

Alienware 15

DA15265

Service Manual

Notes, cautions, and warnings

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

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

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

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Working inside your computer

Safety instructions

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

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

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

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

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

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

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

Before working inside your computer

About this task

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

Steps

1. Save and close all open files and exit all open applications.

2. Shut down your computer. For Windows operating system, click **Start** >  **Power** > **Shut down**.

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

3. Turn off all the attached peripherals.

4. Disconnect your computer from the electrical outlet.

5. Disconnect all attached network devices and peripherals, such as keyboard, mouse, and monitor from your computer.

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

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

Safety precautions

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

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

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

Bonding

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

Electrostatic discharge—ESD protection

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

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

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

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

Perform the following steps to prevent ESD damage:

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

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

For more information about the wrist strap and ESD wrist strap tester, see [Components of an ESD Field Service Kit](#).

- Before transporting a static-sensitive component, place it in an anti-static container or packaging.

ESD Field Service kit

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

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

Working environment

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

ESD packaging

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

Components of an ESD Field Service kit

The components of an ESD Field Service kit are:

- **Anti-Static Mat** – The anti-static mat is dissipative and parts can be placed on it during service procedures. When using an anti-static mat, your wrist strap should be snug and the bonding wire should be connected to the anti-static mat and to any bare metal on the computer being worked on. Once deployed properly, service parts can be removed from the ESD bag and placed directly on the anti-static mat. ESD-sensitive items are safe in your hand, on the anti-static mat, in the computer, or inside an ESD bag.
- **Wrist Strap and Bonding Wire** – If an anti-static mat is not being used, the wrist strap and bonding wire should be connected directly between your wrist and an exposed metal part of the hardware. If you are using an anti-static mat, connect the wrist strap and bonding wire to the anti-static mat to ensure protection for any hardware placed on the mat. The physical connection of the wrist strap and bonding wire between your skin, the anti-static mat, and the hardware is known as bonding. Use only Field Service kits with a wrist strap, anti-static mat, and bonding wire. Never use wireless wrist straps. Always be cautious that the internal wires of a wrist strap are prone to damage from normal wear and tear, and must be checked regularly with a wrist strap tester in order to avoid accidental ESD hardware damage. It is recommended to test the wrist strap and bonding wire at least once per week.
- **ESD Wrist Strap Tester** – The wires inside an ESD strap are prone to damage over time. When using an unmonitored ESD kit, it is recommended to test the wrist strap regularly—ideally before each service session, and at a minimum, once per week. The most reliable method for testing is with a wrist strap tester. To perform the test, connect the bonding wire of the wrist strap to the tester while wearing the strap. Press the test button to initiate the check. A green LED indicates a successful test, while a red LED and audible alarm signal a failure.

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

Transporting sensitive components

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

After working inside your computer

About this task

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

Steps

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

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

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

BitLocker

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

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

The installation of the following components triggers BitLocker:

- Hard disk drive or solid state drive
- System board

Recommended tools

The procedures in this document may require the following tools:

- Phillips screwdriver #0
- Plastic scribe

Screw list

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

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

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

Table 1. Screw list

Component	Screw type	Quantity	Screw torque strength	Screw image
Base cover	M2x8 (Captive screws)	2	1.36 Kgf-cm to 1.84 Kgf-cm	
	M2x6	7	1.36 Kgf-cm to 1.84 Kgf-cm	
Battery	M2x4.5	5	1.36 Kgf-cm to 1.84 Kgf-cm	
Solid state drive	M3x2.3	1	2.55 kgf-cm to 3.45 kgf-cm	
Wireless card	M2x3	1	1.36 Kgf-cm to 1.84 Kgf-cm	
Type-C bracket (System board)	M2x4	2	1.36 Kgf-cm to 1.84 Kgf-cm	
Type-C bracket (I/O board)	M2x4	2	1.36 Kgf-cm to 1.84 Kgf-cm	
Right fan	M2x3	2	1.36 Kgf-cm to 1.84 Kgf-cm	
Left fan	M2x3	3	1.36 Kgf-cm to 1.84 Kgf-cm	
I/O board	M2x3	2	1.36 Kgf-cm to 1.84 Kgf-cm	
Heat sink	Captive screws	6	Not applicable	Not applicable
System board	M2x3	8	1.36 Kgf-cm to 1.84 Kgf-cm	
Touchpad assembly	M2x2	4	1.36 Kgf-cm to 1.84 Kgf-cm	
Touchpad support bracket	M2x2	3	1.36 Kgf-cm to 1.84 Kgf-cm	
Deco cover	M2.x1.7	5	2.55 kgf-cm to 3.45 kgf-cm	
Display assembly	M2.5x6	4	2.55 kgf-cm to 3.45 kgf-cm	
Power-button board	M2x3.5	2	1.36 Kgf-cm to 1.84 Kgf-cm	

Major components of Alienware 15 DA15265

The following image shows the major components of Alienware 15 DA15265.

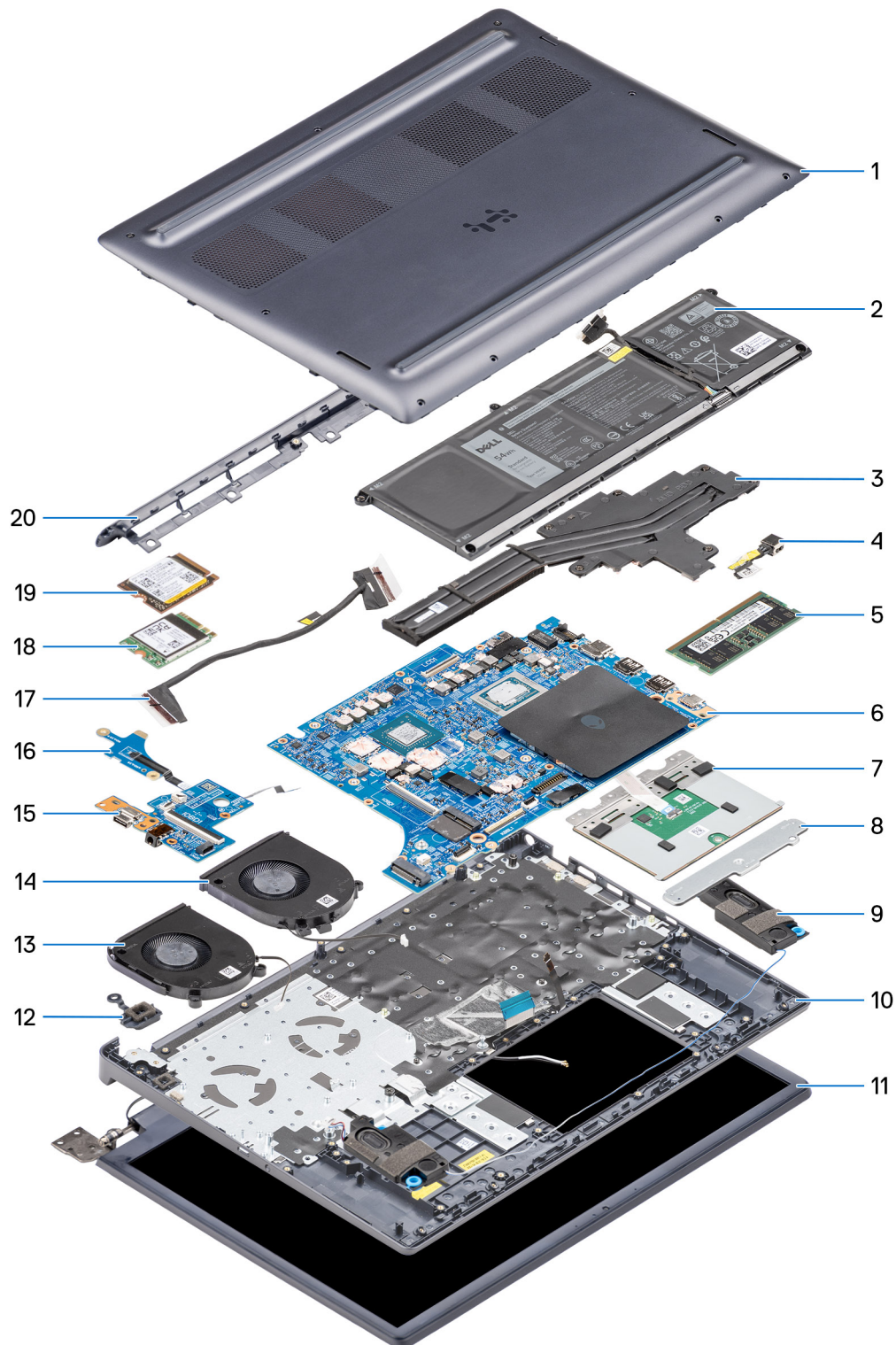


Figure 1. Major components of Alienware 15 DA15265

- 1. Base cover
- 2. Battery
- 3. Heat sink

4. Power-adapter port
5. Memory module
6. System board
7. Touchpad assembly
8. Touchpad support bracket
9. Speakers
10. Palm rest and keyboard assembly
11. Display assembly
12. Power button
13. Left fan
14. Right fan
15. I/O board
16. Power-button board
17. I/O-board cable
18. Wireless card
19. Solid state drive (SSD)
20. Deco cover

 **NOTE:** Dell provides a list of components and their part numbers for the original computer configuration purchased. These parts are available depending on the warranty coverage that is selected at the time of purchase. Components from upsell or upgraded variants may not be covered under the standard system warranty. For more details or to explore purchase options, contact your Dell sales representative.

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

The replaceable components in Alienware 15 DA15265 are either Customer Replaceable Units (CRUs) or Field Replaceable Units (FRUs).

 **CAUTION:** To avoid any potential damage to the component or loss of data, ensure that an authorized service technician replaces the Field Replaceable Units (FRUs). Customers can replace only the Customer Replaceable Units (CRUs) following the safety precautions and replacement procedures.

Table 2. CRU and FRU list

Customer Replaceable Unit (CRU)	Field Replaceable Unit (FRU)
Base cover	Heat sink
Battery	Left fan
Memory module	Right fan
Solid state drive	I/O-board cable
Wireless card	I/O board
Speakers	System board
	Touchpad support bracket
	Touchpad assembly
	Deco cover
	Display assembly
	Type-C bracket (I/O board)
	Type-C bracket (System board)
	Power button with power-button board assembly
	Power-adapter port

Table 2. CRU and FRU list (continued)

Customer Replaceable Unit (CRU)	Field Replaceable Unit (FRU)
	Palm rest and keyboard assembly

Removing and installing Customer Replaceable Units (CRUs)

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

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

ℹ **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

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



Figure 2. Removing the base cover

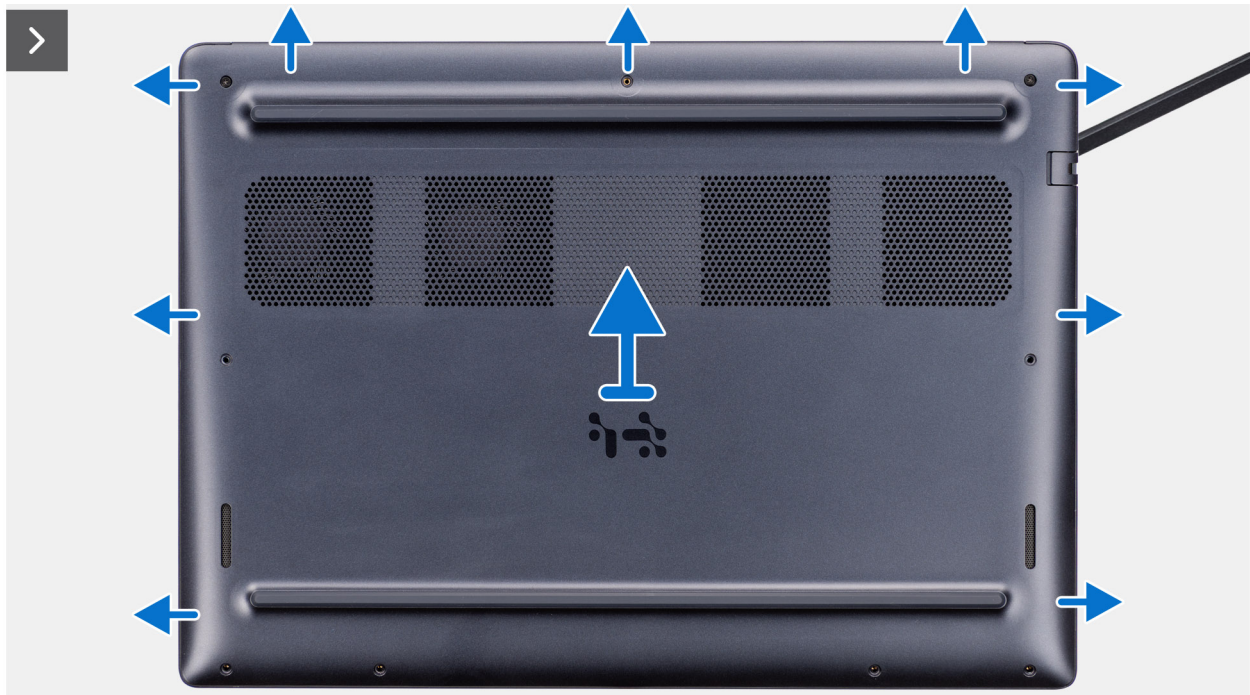


Figure 3. Removing the base cover



Figure 4. Disconnecting the battery cable

Steps

1. Remove the seven screws (M2x6) that secure the base cover to the palm rest and keyboard assembly.
2. Loosen the two captive screws (M2x8) that secure the base cover to the palm rest and keyboard assembly.
 - ① **NOTE:** After the captive screws are loosened, the base cover is pushed upwards, creating a gap from which you can start the prying process of the base cover.
3. Insert a scribe in the gap between the base and palm rest assembly. Pry loose the base cover near the locations of the captive screws and continue to work towards the sides to open the base cover.
4. Lift the base cover off the palm rest and keyboard assembly.
5. Disconnect the battery cable from the battery-cable connector (BATT1) on the system board.
6. Press and hold the power button for five seconds to ground the computer and drain the flea power.

Installing the base cover

Prerequisites

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

About this task

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



Figure 5. Connecting the battery cable

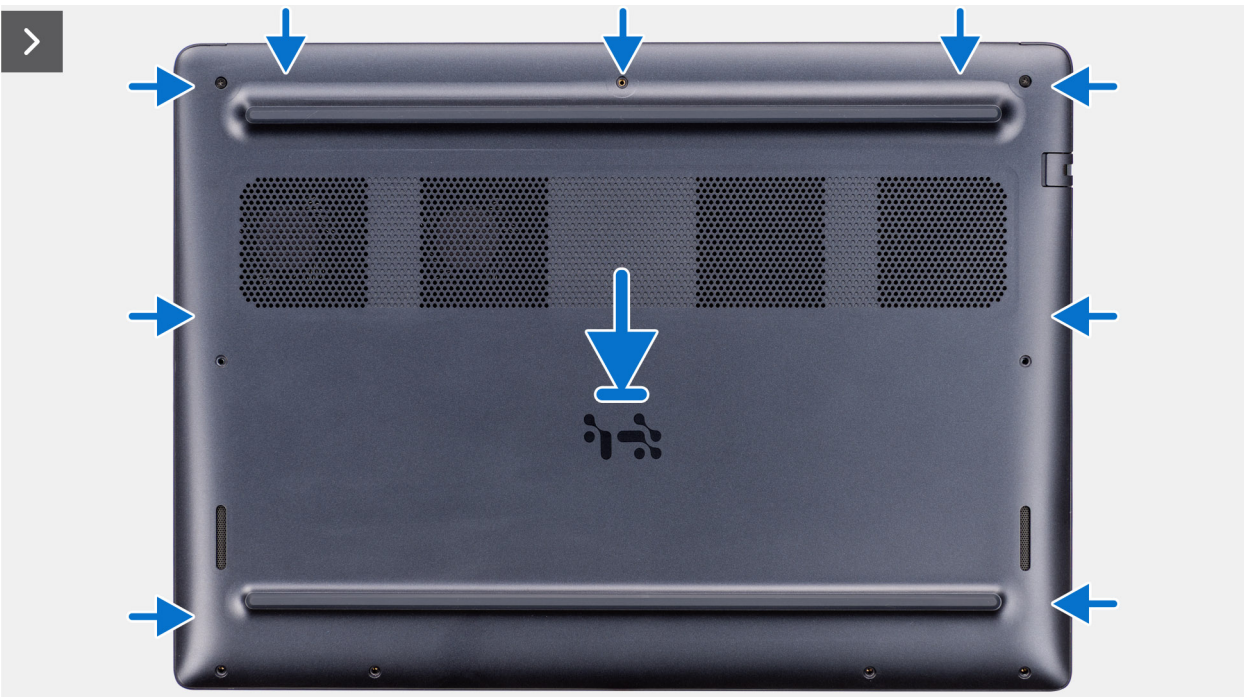


Figure 6. Installing the base cover



Figure 7. Installing the base cover

NOTE: If you have disconnected the battery cable, ensure to connect the battery cable. To connect the battery cable, follow step 1 in the procedure.

Steps

1. Connect the battery cable to the battery-cable connector (BATT1) on the system board.
2. Align the screw holes on the base cover with the screw holes on the palm rest and keyboard assembly, and then snap the base cover into place.
3. Tighten the two captive screws (M2x8) to secure the base cover to the palm rest and keyboard assembly.
4. Replace the eight screws (M2x6) that secure the base cover to the palm rest and keyboard assembly.

Next steps

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

Battery

Rechargeable Li-ion battery precautions

CAUTION:

- 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 the computer.
- Always purchase genuine batteries from [Dell Support 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 4-cell battery

Prerequisites

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

About this task

⚠ **CAUTION:** Removing the battery resets the BIOS setup settings to default. It is recommended that you note the BIOS setup settings before removing the battery.

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

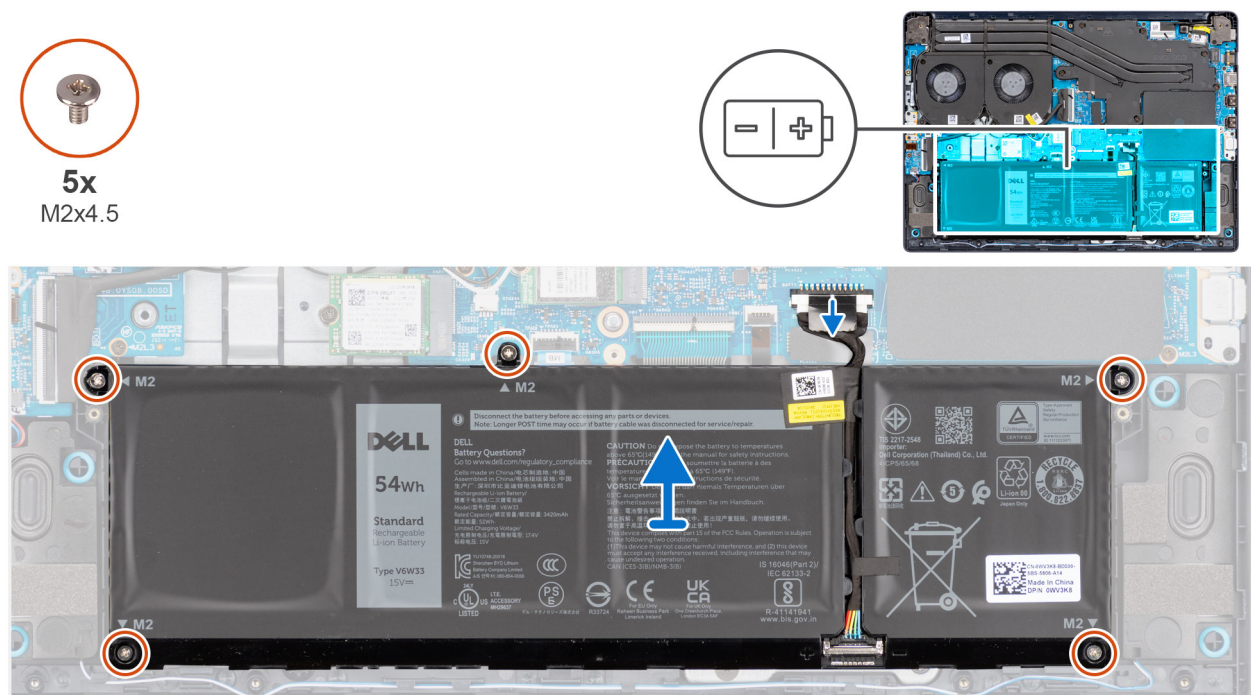


Figure 8. Removing the 4-cell battery

Steps

1. Disconnect the battery cable from the battery-cable connector (BATT1) on the system board (if not disconnected earlier).
2. Remove the five screws (M2x4.5) that secure the battery to the palm rest and keyboard assembly.
3. Lift the battery off the palm rest and keyboard assembly.

Installing the 4-cell battery

Prerequisites

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

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



1. Align the screw holes on the battery with the screw holes on the palm rest and keyboard assembly.
2. Replace the five screws (M2x4.5) that secure the battery to the palm rest and keyboard assembly.
3. Connect the battery cable to the battery-cable connector (BATT1) on the system board.

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

1. Follow the procedure in [Before working inside your computer.](#)
2. Remove the **base cover**.

CAUTION: Removing the battery resets the BIOS setup settings to default. It is recommended that you note the BIOS setup settings before removing the battery.

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

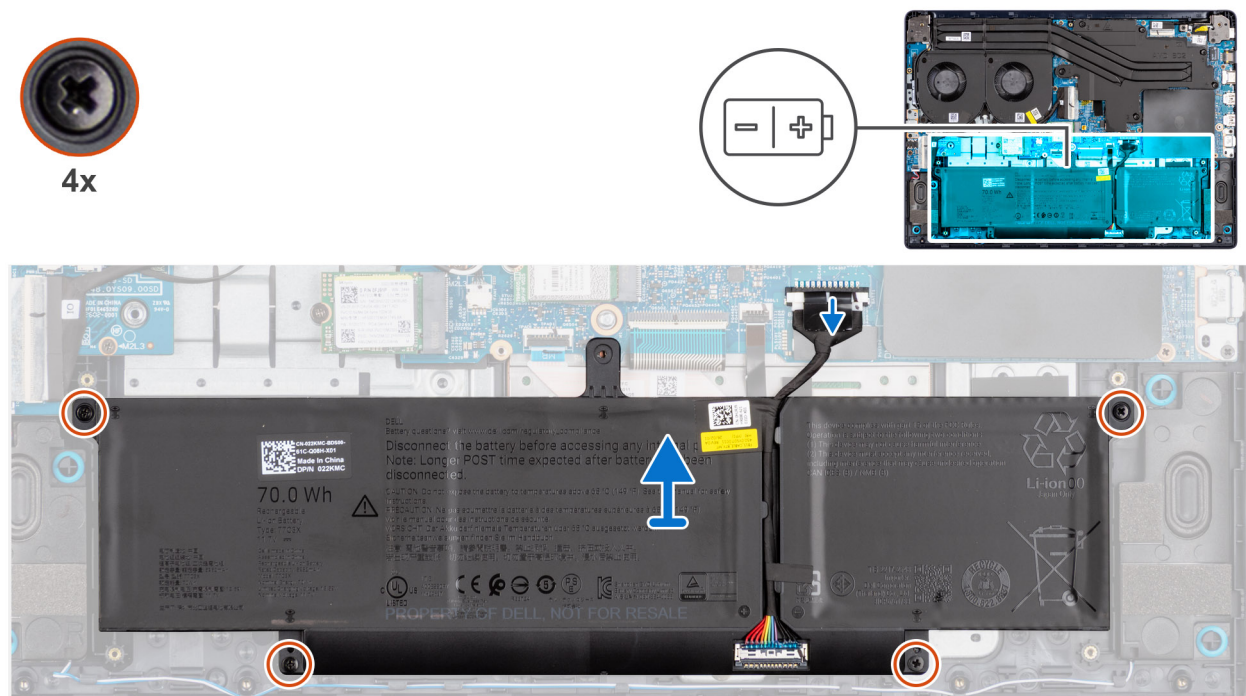


Figure 10. Removing the 3-cell battery

Steps

1. Disconnect the battery cable from the battery-cable connector (BATT1) on the system board (if not disconnected earlier).
2. Loosen the four captive screws that secure the battery to the palm rest and keyboard assembly.
3. Lift the battery off the palm rest and keyboard assembly.

Installing the 3-cell battery

Prerequisites

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

About this task

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

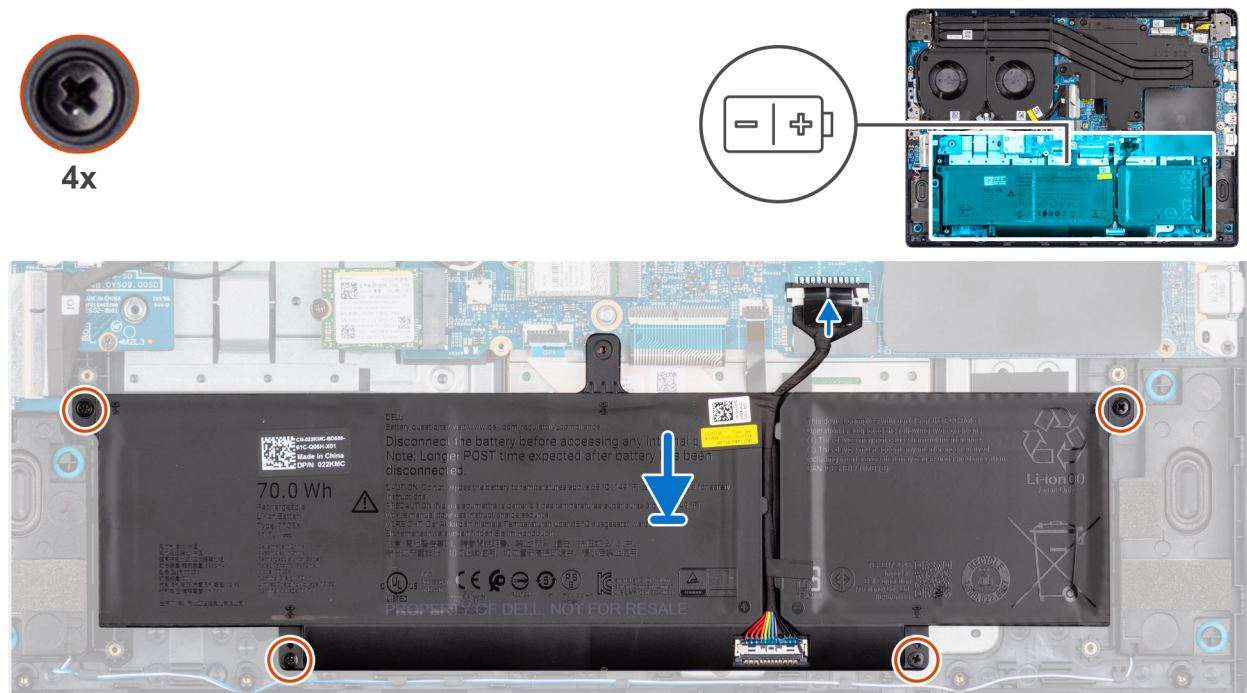


Figure 11. Installing the 3-cell battery

Steps

1. Align the screw holes on the battery with the screw holes on the palm rest and keyboard assembly.
2. Tighten the four captive screws that secure the battery to the palm rest and keyboard assembly.
3. Connect the battery cable to the battery-cable connector (BATT1) on the system board.

Next steps

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

Memory module

Removing the memory module

Prerequisites

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

About this task

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

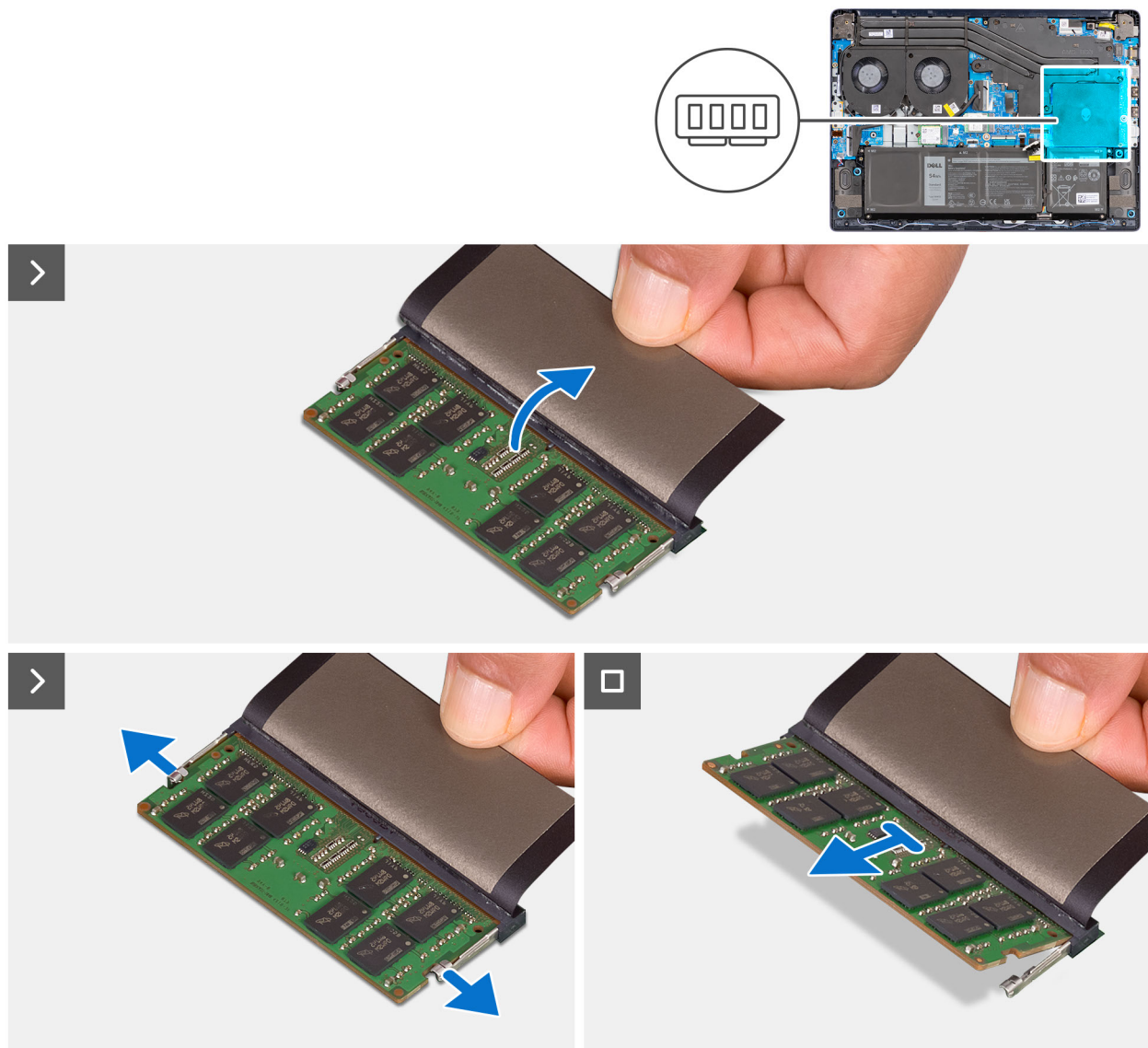


Figure 12. Removing the memory module

Steps

1. Lift the Mylar to access the memory module.
2. Using your fingertips, spread apart the securing clips on the memory-module slot (DM1 or DM2) until the memory module pops up.

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

3. Slide and remove the memory module from the memory-module slot (DM1 or DM2) on the system board.

NOTE: Repeat step 1 and step 2 if there is more than one memory module installed on your computer.

Installing the memory module

Prerequisites

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

About this task

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

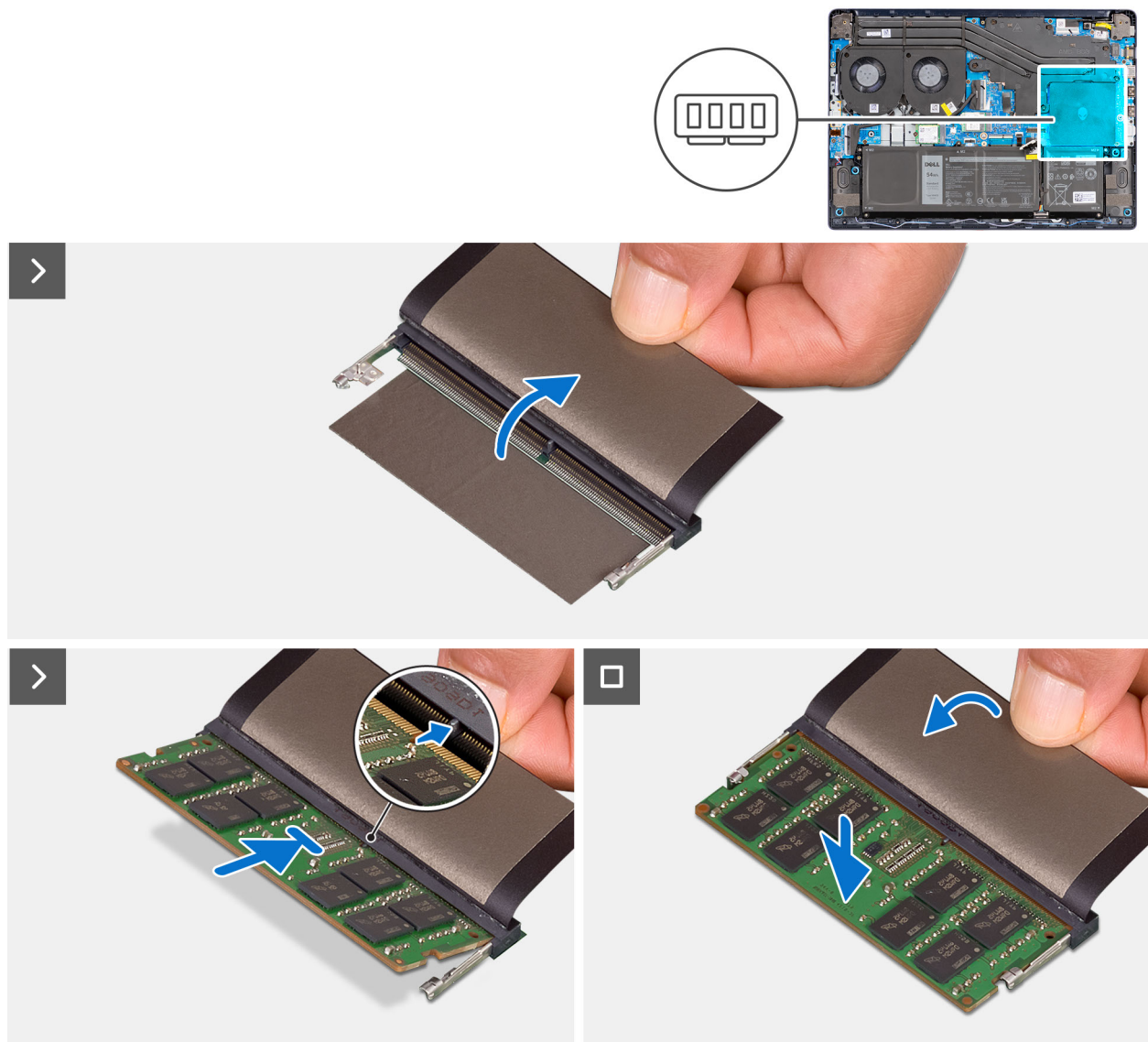


Figure 13. Installing the memory module

Steps

1. Lift the Mylar to access the memory-module slot.
2. Align the notch on the memory module with the tab on the memory-module slot (DM1 or DM2).
CAUTION: To prevent damage to the memory module, hold the memory module by the edges. Do not touch the components or metallic contacts on the memory module as electrostatic discharge (ESD) can inflict severe damage on the components. To read more about ESD protection, see [ESD protection](#).
3. Slide the memory module firmly into the slot (DM1 or DM2) at an angle.
4. Press the memory module down until it clicks into place.
NOTE: If you do not hear the click, remove the memory module and reinstall it.
5. Replace the Mylar to cover the memory-module slots (DM1 or DM2).

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 SSD

Prerequisites

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

About this task

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



Figure 14. Removing the M.2 2230 SSD

Steps

1. Remove the screw (M3x2.3) that secures the SSD to the palm rest and keyboard assembly.
2. Slide and lift the SSD from its slot (SSD1).

Installing the M.2 2230 SSD

Prerequisites

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

About this task

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

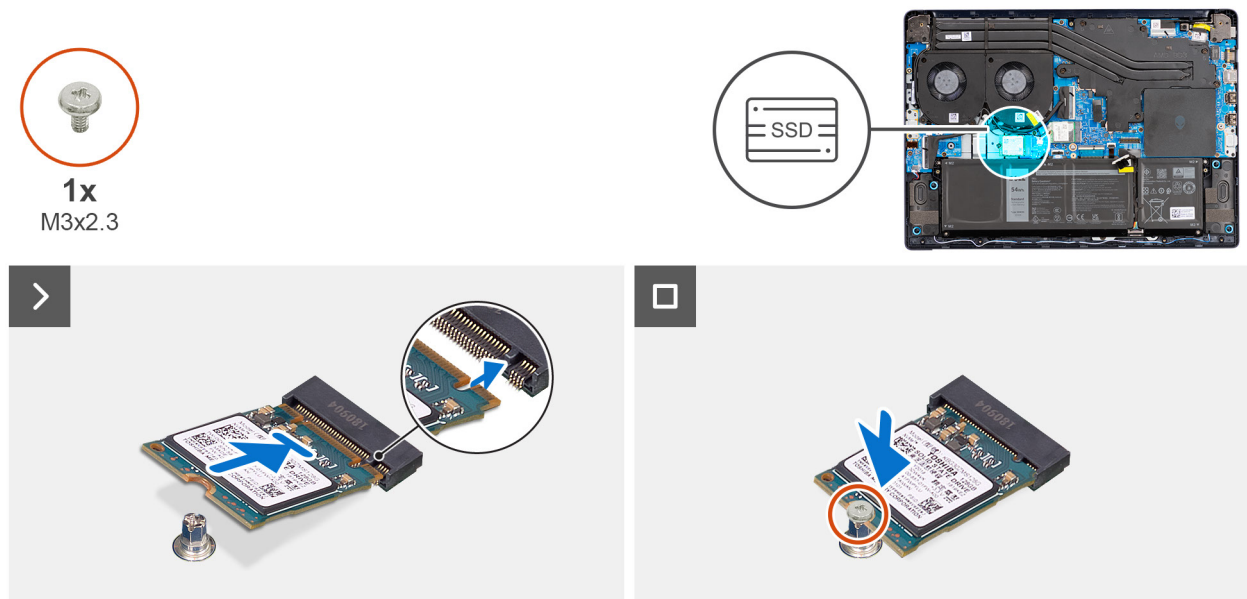


Figure 15. Installing the M.2 2230 SSD

Steps

1. Align the notch on the SSD with the tab on the SSD slot on the system board.
2. Slide the SSD into its slot (SSD1) on the system board.
3. Align the screw hole on the SSD with the screw hole on the palm rest and keyboard assembly.
4. Replace the screw (M3x2.3) that secures the SSD 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 SSD

Prerequisites

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

About this task

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

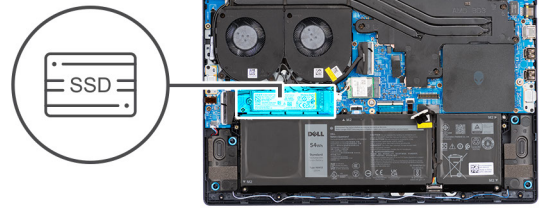
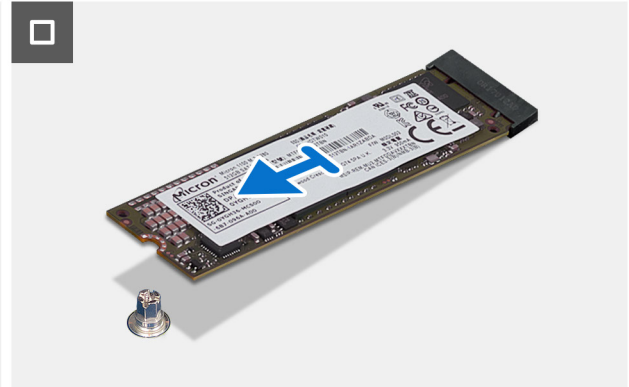


Figure 16. Removing the M.2 2280 SSD

Steps

1. Remove the screw (M3x2.3) that secures the SSD to the palm rest and keyboard assembly.
2. Slide and lift the SSD from its slot (SSD1).

Installing the M.2 2280 SSD

Prerequisites

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

About this task

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



Figure 17. Installing the M.2 2280 SSD

Steps

1. Align the notch on the SSD with the tab on the SSD slot on the system board.
2. Slide the SSD into its slot (SSD1) on the system board.
3. Align the screw hole on the SSD with the screw hole on the palm rest and keyboard assembly.
4. Replace the screw (M3x2.3) that secures the SSD 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

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



1x
M2x3

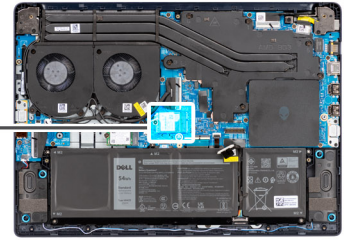
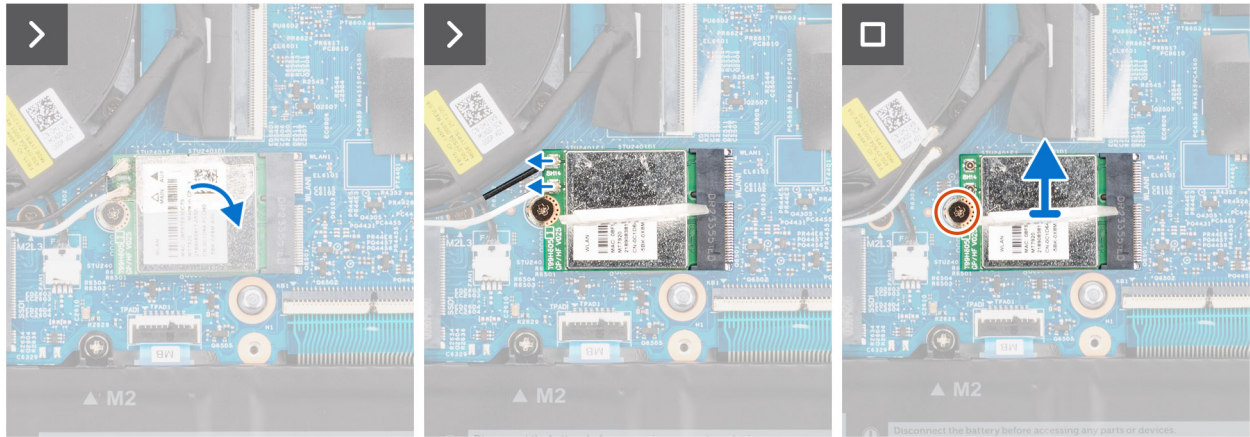


Figure 18. Removing the wireless card

Steps

1. Peel off the adhesive tape partially to access the antenna cables.
2. Disconnect the antenna cables from the wireless card.
3. Remove the screw (M2x3) that secures the wireless card to the palm rest and keyboard assembly.
4. Slide and remove the wireless card at an angle from the wireless-card slot (WLAN1).

Installing the wireless card

Prerequisites

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

About this task

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

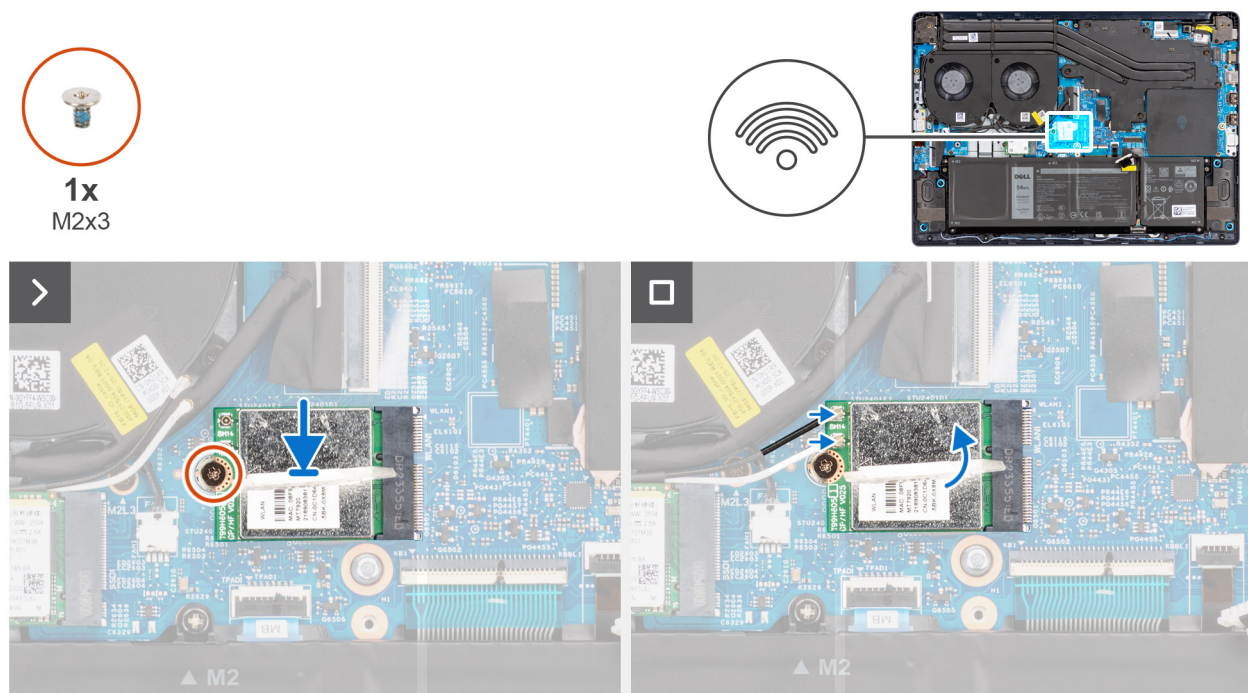


Figure 19. Installing the wireless card

Steps

1. Align the notch on the wireless card with the tab on the wireless-card slot (WLAN1) and insert the wireless card at an angle into the slot.
2. Align the screw hole on the wireless-card with the screw hole on the palm rest and keyboard assembly.
3. Replace the screw (M2x3) that secures the wireless card to the palm rest and keyboard assembly.
4. Connect the antenna cables to the wireless card.

NOTE: The following table provides the antenna-cable color scheme for the wireless card that is supported on your computer.

Table 3. Antenna-cable color scheme

Connectors on the wireless card	Antenna-cable color	Label marking	
Main	White	MAIN 2	△ (white triangle)
Auxiliary	Black	AUX 1	▲ (black triangle)

5. Replace the adhesive tape that covers the wireless card.

Next steps

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

Speakers

Removing the speakers

Prerequisites

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

2. Remove the [base cover](#).

About this task

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

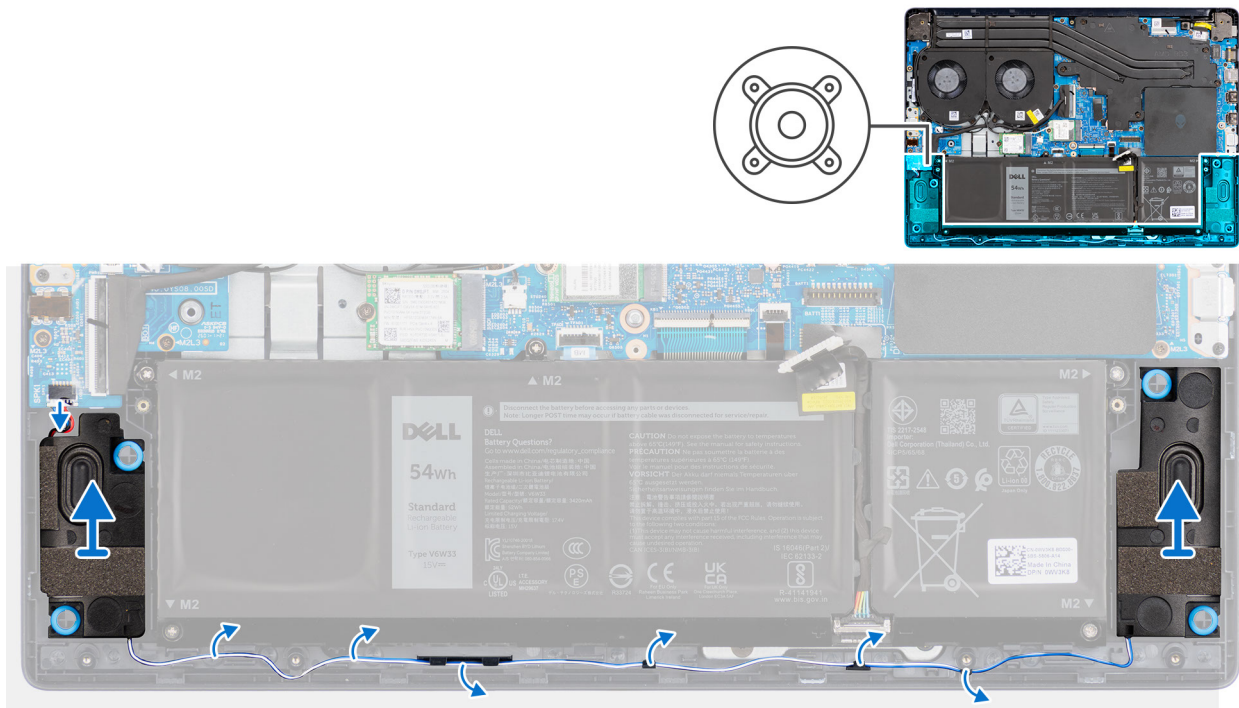


Figure 20. Removing the speakers

Steps

1. Disconnect the speaker cable from the connector (SPK1) on the I/O board.
2. Remove the speaker cable from the routing guides on the palm rest and keyboard assembly.
3. Lift the right and left speaker, along with its cable, off the palm rest and keyboard assembly.

Installing the speakers

Prerequisites

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

About this task

- NOTE:** If the rubber grommets are pushed out when removing the speakers, push them back in place before replacing the speakers.

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

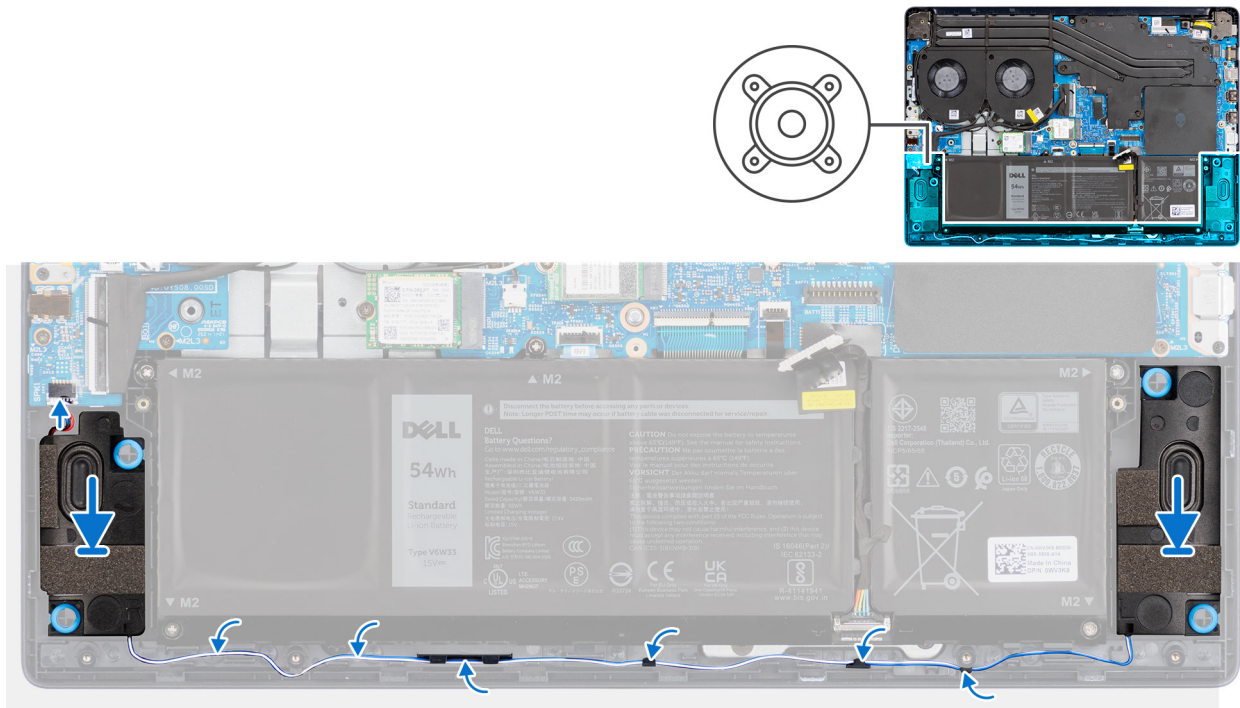


Figure 21. Installing the speakers

Steps

1. Using the alignment posts, place the left and right speakers into their slots on the palm rest and keyboard assembly.

NOTE: Ensure that the alignment posts are threaded completely through the rubber grommets on the speakers.

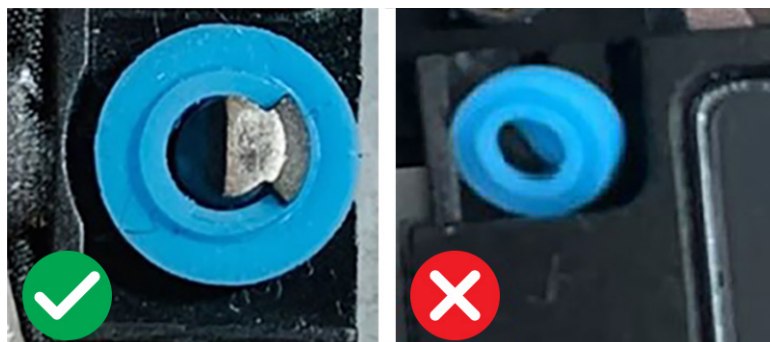


Figure 22. Rubber grommets

2. Route the speaker cable through the routing guides on the palm rest and keyboard assembly.
3. Connect the speaker cable to the connector (SPK1) on the I/O board.

Next steps

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

Removing and installing Field Replaceable Units (FRUs)

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

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

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

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

USB Type-C bracket

Removing the USB Type-C bracket (I/O board)

Prerequisites

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

About this task

The following images indicate the location of the USB Type-C bracket (I/O board) and provide a visual representation of the removal procedure.

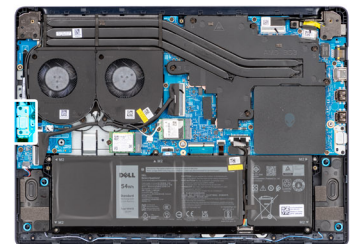
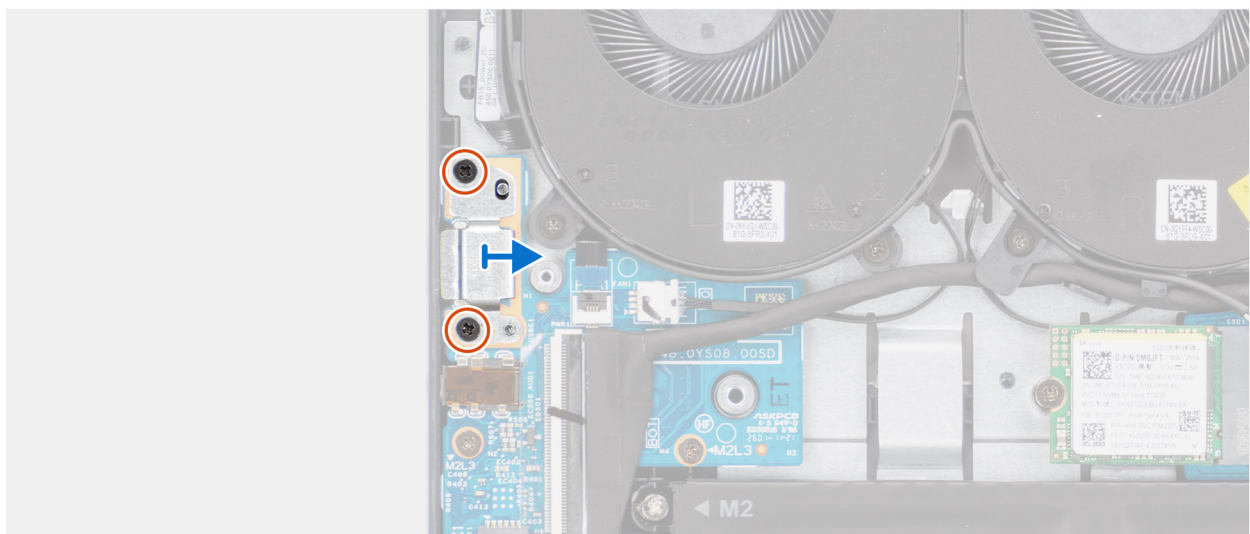


Figure 23. Removing the USB Type-C bracket (I/O board)

Steps

1. Remove the two screws (M2x4) that secure the USB Type-C bracket to the I/O board.
2. Lift and remove the USB Type-C bracket from the I/O board.

Installing the USB Type-C bracket (I/O board)

Prerequisites

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

About this task

The following images indicate the location of USB Type-C bracket (I/O board) and provide a visual representation of the installation procedure.

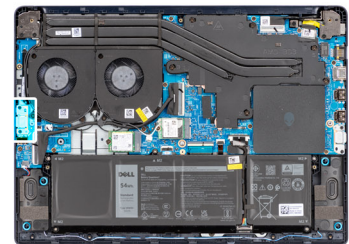
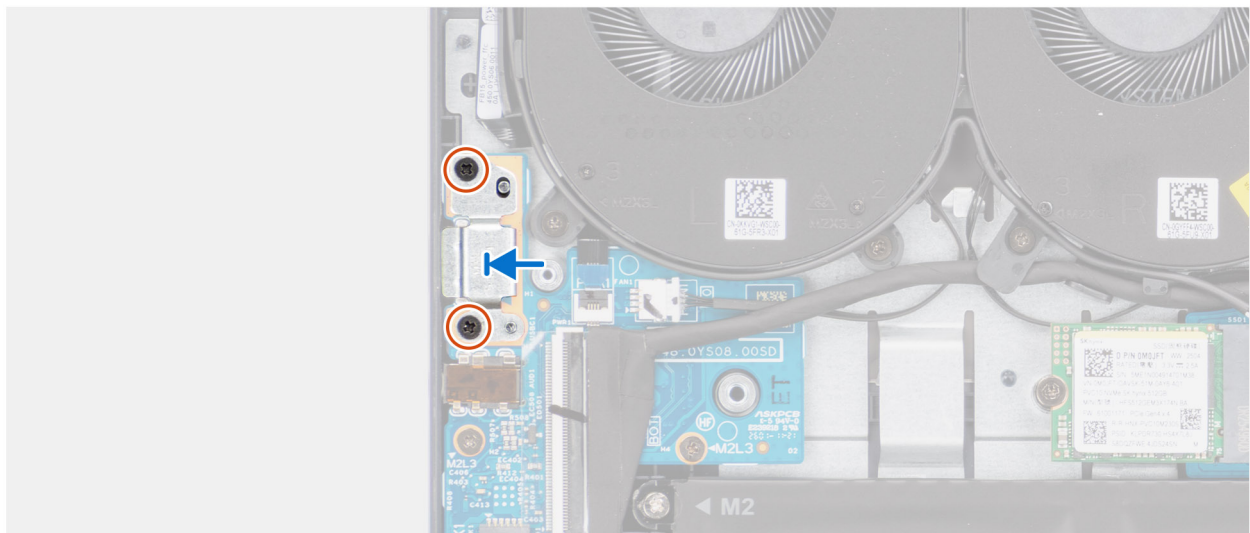


Figure 24. Installing the USB Type-C bracket (I/O board)

Steps

1. Align the screw holes on the USB Type-C bracket with the screw holes on the I/O board.
2. Replace the two screws (M2x4) that secure the USB Type-C bracket to the I/O board.

Next steps

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

Removing the USB Type-C bracket (system board)

Prerequisites

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

About this task

The following images indicate the location of the USB Type-C bracket (system board) and provide a visual representation of the removal procedure.

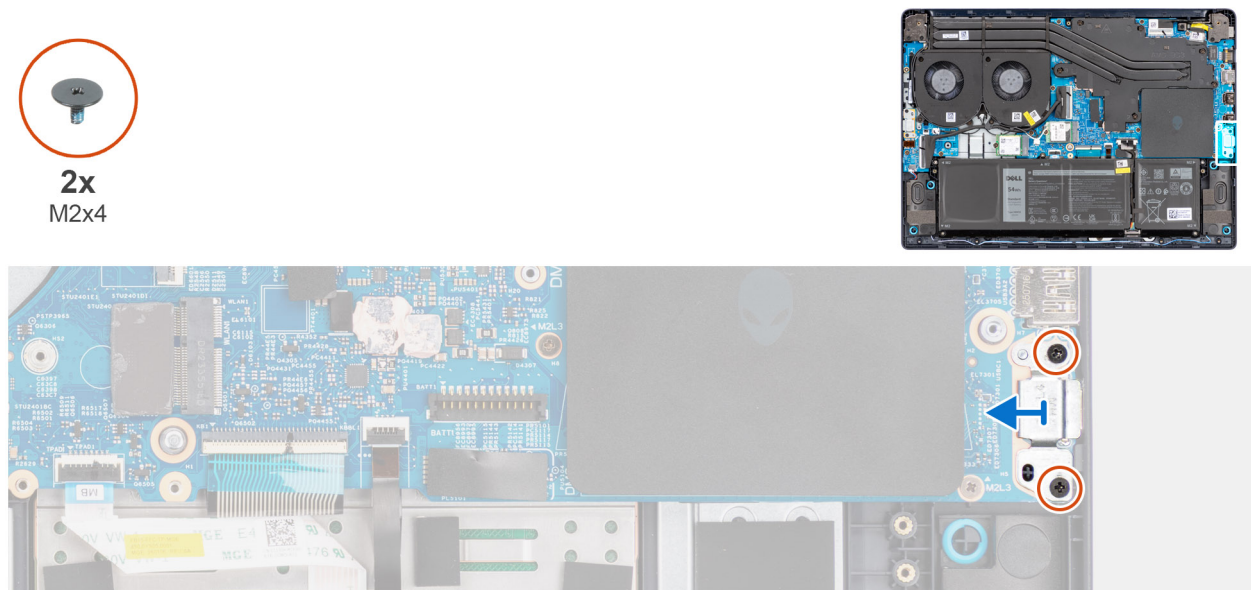


Figure 25. Removing the USB Type-C bracket (system board)

Steps

1. Remove the two screws (M2x4) that secure the USB Type-C bracket to the system board.
2. Lift and remove the USB Type-C bracket from the system board.

Installing the USB Type-C bracket (system board)

Prerequisites

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

About this task

The following images indicate the location of USB Type-C bracket (system board) and provide a visual representation of the installation procedure.



2x
M2x4

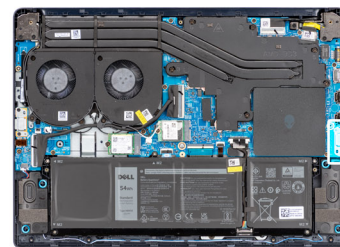


Figure 26. Installing the USB Type-C bracket (system board)

Steps

1. Align the screw holes on the USB Type-C bracket with the screw holes on the system board.
2. Replace the two screws (M2x4) that secure the USB Type-C bracket to the system board.

Next steps

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

I/O-board cable

Removing the I/O-board cable

Prerequisites

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

About this task

The following image indicates the location of the I/O-board cable and provides a visual representation of the removal procedure.

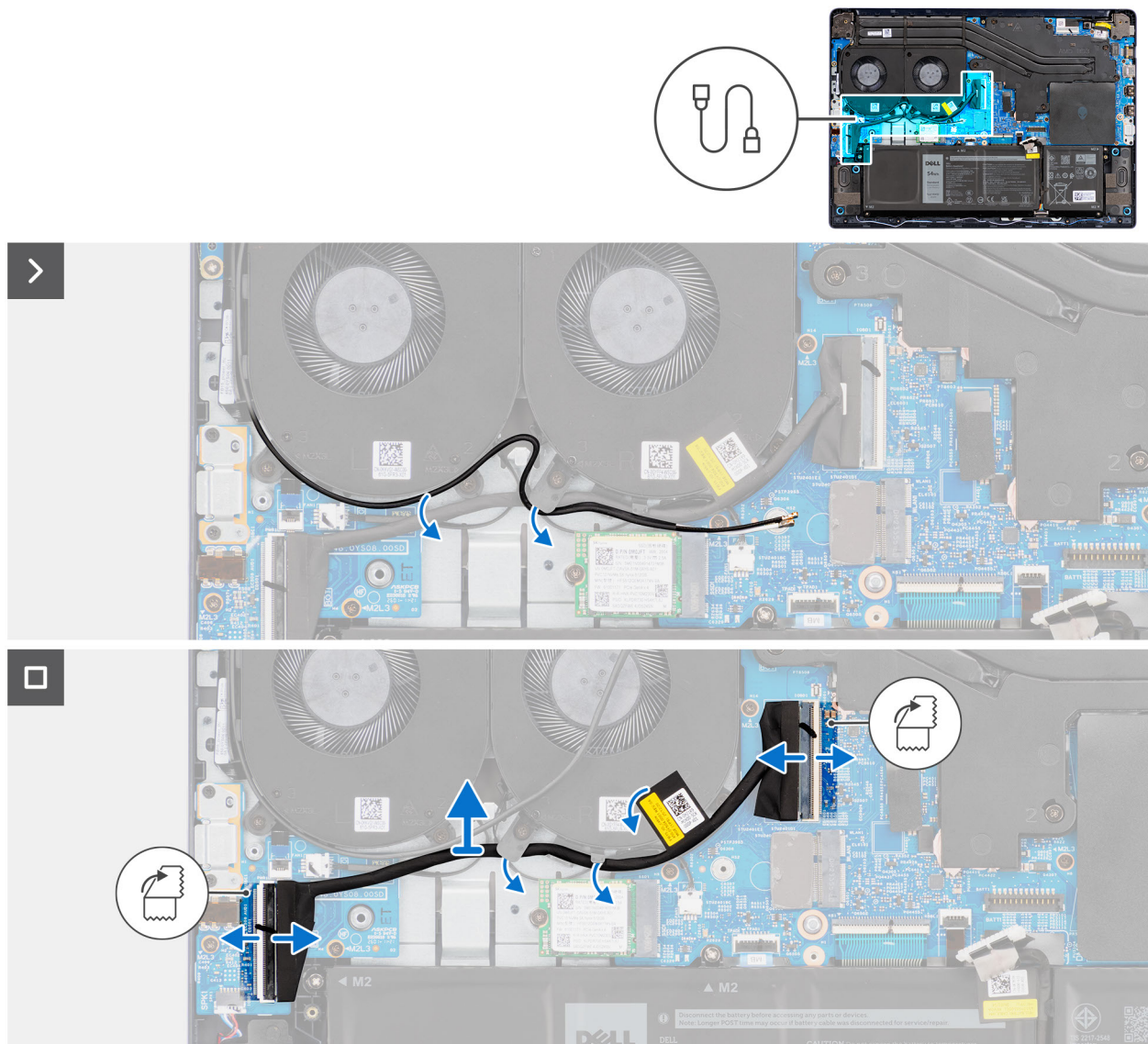


Figure 27. Removing the I/O-board cable

Steps

1. Remove the wireless-antenna cables from the routing guides on the palm rest and keyboard assembly.
2. Peel off the tape, open the latch, and disconnect the I/O-board cable from the connector (IOBD1) on the system board.
3. Peel off the tape, open the latch, and disconnect the other end of the I/O-board cable from the connector (IOBD1) on the I/O board.
4. Lift the I/O-board cable off the computer.

Installing the I/O-board cable

Prerequisites

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

About this task

The following image indicates the location of the I/O-board cable and provides a visual representation of the installation procedure.

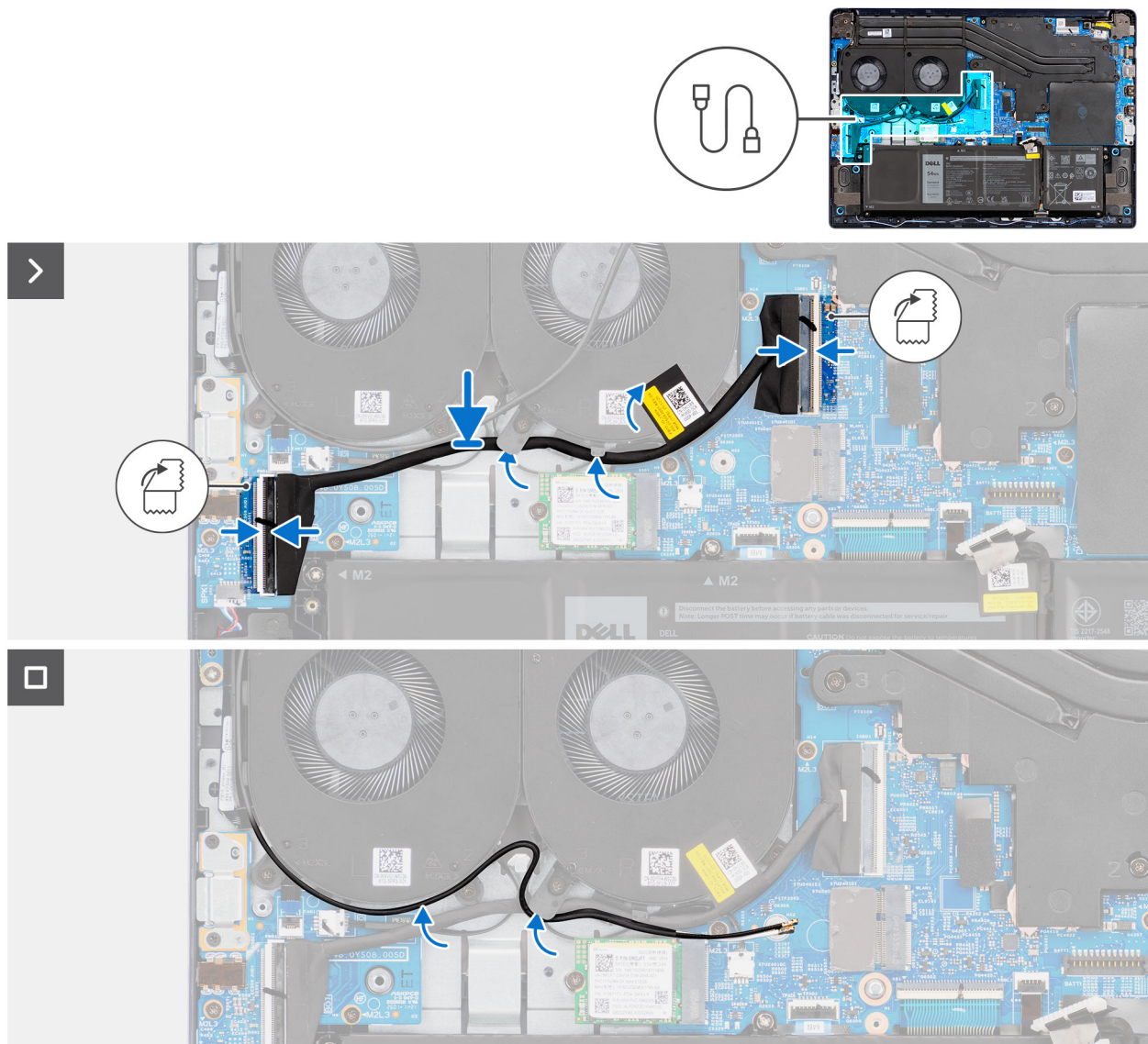


Figure 28. Installing the I/O-board cable

Steps

1. Route the I/O-board cable through the routing guides.
2. Connect the I/O-board cable to the connector (IOBD1) on the system board and close the latch to secure the cable in place.
3. Connect the other end of the I/O-board cable to the connector (IOBD1) on the I/O board and close the latch to secure the cable in place.
4. Route the wireless-antenna cables through the routing guides.

Next steps

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

Fan

Removing the right fan

Prerequisites

1. Follow the procedure in [Before working inside your computer.](#)
2. Remove the [base cover.](#)
3. Remove the [wireless card.](#)
4. Remove the [I/O-board cable.](#)

About this task

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

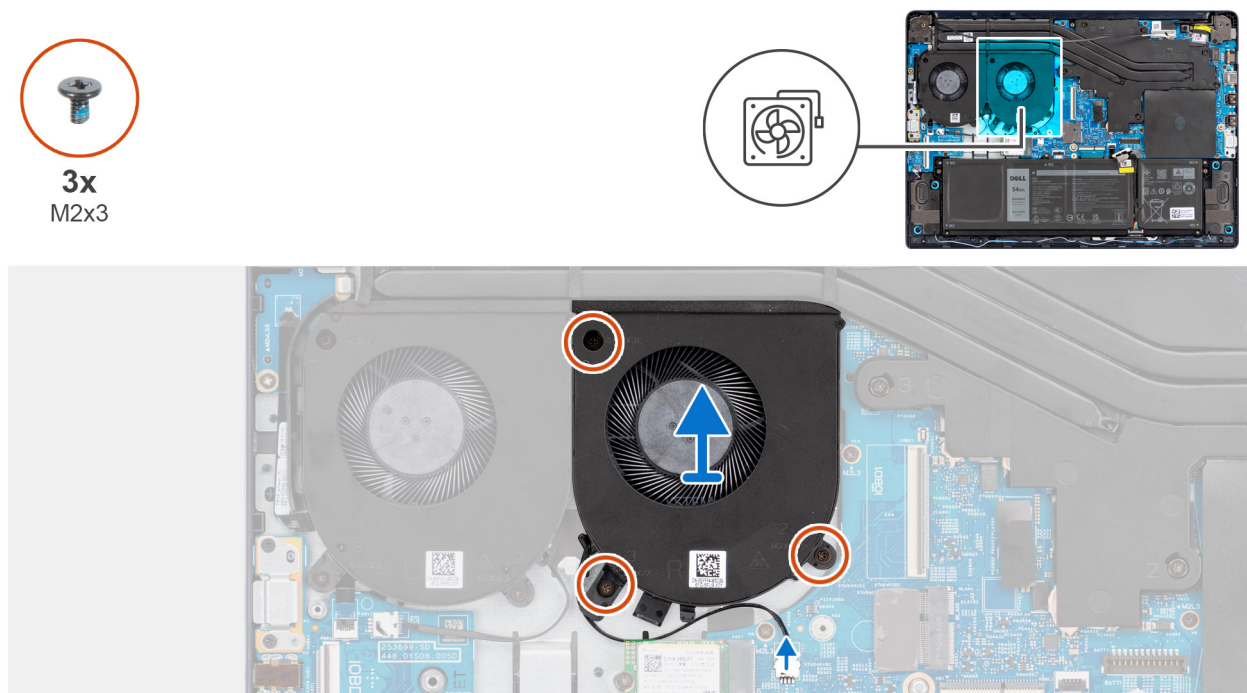


Figure 29. Removing the right fan

Steps

1. Disconnect the fan cable from the connector (FAN1) on the system board.
2. Remove the three screws (M2x3) that secure the fan to the palm rest and keyboard assembly.
3. Lift and remove the fan from the system board.

Installing the right fan

Prerequisites

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

About this task

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

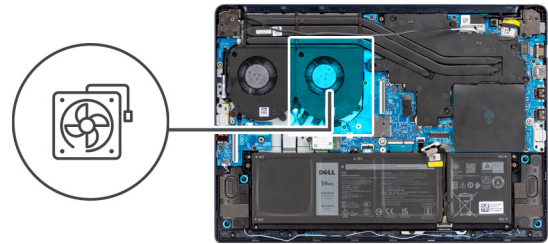
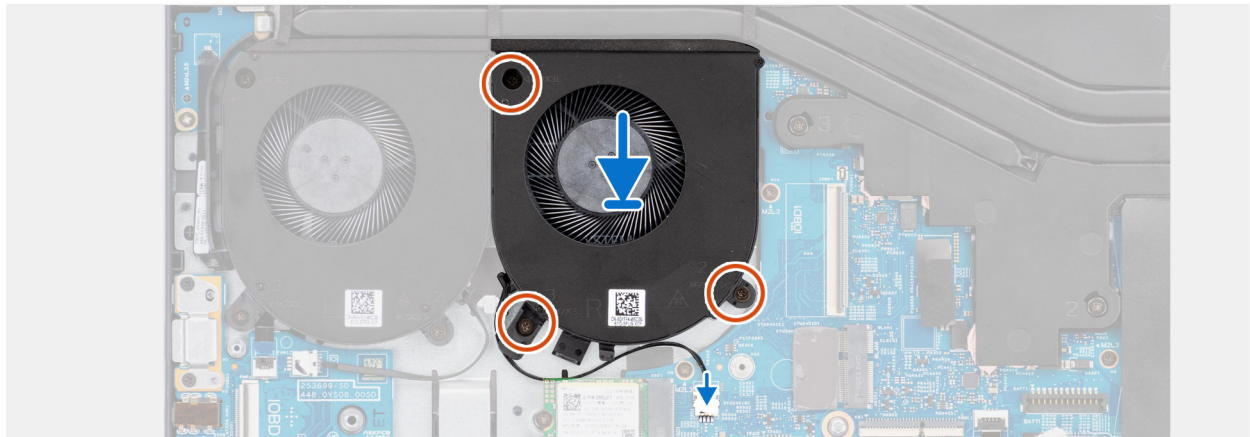


Figure 30. Installing the right fan

Steps

1. Align the screw holes on the right fan with the screw holes on the palm rest and keyboard assembly.
2. Replace the three screws (M2x3) that secure the right fan to the palm rest and keyboard assembly.
3. Connect the right fan cable to the connector (FAN1) on the system board.

Next steps

1. Install the [I/O-board cable](#).
2. Install the [wireless card](#).
3. Install the [base cover](#).
4. Follow the procedure in [After working inside your computer](#).

Removing the left fan

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [wireless card](#).
4. Remove the [I/O-board cable](#).

About this task

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

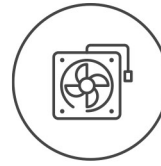
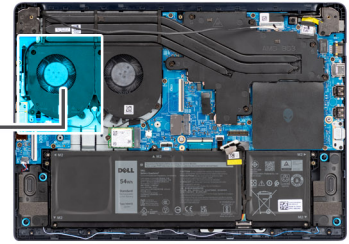


Figure 31. Removing the left fan

Steps

1. Disconnect the fan cable from the connector (FAN1) on the I/O board.
2. Remove the three screws (M2x3) that secure the fan to the palm rest and keyboard assembly.
3. Lift and remove the fan from the system board.

Installing the left fan

Prerequisites

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

About this task

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

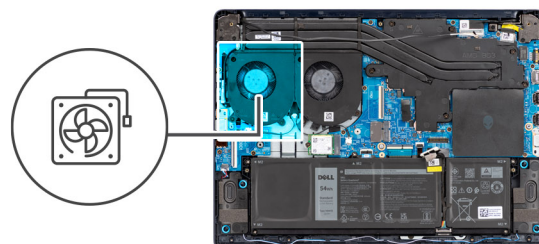
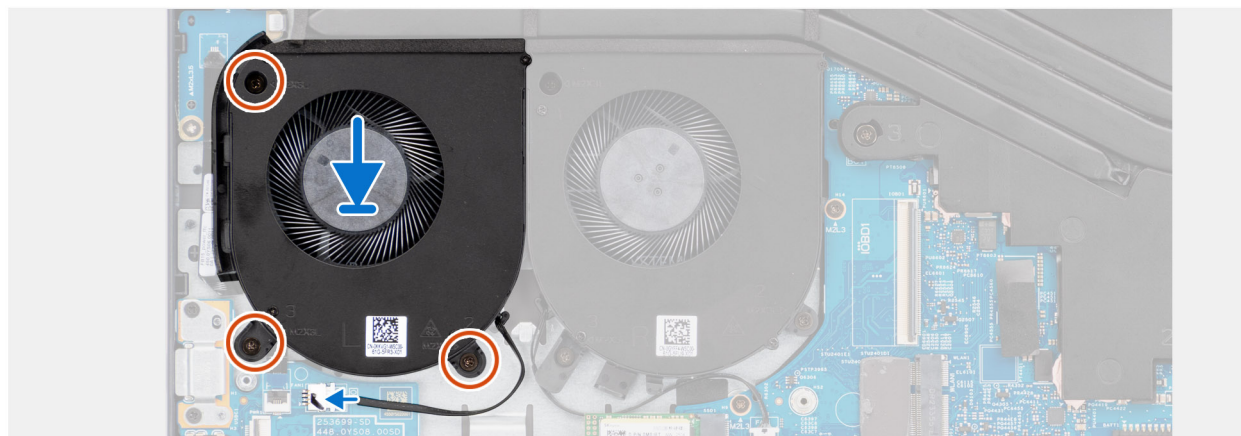


Figure 32. Installing the left fan

Steps

1. Align the screw holes on the left fan with the screw holes on the palm rest and keyboard assembly.
2. Replace the three screws (M2x3) that secure the left fan to the palm rest and keyboard assembly.
3. Connect the left fan cable to the connector (FAN1) on the system board.

Next steps

1. Install the [I/O-board cable](#).
2. Install the [wireless card](#).
3. Install the [base cover](#).
4. Follow the procedure in [After working inside your computer](#).

I/O board

Removing the I/O board

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [wireless card](#).
4. Remove the [I/O-board cable](#).
5. Remove the [left fan](#).
6. Remove the [USB Type-C bracket \(I/O board\)](#).

About this task

The following image indicates the location of the I/O board and provides a visual representation of the removal procedure.



2x
M2x3

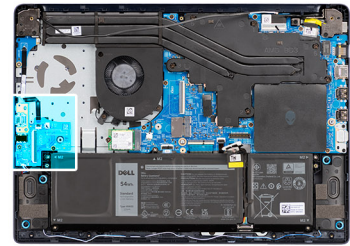
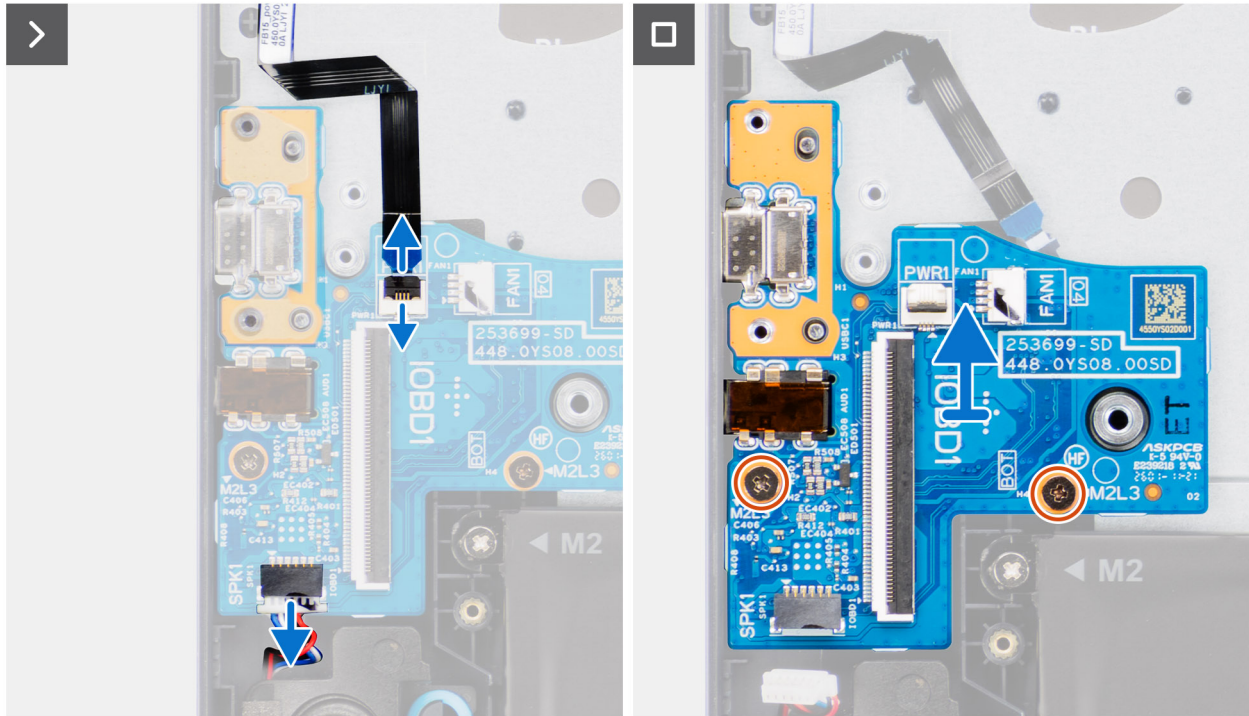


Figure 33. Removing the I/O board

Steps

1. Disconnect the power-button cable from the connector (PWR1) on the I/O board.
2. Disconnect the speaker cable from the connector (SPK1) on the I/O board.
3. Remove the two screws (M2x3) that secure the I/O board to the palm rest and keyboard assembly.
4. Lift the I/O board off the palm rest and keyboard assembly.

Installing the I/O board

Prerequisites

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

About this task

The following image indicates the location of the I/O board and provides a visual representation of the installation procedure.



2x
M2x3

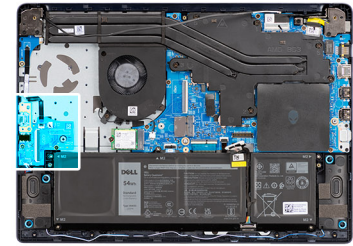
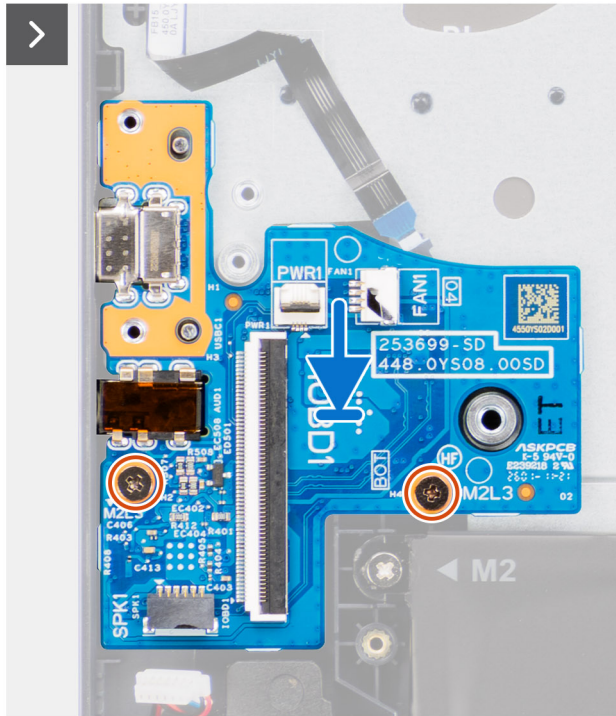
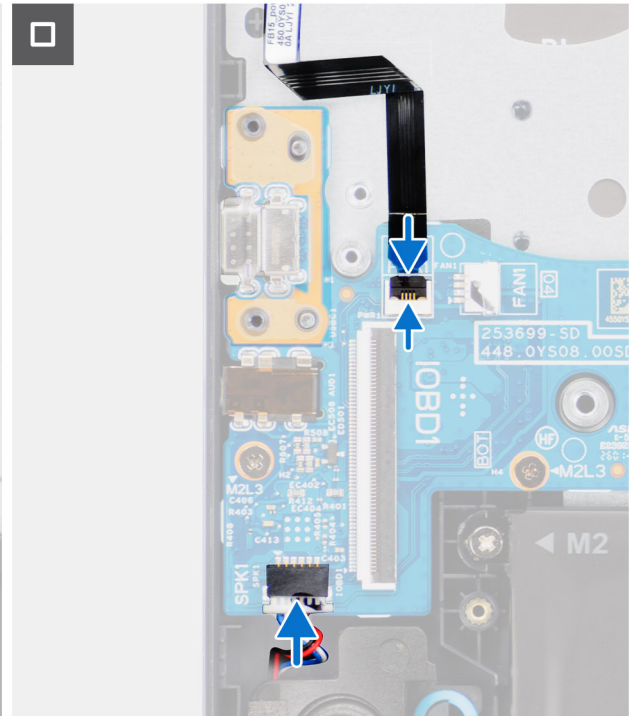


Figure 34. Installing the I/O board

Steps

1. Align the screw holes on the I/O board with the screw holes on the palm rest and keyboard assembly.
2. Replace the two screws (M2x4) that secures the I/O board to the palm rest and keyboard assembly.
3. Connect the speaker cable to the connector (SPK1) on the I/O board.
4. Connect the power-button cable to the connector (PWR1) on the I/O board.

Next steps

1. Install the [USB Type-C bracket \(I/O board\)](#).
2. Install the [left fan](#).
3. Install the [I/O-board cable](#).
4. Install the [wireless card](#).
5. Install the [base cover](#).
6. Follow the procedure in [After working inside your computer](#).

Heat sink

Removing the heat sink

Prerequisites

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

About this task

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

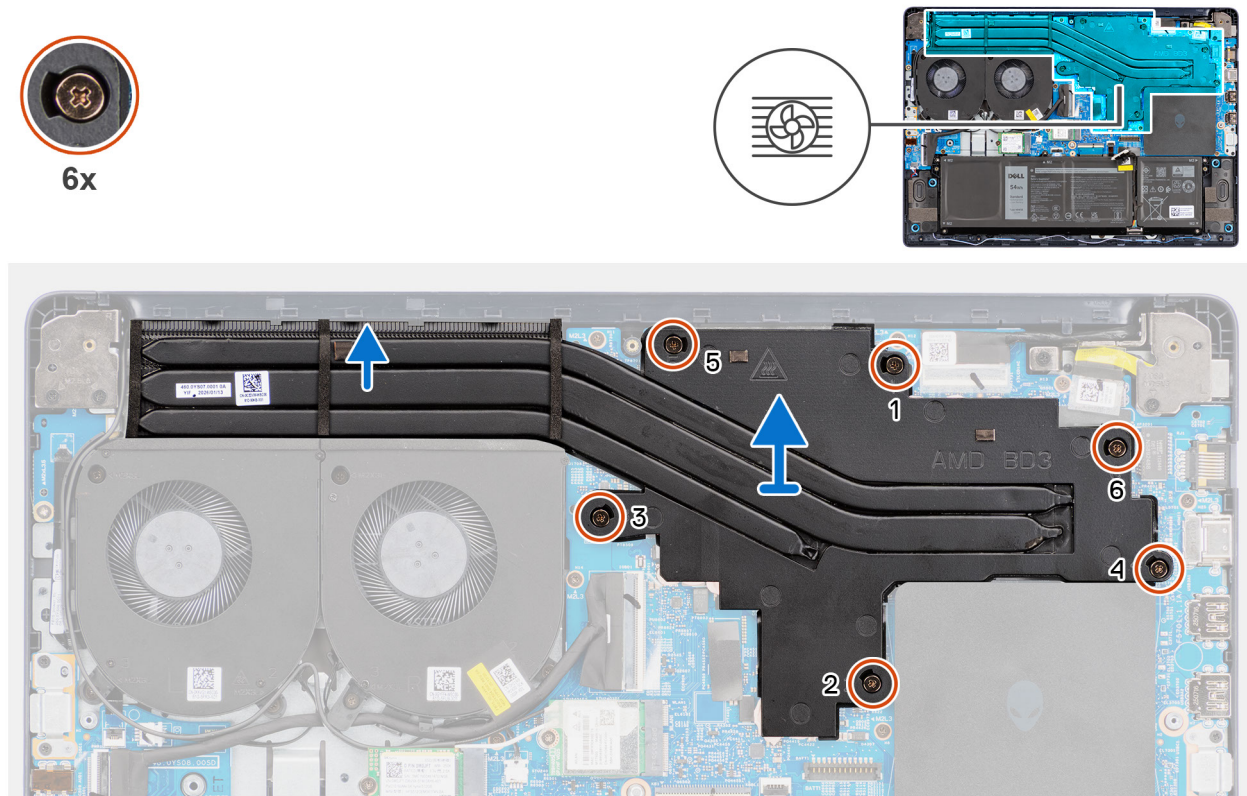


Figure 35. Removing the heat sink

Steps

1. Loosen the six captive screws that secure the heat sink to the system board.
i **NOTE:** Loosen the captive screws in the reverse sequential order indicated on the heat sink [6 > 5 > 4 > 3 > 2 > 1].
2. Lift the heat sink off the system board.
i **NOTE:** The replacement heat sink is supplied with a scraper and alcohol wipes for removing existing thermal grease from the system board. The replacement heat sink is pre-applied with thermal grease and thermal gel. Before installing the replacement heat sink, use the supplied scraper and alcohol wipes to completely remove all grease and gel residue from the system board.

Installing the heat sink

Prerequisites

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

About this task

- i** **NOTE:** The replacement heat sink is supplied with a scraper and alcohol wipes for removing existing thermal grease from the system board. The replacement heat sink is pre-applied with thermal grease and thermal gel. Before installing the replacement heat sink, use the supplied scraper and alcohol wipes to completely remove all grease and gel residue from the system board.

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

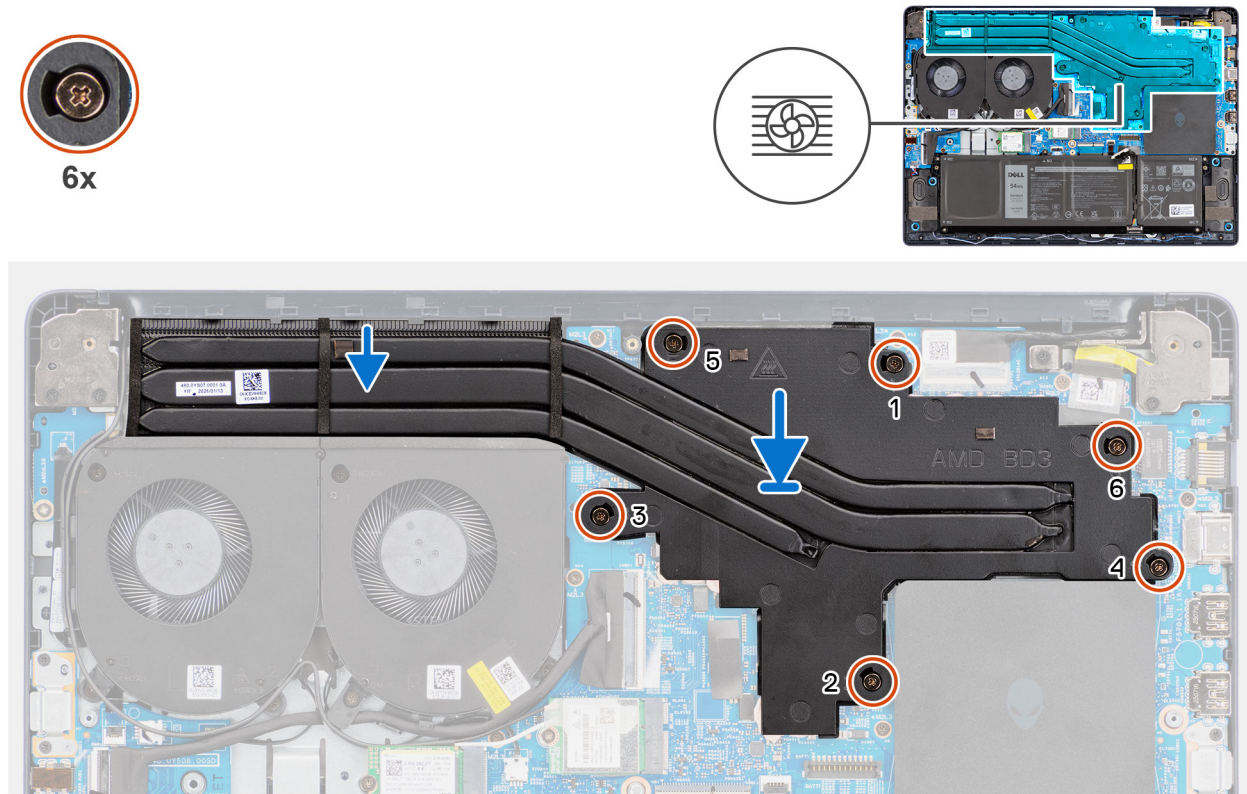


Figure 36. Installing the heat sink

Steps

1. Align the screw holes on the heat sink with the screw holes on the system board.
2. Tighten the six captive screws that secure the heat sink to the system board.

- i** **NOTE:** Tighten the captive screws in the sequential order indicated on the heat sink [1 > 2 > 3 > 4 > 5 > 6].

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 [battery](#).

4. Remove the [memory module](#).
5. Remove the [wireless card](#).
6. Remove the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Remove the [heat sink](#).
8. Remove the [I/O-board cable](#).
9. Remove the [right fan](#).
10. Remove the [USB Type-C bracket \(system board\)](#).

About this task

The following image indicates the connectors on your system board.

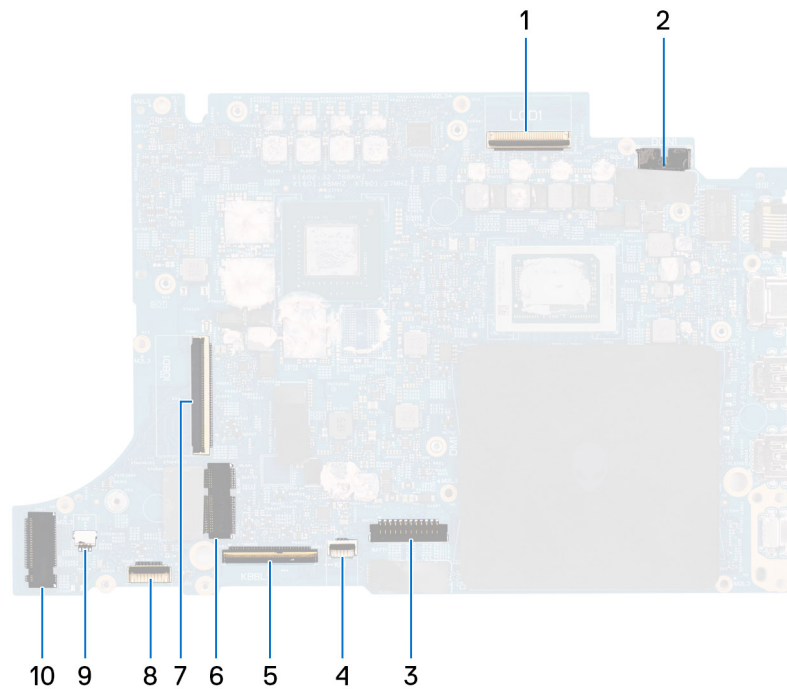


Figure 37. System-board connectors

- | | |
|--------------------------------------|--|
| 1. Display-cable connector (LCD1) | 2. DC-in port connector (DCIN1) |
| 3. Battery-cable connector (BATT1) | 4. Keyboard back-light cable connector (KBBL1) |
| 5. Keyboard cable connector (KB1) | 6. Wireless-card connector (WLAN1) |
| 7. I/O-board cable connector (IOBD1) | 8. Touchpad-cable connector (TPAD1) |
| 9. Fan-cable connector (FAN1) | 10. SSD slot (SSD1) |

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

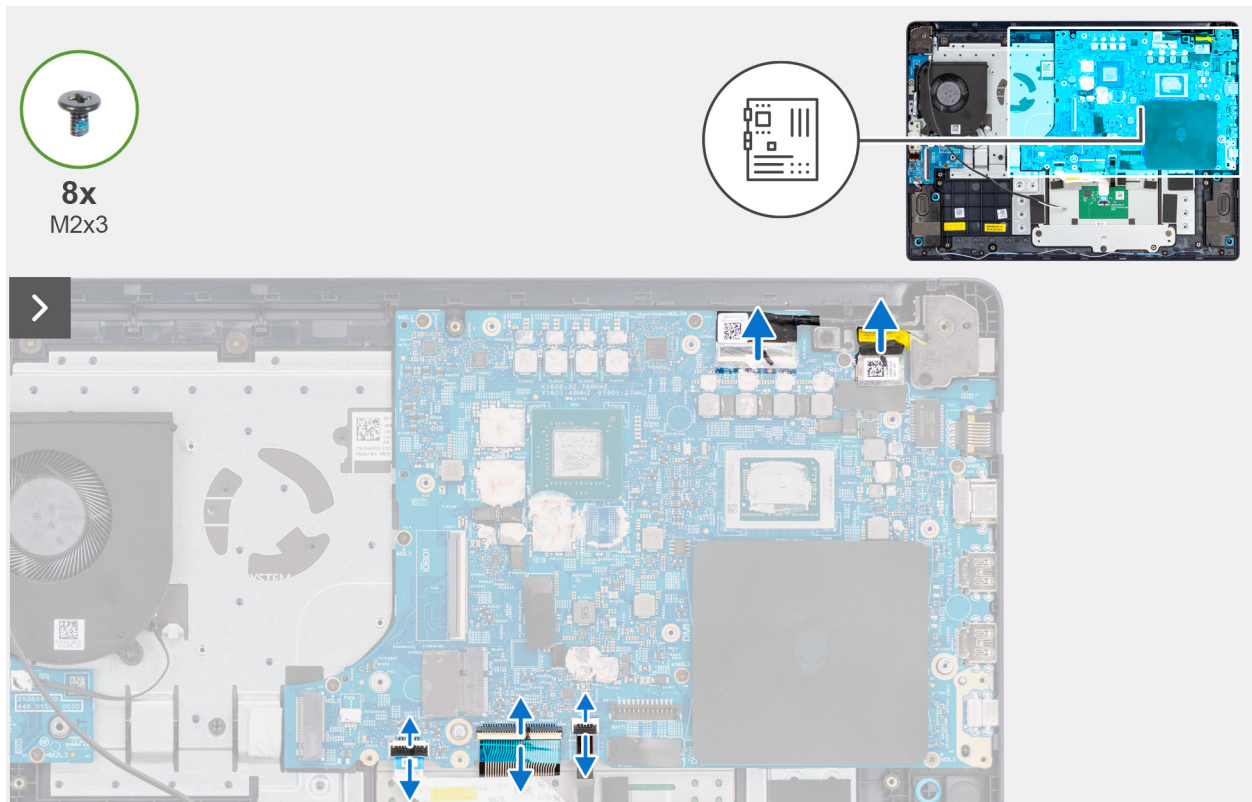


Figure 38. Removing the system board

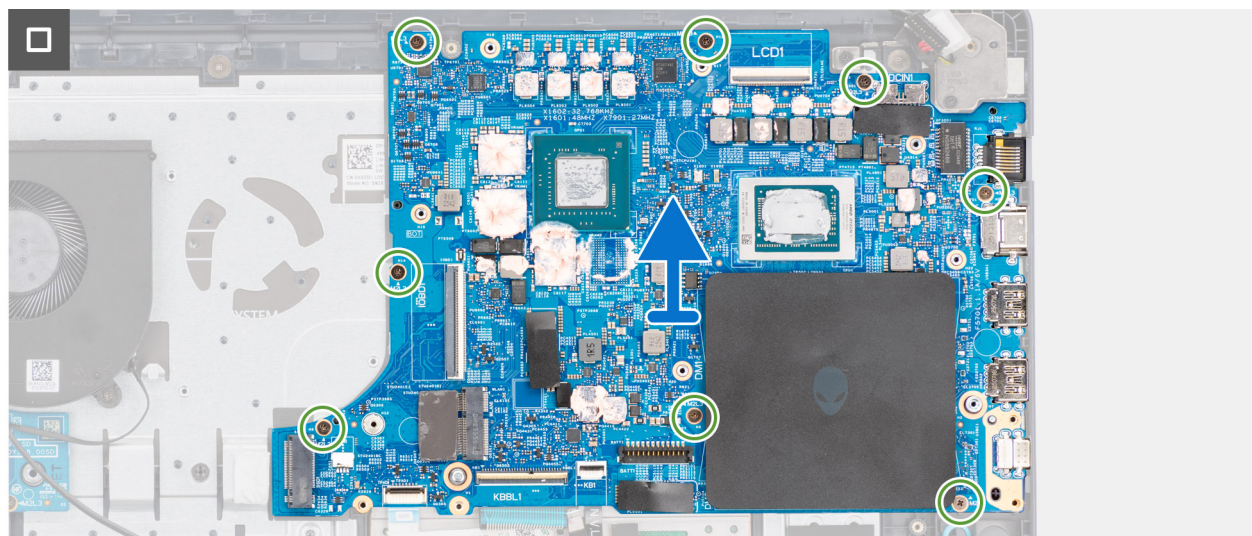


Figure 39. Removing the system board

Steps

1. Disconnect the following cables from the respective connectors on the system board:
 - Display cable (EDP)
 - Power-adaptor port cable
 - Keyboard back-light cable
 - Keyboard cable
 - Touchpad cable
2. Remove the eight screws (M2x3) that secure the system board to the palm rest and keyboard assembly.
3. Lift the system board off the palm rest and keyboard assembly.

NOTE: The replacement system board also ships with a heat sink assembly that is pre-applied with thermal grease and thermal gel. Replace the system board and the heat sink assembly together.

Installing the system board

Prerequisites

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

About this task

The following image indicates the connectors on your system board.

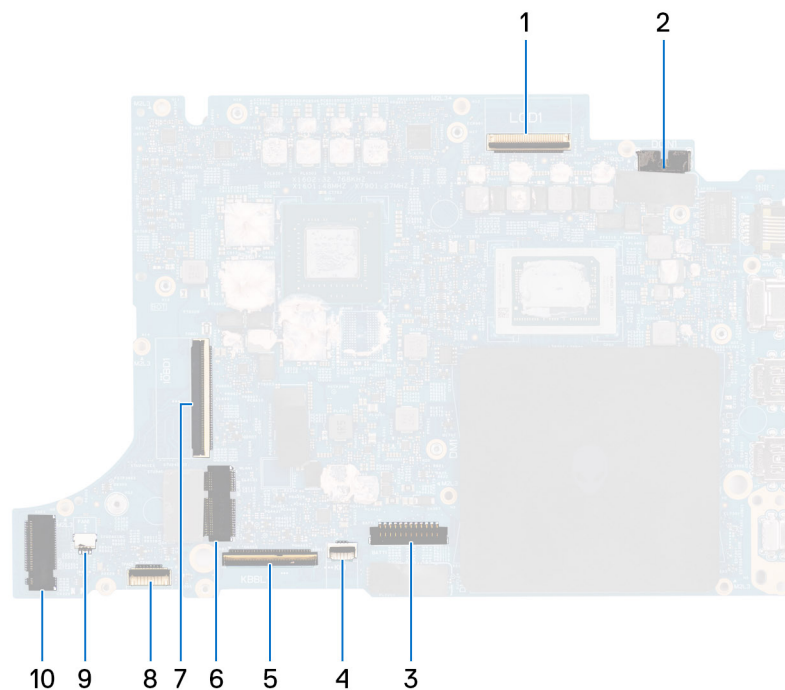


Figure 40. System-board connectors

- | | |
|--------------------------------------|--|
| 1. Display-cable connector (LCD1) | 2. DC-in port connector (DCIN1) |
| 3. Battery-cable connector (BATT1) | 4. Keyboard back-light cable connector (KBBL1) |
| 5. Keyboard cable connector (KB1) | 6. Wireless-card connector (WLAN1) |
| 7. I/O-board cable connector (IOBD1) | 8. Touchpad-cable connector (TPAD1) |
| 9. Fan-cable connector (FAN1) | 10. SSD slot (SSD1) |

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

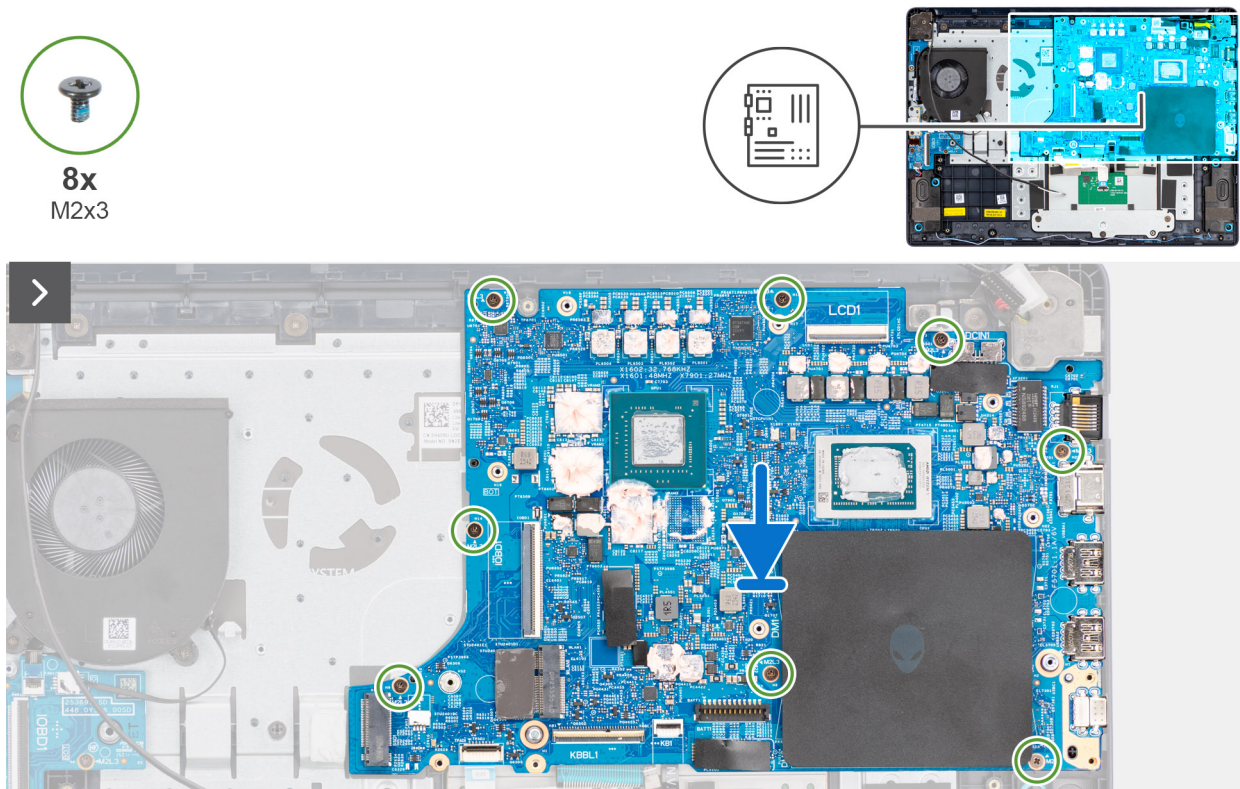


Figure 41. Installing the system board

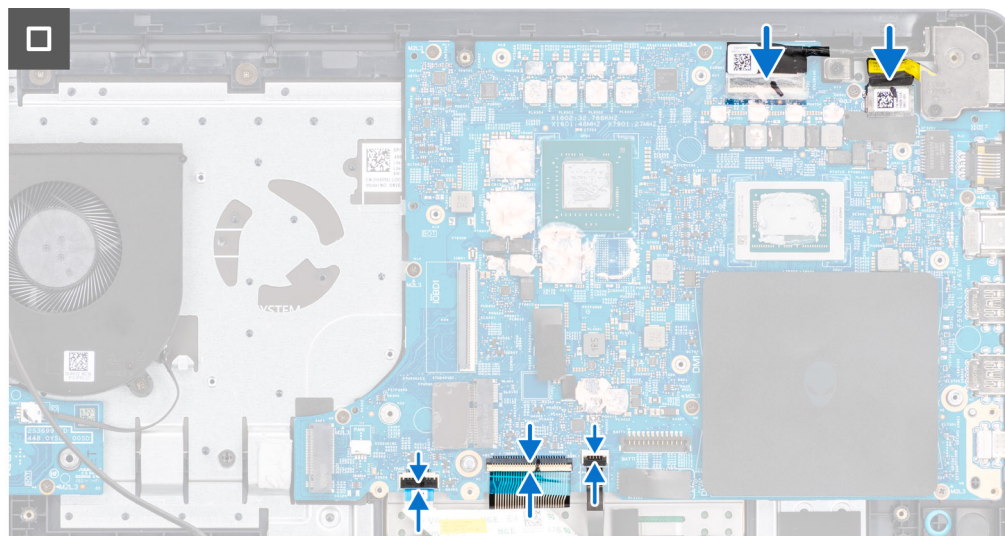


Figure 42. Installing the system board

NOTE: The replacement system board also ships with a heat sink assembly that is pre-applied with thermal grease and thermal gel. Replace the system board and the heat sink assembly together.

Steps

1. Align the screw holes on the system board with the screw holes on the palm rest and keyboard assembly.
2. Replace the eight screws (M2x3) that secure the system board to the palm rest and keyboard assembly.
3. Connect the following cables to the respective connectors on the system board:
 - Touchpad cable
 - Keyboard cable

- Keyboard back-light cable
- Power-adapter port cable
- Display cable (EDP)

Next steps

1. Install the [USB Type-C bracket \(system board\)](#).
2. Install the [right fan](#).
3. Install the [I/O-board cable](#).
4. Install the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
5. Install the [wireless card](#).
6. Install the [memory module](#).
7. Install the [battery](#).
8. Install the [base cover](#).
9. Follow the procedure in [After working inside your computer](#).

Touchpad assembly

Removing the touchpad assembly

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [battery](#).
4. Remove the [memory module](#).
5. Remove the [wireless card](#).
6. Remove the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Remove the [I/O-board cable](#).
8. Remove the [right fan](#).
9. Remove the [USB Type-C bracket \(system board\)](#).
10. Remove the [system board](#).

NOTE: The system board can be removed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

About this task

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

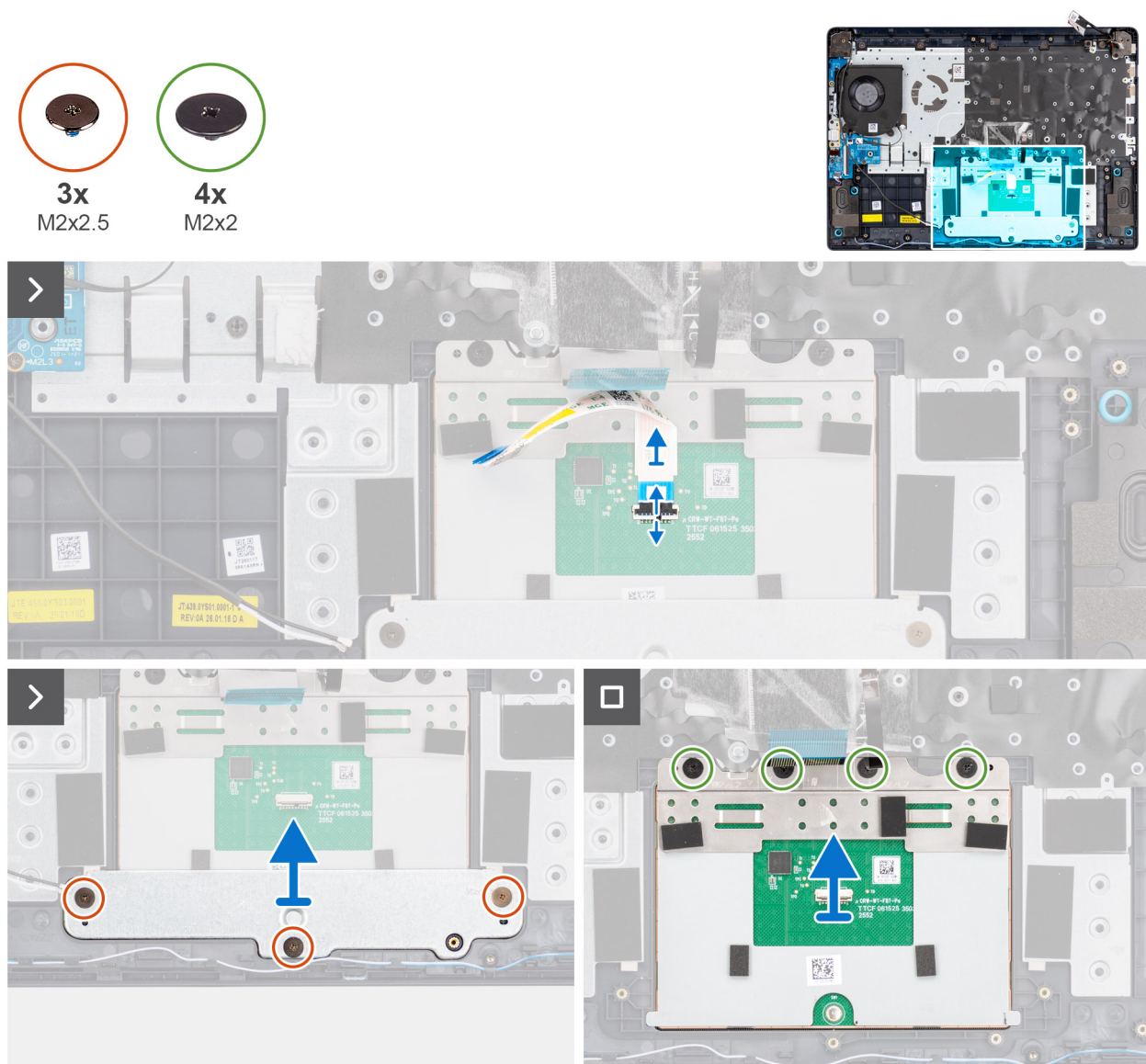


Figure 43. Removing the touchpad assembly

Steps

1. Open the latch and disconnect the touchpad cable from the connector (TPAD1) on the touchpad assembly.
2. Remove the three screws (M2x2.5) that secure the touchpad assembly support plate to the palm rest and keyboard assembly.
3. Remove the four screws (M2x2) that secure the touchpad to the palm rest and keyboard assembly.
4. Lift the touchpad assembly off the palm rest and keyboard assembly.

Installing the touchpad assembly

Prerequisites

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

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

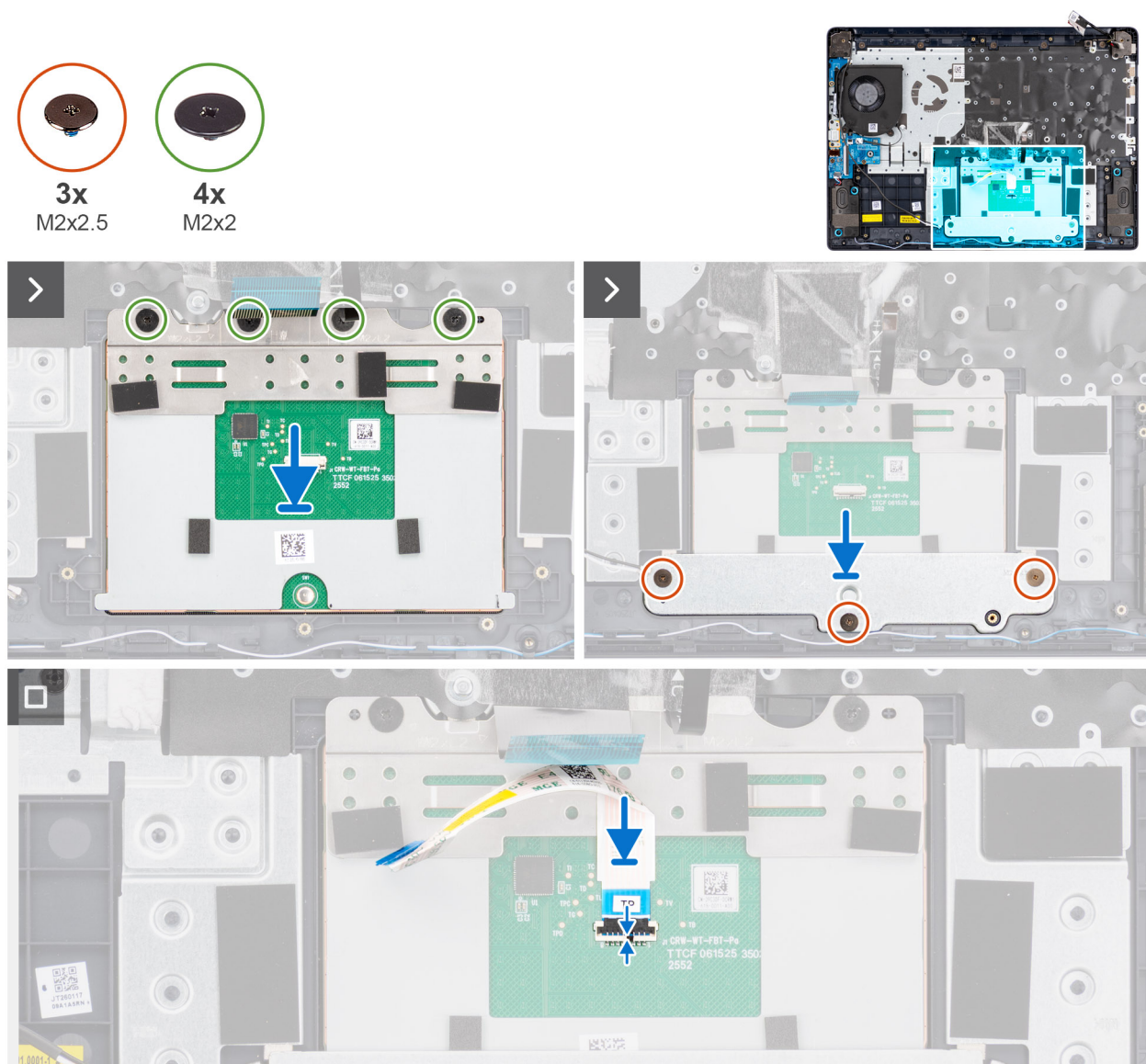


Figure 44. Installing the touchpad assembly

Steps

1. At an angle slide the touchpad into the slot on the palm rest and keyboard assembly.
2. Align the screw holes on the touchpad with the screw holes on the palm rest and keyboard assembly.
3. Replace the four screws (M2x2) that secure the touchpad assembly to the palm rest and keyboard assembly.
4. Align the screw holes on the touchpad support plate with the screw holes on the palm rest and keyboard assembly.
5. Replace the three screws (M2x2) that secure the touchpad support plate to the palm rest and keyboard assembly.
6. Connect the touchpad cable into the connector (TPAD1) on the touchpad assembly and close the latch to secure the cable.

Next steps

1. Install the [system board](#).

NOTE: The system board can be installed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

2. Install the [USB Type-C bracket \(system board\)](#).
3. Install the [right fan](#).
4. Install the [I/O-board cable](#).
5. Install the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).

6. Install the [wireless card](#).
7. Install the [memory module](#).
8. Install the [battery](#).
9. Install the [base cover](#).
10. Follow the procedure in [After working inside your computer](#).

Deco cover

Removing the deco cover

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [battery](#).
4. Remove the [memory module](#).
5. Remove the [wireless card](#).
6. Remove the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Remove the [I/O-board cable](#).
8. Remove the [right fan](#).
9. Remove the [USB Type-C bracket \(system board\)](#).
10. Remove the [system board](#).

 **NOTE:** The system board can be removed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

About this task

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



5x
M2x1.7

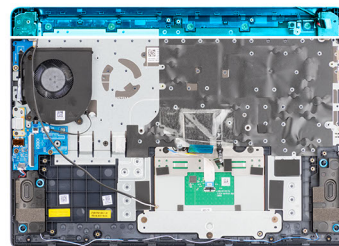


Figure 45. Removing the deco cover

Steps

1. Remove the five screws (M2x1.7) that secure the deco cover to the keyboard and palm rest assembly.
2. Release the latches on the deco cover, pry it loose, and remove the deco cover from the system.

Installing the deco cover

Prerequisites

If you are replacing a component, remove the existing component before performing the installation procedure.
The following images indicate the location of the deco cover and provide a visual representation of the removal procedure.



5x
M2x1.7

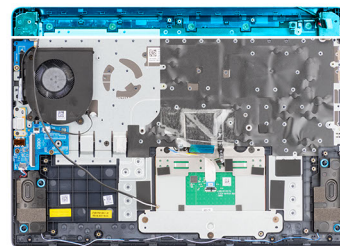
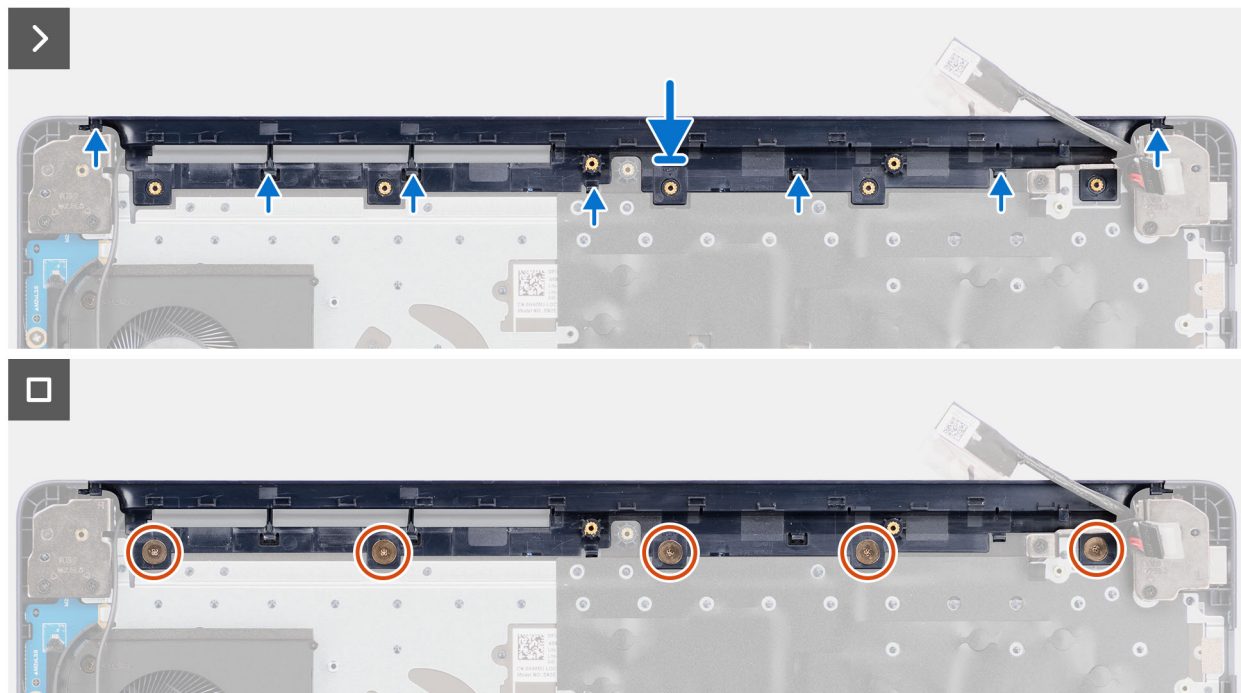


Figure 46. Installing the deco cover

Steps

1. Align the deco cover with the palm rest and keyboard assembly.
2. Press along the edges of the deco cover to engage and lock the latches.
3. Replace the five screws (M2x1.7) that secure the deco cover to the palm rest and keyboard assembly.

Next steps

1. Install the [system board](#).

NOTE: The system board can be installed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

2. Install the [USB Type-C bracket \(system board\)](#).
3. Install the [right fan](#).
4. Install the [I/O-board cable](#).
5. Install the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
6. Install the [wireless card](#).
7. Install the [memory module](#).
8. Install the [battery](#).
9. Install the [base cover](#).
10. Follow the procedure in [After working inside your computer](#).

Display assembly

Removing the display assembly

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [battery](#).
4. Remove the [memory module](#).
5. Remove the [wireless card](#).
6. Remove the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Remove the [I/O-board cable](#).
8. Remove the [right fan](#).
9. Remove the [USB Type-C bracket \(system board\)](#).
10. Remove the [system board](#).

 **NOTE:** The system board can be removed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

11. Remove the [deco cover](#).

About this task

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



4x
M2.5x6

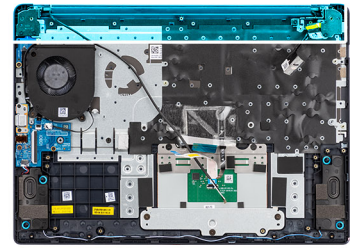
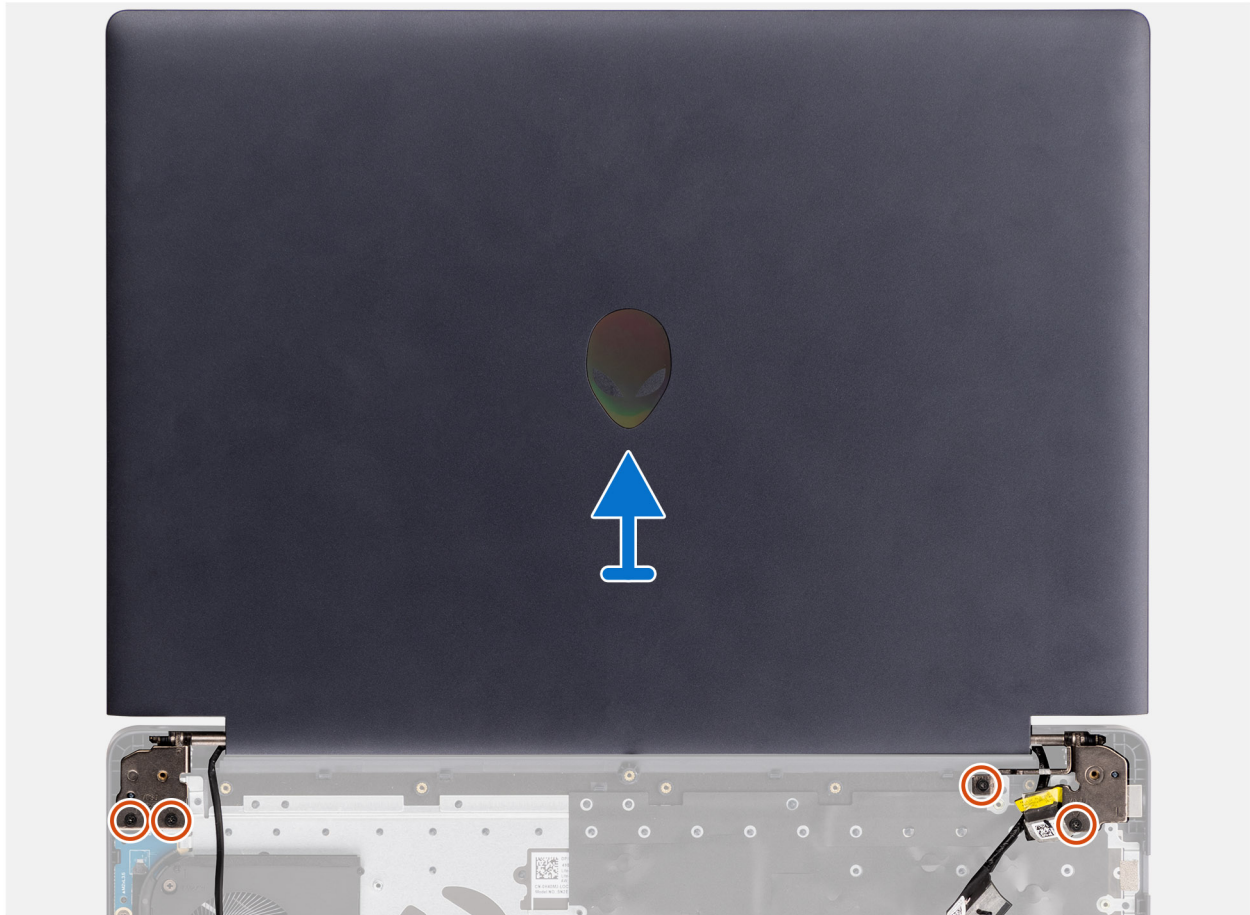


Figure 47. Removing the display assembly



Figure 48. Removing the display assembly

Steps

1. Open the system until it is at a 180-degree angle and lay the system on a flat surface.
2. Remove the four screws (M2.5x4) that secure the left and right hinges.
3. Lift and slide out the display assembly from the palm rest and keyboard assembly.

Installing the display assembly

Prerequisites

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

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



Figure 49. Installing the display assembly



4x
M2.5x6

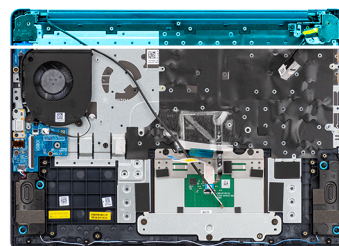


Figure 50. Installing the display assembly

Steps

1. Align the display assembly with the palm rest and keyboard assembly.
2. Replace the four screws (M2.5x4) that secure the left and right hinges to the palm rest and keyboard assembly.
3. Close the display assembly and turn the computer to face the rear of the computer.

Next steps

1. Install the [deco cover](#).
2. Install the [system board](#).

NOTE: The system board can be installed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

3. Install the [USB Type-C bracket \(system board\)](#).
4. Install the [right fan](#).
5. Install the [I/O-board cable](#).
6. Install the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Install the [wireless card](#).

8. Install the [memory module](#).
9. Install the [battery](#).
10. Install the [base cover](#).
11. Follow the procedure in [After working inside your computer](#).

Power-adapter port

Removing the power-adapter port

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [battery](#).
4. Remove the [memory module](#).
5. Remove the [wireless card](#).
6. Remove the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Remove the [I/O-board cable](#).
8. Remove the [right fan](#).
9. Remove the [USB Type-C bracket \(system board\)](#).
10. Remove the [system board](#).

 **NOTE:** The system board can be removed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

11. Remove the [deco cover](#).
12. Remove the [display assembly](#).

About this task

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

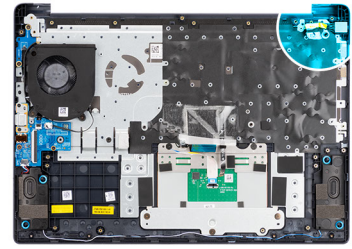
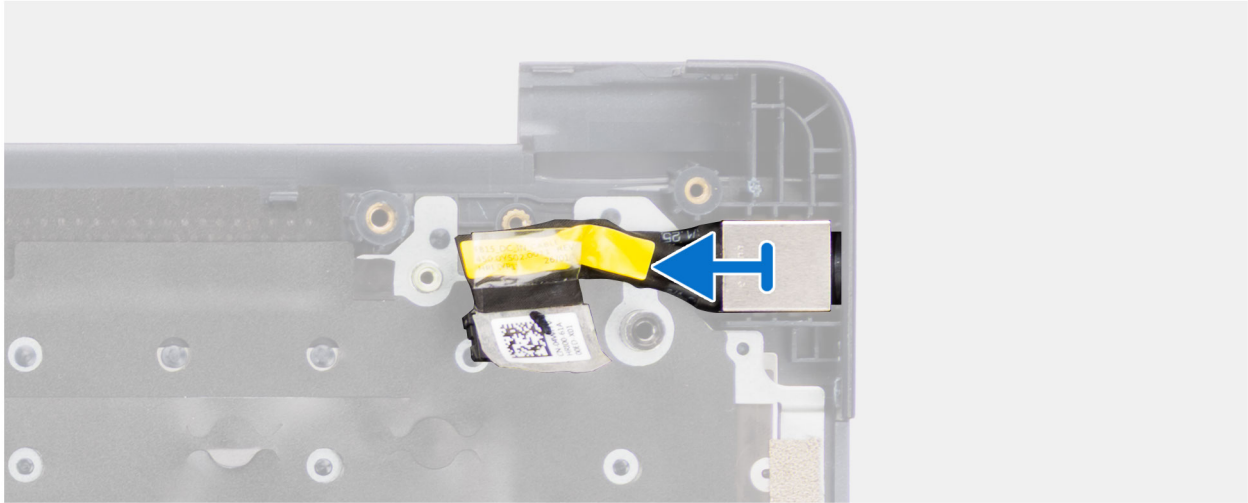


Figure 51. Removing the power-adapter port

Steps

Lift and remove the power-adapter port from the palm rest and keyboard assembly.

Installing the power-adapter port

Prerequisites

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

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

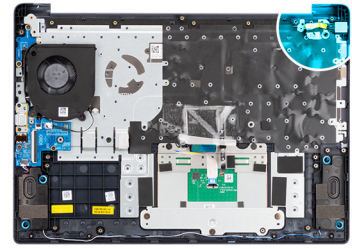
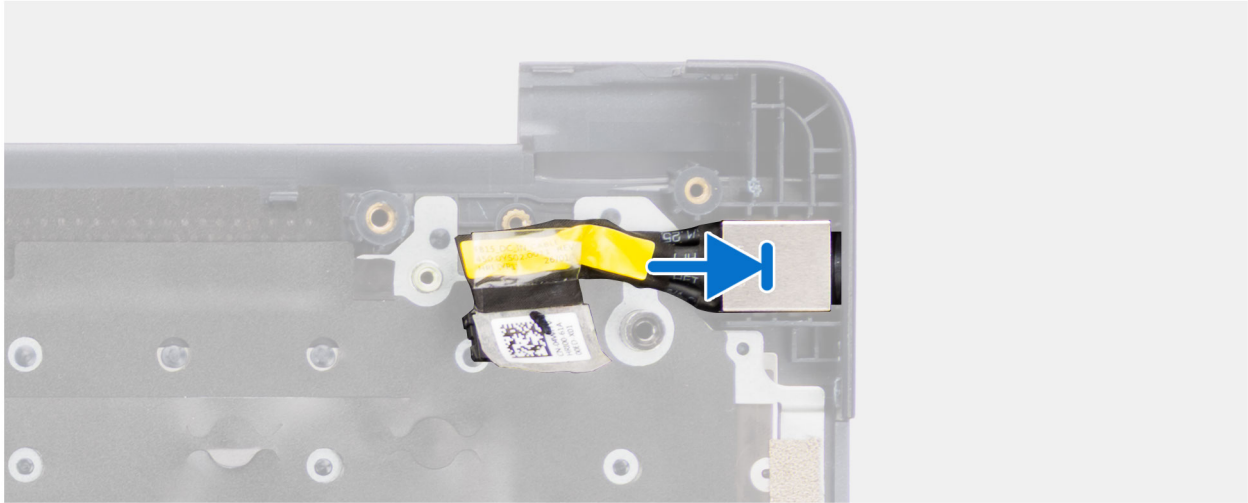


Figure 52. Installing the power-adapter port

Steps

Align the power-adapter port with the palm rest and keyboard assembly.

Next steps

1. Install the [display assembly](#).
2. Install the [deco cover](#).
3. Install the [system board](#).

NOTE: The system board can be installed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

4. Install the [USB Type-C bracket \(system board\)](#).
5. Install the [right fan](#).
6. Install the [I/O-board cable](#).
7. Install the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
8. Install the [wireless card](#).
9. Install the [memory module](#).
10. Install the [battery](#).
11. Install the [base cover](#).
12. Follow the procedure in [After working inside your computer](#).

Power-button and power-button board

Removing the power button and power-button board

Prerequisites

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

2. Remove the [base cover](#).
3. Remove the [battery](#).
4. Remove the [memory module](#).
5. Remove the [wireless card](#).
6. Remove the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Remove the [I/O-board cable](#).
8. Remove the [right fan](#).
9. Remove the [left fan](#).
10. Remove the [USB Type-C bracket \(system board\)](#).
11. Remove the [system board](#).

NOTE: The system board can be removed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

12. Remove the [deco cover](#).
13. Remove the [display assembly](#).

About this task

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



Figure 53. Removing the power button and power-button board

Steps

1. Disconnect the power-button cable from the connector (PWR1) on the I/O board.
2. Remove the two screws (M2x3.5) that secure the power-button board to the palm rest and keyboard assembly.
3. Lift and remove the power-button board from the palm rest and keyboard assembly.
4. Lift and remove the power-button from the palm rest and keyboard assembly.

Installing the power-button and power-button board

Prerequisites

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

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

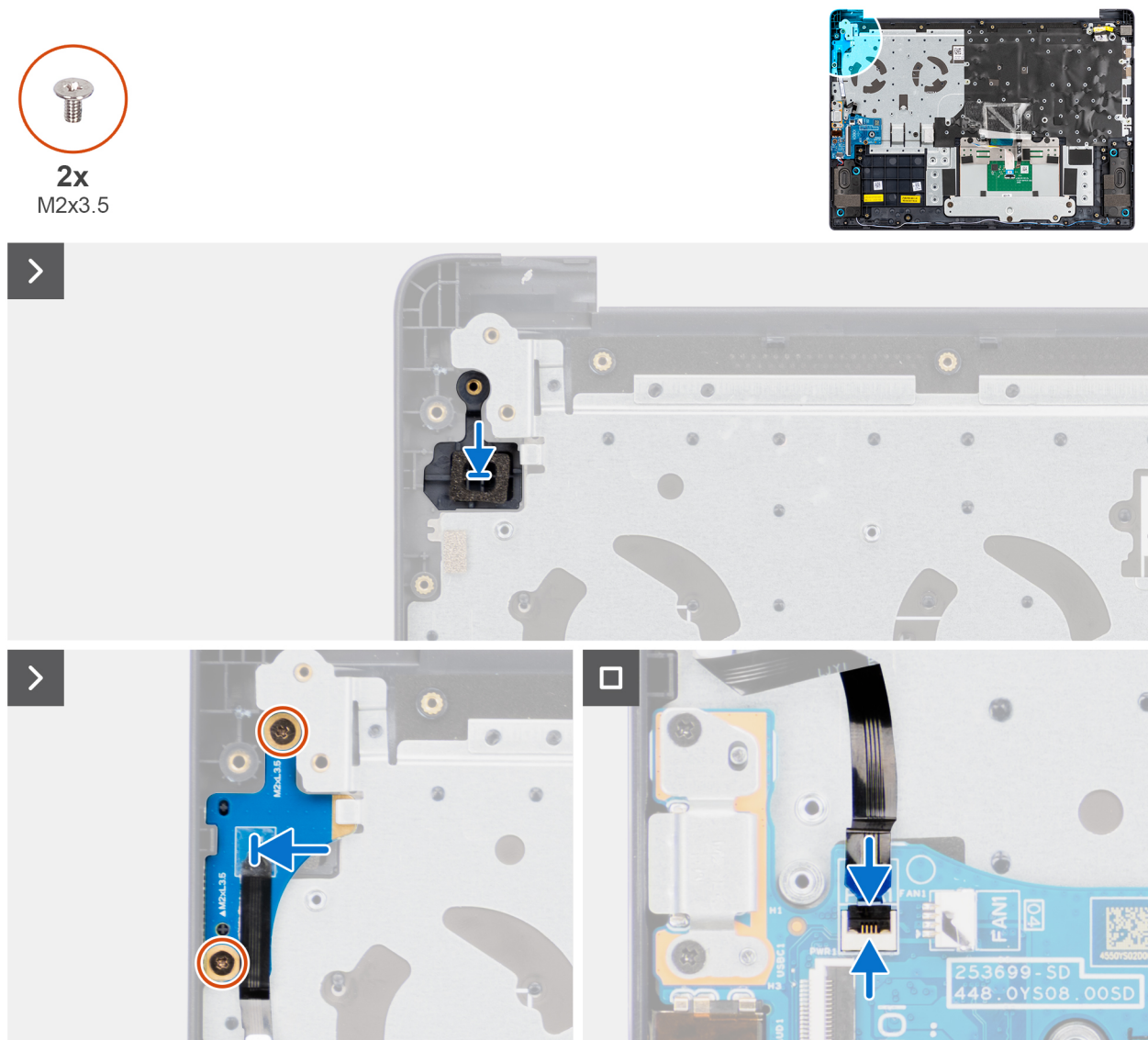


Figure 54. Installing the power-button and power-button board

Steps

1. Align the power button with the slot on the palm rest and keyboard assembly.
2. Align the power-button board on top of the power button with the palm rest and keyboard assembly.

3. Replace the two screws (M2x3.5) that secures the power-button board to the palm rest and keyboard assembly.
4. Connect the power-button cable to the connector (PWR1) on the I/O board.

Next steps

1. Install the [display assembly](#).
2. Install the [deco cover](#).
3. Install the [system board](#).

 **NOTE:** The system board can be installed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

4. Install the [USB Type-C bracket \(system board\)](#).
5. Install the [left fan](#).
6. Install the [right fan](#).
7. Install the [I/O-board cable](#).
8. Install the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
9. Install the [wireless card](#).
10. Install the [memory module](#).
11. Install the [battery](#).
12. Install the [base cover](#).
13. Follow the procedure in [After working inside your computer](#).

Palm rest and keyboard assembly

Removing the palm rest and keyboard assembly

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

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [battery](#).
4. Remove the [memory module](#).
5. Remove the [wireless card](#).
6. Remove the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
7. Remove the [speakers](#).
8. Remove the [I/O-board cable](#).
9. Remove the [right fan](#).
10. Remove the [left fan](#).
11. Remove the [USB Type-C bracket \(I/O board\)](#).
12. Remove the [I/O board](#).
13. Remove the [USB Type-C bracket \(system board\)](#).
14. Remove the [system board](#).

 **NOTE:** The system board can be removed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

15. Remove the [power button and power-button board](#).
16. Remove the [touchpad assembly](#).
17. Remove the [deco cover](#).
18. Remove the [display assembly](#).
19. Remove the [power-adaptor port](#).

About this task

NOTE: The palm rest and keyboard assembly cannot be further disassembled once all the prerequisites are completed. The keyboard is part of the palm rest and keyboard assembly. If the keyboard is malfunctioning and needs to be replaced, the entire palm rest and keyboard assembly must be replaced.

The image below shows the palm rest and keyboard assembly after the prerequisites have been completed. After performing the steps mentioned in the prerequisites, you are left with the palm rest and keyboard assembly.

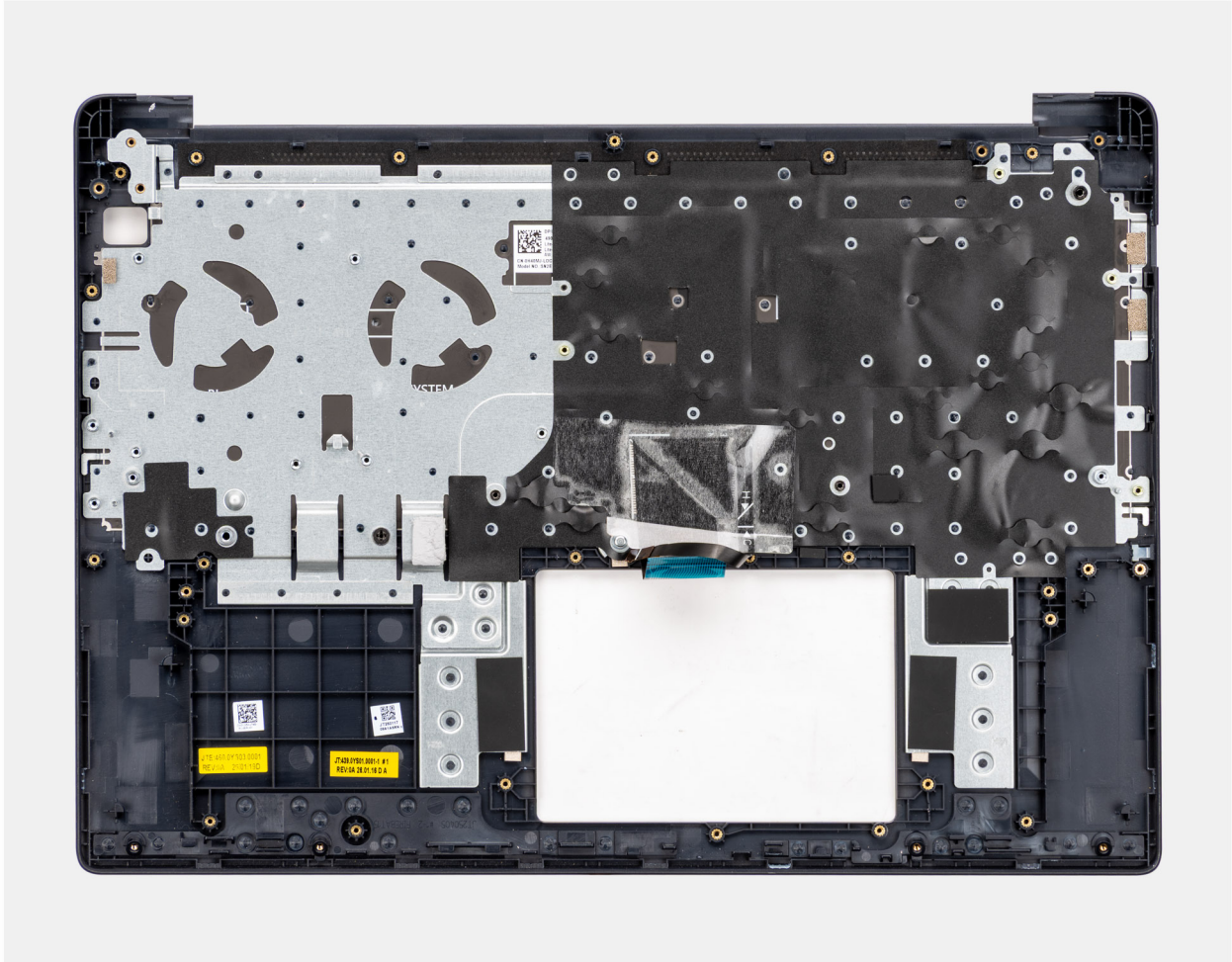


Figure 55. Removing the palm rest and keyboard assembly

Installing the palm rest and keyboard assembly

Prerequisites

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

The following images indicate the location of the palm rest and keyboard assembly and provide a visual representation of the removal procedure.

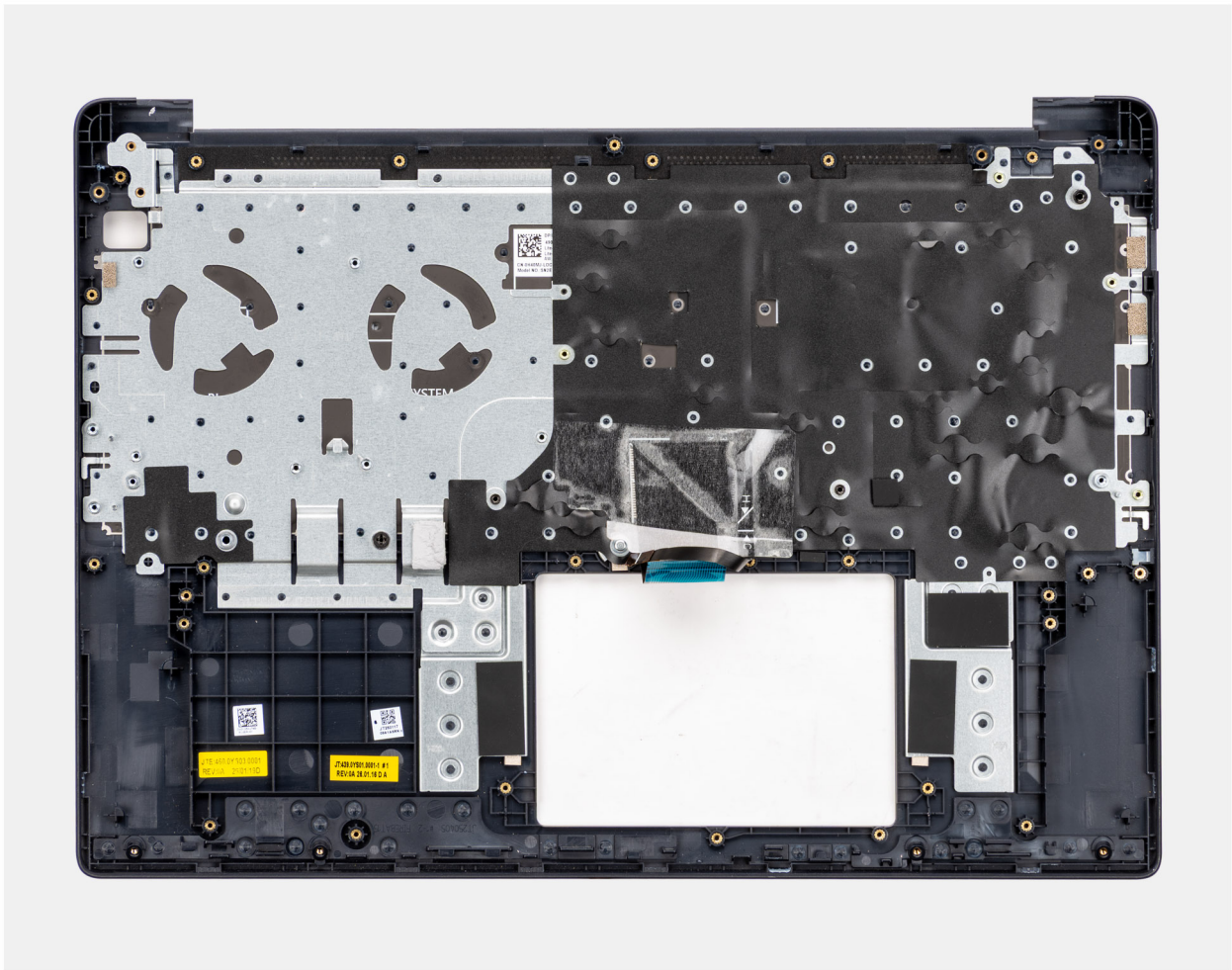


Figure 56. Installing the palm rest and keyboard assembly

Steps

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

Next steps

1. Install the [power-adaptor port](#).
2. Install the [display assembly](#).
3. Install the [deco cover](#).
4. Install the [touchpad assembly](#).
5. Install the [power button and power-button board](#).
6. Install the [system board](#).

NOTE: The system board can be installed with the heat sink attached in order to simplify the procedure and preserve the thermal bond between the system board and heat sink.

7. Install the [USB Type-C bracket \(system board\)](#).
8. Install the [I/O board](#).
9. Install the [USB Type-C bracket \(I/O board\)](#).
10. Install the [left fan](#).
11. Install the [right fan](#).
12. Install the [I/O-board cable](#).
13. Install the [speakers](#).
14. Install the [M.2 2230 SSD](#) or [M.2 2280 SSD](#).
15. Install the [wireless card](#).

16. Install the [memory module](#).
17. Install the [battery](#).
18. Install the [base cover](#).
19. Follow the procedure in [After working inside your computer](#).

Software

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

Operating system

Your Alienware 15 DA15265 supports the following operating systems:

- Windows 11 Home
- Windows 11 Pro

Drivers and downloads

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

BIOS Setup

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

NOTE: Depending on the computer and the installed devices, the options that are listed in below may differ.

Use BIOS Setup for the following purposes:

- Get information about the hardware installed in your computer, such as the amount of RAM and the capacity of the storage device.
- Change the system configuration information.
- Set or change user-selectable options such as the user password, enabling or disabling base devices, and configuring hard drive settings.

Entering BIOS Setup program

Turn on or restart your computer and press F2 immediately.

Navigation keys

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

Table 4. Navigation keys

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

F12 One Time Boot menu

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

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

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

- Removable Drive (if available)
- STXXXX Drive (if available)

NOTE: XXX denotes the SATA drive number.

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

- Diagnostics

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

BIOS setup options

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

Table 5. BIOS Setup options—Main

Option	Description
System Time	Displays the current time in hh:mm:ss format.
System Date	Displays the current date in mm/dd/yyyy format.
BIOS Version	Displays the BIOS version.
Product Name	Displays the model number of your computer.
Service Tag	Displays the service tag of your computer.
Asset Tag	Displays the asset tag of your computer.
CPU Type	Displays the processor type.
CPU Speed	Displays the processor speed.
CPU ID	Displays the processor identification code.
L1 Cache	Displays the processor L1 cache size.
L2 Cache	Displays the processor L2 cache size.
L3 Cache	Displays the processor L3 cache size.
M.2 PCIe SSD	Displays the primary SSD installed on your computer.
AC Adapter Type	Displays the AC adapter type.
System Memory	Displays the system memory information.
Memory Speed	Displays the memory speed information.
Keyboard Type	Displays the keyboard type of your computer.

Table 6. BIOS Setup options—Advanced

Option	Description
Integrated NIC	Enables you to configure the onboard LAN controller. Choose one of the following options: <ul style="list-style-type: none">• Disabled: The internal LAN is off and not visible to the operating system• Enabled: The internal LAN is enabled Default: Enabled
USB Emulation	Enables or disables the USB emulation feature. This feature defines how the BIOS, in the absence of a USB-aware operating system, handles USB devices. USB emulation is always enabled during POST. Default: Enabled NOTE: When this setting is off, booting the computer from a USB device is not allowed.

Table 6. BIOS Setup options—Advanced (continued)

Option	Description
Adapter Warnings	Enables or disables the system setup (BIOS) warning messages when you use certain power adapters. <ul style="list-style-type: none"> • Enable Adapter Warnings Default: Disabled
Function Key Behavior	Enables you to set function key or multimedia key as the default function key behavior. Default: Multimedia Key
Keyboard Illumination	Set the keyboard illumination settings By default, the Bright option is enabled.
Keyboard Backlight with AC	Set the timeout value for the keyboard backlight when an AC adapter is connected to the system. By default, the 1 minutes option is enabled.
Keyboard Backlight with Battery	Set the timeout value for the keyboard backlight when the is running only on battery power. By default, the 1 minutes option is enabled.
Battery Health	Displays the battery health.
Enable External USB Ports	Enables the external USB ports By default, the Enable External USB Ports option is enabled.
Enable Audio	Enables all integrated audio controller. By default, the Enable Audio option is enabled.
Microphone	Enables the microphone. By default, the Microphone option is enabled.
Camera	Enables the camera. By default, the Camera option is enabled. <i>i</i> NOTE: Depending on the configuration ordered, the camera setup option may not be available.
Battery Charge Configuration	Enables the computer to run on battery during power usage hours. Use the below options to prevent AC power usage between certain times of each day. Default: Adaptive
Advanced Battery Charge Configuration	Enables Advanced Battery Charge Configuration from the beginning of the day to a specified work period. Advanced Battery Charged maximizes battery health while still supporting heavy use during the work day. Default: Disabled
IPv4 HTTP Support	Enables IPv4 HTTP Boot support. Default: Disabled
IPv6 HTTP Support	Enables IPv6 HTTP Boot support. Default: Disabled
Performance Options	

Table 6. BIOS Setup options—Advanced (continued)

Option	Description
CPU TCC offset	This option regulates the maximum CPU operating temperature. Increasing TCC Offset reduces maximum CPU operating temperature. Increasing TCC Offset value may reduce CPU performance in certain applications. Default: 0
Precision Boost Overdrive Configurations	Enables configuration of AMD Precision Boost Overdrive (PBO) settings to allow higher CPU boost performance within expanded power and thermal limits. Default: Auto
Memory	Enables the use of AMD EXPO memory profiles (memory overclocking profiles). Default: Auto
Maintenance	
Data Wipe on next boot	If enabled, the BIOS will queue up a data wipe cycle for storage devices that are connected to the motherboard on the next reboot. Default: Enabled
BIOS Recovery from Hard Drive	Enables the computer to recover from a bad BIOS image, as long as the Boot Block portion is intact and functioning. Default: Enabled
BIOS Auto-Recovery	Enables the computer to automatically recover the BIOS without user actions. This feature requires BIOS Recovery from Hard Drive to be set to Enabled. Default: Disabled
SupportAssist System Resolution	
Auto OS Recovery Threshold	Controls the automatic boot flow for SupportAssist System Resolution Console and for Dell operating system Recovery tool. Default: 2
SupportAssist OS Recovery	Enables or disables the boot flow for SupportAssist operating system Recovery tool in the even of certain system errors. Default: Enabled

Table 7. BIOS Setup options—Security

Option	Description
Admin Password	Displays if the administrator password is clear or set. Default: Not Set
System Password	Displays if the system password is clear or set. Default: Not Set
Admin Password	Allows you to set, change, or delete the administrator(admin) password. The entries to set the password are: <ul style="list-style-type: none"> • Enter the old password: • Enter the new password:

Table 7. BIOS Setup options—Security (continued)

Option	Description
	<ul style="list-style-type: none"> • Confirm new password: <p>Click OK once you set the password.</p> <p>❶ NOTE: For the first-time login, "Enter the old password:" field is marked to "Not set". Hence, the password has to be set for the first time you login and then you can change or delete the password.</p>
System Password	<p>Allows you to set, change, or delete the System password.</p> <p>The entries to set the password are:</p> <ul style="list-style-type: none"> • Enter the old password: • Enter the new password: • Confirm new password: <p>Click OK once you set the password.</p> <p>❶ NOTE: For the first-time login, "Enter the old password:" field is marked to "Not set". Hence, the password has to be set for the first time you login and then you can change or delete the password.</p> <p>Default: Disabled</p>
Password Change	<p>Allows you to change the System password when the administrator password is set.</p> <ul style="list-style-type: none"> • Allow Non-Admin Password Changes <p>This option is enabled by default.</p>
Windows SMM Security Mitigations Table (WSMT)	<p>Enables or disables the Windows SMM Security Mitigations Table. It allows the system firmware to confirm to the OS that certain security best practices have been implemented in the System Management Mode (SMM) software.</p>
Firmware TPM	<p>Enables the Firmware TPM function.</p> <p>Default: Enabled</p>
PPI Bypass for Clear Command	<p>Enables you to control the TPM Physical Presence Interface (PPI). When enabled, this setting allows the OS to skip BIOS PPI user prompts when issuing the Clear command. Changes to this setting take effect immediately.</p>
Enable Master Password Lockout	<p>Allows you to disable master password support.</p> <p>Default: Disabled</p>
Enable Pre-Boot DMA Support	<p>Allows you to control the Pre-Boot DMA protection for both internal and external ports. This option does not directly enable DMA protection in the operating system.</p> <p>Default: Enabled</p>
Enable OS Kernel DMA Support	<p>Allows you to control the Kernel DMA protection for both internal and external ports. This option does not directly enable DMA protection in the operating system. For operating systems that support DMA protection, this setting indicates to the operating system that the BIOS supports the feature.</p> <p>Default: Enabled</p>
Internal Port DMA Compatibility Mode	<p>When enabled, the BIOS will notify the OS that the Internal ports are not DMA capable.</p> <p>Default: Disabled</p>
UEFI firmware Capsule Updates	<p>This option controls if the system allows BIOS updates via UEFI capsule update package.</p> <p>Default: Enabled</p>
Secure Boot	
Secure Boot	<p>Enables or disables the Secure Boot Feature.</p>

Table 7. BIOS Setup options—Security (continued)

Option	Description
	Choose one of the options: <ul style="list-style-type: none"> • Secure Boot Enable • Secure Boot Disable Default: Enabled
Secure Boot Mode	Displays the secure boot mode. Default: Deployed Mode.
Expert Key Management	Enables or disables Expert Key Management. Default: Enabled

Table 8. BIOS Setup options—Boot

Option	Description
Boot List Option	Displays the available boot options. Default: UEFI
File Browser Add Boot Option	Enables you to add the boot options.
File Browser Del Boot Option	Enables you to delete the boot options.
UEFI Boot	Enables or disables UEFI boot.

Table 9. BIOS Setup options—Exit

Option	Description
Exit Saving Changes	Exits system setup and saves all changes.
Save Change Without Exit	Saves all changes without exiting system setup.
Exit Discarding Changes	Exits system setup without saving changes.
Load Optimal Defaults	Loads the factory default values for all system setup options.
Discard Changes	Discards all unsaved changes and restores the previously saved values.

Updating the BIOS

Updating the BIOS in Windows

About this task

- ⚠ **CAUTION:** If BitLocker is not suspended before updating the BIOS, the BitLocker key is not recognized the next time you reboot the computer. You will then be prompted to enter the recovery key to proceed, and the computer displays a prompt for the recovery key on each reboot. Failure to provide the recovery key can result in data loss or an operating system reinstall. For more information, refer [Updating the BIOS on Dell systems with BitLocker enabled](#).
- ⚠ **CAUTION:** Do not turn off the computer during the BIOS flash update process. The computer may not boot if you turn off your computer.

Steps

1. Go to [Dell Support Site](#).

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

 **NOTE:** If you do not have the Service Tag, click **Detect This PC**. The site automatically detects your device, and you can then click **Explore Product Support** to go to the support page for your device. You can also use the product ID or manually browse for your computer model.

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

For more information, search [Dell Support Site](#).

Updating the BIOS using the USB drive in Windows

About this task

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

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

Steps

1. Go to [Dell Support Site](#).
 2. Go to **Identify your product or ask support**. In the box, enter the product identifier, model, service request or describe what you are looking for, and then click **Search**.
-  **NOTE:** If you do not have the Service Tag, click **Detect This PC**. The site automatically detects your device, and you can then click **Explore Product Support** to go to the support page for your device. You can also use the product ID or manually browse for your computer model.
3. Click **Drivers & Downloads**.
 4. Select the operating system installed on your computer.
 5. In the **Category** drop-down list, select **BIOS**.
 6. Select the latest version of BIOS, and click **Download** to download the BIOS file for your computer.
 7. Create a bootable USB drive. For more information, search [Dell Support Site](#).
 8. Copy the BIOS setup program file to the bootable USB drive.
 9. Connect the bootable USB drive to the computer that needs the BIOS update.
 10. Restart the computer and press **F12**.
 11. Select the USB drive from the **One Time Boot Menu**.
 12. Type the BIOS setup program filename and press **Enter**.
The **BIOS Update Utility** appears.
 13. Follow the on-screen instructions to complete the BIOS update.

Updating the BIOS from the One-Time boot menu

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

System and setup password

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

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

Table 10. System and setup password

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

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

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

Assigning a System Setup password

Prerequisites

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

Steps

1. To enter the **System Setup**, press **F2** immediately after a power-on or reboot.
2. In the **System BIOS** or **System Setup** screen, select **Security** and press Enter.
The **Security** screen is displayed.
3. Select **System/Admin Password** and create a password in the **Enter the new password** field.
Use the following guidelines to create the system password:
 - Password can be up to 32 characters.
 - Password must contain at least one special character: "(! " # \$ % & ' * + , - . / : ; < = > ? @ [\] ^ _ ` { | })"
 - The password can contain numbers from 0 to 9.
 - The password can contain alphabets A to Z and a to z.
4. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
5. Press Y to save the changes.
The computer restarts.

Deleting or changing an existing system password or setup password

Prerequisites

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

Steps

1. To enter the **System Setup**, press **F2** immediately after a power-on or reboot.
2. In the **System BIOS** or **System Setup** screen, select **System Security** and press Enter.
The **System Security** screen is displayed.
3. In the **System Security** screen, verify that the **Password Status** is Unlocked.
4. Select **System Password**. Update or delete the existing system password, and press Enter or Tab.
5. Select **Setup Password**. Update or delete the existing setup password, and press Enter or Tab.

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

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

Clearing system and setup passwords

About this task

To clear the system or setup passwords, contact Dell technical support as described at [Contact Support](#).

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

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 at [Dell Support Site](#).

Dell SupportAssist Pre-boot System Performance Check diagnostics

About this task

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

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

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

For more information, see [How to Run Dell Preboot Diagnostics and Hardware Tests on Your Dell Computer](#).

Running the SupportAssist Pre-Boot System Performance Check

Steps

1. Turn on your computer.
2. As the computer boots, press the F12 key.
3. On the boot menu screen, select **Diagnostics**.
The quick diagnostic test begins.
i **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)

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.
- i** **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 Alienware 15 DA15265.

- i** **NOTE:** The battery-status light shows the Service LED system-diagnostic light codes.

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

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

Table 11. Diagnostic light codes

Diagnostic light codes (Amber, White)	Problem description
2,1	CPU configuration or CPU failure
2,2	System board: BIOS or ReadOnly Memory (ROM) failure
2,3	No memory or RandomAccess Memory (RAM) detected
2,4	Memory or Random-Access Memory (RAM) failure
2,5	Invalid memory installed
2,6	System board or Chipset Error
2,7	LCD failure SBIOS message
2,8	Display power-rail failure on the system board
3,1	RTC power failure
3,3	Recovery image not found
3,4	Recovery image found but invalid

Recovering the operating system

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

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

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

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

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

Real-Time Clock (RTC Reset)

The Real-Time Clock (RTC) reset function enables you or the service technician to recover Dell computers from No POST/No Power/No Boot situations.

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

Backup media and recovery options

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

Network power cycle

About this task

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

Steps

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

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 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.
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.

Getting help and contacting Alienware

Self-help resources

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

Table 12. Alienware products and online self-help resources

Self-help resources	Resource location
Information about Alienware products and services	Alienware Support Site
Contact Support	In Windows search, type Contact Support , and press Enter .
Online help for operating system	Windows Support Site
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals, and documents.	Your Alienware computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at 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 .
Videos providing step-by-step instructions to service your computer.	Alienware Support Channel

Contacting Alienware

To contact Alienware for sales, technical support, or customer service issues, see [Alienware 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.

Revision history

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

Table 13. Revision history

Revision	Date	Description
A00	April 2026	Original publish date.