E18659
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IN SEARCH OF INCREDIBLE

Service Manual

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Disclaimer

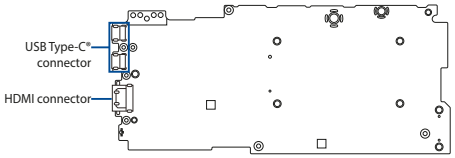
ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

Safety precautions

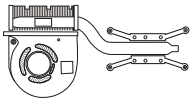
- Keep liquids or moisture away from your Notebook PC before installing or removing any components.
- Ensure to place your Notebook PC on a stable surface before installing or removing any components.
- Detach the clip or flap before removing the signal cables to prevent damage.
- Disconnect the power 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



Fan module and cooling radiator

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

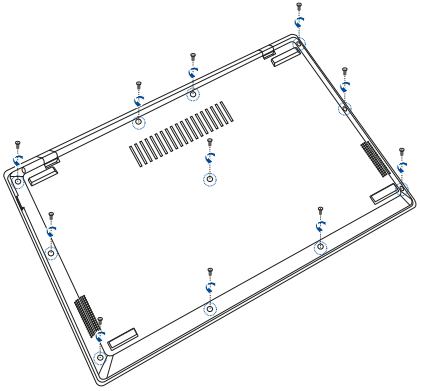
Plastic blade

Tweezers

Removing the compartment cover

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

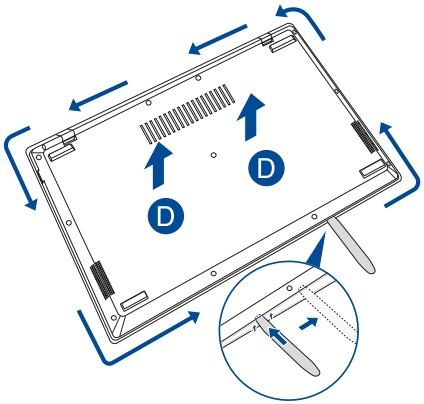
A. Remove the screw(s) from the Notebook PC's compartment cover.



B. Prepare the plastic blade.

C. Use the plastic blade to pry open the indicated area of the compartment cover as shown in the illustration below.

D. Pull out the compartment cover and remove it completely from your Notebook PC.

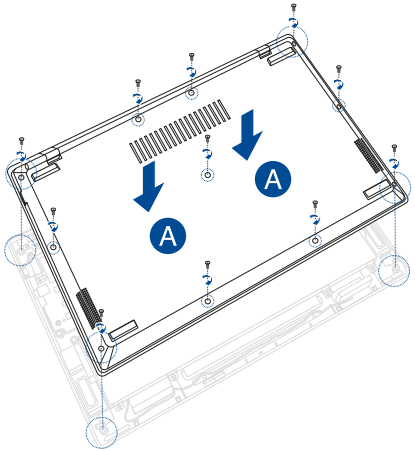


IMPORTANT! Avoid sliding the plastic blade along the side of your Notebook PC to prevent damage.

To reattach the compartment cover:

A. Align and reattach the cover of the compartment.

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

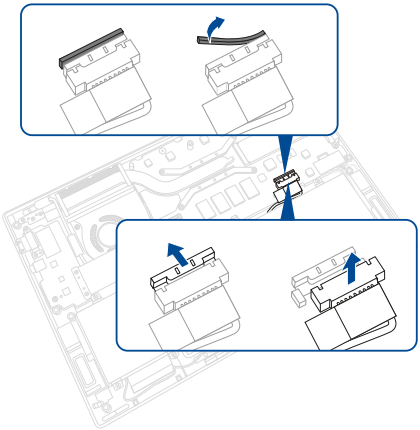


Disconnecting the battery

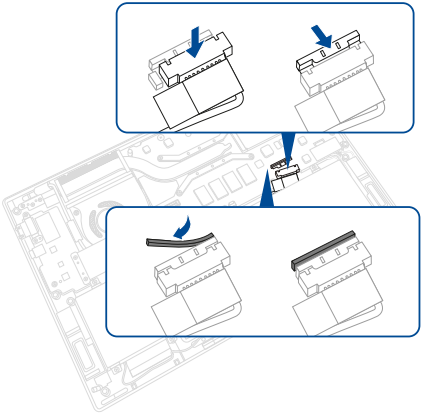
A. Remove the compartment cover.

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

B. Locate and disconnect the battery power cable(s) as shown in the illustration below.



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

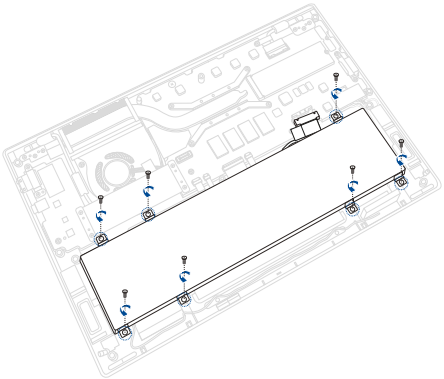
NOTE:

- 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.

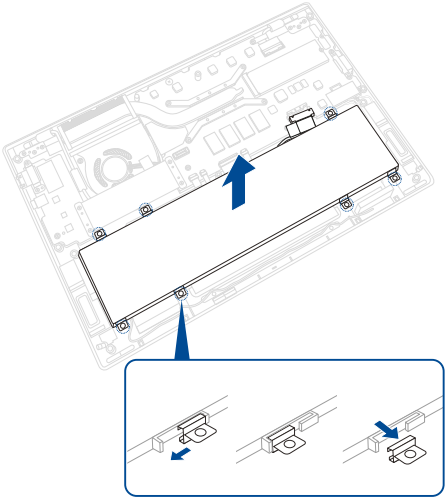
A. Remove the compartment cover and disconnect the battery.

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

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

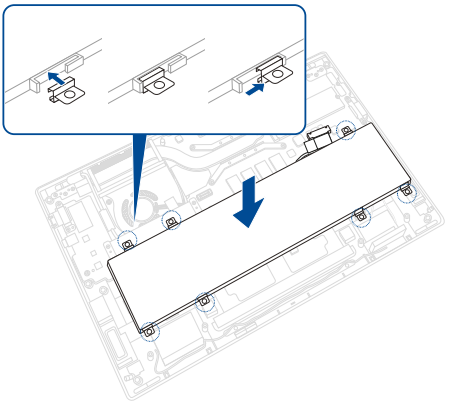


C. Remove the battery.

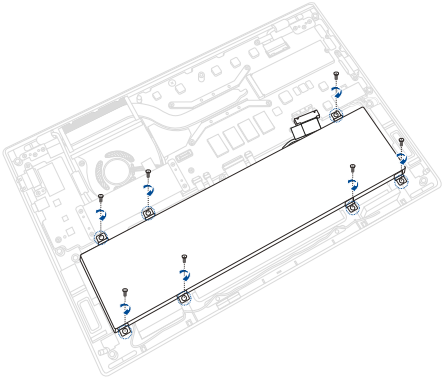


D. Prepare the new battery.

E. Reinstall the battery.



F. Secure the battery using the screw(s) you removed earlier.



Installing an 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 compartment cover.

NOTE:

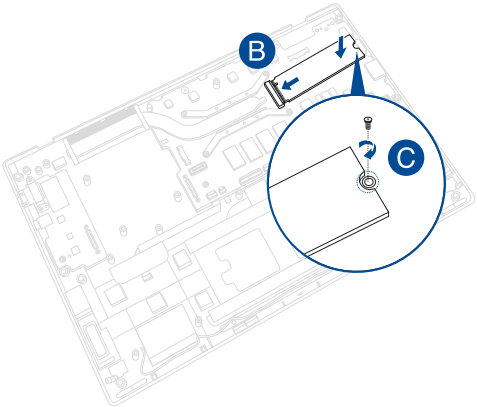
- The appearance of your Notebook PC's bottom view and M.2 SSD module may vary per model but the module installation remains the same.
- It is recommended that you install the M.2 SSD module under professional supervision. You may also visit an authorized service center for further assistance.

A. Remove the compartment cover and disconnect the battery.

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

B. Align and insert the M.2 SSD module into the M.2 connector on the motherboard.

C. Secure the M.2 SSD module in place using the bundled screw(s).



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 compartment 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 compartment cover and disconnect the battery.

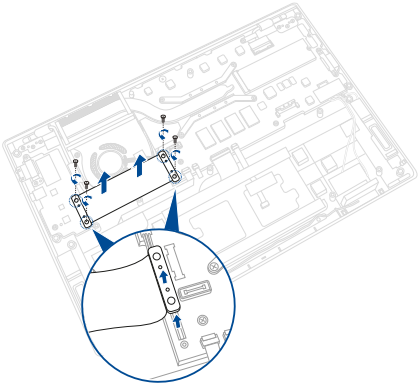
NOTE: For more details, refer to the *Removing the compartment cover* and *Disconnecting the battery* sections in this manual.

B. Remove the battery.

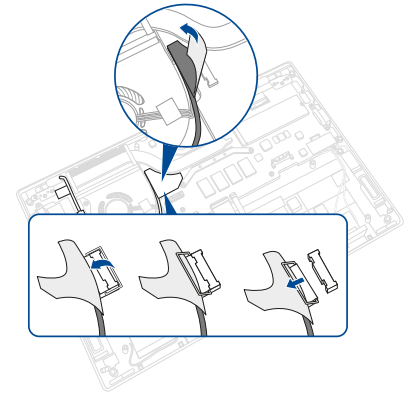
NOTE: For more details, refer to the *Replacing the battery* section in this manual.

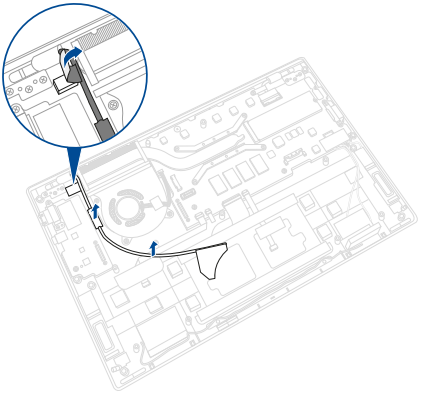
C. Remove the screw(s) from the I/O board connector.

D. Remove the I/O board.

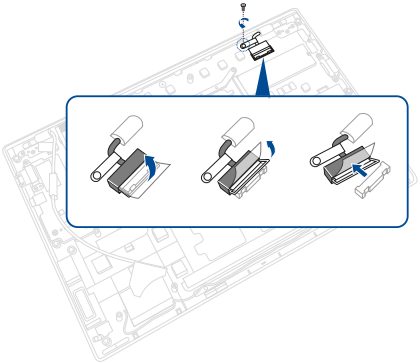


E. Locate and remove all the connector(s) as shown in the illustration below.



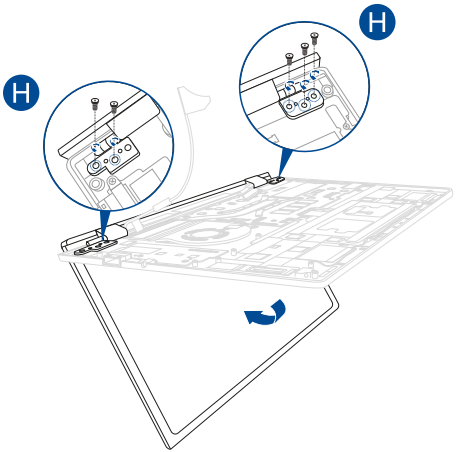


F. Locate and remove the display panel connector(s) from the motherboard.

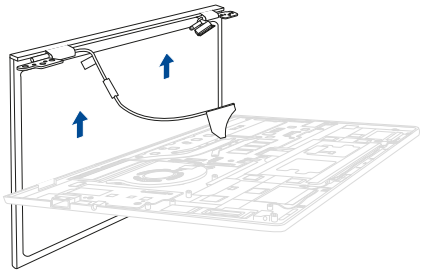


G. Place your Notebook PC in the orientation as shown in the illustration below.

H. Remove the screw(s) from the hinge.



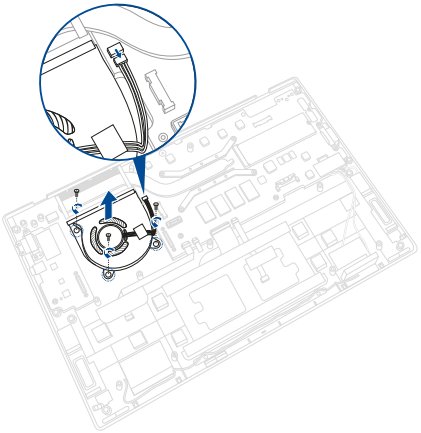
I. Remove the display panel.



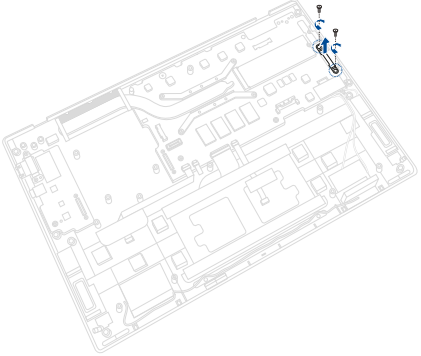
J. Remove the screw(s) from the fan module(s).

K. Remove the fan module connector(s) from the motherboard.

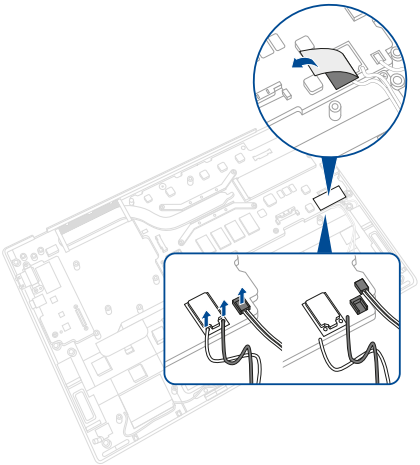
L. Remove the fan module(s).



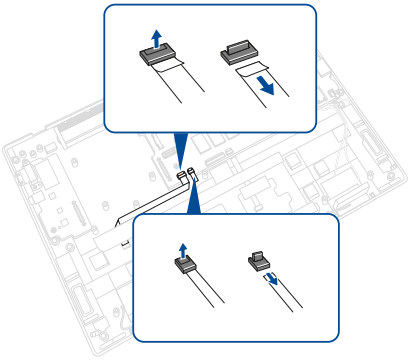
M. Remove the screw(s) from the bracket, and then remove the bracket.

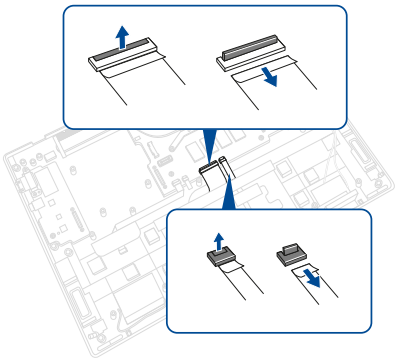


N. Locate and remove all the connector(s) and antenna(s) as shown in the illustration below.



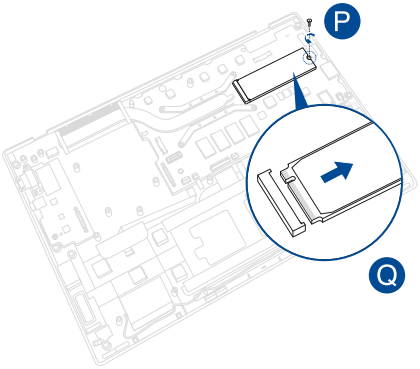
O. Locate and remove all the cable(s) and connector(s) as shown in the illustration below.





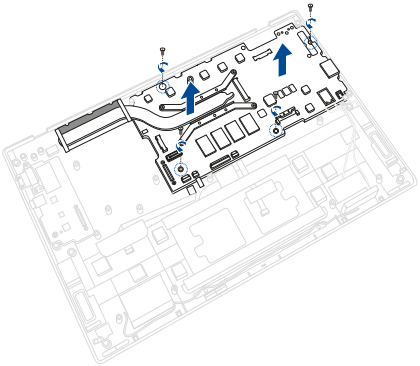
P. Remove the screw(s) from the M.2 SSD module.

Q. Remove the M.2 SSD module from the motherboard.



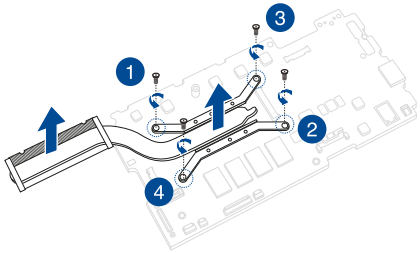
R. Remove the screw(s) from the motherboard.

S. Remove the motherboard from the chassis.



T. Remove the screw(s) one by one in the sequence shown in the illustration below.

U. Remove the thermal module(s).

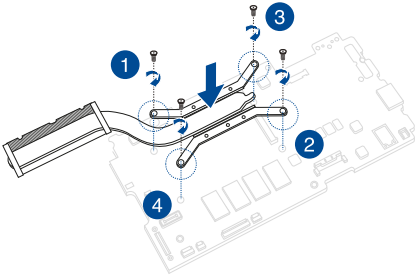


To install the new motherboard:

A. Prepare the new motherboard.

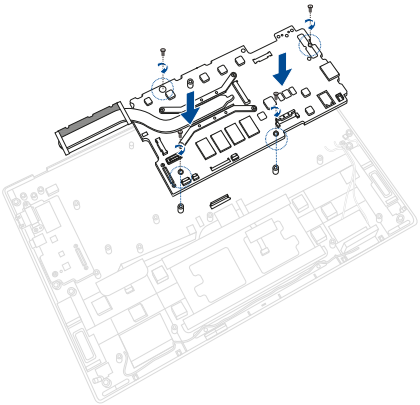
B. Align and replace the thermal module(s) on the screw holes of the motherboard.

C. Secure the screw(s) one by one in the sequence as shown in the illustration below.

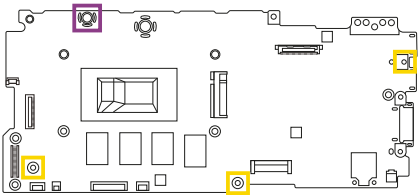


D. Align and place the motherboard in the chassis.

E. Secure the motherboard to the chassis using the screw(s) you removed earlier.



Motherboard screw map

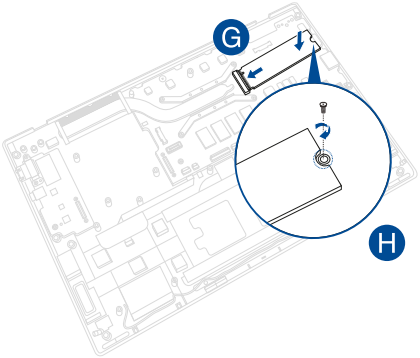


- M2 X 2.5L (1PCS)
- M2 X 3.0L (3PCS)

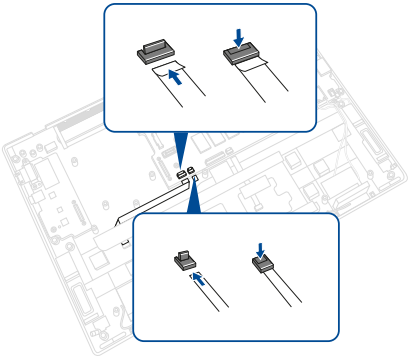
F. (Optional) Prepare the new M.2 SSD module.

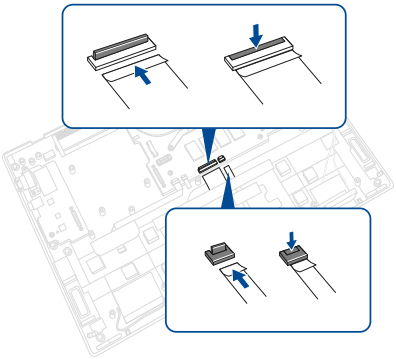
G. Align and insert the M.2 SSD module into the M.2 connector on the motherboard.

H. Secure the M.2 SSD module in place with the screw(s) you removed earlier.

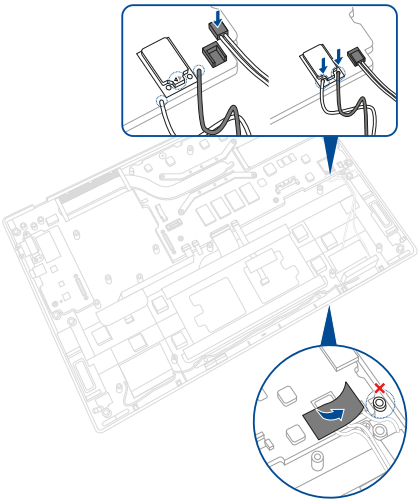


I. Locate and reconnect all the cable(s) and connector(s).





J. Reconnect all the connector(s) and antenna(s) as shown in the illustration below.

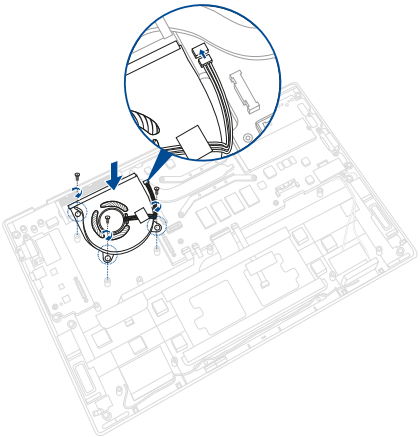


K. Secure the bracket using the screw(s) you removed earlier.

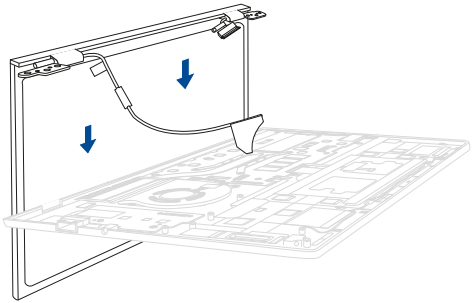
L. Align and place the fan module(s) back in the chassis.

M. Secure the fan module(s) to the motherboard using the screw(s) you removed earlier.

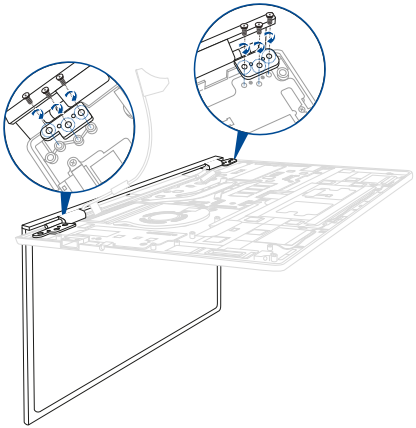
N. Reconnect the fan module connector(s) to the motherboard.



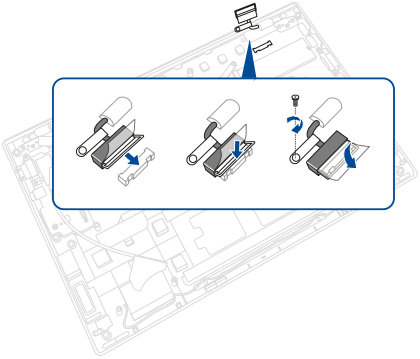
O. In the orientation shown, align and place the hinge of the display panel on the screw holes of the motherboard.



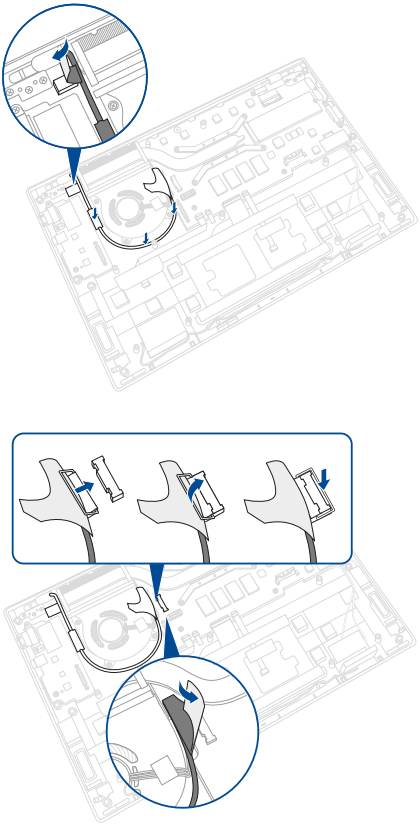
P. Secure the hinge using the screw(s) you removed earlier.



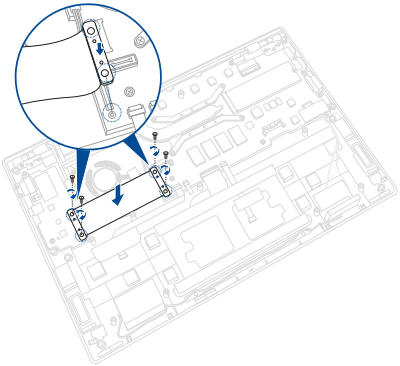
Q. Reconnect the display panel connector(s) to the motherboard.



R. Reconnect all the connector(s) as shown in the illustration below.



S. Reinstall the I/O board.



Replacing the LCD module

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

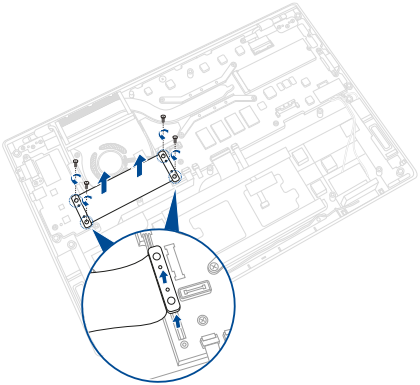
NOTE: The illustrations are for reference only.

A. Remove the compartment cover and disconnect the battery.

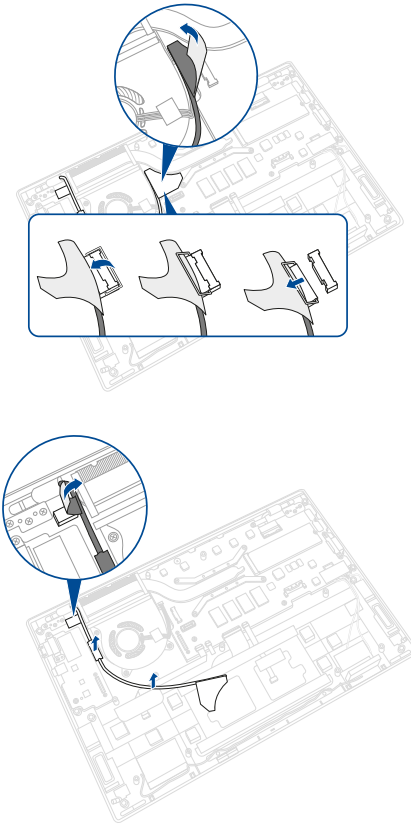
NOTE: For more details, refer to the *Removing the compartment cover* and *Disconnecting the battery* sections in this manual.

B. Remove the screw(s) from the I/O board connector.

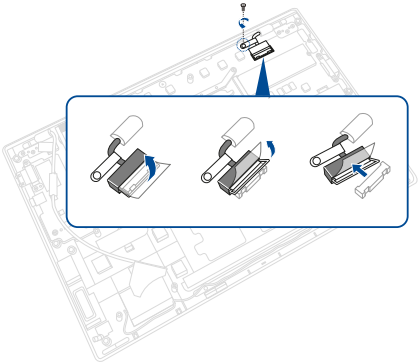
C. Remove the I/O board.



D. Locate and remove all the connector(s) as shown in the illustration below.

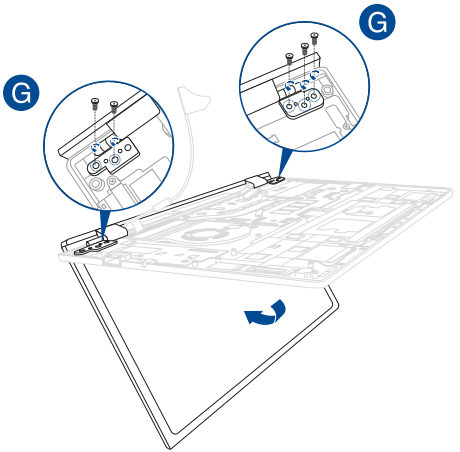


E. Locate and remove the display panel connector(s) from the motherboard.

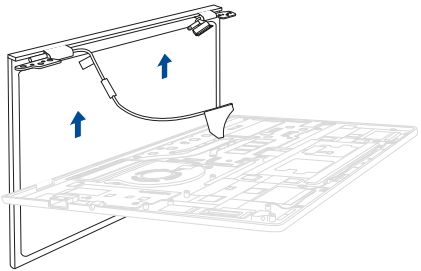


F. Place your Notebook PC in the orientation as shown in the illustration below.

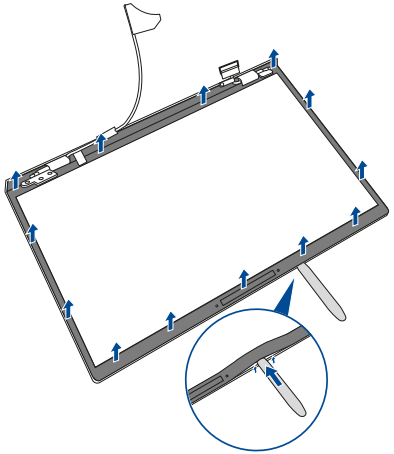
G. Remove the screw(s) from the hinge.



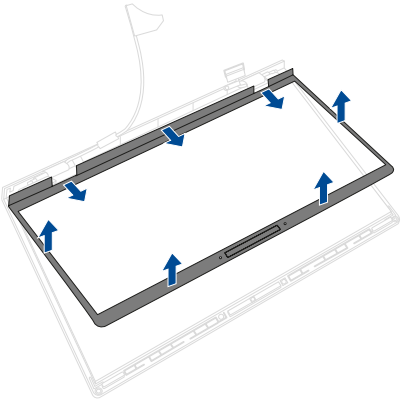
H. Remove the display panel.



I. Use the plastic blade to pry loose the bezel as shown in the illustration below.



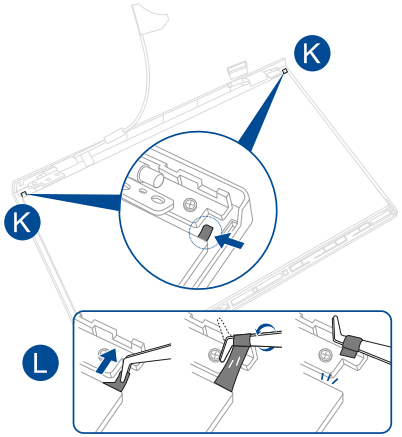
J. Remove the bezel.



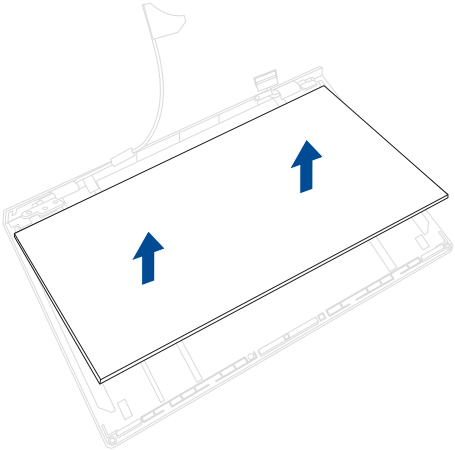
K. Locate the tip of the adhesive strips.

L. Carefully pull the adhesive strips out one part at a time as shown in the illustration below.

IMPORTANT! Avoid pulling the adhesive strips with excessive force or the adhesive strips might break.



M. Remove the LCD panel module.

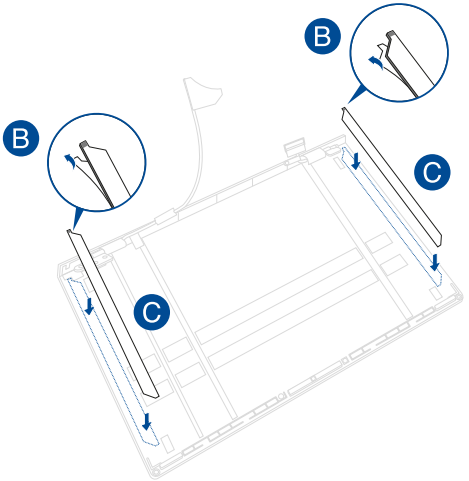


To install the new LCD panel module:

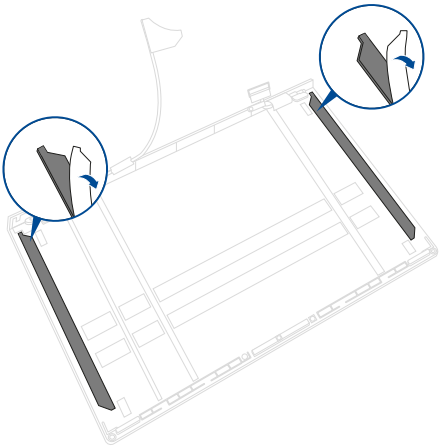
A. Prepare the new adhesive strips.

B. Remove the release liner underneath the adhesive strips.

C. Align and apply the adhesive strips as shown in the illustration below.

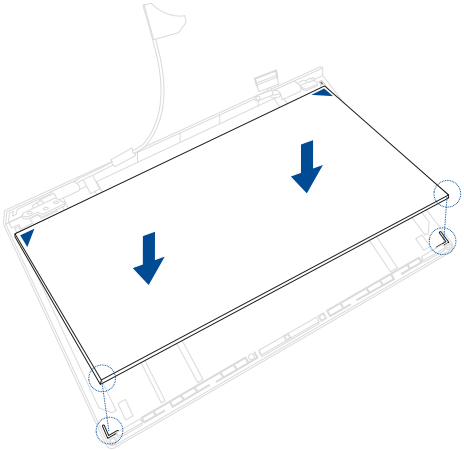


D. Remove the release liner above the adhesive strips.

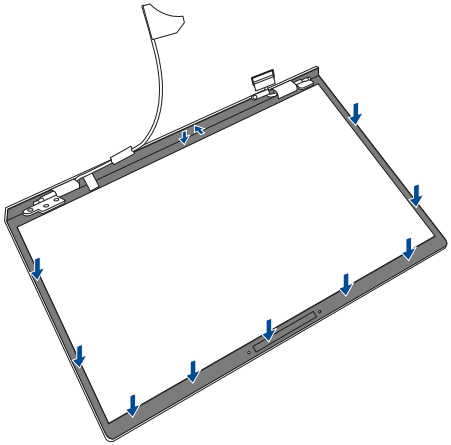


E. Prepare the new LCD panel module.

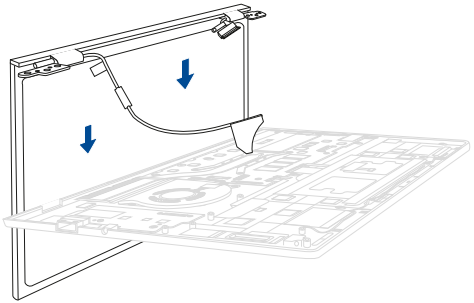
F. Align and place the new LCD panel module in the orientation as shown in the illustration below.



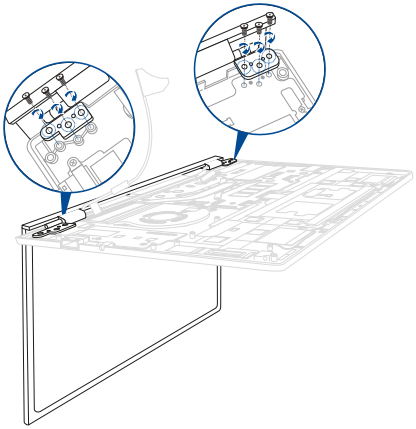
G. Align and gently reattach the bezel onto its slot on the bottom side of the LCD panel module. Continue reattaching upward along the left and right sides. Finally, reattach the top side.



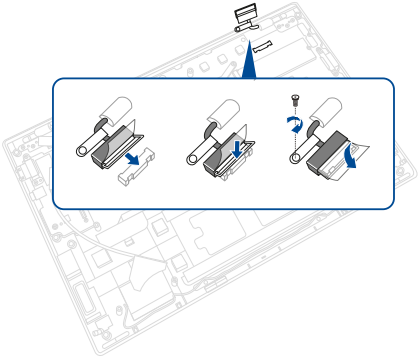
H. In the orientation shown, align and place the hinge of the display panel on the screw holes of the motherboard.



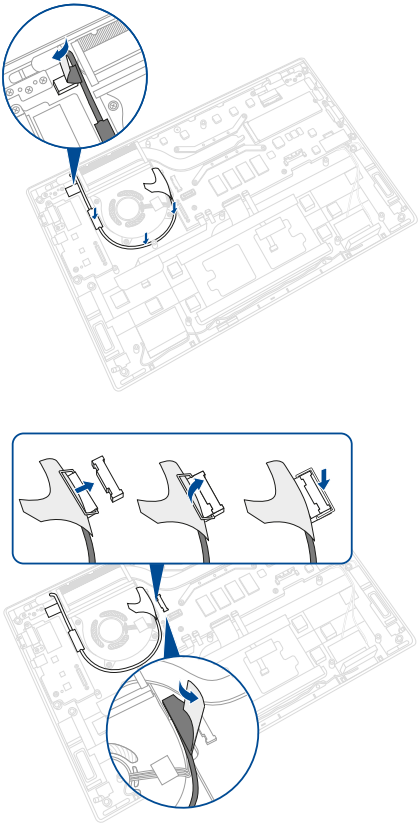
I. Secure the hinge using the screw(s) you removed earlier.



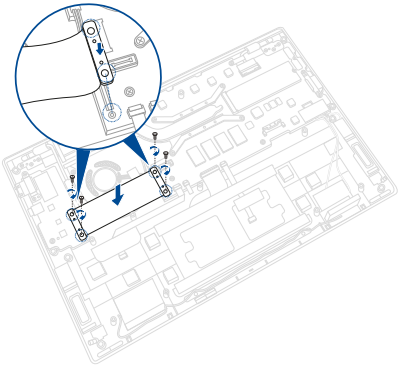
J. Reconnect the display panel connector(s) to the motherboard.



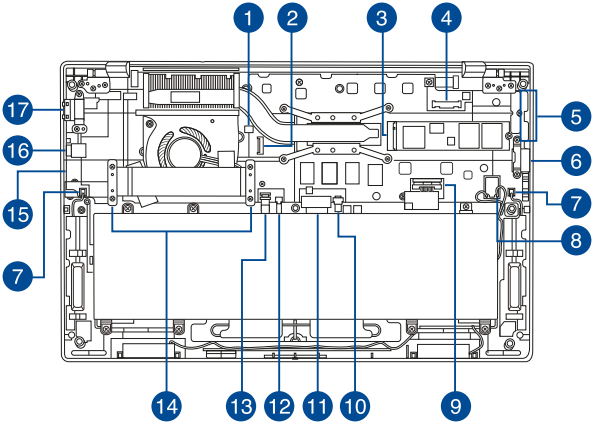
K. Reconnect all the connector(s) as shown in the illustration below.



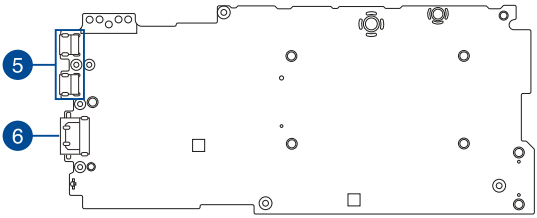
L. Reinstall the I/O board.



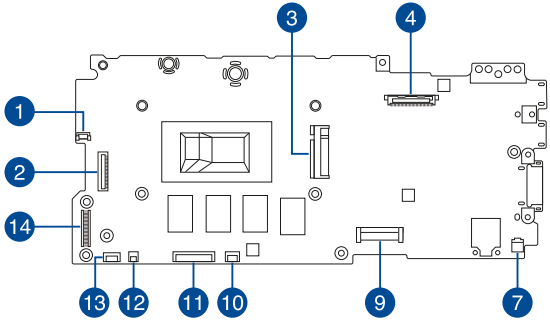
Wiring and connection diagrams



Top View



Bottom View



1. Fan connector
2. Camera connector
3. SSD connector
4. Display connector
5. USB Type-C® connector
6. HDMI connector
7. Speaker connector
8. WiFi module
9. Battery connector
10. Touchpad/NumberPad connector
11. Keyboard connector
12. Backlight connector
13. Fingerprint connector
14. I/O Board connector
15. MicroSD card connector
16. USB Type-A connector
17. Headphone/Headset/Microphone jack