

E18901

First Edition / October 2021

IN SEARCH OF INCREDIBLE



Service Manual



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Disclaimer

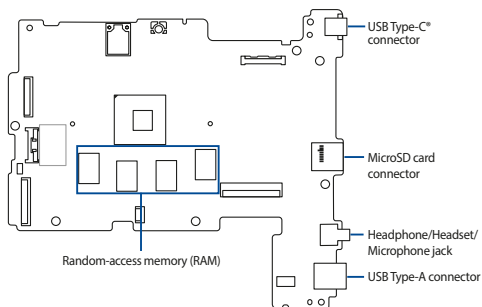
ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

Safety precautions

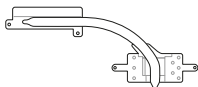
- Keep liquids or moisture away from your Notebook PC before installing or removing any components.
- Ensure to place your Notebook PC on a stable surface before installing or removing any components.
- Detach the clip or flap before removing the signal cables to prevent damage.
- Disconnect the power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

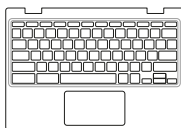
Major components



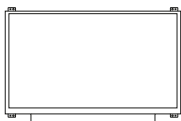
Motherboard with ports and connectors



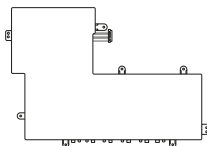
Cooling radiator



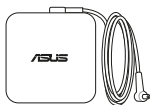
Keyboard (Top case module)



LCD panel module



Battery and power connector



Power adapter

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

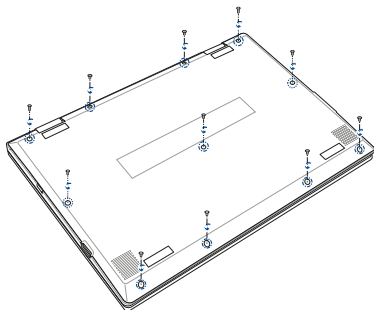


Tweezers

Removing the compartment cover

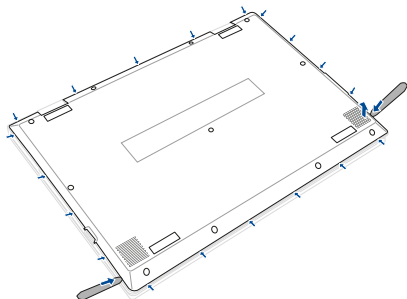
NOTE: The appearance of your Notebook PC's bottom view may vary per model.

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

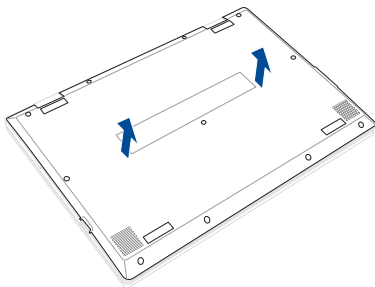


- B. Use the plastic blade to pry open the indicated area of the compartment cover as shown in the illustration below.

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

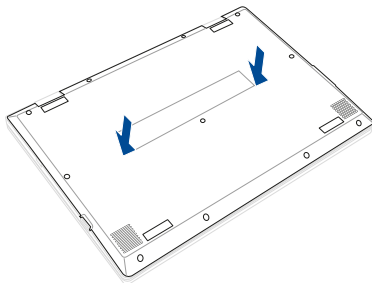


- C. Pull out the compartment cover and remove it completely from your Notebook PC.

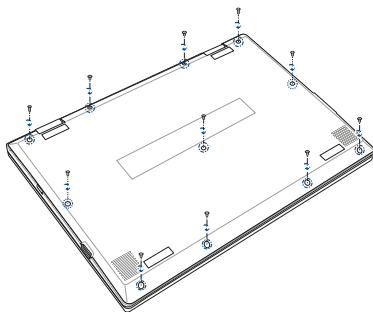


To reattach the compartment cover:

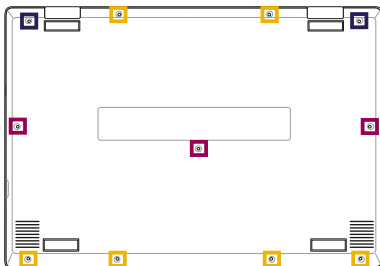
- A. Align and reattach the compartment cover.



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



Compartment cover screw map



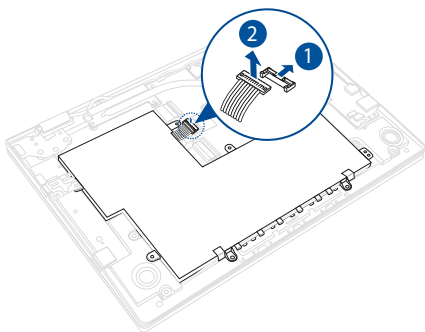
- M2.0 X 5.0L (6PCS)
- M2.0 X 6.0L (3PCS)
- M2.0 X 7.0L (2PCS)

Disconnecting the battery

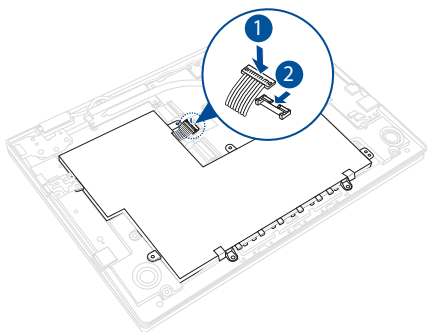
- A. Remove the compartment cover.

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.

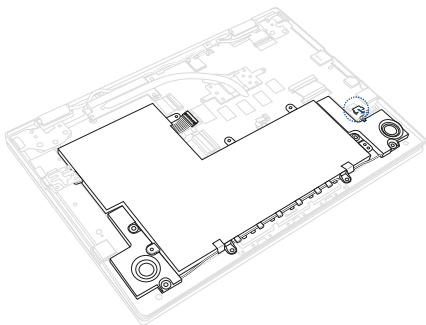
NOTE:

- 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.
-

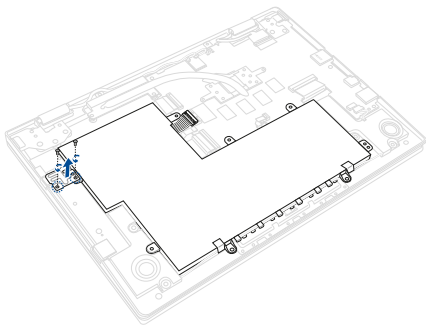
- A. Remove the compartment cover and disconnect the battery.

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

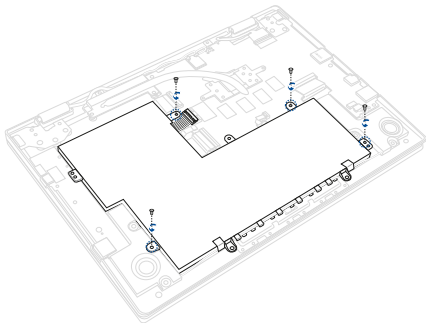
- B. Locate and disconnect the speaker cable(s) as shown in the illustration below.



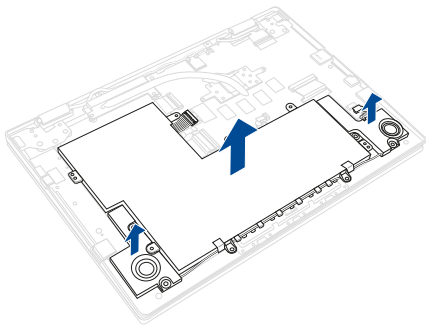
- C. Remove the screw(s) from the I/O bracket and then remove the I/O bracket.



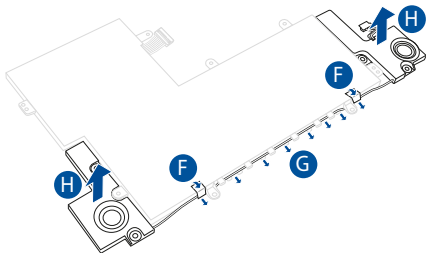
- D. Remove the screw(s) from the battery.



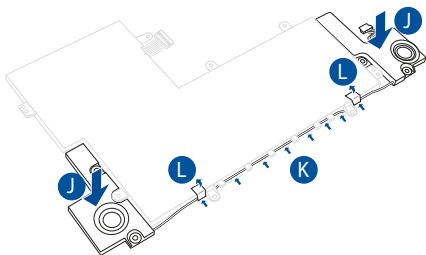
- E. Remove the battery and speaker(s) assembly from the chassis.



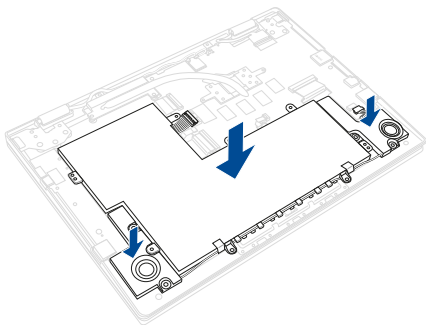
- F. Detach the adhesive tape(s).
- G. Unroute the speaker cable(s) from the battery cable guides as shown in the illustration below.
- H. Remove the speaker(s).



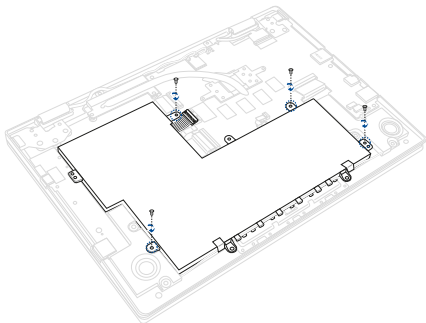
- I. Prepare the new battery.
- J. Align and place the speaker(s) on the sides of the battery as shown in the illustration below.
- K. Route the speaker cable(s) through the battery cable guide(s).
- L. Secure the speaker cable(s) in place with the adhesive tape(s).



- M. Reinstall the battery and speaker(s) assembly as shown in the illustration below.

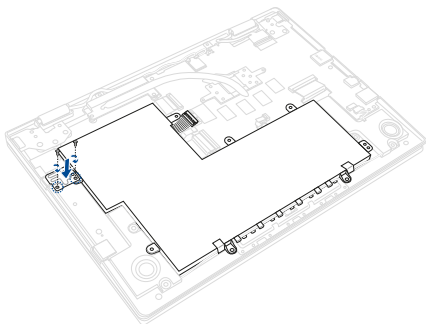


- N. Secure the battery using the screw(s) you removed earlier.

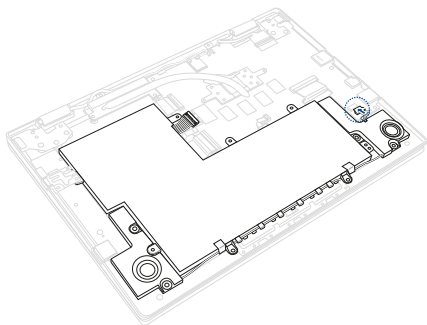


- O. Align and install the I/O bracket to the chassis.

- P. Secure the I/O bracket using the screw(s) you removed earlier.



- Q. Locate and reconnect the speaker cable(s) as shown in the illustration below.



Replacing the LCD module

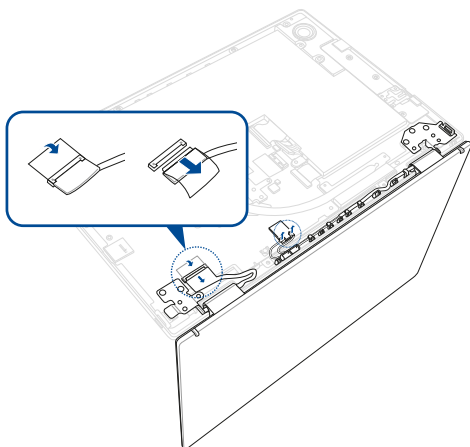
IMPORTANT! Do not bend the LCD panel in any ways to avoid risk of LCD panel leakage.

NOTE: The illustrations are for reference only.

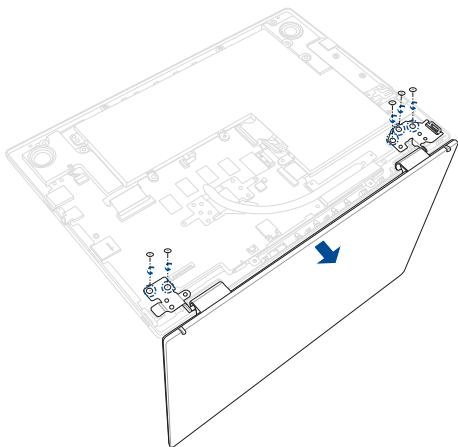
- A. Remove the compartment cover and disconnect the battery.

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

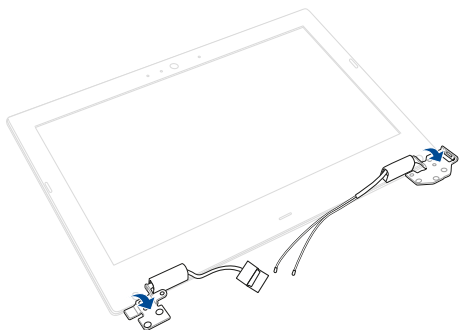
- B. Place your Notebook PC in the orientation as shown in the illustration below.
- C. Locate and disconnect the cable(s) and antenna(s) as shown in the illustration below.



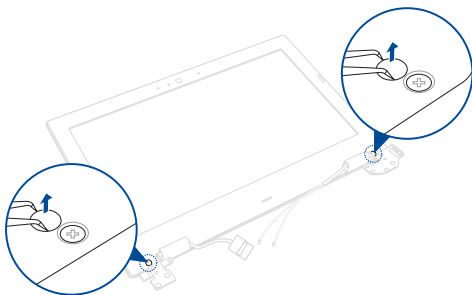
- D. Remove the screw(s) from the hinge, and then remove the LCD panel module.



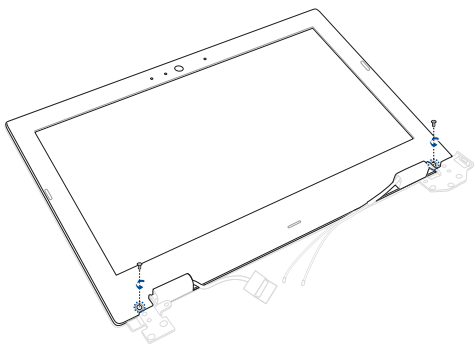
- E. Press down the LCD hinges until they are fully seated in place.



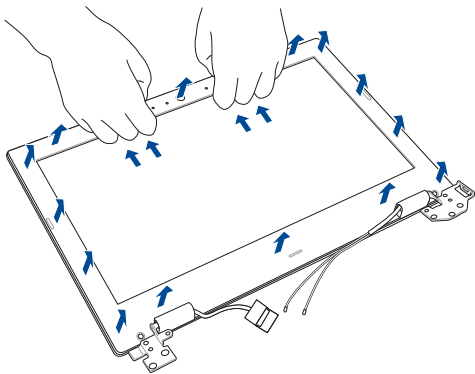
- F. Use the tweezers to remove the screw cap cover(s) from the screw(s) as shown in the illustration below.



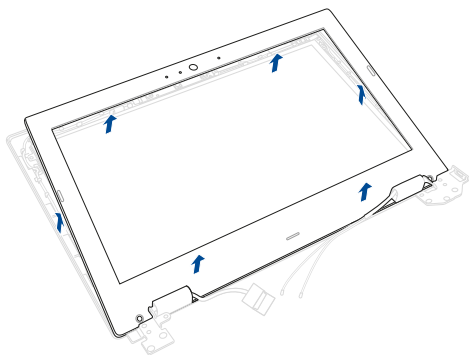
- G. Remove the screw(s) from the LCD bezel.



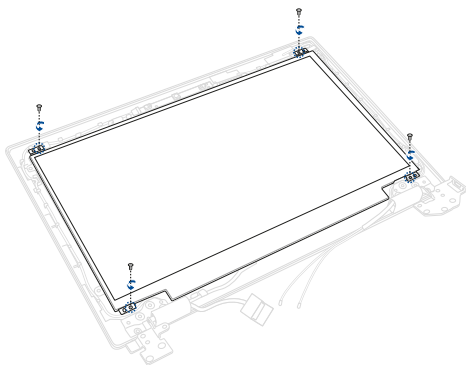
- H. Pry loose the bezel as shown in the illustration below.



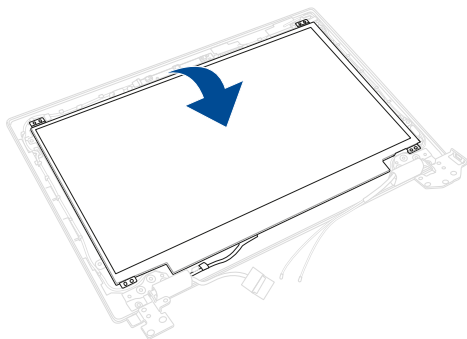
- I. Remove the bezel.



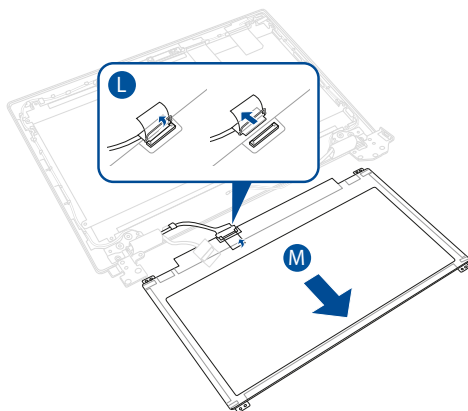
- J. Remove the screw(s) from the LCD panel. **DO NOT** remove the LCD panel yet!



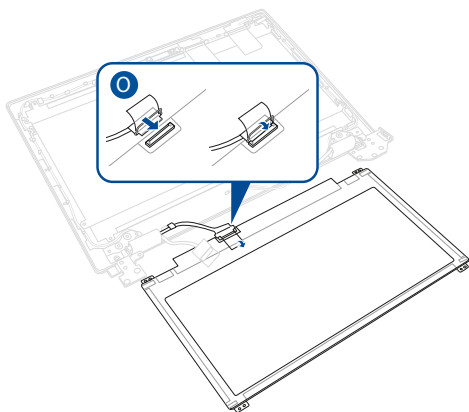
- K. Carefully flip the LCD panel forward to access the cable connector(s).



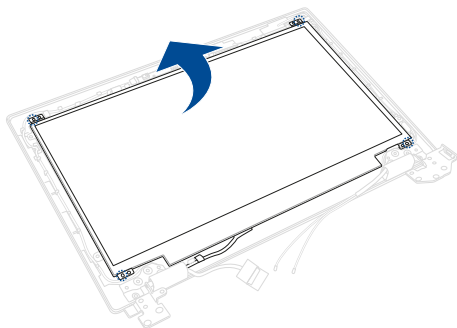
- L. Locate and disconnect the eDP cable as shown in the illustration below.
- M. Remove the LCD panel.



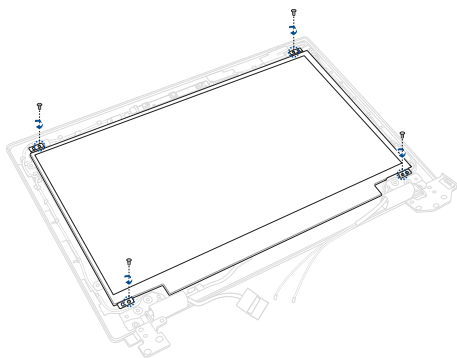
- N. Prepare the new LCD panel.
- O. Reconnect the eDP cable as shown in the illustration below.



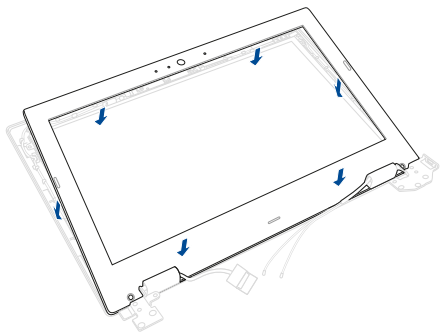
- P. Align and place the new LCD panel in the orientation as shown in the illustration below.



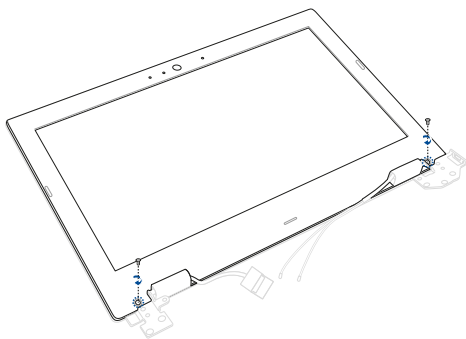
- Q. Secure the LCD panel using the screw(s) you removed earlier.



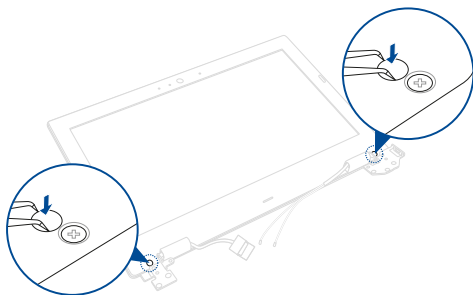
- R. Align and gently reattach the bezel around the display panel.



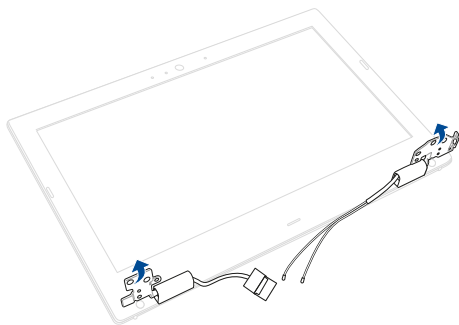
- S. Secure the LCD bezel using the screw(s) you removed earlier.



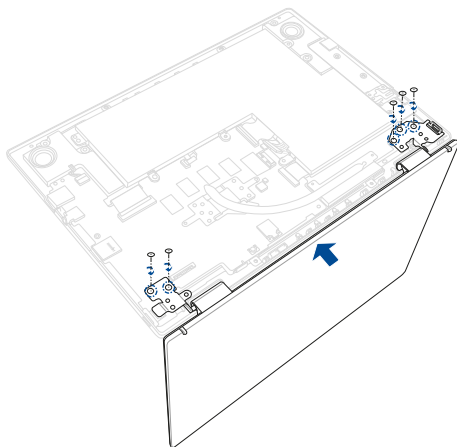
- T. Use the tweezers to replace the screw cap cover(s) as shown in the illustration below.



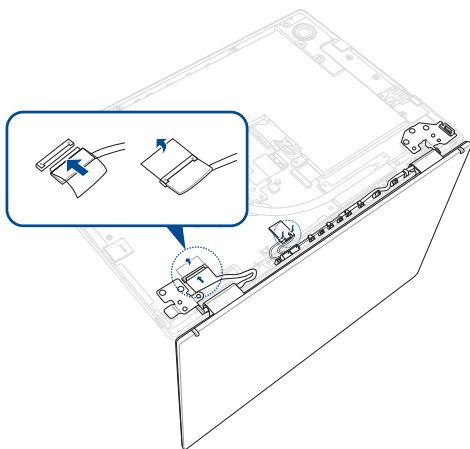
- U. Lift both LCD hinges until they are fully extended.



- V. In the orientation shown, align and place the hinge of the display module on the screw holes on the chassis.
- W. Secure the LCD panel module using the screw(s) you removed earlier.



- X. Reconnect the cable(s) and antenna(s) as shown in the illustration below.



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.

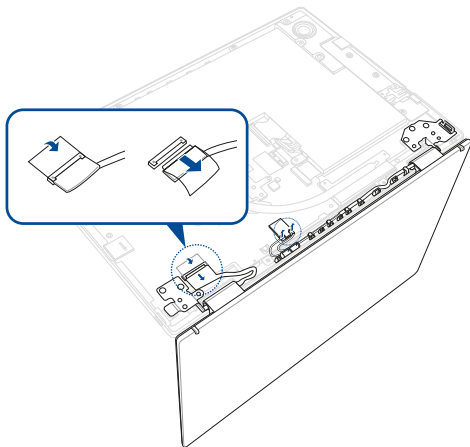
NOTE:

- 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.
-

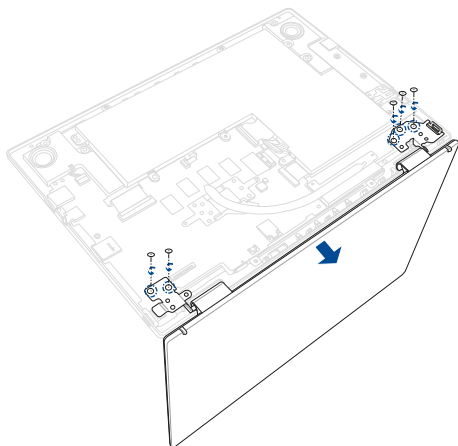
- A. Remove the compartment cover and remove the battery.

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

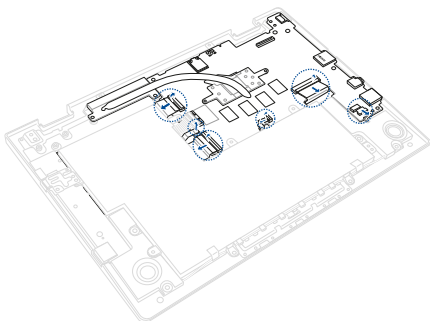
- B. Place your Notebook PC in the orientation as shown in the illustration below.
- C. Locate and disconnect the cable(s) and antenna(s) as shown in the illustration below.



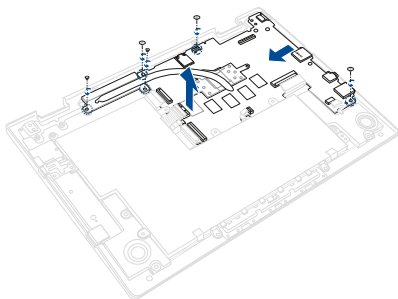
- D. Remove the screw(s) from the hinge, and then remove the LCD panel module.



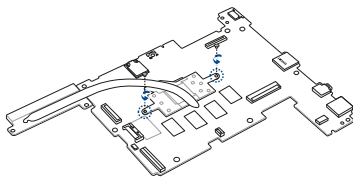
- E. Locate and disconnect all the cable(s) as shown in the illustration below.



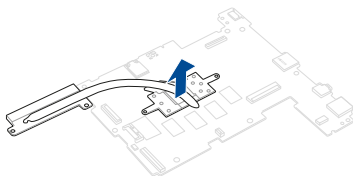
- F. Remove the screw(s) from the motherboard.
- G. Release the motherboard I/O connectors from the I/O slots on the chassis and then remove the motherboard.



- H. Remove the screw(s) from the cooling radiator.

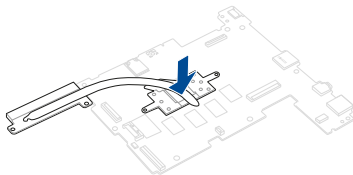


- I. Remove the cooling radiator from the motherboard.

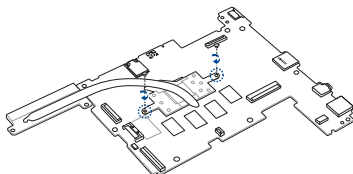


- J. Prepare the new motherboard.

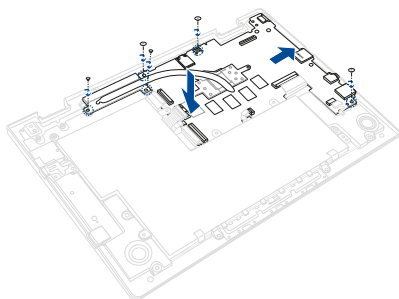
- K. Align and replace the cooling radiator on the screw holes of the motherboard.



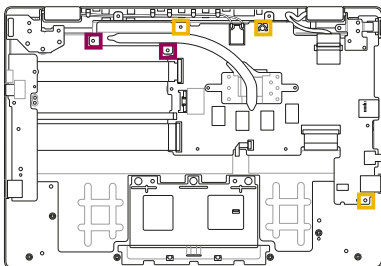
- L. Secure the cooling radiator using the screw(s) you removed earlier.



- M. Align and insert the motherboard I/O connectors into the I/O ports of the chassis. Then lower the motherboard back in the chassis.
- N. Secure the motherboard using the screw(s) you removed earlier.



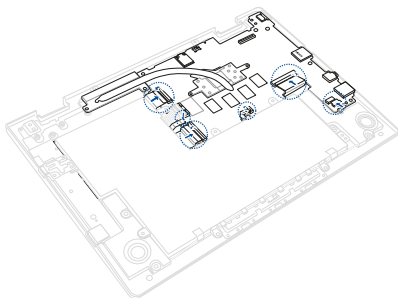
Motherboard screw map



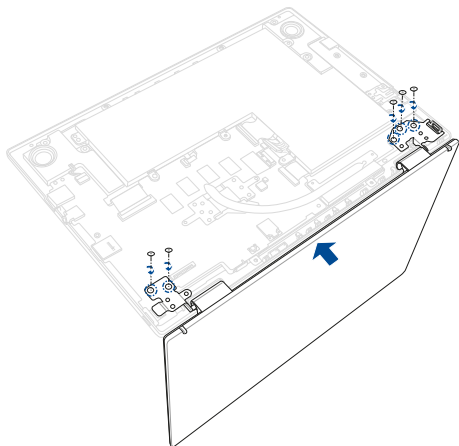
■ M2.0 X 4.0L (3PCS)

■ M2.0 X 3.0L (2PCS)

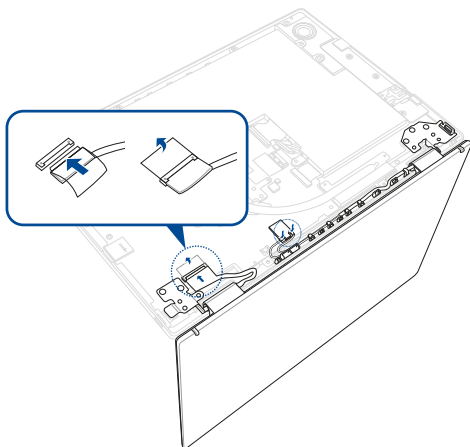
- O. Locate and reconnect all the connector(s).



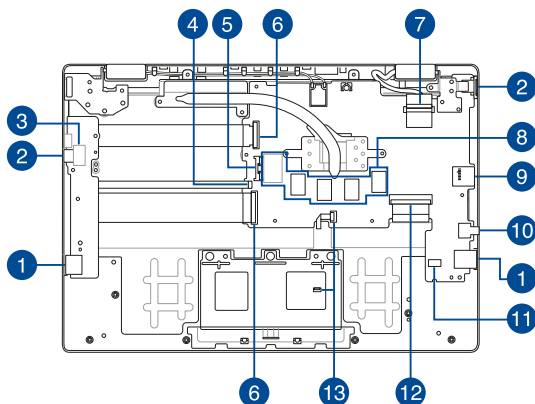
- P. In the orientation shown, align and place the hinge of the display module on the screw holes on the chassis.
- Q. Secure the LCD panel module using the screw(s) you removed earlier.



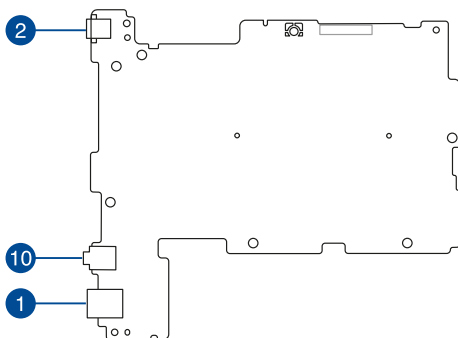
- R. Reconnect the cable(s) and antenna(s) as shown in the illustration below.



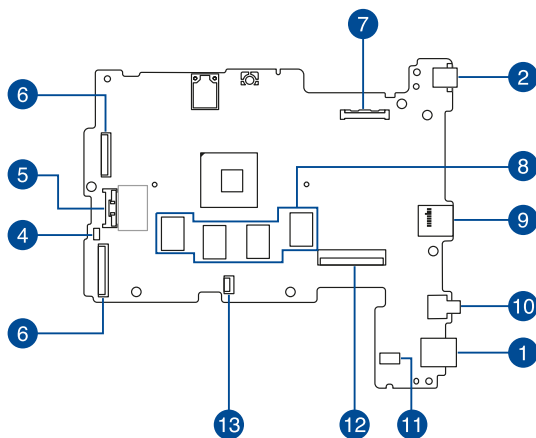
Wiring and connection diagrams



Top View



Bottom View



- | | |
|----------------------------|---------------------------------------|
| 1. USB Type-A connector | 8. Random-access memory (RAM) module |
| 2. USB Type-C® connector | 9. MicroSD card connector |
| 3. I/O board type C mux | 10. Headphone/headset/microphone jack |
| 4. VBUS power in connector | 11. Speaker connector |
| 5. Battery power connector | 12. Keyboard connector |
| 6. I/O FPC connector | 13. Touchpad connector |
| 7. eDP connector | |