2x6) on the thermal pad.
5. Place the M.2 2230 SSD card on the extender bracket at a 45-degree angle.
6. Align the notch of the card with the screw (M2x6) on the extender bracket.
7. Press down until the M.2 2230 card snaps into place.
8. Install the M.2 2230 SSD (slot 1).

WLAN card

Removing the wireless card

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.
4. Remove the speaker.

About this task

The following image indicates the location of the wireless card and provides a visual representation of the removal procedure.

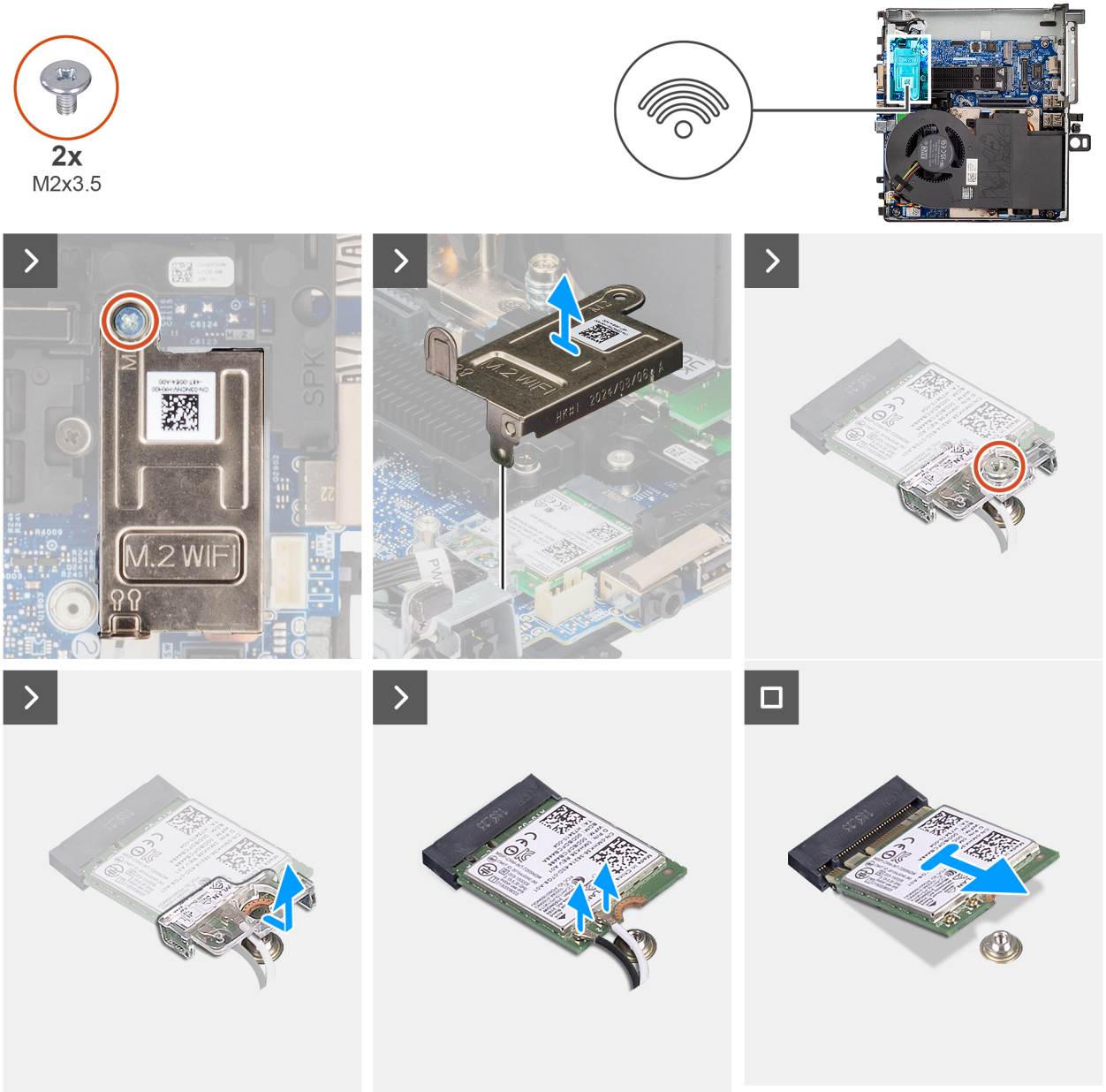


Figure 25. Removing the wireless card

Steps

1. Remove the screw (M2x3.5) that secures the wireless-card shield to the system board.
2. Lift the wireless-card shield out of the computer.
3. Remove the screw (M2x3.5) that secures the wireless-card bracket to the wireless card.
4. Slide and remove the wireless-card bracket off the wireless card.
5. Disconnect the antenna cables from the wireless card.
6. Slide and remove the wireless card from the wireless-card slot.

Installing the wireless card

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 wireless card and provides a visual representation of the installation procedure.

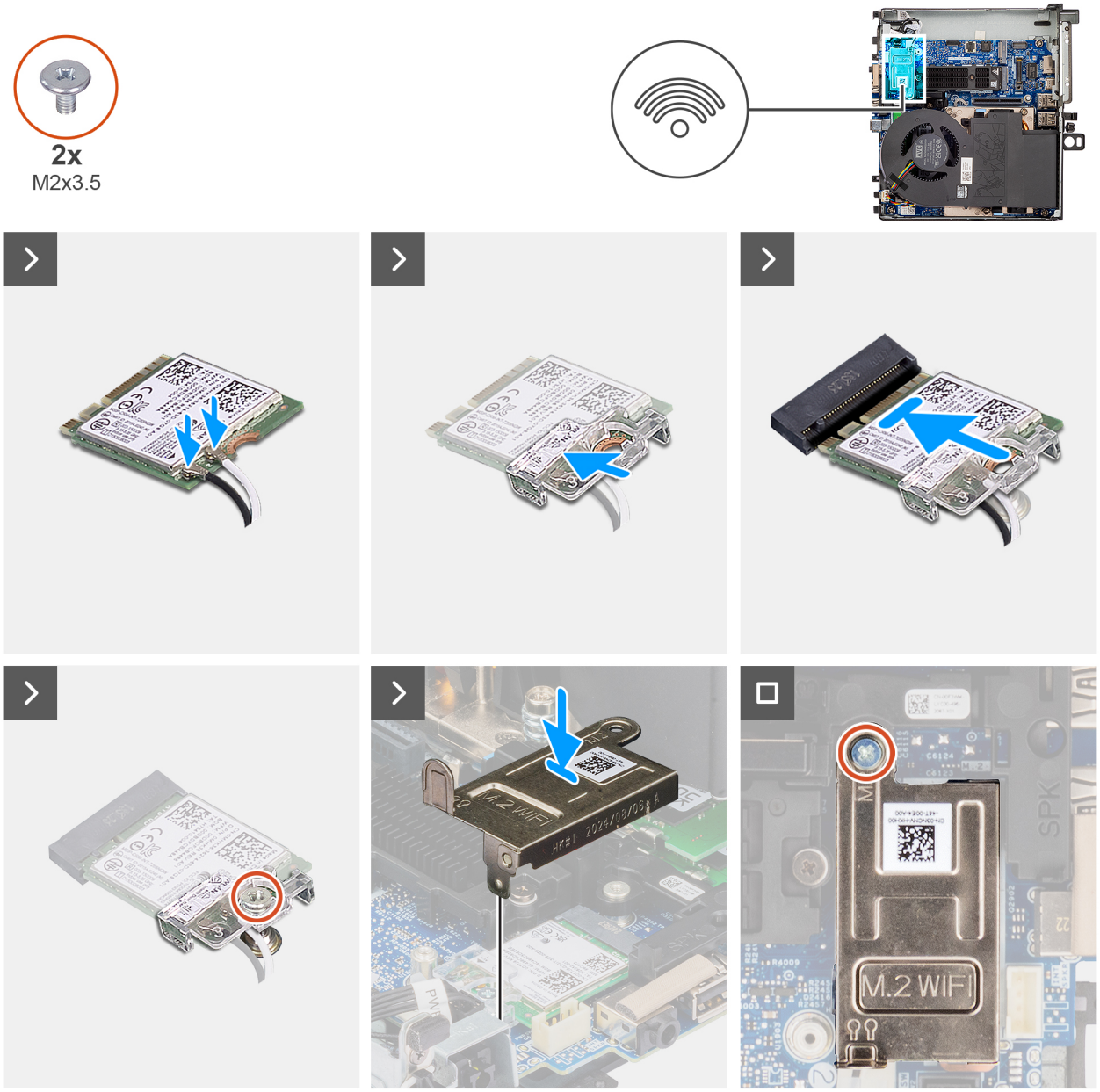


Figure 26. Installing the wireless card

Steps

1. Connect the antenna cables to the wireless card.
   The following table provides the antenna-cable color scheme for the WLAN card of your computer.

Table 24. Antenna-cable color scheme

Connectors 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.
4. Slide the wireless card at an angle into the wireless-card slot.
5. Replace the screw (M2x3.5) to secure the wireless card and wireless-card bracket to the system board.

6. Align and place the wireless-card shield on the system board and wireless card.
7. Replace the screw (M2x3.5) to secure the wireless-card shield to the system board.

Next steps

1. Install the speaker.
2. Install the riser-card module.
3. Install the side cover.
4. 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.
3. Remove the riser-card module.
4. Remove the system fan.

About this task

The following image indicates the location of the speaker and provides a visual representation of the removal procedure.

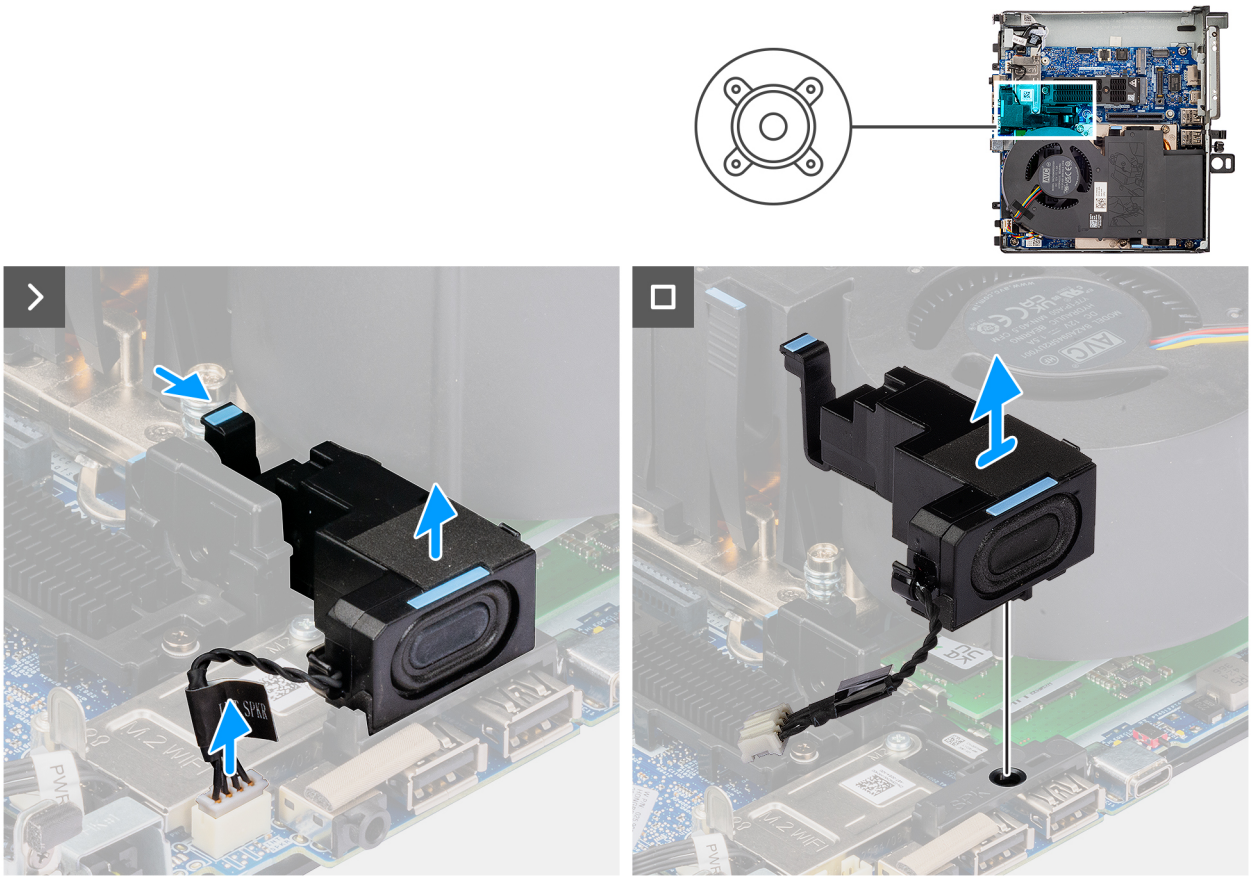


Figure 27. Removing the speaker

Steps

1. Disconnect the speaker cable from the connector (INT SPKR) on the system board.

2. Press the release tab and lift the speaker along with the cable from the system board.

Installing the speaker

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 speaker and provides a visual representation of the installation procedure.

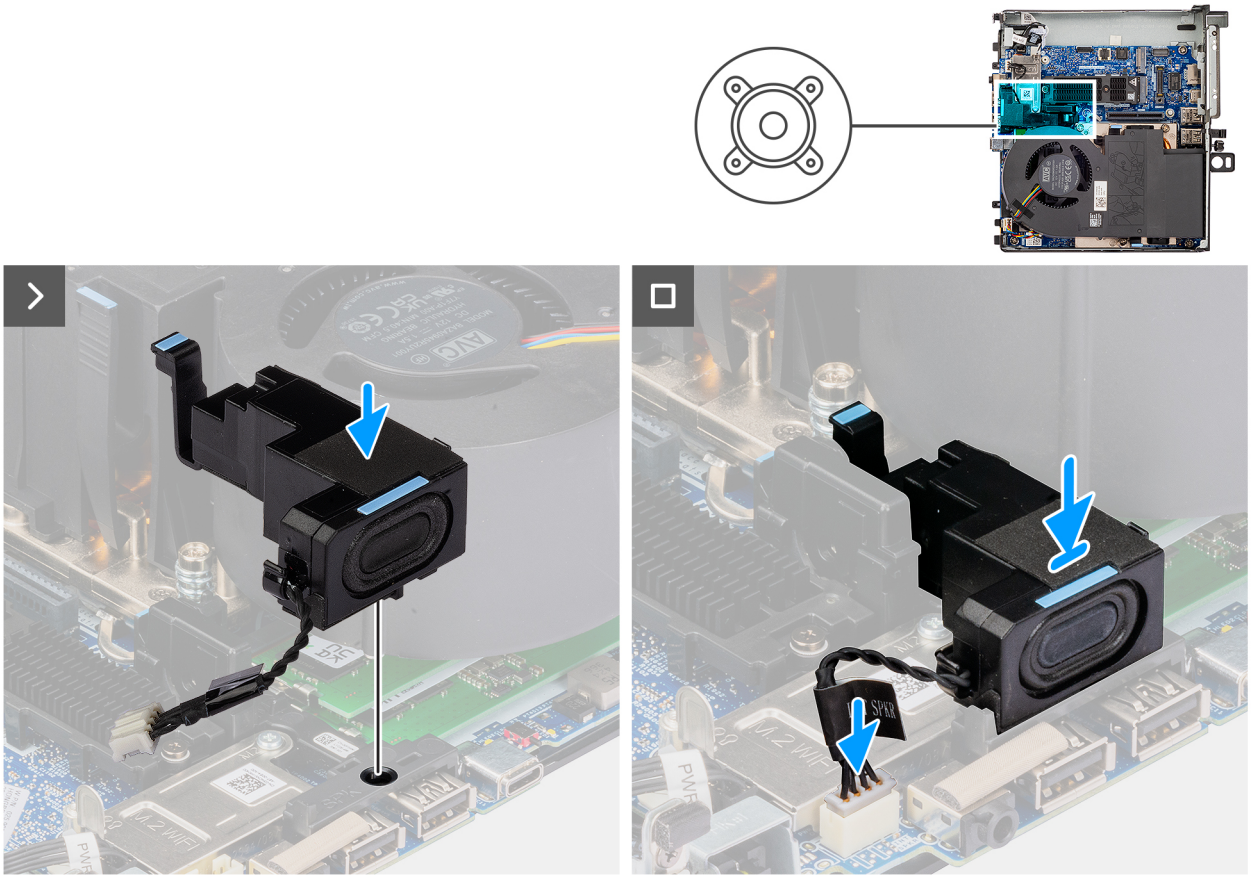


Figure 28. Installing the speaker

Steps

1. Align and insert the speaker into the slot and press it until the release tab clicks.
2. Connect the speaker cable to the connector (INT SPKR) on the system board.

Next steps

1. Install the system fan.
2. Install the riser-card module.
3. Install the side cover.
4. 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.
3. Remove the riser-card module.
4. Remove the speaker.
5. Remove the wireless card.

About this task

The following image indicates the location of the speaker holder and provides a visual representation of the removal procedure.

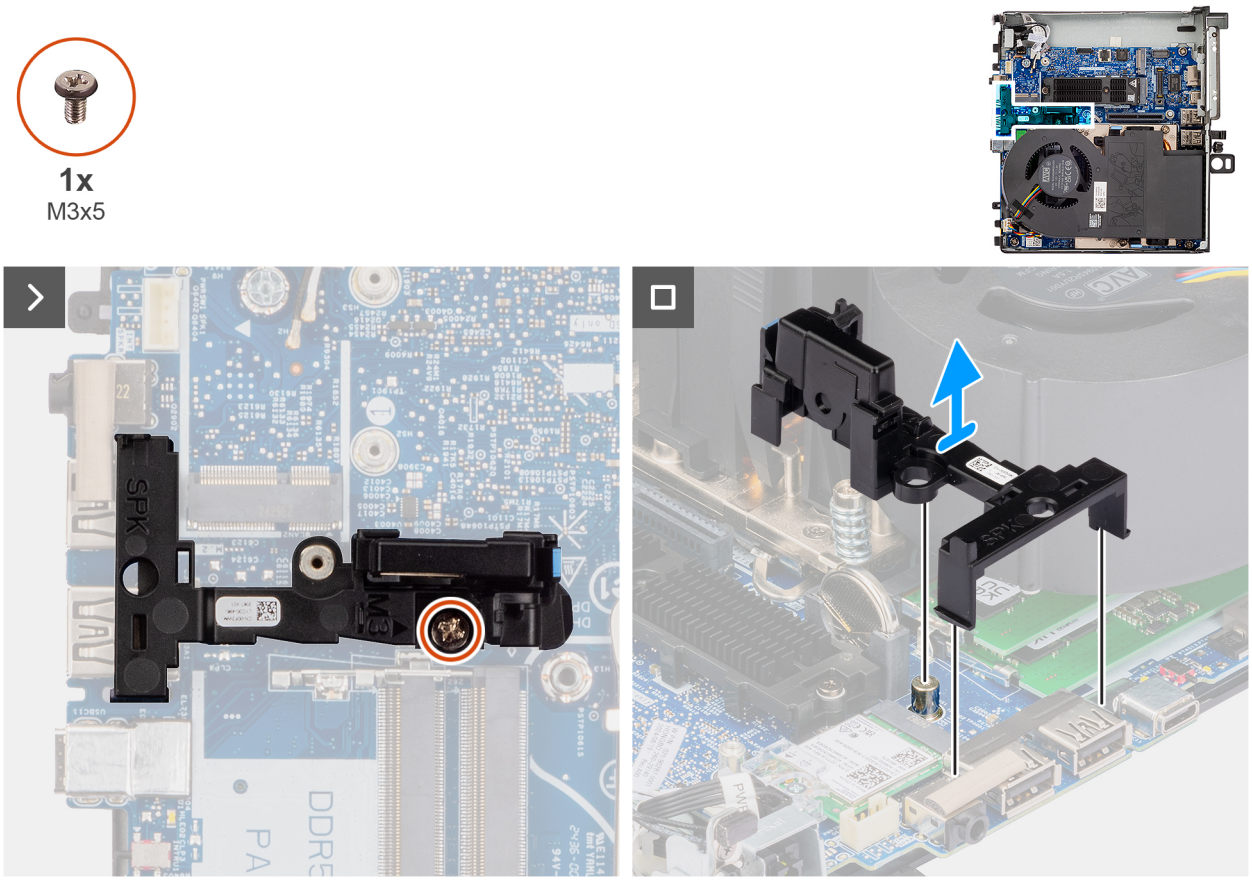


Figure 29. Removing the speaker holder

Steps

1. 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 procedure.

About this task

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

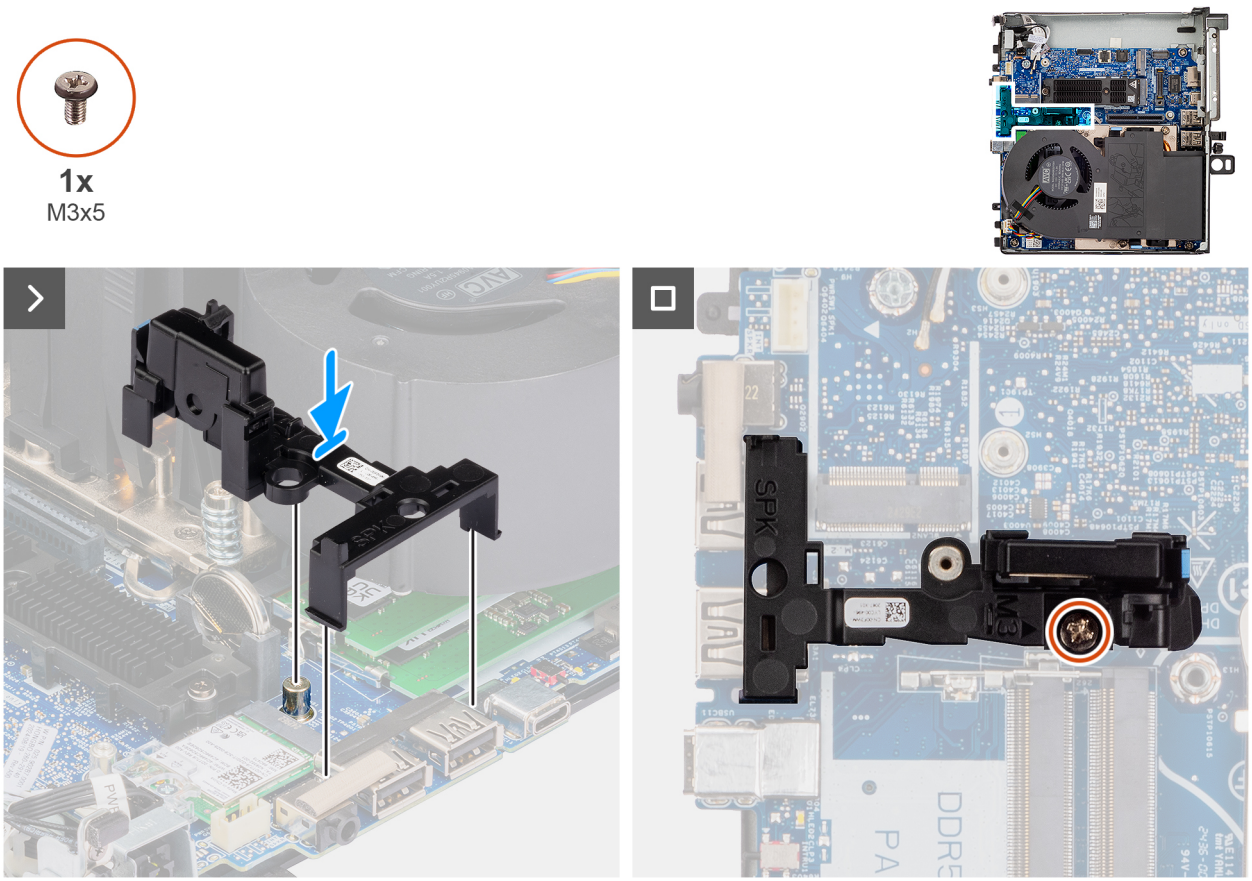


Figure 30. Installing the speaker holder

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) to secure the speaker holder to the system board.

Next steps

1. Install the wireless card.
2. Install the speaker.
3. Install the riser-card module.
4. Install the side cover.
5. Follow the procedure in after working inside your computer.

Optional modules

NOTE: The optional modules can be ordered from Dell.com.

Installing the 5G optical fiber port

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 5G optical fiber port module and provide a visual representation of the installation procedure.

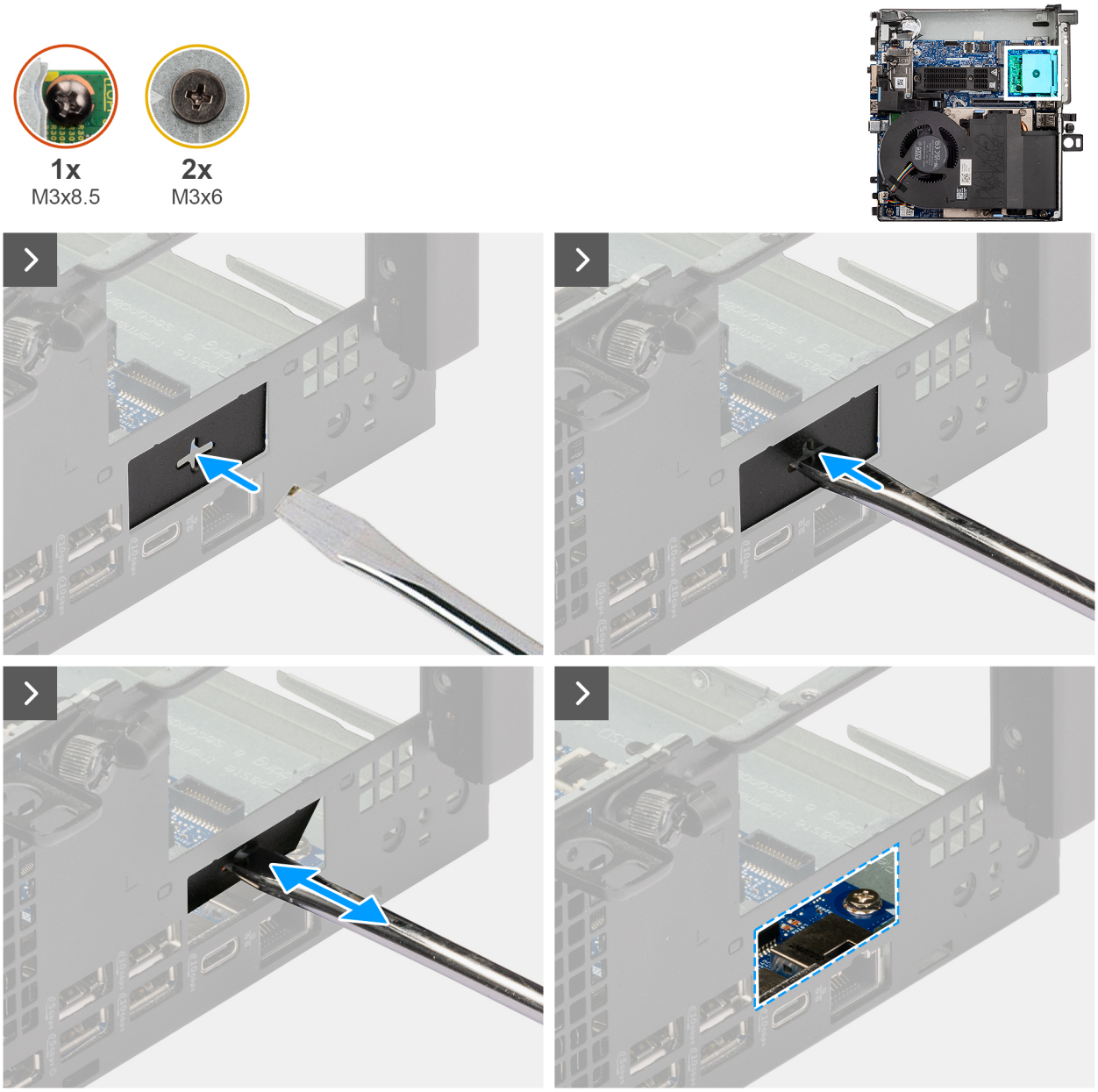


Figure 31. Installing the 5G optical fiber port

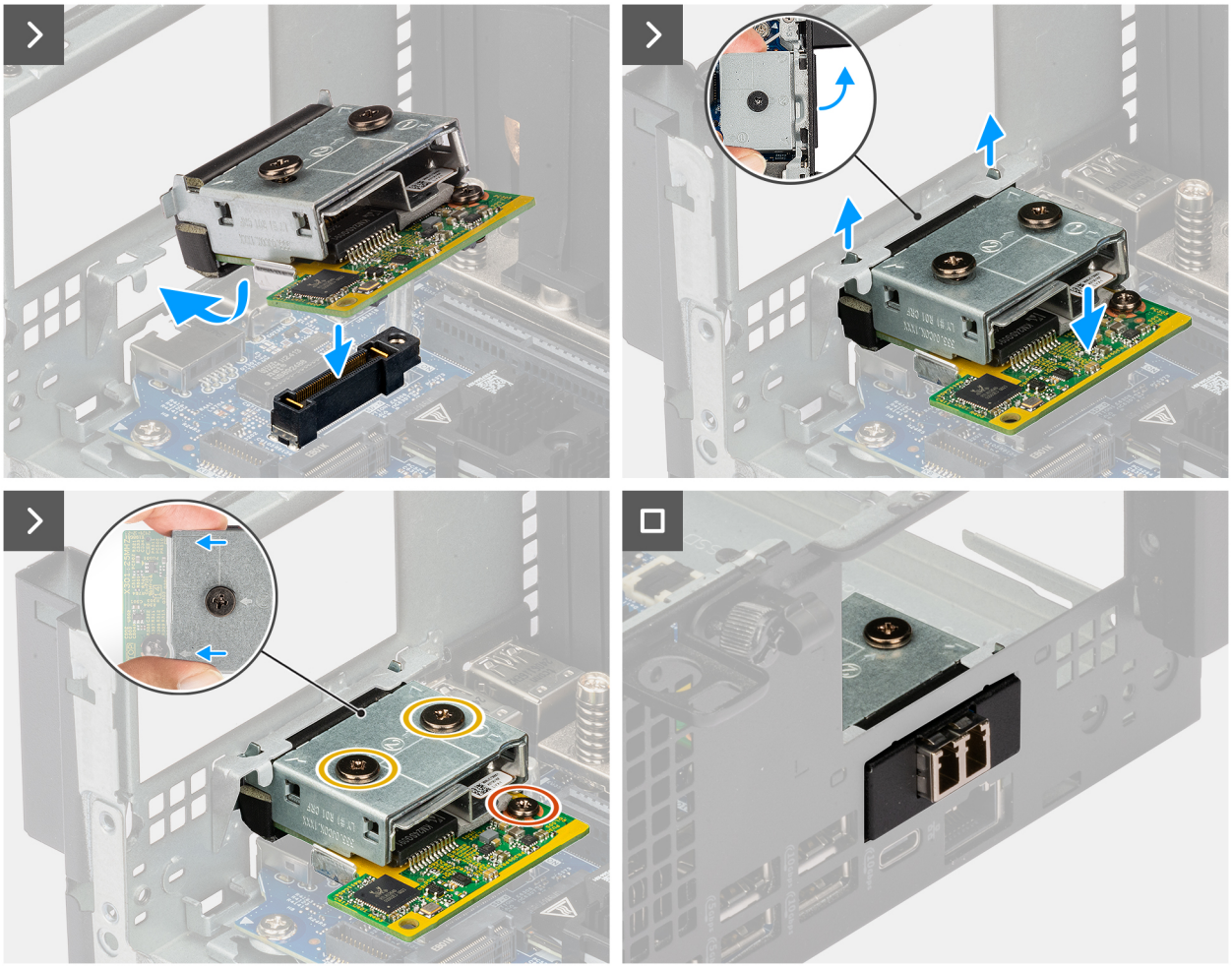


Figure 32. Installing the 5G optical fiber port

Steps

1. Insert a flat-head screwdriver in the hole of the bracket, push the bracket to release the bracket, and lift the bracket out from the computer.
2. Align and insert the hooks of the optional module port into the slots on the chassis.
3. Gently press the optional module onto the system board until it clicks into place.
4. Tighten the screw (M3x8.5) and two screws (M3x6) to secure the optional module in place.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Removing the 5G optical fiber port

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following images indicate the location of the optional 5G optical fiber port module and provide a visual representation of the removal procedure.

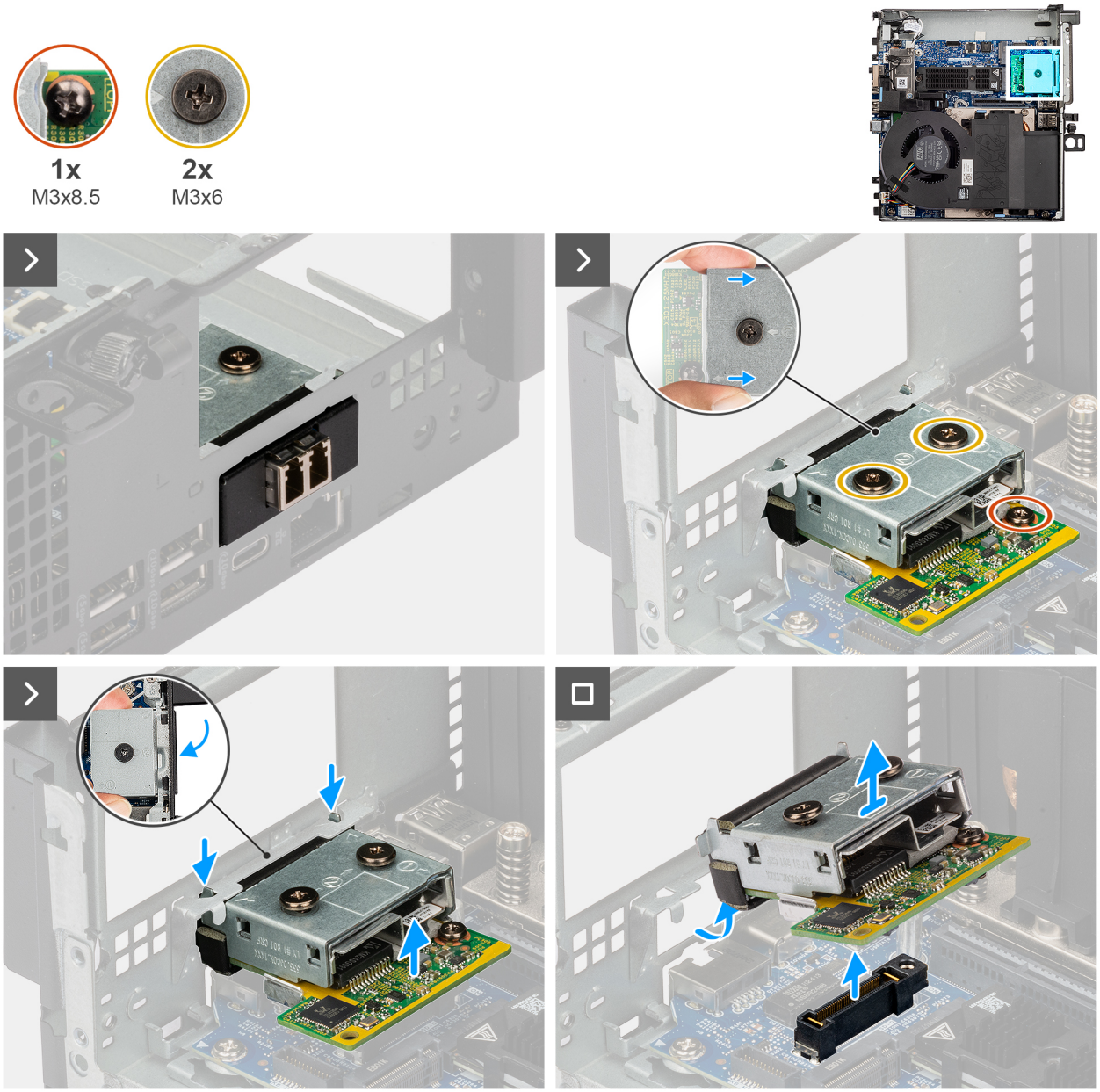


Figure 33. Removing the 5G optical fiber port

Steps

1. Remove the screw (M3x8.5) and loosen the two screws (M3x6) that secure the optional module in place.
2. Lift the optional module at an angle and unhook from the chassis.

Installing the PS2 port

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 PS2 port module and provide a visual representation of the installation procedure.

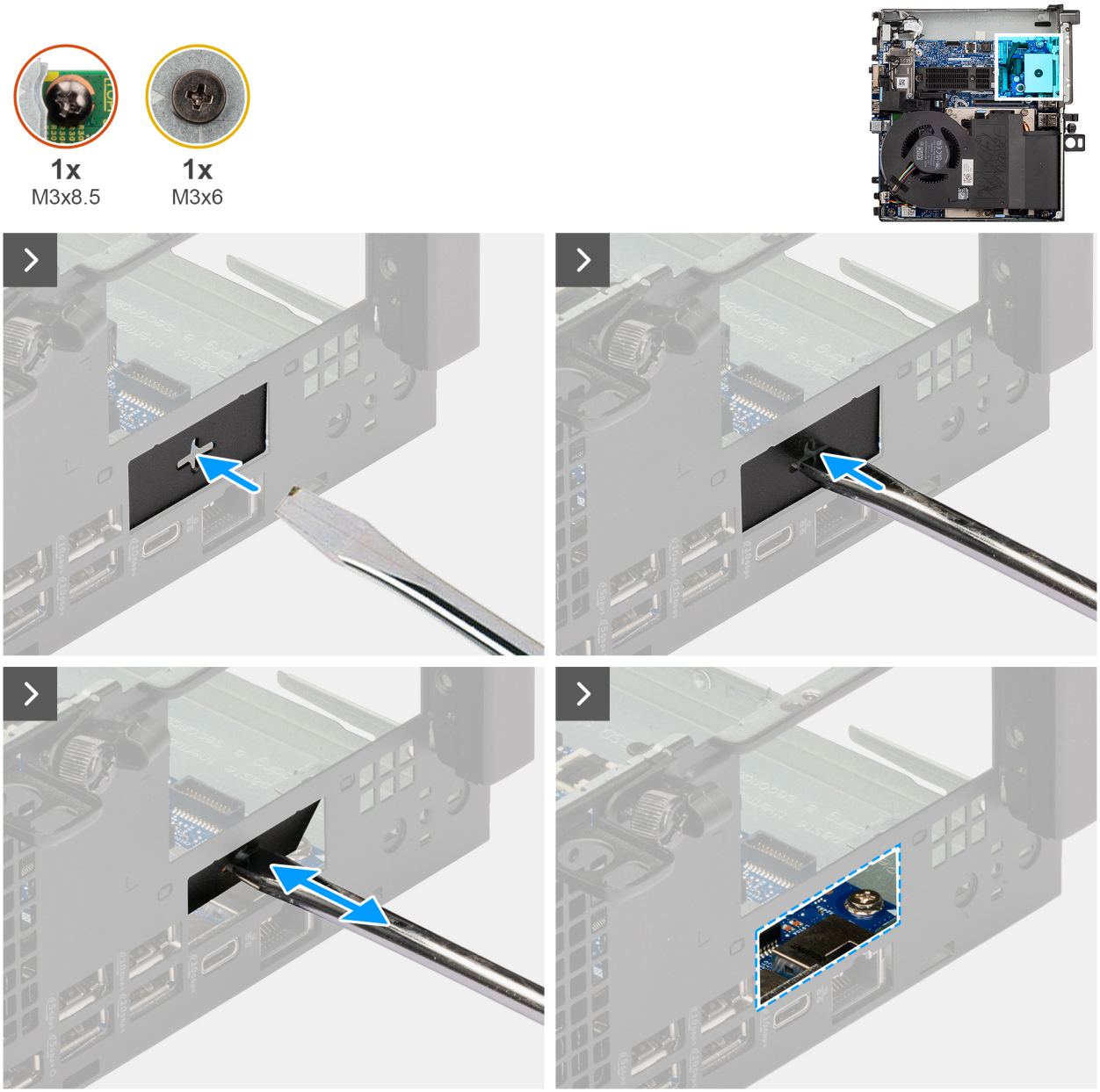


Figure 34. Installing the PS2 port

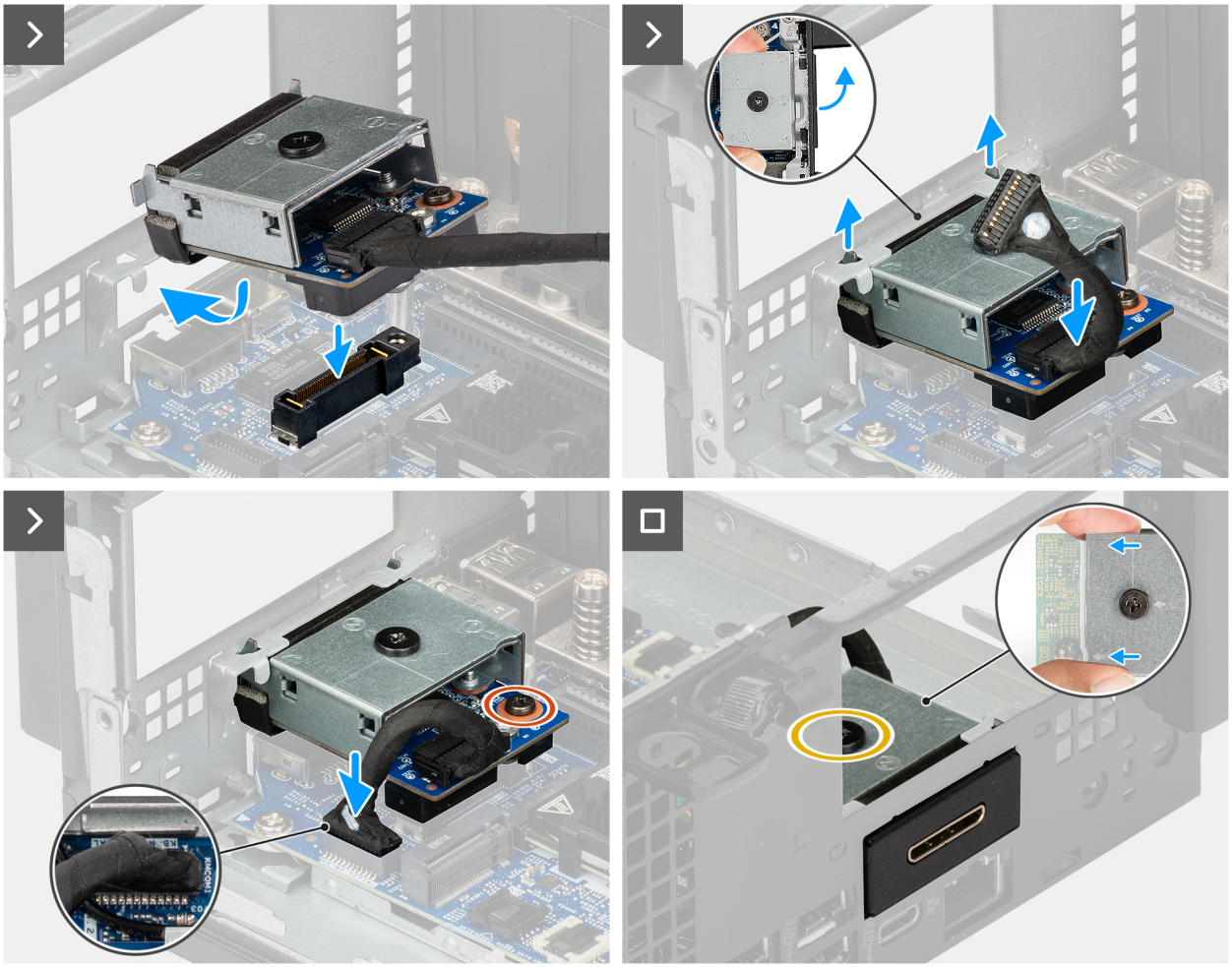


Figure 35. Installing the PS2 port

Steps

1. Insert a flat-head screwdriver in the hole of the bracket, push the bracket to release the bracket, and lift the bracket out from the computer.
2. Align and insert the hooks of the optional module port into the slots on the chassis.
3. Gently press the optional module onto the system board until it clicks into place.
4. Tighten the screw (M3x8.5) and screw (M3x6) to secure the optional module in place.
5. Connect the PS2 cable to its connector (OPTION) on the system board.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Removing the PS2 port

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following images indicate the location of the optional PS2 port module and provide a visual representation of the removal procedure.

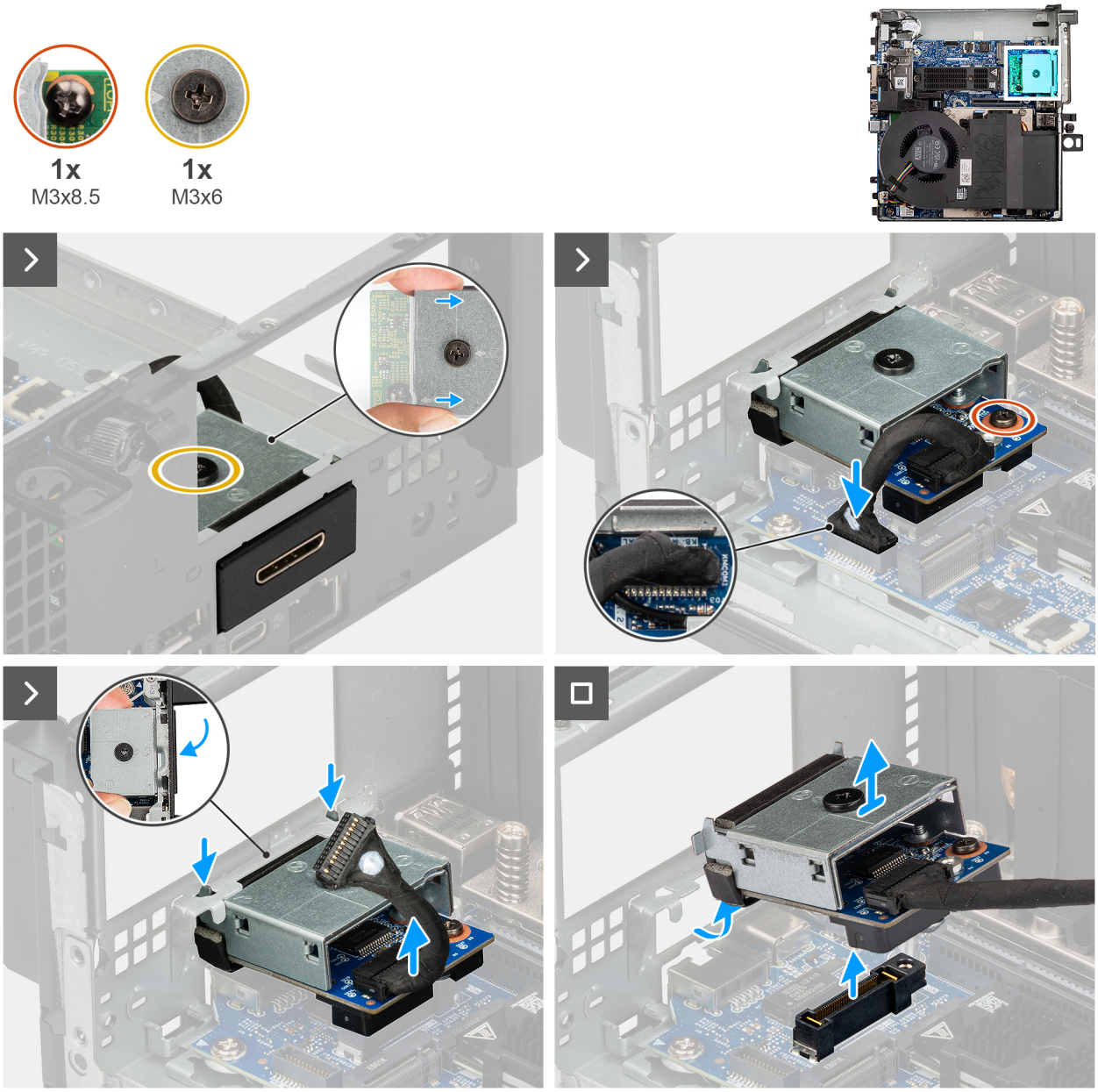


Figure 36. Removing the PS2 port

Steps

1. Disconnect the PS2 cable from its connector (OPTION) on the system board.
2. Remove the screw (M3x8.5) and loosen the screw (M3x6) that secure the optional module in place.
3. Lift the optional module at an angle and unhook from the chassis.

Installing the DisplayPort

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 DisplayPort module and provide a visual representation of the installation procedure.

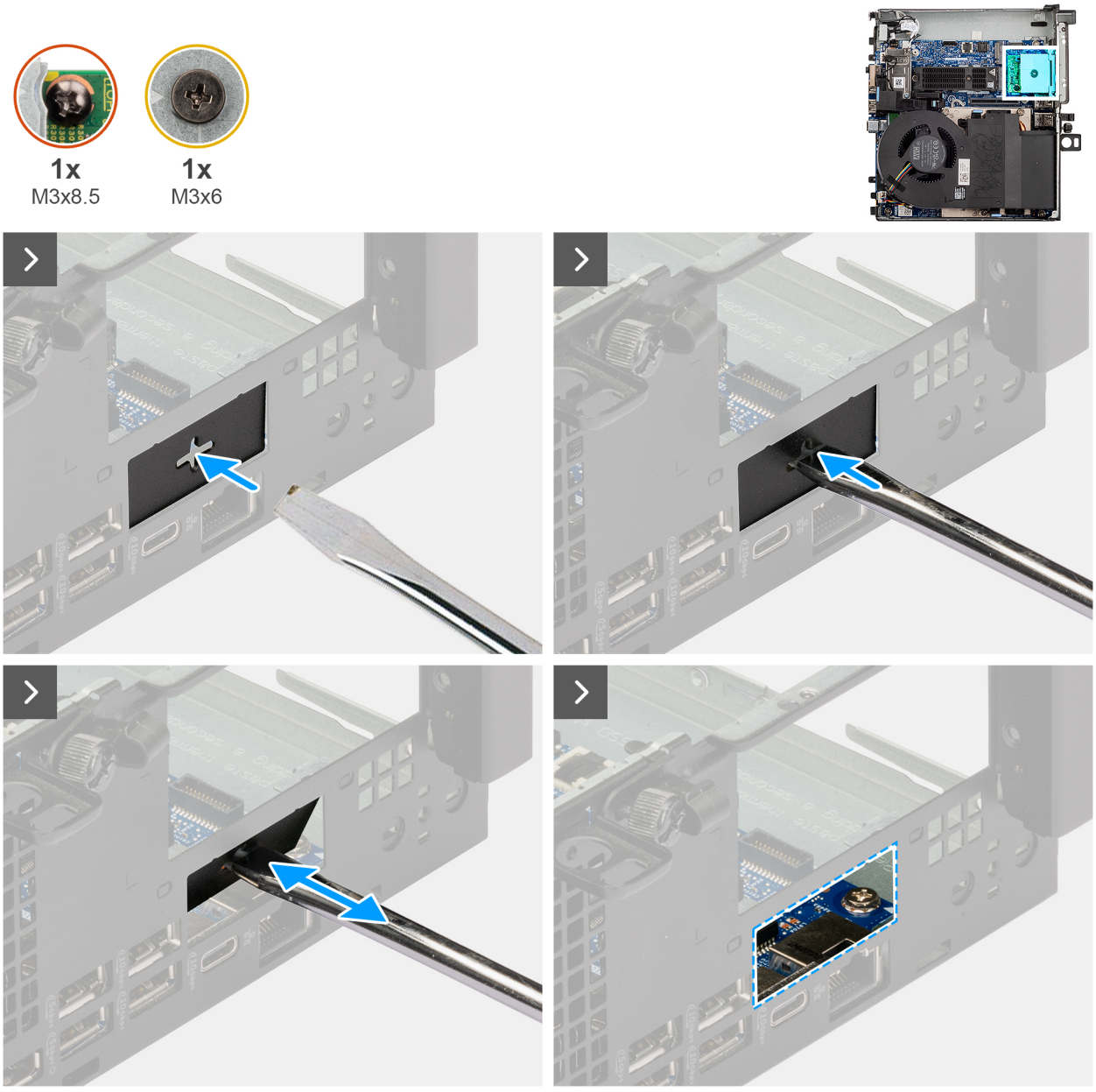


Figure 37. Installing the DisplayPort

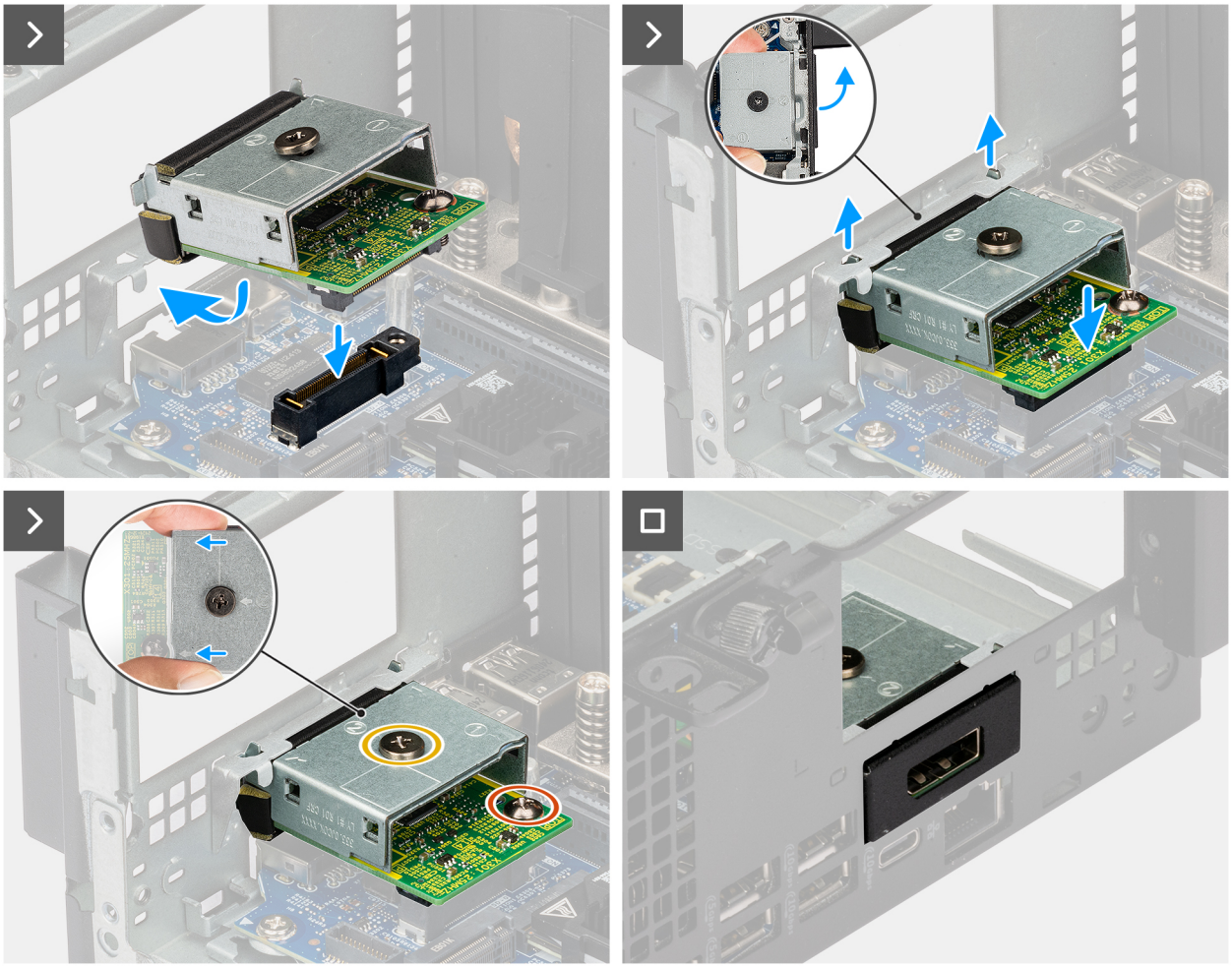


Figure 38. Installing the DisplayPort

Steps

1. Insert a flat-head screwdriver in the hole of the bracket, push the bracket to release the bracket, and lift the bracket out from the computer.
2. Align and insert the hooks of the optional module port into the slots on the chassis.
3. Gently press the optional module onto the system board until it clicks into place.
4. Tighten the screw (M3x8.5) and screw (M3x6) to secure the optional module in place.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Removing the DisplayPort

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

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

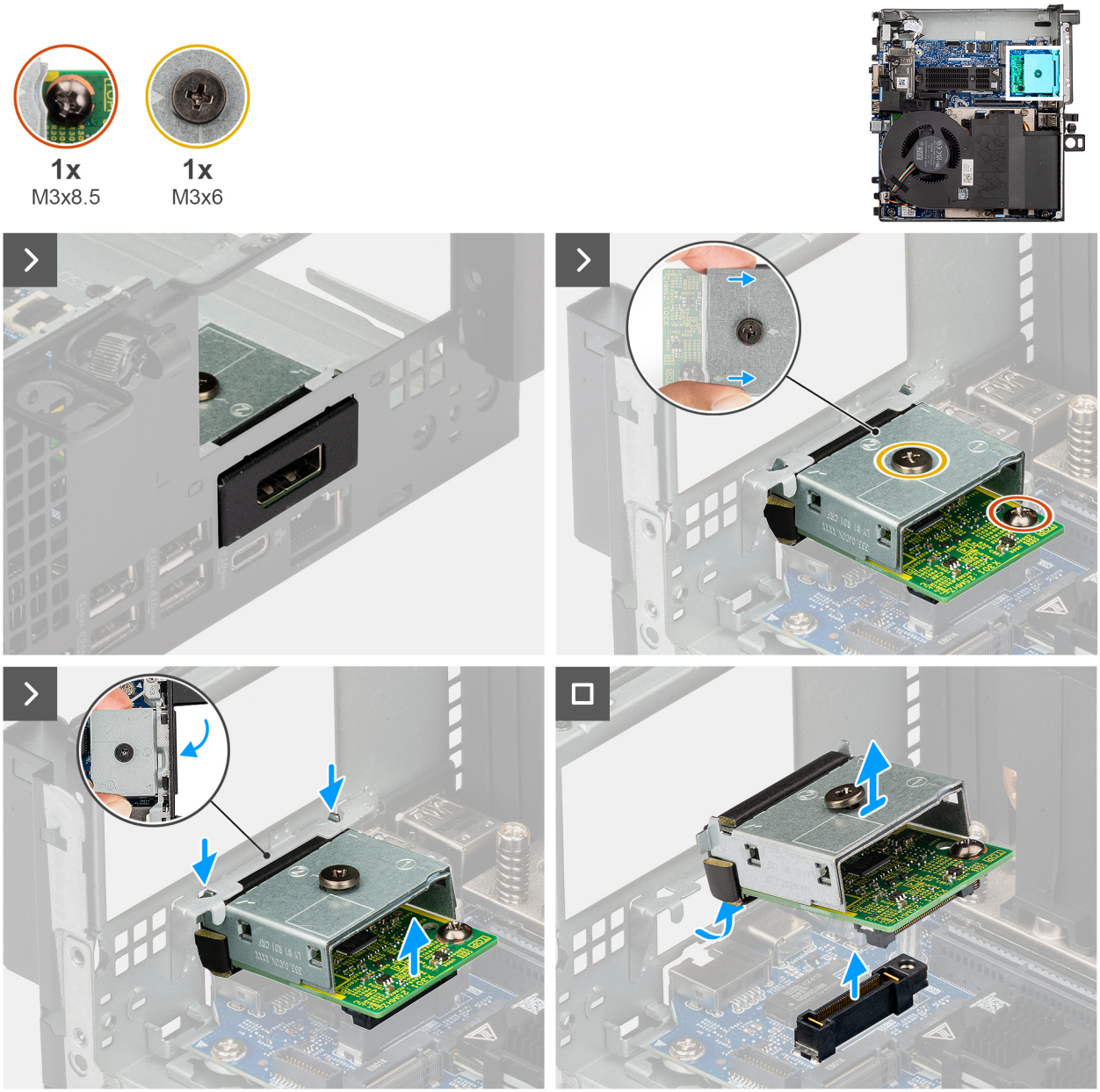


Figure 39. Removing the DisplayPort

Steps

1. Remove the screw (M3x8.5) and loosen the screw (M3x6) that secure the optional module in place.
2. Lift the optional module at an angle and unhook from the chassis.

Installing the Thunderbolt port

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 Thunderbolt port module and provide a visual representation of the installation procedure.

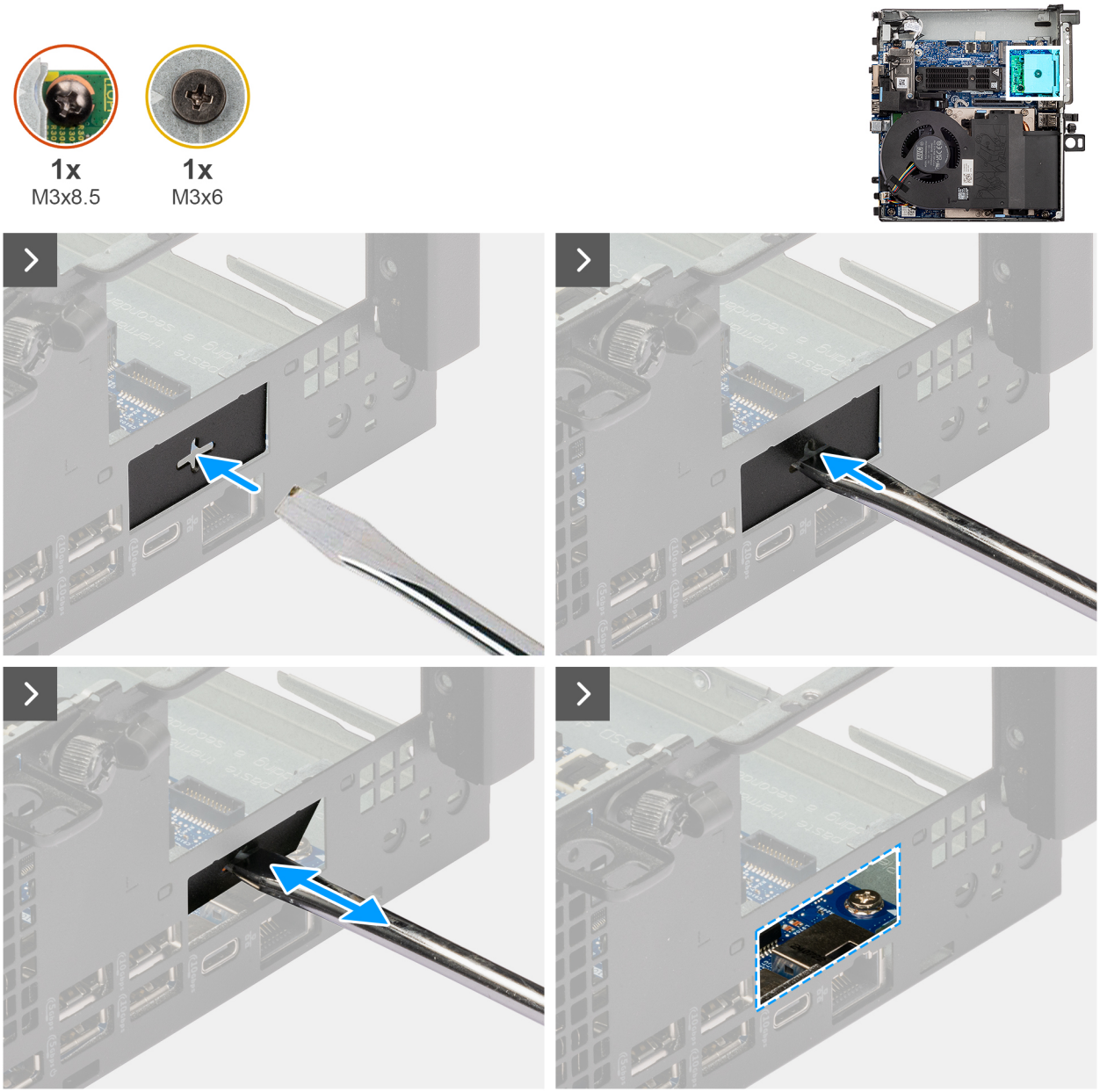


Figure 40. Installing the Thunderbolt port

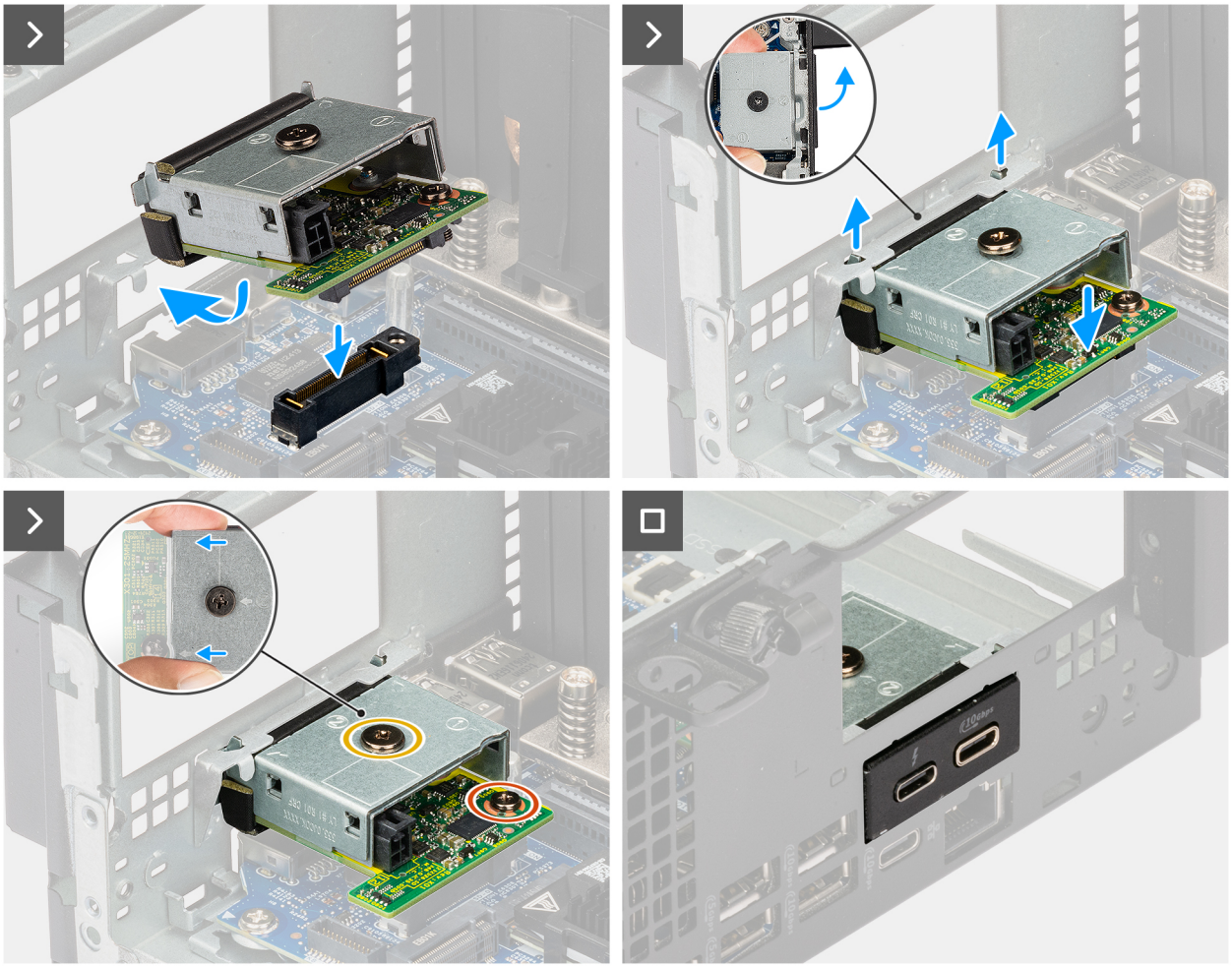


Figure 41. Installing the Thunderbolt port

Steps

1. Insert a flat-head screwdriver in the hole of the bracket, push the bracket to release the bracket, and lift the bracket out from the computer.
2. Align and insert the hooks of the optional module port into the slots on the chassis.
3. Gently press the optional module onto the system board until it clicks into place.
4. Tighten the screw (M3x8.5) and screw (M3x6) to secure the optional module in place.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Removing the Thunderbolt port

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following images indicate the location of the optional Thunderbolt port module and provide a visual representation of the removal procedure.

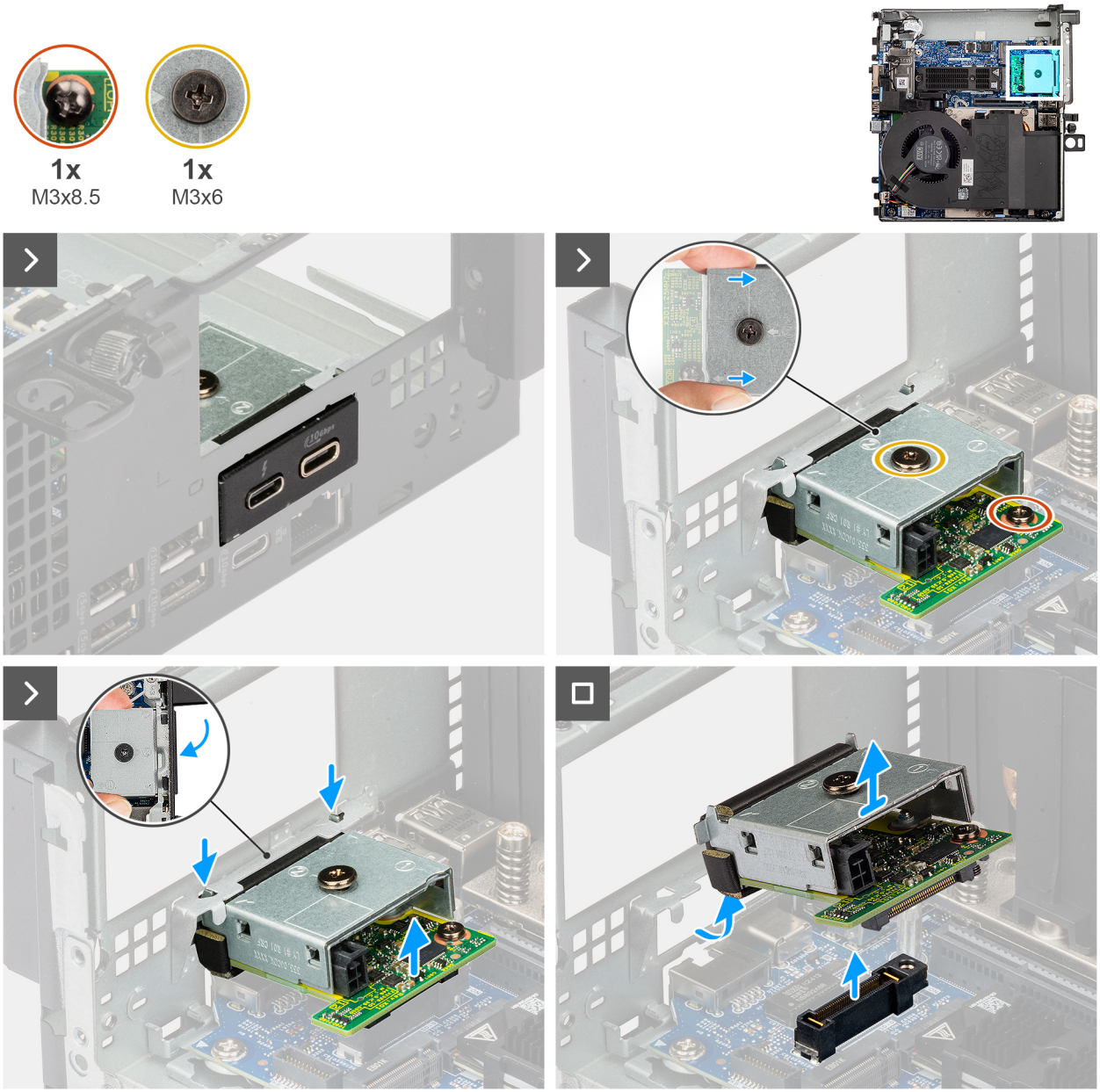


Figure 42. Removing the Thunderbolt port

Steps

1. Remove the screw (M3x8.5) and loosen the screw (M3x6) that secure the optional module in place.
2. Lift the optional module at an angle and unhook from the chassis.

Installing the HDMI port

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 HDMI port module and provide a visual representation of the installation procedure.

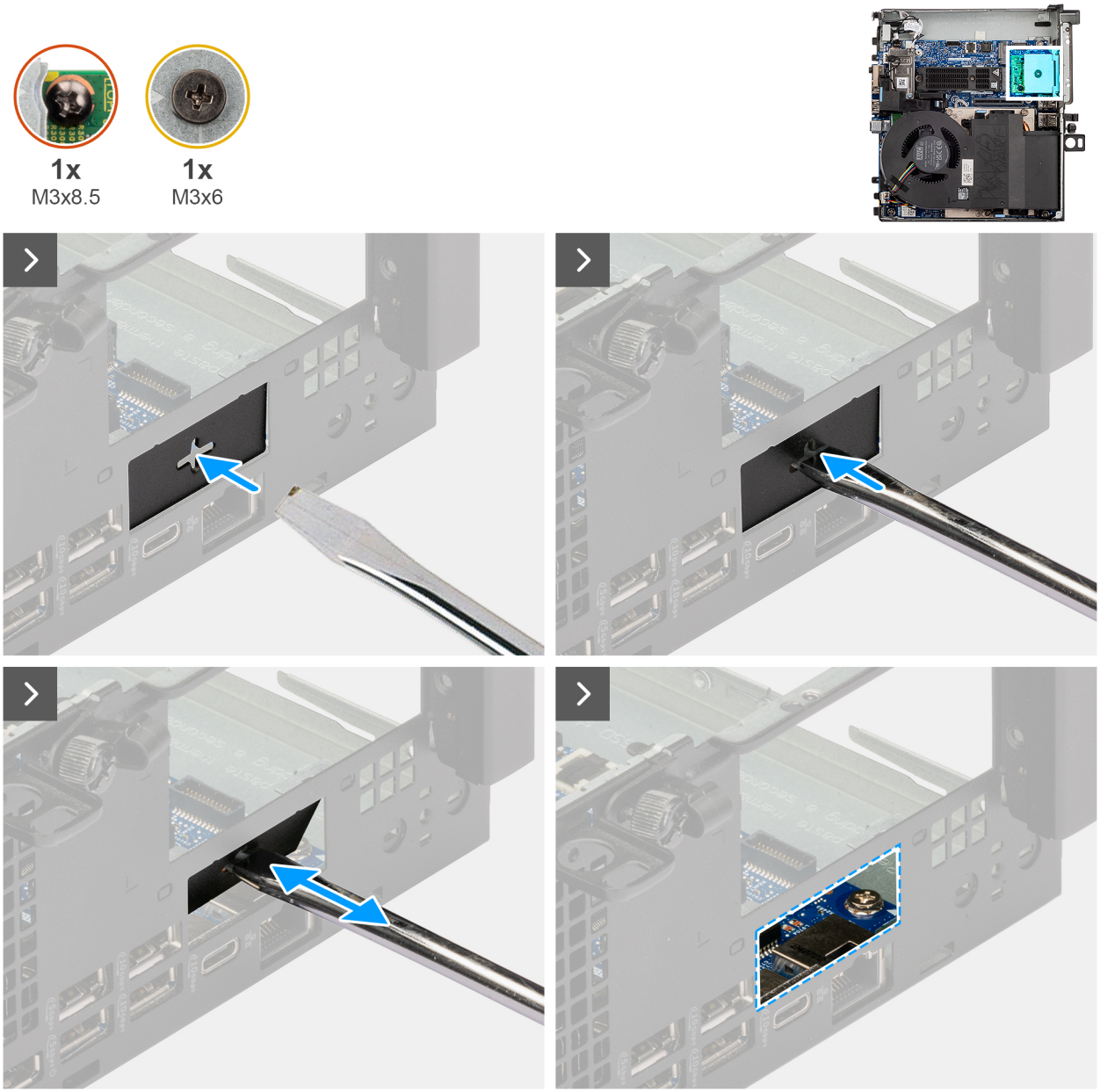


Figure 43. Installing the HDMI port

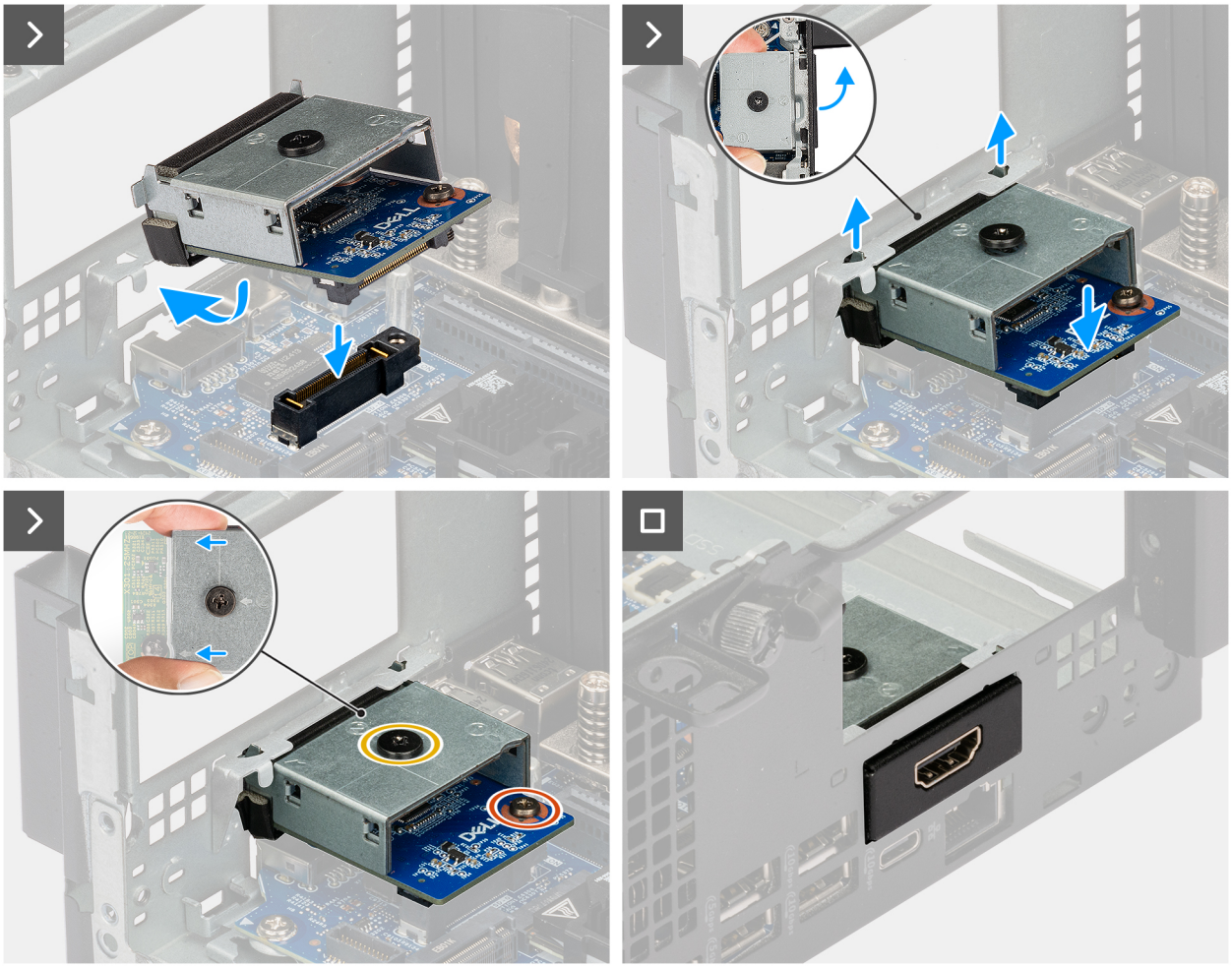


Figure 44. Installing the HDMI port

Steps

1. Insert a flat-head screwdriver in the hole of the bracket, push the bracket to release the bracket, and lift the bracket out from the computer.
2. Align and insert the hooks of the optional module port into the slots on the chassis.
3. Gently press the optional module onto the system board until it clicks into place.
4. Tighten the screw (M3x8.5) and screw (M3x6) to secure the optional module in place.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Removing the HDMI port

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following images indicate the location of the optional HDMI port module and provide a visual representation of the removal procedure.

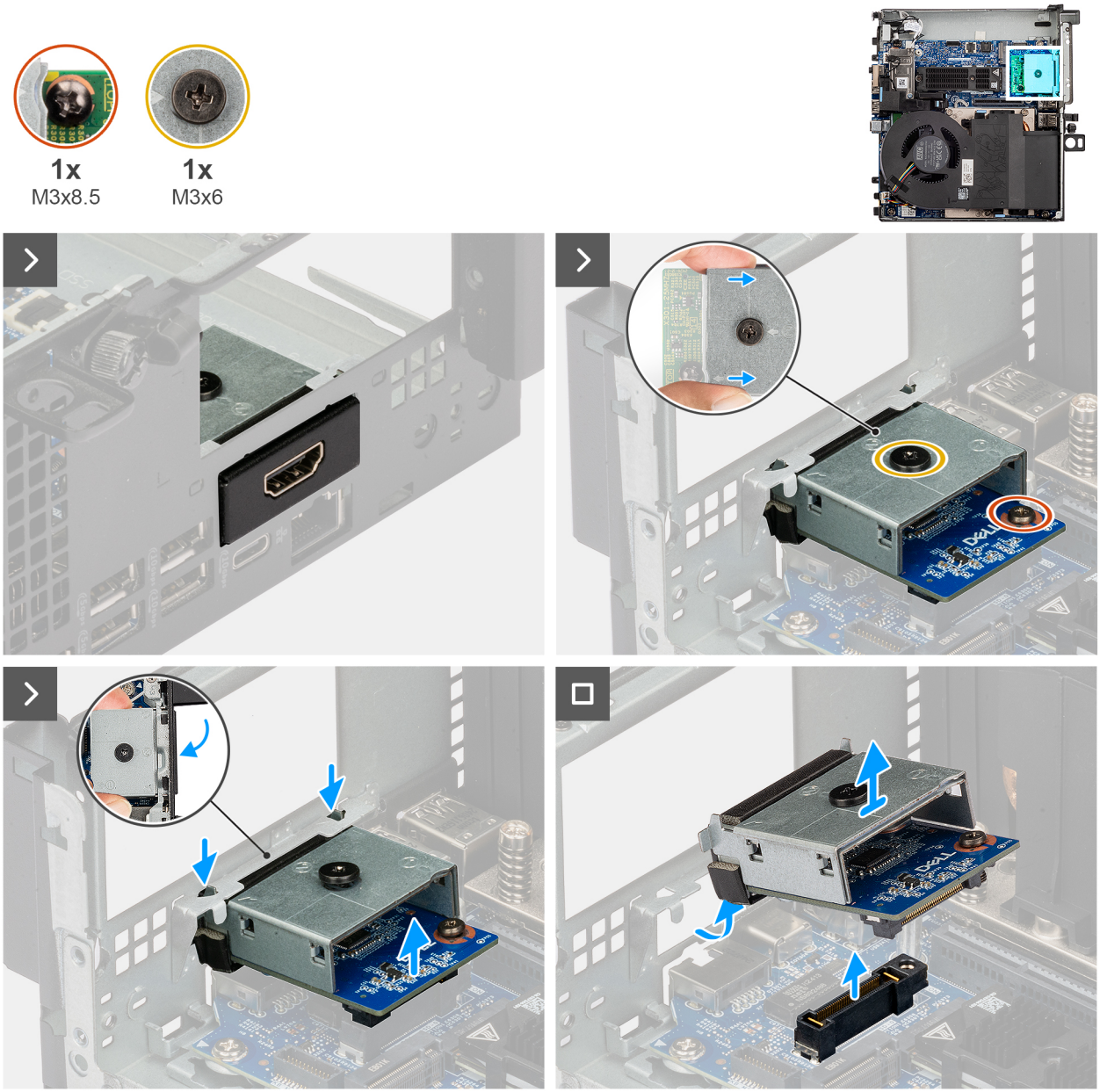


Figure 45. Removing the HDMI port

Steps

1. Remove the screw (M3x8.5) and loosen the screw (M3x6) that secure the optional module in place.
2. Lift the optional module at an angle and unhook from the chassis.

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 riser-card module.
4. Remove the system 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 images indicate the location of the heat sink and provide a visual representation of the removal procedure.

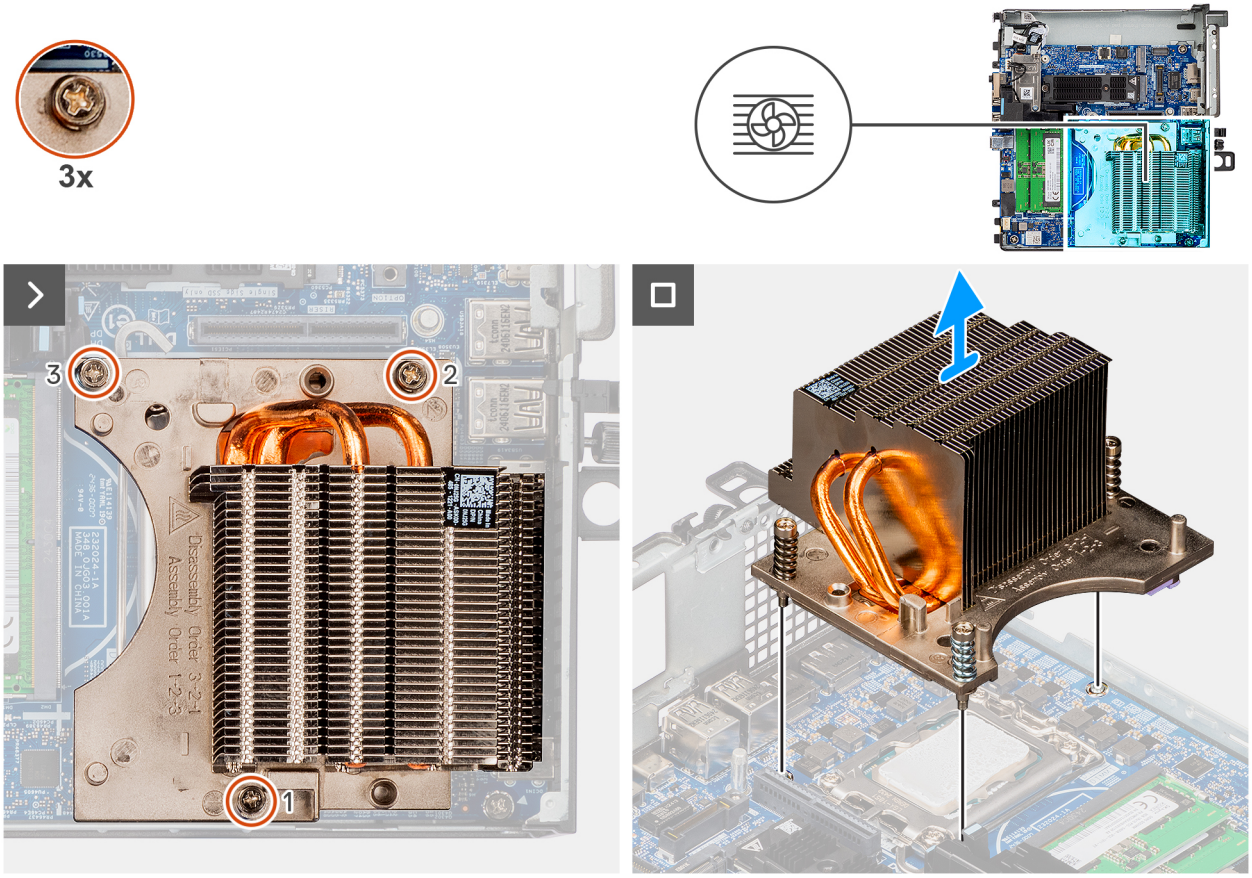


Figure 46. Removing the heat sink

Steps

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

Installing the heat sink

Prerequisites

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

About this task

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

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

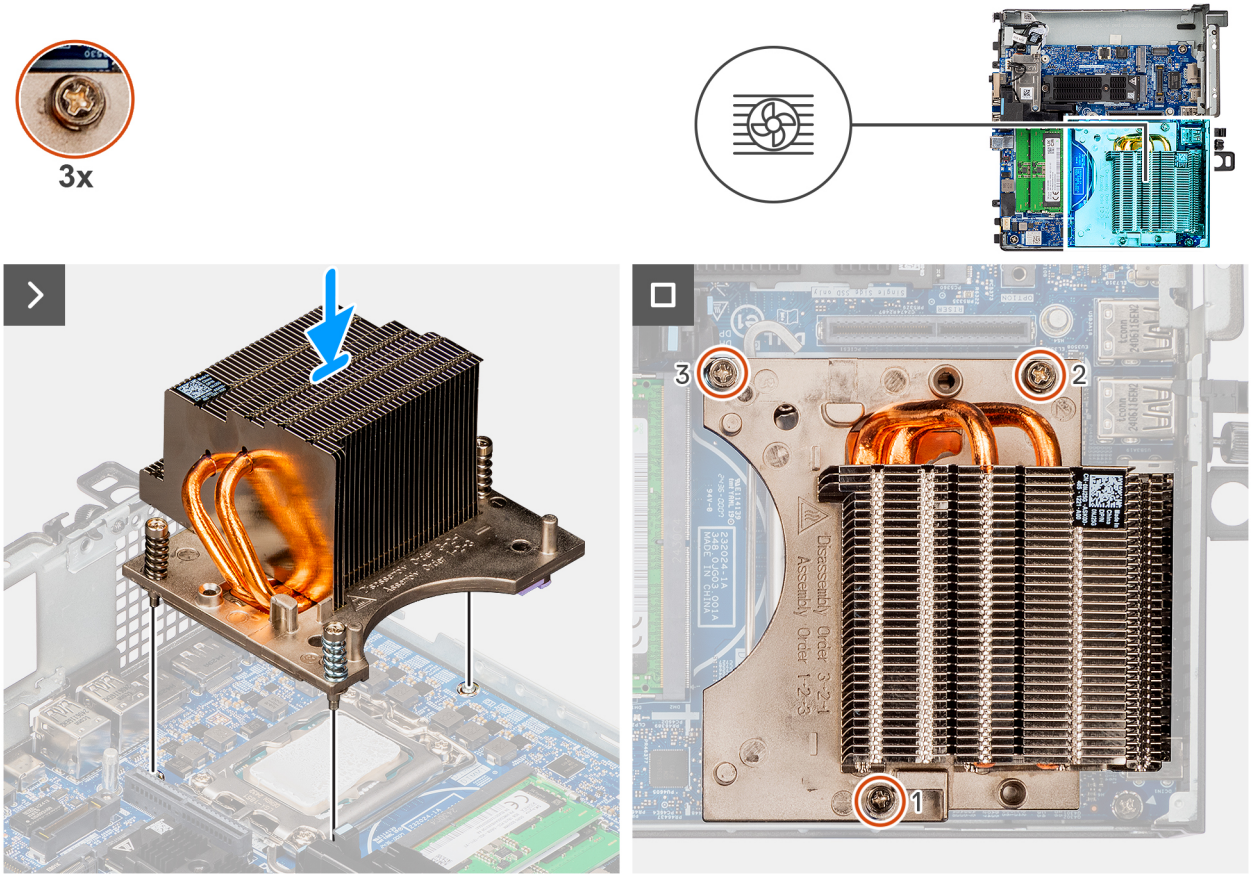


Figure 47. Installing the heat sink

Steps

1. Align the screw holes on the heat sink with the screw holes on the system board.
2. Tighten the three captive screws in a sequential order (1->2->3) to secure the heat sink to the system board.

Next steps

1. Install the system fan.
2. Install the riser-card module.
3. Install the side cover.
4. 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 riser-card module.
4. Remove the system fan.
5. Remove the heat sink.

About this task

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

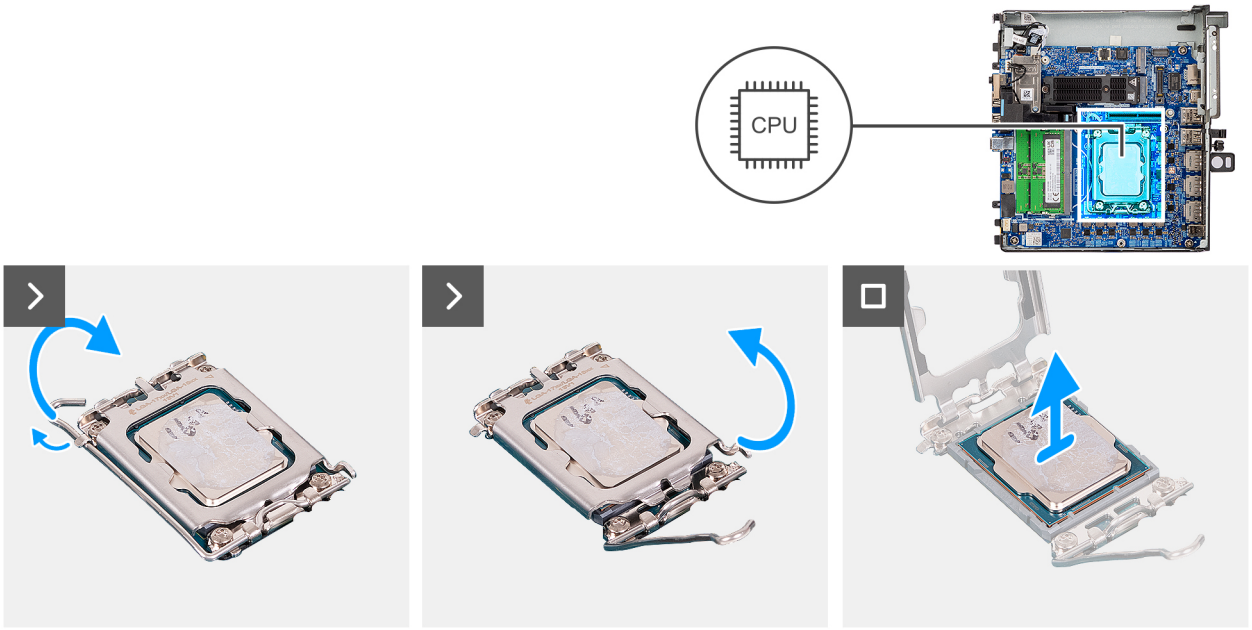


Figure 48. Removing the processor

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 procedure.

About this task

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

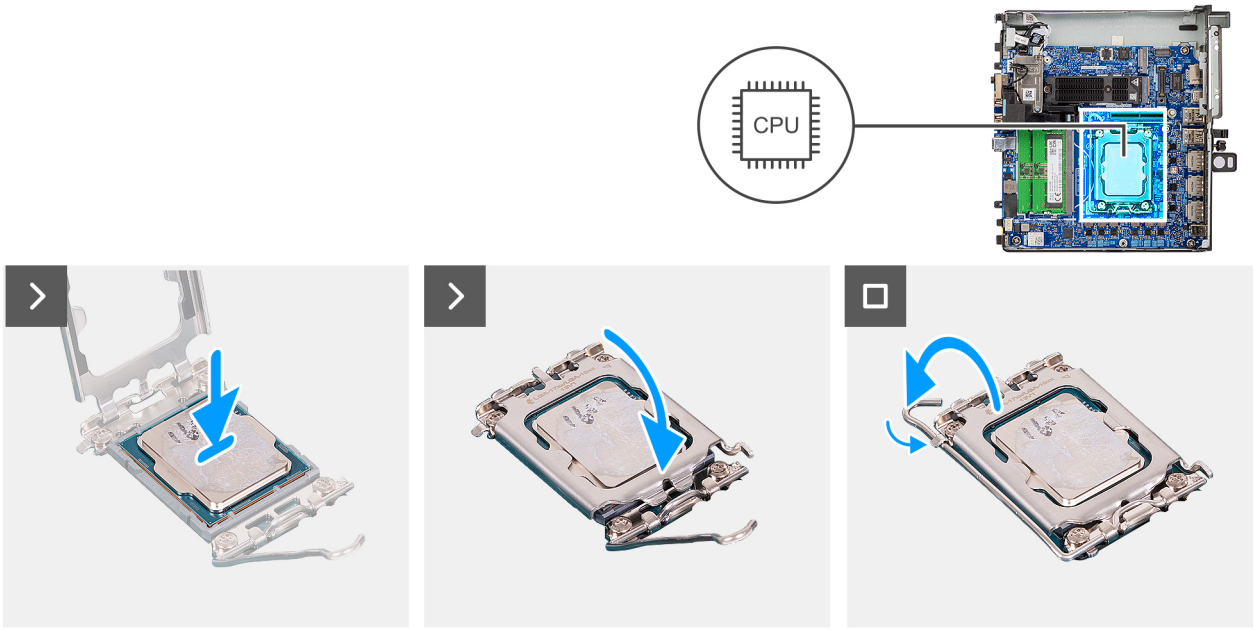


Figure 49. Installing the processor

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 system fan.
3. Install the riser-card module.
4. Install the side cover.
5. 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 memory modules.
4. Remove the riser-card module.
5. Remove the M.2 2230 SSD (slot-one).
6. Remove the M.2 2280 SSD (slot-one).
7. Remove the wireless card.

8. Remove the coin-cell battery.
9. Remove the speaker.
10. Remove the system fan.
11. Remove the heat sink.
12. Remove the processor.
13. Remove the optional module.

About this task

The following images indicate the connectors on your system board.

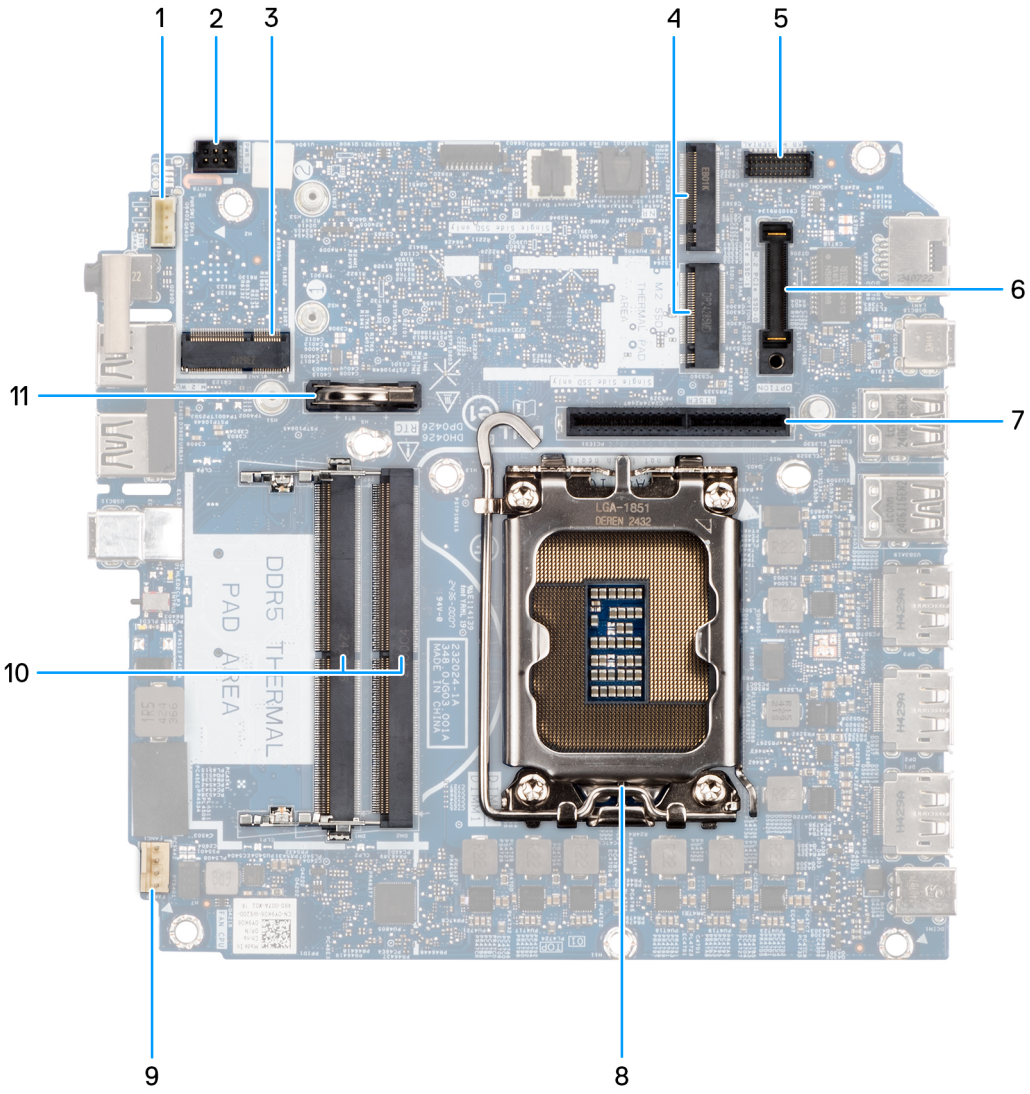


Figure 50. System board connectors

Table 25. Dell Pro Max Micro FCM2250 system board connectors

No	Connector	Description
1	INT SPKR	Internal speaker
2	PWR SW	Power button
3	M.2	Wireless card
4	M.2 PCIe SSD-0 and M.2 PCIe SSD-1	M.2 PCIe SSD slots

Table 25. Dell Pro Max Micro FCM2250 system board connectors (continued)

No	Connector	Description
5	KB MS SERIAL	Optional PS/2, serial port connector
6	OPTION	Optional module connector
7	PCIe RISER connector	The riser supports two PCIe Gen4 x8 open-end connector (Electrically x8 for slot1, x1 for slot2)
8	CPU	Processor socket
9	FANC1 and FANC2	CPU fan connector
10	DIMM1 and DIMM2	Memory module connectors
11	RTC	Coin-cell battery

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

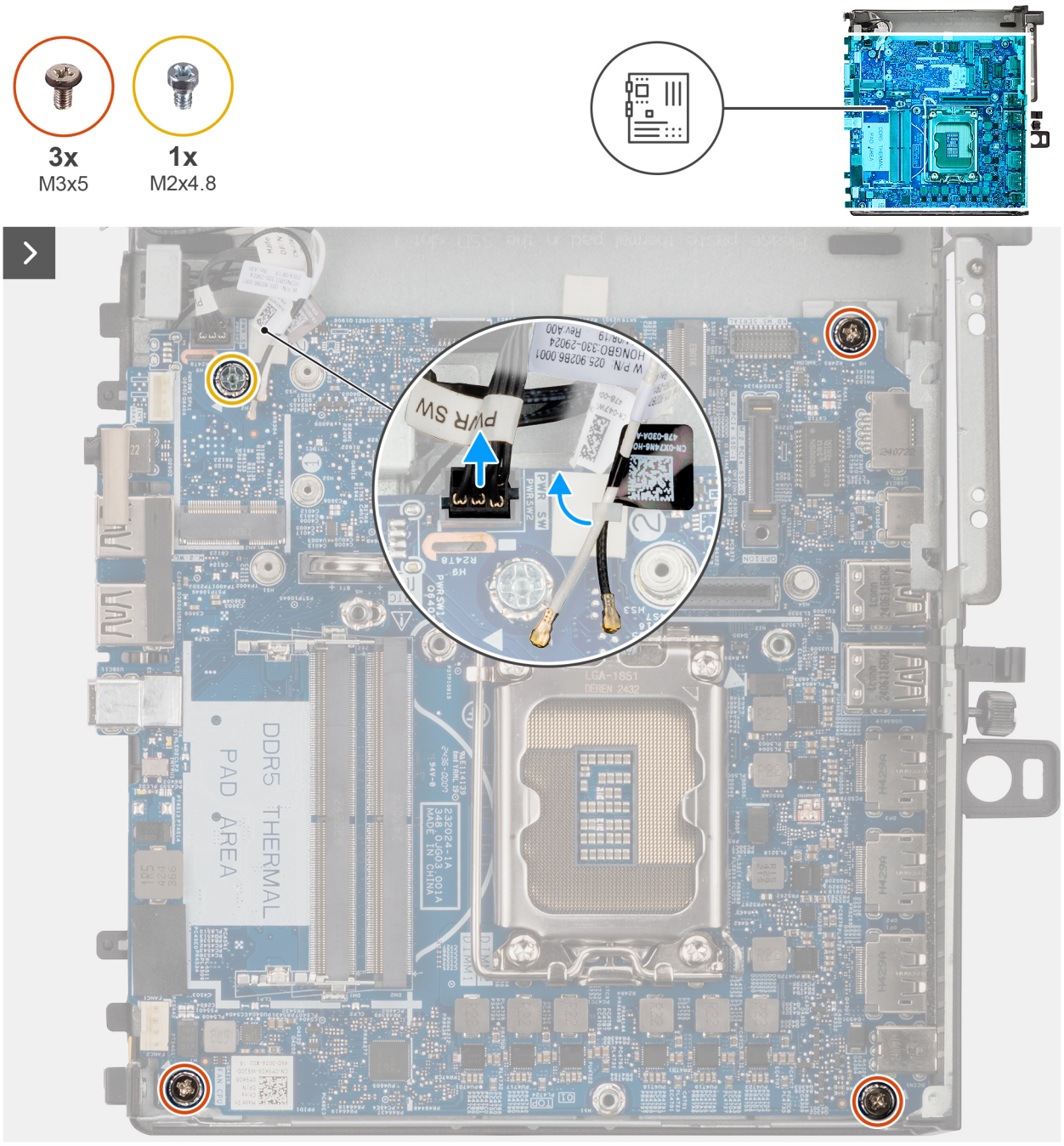


Figure 51. Removing the system board

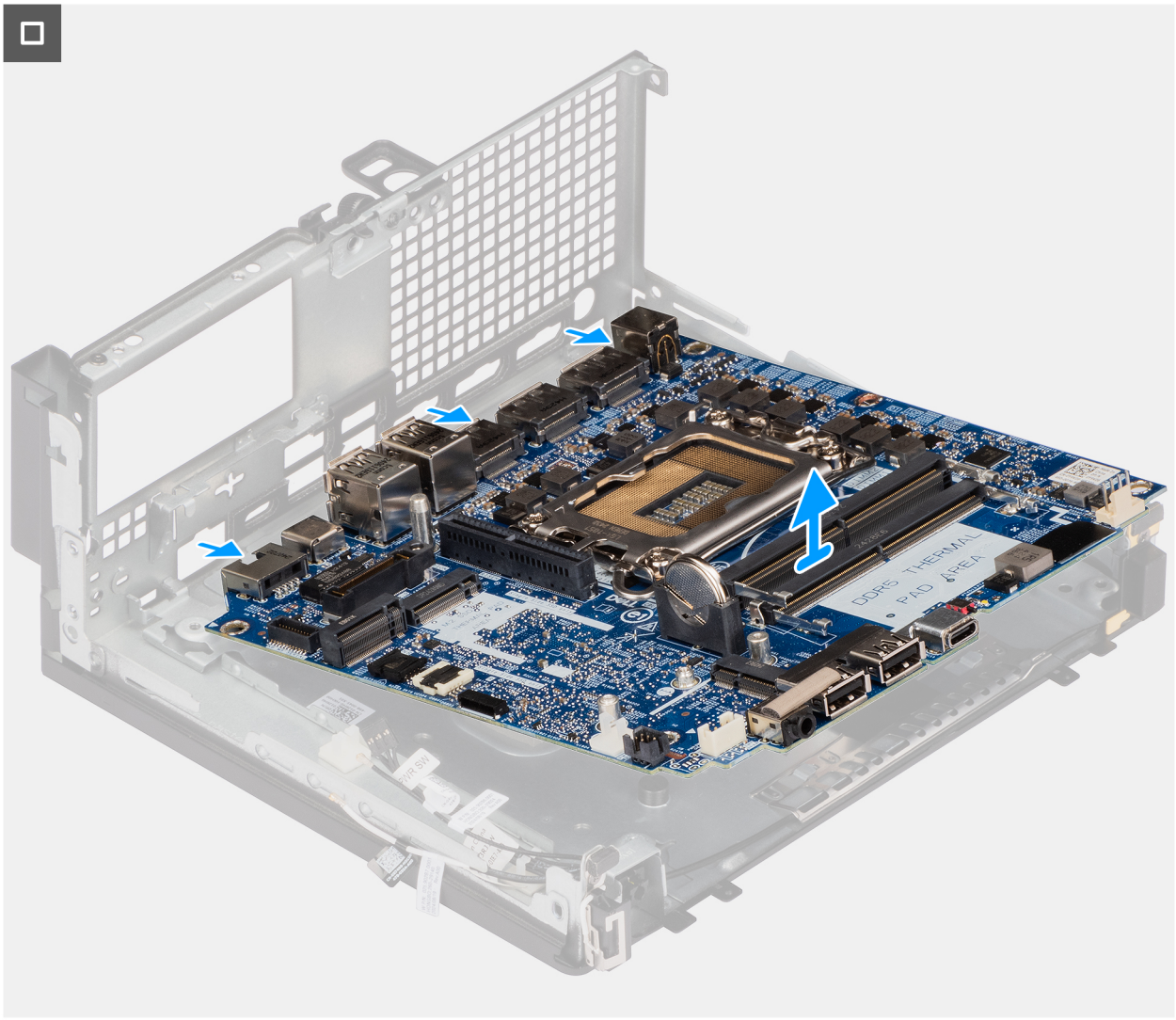


Figure 52. Removing the system board

Steps

1. Disconnect the power button cable from its connector on the system board.
2. Unroute the wireless antenna cables from the plastic routing guide.
3. Remove the screw (M2x4.8) and three screws (M3x5) that secure the system board to the chassis.
4. Slide and lift the system board away from the chassis.

Installing the system board

Prerequisites

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

About this task

The following image indicates the connectors on your system board.

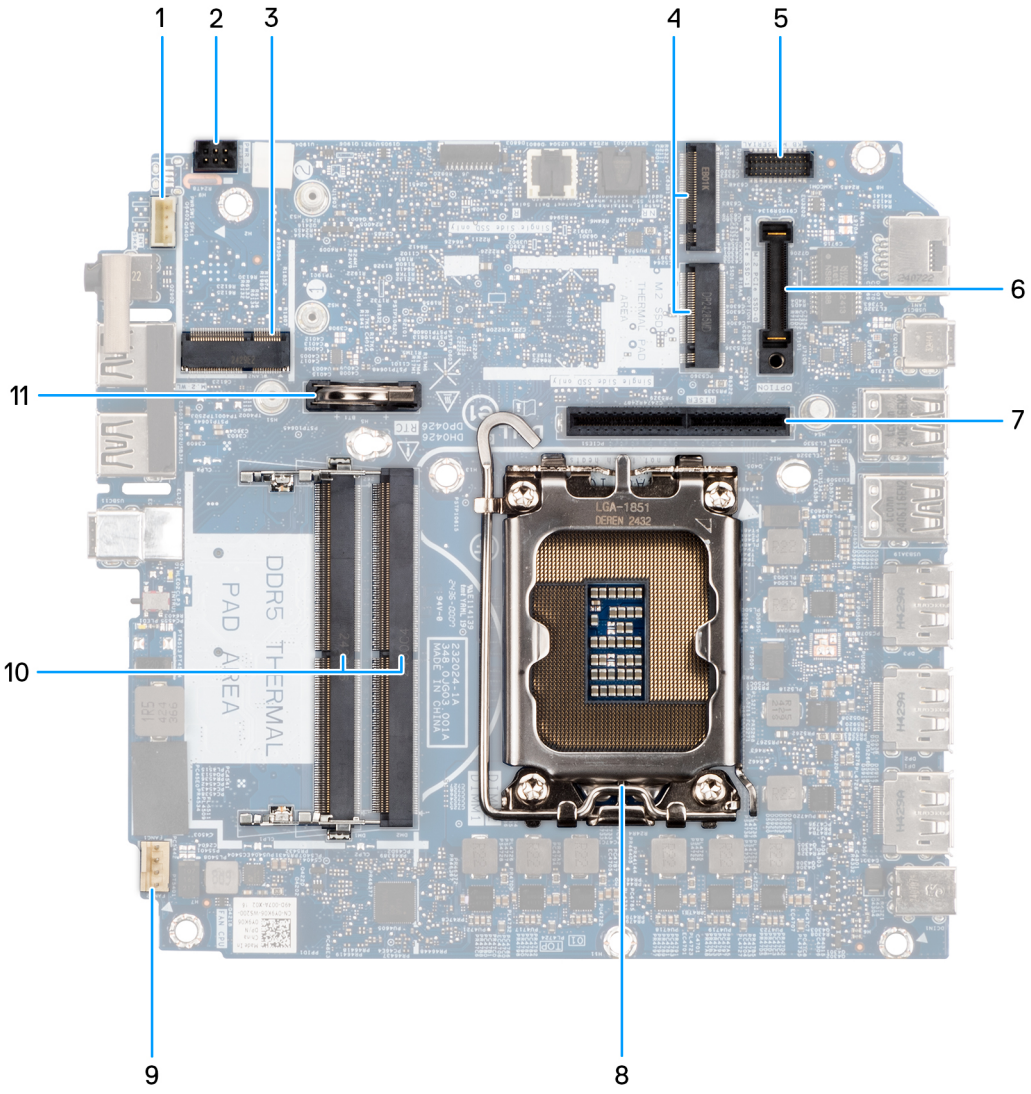


Figure 53. System board connectors

Table 26. Dell Pro Max Micro FCM2250 system board connectors

No	Connector	Description
1	INT SPKR	Internal speaker
2	PWR SW	Power button
3	M.2	Wireless card
4	M.2 PCIe SSD-0 and M.2 PCIe SSD-1	M.2 PCIe SSD slots
5	KB MS SERIAL	Optional PS/2, serial port connector
6	OPTION	Optional module connector
7	PCIe RISER connector	The riser supports two PCIe Gen4 x8 open-end connector (Electrically x8 for slot1, x1 for slot2)
8	CPU	Processor socket
9	FANC1 and FANC2	CPU fan connector
10	DIMM1 and DIMM2	Memory module connectors

Table 26. Dell Pro Max Micro FCM2250 system board connectors (continued)

No	Connector	Description
11	RTC	Coin-cell battery

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

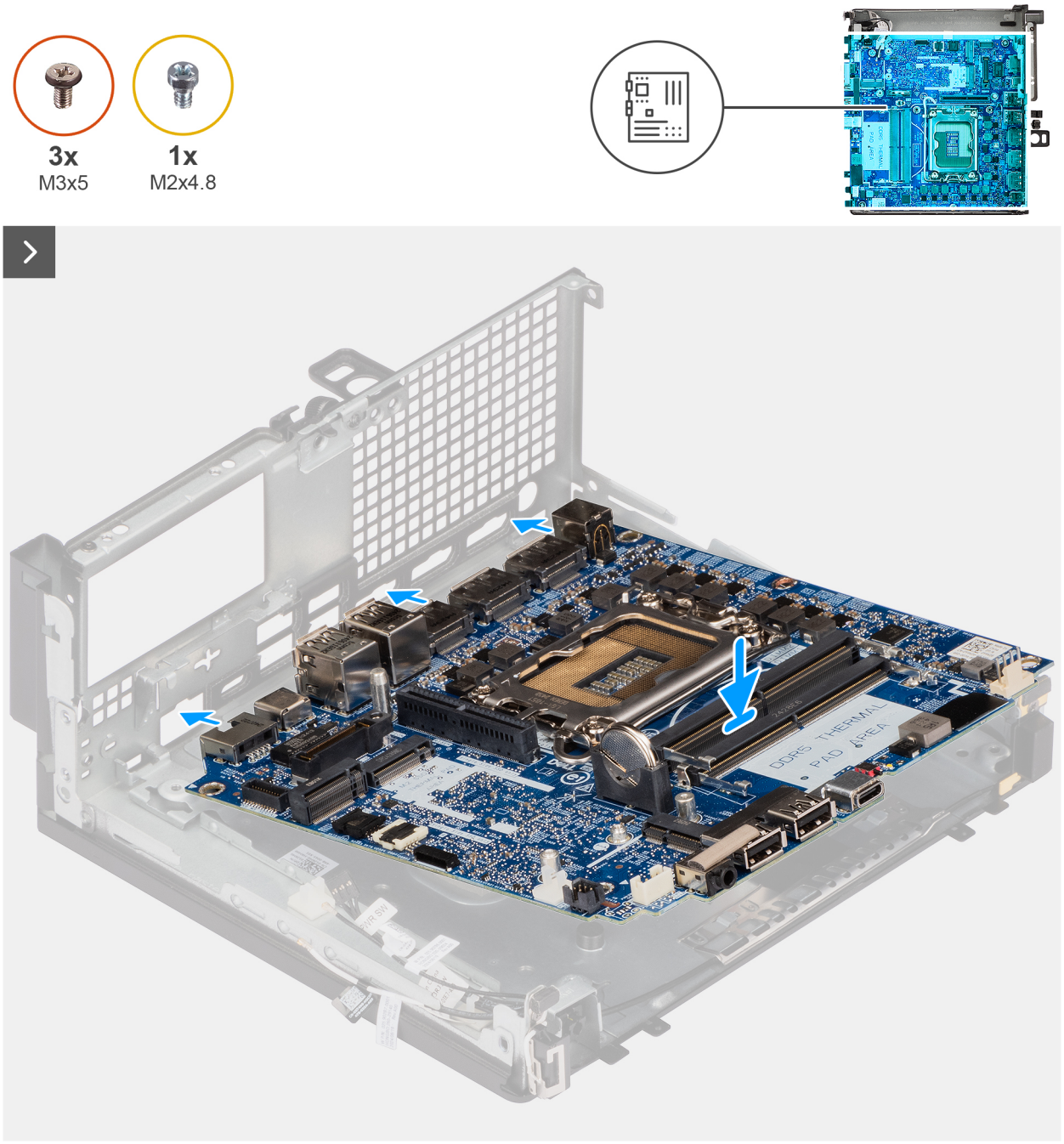


Figure 54. Installing the system board

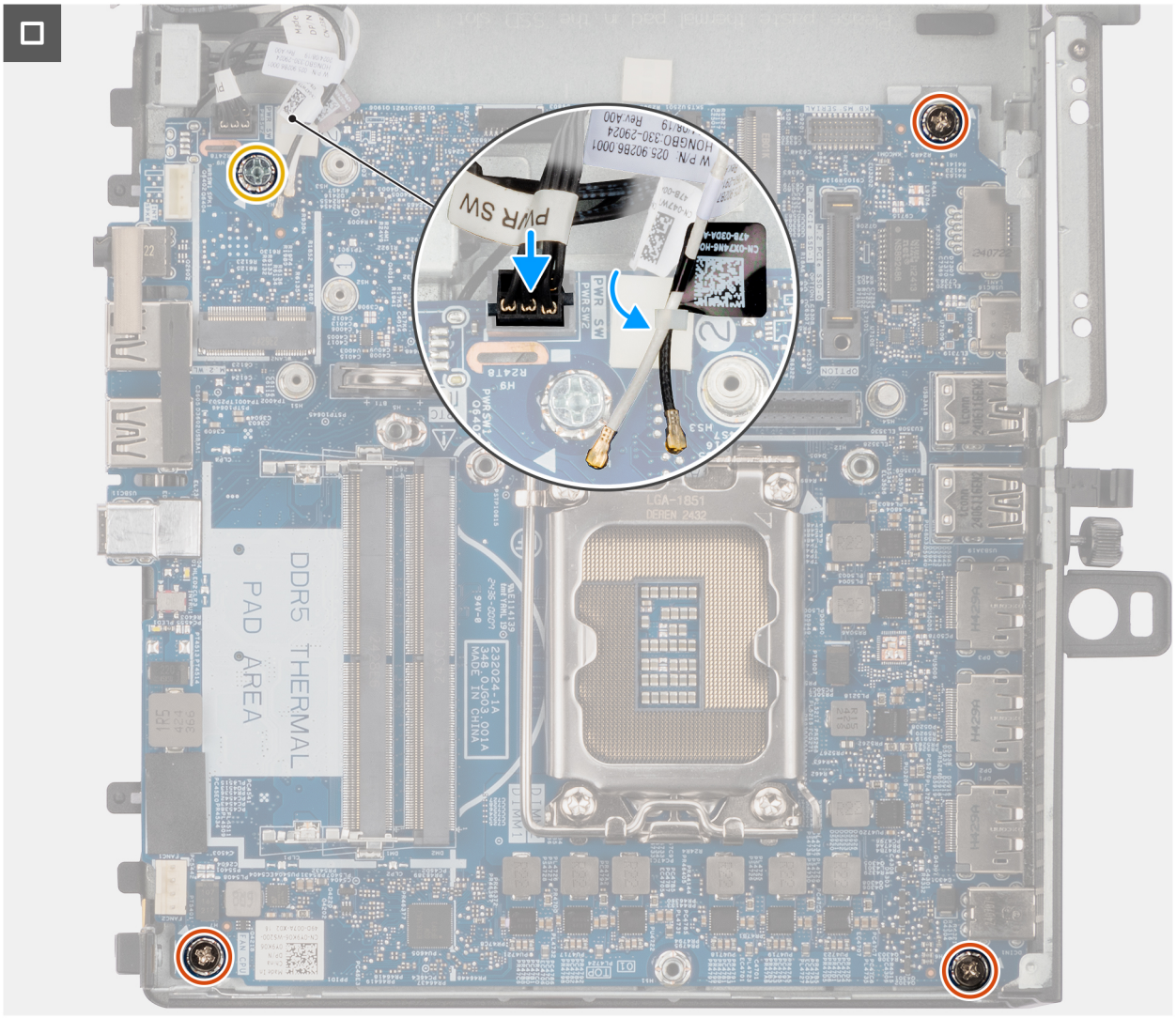


Figure 55. Installing the system board

Steps

1. At an angle, carefully slide to align the ports on the system board to the port slots on the chassis.
2. Align the screw holes on the system board with the screw holes on the chassis.
3. Replace the three screws (M3x5) and screw (M2x4.8) to secure the system board to the chassis.
4. Connect the power button cable to its connector on the system board.
5. Route the wireless antenna cables through the plastic routing guide.

Next steps

1. Install the optional modules.
2. Install the processor.
3. Install the heat sink.
4. Install the system fan.
5. Install the speaker.
6. Install the coin-cell battery.
7. Install the wireless card.
8. Install the M.2 2280 SSD (slot-one).
9. Install the M.2 2230 SSD (slot-one).
10. Install the riser-card module.
11. Install the memory modules.
12. Install the side cover.

13. Follow the procedure in after working inside your computer.

Power button

Removing the power button

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.

About this task

The following images indicate the location of the power button and provide a visual representation of the removal procedure.

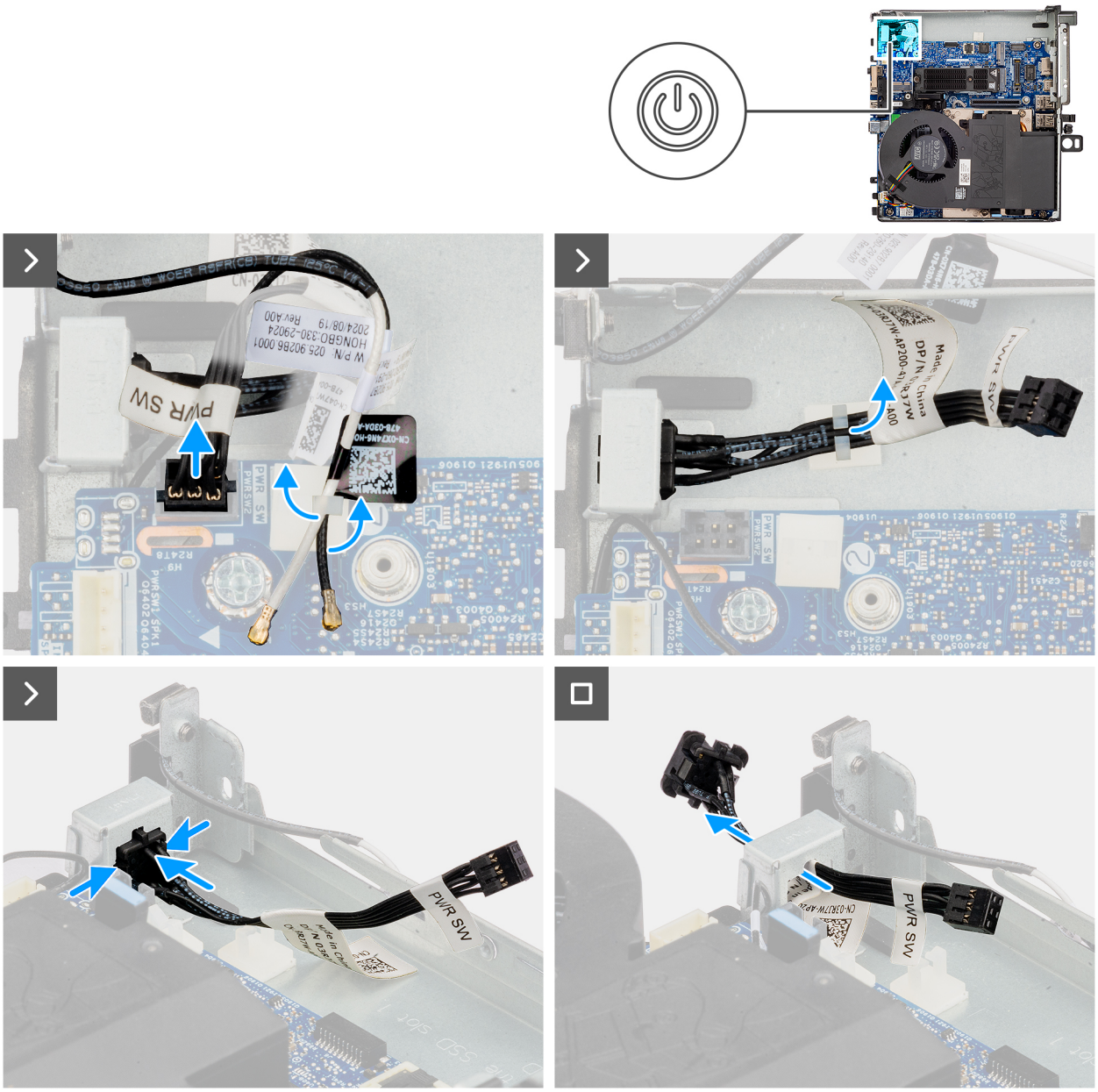


Figure 56. Removing the power button

Steps

1. Disconnect the power-button cable from the connector on the system board.
2. Unroute the wireless antenna cables from the plastic routing guide.
3. Unroute the power-button cable from the plastic routing guide.
4. Press the release tabs on the power-button head and slide the power-button cable out from the front-side chassis of the computer.
5. Pull the power-button cable out from the computer.

Installing the power button

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 power button and provide a visual representation of the installation procedure.

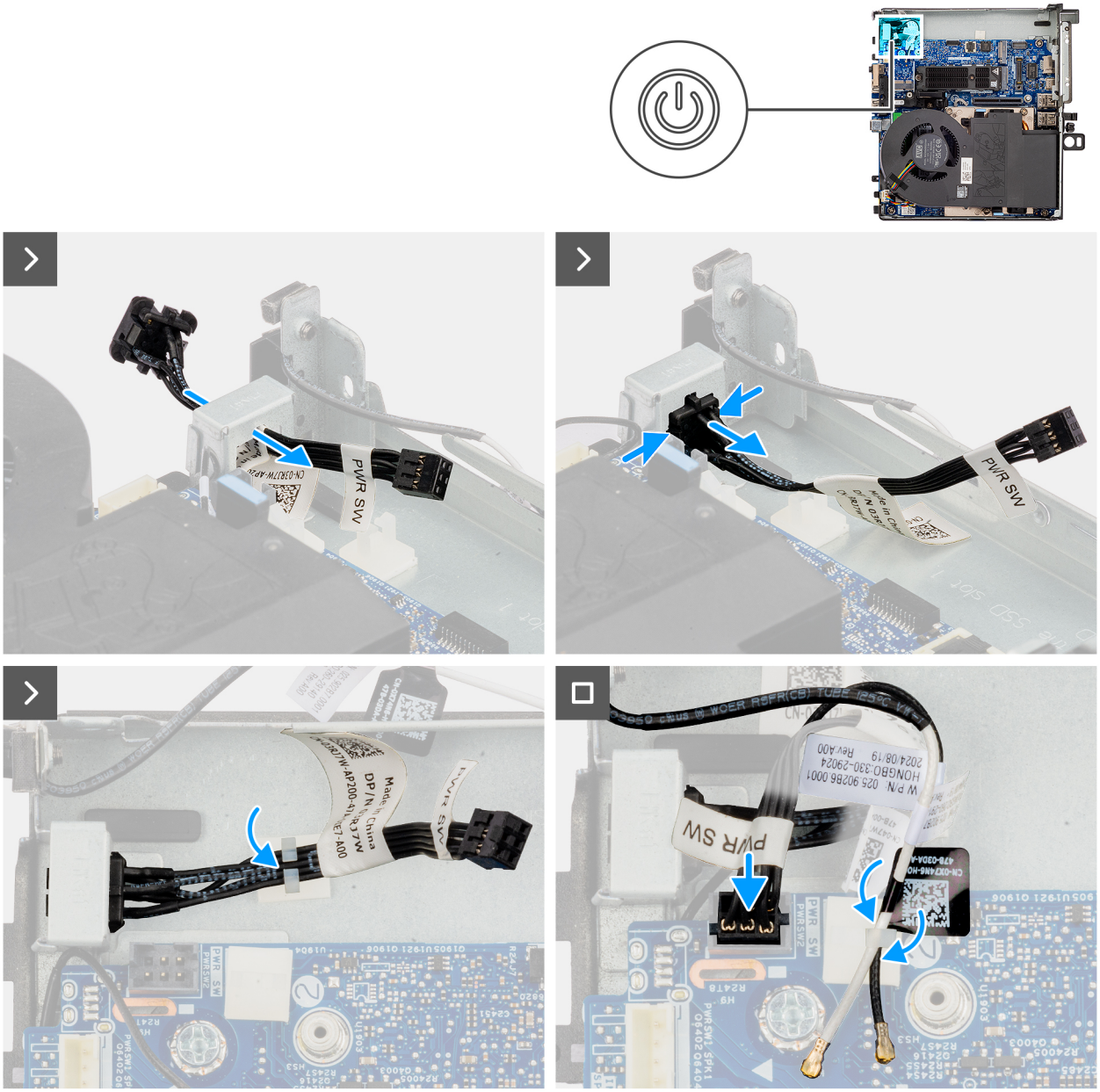


Figure 57. Installing the power button

Steps

1. Insert the power-button cable into the slot from the front-side of the computer.
2. Press the power-button head until it clicks into the place in the chassis.
3. Route the power-button cable through the plastic routing guide.
4. Route the wireless antenna cables through the plastic routing guide.
5. Align and connect the power-button cable to the connector on the system board.

Next steps

1. Install the riser-card module.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Internal antenna

Removing the internal antenna—location one

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.
4. Remove the wireless card.

About this task

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

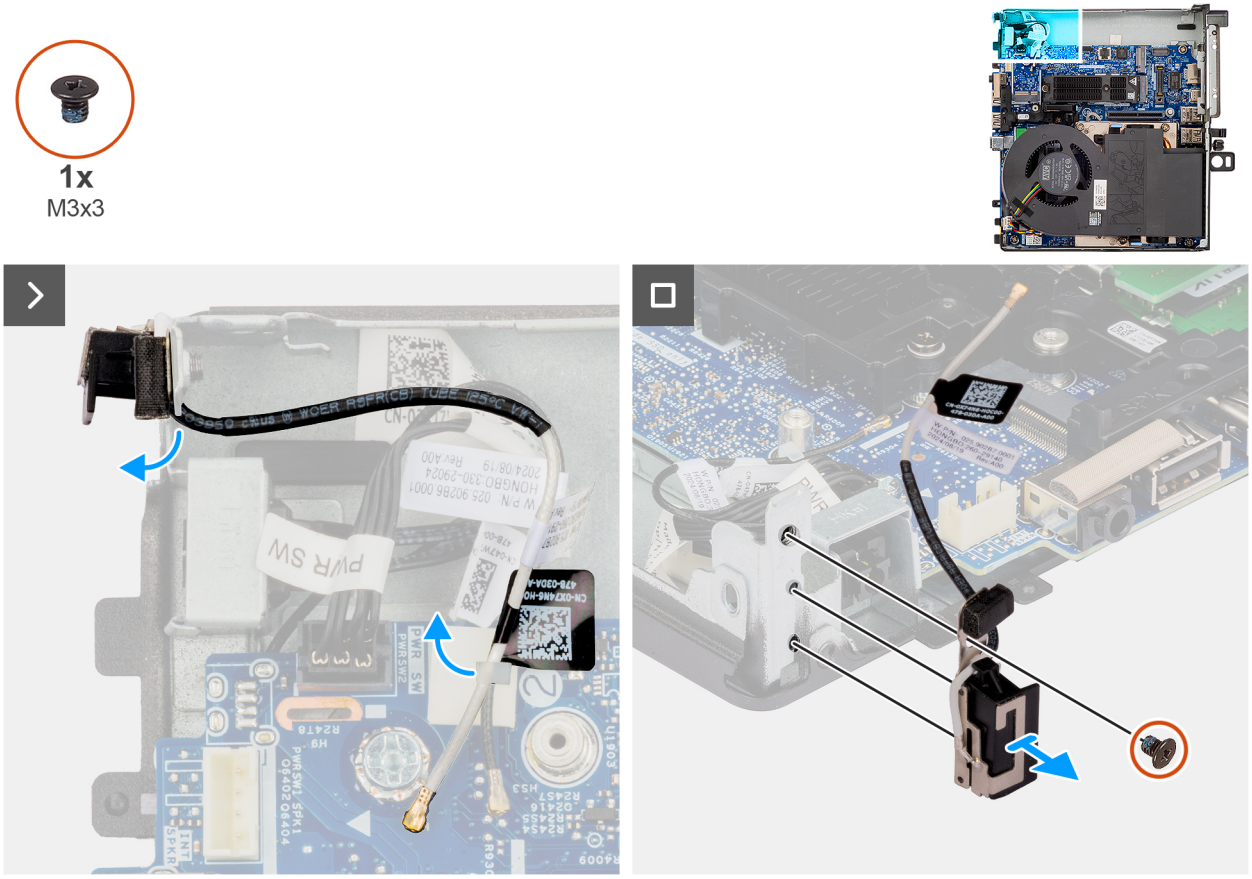


Figure 58. Removing the internal antenna—location one

Steps

1. Unroute the antenna cable from the routing guides using a plastic scribe.
2. Remove the screw (M3x3) that secures the internal antenna module to the chassis.
3. Pull to remove the internal antenna module away from the chassis.

Installing the internal antenna—location one

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 Internal antenna and provide a visual representation of the installation procedure.

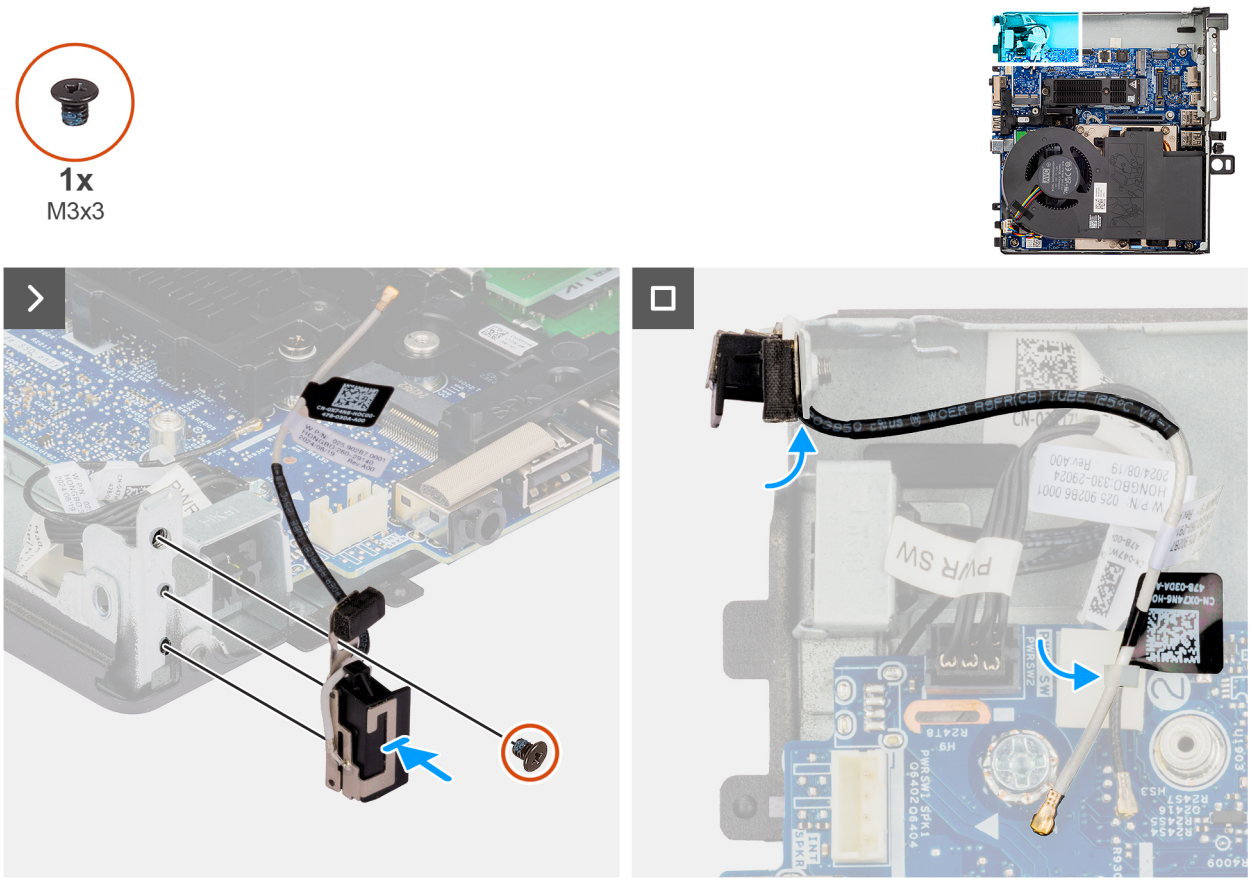


Figure 59. Installing the internal antenna—location one

Steps

1. Align and insert the internal antenna module into its slot on the chassis.
2. Replace the screw (M3x3) to secure the internal antenna module to the chassis.
3. Route the antenna cable through the routing guides using a plastic scribe.

Next steps

1. Install the wireless card.
2. Install the riser-card module.
3. Install the side cover.
4. Follow the procedure in after working inside your computer.

Removing the internal antenna—location two

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the riser-card module.
4. Remove the wireless card.

About this task

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

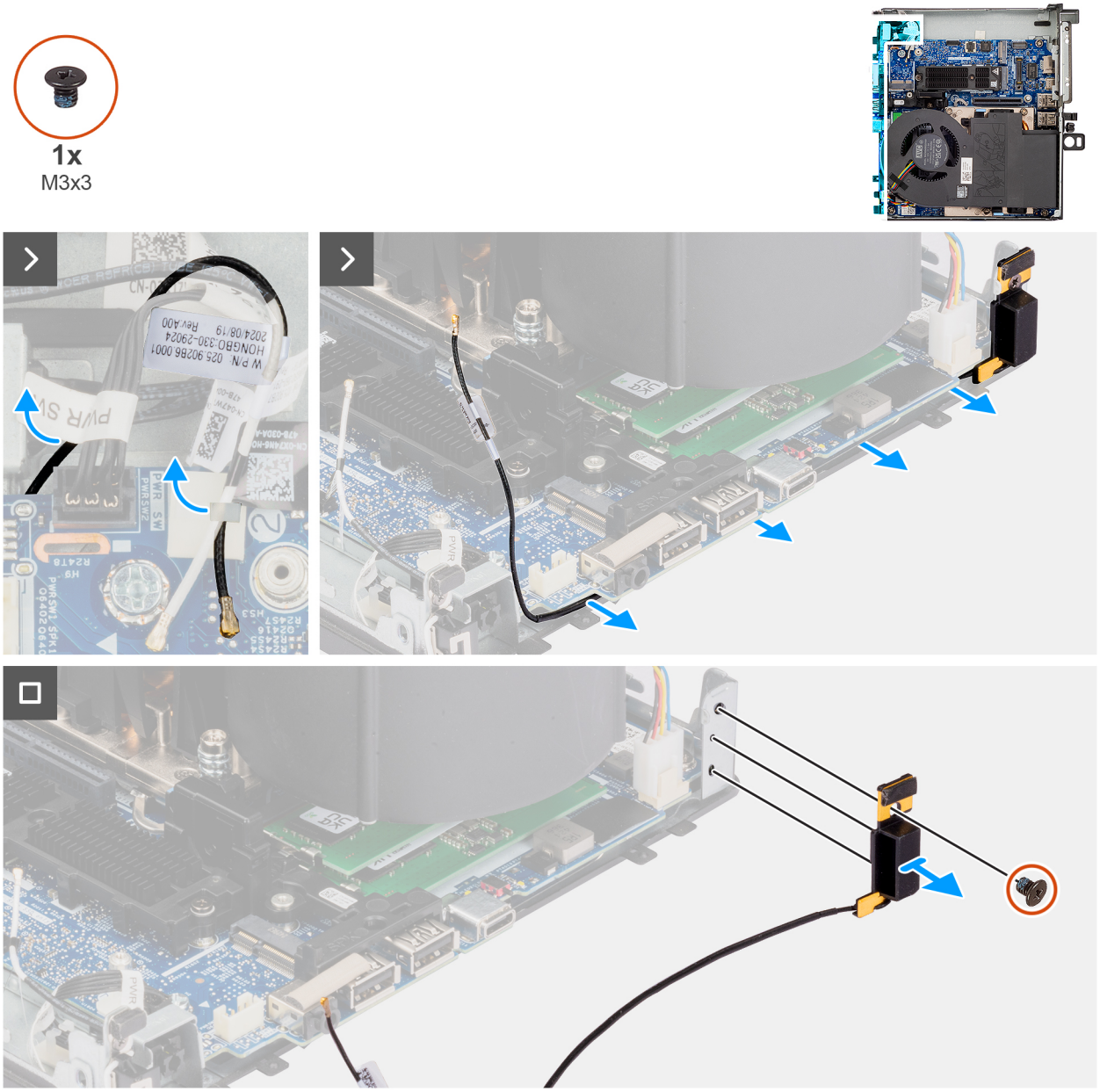


Figure 60. Removing the internal antenna—location two

Steps

1. Unroute the antenna cables from the routing guides in the chassis using a plastic scribe.
2. Pry the metallic routing guide and unroute the antenna cables from the chassis.
3. Remove the screw (M3x3) that secures the internal antenna module to the chassis.
4. Pull to remove the internal antenna module away from the chassis.

Installing the internal antenna—location two

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 Internal antenna and provides a visual representation of the installation procedure.

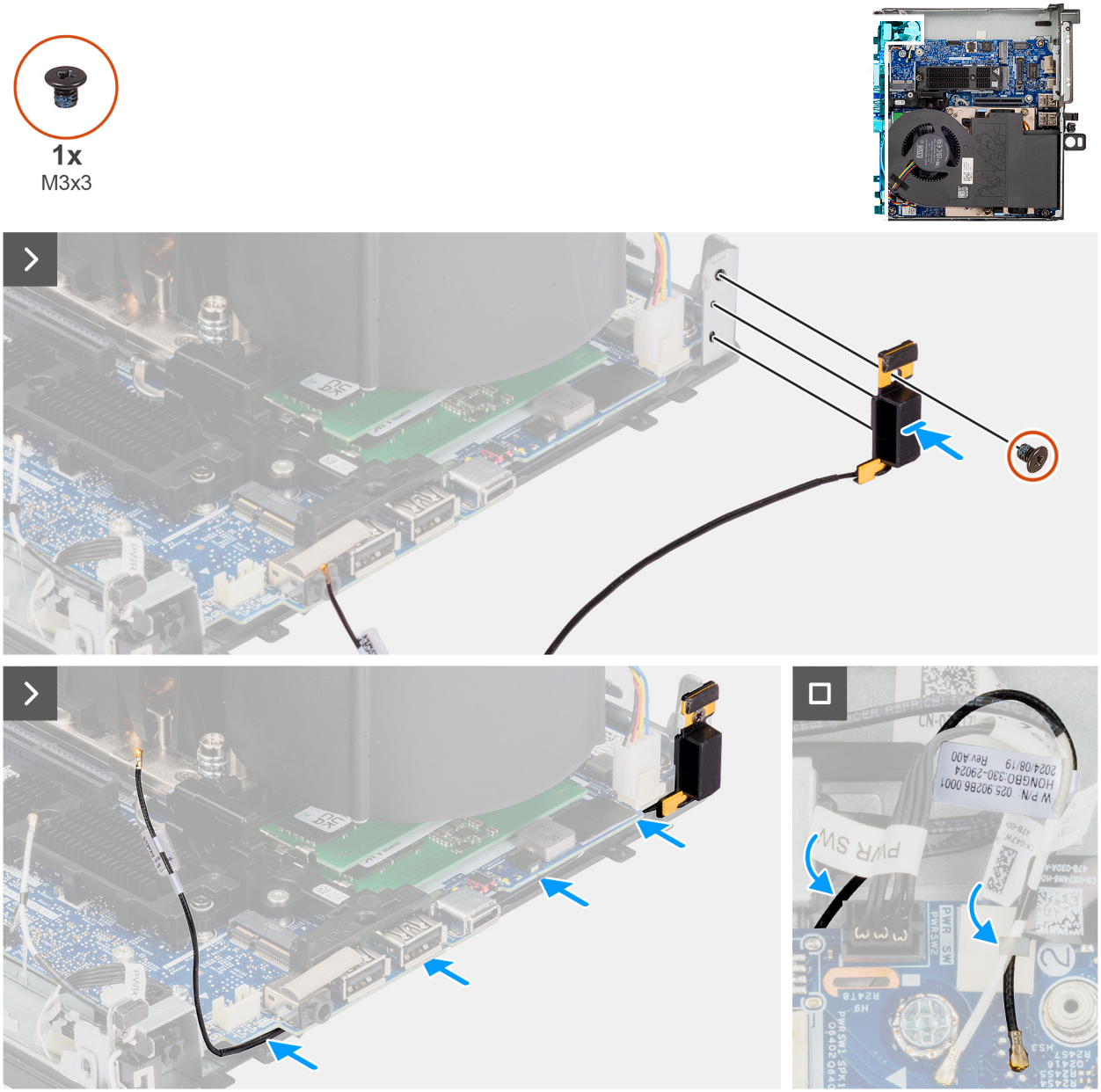


Figure 61. Installing the internal antenna—location two

Steps

1. Align and insert the internal antenna module into its slot on the chassis.
2. Replace the screw (M3x3) to secure the internal antenna module to the chassis.
3. Route the antenna cable through the metallic routing guide on the chassis using a plastic scribe.
4. Route the antenna cable through the plastic routing guides on the chassis using a plastic scribe.

Next steps

1. Install the wireless card.
2. Install the riser-card module.
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 Dell Pro Max Micro FCM2250 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Pro National Education, 64-bit
- Windows 11 Pro for Workstations
- Ubuntu Linux 24.04 LTS, 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 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

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 27. 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.

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 28. BIOS Setup options—Overview menu

Overview	Description
Dell Pro Max Micro FCM2250	
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.
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 vPro Technology	Allows computers to be fixed and maintained remotely.
Memory Information	
Memory Installed	Displays the total memory installed on the computer.
Memory Available	Displays the total computer memory available.
Memory Speed	Displays the memory speed.
Memory Technology	Displays the technology that is used for the memory.
DIMM1 Size	Displays the memory on DIMM1 slot.
DIMM2 Size	Displays the memory on DIMM2 slot.
Devices Information	

Table 28. BIOS Setup options—Overview menu (continued)

Overview	Description
Video Controller	Displays the type of video controller available on the computer.
Video Memory	Displays the video memory information of the computer.
Wi-Fi Device	Displays the wireless device information of the computer.
Video BIOS Version	Displays the video BIOS version of the computer.
Native Resolution	Displays the native resolution 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.
dGPU Video Controller	Displays the discrete video controller information of the computer.
Slot 1	Displays the video compatibility information of the computer.
Slot 2	Displays the video compatibility information of the computer.

Table 29. BIOS Setup options—Boot Configuration menu

Boot Configuration	Description
Boot Sequence	
Boot Sequence	Displays the boot sequence.
Enable PXE Boot Priority	Enables or disables PXE boot priority. By default, the **Enable PXE Boot Priority** option is disa bled.
Extended IPV4 PXE Boot Timeout	Allows to set time for extended IPV4 PXE Boot timeout.
Force PXE On Next Boot	Enables or disables Force PXE on Next Boot. By default, the option is not enabled.
Secure Boot	
Enable Secure Boot	Enable or disable the secure boot feature. By default, the option is not enabled.
Secure Boot Mode	Enable or disable to change the secure boot mode options. By default, the **Deployed Mode** is enabled.
Expert Key Management	
Enable Custom Mode	Enable or disable custom mode. By default, the custom mode option is not enabled.
Custom Mode Key Management	Select the custom values for expert key management. By default, the **PK** is enabled.

Table 30. BIOS Setup options—Integrated Devices menu

Integrated Devices	Description
Date/Time	
Date	Sets the computer date in MM/DD/YYYY format. Changes to the date format take effect immediately.

Table 30. BIOS Setup options—Integrated Devices menu (continued)

Integrated Devices	Description
Time	Sets the computer time in HH/MM/SS 24-hour format. You can switch between a 12-hour and 24-hour clock. Changes to the time format take effect immediately.
Audio	
Enable Audio	Enables all integrated audio controller. By default, all the options are enabled.
Enable 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 Internal Speaker	Enables the internal speaker. By default, the **Enable Intenal Speaker** option is enabled.
USB Configuration	Enable or disable booting from USB mass storage devices through the boot sequence or boot menu. By default, all the options are enabled.
Enable Front USB Ports	Enable or disable the individual front USB ports. By default, **Enable Front USB Ports** is enabled.
Enable Rear USB Ports	Enable or disable the individual rear USB ports. By default, **Enable Rear USB Ports** is enabled.
Enable USB Boot Support	Enable or disable the USB boot support. By default, **Enable USB Boot Support** is enabled.

Table 31. BIOS Setup options—Storage menu

Storage	Description
SATA/NVMe Operation	Enable or disable the operating mode of the integrated SATA/NVMe storage device controller. By default, the **RAID On** option is enabled.
Storage Interface	Displays the information of various onboard drives.
Port Enablement	Enables or disables the M.2 PCIe SSD-0 and M.2 PCIe SSD-1 options. By default, both **M.2 PCIe SSD-0** and **M.2 PCIe SSD-1** options are enabled.
SMART Reporting	
Enable SMART Reporting	Enable or disable Self-Monitoring, Analysis, and Reporting Technology (SMART) during computer startup. By default, the **Enable SMART Reporting** option is not enabled.
Drive Information	Displays the information of onboard drives.
M.2 PCIe SSD-0 Type Device	Displays the M.2 PCIe SSD-0 type information of the computer. Displays the M.2 PCIe SSD-0 device information of the computer.
M.2 PCIe SSD-1	Displays the M.2 PCIe SSD-1 type information of the computer.

Table 31. BIOS Setup options—Storage menu (continued)

Storage	Description
Type Device	Displays the M.2 PCIe SSD-1 device information of the computer.

Table 32. BIOS Setup options—Display menu

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

Table 33. BIOS Setup options—Connection menu

Connection	Description
Network Controller Configuration	
Integrated NIC	Controls the on-board LAN controller. By default, the **Enabled with PXE** option is enabled.
Wireless Device Enable	
WLAN	Enables or disables the internal WLAN device. By default, the **WLAN** option enabled.
Bluetooth	Enables or disables the internal Bluetooth device. By default, the **Bluetooth** option enabled.
Enable UEFI Network Stack	Enable or disable UEFI Network Stack and controls the on-board LAN Controller. By default, the **Auto Enabled** option is enabled.
HTTP(s) Boot Feature	
HTTP(s) Boot	Enable or disable the HTTP(s) Boot feature. By default, the **HTTP(s) Boot** option is enabled.
HTTP(s) Boot Modes	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. By default, the **Auto Mode** option is enabled.

Table 34. BIOS Setup options—Power menu

Power	Description
USB PowerShare	
Enable USB PowerShare	Enable or disable the USB PowerShare. By default, the **Enable USB PowerShare** option is disabled
Thermal Management	Enables cooling fan and processor heat management to adjust the computer performance, noise, and temperature. By default, the **Optimized** option is enabled.

Table 34. BIOS Setup options—Power menu (continued)

Power	Description
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. By default, the option is enabled.
AC Behavior	
AC Recovery	Enables the system to determine what happens when AC power is restored after unexpected loss of AC power. By default, the **Power Off** option is enabled.
Block Sleep	Enables to block entering sleep (S3) mode in the operating system. By default, the **Block Sleep** option is disabled.
Deep Sleep Control	Enable or disable the Deep Sleep mode support. By default, this option is **Disabled**.
Fan Control Override	Enable or disable the Fan Control Override. This allows a software or hardware to override the settings for controlling a computer's fan speed. By default, the **Fan Control Override** option is disabled.

Table 35. BIOS Setup options—Security menu

Security	Description
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 **TPM 2.0 Security On** option is enabled. For additional security, Dell Technologies recommends keeping **Trusted Platform Module (TPM)** enabled to allow these security technologies to fully function.
Attestation Enable	Enables to control whether the Trusted Platform Module (TPM) Endorsement Hierarchy is available to the operating system. 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. By default, the **Key Storage Enable** option is enabled.
Clear	Enables to clear the TPM owner information and returns the TPM to the default state. By default, the **Clear** option is disabled.
PPI ByPass for Clear Commands	Controls the TPM Physical Presence Interface (PPI). By default, the **PPI ByPass for Clear Commands** option is disabled.
Intel Total Memory Encryption	
Multi-Key Total Memory Encryption (Up to 16days)	Protects the memory from physical attacks including freeze spray.

Table 35. BIOS Setup options—Security menu (continued)

Security	Description
	By default, the **Multi-Key Total Memory Encryption (Up to 16days)** option is disabled.
Chassis intrusion	Controls the chassis intrusion feature. By default, the option is **Disabled**.
Data Wipe on Next Boot	
Start Data Wipe	Enable or disable the data wipe on next boot. By default, the option is disabled.
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 **Enable 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.
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. By default, the **Always Except Internal HDD** option is enabled.
Authenticated BIOS Interface	
Enable Authenticated BIOS Interface	Enable or disable the Authenticated BIOS Interface option. By default, the option is disabled.
Legacy Manageability Interface Access	Allows the platform administrator to control access through the Legacy Manageability Interface when Authenticated BIOS Interface (ABI) is enabled and provisioned. By default, the option is **Enabled**.
Firmware Device Tamper Detection	Allows you to control the firmware device tamper detection feature. This feature notifies the user when the firmware device is tampered. When enabled, a screen warning messages are displayed on the computer and a tamper detection event is logged in the BIOS Events log. The computer fails to reboot until the event is cleared. By default, the **Silent** option is enabled.
Clear Firmware Device Tamper Detection	

Table 36. BIOS Setup options—Passwords menu

Passwords	
Admin Password	The Administrator Password prevents unauthorized access to the BIOS Setup options. Once the administrator password is set, the BIOS setup options can only be modified after providing the correct password. The following rules and dependencies apply to the Administrator Password - • The administrator password cannot be set if computer and/or internal storage passwords are previously set. • The administrator password can be used in place of the computer and/or internal storage passwords.

Table 36. BIOS Setup options—Passwords menu (continued)

Passwords	
	• When set, the administrator password must be provided during a firmware update. • Clearing the administrator password also clears the computer password (if set). Dell Technologies recommends using an administrator password to prevent unauthorized changes to BIOS setup options.
System Password	The System Password prevents the computer from booting to an operating system without entering the correct password. The following rules and dependencies apply when the System Password is used - • The computer shuts down when idle for approximately 10 minutes at the computer password prompt. • The computer shuts down after three incorrect attempts to enter the computer password. • The computer shuts down when the **Esc** key is pressed at the System Password prompt. • The computer password is not prompted when the computer resumes from standby mode. Dell Technologies recommends using the computer password in situations where it is likely that a computer may be lost or stolen.
M.2 PCIe SSD-0/SSD-1	Set, change, or delete the M.2 PCIe SSD-0 and/or SSD-1 password.
Password Configuration	
Upper Case Letter	Reinforces password must have at least one upper case letter. By default, the option is disabled.
Lower Case Letter	Reinforces password must have at least one lower case letter. By default, the option is disabled.
Digit	Reinforces password must have at least one digit. By default, the option is disabled.
Special Character	Reinforces password must have at least one special character. By default, the option is disabled.
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. By default, the **Disabled** option is enabled.
Password Changes	
Allow Non-Admin Password Changes	Enable or disable to change computer and hard drive password without the need for admin password. 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. By default, the option is disabled.
Master Password Lockout	

Table 36. BIOS Setup options—Passwords menu (continued)

Passwords	
Enable Master Password Lockout	When enabled, this will disable the master password support. 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. By default, the option **Disabled** is enabled.

Table 37. BIOS Setup options—Update, Recovery menu

Update, Recovery	
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. 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. 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. By default, the option is enabled.
BIOSConnect	Enables or disables cloud Service operating system 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 operating system does not boot or is not installed. By default, the **BIOSConnect** option is enabled.
Dell Auto OS Recovery Threshold	Controls the automatic boot flow for SupportAssist System Resolution Console and for Dell OS Recovery Tool. By default, the threshold value is set to **2**.

Table 38. 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. By default, the **Disabled** option is enabled.
Auto on Time	Enable to set 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. By default, the option is disabled.
Intel AMT Capability	
Enable Intel AMT Capability	Enable or disable the Intel AMT capabilty. By default, the Restrict Preboot Access option is enabled.

Table 38. System setup options—System Management menu (continued)

System Management	
SERR Messages	Enable or disable SERR messages. By default, the option is enabled.
First Power On Date	
Set Ownership Date	Allows to set the Ownership date. By default, the option is disabled.
Diagnostics	
OS Agent Requests	Enable or disable the Dell OS Agent(s) capability of scheduling onboard diagnostics on a subsequent boot which helps assist in the prevention and resolution of hardware related issues. By default, this option is enabled.
Power-on-Self-Test Automatic Recovery	Enable or disable the Power-on-Self-Test automatic recovery option. By default, the option is enabled.

Table 39. BIOS Setup options—Keyboard menu

Keyboard	
Numlock LED	
Enable Numlock LED	Enable or disable Numlock LED. 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. By default, the option is **Enabled**.

Table 40. BIOS Setup options—Pre-boot Behavior menu

Preboot Behavior	
Adapter Warnings	
Enable Adapter Warnings	Enable or disable the adapter warning messages. By default, the option is enabled.
Warnings and Errors	Enables or disables the action to be taken when a warning or error is encountered. By default, the **Prompt on Warnings and Errors** option is selected. **NOTE:** Errors deemed critical to the operation of the computer hardware stop the functioning of the computer.
Extend BIOS POST Time	Set the BIOS POST time. By default, the **0 seconds** option is enabled.

Table 41. BIOS Setup options—Performance menu

Performance	
Intel SpeedStep	
Enable Intel SpeedStep Technology	Enables the computer to dynamically adjust processor voltage and core frequency, decreasing average power consumption and heat production.

Table 41. BIOS Setup options—Performance menu (continued)

Performance	
	By default, the option is enabled.
PCIe Resizable Base Address Register (BAR)	Enable or disable the PCIe resizable base address register support. By default, the option is disabled.

Table 42. BIOS Setup options—System Logs menu

System Logs	
BIOS Event Log	
Clear BIOS Event Log	Allows you to select option to keep or clear BIOS events logs. By default, the **Keep Log** option is selected.
Power Event Log	
Clear Power Event Log	Allows you to select option to keep or clear power events logs. By default, the **Keep Log** option is selected.

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.

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 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 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, 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 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.

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 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 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 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.

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
- For laptops, ensure that the battery is adequately charged before flashing 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 and 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 43. 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 **Passwords** and press Enter.
   The **Passwords** 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.
   - 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 press Enter.
4. Press **Yes** 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 **Passwords** 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.
4. Select **Setup Password**. Update or delete the existing setup password, and press Enter.

   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 CMOS settings

About this task

CAUTION: Clearing CMOS settings reset the BIOS settings on your computer.

Steps

1. Remove the side cover.
2. Remove the riser-card module.
3. Remove the coin-cell battery.
4. Wait for one minute.
5. Replace the coin-cell battery.
6. Replace the riser-card module.
7. Replace the side cover.

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.

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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 Dell Pro Max Micro FCM2250.

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 44. 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
1,7	Non-RPMC Flash on Boot Guard fused system
1,8	Chipset “Catastrophic Error” signal has tripped
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
2,7	LCD failure SBIOS message
2,8	Display power-rail failure on the system board
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
3,7	Timeout waiting on ME to reply to HECI message
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 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.

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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 45. 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 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. 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. 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

To contact Dell 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 in your purchase invoice, packing slip, bill, or Dell product catalog.