Vostro 16 5630

Owner's Manual

Regulatory Model: P117F
Regulatory Type: P117F006
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Rev. A04

DELL Technologies

Notes, cautions, and warnings

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

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

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

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1

Views of Vostro 16 5630

Right



1. **SD-card slot**

   Insert a SD card to expand your storage and store photos, videos, and data from your computer. The computer supports the following card types:

   - Secure Digital (SD)
   - Secure Digital High Capacity (SDHC)
   - Secure Digital Extended Capacity (SDXC)

2. **USB 3.2 Gen 1 port**

   Connect peripherals such as keyboard, mice, and printers and external storage devices. Supports data transfer speeds up to 5 Gbps.

3. **Network port**

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

4. **Universal audio jack**

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

5. **Security-cable slot (wedge-shaped)**

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

Left



1. **Power-adapter port**

   Connect the power adapter to charge your computer battery.

2. **Power and battery-status light**

Indicates the power state and battery state of the computer.

Solid white—Power adapter is connected and the battery is charging.

Solid amber—Battery charge is low or critical.

Off—Battery is fully charged.

NOTE: On certain computer models, the power and battery-status light are also used for diagnostics. For more information, see the *Troubleshooting* section in your computer's *Service Manual*.

3. **HDMI 1.4 port**

   Connect to a TV, external display or another HDMI-in enabled device. Supports video and audio output.

4. **USB 3.2 Gen 1 port**

   Connect peripherals such as keyboard, mice, and printers and external storage devices. Supports data transfer speeds up to 5 Gbps.

5. **Thunderbolt 4.0 port with Power Delivery and DisplayPort**

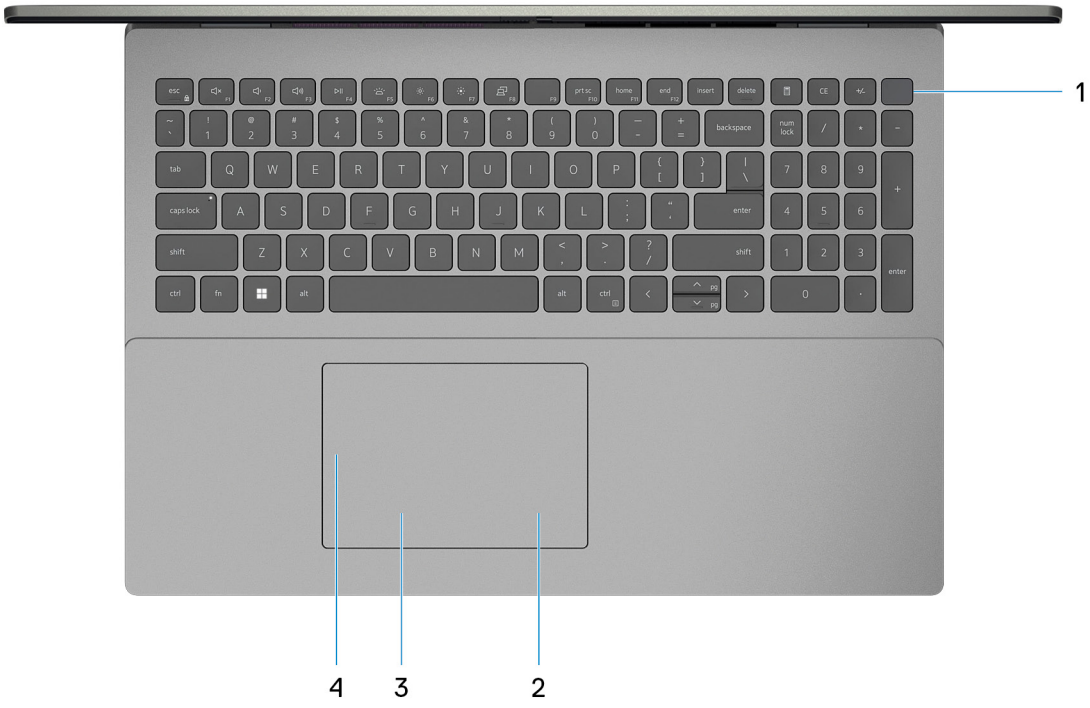
   Supports DisplayPort 1.4, Thunderbolt 4.0 and also enables you to connect to an external display using a display adapter. Provides data transfer rates of up to 40 Gbps for Thunderbolt 4.0.

NOTE: You can connect a Dell Docking Station to the Thunderbolt 4.0 ports. For more information, search in the Knowledge Base Resource at Dell Support Site.

NOTE: A USB Type-C to DisplayPort adapter (sold separately) is required to connect a DisplayPort device.

NOTE: Thunderbolt 4.0 supports two 4K displays or one 8K display.

Top

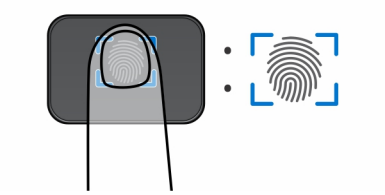


1. **Power button with optional fingerprint reader**

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

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

If the power button has a fingerprint reader, place your finger on the power button to log in.



NOTE: The highlighted area indicates the actual active fingerprint reader area and the image is for illustration purposes only.

NOTE: To reset the battery, press and hold the power button for 25 seconds.

2. **Right-click area**

   Press to right-click.

   NOTE: The right-click area is enabled when you touch the touchpad.

3. **Left-click area**

   Press to left-click.

   NOTE: The left-click area is enabled when you touch the touchpad.

4. **Precision touchpad**

   Move your finger on the touchpad to move the mouse pointer. Tap to left-click and two fingers tap to right-click.

Front



1. **Left microphone**

Provides digital sound input for audio recording and voice calls.

2. **Privacy shutter**

   Slide the privacy shutter to cover the camera lens and protect your privacy when the camera is not in use.

3. **Camera**

   Make video calls, capture photos, or record videos.

4. **Camera-status light**

   Turns on when the camera is in use.

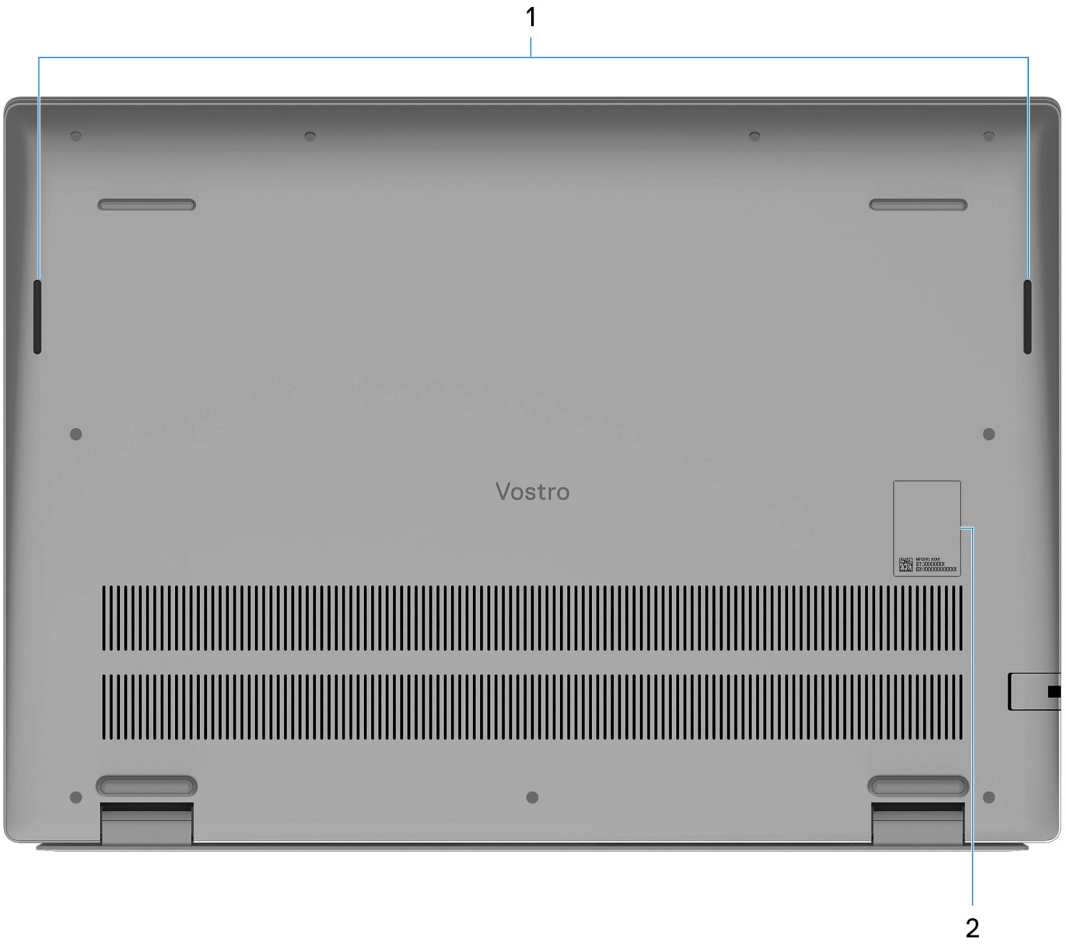
5. **Right microphone**

   Provides digital sound input for audio recording and voice calls.

6. **LCD panel**

   Provides visual output to the user.

Bottom



1. **Speakers**

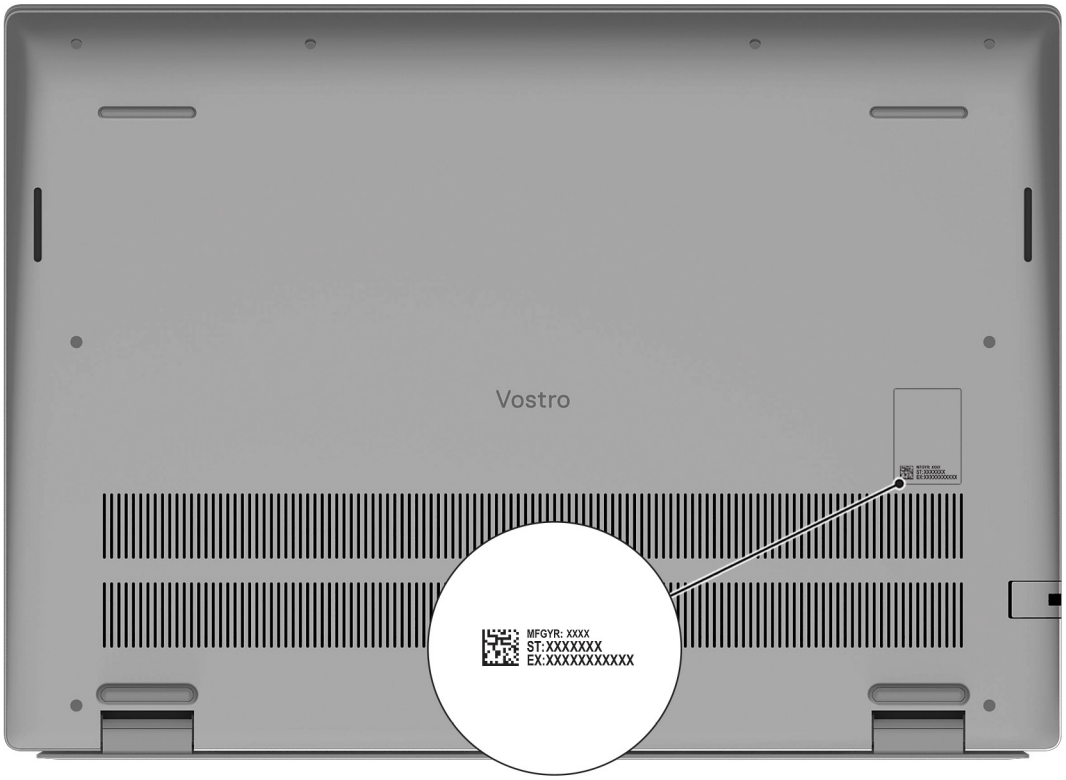
   Provide audio output.

2. **Service Tag and regulatory labels**

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

Service Tag

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



Battery-charge status light

The following table lists the battery-charge status light of your Vostro 16 5630.

Table 1. Battery charge and status light behavior

Power source	LED behavior	System power state	Battery charge level
AC adapter	Off	S0 or S5	Fully charged
AC adapter	Solid white	S0 or S5	< Fully charged
Battery	Off	S0 or S5	11-100%
Battery	Solid amber (590+/-3 nm)	S0 or S5	< 10%

- S0 (ON): Computer is turned on.
- S4 (Hibernate): The computer consumes the least power in the Hibernate state than in the ON or OFF state. The computer is almost in the OFF state. The context data is written to a storage device, allowing you to resume from where you left when the computer is turned on.
- S5 (OFF): The computer is in a shutdown state.

2

Set up your Vostro 16 5630

About this task

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

Steps

1. Connect the power adapter and press the power button.



NOTE: The battery may go into power-saving mode during shipment to conserve charge on the battery. Ensure that the power adapter is connected to your computer when it is turned on for the first time.

2. Finish Windows setup.

   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.

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

Table 2. Locate Dell apps

Resources	Description
	**My Dell** Centralized location for key Dell applications, help articles, and other important information about your computer. It also notifies you about the warranty status, recommended accessories, and software updates if available.
	**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 Serviceability Tools at the Dell Support Site. Click **SupportAssist** and then, click **SupportAssist for Home PCs**. **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 on using Dell Update, search in the Knowledge Base Resource at the Dell Support Site.
	**Dell Digital Delivery** Download software applications, which are purchased but not preinstalled on your computer. For more information on using Dell Digital Delivery, search in the Knowledge Base Resource at the Dell Support Site.

3

Specifications of Vostro 16 5630

Dimensions and weight

The following table lists the height, width, depth, and weight of your Vostro 16 5630.

Table 3. Dimensions and weight

Description	Values
Height:	
Front height	15.67 mm (0.62 in.)
Rear height	17.95 mm (0.71 in.)
Width	356.78 mm (14.05 in.)
Depth	251.90 mm (9.92 in.)
Weight **NOTE:** The weight of your computer depends on the configuration that is ordered.	1.90 kg (4.19 lb maximum)

Processor

The following table lists the details of the processors that are supported in your Vostro 16 5630.

Table 4. Processor

Description	Option one	Option two	Option three	Option four
Processor type	13th Generation Intel Core i5-1335U	13th Generation Intel Core i7-1355U	13th Generation Intel Core i5-1340P	13th Generation Intel Core i7-1360P
Processor wattage	15 W	15 W	15 W	15 W
Processor core count	10 (2 +8)	10 (2 +8)	10 (2 +8)	10 (2 +8)
Processor thread count	12	12	12	12
Processor speed	Up to 4.60 GHz	Up to 5 GHz	Up to 4.60 GHz	Up to 5 GHz
Processor cache	12 MB	12 MB	12 MB	12 MB
Integrated graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics

Chipset

The following table lists the details of the chipset that is supported by your Vostro 16 5630.

Table 5. Chipset

Description	Values
Chipset	Integrated in processor
Processor	13th Generation Intel Core i5/i7
DRAM bus width	64-bit
Flash EPROM	32 MB
PCIe bus	Up to Gen 4

Operating system

Your Vostro 16 5630 supports the following operating systems:

- Windows 11 Pro, 64-bit
- Windows 11 Pro National Education, 64-bit
- Windows 11 Home, 64-bit
- Windows 10 Pro, 64-bit
- Windows 10 Home, 64-bit

Memory

The following table lists the memory specifications that are supported by your Vostro 16 5630.

Table 6. Memory specifications

Description	Values
Memory slots	Two memory modules integrated with the system board
Memory type	Dual-channel LPDDR5 and LPDDR5x
Memory speed	4800 MT/s
Maximum memory configuration	16 GB
Minimum memory configuration	8 GB
Memory size per slot	4 GB, 8 GB
Memory configurations supported	• 8 GB, 2 x 4 GB, LPDDR5/LPDDR5x, 4800 MT/s, dual-channel • 16 GB, 2 x 8 GB, LPDDR5/LPDDR5x, 4800 MT/s, dual-channel

External ports and slots

The following table lists the external ports and slots of your Vostro 16 5630.

Table 7. External ports and slots

Description	Values
Network port	One RJ-45 port
USB ports	• One Thunderbolt™ 4 port with DisplayPort™ and Power Delivery • Two USB 3.2 Gen 1 ports
Audio port	One Universal headset jack
Video port(s)	One HDMI 1.4 port
Media-card reader	One SD-card slot
Power-adapter port	• One 4.50 mm x 2.90 mm DC-in
Security-cable slot	One security cable slot (wedge-shaped)

Internal slots

The following table lists the internal slots of your Vostro 16 5630.

Table 8. Internal slots

Description	Values
M.2	One M.2 2230/M.2 2280 slot for solid-state drive **NOTE:** To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at Dell Support Site.

Communications

Ethernet

Table 9. Ethernet specifications

Description	Values
Model	RTL8111H-CG
Transfer rate	10/100/1000 Mbps

Wireless module

Table 10. Wireless module specifications

Description	Option one	Option two
Model	Intel AX211	Intel AX201
Transfer rate	Up to 2400 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz/6 GHz	2.4 GHz/5 GHz
Wireless standards	• WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6E (802.11ax)	• WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (802.11ax)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • TKIP	• 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth	Bluetooth 5.3 **NOTE:** Particular versions of Microsoft Windows may not support the full Bluetooth 5.3 functionality	Bluetooth 5.2

Audio

The following table lists the audio specifications of your Vostro 16 5630.

Table 11. Audio specifications

Description		Values
Audio controller		Realtek ALC3254
Stereo conversion		Supported
Internal audio interface		High definition audio interface
External audio interface		Universal Audio Jack
Number of speakers		2
Internal-speaker amplifier		Supported
External volume controls		Keyboard shortcut controls
Speaker output:		
	Average	2 W x 2 = 4 W
	Peak	2.5 W x 2 = 5 W
Microphone		Digital-array microphones

Camera

The following table lists the camera specifications of your Vostro 16 5630.

Table 12. Camera specifications

Description		Values
Number of cameras		One
Camera type		RGB FHD Camera
Camera location		Front camera
Camera sensor type		CMOS-sensor technology
Camera resolution:		
	Still image	2.03 megapixel
	Video	1920 x 1080 (HD) at 30 fps
Diagonal viewing angle		82 degrees

Storage

This section lists the storage options on your Vostro 16 5630.

Your Vostro 16 5630 supports one of the following storage configurations:

- One M.2 2230 solid-state drive
- One M.2 2280 solid-state drive

The primary drive of your Vostro 16 5630 is the M.2 drive where your operating system is installed.

Table 13. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 solid-state drive	PCIe Gen3.0x4 NVMe, up to 32 Gbps	Up to 1 TB
M.2 2230 solid-state drive	PCIe Gen4.0x4 NVMe, up to 64 Gbps	Up to 1 TB
M.2 2280 solid-state drive	PCIe Gen4.0x4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2280 solid-state drive	PCIe Gen3.0x4 NVMe QLC, up to 32 Gbps	Up to 1 TB
M.2 2280 solid-state drive	PCIe Gen4.0x4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2280 solid-state drive	PCIe Gen3.0x4 NVMe QLC, up to 32 Gbps	Up to 1 TB

Media-card reader

The following table provides the specification of media cards that are supported by your Vostro 16 5630.

Table 14. Media-card reader specifications

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

Keyboard

The following table lists the keyboard specifications of your Vostro 16 5630.

Table 15. Keyboard specifications

Description	Values
Keyboard type	• Backlit keyboard with Numpad • Standard keyboard with Numpad
Keyboard layout	QWERTY
Number of keys	• United States and Canada: 99 keys • United Kingdom: 100 keys • Japan: 103 keys
Key pitch	X=18.70 mm mm key pitch Y=18.05 mm mm key pitch
Keyboard shortcuts	Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key. **NOTE:** You can define the primary behavior of the function keys (F1–F12) changing **Function Key Behavior** in the BIOS setup program. **NOTE:** If Copilot in Windows is not available on your computer, pressing the Copilot key launches Windows search. For more information about Copilot in Windows, search in the Knowledge Base Resource at the Dell Support site.

Keyboard shortcuts

NOTE: Keyboard characters may differ depending on the keyboard language configuration. Keys used for shortcuts remain the same across all language configurations.

Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. The symbol shown on the lower part of the key refers to the character that is typed out when the key is pressed. If you press shift and the key, the symbol shown on the upper part of the key is typed out. For example, if you press **2**, **2** is typed out; if you press **Shift** + **2**, **@** is typed out.

The keys F1-F12 at the top row of the keyboard are function keys for multi-media control, as indicated by the icon at the bottom of the key. Press the function key to invoke the task represented by the icon. For example, pressing F1 mutes the audio (refer to the table below).

However, if the function keys F1-F12 are needed for specific software applications, multi-media functionality can be disabled by pressing **fn** + **Esc**. Subsequently, multi-media control can be invoked by pressing **fn** and the respective function key. For example, mute audio by pressing **fn** + **F1**.

NOTE: You can also define the primary behavior of the function keys (F1–F12) by changing **Function Key Behavior** in BIOS setup program.

Table 16. List of keyboard shortcuts

Function key	Re-defined key (for multi-media control)	Behavior
F1	fn + F1	Mute audio
F2	fn + F2	Decrease volume
F3	fn + F3	Increase volume
F4	fn + F4	Play/Pause
F5	fn + F5	Toggle keyboard backlight (optional)
F6	fn + F6	Decrease brightness
F7	fn + F7	Increase brightness
F8	fn + F8	Switch to external display
F10	fn + F10	Print screen
F11	fn + F11	Home
F12	fn + F12	End

The **fn** key is also used with selected keys on the keyboard to invoke other secondary functions.

Table 17. List of keyboard shortcuts

Function key	Behavior
fn + B	Pause/Break
fn + S	Toggle scroll lock
fn + R	System request
fn + T	Toggle Ultra performance mode
fn + right ctrl	Open application menu
fn + / **NOTE:** Brazilian keyboard only	Open application menu
fn + Space bar	Open Emoji menu
fn + esc	Toggle fn-key lock
fn + left arrow	Home
fn + right arrow	End

Touchpad

The following table lists the touchpad specifications of your Vostro 16 5630.

Table 18. Touchpad specifications

Description		Values
Touchpad resolution:		>300 DPI
Touchpad dimensions:		
	Horizontal	115 mm (4.53 in.)
	Vertical	80 mm (3.15 in.)
Touchpad gestures		For more information about the touchpad gestures available on Windows, see the Microsoft Knowledge Base article at Microsoft Support Site.

Power adapter

The following table lists the power adapter specifications of your Vostro 16 5630.

Table 19. Power adapter specifications

Description		Values
Type		65 W AC adapter, 4.50 mm barrel type
Connector dimensions:		
	External diameter	4.50 mm
	Internal diameter	2.90 mm
Input voltage		100 VAC–240 VAC
Input frequency		50 Hz–60 Hz
Input current (maximum)		1.60 A/1.70 A
Output current (continuous)		3.34 A
Rated output voltage		19.50 VDC
Temperature range:		
	Operating	0°C to 40°C (32°F to 104°F)
	Storage	-40°C to 70°C (-40°F to 158°F)
CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.		

Battery

The following table lists the battery specifications of your Vostro 16 5630.

Table 20. Battery specifications

Description		Values
Battery type		4-cell polymer (54 Wh), Li-ion battery
Battery voltage		15 V
Battery weight (maximum)		0.24 kg (0.53 lb)
Battery dimensions:		
	Height	271.90 mm
	Width	82 mm
	Depth	5.75 mm
Temperature range:		
	Operating	0°C to 50°C (32°F to 122°F)
	Storage	-20°C to 60°C (-4°F to 140°F)
Battery operating time		Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.
Battery charging time (approximate) **NOTE:** Control the charging time, duration, start and end time, and so on, using the Dell Power Manager application. For more information about the Dell Power Manager, see, *Me and My Dell* on Dell Support Site.		2hr (Express charge), 3hr (Standard charge) hours (when the computer is off)
Coin-cell battery		CR2032
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.		

Display

The following table lists the display specifications of your Vostro 16 5630.

Table 21. Display specifications

Description		Option one	Option two	Option three
Display type		Full High Definition (FHD+), ComfortView	Full High Definition (FHD+), ComfortView Plus	2.5K, ComfortView Plus
Touch options		No	No	No
Display-panel technology		Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)
Display-panel dimensions (active area):				
	Height	215.42 mm (8.48 in.)	215.42 mm (8.48 in.)	215.42 mm (8.48 in.)

Table 21. Display specifications (continued)

Description		Option one	Option two	Option three
	Width	344.68 mm (13.57 in.)	344.68 mm (13.57 in.)	344.68 mm (13.57 in.)
	Diagonal	406.46 mm (16 in.)	406.46 mm (16 in.)	406.46 mm (16 in.)
Display-panel native resolution		1920 x 1200	1920 x 1200	2560 x 1600
Luminance (typical)		250 nits	300 nits	300 nits
Megapixels		2.30	2.30	4.09
Color gamut		NTSC 45%	sRGB 100%, typical	sRGB 100%, typical
Pixels Per Inch (PPI)		141	141	189
Contrast ratio (typical)		• 800:1 (minimum) • 1000:1 (typical)	• 1000:1 (minimum) • 1200:1 (typical)	• 1000:1 (minimum) • 1200:1 (typical)
Response time (maximum)		35 ms	35 ms	35 ms
Refresh rate		60 Hz	60 Hz	120 Hz
Horizontal view angle		• +/- 85 degrees, typical • +/- 80 degrees, minimum	• +/- 85 degrees, typical • +/- 80 degrees, minimum	• +/- 85 degrees, typical • +/- 80 degrees, minimum
Vertical view angle		• +/- 85 degrees, typical • +/- 80 degrees, minimum	• +/- 85 degrees, typical • +/- 80 degrees, minimum	• +/- 85 degrees, typical • +/- 80 degrees, minimum
Pixel pitch		0.18 mm	0.18 mm	0.13 mm
Power consumption (maximum)		4.15 W	4.40 W	4 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare	Anti-glare

Fingerprint reader (optional)

The following table lists the specifications of the optional fingerprint-reader of your Vostro 16 5630.

Table 22. Fingerprint reader specifications

Description	Values
Sensor technology	Trans-capacitive sensing
Sensor resolution	500 dpi
Sensor pixel size	108 x 88 pixels

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Vostro 16 5630.

Table 23. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel UHD Graphics	• One HDMI 1.4 port • One Thunderbolt 4 port with DisplayPort and Power Delivery	Shared system memory	13th Generation Intel Core i5/i7
Intel Iris Xe Graphics **NOTE:** Intel Iris Xe Graphics will default to Intel UHD Graphics on computers with single-channel memory configuration.	• One HDMI 1.4 port • One Thunderbolt 4 port with DisplayPort and Power Delivery	Shared system memory	13th Generation Intel Core i5/i7

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Vostro 16 5630.

Table 24. GPU—Discrete

Controller	Memory size	Memory type
NVIDIA GeForce RTX 2050 Ti	4 GB	GDDR6

Operating and storage environment

This table lists the operating and storage specifications of your Vostro 16 5630.

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

Table 25. Computer environment

Description	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	110 G†	160 G†
Altitude range	-15.2 m to 3048 m (-49.87 ft to 10000 ft)	-15.2 m to 10668 m (-49.87 ft to 35000 ft)
CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.		

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

† Measured using a 2 ms half-sine pulse.

ComfortView Plus

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 cm and 70 cm) from your eyes.
- Blink frequently to moisten your eyes, wet your eyes with water, or apply suitable eye drops.
- Take an extended break for 20 minutes every two hours.
- 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.

ComfortView

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.

Dell ComfortView software technology reduces harmful blue light emissions to make extended screen time easy on your eyes.

ComfortView mode can be enabled and configured using the Dell CinemaColor application.

ComfortView mode complies with TÜV Rheinland's requirement for low blue light displays.

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 cm and 70 cm) from your eyes.
- Blink frequently to moisten your eyes, wet your eyes with water, or apply suitable eye drops.
- Take an extended break for 20 minutes every two hours.
- 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.

4

Working inside your computer

Welcome - Getting started

The Vostro 16 5630 field service manual enables the service technicians to accurately and effectively resolve customer inquiries and technical issues regarding this computer. The document informs the field service technicians of the proper steps for replacing hardware and also gives an overview of the system BIOS, features, and safety precautions.

Safety instructions

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

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

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

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

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

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

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

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

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

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

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

Before working inside your computer

About this task

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

Steps

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

   NOTE: If you are using a different operating system, see the documentation of your operating system for shut-down instructions.
3. Turn off all the attached peripherals.
4. Disconnect your computer and all attached devices from their electrical outlet.
5. Disconnect all attached network devices and peripherals, such as keyboard, mouse, and monitor from your computer.

   CAUTION: To disconnect a network cable, unplug the cable from your computer.
6. Remove any media card and optical disc from your computer, if applicable.

Safety precautions

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

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

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

Bonding

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

Electrostatic discharge—ESD protection

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

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

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

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

Perform the following steps to prevent ESD damage:

- Use a wired ESD wrist strap that is properly grounded. Wireless anti-static straps do not provide adequate protection. Touching the chassis before handling parts does not ensure adequate ESD protection on parts with increased sensitivity to ESD damage.
- Handle all static-sensitive components in a static-safe area. If possible, use anti-static floor pads and workbench pads.

- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the anti-static packing material until you are ready to install the component. Before unwrapping the anti-static packaging, use the anti-static wrist strap to discharge the static electricity from your body. For more information about the wrist strap and ESD wrist strap tester, see Components of an ESD Field Service Kit.
- Before transporting a static-sensitive component, place it in an anti-static container or packaging.

ESD Field Service kit

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

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

Working Environment

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

ESD Packaging

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

Components of an ESD Field Service kit

The components of an ESD Field Service kit are:

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

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

Transporting sensitive components

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

After working inside your computer

About this task

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

Steps

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

BitLocker

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the computer, it will not recognize the BitLocker key. You are prompted to enter the recovery key to progress, and the computer asks 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, *updating the BIOS on Dell computers with BitLocker enabled*, search in the Knowledge Base Resource at Dell Support Site.

CAUTION: If BitLocker is not suspended, replacing parts like system board or storage drives on a computer with BitLocker/Device encryption enabled triggers the encryption and locks the user out. The recovery key is required to regain access to Windows. The recovery key is automatically saved to the user's Microsoft Account (MSA) when the device is encrypted and can be retrieved from Microsoft Account.

For more information about Windows Support, see article Finding your BitLocker recovery key in Windows.

Recommended tools

The procedures in this document may require the following tools:

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

Screw list

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

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

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

Table 26. Screw list

Component	Screw type	Quantity	Screw image
Base cover	M2x7.5 - captive screws	2	
Base cover	M2x4	7	
Battery	M2x3	5	
Wireless card	M2x3	1	
Solid-state drive	M2x3	1	
Solid-state drive	M2x1.8	1	
Fan	M2x3	2	
Heat sink	captive screw	7	
System board	M2x1.8	2	
USB Type-C bracket	M2x4	2	
Power button with optional fingerprint reader	M2x3	1	
TPM Board	M2x3.5	2	
Power button	M2x3	1	
I/O board	M2x3	2	
RJ45 network-port assembly	M2x5	3	
Touchpad bracket	M1.6x2	3	
Touchpad	M2x1.8	2	
Display hinges	M2.5x5	6	

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

Table 27. CRU/FRU list

Vostro 16 5630	CRU component	FRU component
Base cover	✓	✗
Fan	✓	✗
M.2 2230 solid-state drive	✓	✗
M.2 2280 solid-state drive	✓	✗
Wireless card	✓	✗
Battery	✗	✓
Coin-cell battery	✗	✓
Heat sink	✗	✓
I/O board	✗	✓
System board	✗	✓
Power-button with fingerprint reader	✗	✓
Power-adapter port	✗	✓
Speakers	✗	✓
TPM board	✗	✓
Touchpad	✗	✓

Table 27. CRU/FRU list (continued)

Vostro 16 5630	CRU component	FRU component
Display assembly	✗	✓
Palm-rest and keyboard assembly	✗	✓

Critical callouts

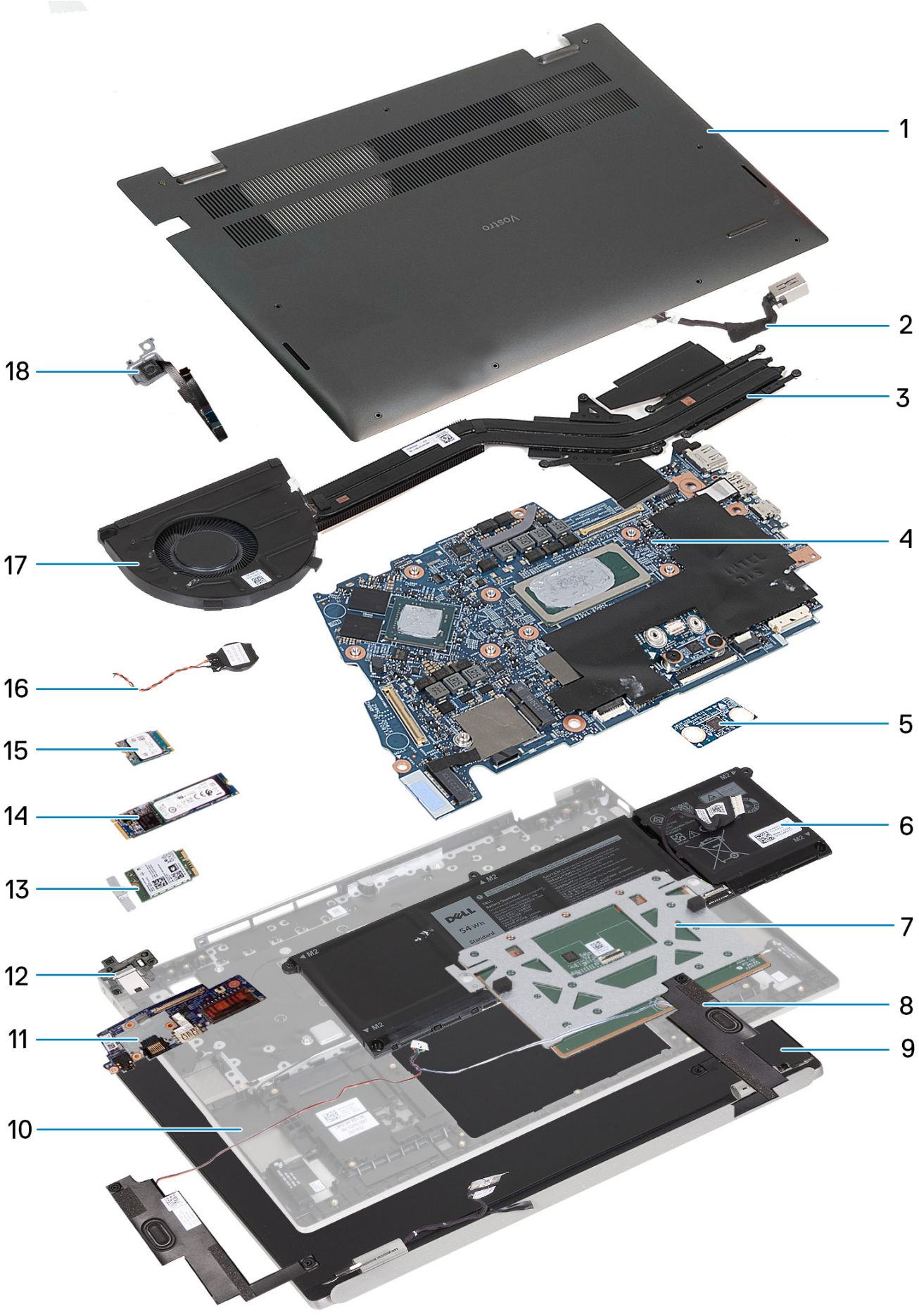
CAUTION: The information in this section is intended for authorized service technicians only.

This section contains information about some new features and need-to-know information about this computer.

NOTE: Before performing the procedures listed in this section, refer to Before working inside your computer.

Major components of Vostro 16 5630

The following image shows the major components of Vostro 16 5630.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

1. Base cover
2. Power-adapter port
3. Heat sink
4. System board
5. Trusted Platform Module (TPM) board
6. Battery
7. Touchpad module
8. Speaker module
9. Display assembly
10. Palm-rest and keyboard assembly
11. I/O board
12. RJ45 bracket
13. Wireless card
14. M.2 2280 solid-state drive
15. M.2 2230 solid-state drive
16. Coin-cell battery
17. Fan
18. Fingerprint module

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.

Base cover

Removing the base cover

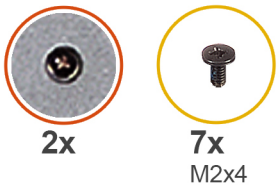
Prerequisites

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

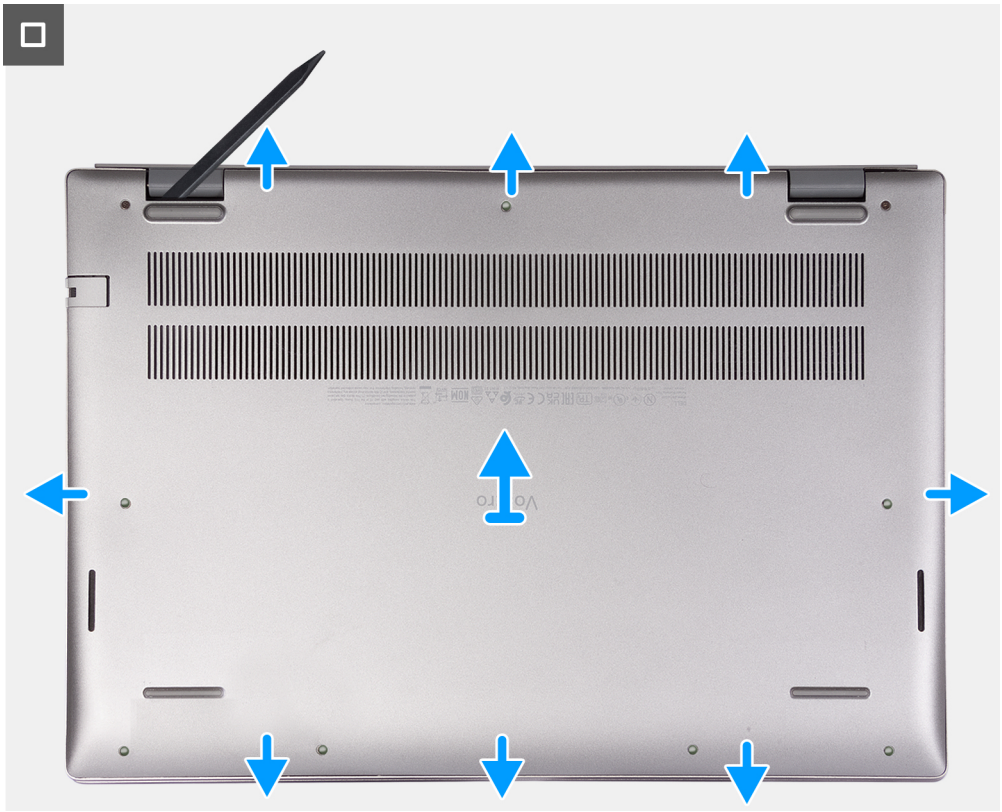
About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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


2x
7x
M2x4





Steps

1. Remove the seven screws (M2x4) that secure the base cover to the palm-rest and keyboard assembly.
2. Loosen the two captive screws that secure the base cover to the palm-rest and keyboard assembly.
3. Using a plastic scribe, pry the base cover from the top left and continue to work on the sides to open the base cover.
4. Lift and slide the base cover off the palm-rest assembly.

Installing the base cover

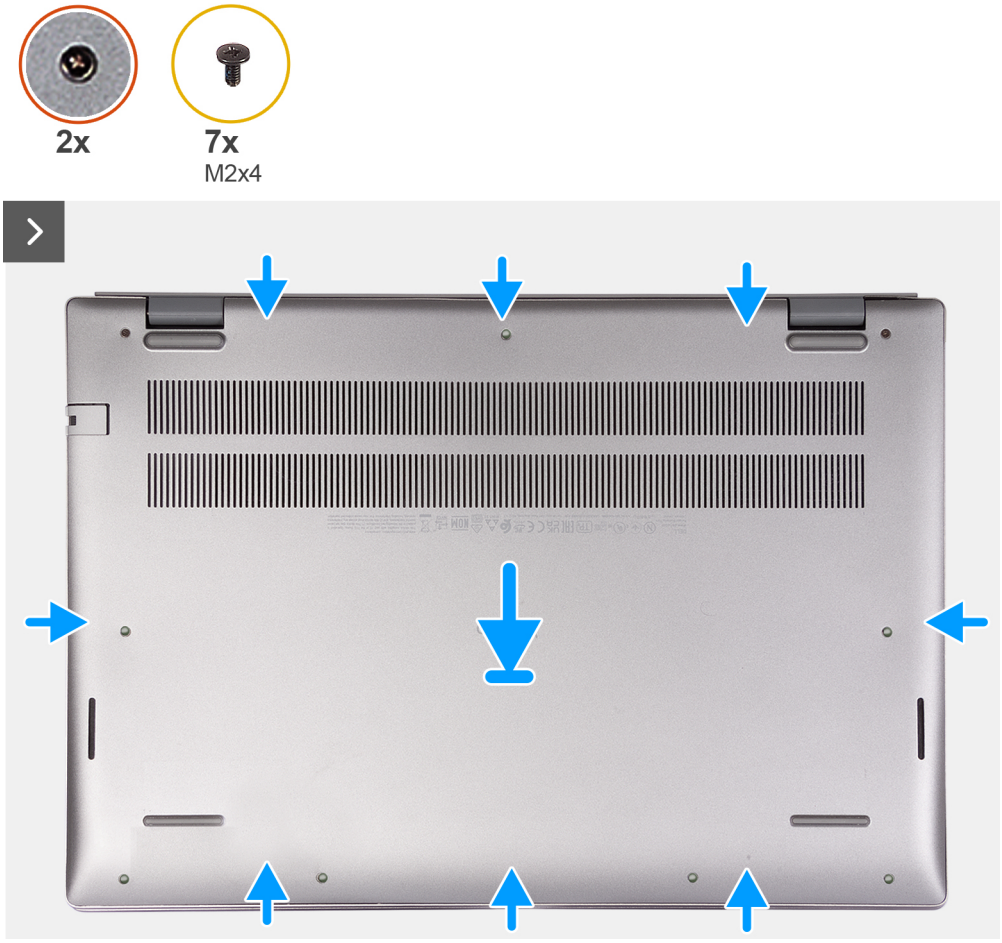
Prerequisites

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

About this task

NOTE: The following image(s) shows the base cover and provides a visual representation of the installation procedure.

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





Steps

1. Ensure the battery cable has been connected to the system board.
2. Place and snap the base cover into place on the palm-rest and keyboard assembly.
3. Tighten the two captive screws on the base cover.
4. Replace the seven screws (M2x7) that secure the base cover to the palm-rest and keyboard assembly.

Next steps

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

Fan

Removing the fan

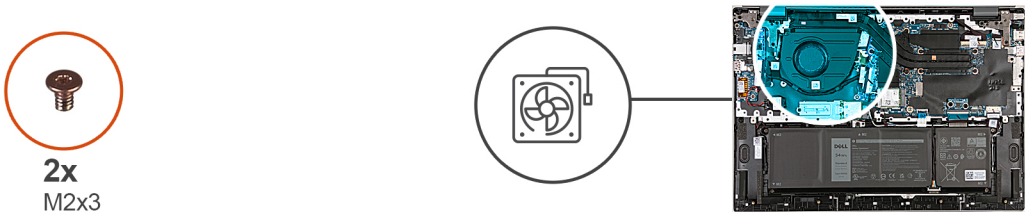
Prerequisites

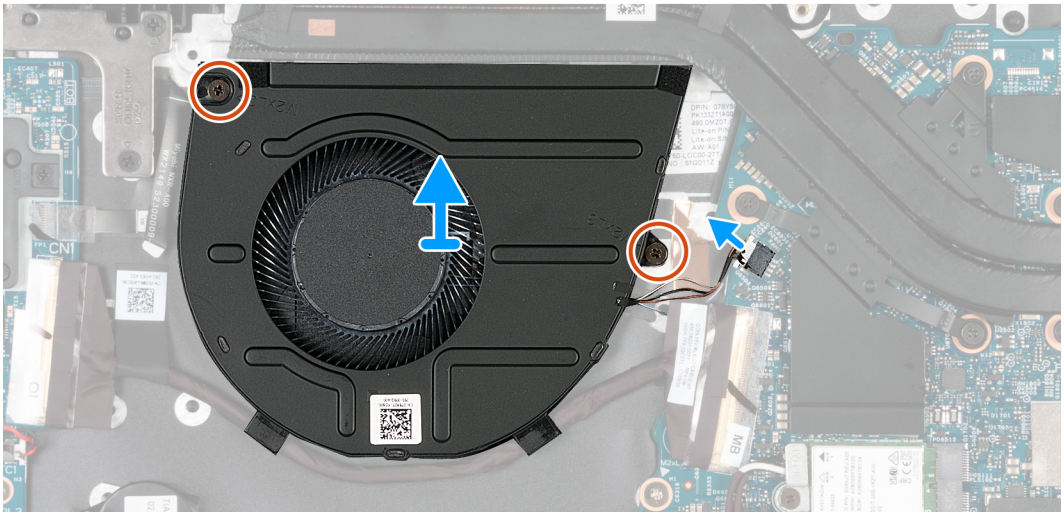
1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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





Steps

1. Disconnect the fan cable from the system board.
2. Remove the two screws (M2x3) that secure the left fan to the palm-rest and keyboard assembly.
3. Lift the fan off the palm-rest and keyboard assembly.

Installing the fan

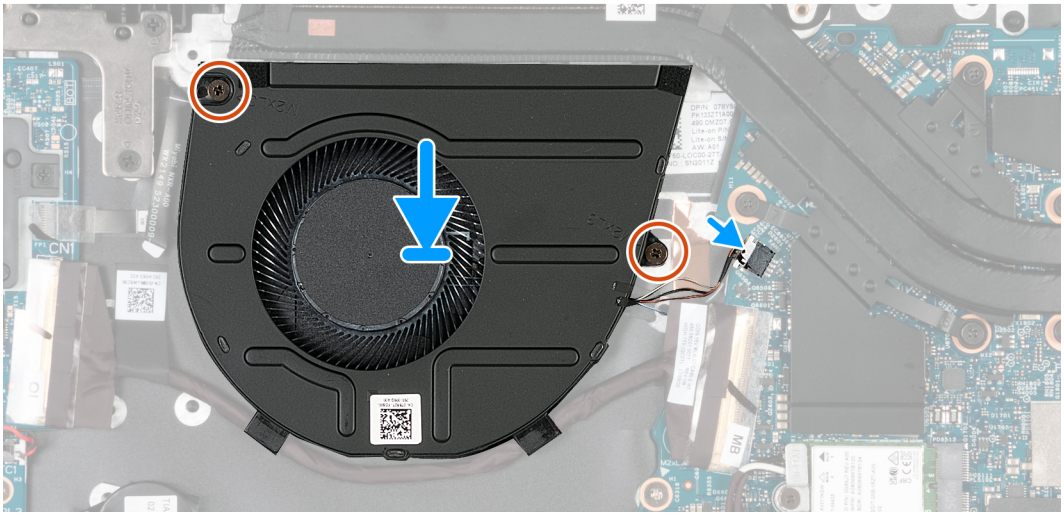
Prerequisites

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

About this task

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





Steps

1. Align the screw holes of the fan with the screw holes on the palm-rest and keyboard assembly.
2. Replace the two screws (M2x3) that secure the fan to the palm-rest and keyboard assembly.
3. Connect the fan cable to the system board.

Next steps

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

Wireless card

Removing the wireless card

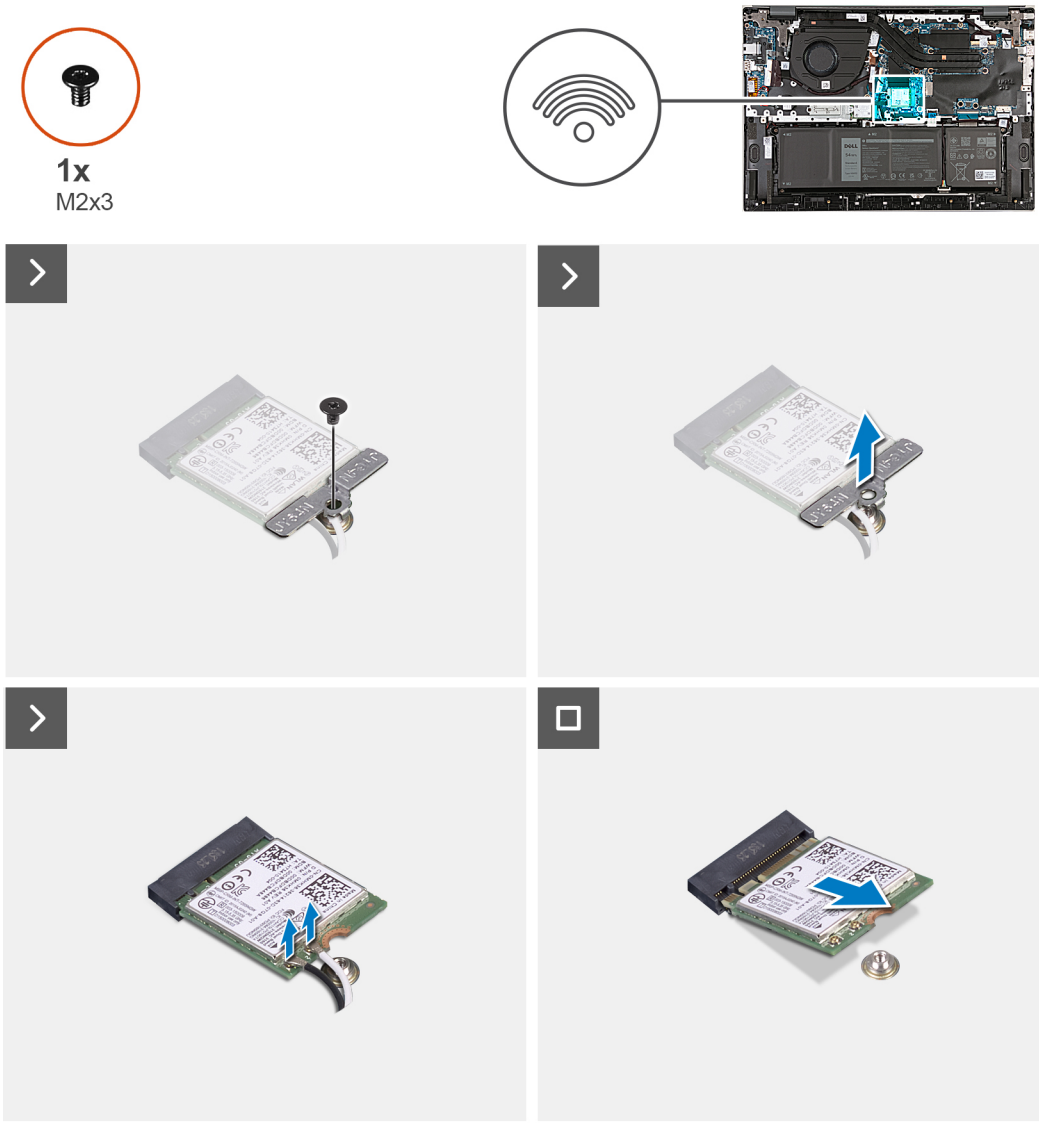
Prerequisites

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

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



Steps

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

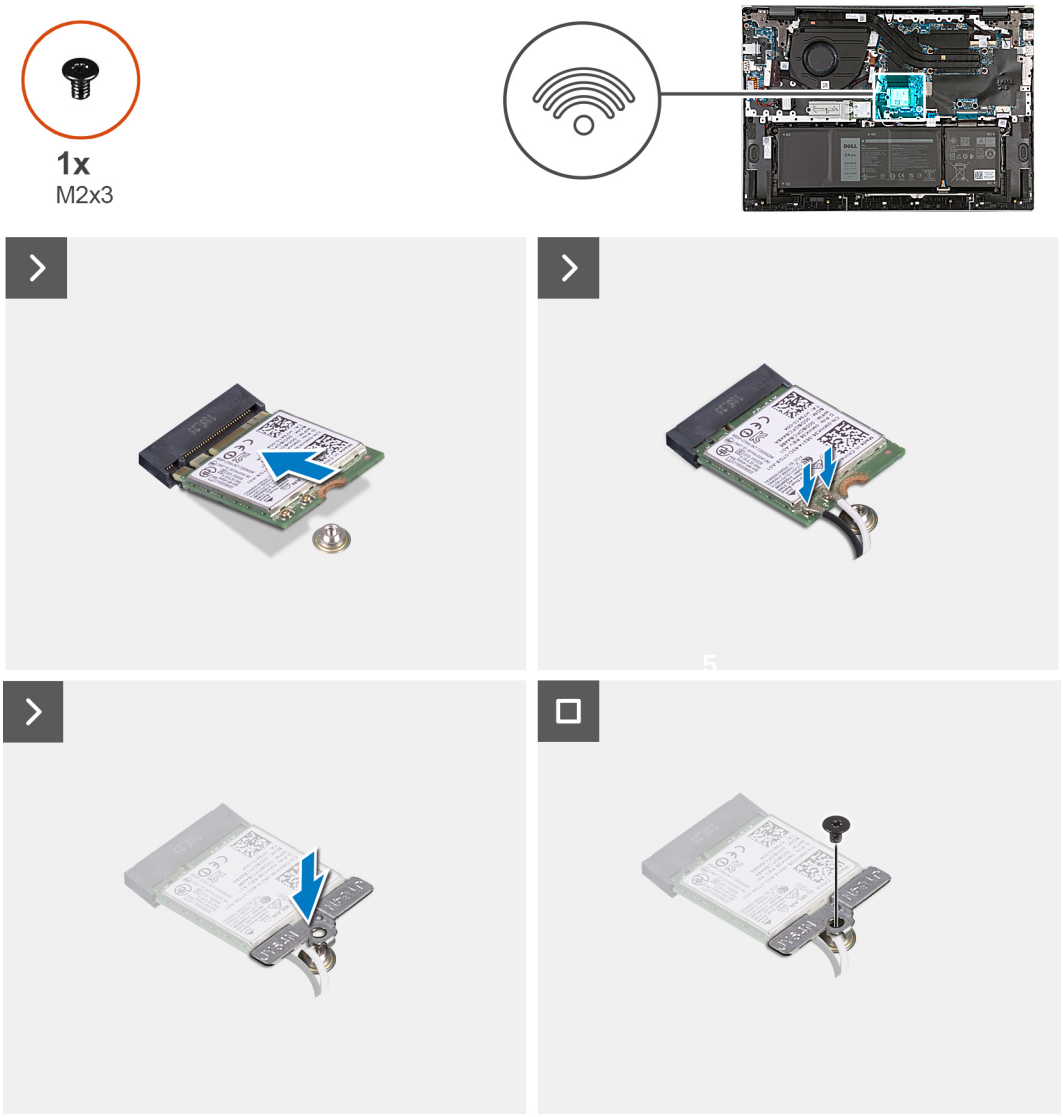
Installing the wireless card

Prerequisites

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

About this task

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



Steps

1. Align the notch on the wireless card with the tab on the wireless-card slot and insert the wireless card at an angle into the wireless-card slot.
2. Connect the antenna cables to the wireless card.
3. Align and place the wireless-card bracket on the wireless card.
4. Replace the screw (M2x3) that secures the wireless-card bracket to the system board and palm-rest and keyboard assembly.

Next steps

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

Solid State Drive (SSD)

Removing the M.2 2230 solid-state drive

Prerequisites

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

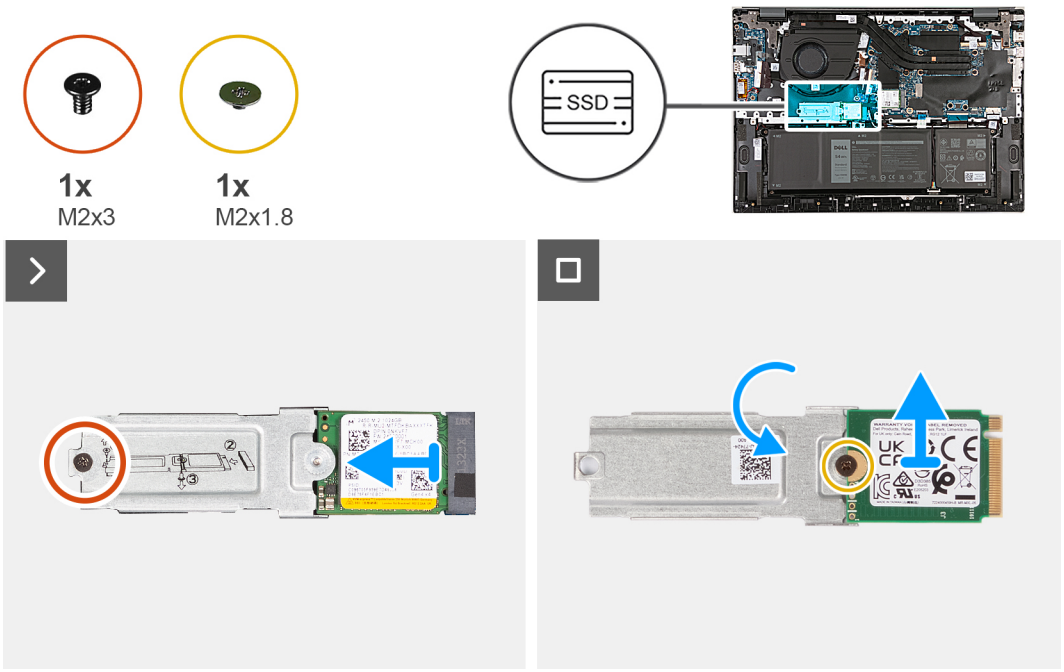
About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

NOTE: If you are replacing the M.2 2230 solid-state drive with an M.2 2280 solid-state drive, the following images indicate how to remove the M.2 2230 solid-state drive from the M.2 2230 solid-state drive bracket.

NOTE: Device Encryption will be triggered when either the system board or storage (SSD) is replaced. Refer to BitLocker for more information on suspending BitLocker.

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



Steps

1. Remove the M2x3 screw that secures the M.2 2230 solid-state drive with bracket from the solid-state drive slot.
2. Slide the M.2 2230 solid-state drive with bracket from the peg and lift it from the system board.
3. Remove the M2x1.8 screw that secures the M.2 2230 solid-state drive to the M.2 solid-state drive bracket.
4. Lift the M.2 2230 solid-state drive off the M.2 solid-state drive bracket.

Installing the M.2 2230 solid-state drive

Prerequisites

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

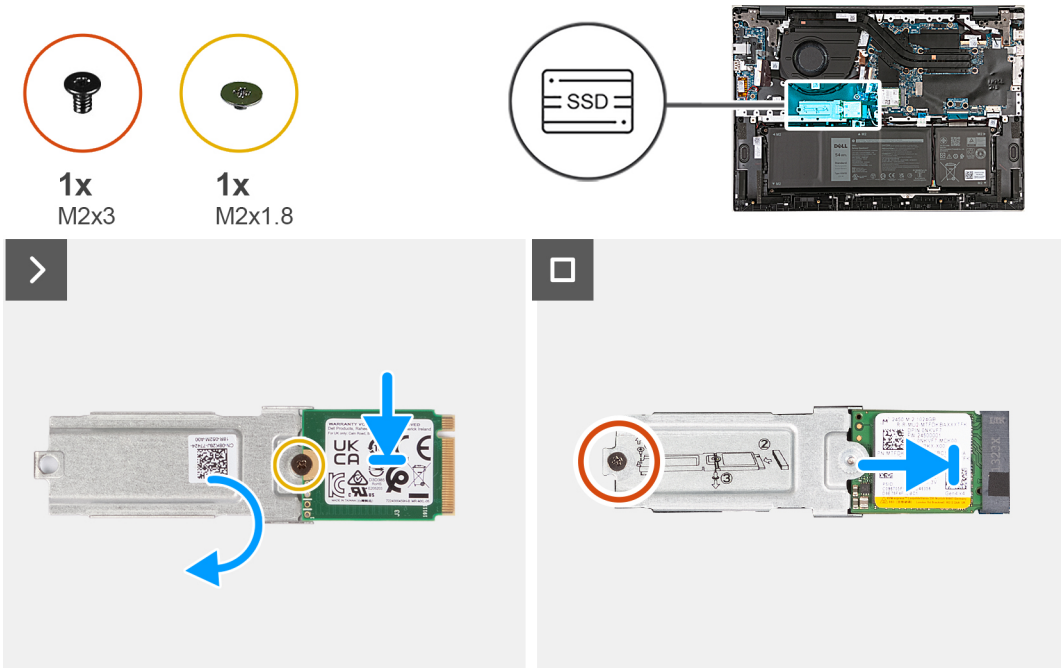
About this task

NOTE: This computer supports two solid-state drive form factors.

- M.2 2230
- M.2 2280

If you are replacing the M.2 2280 solid-state drive with an M.2 2230 solid-state drive, the following images indicate how to install the solid-state drive bracket to the M.2 2230 solid-state drive card before installing the 2230 solid-state drive to the computer.

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



Steps

1. With the printed side of the solid-state drive facing up, align the screw hole on the M.2 2230 solid-state drive with the screw hole on the M.2 solid-state drive bracket.
2. Secure the M.2 2230 solid-state drive to the M.2 solid-state drive bracket with a M2x1.8 screw.
3. Align the notch on the M.2 2230 solid-state drive with the tab on the solid-state drive slot.
4. Gently slide the M.2 2230 solid-state drive with bracket into the solid-state drive slot.
5. Replace the screw (M2x3) that secures the M.2 solid-state drive with bracket to the system board.

Next steps

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

Removing the M.2 2280 solid-state drive

Prerequisites

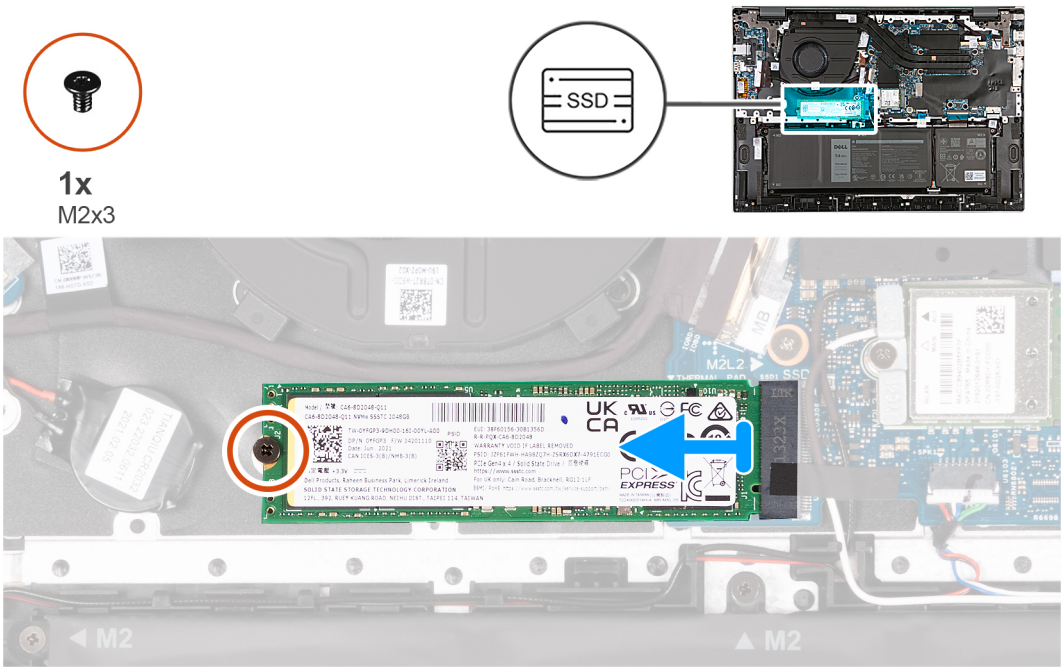
1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

NOTE: Device Encryption will be triggered when either the system board or storage (SSD) is replaced. Refer to BitLocker for more information on suspending BitLocker

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



Steps

1. Remove the screw (M2x3) that secures the M.2 2280 solid-state drive to the system board.
2. Slide and remove the M.2 2280 solid-state drive from the solid-state drive slot.

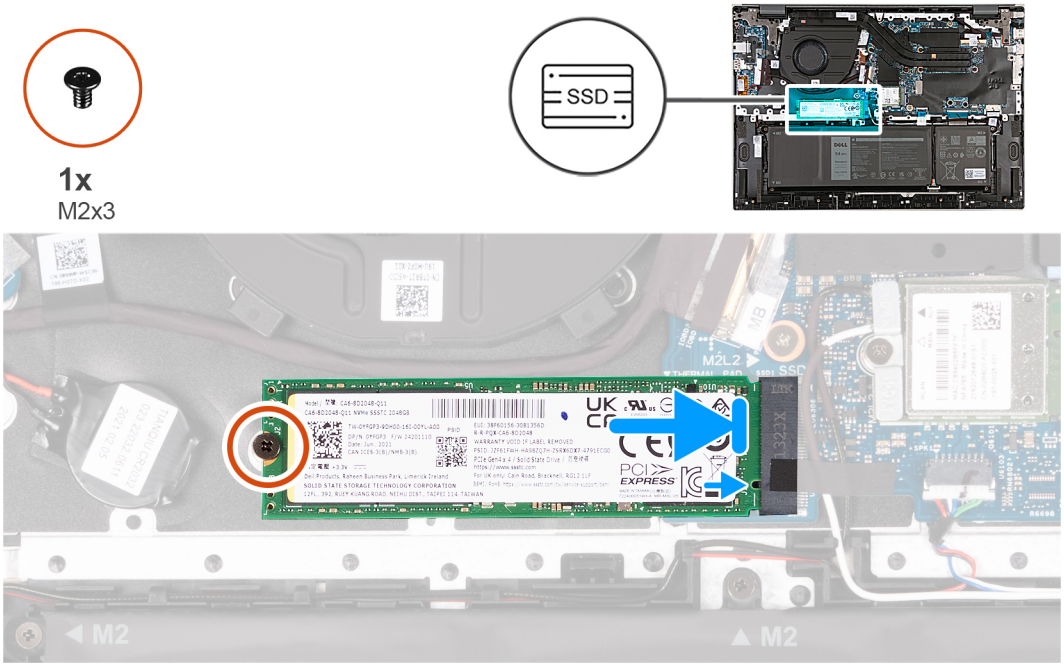
Installing the M.2 2280 solid-state drive

Prerequisites

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

About this task

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



Steps

1. Align the notch on the M.2 2280 solid-state drive with the tab on the solid-state drive slot.
2. Gently slide the M.2 2280 solid-state drive into the solid-state drive slot.
3. Replace the screw (M2x3) that secures the M.2 2280 solid-state drive to the system board.

Next steps

1. Install the base cover.
2. 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 removing and installing FRUs section is intended for authorized service technicians only.

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

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

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

Heat sink

Removing the heat sink for computers shipped with a NVIDIA GeForce RTX 2050 Ti graphics card

Prerequisites

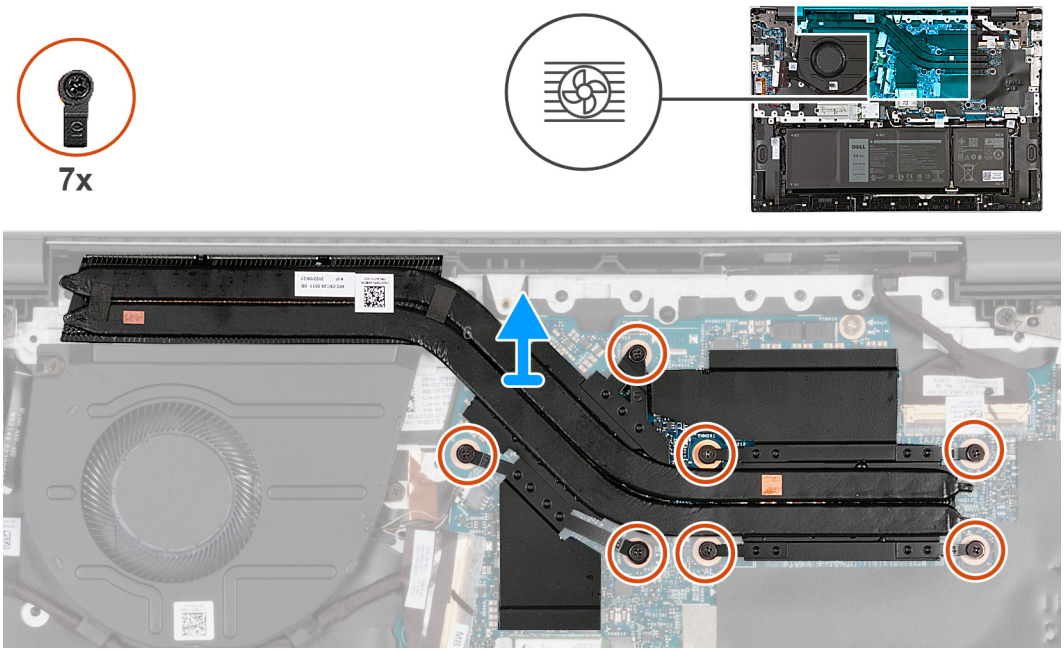
CAUTION: The information in this section is intended for authorized service technicians only.

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

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



Steps

1. In reverse sequential order (7>6>5>4>3>2>1), loosen the seven captive screws that secure the heat sink to the system board.
2. Lift the heat sink off the system board.

Installing the heat sink for computers shipped with a NVIDIA GeForce RTX 2050 Ti graphics card

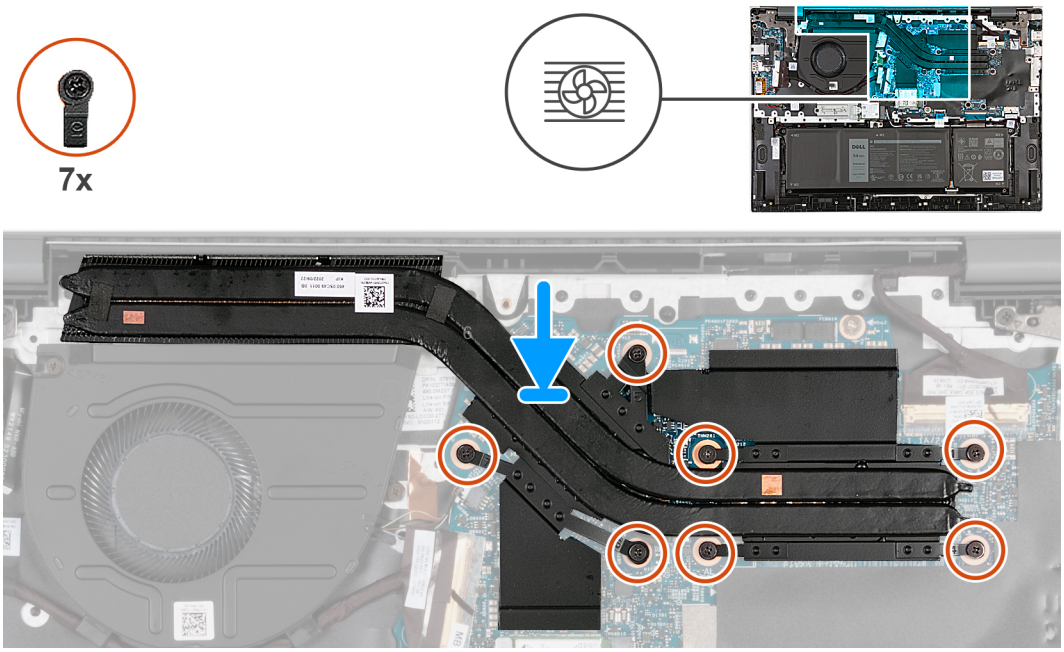
Prerequisites

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

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

About this task

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



Steps

1. Align the captive screws on the heat sink to the screw holes on the system board.
2. In sequential order (1>2>3>4>5>6>7), tighten the seven captive screws that secure the heat sink to the system board.

Next steps

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

Removing the heat sink for computers shipped without a discrete graphics card

Prerequisites

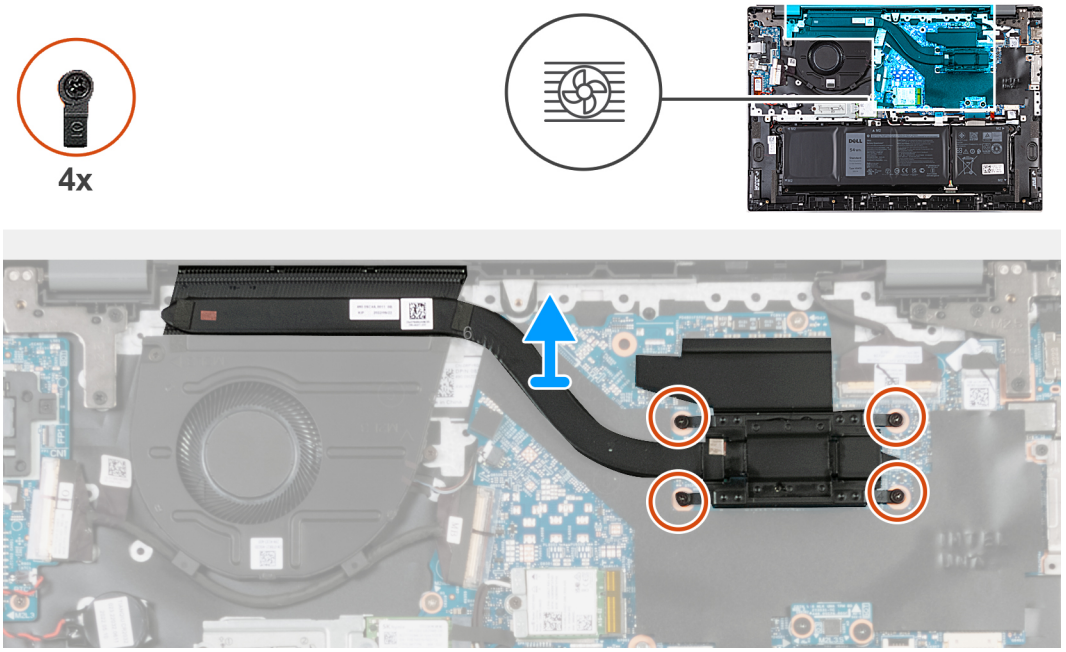
CAUTION: The information in this section is intended for authorized service technicians only.

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

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



Steps

1. In reverse sequential order (4>3>2>1), loosen the four captive screws that secure the heat sink to the system board.
2. Lift the heat sink off the system board.

Installing the heat sink for computers shipped without a discrete graphics card

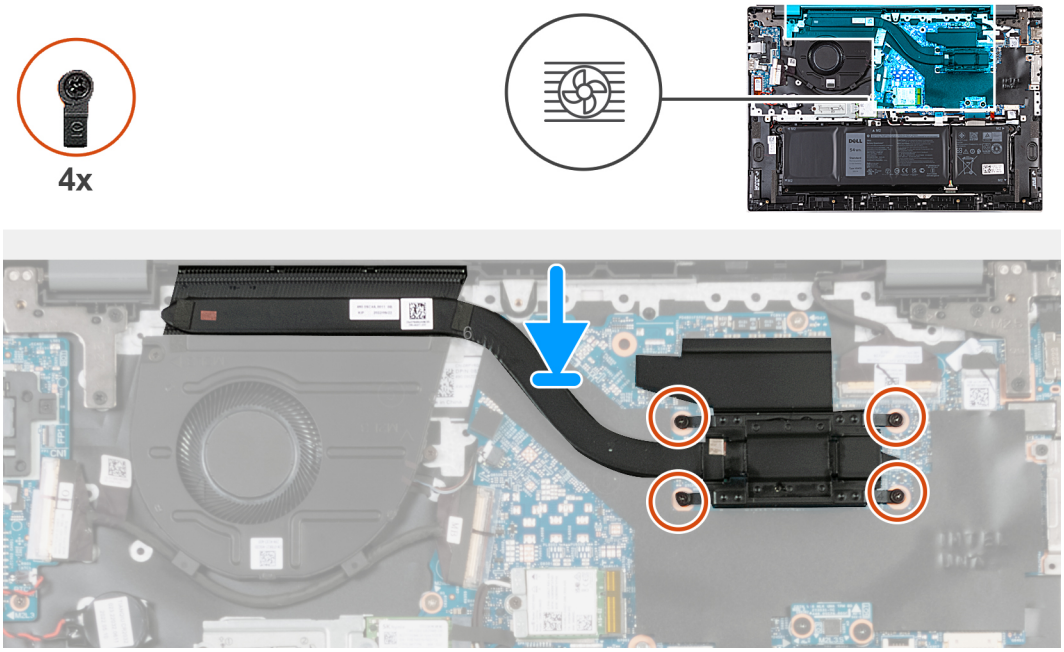
Prerequisites

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

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

About this task

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



Steps

1. Align the captive screws on the heat sink to the screw holes on the system board.
2. In sequential order (1>2>3>4), tighten the four captive screws that secure the heat sink to the system board.

Next steps

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

Battery

Rechargeable Li-ion battery precautions

WARNING:

- **Exercise caution when handling rechargeable Li-ion batteries.**
- **Discharge the battery completely before removing it. Disconnect the AC power adapter from the computer and operate the computer solely on battery power—the battery is fully discharged when the computer no longer turns on when the power button is pressed.**
- **Do not crush, drop, mutilate, or penetrate the battery with foreign objects.**
- **Do not expose the battery to high temperatures, or disassemble battery packs and cells.**
- **Do not apply pressure to the surface of the battery.**
- **Do not bend the battery.**
- **Do not use tools of any kind to pry on or against the battery.**
- **To prevent accidental puncture or damage to the battery and other components, ensure that no screws are lost or misplaced during the servicing of this product.**
- **Always purchase genuine batteries from Dell Site or authorized Dell partners and resellers.**
- **Swollen batteries should not be used and should be replaced and disposed properly. For guidelines on how to handle and replace swollen rechargeable Li-ion batteries, see Handling swollen rechargeable Li-ion batteries.**

Removing the battery

Prerequisites

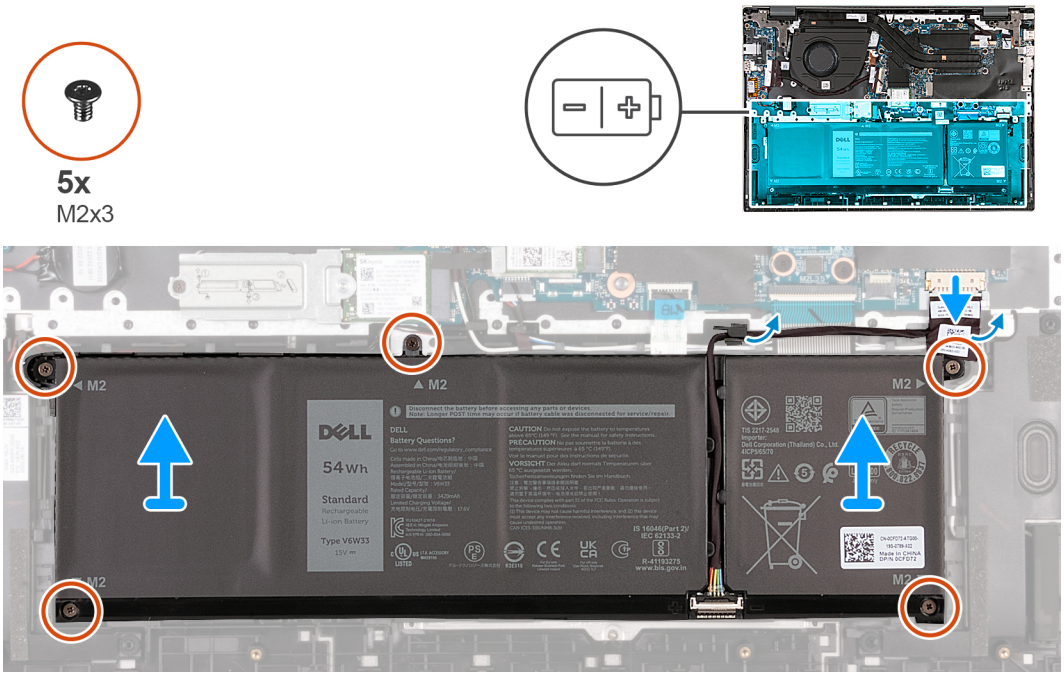
CAUTION: The information in this section is intended for authorized service technicians only.

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

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



Steps

1. Peel the tape that secures the battery cable to the battery
2. Disconnect the battery cable and disengage it from the tabs on the system board.
3. Remove the five screws (M2x3) that secure the battery to the palm-rest and keyboard assembly.
4. Lift the battery off the palm-rest and keyboard assembly.

Installing the battery

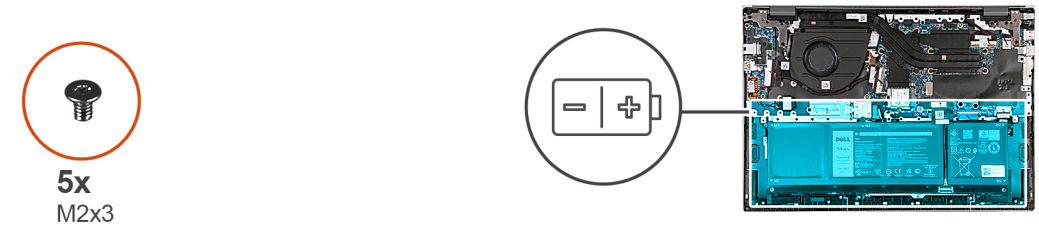
Prerequisites

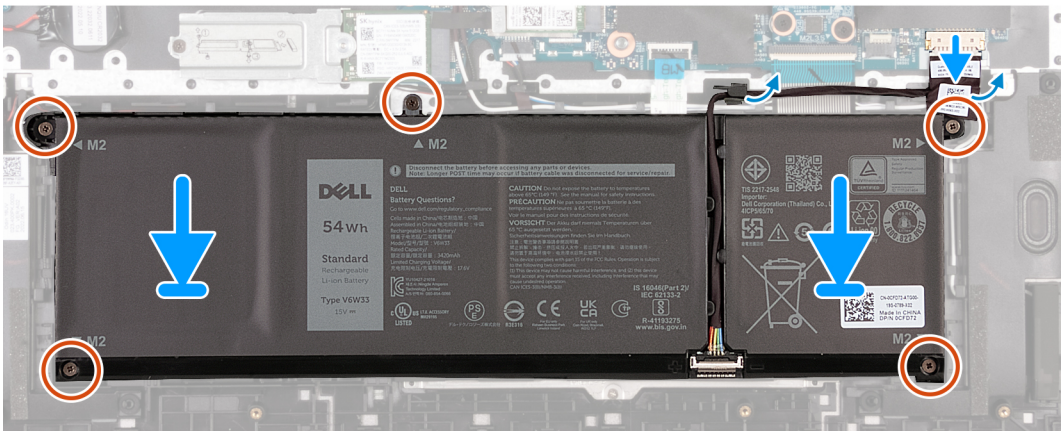
CAUTION: The information in this section is intended for authorized service technicians only.

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

About this task

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





Steps

1. Align the screw holes on the battery with the screw holes on the palm-rest and keyboard assembly.
2. Replace the five screws (M2x3) that secure the battery to the palm-rest and keyboard assembly.
3. Route the battery cable through the tabs and reconnect it to the system board.
4. Adhere the tape that secures the battery cable to the battery.

Next steps

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

Speaker

Removing the speakers

Prerequisites

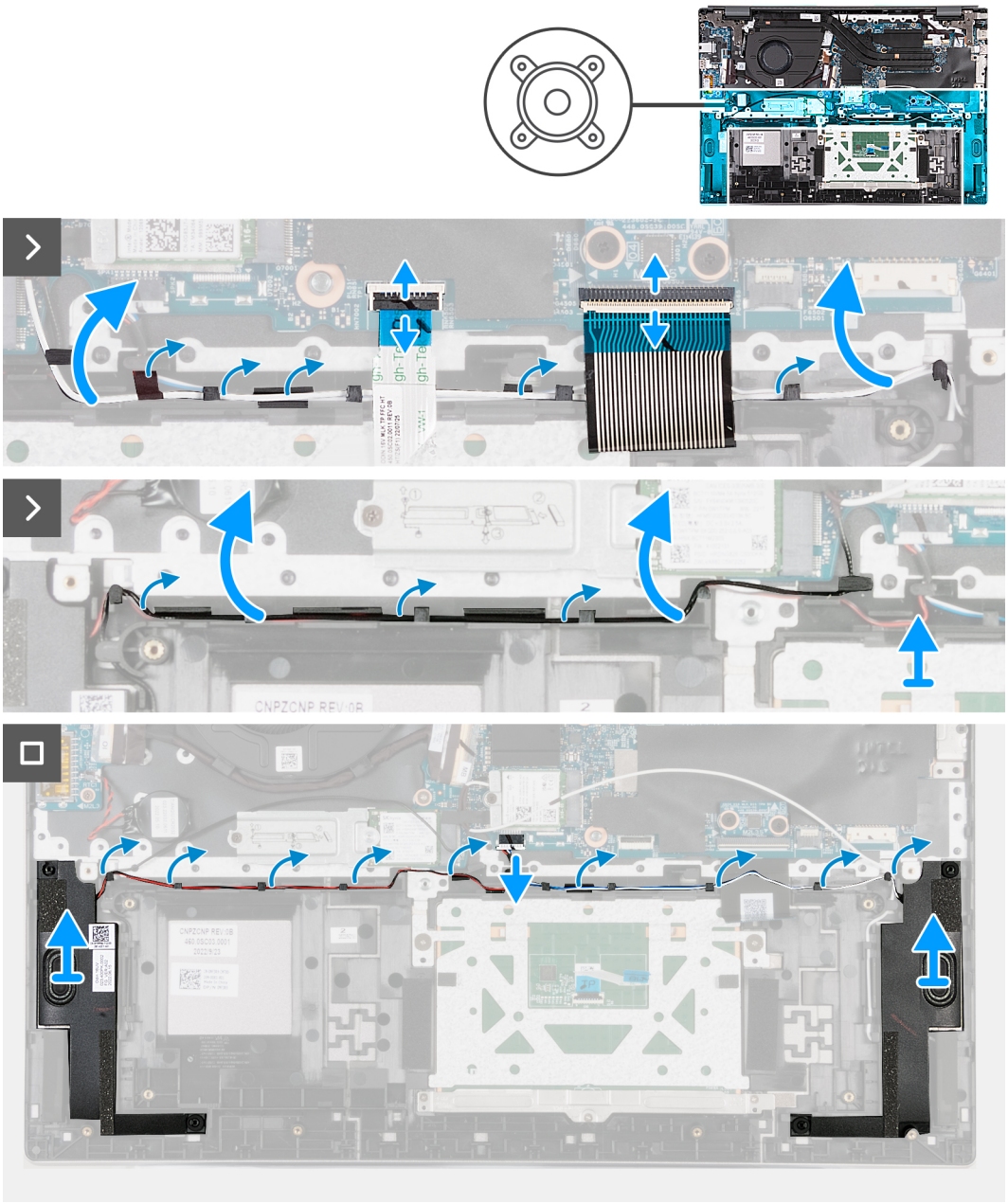
CAUTION: The information in this section is intended for authorized service technicians only.

1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.
3. Remove the battery.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



Steps

1. Open the latch and disconnect the touchpad cable from the system board.
2. Open the latch and disconnect the keyboard cable from the system board.
3. Peel the tapes that secure the WLAN cable to the system board.
4. Remove the WLAN cable from the routing guides on the palm-rest and keyboard assembly.
5. Remove the speaker cable from the routing guides on the palm-rest and keyboard assembly.
6. Lift the speakers along with their cables off the palm-rest and keyboard assembly.

Installing the speakers

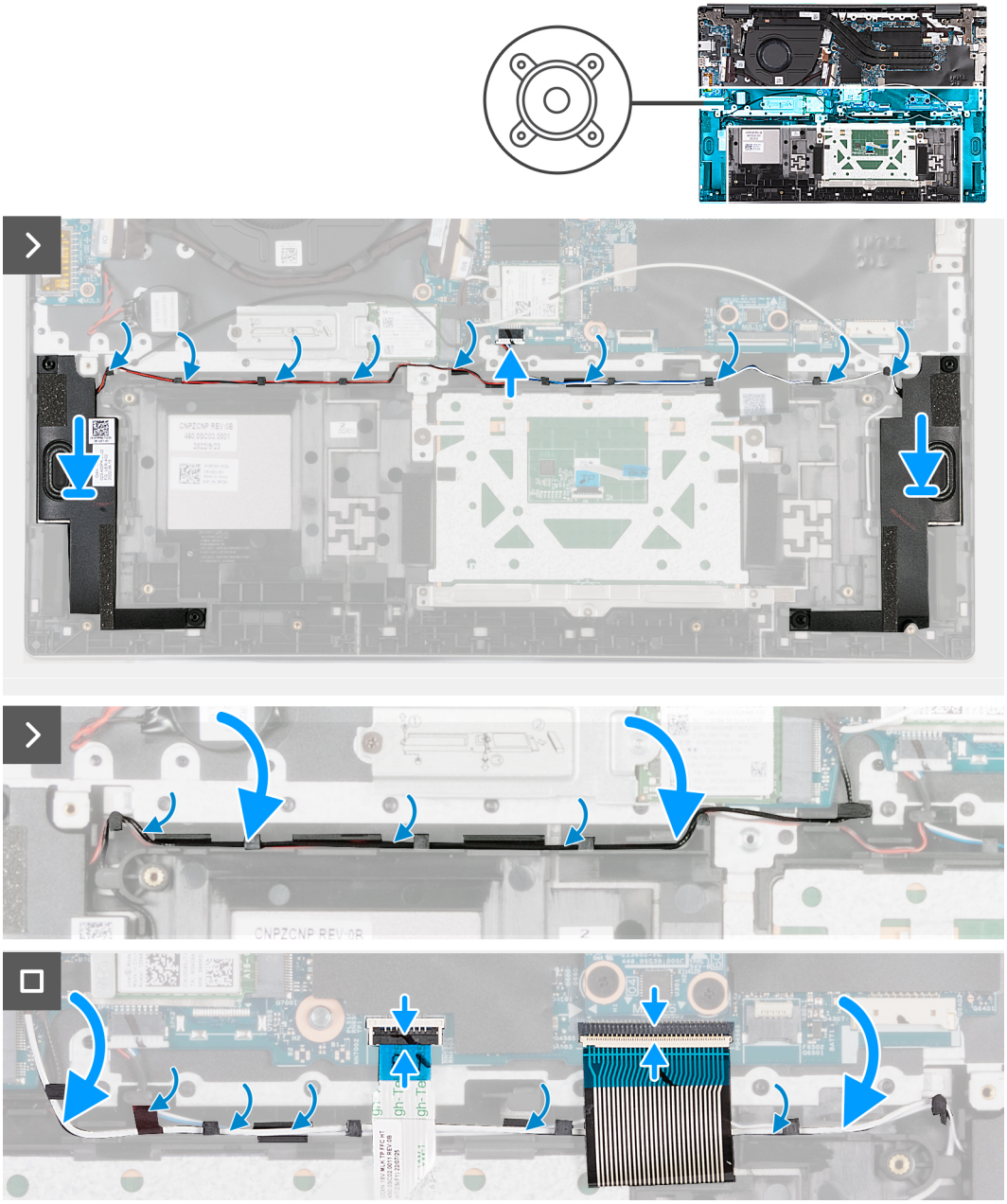
Prerequisites

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

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

About this task

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



Steps

1. Using the alignment posts, place the speakers (woofers) on the palm-rest and keyboard assembly.
2. Ensure that the alignment posts are threaded through the rubber grommets on the speaker.
3. Route the speaker cable through the routing guides on the palm-rest and keyboard assembly.
4. Route the WLAN cable through the routing guides on the palm-rest and keyboard assembly.
5. Adhere the tapes that secure the WLAN cable to the system board.
6. Connect the keyboard cable to the system board and close the latch.
7. Connect the touchpad cable to the system board and close the latch.

Next steps

1. Install the battery.
2. Install the base cover.
3. Follow the procedure in After working inside your computer.

Coin-cell battery

Removing the coin-cell battery

Prerequisites

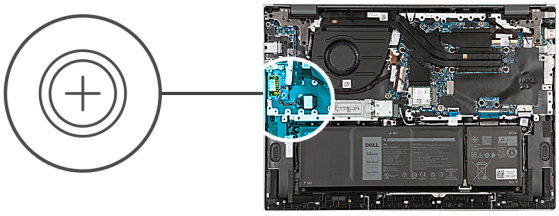
CAUTION: The information in this section is intended for authorized service technicians only.

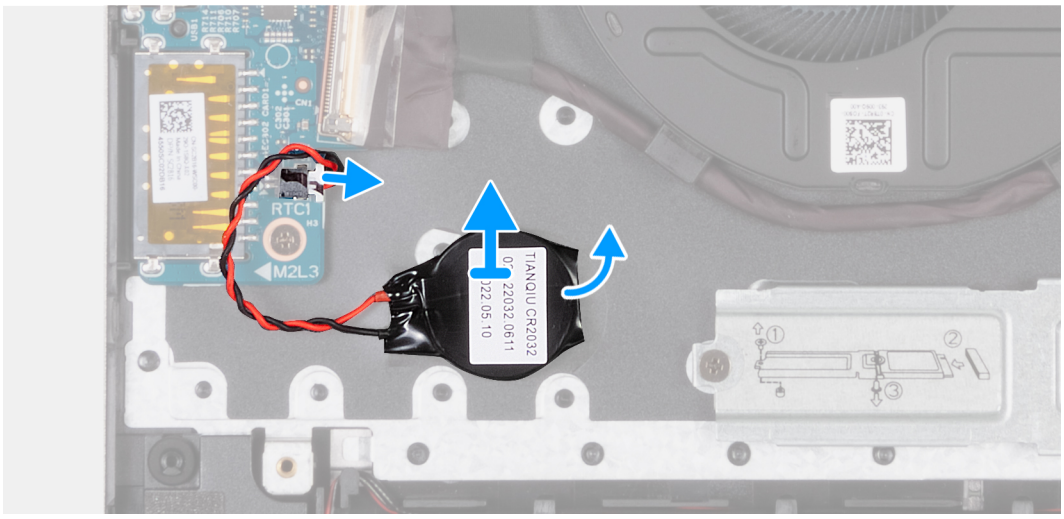
1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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





Steps

1. Disconnect the coin-cell battery cable from the system board.
2. Lift and remove the coin-cell battery off the system board.

Installing the coin-cell battery

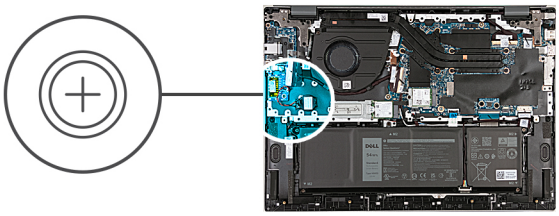
Prerequisites

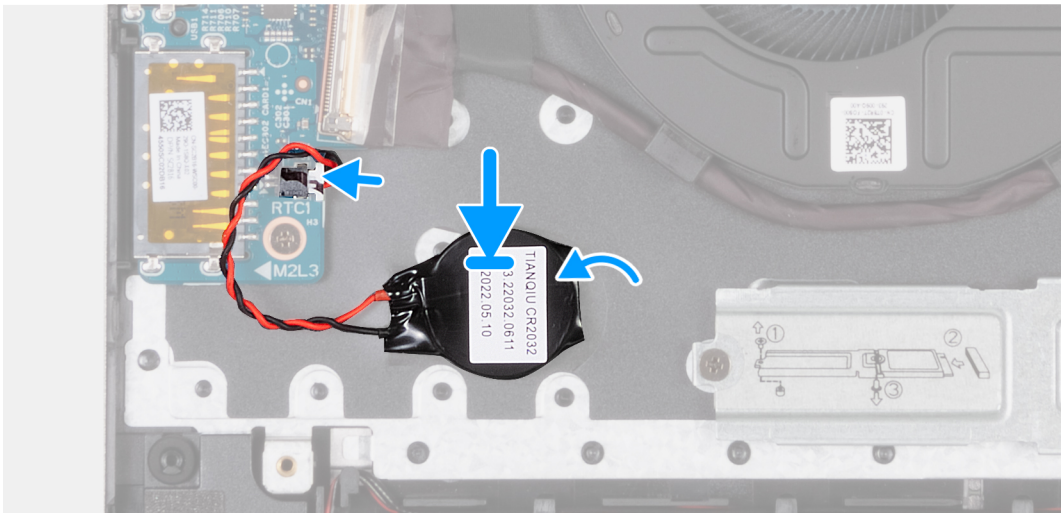
CAUTION: The information in this section is intended for authorized service technicians only.

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

About this task

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





Steps

1. Adhere the coin-cell battery to the system board.
2. Connect the coin-cell battery cable to the system board.

Next steps

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

I/O board

Removing the I/O board

Prerequisites

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

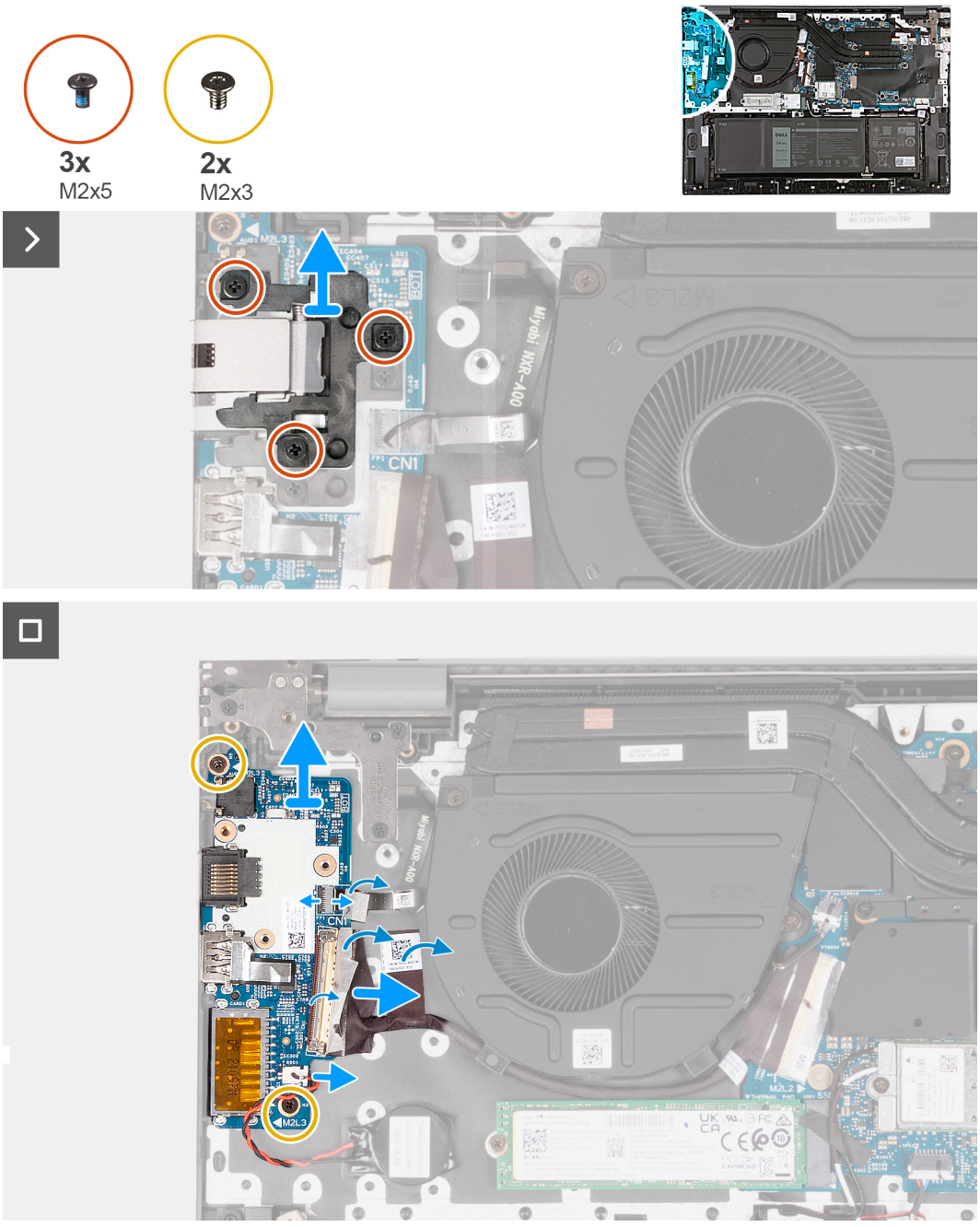
1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

NOTE: The I/O board includes a RJ45 network-port assembly. If you are replacing the I/O board, ensure that you remove the RJ45 network-port assembly from the old I/O board and install it in the new I/O board.

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



Steps

1. Remove the three screws (M2x5) that secure the RJ45 network-port assembly to the I/O board.
2. Lift the RJ45 network-port assembly off the I/O board.
3. Peel the tape that secures the I/O-board cable connector latch to the I/O board.
4. Open the latch and disconnect the power-button board cable from the I/O board.
5. Open the latch and disconnect the fingerprint-reader cable from the I/O board.

6. Remove the two screws (M2x3) that secure the I/O board to the palm-rest and keyboard assembly.
7. Lift the I/O board off the palm-rest and keyboard assembly.

Installing the I/O board

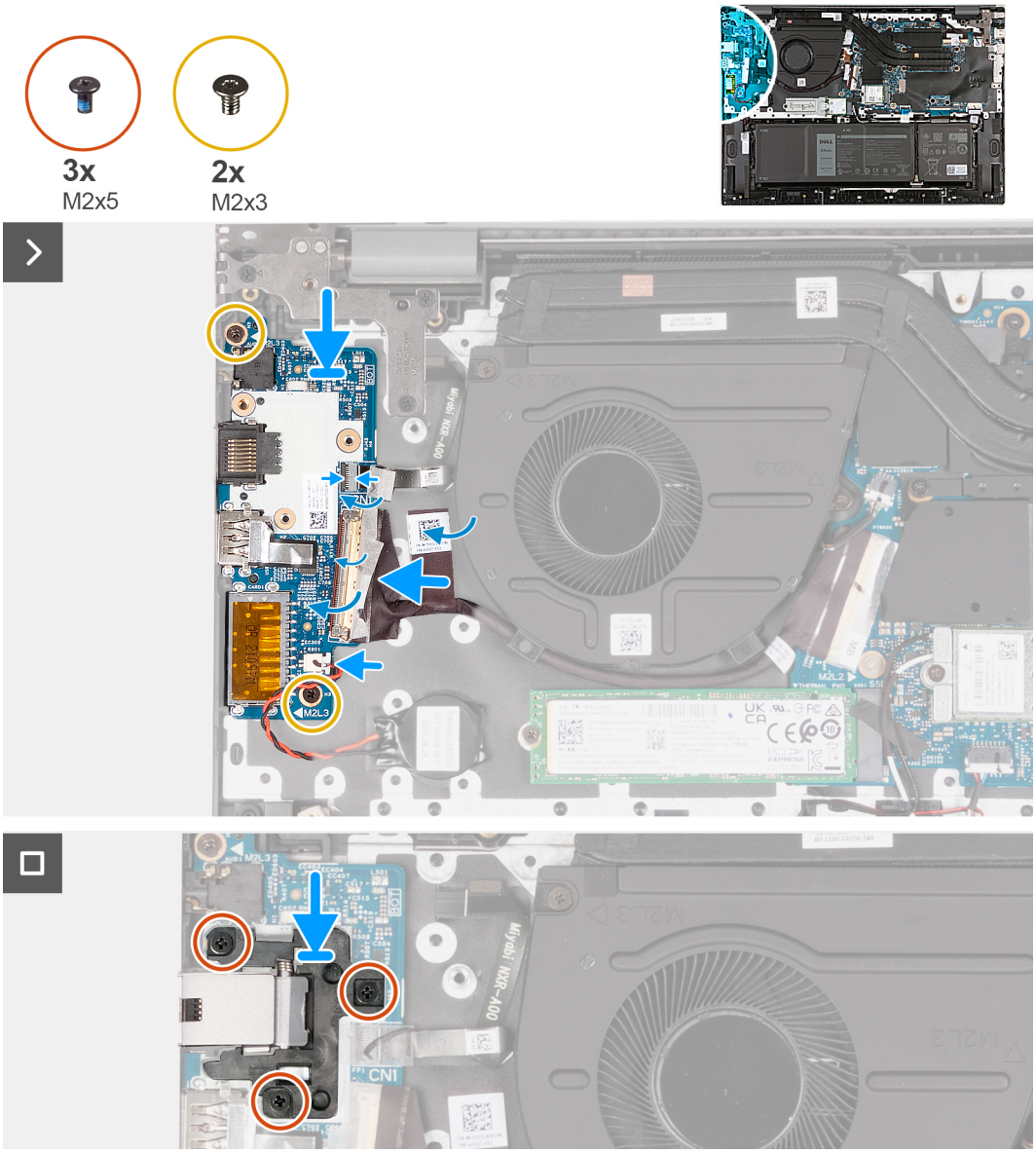
Prerequisites

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

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

About this task

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



Steps

1. Align the screw holes on the I/O board with the screw holes on the system board and palm-rest and keyboard assembly.
2. Align the ports on the I/O board with the slots on the palm-rest and keyboard assembly.
3. Place the I/O board on the palm-rest and keyboard assembly.

4. Replace the two screws (M2x3) that secure the I/O board to the palm-rest and keyboard assembly.
5. Connect the I/O-board cable to the I/O board.
6. Close the latch and replace the clear adhesive tape.
7. Connect the fingerprint-reader cable to the I/O board and close the latch to secure the cable.
8. Align the screw holes on the RJ45 network-port assembly with the screw holes of the I/O board.
9. Replace the three screws (M2x5) that secure the RJ45 network-port assembly to the I/O board.

Next steps

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

Power button with optional fingerprint reader

Removing the power button with optional fingerprint reader

Prerequisites

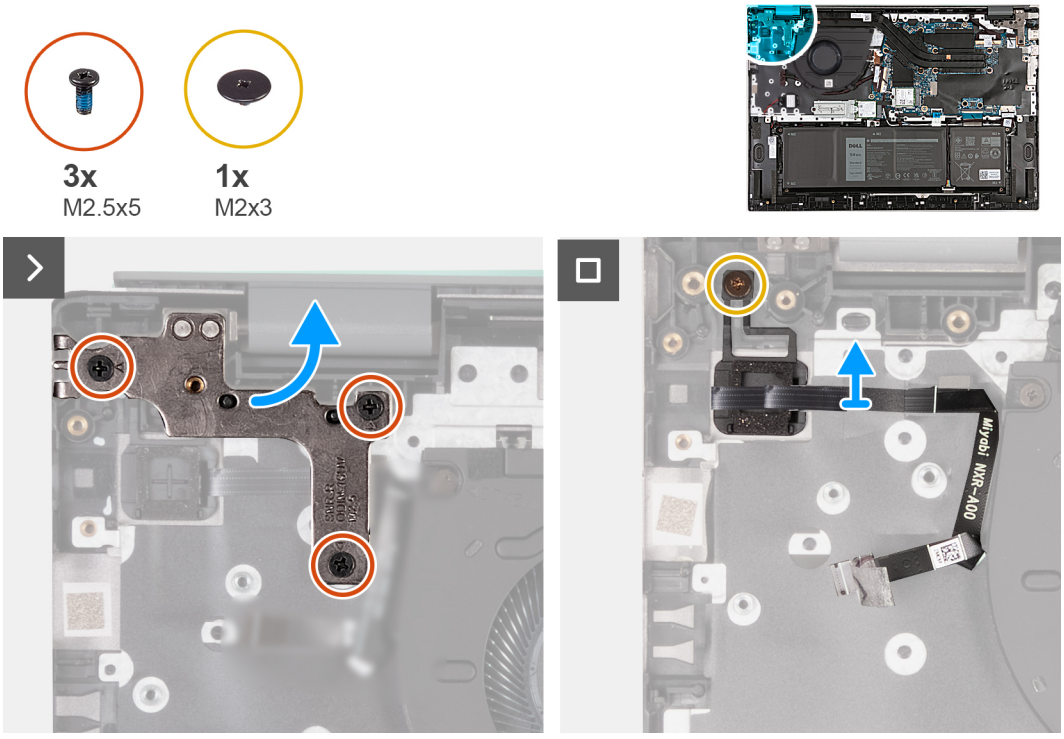
CAUTION: The information in this section is intended for authorized service technicians only.

1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.
3. Remove the I/O board.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the power button with optional fingerprint reader and provides a visual representation of the removal procedure.



Steps

1. Remove the three screws (M2.5x5) that secure the left display hinge to the system board.
2. Open the left display hinge at an angle of 90 degrees.
3. Remove the screw (M2x3) that secures the power button with optional fingerprint reader with optional fingerprint reader to the palm-rest and keyboard assembly.
4. Lift the power button with optional fingerprint reader with optional fingerprint reader off the palm-rest and keyboard assembly.

Installing the power button with optional fingerprint reader

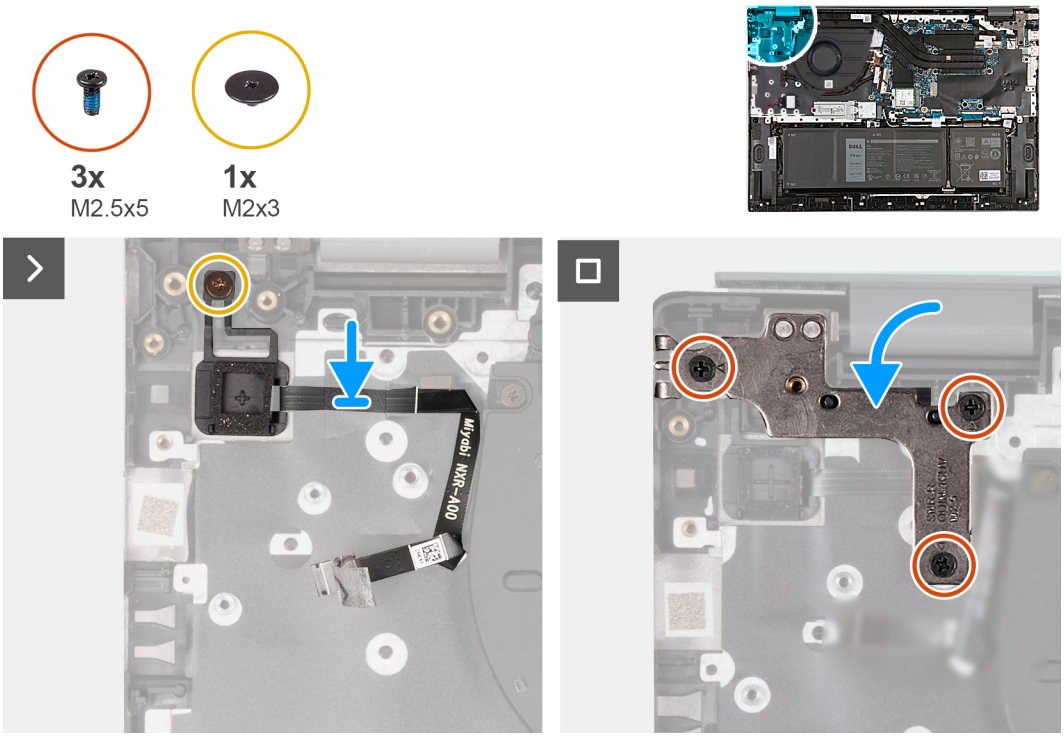
Prerequisites

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

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

About this task

The following image(s) indicate the location of the power button with optional fingerprint reader and provides a visual representation of the installation procedure.



Steps

1. Place the power button with optional fingerprint reader with optional fingerprint reader on the palm-rest and keyboard assembly.
2. Align the screw hole on the power button with optional fingerprint reader with optional fingerprint reader with the screw hole on the palm-rest and keyboard assembly.
3. Replace the screw (M2x3) that secures the power button with optional fingerprint reader with optional fingerprint reader to the palm-rest and keyboard assembly.
4. Close the left display hinge and align the screw holes on the left display hinge with the screw holes on the palm-rest and keyboard assembly.
5. Replace the three screws (M2.5x5) that secure the left display hinge to the palm-rest and keyboard assembly.

Next steps

1. Install the I/O board.
2. Install the base cover.
3. Follow the procedure in After working inside your computer.

Power-adapter port

Removing the power-adapter port

Prerequisites

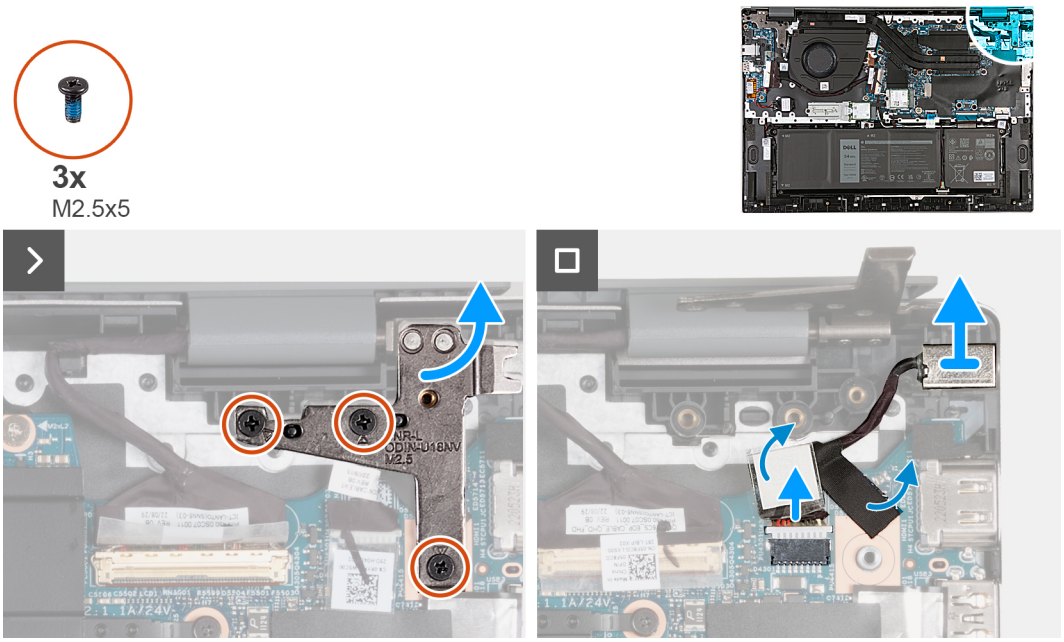
CAUTION: The information in this section is intended for authorized service technicians only.

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

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the power-adapter port and provides a visual representation of the removal procedure.



Steps

1. Remove the three screws (M2.5x5) that secure the right display hinge to the system board.
2. Open the right display hinge at an angle of 90 degrees.
3. Peel the tapes that secure the power-adapter port cable to the system board.
4. Disconnect the power-adapter port cable from the system board.
5. Lift the power-adapter port and its cable off the palm-rest and keyboard assembly.

Installing the power-adapter port

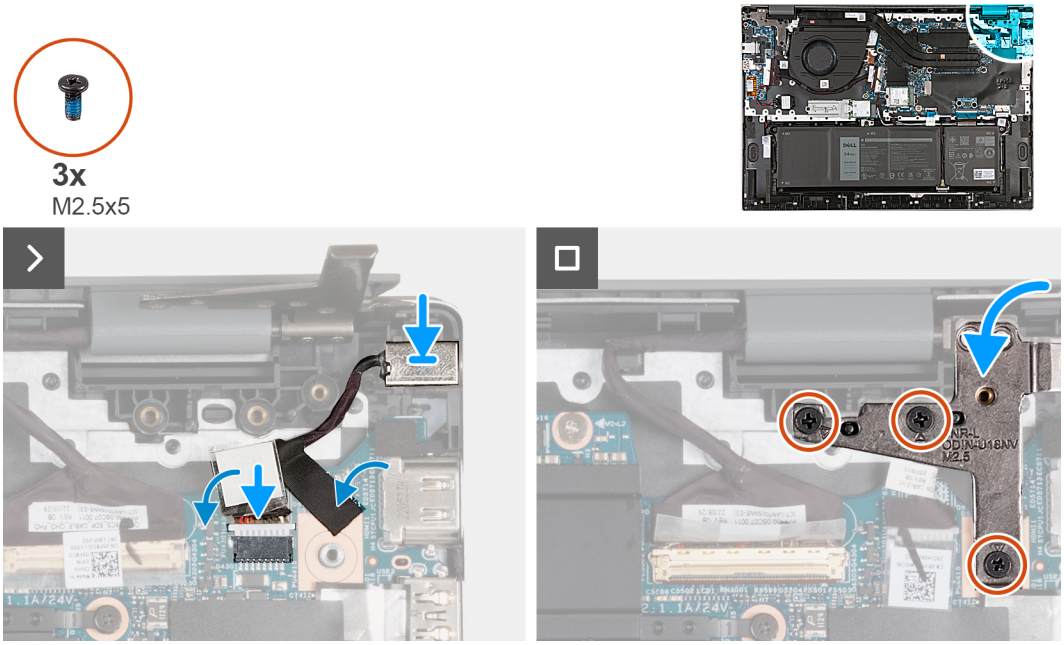
Prerequisites

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

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

About this task

The following image(s) indicate the location of the power-adapter port and provides a visual representation of the installation procedure.



Steps

1. Place the power-adapter port into the slot on the palm-rest and keyboard assembly.
2. Connect the power-adapter port cable to the system board.
3. Adhere the tapes that secure the power-adapter port cable to the system board.
4. Close the right display hinge and align the screw holes on the right display hinge with the screw holes on the system board.
5. Replace the three screws (M2.5x5) that secure the right display hinge to the system board.

Next steps

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

Display assembly

Removing the display assembly

Prerequisites

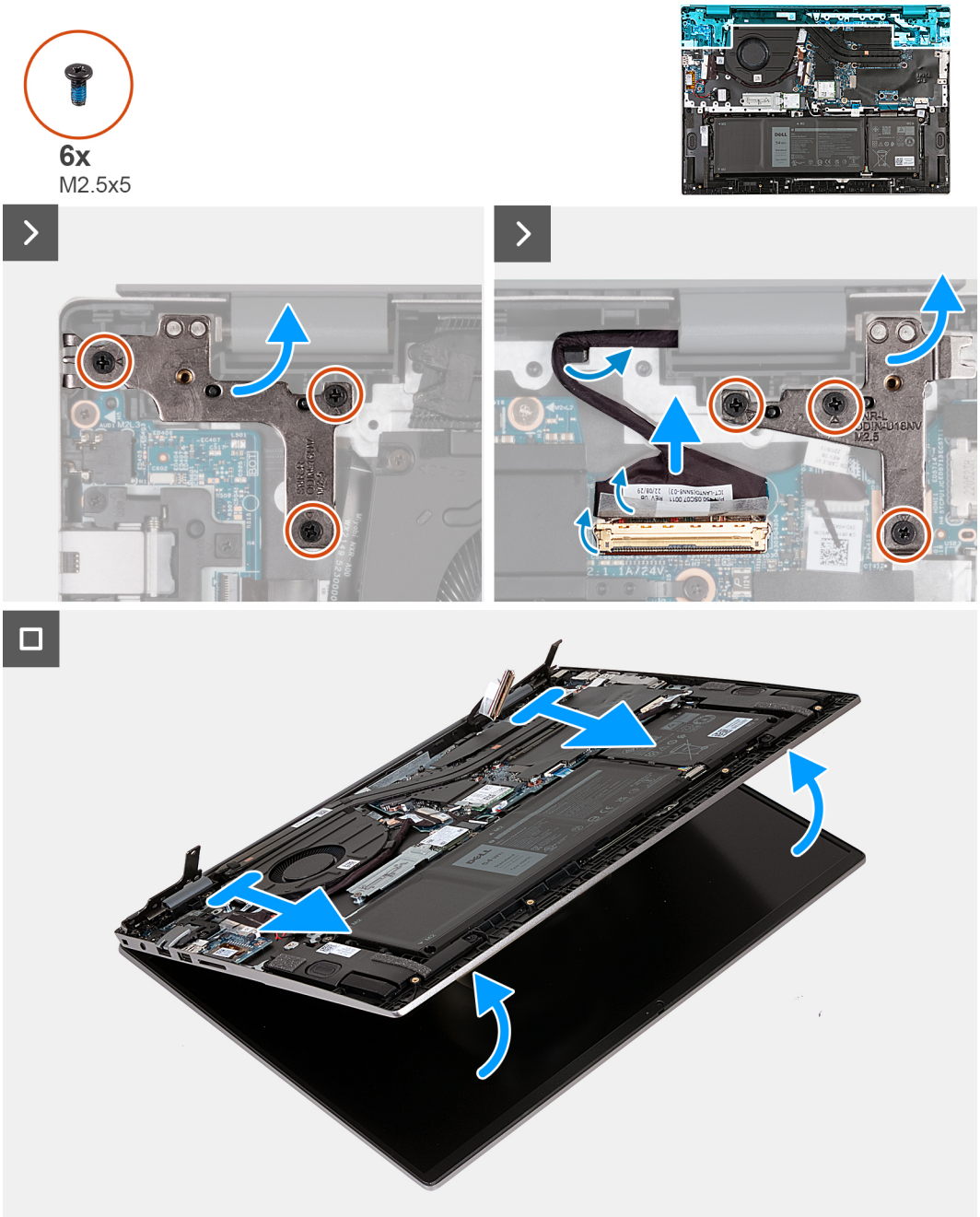
CAUTION: The information in this section is intended for authorized service technicians only.

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

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



Steps

1. Remove the three screws (M2.5x5) that secure the left display hinge to the system board.
2. Open the left display hinge at an angle of 90 degrees.
3. Remove the three screws (M2.5x5) that secure the right display hinge to the system board.
4. Open the right display hinge at an angle of 90 degrees.
5. Peel the tape that secures the display-cable connector latch to the system board.
6. Open the latch and disconnect the display cable from the system board.
7. Remove the display cable from the routing guides on the palm-rest and keyboard assembly.

8. At an angle, gently lift the palm-rest and keyboard assembly off the display assembly.

Installing the display assembly

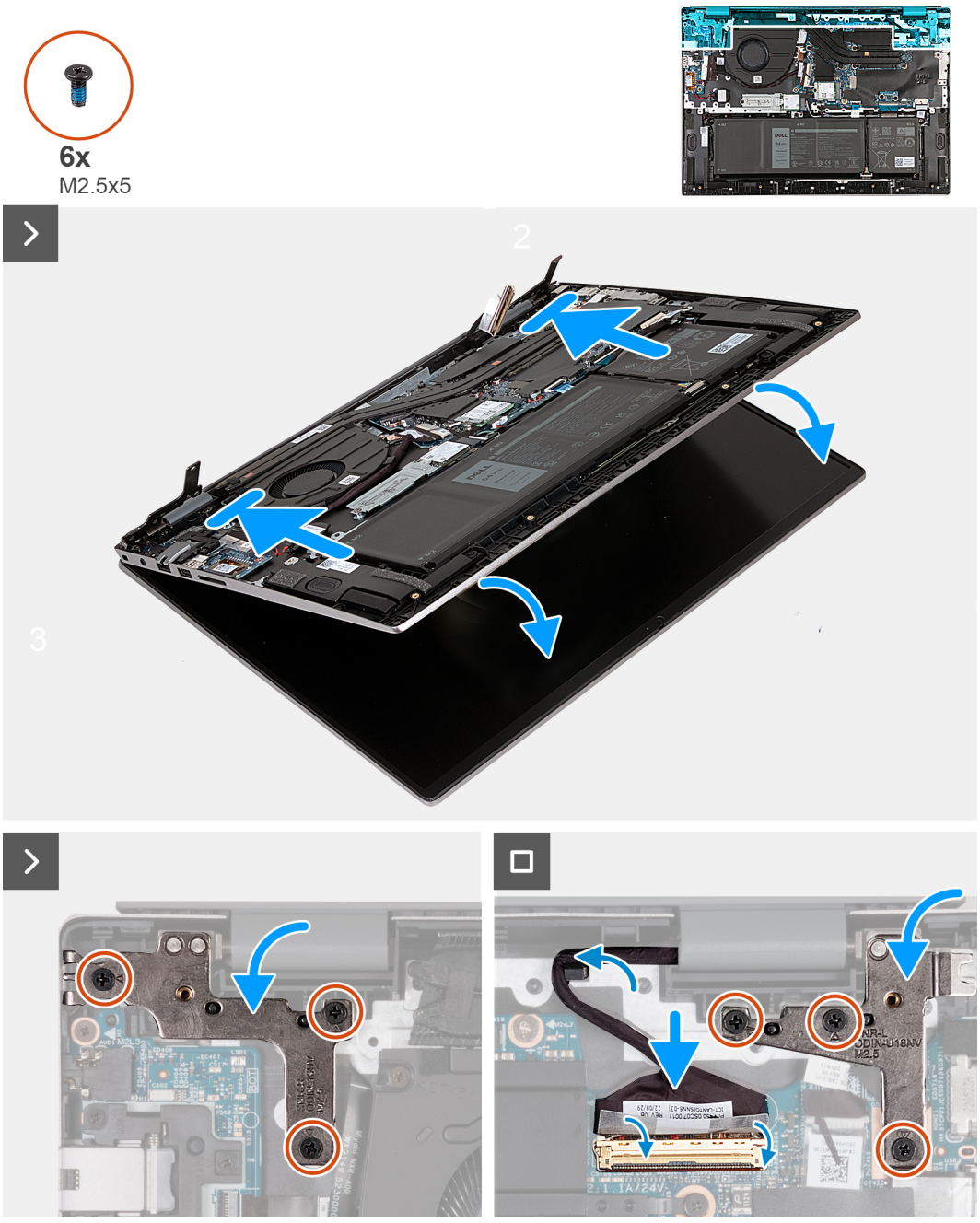
Prerequisites

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

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

About this task

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



Steps

1. Place the display assembly on a clean and flat surface with the display panel facing up.
2. Gently place the palm-rest and keyboard assembly under the display hinges.
3. Close the left display hinge and align the screw holes on the left display hinge with the screw holes on the palm-rest and keyboard assembly.
4. Replace the three screws (M2.5x5) that secure the left display hinge to the palm-rest and keyboard assembly.
5. Close the right display hinge and align the screw holes on the right display hinge with the screw holes on the palm-rest and keyboard assembly.
6. Replace the three screws (M2.5x5) that secure the right display hinge to the palm-rest and keyboard assembly.
7. Route the display cable through the routing guides on the palm-rest and keyboard assembly.
8. Connect the display cable to the system board and close the latch.
9. Adhere the tape that secures the display-cable connector latch to the system board.

Next steps

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

Trusted Platform Module

Removing the Trusted Platform Module (TPM) board

Prerequisites

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

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

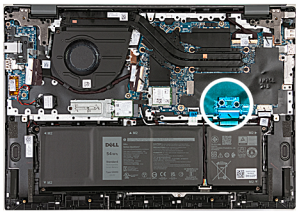
About this task

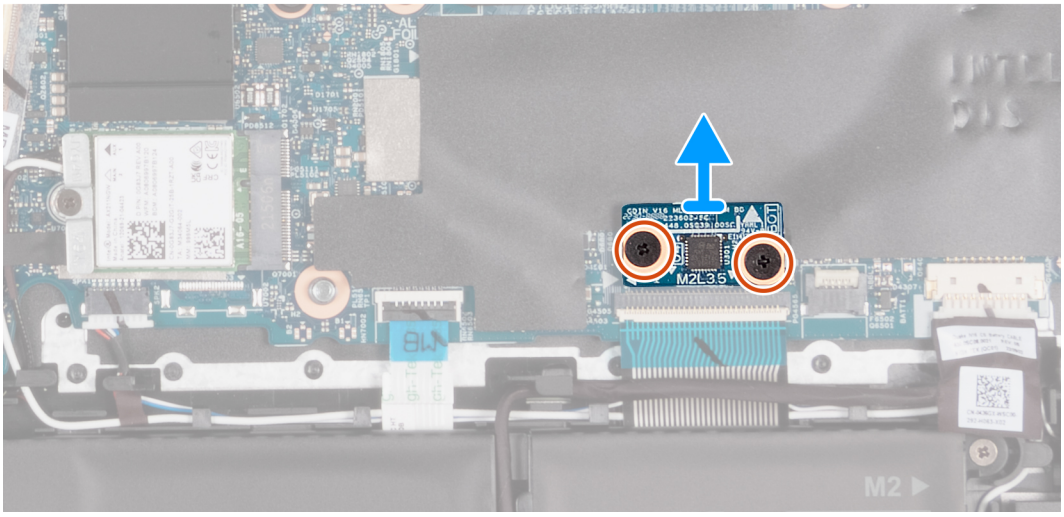
NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



2x
M2x3.5





Steps

1. Remove the two screws (M2x3.5) that secure the TPM board to the system board.
2. Lift the TPM board off the system board.

Installing the Trusted Platform Module (TPM) board

Prerequisites

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

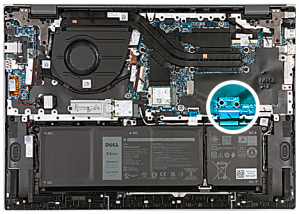
If you are replacing a component, remove the existing component before performing the installation process.

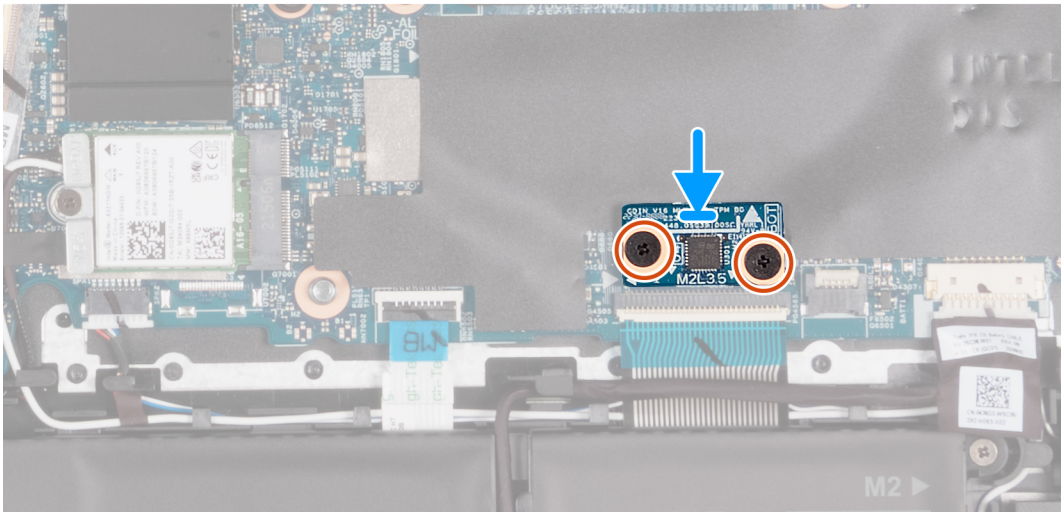
About this task

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



2x
M2x3.5





Steps

1. Align the screw holes on the TPM board with the screw holes on the system board.
2. Align the ports on the TPM board with the slots on the system board.
3. Place the TPM board on the system board.
4. Replace the two screws (M2x3) that secure the TPM board to the system board.

Next steps

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

System board

Removing the system board

Prerequisites

1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.
3. Remove the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever is applicable.
4. Remove the wireless card.
5. Remove the heat sink for computers shipped with a NVIDIA GeForce RTX 2050 Ti graphics card or heat sink for computers shipped without a discrete graphics card, whichever is applicable.
6. Remove the Trusted Platform Module (TPM) board.

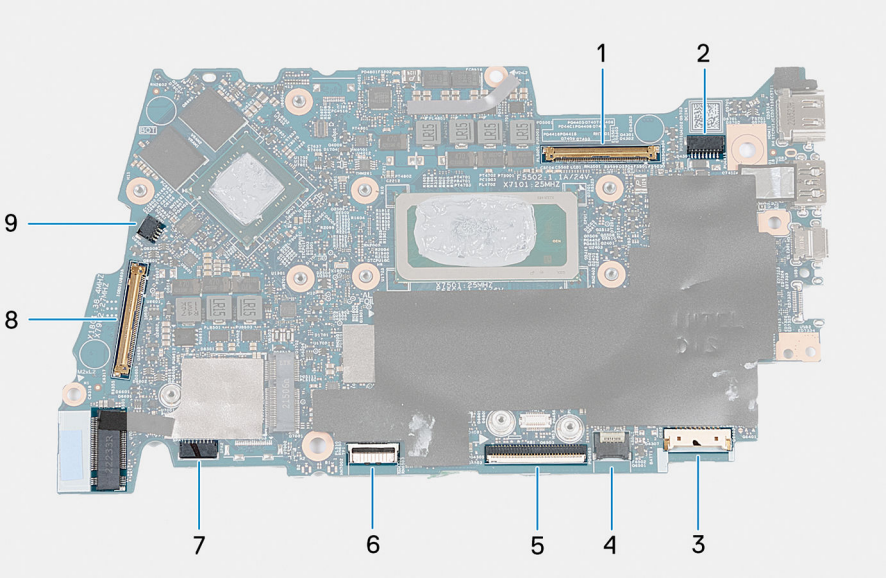
About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

NOTE: The system board can be removed and installed along with the heat sink, when you replace the palm-rest and keyboard assembly. This simplifies the removal and installation procedure and also prevents damage to the thermal bond between the system board and heat sink.

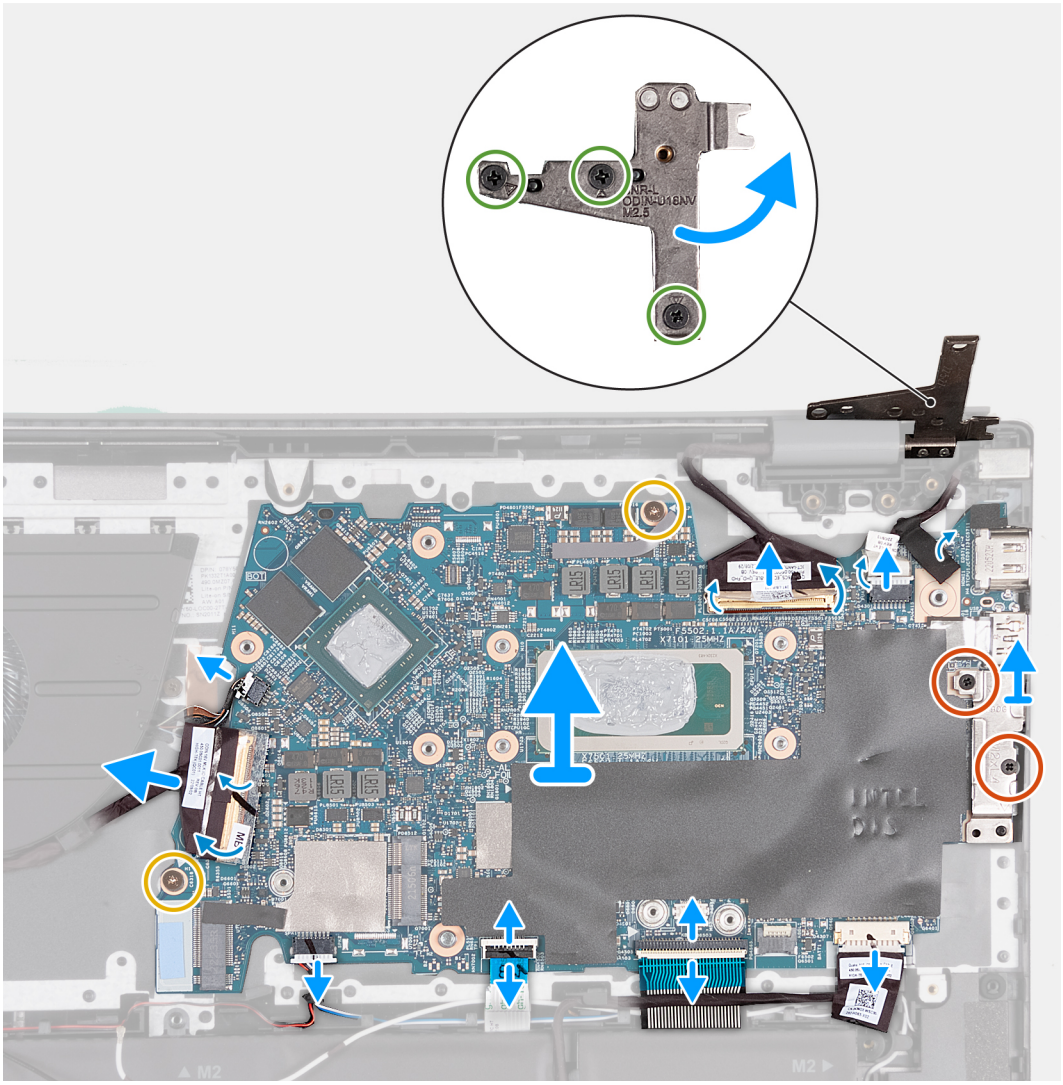
NOTE: Device Encryption will be triggered when either the system board or storage (SSD) is replaced. Refer to BitLocker for more information on suspending BitLocker.

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



1. Display cable connector
2. Power-cable connector
3. Battery-cable connector
4. Keyboard-cable connector
5. Touchpad-cable connector
6. Keyboard-backlight cable connector
7. Speaker cable connector
8. I/O board-cable connector
9. Fan-cable connector





Steps

1. Remove the three screws (M2.5x5) that secure the right display hinge to the system board.
2. Open the right display hinge at an angle of 90 degrees.
3. Peel the tape that secures the display-cable connector latch to the system board.
4. Open the latch and disconnect the display cable from the system board.
5. Peel the tapes that secure the power-adapter port cable to the system board.
6. Disconnect the power-adapter port cable from the system board.
7. Remove the two screws (M2x4) that secure the Type-C port bracket to the system board.
8. Lift the Type-C port-bracket off the system board.
9. Disconnect the battery cable from the system board.
10. Open the latch and disconnect the keyboard cable from the system board.
11. Open the latch and disconnect the touchpad cable from the system board.
12. Disconnect the keyboard-backlight cable from the system board.

13. Open the latch and disconnect the I/O board cable from the system board
14. Disconnect the fan cable from the system board.
15. Remove the two screws (M2x1.8) that secure the system board to the palm-rest and keyboard assembly.
16. Lift the system board at angle off the palm-rest and keyboard assembly, to clear the ports from the port openings.

Installing the system board

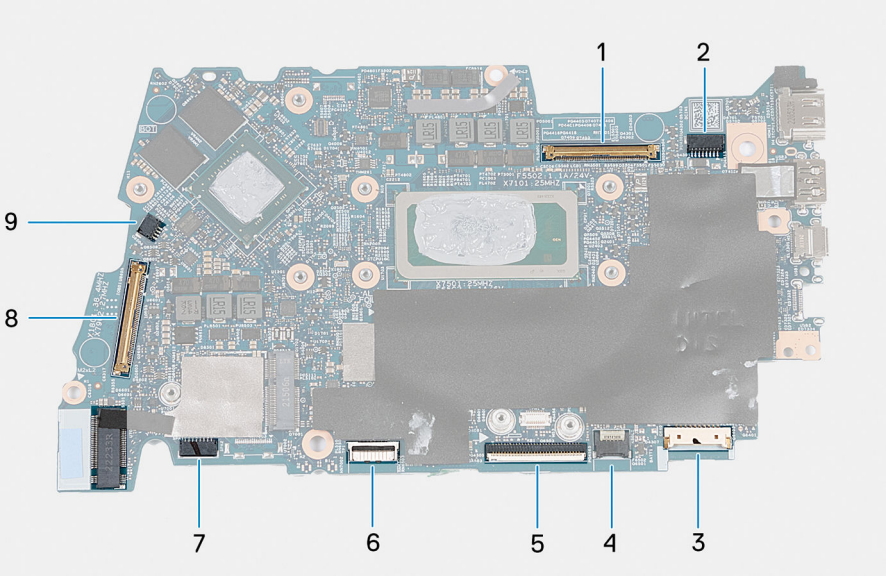
Prerequisites

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

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

About this task

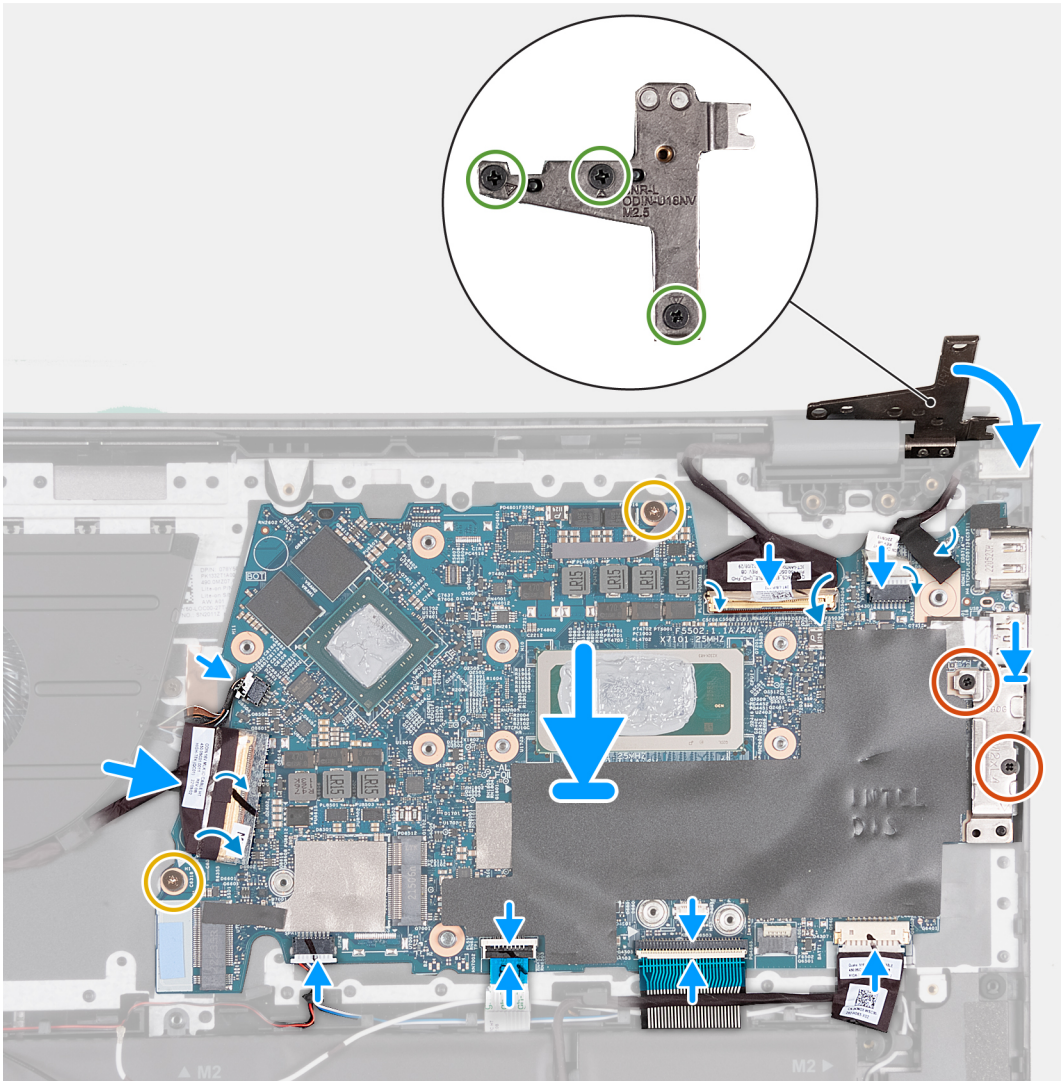
The following image(s) indicate the location of the system board and provides a visual representation of the installation procedure.



1. Display cable connector
2. Power-cable connector
3. Battery-cable connector
4. Keyboard-cable connector
5. Touchpad-cable connector
6. Keyboard-backlight cable connector
7. Speaker cable connector
8. I/O board-cable connector
9. Fan-cable connector

NOTE: The system board can be removed and installed along with the heat sink, when you replace the palm-rest and keyboard assembly. This simplifies the removal and installation procedure and also prevents damage to the thermal bond between the system board and heat sink.





Steps

1. Install the system board at an angle and ensure that the ports are properly aligned with the port openings.
2. Place the system board on the palm-rest and keyboard assembly.
3. Align the screw holes on the system board with the screw holes on the palm-rest and keyboard assembly.
4. Replace the two screws (M2x1.8) that secure the system board to the palm-rest and keyboard assembly.
5. Connect the fan cable to the system board.
6. Connect the I/O board cable to the system board and close the latch.
7. Connect the keyboard-backlight cable to the system board.
8. Connect the touchpad cable to the system board and close the latch.
9. Connect the keyboard cable to the system board and close the latch.
10. Connect the battery cable to the system board.
11. Align the screw holes of the Type-C port-bracket with the screw holes of the system board.
12. Place the Type-C port-bracket on the system board.

13. Replace the two screws (M2x4) that secure the Type-C port-bracket to the system board.
14. Connect the power-adapter port cable to the system board.
15. Adhere the tapes that secure the power-adapter port cable to the system board.
16. Connect the display cable from the system board and close the latch.
17. Adhere the tape that secures the display-cable connector latch to the system board.
18. Connect the power-adapter port cable to the system board.
19. Adhere the tapes that secure the power-adapter port cable to the system board.
20. Connect the display cable to the system board and close the latch.
21. Adhere the tape that secures the display-cable connector latch to the system board.
22. Close the right display hinge and align the screw holes on the right display hinge with the screw holes on the palm-rest and keyboard assembly.
23. Replace the three screws (M2.5x5) that secure the right display hinge to the palm-rest and keyboard assembly.

Next steps

1. Install the Trusted Platform Module (TPM) board.
2. Install the heat sink for computers shipped with a NVIDIA GeForce RTX 2050 Ti graphics card or heat sink for computers shipped without a discrete graphics card, whichever is applicable.
3. Install the wireless card.
4. Install the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever is applicable.
5. Install the base cover.
6. Follow the procedure in After working inside your computer.

Touchpad

Removing the touchpad

Prerequisites

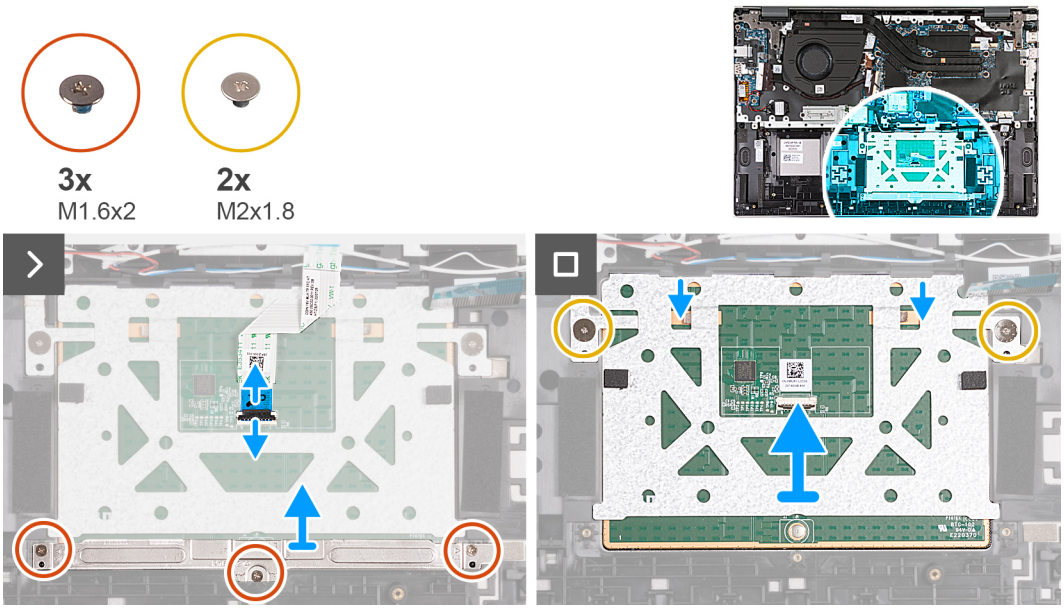
CAUTION: The information in this section is intended for authorized service technicians only.

1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.
3. Remove the battery.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

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



Steps

1. Open the latch of the touchpad connector and disconnect the touchpad cable from the touchpad.
2. Remove the three screws (M1.6x2) that secure the touchpad bracket to the palm-rest and keyboard assembly.
3. Lift the touchpad bracket off the palm-rest and keyboard assembly.
4. Remove the two screws (M2x1.8) that secure the touchpad to the palm-rest and keyboard assembly.
5. Lift the touchpad assembly off the palm-rest and keyboard assembly.

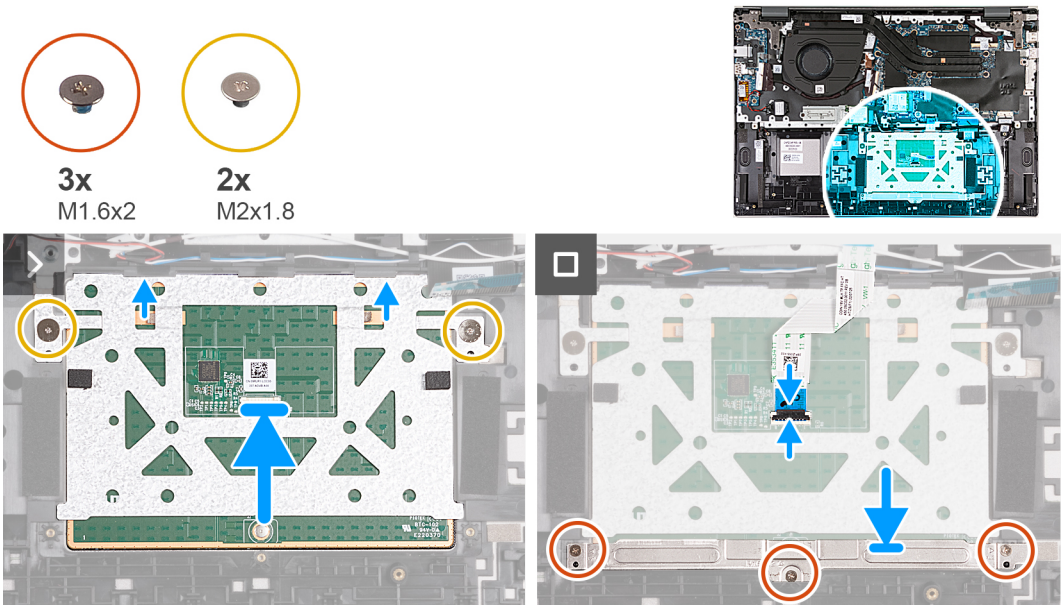
Installing the touchpad

Prerequisites

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

About this task

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



Steps

1. Slide the touchpad onto the palm-rest and keyboard assembly.
2. Replace the two screws (M2x1.8) that secure the touchpad to the palm-rest and keyboard assembly.
3. Align the touchpad bracket and place it on the palm-rest and keyboard assembly.
4. Replace the three screws (M1.6x2) that secure the touchpad bracket to the palm-rest and keyboard assembly.
5. Connect the touchpad cable to the touchpad and close the latch.

Next steps

1. Install the battery.
2. Install the base cover.
3. Follow the procedure in After working inside your computer.

Palm-rest and keyboard assembly

Removing the palm-rest and keyboard assembly

Prerequisites

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

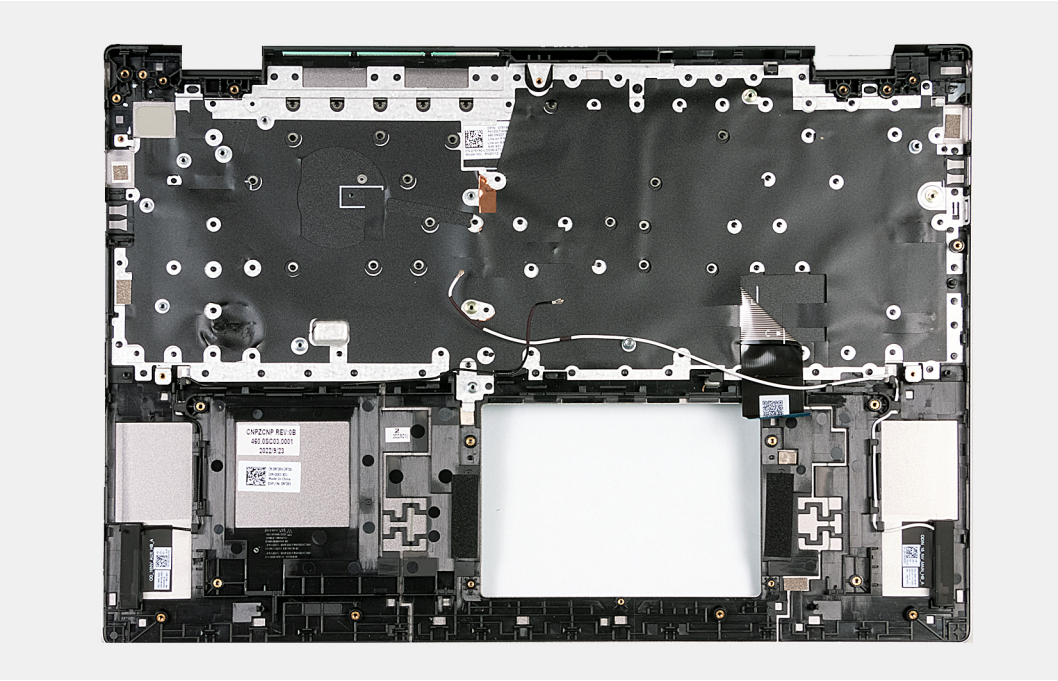
1. Follow the procedure in Before working inside your computer.
2. Remove the base cover.
3. Remove the fan.
4. Remove the wireless card.
5. Remove the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever applicable.
6. Remove the battery.
7. Remove the speakers.
8. Remove the coin-cell battery.
9. Remove the I/O board.
10. Remove the power button with optional fingerprint reader.
11. Remove the power-adapter port.
12. Remove the display assembly.
13. Remove the TPM board.
14. Remove the system board.
15. Remove the touchpad.

About this task

NOTE: Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

NOTE: The system board can be removed and installed along with the heat sink, when you replace the palm-rest and keyboard assembly. This simplifies the removal and installation procedure and also prevents damage to the thermal bond between the system board and heat sink.

The following image(s) indicate the location of the palm-rest and keyboard assembly and provides a visual representation of the removal procedure.



Steps

After performing the pre-requisites, you are left with the palm-rest and keyboard assembly.

Installing the palm-rest and keyboard assembly

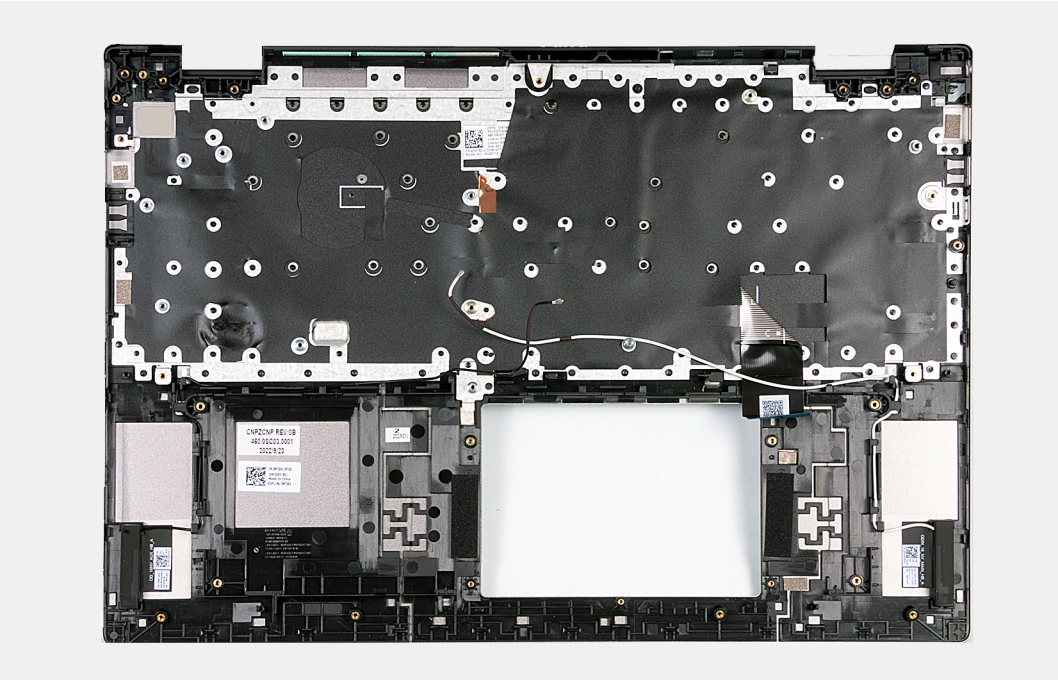
Prerequisites

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

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

About this task

The following image(s) indicate the location of the palm-rest and keyboard assembly and provides a visual representation of the installation procedure.



Steps

Place the palm-rest and keyboard assembly on a flat and clean surface and perform the post-requisites to install the palm-rest and keyboard assembly.

Next steps

NOTE: The system board can be removed and installed along with the heat sink, when you replace the palm-rest and keyboard assembly. This simplifies the removal and installation procedure and also prevents damage to the thermal bond between the system board and heat sink.

1. Install the touchpad.
2. Install the system board.
3. Install the tpm board.
4. Install the display assembly.
5. Install the power adapter port
6. Install the power button with optional fingerprint reader.
7. Install the I/O board.
8. Install the coin-cell battery.
9. Install the speakers.
10. Install the battery.
11. Install the M.2 2230 solid-state drive or M.2 2280 solid-state drive, whichever applicable.
12. Install the wireless card.
13. Install the fan.
14. Install the base cover.
15. Follow the procedure in After working inside your computer.

7

Software

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

Operating system

Your Vostro 16 5630 supports the following operating systems:

- Windows 11 Pro, 64-bit
- Windows 11 Pro National Education, 64-bit
- Windows 11 Home, 64-bit
- Windows 10 Pro, 64-bit
- Windows 10 Home, 64-bit

Drivers and downloads

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

8

BIOS Setup

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

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

Use BIOS Setup for the following purposes:

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

Entering BIOS Setup program

About this task

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

Navigation keys

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

Table 28. Navigation keys

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

F12 One Time Boot menu

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

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

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

- Removable Drive (if available)

- STXXXX Drive (if available)

  NOTE: XXX denotes the SATA drive number.

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

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

System setup options

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

Table 29. System setup options—System information menu

Overview	
Vostro 16 5630	
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.
Battery Information	
Primary	Displays that battery is primary.
Battery Level	Displays the battery level of the system.
Battery State	Displays the battery state of the system.
Health	Displays the battery health of the system.
AC Adapter	Displays whether the AC adapter is connected or not.
Processor Information	
Processor Type	Displays the processor type.
Maximum Clock Speed	Displays the maximum processor clock speed.
Minimum Clock Speed	Displays the minimum processor clock speed.
Current Clock Speed	Displays the current processor clock speed.
Core Count	Displays the number of cores on the processor.
Processor ID	Displays the processor identification code.
Processor L2 Cache	Displays the processor L2 Cache size.
Processor L3 Cache	Displays the processor L3 Cache size.
Microcode Version	Displays the microcode version.
Intel Hyper-Threading Capable	Displays whether the processor is Hyper-Threading (HT) capable.
64-Bit Technology	Displays whether 64-bit technology is used.
Memory Information	
Memory Installed	Displays the total system memory installed.

Table 29. System setup options—System information menu (continued)

Overview	
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.
Devices Information	
Panel Type	Displays the Panel Type of the system.
Video Controller	Displays the video controller type of the system.
Video Memory	Displays the video memory information of the system.
Wi-Fi Device	Displays the wireless device information of the system.
Native Resolution	Displays the native resolution of the system.
Video BIOS Version	Displays the video BIOS version of the system.
Audio Controller	Displays the audio controller information of the system.
Bluetooth Device	Displays the Bluetooth device information of the system.

Table 30. System setup options—Boot Configuration menu

Boot Configuration	
Boot Sequence	
Boot mode	Displays the boot mode.
Boot Sequence	Displays the boot sequence.
Secure Digital (SD) Card Boot	Enable or disable the SD card read-only boot. By default, the **Secure Digital (SD) Card Boot** option is not enabled.
Secure Boot	
Enable Secure Boot	Enable or disable the secure boot feature. By default, the option is not enabled.
Secure Boot Mode	Enable or disable to change the secure boot mode options. By default, the **Deployed Mode** is enabled.
Expert Key Management	
Enable Custom Mode	Enable or disable custom mode. By default, the **custom mode** option is not enabled.
Custom Mode Key Management	Select the custom values for expert key management.

Table 31. 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.
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.

Table 31. System setup options—Integrated Devices menu (continued)

Integrated Devices	
USB Configuration	• Enable or disable booting from USB mass storage devices that are connected to external USB ports. By default, the **Enable External USB Ports** option is enabled. • Enable or disable booting from USB mass storage devices such as external hard drive, optical drive, and USB drive. By default, the **Enable USB Boot Support** option is enabled.
Disable USB4 PCIE Tunneling	Disable the USB4 PCIE Tunneling option. By default, the option is disabled.
Video/Power only on Type-C Ports	Enable or disable the Type-C port functionality to video or power only. By default, the **Video/Power only on Type-C Ports** option is disabled.

Table 32. 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 **RAID On** option is enabled.
Storage interface	
Port Enablement	This page allows you to enable the onboard drives. By default, the **M.2 PCIe SSD** option is 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	
M.2 PCIe SSD	
Type	Displays the M.2 PCIe SSD type information of the system.
Device	Displays the M.2 PCIe SSD 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 33. System setup options—Display menu

Display	
Display Brightness	
Brightness on battery power	Enable to set screen brightness when the system is running on battery power.
Brightness on AC power	Enable to set screen brightness when the system is running on AC power.

Table 33. System setup options—Display menu (continued)

Display	
EcoPower	Enable or disable EcoPower Feature in your panel. EcoPower can increase the battery life of your system by reducing the display brightness when appropriate. By default, **Enable EcoPower** option is enabled.
Full Screen Logo	Enable or disable full screen logo. By default, the option is not enabled.

Table 34. System setup options—Connection menu

Connection	
Wireless Device Enable	
WLAN	Enable or disable the internal WLAN device. By default, the option enabled.
Bluetooth	Enable or disable the internal Bluetooth device By default, the option enabled.
Enable UEFI Network Stack	Enable or disable UEFI Network Stack and controls the on-board LAN Controller. By default, the **Enable UEFI Network Stack** option is enabled.
HTTPs Boot Feature	
HTTPs Boot	Enable or disable the HTTPs Boot feature. By default, the **HTTPs Boot** option is disabled.

Table 35. System setup options—Power menu

Power	
Battery configuration	Enables the system to run on battery during peak power usage hours. Use the table **Custom Charge Start** and **Custom Charge Stop**, to prevent AC power usage between certain times of each day. By default, the **Adaptive** option is enabled.
Advanced Configuration	
Enable Advanced Battery Charge Configuration	Enable or disable the advanced battery charge configuration. By default, the **Enable Advanced Battery Charge Configuration** option is disabled.
Peak Shift	Enables the system to run on battery during peak power usage hours.
Enable Peak Shift	By default, the **Enable Peak Shift** option is disabled.
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.
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 35. 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.
Wake on Dell USB-C Dock	When enabled, connecting a Dell USB-C Dock will wake the system from Standby, Hibernate, and Power Off. By default, the **Wake on Dell USB-C Dock** option is enabled.
Block Sleep	Enables to block entering sleep (S3) mode in the operating system. By default, the **Block Sleep** option is disabled.
Lid Switch	
Enabled Lid Switch	Enable or disable the lid switch. By default, the **Enable Lid Switch** option is enabled.
Power On Lid Open	When enabled, allows the system to power up from the off state whenever the lid is opened. By default, the **Power On Lid Open** option is enabled.
Intel Speed Shift Technology	Enable or disable the Intel speed shift technology support. By default, the **Intel Speed Shift Technology** option is enabled.

Table 36. 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	Enables to control whether the Trusted Platform Module (TPM) Endorsement Hierarchy is available to the operating system. By default, the **Attestation Enable** option is enabled.
Key Storage Enable	Enables to control whether the Trusted Platform Module (TPM) Storage Hierarchy is available to the operating system. By default, the **Key Storage Enable** option is enabled.
SHA-256	When enabled, the BIOS and TPM will use the SHA-256 hash algorithm to extend measurements into the TPM PCRs during BIOS boot. By default, the **SHA-256** option is enabled.
Clear	Enables to clear the TPM owner information and returns the TPM to the default state. By default, the **Clear** option is disabled.
PPI Bypass for Clear Commands	Controls the TPM Physical Presence Interface (PPI). By default, the **PPI ByPass for clear Commands** option is disabled.
SMM Security Mitigation	Enable or disable additional UEFI SMM Security Mitigation protections. By default, the option is enabled.
Data Wipe on Next Boot	
Start Data Wipe	Enable or disable the data wipe on next boot.

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

Security	
	By default, the **Start Data Wipe** option is disabled.
Absolute	Enable or disable or permanently disable the BIOS module interface of the optional Absolute Persistence Module service from Absolute software. By default, the option is 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 will be unavailable while Computrace is in the activated state.
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.

Table 37. System setup options—Passwords menu

Passwords	
Admin Password	Set, change, or delete the administrator password.
System Password	Set, change, or delete the system password.
NVMe SSD0	Set, change, or delete the NVMe SSD0 password.
Password Configuration	
Upper Case Letter	Reinforces password must have at least one upper case letter. 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.
Minimum Characters	Set the minimum characters allowed for password.
Password Bypass	When enabled, this always prompts for system and internal hard drive passwords when powered on from the off state. By default, the **Disabled** option is selected.
Password Changes	
Enable Non-Admin Password Changes	Enable or disable to change system and hard drive password without the need for admin password. By default, the option is enabled.
Admin Setup Lockout	
Enable Admin Setup Lockout	Enables administrators control over how their users can or cannot access BIOS setup. By default, the option is disabled.
Master Password Lockout	

Table 37. System setup options—Passwords menu (continued)

Passwords	
Enable Master Password Lockout	When enabled, this disables the master password support. By default, the option is disabled.
Allow Non-Admin PSID Revert	
Enable Allow Non-Admin PSID Revert	Controls access to the Physical Security ID (PSID) revert of NVMe hard-drives from the Dell Security Manager prompt. By default, the option is disabled.

Table 38. 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. 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 operating system recovery if the main operating system fails to boot with the number of failures equal to or greater than the value specified by the Auto operating system 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 39. System setup options—System Management menu

System Management	
Service Tag	Displays the Service Tag of the system.
Asset Tag	Create a system Asset Tag.
AC Behavior	
Wake on AC	Enable or disable the wake on AC option. By default, the option is disabled.
Auto on Time	Enable to set the system 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.

Table 39. System setup options—System Management menu (continued)

System Management	
	By default, the option is disabled.

Table 40. System setup options—Keyboard menu

Keyboard	
Numlock Enable	Allows you to enable or disable the Numlock function when the system boots. By default, the option **Fn Lock Options** is enabled.
Fn Lock Options	By default, the Fn lock option is enabled.
Lock Mode	By default, the **Lock Mode Secondary** option is enabled. With this option, the F1-F2 keys scan the code for their secondary functions.

Table 41. System setup options—Pre-boot Behavior menu

Pre-boot Behavior	
Adapter Warnings	
Enable Adapter Warnings	Enable or disable the warning messages during boot when the adapters with less power capacity are detected. By default, the option is enabled.
Warning and Errors	Enable or disable the action to be done when a warning or error is encountered. By default, the **Prompt on Warnings and Errors** option is enabled.
USB-C Warnings	
Enable Dock Warning Messages	By default, the option is enabled.
Fastboot	Allows you to configure the speed of the UEFI boot process. By default, the **Minimal** option is enabled.
Extend BIOS POST Time	Set the BIOS POST load time. By default, the **0 seconds** option is enabled.

Table 42. System setup options—Virtualization menu

Virtualization	
Intel Virtualization Technology	
Enable Intel Virtualization Technology (VT)	When enabled, the system will be able to run a Virtual Machine Monitor (VMM). By default, the option is enabled.
VT for Direct I/O	When enabled, the system will be able to perform Virtualization Technology for Direct I/O (VT-d). By default, the option is enabled.
Intel Trusted Execution Technology (TXT)	
Enable Intel Trusted Execution Technology (TXT)	Specifies whether a measured Virtual Machine Monitor (MVMM) can use the additional hardware capabilities that are provided by Intel Trusted Execution Technology. The following must be enabled in order to enable Intel TXT. • Trusted Platform Module (TPM) • Intel Hyper-Threading • All CPU cores (Multi-Core Support) • Intel Virtualization Technology

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

Virtualization	
	• Intel VT for Direct I/O By default, the option is disabled.

Table 43. System setup options—Performance menu

Performance	
Multi Core Support	
Active Cores	Enables to change the number of CPU cores available to the operating system. By default, the **All Cores** option is enabled.
Intel SpeedStep	
Enable Intel SpeedStep Technology	Enables the system to dynamically adjust processor voltage and core frequency, decreasing average power consumption and heat production. By default, the option is enabled.
C-States Control	
Enable C-State Control	Enable the ability of the CPU to enter and exit low power state. When disabled, it disabled all C-states. When enabled, it enabled all C-states that the chipset or platform allows. By default, the option is enabled.
Intel Turbo Boost Technology	
Enable Intel Turbo Boost Technology	Enable or disable the Intel TurboBoost mode of the processor. By default, the option is enabled.
Intel Hyper-Threading Technology	
Enable Intel Hyper-Threading Technology	Enable or disable Hyper-Threading in the processor. By default, the option is enabled.
Dynamic Tuning:Machine Learning	
Enable Dynamic Tuning:Machine Learning	Enables the operating system capability to enhance dynamic power tuning capabilities based on detected workloads. By default, the option is disabled.

Table 44. 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.
Thermal Event Log	
Clear Thermal Event Log	Displays Thermal events. By default, the **Keep Log** option is enabled.
Power Event Log	
Clear Power Event Log	Displays power events. By default, the **Keep Log** option is enabled.
License Information	Displays the license information of the system.

Updating the BIOS

Updating the BIOS in Windows

Steps

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

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

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

   For more information about how to update the system BIOS, search in the Knowledge Base Resource at Dell Support Site.

Updating the BIOS using the USB drive in Windows

Steps

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

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

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

Updating the BIOS in Linux and Ubuntu

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

Updating the BIOS from the One-Time boot menu

You can run the BIOS flash update file from Windows using a bootable USB drive or you can also update the BIOS from the One-Time boot menu on the computer. To update your computers BIOS, copy the BIOS XXXX.exe file onto a USB drive

formatted with the FAT32 file system. Then, restart your computer and boot from the USB drive using the One-Time Boot Menu.

About this task

BIOS Update

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

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

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

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

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

Steps

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

System and setup password

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

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

Table 45. System and setup password

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

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

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

Assigning a System Setup password

Prerequisites

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

Steps

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

Deleting or changing an existing system password or setup password

Prerequisites

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

Steps

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

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

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

Clearing CMOS settings

About this task

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

Steps

1. Remove the base 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 base cover.

Clearing system and setup passwords

About this task

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

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

9

Troubleshooting

Handling swollen rechargeable Li-ion batteries

Like most laptops, Dell laptops use Lithium-ion batteries. One type of Lithium-ion battery is the rechargeable Li-ion battery. Rechargeable Li-ion batteries have increased in popularity in recent years and have become a standard in the electronics industry due to customer preferences for a slim form factor (especially with newer ultra-thin laptops) and long battery life. Inherent to rechargeable Li-ion battery technology is the potential for swelling of the battery cells.

A swollen battery may impact the performance of the laptop. To prevent possible further damage to the device enclosure or internal components leading to malfunction, discontinue the use of the laptop and discharge it by disconnecting the AC adapter and letting the battery drain.

Swollen batteries should not be used and must be replaced and disposed of properly. We recommend contacting Dell Support for options to replace a swollen battery under the terms of the applicable warranty or service contract, including options for replacement by a Dell authorized service technician.

The guidelines for handling and replacing rechargeable Li-ion batteries are as follows:

- Exercise caution when handling rechargeable Li-ion batteries.
- Discharge the battery before removing it from the laptop. To discharge the battery, unplug the AC adapter from the computer and operate the computer only on battery power. The battery is fully discharged when the computer no longer turns on when the power button is pressed.
- Do not crush, drop, mutilate, or penetrate the battery with foreign objects.
- Do not expose the battery to high temperatures, or disassemble battery packs and cells.
- Do not apply pressure to the surface of the battery.
- Do not bend the battery.
- Do not use tools of any type to pry on or against the battery.
- If a battery gets stuck in a device as a result of swelling, do not try to free it as puncturing, bending, or crushing a battery can be dangerous.
- Do not attempt to reassemble a damaged or swollen battery into a laptop.
- Swollen batteries that are covered under warranty should be returned to Dell in an approved shipping container (provided by Dell)—this is to comply with transportation regulations. Swollen batteries that are not covered under warranty should be disposed of at an approved recycling center. Contact Dell Support at Dell Support Site for assistance and further instructions.
- Using a non-Dell or incompatible battery may increase the risk of fire or explosion. Replace the battery only with a compatible battery purchased from Dell that is designed to work with your Dell computer. Do not use a battery from other computers with your computer. Always purchase genuine batteries from Dell Site or otherwise directly from Dell.

Rechargeable Li-ion batteries can swell for various reasons such as age, number of charge cycles, or exposure to high heat. For more information about how to improve the performance and lifespan of the laptop battery and to minimize the possibility of occurrence of the issue, search Dell laptop battery in the Knowledge Base Resource at Dell Support Site.

Locating the Service Tag or Express Service Code of your Dell computer

Your Dell computer is uniquely identified with a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, we recommend entering the Service Tag or Express Service Code at Dell Support Site.

For more information about how to find the Service Tag for your computer, see Instructions on how to find your Service Tag or Serial Number.

Dell SupportAssist Pre-boot System Performance Check diagnostics

About this task

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

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

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

For more information, see the knowledge base article 000181163.

Running the SupportAssist Pre-Boot System Performance Check

Steps

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

Built-in self-test (BIST)

Motherboard Built-In Self-Test (M-BIST)

M-BIST is the system board onboard self-test diagnostics tool that improves the diagnostics accuracy of system board Embedded Controller (EC) failures.

NOTE: M-BIST can be manually initiated before Power On Self-Test (POST).

How to run M-BIST

NOTE: Before initiating M-BIST, ensure that the computer is in a power-off state.

1. Press and hold both the **M** key and the power button to initiate M-BIST.
2. The battery indicator LED may exhibit two states:
   - Off: No fault was detected.
   - Amber and White: Indicates a problem with the system board.
3. If there is a failure with the system board, the battery status LED flashes one of the following error codes for 30 seconds:

Table 46. LED error codes

Blinking Pattern		Possible Problem
Amber	**White**	
2	1	CPU Failure
2	8	LCD Power Rail Failure
1	1	TPM Detection Failure
2	4	Memory/RAM failure

4. If there is no failure with the system board, the LCD cycles through the solid color screens (that are described in the LCD-BIST) for 30 seconds and then turn off.

Logic Built-in Self-test (L-BIST)

L-BIST is an enhancement to the single LED error code diagnostics and is automatically initiated during POST. L-BIST will check the LCD power rail. If there is no power being supplied to the LCD (that is if the L-BIST circuit fails), the battery status LED flashes either an error code [2,8] or an error code [2,7].

NOTE: If L-BIST fails, LCD-BIST cannot function as no power will be supplied to the LCD.

How to invoke the L-BIST

1. Turn on your computer.
2. If the computer does not start up normally, look at the battery status LED:
   - If the battery status LED flashes an error code [2,7], the display cable may not be connected properly.
   - If the battery status LED flashes an error code [2,8], there is a failure on the LCD power rail of the system board, hence there is no power that is supplied to the LCD.
3. For cases, when a [2,7] error code is shown, check to see if the display cable is properly connected.
4. For cases when a [2,8] error code is shown, replace the system board.

LCD Built-in Self-Test (LCD-BIST)

Dell laptops have a built-in diagnostic tool that helps you determine if the screen abnormality you are experiencing is an inherent problem with the LCD (screen) of the Dell laptop or with the video card (GPU) and computer settings.

When you notice screen abnormalities like flickering, distortion, clarity issues, fuzzy or blurry image, horizontal or vertical lines, color fade, it is always a good practice to isolate the LCD (screen) by running the LCD-BIST.

How to invoke the LCD-BIST

1. Turn off your computer.
2. Disconnect any peripherals that are connected to the computer. Connect only the AC adapter (charger) to the computer.
3. Ensure that the LCD (screen) is clean (no dust particles on the surface of the screen).
4. Press and hold the **D** key and press the power button to enter LCD-BIST mode. Continue to hold the **D** key until the computer boots up.
5. The screen displays solid colors and changes colors on the entire screen to white, black, red, green, and blue twice.
6. Then it displays the colors white, black, and red.
7. Carefully inspect the screen for abnormalities (any lines, fuzzy color, or distortion on the screen).
8. At the end of the last solid color (red), the computer shuts down.

NOTE: Dell SupportAssist Preboot diagnostics upon launch initiates an LCD-BIST first, expecting a user intervention to confirm functionality of the LCD.

System-diagnostic lights

This section lists the system-diagnostic lights of your Vostro 16 5630.

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

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

Table 47. Diagnostic light codes

Diagnostic light codes (Amber, White)	Problem description
1,1	TPM Detection Failure
1,2	Unrecoverable SPI Flash Failure
1,5	EC unable to program i-Fuse
1,6	Generic catch-all for ungraceful EC code flow errors
1,7	Non-RPMC Flash on Boot Guard fused system
1,8	Chipset “Catastrophic Error” signal has tripped
2,1	CPU configuration or CPU failure
2,2	System board: BIOS or Read-Only Memory (ROM) failure
2,3	No memory or Random-Access Memory (RAM) detected
2,4	Memory or Random-Access Memory (RAM) failure
2,5	Invalid memory installed
2,6	System board/Chipset Error
2,7	LCD failure SBIOS message
2,8	Display power-rail failure on the system board
3,1	CMOS battery failure
3,2	PCI of Video card/chip failure
3,3	Recovery image not found
3,4	Recovery image found but invalid
3,5	EC power-rail error
3,6	Flash corruption detected by SBIOS
3,7	Timeout waiting on ME to reply to HECI message
4,1	Memory DIMM power rail failure
4,2	CPU Power cable connection issue

Recovering the operating system

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

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

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

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

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

Backup media and recovery options

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

Network power cycle

About this task

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

Steps

1. Turn off the computer.
2. Turn off the modem.

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

Drain flea power (perform hard reset)

About this task

Flea power is the residual static electricity that remains in the computer even after it has been powered off and the battery is removed.

For your safety, and to protect the sensitive electronic components in your computer, you must drain residual flea power before removing or replacing any components in your computer.

Draining flea power, also known as a performing a "hard reset," is also a common troubleshooting step if your computer does not turn on or boot into the operating system.

Perform the following steps to drain the flea power:

Steps

1. Turn off the computer.
2. Disconnect the power adapter from the computer.
3. Remove the base cover.
4. Remove the battery.

   CAUTION: The battery is a Field Replaceable Unit (FRU) and the removal and installation procedures are intended for authorized service technicians only.
5. Press and hold the power button for 20 seconds to drain the flea power.

6. Install the battery.
7. Install the base cover.
8. Connect the power adapter to the computer.
9. Turn on the computer.

NOTE: For more information about performing a hard reset, go to Dell Support Site. On the menu bar at the top of the Support page, select Support > Support Library. In the Search field on the Support Library page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.

10

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 48. Self-help resources

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

Contacting Dell

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

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

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