

E20458

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IN SEARCH OF INCREDIBLE



Service Manual



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Disclaimer

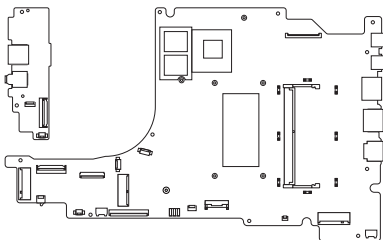
ASUS is not responsible for direct, indirect, intentional or unintentional damages resulting from improper installation and operation.

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.

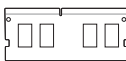
Major components



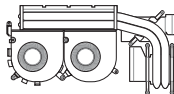
Motherboard with ports and connectors



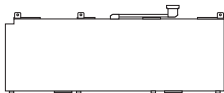
M.2 SSD module



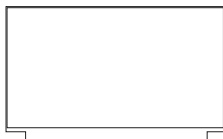
RAM module



Thermal module



Battery and power connector



LCD panel module

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

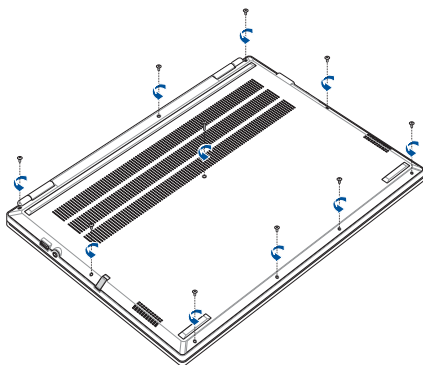


Tweezers

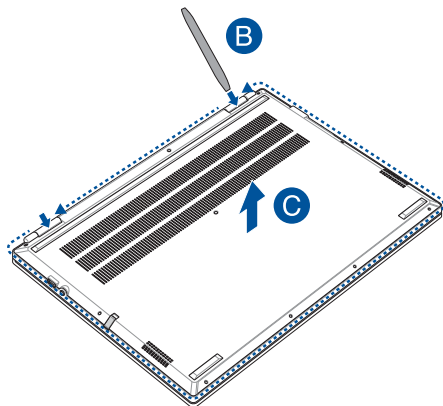
Removing the bottom cover

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.



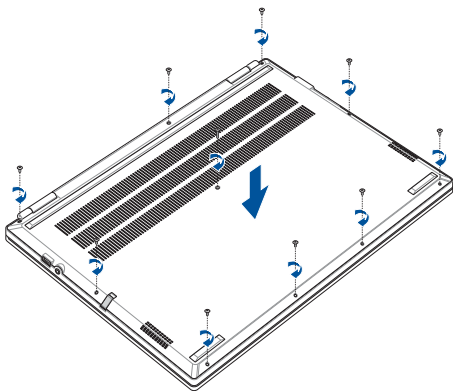
- B. Use the plastic blade to pry open the indicated area of the bottom cover as shown in the illustration below.
- C. Remove the bottom cover.



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.

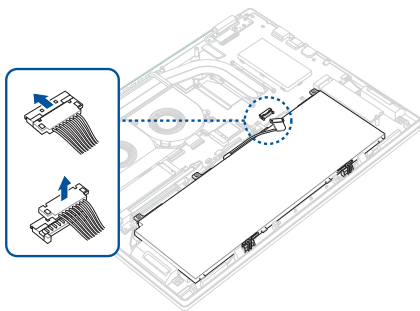


Disconnecting the battery

- A. Remove the bottom cover.

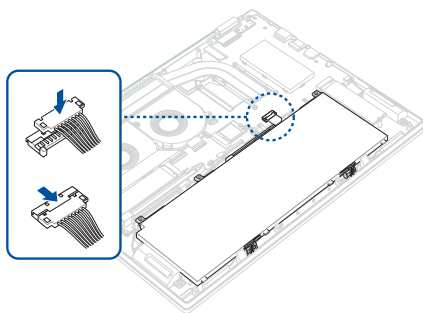
NOTE: For more details, refer to the *Removing the bottom cover* section in this manual.

- 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 compartment cover.

NOTE:

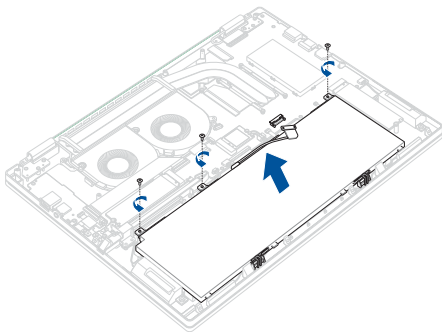
- The appearance of your Notebook PC's bottom view and battery may vary per model but the module installation remains the same.
 - It is recommended that you install the battery under professional supervision. You may also visit an authorized service center for further assistance.
-

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

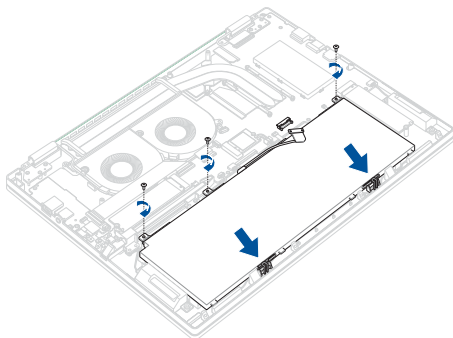
NOTE: For more details, refer to the *Removing the bottom cover* and *Disconnecting the battery* sections in this manual.

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

- C. Remove the battery.



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



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.

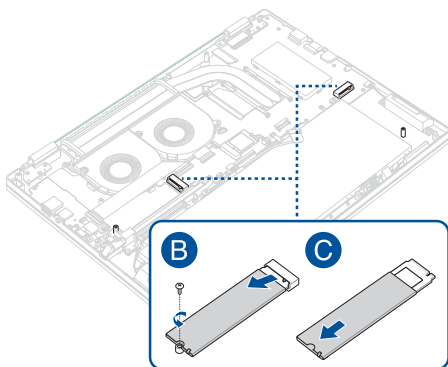
NOTE:

- 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.
-

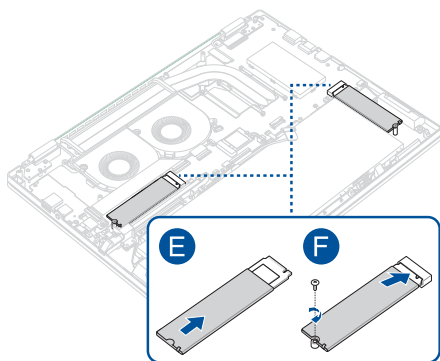
- A. Remove the bottom cover and disconnect the battery.

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

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



- D. Prepare the new M.2 SSD module.
- E. Place the new M.2 SSD module inside the cover.
- F. Align and insert the M.2 SSD module into the M.2 connector(s) on the motherboard.
- G. Secure the M.2 SSD module in place using the screw(s) you removed earlier.



Replacing the RAM module

Upgrade the memory capacity of your Notebook PC by installing a RAM (Random Access Memory) module in the memory module compartment. Refer to the following steps when installing a RAM module in your Notebook PC:

IMPORTANT! Visit an authorized service center or retailer for information on RAM module upgrades for your Notebook PC. Purchase your RAM modules 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.

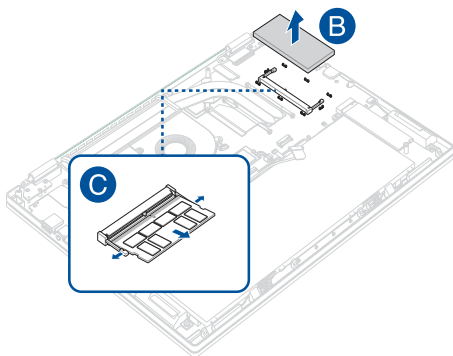
NOTE:

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

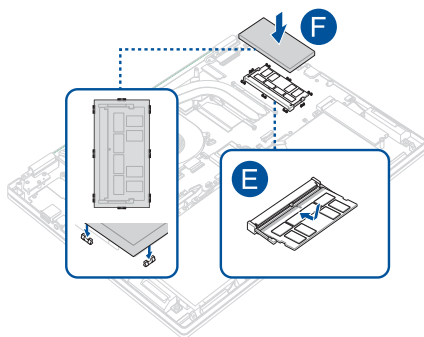
- A. Remove the bottom cover and disconnect the battery.

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

- B. Remove the shielding cover from the motherboard.
- C. Push the clips outwards to remove the RAM module.



- D. Prepare the new RAM module.
- E. Align and insert the RAM module into the RAM module slot.
- F. Align and reinstall the shielding cover.



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.
-

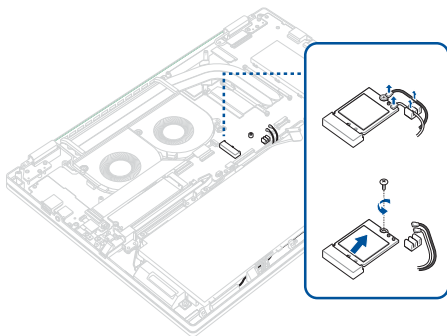
- A. Remove the bottom cover and disconnect the battery.

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

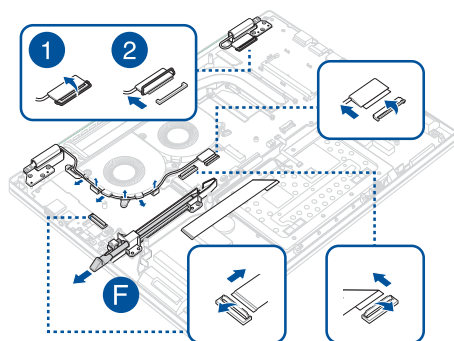
- B. Remove the battery.

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

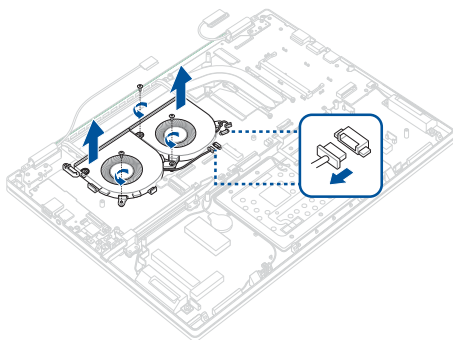
- C. Locate and remove the antenna cable(s).
- D. Remove the screw(s), then remove the Wi-Fi module.



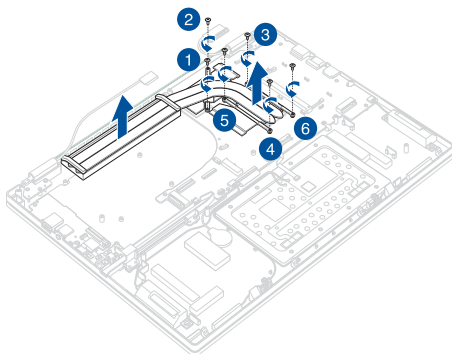
- E. Locate and remove all the cable(s) and connector(s) as shown in the illustration below.
- F. Remove the stylus pen from the stylus storage slot.



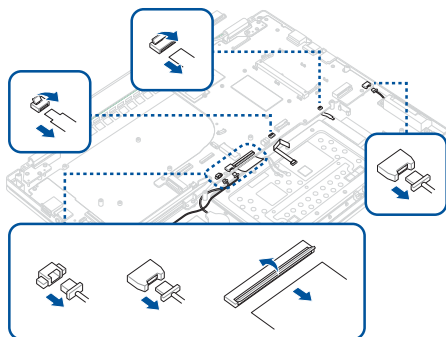
- G. Locate and remove the fan connector(s) and screw(s).
- H. Remove the fan(s) from the motherboard.



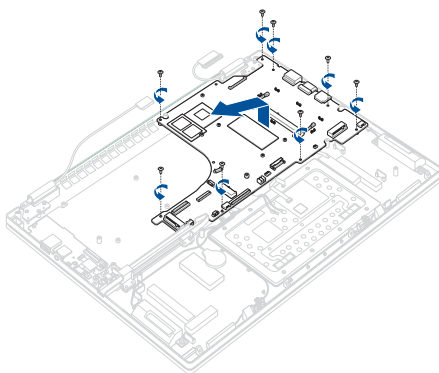
- I. Remove the thermal module screw(s) one by one in the sequence shown in the illustration below.
- J. Remove the thermal module from the motherboard.



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

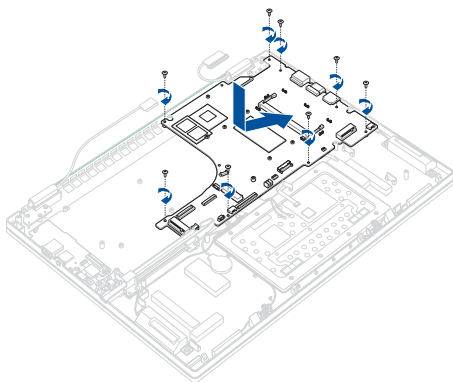


- L. Remove the screw(s) from the motherboard, then remove the motherboard from the chassis.

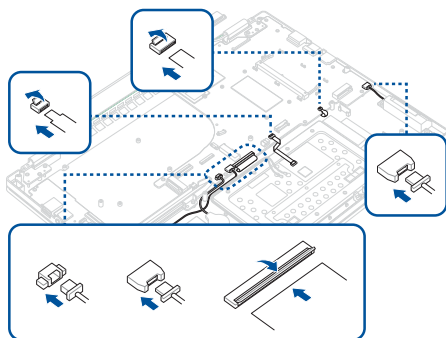


To install the new motherboard:

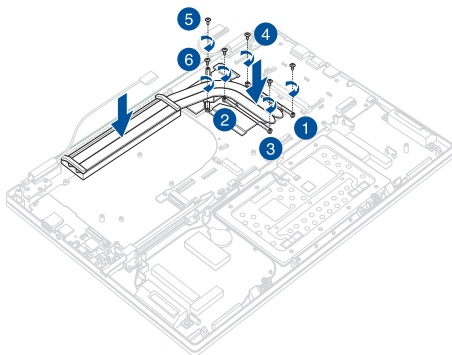
- A. Prepare the new motherboard.
- B. Align and place the motherboard in the chassis, then secure the motherboard using the screw(s) you removed earlier.



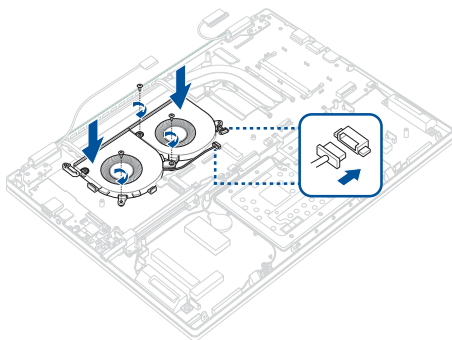
- C. Locate and reconnect all the cable(s) and connector(s) as shown in the illustration below.



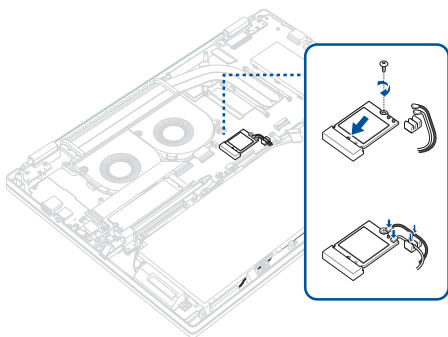
- D. Align and place the thermal module on the screw holes of the motherboard.
- E. Secure the thermal module screw(s) one by one in the sequence shown in the illustration below.



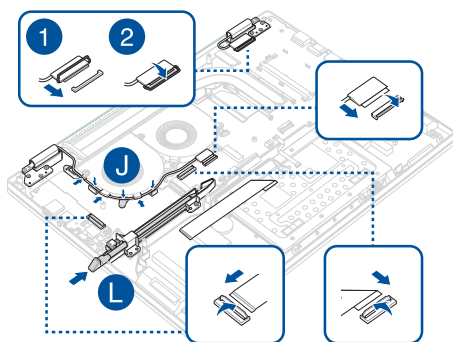
- F. Align and reinstall the fan(s), then secure the fan(s) using the screw(s) you removed earlier.
- G. Reconnect the fan connector(s) to the motherboard.



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



- J. Route the cable(s) through the cable guide.
- K. Locate and reconnect all the cable(s) and connector(s) as shown in the illustration below.
- L. Insert the stylus pen into the stylus storage slot.



Replacing the LCD module

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

NOTE: The illustrations are for reference only.

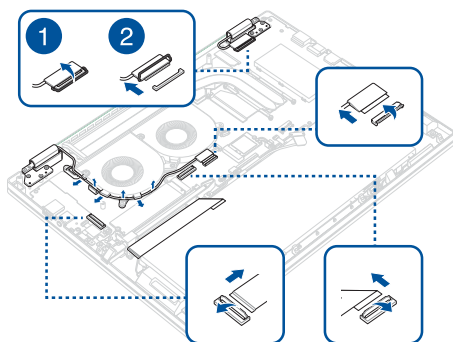
- A. Remove the bottom cover and disconnect the battery.

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

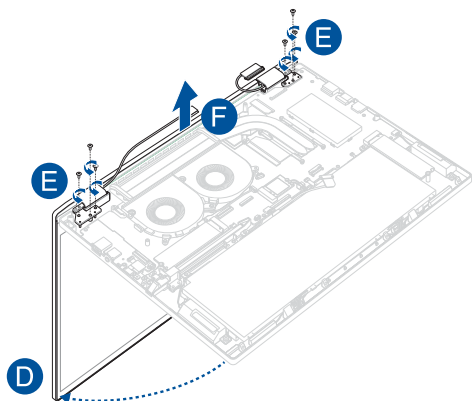
- B. Remove the battery.

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

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

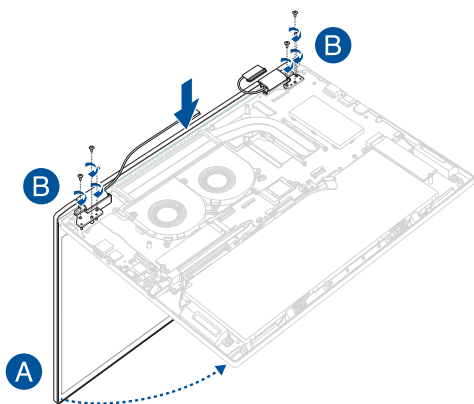


- D. Place your Notebook PC in the orientation as shown in the illustration below.
- E. Remove the screw(s) from the hinges.
- F. Remove the display panel.

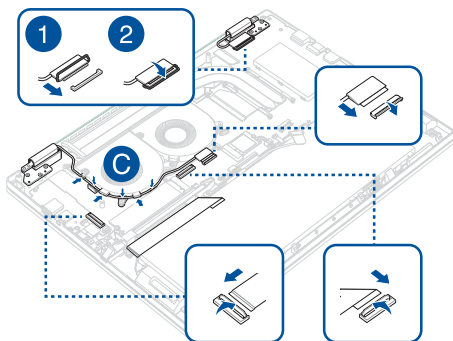


To install the new LCD panel module:

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

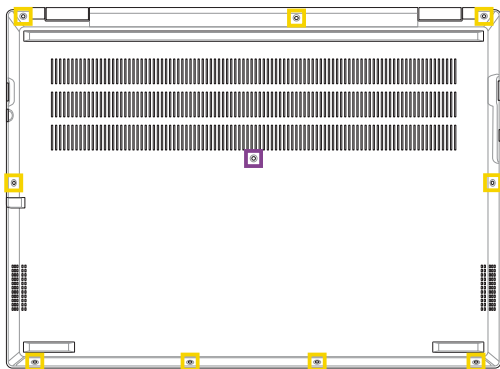


- C. Route the cable(s) through the cable guide.
- D. Locate and reconnect all the cable(s) and connector(s) as shown in the illustration below.



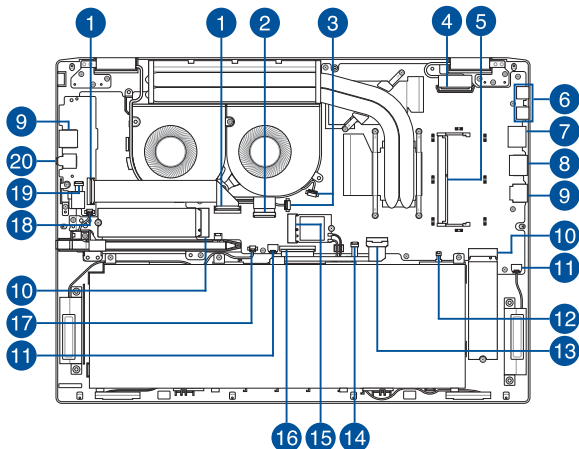
Screw map

Bottom cover

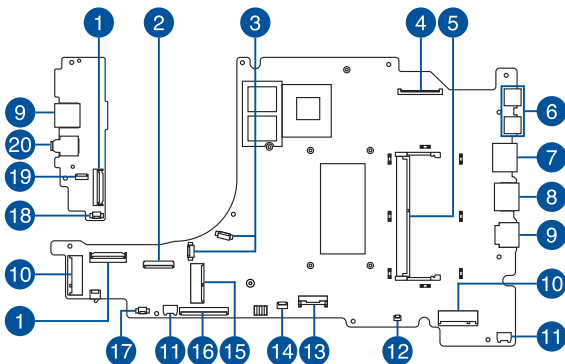


- M2.0 X 8.5L (1PC)
- M2.0 X 4.0L (9PCS)

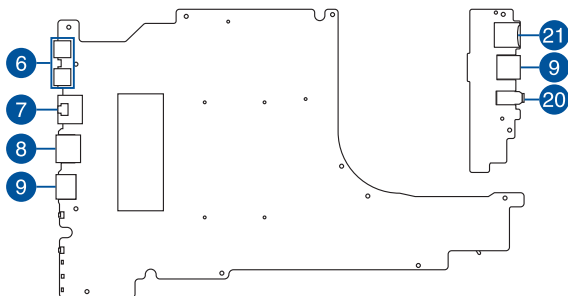
Wiring and connection diagrams



Top View



Bottom View



- | | |
|---------------------------|-----------------------------------|
| 1. I/O FPC connector | 12. Keyboard backlight connector |
| 2. Front camera connector | 13. Battery connector |
| 3. Fan connector | 14. Touchpad connector |
| 4. eDP connector | 15. Wi-Fi module connector |
| 5. DIMM socket | 16. Keyboard connector |
| 6. USB Type-C® connector | 17. RTC connector |
| 7. LAN connector | 18. Stylus charger connector |
| 8. HDMI connector | 19. Power / fingerprint connector |
| 9. USB Type-A connector | 20. Audio connector |
| 10. M.2 SSD connector | 21. MicroSD card slot |
| 11. Speaker connector | |