Precision 7875 Tower

Owner's Manual

Regulatory Model: D04T
Regulatory Type: D04T001
December 2023
Rev. A00

DELL Technologies

Notes, cautions, and warnings

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

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

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

Contents

1

Views of Precision 7875 Tower

Front

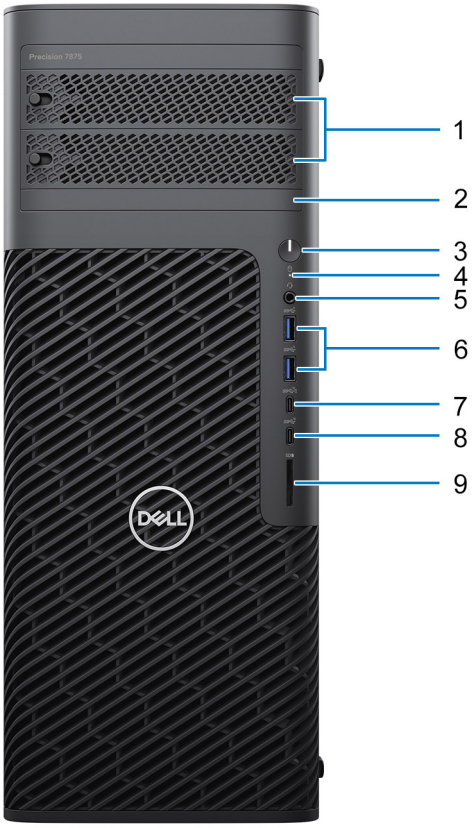

Figure 1. Image: Front view

1. Externally facing flex bays - SATA/M.2 (optional)
2. Slim optical-drive (optional)
3. Power button
4. Hard-drive activity light
5. Headset (headphone and microphone combo) port
6. Two USB 3.2 Gen 1 ports
7. USB 3.2 Gen 2 Type-C port with PowerShare
8. USB 3.2 Gen 2 Type-C port
9. SD-card slot

Back

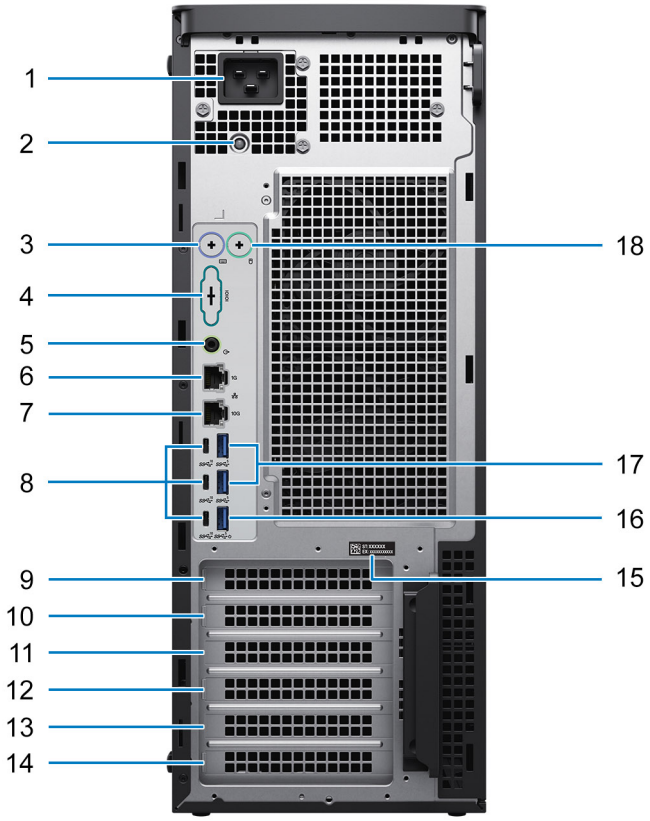

Figure 2. Image: Back view

1. Power port

   NOTE: Based on system configuration, the port can be either:

   C20 inlet (for 1350 W PSU) or C14 inlet (for 1000 W PSU).

2. Power-supply diagnostics light
3. PS2 port (optional) - keyboard
4. Serial port (optional)
5. Line-out audio port
6. RJ45 Ethernet port (1 Gbps)
7. RJ45 Ethernet port (10 Gbps)
8. Three USB 3.2 Gen 2 Type-C ports
9. Expansion slot 1 (full-height Gen5 PCIe x8 slot), open-ended
10. Expansion slot 2 (full-height Gen5 PCIe x16 slot)
11. Expansion slot 3 (full-height Gen4 PCIe x8 slot - x4 electrical), open-ended
12. Expansion slot 4 (full-height Gen4 PCIe x8 slot), open-ended
13. Expansion slot 5 (full-height Gen4 PCIe x16 slot)
14. Expansion slot 6 (full-height Gen4 PCIe x8 slot), open-ended
15. Service tag location
16. USB 3.2 Gen 1 port with Smart Power On
17. Two USB 3.2 Gen 1 ports
18. PS2 port (optional) - mouse

2

Set up your computer

Steps

1. Connect the keyboard and mouse.

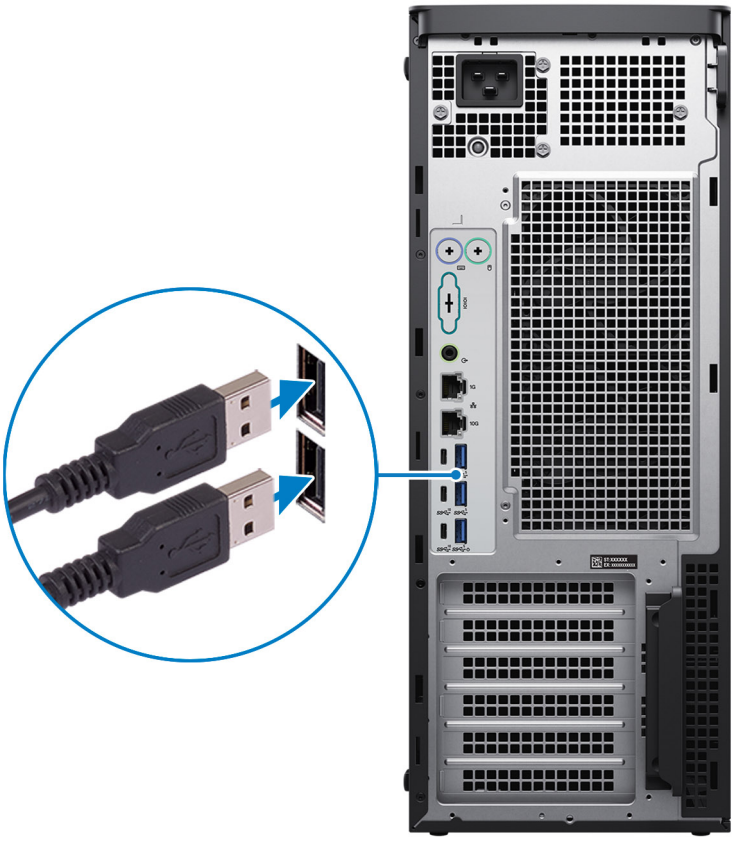

Figure 3. Connect the keyboard and mouse

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

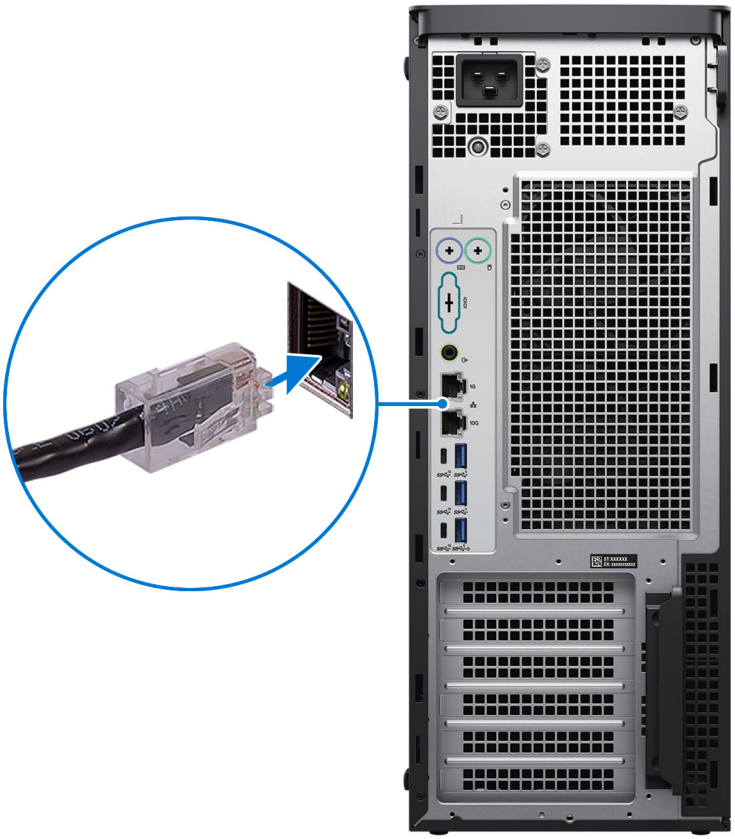

Figure 4. Connect to the network

3. Connect the display.

Figure 5. Connect the display

4. Connect the power cable.

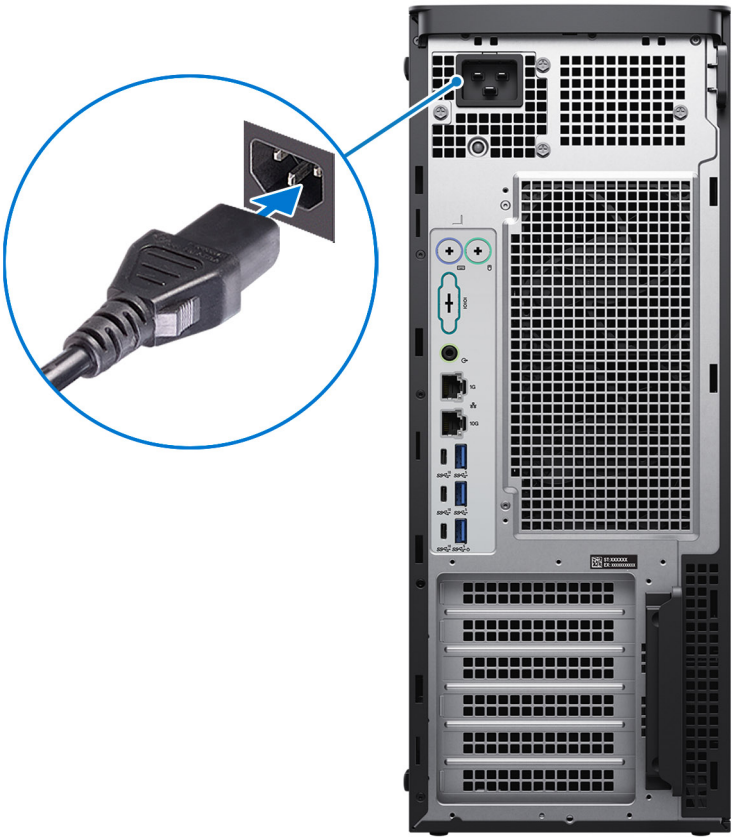

Figure 6. Connect the power cable

5. Press the power button.

Figure 7. Press the power button

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 www.dell.com/support.

   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
	MyDell MyDell is a software application that offers you a single streamlined engagement platform including account access, device information, and hardware settings. This software delivers intelligent features that automatically fine-tune your computer for the best possible audio, power, and

Table 1. Locate Dell apps (continued)

Resources	Description
	performance. Get the most out of your Dell device with intelligent, personalized technology from MyDell. Following are the key features of MyDell: • Application • Audio • Power • Color and Display • Presence detection For more information about how to use MyDell, see product guides at www.dell.com/support.
	**SupportAssist** SupportAssist proactively and predictively identifies hardware and software issues on your computer and automates the engagement process with Dell Technical support. It addresses performance and stabilization issues, prevents security threats, monitors, and detects hardware failures. For more information, see *SupportAssist for Home PCs User's Guide* at www.dell.com/support/home/product-support/product/dell-supportassist-pcs-tablets/docs. **NOTE:** In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.
	**Dell Update** Updates your computer with critical fixes and latest device drivers as they become available. For more information about using Dell Update, see the product guides and third-party license documents at www.dell.com/support.
	**Dell Digital Delivery** Download software applications, which are purchased but not preinstalled on your computer. For more information about using Dell Digital Delivery, search in the Knowledge Base Resource at www.dell.com/support.

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Specifications of Precision 7875 Tower

Dimensions and weight

The following table lists the height, width, depth, and weight of your Precision 7875 Tower.

Table 2. Dimensions and weight

Description	Values
Height	• 17.42 in. (442.70 mm) • 17.58 in. (446.60 mm) with rubber foot protruding
Width	• 6.79 in. (172.60 mm) • 6.94 in. (176.50 mm) with rubber foot protruding
Depth	• 18.30 in. (465.00 mm) • 19.19 in. (487.50 mm) with lock structure protruding
Weight **NOTE:** The weight of your computer depends on the configuration ordered and manufacturing variability.	• Minimum - 18.34 kg (40.39 lb) • Maximum - 25.57 kg (56.34 lb)

Processor

The following table lists the details of the processors supported by your Precision 7875 Tower.

Table 3. Processor

Description	Option one	Option two	Option three	Option four	Option five	Option six
Processor type	AMD Ryzen Threadripper Pro 7995WX	AMD Ryzen Threadripper Pro 7985WX	AMD Ryzen Threadripper Pro 7975WX	AMD Ryzen Threadripper Pro 7965WX	AMD Ryzen Threadripper Pro 7955WX	AMD Ryzen Threadripper Pro 7945WX
Processor wattage	350 W	350 W	350 W	350 W	350 W	350 W
Processor core count	96 cores	64 cores	32 cores	24 cores	16 cores	12 cores
Processor thread count	192	128	64	48	32	24
Processor speed	2.50 GHz to 5.10 GHz	3.20 GHz to 5.10 GHz	4.0 GHz to 5.30 GHz	4.20 GHz to 5.30 GHz	4.50 GHz to 5.30 GHz	4.70 GHz to 5.30 GHz
Processor cache	491 MB total cache	327 MB total cache	163 MB total cache	155 MB total cache	81 MB total cache	77 MB total cache

Chipset

The following table lists the details of the chipset supported by your Precision 7875 Tower.

Table 4. Chipset

Description	Values
Chipset	AMD PROM21
Processor	PRO 695
DRAM bus width	64-bit
Flash EPROM	32 MB + 4 MB
PCIe bus	Up to Gen 5.0
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 Precision 7875 Tower supports the following operating systems:

- Windows 10 22H2
- Windows 11 SV1
- Windows 11 SV2
- Ubuntu 22.04 LTS, 64-bit
- Red Hat Enterprise Linux 9.3

Memory

The following table lists the memory specifications of your Precision 7875 Tower.

Table 5. Memory specifications

Description	Values
Memory slots	Eight DIMM slots
Memory type	DDR5 RDIMM
Memory speed	• 4800 MT/s, ECC • 5200 MT/s, ECC (Supported with 5600 module)
Maximum memory configuration	2 TB
Minimum memory configuration	16 GB

Table 5. Memory specifications (continued)

Description	Values
Memory size per slot	16 GB, 32 GB, 64 GB, 128 GB, 256 GB
Memory configurations supported	• 16 GB: 1 x 16 GB, DDR4, 4800 MT/s, ECC • 32 GB: 2 x 16 GB, DDR5, 4800 MT/s, ECC • 64 GB: 4 x 16 GB, DDR5, 4800 MT/s, ECC • 64 GB: 2 x 32 GB, DDR5, 4800 MT/s, ECC • 128 GB: 8 x 16 GB, DDR5, 4800 MT/s, ECC • 128 GB: 4 x 32 GB, DDR5, 4800 MT/s, ECC • 256 GB: 8 x 32 GB, DDR5, 4800 MT/s, ECC • 256 GB: 4 x 64 GB, DDR5, 4800 MT/s, ECC • 512 GB: 8 x 64 GB, DDR5, 4800 MT/s, ECC • 512 GB: 4 x 128 GB, DDR5, 4800 MT/s, ECC • 768 GB: 6 x 128 GB, DDR5, 4800 MT/s, ECC • 1024 GB: 8 x 128 GB, DDR5, 4800 MT/s, ECC • 1024 GB: 4 x 256 GB, DDR5, 4800 MT/s, ECC • 1536 GB: 6 x 256 GB, DDR5, 4800 MT/s, ECC • 2048 GB: 8 x 256 GB, DDR5, 4800 MT/s, ECC

Memory matrix

The following table lists the memory configurations supported on your Precision 7875 Tower.

Table 6. Memory matrix

Configuration	Slot							
	DIMM1	DIMM2	DIMM3	DIMM4	DIMM5	DIMM6	DIMM7	DIMM8
16 GB DDR4	16 GB							
32 GB DDR4	16 GB	16 GB						
64 GB DDR4	16 GB	16 GB	16 GB	16 GB				
64 GB DDR4	32 GB	32 GB						
128 GB DDR4	16 GB	16 GB	16 GB	16 GB	16 GB	16 GB	16 GB	16 GB
128 GB DDR4	32 GB	32 GB	32 GB	32 GB				
256 GB DDR4	32 GB	32 GB	32 GB	32 GB	32 GB	32 GB	32 GB	32 GB
256 GB DDR4	64 GB	64 GB	64 GB	64 GB				
512 GB DDR4	64 GB	64 GB	64 GB	64 GB	64 GB	64 GB	64 GB	64 GB
512 GB DDR4	128 GB	128 GB	128 GB	128 GB				
768 GB DDR4	128 GB	128 GB	128 GB	128 GB	128 GB	128 GB		

Table 6. Memory matrix (continued)

Configuration	Slot							
1024 GB DDR4	128 GB	128 GB	128 GB	128 GB	128 GB	128 GB	128 GB	128 GB
1024 GB DDR4	256 GB	256 GB	256 GB	256 GB				
1536 GB DDR4	256 GB	256 GB	256 GB	256 GB	256 GB	256 GB		
2048 GB DDR4	256 GB	256 GB	256 GB	256 GB	256 GB	256 GB	256 GB	256 GB

External ports

The following table lists the external ports of your Precision 7875 Tower.

Table 7. External ports

Description	Values
Network port	• One RJ45 Ethernet port, 1 G (rear) • One RJ45 Ethernet port, 10 G (rear)
USB ports	Front: • Two USB 3.2 Gen 1 ports • One USB 3.2 Gen 2 Type-C port with PowerShare • One USB 3.2 Gen 2 Type-C port Rear: • Three USB 3.2 Gen 2 Type-C ports • Two USB 3.2 Gen 1 ports • One USB 3.2 Gen 1 port with Smart Power On
Audio port	• One headset (headphone and microphone combo) port (front) • One line-out audio port (rear)
Video port	Using Discrete GPU
Media-card reader	One SD-card 6.0 slot (front)
Power-adapter port	Not supported
Security-cable slot	N/A

Internal slots

The following table lists the internal slots of your Precision 7875 Tower.

Table 8. Internal slots

Description	Values
Expansion slots	• One full-height Gen5 PCIe x16 slot • One full-height Gen4 PCIe x16 slot • Two full-height Gen4 PCIe x8 slots, open-ended • One full-height Gen5 PCIe x8 slot, open-ended • One full-height Gen4 PCIe x8 slot (x4 electrical), open-ended
SATA/SAS	• Two SATA 3.0 slots for 3.5-inch/2.5-inch hard drives • Two SATA 3.0 slots for externally facing storage flex bays • One SATA 3.0 slot for optical drive
M.2	• Two M.2 2230/2280 slots for PCIe NVMe Gen4 solid state drives • Two M.2 2230/2280 slots for externally facing PCIe NVMe Gen4 storage flex bays **NOTE:** To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at www.dell.com/support.

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Precision 7875 Tower.

Table 9. Ethernet specifications

Description	Values
Model number	• Realtek RTL8111-EPP • Marvell AQC113-B1-C
Transfer rate	• Realtek RTL8111-EPP, 1G • Marvell AQC113-B1-C, 10G

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module that is supported on your Precision 7875 Tower.

Table 10. Wireless module specifications

Description	Values
Model number	Qualcomm WCN6856-DBS
Transfer rate	3571 Mbps
Frequency bands supported	2.4 GHz/5 GHz/6 GHz **NOTE:** The 6 GHz frequency is supported on computers installed with Windows 11 operating system only.

Table 10. Wireless module specifications (continued)

Description	Values
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)
Encryption	• 64-bit and 128-bit WEP • AES-CCMP • TKIP
Bluetooth wireless card	5.3 wireless card
	NOTE: The version of the Bluetooth wireless card may vary depending on the operating system that is installed on your computer.

Audio

The following table lists the audio specifications of your Precision 7875 Tower.

Table 11. Audio specifications

Description	Values
Audio type	Realtek Audio Controller ALC3246
Audio controller	24-bit Digital-to-Analog (DAC) and Analog-to-Digital (ADC)
Internal audio interface	HDA
External audio interface	• One Universal audio port (front) • One line-out audio port (rear)

Storage

This section lists the storage options on your Precision 7875 Tower.

Your Precision 7875 Tower supports one of the following storage configurations: Internal:

- Two 2.5-inch hard drives/two 3.5-inch hard drives
- Two M.2 solid state drives

Externally facing storage flexbays:

- Two 2.5-inch hard drives/two 3.5-inch hard drives
- Two M.2 solid state drives

Table 12. Storage specifications

Storage type	Interface type	Capacity
3.5-inch, 7200 RPM, HDD	SATA 3.0, up to 6 Gbps	Up to 12 TB
2.5-inch, 10000 RPM, SAS Enterprise Drive, HDD	• SAS • 9660 16i, up to 24 Gbps • 9540 8i, up to 12 Gbps	Up to 2.4 TB
2.5-inch, 15000 RPM, SAS Enterprise Drive, HDD	SAS	600 GB

Table 12. Storage specifications (continued)

Storage type	Interface type	Capacity
M.2 2280 solid state drive, Class 40	PCIe Gen4 x4 NVMe	Up to 4 TB
M.2 2280 self-encrypting drive, Class 40	PCIe Gen4 x4 NVMe	Up to 1 TB
M.2 2230 solid state drive, Class 35	PCIe Gen4 x4 NVMe	256 GB
M.2 2230 self-encrypting drive, Class 35	PCIe Gen4 x4 NVMe	256 GB
8x DVD-ROM, slimline	SATA 1, up to 1.5 Gbps	NA
8x DVD±RW, slimline	SATA 1, up to 1.5 Gbps	N/A
16x Half Height DVD ± RW	SATA 1, up to 1.5 Gbps	NA

Storage Matrix

Storage configuration number	C1	C2	C3	C4	C5
Chassis type (L6/L5.5)	Standard 2x SATA 	Blank/open (empty) flex bay 			
Flex bay mechanical assembly (L10)	SAS/SATA + SAS/SATA (already installed) 	SATA + half-height optical drive 	M.2 + M.2 	M.2 + SATA 	M.2 + half-height optical drive 
Boot drive option	M.2 SSD	M.2 SSD	M.2 SSD	M.2 SSD	M.2 SSD
Storage controller option	AMD integrated MegaRAID 9540 MegaRAID 9660	AMD integrated	AMD integrated	AMD integrated	AMD integrated
Upper flex bay option	2.5-inch/3.5-inch SAS/SATA	2.5-inch/3.5-inch SATA	M.2 SSD boot	M.2 SSD boot	M.2 SSD boot
Lower flex bay option	2.5-inch/3.5-inch SAS/SATA	None (slot occupied by hard drive - optical drive)	M.2 SSD	2.5-inch/3.5-inch SATA	None (slot occupied by hard drive - optical drive)
First internal SATA option	2.5-inch/3.5-inch SAS/SATA	2.5-inch/3.5-inch SATA	2.5-inch/3.5-inch SATA	2.5-inch/3.5-inch SATA	2.5-inch/3.5-inch SATA
Second internal SATA option	2.5-inch/3.5-inch SAS/SATA	2.5-inch/3.5-inch SATA	2.5-inch/3.5-inch SATA	2.5-inch/3.5-inch SATA	2.5-inch/3.5-inch SATA
First internal M.2 option	M.2 SSD boot	M.2 SSD boot	M.2 SSD	M.2 SSD	M.2 SSD
Second internal M.2 option	M.2 SSD	M.2 SSD	M.2 SSD	M.2 SSD	M.2 SSD
Optical drive option	Slimline	Half-height - optical drive required	Slimline	Slimline	Half-height - optical drive required

Figure 8. Storage matrix configurations

Redundant Array of Independent Disks (RAID)

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

RAID 0 (Striped, Performance) volumes benefit from higher performance when drives are matched because the data is split across multiple drives: any IO operations with block sizes larger than the stripe size will split the I/O and become constrained by the slowest of the drives. For RAID 0 I/O operations where block sizes are smaller than the stripe size, whichever drive the I/O operation targets will determine 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, results in the I/O operations completing only as fast as the slowest drive. While this does not suffer 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 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.

RAID 5 provides better performance by using data striping and protection through parity. The disadvantage of RAID 5 is that rebuilding a large RAID 5 volume requires a longer period of time. The following are the key features of RAID 5:

- Requires at least three drives.
- Data is available even if one of the drives present in the volume fails. The failed drive must be replaced, and the volume must be rebuilt for the data to be accessible.
- The total capacity is N-1, where N is the total capacity of the drives in the array. For example, if you use three 1 TB drives in a RAID 5 array, the total volume size is 2 TB.

RAID 10 is a stripe of mirrors that combines the features of RAID 0 and RAID 1. As the blocks are striped and mirrored, the performance and redundancy are higher. The disadvantage of RAID 10 is that it is more expensive than other RAID levels, with a higher number of drives required. The following are the key features of RAID 10:

- Requires a minimum of four drives. Only an even number of drives can be used, and an odd number of drives are not possible.
- The total volume capacity is half the sum of individual drive capacity. For example, when you use four drives of 1 TB, you get a RAID 10 volume of 2 TB.

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 very different performance characteristics for certain types of I/O operations. Thus, matching by model ensures that the RAID volume is comprised of a homogeneous array of drives that will deliver all the benefits of a RAID volume without incurring the additional penalties when one or more drives in the volume are lower performing.

Precision 7875 Tower supports RAID with more than one hard drive configuration.

Media-card reader

The following table lists the media cards supported by your Precision 7875 Tower.

Table 13. Media-card reader specifications

Description	Values
Media-card type	One SD-card 6.0 slot
Media-cards supported	• Secure Digital (SD) • Secure Digital High Capacity (SDHC) • Secure Digital Extended Capacity (SDXC)
NOTE: The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

Power ratings

The following table lists the power rating specifications of Precision 7875 Tower.

Table 14. Power ratings

Description	Option one	Option two
Type	1350 W Platinum internal power supply (C20 inlet)	1000 W Platinum internal power supply (C14 inlet)

Table 14. Power ratings (continued)

Description	Option one	Option two
Input voltage	90 VAC–264 VAC	90 VAC–264 VAC
Input frequency	47 Hz–63 Hz	47 Hz–63 Hz
Input current (maximum)	16 A	13.60 A
Output current (continuous)	Operating: • 12 VA/42 A • 12 VB/36 A • 12 VC/72 A Standby mode: • 12 VA/1.5 A • 12 VB/5 A	Operating: • 12 VA/36 A • 12 VB/27 A • 12 VC/36 A Standby mode: • 12 VA/1.5 A • 12 VB/5 A
Rated output voltage	• +12 VA • +12 VB • +12 VC	• +12 VA • +12 VB • +12 VC
Temperature range		
Operating	5°C (41°F) to 45°C (113°F)	5°C (41°F) to 45°C (113°F)
Storage	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)

Power supply connector

The following table lists the Power supply connector specifications of your Precision 7875 Tower.

Table 15. Power supply connector

Description	Values
1350 W (Platinum)	• C20 inlet • Three 4-pin connectors for the processor • One 12-pin connector for the system board • Four 8-pin (6 + 2) auxiliary connectors for expansion cards
1000 W (Platinum)	• C14 inlet • Two 4-pin connectors for the processor • One 10-pin connector for the system board • Two 8-pin (6 + 2) auxiliary connectors for expansion cards

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Precision 7875 Tower.

Table 16. GPU—Discrete

Controller	Memory size	Memory type
NVIDIA RTX 6000 Ada Generation	48 GB	GDDR6 with ECC
NVIDIA RTX A6000	48 GB	GDDR6

Table 16. GPU—Discrete (continued)

Controller	Memory size	Memory type
NVIDIA RTX A4000	16 GB	GDDR6
NVIDIA RTX A2000	12 GB	GDDR6
NVIDIA T1000	8 GB	GDDR6
NVIDIA T400	4 GB	GDDR6
NVIDIA GeForce RTX 4090	24 GB	GDDR6X
AMD Radeon Pro W7600	8 GB	GDDR6
AMD Radeon Pro W7500	8 GB	GDDR6
AMD Radeon Pro W6400	4 GB	GDDR6
AMD Radeon Pro W6300	2 GB	GDDR6

Video port resolution

The following table lists the video port resolution for your Precision 7875 Tower.

Table 17. Video port resolution

Graphics card	Video ports	Maximum supported resolution
NVIDIA RTX 6000 Ada Generation	Four DisplayPort ports	7680 x 4320 @ 24 bpp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a ports and DSC
NVIDIA RTX A6000	Four DisplayPort 1.2 ports	7680 x 4320 @ 24 bpp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a ports and DSC
NVIDIA RTX A4000	Four DisplayPort 1.2 ports	7680 x 4320 @ 24 bpp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a ports and DSC
NVIDIA RTX A2000	Four mini-DisplayPort 1.2 ports	7680 x 4320 @ 24 bpp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a ports and DSC
NVIDIA T1000	Four mini-DisplayPort 1.2 ports	7680 x 4320 @ 24 bpp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a ports and DSC
NVIDIA T400	Three mini-DisplayPort 1.2 ports	7680 x 4320 @ 24 bpp at 120 Hz **NOTE:** Requires two DisplayPort 1.4a ports and DSC
NVIDIA GeForce RTX 4090	• Three DisplayPort 1.4 ports • One HDMI 2.1 port	7680 x 4320 @ 60 Hz **NOTE:** Requires two DP links with no compression or single DP link with DSC compression.

Table 17. Video port resolution (continued)

Graphics card	Video ports	Maximum supported resolution
AMD Radeon Pro W7600	Two DisplayPort 1.4 ports	7680 x 4320 @ 60 Hz
AMD Radeon Pro W7500	Two DisplayPort 1.4 ports	7680 x 4320 @ 60 Hz
AMD Radeon Pro W6400	Two DisplayPort 1.4 ports	7680 x 4320 @ 60 Hz
AMD Radeon Pro W6300	Two DisplayPort 1.4 ports	7680 x 4320 @ 60 Hz

Hardware security

The following table lists the hardware security of your Precision 7875 Tower.

Table 18. Hardware security

Hardware security
TPM 2.0 Discrete Hardware
TPM localization
TPM OS dependency
Factory Test Image with third-party solutions. (McAffe/Symantec)

Environmental

The following table lists the environmental specifications of your Precision 7875 Tower.

Table 19. Environmental

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

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

Regulatory compliance

The following table lists the regulatory compliance of your Precision 7875 Tower.

Table 20. Regulatory compliance

Regulatory compliance
EPEAT registered configurations are available
ENERGY STAR-compliant configurations available

Table 20. Regulatory compliance (continued)

Regulatory compliance
TCO 9.0 certified configurations available
US CEC MEPS-compliant configurations available
WEEE
Japan Energy Law
EU RoHS
China RoHS

Operating and storage environment

This table lists the operating and storage specifications of your Precision 7875 Tower.

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

Table 21. 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)	20% to 80% (non-condensing, Max dew point temperature = 26°C)	5% to 95% (non-condensing, Max dew point temperature = 33°C)
Vibration (maximum)*	0.52 GRMS random at 5 Hz to 350 Hz	2.00 GRMS random at 5 Hz to 350 Hz
Shock (maximum)	Bottom half-sine pulse with a change in velocity of 40G, 2.5ms G†	105G half-sine pulse with a change in velocity of 105G, 2.5 ms G†
Altitude range	-15.2 m to 3048 m (-49.87 ft to 10000 ft)	-15.2 m to 10668 m (-49.87 ft to 35000 ft)
CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.		

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

† Measured using a 2 ms half-sine pulse.

Dell Support policy

For information on Dell support policy, search in the Knowledge Base Resource at www.dell.com/support.

Dell Optimizer

This section details the Dell Optimizer specifications of your Precision 7875 Tower.

Dell Optimizer is a software application that intelligently optimizes the performance of your system by using artificial intelligence and machine learning. Dell Optimizer dynamically configures your system settings to optimize the performance of your applications. It improves the productivity, performance, and user experience through system usage analysis and learning.

On Precision 7875 Tower with Dell Optimizer, the following features are supported:

- Improves user experience through computer usage analysis and learning
- Faster application launch and seamless application transition
- Intelligent battery run-time extension

- Optimized Audio for best meeting experience
- Locks computer when walks away for enhanced security
- Intelligently shows alerts
- Updates automatically to minimize disruption

For more information about configuring and using these features, search for the Dell Optimizer User Guide at www.dell.com/support.

Dell low blue light display

WARNING: Prolonged exposure to blue light from the display may lead to long-term effects such as eye strain, eye fatigue, or damage to the eyes.

Blue light is a color in the light spectrum which has a short wavelength and high energy. Chronic exposure to blue light, particularly from digital sources, may disrupt sleep patterns and cause long-term effects such as eye strain, eye fatigue, or damage to the eyes.

The display on this computer is designed to minimize blue light and complies with TÜV Rheinland's requirement for low blue light displays.

Low blue light mode is enabled at the factory, so no further configuration is necessary.

To reduce the risk of eye strain, it is also recommended that you:

- Position the display at a comfortable viewing distance between 20 and 28 inches (50 and 70 cm) from your eyes.
- Blink frequently to moisten your eyes, wet your eyes with water, or apply suitable eye drops.
- Look away from your display, and gaze at a distant object at 20 ft (609.60 cm) away for at least 20 seconds during each break.
- Take an extended break for 20 minutes every two hours.

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 included 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 the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

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.

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

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

CAUTION: You should only perform troubleshooting and repairs as authorized or directed by the Dell technical assistance team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. See the safety instructions that is shipped with the product or at www.dell.com/regulatory_compliance.

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: 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 ports and the connectors are correctly oriented and aligned.

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.

NOTE: The color of your computer and certain components may appear differently than shown in this document.

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. Disconnect your computer and all attached devices from their electrical outlets.
4. Disconnect all attached network devices and peripherals, such as keyboard, mouse, and monitor from your computer.

CAUTION: To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.

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

Safety precautions

The safety precautions chapter details the primary steps to be taken before performing any disassembly instructions.

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

- Turn off the system and all attached peripherals.
- Disconnect the system and all attached peripherals from AC power.
- Disconnect all network cables, telephone, and telecommunications lines from the system.
- Use an ESD field service kit when working inside any to avoid electrostatic discharge (ESD) damage.
- After removing any system component, carefully place the removed component on an anti-static mat.
- Wear shoes with non-conductive rubber soles to reduce the chance of getting electrocuted.

Standby power

Dell products with standby power must be unplugged before you open the case. Systems that incorporate standby power are essentially powered while turned off. The internal power enables the system to be remotely turned on (wake on LAN) and suspended into a sleep mode and has other advanced power management features.

Unplugging, pressing, and holding the power button for 15 seconds should discharge 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 through the use of 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 non-metal surface. The wrist strap should be secure and in full contact with your skin, and ensure that you remove all jewelry such as watches, bracelets, or rings prior to bonding 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 DIMMs, and system boards. Very slight charges 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.

Due to the increased density of semiconductors used in recent Dell products, the sensitivity to static damage is now higher than in previous Dell products. For this reason, some previously approved methods of handling parts are no longer applicable.

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 DIMM that has received a static shock and immediately generates a "No POST/No Video" symptom with a beep code 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 DIMM receives a static shock, but the tracing is merely weakened and does not immediately produce outward symptoms 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, etc.

The more difficult type of damage to recognize and troubleshoot is the intermittent (also called latent or "walking wounded") failure.

Perform the following steps to prevent ESD damage:

- Use a wired ESD wrist strap that is properly grounded. The use of wireless anti-static straps is no longer allowed; they 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, ensure that you discharge static electricity from your body.
- 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.

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 mat and to any bare metal on the system being worked on. Once deployed properly, service parts can be removed from the ESD bag and placed directly on the mat. ESD-sensitive items are safe in your hand, on the ESD mat, in the system, or inside a 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 ESD mat is not required, or connected 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 ESD mat, and the hardware is known as bonding. Use only Field Service kits with a wrist strap, mat, and bonding wire. Never use wireless wrist straps. Always be aware 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 of an ESD strap are prone to damage over time. When using an unmonitored kit, it is a best practice to regularly test the strap prior to each service call, and at a minimum, test once per week. A wrist strap tester is the best method for doing this test. If you do not have your own wrist strap tester, check with your regional office to find out if they have one. To perform the test, plug the wrist-strap's bonding-wire 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.
- **Insulator Elements** – It is critical to keep ESD sensitive devices, such as plastic heat sink casings, away from internal parts that are insulators and often highly charged.
- **Working Environment** – Before deploying the ESD Field Service kit, assess the situation at the customer location. For example, deploying the kit for a server environment is different than for a desktop or portable environment. Servers are typically installed in a rack within a data center; desktops or portables 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 system 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 part 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 ESD mat, in the system, or inside an anti-static bag.
- **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.

ESD protection summary

It is recommended to use the traditional wired ESD grounding wrist strap and protective anti-static mat at all times when servicing Dell products. In addition, it is critical to keep sensitive parts separate from all insulator parts while performing service and that they use anti-static bags for transporting sensitive components.

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 weight 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 techniques in reverse to set the load down.

After working inside your computer

About this task

NOTE: 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 parts 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 next time you reboot the system it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress, and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system reinstall. For more information about this subject, see Knowledge Article: updating the BIOS on Dell systems 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
- Phillips screwdriver #2
- Torx #20 (T20) screwdriver
- Plastic scribe

Screw list

NOTE: When removing screws from a component, it is recommended to note the screw type, 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 with the configuration ordered.

Table 22. Screw list

Component	Screw type	Quantity	Screw image
CRU			
Top cover	M3	2	
Front I/O bracket	Thumbscrew - M3x5	1	
External M.2 2230 solid state drive/ M.2 2280 solid state drive	• M3x6 • M3x3	• 1 • 2	•  • 
Front-fan assembly	M3	1	
UltraSpeed Duo solid state drive	• Captive screws - for heat sink • M2x3	• 2 • 1	• N/A • 
UltraSpeed Quad M.2 2230 solid state drive	• Captive screws - for heat sink • M2x3 • Captive screw - 1	• 4 • 1 • 1	• N/A •  • N/A
UltraSpeed Quad M.2 2280 solid state drive	• Captive screws - for heat sink • M2x3	• 4 • 1	• N/A • 
M.2 2230 PCIe solid state drive	• Captive screws - for heat sink • M2x3.5	• 4 • 1	• N/A • 
M.2 2280 PCIe solid state drive	• Captive screws - for heat sink	• 4 • 1	• N/A

Table 22. Screw list (continued)

Component	Screw type	Quantity	Screw image
	• M2x3.5		• 
Rear-fan assembly	#6-32	2	
Intrusion switch	#6-32	1	
Front bottom air shroud	M3	3	
Rear bottom air shroud	M3	2	
FRU			
Hard-drive fan assembly	M3	4	
NVMe-fan assembly (optional)	M3	1	
NVMe-backplane assembly (optional)	M3	2	
Heat sink	Captive: Torx T20	4	
Processor	Captive: Torx T20	3	
Internal hard drive cage	• Thumbscrews • #6-32	• 3 • 2	• N/A • 
Voltage-Regulator heat sink - Location 1	M3	3	
Voltage-Regulator heat sink - Location 2	Captive	2	
Power-supply unit	#6-32	6	
System board	#6-32	12	

Major components of Precision 7875 Tower

The following image shows the major components of Precision 7875 Tower.

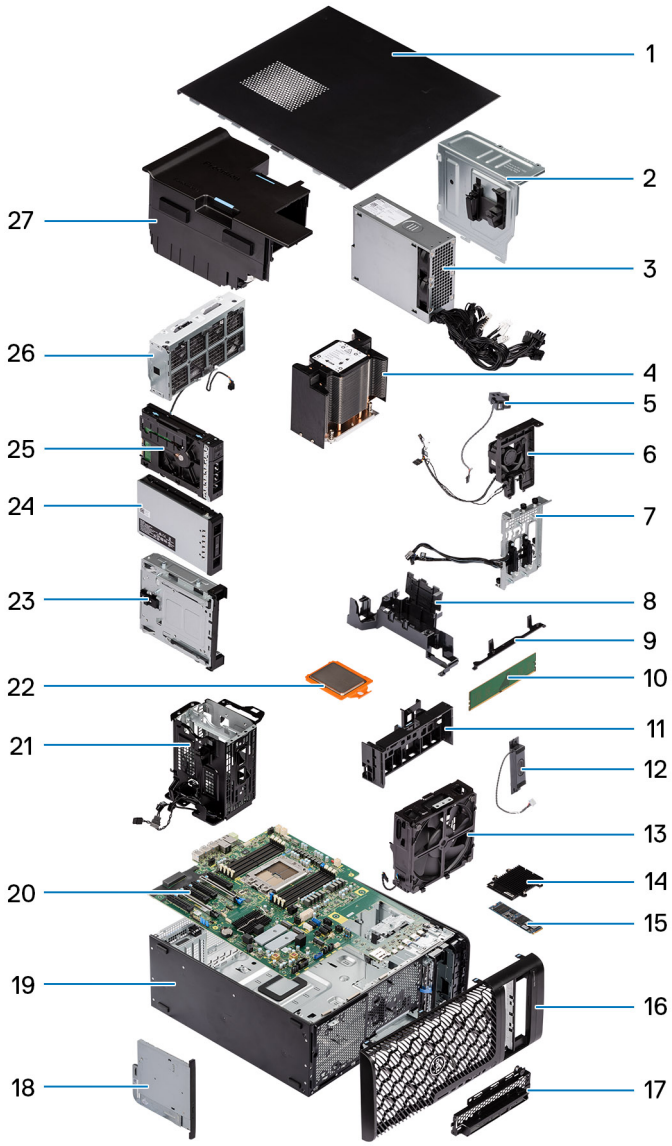


Figure 9. Major components of Precision 7875 Tower

1. Side cover
2. Power-supply unit cover
3. Power-supply unit
4. Heat sink
5. Intrusion switch
6. Hard-drive fan assembly
7. Back plane
8. Bottom-air shroud
9. Rear bottom-air shroud
10. Memory module
11. PCIe holder
12. Speaker
13. Front-fan assembly
14. Solid-state drive heat-sink
15. M.2 solid state drive

16. Front bezel
17. Front I/O bracket
18. Slim optical-drive
19. Chassis
20. System board
21. Internal hard drive cage
22. Processor
23. External solid state drive cage
24. External storage flex bay (solid state drive)
25. External storage flex bay (hard drive)
26. Rear-fan assembly
27. Air shroud

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

5

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.

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 10. Removing the side cover

Steps

1. Unlock the side-panel latch using a Phillips screwdriver.
2. Press to open the latch of the side cover.
3. Pull the release latch to release the side cover from the computer.
4. Open the side cover at an angle and lift the cover away 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 images indicate the location of the side cover and provide a visual representation of the installation procedure.

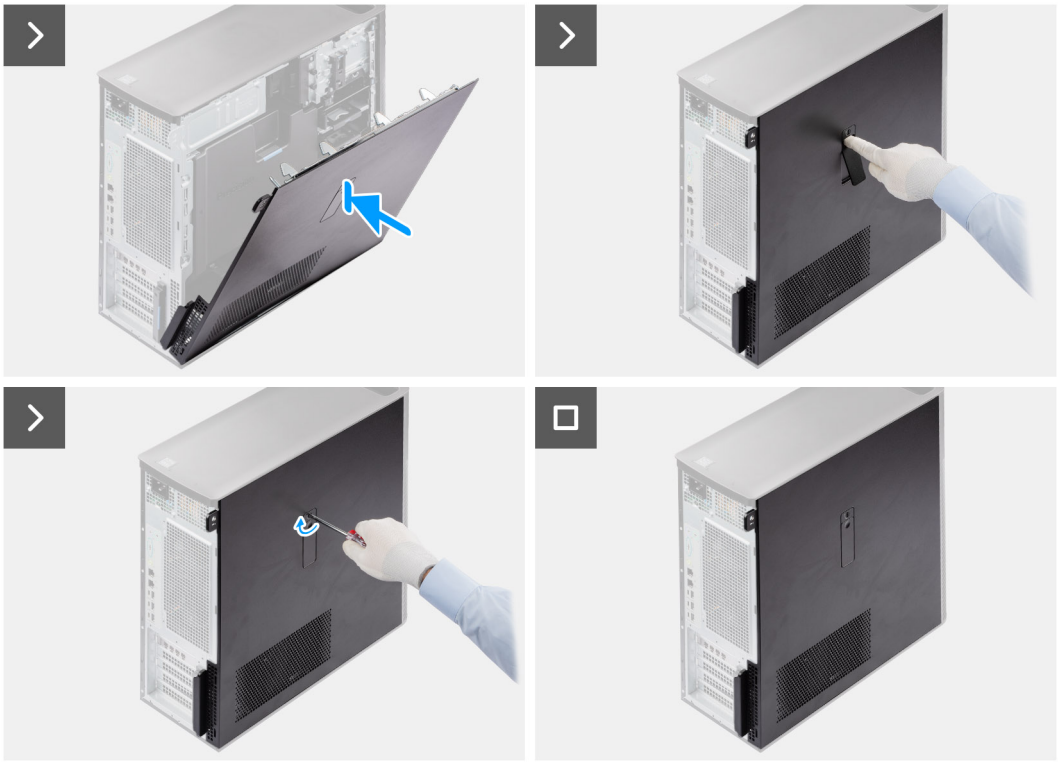


Figure 11. Installing the side cover

Steps

1. Align the tabs on the side cover with the slots on the chassis.
2. Press the side cover back towards the side of the computer to secure it.

NOTE: The release latch automatically locks the side cover to the computer.

NOTE: To set the side-panel latch to the locked position, use a Phillips screwdriver to turn the side-panel latch to the locked position.

Next steps

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

Front bezel

Removing the front bezel

Prerequisites

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

About this task

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

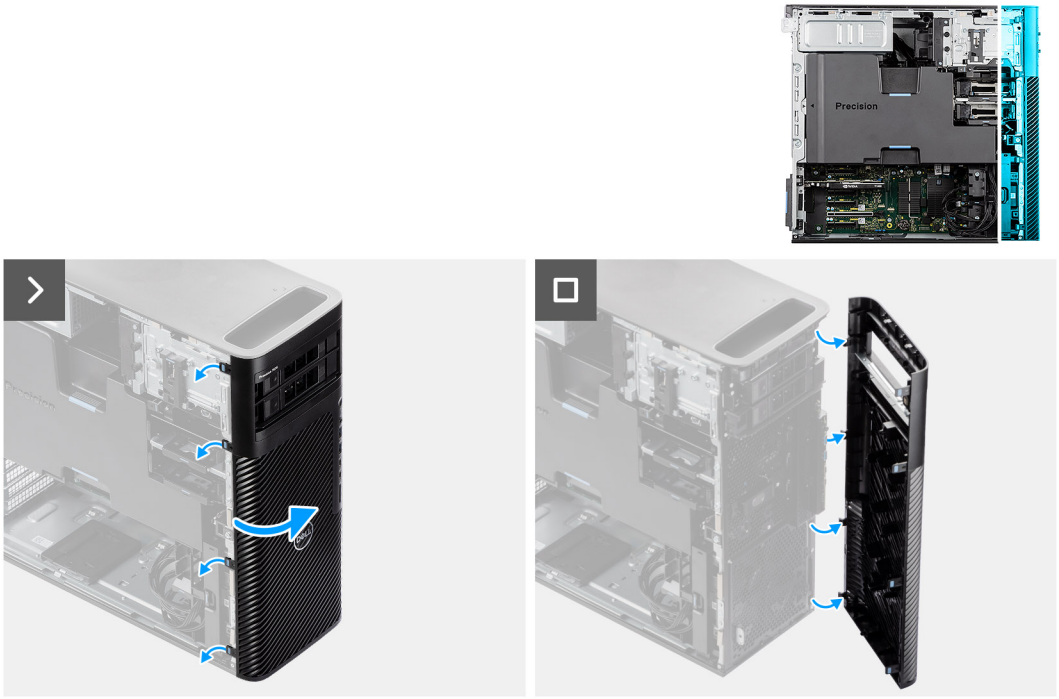


Figure 12. Removing the front bezel

Steps

1. Pry the retention tabs to release the front bezel from the computer.
2. Slightly pull the front bezel and gently rotate to release the other tabs on the bezel from the slots in the chassis.
3. Remove the front bezel from the computer.

Installing the front bezel

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 front bezel and provide a visual representation of the installation procedure.

Figure 13. Installing the front bezel

Steps

1. Position the front bezel to align the tabs on the bezel with the slots on the chassis.
2. Press the bezel until the tabs clicks into place.

Next steps

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

Top cover

Removing the top cover

Prerequisites

1. Follow the procedure in Before working intop your computer.
   NOTE: Ensure that you remove the security cable from the security-cable slot (if applicable).
2. Remove the side cover.

About this task

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

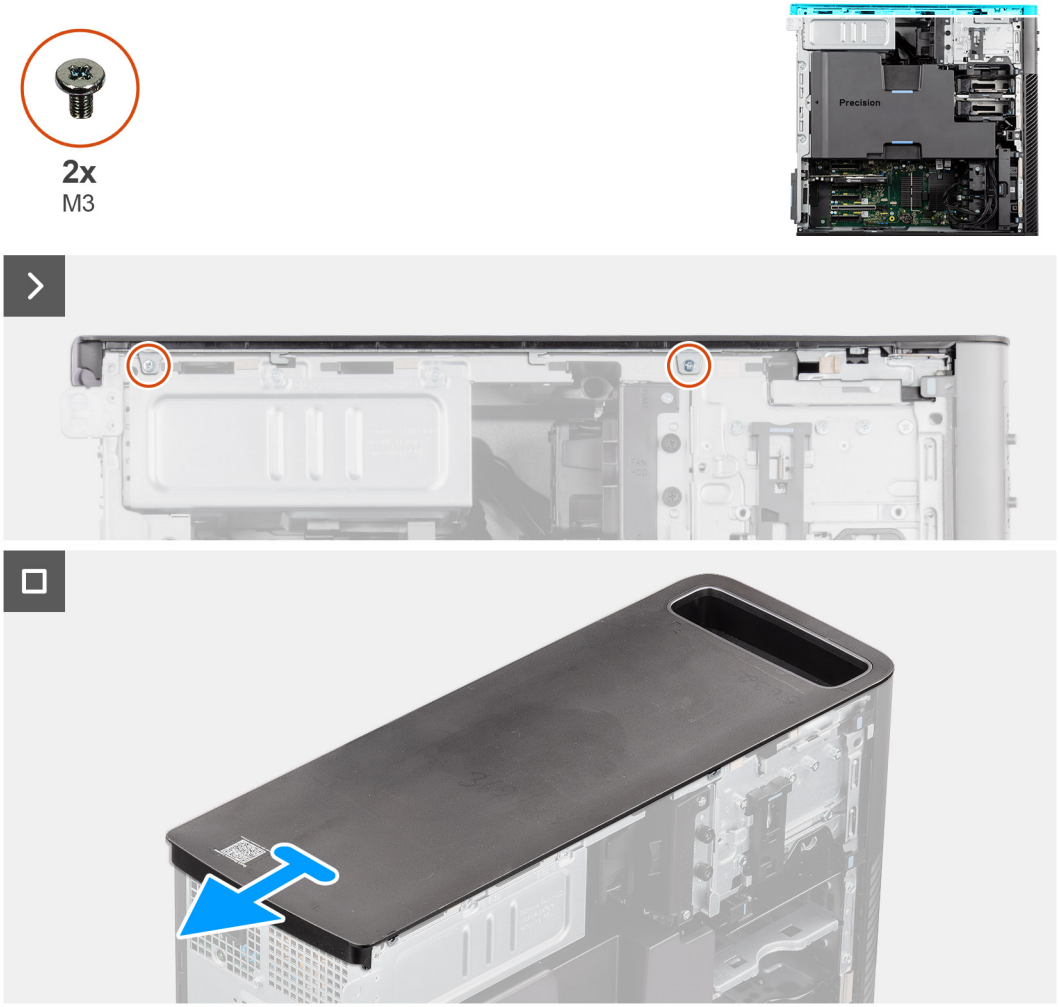


Figure 14. Removing the top cover

Steps

1. Remove the two (M3 screws) that secure the top cover to the chassis.
2. Slide and remove the top cover.

Installing the top cover

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 top cover and provide a visual representation of the installation procedure.

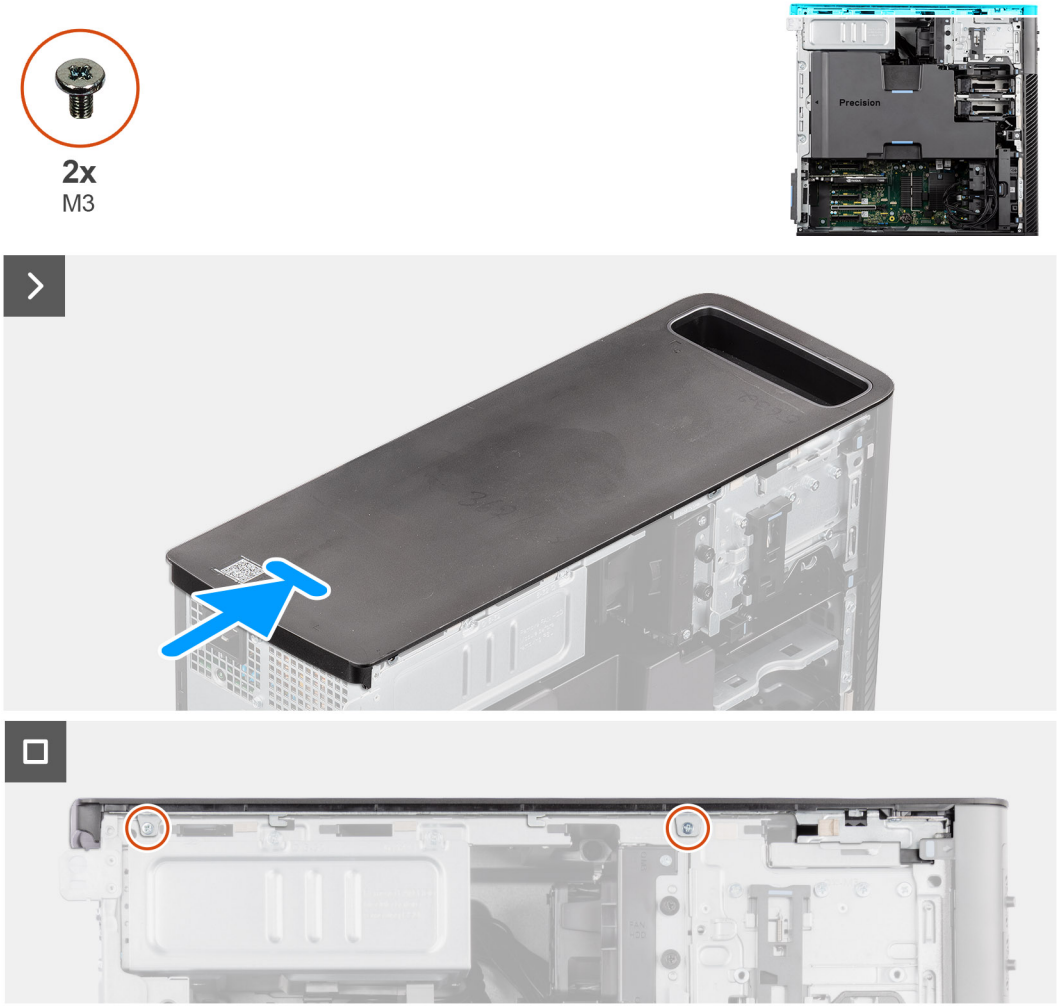


Figure 15. Installing the top cover

Steps

1. Slide and align the tabs on the top cover with the slots on the chassis.
2. Press the top cover back towards the top of the computer to secure it.
3. Replace the two (M3) screws to secure the top cover to the chassis.

Next steps

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

Front I/O bracket

Removing the front I/O bracket

Prerequisites

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

About this task

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

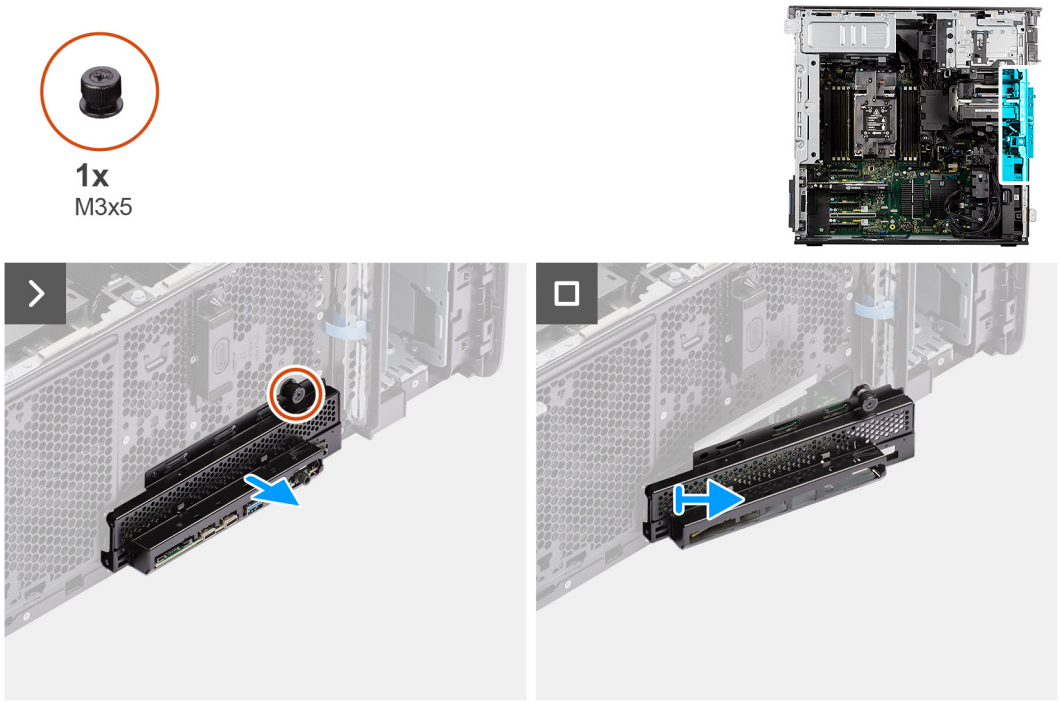


Figure 16. Removing the front I/O bracket

Steps

1. Loosen the thumbscrew (M3x5) that secures the front I/O bracket to the chassis.
2. Slide the front I/O bracket to free it from its slot on the chassis.
3. Remove the front I/O bracket from the computer.

Installing the front I/O bracket

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 front I/O bracket and provide a visual representation of the installation procedure.

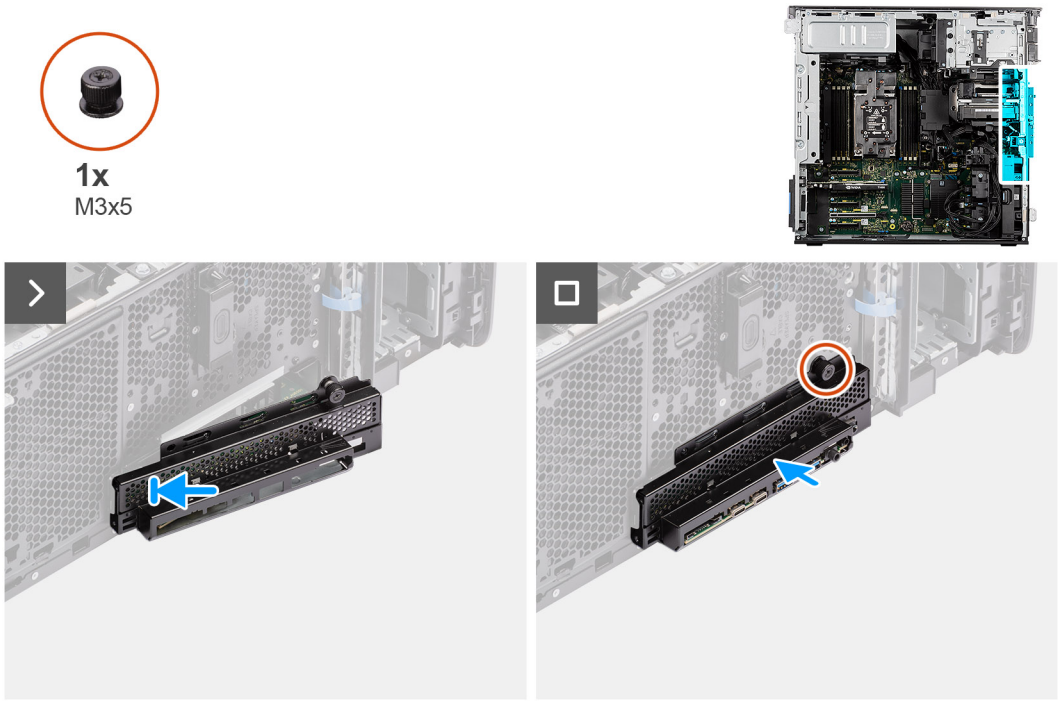


Figure 17. Installing the front I/O bracket

Steps

1. Align and slide the front I/O bracket into its slot on the chassis.
2. Tighten the thumbscrew (M3x5) to secure the front I/O bracket to the chassis.

Next steps

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

Front bezel - Hard drive

Removing the front bezel with hard drive

Prerequisites

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

About this task

The following images indicate the location of the front bezel with hard drive and provide a visual representation of the removal procedure.

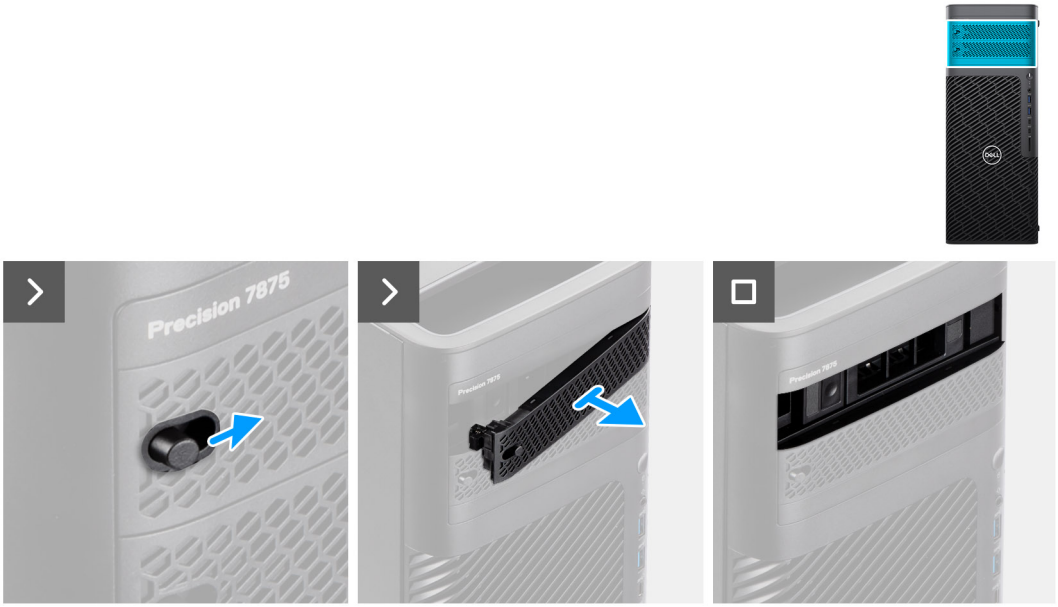


Figure 18. Removing the front bezel with hard drive

Steps

1. Push the latch to unlock the bezel from the chassis.
2. Slide and remove the bezel from the computer.

Installing the front bezel with hard drive

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 front bezel with hard drive and provide a visual representation of the installation procedure.

Figure 19. Installing the front bezel with hard drive

Steps

1. Position the front bezel to align the tabs on the bezel with the slots on the chassis.
2. Press the bezel until the tabs clicks into place.
3. Slide the latch to lock the bezel to the chassis.

Next steps

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

Removing the lockable front bezel for hard drive

Prerequisites

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

About this task

The following images indicate the location of the lockable front bezel for the hard drive and provide a visual representation of the removal procedure.

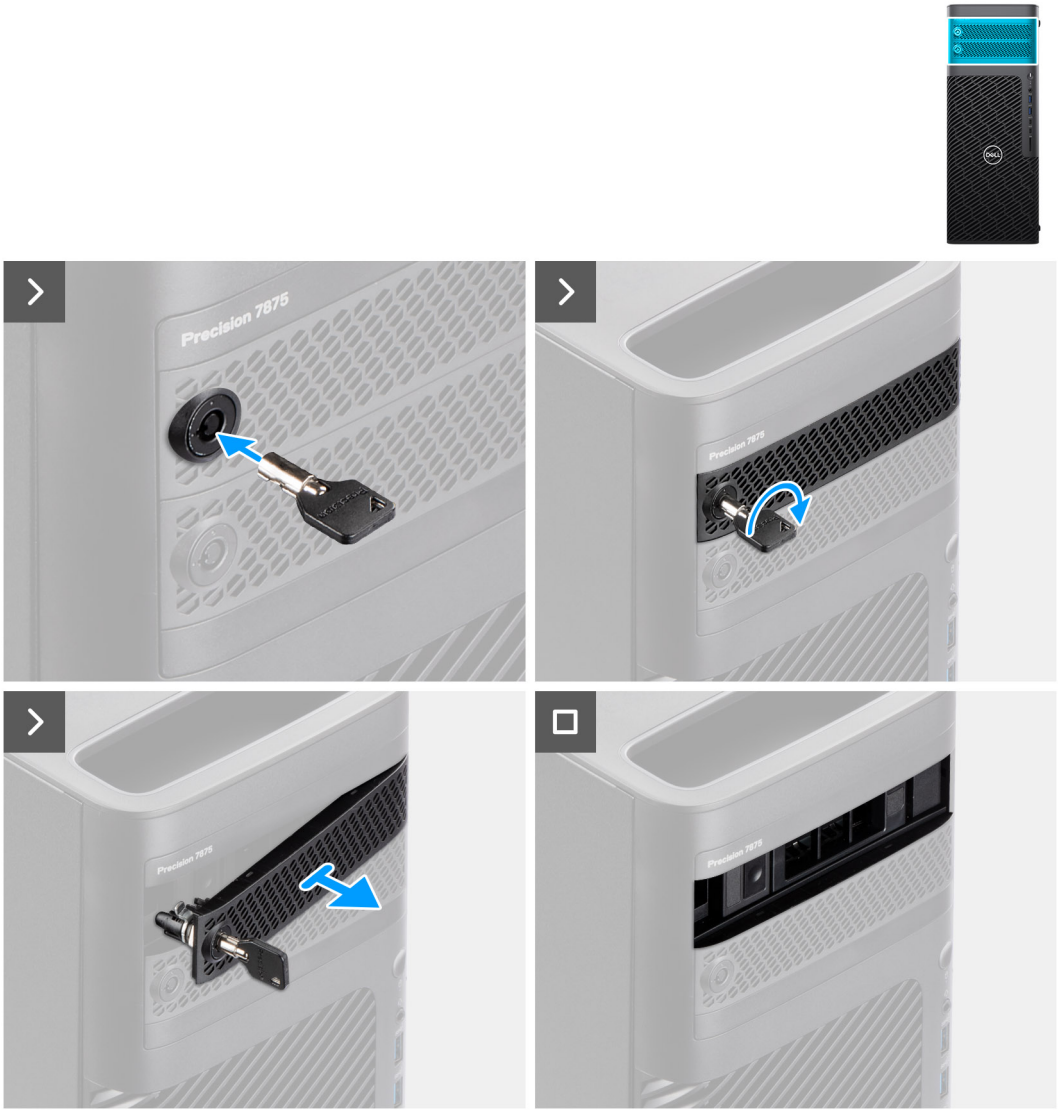


Figure 20. Removing the lockable front bezel for hard drive

Steps

1. Insert the key into the keyhole.
2. Rotate the key 90 degrees clockwise to unlock the bezel.
3. Remove the key from the bezel.

   Note: Perform step 1 to step 3, to remove second lockable front bezel for the hard drive (if applicable).

Installing the lockable front bezel for the hard drive

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 lockable front bezel for the hard drive and provide a visual representation of the installation procedure.

Figure 21. Installing the lockable front bezel for the hard drive

Steps

1. Position the front bezel to align the tab on the bezel with the slot on the chassis.
2. Insert the key into the keyhole.

3. Rotate the key 90 degrees counterclockwise to lock the bezel.
4. Remove the key from the bezel.
   Note: Perform step 1 to step 4, to install the second lockable front bezel for the hard drive (if applicable).

Next steps

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

External storage flex bay (hard drive)

Removing the external 2.5-inch hard-drive assembly

Prerequisites

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

NOTE: Precision 7875 Tower can support two external 2.5-inch hard-drive assemblies.

About this task

The following images indicate the location of the external 2.5-inch hard-drive assembly and provide a visual representation of the removal procedure.

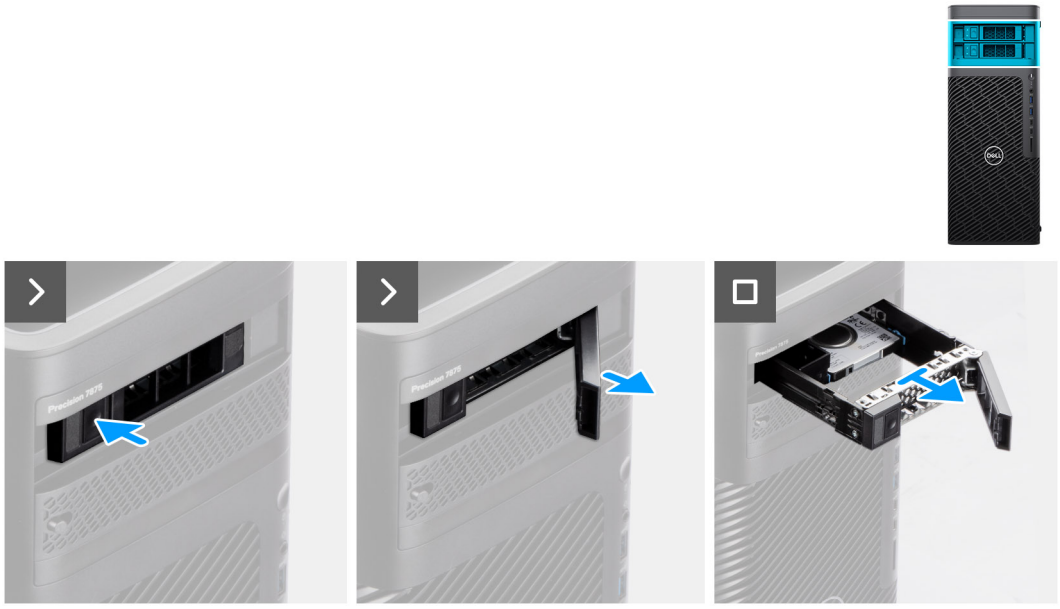


Figure 22. Removing the external 2.5-inch hard-drive assembly

Steps

1. Push the release button on the upper external flex bay bracket to open the release latch. Hold the release latch and slide the hard-drive assembly out of the upper external flex bay slot.
2. Hold the release latch and slide the hard-drive assembly out of the upper external flex bay slot.

   NOTE: Perform step 1 to step 2, to remove the second external 2.5-inch hard-drive assembly from the lower bay (if applicable).

Removing a 2.5-inch hard drive from the external hard-drive assembly

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the external 2.5-inch hard-drive assembly

About this task

The following images indicate the location of a 2.5-inch hard-drive in the external hard-drive assembly and provide a visual representation of the removal procedure.

Figure 23. Removing a 2.5-inch hard drive from the external hard-drive assembly

Steps

1. Pry the sides of the external hard-drive bracket to release the pins on the bracket from the slots on the hard drive.
2. Lift and remove the hard drive off the external hard-drive bracket.

NOTE: Perform step 1 to step 2 to remove the second external 2.5-inch hard-drive assembly from the lower bay (if applicable).

Installing a 2.5-inch hard drive from the external hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of a 2.5-inch hard drive in the external hard-drive assembly and provide a visual representation of the installation procedure.

Figure 24. Installing a 2.5-inch hard drive from the external hard-drive assembly

Steps

1. **NOTE:** 2.5-inch hard drives are to be installed in hard-drive assembly to fit 2.5-inch hard-drives.

   NOTE: The rubber grommets must be positioned to fit a 2.5-inch hard drive.

   Place the hard drive into the external hard drive bracket and align the pins on the bracket with the slots on the hard drive.
2. Snap the hard drive into the external hard-drive bracket.

   NOTE: Perform step 1 to step 2 to install the second external 2.5-inch hard-drive assembly from the lower bay (if applicable).

Next steps

1. Install the 2.5-inch hard-drive in the external hard-drive assembly.
2. Follow the procedure in After working inside your computer.

Installing the external 2.5-inch hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of the external 2.5-inch hard-drive assembly and provide a visual representation of the installation procedure.

NOTE: Precision 7875 Tower can support two external 2.5-inch hard-drive assemblies.

Figure 25. Installing the external 2.5-inch hard-drive assembly

Steps

1. Slide and insert the hard-drive assembly into the upper external flex bay slot.
2. Close the release latch to secure the hard-drive assembly in place.

NOTE: Perform step 1 to step 2, to install the second external 2.5-inch hard-drive assembly into the lower bay (if applicable).

Next steps

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

Removing the external 3.5-inch hard-drive assembly

Prerequisites

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

NOTE: Precision 7875 Tower can support two external 3.5-inch hard-drive assemblies.

About this task

The following images indicate the location of the external 3.5-inch hard-drive assembly and provide a visual representation of the removal procedure.

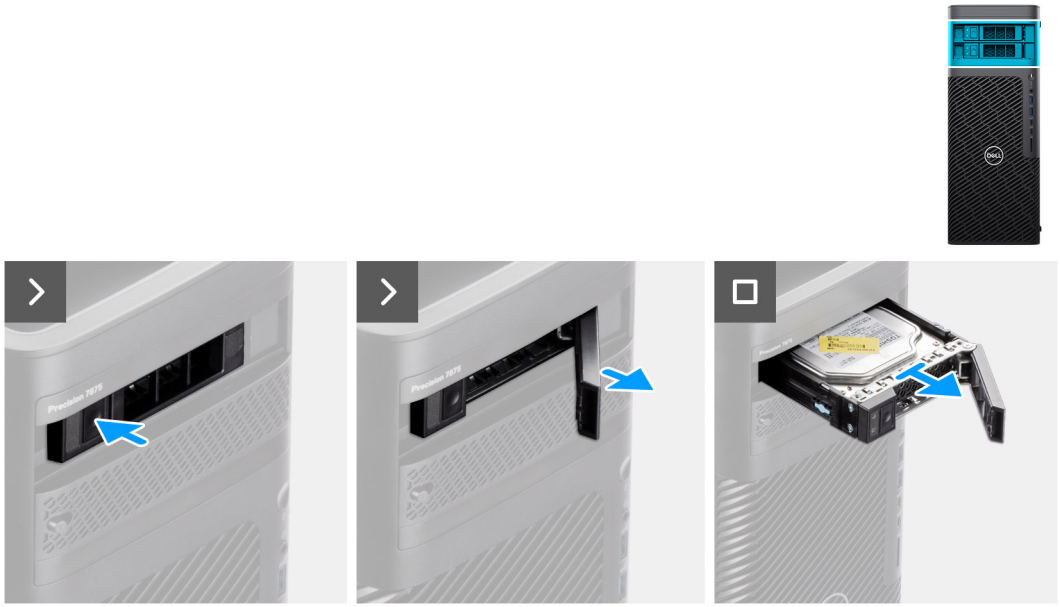


Figure 26. Removing the external 3.5-inch hard-drive assembly

Steps

1. Push the release button on the upper external flex bay bracket to open the release latch.
2. Hold the release latch and slide the hard-drive assembly out of the upper external flex bay slot.

   NOTE: Perform step 1 to step 2, to remove the second external 3.5-inch hard-drive assembly from the lower bay (if applicable).

Removing a 3.5-inch hard drive from the external hard-drive assembly

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the external 3.5-inch hard-drive assembly.

About this task

The following images indicate the location of a 3.5-inch hard drive from the external hard-drive assembly and provide a visual representation of the removal procedure.

Figure 27. Removing a 3.5-inch hard drive from the external hard-drive assembly

Steps

1. Pry the sides of the external hard-drive bracket to release the pins on the bracket from the slots on the hard drive. Lift and remove the hard drive off the external hard-drive bracket.
2. Lift and remove the hard drive off the external hard-drive bracket.

NOTE: Perform step 1 to step 2, to remove the second external 3.5-inch hard-drive assembly from the lower bay (if applicable).

Installing a 3.5-inch hard drive from the external hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of a 3.5-inch hard drive from the external hard-drive assembly and provide a visual representation of the installation procedure.

Figure 28. Installing a 3.5-inch hard drive from the external hard-drive assembly

Steps

1. Place the hard drive into the external hard-drive bracket to align the pins on the bracket with the slots on the hard drive, and snap the hard drive into the external hard-drive bracket.
2. Snap the hard drive into the external hard-drive bracket.

   NOTE: Perform step 1 to step 2 to install the second external 3.5-inch hard-drive assembly from the lower bay (if applicable).

Next steps

1. Install the external 3.5-inch hard-drive assembly.
2. Follow the procedure in After working inside your computer.

Installing the external 3.5-inch hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of the external 3.5-inch hard-drive assembly and provide a visual representation of the installation procedure.

NOTE: Precision 7875 Tower can support two external 3.5-inch hard-drive assemblies.

Figure 29. Installing the external 3.5-inch hard-drive assembly

Steps

1. Slide and insert the hard-drive assembly into the upper external flex bay slot.
2. Close the release latch to secure the hard-drive assembly in place.

   NOTE: Perform step 1 to step 2 to install the second external 3.5-inch hard-drive assembly into the lower bay (if applicable).

Next steps

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

External solid-state drive cage

Removing the external solid-state drive cage

Prerequisites

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

About this task

The following images indicate the location of the external solid-state drive cage provide a visual representation of the removal procedure.

Figure 30. Removing the external solid-state drive cage

Steps

1. Using a screwdriver, push the release button on the upper external flex bay slot to release the SSD cage.
2. Pull the external SSD cage out of the upper external flex bay slot.

Installing the external solid-state drive cage

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 external solid-state drive cage and provide a visual representation of the installation procedure.

Figure 31. Installing the external solid-state drive cage

Steps

Slide and insert the external solid-state drive cage into the upper external flex bay slot.

Next steps

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

External storage flex bay (solid-state drive)

Removing the external solid-state drive assembly

Prerequisites

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

About this task

The following images indicate the location of the external solid-state drive assembly and provide a visual representation of the removal procedure.

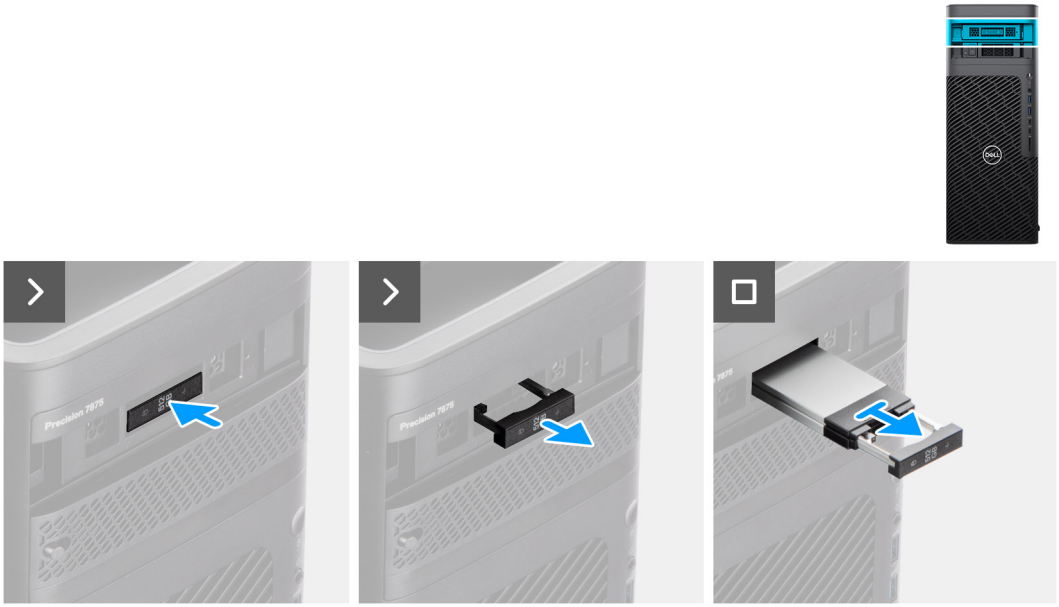


Figure 32. Removing the external solid-state drive assembly

Steps

1. Push the release button on the external flex bay bracket to open the release latch.
2. Hold the release latch and slide the solid-state drive assembly out of the external flex bay slot.

Removing the external M.2 2230 solid-state drive

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the external solid-state drive assembly.

About this task

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

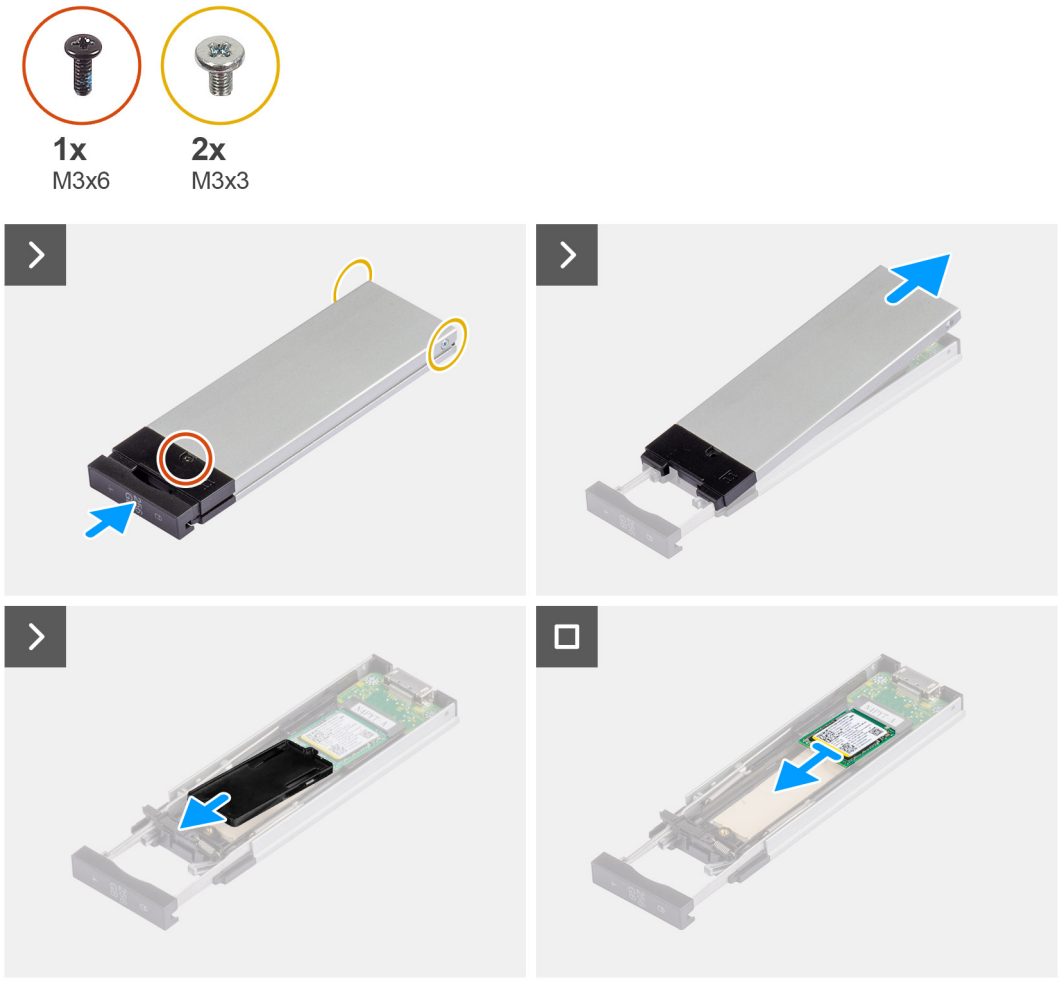


Figure 33. Removing the external M.2 2230 solid-state drive

Steps

1. Remove the single (M3x6) screw and the two (M3x3) screws from the solid-state drive assembly.
2. Lift and remove the cover from the solid-state drive assembly.
3. Slide and remove the solid-state drive holder from the solid-state drive assembly.
4. Slide and remove the M.2 2230 solid-state drive from the solid-state drive assembly.

Installing the external M.2 2230 solid-state drive

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 external M.2 2230 solid-state drive and provide a visual representation of the installation procedure.

Figure 34. Installing the external M.2 2230 solid-state drive

Steps

1. Align the notch on the solid-state drive with the tab on the solid-state drive connector.
2. Insert the solid-state drive at a 45-degree angle into the slot on the solid-state drive assembly.
3. Align and place the solid-state drive bracket onto the solid-state drive assembly.
4. Place the cover over the solid-state drive assembly.
5. Install the single (M3x6) screw and the two (M3x3) screws to secure the cover to the solid-state drive assembly.

Next steps

1. Install the external solid-state drive assembly.
2. Follow the procedure in After working inside your computer.

Removing the external M.2 2280 solid-state drive

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the external solid-state drive assembly.

About this task

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

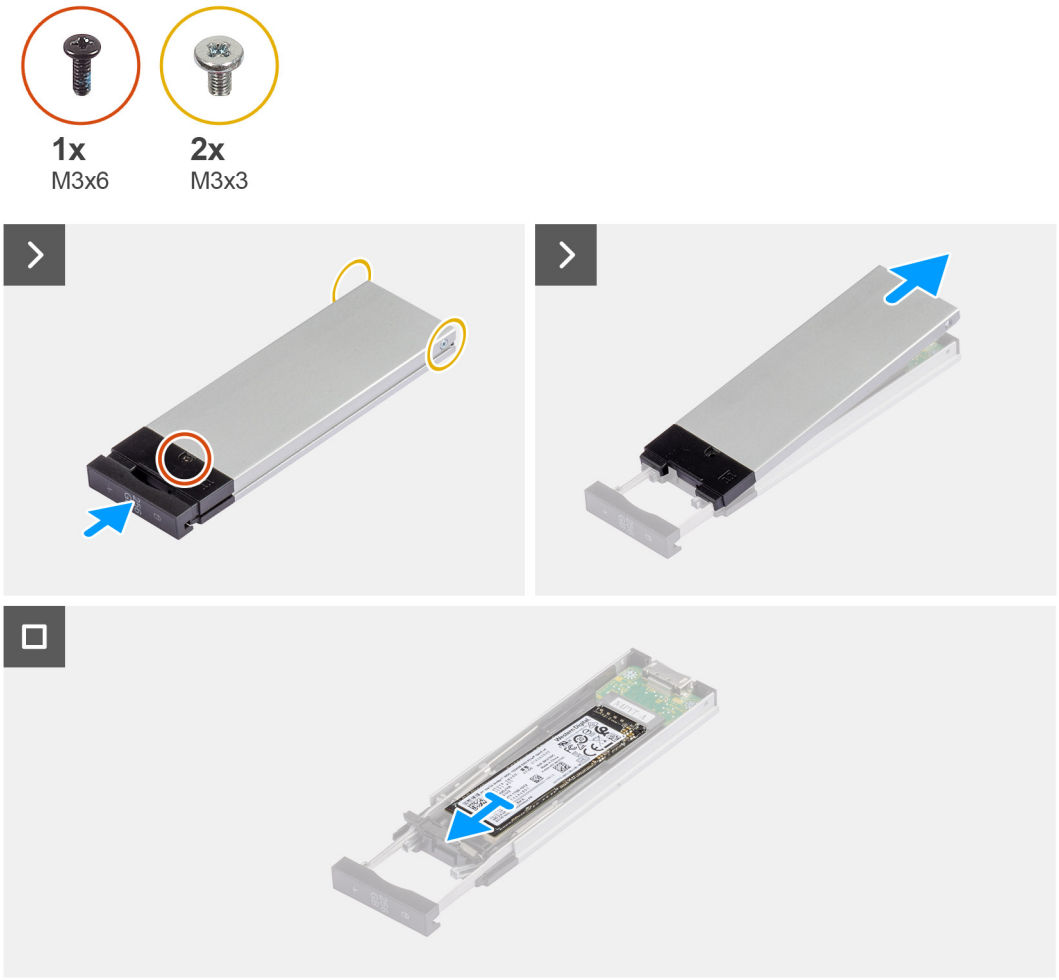


Figure 35. Removing the external M.2 2280 solid-state drive

Steps

1. Remove the single (M3x6) screw and the two (M3x3) screws from the solid-state drive assembly.
2. Lift and remove the cover from the solid-state drive assembly.
3. Slide and remove the solid-state drive from the solid-state drive assembly.

Installing the external M.2 2280 solid state drive

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

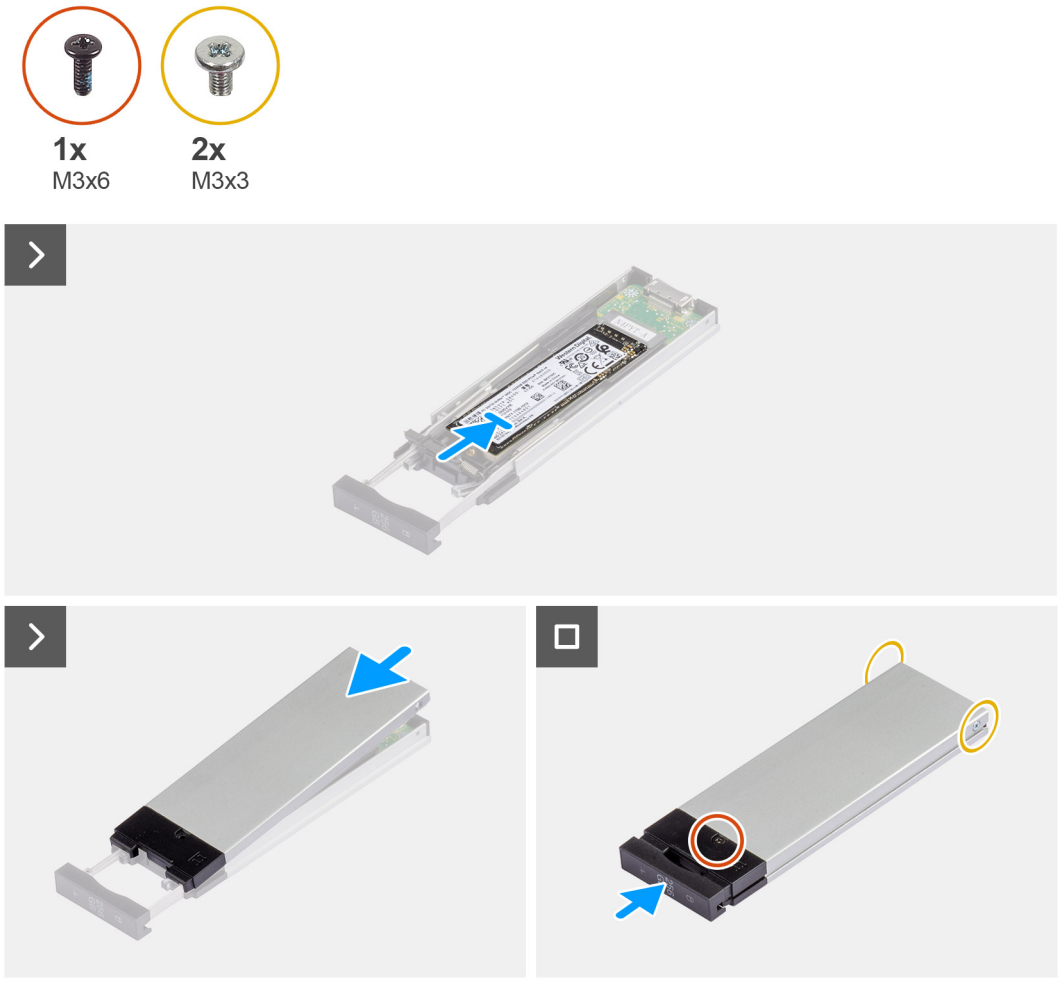


Figure 36. Installing the external M.2 2280 solid-state drive

Steps

1. Align the notch on the solid state drive with the tab on the solid-state drive connector.
2. Insert the solid state drive at a 45-degree angle into the slot on the solid-state drive assembly.
3. Place the cover over the solid-state drive assembly.
4. Install the single (M3x6) screw and the two (M3x3) screws to secure the cover to the solid-state drive assembly.

Next steps

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

Installing the external solid-state drive assembly

Prerequisites

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

About this task

The following images indicate the location of the external solid-state drive assembly and provide a visual representation of the installation procedure.

Figure 37. Installing the external solid-state drive assembly

Steps

1. Slide and insert the solid-state drive assembly into the external flex bay slot.
2. Push and close the release latch to secure the solid-state drive assembly in place.

Next steps

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

Air shroud

Removing the air shroud

Prerequisites

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

NOTE: Removing the air shroud disconnects the memory fan module as the memory fan module is integrated in the air shroud.

About this task

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

Figure 38. Removing the air shroud

Steps

1. Hold the air shroud at the gripping points.
2. Pull the air shroud upwards and out of the computer.

Installing the air shroud

Prerequisites

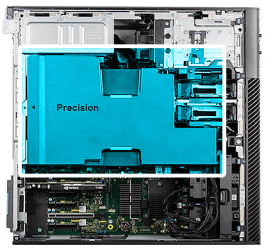
If you are replacing a component, remove the existing component before performing the installation procedure.

NOTE: Installing the air shroud connects the memory fan module as the memory fan module is integrated in the air shroud.

NOTE: Route all the power cables through the bottom air shroud cover to prevent the air shroud installation interference.

About this task

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



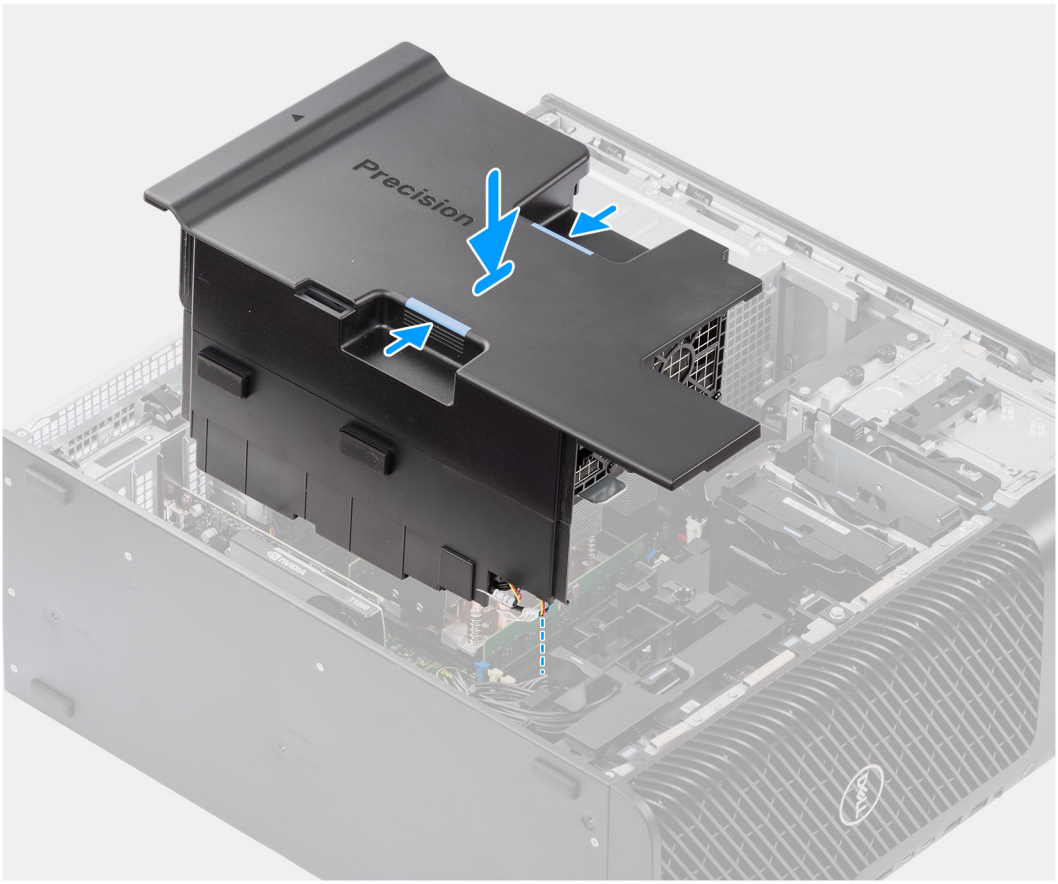


Figure 39. Installing the air shroud

Steps

1. Align the air shroud over the heat-sink and system board holding and seat it in the slot.
2. Press the air shroud down until the tabs click into place.

Next steps

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

Slim optical-drive

Removing the slim optical-drive

Prerequisites

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

About this task

The following images indicate the location of the slim optical-drive and provide a visual representation of the removal procedure.

Figure 40. Removing the slim optical-drive

Steps

1. Push the slim optical-drive latch to release it from the flex bay.
2. Slide and remove the slim optical-drive from the slot on the flex bay.

Installing the slim optical-drive

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 slim optical-drive and provide a visual representation of the installation procedure.

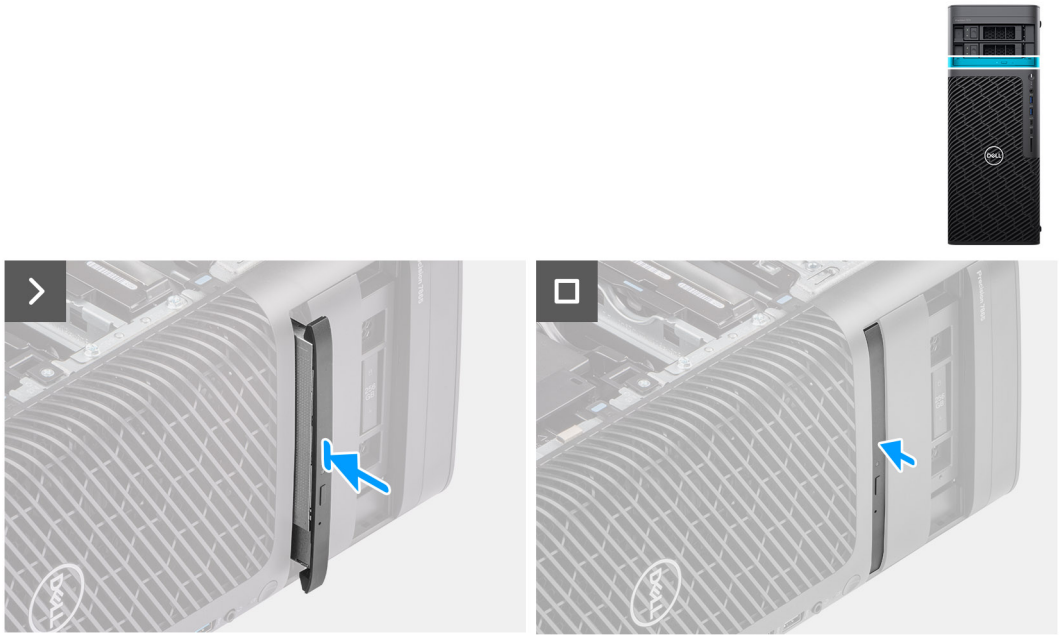


Figure 41. Installing the slim optical-drive

Steps

1. Insert the slim optical-drive into the slot in the flex bay and push the slim optical-drive until it snaps into place.
2. Push the slim optical-drive until it snaps into place.

Next steps

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

PCIe holder

Removing the PCIe holder

Prerequisites

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

About this task

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

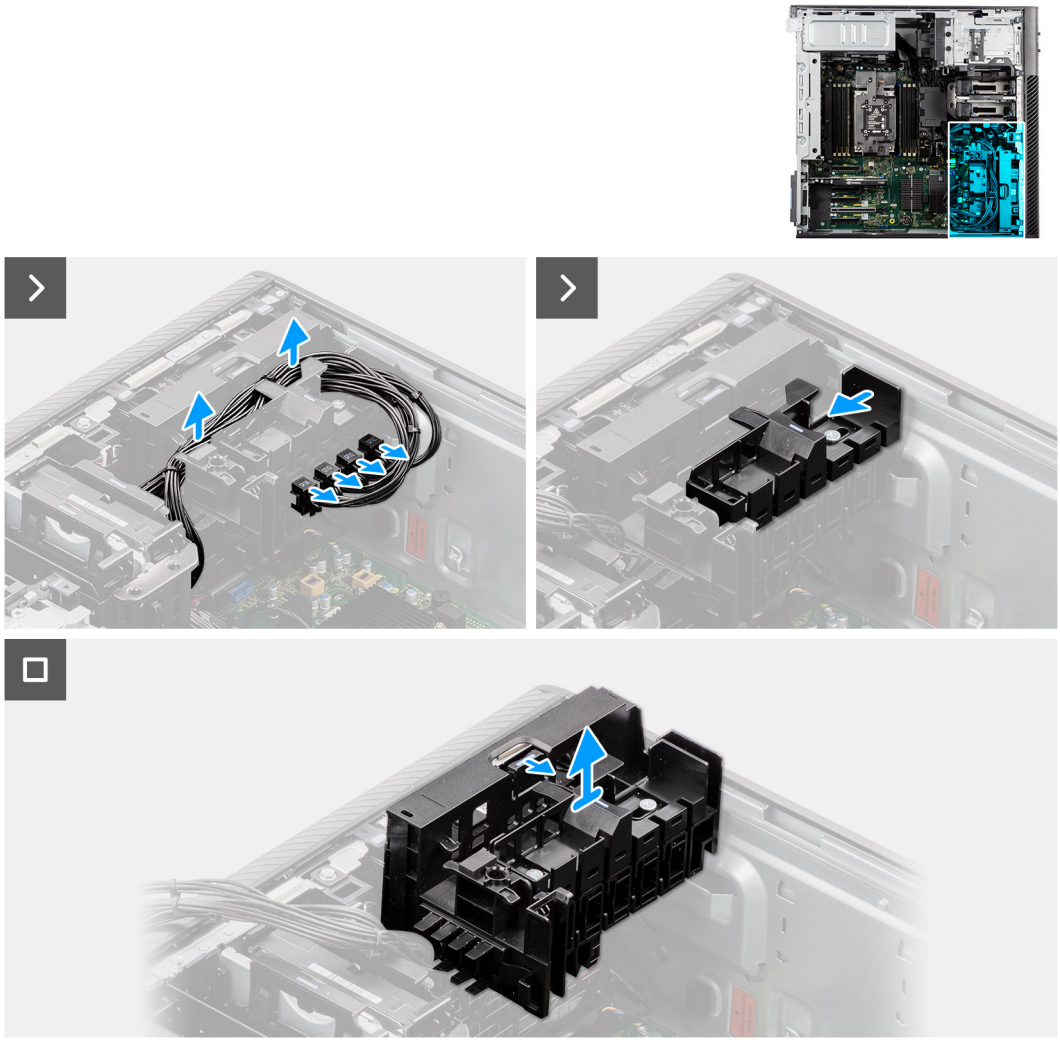


Figure 42. Removing the PCIe holder

Steps

1. Remove the PCIe-power cables from the slots on the PCIe holder.
2. Unroute the PCIe-power cables from the hooks on the chassis.
3. Push the PCIe holder lock into the unlock position.
4. Push the latch towards the PCIe holder lock, then lift and remove the PCIe holder out of the computer.

Installing the PCIe holder

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 PCIe holder and provide a visual representation of the installation procedure.

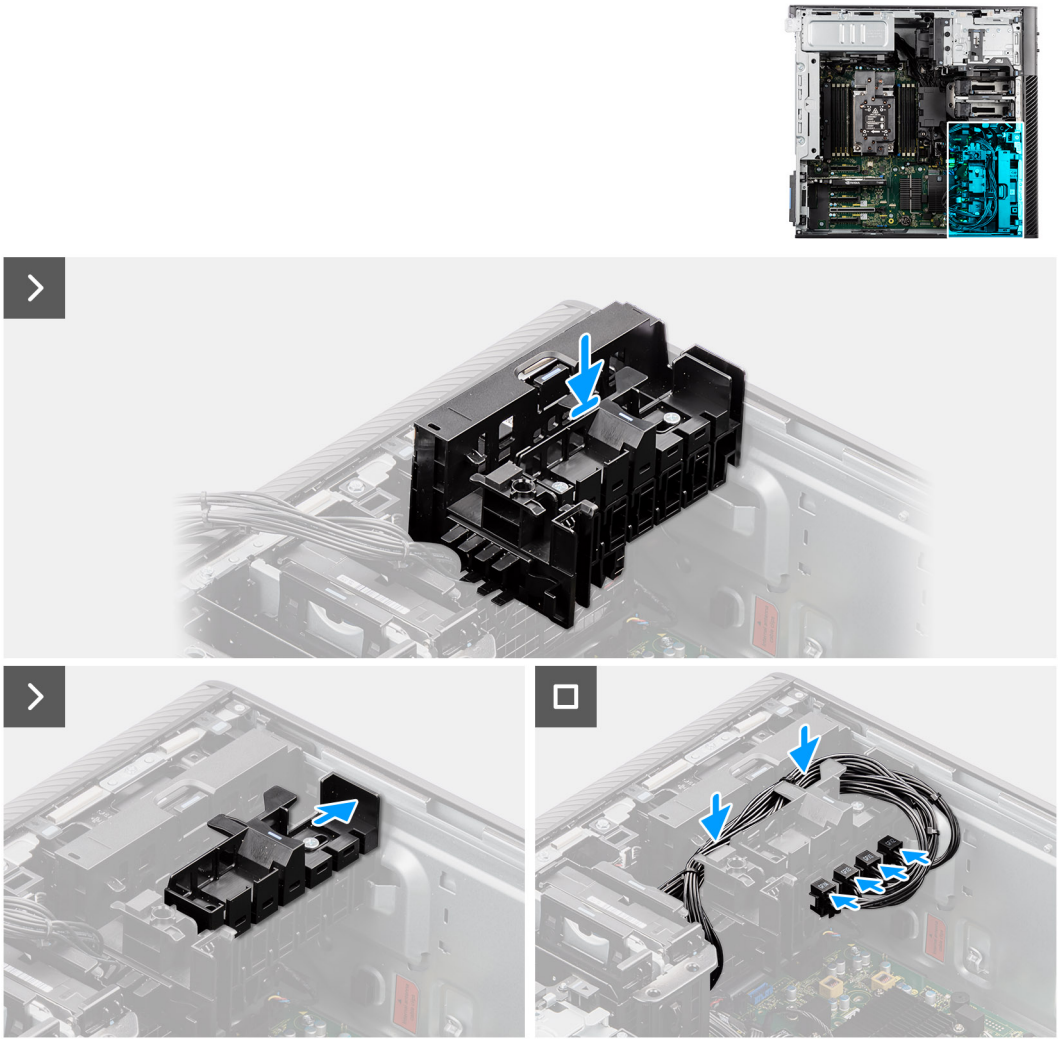


Figure 43. Installing the PCIe holder

Steps

1. Align and place the PCIe holder on the slot over the front fan.
2. Push the PCIe holder lock into the lock position to secure the PCIe holder to the chassis.
3. Route the PCIe-power cables through the hooks on the chassis.
4. Reconnect the PCIe-power cables to the slots on the PCIe holder.

Next steps

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

Front fan

Removing the front-fan assembly

Prerequisites

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

3. Remove the air shroud.
4. Remove the PCIe holder.

About this task

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

Figure 44. Removing the front-fan assembly

Steps

1. Remove the single (M3) screw that secures the front-fan assembly to the chassis.
2. Disconnect the fan cable from the connector on the system board.
3. Move the fan assembly at an angle from the chassis.
4. Lift and remove the front fan-assembly from the computer.

Installing the front-fan assembly

Prerequisites

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

About this task

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

Figure 45. Installing the front-fan assembly

Steps

1. Align the tabs of the front-fan assembly with the slot on the chassis.
2. Insert the front-fan assembly at an angle into the slot in the chassis.
3. Install the single (M3) screw to secure the front-fan assembly to the chassis.
4. Connect the fan cable to the connector on the system board.

Next steps

1. Install the PCIe holder.
2. Install the air shroud.
3. Install the side cover.
4. Follow the procedure in After working inside your computer.

3.5-inch hard-drive assembly

Removing the 3.5-inch hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of the 3.5-inch hard-drive assembly and provide a visual representation of the removal procedure.

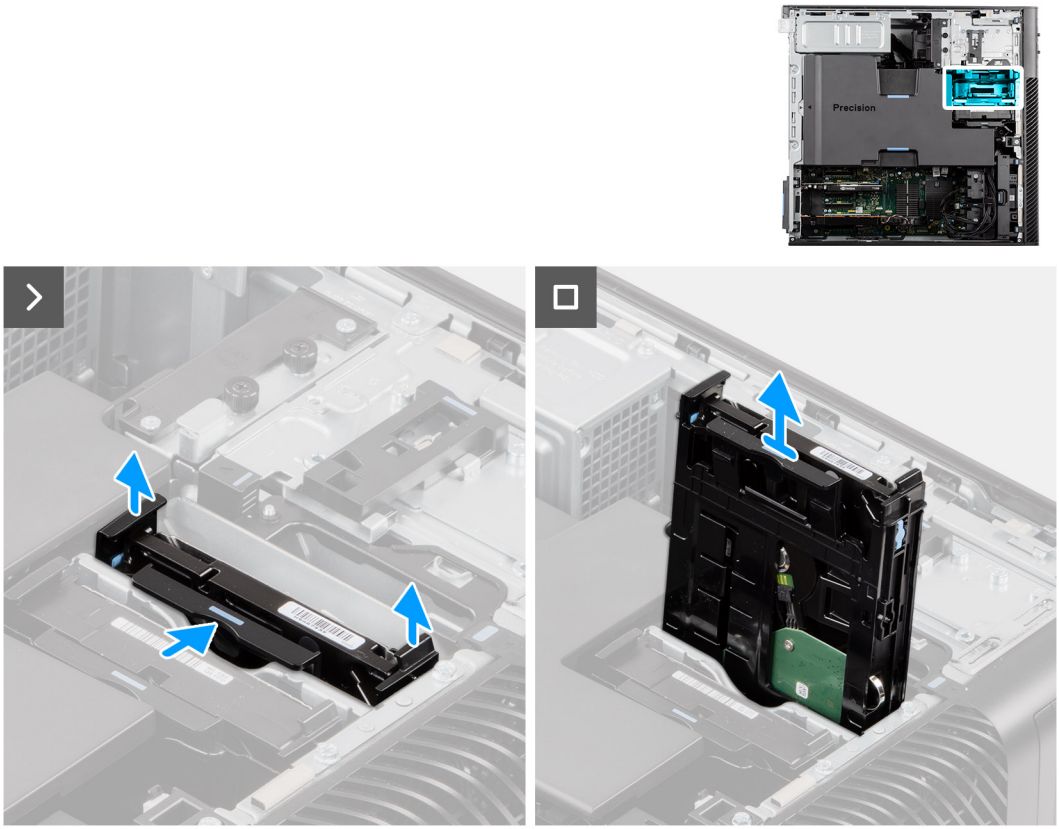


Figure 46. Removing the 3.5-inch hard-drive assembly

Steps

1. Press the securing tabs to release the 3.5-inch hard-drive assembly from the chassis.
2. Slide the 3.5-inch hard-drive assembly out of the hard-drive bracket.

Removing the 3.5-inch hard-drive bracket

Prerequisites

1. Follow the procedure in before working inside your computer.
2. Remove the side cover.
3. Remove the 3.5-inch hard-drive assembly.

About this task

The following images indicate the location of the 3.5-inch hard-drive bracket and provide a visual representation of the removal procedure.

Figure 47. Removing the 3.5-inch hard-drive bracket

Steps

1. Pry the sides of the hard-drive bracket to release the tabs on the bracket from the slots on the hard drive.
2. Lift and remove the hard drive off the hard-drive bracket.

Installing the 3.5-inch hard-drive bracket

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 3.5-inch hard-drive bracket and provide a visual representation of the installation procedure.

Figure 48. Installing the 3.5-inch hard-drive bracket

Steps

1. **NOTE:** If your hard-drive bracket was installed for 2.5-inch drive, the rubber grommets must be positioned to fit a 3.5-inch hard-drive.

   Place the hard drive into the hard-drive bracket and align the tabs on the bracket with the slots on the hard drive.
2. Snap the hard-drive into the hard-drive bracket.

Next steps

1. Install the 3.5-inch hard-drive assembly.
2. Install the side cover.
3. Follow the procedure in after working inside your computer.

Installing the 3.5-inch hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of the 3.5-inch hard-drive assembly and provide a visual representation of the installation procedure.

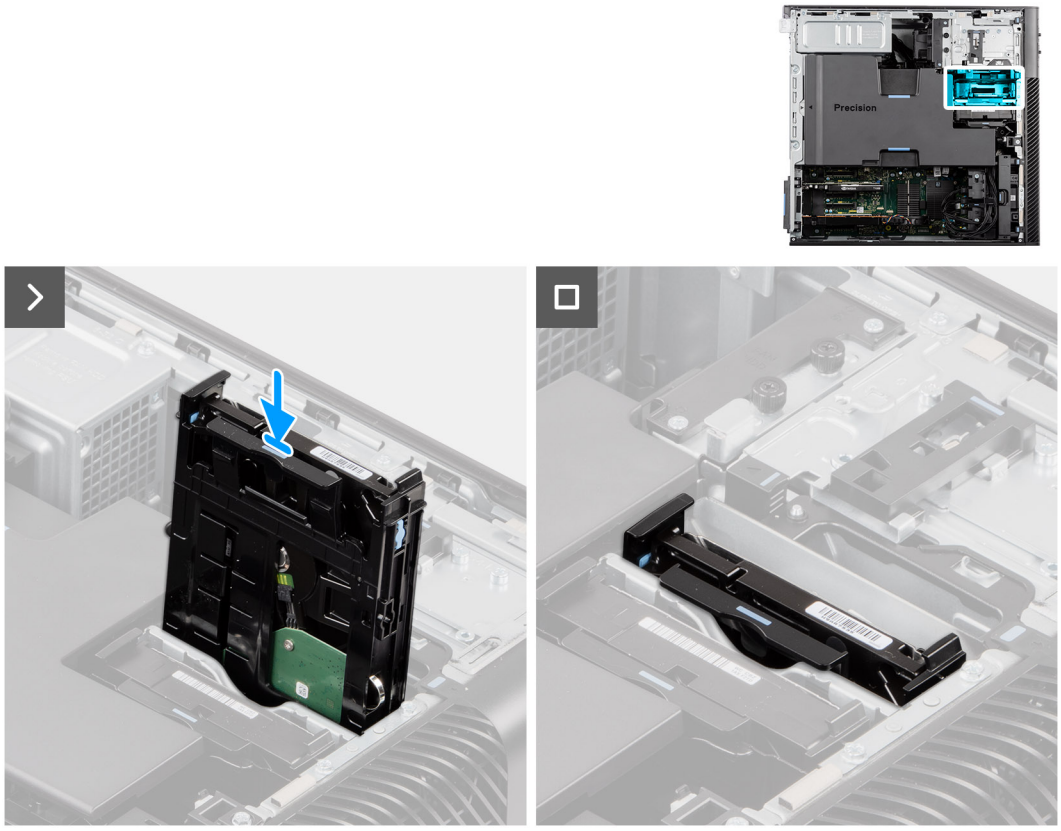


Figure 49. Installing the 3.5-inch hard-drive assembly

Steps

Slide and insert the 3.5-inch hard-drive assembly into the slot on the hard-drive bracket.

NOTE: Push the hard-drive assembly into the slot until it clicks into place, which indicates that the assembly is locked into position.

Next steps

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

2.5-inch hard-drive assembly

Removing the 2.5-inch hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of the 2.5-inch hard-drive assembly and provide a visual representation of the removal procedure.

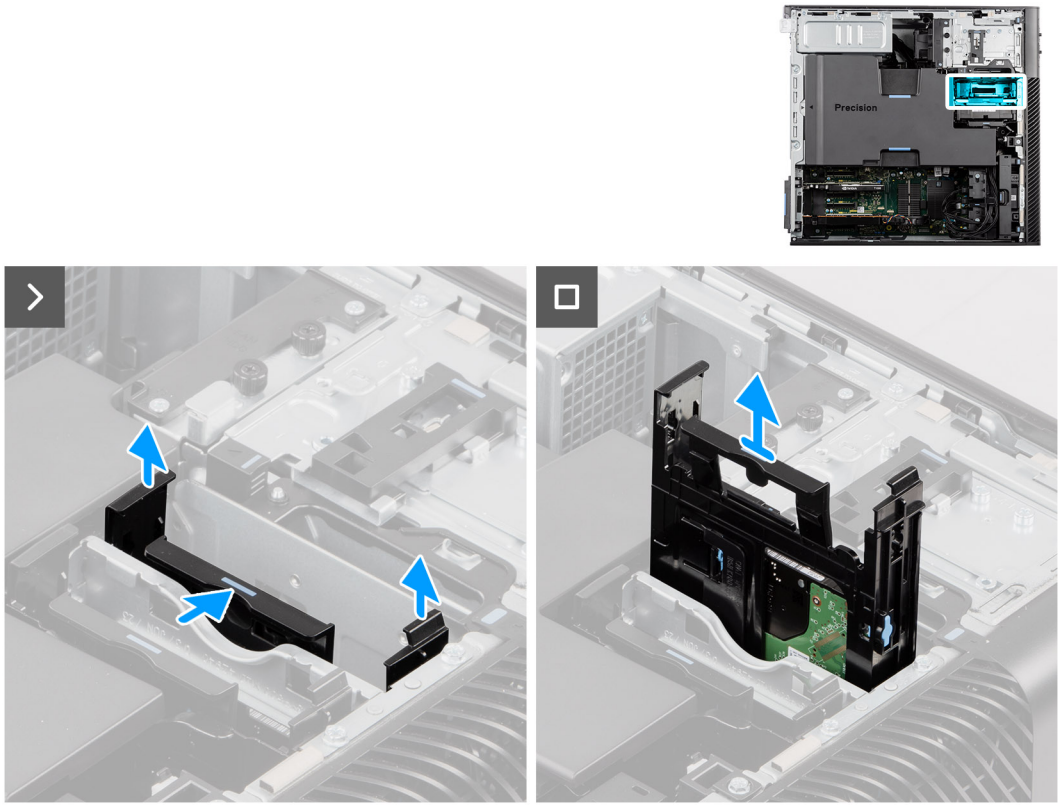


Figure 50. Removing the 2.5-inch hard-drive assembly

Steps

1. Press the securing tabs to release the 2.5-inch hard-drive assembly from the chassis.
2. Slide the 2.5-inch hard-drive assembly out of the hard-drive bracket.

Removing the 2.5-inch hard-disk drive bracket

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the 2.5-inch hard-drive assembly.

About this task

The following images indicate the location of the 2.5-inch hard-drive bracket and provide a visual representation of the removal procedure.

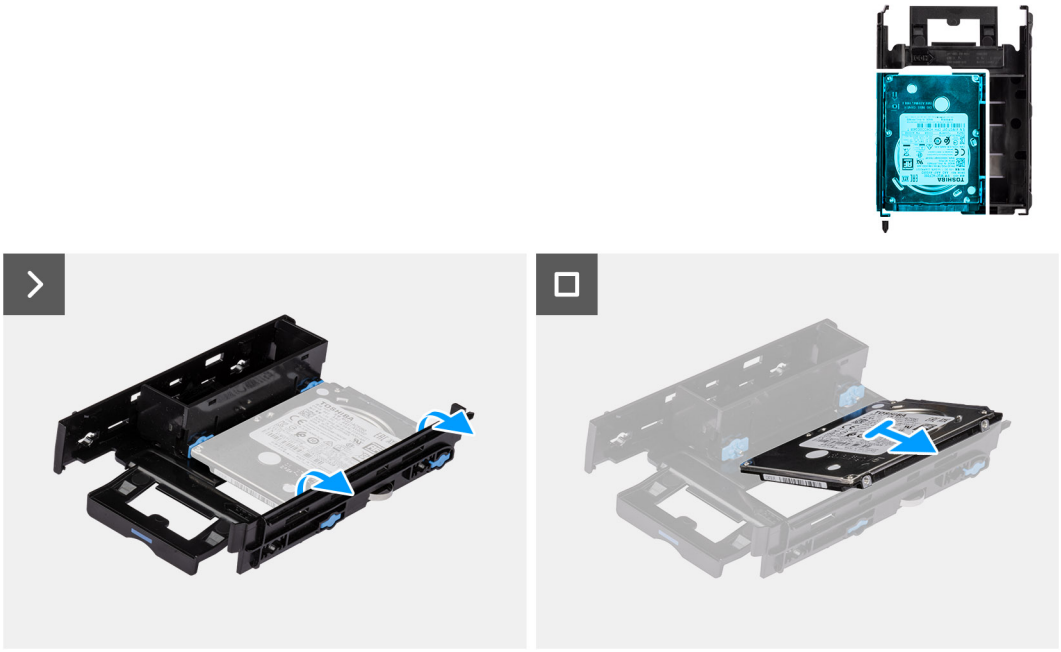


Figure 51. Removing the 2.5-inch hard-disk drive bracket

Steps

1. Pry the sides of the hard-drive bracket to release the tabs on the bracket from the slots on the hard drive.
2. Lift and remove the hard drive off the hard-drive bracket.

Installing the 2.5-inch hard-drive bracket

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 2.5-inch hard-drive bracket and provide a visual representation of the installation procedure.

Figure 52. Installing the 2.5-inch hard-drive bracket

Steps

1. **NOTE:** If your hard-drive bracket was installed for a 3.5-inch drive, the rubber grommets must be positioned to fit a 2.5-inch hard-drive.

   Place the hard drive into the hard-drive bracket and align the tabs on the bracket with the slots on the hard drive.
2. Snap the hard-drive into the hard-drive bracket.

Next steps

1. Install the 2.5-inch hard-drive assembly.
2. Install the side cover.
3. Follow the procedure in After working inside your computer.

Installing the 2.5-inch hard-drive assembly

Prerequisites

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

About this task

The following images indicate the location of the 2.5-inch hard-drive assembly and provide a visual representation of the installation procedure.

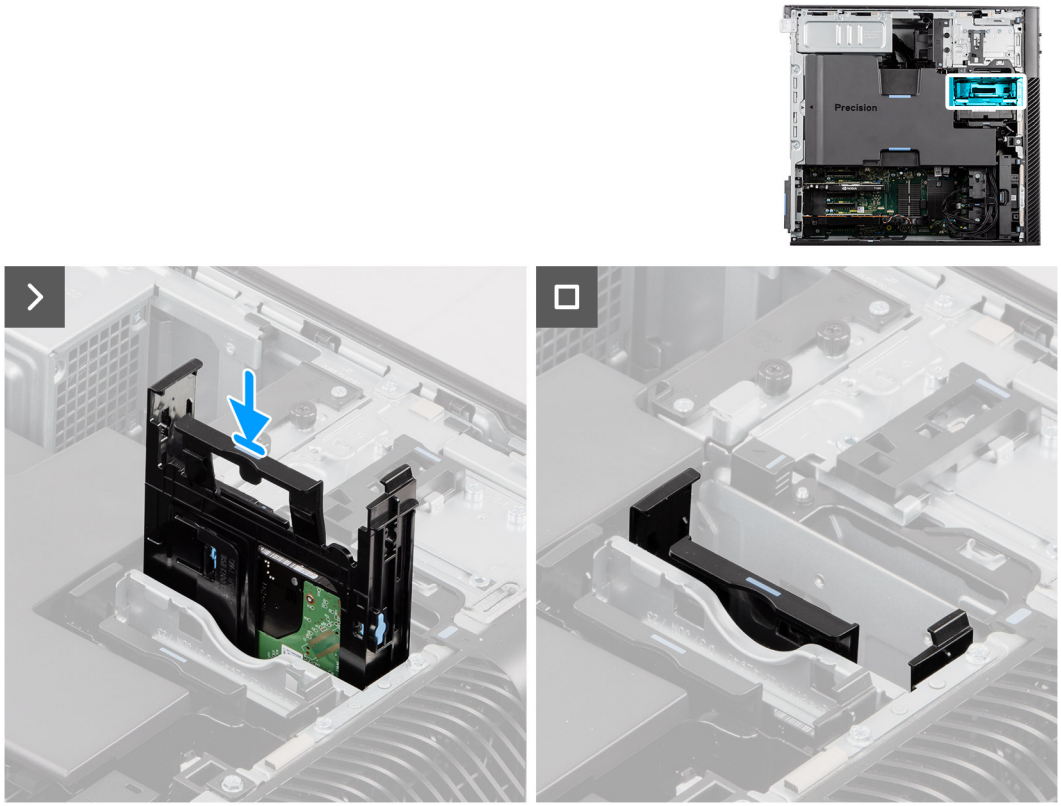


Figure 53. Installing the 2.5-inch hard-drive assembly

Steps

Slide and insert the 2.5-inch hard-drive assembly into the slot on the hard-drive bracket.

NOTE: Push the hard-drive assembly into the slot until it clicks into place, which indicates that the assembly is locked into position.

Next steps

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

Expansion card

UltraSpeed Duo

Installing the UltraSpeed Duo card

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 UltraSpeed Duo card and provide a visual representation of the installation procedure.

NOTE: Precision 7875 Tower supports only one UltraSpeed Duo card in slot 6, 5, or 4.

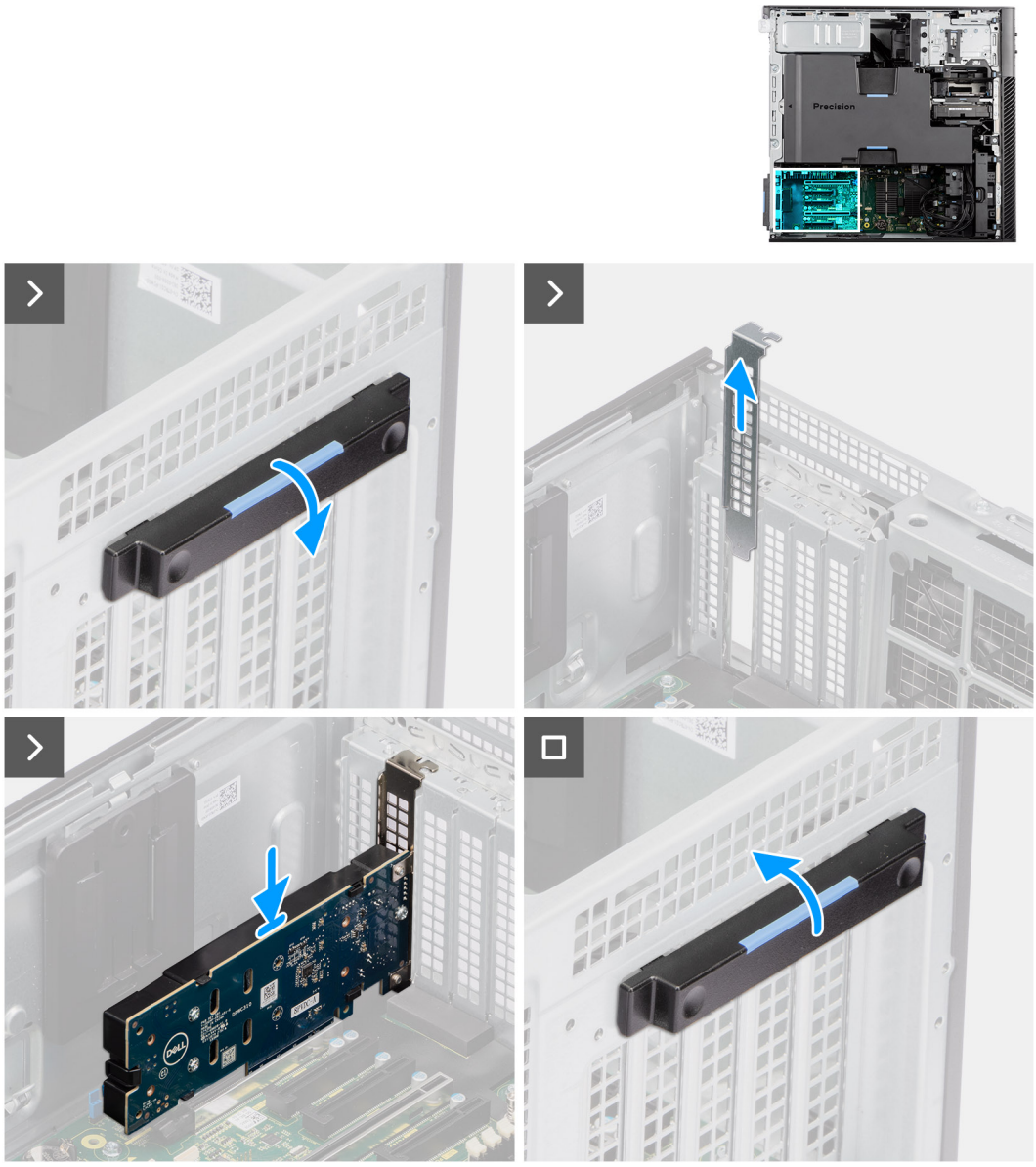


Figure 54. Installing the UltraSpeed Duo card

Steps

1. Push down the PCIe latch to open the PCIe door.
2. Slide and lift the PCIe filler from the PCIe slot.
3. Align and place the UltraSpeed Duo card into the expansion slot.
4. Lift the PCIe latch to close the PCIe door.

Next steps

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

Installing the UltraSpeed Duo solid state drive

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 UltraSpeed Duo solid state drive and provide a visual representation of the installation procedure.

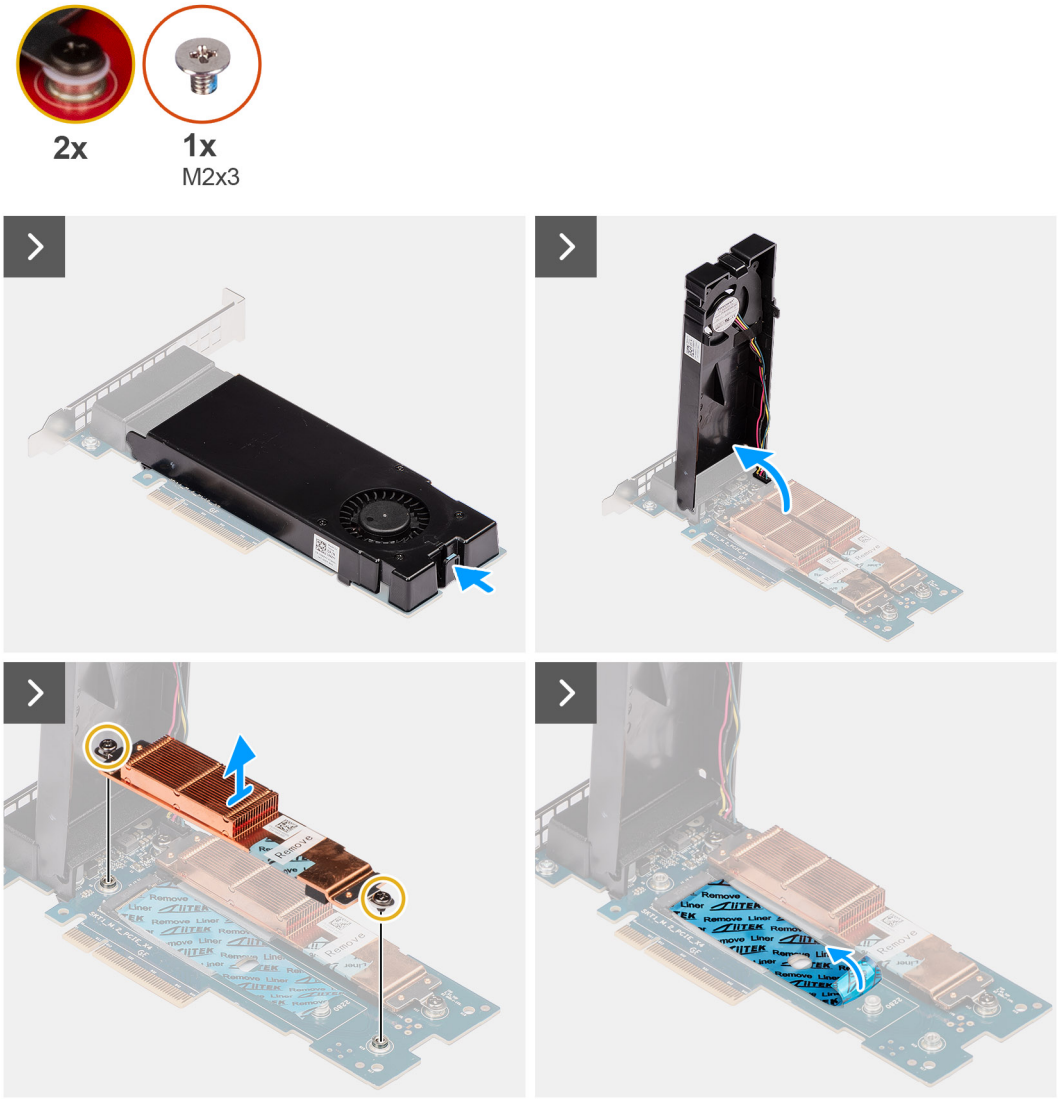


Figure 55. Installing the UltraSpeed Duo solid state drive

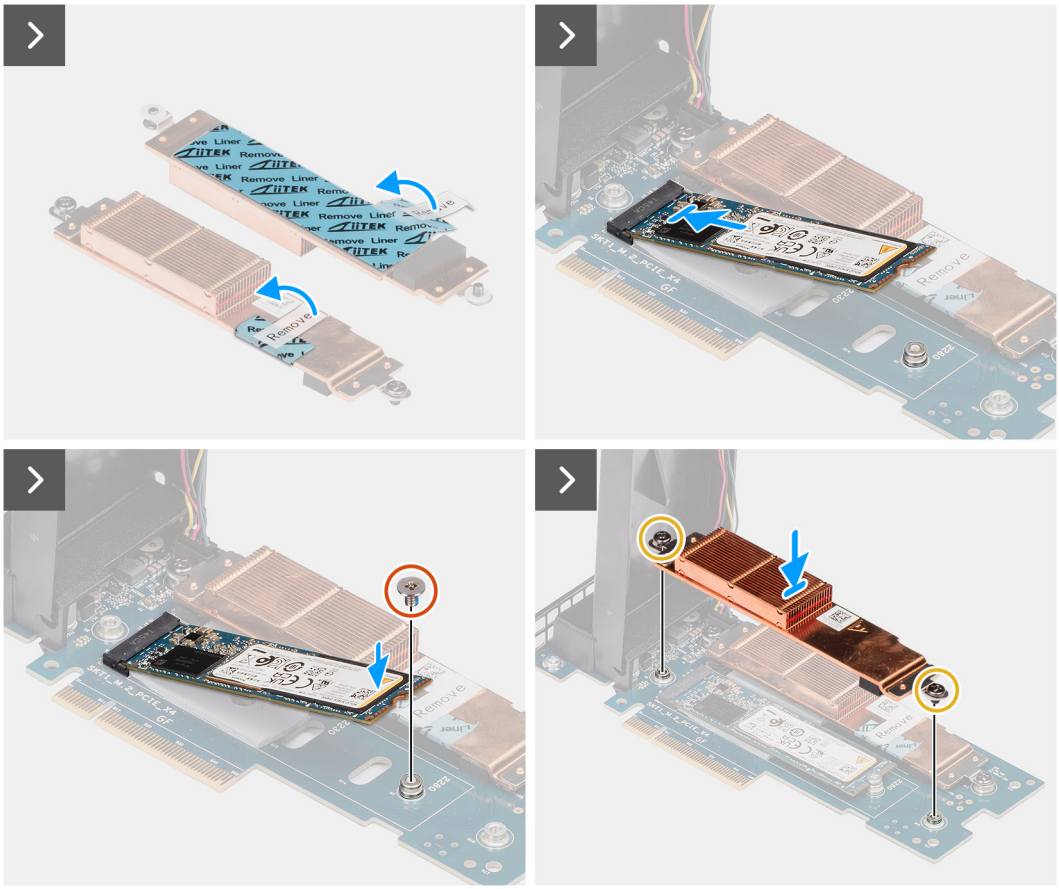


Figure 56. Installing the UltraSpeed Duo solid state drive

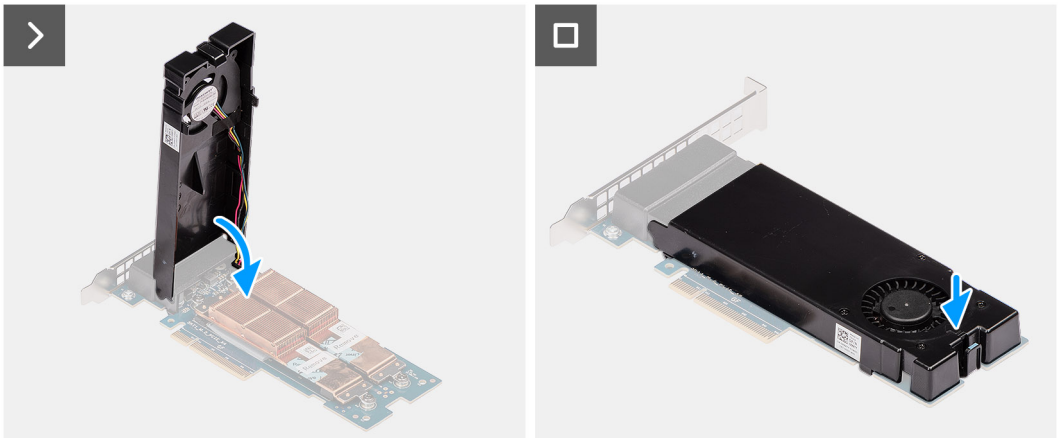


Figure 57. Installing the UltraSpeed Duo solid state drive

Steps

1. Press the release latch to open the fan shroud.
2. Lift to open the fan shroud.
3. Loosen the two captive screws and lift the heat sink away from the UltraSpeed Duo card.
4. Peel the protection film that covers the thermal pad on the M.2 solid state drive slot.
5. Peel the protection film that covers the thermal pad on the heat sink.
6. Align the notch on the M.2 2280 solid state drive with the tab on the solid state drive slot.
7. Slide the M.2 2280 solid state drive into the M.2 2280 solid state drive slot on the UltraSpeed Duo card.
8. Replace the screw (M2x3) on the UltraSpeed Duo card to secure the M.2 2280 solid state drive.

9. Align the screw holes on the solid state drive heat sink with screw holes on the UltraSpeed Duo card.
10. Tighten the two captive screws that secure the solid state drive heat sink in place.
11. Close the fan shroud and press until it clicks in place.

NOTE: The UltraSpeed Duo card can support two solid state drives. Repeat step 1 to step 10 to install the solid state drive into the second slot.

Next steps

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

Removing the UltraSpeed Duo card

Prerequisites

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

About this task

The following images indicate the location of the UltraSpeed Duo card and provide a visual representation of the removal procedure.

NOTE: Precision 7875 Tower supports only one UltraSpeed Duo card in slot 6, 5, or 4.

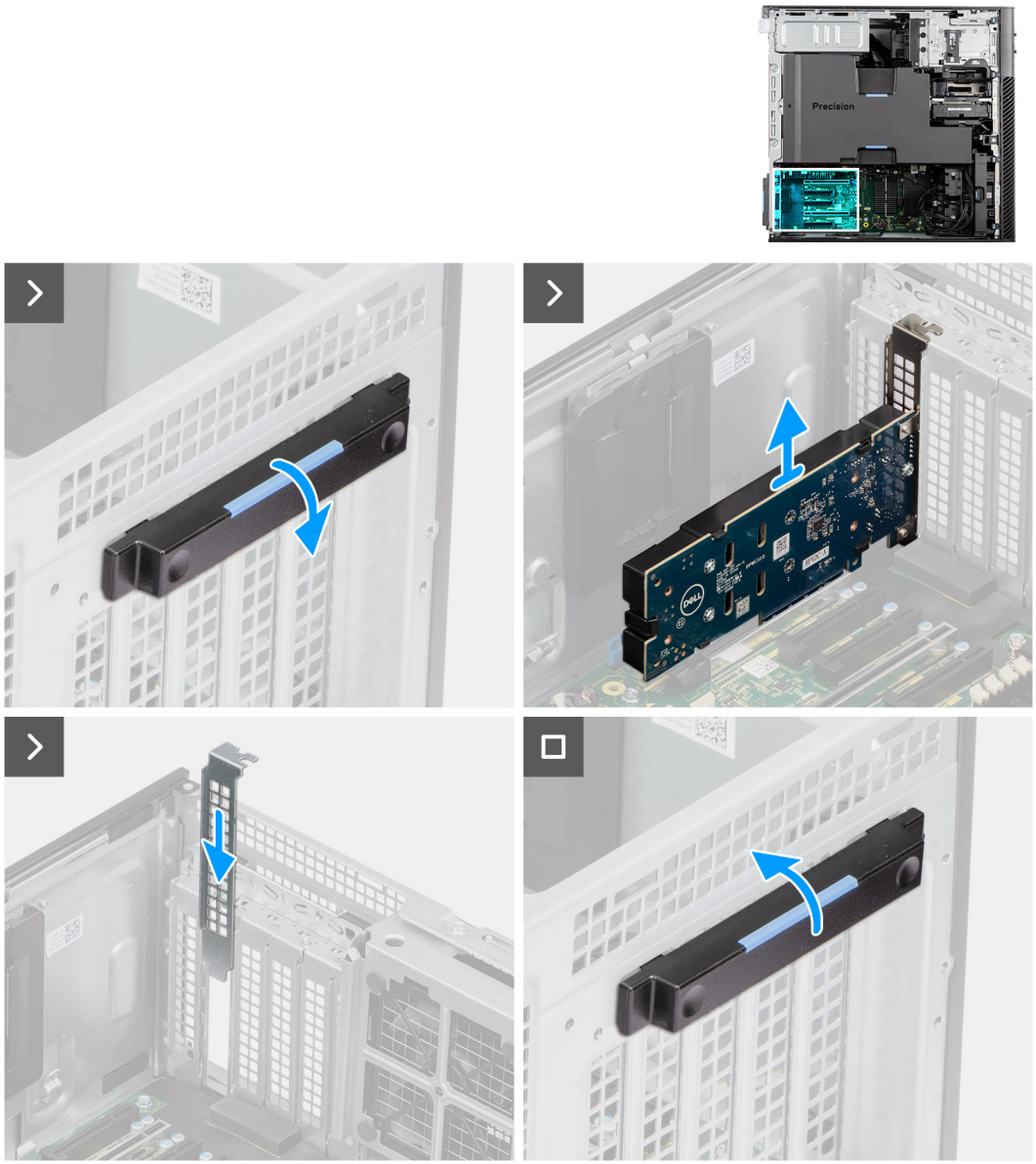


Figure 58. Removing the UltraSpeed Duo card

Steps

1. Push the PCIe latch to open the PCIe door.
2. Lift and remove the UltraSpeed Duo card away from the expansion-card slot.
3. Slide the PCIe filler door down.
4. Lift and push the PCIe latch to close the PCIe door.

UltraSpeed Quad

Installing the UltraSpeed Quad card

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 UltraSpeed Quad card and provide a visual representation of the installation procedure.

NOTE: Precision 7875 Tower supports only one UltraSpeed Quad card in slot 5.

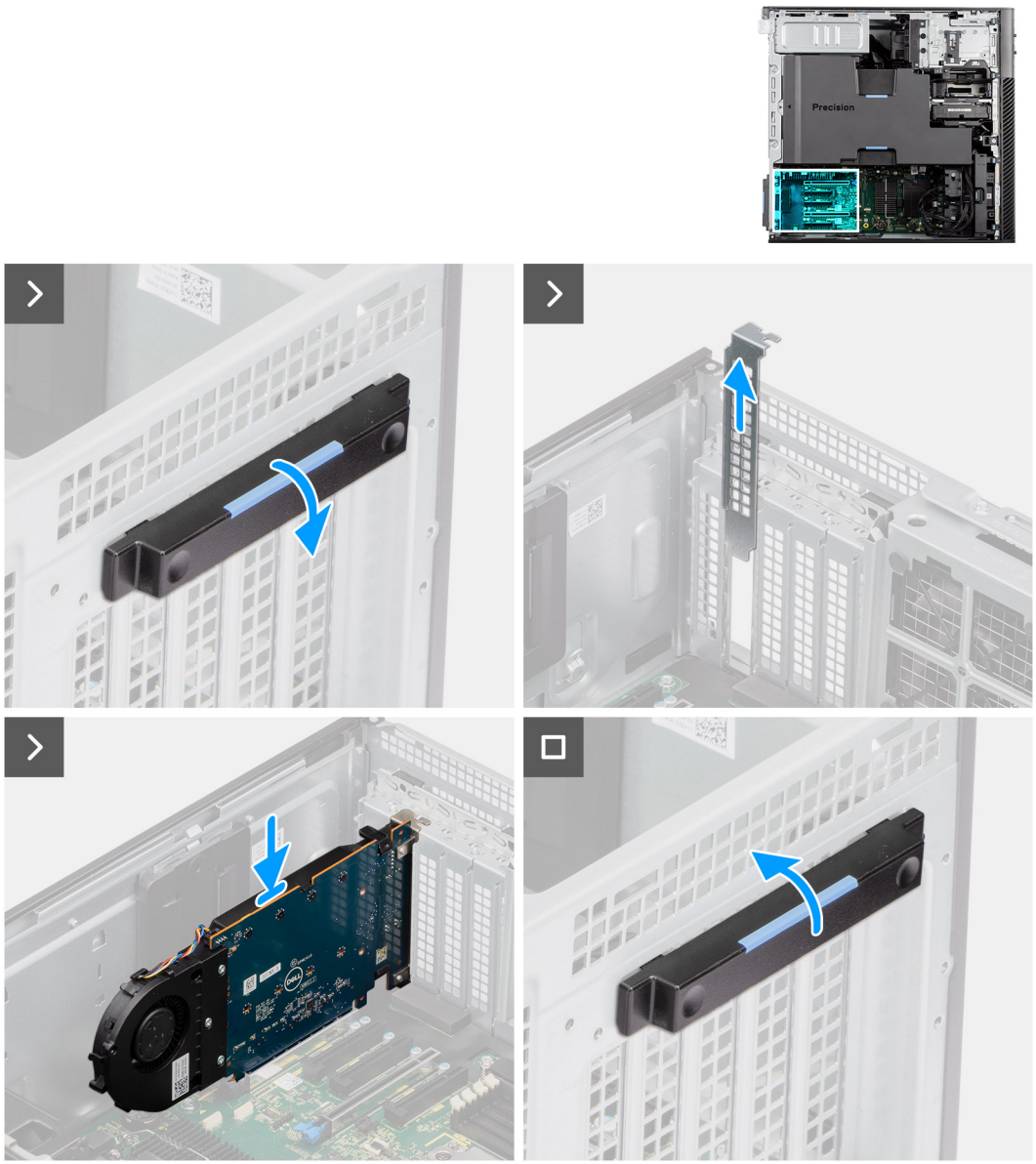


Figure 59. Installing the UltraSpeed Quad card

Steps

1. Push down the PCIe latch to open the PCIe door.
2. Slide and lift the PCIe filler from the PCIe slot.
3. Align and place the UltraSpeed Quad card into the expansion slot.
4. Lift the PCIe latch to close the PCIe door.

Next steps

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

Installing the UltraSpeed Quad M.2 2280 solid state drive

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 theUltraSpeed Quad M.2 2280 solid state drive and provide a visual representation of the installation procedure.

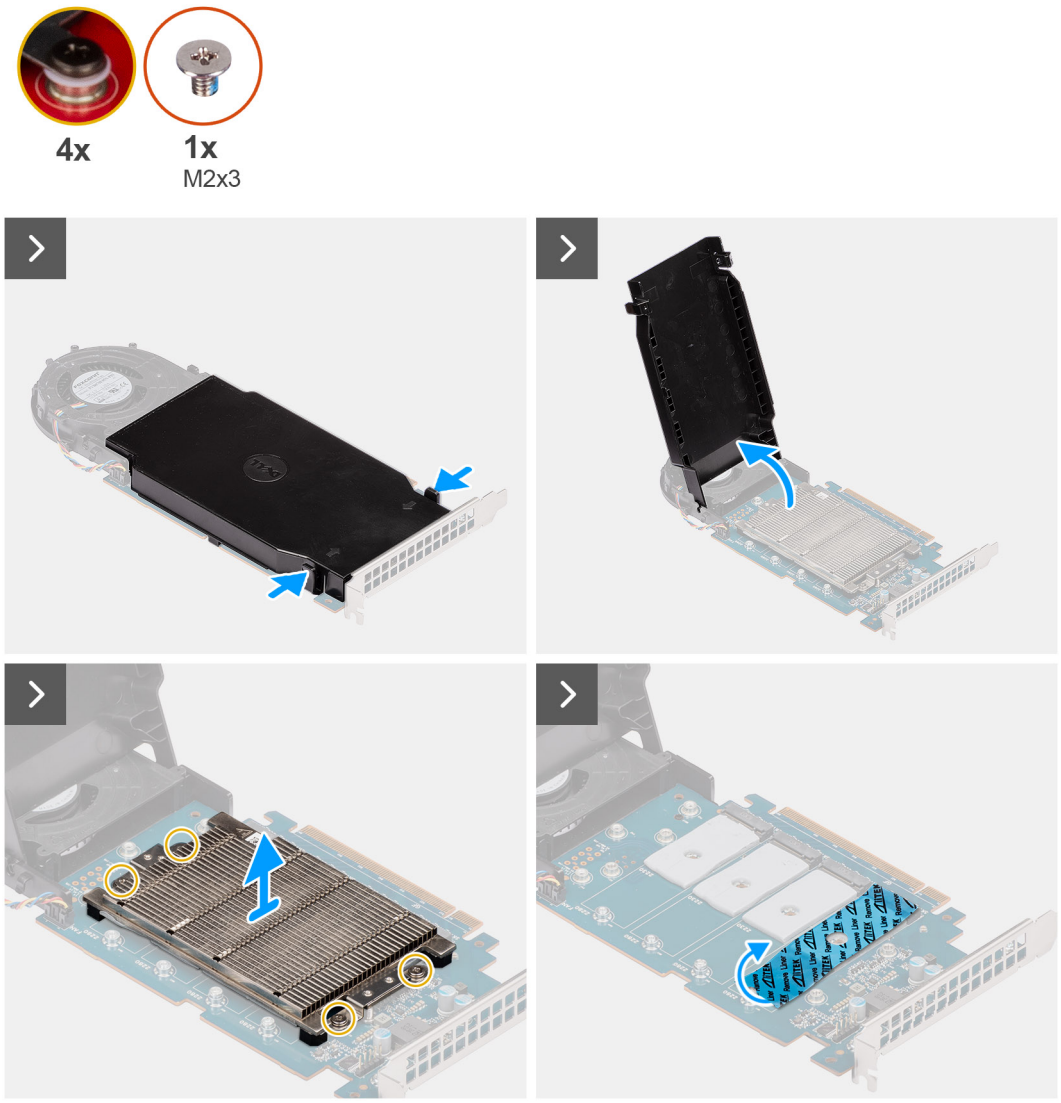


Figure 60. Installing the UltraSpeed Quad M.2 2280 solid-state drive

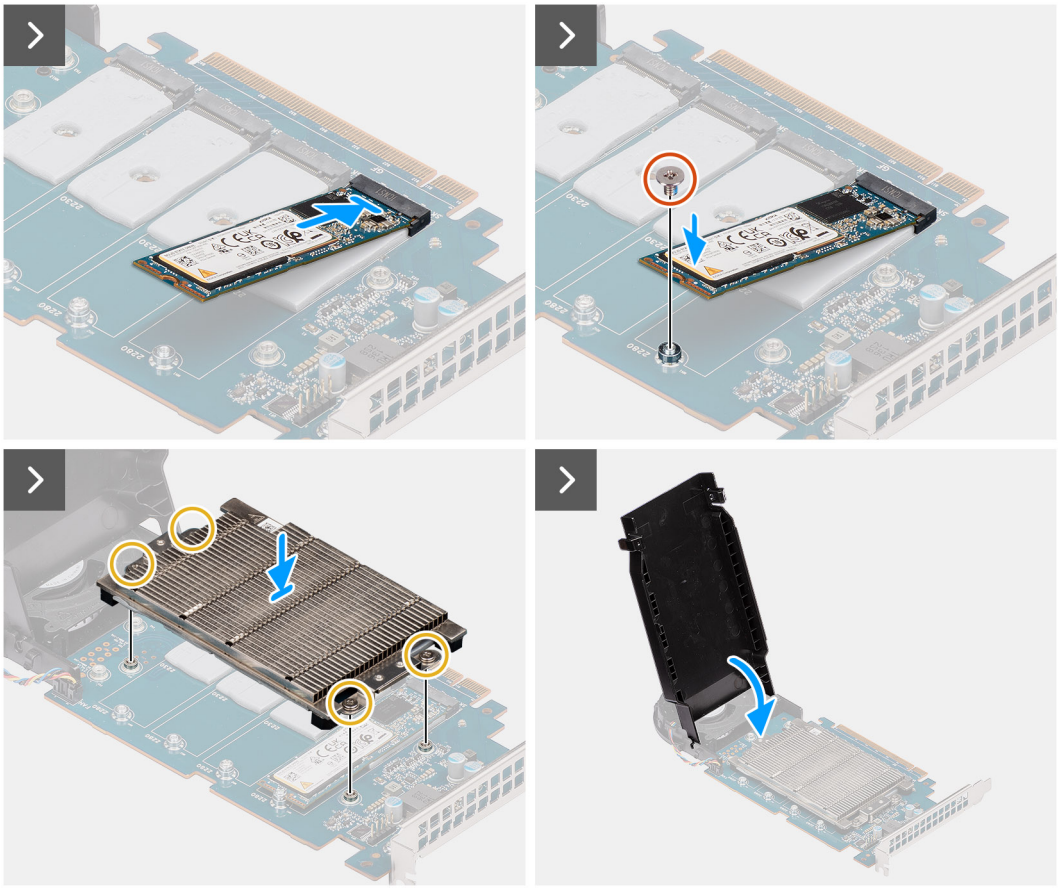


Figure 61. Installing the UltraSpeed Quad M.2 2280 solid-state drive

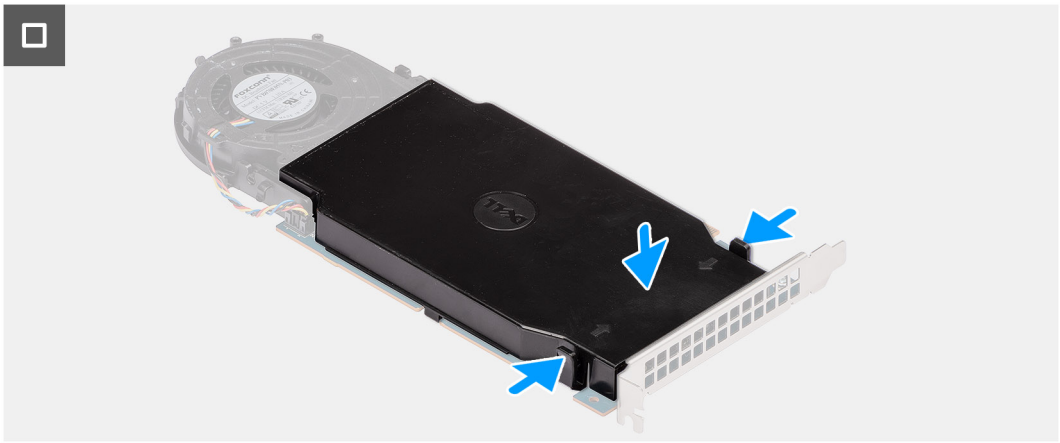


Figure 62. Installing the UltraSpeed Quad M.2 2280 solid-state drive

Steps

1. Press the release latches to open the fan shroud.
2. Loosen the four captive screws and lift the heat sink away from the UltraSpeed Quad card.
3. Remove the screw (M2x3) from the UltraSpeed Quad card.
4. Peel the protection film that covers the thermal pad on the M.2 solid state drive slot.
5. Remove the screw (M3) from the UltraSpeed Quad card.
6. Align the notch on the M.2 2280 solid state drive with the tab on the solid state drive slot.
7. Slide the M.2 2280 solid state drive into the M.2 2280 solid state drive slot on the UltraSpeed Quad card.
8. Replace the screw (M2x3) on the UltraSpeed Quad card to secure the M.2 2280 solid state drive.

9. Align the screw holes on the solid state drive heat sink with screw holes on the UltraSpeed Quad card.
10. Tighten the four captive screws that secure the solid state drive heat sink in place.
11. Close the fan shroud and press until it clicks in place.

NOTE: The UltraSpeed Duo card can support four M.2 2280 solid state drives. Repeat step 1 to step 10 to install the solid state drive into the second slot.

Next steps

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

Installing the UltraSpeed Quad M.2 2230 solid state drive

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 theUltraSpeed Quad M.2 2230 solid state drive and provide a visual representation of the installation procedure.

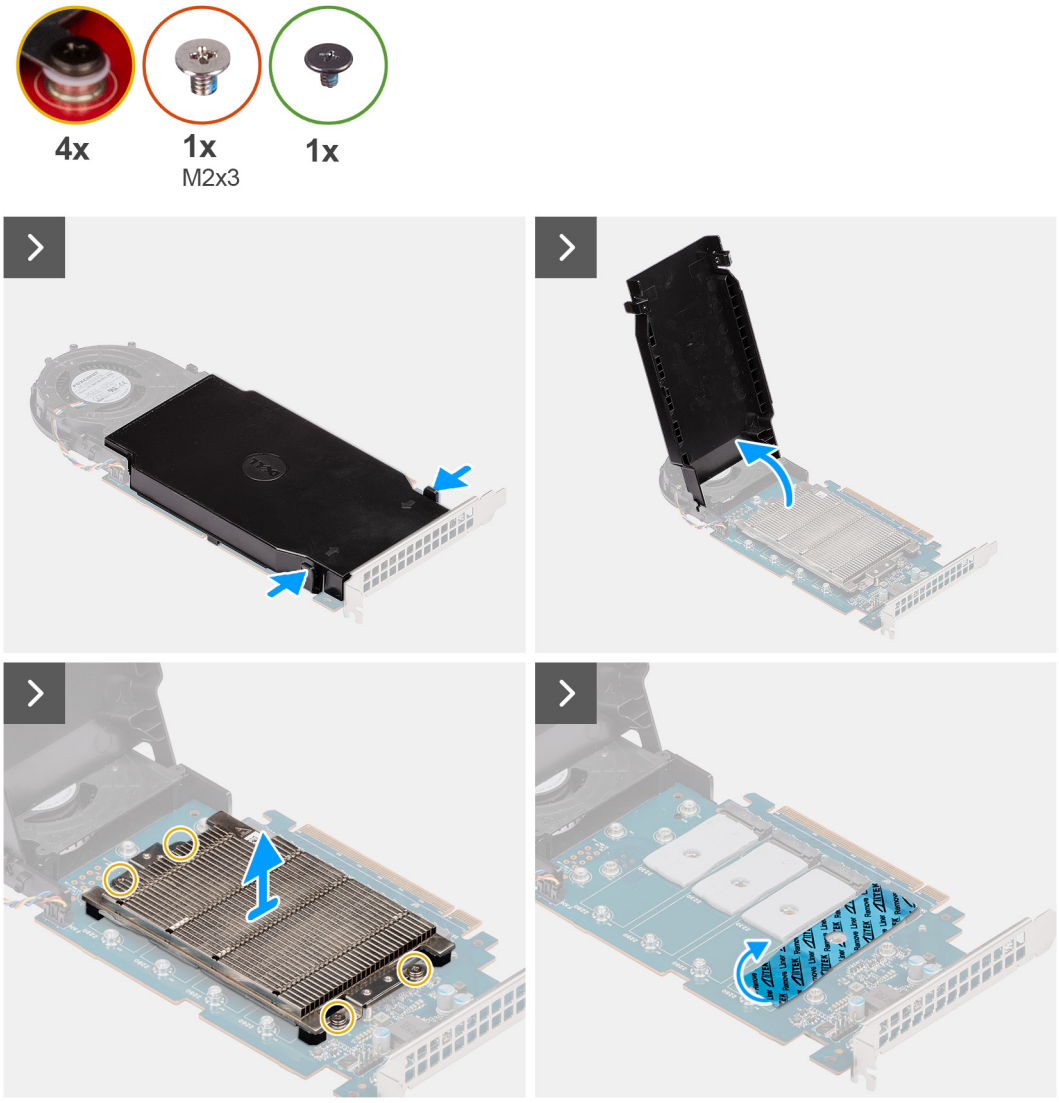


Figure 63. Installing the UltraSpeed Quad M.2 2230 solid-state drive

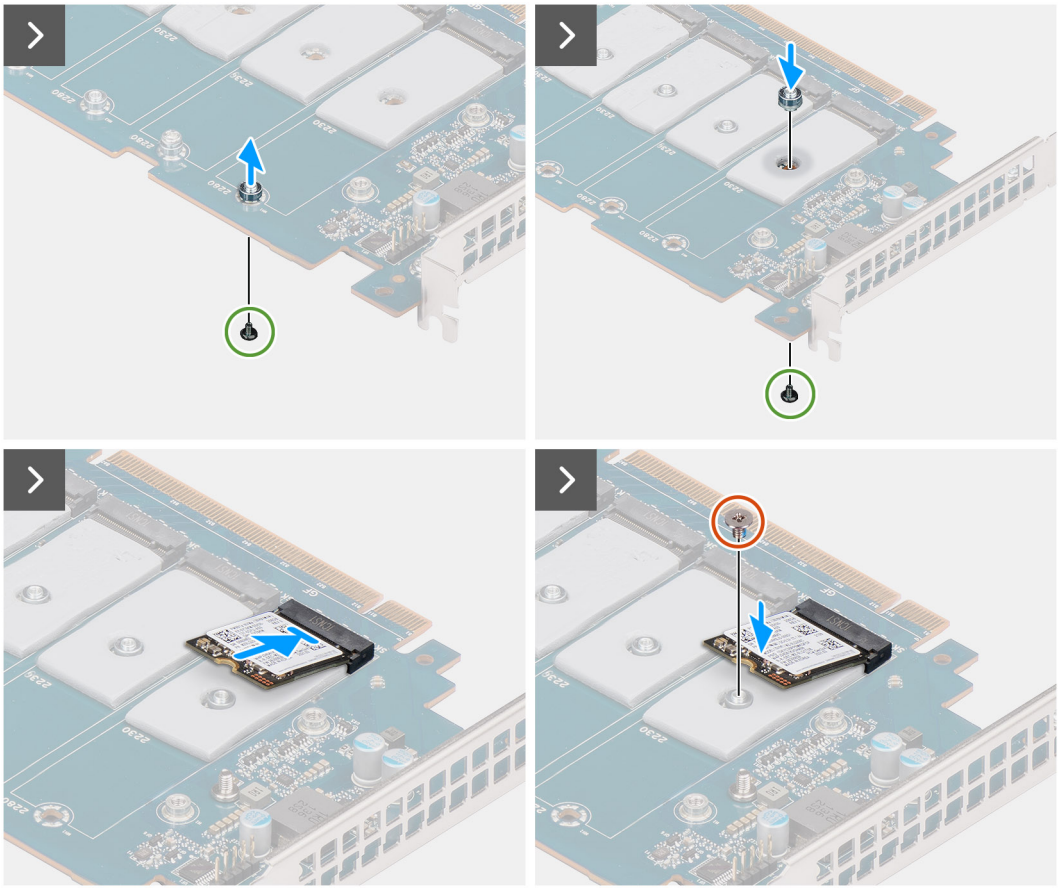


Figure 64. Installing the UltraSpeed Quad M.2 2230 solid-state drive

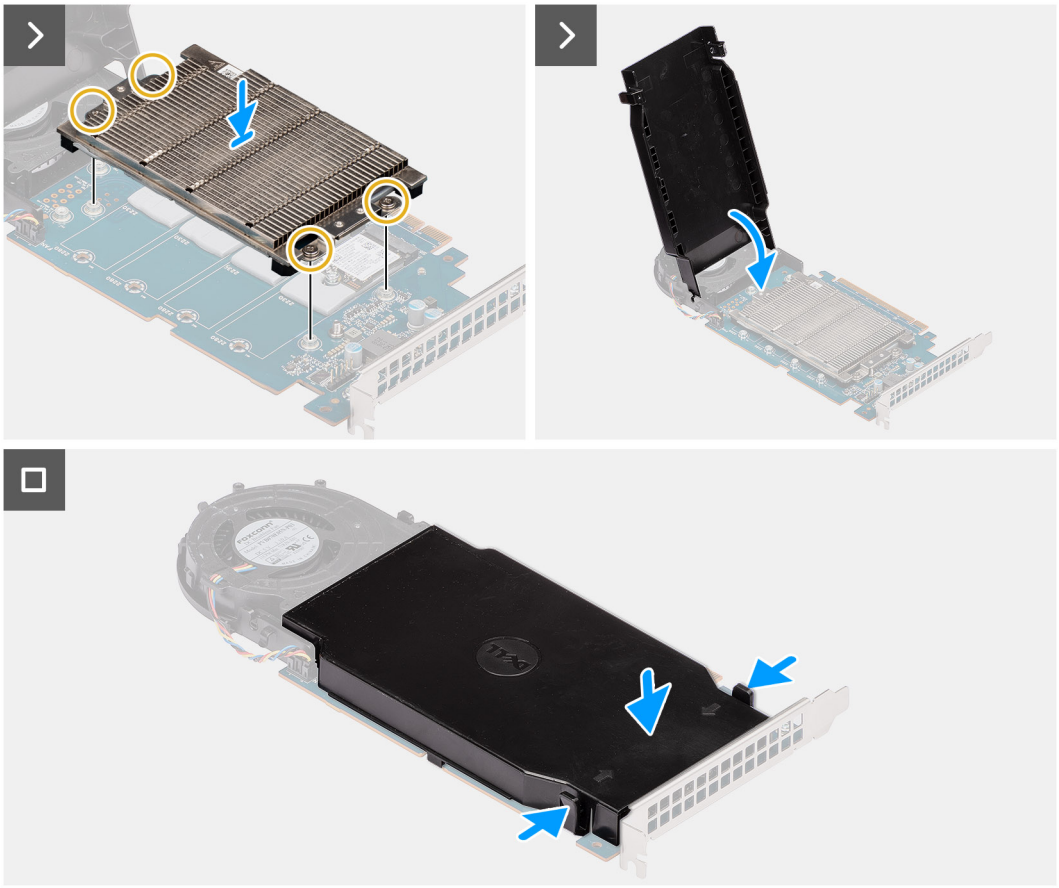


Figure 65. Installing the UltraSpeed Quad M.2 2230 solid-state drive

Steps

1. Press the release latches to open the fan shroud.
2. Loosen the four captive screws and lift the heat sink away from the UltraSpeed Quad card.
3. Remove the screw (M2x3) from the UltraSpeed Quad card.
4. Peel the protection film that covers the thermal pad on the M.2 solid state drive slot.
5. Remove the screw (M3) from the UltraSpeed Quad card.
6. Align the notch on the M.2 2230 solid state drive with the tab on the solid state drive slot.
7. Slide the M.2 2230 solid state drive into the M.2 2230 solid state drive slot on the UltraSpeed Quad card.
8. Replace the screw (M2x3) on the UltraSpeed Quad card to secure the M.2 2230 solid state drive.
9. Align the screw holes on the solid state drive heat sink with screw holes on the UltraSpeed Quad card.
10. Tighten the four captive screws that secure the solid state drive heat sink in place.
11. Close the fan shroud and press until it clicks in place.

NOTE: The UltraSpeed Duo card can support four M.2 2230 solid state drives. Repeat step 1 to step 10 to install the solid state drive into the second slot.

Next steps

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

Removing the UltraSpeed Quad card

Prerequisites

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

About this task

The following images indicate the location of the UltraSpeed Quad card and provide a visual representation of the removal procedure.

NOTE: Precision 7875 Tower supports only one UltraSpeed Quad card in slot 5.

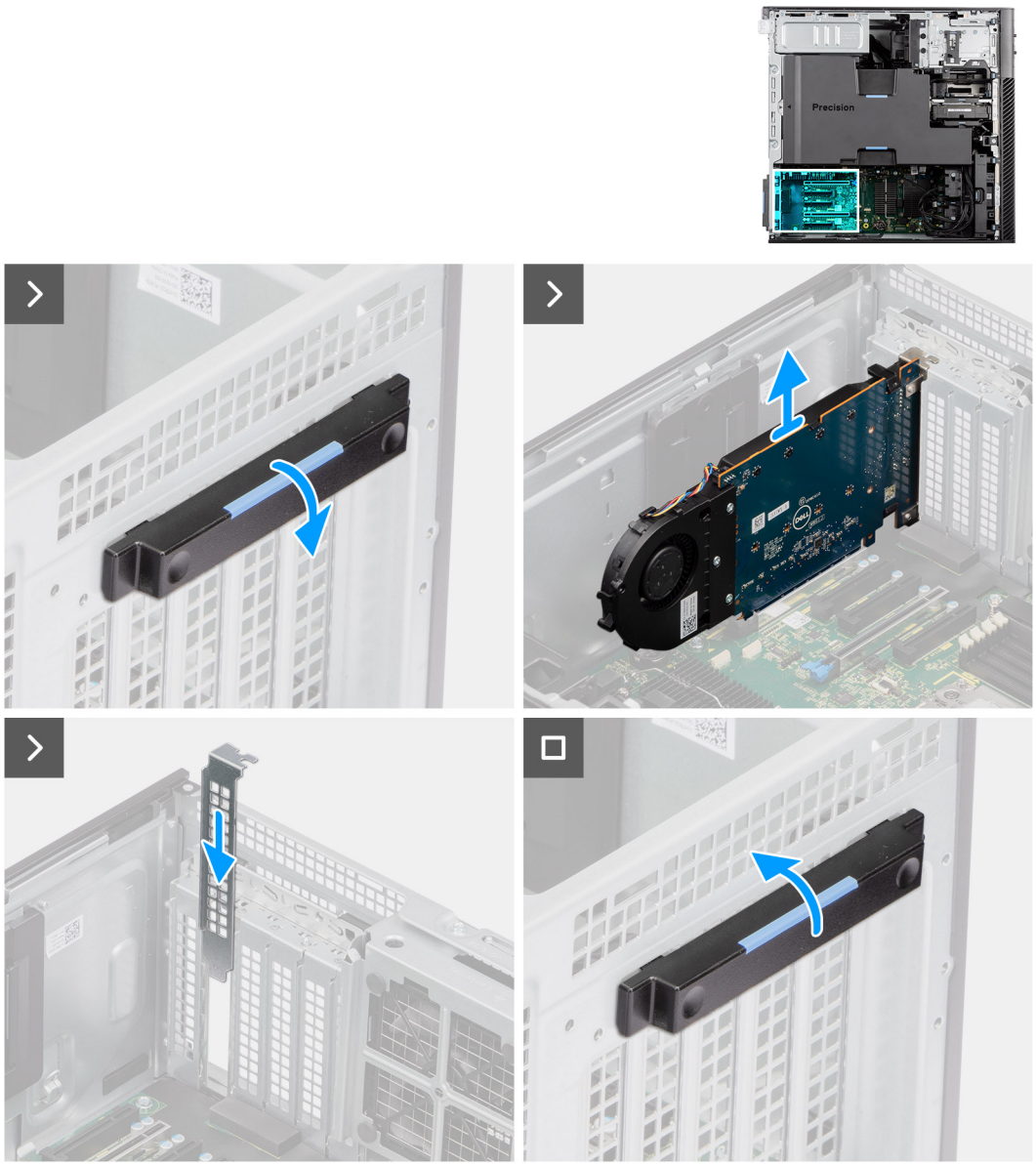


Figure 66. Removing the UltraSpeed Quad card

Steps

1. Push the PCIe latch to open the PCIe door.
2. Lift and remove the UltraSpeed Quad card away from the expansion-card slot.
3. Slide the PCIe door down and push the PCIe latch to close the PCIe door.

Serial card

Installing the serial card

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 serial card and provide a visual representation of the installation procedure.

NOTE: Precision 7875 Tower supports only two serial cards in slots 6, 5, 4, 3, or 1.

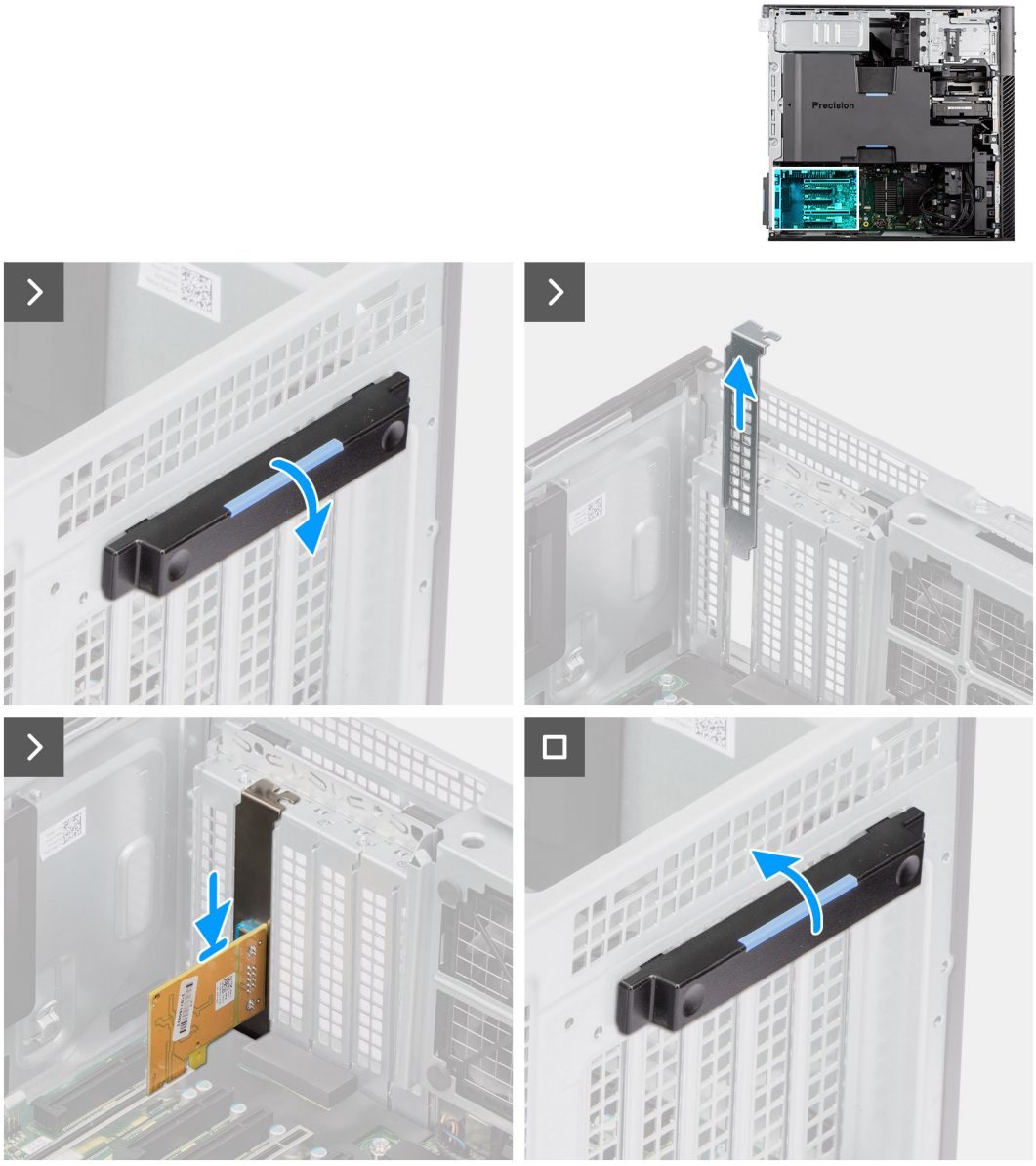


Figure 67. Installing the serial card

Steps

1. Push down the PCIe latch to open the PCIe door.
2. Slide and lift the PCIe filler from the PCIe slot.
3. Align and place the serial card into the expansion slot.

4. Lift the PCIe latch to close the PCIe door.

Next steps

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

Removing the serial card

Prerequisites

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

About this task

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

NOTE: Precision 7875 Tower supports only two serial cards in slots 6, 5, 4, 3, or 1.

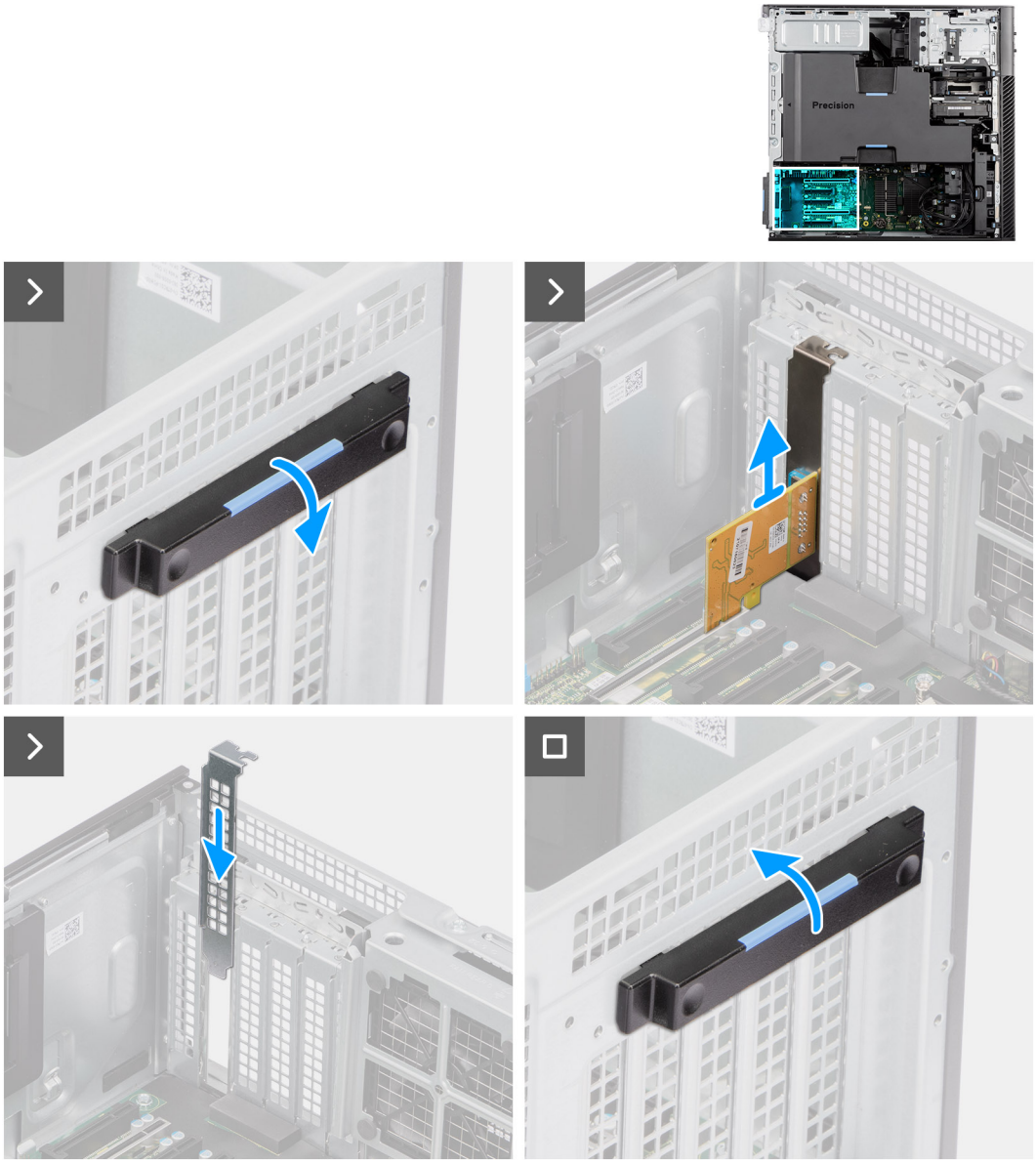


Figure 68. Removing the serial card

Steps

1. Push the PCIe latch down and open the PCIe door.
2. Lift and remove the serial card away from the expansion-card slot.
3. Slide the PCIe door down and push the PCIe latch to close the PCIe door.

Graphics card

Installing the non-powered graphic card

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 non-powered graphic card and provide a visual representation of the installation procedure.

NOTE: Precision 7875 Tower supports only two graphic cards in slots 2 and 5.

NOTE: NVIDIA GeForce RTX 4090 can only be installed in slot 2 due to installation limitations.

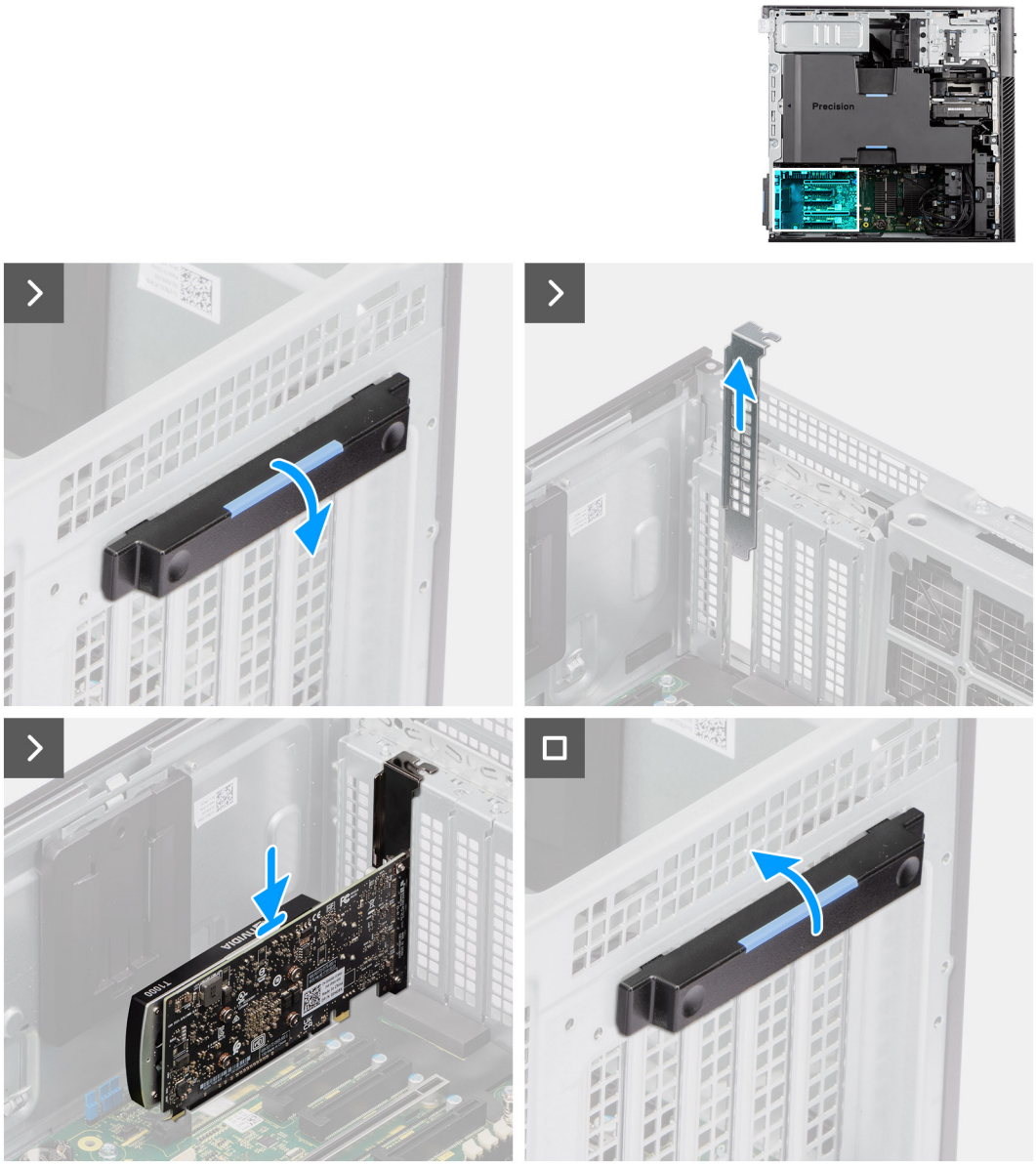


Figure 69. Installing the non-powered graphic card

Steps

1. Push down the PCIe latch to open the PCIe door.
2. Slide and lift the PCIe filler from the PCIe slot.
3. Align and place the non-powered graphic card into the expansion slot.
4. Lift the PCIe latch to close the PCIe door.

Next steps

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

Removing the non-powered graphic card

Prerequisites

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

About this task

The following images indicate the location of the non-powered graphic card and provide a visual representation of the removal procedure.

NOTE: Precision 7875 Tower supports only two graphic cards in slots 2 and 5.

NOTE: NVIDIA GeForce RTX 4090 can only be installed in slot 2 due to installation limitations.

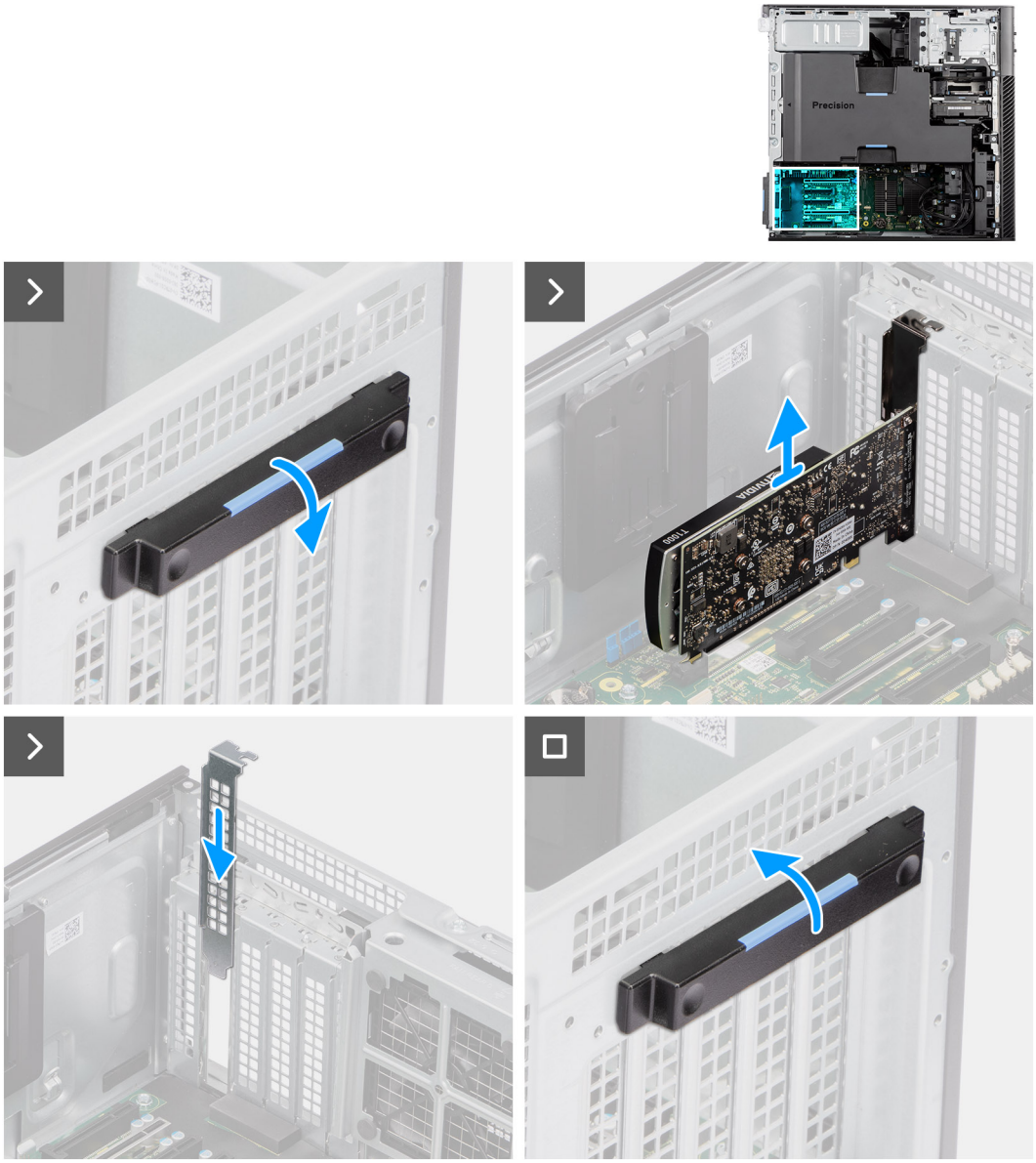


Figure 70. Removing the non-powered graphic card

Steps

1. Push the PCIe latch down and open the PCIe door.
2. Lift and remove the non-powered graphic card away from the expansion-card slot.
3. Slide the PCIe door down and push the PCIe latch to close the PCIe door.

Network Interface Card (NIC)

Installing the 10G network adapter

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 10 G network adapter and provide a visual representation of the installation procedure.

NOTE: Precision 7875 Tower supports only one 10 G network adapter in slots 6, 5, 4, or 1.

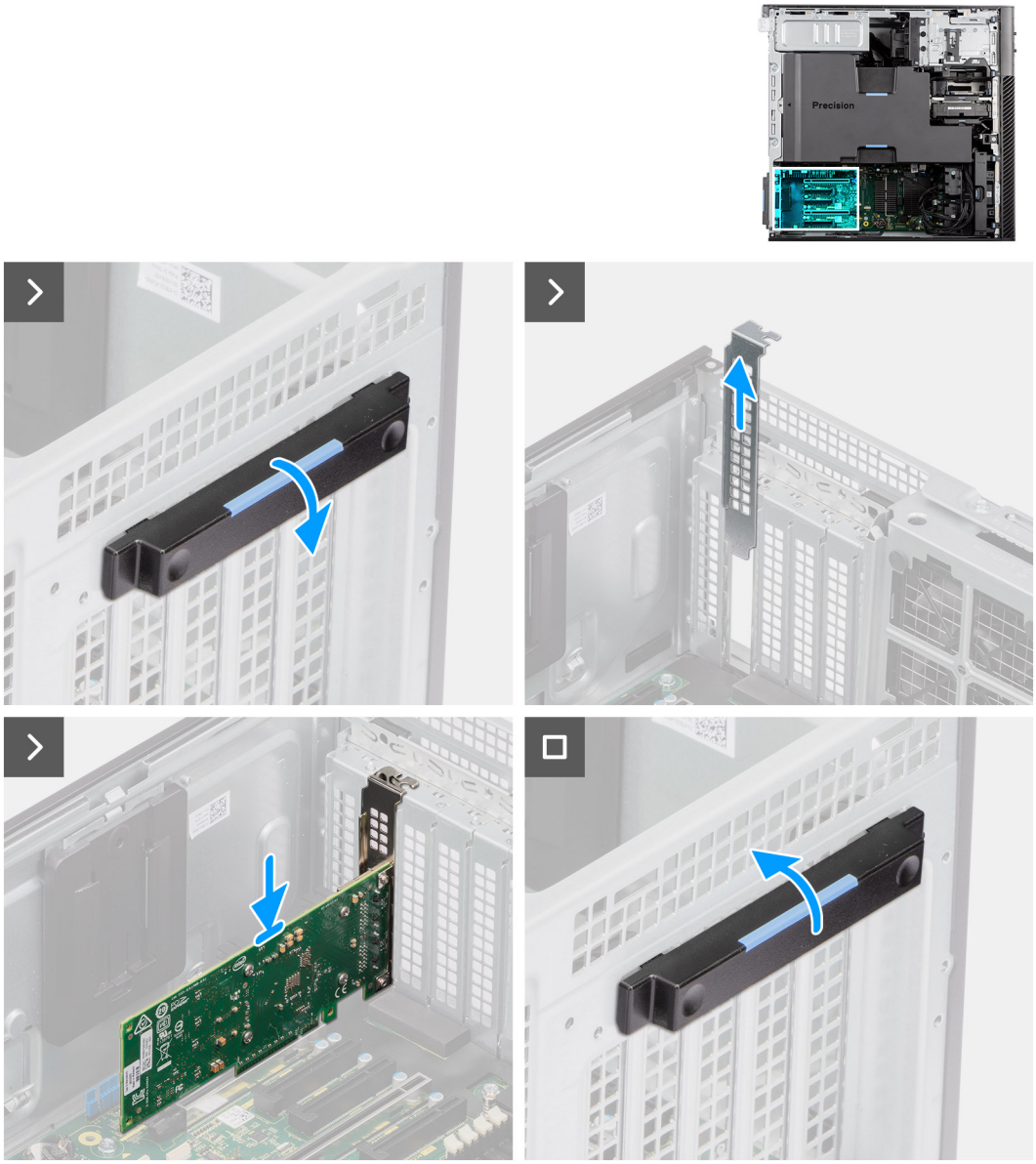


Figure 71. Installing the 10G network adapter

Steps

1. Push down the PCIe latch to open the PCIe door.
2. Slide and lift the PCIe filler from the PCIe slot.

3. Align and place the 10G network adapter into the expansion slot.
4. Lift the PCIe latch to close the PCIe door.
5. Route the 10G network adapter cable through the routing guides on the chassis.
6. Connect the 10G network adapter cable to the connector on the system board.

Next steps

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

Removing the 10G network adapter

Prerequisites

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

About this task

The following images indicate the location of the 10G network adapter and provide a visual representation of the removal procedure.

NOTE: Precision 7875 Tower supports only one 10G network adapter in slots 6, 5, 4, or 1.

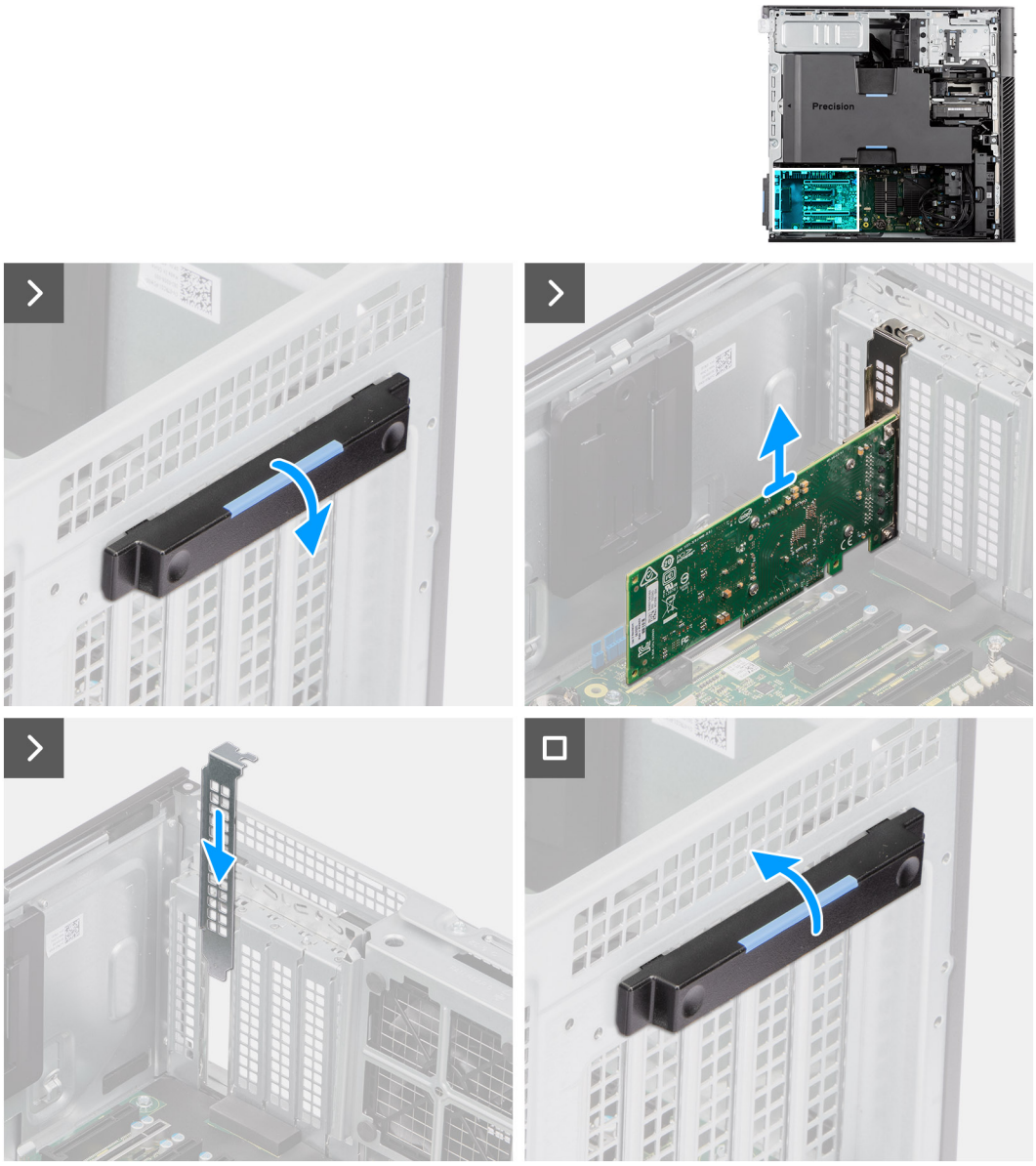


Figure 72. Removing the 10G NIC

Steps

1. Push the PCIe latch down and open the PCIe door.
2. Lift and remove the 10G network card away from the expansion-card slot.
3. Slide the PCIe filler door down and push the PCIe latch to close the PCIe door.

M.2 solid-state drive

Removing the M.2 2230 PCIe solid state drive

Prerequisites

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

About this task

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

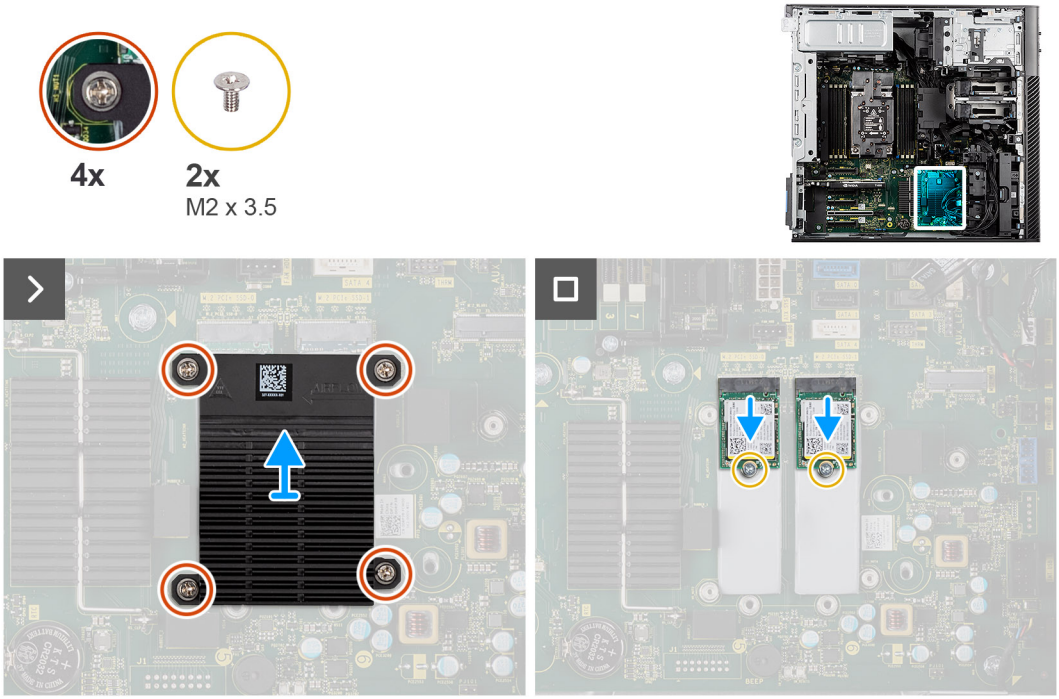


Figure 73. Removing the M.2 2230 PCIe solid state drive

Steps

1. Loosen the four captive screws that secure the M.2 heat sink to the system board.
2. Lift and remove the M.2 heat sink from the computer.
3. Remove the single (M2x3.5) screw that secures the solid state drive to the system board.
4. Slide and lift the solid state drive off the system board.

NOTE: If the computer has two solid state drives installed, repeat step 3 to step 4 for the second solid state drive.

Installing the M.2 2230 PCIe solid state drive

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

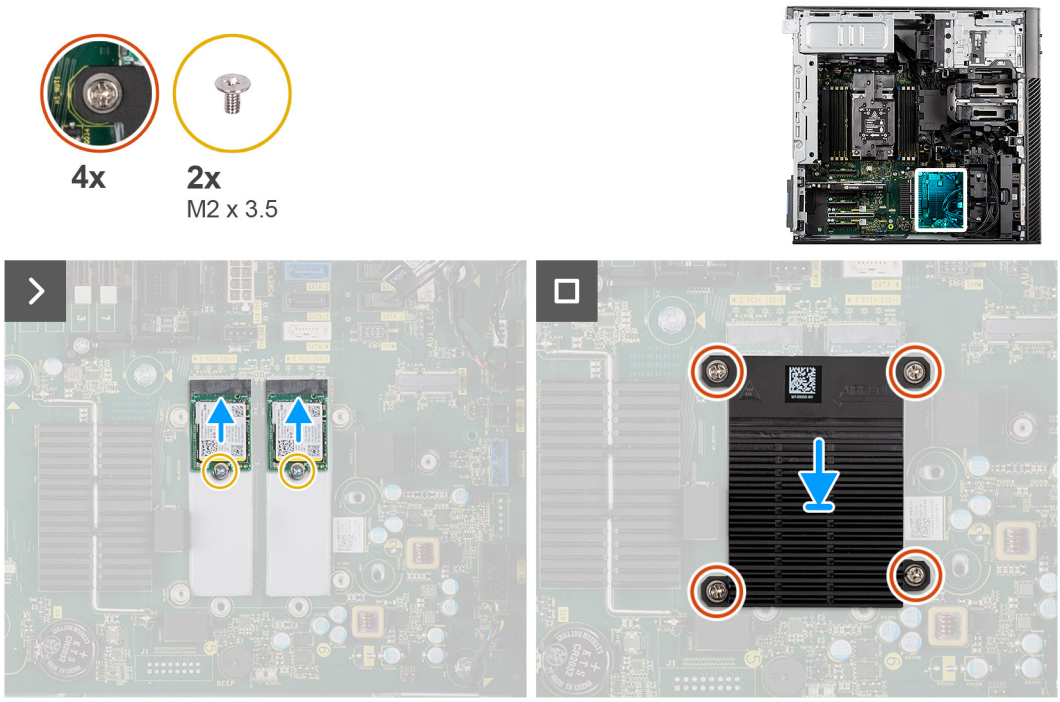


Figure 74. Installing the M.2 2230 PCIe solid state drive

Steps

1. Align the notch on the solid state drive with the tab on the solid state drive connector.
2. Insert the solid state drive at a 45-degree angle into the slot on the system board.

   NOTE: When replacing a M.2 2280 solid state drive from a M.2 2230 solid state drive, ensure to move the standoff nut to the M.2 2230 solid state drive slot position.

3. Replace the single (M2x3.5) screw to secure the solid state drive to the system board.

   NOTE: If the computer has two solid state drives installed, repeat step 2 to step 3 for the second solid state drive.

4. Align and place the M.2 heat sink over the solid state drive.
5. Tighten the four captive screws to secure the M.2 heat sink to the system board.

Next steps

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

Removing the M.2 2280 PCIe solid state drive

Prerequisites

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

About this task

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

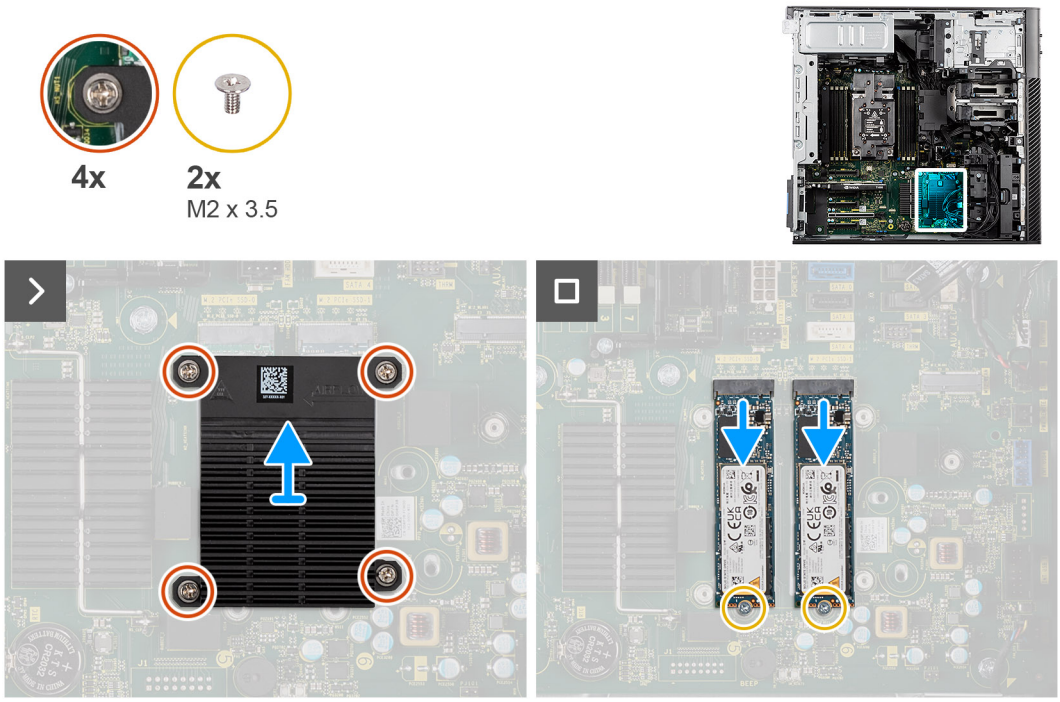


Figure 75. Removing the M.2 2280 PCIe solid state drive

Steps

1. Loosen the four captive screws that secure the M.2 heat sink to the system board.
2. Lift and remove the M.2 heat sink from the computer.
3. Remove the single (M2x3.5) screw that secures the solid state drive to the system board.
4. Slide and lift the solid state drive off the system board.

NOTE: If the computer has two solid state drives installed, repeat step 3 to step 4 for the second solid state drive.

Installing the M.2 2280 PCIe solid state drive

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

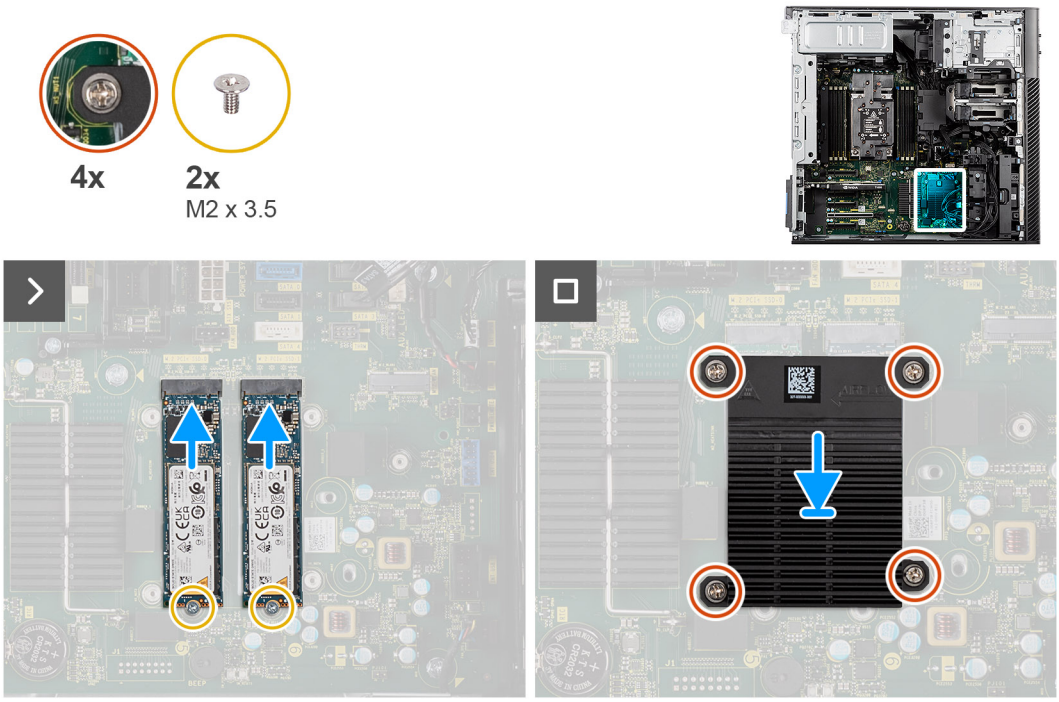


Figure 76. Installing the M.2 2280 PCIe solid-state drive

Steps

1. Align the notch on the solid state drive with the tab on the solid state drive connector.
2. Insert the solid state drive at a 45-degree angle into the slot on the system board.

   NOTE: When replacing a M.2 2280 solid state drive with a M.2 2230 solid state drive, ensure to move the standoff nut to the M.2 2230 solid state drive slot position.

3. Replace the single (M2x3.5) screw to secure the solid state drive to the system board.

   NOTE: If the computer has two solid state drives installed, repeat step 2 to step 3 for the second solid state drive.

4. Align and place the M.2 heat sink over the solid state drive.
5. Tighten the four captive screws to secure the M.2 heat sink to the system board.

Next steps

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

Rear fans

Removing the rear-fan assembly

Prerequisites

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

About this task

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

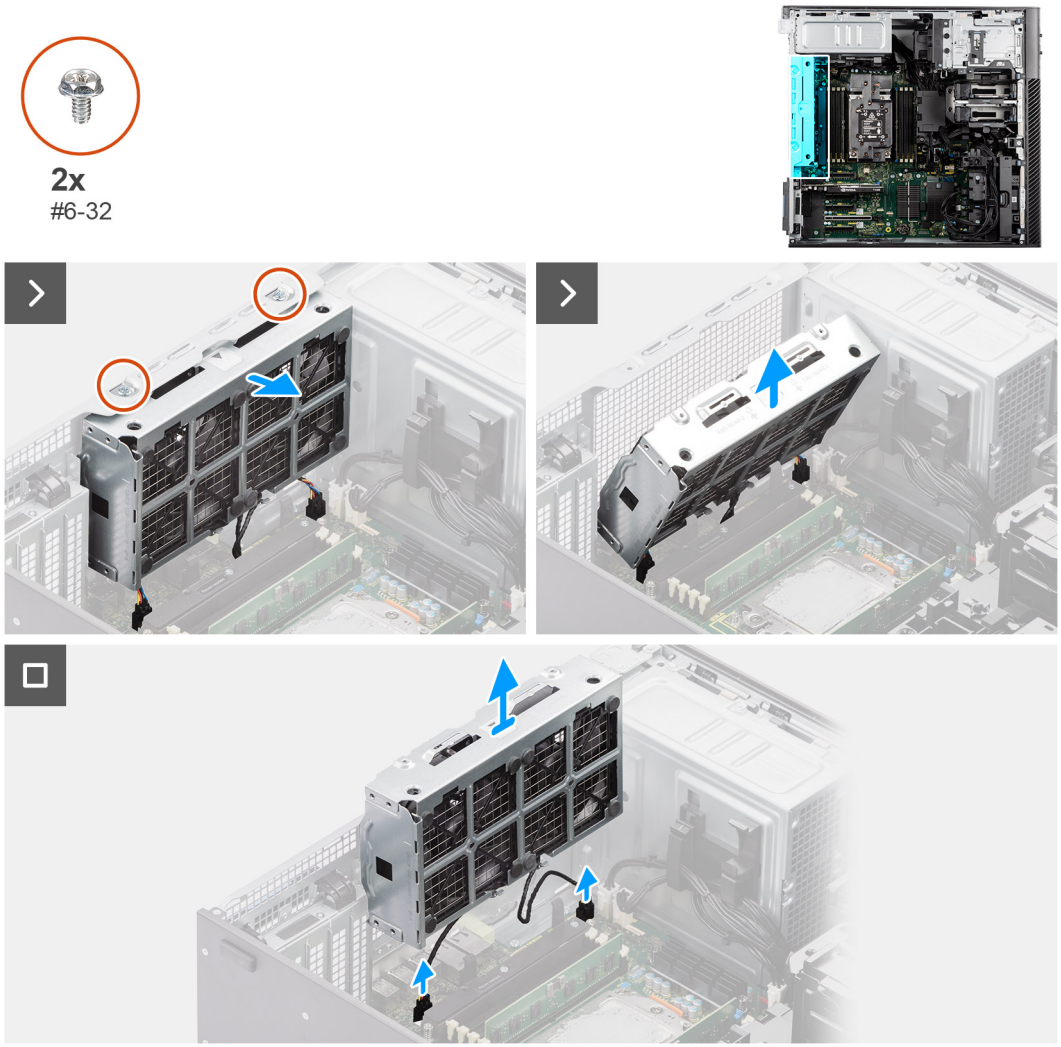


Figure 77. Removing the rear-fan assembly

Steps

1. Remove the two (#6-32) screws that secure the rear-fan assembly to the chassis.
2. Move the rear-fan assembly at an angle from the chassis.
3. Lift and remove the rear-fan assembly from the computer.
4. Disconnect the two fan cables from the connectors on the system board.

Removing rear fan

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the rear-fan assembly.

About this task

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

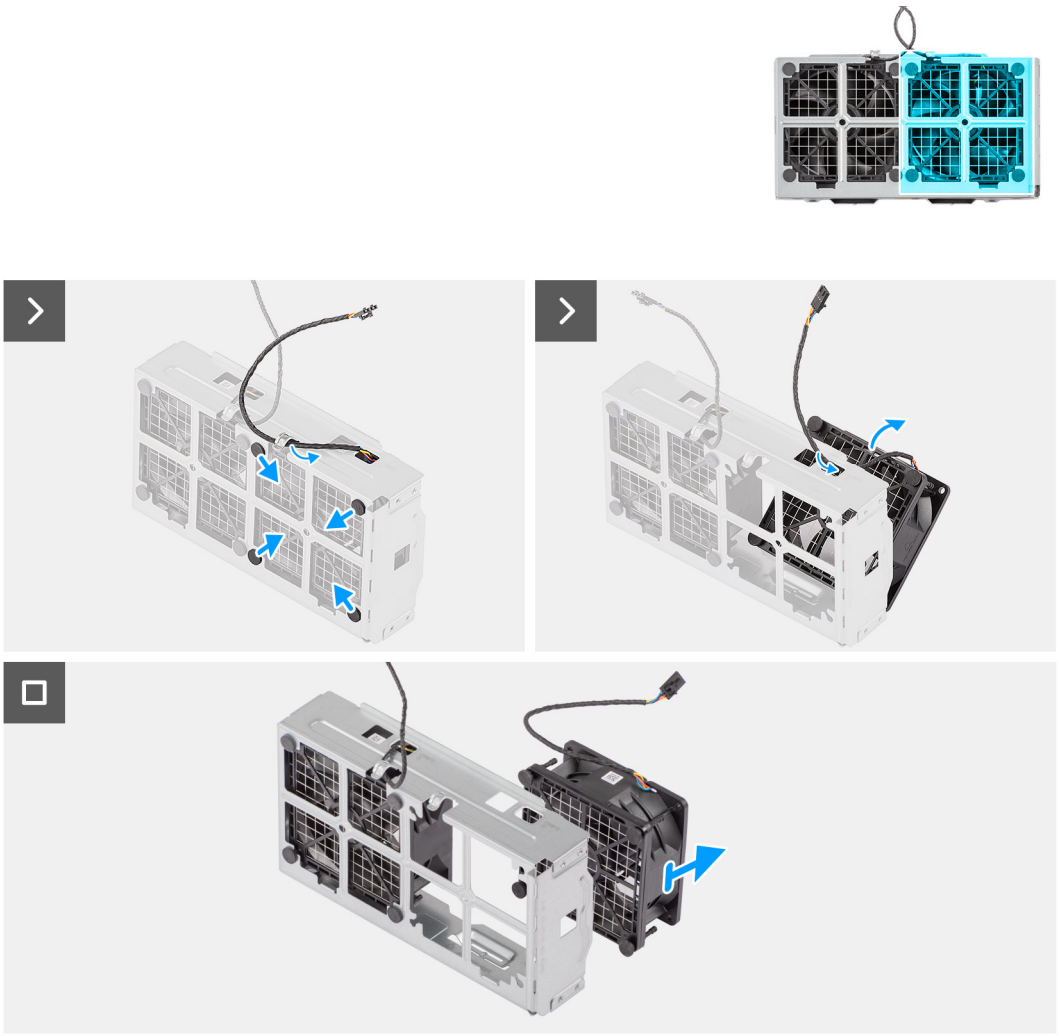


Figure 78. Removing rear fan

Steps

1. Unroute the fan cable from the routing guide on the fan assembly.
2. Locate the position of rubber grommets.
3. Gently pull the rubber grommets inwards to release the fan from the fan cage.
4. Remove the fan from the fan cage.

NOTE: Follow the step 1 to step 4 for the second fan.

Installing the rear 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 rear fan and provide a visual representation of the installation procedure.

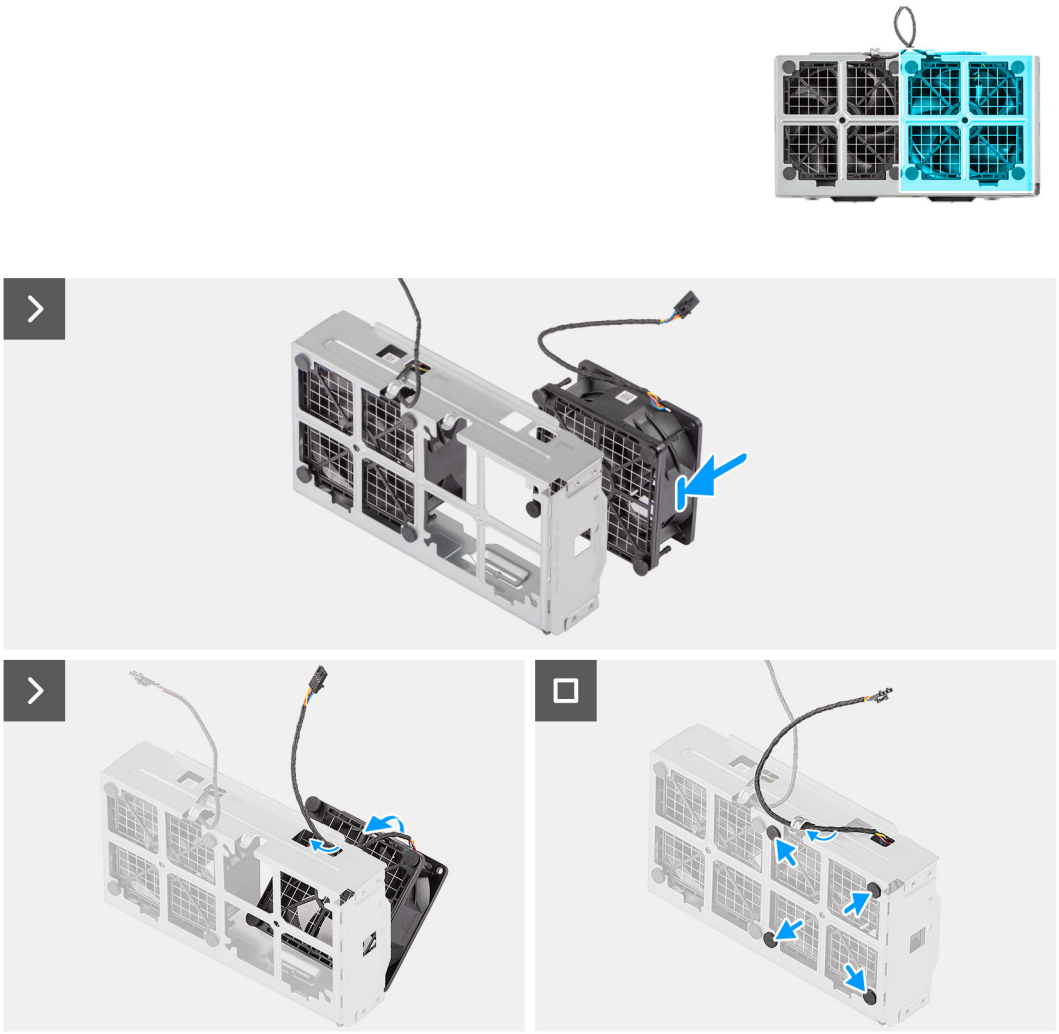


Figure 79. Installing the rear fan

Steps

1. Place the fan inside the fan cage.
2. Route the fan cable through the slot on the fan cage.
3. Align the slots on the fan with the rubber grommets on the fan cage.
4. Route the rubber grommets through the slots on the fan and pull the rubber grommets until the fan snaps into position.

Next steps

1. Install the rear-fan assembly.
2. Follow the procedure in After working inside your computer.

Installing the rear-fan assembly

Prerequisites

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

About this task

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

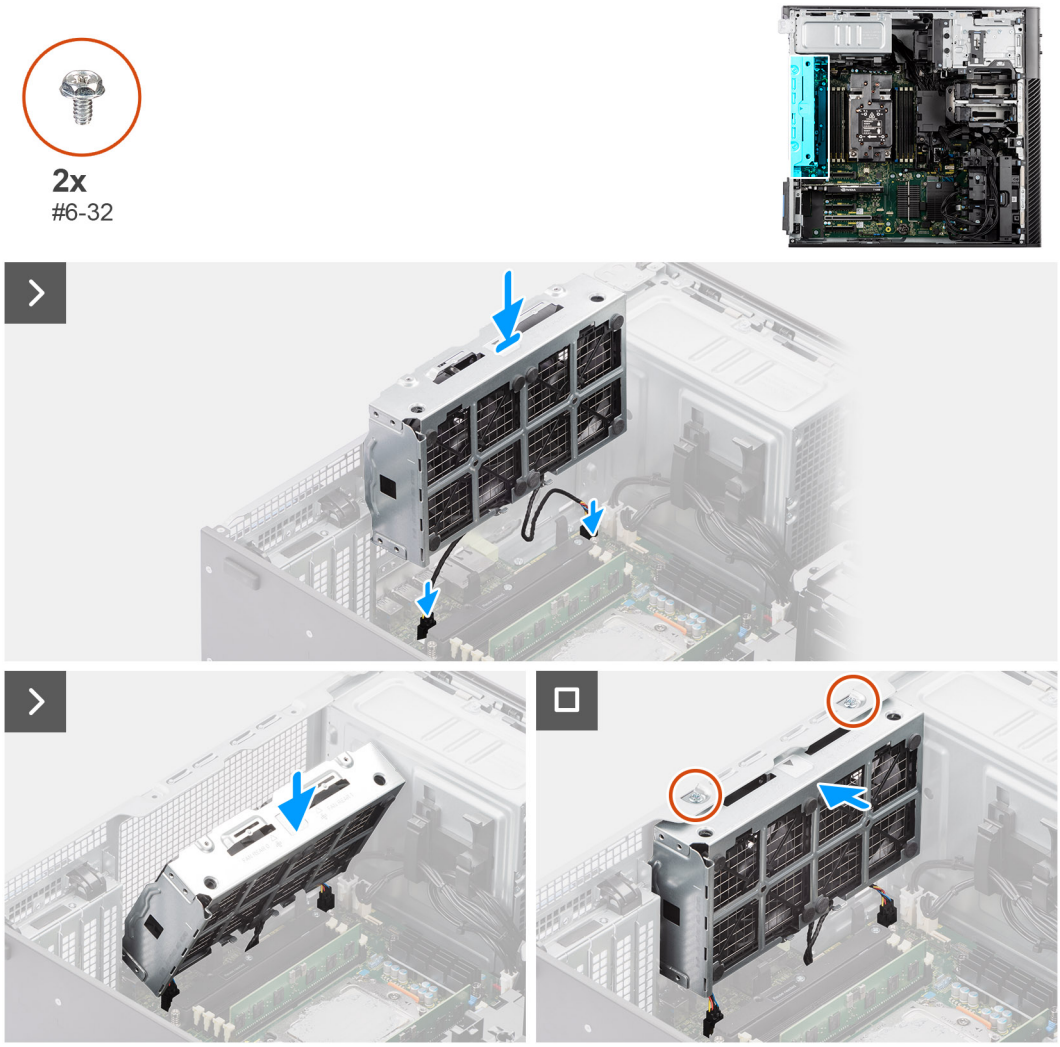


Figure 80. Installing the rear-fan assembly

Steps

1. Align the tabs on the rear-fan assembly with the slots on the chassis.
2. Insert the rear-fan assembly at an angle into the slot in the chassis.
3. Connect the two fan cables to the connectors on the system board.
4. Install the two (#6-32) screws to secure the rear-fan assembly to the chassis.

Next steps

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

Intrusion switch

Removing the intrusion switch

Prerequisites

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

3. Remove the air shroud.

About this task

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

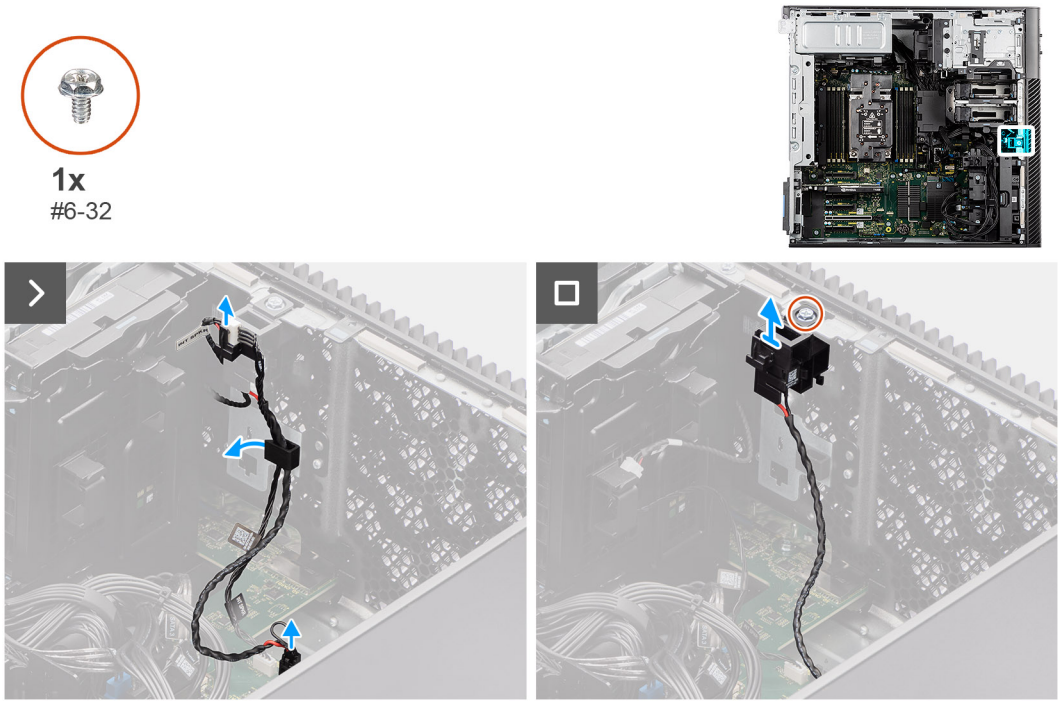


Figure 81. Removing the intrusion switch

Steps

1. Disconnect the intrusion-switch cable from the connector on the system board.
2. Unroute the intrusion switch cable and speaker cable off the cable clip.
3. Unroute the speaker-dongle cable from the routing guide on the intrusion switch.
4. Remove the single (#6-32) screw that secures the intrusion switch to the chassis.
5. Remove the intrusion switch along with the cable away from the computer.

Installing the intrusion switch

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 intrusion switch and provide a visual representation of the installation procedure.

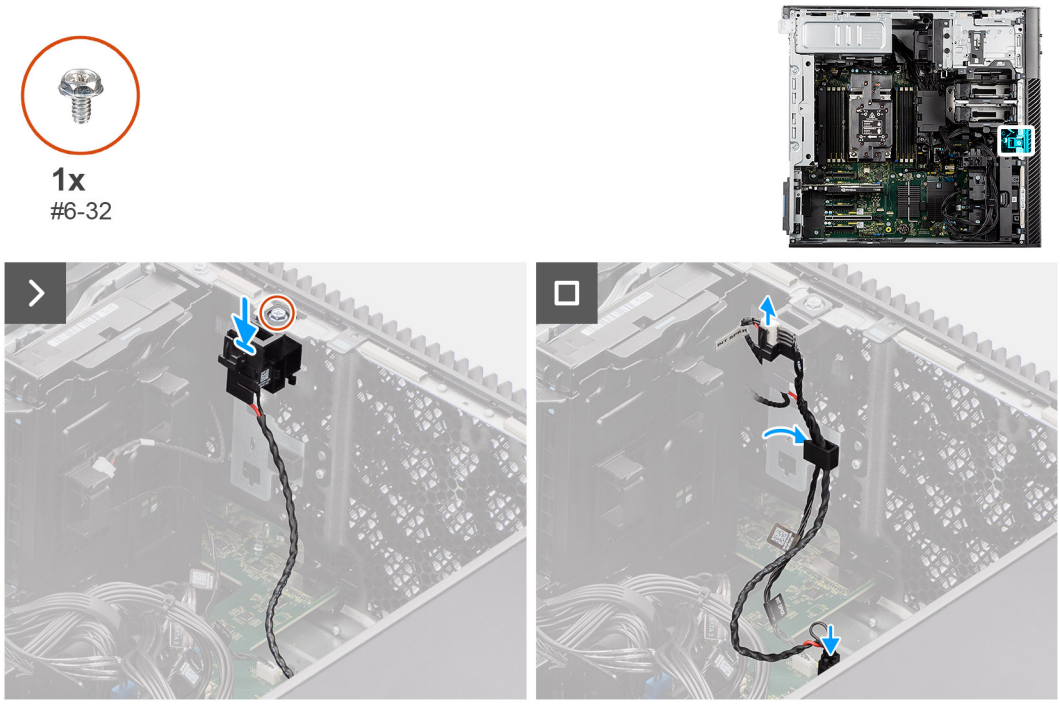


Figure 82. Installing the intrusion switch

Steps

1. Insert the intrusion switch into its slot in the chassis and secure it into place with the single (#6-32) screw.
2. Route the speaker-dongle cable through the routing guide on the intrusion switch.
3. Route the intrusion switch cable and speaker cable through the cable clip.
4. Connect the intrusion-switch cable to the connector on the system board.

Next steps

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

Speaker

Removing the speaker

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the front bezel.
4. Remove the air shroud.

About this task

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

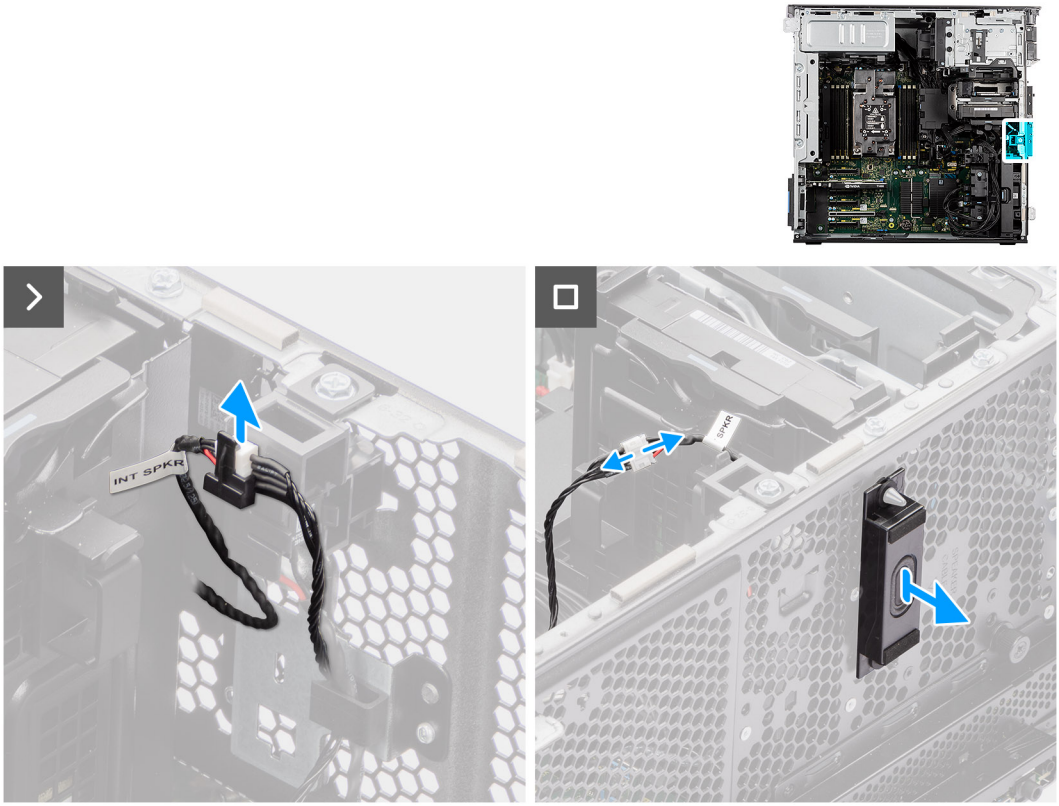


Figure 83. Removing the speaker

Steps

1. Disconnect the speaker cable from the connector on the system board.
2. Unroute the speaker-dongle cable from the routing guide on the intrusion switch.
3. Disconnect the speaker cable from the speaker-dongle cable.
4. Press the two tabs and pull the speaker along with the cable from the slot on the chassis.

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.

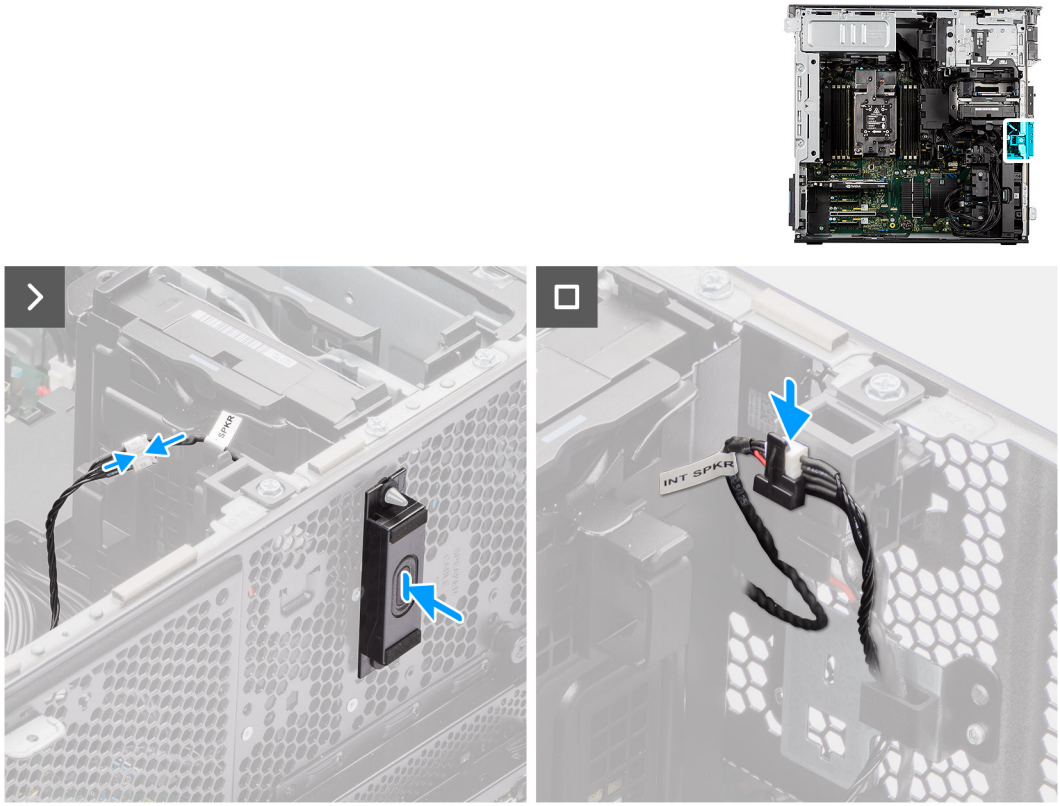


Figure 84. Installing the speaker

Steps

1. Route the speaker cable through the slot on the chassis.
2. Press the tabs on the speaker and push the speaker into the slot on the chassis until it snaps into place.
3. Connect the speaker cable to the speaker dongle cable.
4. Route the speaker-dongle cable through the routing guide on the intrusion switch.
5. Connect the speaker cable to the connector on the system board.

Next steps

1. Install the air shroud.
2. Install the front bezel.
3. Install the side cover.
4. Follow the procedure in After working inside your computer.

Coin-cell battery

Removing the coin-cell battery

Prerequisites

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

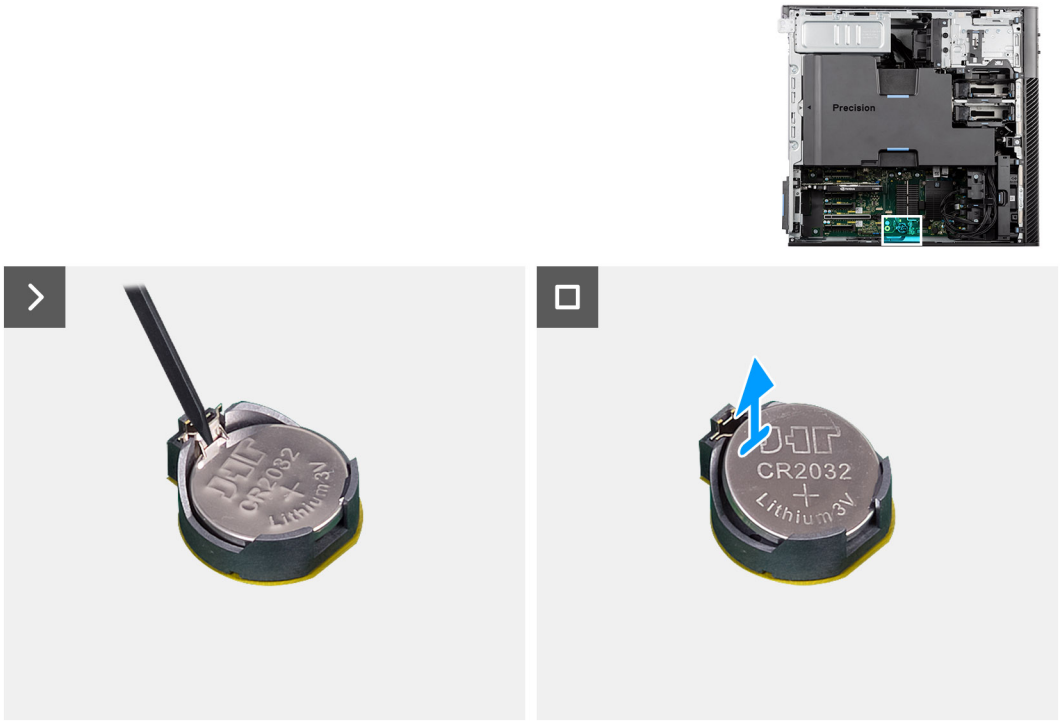


Figure 85. Removing the coin-cell battery

Steps

1. Using a plastic scribe, push the coin-cell battery securing-clip on the coin-cell battery socket to release the coin-cell battery.
2. 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.

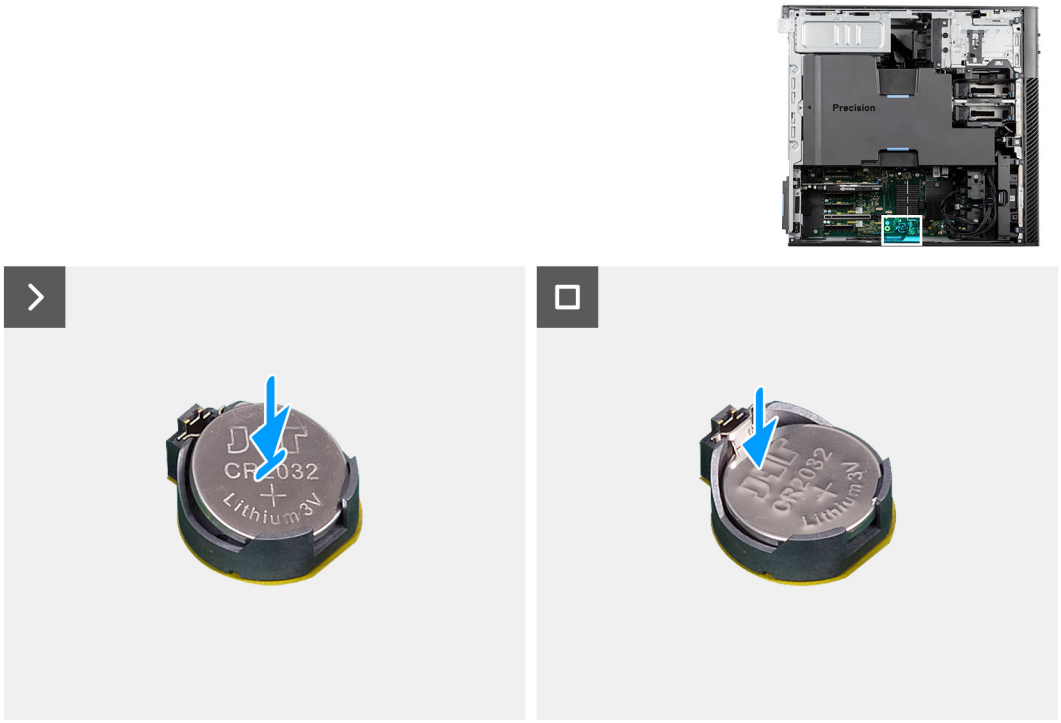


Figure 86. Installing the coin-cell battery

Steps

Insert the coin-cell battery into the socket with the positive side (+) label facing up and snap the battery in the socket.

Next steps

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

Memory modules

Removing the memory module

Prerequisites

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

About this task

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

NOTE: Precision 7875 Tower supports eight DIMM slots with a memory size of up to 256 GB per slot.

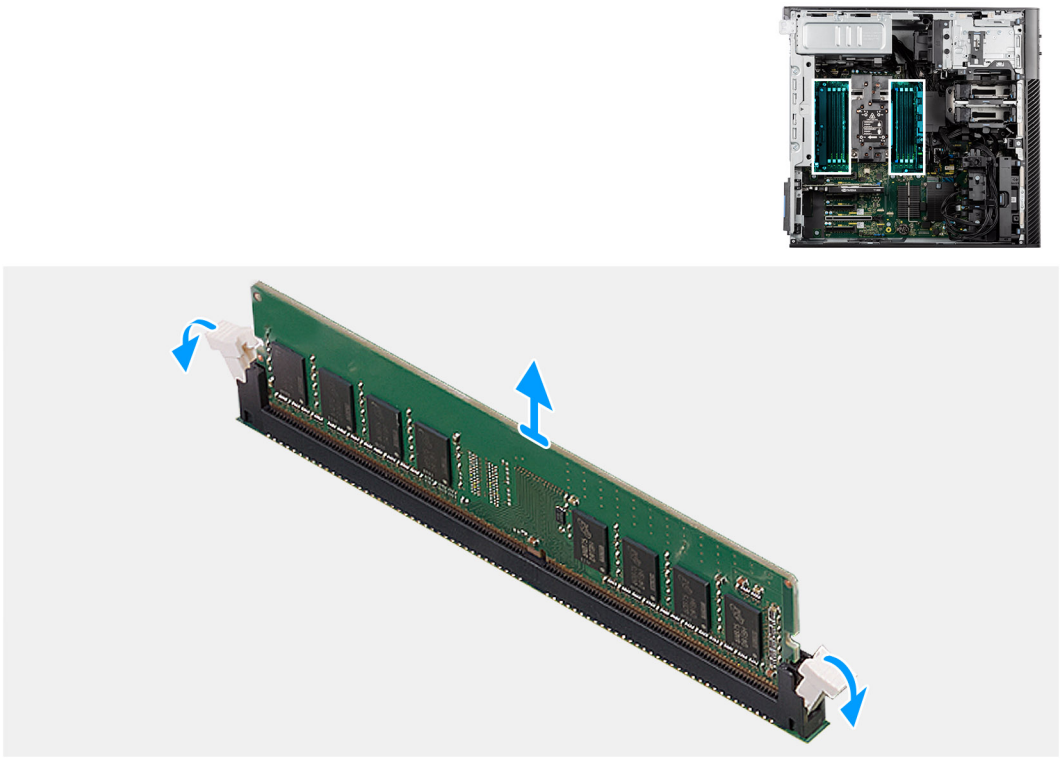


Figure 87. Removing the memory module

Steps

1. Pull the securing clips from both sides of the memory module until the memory module pops up.
2. Slide and remove the memory module from the memory-module slot.
   Repeat step 1 and step 2 for rest of memory module slots (if applicable).

Installing the memory 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 memory module and provides a visual representation of the installation procedure.

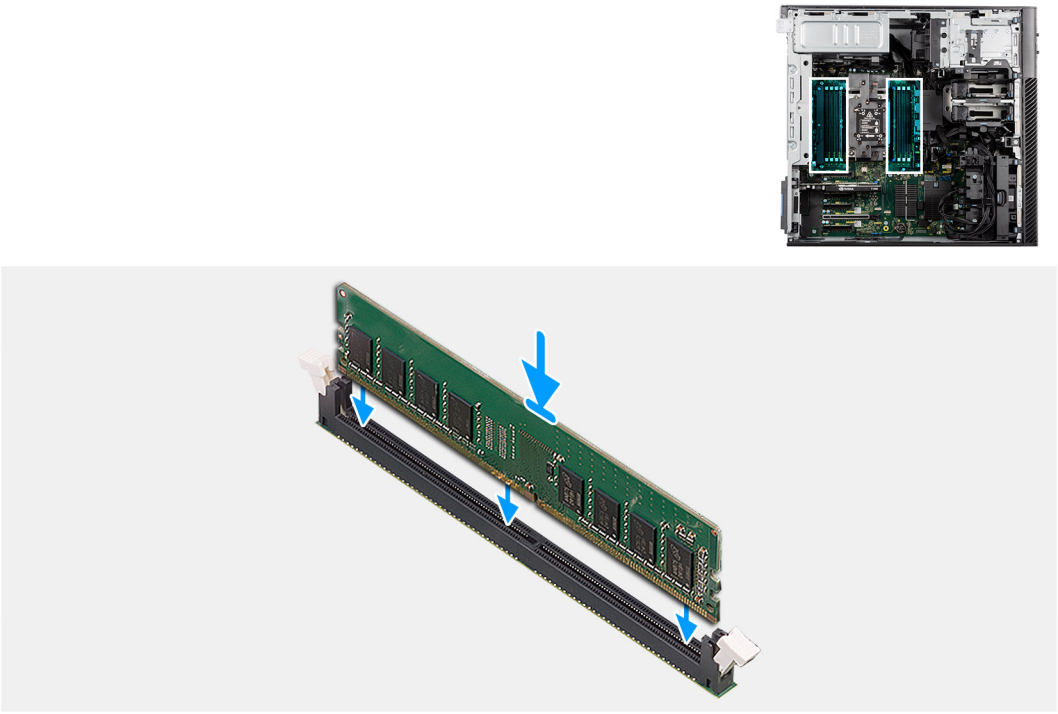


Figure 88. Installing the memory module

Steps

1. Align the notch and slide the memory module until it clicks into place.
2. Slide the memory module firmly into the slot at an angle and press the memory module down until it clicks into place.

   NOTE: If you do not hear the click, remove the memory module and reinstall it.

   NOTE: Repeat step 1 and step 2 for rest of memory module slots (if applicable).

Next steps

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

Bottom air shroud

Removing the bottom air shroud

Prerequisites

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

About this task

The following images indicate the location of the bottom air shroud and provide a visual representation of the removal procedure.

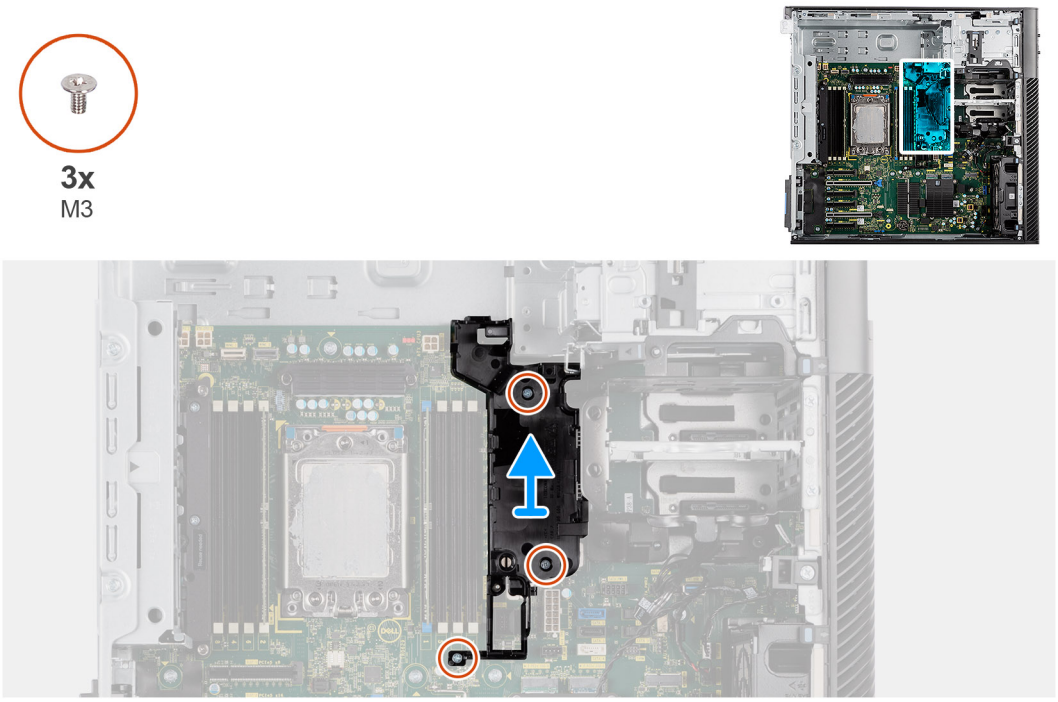


Figure 89. Removing the bottom air shroud

Steps

1. Loosen the three (M3) captive screws securing the bottom air shroud to the system board.
2. Lift the bottom air shroud from the computer.

Installing the bottom air shroud

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 bottom air shroud and provide a visual representation of the installation procedure.

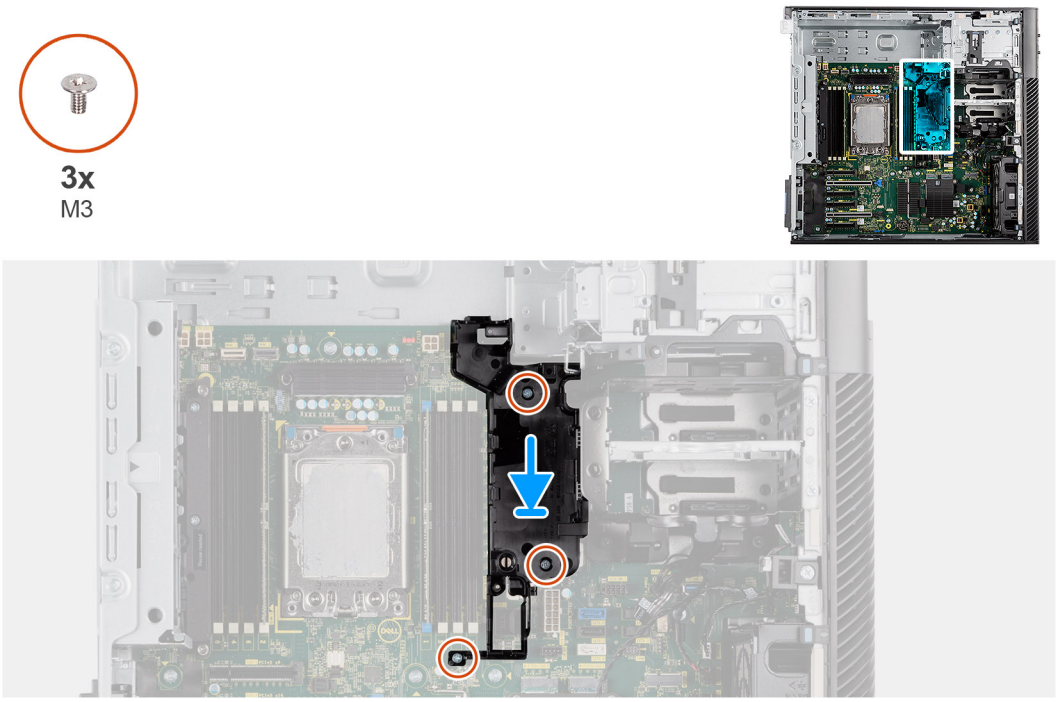


Figure 90. Installing the bottom air shroud

Steps

1. Place the bottom air shroud over the voltage heat sink regulator.
2. Align the screw holes of the bottom air shroud with the holes on the system board.
3. Tighten the three (M3) captive screws to secure the bottom air shroud to the system board.

Next steps

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

Removing the rear bottom air shroud

Prerequisites

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

About this task

The following image indicates the location of the rear bottom air shroud and provides a visual representation of the removal procedure.

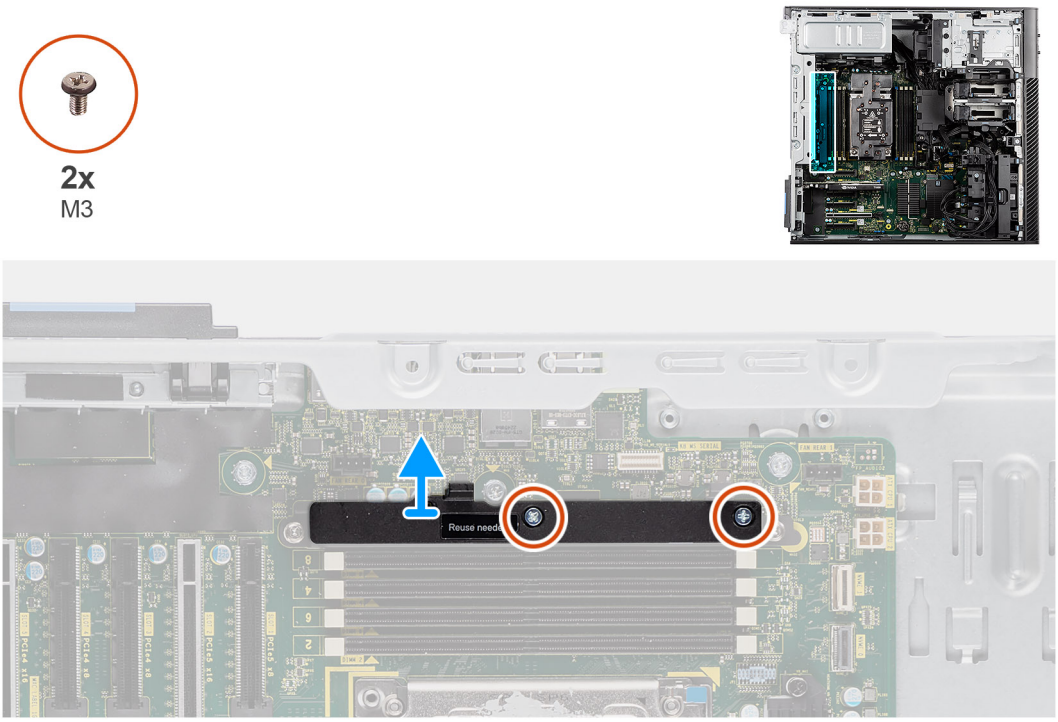


Figure 91. Removing the rear bottom air shroud

Steps

1. Remove the two (M3) screws that secure the rear bottom air shroud to the system board.
2. Remove the rear bottom air shroud out of the computer.

Installing the rear bottom air shroud

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 rear bottom air shroud and provides a visual representation of the installation procedure.

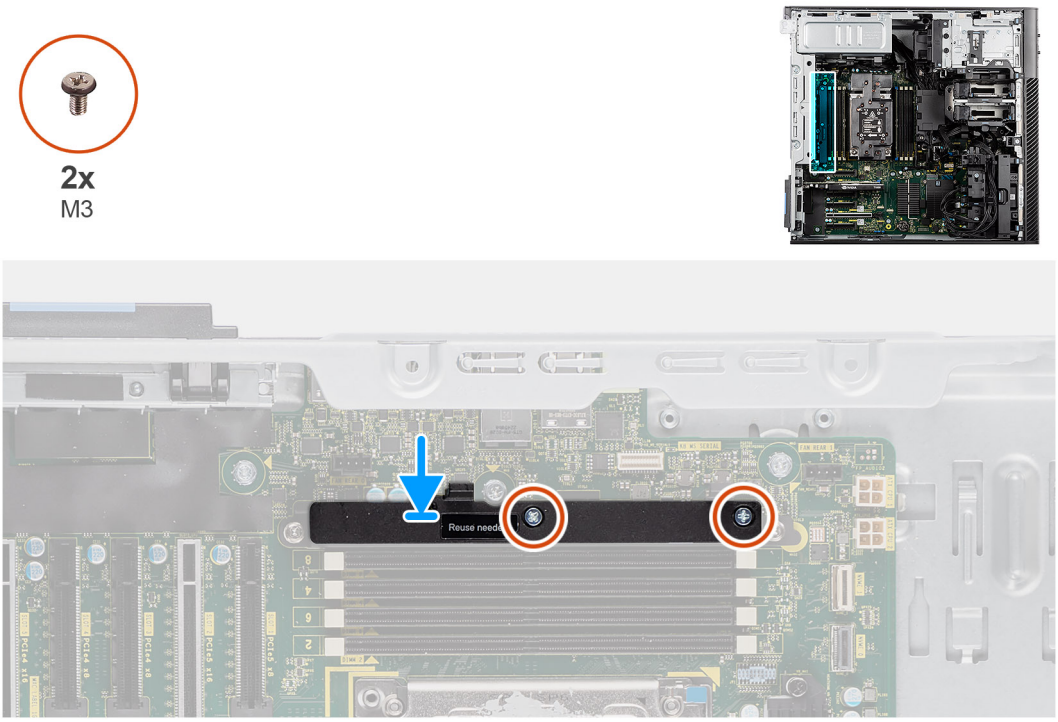


Figure 92. Installing the rear bottom air shroud

Steps

1. Place the rear bottom air shroud on the system board.
2. Align the screw holes of the rear bottom air shroud with the holes on the system board.
3. Replace the two (M3) screws to secure the rear bottom air shroud to the system board.

Next steps

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

6

Removing and installing Field Replaceable Units (FRUs)

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

CAUTION: The information in this section is intended for authorized service technicians only.

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

CAUTION: Dell Technologies recommends that this set of repairs, if needed, to be conducted by trained technical repair specialists.

CAUTION: As a reminder, your warranty does not cover damages that may occur during the courses of 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.

Hard-drive fan assembly

Removing the hard-drive fan assembly

Prerequisites

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

About this task

The following images indicate the location of the hard-drive fan assembly and provide a visual representation of the removal procedure.

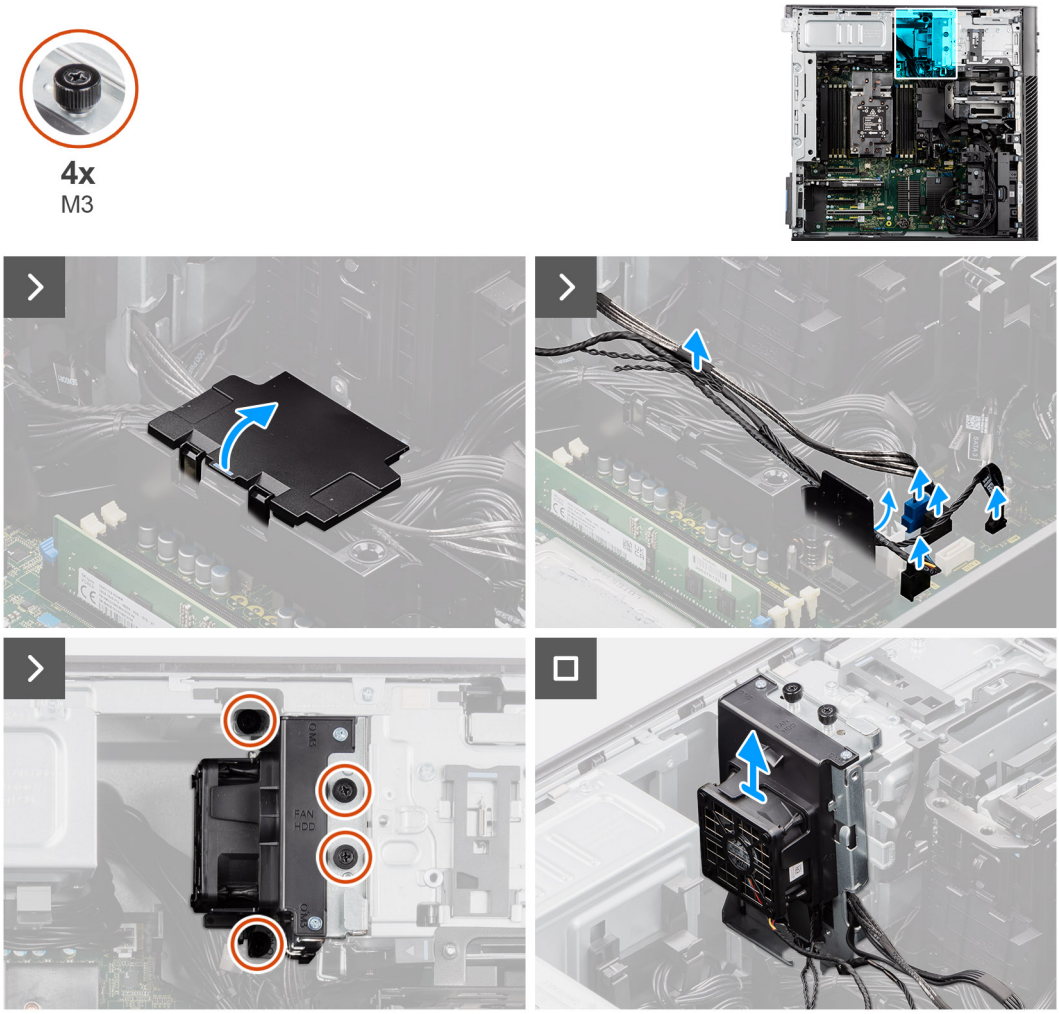


Figure 93. Removing the hard-drive fan assembly

Steps

1. Disconnect the SATA power cables, thermal sensor cable, and fan hard drive assembly cable from the connectors on the system board.
2. Lift the cover of the bottom air shroud to unroute the cables.
3. Loosen the four (M3) captive screws securing the hard-drive fan assembly to the chassis and system board.
4. Lift and remove the hard-drive fan assembly from the computer along with SATA power cables, thermal sensor cable, and fan hard drive assembly cable.

Installing the hard-drive fan assembly

Prerequisites

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

About this task

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

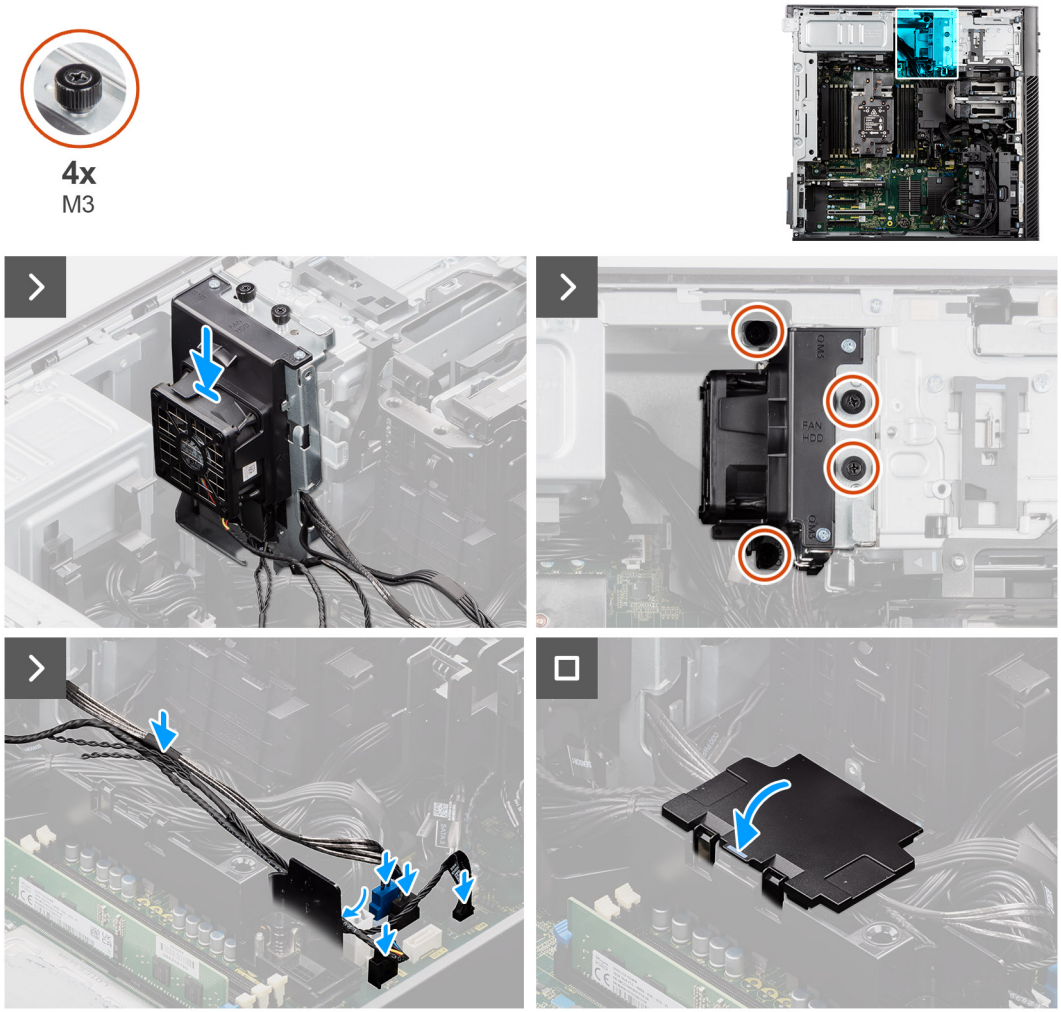


Figure 94. Installing the hard-drive fan assembly

Steps

1. Slide the hard-drive fan assembly into the slot on the chassis.
2. Tighten the four (M3) captive screws to secure the hard-drive fan assembly to the chassis and system board.
3. Lift the cover of the bottom air shroud to route the cables.
4. Connect the SATA power cables, thermal sensor cable, and fan-hard drive cable to the connectors on the system board.

Next steps

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

NVMe-fan assembly (optional)

Removing the NVMe-fan assembly (optional)

Prerequisites

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

About this task

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

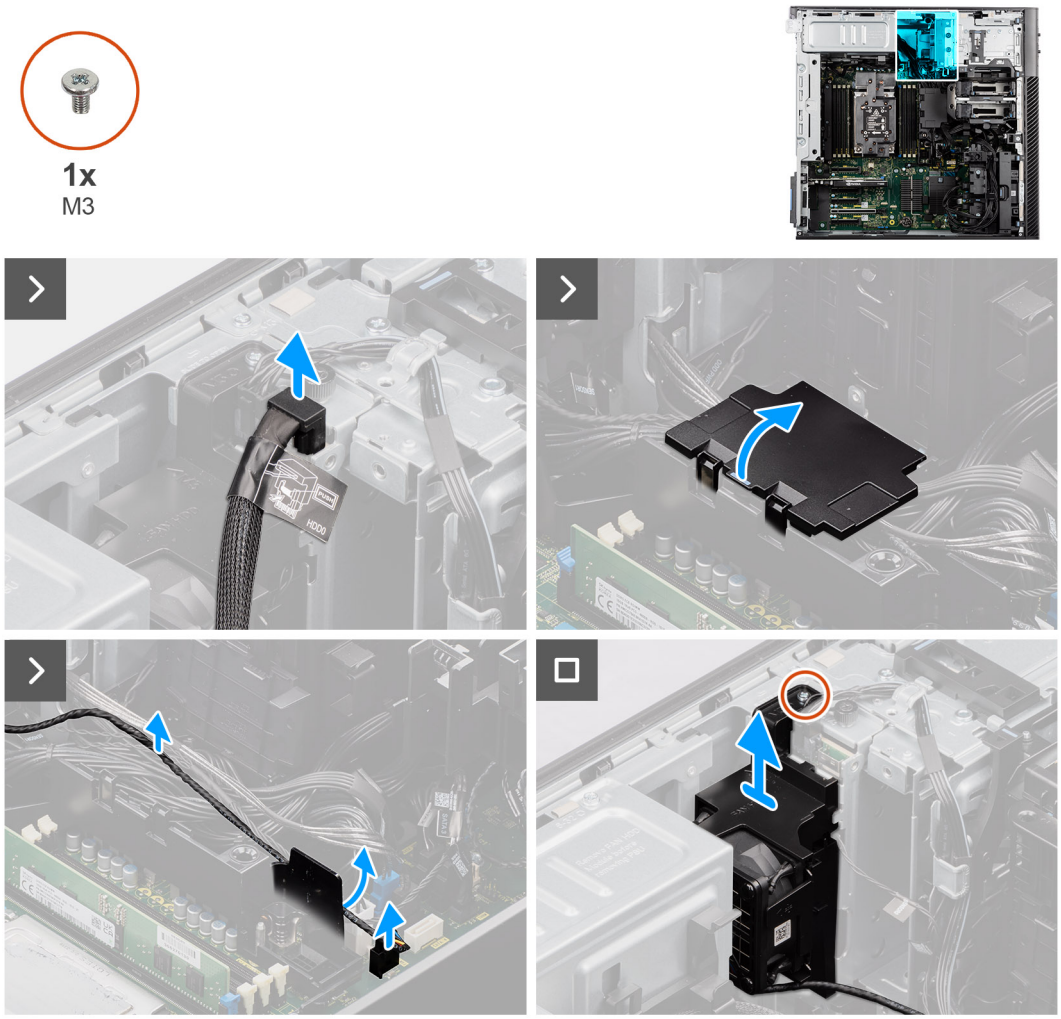


Figure 95. Removing the NVMe-fan assembly (optional)

Steps

1. Disconnect the HDD0 cable from the connector on the backplane.
2. Disconnect the fan hard drive cable from the connector on the system board.
3. Open the lid of the bottom-air shroud cover and unroute the cables that are routed inside.
4. Remove the single (M3) screw securing the NVMe-fan assembly to the backplane.
5. Lift and remove the NVMe-fan assembly along with the cable from the computer.

Installing the NVMe-fan assembly (optional)

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 NVMe-fan assembly and provide a visual representation of the installation procedure.

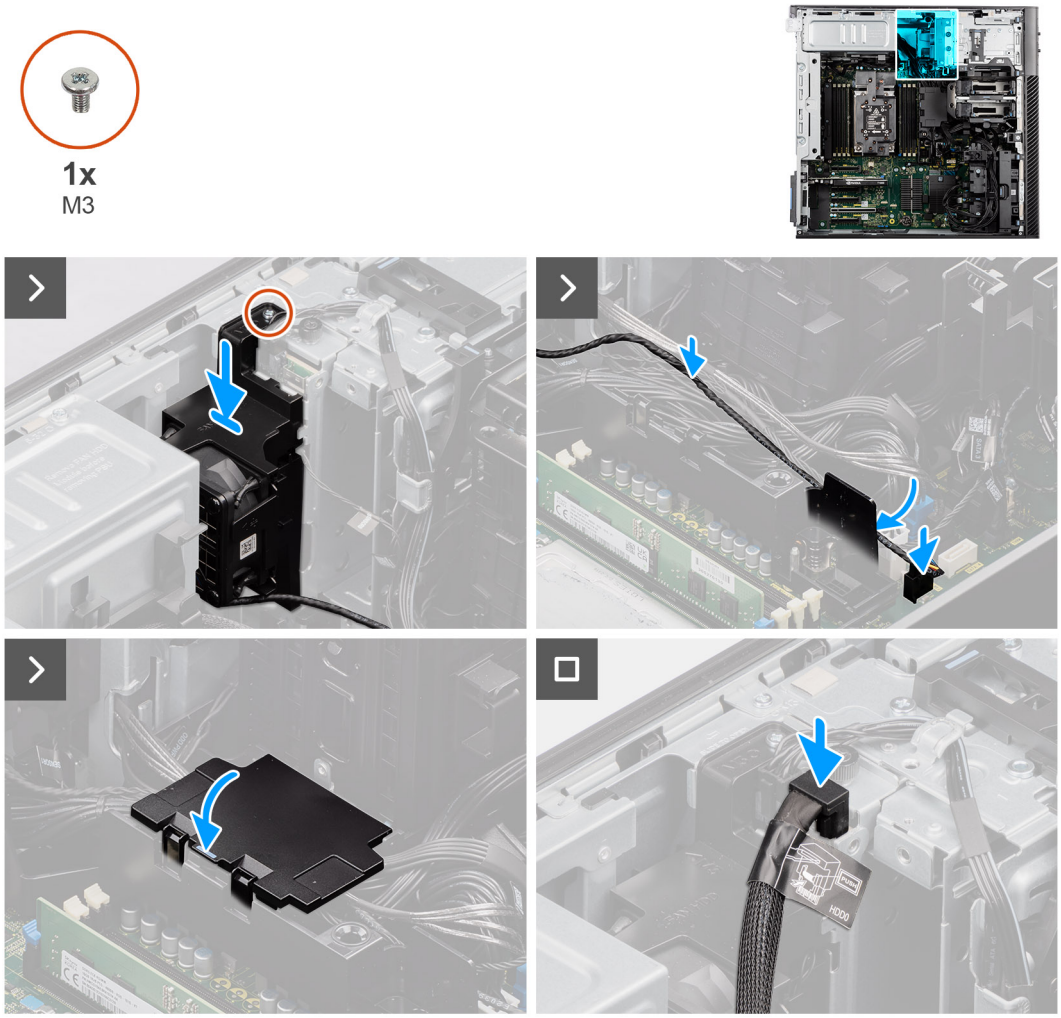


Figure 96. Installing the NVMe-fan assembly (optional)

Steps

1. Slide and insert the NVMe-fan assembly along with the cable into its slot on the chassis.
2. Replace the single (M3) screw to secure the NVMe-fan assembly to the backplane.
3. Open the lid of the bottom-air shroud cover to route the cable inside.
4. Route the cable through the guiding routes.
5. Connect the fan hard drive cable to the connector on the system board.
6. Connect the HDD0 cable from the connector on the backplane.

Next steps

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

Removing the NVMe-backplane assembly (optional)

Prerequisites

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

About this task

The following images indicate the location of the NVMe-backplane assembly and provide a visual representation of the removal procedure.

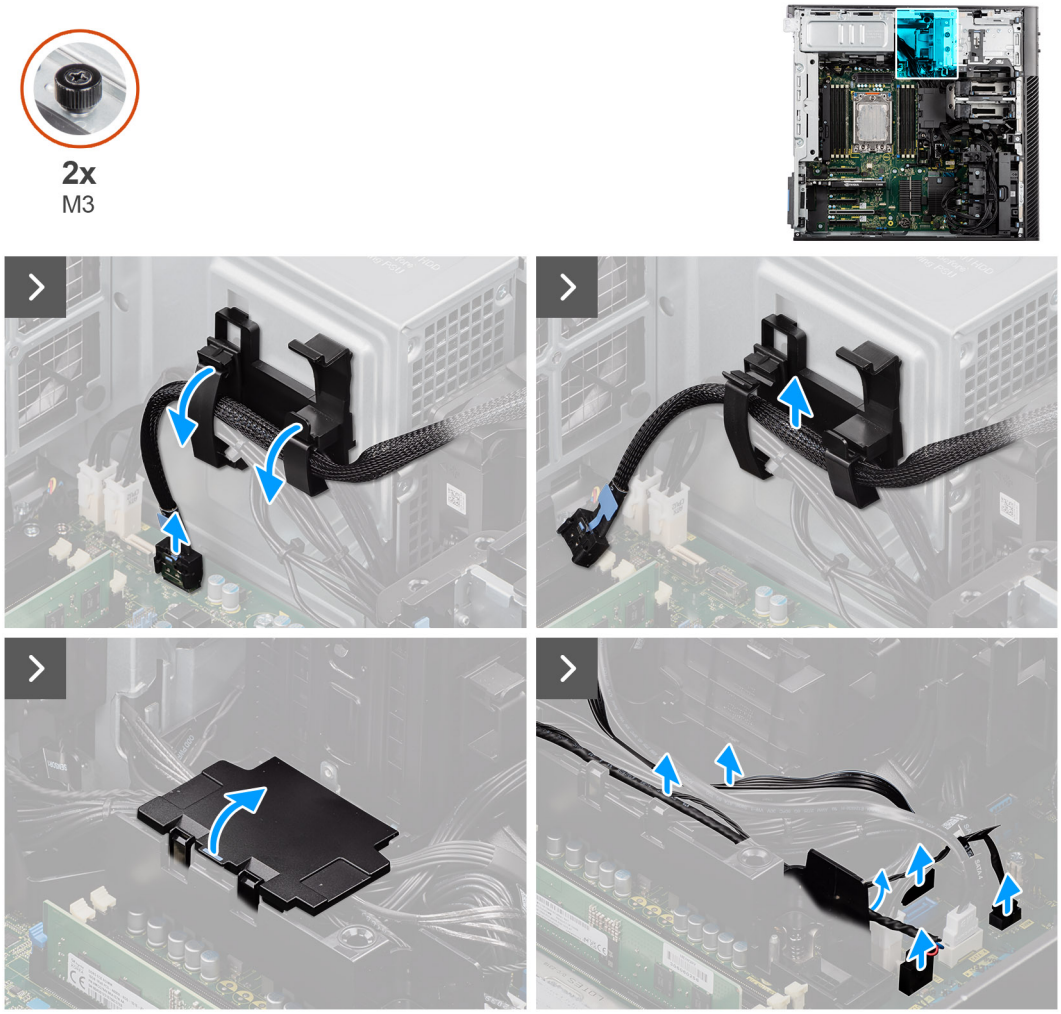


Figure 97. Removing the NVMe-backplane assembly (optional)

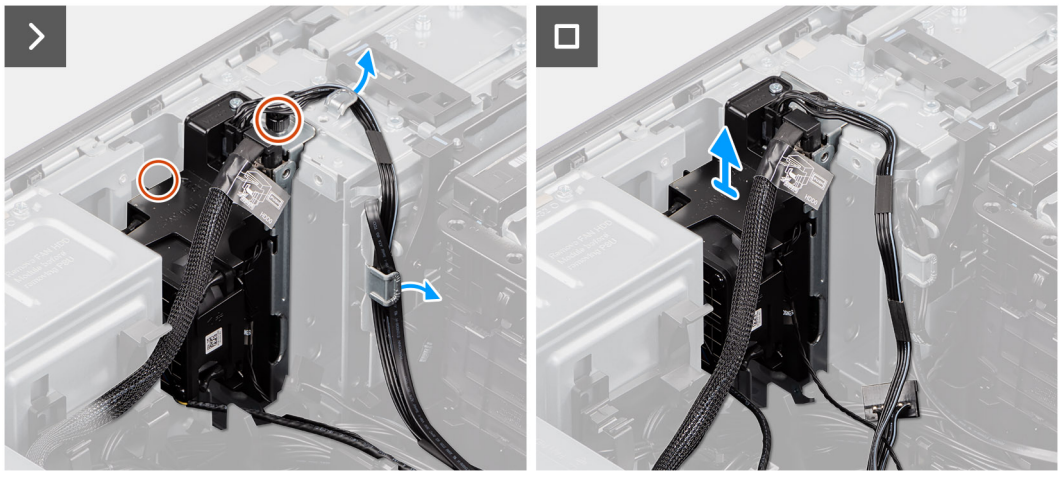


Figure 98. Removing the NVMe-backplane assembly (optional)

Steps

1. Disconnect the NVMe cable from the connector on the system board.

2. Open the plastic clips on cable holder.
3. Unroute the NVMe cable through the plastic clips and close the plastic clips.
4. Disconnect the SATA power, fan cable, and thermal-sensor cable from its connector on the system board.
5. Open the lid of the bottom-air shroud cover to unroute the cables from inside.
6. Unroute the SATA power, fan cable, and thermal-sensor cable from the routing guides on the chassis.
7. Using a Phillips screwdriver, loosen the two (M3) screws that secure the NVMe-backplane assembly to the chassis.

Installing the NVMe-backplane assembly (optional)

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 NVMe-backplane assembly and provide a visual representation of the installation procedure.

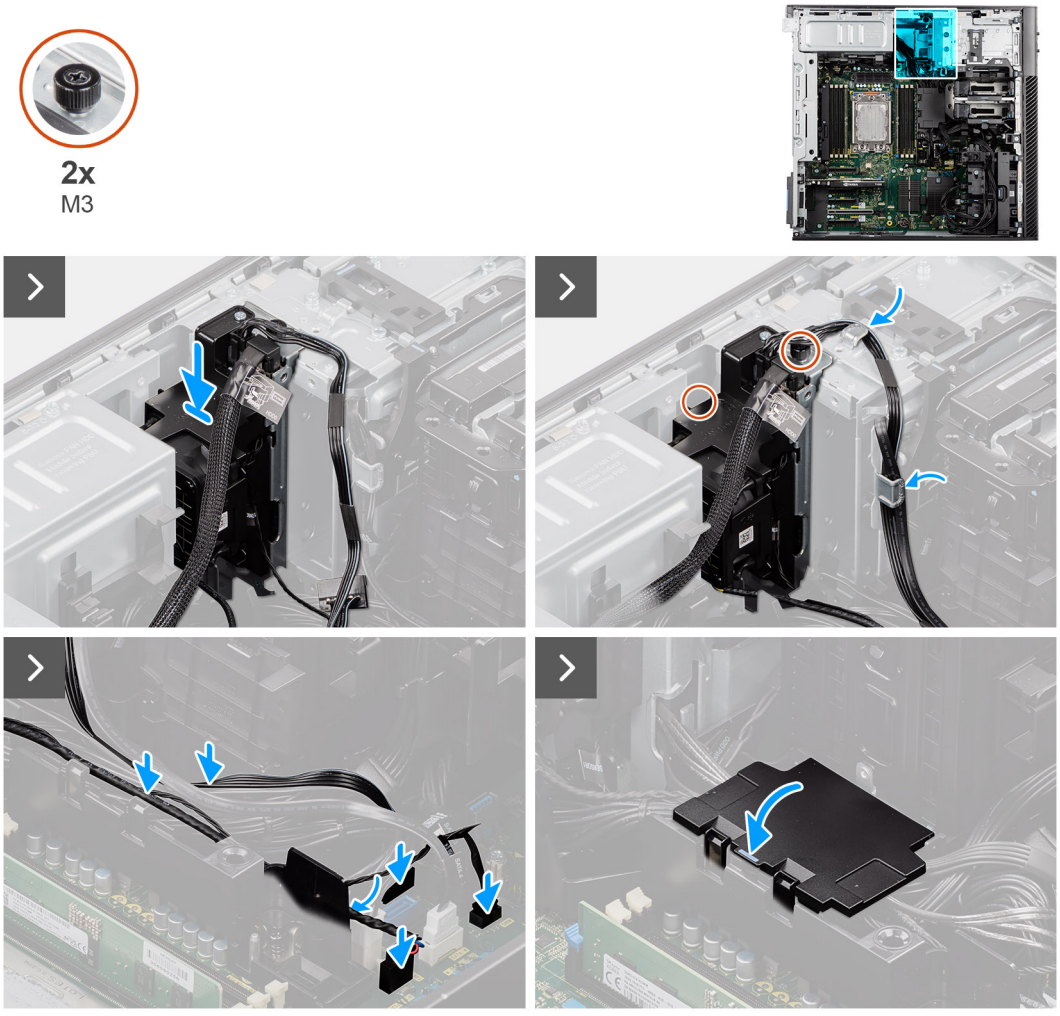


Figure 99. Installing the NVMe-backplane assembly (optional)

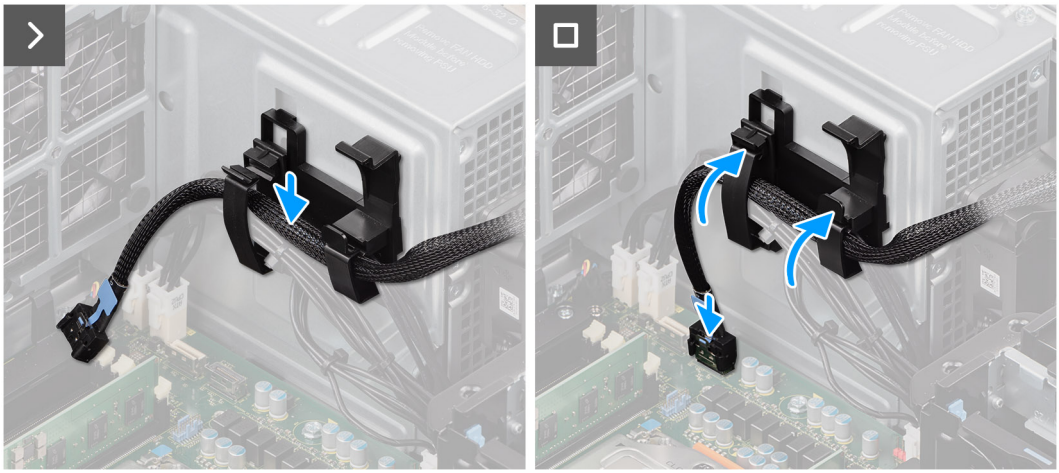


Figure 100. Installing the NVMe-backplane assembly (optional)

Steps

1. Slide and insert the single NVMe-backplane assembly along with the NVMe cable, SATA power cable, fan cable, and thermal-sensor cable into its slot on the chassis.
2. Using a Phillips screwdriver, tighten the two (M3) screws to secure the NVMe-backplane assembly to the chassis.
3. Route the SATA power, fan cable, and thermal-sensor cable through the routing guides on the chassis.
4. Open the lid of the bottom-air shroud cover to route the cables inside.

   NOTE: Ensure to route all cables within the bottom-air shroud cover to avoid damage to the cables.

5. Connect the SATA power, fan cable and thermal-sensor cable to its connector on the system board.
6. Open the plastic clips on cable holder.
7. Route the NVMe cable through the plastic clips and close the plastic clips.
8. Connect the NVMe cable to its connector on the system board.

Next steps

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

Heat sink

Removing the heat-sink assembly

Prerequisites

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

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

   CAUTION: 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.
2. Remove the side cover.
3. Remove the air shroud.

About this task

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

NOTE: The image of the heat-sink assembly may vary depending on the configuration ordered.

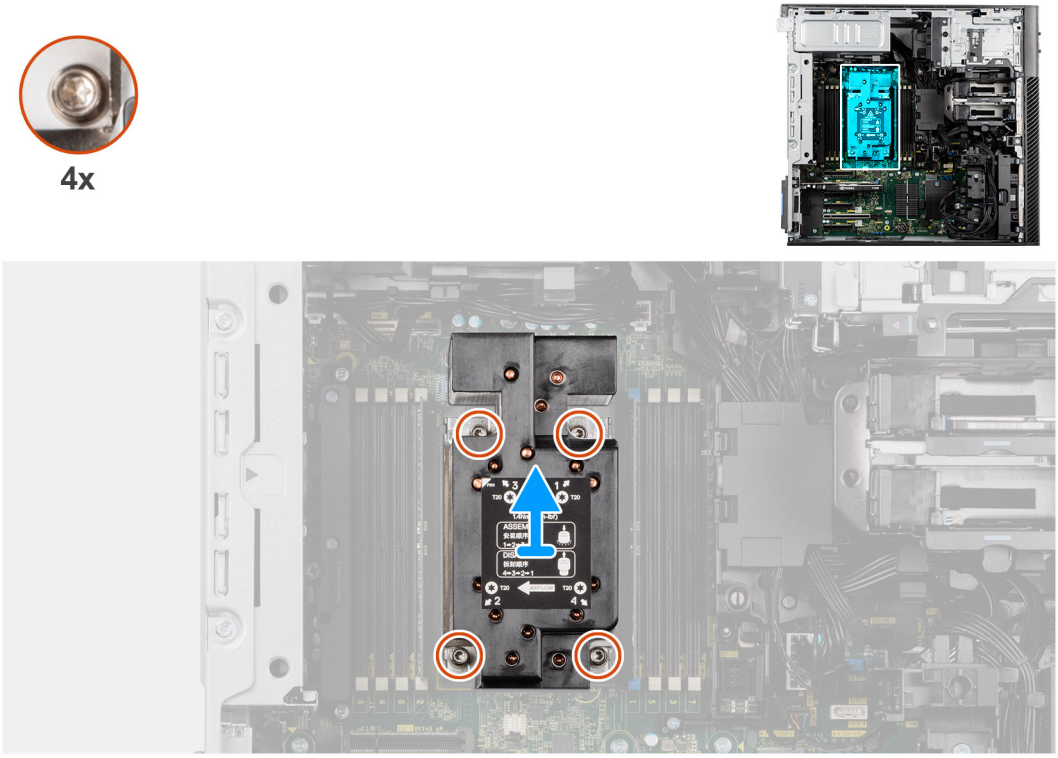


Figure 101. Removing the heat-sink assembly

Steps

1. Using a Torx T20 screwdriver, in reverse sequential order (4->3->2->1), loosen the four captive screws that secure the heat-sink assembly to the system board.

   NOTE:

2. Lift and remove the heat-sink assembly away from the computer.

Installing the heat-sink assembly

Prerequisites

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

NOTE: See the instructions that are provided with the kit for steps on how to apply the thermal grease.

About this task

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

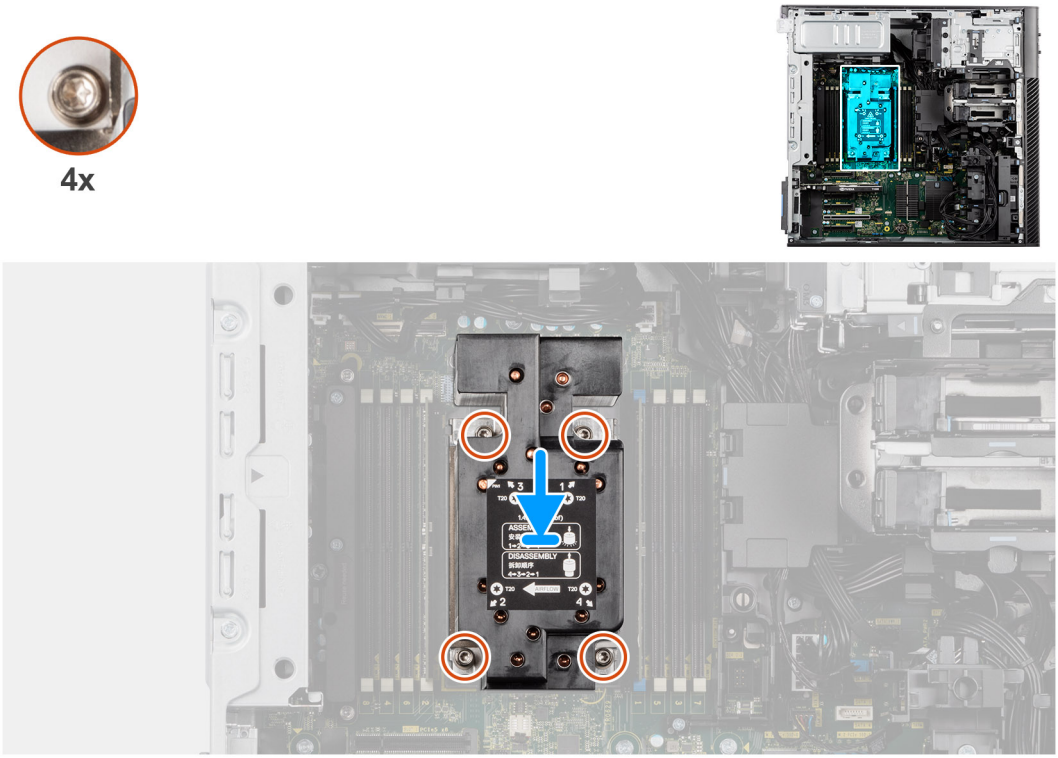


Figure 102. Installing the heat-sink assembly

Steps

1. Align the screws of the heat-sink assembly with the screw holders on the system board.
2. In sequential order (1->2->3->4), tighten the captive screws to secure the heat-sink assembly to the system board.

   NOTE: The numbering and order in which to tighten the screws is printed on the heat-sink assembly.

Next steps

1. Install the air shroud.
2. Install the side cover.
3. 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 air shroud.
4. Remove the heat-sink assembly.

NOTE: The processor might still be hot after the computer is shut down. Allow the processor to cool down before removing it.

About this task

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

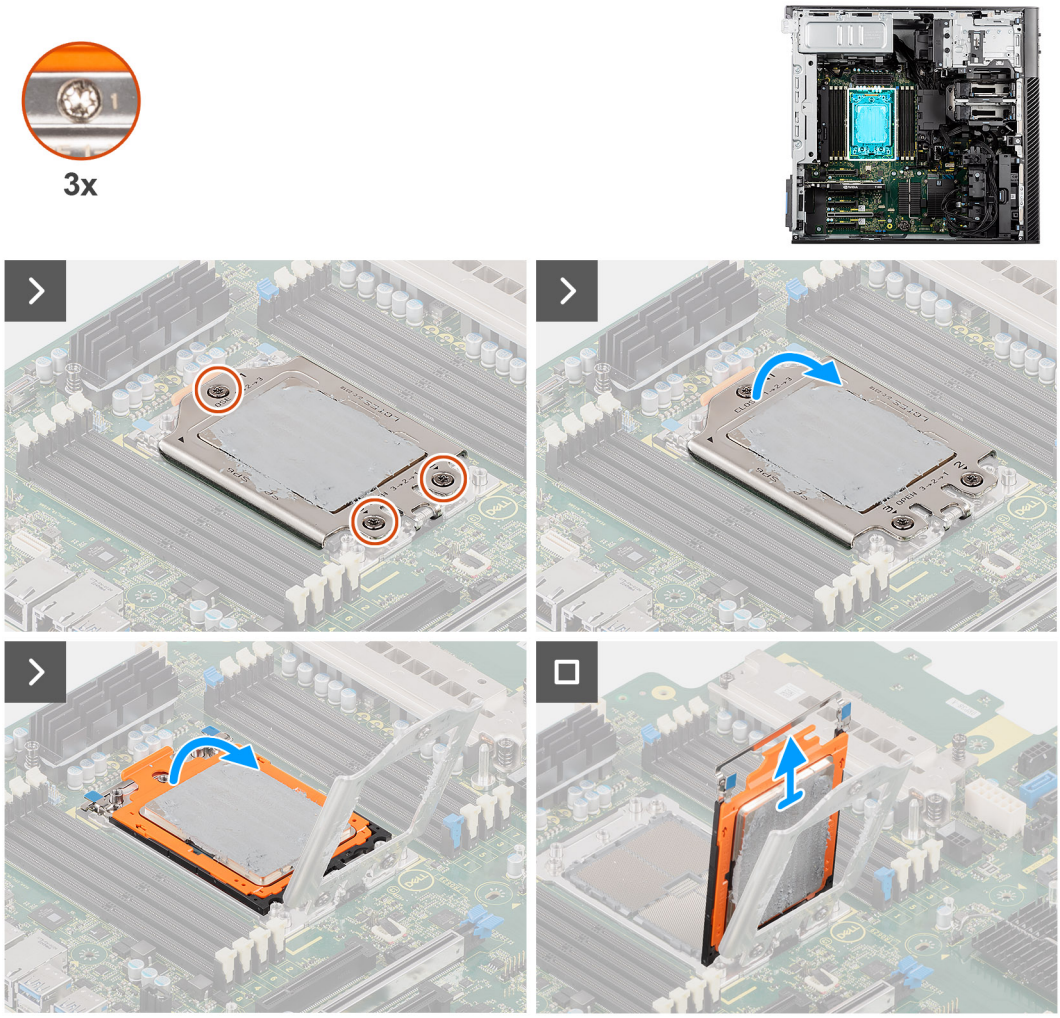


Figure 103. Removing the processor

Steps

1. Using a Torx T20 screwdriver, in reverse sequential order (3->2->1), loosen the three captive screws that secure the force frame to the system board.

   NOTE: The numbering and order in which to loosen the screws is printed on the force frame.

2. Lift and open the force frame.
3. Lift the CPU carrier by holding the two blue latch points on the rail frame and rotating it to the vertical position.

   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.

4. Gently slide the processor out of the CPU carrier.

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.

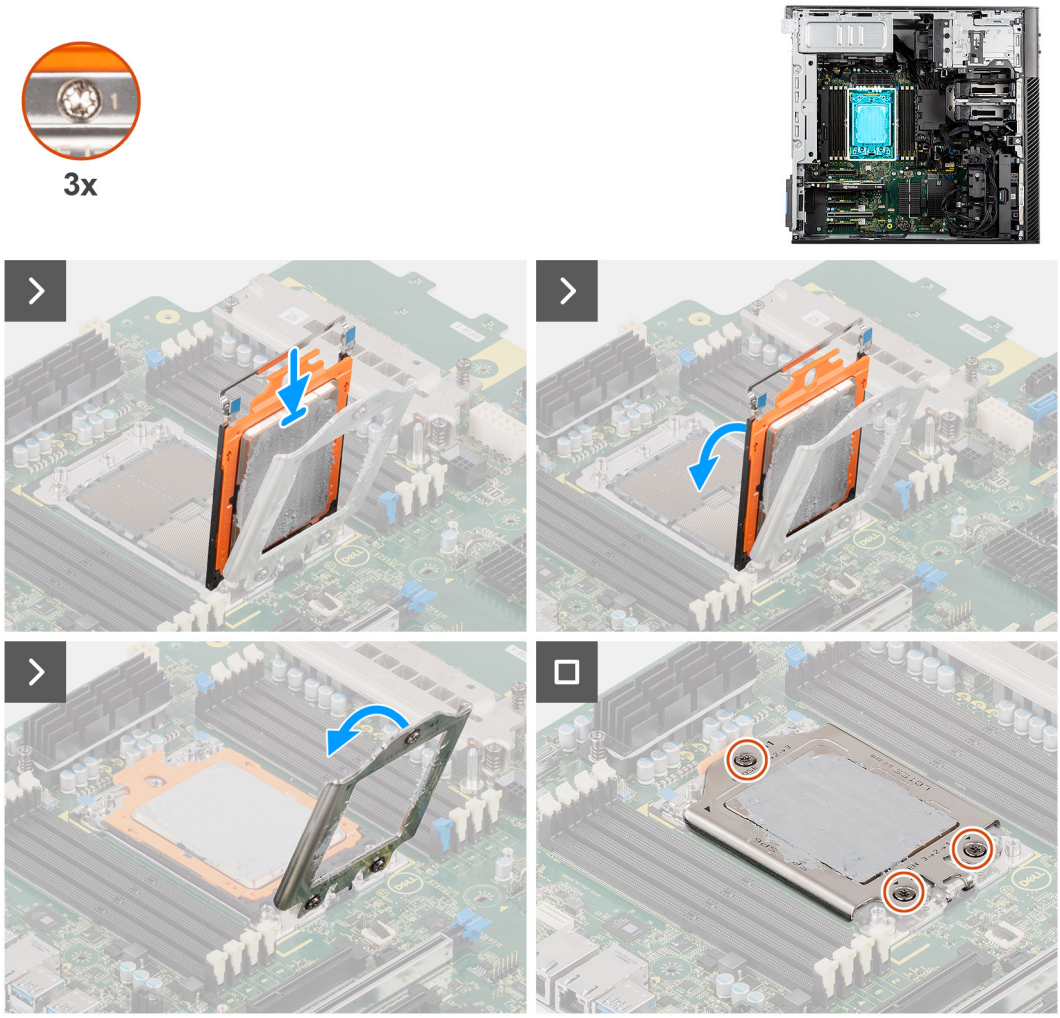


Figure 104. Installing the processor

Steps

1. Place the processor into the CPU carrier.
2. Slide the CPU carrier along with the processor by holding the two blue latch points on the rail frame and rotating it to the horizontal position.

   NOTE: Ensure the carrier frame clicks into place in the rail frame. If the carrier frame is not properly secured, it can damage the socket cap.

3. Close the force frame and align the screw holes on the force frame to the screw holes on the system board.
4. Using a Torx T20 screwdriver, tighten the three captive screws in a sequential order (1 > 2 > 3) to secure the force frame to the system board.

Next steps

1. Install the heat-sink assembly.
2. Install the air shroud.
3. Install the side cover.
4. Follow the procedure in After working inside your computer.

Internal hard-drive cage

Removing the internal hard-drive cage

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the side cover.
3. Remove the air shroud.
4. Remove the 2.5-inch hard-drive assembly.
5. Remove the 3.5-inch hard-drive assembly.
6. Remove the hard-drive fan assembly.

About this task

The following images indicate the location of the internal hard-drive cage and provide a visual representation of the removal procedure.

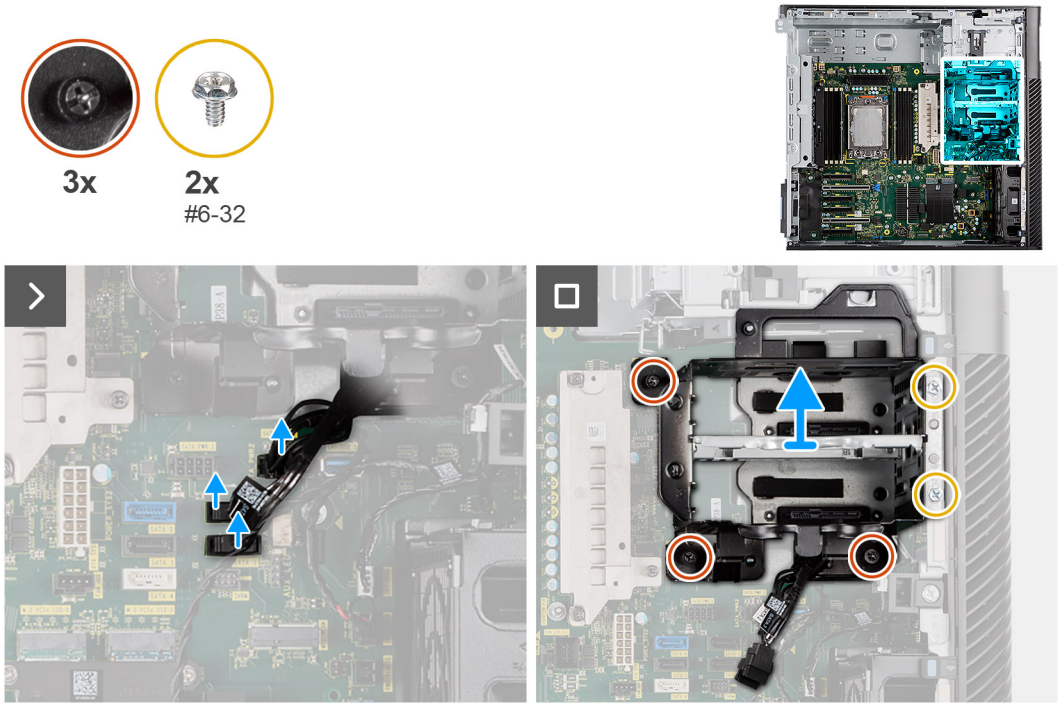


Figure 105. Removing the internal hard-drive cage

Steps

1. Disconnect the SATA power-cables and SATA data-cable from the connectors on the system board.
2. Loosen the three (M3) thumbscrews that secure the internal hard-drive cage to the system board.
3. Remove the two (#6-32) screws that secure the internal hard-drive cage to the chassis.
4. Slide and remove the internal hard-drive cage out of the computer.

Installing the internal hard-drive cage

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 hard-drive cage and provide a visual representation of the installation procedure.

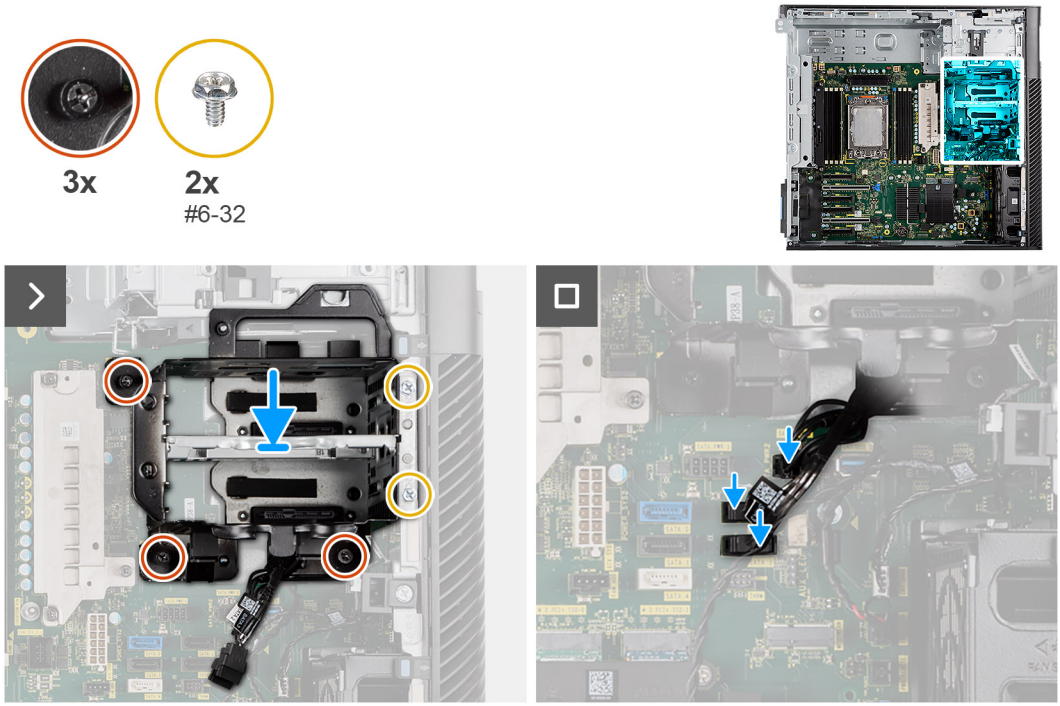


Figure 106. Installing the internal hard-drive cage

Steps

1. Slide and insert the internal hard-drive cage into the slot on the chassis.
2. Replace the two (#6-32) screws to secure the internal hard-drive cage to the chassis.
3. Tighten the three (M3) thumbscrews to secure the internal hard-drive cage to the system board.
4. Connect the SATA power-cables and SATA data-cable to the connectors on the system board.

Next steps

1. Install the hard-drive fan assembly.
2. Install the 3.5-inch hard-drive assembly.
3. Install the 2.5-inch hard-drive assembly.
4. Install the air shroud.
5. Install the side cover.
6. Follow the procedure in After working inside your computer.

Voltage-regulator heat sink

Removing the voltage-regulator heat sink - Location 1

Prerequisites

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

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

CAUTION: 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.

2. Remove the side cover.
3. Remove the air shroud.

About this task

The following image indicates the location of the voltage-regulator heat sink and provides a visual representation of the removal procedure.

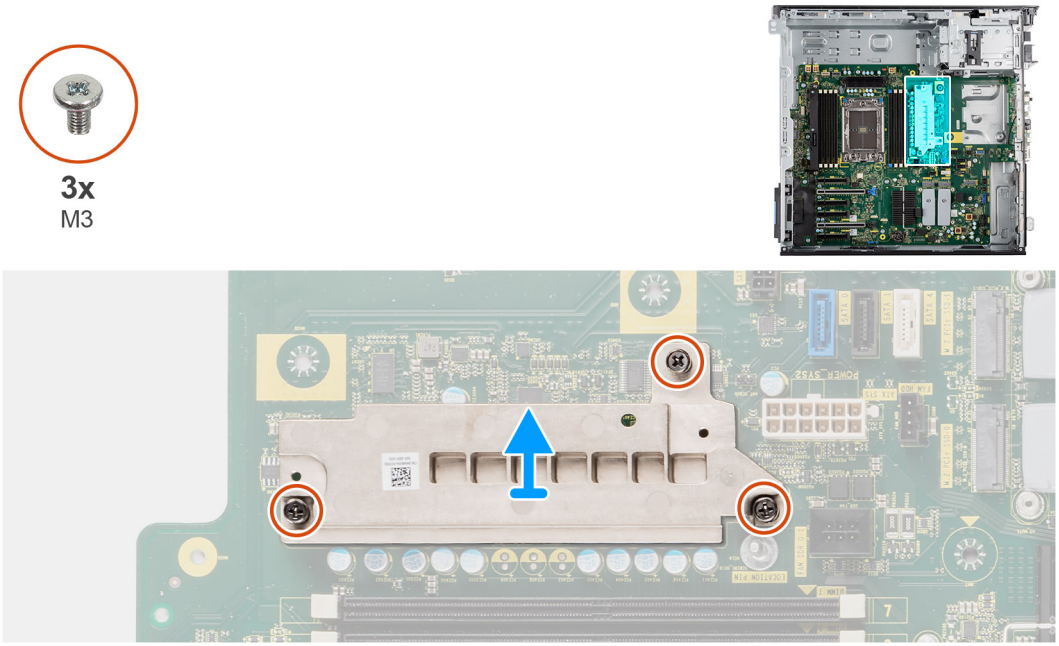


Figure 107. Removing the voltage-regulator heat sink - Location 1

Steps

1. Loosen the three (M3) captive screws that secure the voltage-regulator heat sink to the system board.
2. Lift the heat sink off the system board.

Installing the voltage-regulator heat sink - Location 1

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 voltage-regulator heat sink and provides a visual representation of the installation procedure.

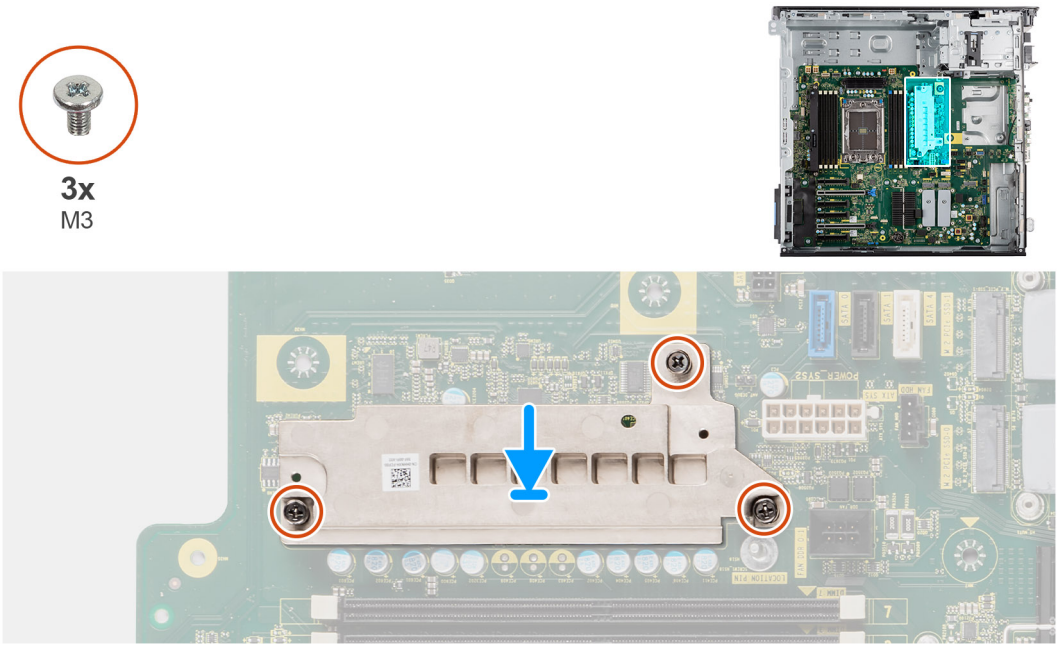


Figure 108. Installing the voltage-regulator heat sink - Location 1

Steps

1. Align the screw holes on the voltage-regulator heat sink to the screw holes on the system board.
2. Tighten the three (M3) captive screws to secure the voltage-regulator heat sink to the system board.

Next steps

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

Removing the voltage-regulator heat sink - Location 2

Prerequisites

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

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

   CAUTION: 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.
2. Remove the side cover.
3. remove the air shroud.

About this task

The following image indicates the location of the voltage-regulator heat sink and provides a visual representation of the removal procedure.

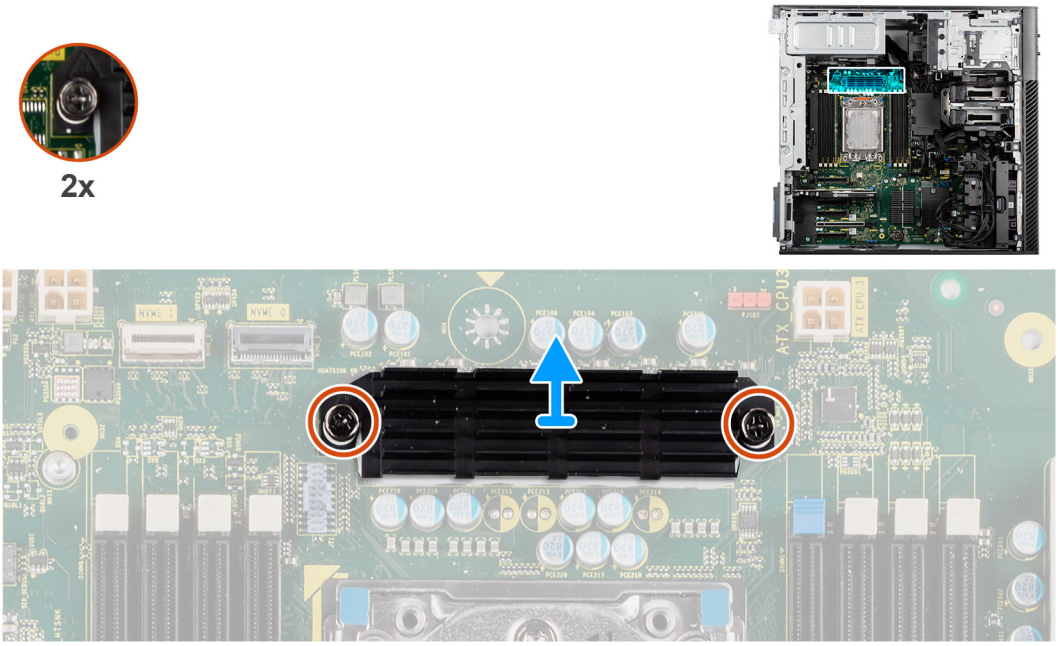


Figure 109. Removing the voltage-regulator heat sink - Location 2

Steps

1. Loosen the two captive screws that secure the voltage-regulator heat sink to the system board.
2. Lift the heat sink off the system board.

Installing the voltage-regulator heat sink - Location 2

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 voltage-regulator heat sink and provides a visual representation of the installation procedure.

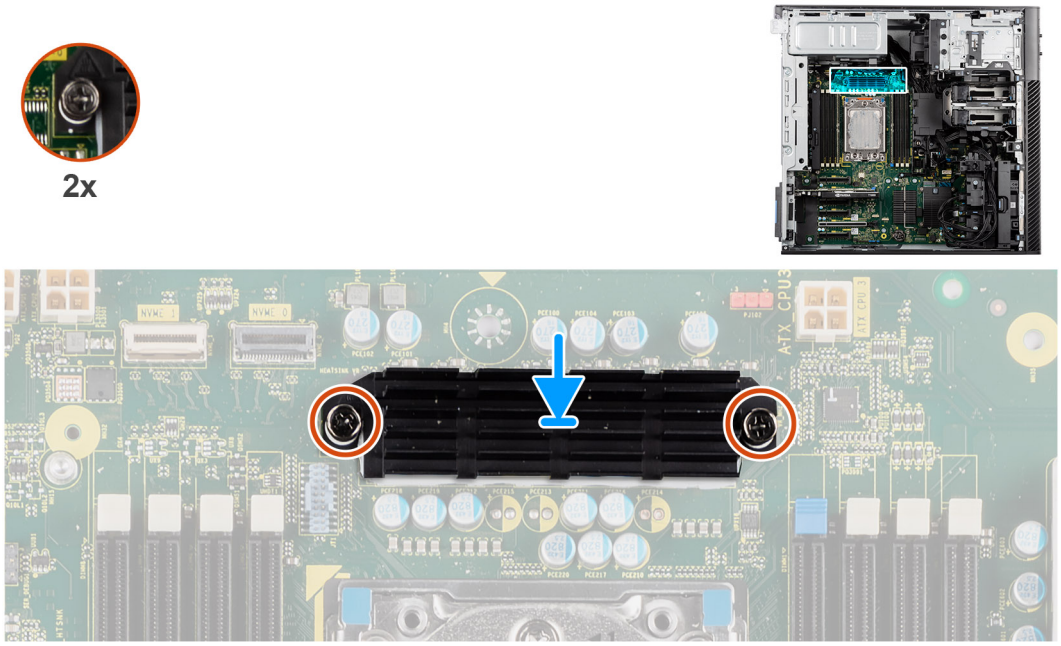


Figure 110. Installing the voltage-regulator heat sink - Location 2

Steps

1. Align the screw holes on the voltage-regulator heat sink to the screw holes on the system board.
2. Tighten the two captive screws to secure the voltage-regulator heat sink to the system board.

Next steps

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

Power-supply unit

Removing the power-supply unit

Prerequisites

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

NOTE: Note the routing of all cables as you remove them so that you can route them correctly while you are replacing the power-supply unit.

About this task

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

NOTE: There may be slight differences for your power-supply unit, depending on the configuration ordered.

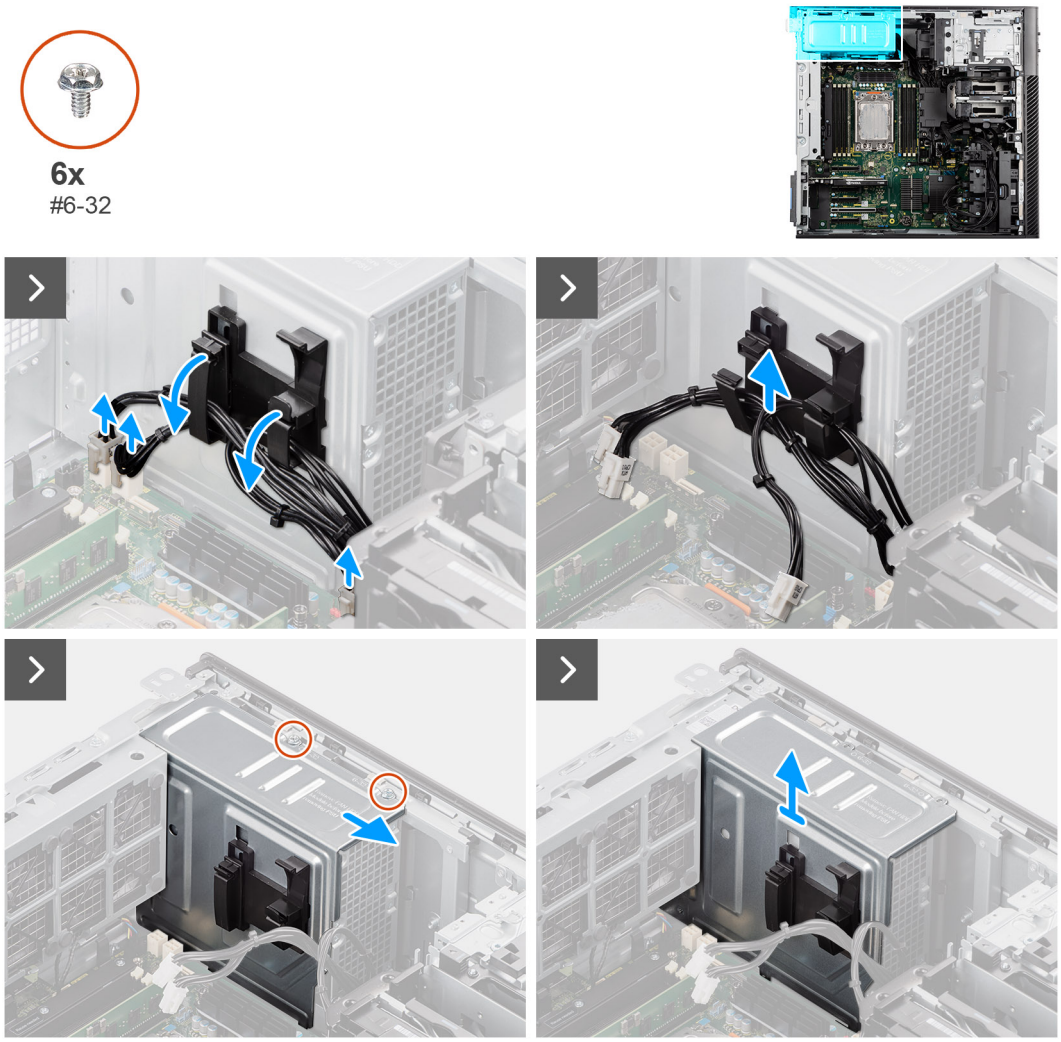


Figure 111. Removing the power-supply unit

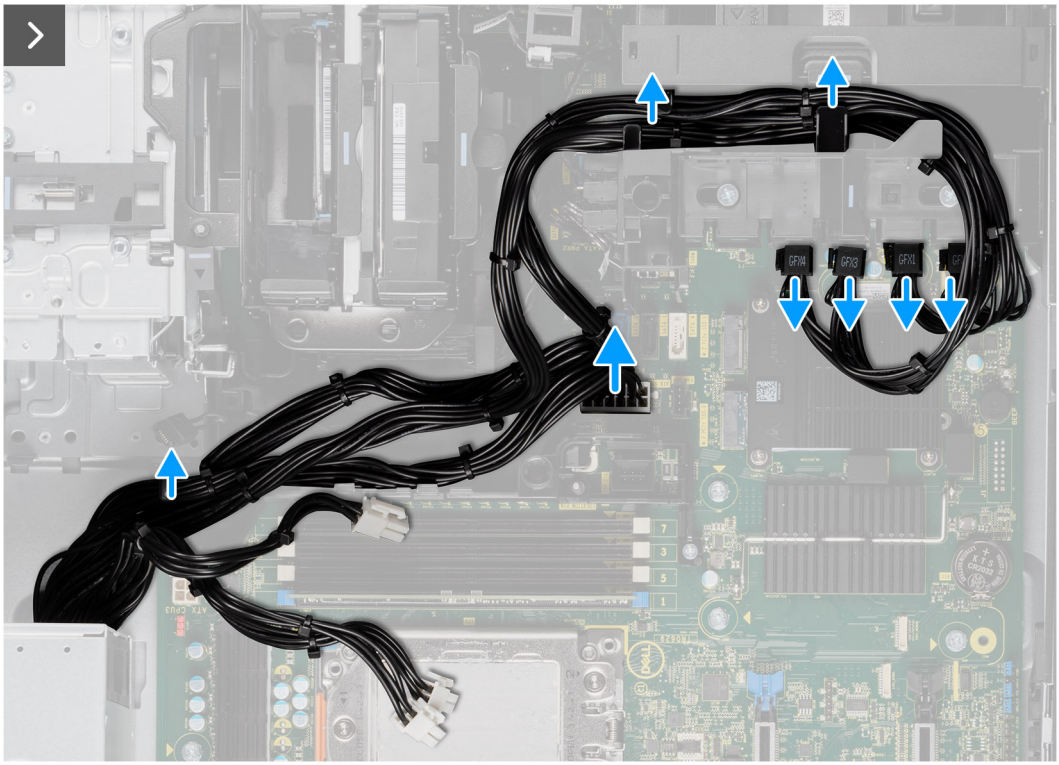


Figure 112. Removing the power-supply unit

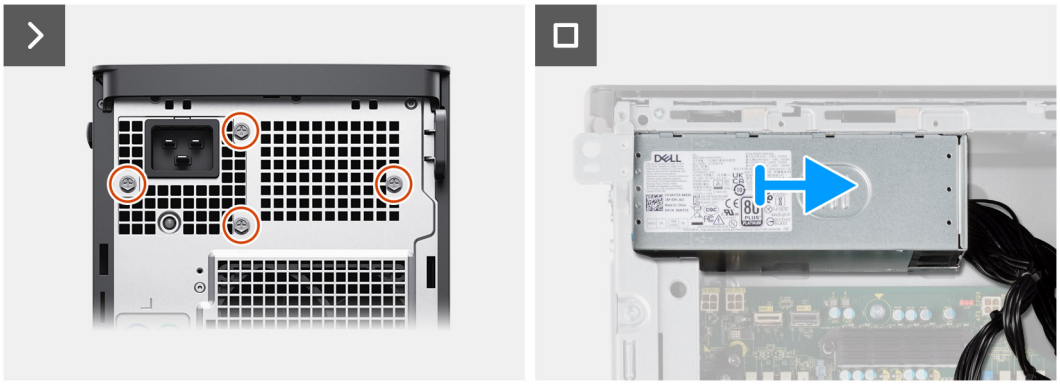


Figure 113. Removing the power-supply unit

Steps

1. Lay the computer on the right side.
2. - **For 1000 W PSU:** Disconnect two of the 4-pin ATX CPU power cables from the ATX CPU1 and ATX CPU2 connectors on the system board.
   - **For 1350 W PSU:** Disconnect three of the 4-pin ATX CPU power cables from the ATX CPU1, ATX CPU2 and ATX CPU3 connectors on the system board.

   NOTE: The location of the connectors on the system-board is described in System-board callouts.
3. Open the clips on the routing guides on the power-supply cover and remove the CPU ATX power-cables from the clips.
4. Remove the two (#6-32) screws that secure the power-supply cover to the chassis.
5. Remove the power-supply cover from the computer.
6. Disconnect the SATA power-cables from the ATX SYS connector on the system board.
7. Disconnect the PCIe power-cables from the PCIe holder.
8. Remove the four (#6x32) screws that secure the power-supply unit to the chassis.
9. Slide the power-supply unit away from the back of the chassis.

10. Lift the power-supply unit off the chassis.

Installing the power-supply unit

Prerequisites

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

WARNING: The cables and ports on the back of the power-supply unit are color-coded to indicate the different power wattage. Ensure that you plug in the cable to the correct port. Failure to do so may result in damaging the power-supply unit and/or system components.

About this task

The following images indicate the location of the power-supply unit and provide a visual representation of the installation procedure.

NOTE: There may be slight differences for your power-supply unit, depending on the configuration ordered.

Figure 114. Installing the power-supply unit

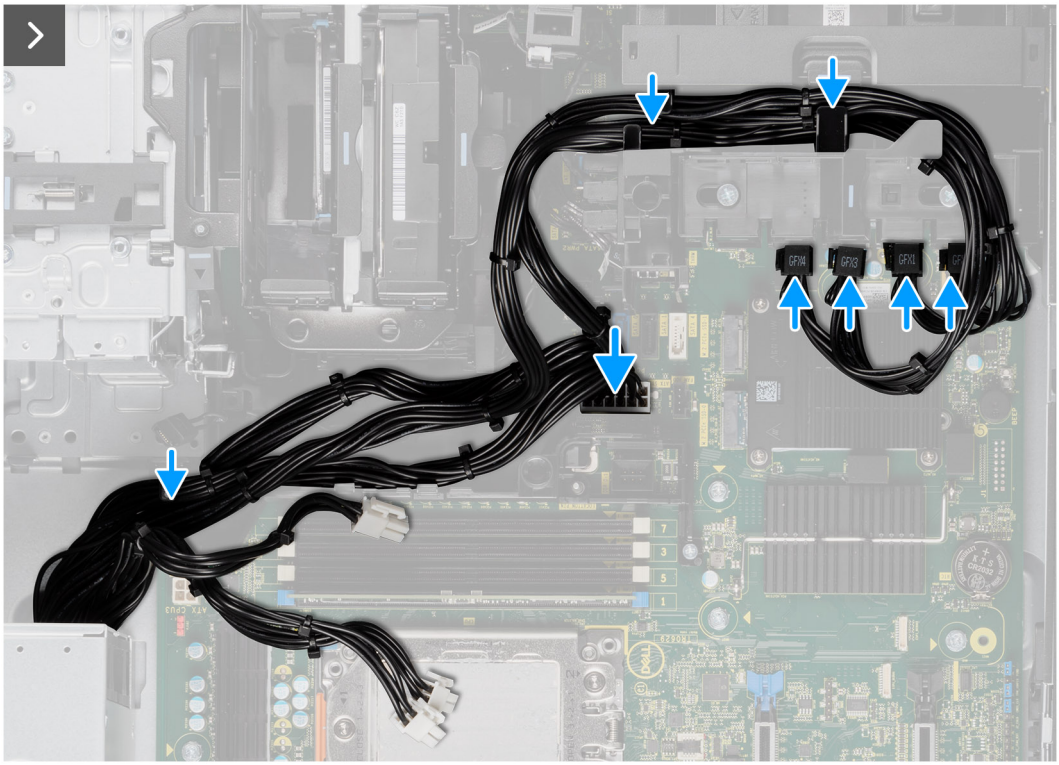


Figure 115. Installing the power-supply unit

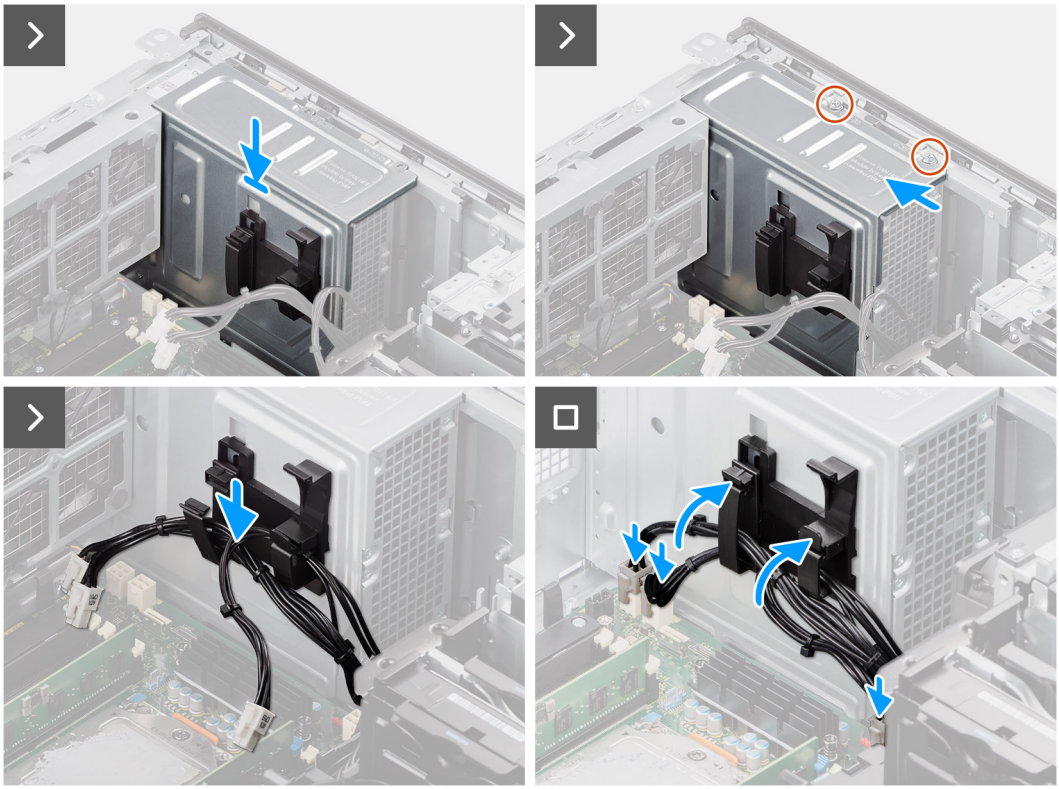


Figure 116. Installing the power-supply unit

Steps

1. Slide the power-supply unit into the chassis until the securing tab snaps into position.
2. Replace the four (#6x32) screws to secure the power-supply unit to the chassis.

3. Route the PCIe power-cables and SATA power-cables through the routing guides.
4. Connect the PCIe power-cables to the slots on the PCIe holder.
5. Connect the SATA power-cables to the ATX SYS connector on the system board.

   NOTE: The location of the connectors on the system-board is described in System-board callouts.

6. Align and place the power-supply cover over the power-supply unit.
7. Install the two (#6-32) screws to secure the power-supply cover to the chassis.
8. Open the clips on the routing guides on the power-supply cover and route the CPU ATX power-cables through the clips.
9. Close the clips on the routing guides on the power-supply cover.
10.
    - **For 1000 W PSU:** Connect two of the 4-pin ATX CPU power cables to the ATX CPU1 and ATX CPU2 connectors on the system board.

      NOTE: Insert the two six-pin PSU power cables (for graphics card) into the supplied PSU-cable holder.
    - **For 1350 W PSU:** Connect three of the 4-pin ATX CPU power cables to the ATX CPU1, ATX CPU2 and ATX CPU3 connectors on the system board.

Next steps

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

System board

System-board callouts

This topic provides detailed callouts for the connectors on the system board:

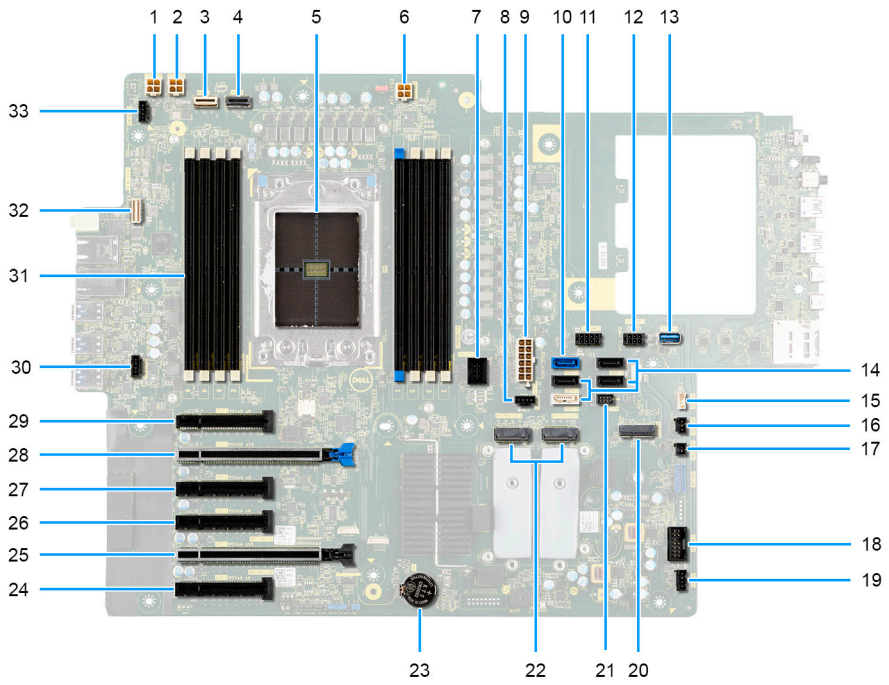


Figure 117. System-board callouts

Table 23. Precision 7875 Tower system board callouts

No	Connector	Description
1	ATX CPU1	4-pin processor power connector
2	ATX CPU2	4-pin processor power connector
3	NVME1	NVMe connector for externally facing M.2 flex bay drive
4	NVME0	NVMe connector for externally facing M.2 flex bay drive
5	CPU0_SKT	Processor socket
6	ATX CPU3	4-pin processor power connector
7	DDR FAN	Memory-module fan connector
8	FAN HDD	Hard-drive fan connector
9	ATX SYS	System-board power connector
10	SATA-0	Primary SATA hard drive data cable connector
11	SATA PWR1	SATA power connector
12	SATA PWR2	SATA power connector
13	INT USB2	USB 3.2 Gen1 port to accommodate standard USB storage key
14	• SATA-1 • SATA-2 • SATA-3 • SATA-4	• SATA device data cable connector • SATA device data cable connector • SATA device data cable connector • SATA device data cable connector
15	INT SPKR	Internal-speaker connector
16	INTRUSION	Intrusion switch connector
17	PWR REMOTE	Remote power-switch connector
18	INT USB1	Internal USB 2.0
19	FAN SYS	System fan connector
20	M.2 WLAN	Wireless card connector
21	THRM	Thermal sensor connector
22	• M.2 PCIe SSD-0 • M.2 PCIe SSD-1	• M.2280/M.2230 solid state drive socket • M.2280/M.2230 solid state drive socket
23	RTC	Coin cell battery
24	SLOT6 PCIe4 x8	PCI Express Gen 4 x8 slot
25	SLOT5 PCIe4 x16	PCI Express Gen 4 x16 slot
26	SLOT4 PCIe4 x8	PCI Express Gen 4 x8 slot
27	SLOT3 PCIe4 x8	PCI Express Gen 4 x8 slot
28	SLOT2 PCIe5 x16	PCI Express Gen 5 x16 slot
29	SLOT1 PCIe5 x8	PCI Express Gen 5 x8 slot
30	FAN REAR 0	Rear fan connector
31	DIMM1 - DIMM8	Memory module connectors
32	KB MS SERIAL	PS2/ Serial port connector
33	FAN REAR 1	Rear fan connector

Removing the system board

Prerequisites

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

   NOTE: Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.

   NOTE: Replacing the system board removes any changes that you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

   NOTE: Before disconnecting the cables from the system board, note the location of the connectors so that you can reconnect the cables correctly after you replace the system board.
2. Remove the side cover.
3. Remove the front bezel.
4. Remove the front I/O bracket.
5. Remove the air shroud.
6. Remove the PCIe holder.
7. Remove the 3.5-inch hard-drive assembly/2.5-inch hard-drive assembly.
8. Remove the memory module.
9. Remove the M.2 2230 PCIe solid-state drive/M.2 2280 PCIe solid-state drive.
10. Remove the hard-drive fan assembly.
11. Remove the internal hard-drive cage.
12. Remove the intrusion switch.
13. Remove the heat-sink assembly.
14. Remove the front-fan assembly and rear-fan assembly.
15. Remove the power-supply unit.

    NOTE: Remove the power-supply cable clips from the power-supply cover before removing the system board.
16. Remove the processor.

About this task

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

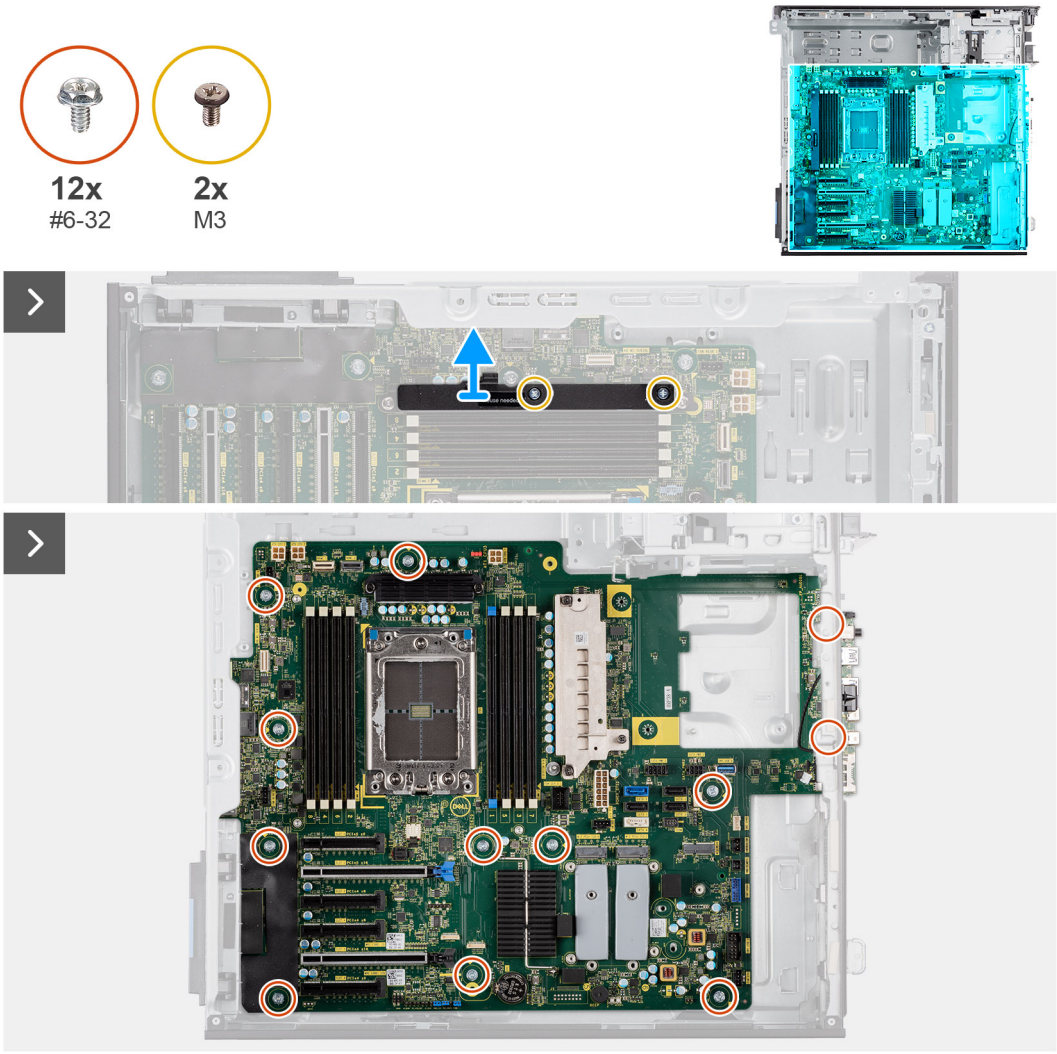


Figure 118. Removing the system board

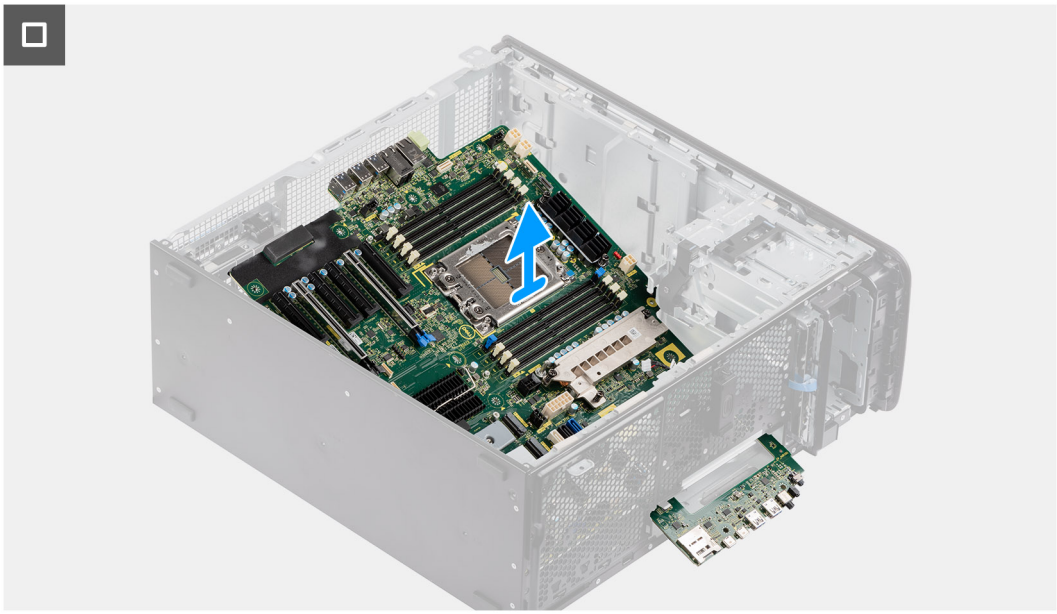


Figure 119. Removing the system board

Steps

1. Remove the two (M3) screws that secure the rear bottom air shroud to the system board.
2. Remove the 12 (#6-32) screws that secure the system board to the chassis.
3. Lift the system board at an angle and remove the system board off 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 images indicate the location of the system board and provide a visual representation of the installation procedure.

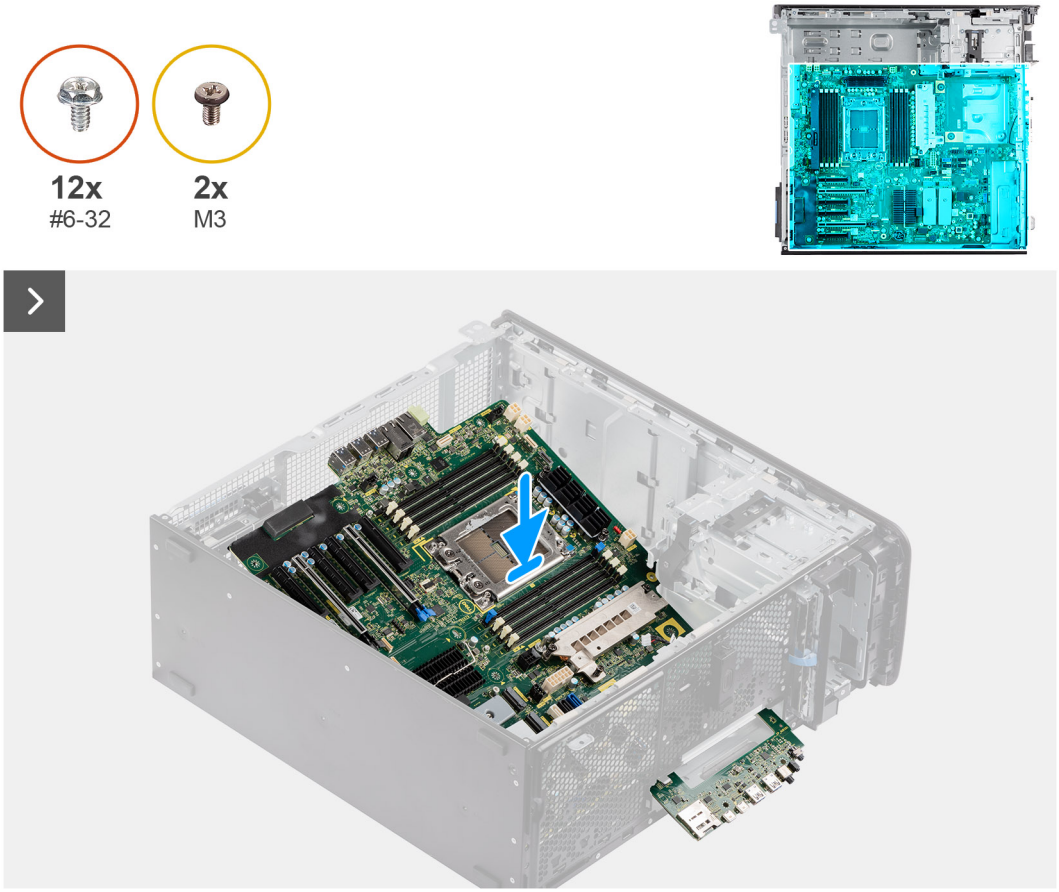


Figure 120. Installing the system board

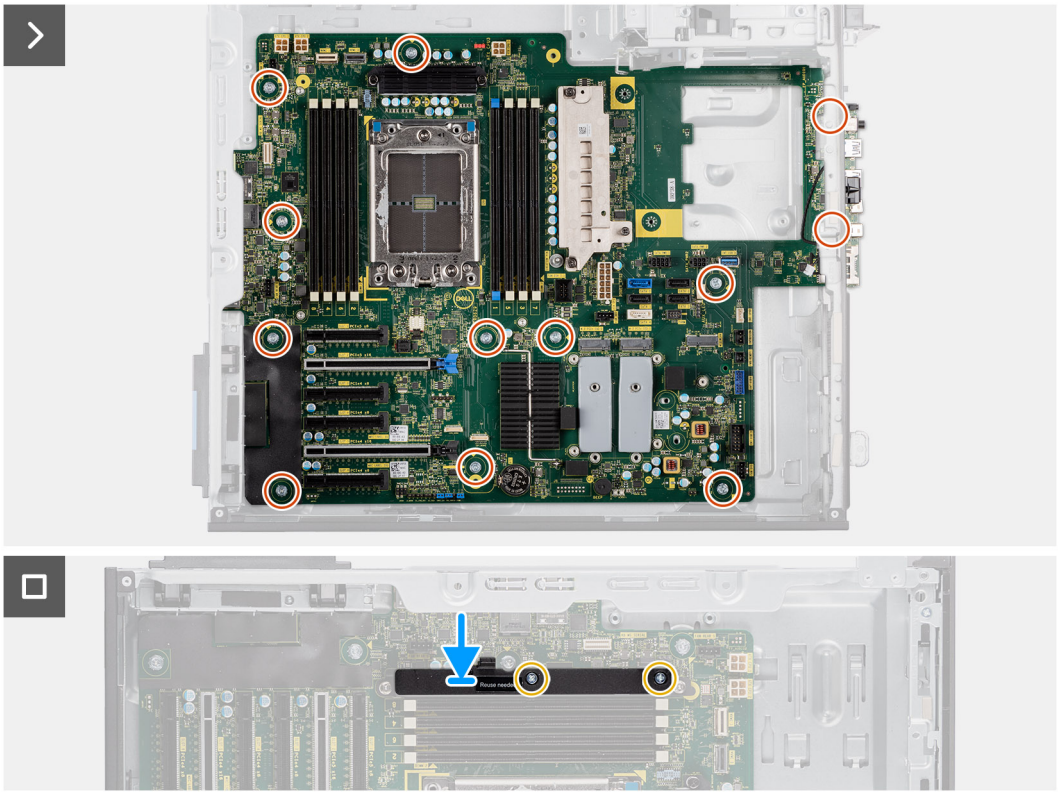


Figure 121. Installing the system board

Steps

1. Align and lower the system board into the system until the connectors at the back of the system board align with the slots on the chassis, and the screw holes on the system board align with the standoffs on the system.
2. Replace the 12 (#6-32) screws that secure the system board to the chassis.
3. Align and place the rear bottom air shroud on the system board.
4. Replace the two (M3) screws to secure the rear bottom air shroud to the system board.

Next steps

1. Install the processor.
2. Install the power-supply unit.

   NOTE: Install the power-supply cable clips to the power-supply cover replacing the system board.
3. Install the front-fan assembly and rear-fan assembly.
4. Install the heat-sink assembly.
5. Install the intrusion switch.
6. Install the internal hard-drive cage.
7. Install the hard-drive fan assembly.
8. Install the M.2 2230 PCIe solid-state drive/M.2 2280 PCIe solid-state drive.
9. Install the memory module.
10. Install the 3.5-inch hard-drive assembly /2.5-inch hard-drive assembly.
11. Install the PCIe holder.
12. Install the air shroud.
13. Install the front I/O bracket.
14. Install the front bezel.
15. Install the side cover.
16. Follow the procedure in After working inside your computer.

    NOTE: Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.

NOTE: Replacing the system board removes any changes that you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

7

Software

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

Operating system

Your Precision 7875 Tower supports the following operating systems:

- Windows 10 22H2
- Windows 11 SV1
- Windows 11 SV2
- Ubuntu 22.04 LTS, 64-bit
- Red Hat Enterprise Linux 9.3

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.

8

Technology and components

NOTE: Instructions provided in this section are applicable on computers shipped with Windows operating system. Windows is factory-installed with this computer.

NVIDIA RTX 6000 Ada Generation, 48 GB GDDR6 with ECC

The following table lists the NVIDIA RTX 6000 Ada Generation specifications.

Table 24. NVIDIA RTX 6000 Ada Generation specifications

Feature	Values
GPU frequency	915 MHz
DirectX 12	12
Shader model	5.17
Open CL	3
Open GL	4.6
GPU memory interface	384 bits
PCIe bus	PCIe 4.0 x16
Display support	Four DisplayPort 1.4a
Graphics memory configuration	48 GB, GDDR6
Graphics memory clock speed	10,000 MHz
Active fan sink	4-pin embedded fan controller
Slot number	Dual Slots
PCB form factor	Full Height, Full length
PCB layer	N/A
PCB solder mask	N/A
Bracket form factor	Full Height
Maximum resolution	7680 x 4320 x 24 bpp at 120 Hz (Requires two DPs 1.4a and DSC)
Power consumption	300 W

NVIDIA RTX A6000, 48 GB GDDR6

The following table lists the NVIDIA RTX A6000 specifications.

Table 25. NVIDIA RTX A6000 specifications

Feature	Values
GPU frequency	1410 MHz

Table 25. NVIDIA RTX A6000 specifications (continued)

Feature	Values
DirectX 12	12
Shader model	5.17
Open CL	3
Open GL	4.6
GPU memory interface	384 bits
PCIe bus	PCIe 4.0 x16
Display support	Four DP 1.2 Certified, 1.3/1,4 Ready
Graphics memory configuration	48 GB, GDDR6
Graphics memory clock speed	8001 MHz
Active fan sink	4-pin embedded fan controller
Slot number	Dual Slots
PCB form factor	Full Height, Full length
PCB layer	N/A
PCB solder mask	N/A
Bracket form factor	Full Height
Maximum resolution	7680 x 4320 x 24 bpp at 120 Hz (Requires two DPs 1.4a and DSC)
Power consumption	300 W

NVIDIA RTX A4000, 16 GB GDDR6

The following table lists the NVIDIA RTX A4000 specifications.

Table 26. NVIDIA RTX A4000 specifications

Feature	Values
GPU frequency	735 MHz
DirectX 12	12
Shader model	5.17
Open CL	3
Open GL	4.6
GPU memory interface	256 bits
PCIe bus	PCIe 4.0 x16
Display support	Four DP 1.2 Certified, 1.3/1,4 Ready
Graphics memory configuration	16 GB, GDDR6
Graphics memory clock speed	7000 MHz
Active fan sink	4-pin embedded fan controller
Slot number	Single Slot
PCB form factor	Full Height, Full length
PCB layer	N/A

Table 26. NVIDIA RTX A4000 specifications (continued)

Feature	Values
PCB solder mask	N/A
Bracket form factor	Full Height
Maximum resolution	7680 x 4320 x 24 bpp at 120 Hz (Requires two DPs 1.4a and DSC)
Power consumption	140 W

NVIDIA RTX A2000, 12 GB GDDR6

The following table lists the NVIDIA RTX A2000 specifications.

Table 27. NVIDIA RTX A2000 specifications

Feature	Values
GPU frequency	562 MHz
DirectX 12	12
Shader model	5.17
Open CL	3
Open GL	4.6
GPU memory interface	192 bits
PCIe bus	PCIe 4.0 x16
Display support	Four mini-DP 1.2 Certified, 1.3/1,4 Ready
Graphics memory configuration	12 GB, GDDR6
Graphics memory clock speed	6001 MHz
Active fan sink	4-pin embedded fan controller
Slot number	Dual Slots
PCB form factor	Half Height, Half Length
PCB layer	N/A
PCB solder mask	N/A
Bracket form factor	Full Height
Maximum resolution	7680 x 4320 x 24 bpp at 120 Hz (Requires two DPs 1.4a and DSC)
Power consumption	70 W

NVIDIA T1000, 8 GB GDDR6

The following table lists the NVIDIA T1000 specifications.

Table 28. NVIDIA T1000 specifications

Feature	Values
GPU frequency	1065 MHz
DirectX 12	12

Table 28. NVIDIA T1000 specifications (continued)

Feature	Values
Shader model	5.17
Open CL	3
Open GL	4.6
GPU memory interface	128 bits
PCIe bus	PCIe 3.0 x16
Display support	Four mini-DP 1.2 Certified, 1.3/1,4 Ready
Graphics memory configuration	8 GB, GDDR6
Graphics memory clock speed	5001 MHz
Active fan sink	4-pin embedded fan controller
Slot number	Single Slot
PCB form factor	Half Height
PCB layer	NA
PCB solder mask	NA
Bracket form factor	Low Profile or Full Height
Maximum resolution	7680 x 4320 x 24 bpp at 120 Hz (Requires two DPs 1.4a & DSC)
Power consumption	50 W

NVIDIA T400, 4 GB GDDR6

The following table lists the NVIDIA T400 specifications.

Table 29. NVIDIA T400 specifications

Feature	Values
GPU frequency	420 MHz
DirectX 12	12
Shader model	5.17
Open CL	3
Open GL	4.6
GPU memory interface	64 bits
PCIe bus	PCIe 3.0 x16
Display support	Three mini-DP 1.2 Certified, 1.3/1,4 Ready
Graphics memory configuration	4 GB, GDDR6
Graphics memory clock speed	5001 MHz
Active fan sink	4-pin embedded fan controller
Slot number	Single Slot
PCB form factor	Half Height
PCB layer	NA
PCB solder mask	NA

Table 29. NVIDIA T400 specifications (continued)

Feature	Values
Bracket form factor	Low Profile
Maximum resolution	7680 x 4320 x 24 bpp at 120 Hz (Requires two DPs 1.4a & DSC)
Power consumption	30 W

NVIDIA GeForce RTX 4090, 24 GB, GDDR6

The following table lists the NVIDIA GeForce RTX 4090 specifications.

Table 30. NVIDIA GeForce RTX 4090 specifications

Feature	Values
GPU frequency	2235 MHz (base clock)
DirectX 12	12
Shader model	6.7
Open CL	3.0
Open GL	4.6
GPU memory interface	384-bit
PCIe bus	PCIe 4.0 x 16
Display support	Three DP (1.4 ready ports) and One HDMI (2.1 port)
Graphics memory configuration	24 GB, GDDR6X
Graphics memory clock speed	21 Gbps
Active fan sink	Fan Controller Embedded (4-pin)
Slot number	3
PCB form factor	Full Height
PCB layer	14 layer
Bracket form factor	Triple
Maximum resolution	4K @120 Hz or 8K@60 Hz (with DSC)
Power consumption	450 W

AMD Radeon Pro W7600, 8 GB GDDR6

The following table lists the AMD Radeon Pro W7600 specifications.

Table 31. AMD Radeon Pro W7600 specifications

Feature	Values
GPU frequency	1240 MHz (base clock)
DirectX 12	12.0 Ultimate
Shader model	6.7
Open CL	2.2
Open GL	4.6

Table 31. AMD Radeon Pro W7600 specifications (continued)

Feature	Values
GPU memory interface	128-bit
PCIe bus	Gen 4 (x8 lanes)
Display support	x4 DP 2.1
Graphics memory configuration	8 GB DDR6
Graphics memory clock speed	2250 MHz
Active fan sink	Fan Controller Embedded (4 pin)
Slot number	Single slot
PCB form factor	Full Height, Three-Quarter Length
PCB layer	8
PCB solder mask	Matte Black
Bracket form factor	Full Height
Maximum resolution	7680 x 4320 @ 60 Hz
Power consumption	130 W

AMD Radeon Pro W7500, 8 GB GDDR6

The following table lists the AMD Radeon Pro W7500 specifications.

Table 32. AMD Radeon Pro W7500specifications

Feature	Values
GPU frequency	540 MHz (base clock)
DirectX 12	12.0 Ultimate
Shader model	6.7
Open CL	2.2
Open GL	4.6
GPU memory interface	128-bit
PCIe bus	Gen 4 (x8 lanes)
Display support	x4 DP 2.1
Graphics memory configuration	8 GB DDR6
Graphics memory clock speed	1350 MHz
Active fan sink	Fan Controller Embedded (4 pin)
Slot number	Single slot
PCB form factor	Full Height, Three-Quarter Length
PCB layer	8
PCB solder mask	Matte black
Bracket form factor	Full Height
Maximum resolution	7680 x 4320 @ 60 Hz
Power consumption	70 W

AMD Radeon Pro W6400, 4 GB GDDR6

The following table lists the AMD Radeon Pro W6400 specifications.

Table 33. AMD Radeon Pro W6400 specifications

Feature	Values
GPU frequency	1923 MHz (base clock)
DirectX 12	12.0 Ultimate
Shader model	6.6
Open CL	2.2
Open GL	4.6
GPU memory interface	64-bit
PCIe bus	Gen 4 (x4 lanes)
Display support	x2 DP 1.4
Graphics memory configuration	4 GB DDR6
Graphics memory clock speed	14 Gbps
Active fan sink	Fan Controller Embedded(4 pin)
Slot number	Single slot
PCB form factor	Full Height, Full length
PCB layer	6
PCB solder mask	Black
Bracket form factor	Full Height
Maximum resolution	7680x4320 @60 Hz
Power consumption	50 W

AMD Radeon Pro W6300, 2 GB GDDR6

The following table lists the AMD Radeon Pro W6300 specifications.

Table 34. AMD Radeon Pro W6300 specifications

Feature	Values
GPU frequency	1096 MHz (base clock)
DirectX 12	12.0 Ultimate
Shader model	6.1
Open CL	2.2
Open GL	4.6
GPU memory interface	32-bit
PCIe bus	Gen 4 (x4 lanes)
Display support	x2 DP 1.4
Graphics memory configuration	2 GB DDR6
Graphics memory clock speed	16 Gbps

Table 34. AMD Radeon Pro W6300 specifications (continued)

Feature	Values
Active fan sink	Fan Controller Embedded (4 pin)
Slot number	Single slot
PCB form factor	Full Height, Half Length
PCB layer	6
PCB solder mask	Red
Bracket form factor	Full Height
Maximum resolution	7680 x 4320 @60 Hz
Power consumption	35 W

9

BIOS Setup

CAUTION: Unless you are an expert computer user, do not change the settings in the BIOS Setup. Certain changes can make your computer work incorrectly.

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

NOTE: Before you change the settings in BIOS Setup, it is recommended that you note down the original settings for future reference.

Use BIOS Setup for the following purposes:

- Get information about the hardware installed in your computer, such as the amount of RAM and the size of the hard drive.
- Change the system configuration information.
- Set or change a user-selectable option, such as the user password, type of hard drive installed, and enabling or disabling base devices.

Entering BIOS setup program

About this task

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

Navigation keys

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

Table 35. 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 follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.
Tab	Moves to the next focus area. **NOTE:** For the standard graphics browser only.
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 restarts the system.

One time boot menu

To enter **one time boot menu**, turn on your computer, and then press F2 immediately.

NOTE: It is recommended to shutdown the computer if it is on.

The one-time boot menu displays the devices that you can boot from including the diagnostic option. 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

  NOTE: Choosing **Diagnostics**, will display the **ePSA diagnostics** screen.

The boot sequence screen also displays the option to access the System Setup screen.

F12 One Time Boot menu

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

NOTE: It is recommended to shutdown the computer if it is on.

The F12 One Time Boot menu displays the devices that you can boot from including the diagnostic option. 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 boot sequence screen also displays the option to access System Setup.

System setup options

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

Table 36. System setup options—System information menu

Overview	
Precision 7875 Tower	
BIOS Version	Displays the BIOS version number.
Service Tag	Displays the Service Tag of the system.
Asset Tag	Displays the Asset Tag of the system.
Manufacture Date	Displays the manufacture date of the system.
Ownership Date	Displays the ownership date of the system.
Express Service Code	Displays the express service code of the system.
Ownership Tag	Displays the Ownership Tag of the system.
Signed Firmware Update	Displays whether the Signed Firmware Update is enabled on your system.
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.

Table 36. System setup options—System information menu (continued)

Overview	
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.
Simultaneous Multi-Threading Capable	Displays whether the processor is Simultaneous Multi-Threading capable.
64-Bit Technology	Displays whether 64-bit technology is used.
Memory Information	
Memory Installed	Displays the total system memory installed.
Memory Available	Displays the total system memory available.
Memory Speed	Displays the memory speed.
Memory Channel Mode	Displays single or dual channel mode.
Memory Technology	Displays the technology that is used for the memory.
DIMM 1 size	Displays the size/status of DIMM 1 slot.
DIMM 2 size	Displays the size/status of DIMM 2 slot.
DIMM 3 size	Displays the size/status of DIMM 3 slot.
DIMM 4 size	Displays the size/status of DIMM 4 slot.
DIMM 5 size	Displays the size/status of DIMM 5 slot.
DIMM 6 size	Displays the size/status of DIMM 6 slot.
DIMM 7 size	Displays the size/status of DIMM 7 slot.
DIMM 8 size	Displays the size/status of DIMM 8 slot.
Devices Information	
Native Resolution	Displays the native resolution of the system.
Audio Controller	Displays the audio controller information of the system.
LOM Mac Address	Displays the LOM Mac address of the system.
dGPU Video Controller	Displays the video controller type of the system.
LOM2 Mac Address	Displays the LOM2 Mac address of the system.
Slot 1-6	Displays the slot information and compatibility

Table 37. System setup options—Boot Configuration menu

Boot Configuration	
Boot Sequence	
Boot mode	Displays the boot mode.
Boot Sequence	Displays the boot sequence.
Enable PXE Boot Priority	Enable or disable PXE boot be added to boot sequence.
Secure Boot	
Enable Secure Boot	Enables the computer to boot using only validated boot software. By default, the **Enable Secure Boot** option is enabled. For additional security, Dell Technologies recommends keeping the **Secure Boot** option enabled to ensure that the UEFI firmware validates the operating system during the boot process.

Table 37. System setup options—Boot Configuration menu (continued)

Boot Configuration	
	NOTE: For Secure Boot to be enabled, the computer is required to be in UEFI boot mode and the Enable Legacy Option ROMs option is required to be turned off.
Enable Microsoft UEFI CA	Allows the UEFI CA to be added BIOS UEFI Secure Boot DB database. When disabled, the UEFI CA is removed from the BIOS UEFI Secure Boot database. **NOTE:** When disabled, the Microsoft UEFI CA could render your computer unable to boot, system graphics may not function, some devices may not function properly, and the computer could become unrecoverable. By default, the **Enable Microsoft UEFI CA** option is enabled. For additional security, Dell Technologies recommends keeping the **Microsoft UEFI CA** option enabled to ensure the broadest compatibility with devices and operating systems.
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, PK is selected.

Table 38. System setup options—Integrated Devices menu

Integrated Devices	
Date/Time	Displays the current date in MM/DD/YYYY format and current time in HH:MM:SS AM/PM format.
HDD Fans	Configures which fans in the system are physical populated in the system. By default, **HDD0 Fan Enable** is enabled.
Limit system memory to less than 1 TB	Limits the system memory to less than 1 TB when more than 1 TB is installed in computer to allow compatibilt
Camera	Enables or disable the camera. By default, the **Enable Camera** option is selected
Audio	
Enable Audio	Enable or disable the integrated audio controller. By default, all the options are enabled.
Serial Port	Enable or disable the serial port address.
USB Configuration	Enable or disable booting from USB mass storage devices. By default, all options are enabled.
Dust Filter Maintenance	Enable or disable BIOS messages for maintaining optional dust filter installed in the system. By default, the option **Disabled** is enabled.

Table 39. System setup options—Storage menu

Storage	
SATA/NVMe Operation	
SATA/NVMe Operation	Set the operating mode of the integrated storage device controller. By default, the **ACHI/NVMe** option is enabled.
Storage interface	
Port Enablement	This page allows you to enable the onboard drives. By default, the all options are enabled.
SMART Reporting	
Enable SMART Reporting	Enable or disable Self-Monitoring, Analysis, and Reporting Technology (SMART) during system startup. By default, the **Enable SMART Reporting** option is not enabled.
Drive Information	
SATA-0	Type: Displays the type information of the system. Device: Displays the device information of the system.
SATA-1	Type: Displays the type information of the system. Device: Displays the device information of the system.
SATA-2	Type: Displays the type information of the system. Device: Displays the device information of the system.
SATA-3	Type: Displays the type information of the system. Device: Displays the device information of the system.
SATA-4	Type: Displays the type information of the system. Device: Displays the device information of the system.
M.2 PCIe SSD-0	Type: Displays the type information of the system. Device: Displays the device information of the system.
M.2 PCIe SSD-1	Type: Displays the type information of the system. Device: Displays the device information of the system.
MCIO PCIe SSD-0	Type: Displays the type information of the system. Device: Displays the device information of the system.
MCIO PCIe SSD-0	Type: Displays the type information of the system. Device: Displays the device information of the system.
Enable MediaCard	
Secure Digital (SD) Card	Enable or disable the SD card. By default, the **Secure Digital (SD) Card** option is enabled.
Secure Digital (SD) Card Read-Only Mode	Enable or disable the SD card read-only mode. By default, the **Secure Digital (SD) Card Read-Only Mode** option is not enabled.

Table 40. System setup options—Display menu

Display	
Multi-Display	Enable or disables Multi-Display, **NOTE:** This feature has to be enabled for Windows 7 or later, and not applciable to other operating systems. By default, **Enable Multi-Display** is enabled.
Primary Video Slot	Determines which video controller to be the primary display when multiple controllers are available in the system. By default, **Auto** is enabled.
Full Screen Logo	Enable or disable full screen logo. By default, the option is not enabled.

Table 41. System setup options—Connection menu

Connection	
Network Controller Configuration	
Integrated NIC	Enable or disable on-board LAN Controller. By default, **Enabled with PXE** is enabled.
Integrated NIC2	By default, **Enabled** is enabled.
Enable UEFI Network Stack	Enable or disable installation of UEFI networking protocols. By default, the **Auto Enabled** option is enabled.
HTTPs Boot Feature	
HTTPs Boot	Enable or disable the HTTPs Boot feature. By default, the **HTTPs Boot** option is disabled.
HTTPs Boot Modes	By default, the **Auto Mode** option is disabled.

Table 42. System setup options—Power menu

Power	
USB PowerShare	
Enable USB PowerShare	Enables external devices (such as phones and portable music players) to be charged using stored system battery. Devices must be connected to system using designated USB PowerShare ports. By default, the **Enable USB PowerShare** is enabled.
Thermal Management	Enables to cool the fan and processor heat management to adjust the system performance, noise, and temperature. By default, the **Optimized** option is enabled.
Lower PCIe Slot Zone	Allows increasing target fan speed on Lower PCIe Slot Zone giving a higher performance.
CPU/Memory Zone	Allows increasing target fan speed on CPU/Memory Zone giving a higher performance.
USB Wake Support	
Enable USB Wake Support	When enabled, the USB devices like a mouse or keyboard can be used to wake the system from Standby, Hibernate, and Power Off. **NOTE:** This feature requires Deep Sleep Control to be disabled.

Table 42. System setup options—Power menu (continued)

Power	
	NOTE: This feature is only functional when the AC power adapter is connected. If the AC power adapter is removed before Standby, the BIOS will remove power from all of the USB ports to conserve battery power. By default, the **Enable USB Wake Support** option is disabled.
AC Behavior	Enables the system to turn on automatically, when AC is inserted. By default, the **Power Off** option is enabled.
Block Sleep	Enable to block entering sleep (S3) mode in the operating system. By default, the **Block Sleep** (S3) option is disabled.
Deep Sleep Control	Deep Sleep Control option is disabled in order to enable the Wake from USB keyboard and mouse feature to work in the shutdown (S5) and Hibernate (S4) states. By default, the **Enabled in S4 and S5** option is enabled.

Table 43. System setup options—Security menu

Security	
TPM 2.0 Security	
TPM 2.0 Security On	Allows you to enable or disable TPM visibility to operating system. By default, the **TPM 2.0 Security On** option is enabled.
Attestation Enable	The **Attestation Enable** option controls the endorsement hierarchy of TPM. Disabling the **Attestation Enable** option prevents TPM from being used to digitally-sign certificates. By default, the **Attestation Enable** option is enabled. For additional security, Dell Technologies recommends keeping the **Attestation Enable** option enabled. **NOTE:** When disabled, this feature may cause compatibility issues or loss of functionality in some operating systems.
Key Storage Enable	The **Key Storage Enable** option controls the storage hierarchy of TPM, which is used to store digital keys. Disabling the **Key Storage Enable** option restricts the ability of TPM to store owner's data. By default, the **Key Storage Enable** option is enabled. For additional security, Dell Technologies recommends keeping the **Key Storage Enable** option enabled. **NOTE:** When disabled, this feature may cause compatibility issues or loss of functionality in some operating systems.
SHA-256	Allows you control the usage of SHA-256 by TPM. When enabled, the BIOS and TPM use the SHA-256 hash algorithm to extend measurements into the TPM PCRs during BIOS boot. When disabled, the BIOS and TPM use the SHA-1 hash algorithm to extend measurements into the TPM PCRs during BIOS boot. By default, the **SHA-256** option is enabled. For additional security, Dell Technologies recommends keeping the **SHA-256** option enabled.
Clear	When enabled, the **Clear** option clears information stored in the TPM after exiting the system's BIOS. This option returns to disabled state when the system restarts.

Table 43. System setup options—Security menu (continued)

Security	
	By default, the **Clear** option is disabled. Dell Technologies recommends enabling the **Clear** option only when TPM data is required to be cleared.
PPI Bypass for Clear Commands	Controls the TPM Physical Presence Interface (PPI). For additional security, Dell Technologies recommends keeping the **PPI Bypass for Clear Commands** option disabled.
SMM Security Mitigation	Enables or disables additional UEFI SMM Security Mitigation protections. This option uses the Windows SMM Security Mitigations Table (WSMT) to confirm to the operating system that security best practices have been implemented by the UEFI firmware. By default, the **SMM Security Mitigation** option is enabled. For additional security, Dell Technologies recommends keeping the **SMM Security Mitigation** option enabled unless you have a specific application which is not compatible. **NOTE:** This feature may cause compatibility issues or loss of functionality with some legacy tools and applications.
AMD Memory Guard	Enables enhanced protection by encrypting contents of RAM. This feature is only available on Pro version CPUs. By default, this option is disabled.
Data Wipe on Next Boot	
Start Data Wipe	Enable or disable the data wipe on next boot. By default, the **Start Data Wipe** option is disabled.
Absolute	Enables, disables, or permanently disables the BIOS module interface of the optional Absolute Persistence Module service from Absolute software. By default, the **Absolute** option is enabled. For additional security, Dell Technologies recommends keeping the **Absolute** option enabled. **WARNING: The 'Permanently Disabled' option can only be selected once. When 'Permanently Disabled' is selected, Absolute Persistence cannot be re-enabled. No further changes to the Enable/Disable states are allowed.** **NOTE:** The Enable/Disable options are unavailable while the computer is in the activated state. **NOTE:** When the Absolute features are activated, the Absolute integration cannot be disabled from the BIOS setup screen.
UEFI Boot Path Security	Controls whether the system will prompt the user to enter the admin password (if set) when booting to a UEFI boot path device from the F12 boot menu. By default, the **Always Except Internal HDD** 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 **Firmware Device Tamper Detection** option is enabled. For additional security, Dell Technologies recommends keeping the **Firmware Device Tamper Detection** option enabled.

Table 43. System setup options—Security menu (continued)

Security	
Clear Firmware Device Tamper Detection	Allows clearing the event and booting. By default, this option is disabled.

Table 44. System 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 system and/or internal hard drive passwords are previously set. ● The administrator password can be used in place of the system and/or internal hard drive passwords. ● When set, the administrator password must be provided during a firmware update. ● Clearing the administrator password also clears the system 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 system 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 system password prompt. ● The computer shuts down after three incorrect attempts to enter the system password. ● The computer shuts down when the **Esc** key is pressed at the System Password prompt. ● The system password is not prompted when the computer resumes from standby mode. Dell Technologies recommends using the system password in situations where it is likely that a system may be lost or stolen.
M.2 PCIe SSD-1	Set, change, or delete the M.2 PCIe SSD-1 password.
Password Configuration	The Password configuration page includes several options for changing the requirements of BIOS passwords. You can modify the minimum and maximum length of the passwords as well as require passwords to contain certain character classes (upper case, lower case, digit, special character). Dell Technologies recommends setting the minimum password length to at least 8 characters.
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 number. By default, the option is disabled.
Special Character	Reinforces password must have at least one special character. By default, the option is disabled.

Table 44. System setup options—Passwords menu (continued)

Passwords	
Minimum Characters	Set the minimum characters allowed for password.
Password Changes	
Allow Non-Admin Password Changes	The **Allow Non-Admin Password Changes** option in BIOS setup allows an end user to set or change the system or hard drive passwords without entering the administrator password. This gives an administrator control over the BIOS settings but enables an end user to provide their own password. By default, the **Allow Non-Admin Password Changes** option is disabled. For additional security, Dell Technologies recommends keeping the **Allow Non-Admin Password Changes** option disabled.
Admin Setup Lockout	
Enable Admin Setup Lockout	The **Admin Setup Lockout** option prevents an end user from even viewing the BIOS setup configuration without first entering the administrator password (if set). By default, the **Admin Setup Lockout** option is disabled. For additional security, Dell Technologies recommends keeping the **Admin Setup Lockout** option disabled.
Master Password Lockout	
Enable Master Password Lockout	The Master Password Lockout setting allows you to disable the Recovery Password feature. If the system, administrator, or hard drive password is forgotten, the system becomes unusable. **NOTE:** When the owner password is set, the Master Password Lockout option is not available. **NOTE:** When an internal hard drive password is set, it must first be cleared before Master Password Lockout can be changed. By default, the **Enable Master Password Lockout** option is disabled. Dell Technologies does not recommend enabling the **Master Password Lockout** unless you have implemented your own password recovery system.
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 is disabled.

Table 45. System setup options—Update, Recovery menu

Update, Recovery	
UEFI Capsule Firmware Updates	Enable or disable BIOS updates through UEFI capsule update packages. **NOTE:** Disabling this option will block BIOS updates from services such as Microsoft Windows Update and Linux Vendor Firmware Service (LVFS). By default, the option is enabled.
BIOS Recovery from Hard Drive	Enables the user to recover from certain corrupted BIOS conditions from a recovery file on the user primary hard drive or an external USB key. By default, the option is enabled. **NOTE:** BIOS Recovery from Hard Drive is not available for Self-Encrypting Drives (SED).
BIOS Downgrade	
Allow BIOS Downgrade	This field controls the flashing of the system firmware to previous revisions.

Table 45. System setup options—Update, Recovery menu (continued)

Update, Recovery	
	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 system errors. By default, the option is enabled.
BIOSConnect	Enable or disable cloud Service OS recovery if the main operating system fails to boot with the number of failures equal to or greater than the value specified by the Auto OS Recovery Threshold setup option and local Service operating system does not boot or is not installed. By default, the option is enabled.
Dell Auto operating system Recovery Threshold	Controls the automatic boot flow for SupportAssist System Resolution Console and for Dell operating system Recovery Tool. By default, the threshold value is set to 2.

Table 46. System setup options—System Management menu

System Management	
Service Tag	Displays the Service Tag of the system.
Asset Tag	Create a system Asset Tag.
Wake on LAN/WLAN	
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 option is disabled.
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.
SERR Messages	Enable or disable the SERR message mechanism. 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 OS agent requests. By default, the 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.
DASH Support	Enable or disable support for Desktop and Mobile Architecture for System Hardware (DASH) management via Platform Level Data Model (PLDM) exchanges. By default, this option is enabled.

Table 47. System setup options—Keyboard menu

Keyboard	
Keyboard Errors	
Enable Keyboard Error Detection	Enable or disable the keyboard error detection when the system boots. By default, the option is enabled.
Numlock LED	
Enable Numlock LED	Allows you to enable or disable the Numlock LED when the system boots. By default, the option is enabled.

Table 48. System setup options—Pre-boot Behavior menu

Pre-boot Behavior	
Warning and Errors	Enable or disable the boot process to pause when warnings or errors are detected. A useful feature when the system is being remotely managed. By default, the **Prompt on Warnings and Errors** option is enabled.
Extend BIOS POST Time	Set the BIOS POST load time. By default, the **0 seconds** option is enabled.

Table 49. System setup options—Virtualization menu

Virtualization	
AMD-V Technology	
Enable AMD-V Technology	When enabled, the system will be able to utilize a Virtual Machine Monitor (VMM). By default, the option is enabled.
AMD-Vi Technology	
Enable AMD-Vi Technology (IOMMU v2)	Specifies whether a measured Virtual Machine Monitor (MVMM) can use the additional hardware capabilities that are provided by AMD-Vi Technology.
DMA Protection	Controls BIOS support for Pre-boot and Kernel DMA protection.
Enable Pre-Boot DMA Support	Allows you to control the Pre-Boot DMA protection for both internal and external ports. This option does not directly enable DMA protection in the operating system. **NOTE:** This option is not available when the virtualization setting for IOMMU is disabled (VT-d/AMD Vi). By default, the **Enable Pre-Boot DMA Support** option is enabled. For additional security, Dell Technologies recommends keeping the **Enable Pre-Boot DMA Support** option enabled. **NOTE:** This option is provided only for compatibility purposes, since some older hardware is not DMA capable.
Enable OS Kernel DMA Support	Allows you to control the Kernel DMA protection for both internal and external ports. This option does not directly enable DMA protection in the operating system. For operating systems that support DMA protection, this setting indicates to the operating system that the BIOS supports the feature. **NOTE:** This option is not available when the virtualization setting for IOMMU is disabled (VT-d/AMD Vi). By default, the **Enable OS Kernel DMA Support** option is enabled. **NOTE:** This option is provided only for compatibility purposes, since some older hardware is not DMA capable.

Table 50. System setup options—Performance menu

Performance	
Enable Dell RMT	Enable or disable Dell Reliable Memory Technology (RMT) to identify and isolate memory errors in the system RAM. By default, the option is enabled.
Clear Dell RMT Log	By default, the option is disabled.
AMD Simultaneous Multithreading Technology	
Enable AMD Processor Threads	Each processor core contains two threads. Each thread appears as a separate processor to the operating system, however, they share some of the core with one another. Most applications benefit from using this additional processing capability, though some do not. By default, the option is enabled.
AMD Turbo Boost Technology	
Enable AMD Turbo Core Technology	Enables or diables AMD Turbo Core Technology in the processor. It adjusts processor frequency to provide a performance boost at the operating system's request. By default, the option is enabled.
PCIe Link Speed	
PCIe Link Speed	Allows the user to select the maximum PCIe link speed attainable by devices within the system. By default, the option **Auto** is enabled.
PCIe Resizable Base Address Register (BAR)	
PCIe Resizable Base Address Register (BAR)	Enable or disable PCIe Resizable Base Address Register (BAR) support. By default, the option is enabled.
NUMA Nodes Per Socket	Controls how system memory is distributed among processor cores. By default, the option **Auto** is enabled. **NOTE:** All processors support NPS2. **NOTE:** 12-core and 16-core processors (AMD Ryzen Threadripper PRO 7945WX and AMD Ryzen Threadripper PRO 7955WX) do not support NPS4.

Table 51. System setup options—System Logs menu

System Logs	
BIOS Event Log	
Clear Bios Event Log	Displays BIOS events. By default, the **Keep Log** option is enabled.
Dell Reliable Memory Technology Events	Displays the Dell Reliable Memory Technology events.

Updating the BIOS

Updating the BIOS in Windows

About this task

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the computer it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system re-install. For more information on this subject, search in the Knowledge Base Resource at www.dell.com/support.

Steps

1. Go to www.dell.com/support.
2. Click **Product support**. In the **Search support** box, enter the Service Tag of your computer, and then click **Search**.

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

3. Click **Drivers & Downloads**. Expand **Find drivers**.
4. Select the operating system installed on your computer.
5. In the **Category** drop-down list, select **BIOS**.
6. Select the latest version of BIOS, and click **Download** to download the BIOS file for your computer.
7. After the download is complete, browse the folder where you saved the BIOS update file.
8. Double-click the BIOS update file icon and follow the on-screen instructions.
   For more information, search in the Knowledge Base Resource at www.dell.com/support.

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 www.dell.com/support.

Updating the BIOS using the USB drive in Windows

About this task

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the system it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system re-install. For more information on this subject, search in the Knowledge Base Resource at www.dell.com/support.

Steps

1. Follow the procedure from step 1 to step 6 in Updating the BIOS in Windows to download the latest BIOS setup program file.
2. Create a bootable USB drive. For more information, search in the Knowledge Base Resource at www.dell.com/support.
3. Copy the BIOS setup program file to the bootable USB drive.
4. Connect the bootable USB drive to the computer that needs the BIOS update.
5. Restart the computer and press **F12** .
6. Select the USB drive from the **One Time Boot Menu**.
7. Type the BIOS setup program filename and press **Enter**.
   The **BIOS Update Utility** appears.
8. Follow the on-screen instructions to complete the BIOS update.

Updating the BIOS from the F12 One-Time boot menu

Update your computer BIOS using the BIOS update.exe file that is copied to a FAT32 USB drive and booting from the F12 One-Time boot menu.

About this task

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the computer it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress and the computer will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system re-install. For more information on this subject, search in the Knowledge Base Resource at www.dell.com/support.

BIOS Update

You can run the BIOS update file from Windows using a bootable USB drive or you can also update the BIOS from the F12 One-Time boot menu on the computer.

Most of the Dell computers built after 2012 have this capability, and you can confirm by booting your computer to the F12 One-Time Boot Menu to see if BIOS FLASH UPDATE is listed as a boot option for your computer. If the option is listed, then the BIOS supports this BIOS update option.

NOTE: Only computers with BIOS Flash Update option in the F12 One-Time boot menu can use this function.

Updating from the One-Time boot menu

To update your BIOS from the F12 One-Time boot menu, you need the following:

- USB drive formatted to the FAT32 file system (key 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 that is connected to the computer
- Functional computer battery to flash the BIOS

Perform the following steps to perform the BIOS update flash process from the F12 menu:

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

Steps

1. From a turn off state, insert the USB drive where you copied the flash into a USB port of the computer.
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 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 update is completed.

System and setup password

Table 52. System and setup password

Password type	Description
System password	Password that you must enter to log in to your system.
Setup password	Password that you must enter to access and make changes to the BIOS settings of your computer.

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

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

CAUTION: Anyone can access the data that is stored on your computer if it is not locked and left unattended.

NOTE: System and setup password feature is disabled.

Assigning a System Setup password

Prerequisites

You can assign a new **System or Admin Password** only when the status is in **Not Set**.

About this task

To enter BIOS System Setup, press F2 immediately after a power-on or reboot.

Steps

1. In the **System BIOS** or **System Setup** screen, select **Security** and press Enter.
   The **Security** screen is visible.
2. Select **System/Admin Password** and create a password in the **Enter the new password** field.
   Use the following guidelines to assign the system password:
   - A password can have up to 32 characters.
   - At least one special character: ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }
   - Numbers 0 through 9.
   - Upper case letters from A to Z.
   - Lower case letters from a to z.
3. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
4. Press Esc and save the changes as prompted by the pop-up message.
5. Press Y to save the changes.
   The computer restarts.

Deleting or changing an existing system setup password

Prerequisites

Ensure that the **Password Status** is Unlocked (in the System Setup) before attempting to delete or change the existing System and/or Setup password. You cannot delete or change an existing System or Setup password, if the **Password Status** is Locked.

About this task

To enter the System Setup, press F2 immediately after a power-on or reboot.

Steps

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

   NOTE: If you change the System and/or Setup password, reenter the new password when prompted. If you delete the System and/or Setup password, confirm the deletion when prompted.
5. Press Esc and 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 will reset the BIOS settings on your computer.

Steps

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

Clearing BIOS (System Setup) and System passwords

About this task

To clear the system or BIOS passwords, contact Dell technical support as described at www.dell.com/contactdell.

NOTE: For information on how to reset Windows or application passwords, refer to 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 with the BIOS and is launched by the BIOS internally. The embedded system diagnostics provides a set of options for particular devices or device groups allowing you to:

- Run tests automatically or in an interactive mode
- Repeat tests
- Display or save test results
- Run thorough tests to introduce additional test options to provide extra information about the failed device(s)
- View status messages that inform you if 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 terminal when the diagnostic tests are performed.

For more information, see the knowledge base article 000180971.

Running the SupportAssist Pre-Boot System Performance Check

Steps

1. Turn on your computer.
2. As the computer boots, press the F12 key as the Dell logo appears.
3. On the boot menu screen, select the **Diagnostics** option.
4. Click the arrow at the bottom left corner.
   Diagnostics front page is displayed.
5. Click the arrow in the lower-right corner to go to the page listing.
   The items detected are listed.
6. To run a diagnostic test on a specific device, press Esc and click **Yes** to stop the diagnostic test.
7. Select the device from the left pane and click **Run Tests**.
8. 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 www.dell.com/support.

System-diagnostic lights

This section lists the system-diagnostic lights of your computer.

Power-supply diagnostics light

Indicates the status of the power-supply in either of the two sates:

- Off: No Power
- On: Power is supplied.

Power button light

Table 53. Power button LED status

Power button LED state	System state	Description
Off	• S4 • S5	There is in Hibernate or Off state.
Solid White	S0	Working state
Solid Amber		Various sleep states or No POST
Blinking Amber/White		Failure to POST

This platform relies on the Power button LED light blinking in an amber/white pattern to determine a failure as listed in the following table:

NOTE:

The blinking patterns consist of two numbers (representing the First Group: Amber blinks, Second Group: White blinks).

- **First Group**: The Power button LED light blinks Amber, 1 to 9 times followed by a short pause with the LED off for a couple of seconds.
- **Second Group**: The Power button LED light then blinks White, 1 to 9 times, followed by a longer pause before the next cycle starts again after a short interval.

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Example: No Memory detected (2,3). The power button LED blinks 2-times in Amber followed by a pause, and then blinks 3-times in White. The Power button LED will pause for a few seconds before the next cycle repeats itself again.

Table 54. System-diagnostic lights

Blinking pattern		Problem description	Suggested resolution
Amber	White		
1	1	TPM detection failure	Replace the system board.
1	2	Unrecoverable SPI Flash Failure	Replace the system board.
1	5	EC unable to program i-Fuse	Replace the system board.
1	6	Generic catch-all for ungraceful EC code flow errors	Disconnect all power source (AC, battery, coin cell) and drain flea power by pressing and holding down the power button for 3~5 seconds.
1	7	Non-RPMC Flash on Boot Guard fused system	
1	8	Reserved	
1	9	Reserved	
2	1	CPU failure	• Run the Dell Support Assist/Dell Diagnostics tool. • If the problem persists, replace the system board.
2	2	System board failure (included BIOS corruption or ROM error)	• Flash latest BIOS version • If the problem persists, replace the system board.

Table 54. System-diagnostic lights (continued)

Blinking pattern		Problem description	Suggested resolution
Amber	**White**		
2	3	No memory/RAM detected	• Confirm that the memory module is installed properly. • If the problem persists, replace the memory module.
2	4	Memory/RAM failure	• Reset and swap memory modules among the slots. • If the problem persists, replace the memory module.
2	5	Invalid memory installed	• Reset and swap memory modules among the slots. • If the problem persists, replace the memory module.
2	6	System board/Chipset Error	Replace the system board.
2	7	LCD failure (SBIOS message)	Replace the LCD module.
2	8	LCD failure (EC detection of power rail failure)	Replace the system board.
2	9	Reserved	
3	1	CMOS battery failure	• Reset the main battery connection. • If the problem persists, replace the main battery.
3	2	PCI or Video card/chip failure	Replace the system board.
3	3	BIOS Recovery image not found	• Flash latest BIOS version. • If the problem persists, replace the system board.
3	4	BIOS Recovery image found but invalid	• Flash latest BIOS version. • If the problem persists, replace the system board.
3	5	Power rail failure	Replace the system board.
3	6	Flash corruption is detected by SBIOS.	• Press the power button for over 25 seconds to do RTC reset. If the problem persists, replace the system board. • Disconnect all power source (AC, battery, coin cell) and drain flea power by pressing and holding down the power button 3~5 seconds to ensure all power are drained. • Run "BIOS recovery from USB," and the instructions are in the website Dell support.

Table 54. System-diagnostic lights (continued)

Blinking pattern		Problem description	Suggested resolution
Amber	**White**		
			• If the problem persists, replace the system board.
3	7	Timeout waiting on ME to reply to HECI message.	Replace the system board.
3	8	Reserved	
3	9	Reserved	
4	1	Memory DIMM power rails failure	
4	2	CPU Power cable connection issue	
4	3	Reserved	
4	4	Reserved	
4	5	Reserved	

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 standalone tool that is preinstalled in all Dell computers installed with 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, or 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 their 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 www.dell.com/serviceabilitytools. Click **SupportAssist** and then, click **SupportAssist OS Recovery**.

Real Time Clock—RTC reset

The Real Time Clock (RTC) reset function allows you or the service technician to recover the recently launched Precision Workstation from **No POST/No Boot/No Power** situations. You can initiate the RTC reset on the system 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 system 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 Defaults and reset the system date and time. The following items are unaffected by the RTC reset:

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

NOTE: The below items may or may not 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 proposes multiple options for recovering Windows operating system on your Dell PC. For more information. see Dell Windows Backup Media and Recovery Options.

Wi-Fi power cycle

About this task

If your computer is unable to access the Internet due to Wi-Fi connectivity issues a Wi-Fi power cycle procedure may be performed. The following procedure provides the instructions on how to conduct a Wi-Fi power cycle:

NOTE: Some ISPs (Internet Service Providers) provide a modem/router combo device.

Steps

1. Turn off your computer.
2. Turn off the modem.
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 your 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 55. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
My Dell app	 **Figure 122. My Dell app**
Tips	 **Figure 123. Tips**
Contact Support	In Windows search, type `Contact Support`, and press Enter.
Online help for operating system	www.dell.com/support/windows www.dell.com/support/linux
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals, and documents.	Your Dell computer is uniquely identified by 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 www.dell.com/support. 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 www.dell.com/support. 2. On the menu bar at the top of the Support page, select **Support** > **Knowledge Base**. 3. In the Search field on the Knowledge Base 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 www.dell.com/contactdell.

NOTE: Availability varies by country/region and product, and some services may not be available in your country/region.

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