

E21519

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# IN SEARCH OF INCREDIBLE



Service Manual

**ASUS**

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# Disclaimer

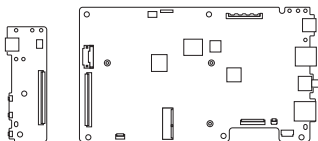
ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

## 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**



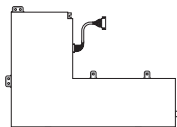
**M.2 SSD module**



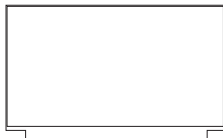
**RAM module**



**Thermal module**



**Battery and power connector**



**Display panel module**

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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**

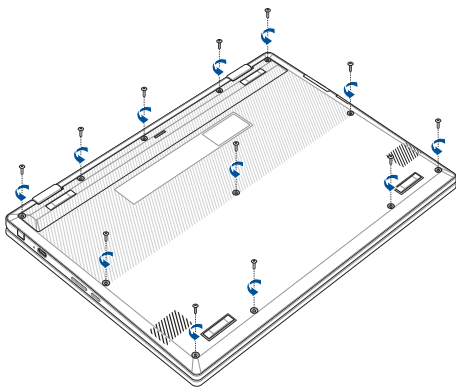
# Removing the bottom cover

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

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



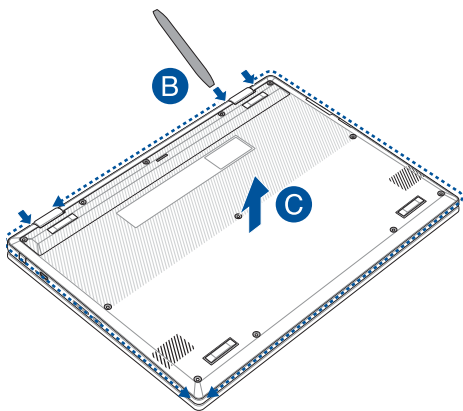


- B. Use the plastic blade to pry open the indicated area of the bottom cover as shown in the illustration below.
- C. Remove the bottom cover.

---

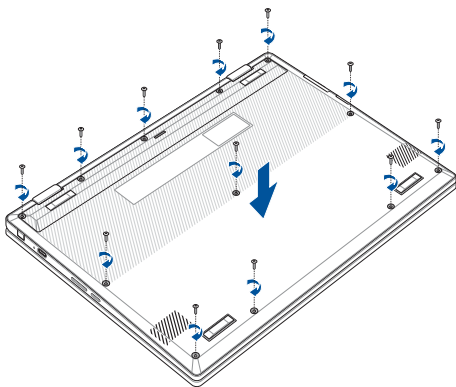
**IMPORTANT!** Avoid sliding the plastic blade along the side of your Notebook PC to prevent damage.

---



To reattach the bottom cover:

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



# Disconnecting the battery

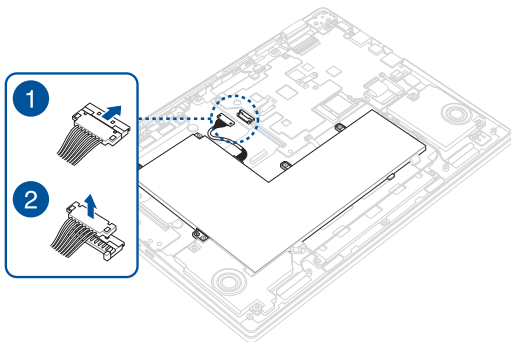
- A. Remove the bottom cover.

---

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

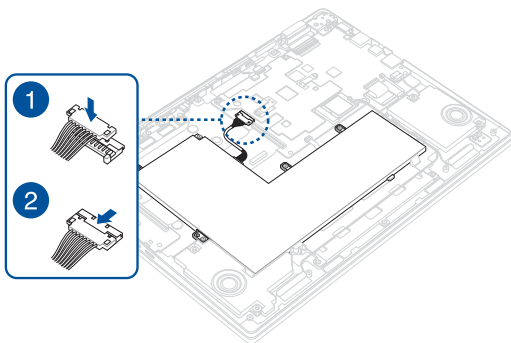
---

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



To connect the battery:

- A. Align and connect the cable to the battery connector before you reattach the bottom cover.



# Replacing the battery

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

---

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

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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 bottom cover.

---

**NOTE:**

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

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

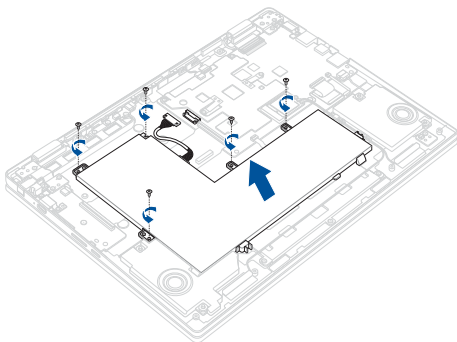
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**NOTE:** For more details, refer to the *Removing the bottom cover* and *Disconnecting the battery* sections in this manual.

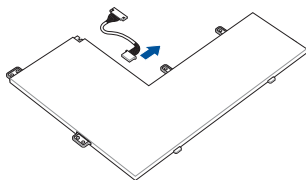
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- B. Remove the screw(s) from the battery.

- C. Remove the battery.

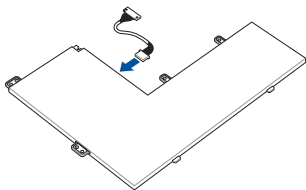


D. Remove the battery power cable.



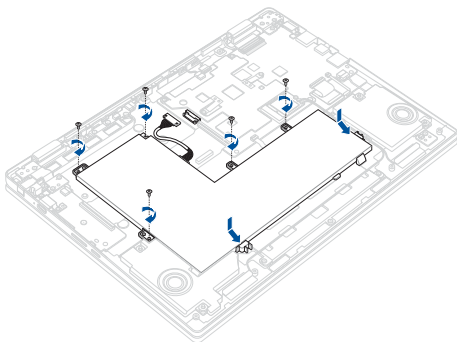
To install the battery:

- A. Prepare the battery.
- B. Connect the battery power cable to the battery.





- C. Align and reinstall the battery.
- D. Secure the battery using the screw(s) you removed earlier.
- E. Reconnect the battery cable.



# Replacing the display panel module

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

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

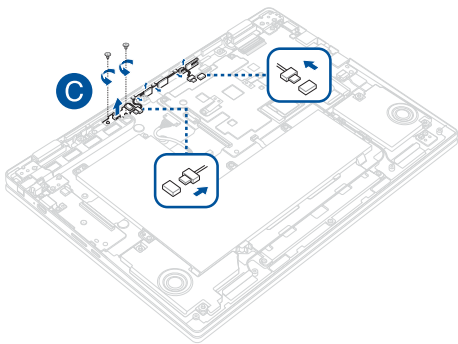
---

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

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

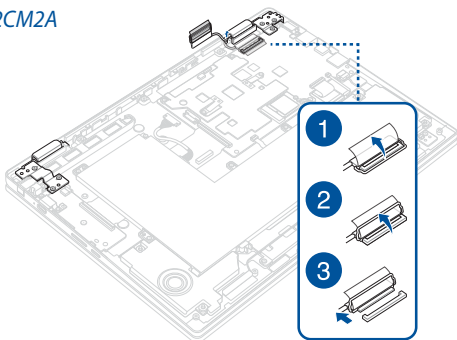
---

- B. Locate and remove all the cable(s) and connector(s) as shown in the illustration below.
- C. Remove the screw(s), then remove the PCB (Printed Circuit Board).

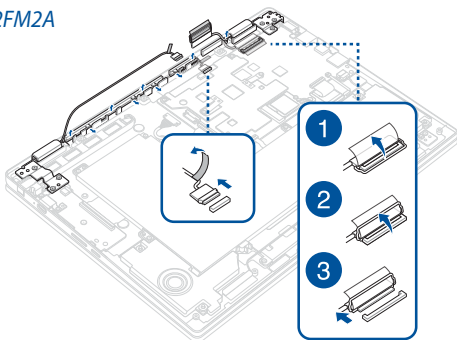


- D. Locate and remove all the cable(s) and connector(s) as shown in the illustration below.

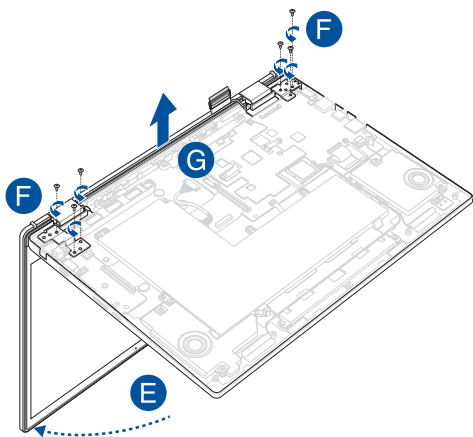
CM1402CM2A



CM1402FM2A

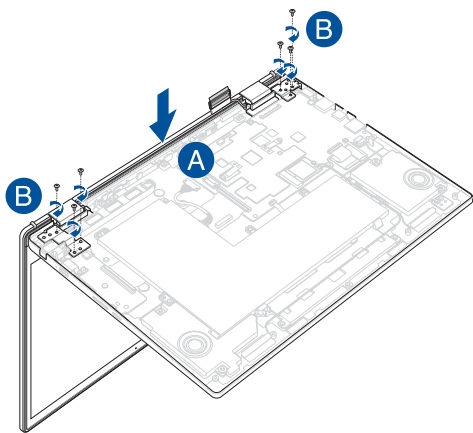


- E. Place your Notebook PC in the orientation shown in the illustration below.
- F. Remove the screw(s) from the hinges.
- G. Remove the display panel module.



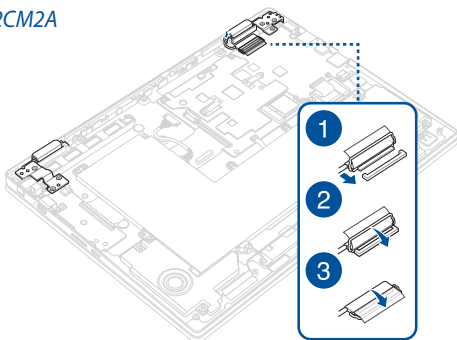
To install the display panel module:

- A. In the orientation shown, align and place the hinges of the display panel module on the screw holes of the chassis.
- B. Secure the hinges using the screw(s) you removed earlier.

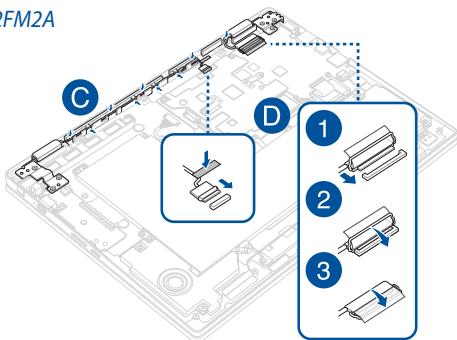


- C. Route the cable(s) through the cable guides.
- D. Locate and reconnect all the cable(s) and connector(s) as shown in the illustration below.

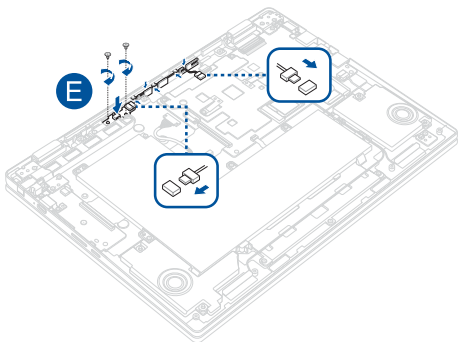
### CM1402CM2A



### CM1402FM2A



- E. Align and reinstall the PCB (Printed Circuit Board), then secure it using the screw(s) you removed earlier.
- F. Locate and reconnect all the cable(s) and connector(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 bottom cover.

---

**NOTE:**

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

A. Remove the bottom cover and disconnect the battery.

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

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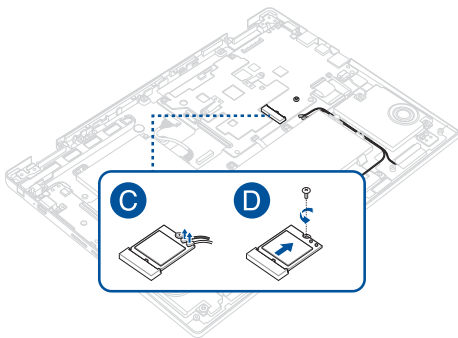
- B. Remove the display panel module.

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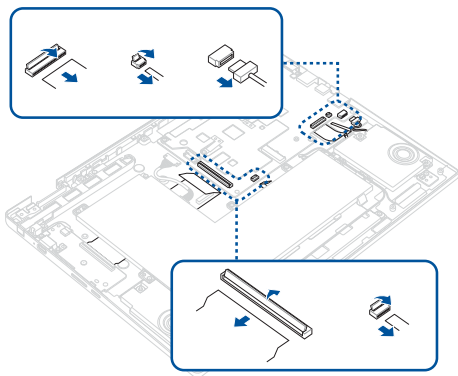
**NOTE:** For more details, refer to the *Replacing the display module* section in this manual.

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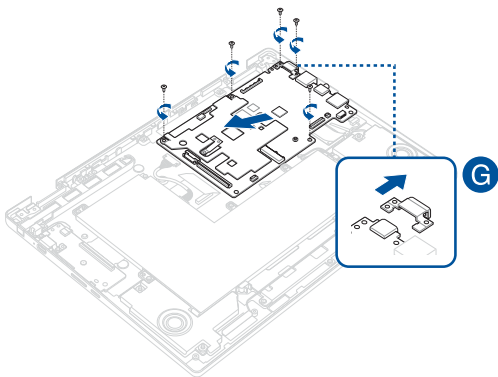
- C. Locate and remove the antenna cable(s).
- D. Remove the screw, then remove the Wi-Fi module.



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

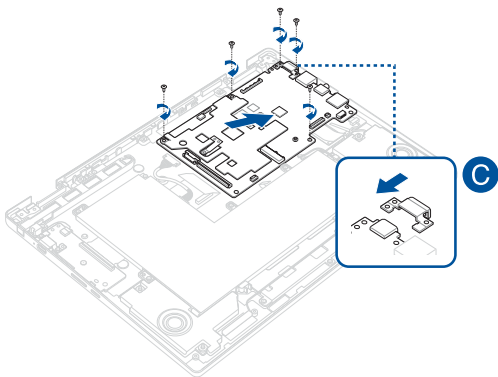


- F. Remove the screw(s).
- G. Remove the bracket.
- H. Remove the motherboard from the chassis.

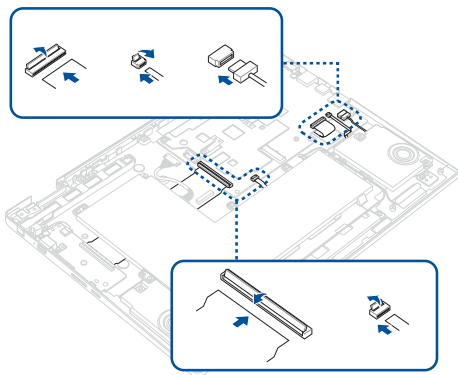


To install the motherboard:

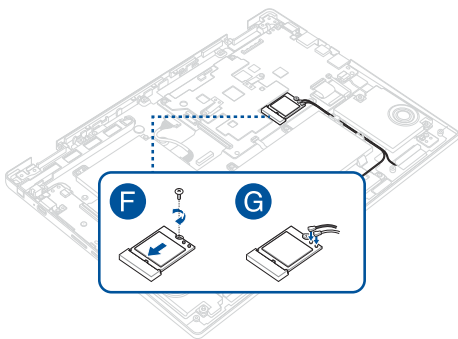
- A. Prepare the motherboard.
- B. Align and place the motherboard in the chassis.
- C. Secure the bracket using the screw(s) you removed earlier.
- D. Secure the motherboard using the screw(s) you removed earlier.



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

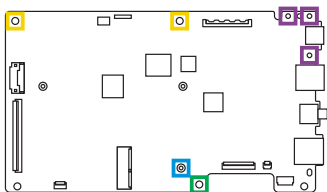


- F. Align and reinstall the Wi-Fi module, then secure the Wi-Fi module using the screw you removed earlier.
- G. Reconnect the antenna cable(s).



# Screw map

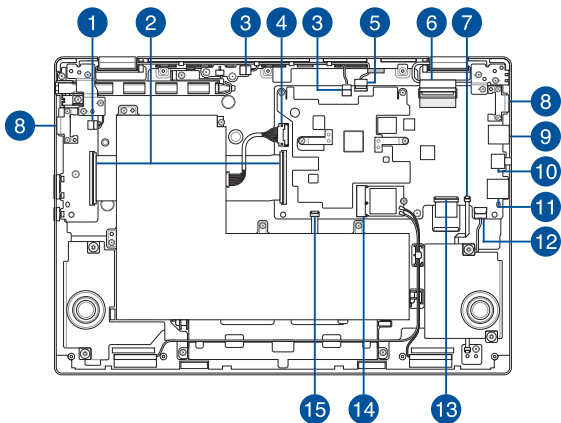
## Motherboard



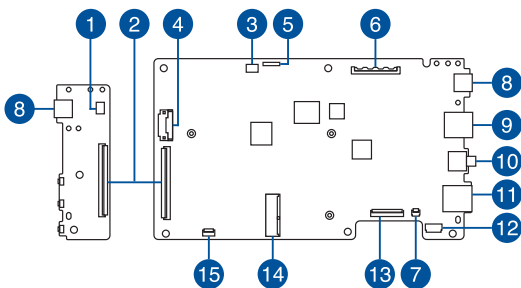
- M2.0 X 4.0L (3PCS)
- M2.0 X 3.0L (2PCS)
- M2.0 X 2.5L (1PC)
- M2.0 X 2.0L (1PC)



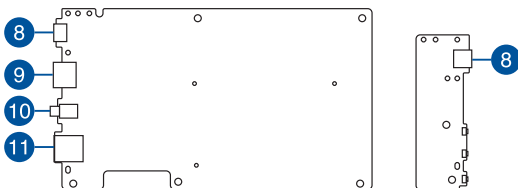
## Wiring and connection diagrams



## Top View



## Bottom View



- |                              |                            |
|------------------------------|----------------------------|
| 1. Stylus charger connector* | 9. USB Type-A connector    |
| 2. I/O board FPC connector   | 10. Audio connector        |
| 3. Stylus sensor connector*  | 11. MicroSD card slot      |
| 4. Battery connector         | 12. Speaker connector      |
| 5. Touch screen connector*   | 13. Keyboard connector     |
| 6. eDP connector             | 14. Wi-Fi module connector |
| 7. Lid sensor connector      | 15. Touchpad connector     |
| 8. USB Type-C® connector     |                            |

\* On selected models