

E21819

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IN SEARCH OF INCREDIBLE



Service Manual



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Disclaimer

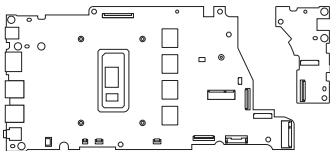
ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

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



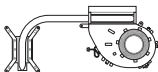
Display panel module



Keyboard



M.2 SSD module*



Thermal module



Power adapter



Battery and power connector

** On selected models*

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.
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Installation tools



Screwdriver



Plastic blade

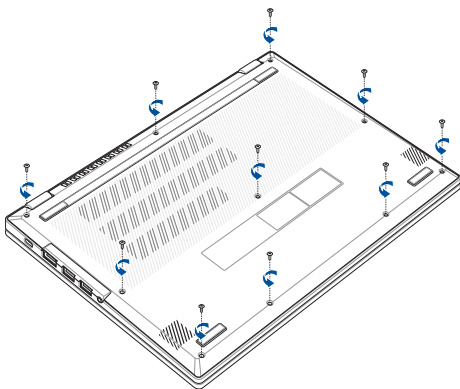


Tweezers

Removing the bottom cover

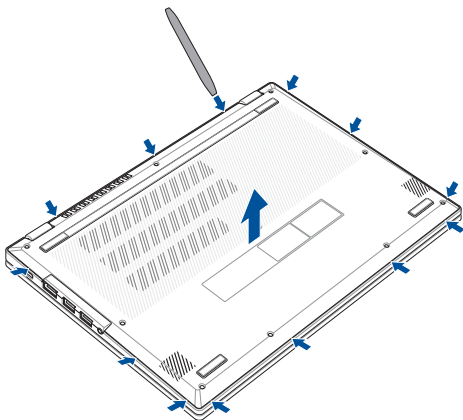
NOTE: The appearance of your Notebook PC's bottom view may vary per model.

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



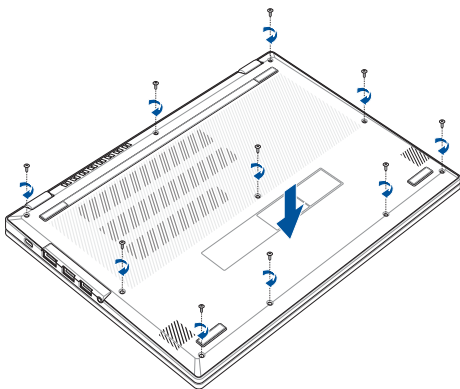
- B. Use the plastic blade to pry open the indicated area of the bottom cover as shown in the illustration below.
- C. Remove the bottom cover.

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.

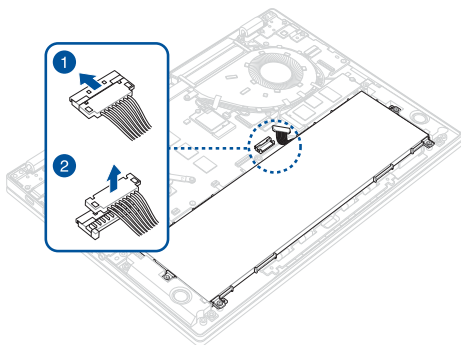


Disconnecting the battery

- A. Remove the bottom cover.

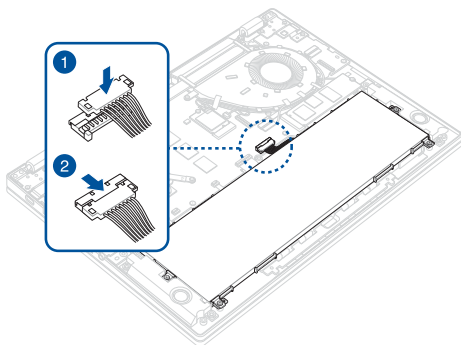
NOTE: For more details, refer to the *Removing the bottom cover* section in this manual.

- 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.

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:

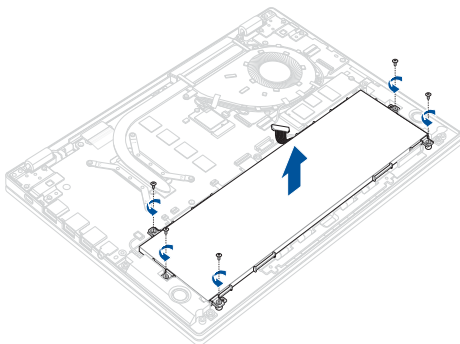
- The appearance of your Notebook PC's bottom view and battery may vary per model but the module installation remains the same.
 - It is recommended that you install the battery under professional supervision. You may also visit an authorized service center for further assistance.
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-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

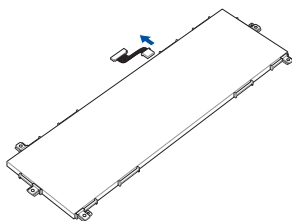
NOTE: For more details, refer to the *Removing the bottom cover* and *Disconnecting the battery* sections in this manual.

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

- C. Remove the battery.

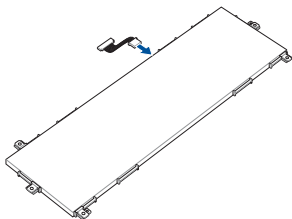


- D. Remove the battery power cable.

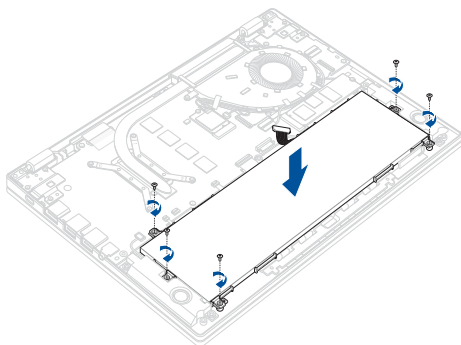


To install the battery:

- 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 M.2 SSD module (on selected models)

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 bottom cover.

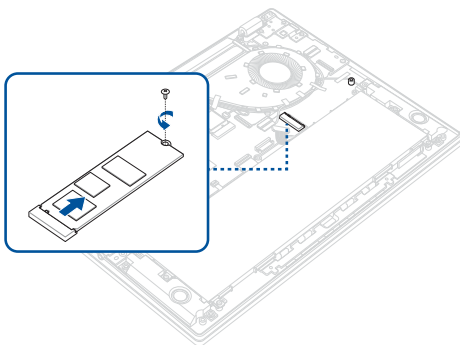
NOTE:

- 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 bottom cover and disconnect the battery.

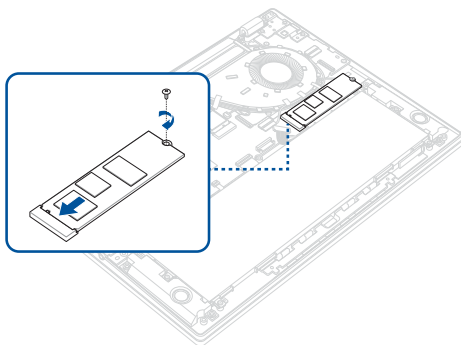
NOTE: For more details, refer to the *Removing the bottom cover* and *Disconnecting the battery* sections in this manual.

- B. Remove the screw, then remove the M.2 SSD module from the motherboard.



To install the M.2 SSD module:

- A. Prepare the M.2 SSD module.
- B. Align and insert the M.2 SSD module into the M.2 connector on the motherboard, then secure the M.2 SSD module using the screw you removed earlier.



Replacing the display panel module

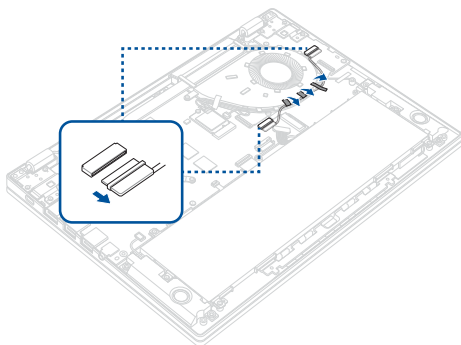
IMPORTANT! Do not bend the display panel in any way to avoid risk of display panel leakage.

NOTE: The illustrations are for reference only.

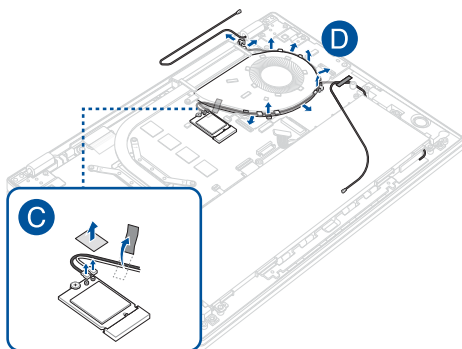
- A. Remove the bottom cover and disconnect the battery.

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

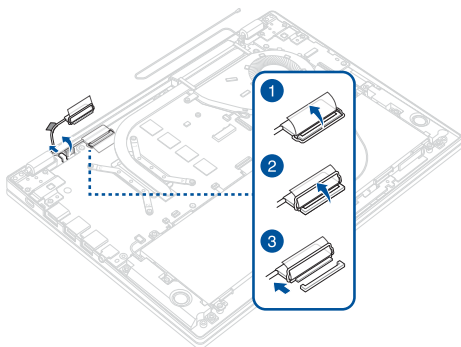
- B. Remove the tape, then disconnect the cable(s) as shown in the illustration below.



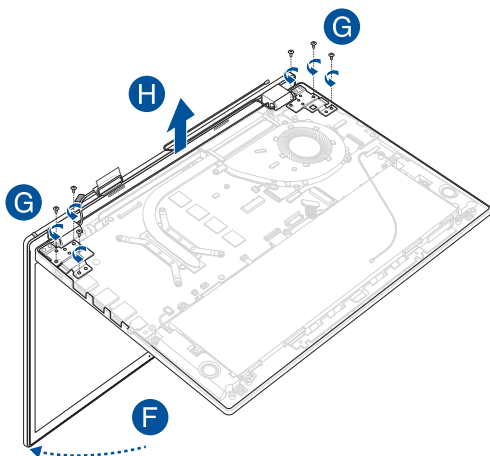
- C. Disconnect the antenna cable(s), then remove the tape.
- D. Remove the antenna cable(s) from the cable guides.



- E. Disconnect the cable(s) as shown in the illustration below.

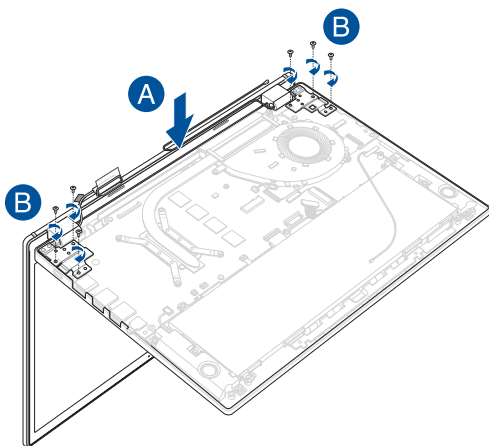


- F. Place your Notebook PC in the orientation shown in the illustration below.
- G. Remove the screw(s) from the hinges.
- H. Remove the display panel module.

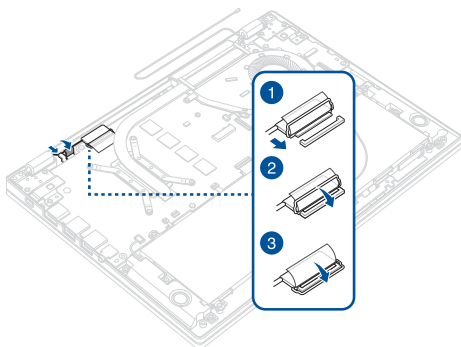


To install the display panel module:

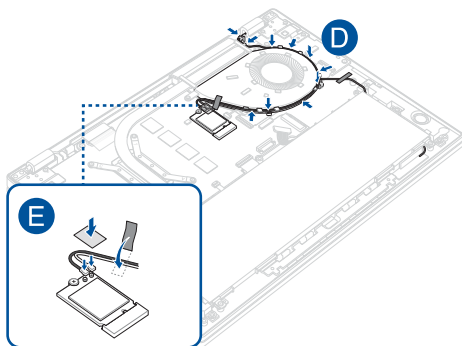
- A. In the orientation shown, align and place the hinges of the display panel module on the screw holes of the chassis.
- B. Secure the hinges using the screw(s) you removed earlier.



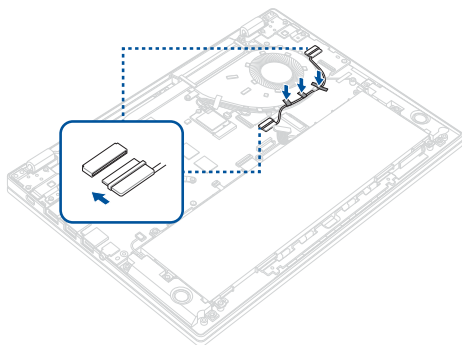
- C. Reconnect the cable(s) as shown in the illustration below.



- D. Route the antenna cable(s) through the cable guides.
- E. Reconnect the antenna cable(s), then reattach the tape.



- F. Reconnect 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.

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.

NOTE: For more details, refer to the *Removing the bottom 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.

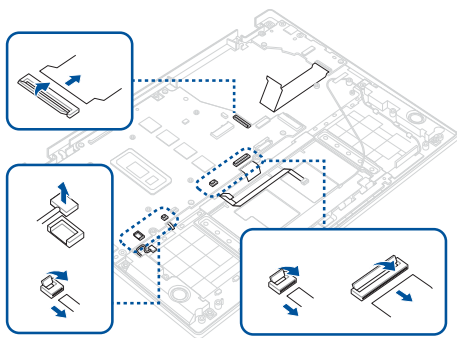
- C. Remove the M.2 SSD module (if available).

NOTE: For more details, refer to the *Replacing the M.2 SSD module* section in this manual.

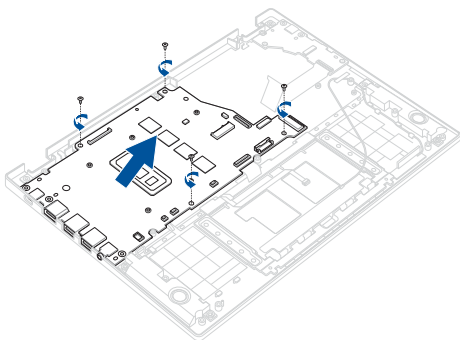
- D. Remove the display panel module.

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

- E. Disconnect the cable(s) as shown in the illustration below.

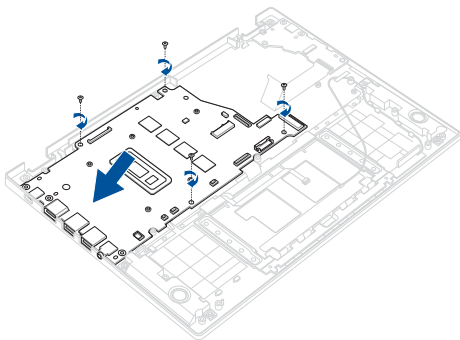


- F. Remove the screw(s), then remove the motherboard from the chassis.

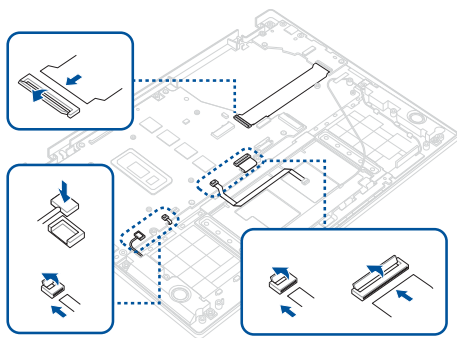


To install the motherboard:

- A. Prepare the motherboard.
- B. Align and place the motherboard in the chassis, then secure the motherboard using the screw(s) you removed earlier.



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



- D. Reinstall the display panel module.

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

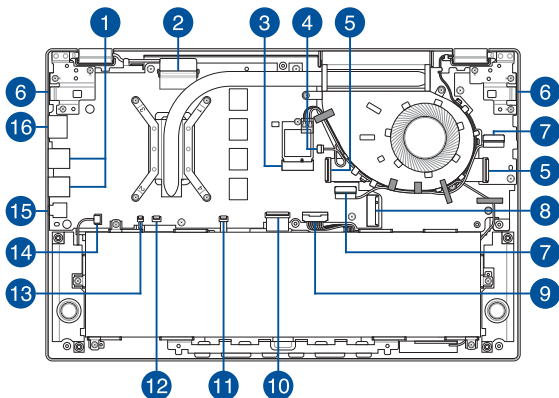
- E. Reinstall the M.2 SSD module (if available).

NOTE: For more details, refer to the *Replacing the M.2 SSD module* section in this manual.

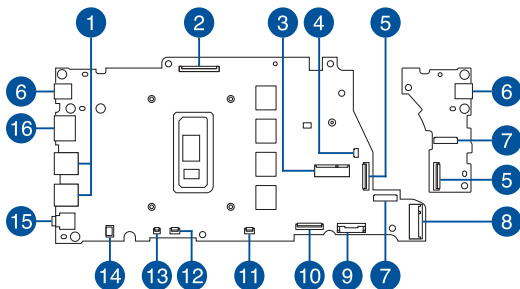
- F. Reinstall the battery.

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

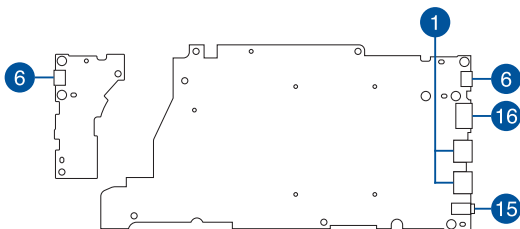
Wiring and connection diagrams



Top View



Bottom View



- | | |
|----------------------------|-----------------------------------|
| 1. USB Type-A connector | 9. Battery connector |
| 2. eDP connector | 10. Keyboard connector |
| 3. Wi-Fi module connector | 11. Touchpad connector |
| 4. Fan connector | 12. Fingerprint sensor connector* |
| 5. I/O board FPC connector | 13. Keyboard backlight connector |
| 6. USB Type-C® connector | 14. Speaker connector |
| 7. I/O board connector | 15. Audio connector |
| 8. M.2 SSD connector | 16. HDMI connector |

* On selected models