

E18143

First Edition / June 2021

# IN SEARCH OF INCREDIBLE



Service Manual



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# Disclaimer

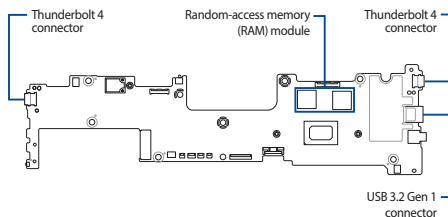
ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

## 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.

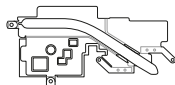
# Major components



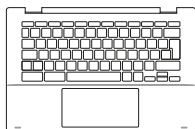
**Motherboard with ports and connectors**



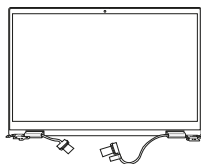
**M.2 SSD module**



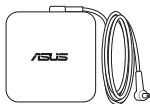
**Cooling radiator**



**Keyboard (Top case module)**



**LCD panel module**



**Power adapter**



**Battery and power connector**

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**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**

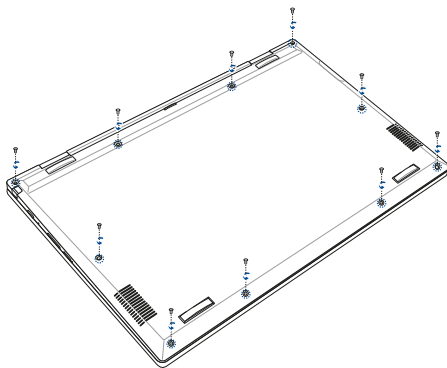
# Removing the compartment cover

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

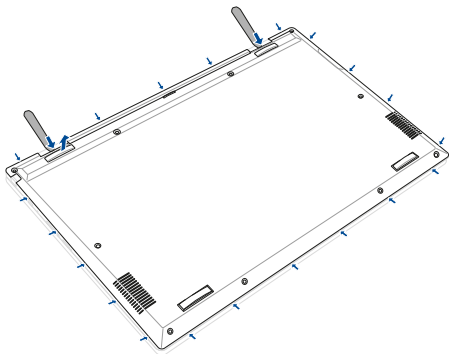
---

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





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

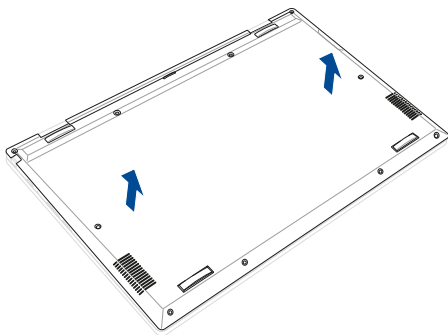


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**IMPORTANT!** Avoid sliding the plastic blade along the side of your Notebook PC to prevent damage.

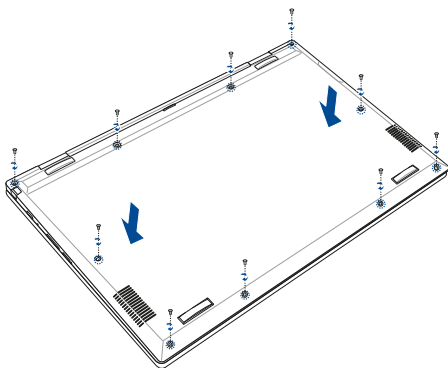
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- D. Remove the compartment cover.



To reattach the compartment cover:

- A. Align and reattach the compartment cover.  
B. Secure the compartment cover using the screw(s) you removed earlier.



## Disconnecting the battery

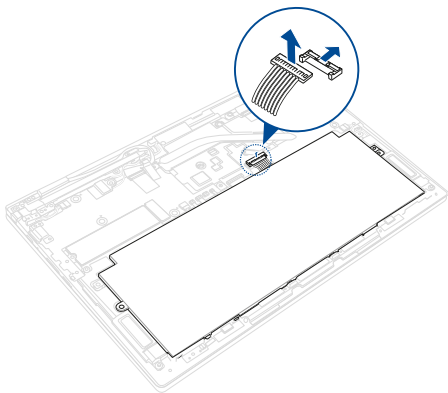
- A. Remove the compartment cover.

---

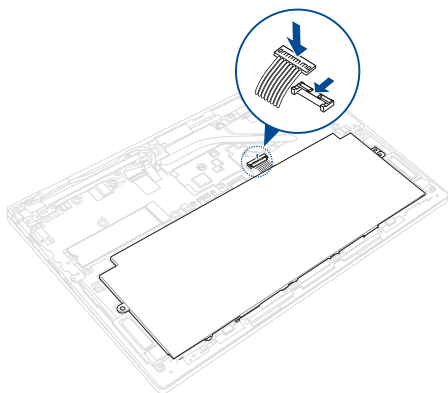
**NOTE:** For more details, refer to the *Removing the compartment cover* section in this manual.

---

- 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.

---

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**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.
-

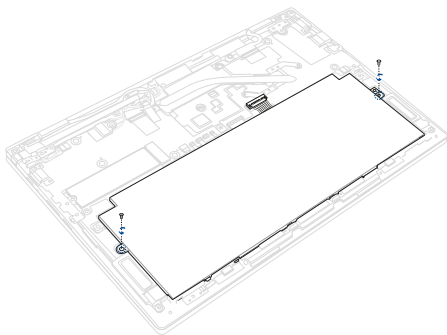
- A. Remove the compartment cover and disconnect the battery.

---

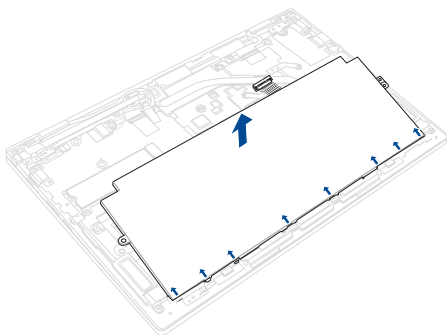
**NOTE:** For more details, refer to the *Removing the compartment cover* and *Disconnecting the battery* sections in this manual.

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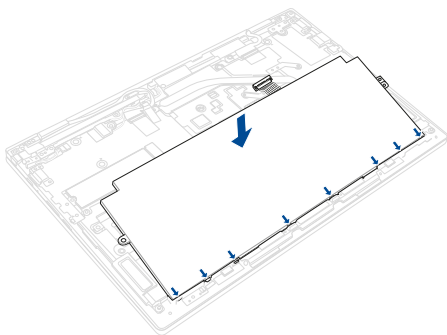
- B. Remove the screw(s) from the battery.



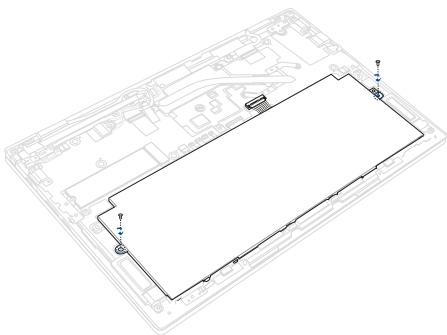
- C. Remove the battery.



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



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



# Replacing the 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.
-



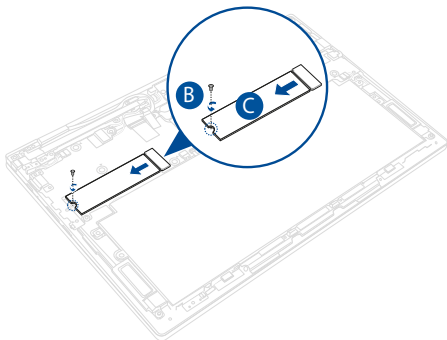
- A. Remove the compartment cover and disconnect the battery.

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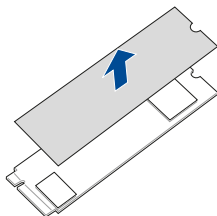
**NOTE:** For more details, refer to the *Removing the compartment cover* and *Disconnecting the battery* sections in this manual.

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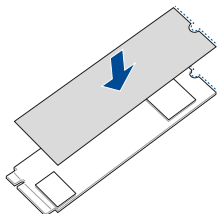
- B. Remove the screw(s) from the M.2 SSD module.
- C. Remove the M.2 SSD module from the motherboard.



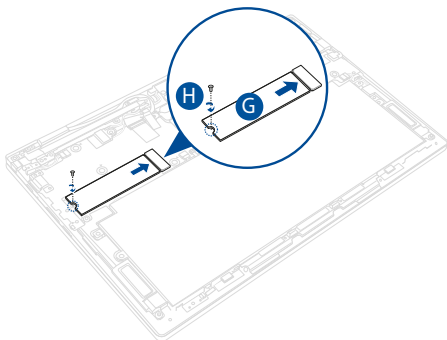
- D. Detach the AL FOIL Mylar from the M.2 SSD module.



- E. Prepare the new M.2 SSD module.
- F. Attach the AL FOIL Mylar onto the 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 using the screw(s) you removed earlier.



# Replacing the LCD module

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

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**NOTE:** The illustrations are for reference only.

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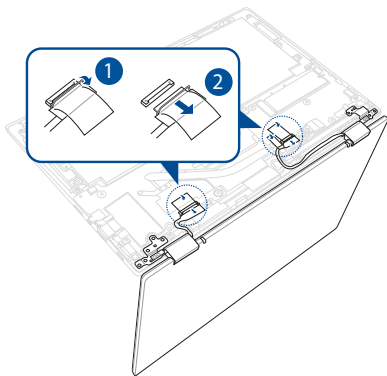
- A. Remove the compartment cover and disconnect the battery.

---

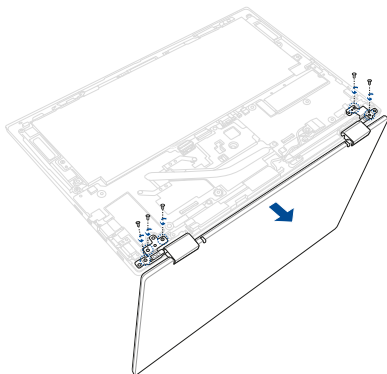
**NOTE:** For more details, refer to the *Removing the compartment cover* and *Disconnecting the battery* sections in this manual.

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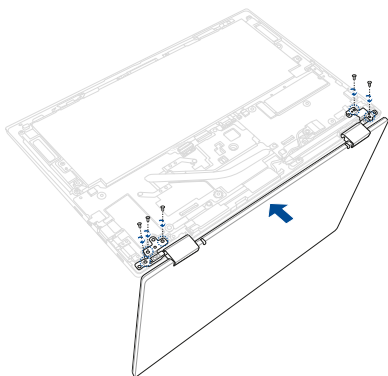
- B. Place your Notebook PC in the orientation as shown in the illustration below.
- C. Locate and disconnect all the cable(s) as shown in the illustration below.



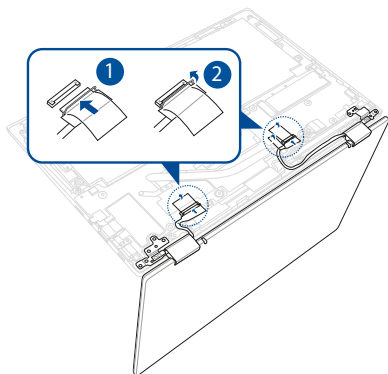
- D. Remove the screw(s) from the hinges, and then remove the LCD panel module.



- E. Prepare the new LCD panel module.
- F. In the orientation shown, align and place the hinges of the display module on the screw holes on the chassis.
- G. Secure the LCD panel module using the screw(s) you removed earlier.



H. Reconnect all the cable(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.

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---

**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.

---

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**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.
-

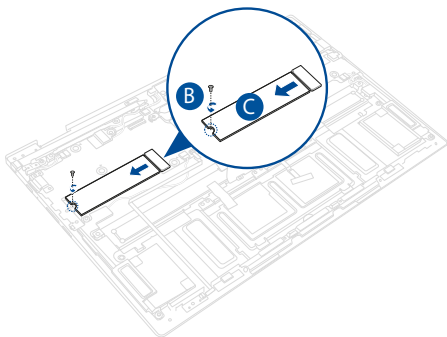
- A. Remove the compartment cover, disconnect the battery, and remove the LCD module.

---

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

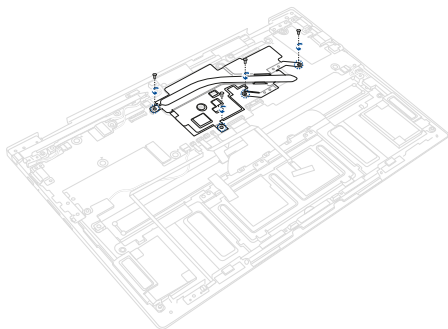
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- B. Remove the screw(s) from the M.2 SSD module.
- C. Remove the M.2 SSD module from the motherboard.

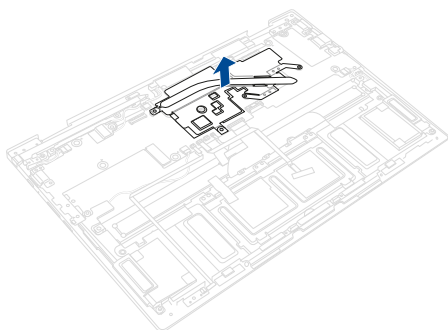




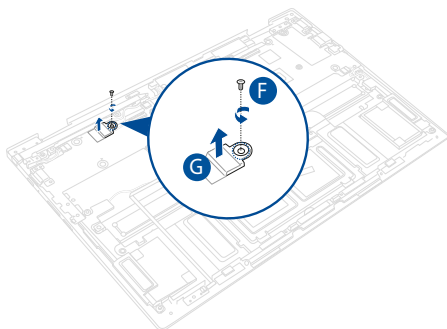
- D. Remove the screw(s) from the cooling radiator.



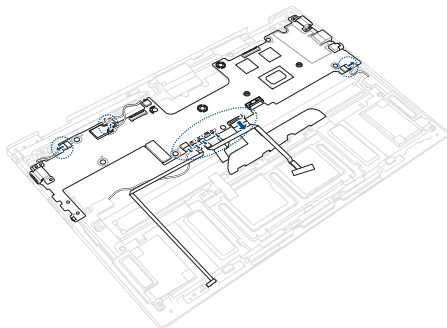
- E. Remove the cooling radiator from the motherboard.



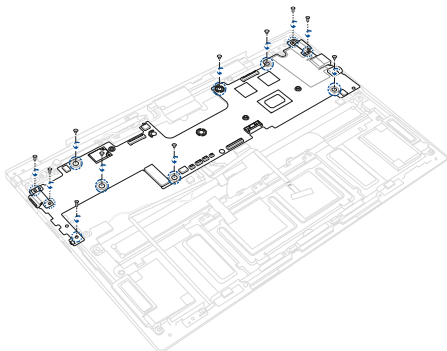
- F. Remove the screw(s) from the WLAN module cover.
- G. Remove the WLAN module cover from the motherboard.



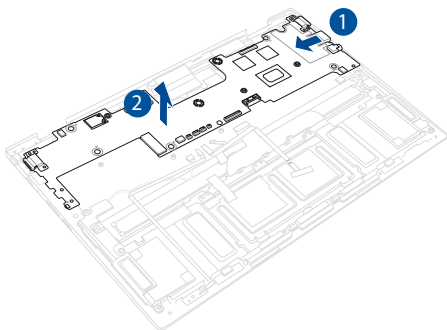
- H. Locate and disconnect all the cable(s) as shown in the illustration below.



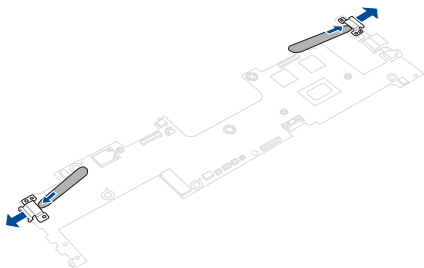
- I. Remove the screw(s) from the motherboard.



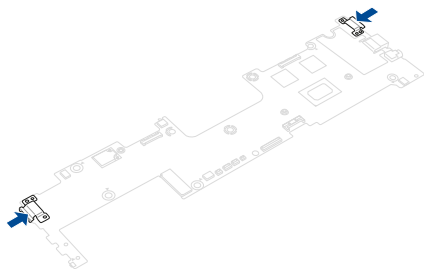
- J. Release the motherboard I/O connectors from the I/O slots on the chassis and then remove the motherboard.



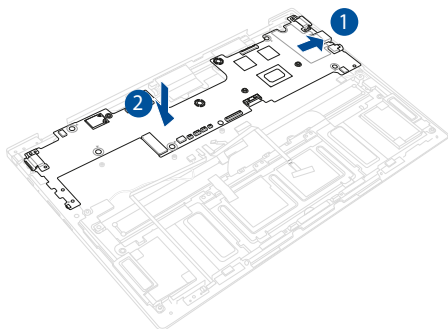
- K. Use the plastic blade to pry the I/O bracket(s) and then remove them from the motherboard.



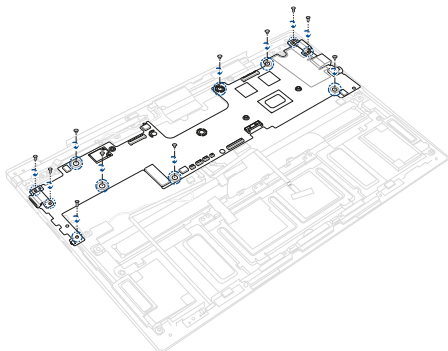
- L. Prepare the new motherboard.
- M. Install the I/O bracket(s) onto their respective slots on the motherboard.



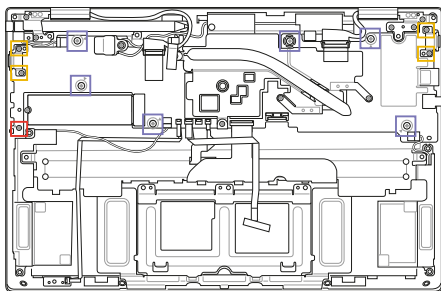
- N. Align and insert the motherboard I/O connectors into the I/O connectors on the chassis. Then lower the motherboard back in the chassis.



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



## Motherboard screw map

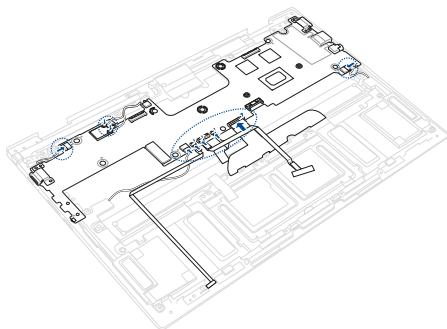


■ M2.0 x 4.0L (4PCS)

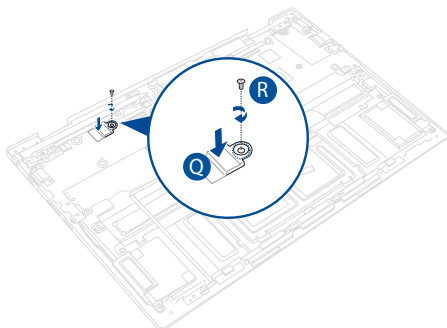
■ M2.0 x 1.5L (6PCS)

■ M2.0 x 3.0L (1PCS)

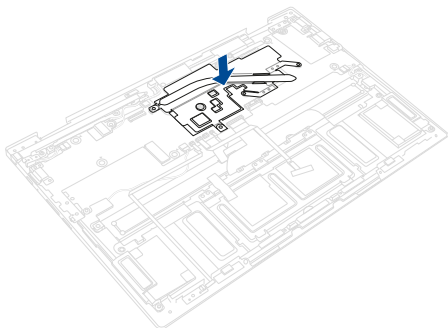
- P. Locate and reconnect all the connector(s) disconnected earlier.



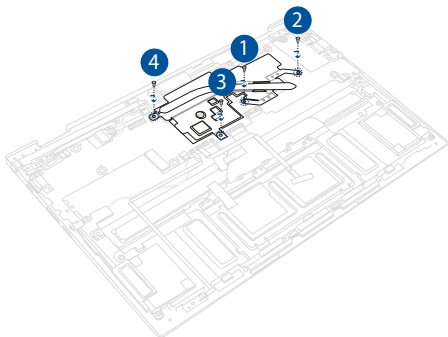
- Q. Install the WLAN module cover onto its slot on the motherboard.
- R. Secure the WLAN module cover using the screw(s) you removed earlier.



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

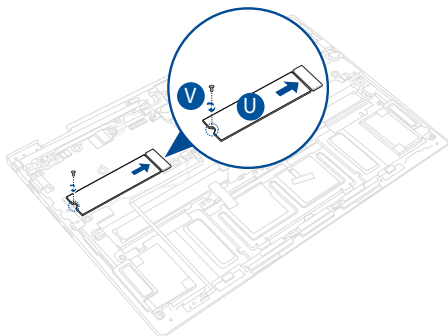


- T. Secure the screw(s) one by one in the sequence as shown in the illustration below.

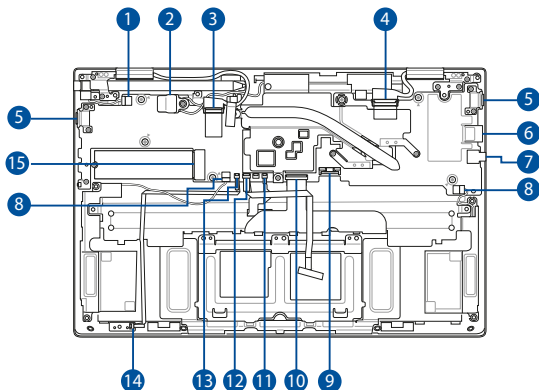




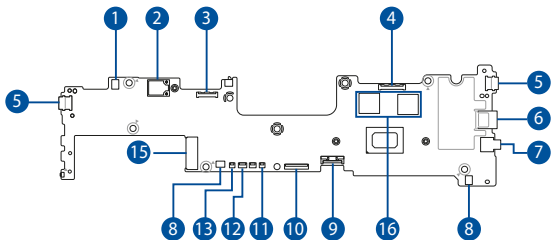
- U. Align and insert the M.2 SSD module into the M.2 connector on the motherboard.
- V. Secure the M.2 SSD module in place using the screw(s) you removed earlier.



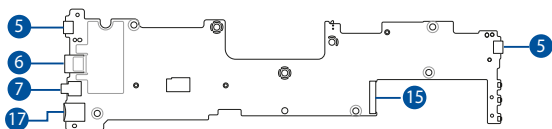
# Wiring and connection diagrams



## Top View



## Bottom View



- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 1. Stylus charger connector          | 10. Keyboard connector                |
| 2. Wifi connector                    | 11. Keyboard backlight connector      |
| 3. Webcam / Touchscreen connector    | 12. Touchpad connector                |
| 4. eDP connector                     | 13. GMR connector                     |
| 5. Thunderbolt 4 connector           | 14. GMR board connector               |
| 6. USB 3.2 Gen 1 connector           | 15. M.2 SSD connector                 |
| 7. Headphone/Headset/Microphone jack | 16. Random-access memory (RAM) module |
| 8. Speaker connector                 | 17. MicroSD card connector            |
| 9. Battery power connector           |                                       |

