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IN SEARCH OF INCREDIBLE



Service Manual

ASUS

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Disclaimer

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

Safety precautions

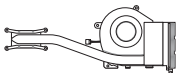
- Keep liquids or moisture away from your Notebook PC before installing or removing any components.
- Ensure to place your Notebook PC on a stable surface before installing or removing any components.
- Detach the clip or flap before removing the signal cables to prevent damage.
- Disconnect the power plug by pulling the plug evenly to avoid damage. Ensure to connect the signal cables in the correct orientation.
- Disconnect all power cables and remove the battery pack (if applicable) before cleaning your Notebook PC with liquid detergent to avoid risk of electric shock.
- Disconnect all power cables and remove the battery pack (if applicable) before installing or removing any components. Ensure to read and follow the instructions in the manual.

- 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 Notebook PC to avoid short circuits.
- Hold components by the edges to avoid touching the ICs.
- Ensure to properly install all the 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.
- Ensure to install the correct screw models on your Notebook PC to prevent damage.

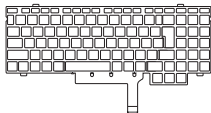
Major components



Motherboard with ports and connectors



Thermal module



Keyboard



M.2 SSD module



LCD panel module



Power adapter



Battery and power connector

NOTE:

- The illustrations are for reference only.
 - The maintenance procedures described in this manual depend on the model configuration and may not reflect the entire servicing process. For servicing those components that are not covered in this manual, please visit an authorized service center for further assistance.
-

Installation tools



Screwdriver



Plastic blade

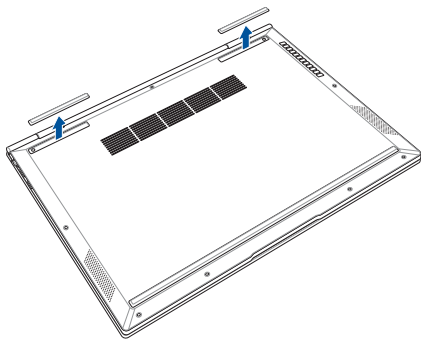


Tweezers

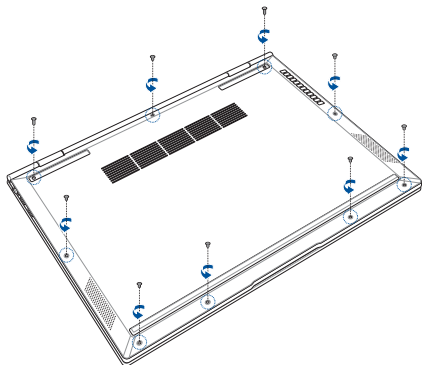
Removing the bottom cover

NOTE: The appearance of your Notebook PC's bottom view may vary per model.

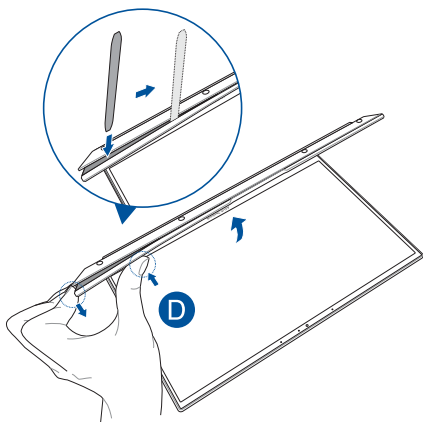
- A. Remove the rubber tab(s).



- B. Remove the screw(s) from the Notebook PC's bottom cover.



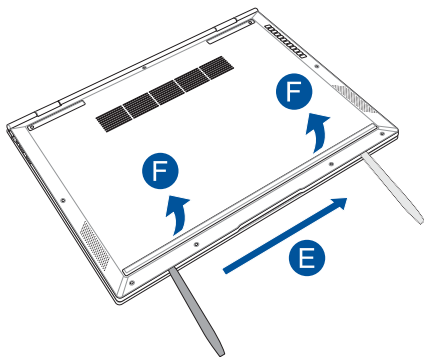
- C. Place your Notebook PC in the orientation as shown in the illustration below.
- D. Starting from the bottom edge, pry loose the bottom cover.



- E. In the orientation shown, use the plastic blade to pry open the indicated area of the bottom cover as shown in the illustration below.

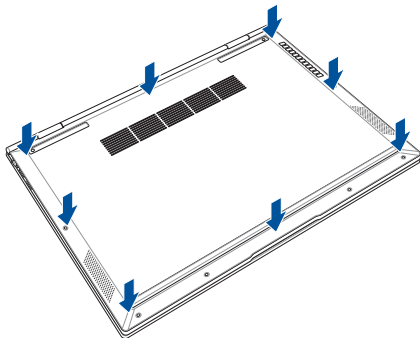
IMPORTANT! Avoid sliding the plastic blade along the side of your Notebook PC to prevent damage.

- F. Remove the bottom cover.

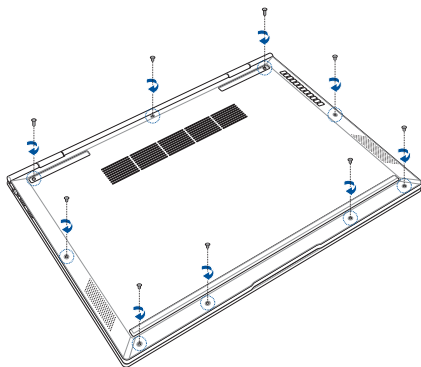


To reattach the bottom cover:

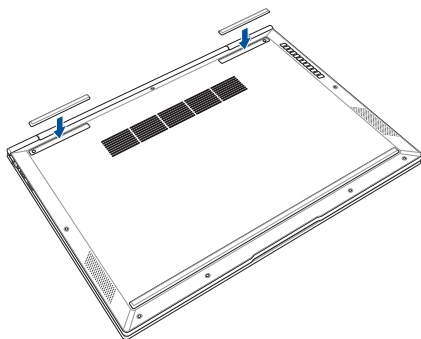
- A. Align and reattach the bottom cover.



- B. Secure the bottom cover using the screw(s) you removed earlier.



- C. Reattach the rubber tab(s).

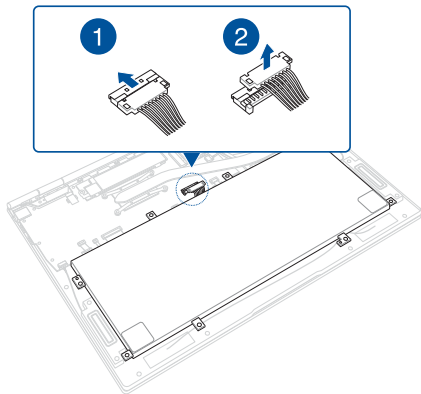


Disconnecting the battery

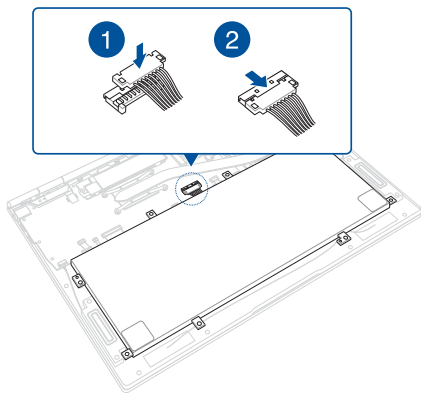
- A. Remove the bottom cover.
-

NOTE: For more details, refer to the *Removing the bottom cover* section in this manual.

- B. Locate and disconnect the battery power cable as shown in the illustration below.



To connect the battery, align and connect the cable to the battery connector before you reattach the bottom cover.



Replacing the battery

Refer to the following steps when installing a compatible battery in your Notebook PC:

IMPORTANT! Purchase your battery from authorized retailers of this Notebook PC to ensure maximum compatibility and reliability.

WARNING! Disconnect all the connected peripherals, any telephone or telecommunication lines and power connector (such as external power supply, battery pack, etc.) before removing the bottom cover.

NOTE:

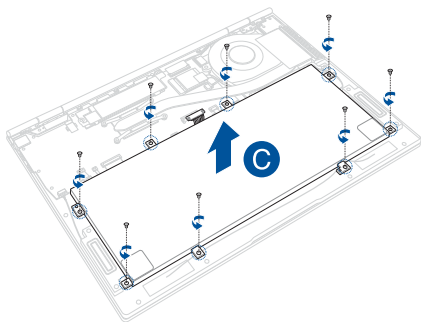
- The appearance of your Notebook PC's bottom view and battery may vary per model but the module installation remains the same.
 - It is recommended that you install the battery under professional supervision. You may also visit an authorized service center for further assistance.
-

- A. Remove the bottom cover and disconnect the battery.

NOTE: For more details, refer to the *Removing the bottom cover* and *Disconnecting the battery* sections in this manual.

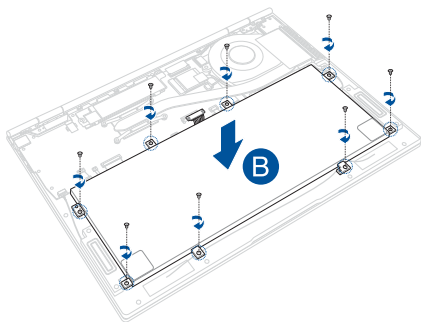
- B. Remove the screw(s) from the battery.

- C. Remove the battery.



To install the new battery:

- A. Prepare the new battery.
- B. Reinstall the battery as shown in the illustration below.
- C. Secure the battery using the screw(s) you removed earlier.



Replacing the M.2 SSD module

Refer to the following steps when installing a compatible M.2 SSD module in your Notebook PC:

IMPORTANT! Purchase your M.2 SSD module from authorized retailers of this Notebook PC to ensure maximum compatibility and reliability.

WARNING! Disconnect all the connected peripherals, any telephone or telecommunication lines and power connector (such as external power supply, battery pack, etc.) before removing the bottom cover.

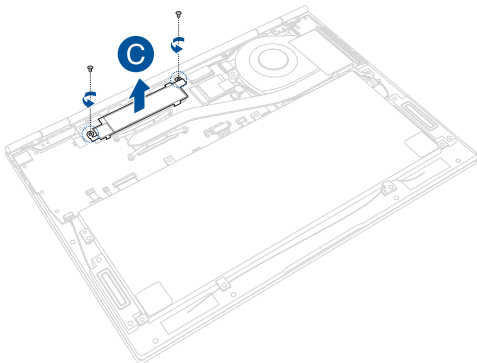
NOTE:

- The appearance of your Notebook PC's bottom view and M.2 SSD module may vary per model but the module installation remains the same.
 - It is recommended that you install the M.2 SSD module under professional supervision. You may also visit an authorized service center for further assistance.
-

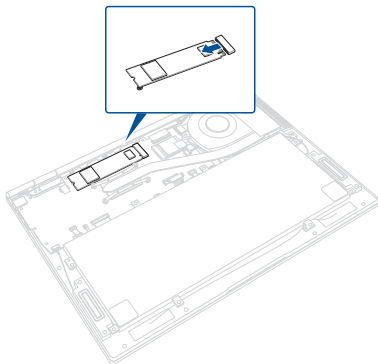
- A. Remove the bottom cover and disconnect the battery.

NOTE: For more details, refer to the *Removing the bottom cover* and *Disconnecting the battery* sections in this manual.

- B. Remove the screw(s) as shown in the illustration below.
- C. Remove the M.2 SSD module cover.

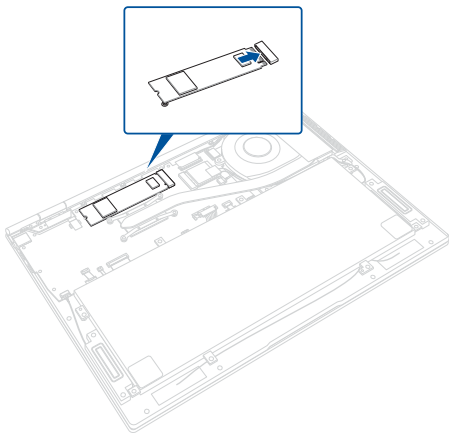


- D. Remove the M.2 SSD module from the motherboard.

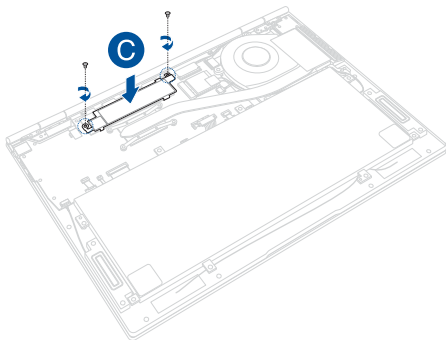


To install the new M.2 SSD module:

- A. Prepare the new M.2 SSD module.
- B. Align and insert the M.2 SSD module into the M.2 connector on the motherboard.



- C. Align and reinstall the M.2 SSD module cover.
- D. Secure the M.2 SSD module in place using the screw(s) you removed earlier.



Replacing the LCD module

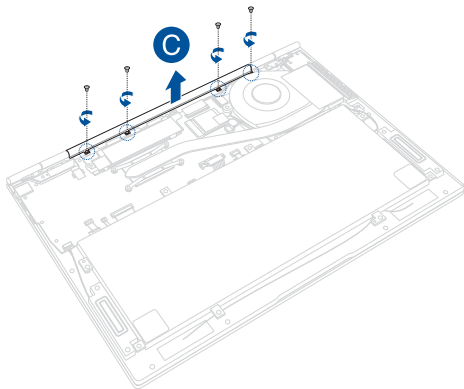
IMPORTANT! Do not bend the LCD panel in any ways to avoid risk of LCD panel leakage.

NOTE: The illustrations are for reference only.

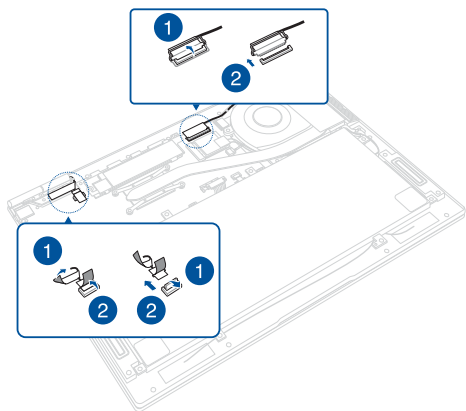
- A. Remove the bottom cover and disconnect the battery.
-

NOTE: For more details, refer to the *Removing the bottom cover* and *Disconnecting the battery* sections in this manual.

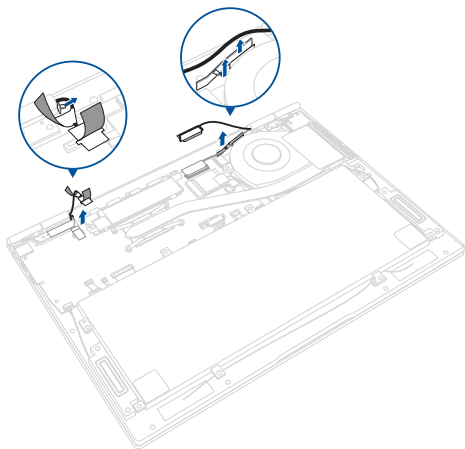
- B. Remove the screw(s) from the hinge cap.
- C. Remove the hinge cap.



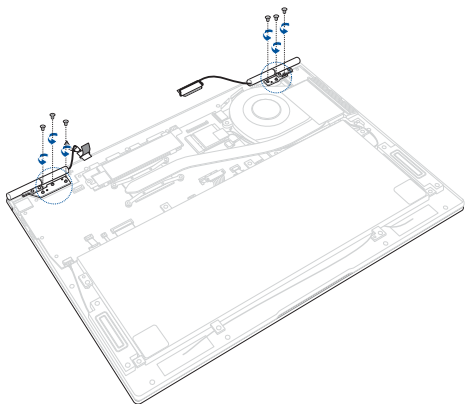
D. Remove all the connector(s) as shown in the illustration below.



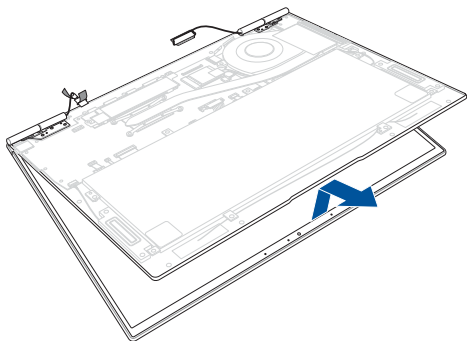
- E. Unroute the cable(s) from the cable guide(s) as shown in the illustration below.



- F. Remove the screw(s) from the hinge.

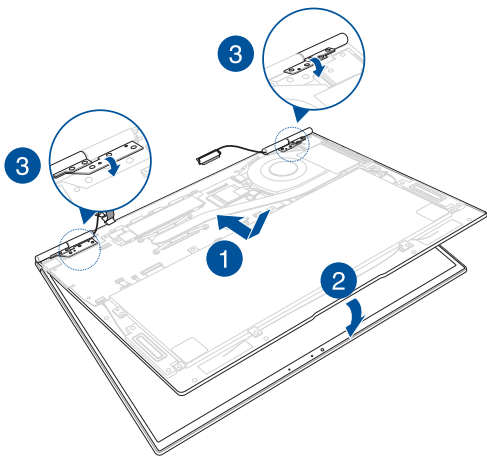


- G. Release the LCD panel module as shown in the illustration below.

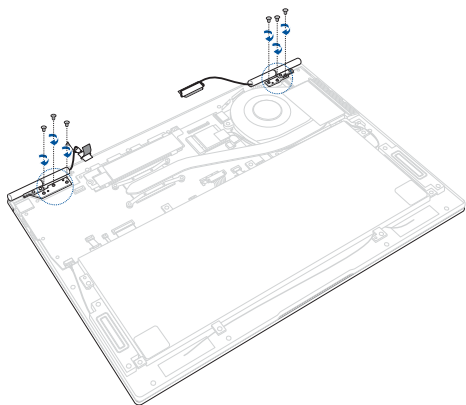


To install the new LCD panel module:

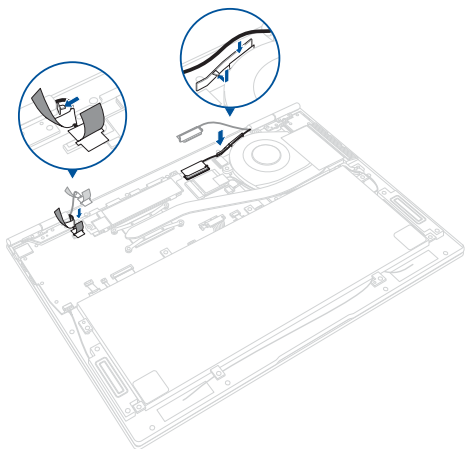
- A. Prepare the new LCD panel module.
- B. In the orientation shown, align and place the hinge of the display panel on the screw holes of the chassis.



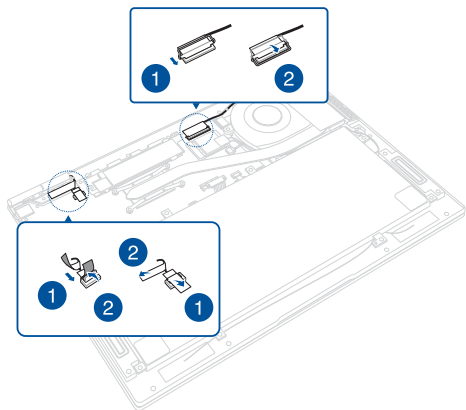
- C. Secure the hinge using the screw(s) you removed earlier.



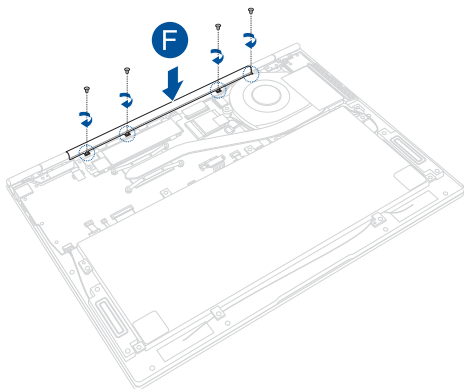
- D. Route the cable(s) through the cable guide(s) as shown in the illustration below.



- E. Reconnect the connector(s) as shown in the illustration below.



- F. Reattach the hinge cap.
- G. Secure the hinge cap using the screw(s) you removed earlier.



Replacing the motherboard

Refer to the following steps when installing the motherboard to your Notebook PC:

IMPORTANT! Purchase your motherboard from authorized retailers of this Notebook PC to ensure maximum compatibility and reliability.

WARNING! Disconnect all the connected peripherals, any telephone or telecommunication lines and power connector (such as external power supply, battery pack, etc.) before removing the bottom cover.

NOTE:

- The appearance of your Notebook PC's bottom view and motherboard may vary per model but the module installation remains the same.
 - It is recommended that you install the motherboard under professional supervision. You may also visit an authorized service center for further assistance.
-

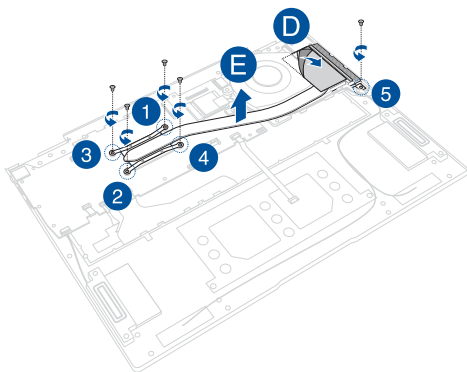
- A. Remove the bottom cover and disconnect the battery.

NOTE: For more details, refer to the *Removing the bottom cover and Disconnecting the battery* sections in this manual.

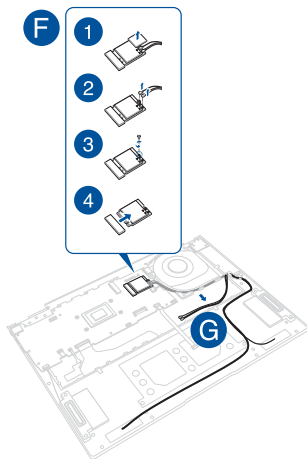
- B. Remove the M.2 SSD module.

NOTE: For more details, refer to the *Replacing the M.2 SSD module* section in this manual.

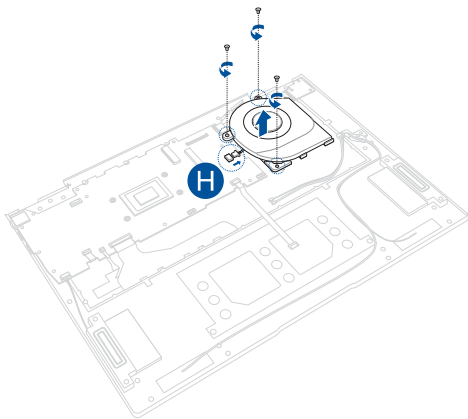
- C. Remove the screw(s) one by one in the sequence shown in the illustration below.
- D. Remove the tape.
- E. Remove the cooling radiator.



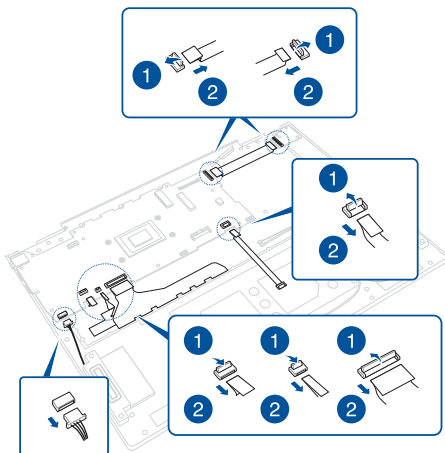
- F. Remove the WLAN module.
- G. Unroute the antenna(s) from the cable guide(s) as shown in the illustration below.



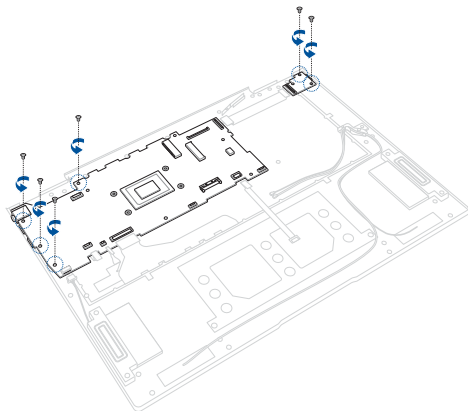
- H. Locate and remove the connector.
- I. Remove the screw(s) from the fan module then remove the fan module.



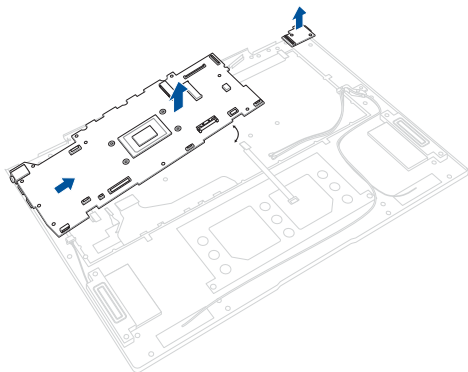
- J. Remove all the cable(s) and connector(s) as shown in the illustration below.



K. Remove the screw(s) from the motherboard.

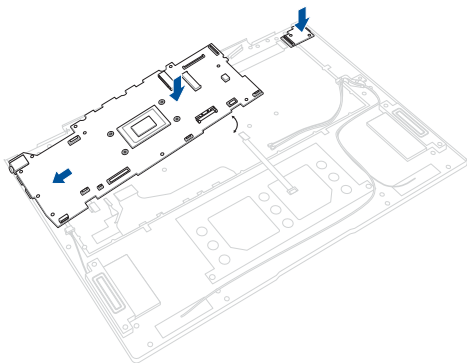


- L. Remove the motherboard.

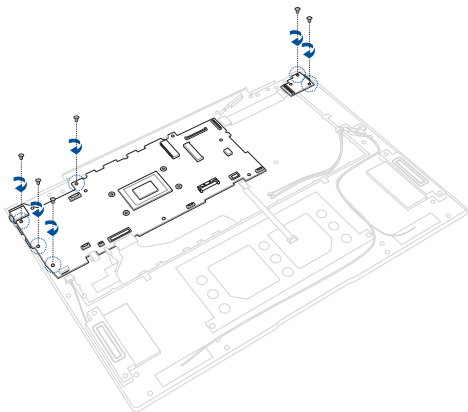


To install the new motherboard:

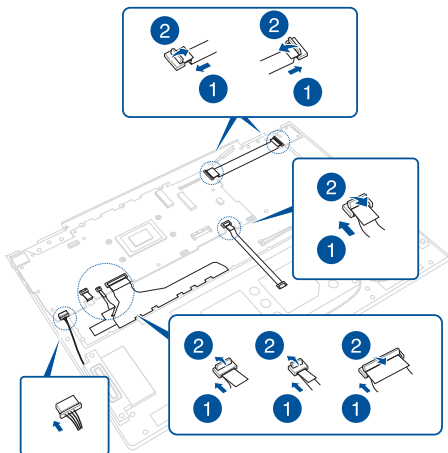
- A. Prepare the new motherboard.
- B. Align and place the motherboard in the chassis as shown in the illustration below.



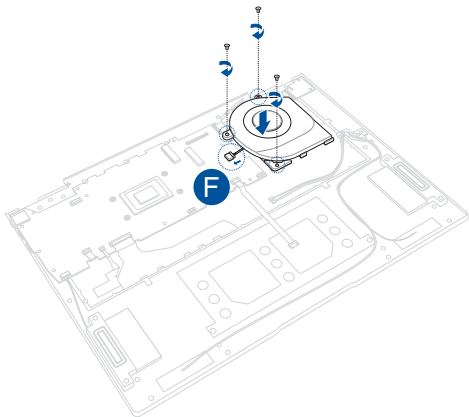
- C. Secure the motherboard using the screw(s) you removed earlier.



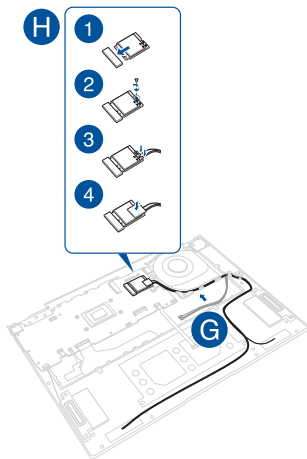
- D. Reconnect all the cable(s) and connector(s) as shown in the illustration below.



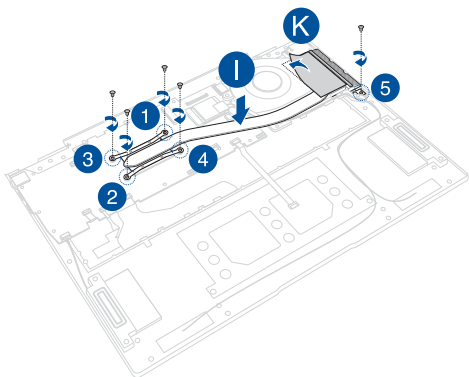
- E. Reinstall the fan module then secure the fan module using the screw(s) you removed earlier.
- F. Reconnect the connector.



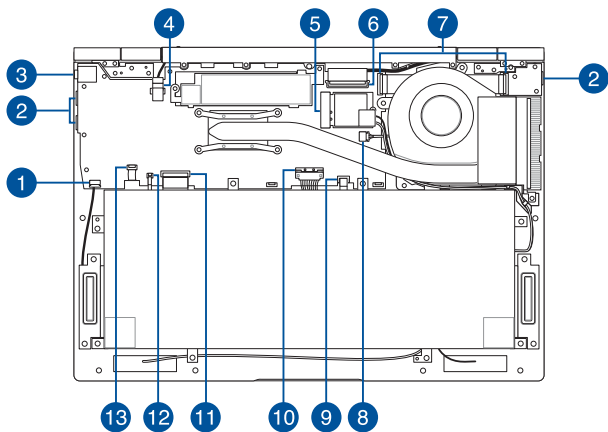
- G. Route the antenna(s) through the cable guide(s) as shown in the illustration below.
- H. Reinstall the WLAN module.



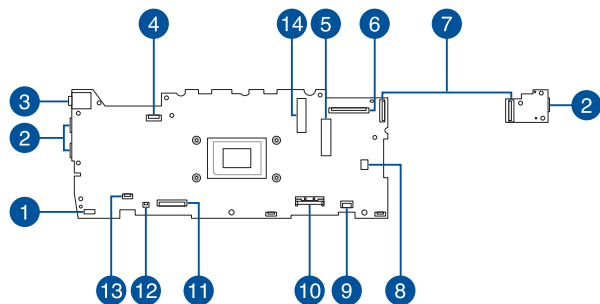
- I. Reinstall the cooling radiator.
- J. Secure the screw(s) one by one in the sequence shown in the illustration below.
- K. Reattach the tape.



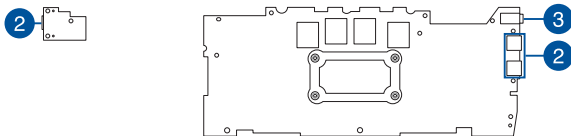
Wiring and connection diagrams



Top View



Bottom View



1. Speaker connector
2. USB Type-C® connector/
Power supply connector
3. Headphone/Headset/
Microphone jack
4. Proximity sensor connector
5. WLAN connector
6. eDP connector/Camera connector
7. I/O FPC connector
8. Fan connector
9. Touchpad connector
10. Battery connector
11. Keyboard connector
12. Back camera connector
13. Fingerprint sensor connector
14. SSD connector