

E25511

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IN SEARCH OF INCREDIBLE



Service Manual

ASUS

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Chapter 1: ***Introduction***

Disclaimer

ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

Safety precautions

- Before handling components, use a grounded wrist strap or touch a safely grounded object to avoid damaging them due to static electricity.
- Keep liquids or moisture away from your device to avoid short circuits.
- Remove rings, watches, and any other metal objects from your hands.
- Hold components by the edges to avoid touching the ICs.
- Properly install all components before connecting the AC power.
- Do not use power adapters or batteries from other devices to reduce the risk of injury to persons due to fire or explosion. Use only certified power adapters or batteries supplied by the manufacturer or authorized retailers.
- Detach all clips or flaps before removing cables to prevent damage.

- Disconnect cables, connectors, and power plugs by pulling the plug evenly to avoid damage.
- Use the correct screw models on your device to prevent damage.
- Confirm that the cable orientation is correct before connecting any cables.
- Fully remove all adhesive residue after removing and before installing any components.
- Photograph the appearance of cables, cable routing, connectors, and screws for later reference before proceeding with each step.

Pre-repair checklist

- Read the entire manual before starting any service procedures and follow all instructions.
 - Back up the data on your device.
 - Place your device on a clean and stable surface.
 - Turn off your device.
 - Disconnect all connected peripherals and cables.
 - Disconnect all power cables and remove the battery pack (if applicable).
-

IMPORTANT!

- If you are uncertain about performing the described service procedures, stop and contact an authorized service center for assistance.
 - Purchase replacement components from authorized retailers of this device to ensure maximum compatibility and reliability.
-

NOTE:

- The illustrations are for reference only.
 - The service procedures described in this manual depend on the model configuration and may not reflect the entire servicing process. To service components that are not covered in this manual, please visit an authorized service center for further assistance.
 - Keep all adhesive tape, insulating materials, screws, and other removable items in a safe place until the service procedure is completed, as they may be needed during installation.
-

Repair tools



Screwdriver



Plastic blade



Tweezers

Accessories



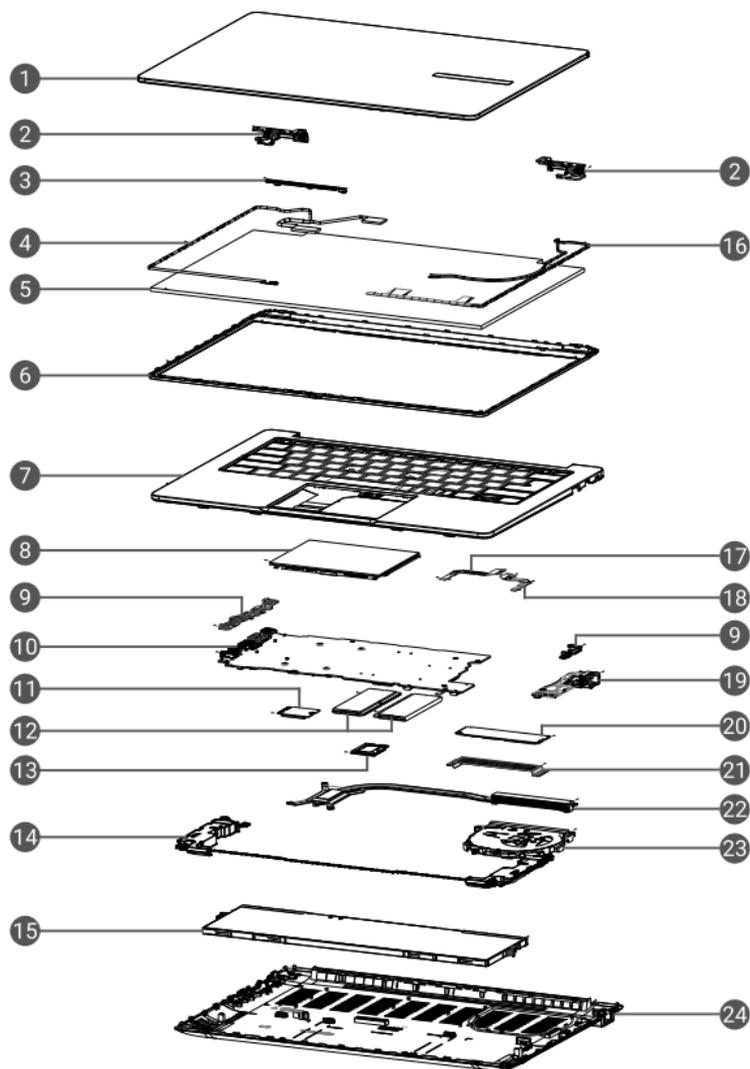
Power adapter

Diagnostic tools

Use ASUS System Diagnostics after completing any service procedures to ensure that all components are working properly.

For more information, visit www.asus.com/support/FAQ/1048490/.

Major components

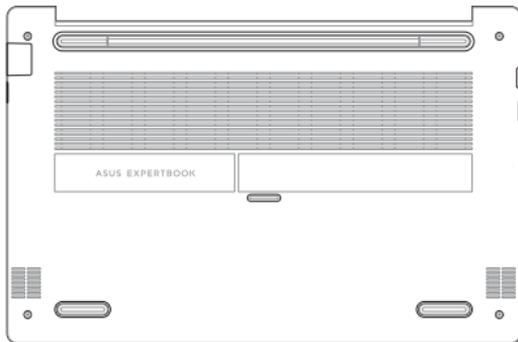


1. Top cover
2. Hinges
3. Camera module
4. eDP cable
5. Display panel
6. Display bezel
7. Keyboard module
8. Touchpad
9. I/O port bracket
10. Motherboard
11. M.2 2230 SSD module*
12. RAM module
13. WLAN module
14. Speakers
15. Battery
16. WLAN antenna
17. Fingerprint sensor cable*
18. Touchpad cable
19. I/O board
20. M.2 2280 SSD module
21. I/O board cable
22. Heat sink
23. Fan module
24. Bottom cover

** On selected models*

Chapter 2: ***Service Procedures***

Bottom cover



Before you begin

Read the **Safety Precautions** and complete the **Pre-repair Checklist**.

Screw list

- ⊕ M2.0 X 3.0L+5 captive screw (2-4pcs)
- ⊕ M2.0 X 2.3L+3.7 captive screw (0-2pcs)

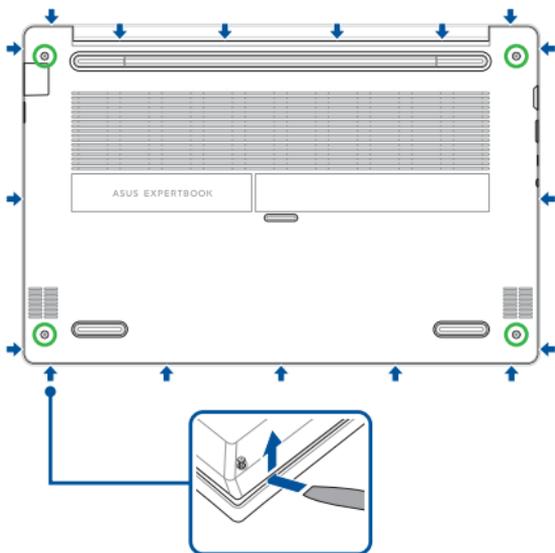
Removal

1. Loosen the captive screw(s) without removing the screw(s).
2. Use the plastic blade to pry open the indicated area of the bottom cover as shown in the illustration below.

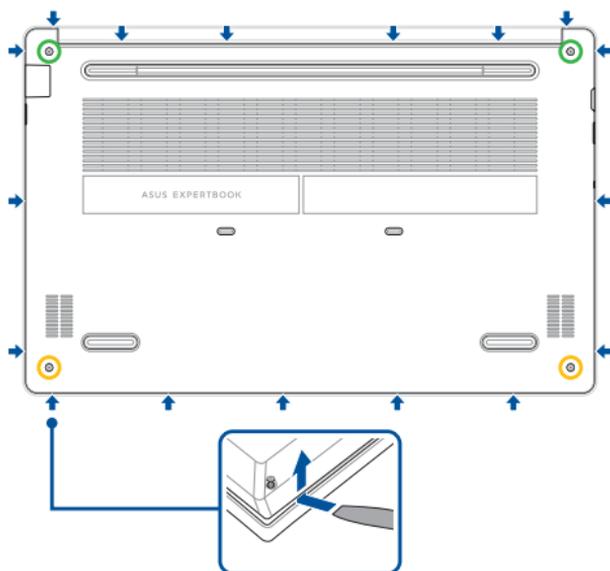
IMPORTANT!

- Avoid sliding the plastic blade along the side of your device or air vents to prevent damage.
 - System power will be cut off automatically upon removal of the bottom cover. To restore power, reattach the bottom cover securely and connect the AC power adapter to your Notebook PC after the servicing is complete.
-

14" models



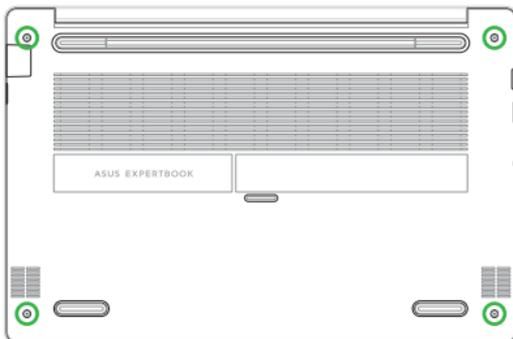
15" models



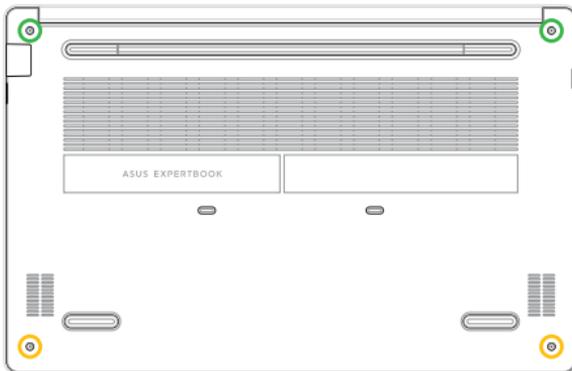
Installation

1. Install the bottom cover.
2. Gently press down on the bottom cover until it clicks into place.
3. Secure the bottom cover by tightening the screw(s).

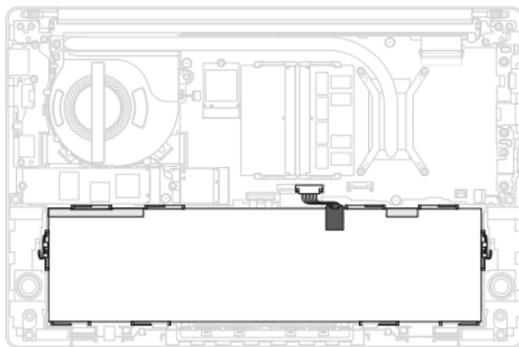
14" models



15" models



Battery



Before you begin

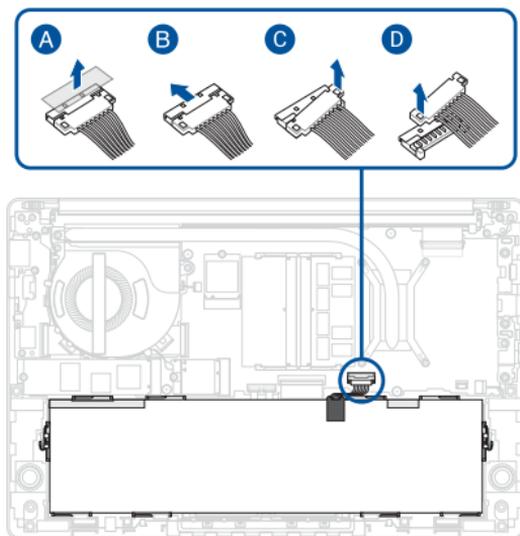
IMPORTANT! Serious risk of fire or explosion may occur if the battery is punctured. If you are uncertain about proceeding, stop and contact an authorized service center for assistance.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover.

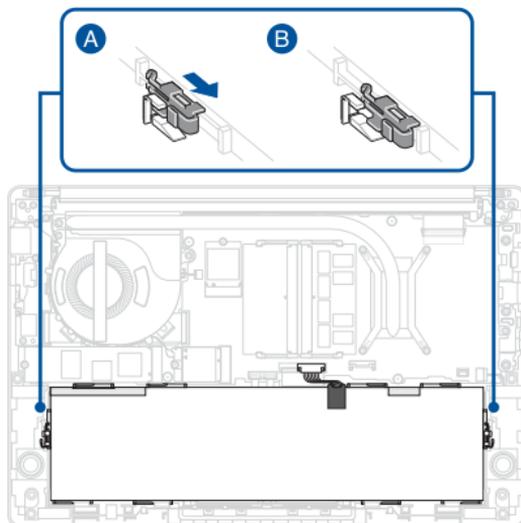
Removal

1. Remove the polyester film, then disconnect the battery power cable.

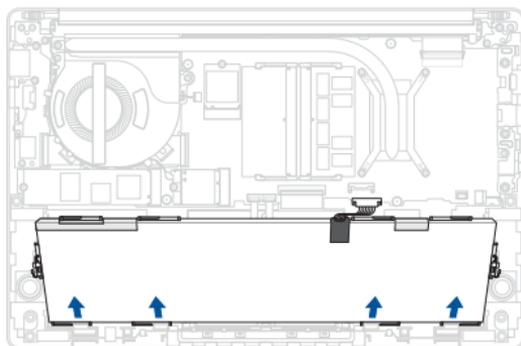
IMPORTANT! Disconnect the battery power cable by lifting the side with the red wires first.



2. Push the latches into the unlocked position.



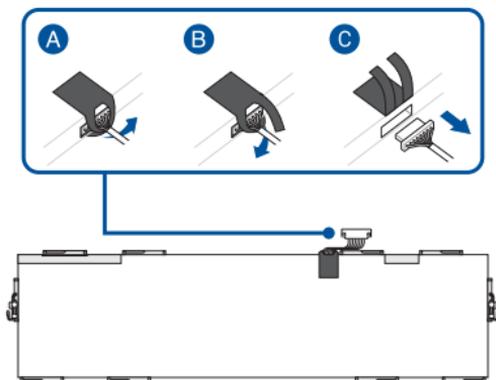
3. Remove the battery.



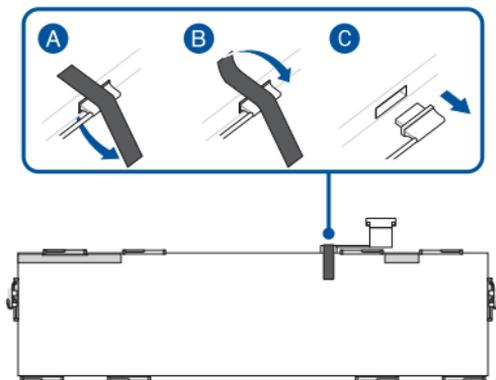
4. Remove the tape, then disconnect the cable.

NOTE: The following steps are only required when you are replacing the existing component with a new one.

14" models

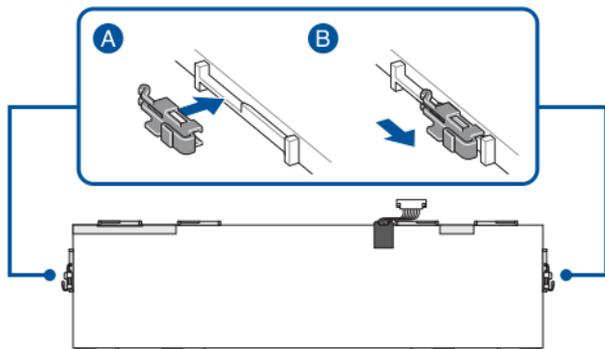


15" models



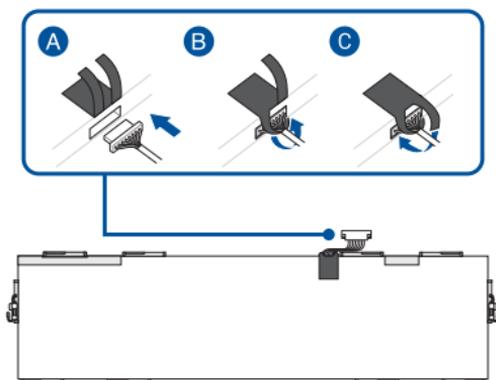
Installation

1. Install the latches.

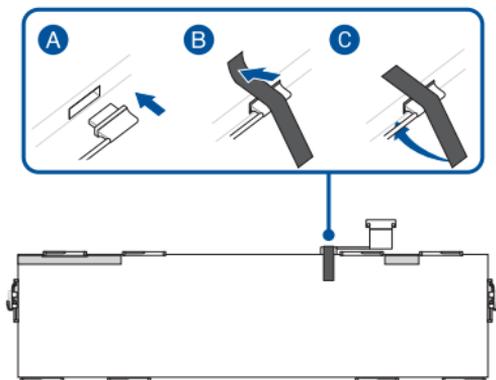


2. Reconnect the cable, then reattach the tape.

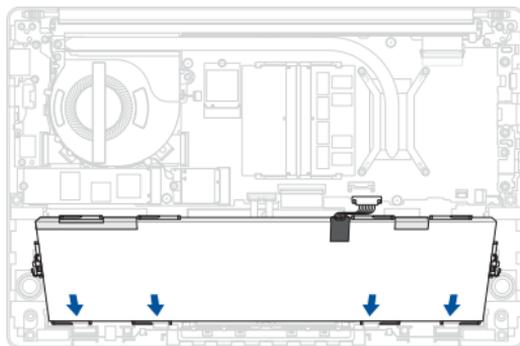
14" models



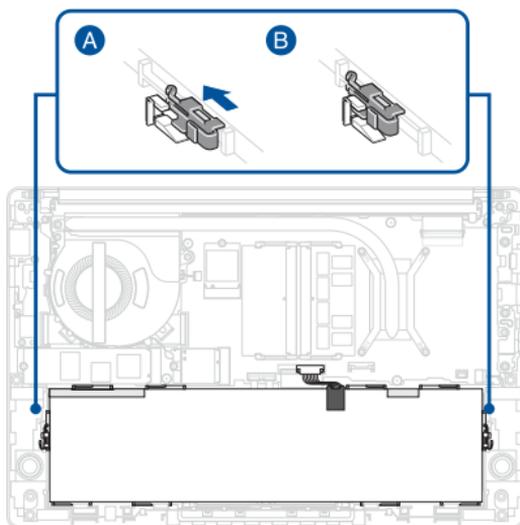
15" models



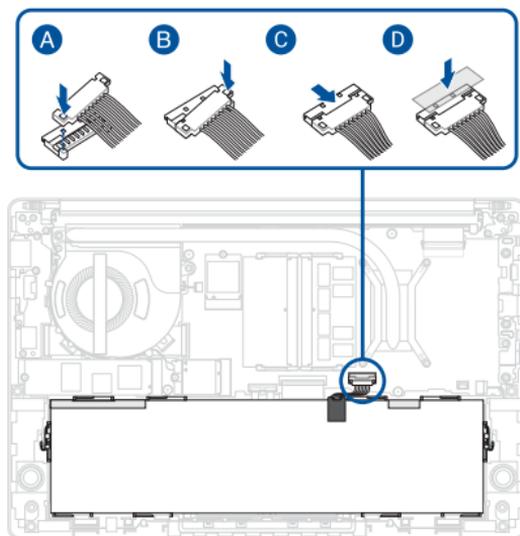
3. Install the battery.



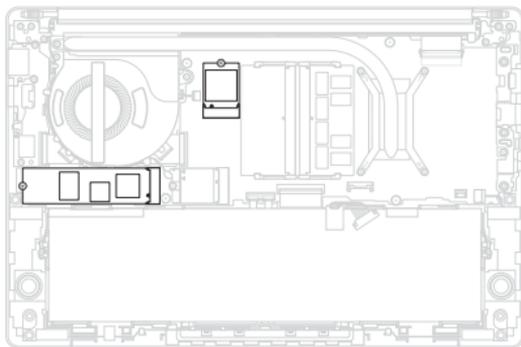
4. Push the latches into the locked position.



5. Reconnect the battery power cable, then reattach the polyester film.
6. Install the components you removed in the *Before you begin* section.



M.2 SSD module



Before you begin

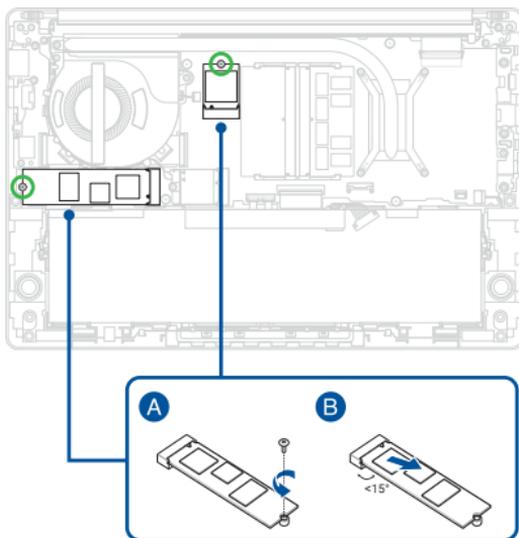
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.

Screw list

- ⊕ M2.0 X 2.5L (1-2pcs)

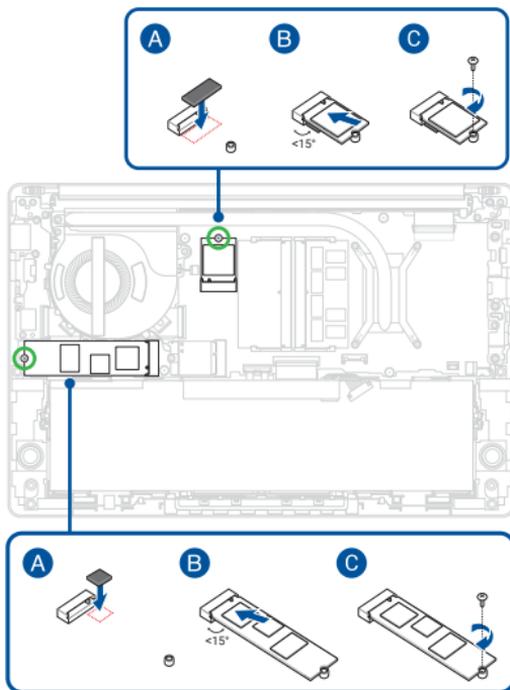
Removal

1. Remove the screw(s).
2. Remove the M.2 SSD module(s) from the motherboard.

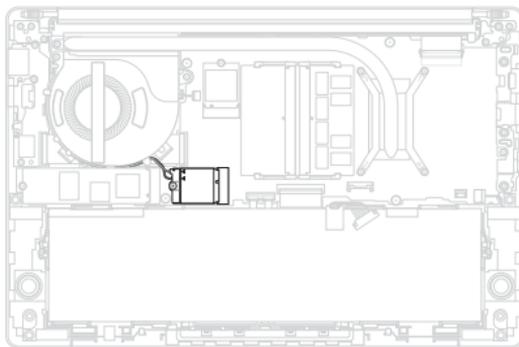


Installation

1. Align and attach the thermal pads to the motherboard.
2. Align and insert the M.2 SSD module(s) into the M.2 connectors on the motherboard.
3. Secure the M.2 SSD module(s) using the screw(s) you removed earlier.
4. Install the components you removed in the *Before you begin* section.



WLAN module



Before you begin

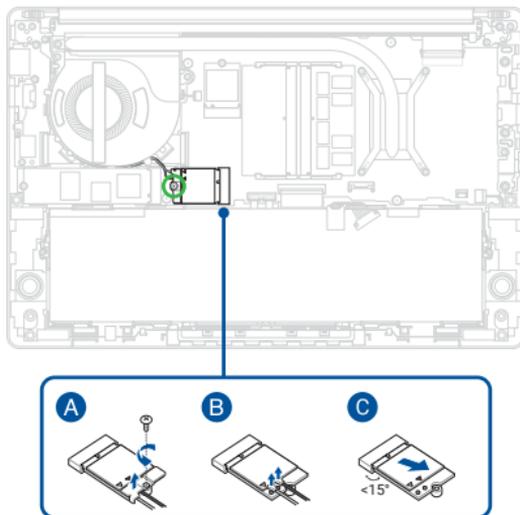
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.

Screw list

- ⊕ M2.0 X 2.5L (1pc)

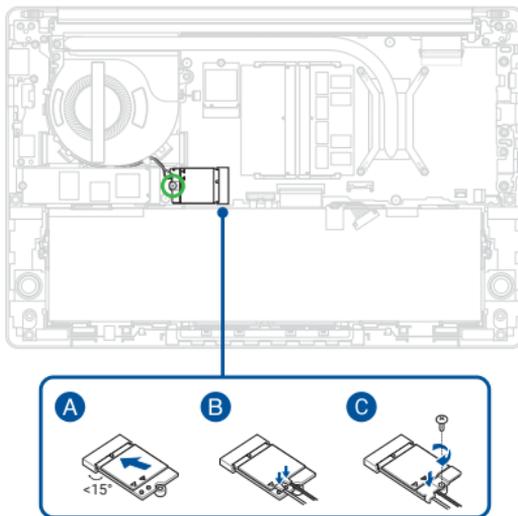
Removal

1. Remove the screw, then remove the bracket.
2. Disconnect the cable(s).
3. Remove the WLAN module.

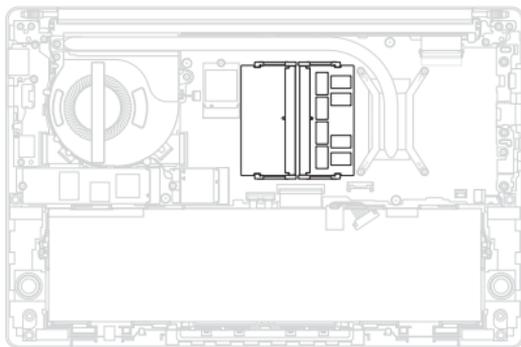


Installation

1. Install the WLAN module.
2. Reconnect the cable(s).
3. Install the bracket, then secure the bracket using the screw you removed earlier.
4. Install the components you removed in the *Before you begin* section.



RAM module

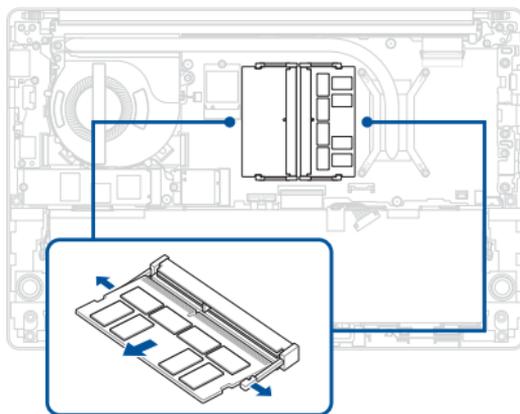


Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.

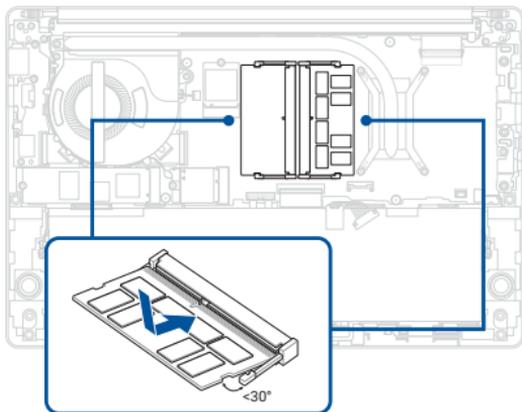
Removal

Push the clips outwards to remove the RAM module(s).

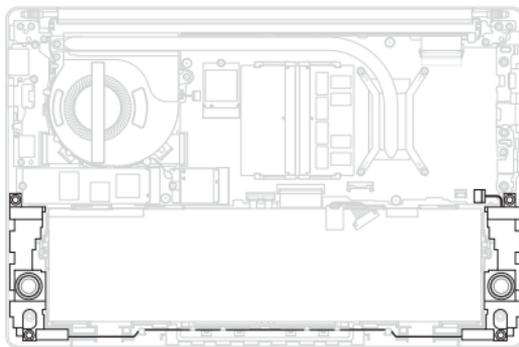


Installation

1. Align and insert the RAM module(s) into the RAM module slot(s).
2. Install the components you removed in the *Before you begin* section.



Speakers



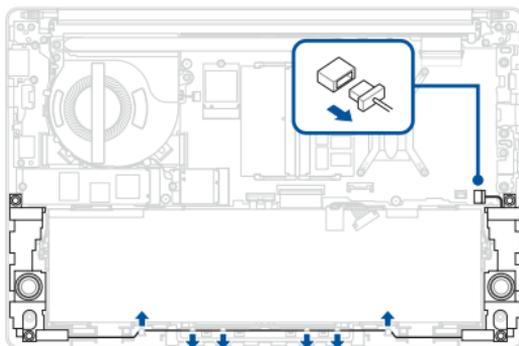
Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.

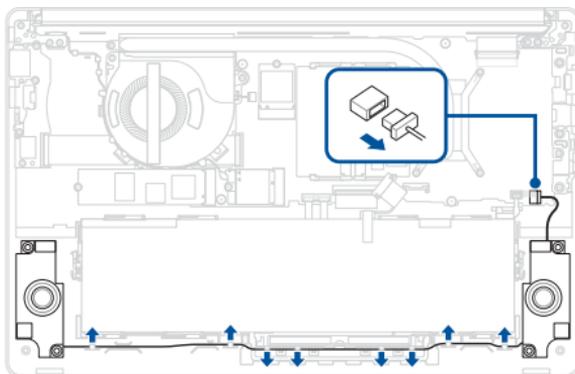
Removal

Disconnect the cable, then remove the speakers.

14" models



15" models



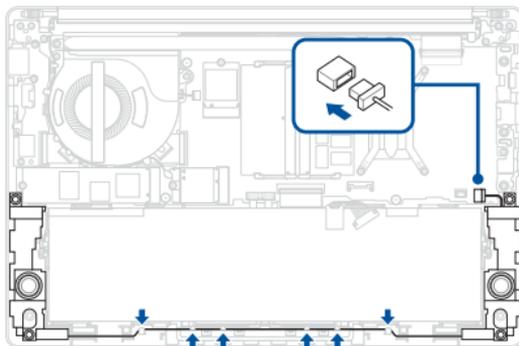
Installation

1. Install the speakers and route the cable through the cable guide(s), then reconnect the cable.

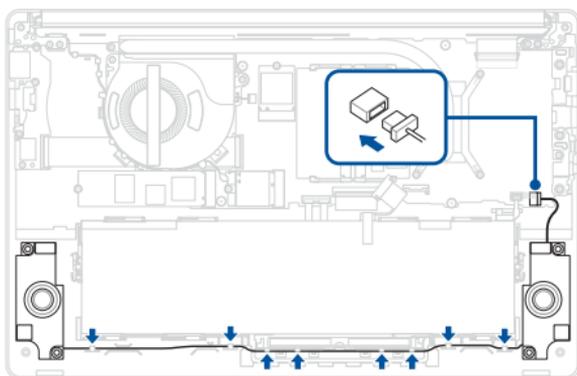
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

2. Install the components you removed in the *Before you begin* section.

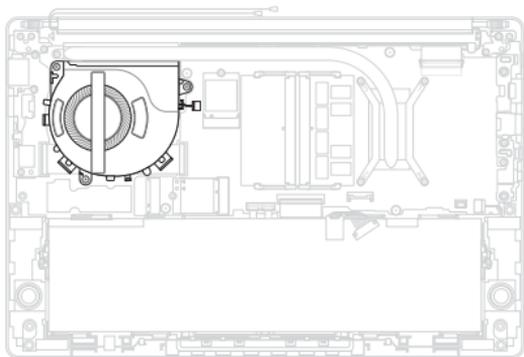
14" models



15" models



Fan module



Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - M.2 SSD module

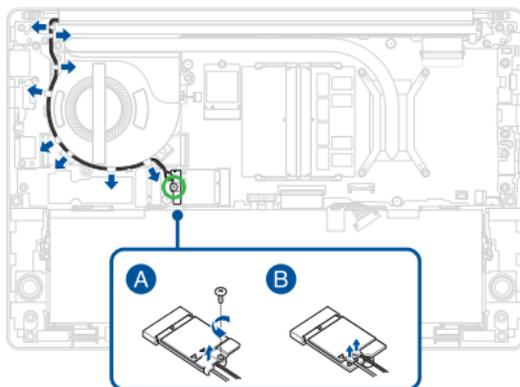
Screw list

- ⊕ M2.0 X 2.5L (3pcs)

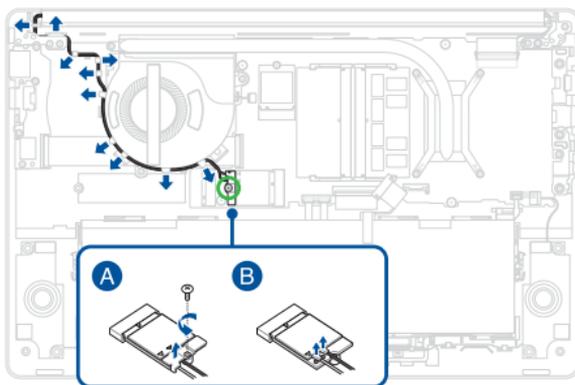
Removal

1. Remove the screw, then remove the bracket.
2. Disconnect the cable(s), then remove the cable(s) from the cable guide(s).

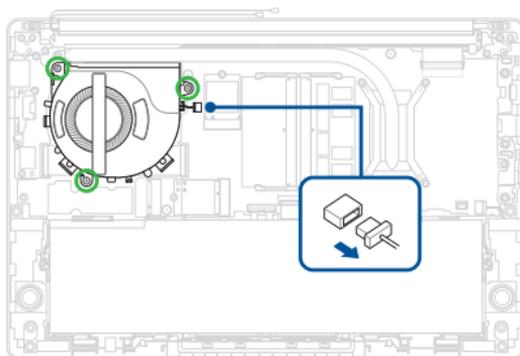
14" models



15" models

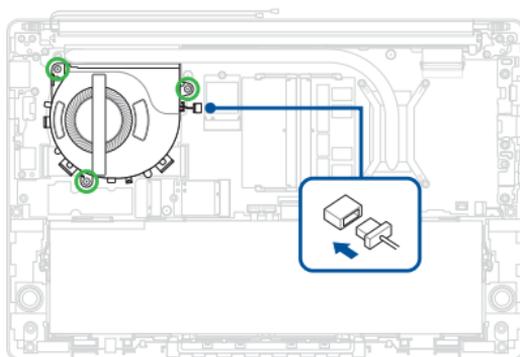


3. Remove the screw(s) and disconnect the cable, then remove the fan.



Installation

1. Install the fan, then reconnect the cable and secure the fan using the screw(s) you removed earlier.

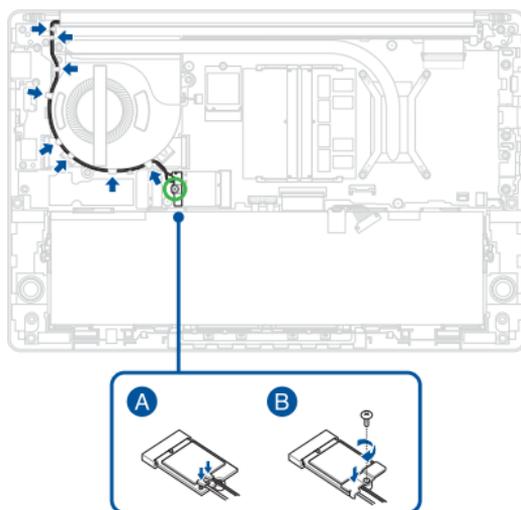


2. Route the cable through the cable guide(s).

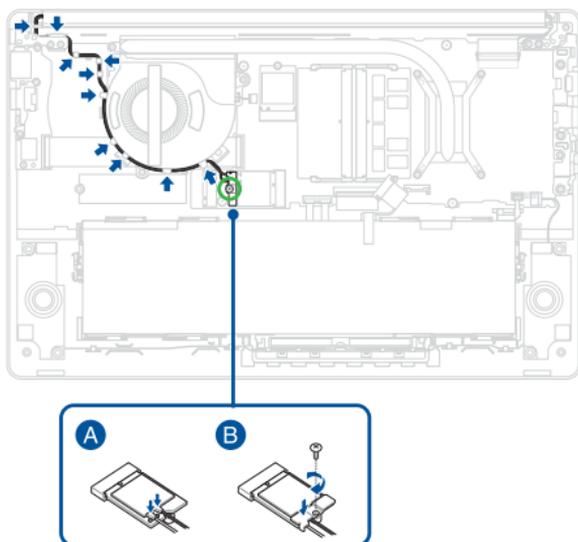
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

3. Reconnect the cable(s).
4. Install the bracket, then secure the bracket using the screw you removed earlier.
5. Install the components you removed in the *Before you begin* section.

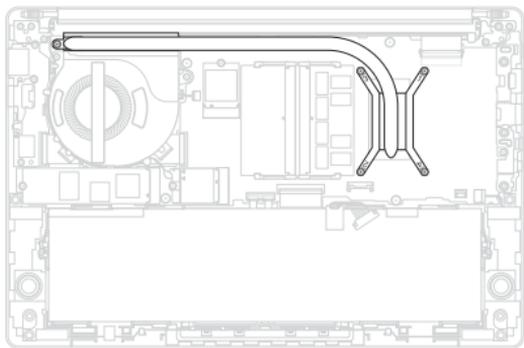
14" models



15" models



Heat sink



Before you begin

IMPORTANT! Thermal paste, thermal pads, liquid metal, or other thermal interface materials must be thoroughly removed and replaced if this component is removed. Ensure that replacement materials are available before proceeding, or contact an authorized service center for assistance.

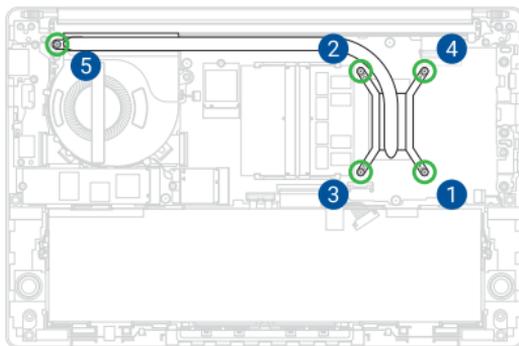
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.

Screw list

- ⊕ M2.0 X 2.0L (5pcs)

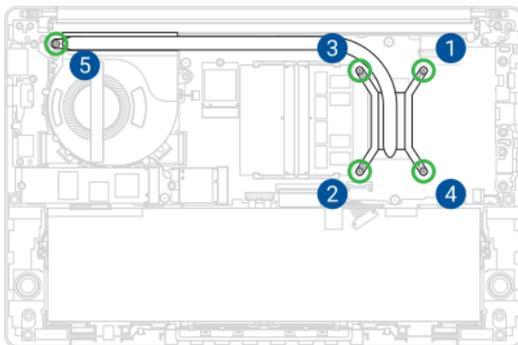
Removal

Remove the screw(s) one by one in the sequence shown in the illustration below, then remove the heat sink.

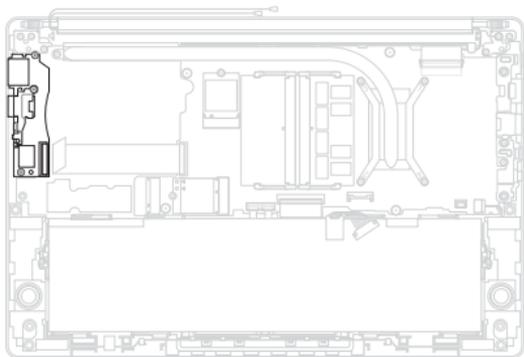


Installation

1. Install the heat sink, then secure the heat sink screw(s) one by one in the sequence shown in the illustration below.
2. Install the components you removed in the *Before you begin* section.



I/O board



Before you begin

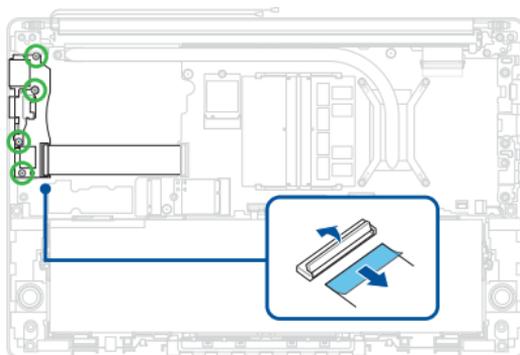
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - M.2 SSD module
 - Fan module

Screw list

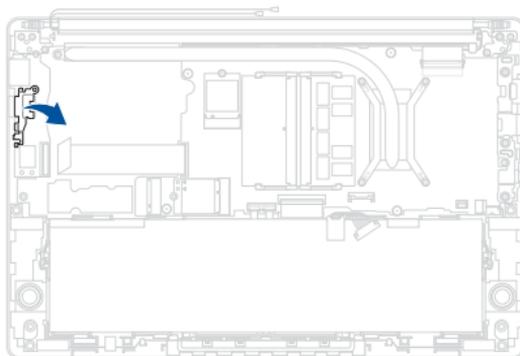
- ⊕ M2.0 X 4.0L (4pcs)

Removal

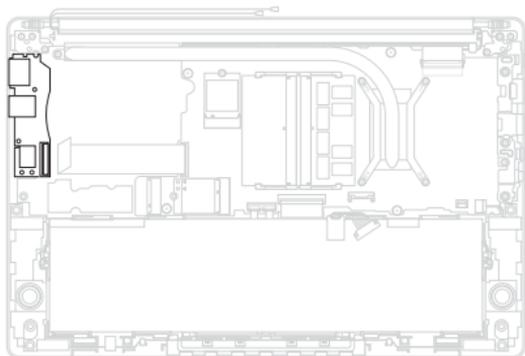
1. Disconnect the cable, then remove the screw(s).



2. Remove the bracket.

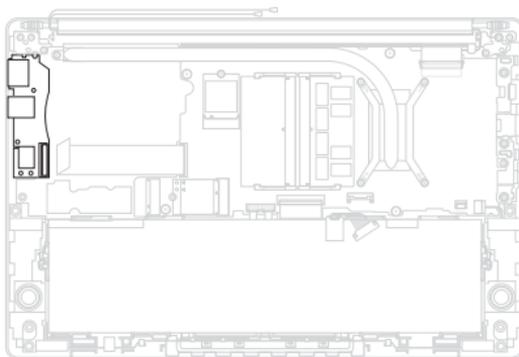


3. Remove the I/O board.

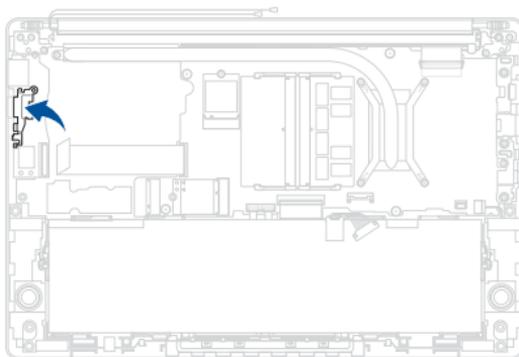


Installation

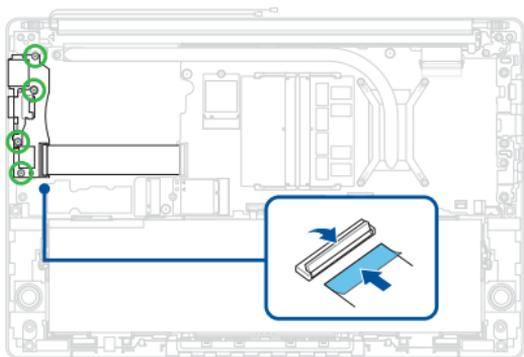
1. Install the I/O board.



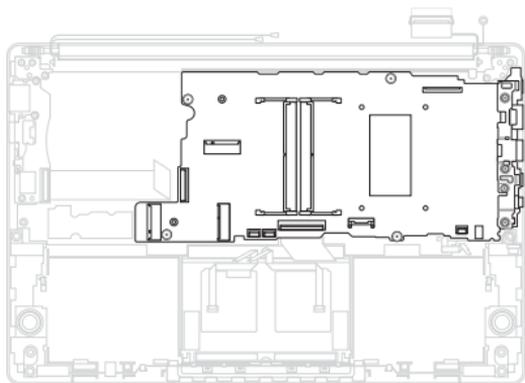
2. Install the bracket.



3. Secure the I/O board using the screw(s) you removed earlier, then reconnect the cable.
4. Install the components you removed in the *Before you begin* section.



Motherboard



Before you begin

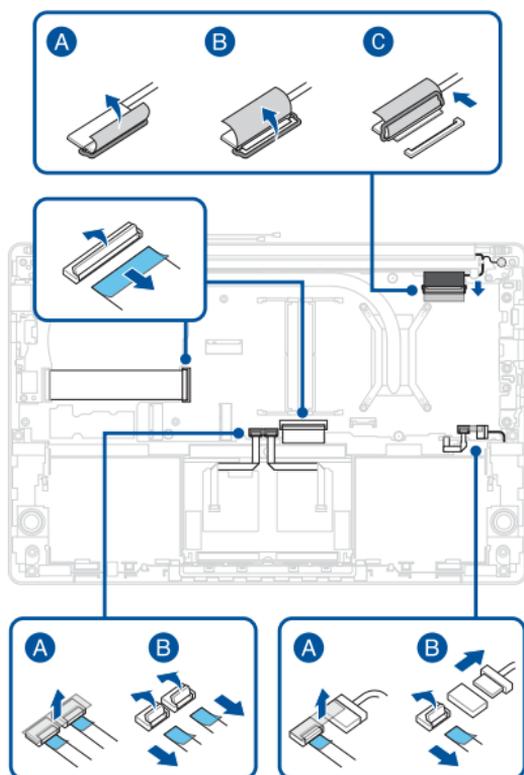
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - Battery
 - M.2 SSD module
 - WLAN module
 - RAM module
 - Fan module

Screw list

- ⊕ M2.0 X 4.0L (4-5pcs)
- ⊕ M2.0 X 2.0L, 7D (3-4pcs)
- ⊕ M2.0 X 2.0L (5pcs)

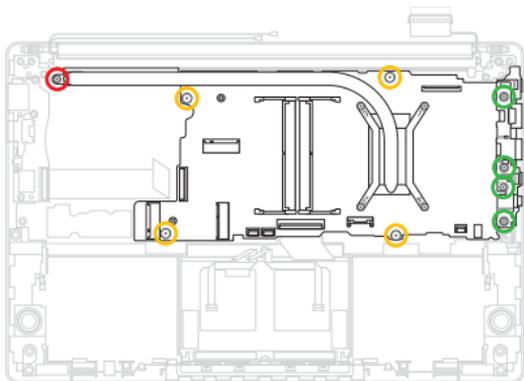
Removal

1. Remove the polyester film, then disconnect the cable(s).

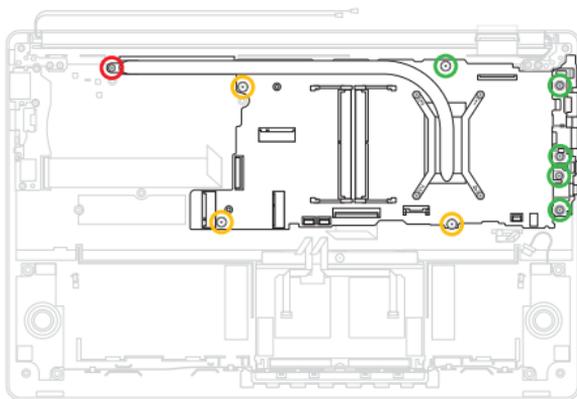


2. Remove the screw(s), then remove the motherboard.

14" models

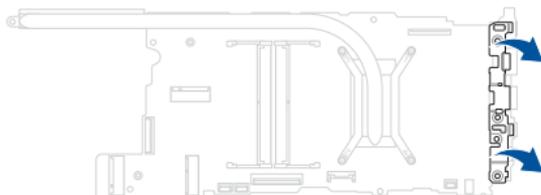


15" models

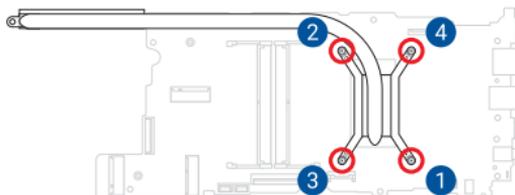


3. Remove the bracket.

NOTE: The following steps are only required when you are replacing the existing component with a new one.

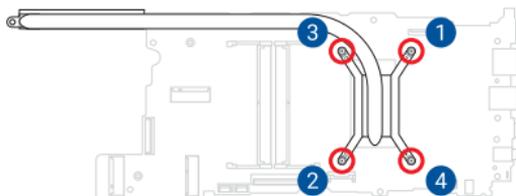


4. Remove the screw(s) one by one in the sequence shown in the illustration below, then remove the heat sink.

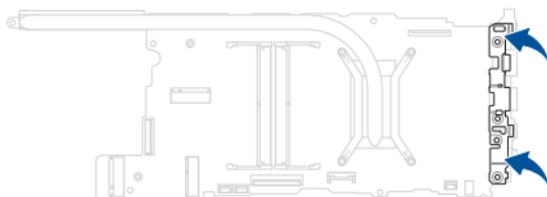


Installation

1. Install the heat sink, then secure the heat sink screw(s) one by one in the sequence shown in the illustration below.

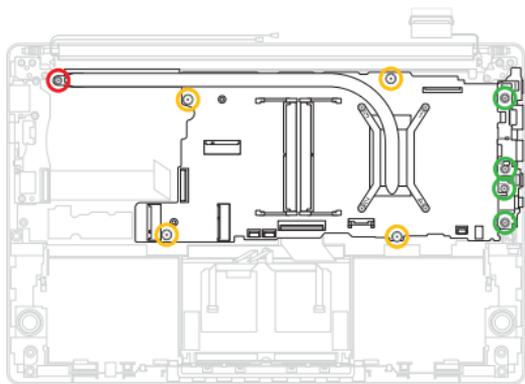


2. Install the bracket.

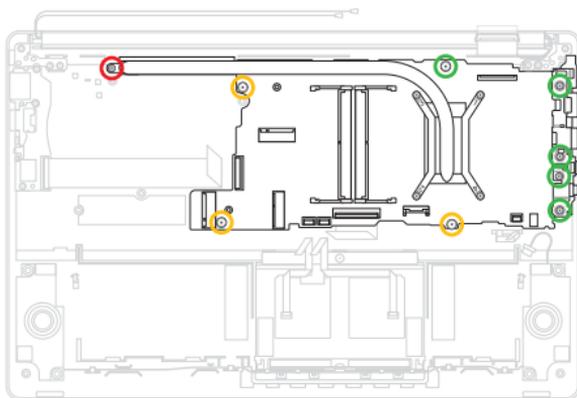


3. Install the motherboard, then secure the motherboard using the screw(s) you removed earlier.

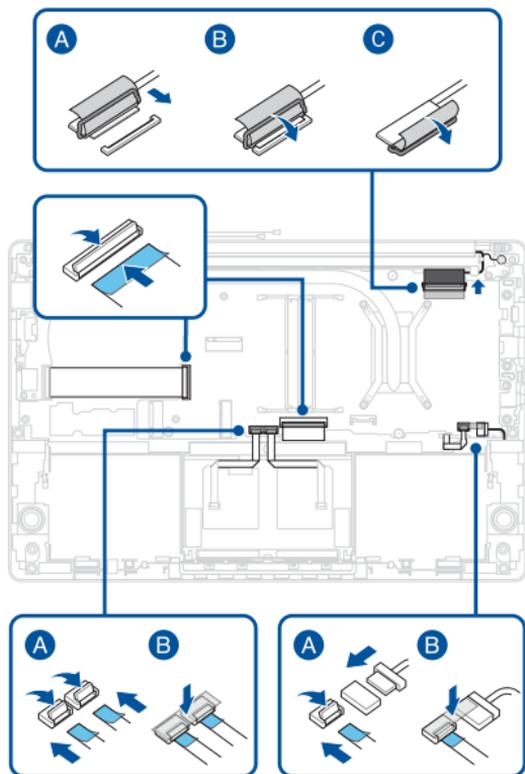
14" models



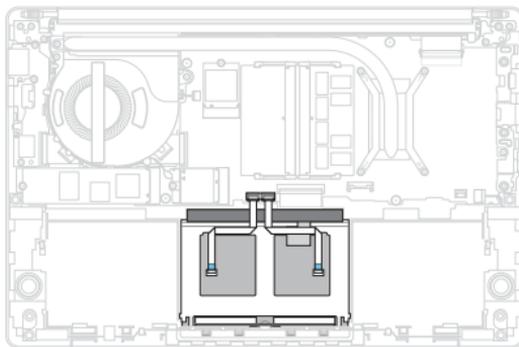
15" models



4. Reconnect the cable(s), then reattach the polyester film.
5. Install the components you removed in the *Before you begin* section.



Touchpad



Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - Battery

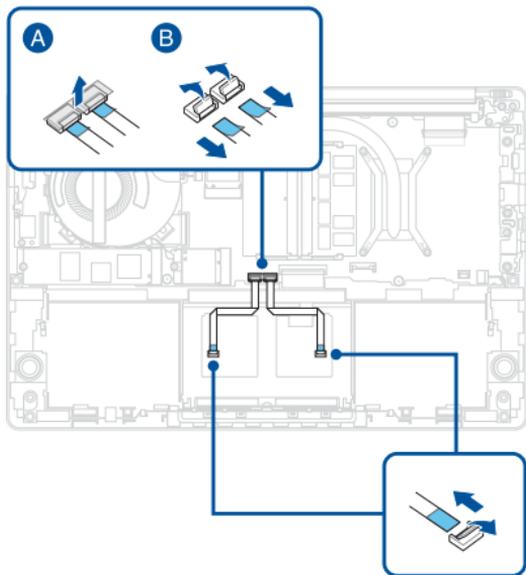
Screw list

- ⊕ M2.0 X 2.0L (3pcs)

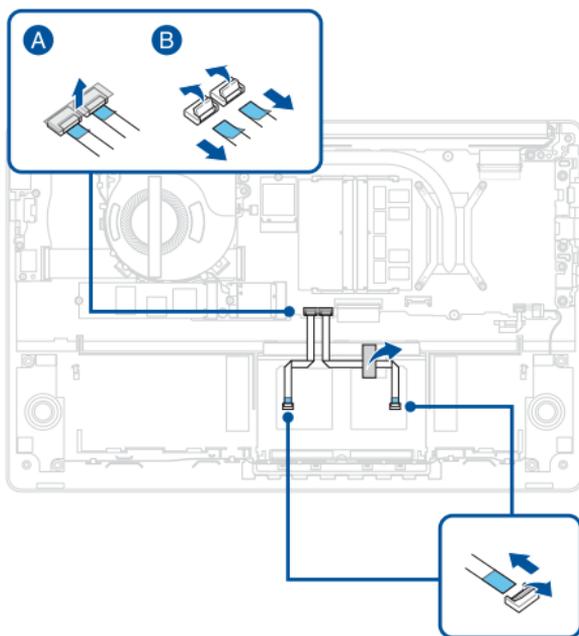
Removal

1. Remove the polyester film, then disconnect the cable(s).

14" models

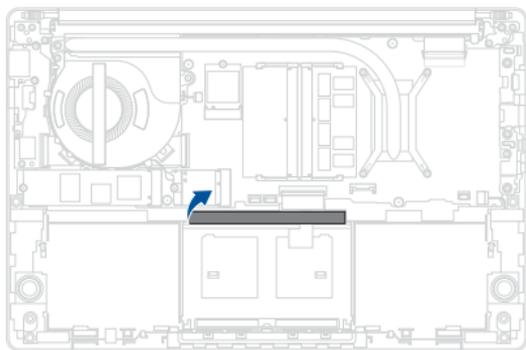


15" models

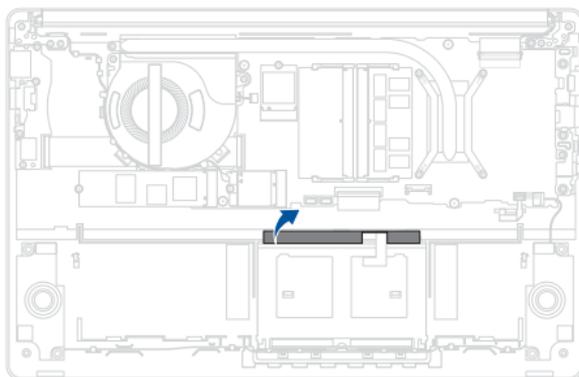


2. Remove the polyester film.

14" models

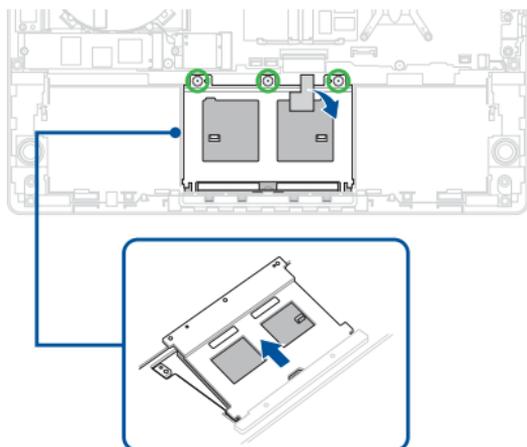


15" models

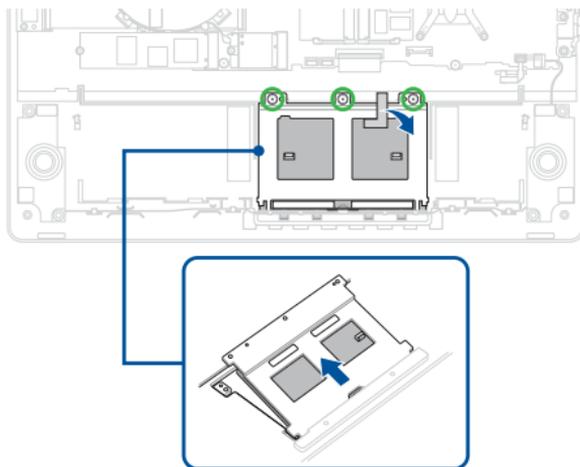


3. Remove the tape and remove the screw(s), then remove the touchpad.

14" models



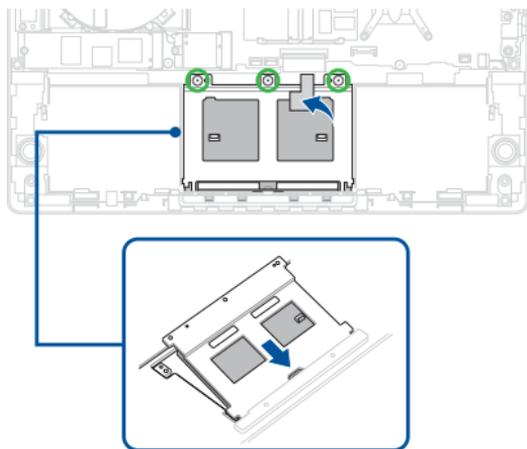
15" models



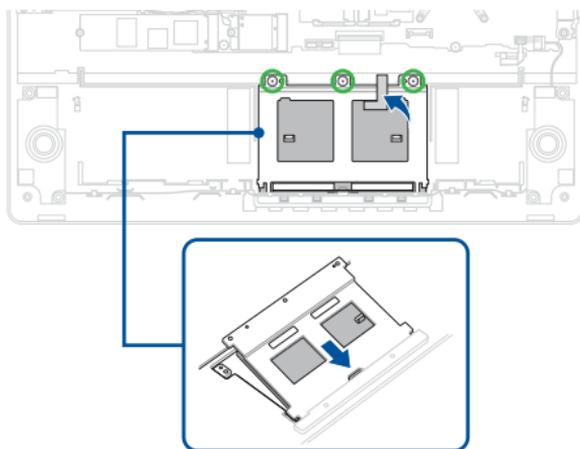
Installation

1. Install the touchpad, then secure the touchpad using the screw(s) you removed earlier and reattach the tape.

14" models

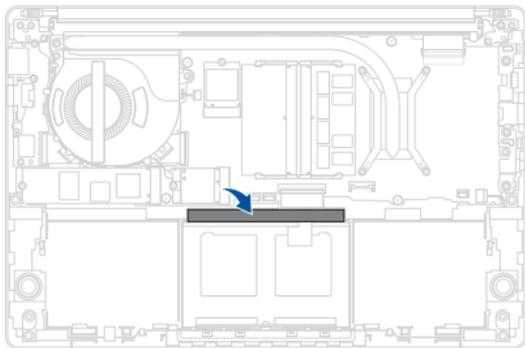


15" models

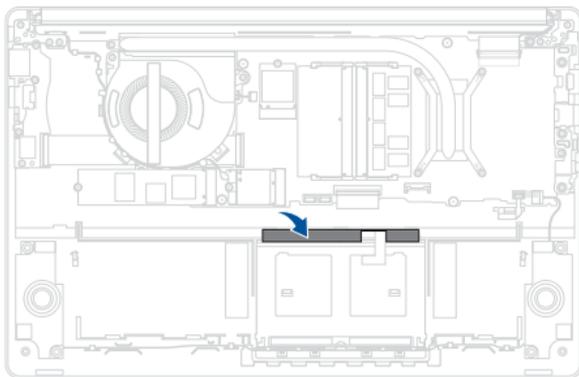


2. Reattach the polyester film.

14" models

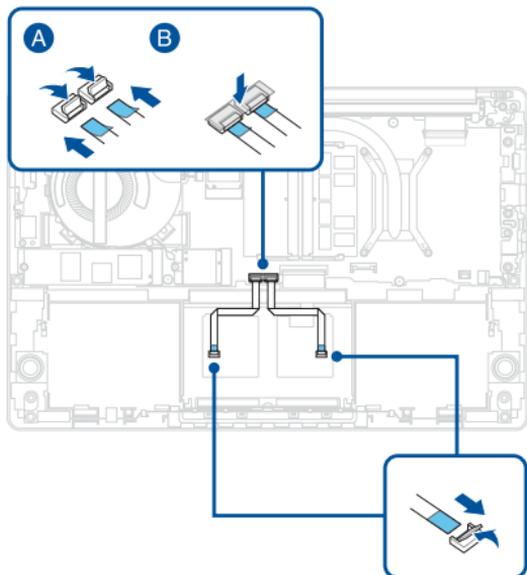


15" models

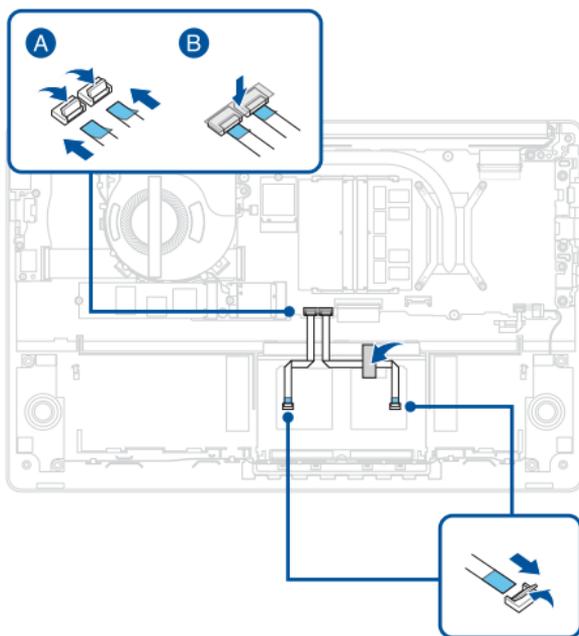


3. Reconnect the cable(s), then reattach the polyester film.
4. Install the components you removed in the *Before you begin* section.

14" models



15" models



Display panel module



Before you begin

IMPORTANT! Do not bend the display panel in any way to avoid risk of display panel leakage.

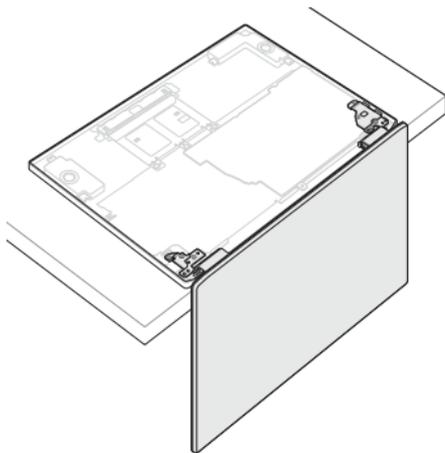
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.

Screw list

- ⊕ M2.0 X 5.0L (6pcs)
- ⊕ M2.0 X 4.0L (6pcs)
- ⊕ M2.0 X 2.5L (1pc)

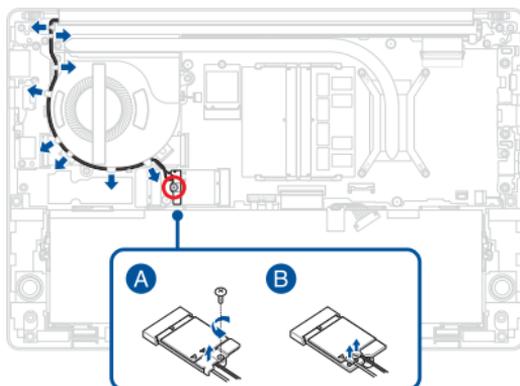
Removal

1. Place your device with the display panel hanging over the edge of the workspace as shown in the illustration below.

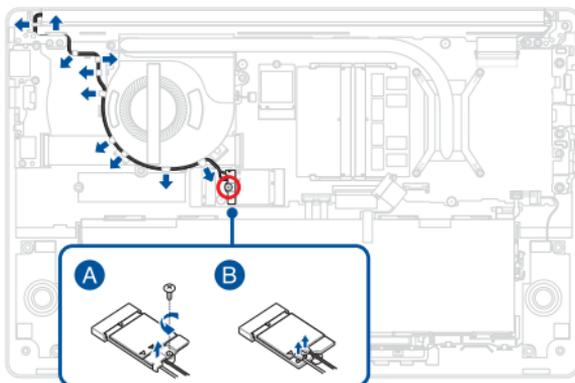


2. Remove the screw, then remove the bracket.
3. Disconnect the cable(s), then remove the cable(s) from the cable guide(s).

14" models

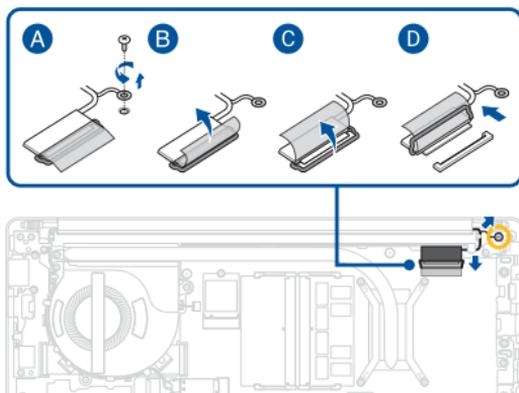


15" models

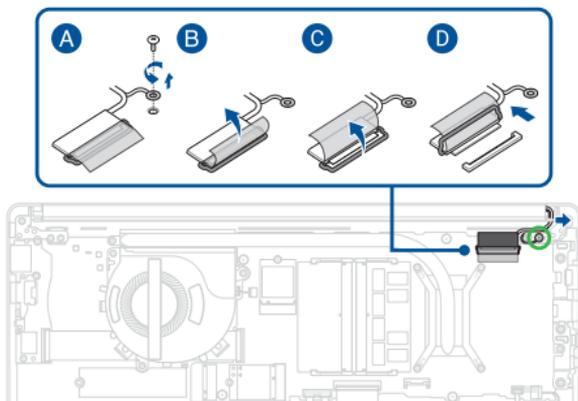


4. Remove the screw, then disconnect the cable.

14" models

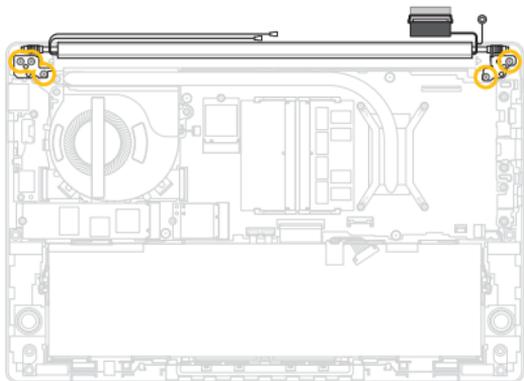


15" models

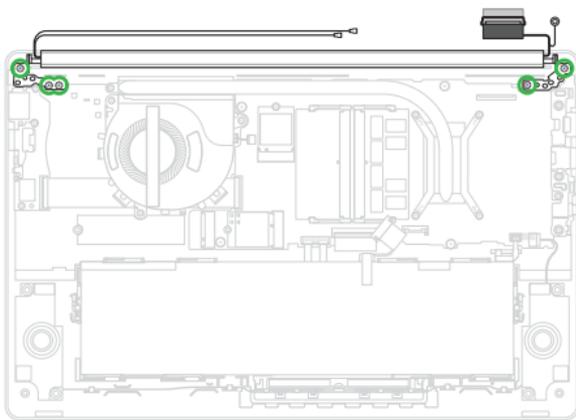


5. Remove the screw(s).

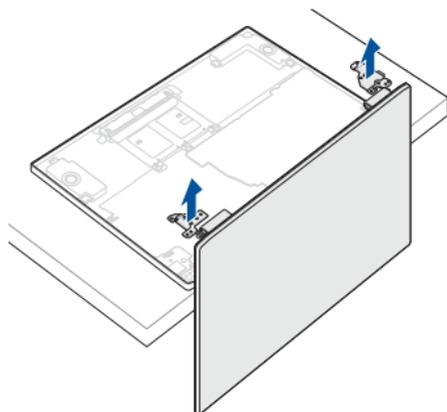
14" models



15" models

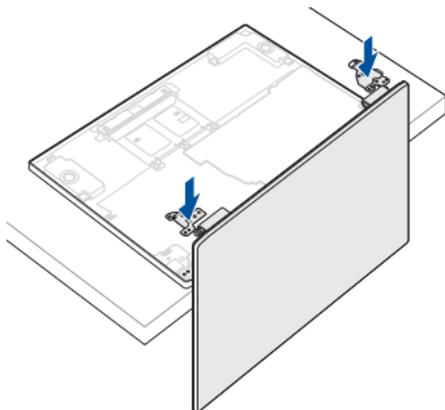


6. Remove the display panel module.



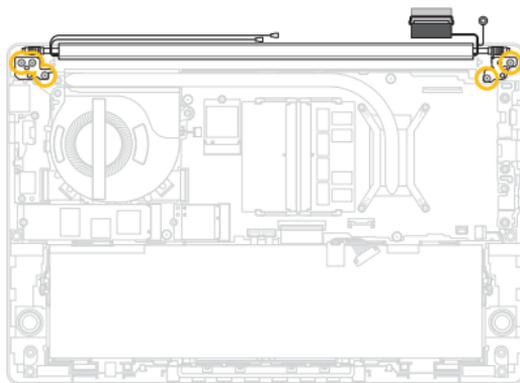
Installation

1. In the orientation shown, align and place the hinges of the display panel module on the screw holes.

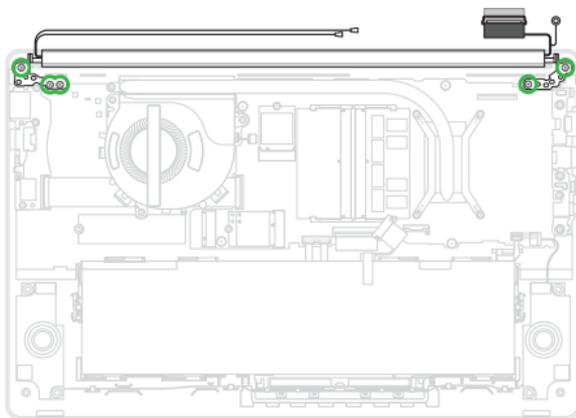


- Secure the display panel module using the screw(s) you removed earlier.

14" models

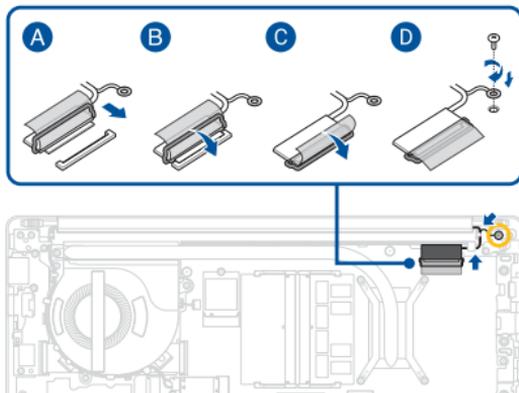


15" models

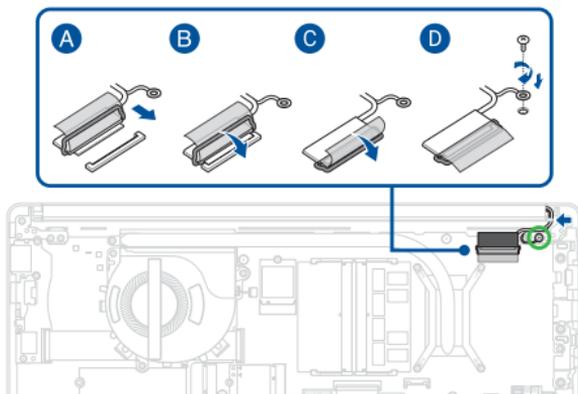


3. Reconnect the cable, then secure the cable using the screw you removed earlier.

14" models



15" models

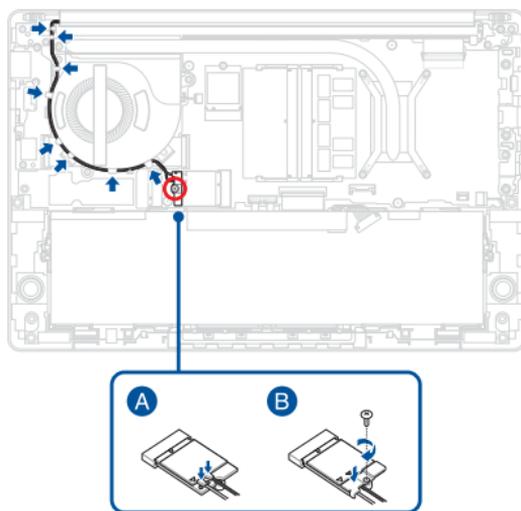


4. Route the cable through the cable guide(s).

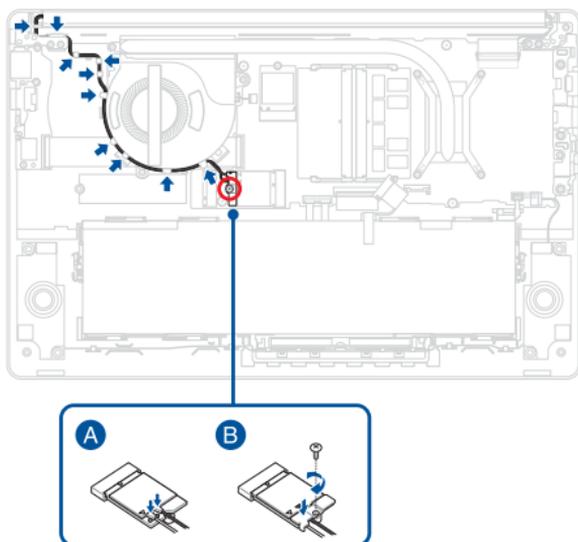
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

5. Reconnect the cable(s).
6. Install the bracket, then secure the bracket using the screw you removed earlier.
7. Install the components you removed in the *Before you begin* section.

14" models



15" models



Display bezel



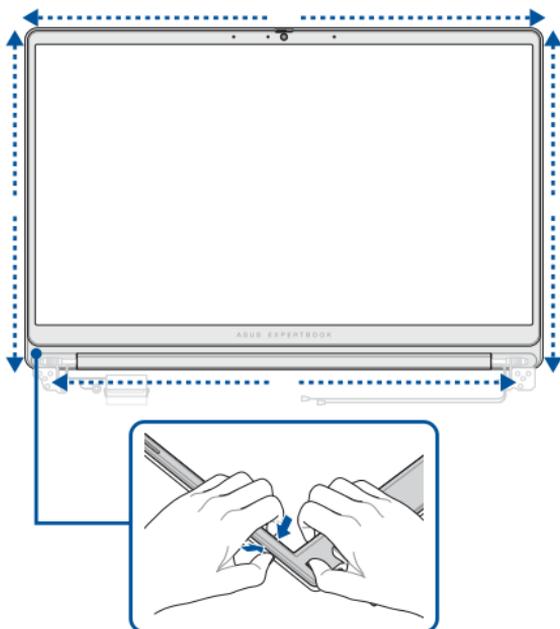
Before you begin

IMPORTANT! This component is fragile. Damage may occur if the service procedure is performed incorrectly. If you are uncertain about proceeding, stop and contact an authorized service center for assistance.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - Display panel module

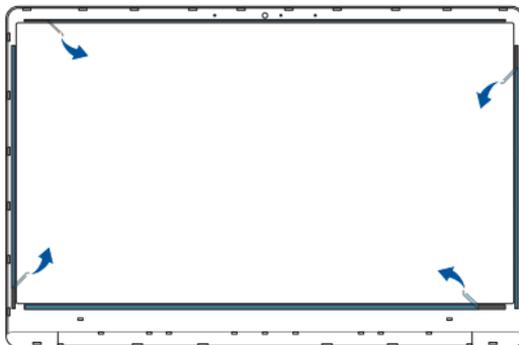
Removal

Carefully pry the bezel loose, then remove the bezel.

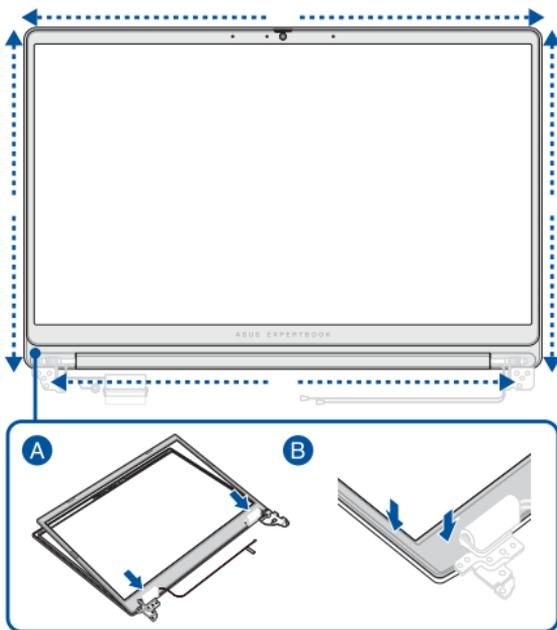


Installation

1. Remove the release liners from the tape on the bezel.



2. Align and install the bezel.
3. Install the components you removed in the *Before you begin* section.



Display panel



Before you begin

IMPORTANT! Do not bend the display panel in any way to avoid risk of display panel leakage.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - Display panel module
 - Display bezel

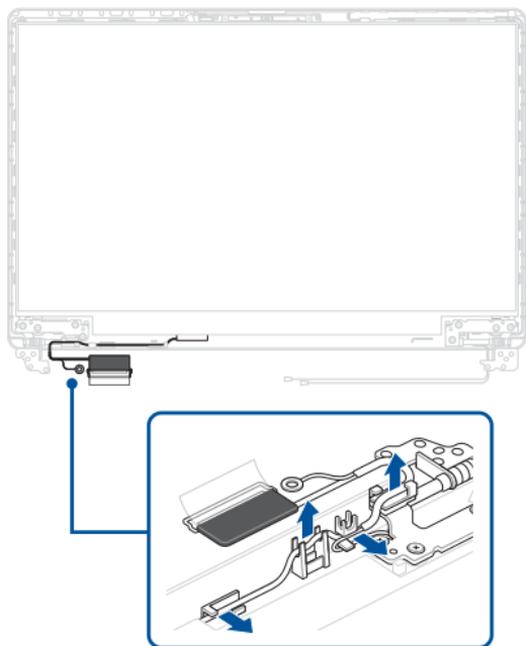
Screw list

- ⊕ M2.5 X 3.0L (8pcs)

Removal

1. Remove the cable from the cable guide(s) (on selected models).

14" models

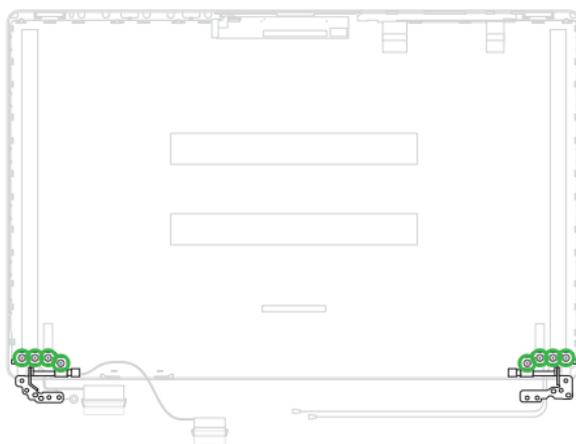


2. Remove the screw(s), then remove the hinges.

14" models



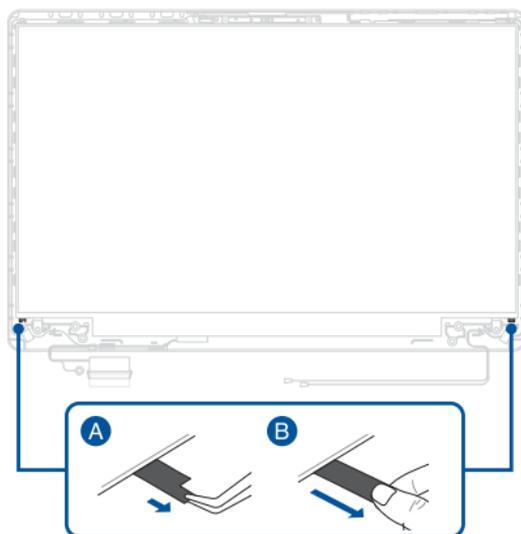
15" models



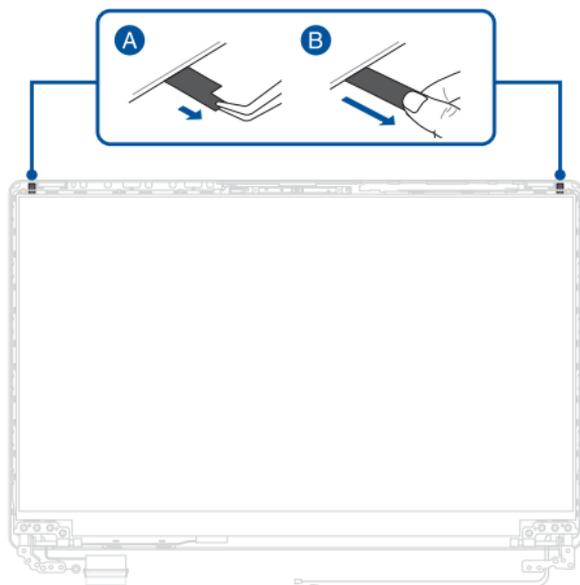
3. Locate the tip of the stretch release tape, then carefully pull out the stretch release tape as shown in the illustration below.

IMPORTANT! Maintain a flat angle and constant speed when pulling the stretch release tape. Excessive force may damage the stretch release tape and prevent removal of the display panel.

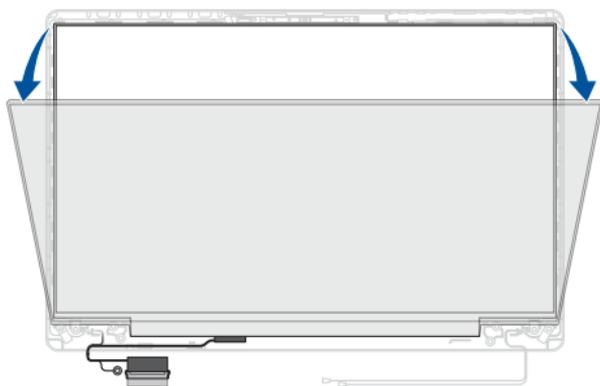
14" models



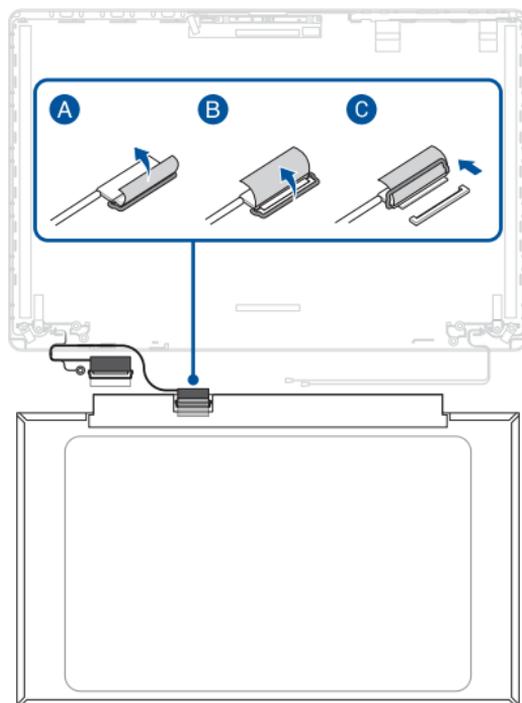
15" models



4. Lift and flip the display panel over.



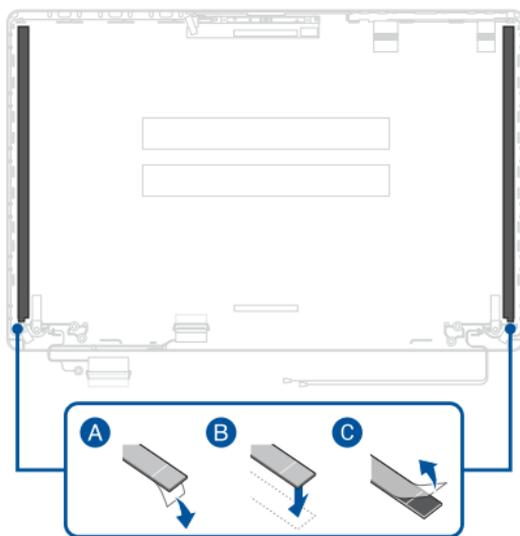
5. Disconnect the cable.



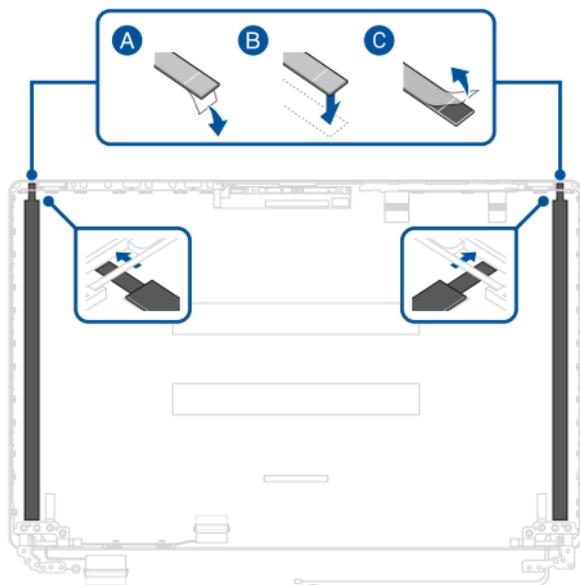
Installation

1. Remove the release liner(s) from the bottom side of the stretch release tape.
2. Align and attach the stretch release tape to the top cover.
3. Remove the release liner(s) from the top side of the stretch release tape.

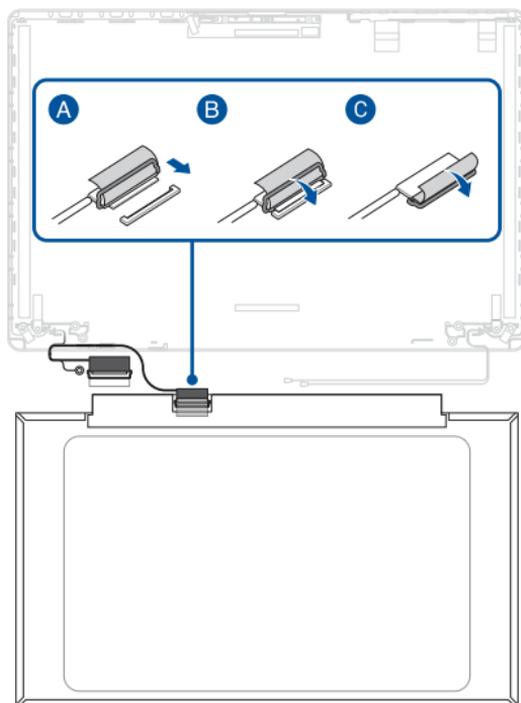
14" models



15" models



4. Reconnect the cable to the rear side of the display panel.



5. Flip the display panel over, then align the display panel with the chassis and gently press down on the display panel.

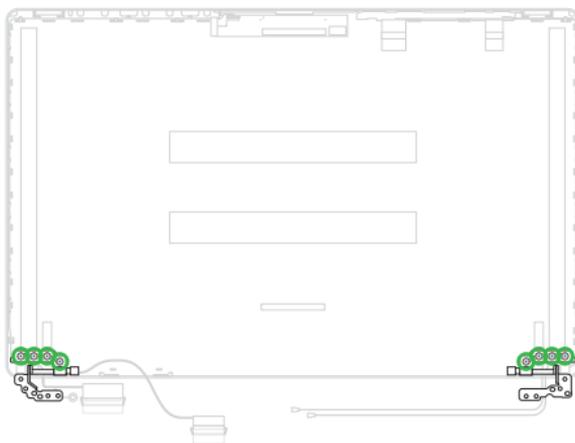


6. Install the hinges, then secure the hinges using the screw(s) you removed earlier.

14" models



15" models

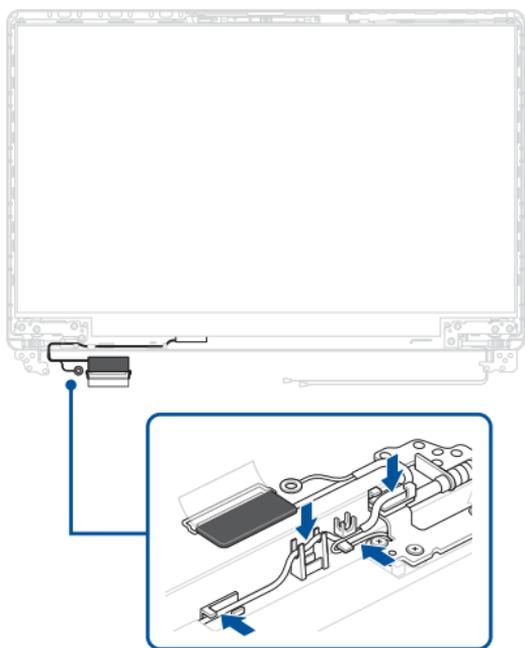


7. Route the cable through the cable guide(s) (on selected models).

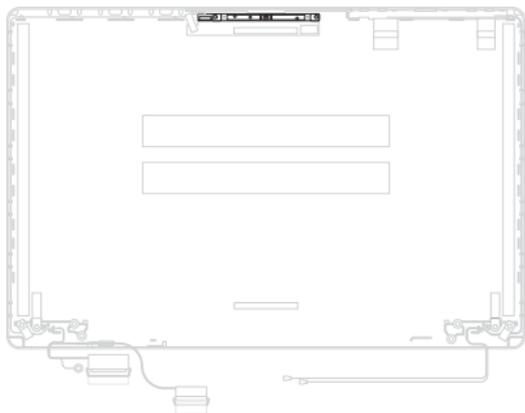
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

8. Install the components you removed in the *Before you begin* section.

14" models



Camera module



Before you begin

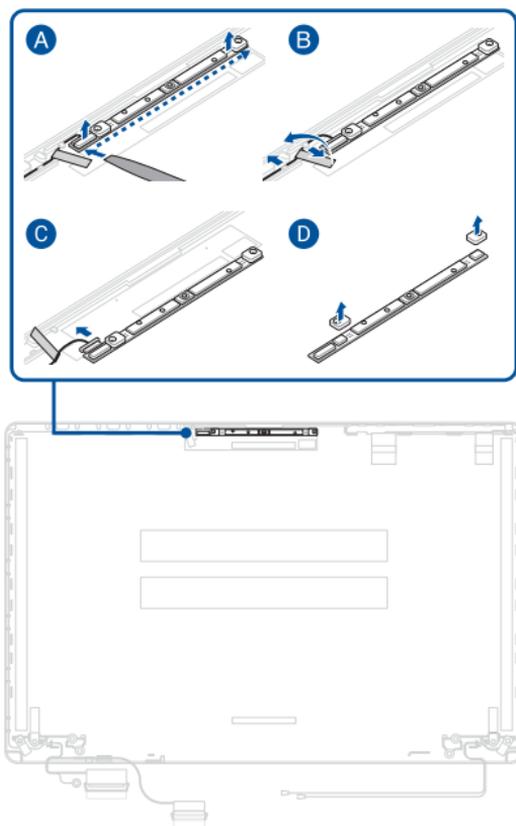
IMPORTANT! This component is fragile. Damage may occur if the service procedure is performed incorrectly. If you are uncertain about proceeding, stop and contact an authorized service center for assistance.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - Display panel module
 - Display bezel
 - Display panel

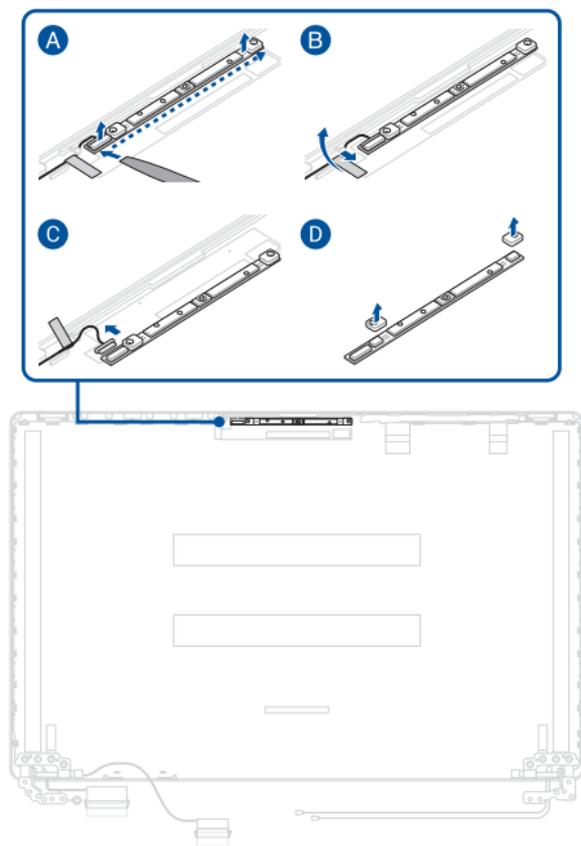
Removal

1. Carefully remove the camera module.
2. Remove the tape, then remove the cable from the cable guide(s).
3. Disconnect the cable.
4. Remove the rubber caps from the camera module.

14" models



15" models



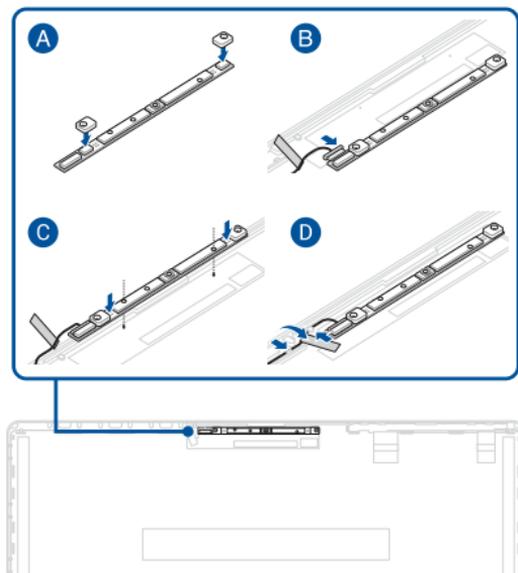
Installation

1. Attach the rubber caps to the camera module.
2. Reconnect the cable.
3. Install the camera module.
4. Route the cable through the cable guide, then reattach the tape.

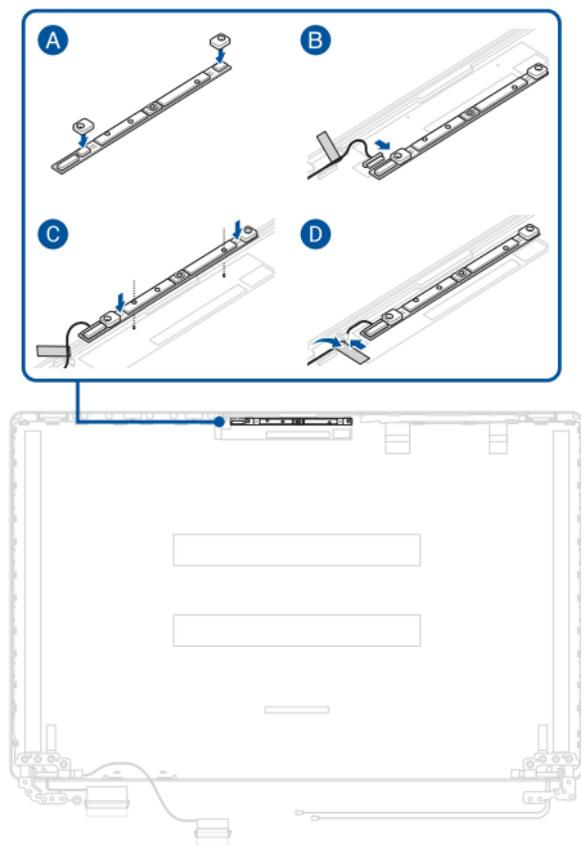
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

5. Install the components you removed in the *Before you begin* section.

14" models



15" models



Top cover



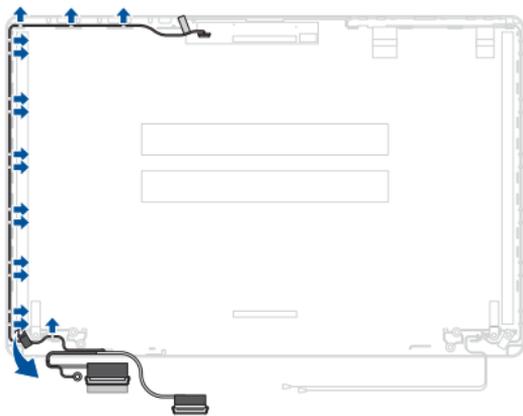
Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - Display panel module
 - Display bezel
 - Display panel
 - Camera module

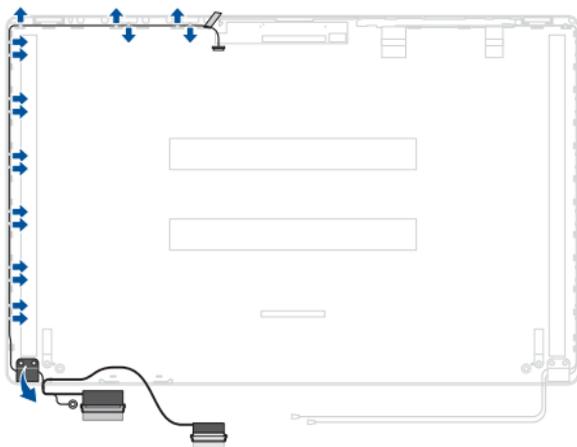
Removal

1. Remove the tape, then remove the cable.

14" models



15" models

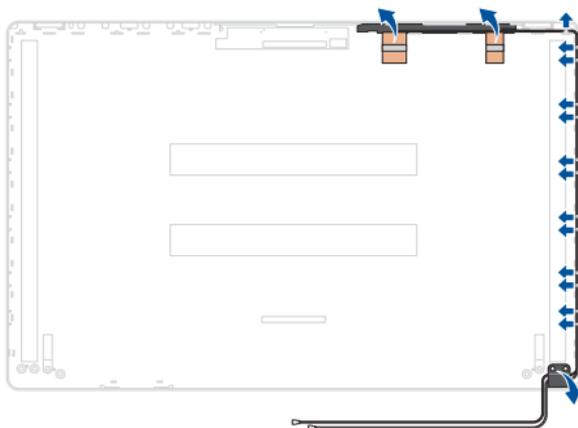


2. Remove the tape, then remove the cable.

14" models



15" models



Installation

1. Reattach the cable, then route the cable through the cable guide and reattach the tape.

IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

14" models



15" models

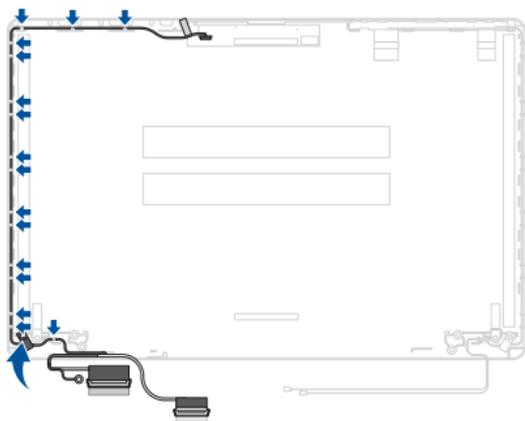


2. Reattach the cable, then route the cable through the cable guide and reattach the tape.

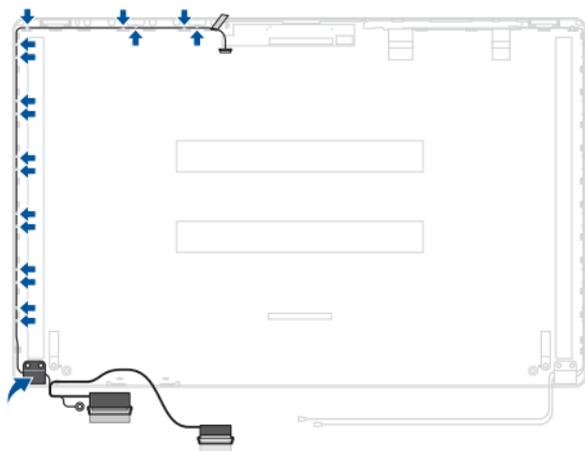
IMPORTANT! Damage may occur if cables are not properly routed through the cable guides. Confirm that all cables are routed through each of the indicated cable guides before proceeding.

3. Install the components you removed in the *Before you begin* section.

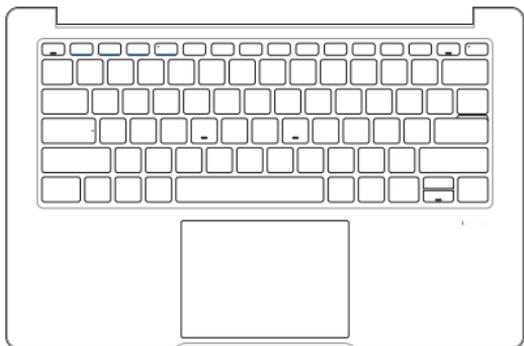
14" models



15" models



Keyboard module



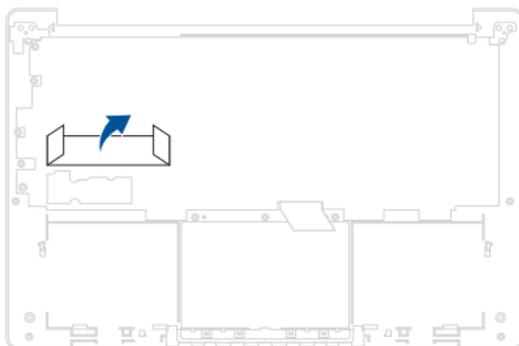
Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the bottom cover and disconnect the battery power cable.
3. Remove the following components:
 - Battery
 - M.2 SSD module
 - WLAN module
 - RAM module
 - Speakers
 - Fan module
 - Heat sink

- I/O board
- Motherboard
- Touchpad
- Display panel module

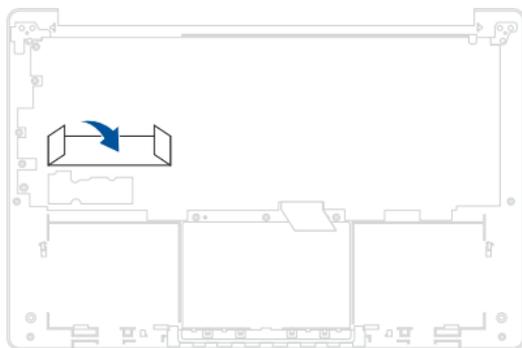
Removal

Remove the cable.



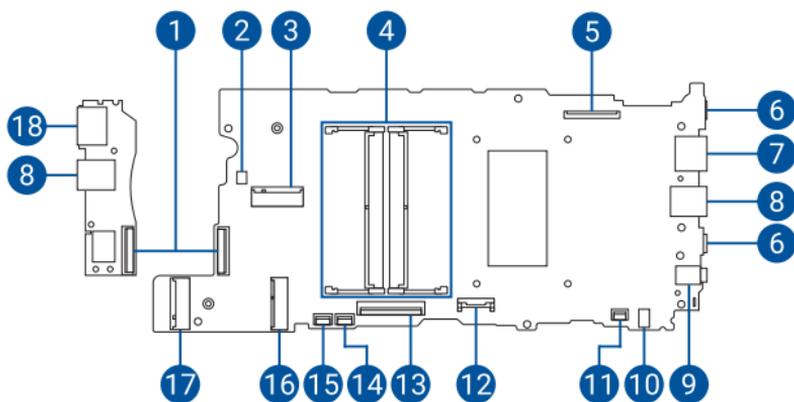
Installation

1. Reattach the cable.
2. Install the components you removed in the *Before you begin* section.



Appendix

Wiring and connection diagrams



- | | |
|---------------------------|----------------------------------|
| 1. I/O board connector | 10. Speaker connector |
| 2. Fan connector | 11. Keyboard backlight connector |
| 3. M.2 2230 SSD connector | 12. Battery connector |
| 4. RAM module slot | 13. Keyboard connector |
| 5. eDP connector | 14. Touchpad connector |
| 6. USB Type-C® connector | 15. Fingerprint sensor connector |
| 7. HDMI connector | 16. WLAN module connector |
| 8. USB Type-A connector | 17. M.2 2280 SSD connector |
| 9. Audio connector | 18. LAN connector |