

E18389

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IN SEARCH OF INCREDIBLE



Service Manual

ASUS

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Disclaimer

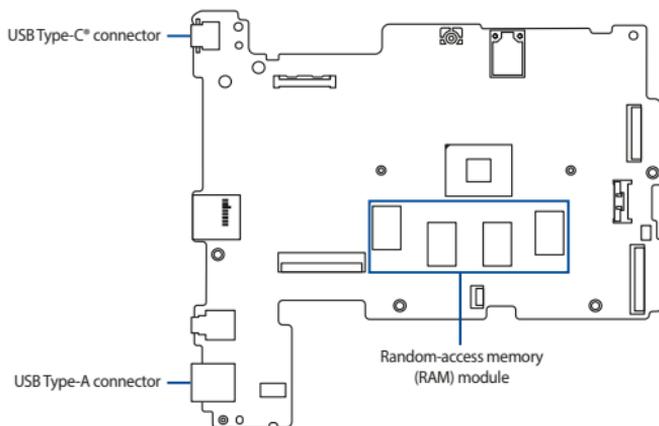
ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

Safety precautions

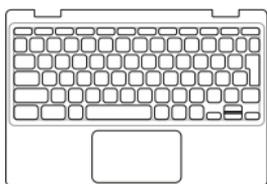
- Keep liquids or moisture away from your Notebook PC before installing or removing any components.
- Ensure to place your Notebook PC on a stable surface before installing or removing any components.
- Detach the clip or flap before removing the signal cables to prevent damage.
- Disconnect the power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



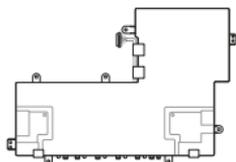
Motherboard with ports and connectors



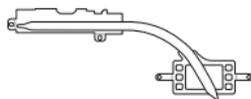
Keyboard (Top case module)



LCD panel module



Battery and power connector



Cooling radiator



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

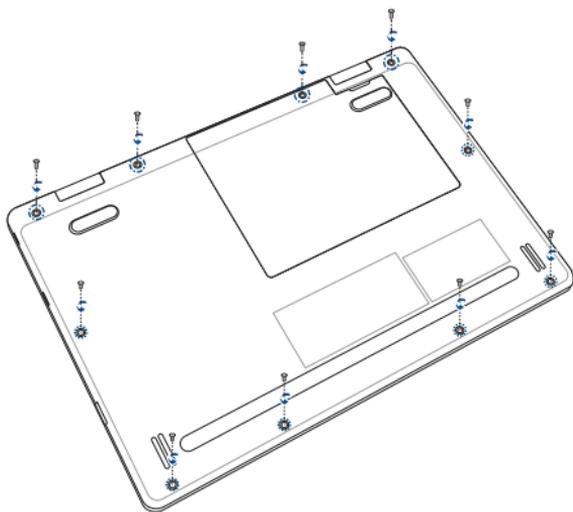


Tweezers

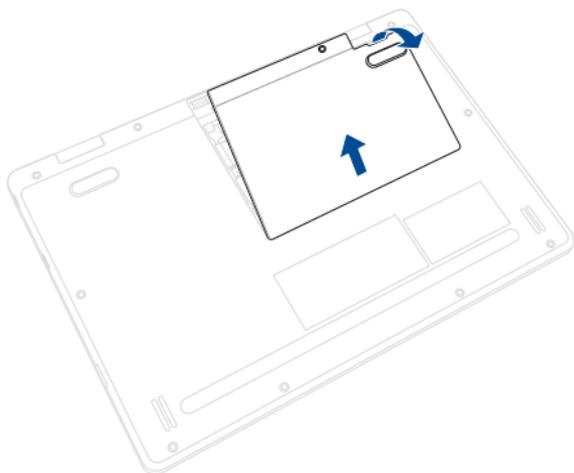
Removing the compartment cover

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

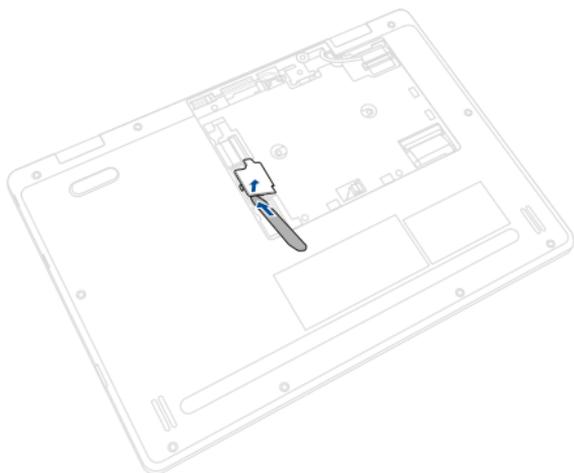
- A. Remove the screw(s) from the Notebook PC's compartment cover.



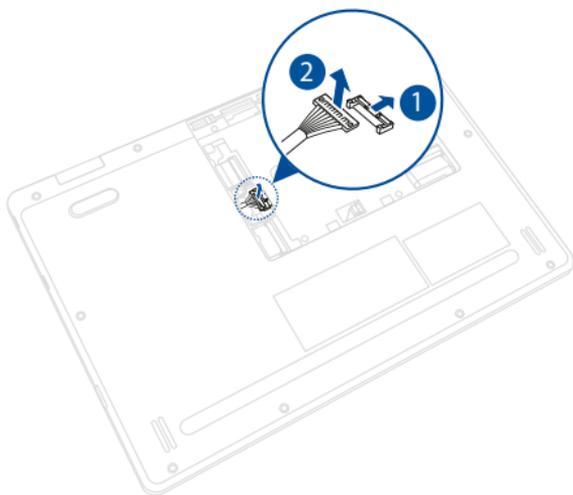
- B. Remove the door.



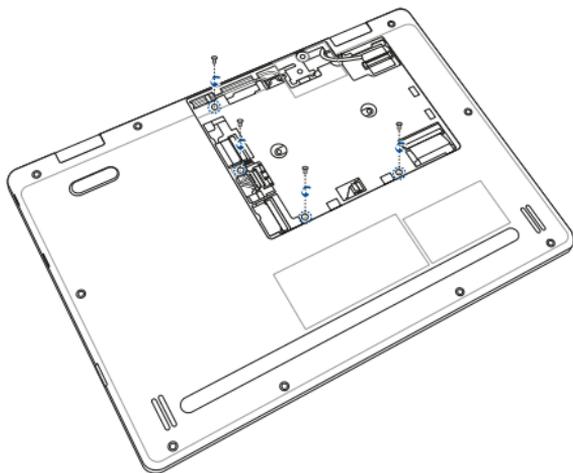
- C. Use the plastic blade to pry open the battery cover.



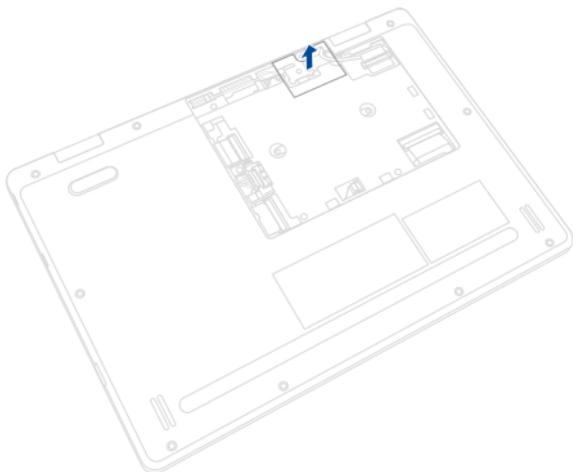
- D. Locate and disconnect the battery power cable(s) as shown in the illustration below.



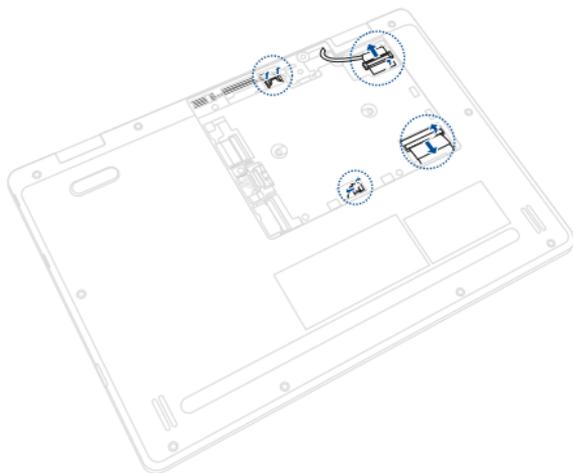
- E. Remove the screw(s) from the inner compartment cover.



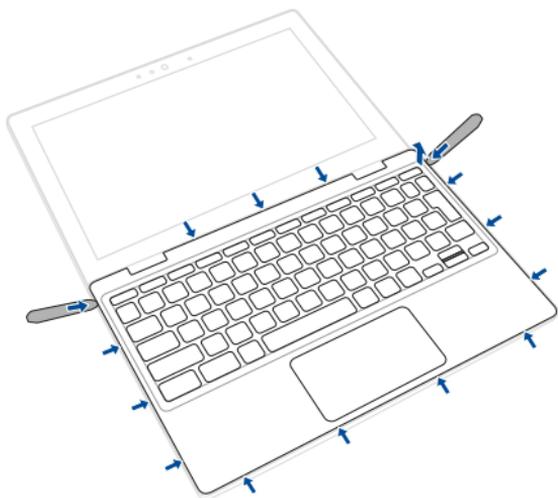
- F. Remove the mylar securing the cable(s).



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

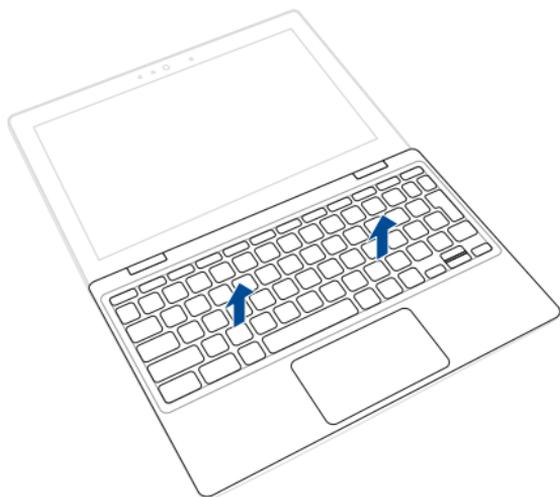


- H. Place your Notebook PC in the orientation as shown in the illustration below.
- I. Use the plastic blade to pry open the indicated area of the compartment cover as shown in the illustration below.



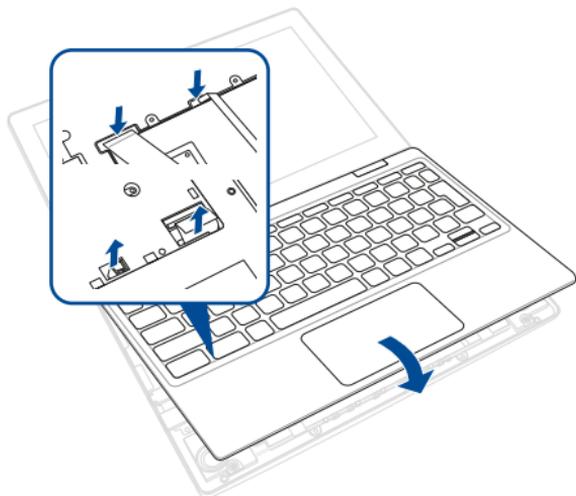
IMPORTANT! Avoid sliding the plastic blade along the side of your Notebook PC to prevent damage.

- J. Remove the keyboard (top case module).

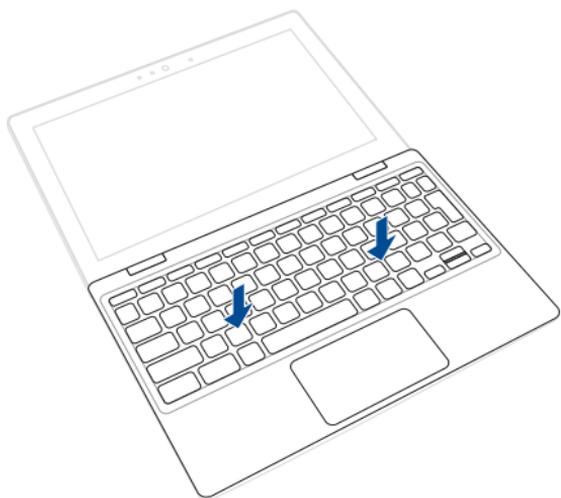


To reattach the compartment cover:

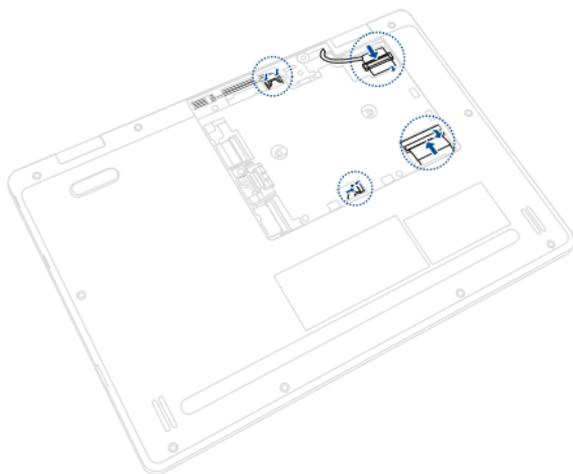
- A. Route all the cable(s) as shown in the illustration below.
- B. Align the keyboard (top case module) with the chassis. Then lower the keyboard (top case module) in place.



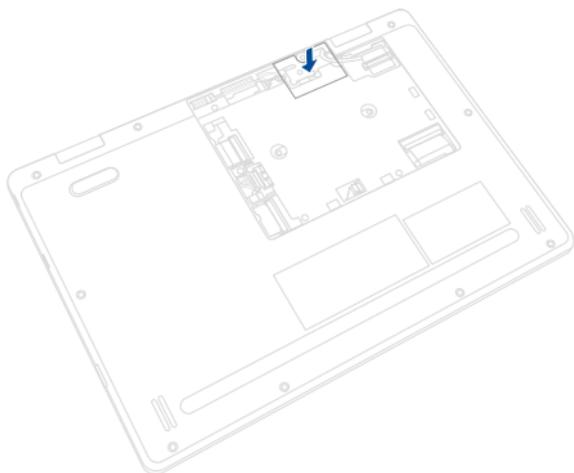
- C. Reattach the keyboard (top case module) to the chassis.



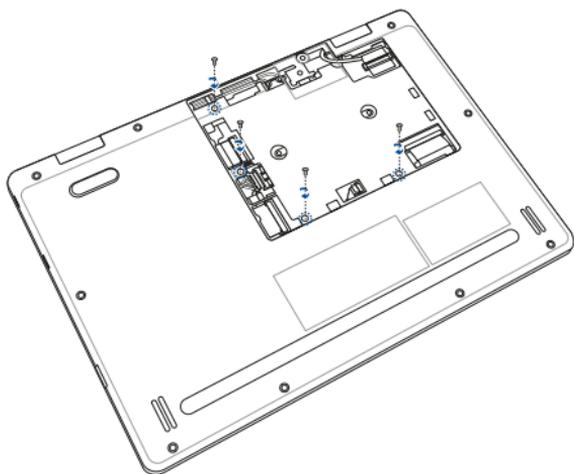
- D. Reconnect all the cable(s) as shown in the illustration below.



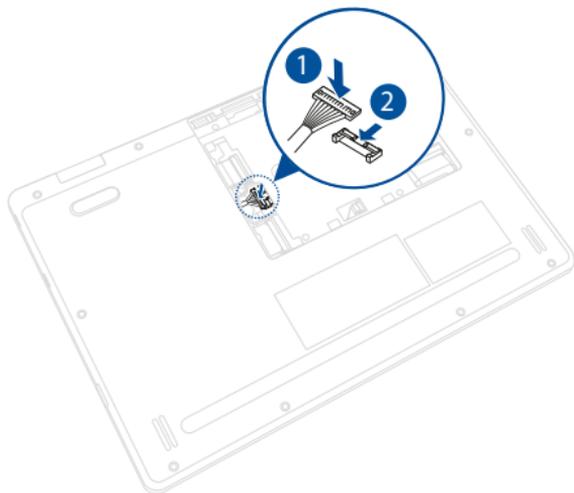
- E. Reattach the mylar to secure the cable(s).



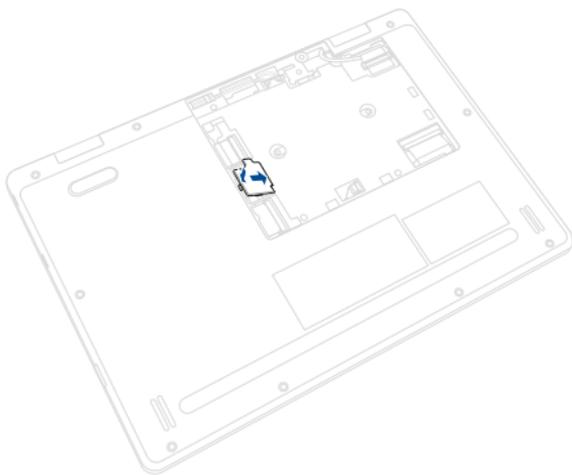
- F. Secure the inner compartment cover using the screw(s) you removed earlier.



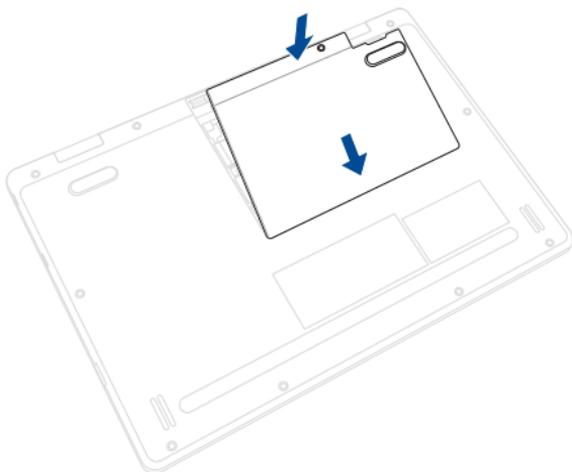
G. Align and connect the cable to the battery.



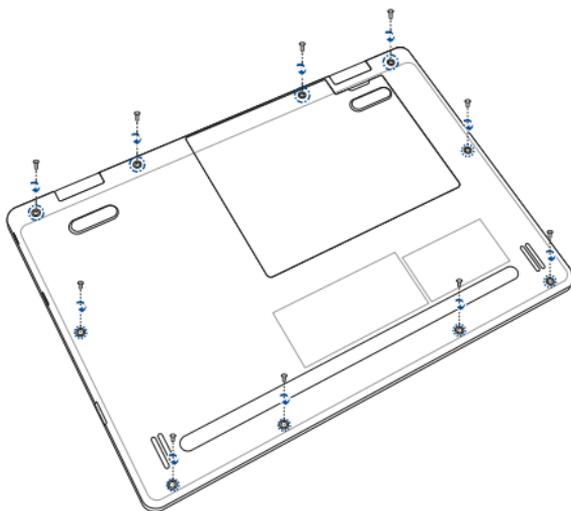
H. Reinstall the battery cover.



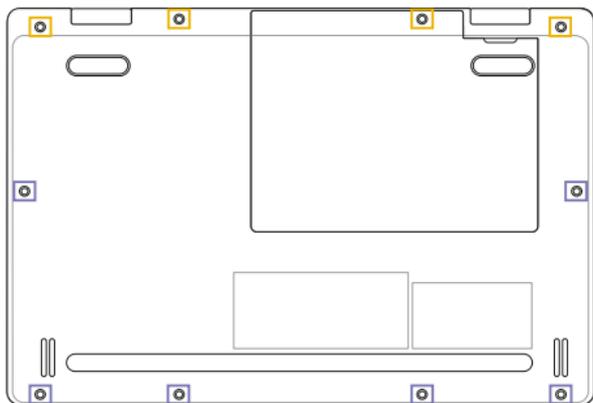
- I. Reinstall the door.



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



Cover screw map



■ M2.5 x 8.0L (4PCS)

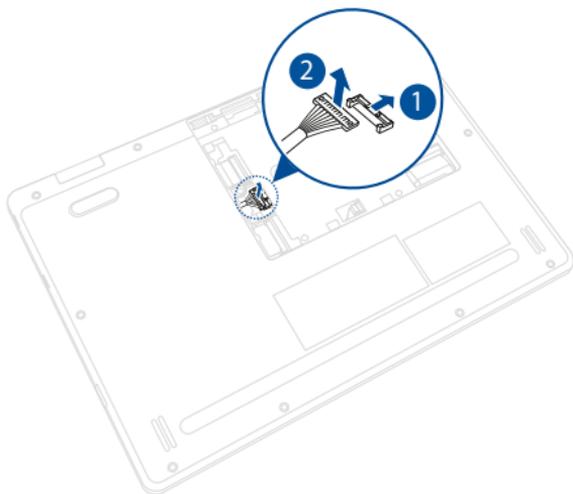
■ M2.5 x 6.5L (6PCS)

Disconnecting the battery

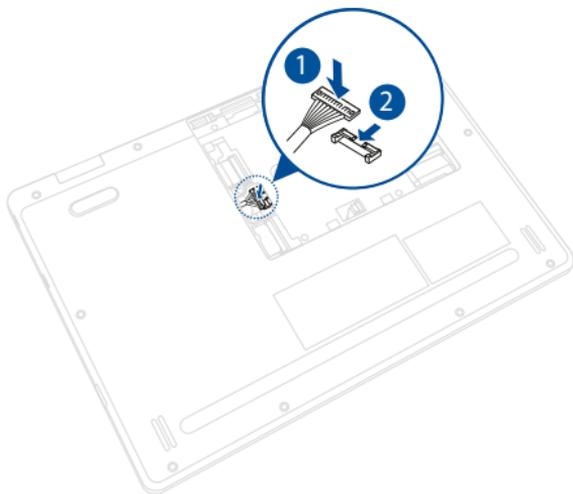
- A. Remove the compartment cover.
-

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.

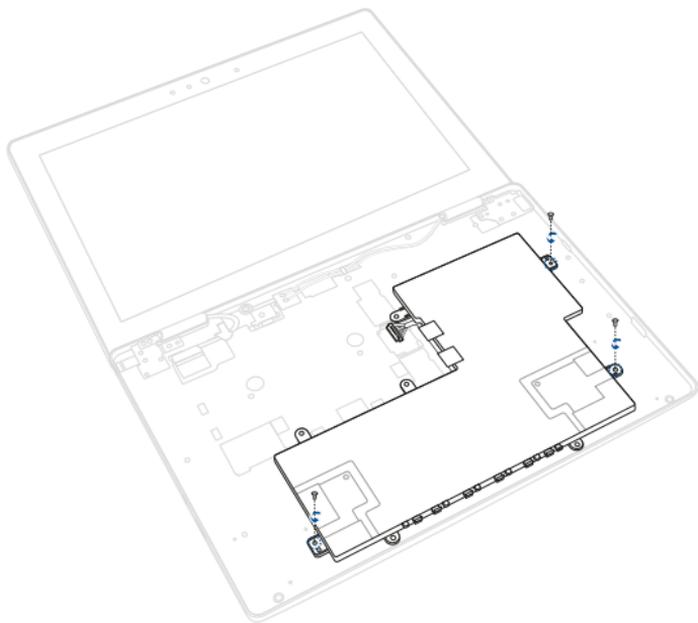
NOTE:

- 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.
-

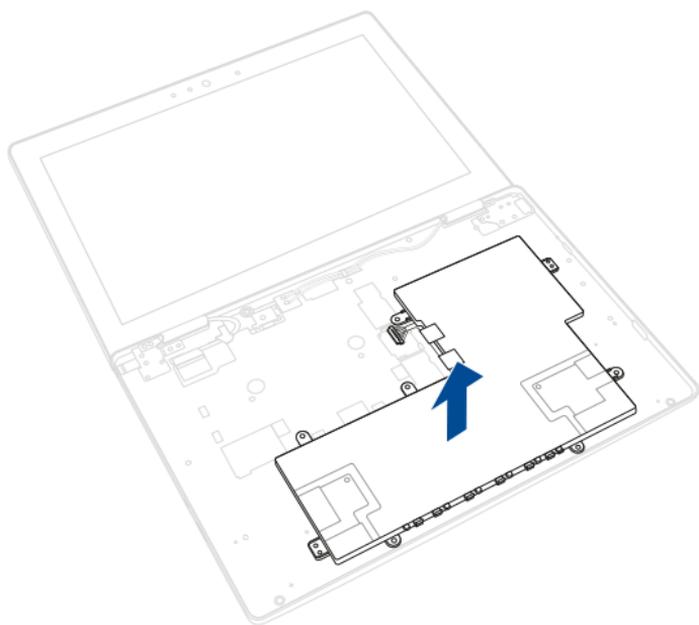
- A. Remove the compartment cover, disconnect the battery, and remove the motherboard.

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

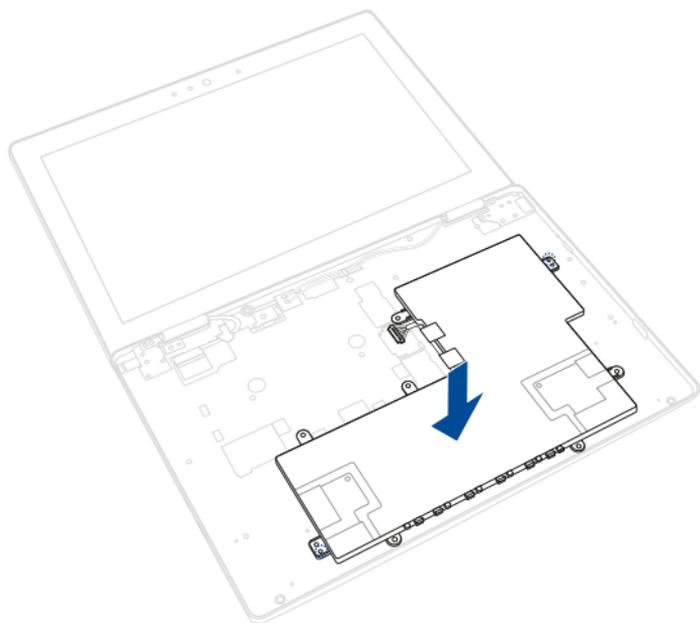
- B. Remove the screw(s) from the battery.



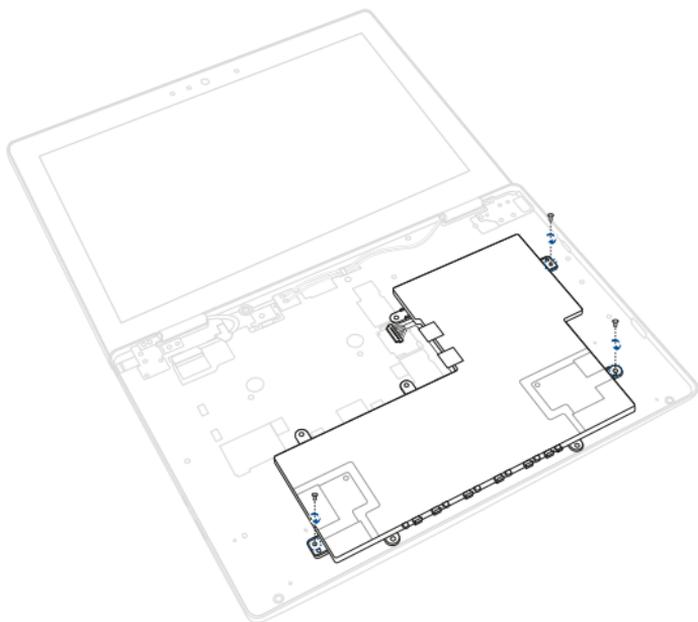
- C. Remove the battery.



- D. Prepare the new battery.
- E. Reinstall the battery.



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



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.

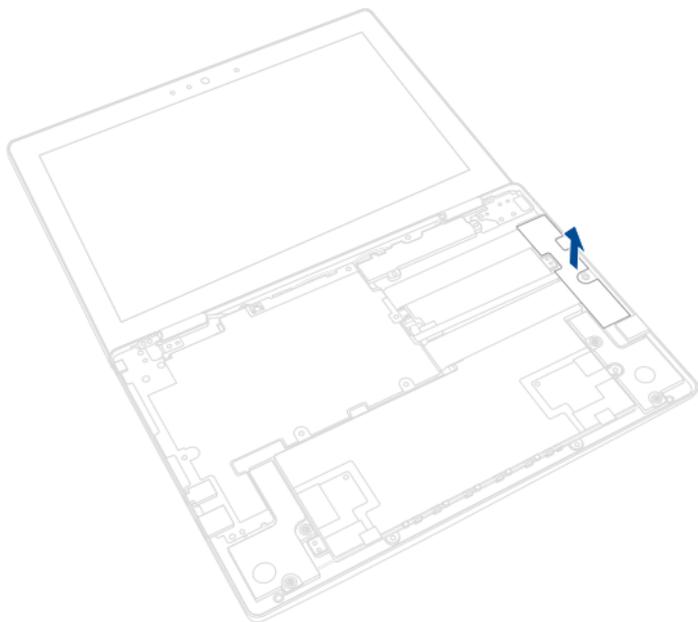
NOTE:

- 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.
-

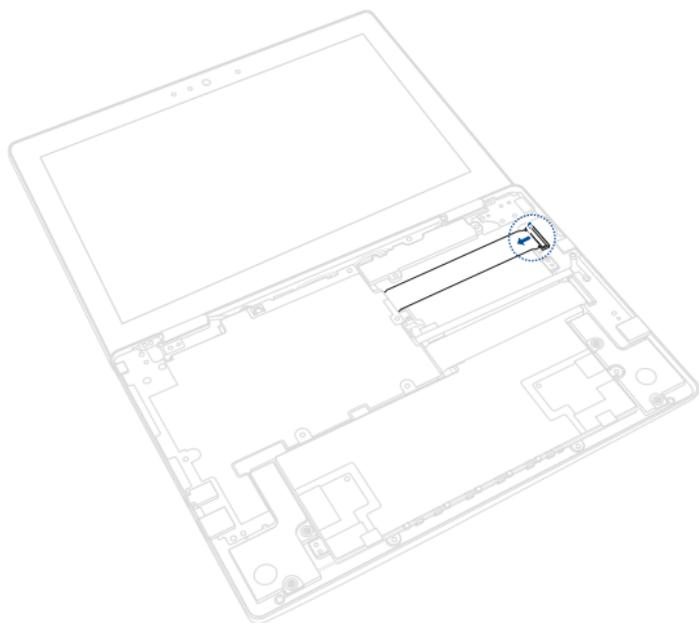
- A. Remove the compartment cover and disconnect the battery.

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

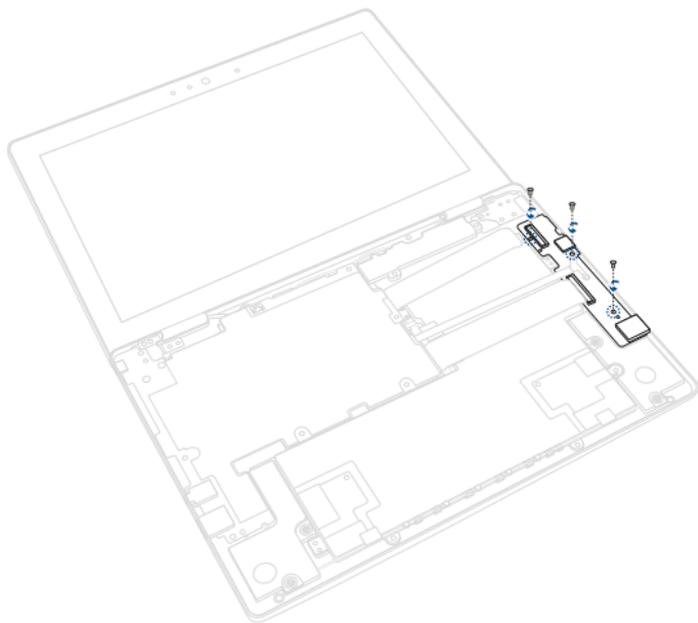
- B. Remove the mylar securing the USB board.



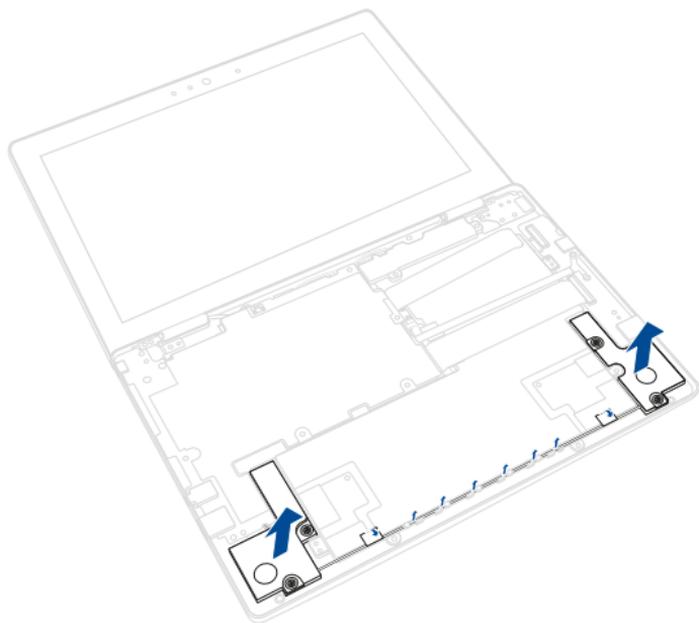
- C. Locate and disconnect the USB board FPC as shown in the illustration below.



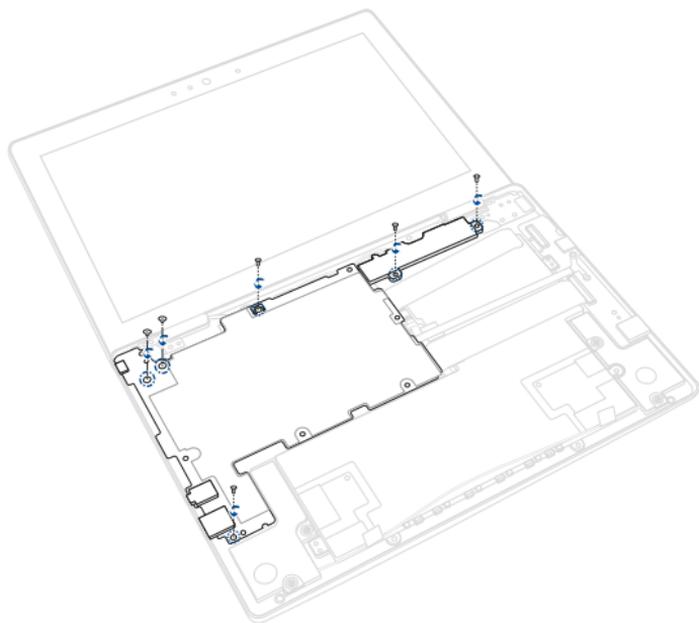
- D. Remove the screw(s) from the USB board.



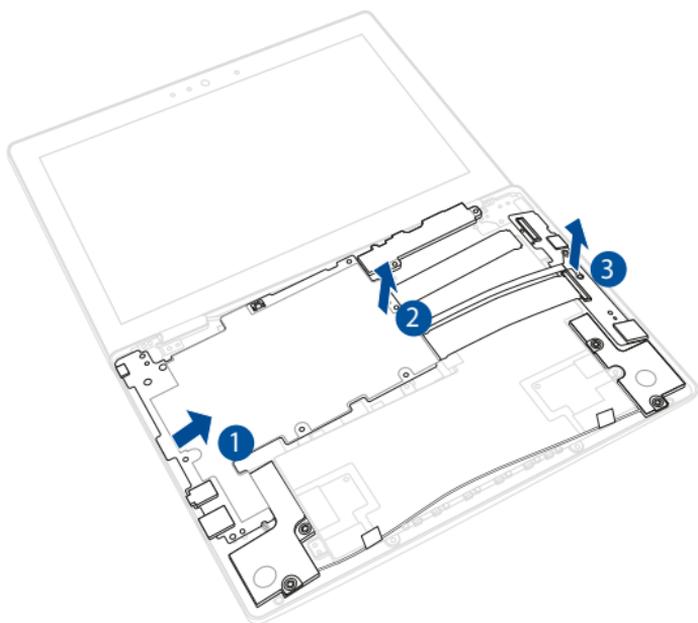
- E. Remove the speakers.



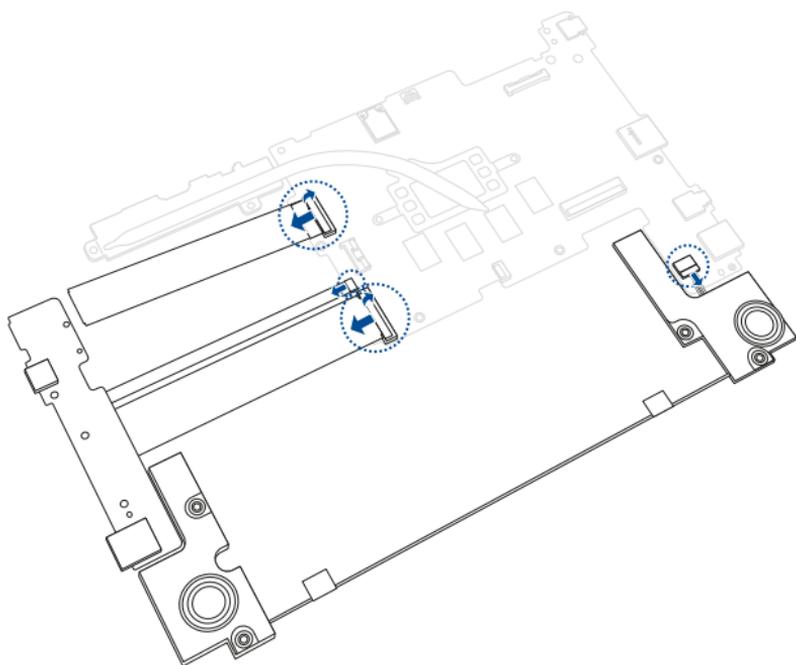
- F. Remove the screw(s) from the motherboard.



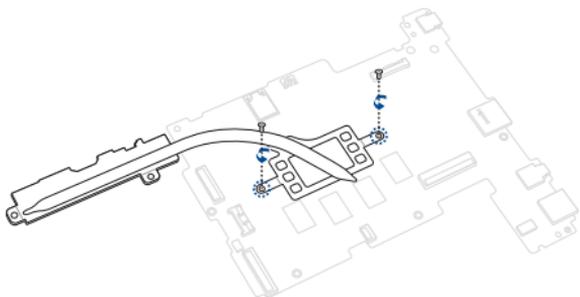
- G. Release the motherboard I/O connectors from the I/O slots on the chassis. Then remove the motherboard and USB board.



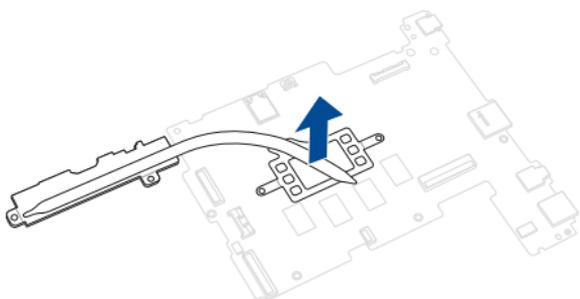
- H. Locate and disconnect all the cable(s) as shown in the illustration below.



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

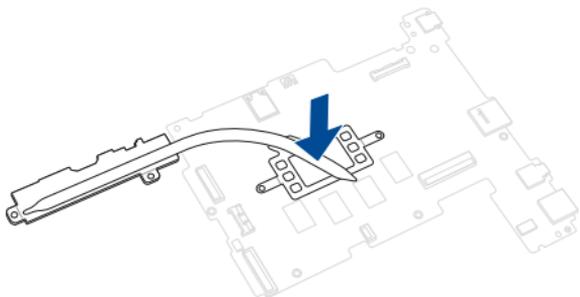


- J. Remove the cooling radiator from the motherboard.

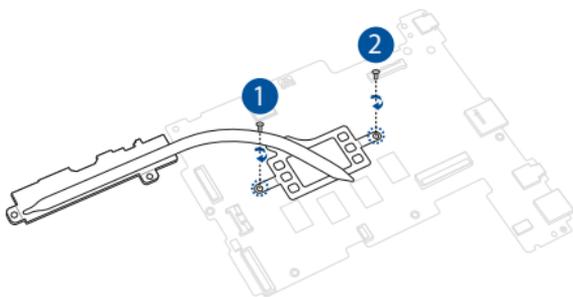


To install the new motherboard:

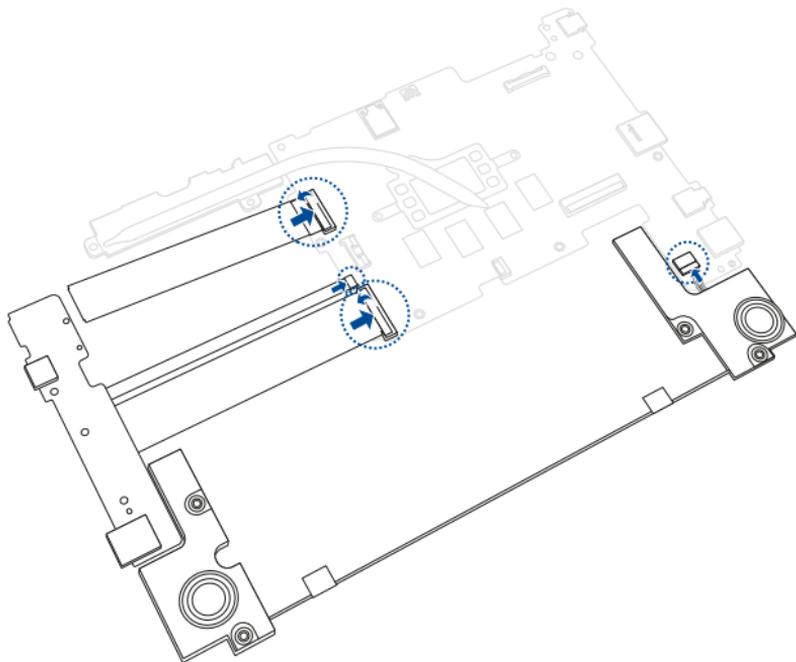
- A. Prepare the new motherboard and USB board.
- B. Align and replace the cooling radiator on the screw holes of the motherboard.



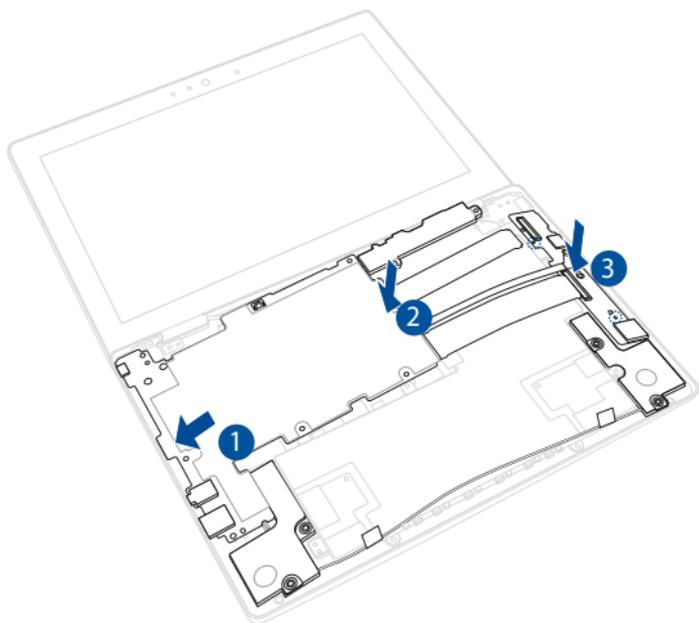
- C. Secure the screw(s) one by one in the sequence as shown in the illustration below.



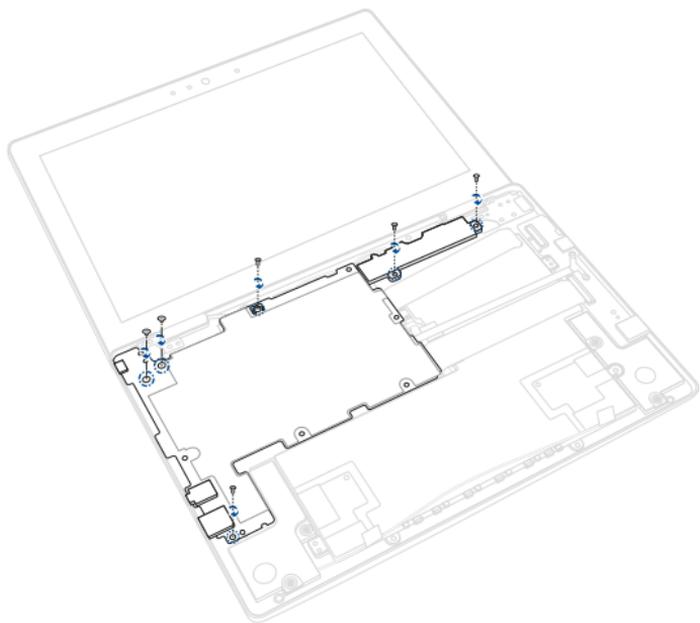
D. Reconnect all the connector(s) disconnected earlier.



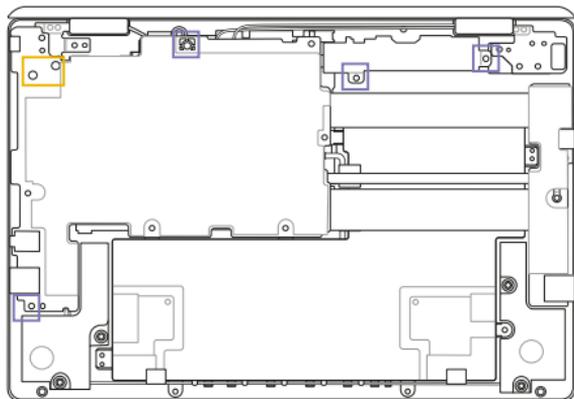
- E. Align and insert the motherboard I/O connectors into the I/O connectors on the chassis. Then lower the motherboard and USB board back in the chassis.



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



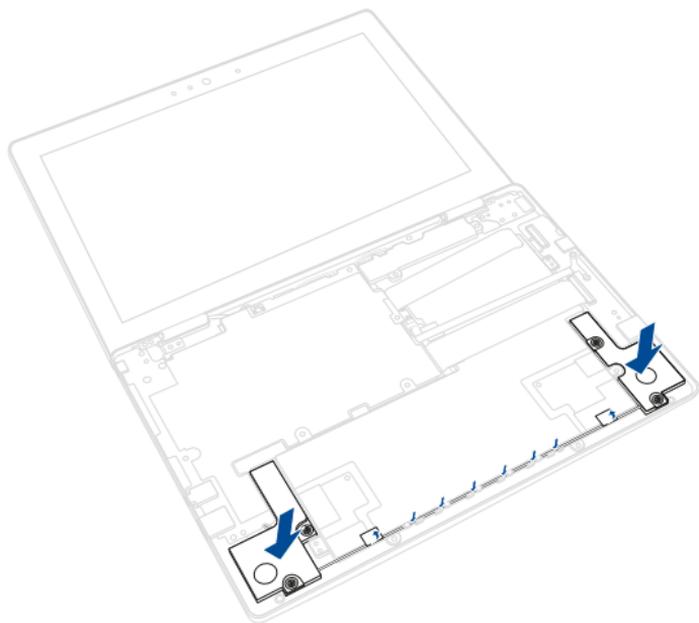
Motherboard screw map



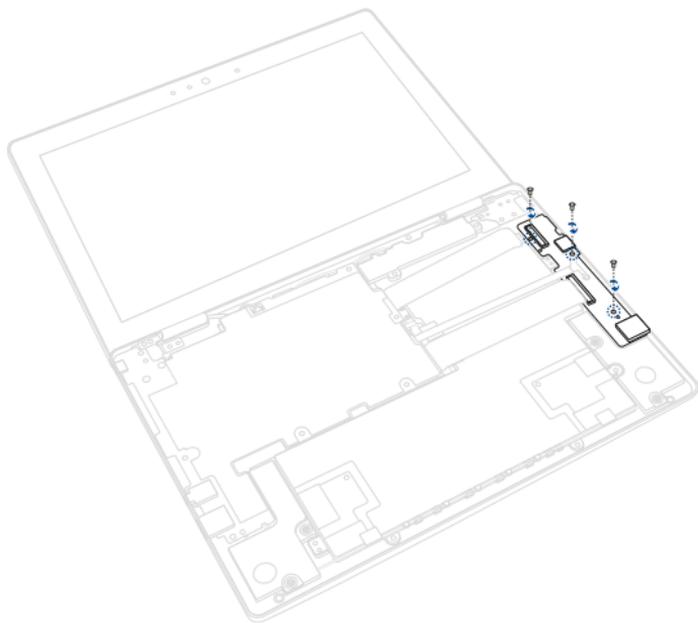
■ M2.5 x 4.5L (2PCS)

■ M2.0 x 3.5L (4PCS)

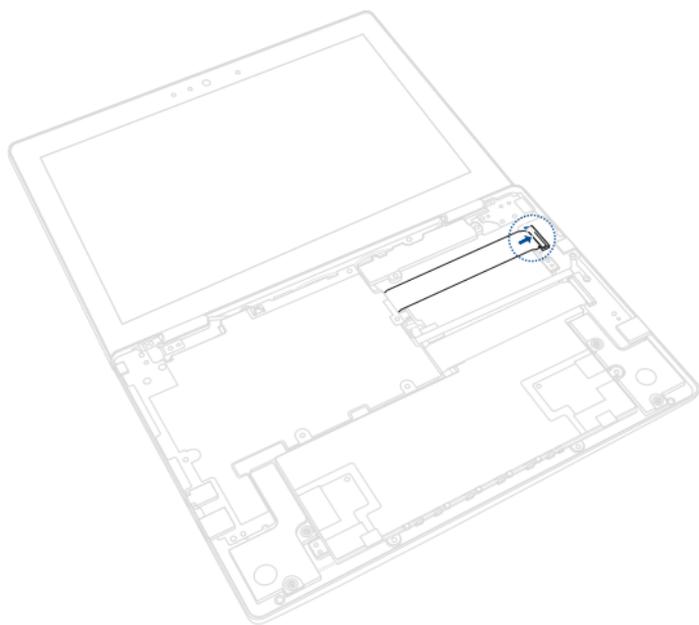
G. Reinstall the speakers.



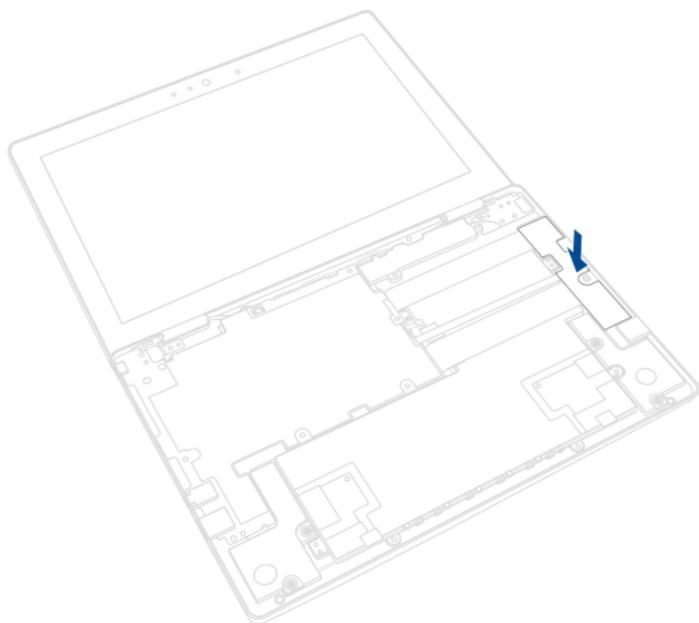
- H. Secure the USB board using the screw(s) you removed earlier.



- I. Reconnect the USB board FPC as shown in the illustration below.



- J. Reattach the mylar to secure the USB board.



Replacing the LCD module

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

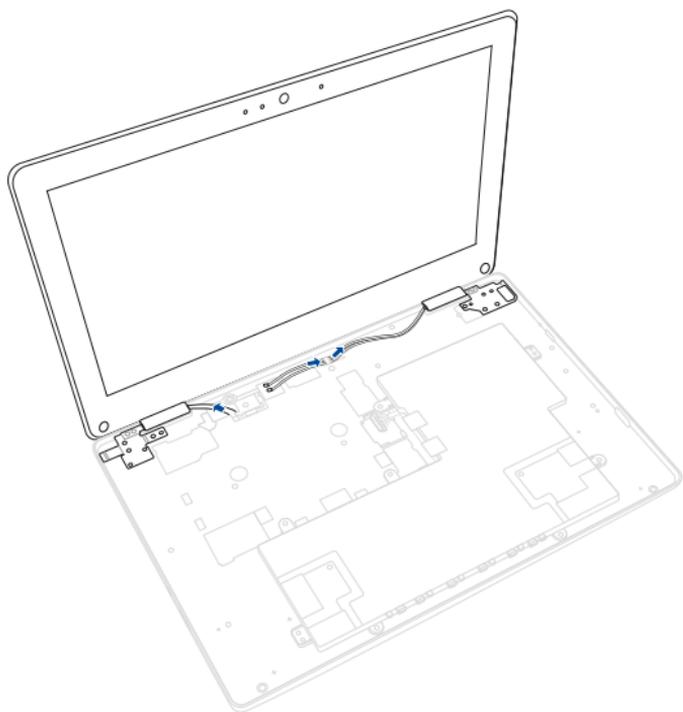
NOTE: The illustrations are for reference only.

- A. Remove the compartment cover, disconnect the battery, and remove the motherboard.
-

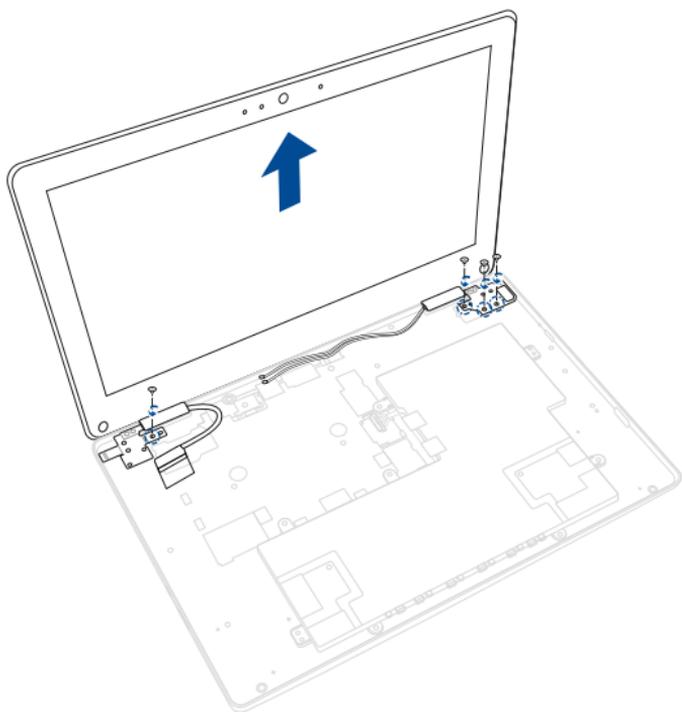
NOTE: For more details, refer to the *Removing the compartment cover*, *Disconnecting the battery*, and *Replacing the motherboard* sections in this manual.

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

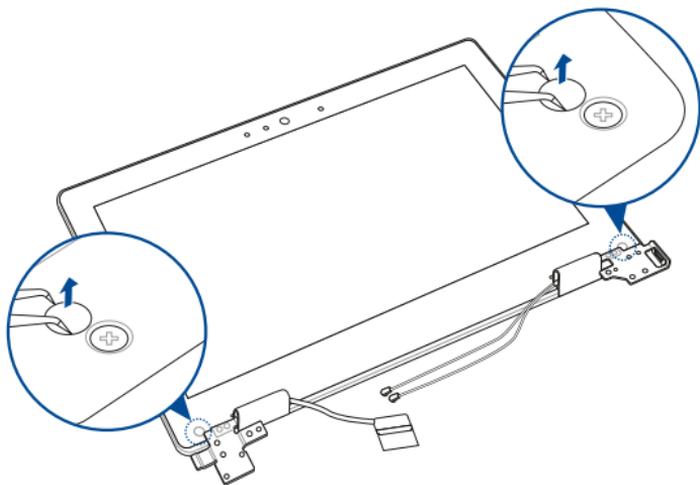
- C. Unroute the cable(s) from the cable guides as shown in the illustration below.



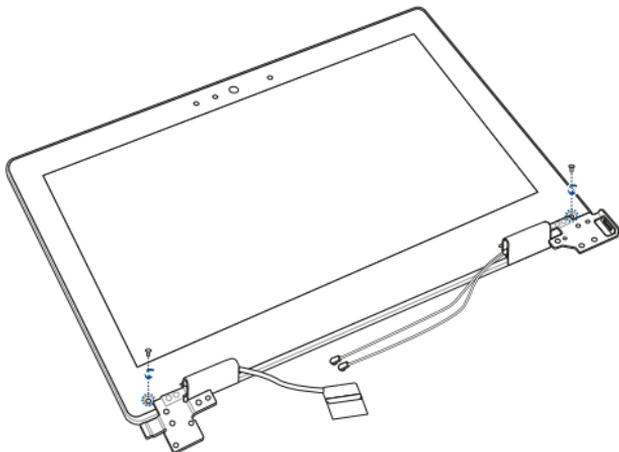
- D. Remove the screw(s) from the hinges, and then remove the LCD panel module.



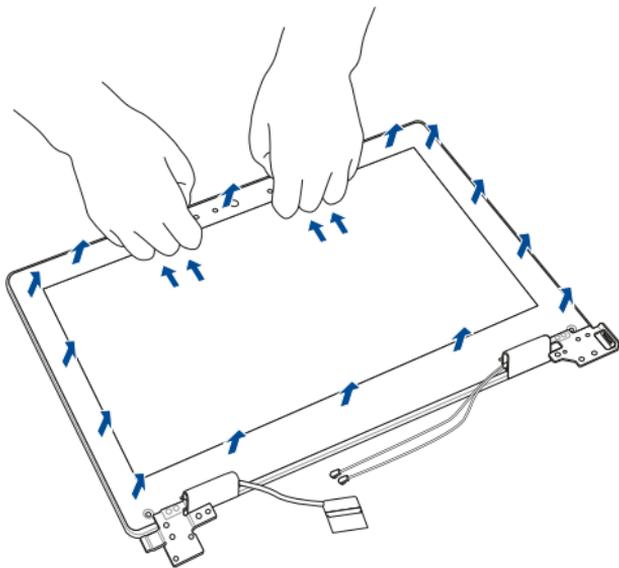
- E. Use the tweezers to remove the screw cap cover(s) from the screw(s) as shown in the illustration below.



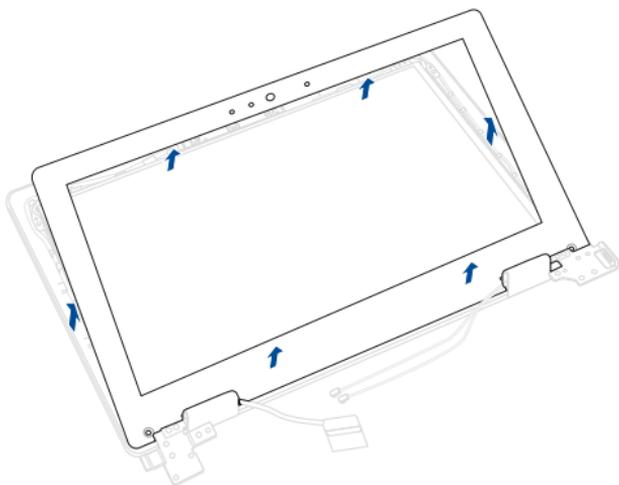
- F. Remove the screw(s) from the LCD bezel.



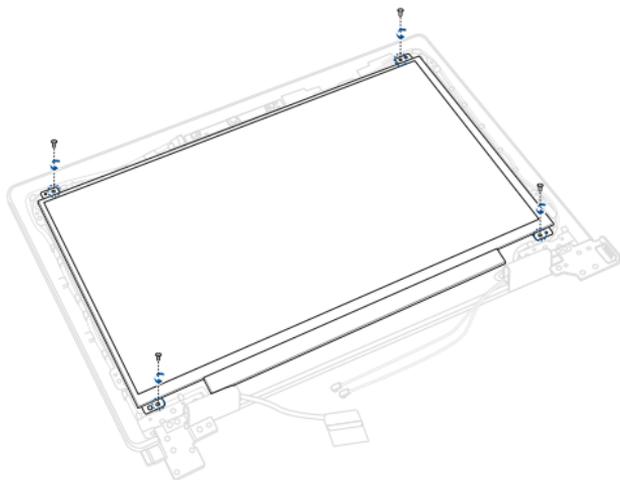
G. Pry loose the LCD bezel as shown in the illustration below.



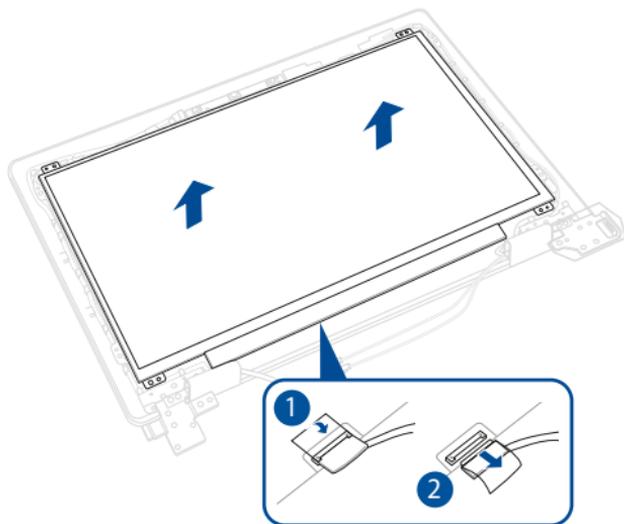
H. Remove the LCD bezel.



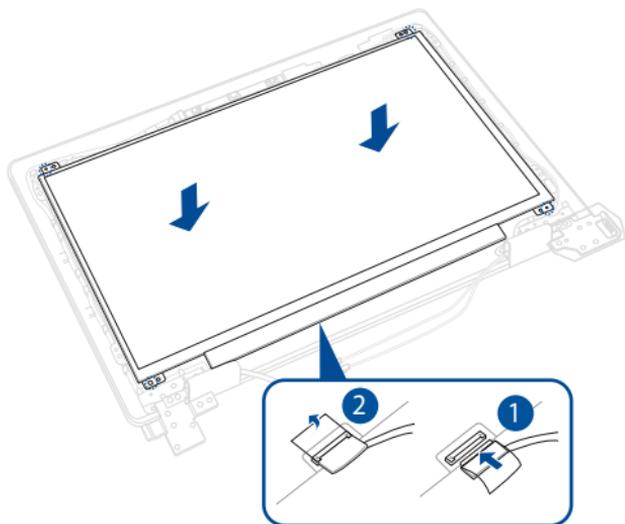
- I. Remove the screw(s) from the LCD panel.



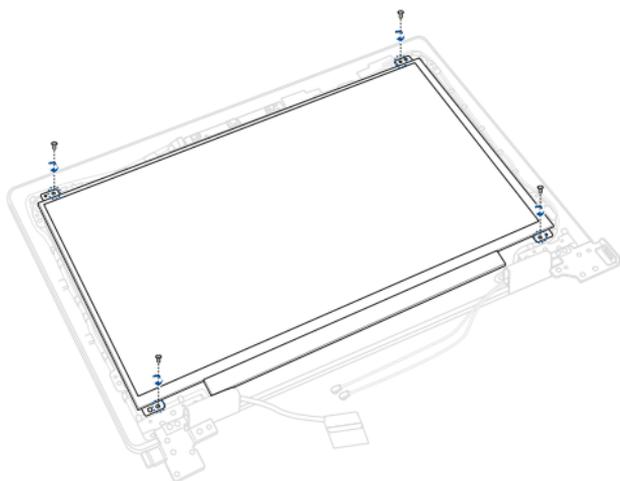
- J. Remove the LCD panel. Then locate and disconnect the eDP cable as shown in the illustration below.



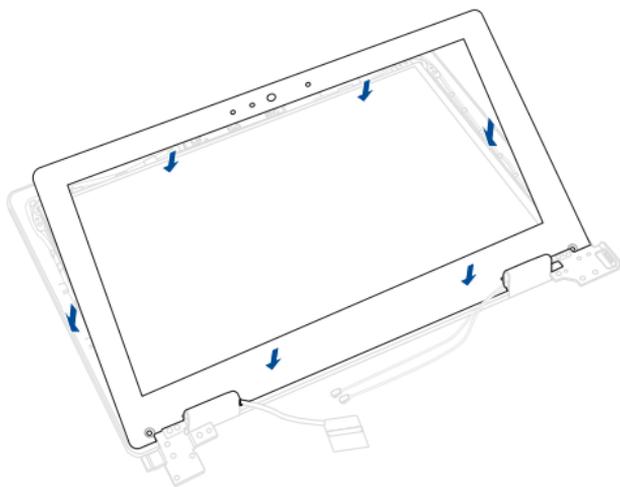
- K. Prepare the new LCD panel.
- L. Reconnect the eDP cable. Then align and place the new LCD panel in the orientation as shown in the illustration below.



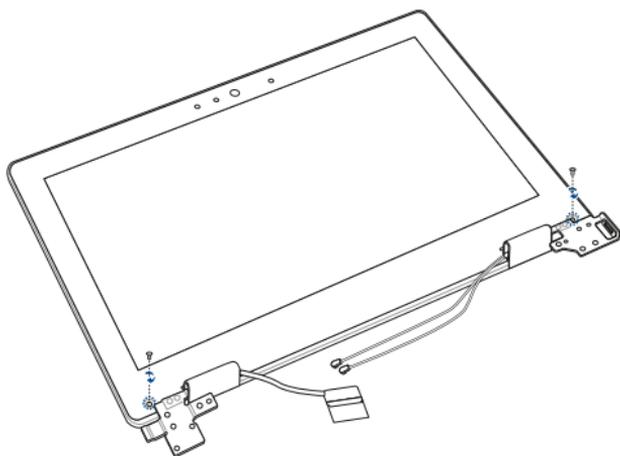
- M. Secure the LCD panel using the screw(s) you removed earlier.



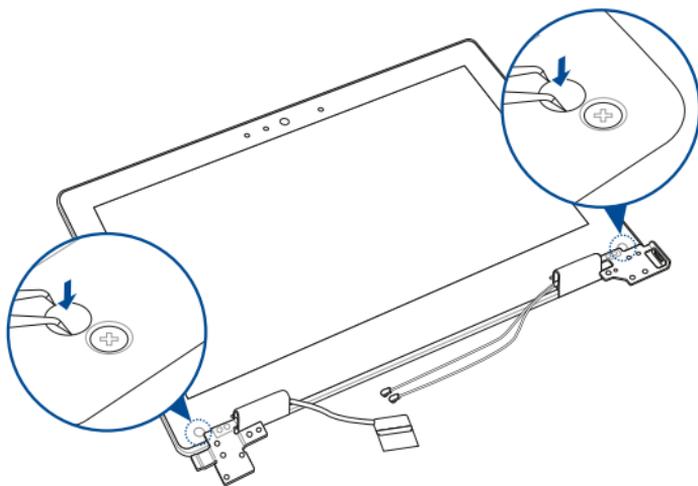
- N. Align and gently reattach the bezel onto its slot on the bottom side of the LCD panel module. Continue reattaching upward along the left and right sides. Finally, reattach the top side.



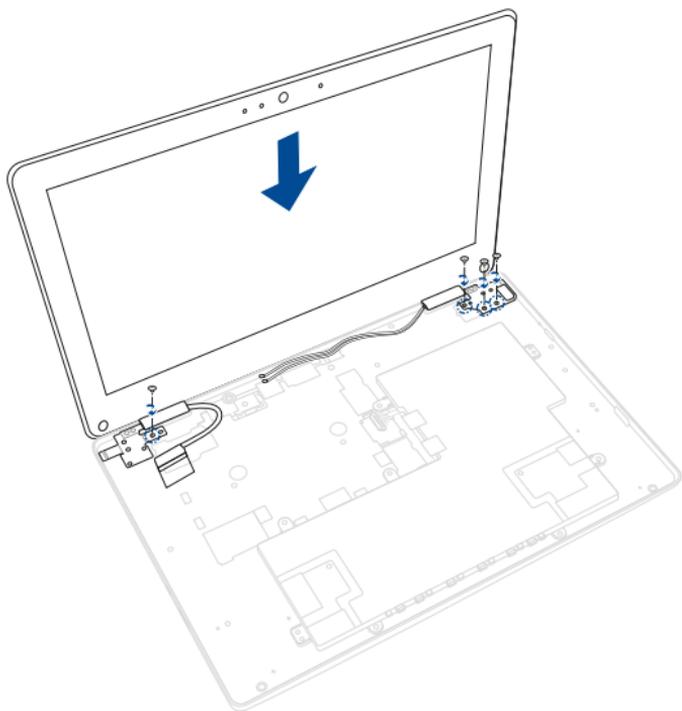
- O. Secure the LCD bezel using the screw(s) you removed earlier.



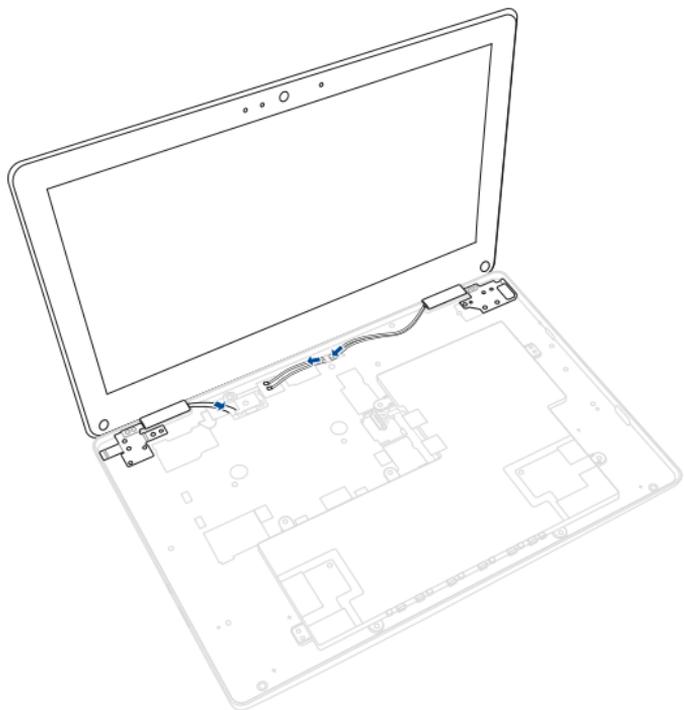
- P. Use the tweezers to replace the screw cap cover(s) as shown in the illustration below.



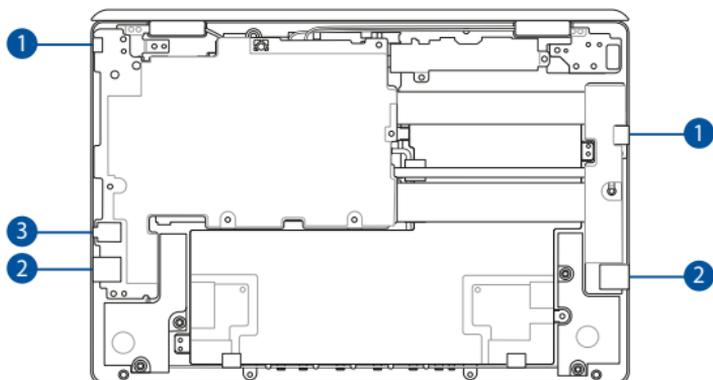
- Q. In the orientation shown, align and place the hinges of the display module on the screw holes on the chassis. Then secure the LCD panel module using the screw(s) you removed earlier.



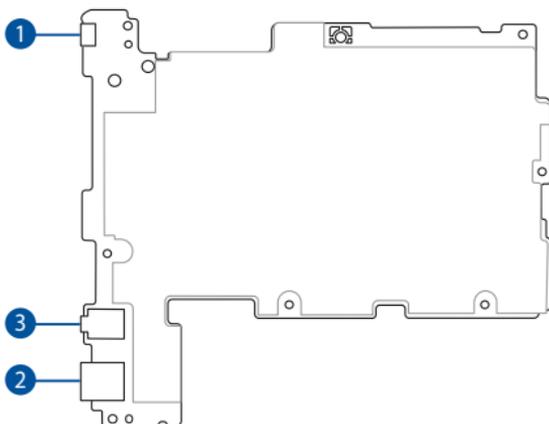
- R. Route the all the cable(s) through the cable guides as shown in the illustration below.



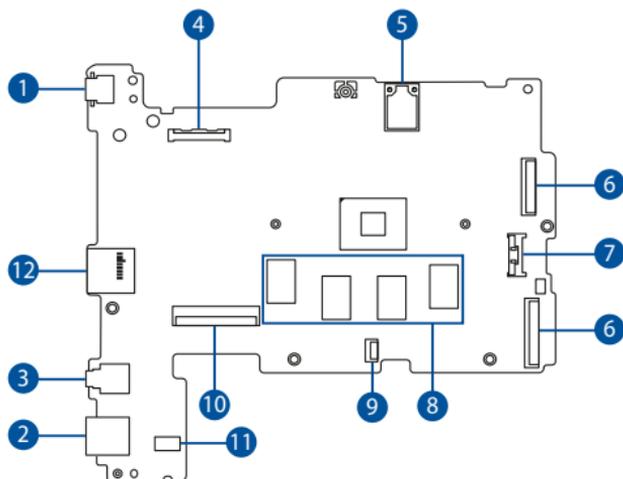
Wiring and connection diagrams



Top View



Bottom View



- | | |
|--|--------------------------------------|
| 1. USB Type-C® connector | 7. Battery power connector |
| 2. USB Type-A connector | 8. Random-access memory (RAM) module |
| 3. Headphone/Headset/
Microphone jack | 9. Touchpad connector |
| 4. eDP connector | 10. Keyboard connector |
| 5. WiFi module | 11. Speaker connector |
| 6. I/O FPC connector | 12. MicroSD connector |

