

XPS 13

DX13260

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.
-  **WARNING:** For laptops, discharge the battery completely before removing it. Disconnect the AC power adapter from the computer and operate the computer solely on battery power—the battery is fully discharged when the computer no longer turns on when the power button
-  **CAUTION:** To avoid damaging the computer, ensure that the work surface is flat, dry, and clean.
-  **CAUTION:** You should only perform troubleshooting and repairs as authorized or directed by the Dell technical support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty.
-  **CAUTION:** Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity which could harm internal components.
-  **CAUTION:** To avoid damaging the components and cards, handle them by their edges, and avoid touching the pins and the contacts.
-  **CAUTION:** When you disconnect a cable, pull it by its connector or its pull tab, not the cable itself. Some cables have connectors with locking tabs or thumbscrews that you must disengage before disconnecting the cable. When disconnecting cables, keep them evenly aligned to avoid bending the connector pins. When connecting cables, ensure that the connector on the cable is correctly oriented and aligned with the port.
-  **CAUTION:** Press and eject any installed card from the media-card reader.
-  **CAUTION:** Exercise caution when handling rechargeable Li-ion batteries in laptops. Swollen batteries should not be used and must be replaced and disposed properly.

Before working inside your computer

About this task

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

Steps

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

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

3. Turn off all the attached peripherals.
4. Disconnect your computer 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:

- Solid-state drive
- System board

Recommended tools

The procedures in this document may require the following tools:

- Torx screwdriver T5
- Phillips screwdriver
- Plastic scribe
- ESD wrist strap

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.

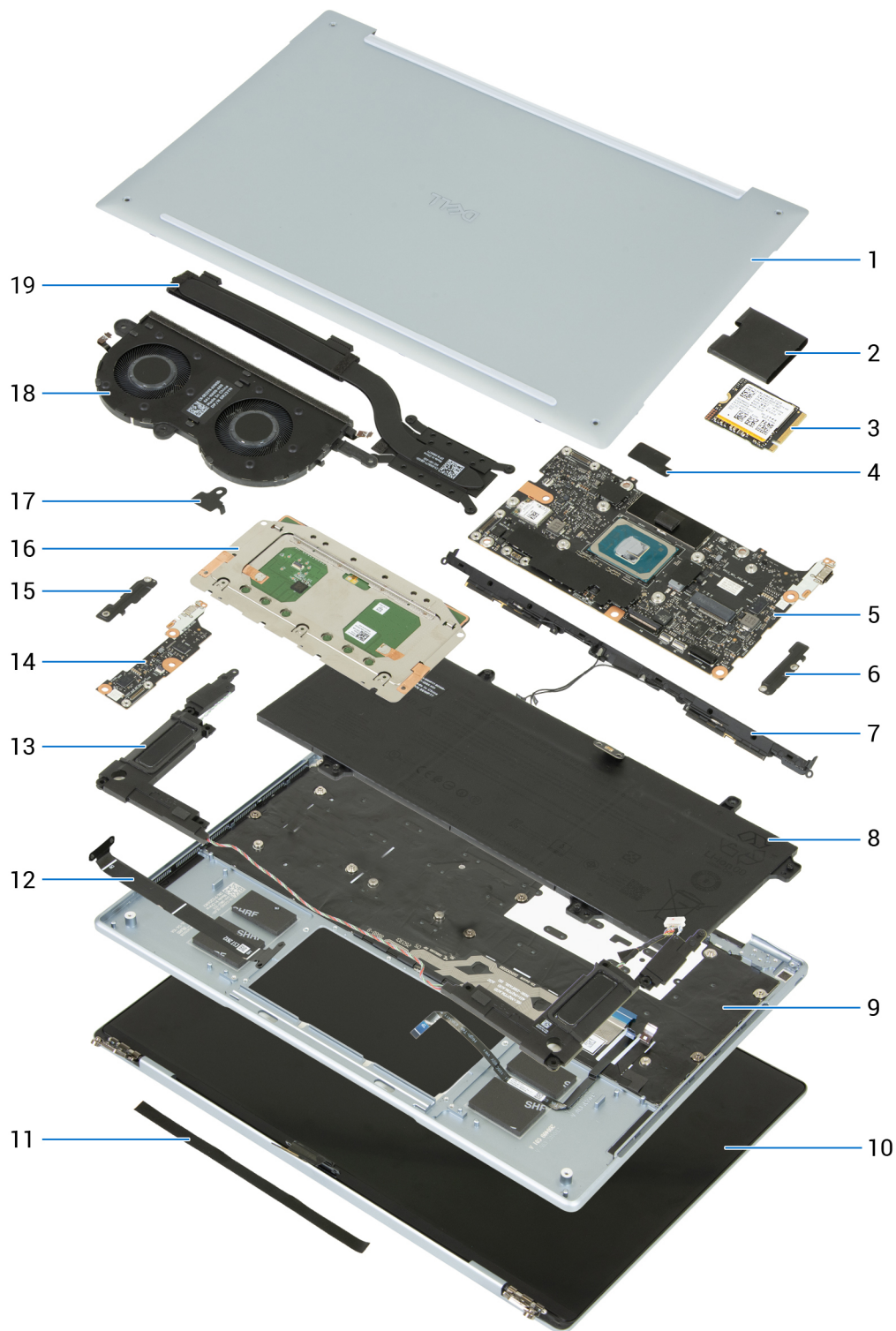
NOTE: Screw color may vary depending on the configuration ordered.

Table 1. Screw list

Component	Screw type	Quantity	Screw torque strength	Screw image
Base cover	M2x3.5, T5	4	1.85 kgf-cm to 2.15 kgf-cm	
Hinges	M2x4.5	6	2.70 kgf-cm to 3.30 kgf-cm	
Wireless-antenna module	M1.6x2.5	6	1.40 kgf-cm to 1.60 kgf-cm	
USB-C brackets	M1.6x2.5	4	1.40 kgf-cm to 1.60 kgf-cm	
Fan	M2x3	3	1.85 kgf-cm to 2.15 kgf-cm	
System board	M2x2.5	3	1.85 kgf-cm to 2.15 kgf-cm	
Solid-state drive	M2x2.5	1	1.85 kgf-cm to 2.15 kgf-cm	
Wireless-module bracket	M2x2.5	1	1.85 kgf-cm to 2.15 kgf-cm	
I/O daughterboard cable	M2x2.5	4	1.85 kgf-cm to 2.15 kgf-cm	
Display-cable bracket	M2x2.5	2	1.85 kgf-cm to 2.15 kgf-cm	
Battery-cable bracket	M2x2.5	2	1.85 kgf-cm to 2.15 kgf-cm	
Touchpad assembly	M2x1.7	8	1.90 kgf-cm to 2.10 kgf-cm	
Battery	M2x4	6	1.85 kgf-cm to 2.15 kgf-cm	
Heatsink	M2x2.5, Captive	4	1.85 kgf-cm to 2.15 kgf-cm	
Speaker	M2x2.8	2	1.85 kgf-cm to 2.15 kgf-cm	

Major components of XPS 13 DX13260

The following image shows the major components of XPS 13 DX13260.



- | | |
|------------------------------------|---|
| 1. Base cover | 2. Solid-state drive (SSD) thermal sleeve |
| 3. SSD | 4. Mylar tape for display-cable bracket |
| 5. System board | 6. Right USB-C bracket |
| 7. Wireless-antenna module | 8. Battery |
| 9. Palm-rest and keyboard assembly | 10. Display assembly |
| 11. Speaker-cable mylar | 12. I/O daughterboard cable |
| 13. Speakers | 14. I/O daughterboard |
| 15. Left USB-C bracket | 16. Touchpad |
| 17. Wireless-module bracket | 18. Fans |

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

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

The replaceable components in XPS 13 DX13260 are either Customer Replaceable Units (CRUs) or Field Replaceable Units (FRUs).

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

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

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

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

Table 2. CRU and FRU list

Customer Replaceable Units (CRUs)	Field Replaceable Units (FRUs)
None	Base cover
	Battery
	Touchpad assembly
	Speaker-cable mylar
	Speakers
	SSD-thermal sleeve
	SSD
	Heat sink
	Wireless-module bracket
	Wireless-module antenna
	Fans
	Display assembly
	I/O daughterboard cable
	Left USB-C bracket
	I/O daughterboard
	Right USB-C bracket
	System board
	Palm-rest and keyboard assembly

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.

Base cover

Removing the base cover

Prerequisites

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.

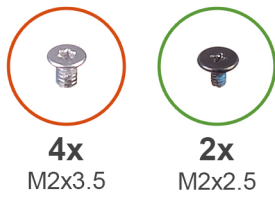


Figure 1. Removing the screws from the base cover



Figure 2. Opening the base cover



Figure 3. Disconnecting the battery cable

Steps

1. Remove the four screws (M2x3.5, T5) that secure the base cover to the palm-rest and keyboard assembly.

NOTE: A Torx screwdriver T5 is necessary to remove the screws (M2x3.5, T5).

2. Place your thumbs and fingers into the recess at the top edge of the base cover.
3. Use both thumbs to pull and loosen the base cover from the palm-rest and keyboard assembly.

CAUTION: Do not pull on or pry the base cover from where the display assembly hinges are located, doing so may damage the base cover.

4. Using a plastic scribe, pry open the base cover from the gap that is created and continue to work on the other sides to open the base cover.
5. Carefully lift the base cover off the palm-rest and keyboard assembly.
6. Remove the two screws (M2x2.5) that secure the battery-cable bracket to the system board.
7. Disconnect the battery cable from the system board.
8. Press and hold the power button for 20 seconds to 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 4. Connecting the battery cable



Figure 5. Placing the base cover



Figure 6. Replacing the screws of the base cover

Steps

1. Align the screw holes of the battery-cable bracket with the screw holes of the system board. This ensures that the battery cable and connector on the system board are properly aligned.
2. Press down on the battery-cable bracket until you feel the cable connector locking into position.

CAUTION: If the battery cable and connector do not lock into position, verify that the battery cable and connector on the system board are properly aligned and securely joined before proceeding. A misaligned battery cable on the system-board connector can damage the connector pins.

3. Replace the two screws (M2x2.5) that secure the battery cable-bracket to the system board.
4. Align the screw holes on the base cover with the screw holes on the palm-rest and keyboard assembly.
5. Snap the base cover into place on the palm-rest and keyboard assembly.
6. Replace the four screws (M2x3.5, T5) that secure the base cover to the palm-rest and keyboard assembly.

NOTE: A Torx screwdriver T5 is necessary to install the four screws (M2x3.5, T5).

Next steps

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

Battery

Rechargeable Li-ion battery precautions

WARNING:

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

Removing the battery

Prerequisites

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 check 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.

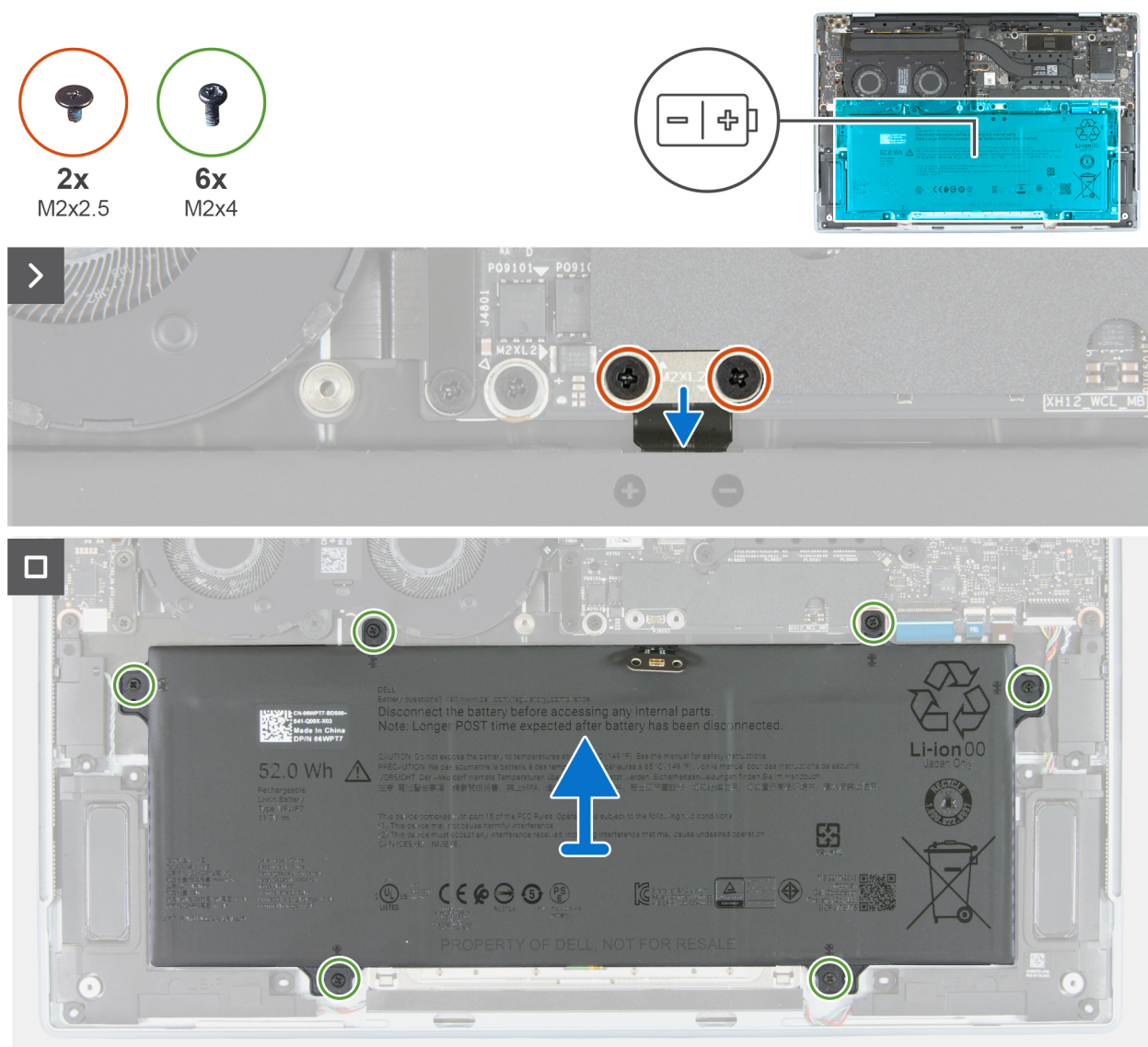


Figure 7. Removing the battery

Steps

1. Remove the two screws (M2x2.5) that secure the battery-cable bracket to the system board if you did not disconnect it when [removing the base cover](#).
2. Disconnect the battery cable from the system board.
3. Remove the six screws (M2x4) that secure the battery to the palm-rest and keyboard assembly.
4. Lift the battery off the palm-rest and keyboard assembly.

Installing the battery

Prerequisites

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

About this task

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

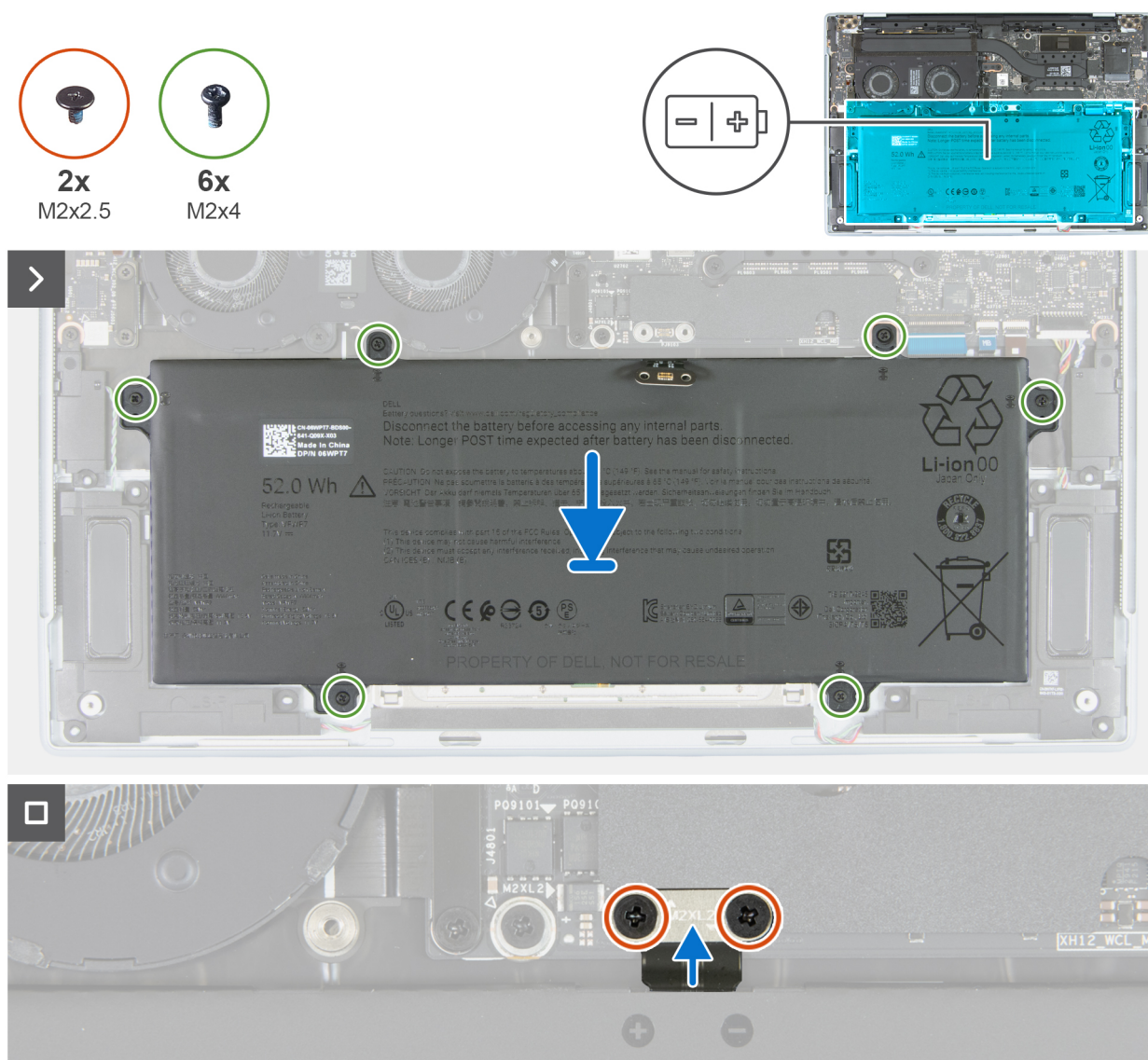


Figure 8. Installing the battery

Steps

1. Using the alignment posts, place the battery in the slot on the palm-rest assembly.
2. Replace the six screws (M2x4) that secure the battery to the palm-rest and keyboard assembly.
3. Align the screw holes of the battery-cable bracket with the screw holes of the system board. This ensures that the battery cable and connector on the system board are properly aligned.
4. Press down on the battery-cable bracket until you feel the cable connector locking into position.

CAUTION: If the battery cable and connector do not lock into position, verify that the battery cable and connector on the system board are properly aligned and securely joined before proceeding. A misaligned battery cable on the system-board connector can damage the connector pins.

5. Replace the two screws (M2x2.5) that secure the battery cable-bracket to the system board.

Next steps

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

About this task

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



8x
M2x1.7

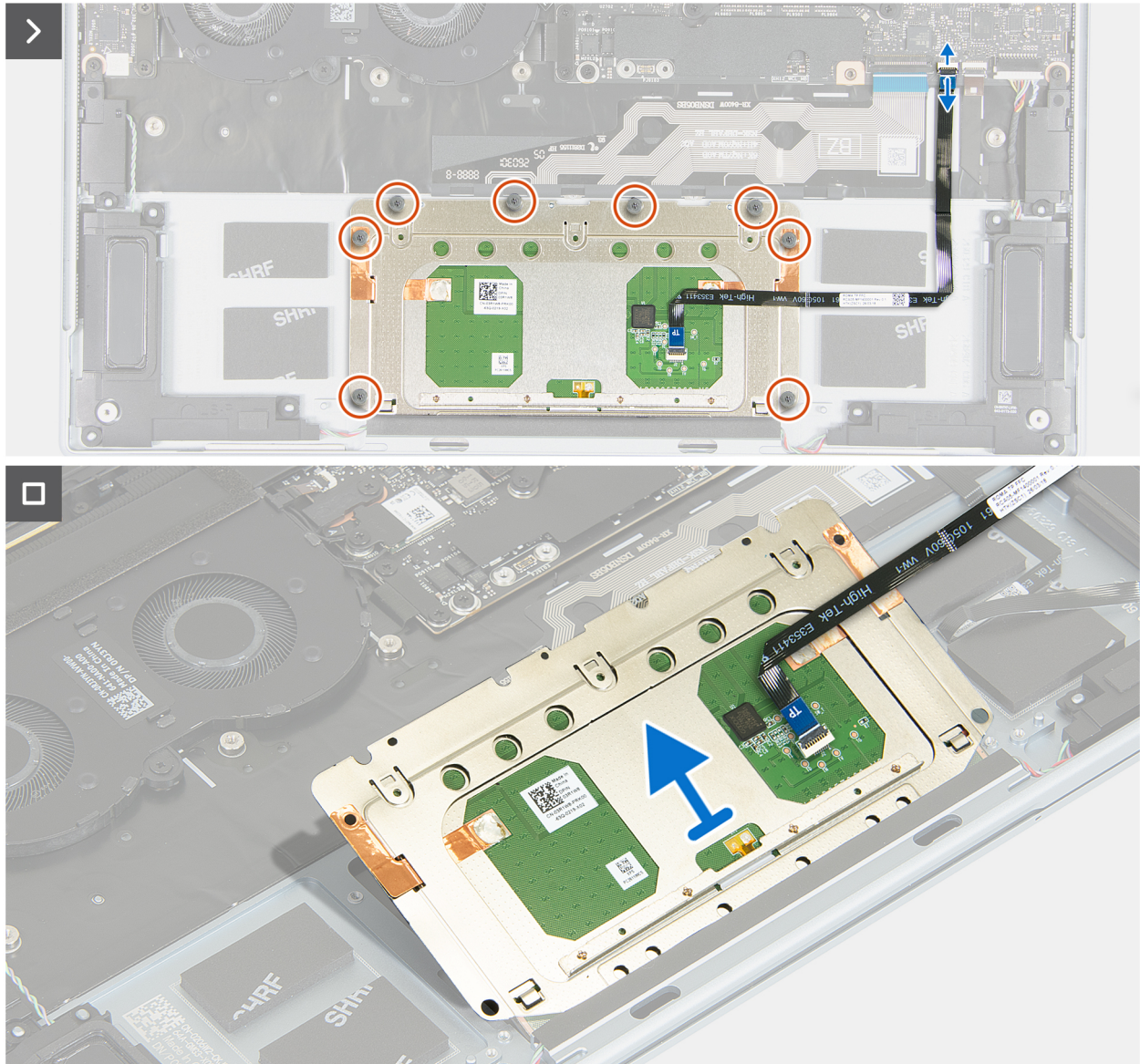
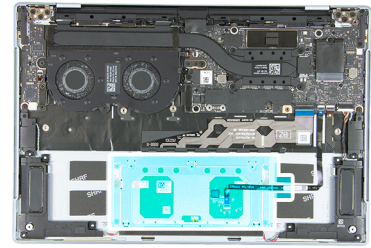


Figure 9. Removing the touchpad assembly

Steps

1. Open the latch and disconnect the touchpad cable from the connector on the system board.
2. Remove the eight screws (M2x1.7) that secure the touchpad bracket to the palm-rest and keyboard assembly.
3. 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 process.

About this task

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

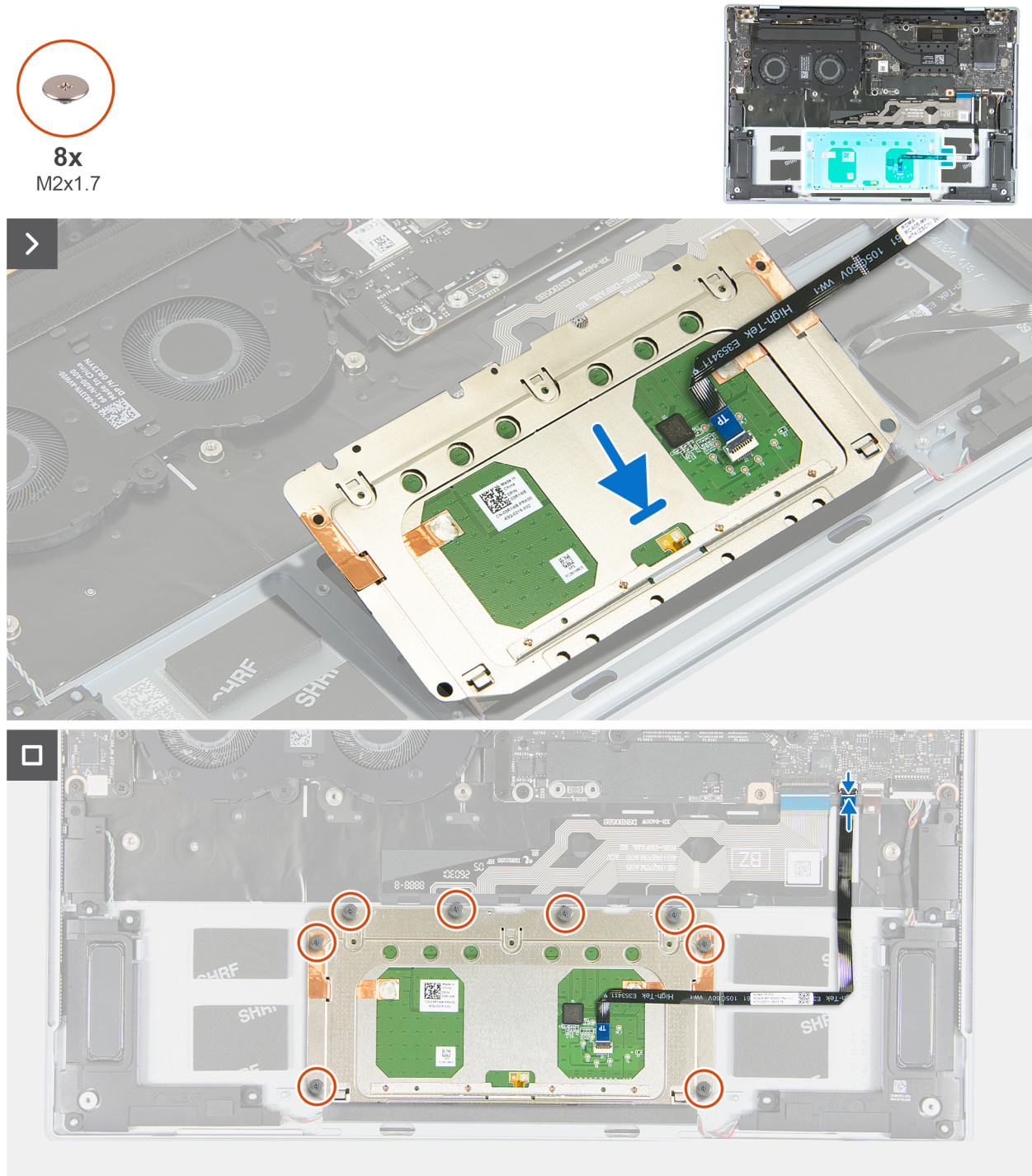


Figure 10. Installing the touchpad assembly

Steps

1. Insert the touchpad assembly at an angle into the palm-rest and keyboard assembly.
2. Align the screw holes of the touchpad assembly with the screw holes of the palm-rest and keyboard assembly.
3. Replace the eight screws (M2x1.7) that secures the touchpad assembly to the system board.
4. Connect the touchpad cable to the connector on the system board and close the latch.

Next steps

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

Speaker-cable mylar

Removing the speaker-cable mylar

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 speaker-cable mylar and provides a visual representation of the removal procedure.



Figure 11. Removing the speaker-cable mylar

Steps

Peel off the speaker-cable mylar from the speaker cable routing guide on the palm-rest and keyboard assembly.

Installing the speaker-cable mylar

Prerequisites

About this task

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



Figure 12. Installing the speaker-cable mylar

Steps

Adhere the speaker-cable mylar over the speaker cable routing guide on the palm-rest and keyboard assembly.

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 image indicates the location of the speakers and provides a visual representation of the removal procedure.

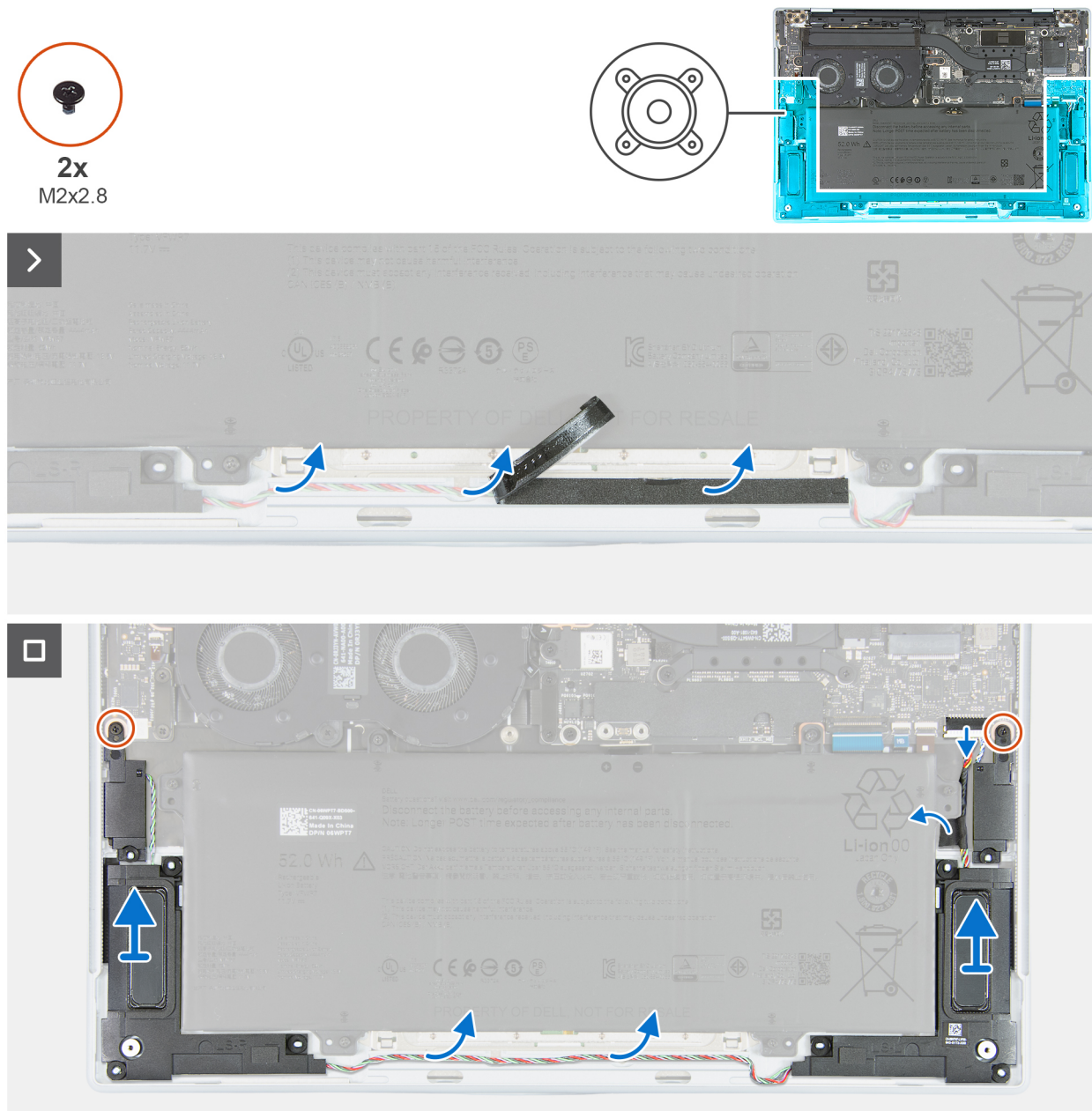


Figure 13. Removing the speakers

Steps

1. Peel off the speaker-cable mylar from the speaker cable routing guide on the palm-rest and keyboard assembly.
2. Disconnect the speaker cable from the connector on the system board.
3. Remove the two screws (M2x2.8) that secure the left and right speakers to the base cover.
4. Lift the left and right speakers, along with the cable, off the palm-rest and assembly.

Installing the speakers

Prerequisites

About this task

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

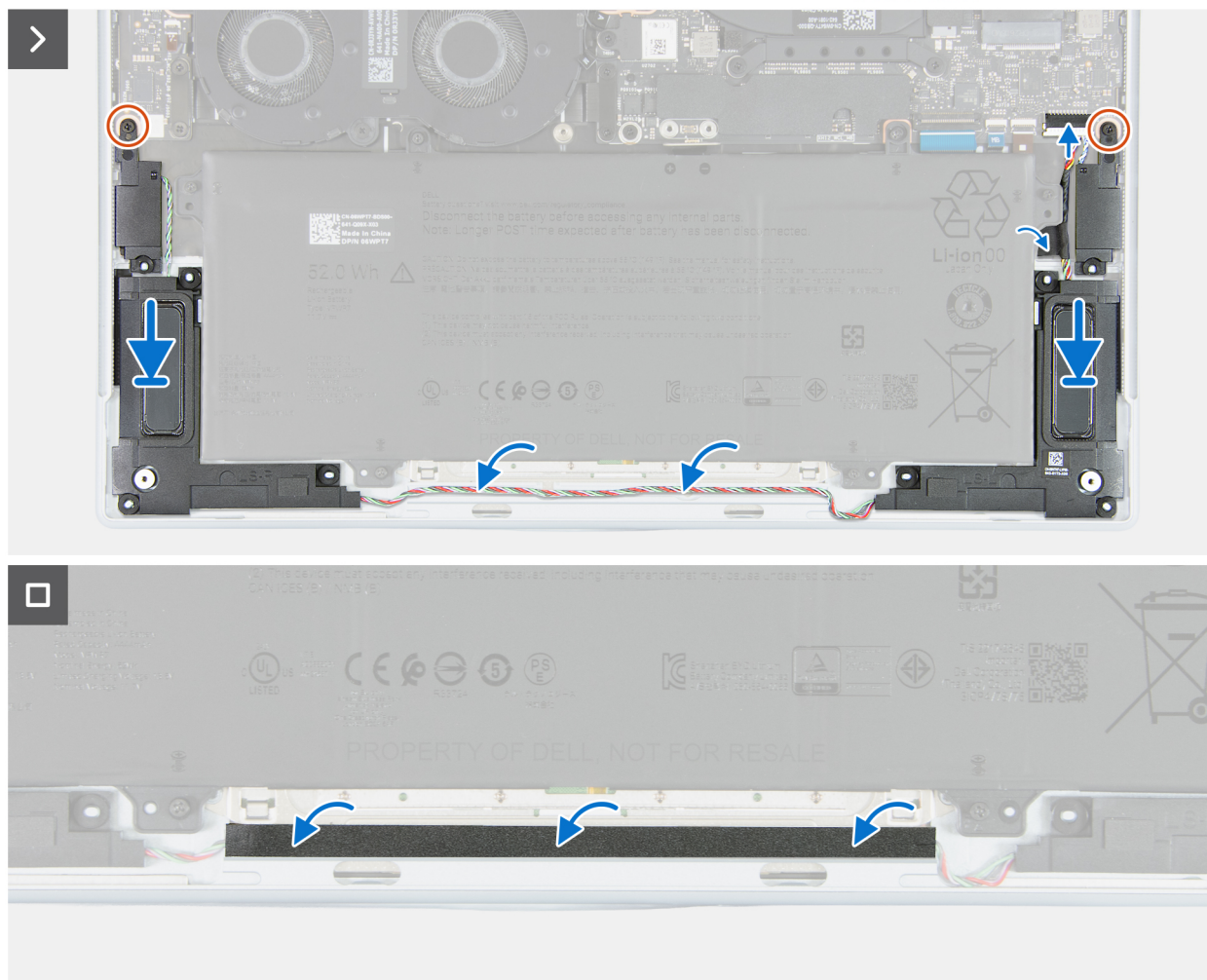
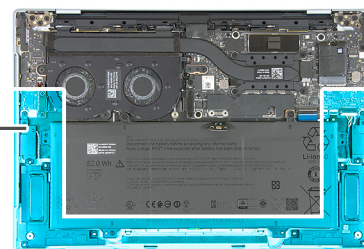
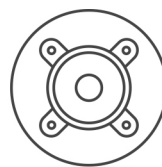


Figure 14. Installing the speakers

Steps

1. Using the alignment posts, place the left and right speakers into position on the palm-rest and keyboard assembly.
2. Route the speaker cable through the routing guide on the palm-rest and keyboard assembly.
3. Connect the speaker cable to the connector on the system board.
4. Replace the two screws (M2x2.8) that secure the left and right speakers to the palm-rest and keyboard assembly.
5. Adhere the speaker-cable mylar over the speaker cable routing guide on the palm-rest and keyboard assembly.

Next steps

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

SSD and SSD-thermal sleeve

Removing the SSD and SSD-thermal sleeve

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 SSD and SSD-thermal sleeve and provide a visual representation of the removal procedure.

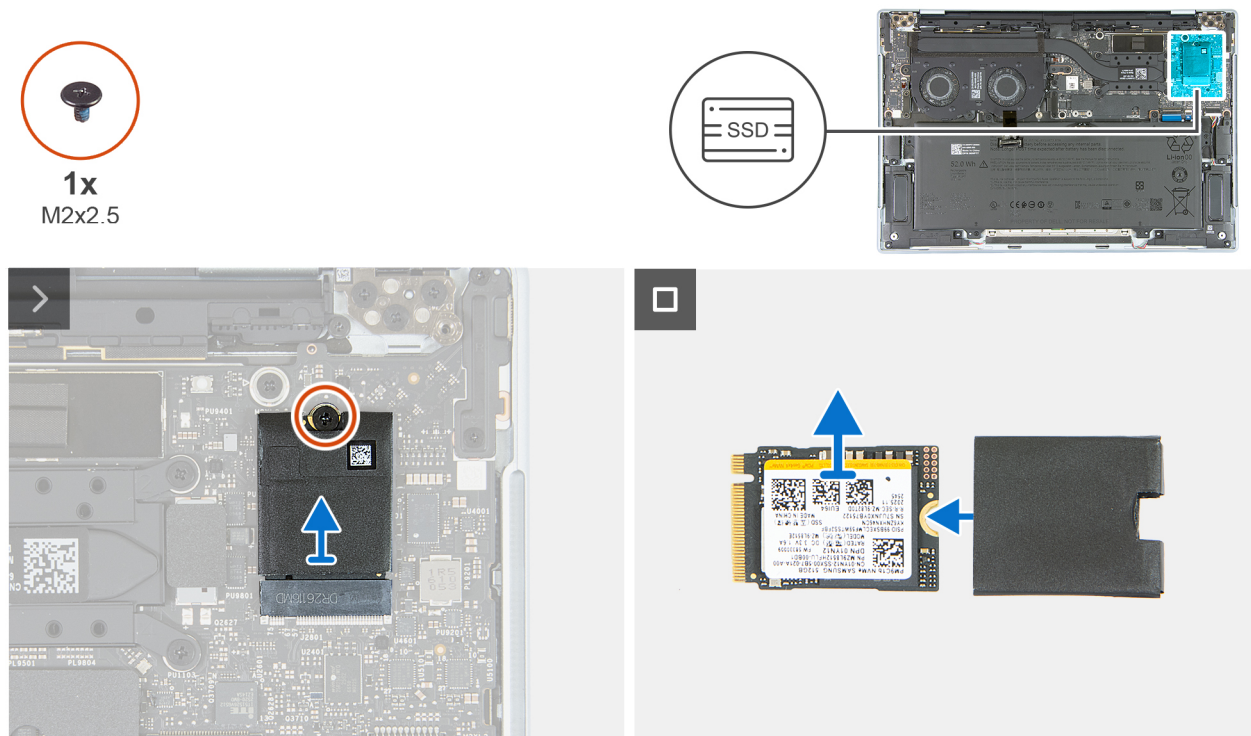


Figure 15. Removing the SSD and SSD-thermal sleeve

Steps

1. Remove the screw (M2x2.5) that secures the SSD to the system board.
2. Slide and remove the SSD off the system board.
3. Pull the SSD out of the SSD thermal sleeve.

Installing the SSD and SSD-thermal sleeve

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 SSD and SSD-thermal sleeve and provide a visual representation of the installation procedure.

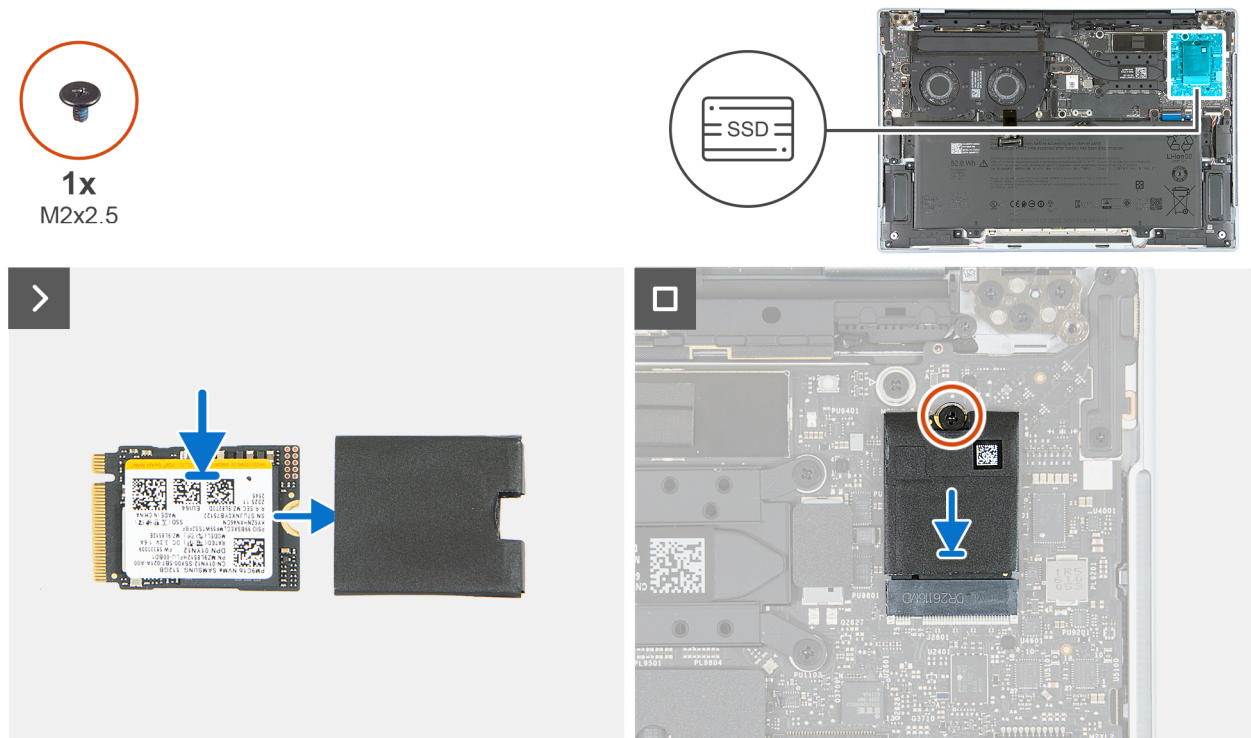


Figure 16. Installing the SSD and SSD-thermal sleeve

Steps

1. Insert the SSD into the SSD-thermal sleeve.
2. Align the notch on the SSD with the tab on the SSD slot, then gently slide the SSD into position.
3. Replace the screw (M2x2.5) 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](#).

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

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

NOTE: For maximum cooling of the processor, do not touch the heat-transfer areas on the heat sink. The oils in your skin can reduce the heat-transfer capability of the thermal grease.

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

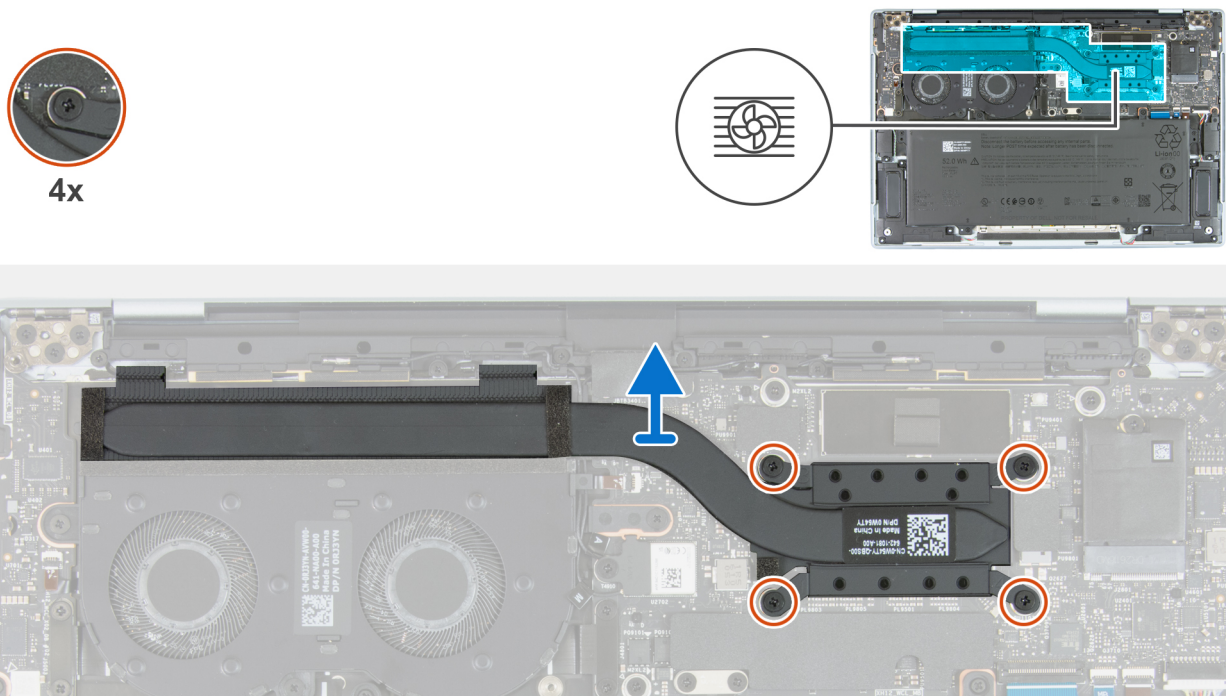


Figure 17. Removing the heat sink

Steps

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

Installing the heat sink

Prerequisites

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

About this task

NOTE: Incorrect alignment of the heat sink can damage the system board and processor.

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

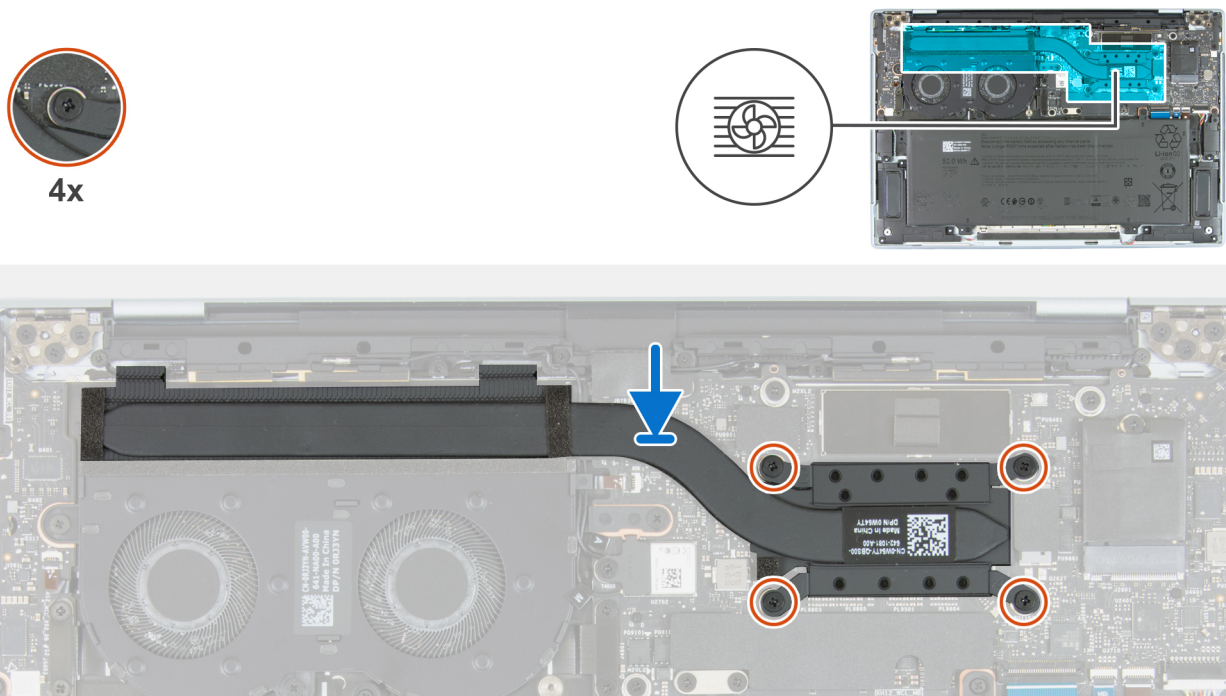


Figure 18. Installing the heat sink

NOTE: During the replacement of the heat sink, the thermal paste is already applied to the processor, so there is no need to apply additional thermal paste.

Steps

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

Next steps

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

Wireless-module bracket

Removing the wireless-module bracket

Prerequisites

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

About this task

NOTE: The wireless module is integrated on the system board and cannot be removed or replaced. If the module is defective, the system board must be replaced.

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

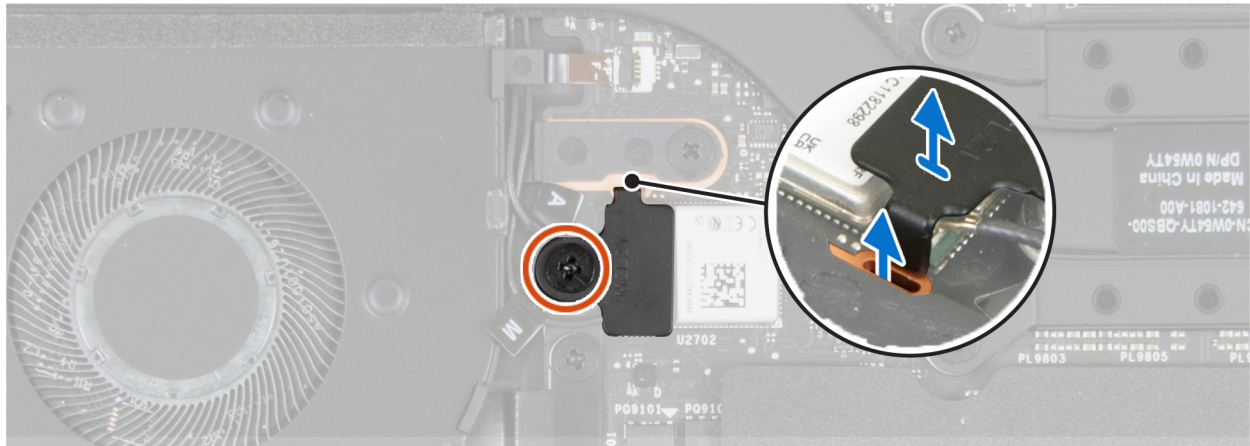


Figure 19. Removing the wireless-module bracket

Steps

1. Remove the screw (M2x2.5) that secures the wireless-module bracket to the system board.
2. Using a plastic scribe, dislodge the wireless-module bracket and lift it off the system board.

Installing the wireless-module bracket

Prerequisites

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

About this task

The following image indicates the location of the wireless-module bracket and provides a visual representation of the installation procedure.

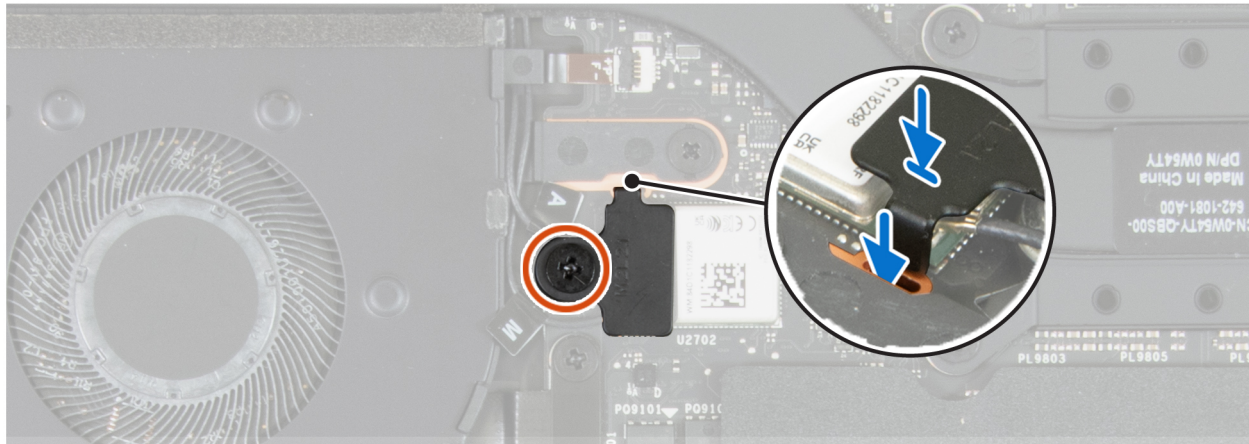


Figure 20. Installing the wireless-module bracket

Steps

1. Align the screw hole on the wireless-module bracket with the screw hole on the system board.
2. Push the wireless-module bracket into its slot on the system board.
3. Replace the screw (M2x2.5) that secures the wireless-module bracket to the system board.

Next steps

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

Wireless-antenna module

Removing the wireless-antenna module

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [heat sink](#).
4. Remove the [wireless-module bracket](#).

About this task

NOTE: The wireless module is integrated on the system board and cannot be removed or replaced. If the module is defective, the system board must be replaced.

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

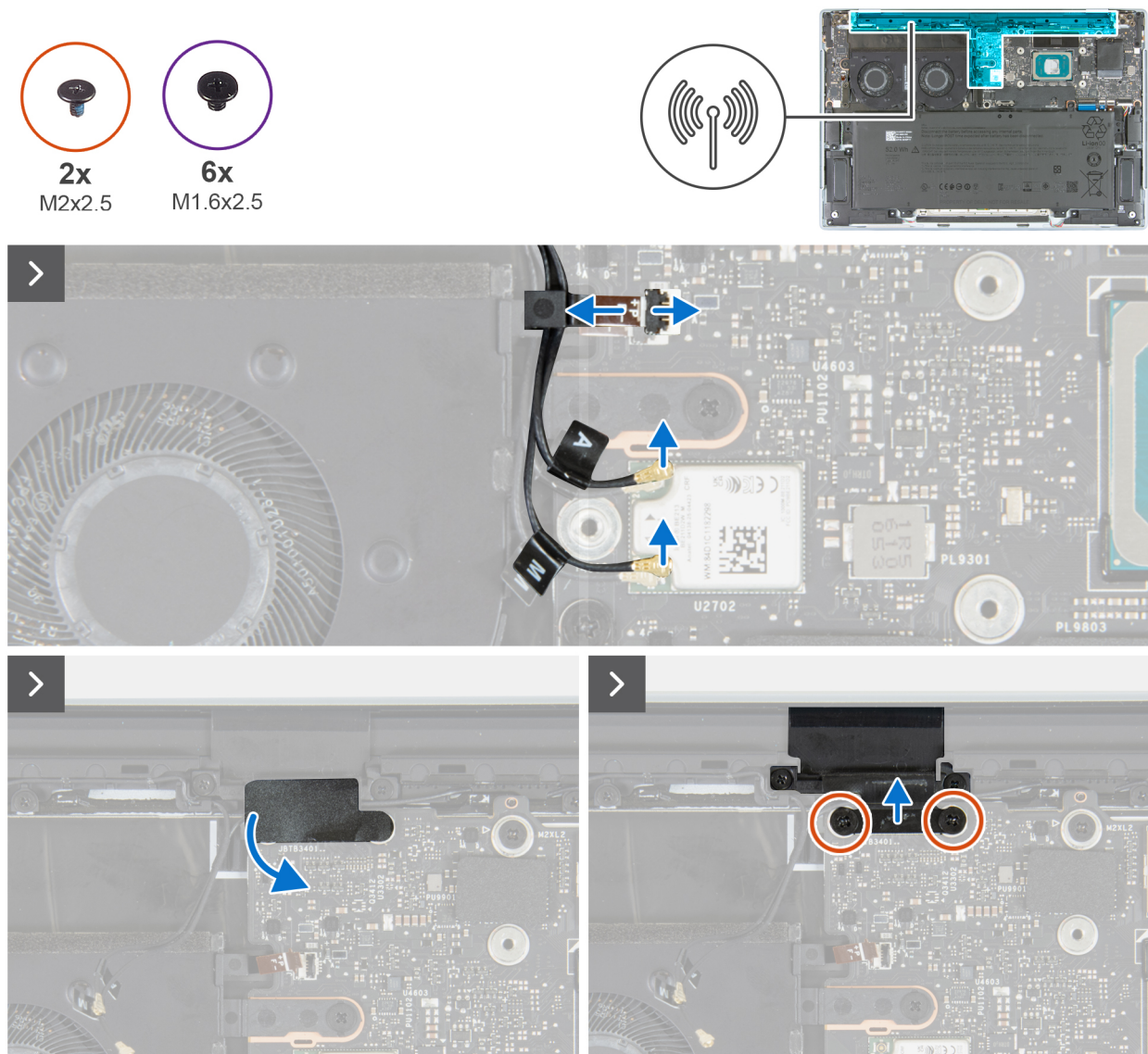


Figure 21. Disconnecting the antenna cables and removing the bracket

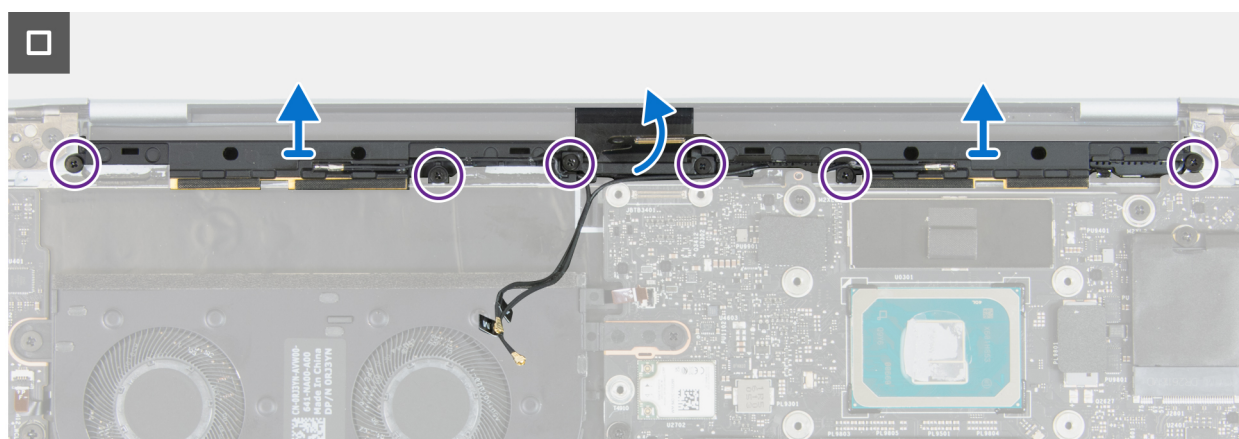


Figure 22. Removing the wireless-antenna module

Steps

1. Disconnect the antenna cables from the wireless module.

2. Open the latch and disconnect the right-fan cable from the connector on the system board.
3. Unroute the antenna cables from the routing guide of the fan.
4. Peel off the mylar tape covering the display-cable bracket off the display assembly.
5. Remove the two screws (M2x2.5) that secure the display-cable bracket to the system board.
6. Disconnect the display cable from the connector on the system board.
7. Remove the six screws (M1.6x2.5) securing the wireless-antenna module to the palm-rest and keyboard assembly.
8. Lift the wireless-antenna module off the palm-rest and keyboard assembly.

Installing the wireless-antenna module

Prerequisites

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

About this task

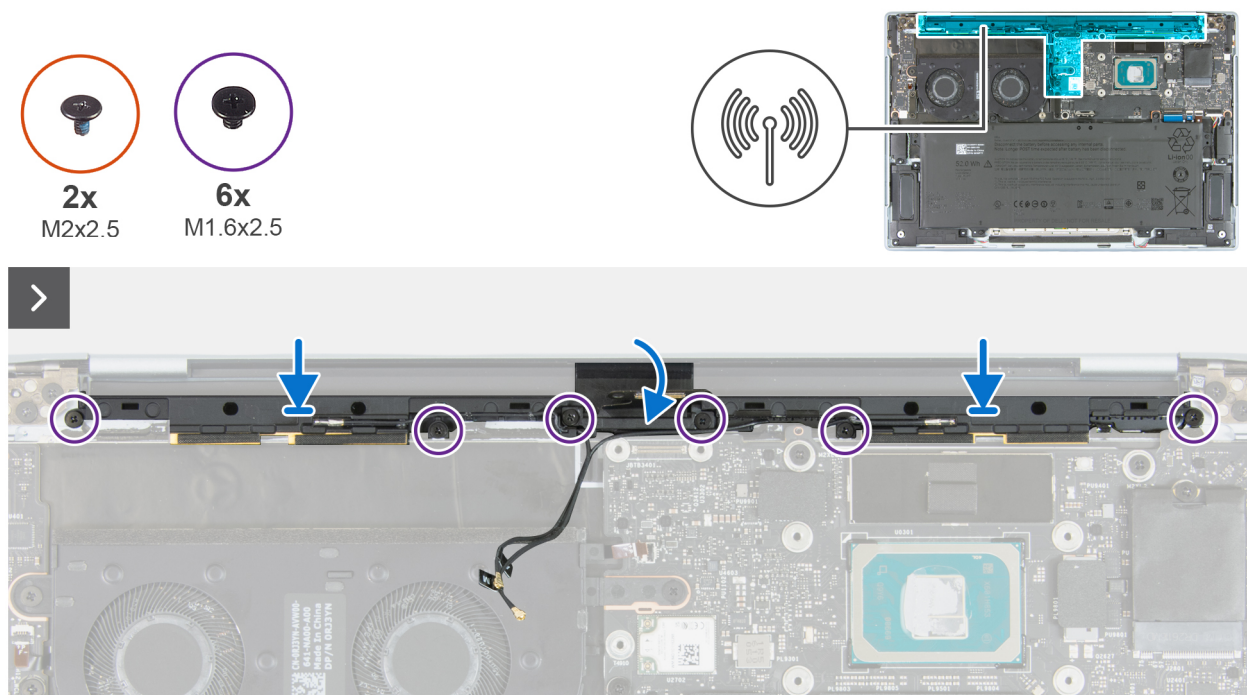


Figure 23. Installing the wireless-antenna module

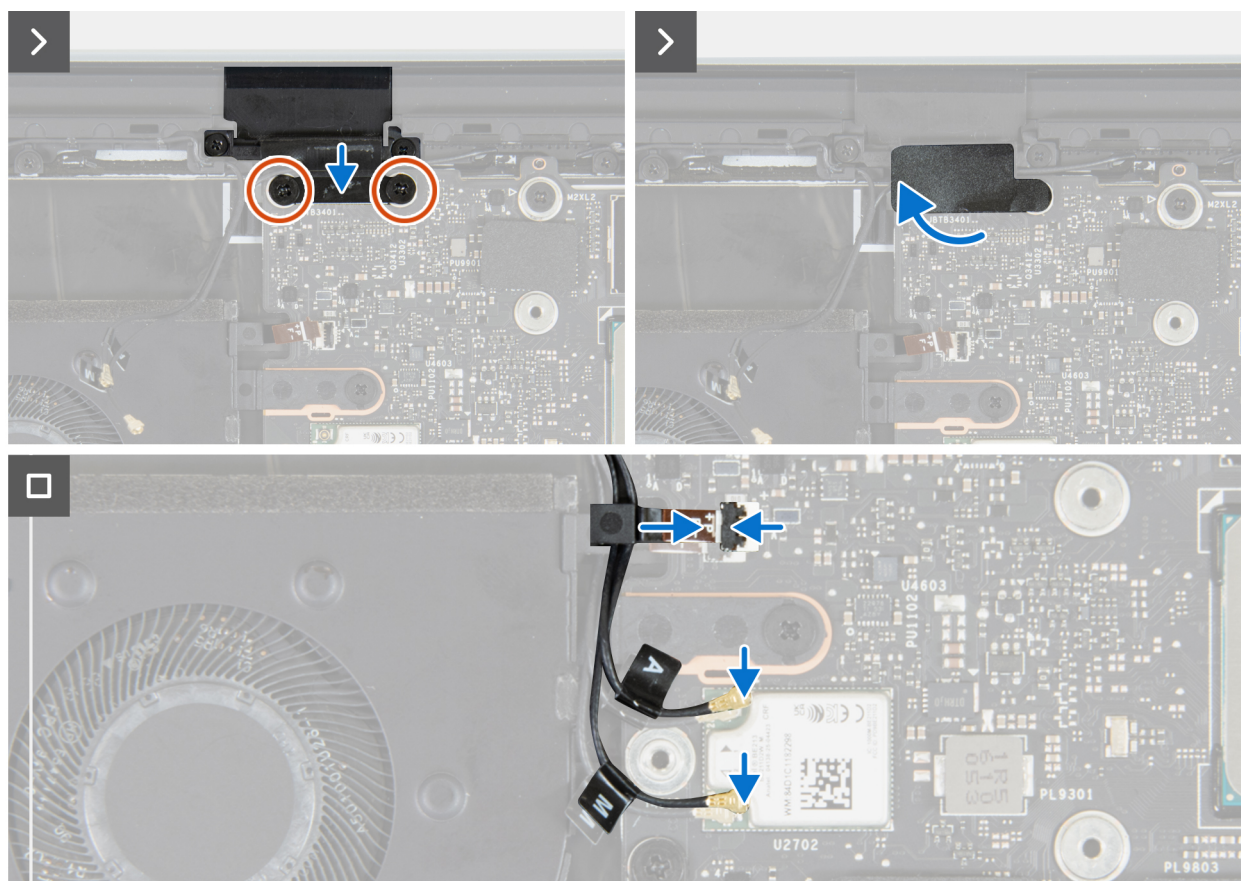


Figure 24. Securing the bracket and connecting the antenna cables

Steps

1. Align the screw holes on the wireless-antenna module with the screw holes on the palm-rest and keyboard assembly.
2. Replace the six screws (M1.6x2.5) that secure the wireless-antenna module to the palm-rest and keyboard assembly.
3. Align the screw holes on the display-cable bracket with the screw holes on the system board.
4. Replace the two screws (M2x2.5) that secure the display-cable bracket to the system board.
5. Adhere the mylar tape to the display-cable bracket .
6. Route the antenna cables under the heat sink and through the routing guide of the fan.
7. Connect the right-fan cable to the connector on the system board and close the latch.
8. Connect the antenna cable with the "A" label to the connector on the wireless module (indicated by the black triangle).
9. Connect the antenna cable with the "M" label to the connector on the wireless module (indicated by the white triangle).

Next steps

1. Install the [wireless-module bracket](#).
2. Install the [heat sink](#).
3. Install the [base cover](#).
4. Follow the procedure in [After working inside your computer](#).

Fans

Removing the fans

Prerequisites

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

2. Remove the [base cover](#).
3. Remove the [wireless-module bracket](#).

About this task

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

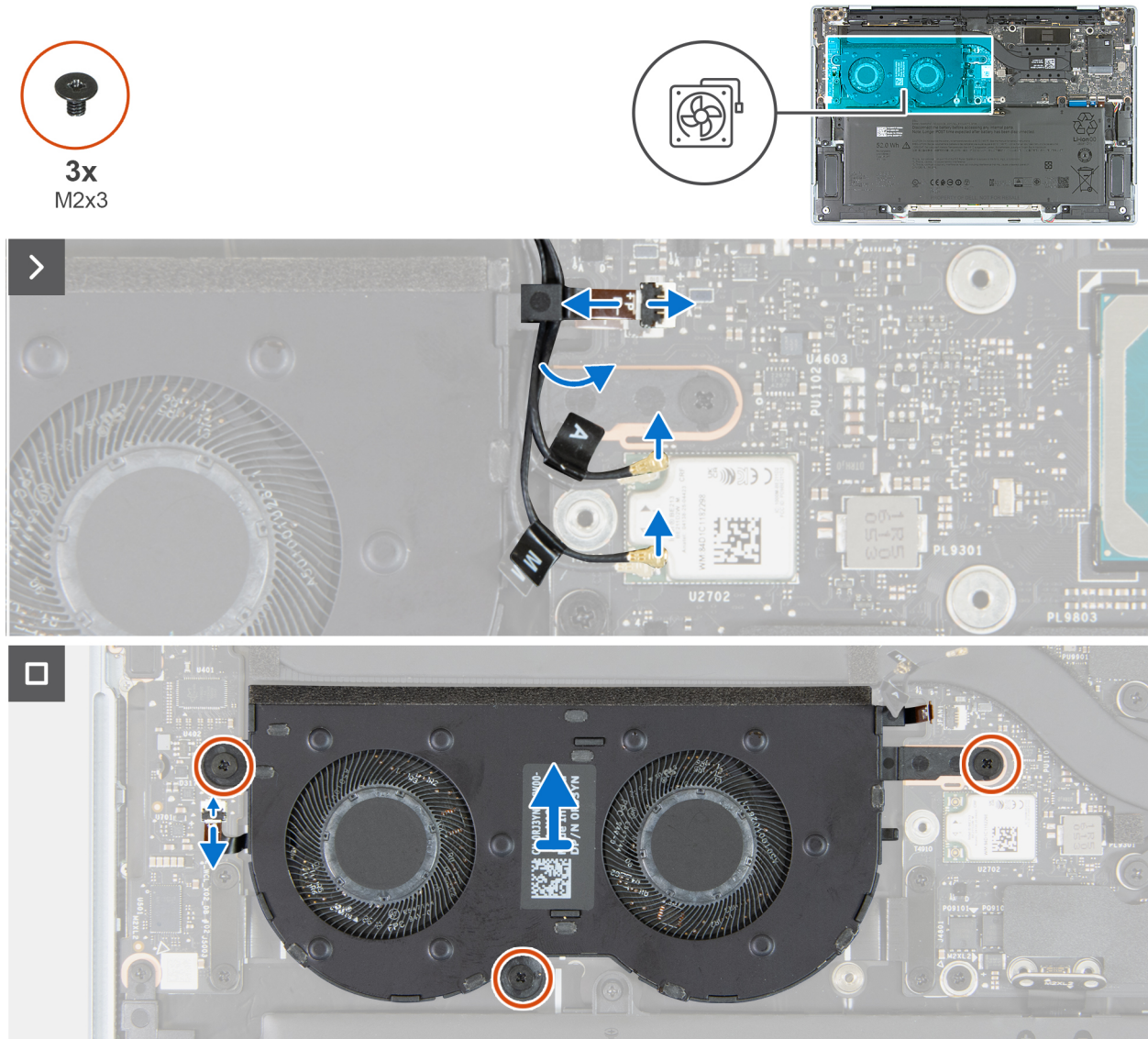


Figure 25. Removing the fans

Steps

1. Disconnect the antenna cables from the wireless module.
2. Open the latch and disconnect the right-fan cable from the connector on the system board.
3. Unroute the antenna cables from the routing guide of the fan.
4. Open the latch and disconnect the left-fan cable from the connector on the system board.
5. Remove the three screws (M2x3) that secure the fans to the system board.
6. Lift the fans off the system board.

Installing the fans

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 fans and provide a visual representation of the installation procedure.

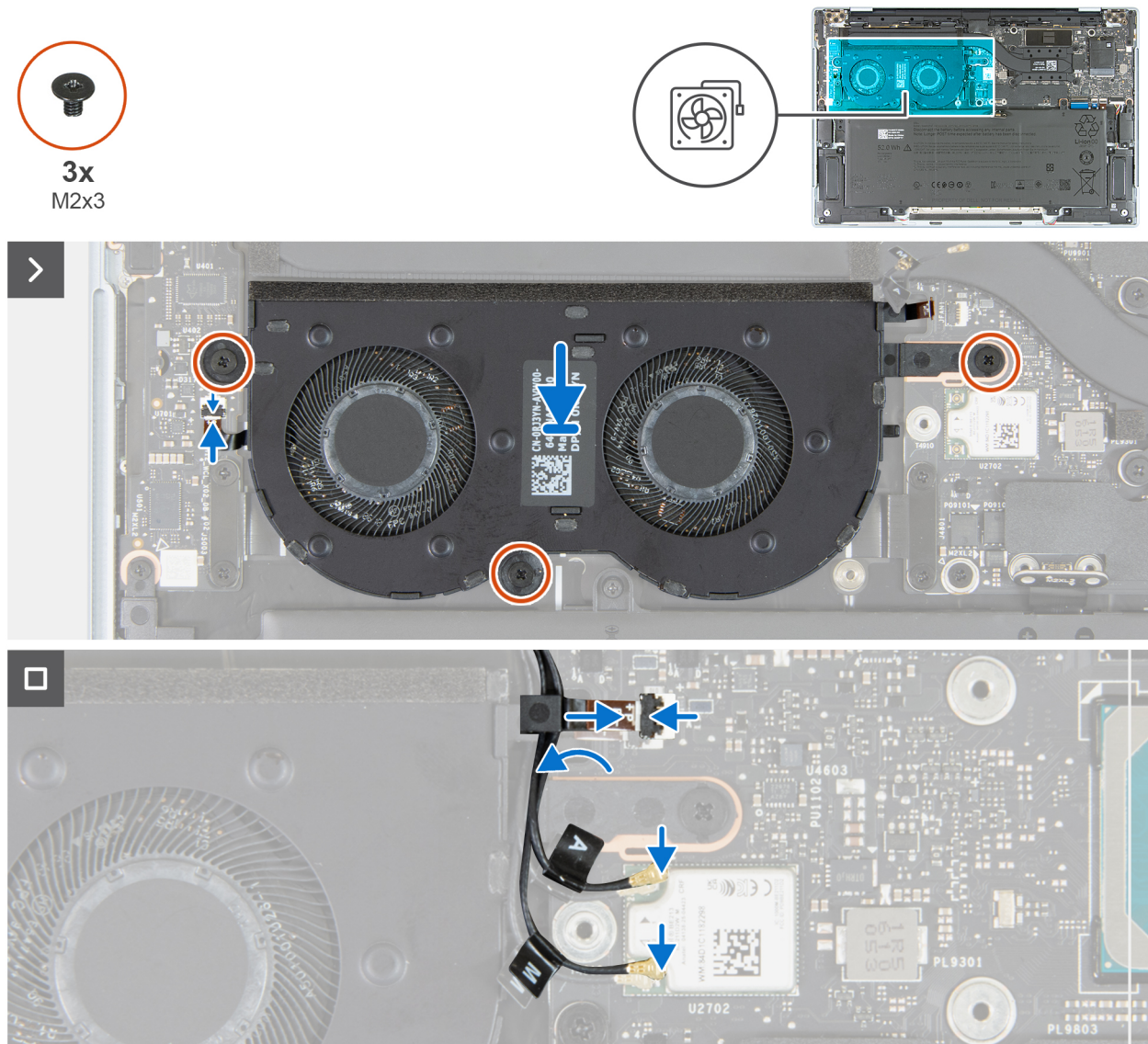


Figure 26. Installing the fans

Steps

1. Align the screw holes of the fans with the screw holes on the system board.
2. Replace the three screws (M2x3) that secure the fans to the system board.
3. Connect the left-fan cable to the connector on the system board and close the latch.
4. Route the antenna cables through the routing guide of the fan.
5. Connect the right-fan cable to the connector on the system board and close the latch.
6. Connect the antenna cable with the "A" label to the connector on the wireless module (indicated by the black triangle).
7. Connect the antenna cable with the "M" label to the connector on the wireless module (indicated by the white triangle).

Next steps

1. Install the [wireless-module bracket](#).
2. Install the [base cover](#).
3. 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 [heat sink](#).
4. Remove the [wireless-module bracket](#).
5. Remove the [wireless-antenna module](#).

About this task

 **NOTE:** The display assembly cannot be further disassembled. If a module in the display assembly needs to be replaced, the whole display assembly needs to be replaced.

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



6x
M2x4.5

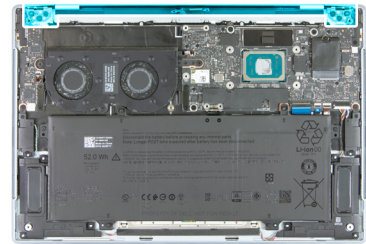


Figure 27. Removing the display assembly

Steps

1. Open the display to a 130-degree angle and place the computer at the edge of a flat table.
2. Remove the six screws (M2x4.5) that secure the left and right hinges of the display assembly to the palm-rest and keyboard assembly.
3. Lift the display assembly off the palm-rest and keyboard assembly.

CAUTION: Check that the display cable is completely disconnected from the system board before proceeding to lift the display assembly clear of the palm-rest and keyboard assembly.

4. After performing all the above steps, you are left with the display assembly.

Installing the display assembly

Prerequisites

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

About this task

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



Figure 28. Installing the display assembly

Steps

1. Place the palm-rest and keyboard assembly at the edge of a flat table.
2. Placing the display assembly at a 130-degree angle, align the screw holes of the left and right hinges of the display assembly with the screw holes on the palm-rest and keyboard assembly.
3. Replace the six screws (M2x4.5) that secure the left and right hinges of the display assembly to the palm-rest and keyboard assembly.
4. Close the display assembly and place the computer on its back on the flat surface.

Next steps

1. Install the [wireless-antenna module](#).
2. Install the [wireless-module bracket](#).
3. Install the [heat sink](#).
4. Install the [base cover](#).
5. Follow the procedure in [After working inside your computer](#).

I/O daughterboard cable

Removing the I/O daughterboard cable

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [wireless-module bracket](#).
4. Remove the [fans](#).

About this task

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

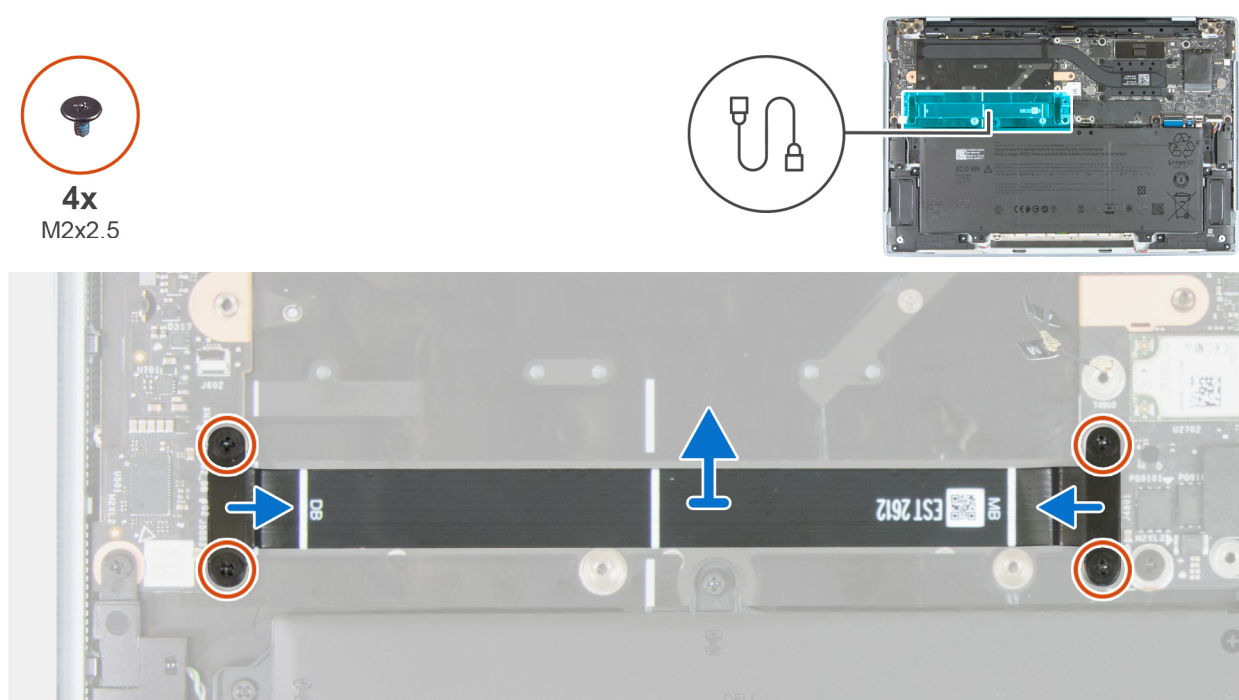


Figure 29. Removing the I/O daughterboard cable

Steps

1. Remove the four screws (M2x2.5) that secure the left bracket of the I/O daughterboard cable to the I/O daughterboard and the right bracket of the I/O daughterboard cable to the system board.
2. Lifting up both ends of the cable, peel the cable off the palm-rest and keyboard assembly.

Installing the I/O daughterboard cable

Prerequisites

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

About this task

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

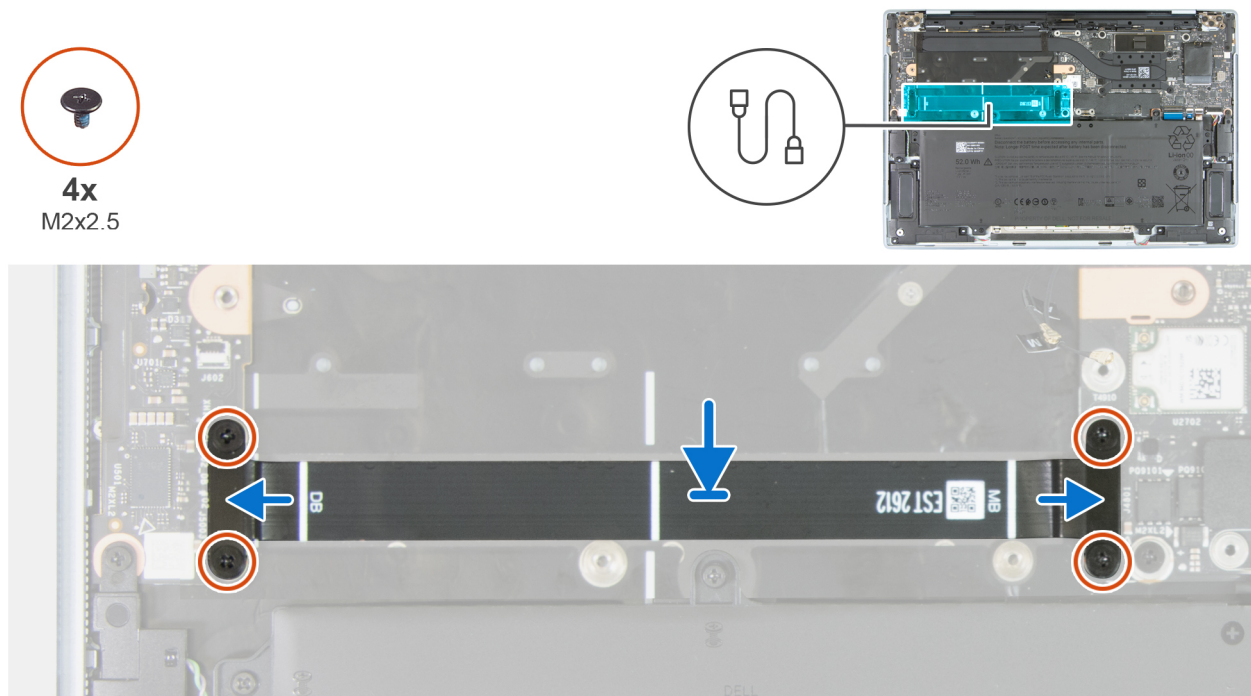


Figure 30. Installing the I/O daughterboard cable

Steps

1. Align the screw holes on the right and left bracket of the I/O daughterboard cable with the screw holes on the system board and the I/O daughterboard.
2. Replace the four screws (M2x2.5) that secure the I/O daughterboard cable to the system board and I/O daughterboard.
3. Adhere the I/O daughterboard cable to the palm-rest and keyboard assembly.

Next steps

1. Install the [fans](#).
2. Install the [wireless-module bracket](#).
3. Install the [base cover](#).
4. Follow the procedure in [After working inside your computer](#).

Left USB-C bracket

Removing the left USB-C bracket

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 left USB-C bracket and provides a visual representation of the removal procedure.

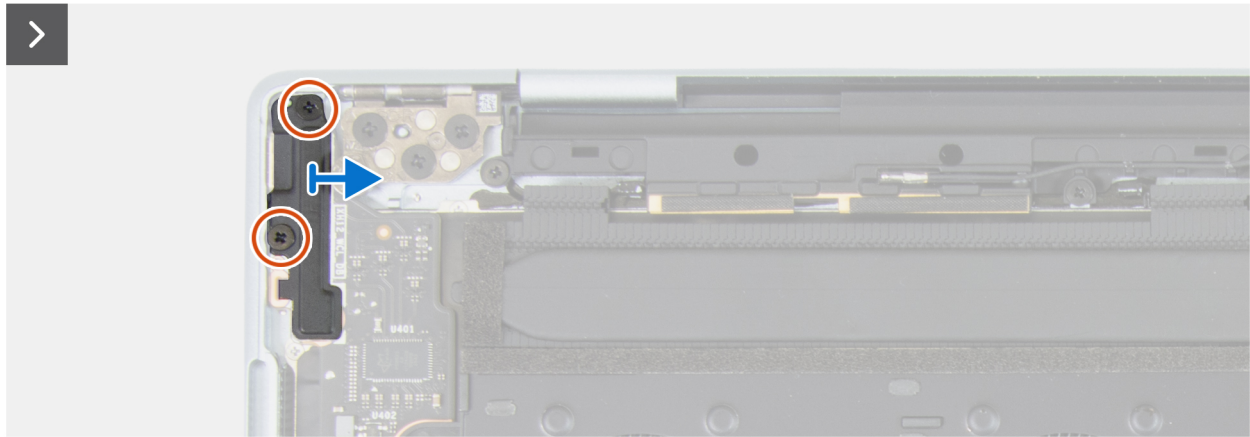
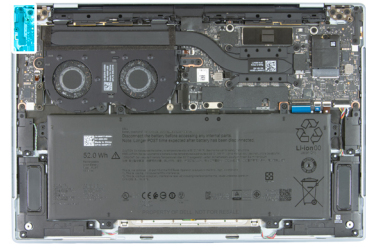


Figure 31. Removing the left USB-C bracket

Steps

1. Remove the two screws (M1.6x2.5) that secure the left USB-C bracket to the I/O daughterboard.
2. Lift the left USB-C bracket off the I/O daughterboard.

Installing the left USB-C bracket

Prerequisites

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

About this task

The following image indicates the location of the left USB-C bracket and provides a visual representation of the installation procedure.

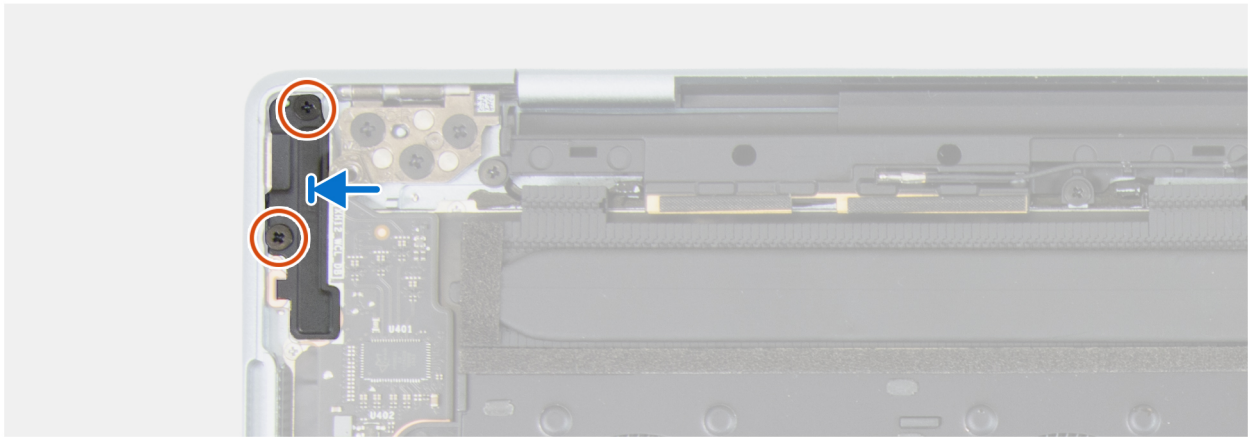
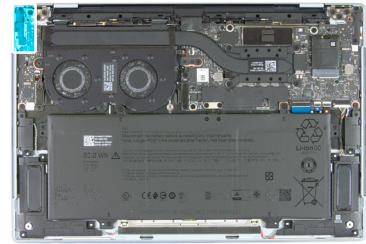


Figure 32. Installing the left USB-C bracket

Steps

1. Align the screw holes on the left USB-C bracket with the screw holes on the I/O daughterboard.
2. Replace the two screws (M1.6x2.5) that secure the left USB-C bracket to the I/O daughterboard.

Next steps

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

I/O daughterboard

Removing the I/O daughterboard

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [speakers](#).
4. Remove the [heat sink](#).
5. Remove the [wireless-module bracket](#).
6. Remove the [fans](#).
7. Remove the [left USB-C bracket](#).

About this task

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

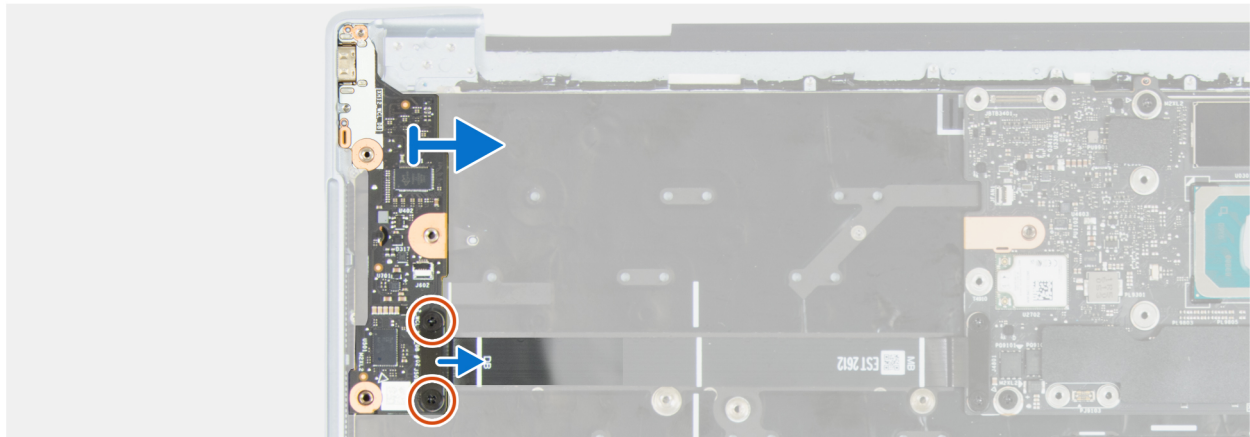
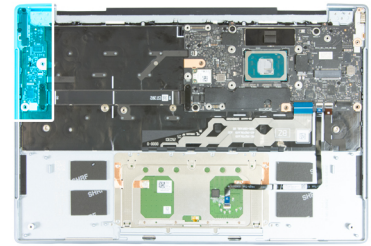


Figure 33. Removing the I/O daughterboard

Steps

1. Remove the two screws (M2x2.5) that secure the left bracket of the I/O daughterboard cable to the I/O daughterboard.
2. Lift up the left end of the I/O daughterboard cable.
3. Hold the I/O daughterboard by the short edges, and lift it off the palm-rest and keyboard assembly with care.

Installing the I/O daughterboard

Prerequisites

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

About this task

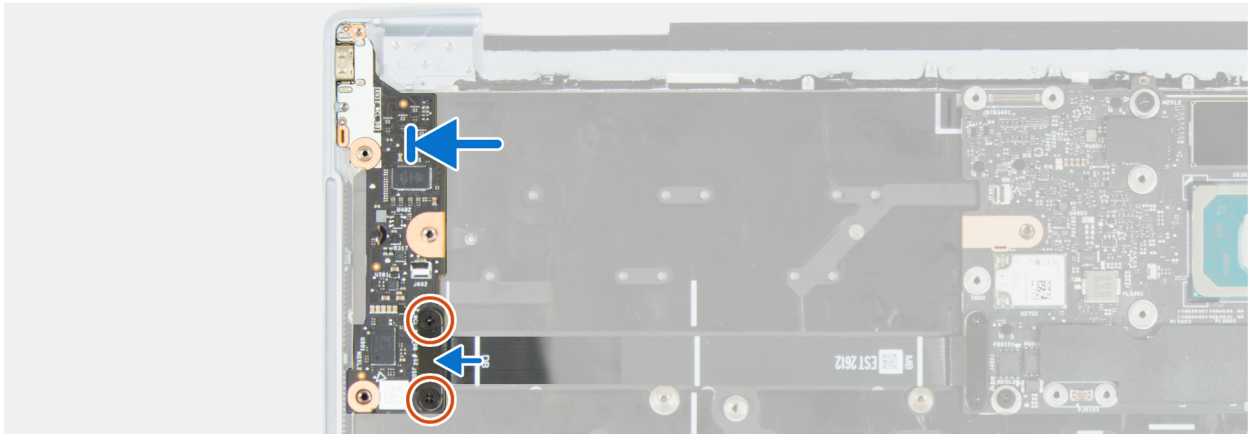
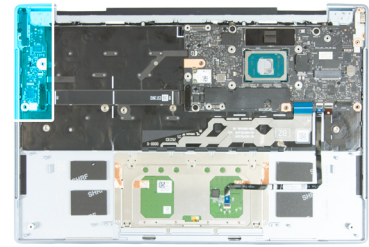


Figure 34. Installing the I/O daughterboard

Steps

1. Place the I/O daughterboard into position on the palm-rest and keyboard assembly.
2. Align the screw holes on the left bracket of the I/O daughterboard cable bracket with the screw holes on the I/O daughterboard.
3. Replace the two screws (M2x2.5) that secure the I/O daughterboard cable bracket to the I/O daughterboard.

Next steps

1. Install the [left USB-C bracket](#).
2. Install the [fans](#).
3. Install the [wireless-module bracket](#).
4. Install the [heat sink](#).
5. Install the [speakers](#).
6. Install the [base cover](#).
7. Follow the procedure in [After working inside your computer](#).

Right USB-C bracket

Removing the right USB-C bracket

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 right USB-C bracket and provides a visual representation of the removal procedure.

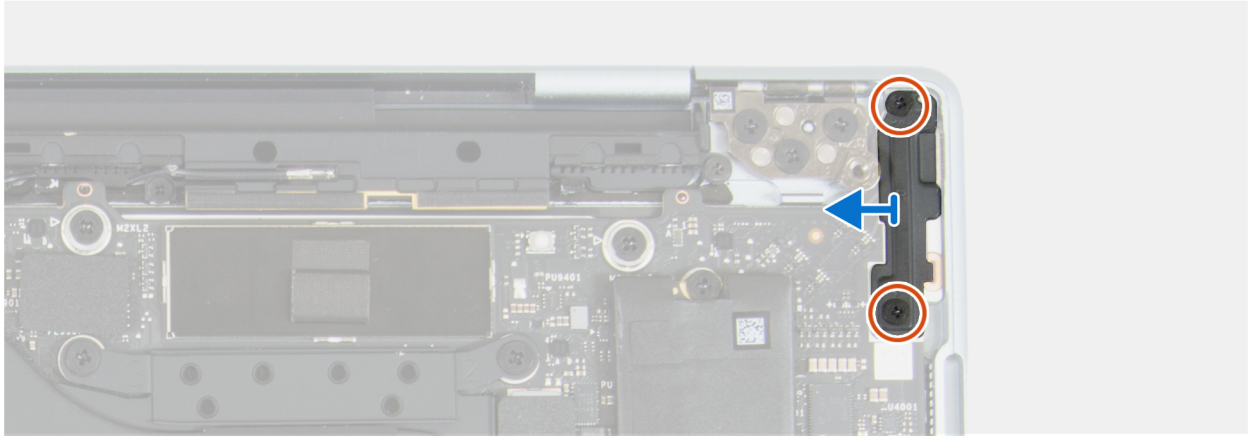


Figure 35. Removing the right USB-C bracket

Steps

1. Remove the two screws (M1.6x2.5) that secure the USB-C bracket to the system board.
2. Lift the right USB-C bracket off the system board.

Installing the right USB-C bracket

Prerequisites

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

About this task

The following image indicates the location of the right USB-C bracket and provides a visual representation of the installation procedure.

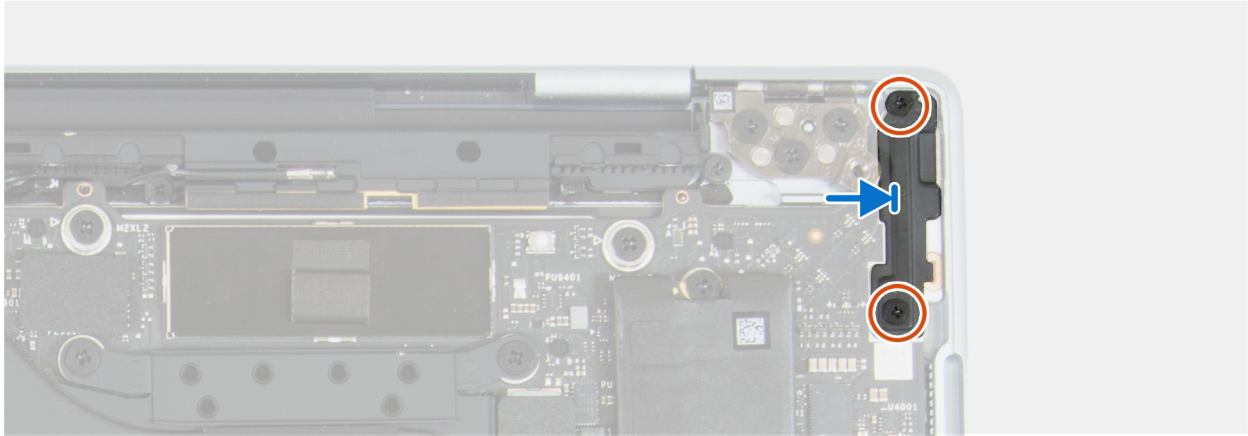


Figure 36. Installing the right USB-C bracket

Steps

1. Align the screw holes on the USB-C bracket with the screw holes on the system board.
2. Replace the two screws (M1.6x2.5) that secure the right USB-C bracket to the system board.

Next steps

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

System board

Removing the system board

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [speakers](#).
4. Remove the [heat sink](#).
5. Remove the [wireless-module bracket](#).
6. Remove the [wireless-antenna module](#).
7. Remove the [fans](#).
8. Remove the [display assembly](#).
9. Remove the [right USB-C bracket](#).
10. Remove the [SSD](#).

About this task

The following image indicates the connectors and components on your system board.

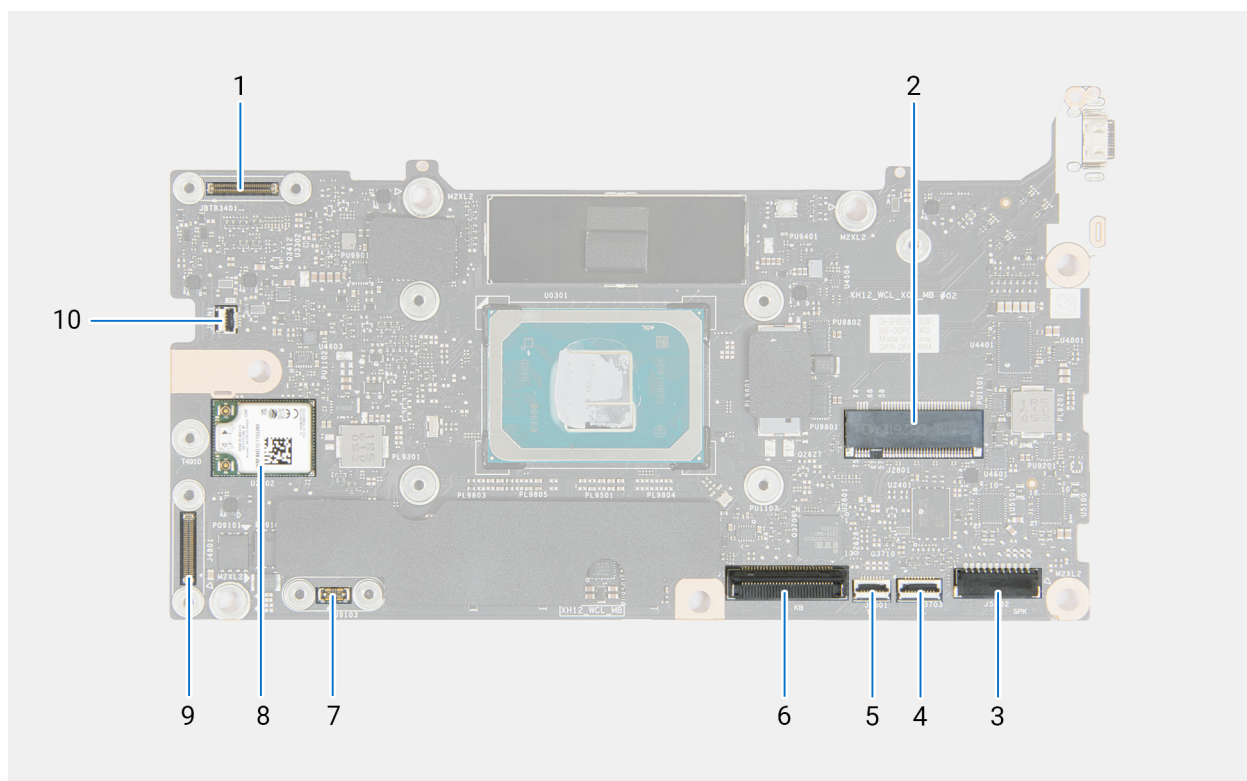


Figure 37. System-board connectors

- | | |
|--------------------------------------|-------------------------------|
| 1. Display assembly cable connector | 2. M.2 solid-state drive slot |
| 3. Right-speaker cable connector | 4. Backlight cable connector |
| 5. Touchpad cable connector | 6. Keyboard cable connector |
| 7. Battery cable connector | 8. Wireless module |
| 9. I/O daughterboard cable connector | 10. Right-fan cable connector |

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

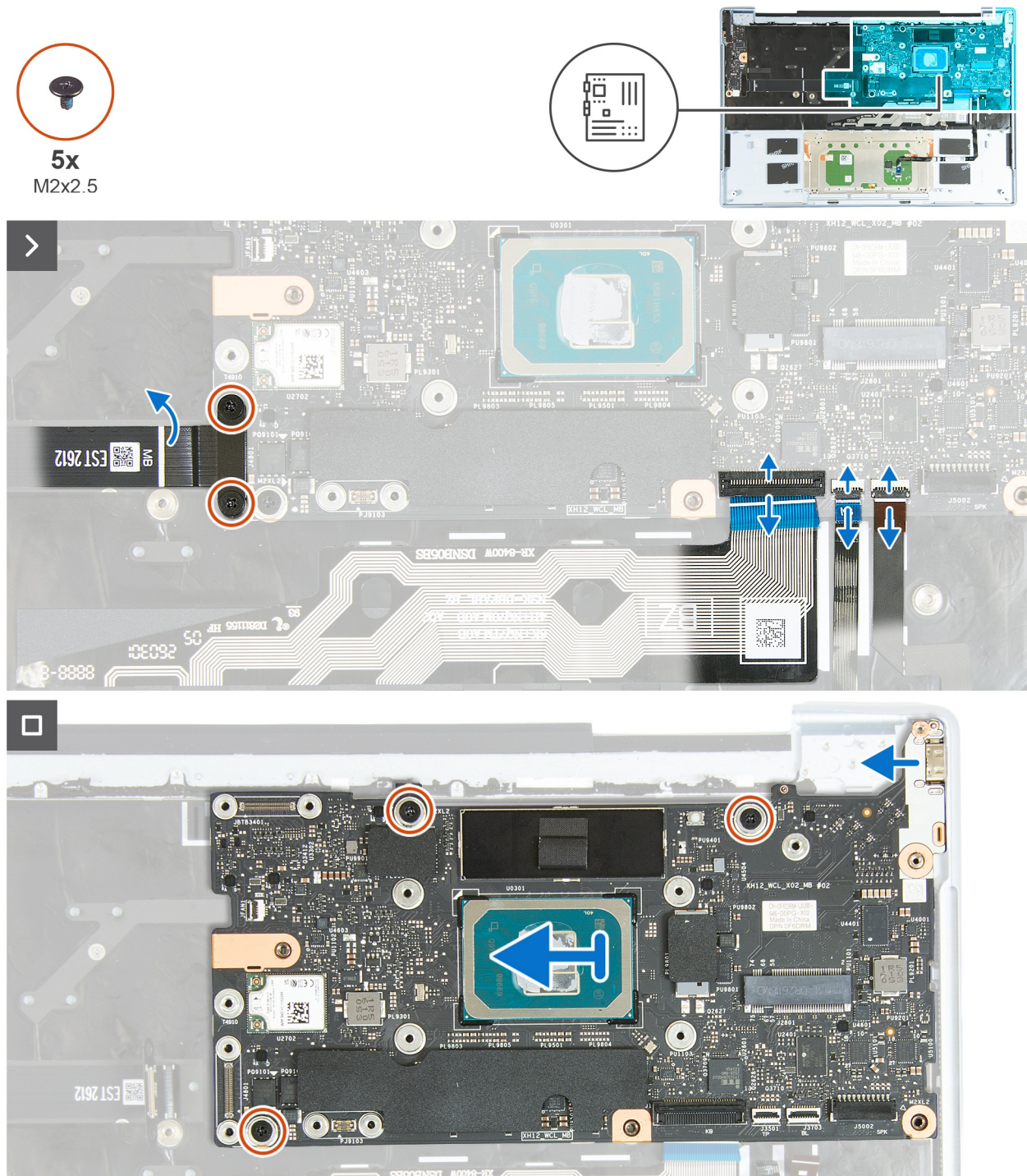


Figure 38. Removing the system board

Steps

1. Remove the two screws (M2x2.5) that secure the right bracket of the I/O daughterboard cable to the system board.
2. Lift up the right end of the I/O daughterboard cable.
3. Open the latches of the following connectors to disconnect the corresponding cables from the system board:
 - Keyboard-cable connector
 - Touchpad-cable connector
 - Backlight-cable connector
4. Remove the three screws (M2x2.5) that secure the system board to the palm-rest and keyboard assembly.
5. Hold the system board by the short edges and carefully lift the board off the palm-rest and keyboard assembly.

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 and components on your system board.

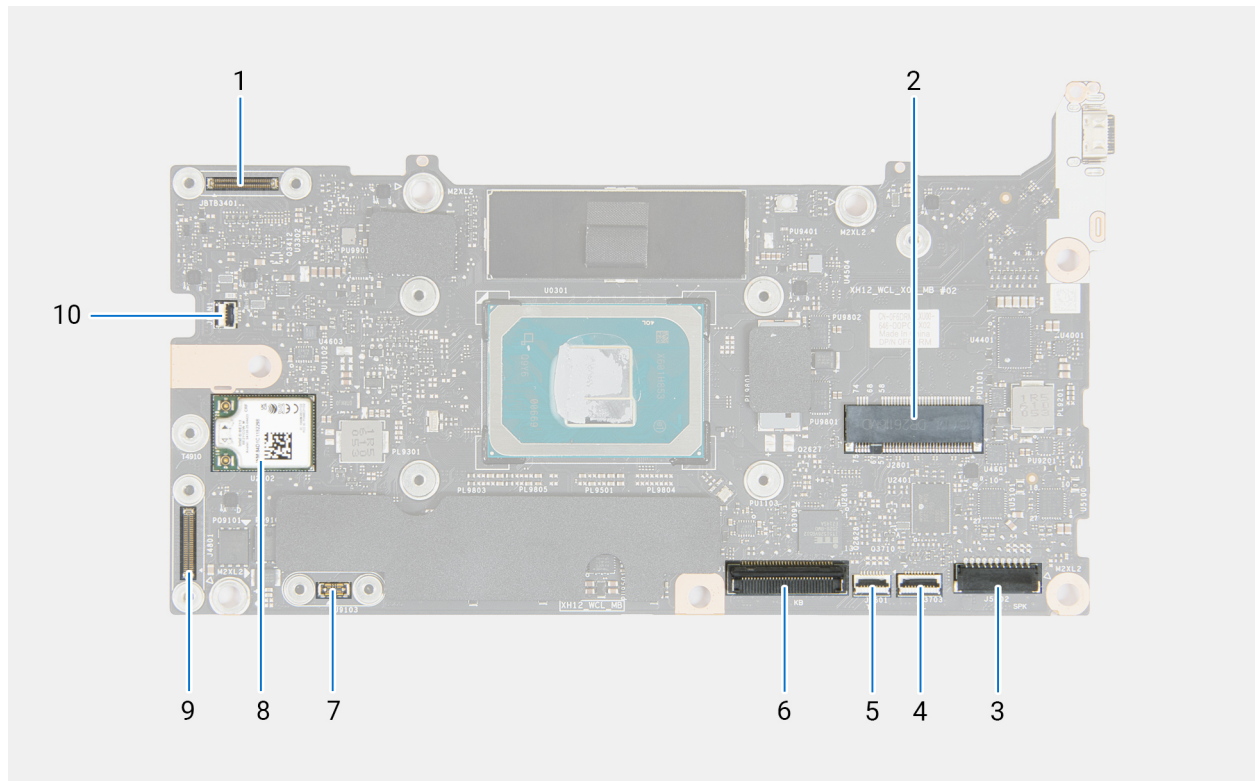


Figure 39. System-board connectors

- | | |
|--------------------------------------|-------------------------------|
| 1. Display assembly cable connector | 2. M.2 solid-state drive slot |
| 3. Right-speaker cable connector | 4. Backlight cable connector |
| 5. Touchpad cable connector | 6. Keyboard cable connector |
| 7. Battery cable connector | 8. Wireless module |
| 9. I/O daughterboard cable connector | 10. Right-fan cable connector |

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

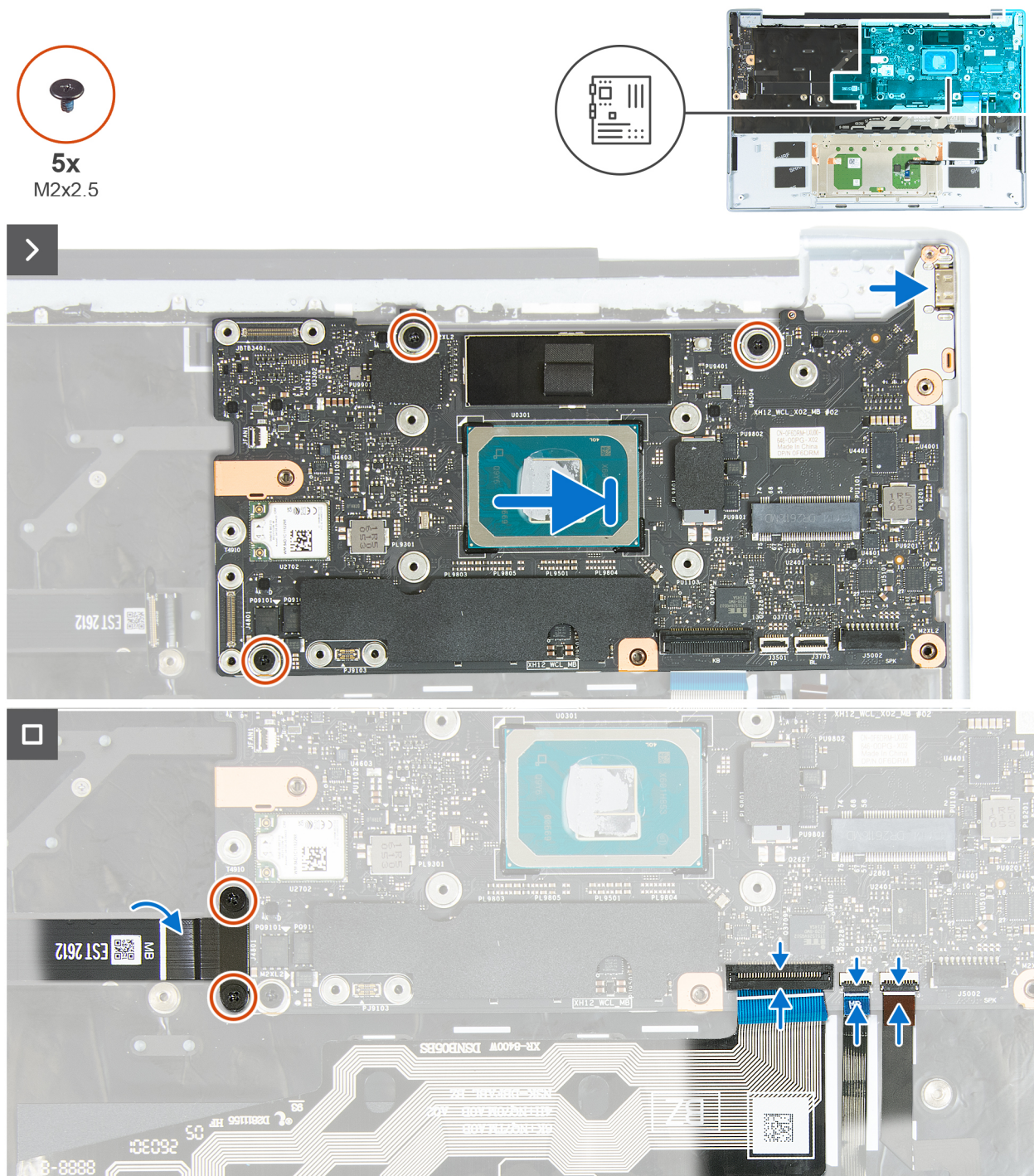


Figure 40. Installing the system board

Steps

1. Place the system board on the palm-rest and keyboard assembly.
2. Align the screw holes on the system board with the screw holes on the palm-rest and keyboard assembly.
3. Replace the three screws (M2x2.5) that secure the system board to the palm-rest and keyboard assembly.
4. Connect the cables and close the corresponding latches of the following connectors:
 - Keyboard-cable connector
 - Touchpad-cable connector
 - Backlight-cable connector
5. Align the screw holes on the right bracket of the I/O daughterboard cable with the screw holes on the system board.

6. Replace the two screws (M2x2.5) that secure the I/O daughterboard cable bracket to the system board.

Next steps

1. Install the [right USB-C bracket](#).
2. Install the [display assembly](#).
3. Install the [fans](#).
4. Install the [wireless-antenna module](#).
5. Install the [wireless-module bracket](#).
6. Install the [heat sink](#).
7. Install the [speakers](#).
8. Install the [base cover](#).
9. Follow the procedure in [After working inside your computer](#).

Palm-rest and keyboard assembly

Removing the palm-rest and keyboard assembly

Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [battery](#).
4. Remove the [speakers](#).
5. Remove the [touchpad assembly](#).
6. Remove the [wireless-module bracket](#).
7. Remove the [wireless-antenna module](#).
8. Remove the [fans](#).
9. Remove the [display assembly](#).
10. Remove the [left USB-C bracket](#).
11. Remove the [I/O daughterboard cable](#).
12. Remove the [I/O daughterboard](#).
13. Remove the [right USB-C bracket](#).
14. Remove the [system board](#).



NOTE: The system board can be removed with the following components attached:

- Heat sink
- SSD and SSD-thermal sleeve

About this task



NOTE: The palm-rest and keyboard assembly cannot be further disassembled. If the keyboard needs to be replaced, the assembly needs to be replaced.

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

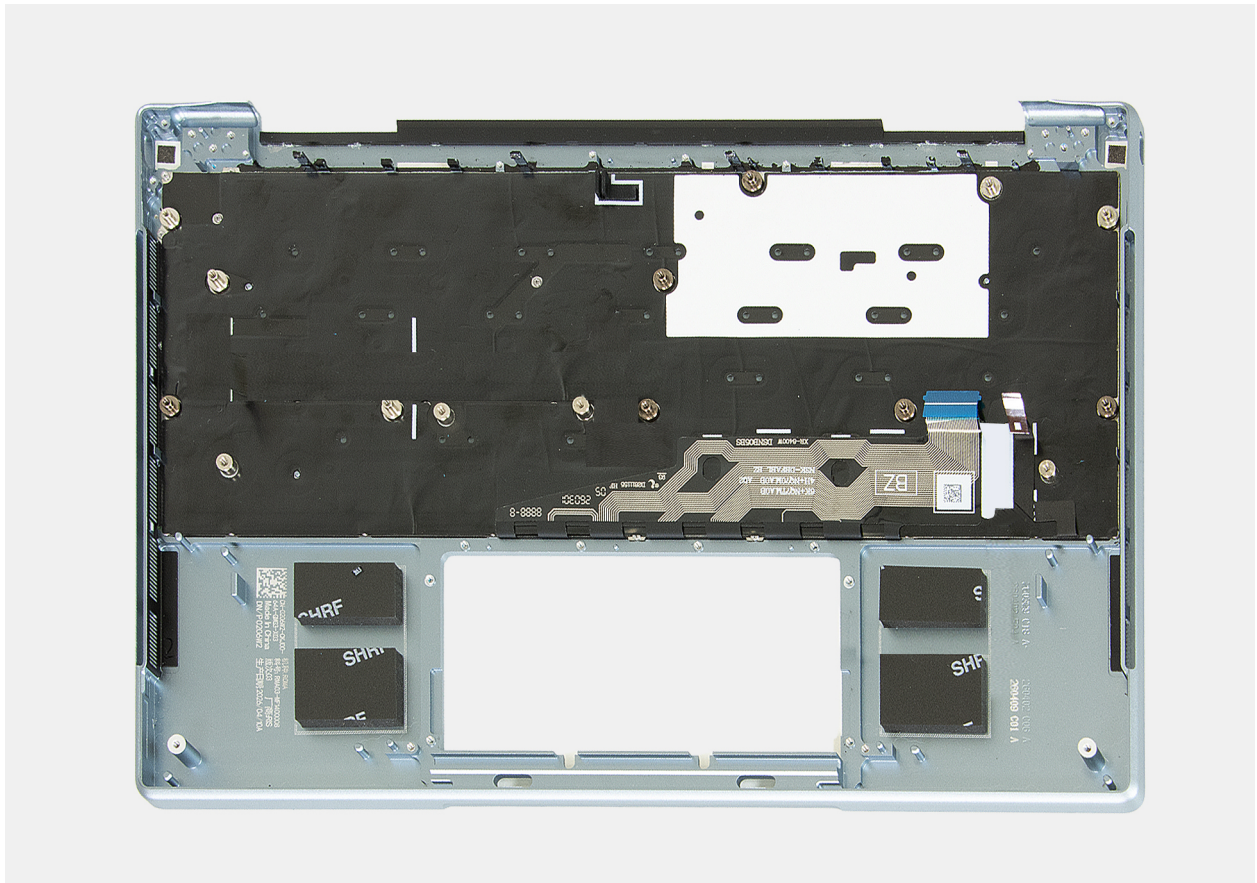


Figure 41. Removing the palm-rest and keyboard assembly

Steps

After performing the steps in the pre-requisites, you are left with 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 process.

About this task

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

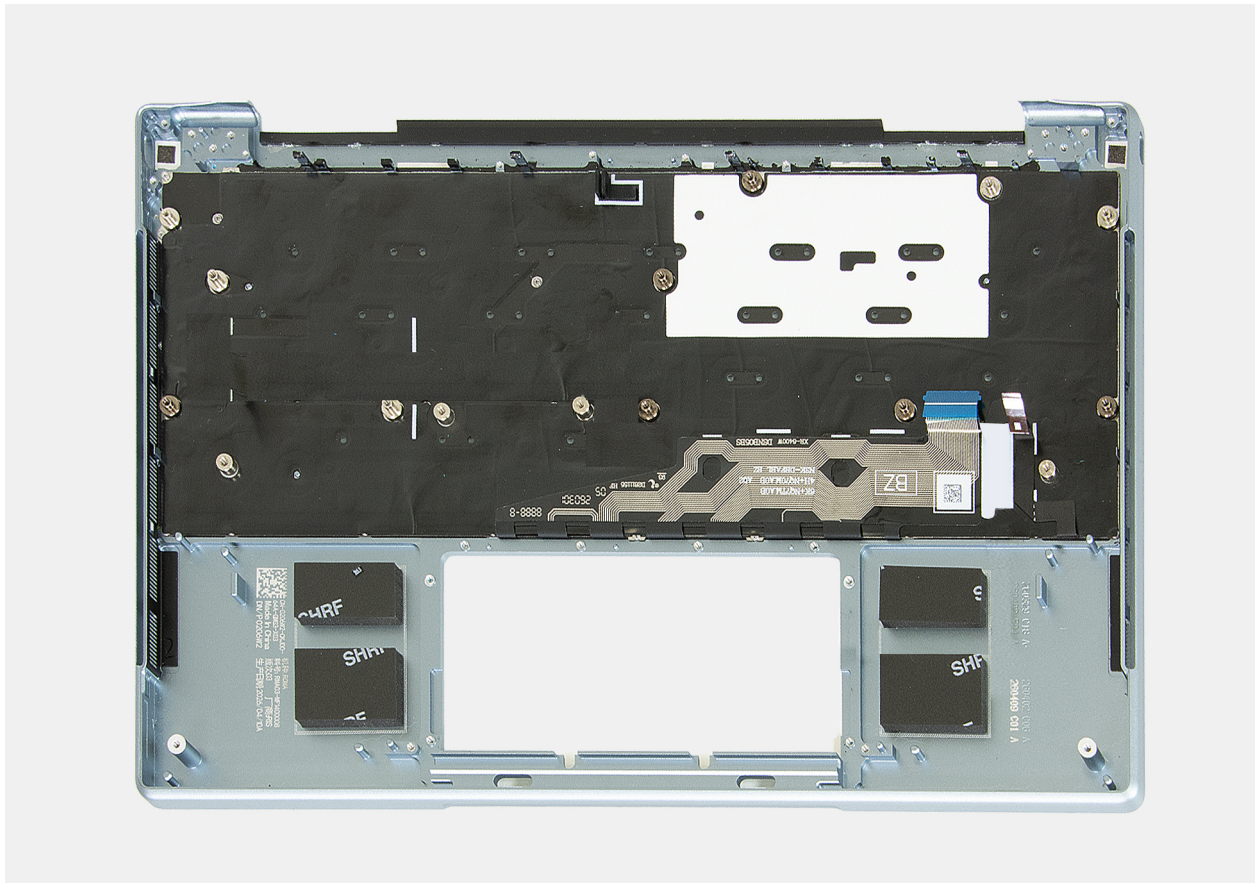


Figure 42. Installing the palm-rest assembly

Steps

Place the palm-rest assembly on a flat surface.

Next steps

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



NOTE: The system board can be installed with the following components attached:

- Heat sink
- SSD and SSD-thermal sleeve

2. Install the [right USB-C bracket](#)
3. Install the [I/O daughterboard](#).
4. Install the [I/O daughterboard cable](#).
5. Install the [left USB-C bracket](#).
6. Install the [display assembly](#).
7. Install the [fans](#).
8. Install the [wireless-antenna module](#).
9. Install the [wireless-module bracket](#).
10. Install the [touchpad assembly](#).
11. Install the [speakers](#).
12. Install the [battery](#).
13. Install the [base cover](#).
14. 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 XPS 13 DX13260 supports the following operating systems:

- Windows 11 Home
- Windows 11 Professional

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 3. 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.

Boot Manager

To enter Boot Manager, turn on or restart your computer, and then press F12 immediately.

 **NOTE:** If you are unable to enter the Boot Manager, repeat the above action.

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

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

 **NOTE:** XXXX denotes the SATA drive number.

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

The Boot Manager screen also displays the option to access BIOS Setup.

Updating the BIOS from Boot Manager

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

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 4. BIOS Setup options—Overview menu

Overview	Description
System Time	Sets the computer time in HH/MM/SS format.
System Date	Sets the computer date in MM/DD/YYYY format.
BIOS Version	Displays the BIOS version number.
Product Name	Displays the name of the product.
Service Tag	Displays the Service Tag of the computer.
Asset Tag	Displays the Asset Tag of the computer.
CPU Type	Displays the type of the processor.
CPU Speed	Displays the speed of the processor.
CPU ID	Displays the identification code of the processor.
CPU Cache	Displays the cache of the processor.
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 M.2 PCIe SSD details.
AC Adapter Type	Displays the type of AC adapter that is connected, if an AC adapter is connected.
System Memory	Displays the total memory that is installed on the computer.
Memory Speed	Displays the memory speed.
Keyboard Type	Displays the type of keyboard that is connected to the computer.

Table 5. BIOS Setup options—Advanced menu

Advanced	Description
Intel(R)SpeedStep	Enable or disables the Intel SpeedStep mode of processor. When enabled, the computer dynamically adjusts processor voltage and core frequency, decreasing average power consumption and heat production. By default, the Intel(R)SpeedStep option is enabled.

Table 5. BIOS Setup options—Advanced menu (continued)

Advanced	Description
Intel Speed Shift Technology	Enables or disables the Intel Speed Shift Technology support. When enabled, the operating system selects the appropriate processor performance automatically. By default, the Intel Speed Shift Technology option is enabled.
Multi-Cores Support	Enables the user to change the number of cores available to the operating system. The default value is set to the maximum number of cores. By default, the All value is selected.
Virtualization	When enabled, the computer can run a Virtual Machine Monitor (VMM). By default, the Virtualization option is enabled.
VT for Direct I/O	When enabled, the Virtual Machine Monitor (VMM) on the computer can perform Virtualization Technology for Direct I/O (VT-d). VT-d is an Intel method that provides virtualization for direct I/O. By default, the VT for Direct I/O option is enabled.
Trusted Execution	When enabled, a measured Virtual Machine Monitor (MVMM) can use the additional hardware capabilities provided by Intel Trusted Execution Technology. The following options must be enabled in order to enable Trusted Execution: • Virtualization • VT for Direct I/O By default, the Trusted Execution option is 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.  NOTE: You cannot boot to a USB device when this option is disabled. By default, the USB Emulation option is enabled.
USB Powershare	Enables or disables the USB PowerShare feature. This feature enables USB devices to charge external devices using the stored system battery power. By default, the USB Powershare option is enabled.
SATA/NVMe Operation mode	Sets the operating mode of the integrated SATA hard drive controller. By default, the AHCI/NVMe value is set.
Adapter Warnings	Enables or disables the warning messages during boot when the adapters with less power capacity are detected. By default, the Adapter Warnings option is enabled.
Function Key Behavior	Sets the default key behavior of the function key. By default, the Multimedia Key value is set.
Keyboard Illumination	Configures the operating mode of the keyboard illumination feature. By default, the Auto value is set.
Keyboard Backlight with AC	Sets the timeout value for the keyboard backlight when an AC adapter is connected to the computer. By default, the 1 minutes value is set.
Keyboard Backlight with Battery	Sets the timeout value for the keyboard backlight when the computer is running only on the battery power. The keyboard backlight timeout value is only effective when the backlight is enabled.

Table 5. BIOS Setup options—Advanced menu (continued)

Advanced	Description
	By default, the 1 minutes value is set.
Thermal Fan Mode Switch	Sets the mode of the fans. By default, the Optimize Mode value is set.
Battery Health	Displays the battery health of the computer.
External USB Ports	Enables or disables the external USB ports. By default, the External USB Ports option is enabled.
Enable Audio	Enables or disables the integrated audio controller. By default, the Enable Audio option is enabled.
Microphone	Enables or disables the microphone. By default, the Microphone option is enabled.
Camera	Enables or disables the camera. By default, the Camera option is enabled.
Battery Charge Configuration	Enables the user to set the battery charge settings, with a preselected custom charge start and stop time. By default, the ExpressCharge value is set.
Advanced Battery Charge Configuration	Enables or disables the advanced battery charging feature. By default, the Advance Battery Charge Configuration option is disabled.
IPv4 HTTP Support	Enables or disables the IPv4 HTTP support. By default, the IPv4 HTTP Support option is disabled.
IPv6 HTTP Support	Enables or disables the IPv6 HTTP support. By default, the IPv6 HTTP Support option is disabled.
Power Option	
Power on LID open	When enabled, the computer turns on from the off state whenever the lid is opened. By default, the Power On LID open option is enabled.
Maintenance	
Data Wipe on next boot	Enables or disables data wipe on the next boot. Data Wipe is a secure wipe operation that deletes information from a storage device.  CAUTION: The secure Data Wipe operation deletes information in a way that it cannot be reconstructed. Commands such as delete and format in the operating system may remove files from showing up in the file system. However, they can be reconstructed through forensic means as they are still represented on the physical media. Data Wipe prevents this reconstruction and is not recoverable. When enabled, the data wipe option will prompt to wipe any storage devices that are connected to the computer on the next boot. By default, the Data Wipe on next boot option is disabled.
BIOS Recovery from Hard Drive	Allows the user to recover certain corrupted BIOS conditions from a recovery file on the user's primary hard drive or an external USB drive.

Table 5. BIOS Setup options—Advanced menu (continued)

Advanced	Description
	By default, the BIOS Recovery from Hard drive option is enabled.
BIOS Auto-Recovery	Enables the user to automatically recover the BIOS without user actions. By default, the BIOS Auto-Recovery option is disabled.
SupportAssist System Resolution	
Auto OS Recovery Threshold	Enables the control of the automatic boot flow for the SupportAssist System Resolution Console and the Dell OS Recovery Tool. By default, the Auto OS Recovery Threshold value is set to 2.
SupportAssist OS Recovery	Enables or disables the boot flow for SupportAssist OS Recovery tool if certain system errors occur. By default, the SupportAssist OS Recovery option is enabled.

Table 6. BIOS Setup options—Security menu

Security	Description
Admin Password	Displays if the administrator password is clear or set. By default, the Admin Password is not set.
System Password	Displays if the system password is clear or set. By default, the System Password is not set.
Asset Tag	Enables the user to set an Asset Tag for the computer, if the Asset Tag is not already set.
Admin Password	Enables the user to set the administrator password. The Administrator Password prevents unauthorized access to the BIOS Setup options. Once the administrator password is set, the BIOS setup options can only be modified after providing the correct password. The following rules and dependencies apply to the Administrator Password - • The administrator password cannot be set if computer and/or internal hard drive passwords are previously set. • The administrator password can be used in place of the computer and/or internal hard drive passwords. • When set, the administrator password must be provided during a firmware update. • Clearing the administrator password also clears the computer password (if set). Dell Technologies recommends using an administrator password to prevent unauthorized changes to BIOS setup options.
System Password	Enables the user to set the system password. The System Password prevents the computer from booting to an operating system without entering the correct password. The following rules and dependencies apply when the System Password is used - • The computer shuts down when idle for approximately 10 minutes at the computer password prompt. • The computer shuts down after three incorrect attempts to enter the computer password. • The computer shuts down when the Esc key is pressed at the System Password prompt. • The computer password is not prompted when the computer resumes from standby mode.

Table 6. BIOS Setup options—Security menu (continued)

Security	Description
	Dell Technologies recommends using the computer password in situations where it is likely that a computer may be lost or stolen.
Password Change	Enables you to permit or deny system or hard disk password changes. By default, the Permitted value is set.
Absolute	Absolute Software provides various cyber security solutions, some requiring software preloaded on Dell computers and integrated into the BIOS. To use these features, you must enable the Absolute BIOS setting and contact Absolute for configuration and activation. By default, the Absolute option is enabled. i NOTE: When the Absolute features are activated, the Absolute integration cannot be disabled from the BIOS setup screen.
Absolute Status	Enables the user to activate or deactivate the Absolute Status feature. Displays if the system password is clear or set. By default, the Activate value is set.
WINDOWS SMM SECURITY MITIGATIONS TABLE (WSMT)	Enables or disables configuration of platform features on Dell Client Systems with WSMT-enabled BIOS. By default, the WINDOWS SMM SECURITY MITIGATIONS TABLE (WSMT) option is enabled.
Firmware TPM	Enables or disables the firmware TPM. By default, the Firmware TPM option is enabled.
PPI Bypass for Clear Command	Enables the user to control the TPM Physical Presence Interface (PPI). When enabled, this setting allows the operating system to skip BIOS PPI user prompts when issuing the Clear command. Changes to this setting take effect immediately. By default, the PPI Bypass for Clear Commands option is disabled. For additional security, Dell Technologies recommends keeping the PPI Bypass for Clear Commands option disabled.
Enable Master Password Lockout	When enabled, this disables the master password support. By default, the Enable Master Password Lockout option is disabled.
Pluton Security Processor	Enables the utilization of the Pluton Security Processor by the operating system to provide security services such as Key Storage Provider functionality. By default, the Pluton Security Processor option is enabled.
Enable Pre-Boot DMA Support	Enables the user 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. i NOTE: This option is not available when the virtualization setting for IOMMU is disabled (VT-d/AMD Vi). By default, the Enable Pre-Boot DMA Support option is enabled. For additional security, Dell Technologies recommends keeping the Enable Pre-Boot DMA Support option enabled. i NOTE: This option is provided only for compatibility purposes, as certain older hardware may not be DMA compliant.
Enable OS Kernel DMA Support	Allows you to control the Kernel DMA protection for both internal and external ports. This option does not directly enable DMA protection in the operating

Table 6. BIOS Setup options—Security menu (continued)

Security	Description
	system. For operating systems that support DMA protection, this setting indicates to the operating system that the BIOS supports the feature. NOTE: This option is not available when the virtualization setting for IOMMU is disabled (VT-d/AMD Vi). By default, the Enable OS Kernel DMA Support option is enabled. NOTE: This option is provided only for compatibility purposes, as certain older hardware may not be DMA compliant.
Internal Port DMA Compatibility Mode	Allows you to control the boot compatibility for integrated PCIe peripherals by disabling PCIe DMA protection on internal PCIe ports. When enabled, BIOS will notify the operating system that the internal ports are not DMA capable. This option is to help with devices that have operating system DMA compatibility issues. This option does not directly enable DMA protection in the operating system. NOTE: This option is not available when the virtualization setting for IOMMU is disabled (VT-d/AMD Vi). By default, the Internal Port DMA Compatibility Mode option is disabled. NOTE: This option is provided only for compatibility purposes, as certain older hardware may not be DMA compliant.
UEFI Firmware Capsule Updates	Enables or disables BIOS updates through UEFI capsule update packages. By default, the UEFI Firmware Capsule Updates option is enabled.
Secure Boot	
System Status:	
Secure Boot Database	Displays the status of the Secure Boot database.
Secure Boot Status	Displays the status of Secure Boot.
Secure Boot Mode	Displays the mode of Secure Boot.
User Customized Security	Displays whether user customized security is deployed. By default, the No value is set.
Options:	
Secure Boot	Enables or disables the computer to boot using only validated boot software. By default, the Enable Secure Boot option is enabled. For additional security, Dell Technologies recommends keeping the Secure Boot option enabled to ensure that the UEFI firmware validates the operating system during the boot process.
Select Secure mode	Allows the user to select the Secure Boot operation mode. By default, the Deployed Mode option is selected. NOTE: Deployed Mode should be selected for normal operation of Secure Boot.
Expert Key Management	
Custom Mode	Enables or disables the keys in the PK, KEK, db, and dbx security key databases to be modified. By default, the Custom Mode option is disabled.

Table 6. BIOS Setup options—Security menu (continued)

Security	Description
Enable Microsoft UEFI CA	When disabled, the UEFI CA is removed from the BIOS UEFI Secure Boot database. CAUTION: If you disable Microsoft UEFI CA, the computer may not boot, computer graphics may not function properly, and the computer could become unrecoverable. By default, the Enable Microsoft UEFI CA option is enabled. For additional security, Dell Technologies recommends keeping the Enable Microsoft UEFI CA option enabled to ensure the broadest compatibility with devices and operating systems.
Legacy Microsoft Third Party UEFI CA	When enabled, allows Secure Boot to trust and load UEFI binaries signed by Microsoft's third-party Certificate Authority (CA), enabling compatibility with non-Microsoft operating systems like Linux. By default, the Enable Microsoft UEFI CA option is enabled.

Table 7. BIOS Setup options—Boot menu

Exit	Description
File Browser Add Boot Option	Sets the name of the boot option to add.
Windows Boot Manager	
Select a File System	Selects the boot loader file of the added option.
File Browser Del Boot Option	
Windows Boot Manager:	Enables the deletion of the boot option.
UEFI Boot:	Displays the boot sequence.

Table 8. BIOS Setup options—Exit menu

Exit	Description
Exit Saving Changes	Exits the BIOS Setup program and saves the changes.
Save Change Without Exit	Saves the changes without exiting the BIOS Setup program.
Exit Discarding Changes	Exits the BIOS Setup program without saving the changes.
Load Optimal Defaults	Loads all the default options of the BIOS Setup program.
Discard Changes	Discards all changes made to the BIOS Setup program.

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 the **F12** key on the keyboard.
11. Select the USB drive from the **Boot Manager**.
12. Type the BIOS setup program filename and press **Enter**.
13. Follow the on-screen instructions to complete the BIOS update.

Updating the BIOS from Boot Manager

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

System and admin 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 9. System and admin password

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

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

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

Assigning a System or Admin password

Prerequisites

You can assign a new System or Admin Password only when the corresponding 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. From the menu bar, select **Security**.
The **Security** screen is displayed.
3. Select **System Password** or **Admin Password** and type a password in the **Enter 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 or admin password that you entered earlier in the **Enter New Password Again** field.
5. Save the changes and exit the BIOS setup program.

Changing an existing system password or admin password

Prerequisites

Ensure that the Permitted value is set for the **Password Change** option in the System Setup before attempting to delete or change the existing system password and/or admin password. You cannot change an existing system password or admin password if the **Password Change** is Denied. 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. From the menu bar, select **Security**.
The **Security** screen is displayed.
3. In the **Security** screen, verify that the Permitted value is set for the **Password Change** option.
4. Select **System Password**. Update the existing system password, and press Enter.
5. Select **Admin Password**. Update the existing admin password, and press Enter.

 **NOTE:** If you change the system password and/or admin password, reenter the new password when prompted.

6. Save the changes and exit the BIOS setup program.

Clearing system and setup passwords

About this task

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

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

Clearing CMOS settings

About this task

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

Steps

1. Remove the base cover.
2. Disconnect the battery cable from the system board as instructed in [removing the base cover](#).
3. Wait for one minute.
4. Reconnect the battery cable as instructed in [installing the base cover](#).

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](#).

Quick charge support on power adapters with detachable Type-C cables

For some Dell power adapters, there is a detachable Type-C cable that connects the power adapter to your computer. To ensure that Quick Charge is supported, the Type-C cable must be able to support a current higher than 3 A.

When the computer is connected to an adapter and turned on, it takes up to three seconds to detect the adapter. When the Type-C cable does not support Quick Charge, the power-adapter LED light flashes for about five seconds before resuming operation.

 **NOTE:** Dell Power adapters are always shipped with a Type-C cable that supports Quick Charge. When using third-party cables, check and ensure that Quick Charge is supported by observing the LED light behavior of the power adapter.

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.

 **NOTE:** For more information about running the SupportAssist Pre-Boot System Performance Check on a specific device, see [Dell Support Site](#).

4. If there are any issues, error codes are displayed.
Note the error code and validation number and contact Dell.

Built-in self-test (BIST)

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

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

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

How to run M-BIST

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

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

Table 10. LED error codes

Blinking Pattern		Possible Problem
Amber	White	
2	4	Memory/RAM failure

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

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

- Turn off your computer.
- Disconnect any peripherals that are connected to the computer. Connect only the AC adapter (charger) to the computer.
- Ensure that the LCD (screen) is clean (no dust particles on the surface of the screen).
- 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.
- The screen displays solid colors and changes colors on the entire screen to white, black, red, green, and blue twice.
- Then it displays the colors white, black, and red.
- Carefully inspect the screen for abnormalities (any lines, fuzzy color, or distortion on the screen).
- At the end of the last solid color (red), the computer shuts down.

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

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

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

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

How to invoke the L-BIST

- Turn on your computer.
- If the computer does not start up, look at the battery status LED.
- If the battery status LED flashes an error code [2,7], check to see if the display cable is properly connected.

System-diagnostic lights

This section lists the system-diagnostic lights of your XPS 13 DX13260.

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

- The Service LED blinks the number of times equal to the value of the first digit and turns off with a short pause.
- After that, the Service LED blinks the number of times equal to the value of the second digit.

- The Service LED turns off again with a longer pause.
- After the second pause, the blinking pattern will be repeated.

Table 11. Diagnostic light codes

Diagnostic light codes (Amber, White)	Problem description
1,6	Generic catch-all for ungraceful EC code flow errors
1,7	Non-RPMC Flash on Boot Guard fused system
2,1	CPU configuration or CPU failure
2,2	System board: BIOS or Read-Only Memory (ROM) failure
2,3	No memory, or Random-Access Memory (RAM) detected
2,4	Memory, or Random-Access Memory (RAM) failure
2,7	LCD failure SBIOS message
3,1	CMOS battery failure
3,3	Recovery image not found
3,4	Recovery image found but invalid
3,5	EC power-rail error
3,6	Flash corruption detected by SBIOS
3,7	Timeout waiting on ME to reply to HECI message
4,4	Cable and power-rail failure

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**.

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

Perform the following steps to drain the flea power:

Steps

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

Self-help resources

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

Table 12. Self-help resources

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

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see [Dell Support Site](#).

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

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

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	June 2026	Original publish date.