

E23076

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IN SEARCH OF INCREDIBLE



Service Manual



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Chapter 1:

Introduction

Disclaimer

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

Safety precautions

- 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 Desktop PC to avoid short circuits.
- Remove rings, watches, and any other metal objects from your hands.
- Hold components by the edges to avoid touching the ICs.
- Properly install all 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.
- Detach all clips or flaps before removing cables to prevent damage.

- Disconnect cables, connectors, and power plugs by pulling the plug evenly to avoid damage.
- Use the correct screw models on your Desktop PC to prevent damage.
- Confirm that the cable orientation is correct before connecting any cables.
- Fully remove all adhesive residue after removing and before installing any components.
- Photograph the appearance of cables, cable routing, connectors, and screws for later reference before proceeding with each step.

Pre-repair checklist

- Read the entire manual before starting any service procedures and follow all instructions.
- Back up the data on your Desktop PC.
- Place your Desktop PC on a clean and stable surface.
- Turn off your Desktop PC.
- Disconnect all connected peripherals and cables.
- Disconnect all power cables and remove the battery pack (if applicable).

IMPORTANT!

- If you are uncertain about performing the described service procedures, stop and contact an authorized service center for assistance.
- Purchase replacement components from authorized retailers of this Desktop PC to ensure maximum compatibility and reliability.

NOTE:

- The illustrations are for reference only.
 - The service procedures described in this manual depend on the model configuration and may not reflect the entire servicing process. To service components that are not covered in this manual, please visit an authorized service center for further assistance.
 - Keep all adhesive tape, insulating materials, screws, and other removable items in a safe place until the service procedure is completed, as they may be needed during installation.
-

Installation tool



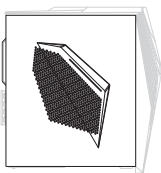
Screwdriver

Diagnostic tools

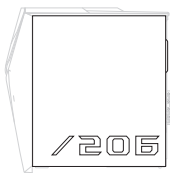
Use ASUS System Diagnostics after completing any service procedures to ensure that all components are working properly.

For more information, visit www.asus.com/support/FAQ/1048490/.

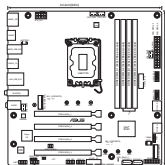
Major components



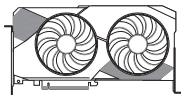
Left side cover



Right side cover



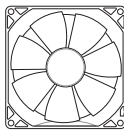
Motherboard



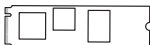
Graphics card



CPU fan module



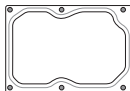
Chassis fan module



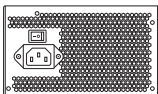
M.2 SSD module



RAM module



HDD



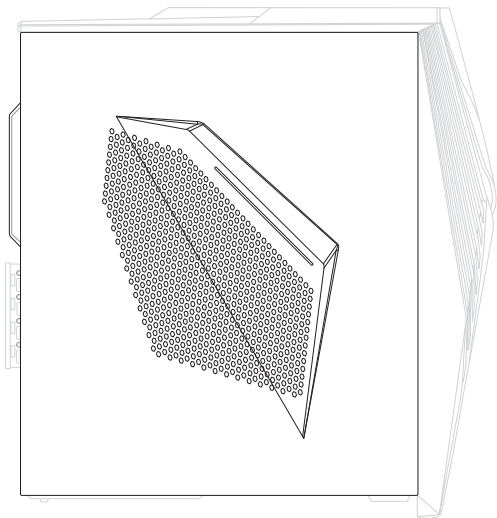
PSU

NOTE: The illustrations in this manual are for reference only. Actual components may vary per model.

Chapter 2:

Service Procedures

Left side cover



Before you begin

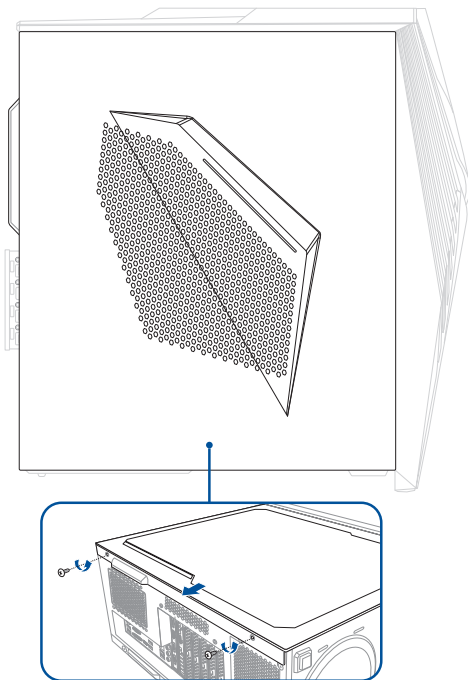
Read the **Safety Precautions** and complete the **Pre-repair Checklist**.

Screw list

- ⊕ #6-32*6.3L (7.3, 2.45) (2pcs)

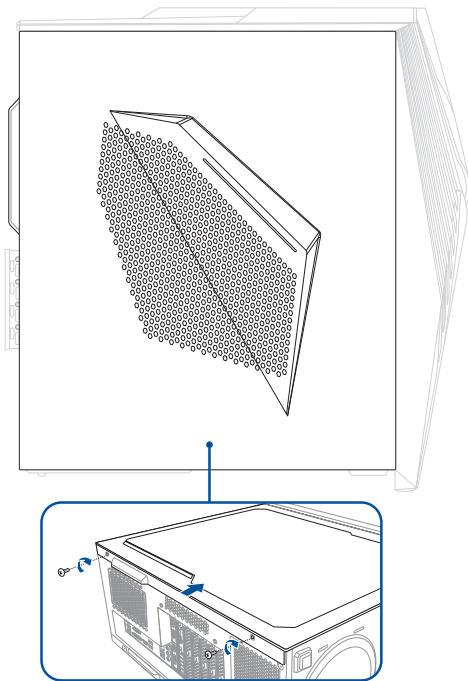
Removal

Remove the screws from the Desktop PC's left side cover and slide the cover to open.

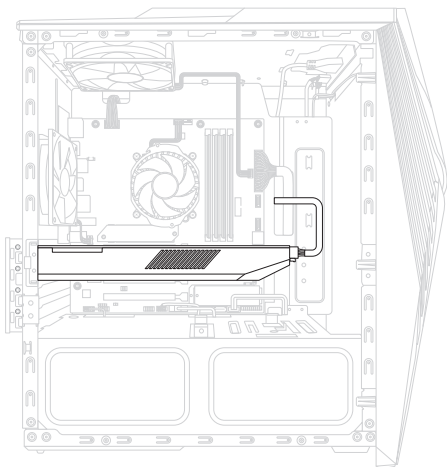


Installation

1. Put the left side cover on the chassis and align the screw holes.
2. Secure the left side cover using the screws you removed earlier.



Graphics card



Before you begin

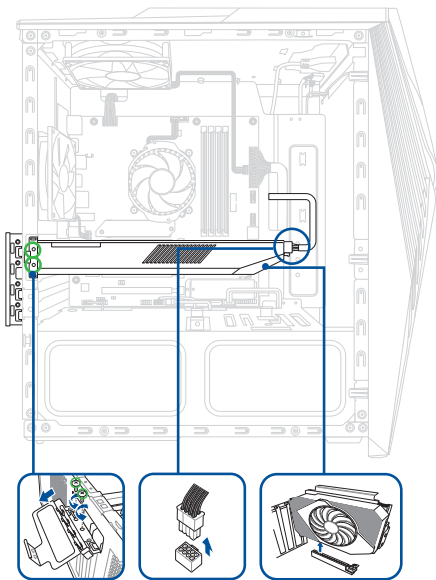
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following component:
 - Left side cover

Screw list

- ⊕ M3.0 X 4L (6.3, 2.05) (2pcs)
- ⊕ #6-32 * L6 (B) B-NI-ZN NY (2pcs)
- ⊕ M2.5 X 4L (4.5, 1.8) (2pcs)

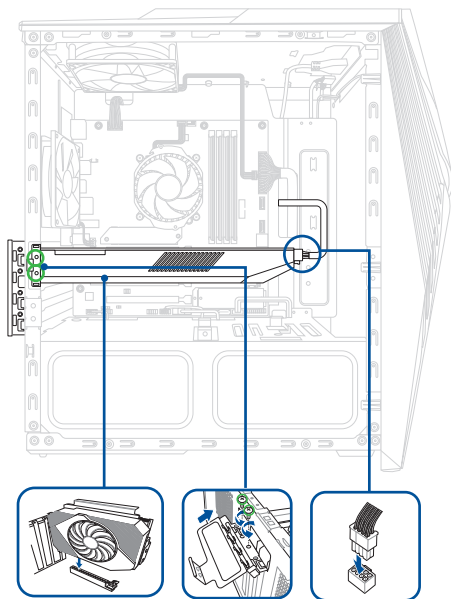
Removal

1. Remove the two screws (marked in green) from the chassis frame and swing the bracket open.
2. Disconnect the 8-pin ATX cable(s) from the graphics card.
3. Remove the two screws that securing the graphics cards to the graphics card bracket.
4. Press the retaining clip of the PCI Express slot outward to unlock and reject the graphics card.
5. If necessary, remove the two screws that securing the graphics card bracket to the motherboard and take the bracket out.

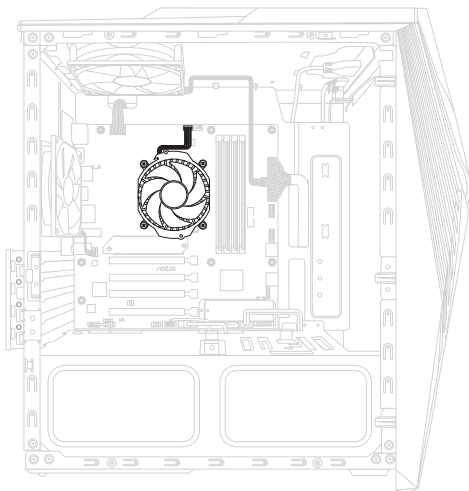


Installation

1. Install the graphics card bracket with two screws you removed earlier if you have uninstalled the bracket.
2. Firmly insert the graphics card into the PCI Express slot until the retaining clip snaps back in place.
3. Secure the graphics card to the bracket and to the chassis frame separately using the four screws you removed earlier.
4. Connect the ATX cable(s) to the graphics card.
5. Install the component you removed in the *Before you begin* section.



CPU cooler module



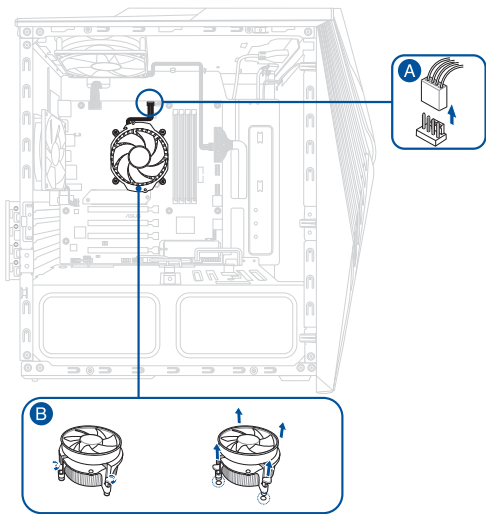
Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following component:
 - Left side cover
 - Graphics card

Removal

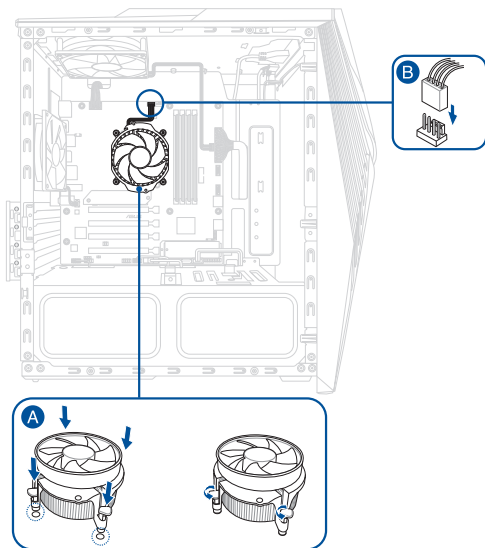
1. Disconnect the CPU cooler header.
2. Unscrew the four spring-screws of the CPU cooler and take it out.

NOTE: Slightly shake the CPU cooler if it's difficult to separate it from the CPU.

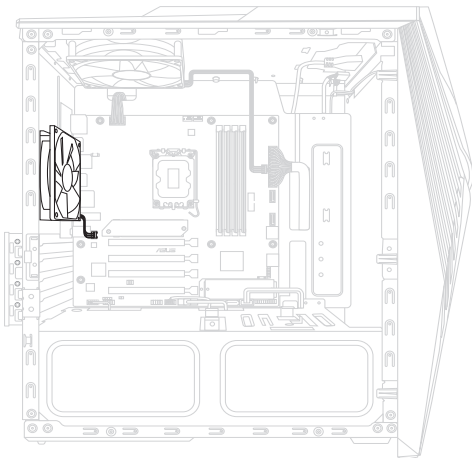


Installation

1. Place the CPU cooler on top of the installed CPU, ensuring that the four spring-screws align with the holes on the motherboard.
2. Follow a diagonal sequence across the CPU cooler to tighten the spring-screws.
3. Reconnect the fan header.
4. Install the component you removed in the *Before you begin* section.



Chassis fan module



Before you begin

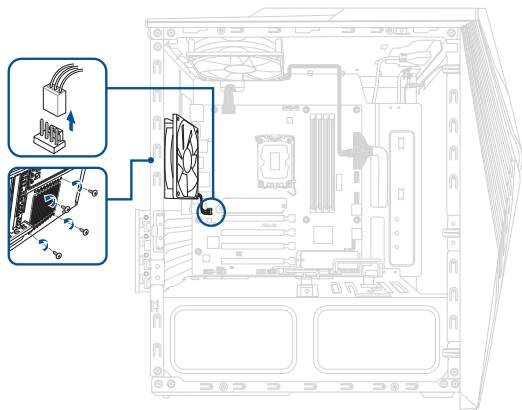
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following component:
 - Left side cover
 - Graphics card
 - CPU cooler

Screw list

- ⊕ M5.0 X 10L (4pcs)

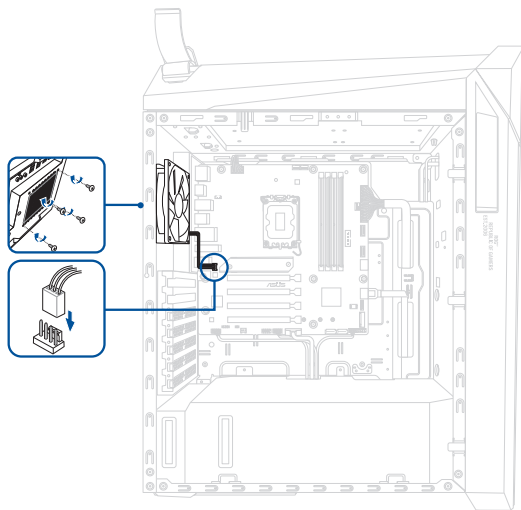
Removal

1. Disconnect the chassis fan cable.
2. Remove the screws on the rear side of the chassis and remove the chassis fan.

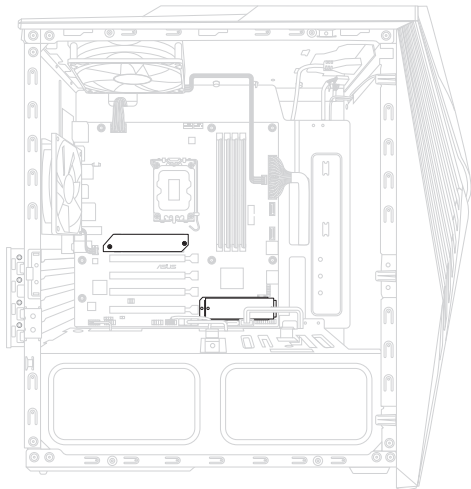


Installation

1. Align the screw holes of the chassis fan and the chassis.
2. Secure with the screws you removed earlier.
3. Reconnect the chassis fan cable.
4. Install the component you removed in the *Before you begin* section.



M.2 SSD module



Before you begin

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Left side cover
 - Graphics card
 - CPU cooler

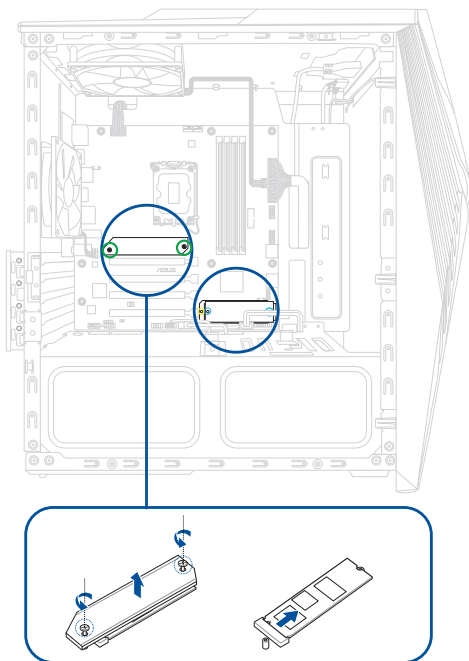
Screw list

- ⊕ G16CH SSD heatsink screws
- ⊕ M2.0 X 0.4 (L=5mm) SSD heatsink screws (2pcs)
- ⊕ M2.0 X 7.5L (1pc)

Removal

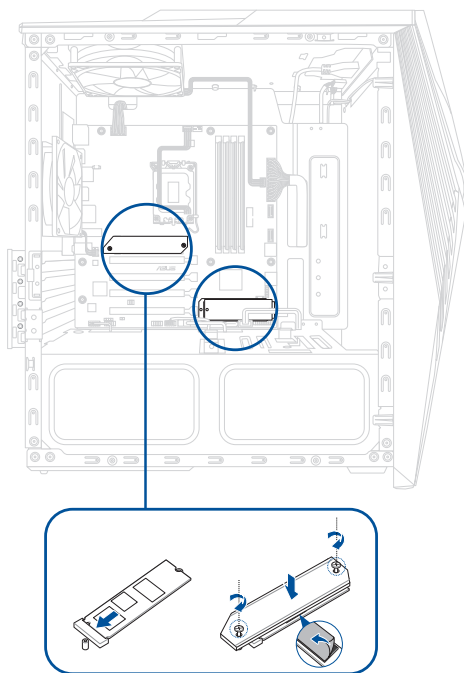
NOTE: Remove the SSD module on the M.2_2 slot before removing the motherboard from the chassis.

Remove the screws on the M.2 heatsink(s) and take out the M.2 SSD module(s) from the motherboard.

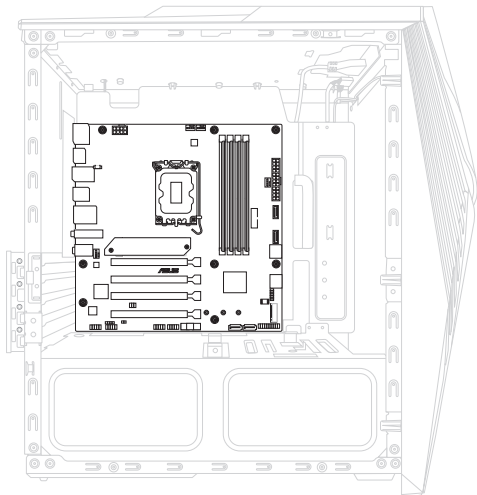


Installation

1. Align and insert the M.2 SSD module(s) into the M.2 slot(s) on the motherboard, then secure the M.2 SSD module(s) using the heatsink(s) with screws you removed earlier.
2. Install the components you removed in the *Before you begin* section.



Motherboard



Before you begin

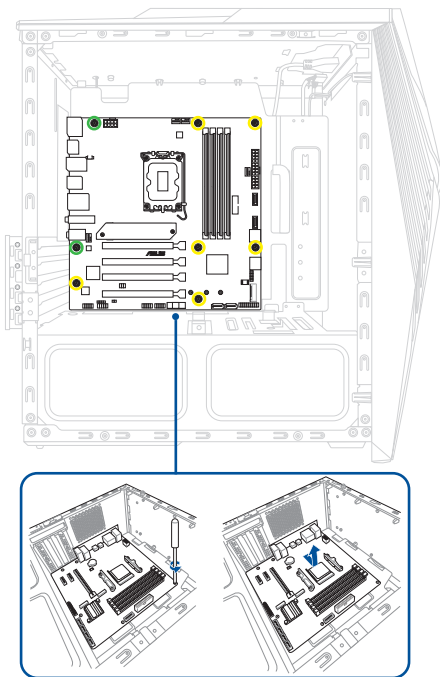
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following components:
 - Left side cover
 - Graphics card
 - CPU fan module
 - Chassis fan module

Screw list

- ⊕ M3.0 X 4L (6.3,2.05) (2pcs)
- ⊕ #6-32 * 6L (7.1,2.3) (6pcs)

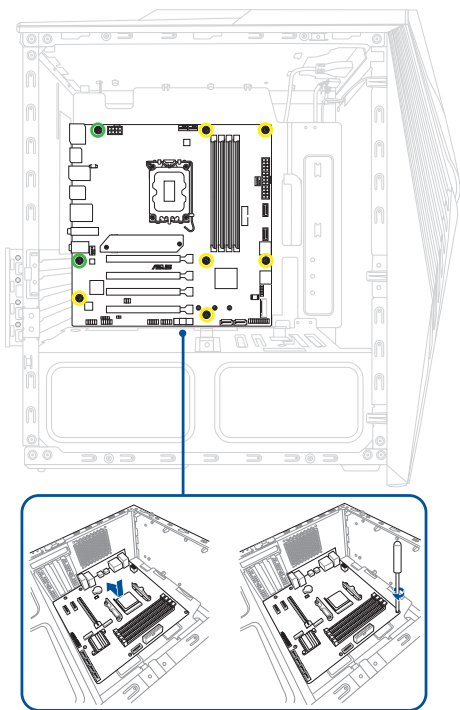
Removal

1. Disconnect the cables from the motherboard.
2. Remove the screws, then remove the motherboard from the chassis.

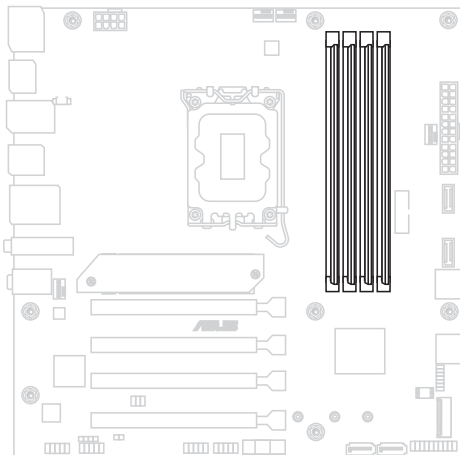


Installation

1. Align and install the motherboard, then secure the motherboard using the screws you removed earlier.
2. Reconnect the cables to the motherboard.
3. Install the components you removed in the *Before you begin* section.



RAM module



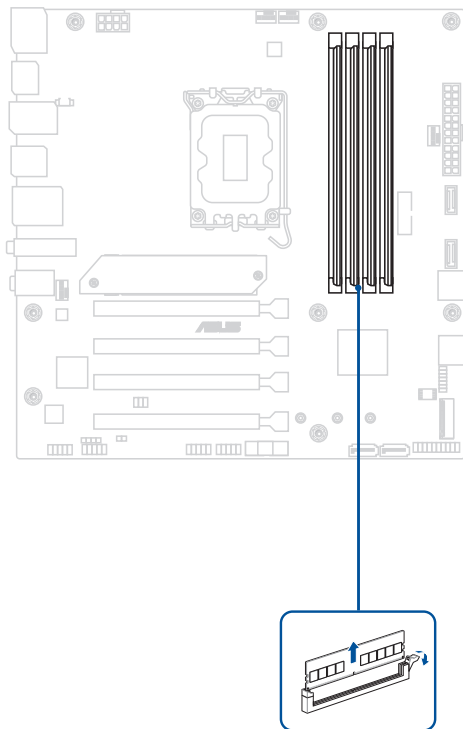
Before you begin

NOTE: The orientation of this component may vary by model.

1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following component:
 - Left side cover
 - Graphics card
 - CPU fan module
 - Chassis fan module
 - Motherboard

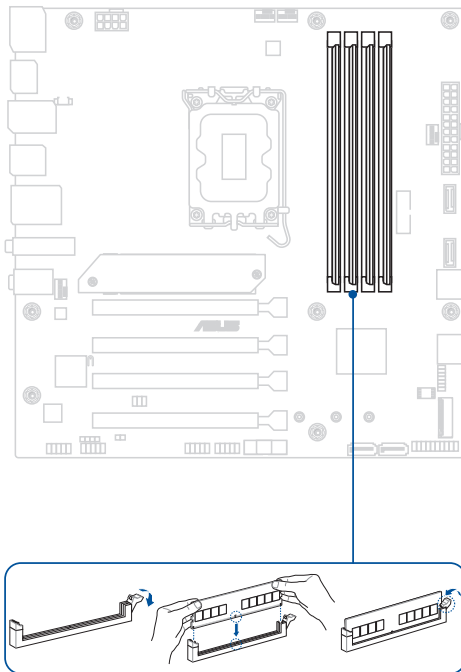
Removal

Press the clip(s) outwards to remove the RAM module(s).

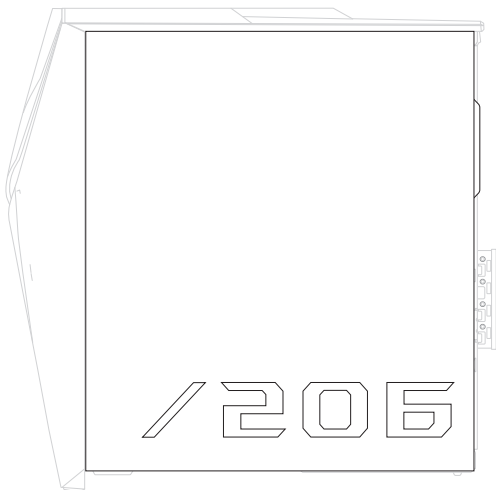


Installation

1. Align and insert the RAM module(s) into the RAM module slot(s).
2. Install the component you removed in the *Before you begin* section.



Right side cover



Before you begin

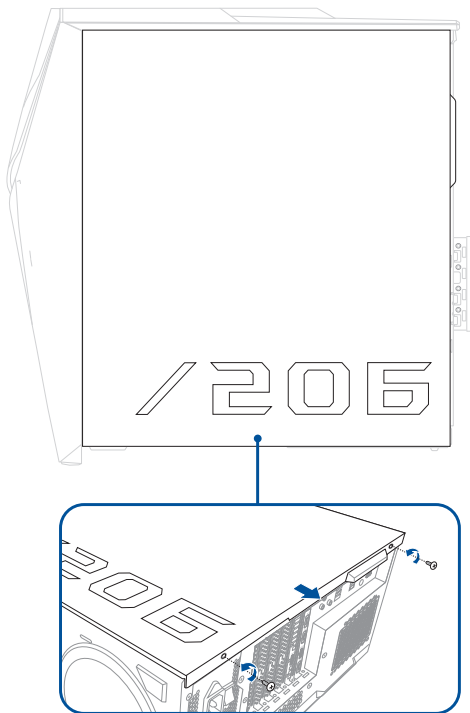
Read the **Safety Precautions** and complete the **Pre-repair Checklist**.

Screw list

- ⊕ #6-32 * 6.3L (2pcs)

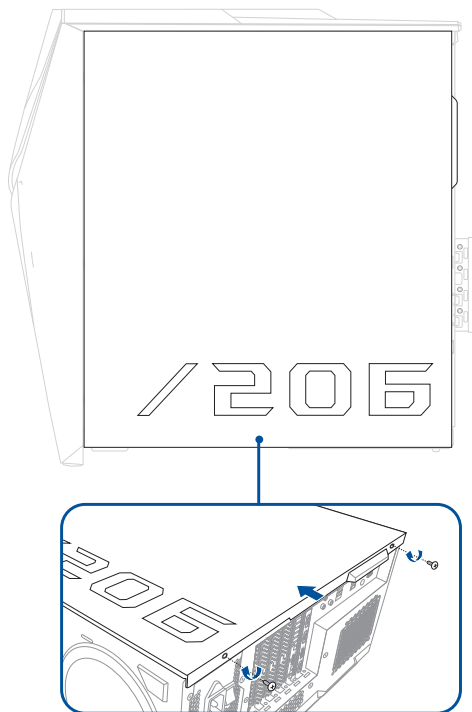
Removal

1. Remove the screws from the Desktop PC's right side cover.
2. Slide to remove the right side cover from the chassis.

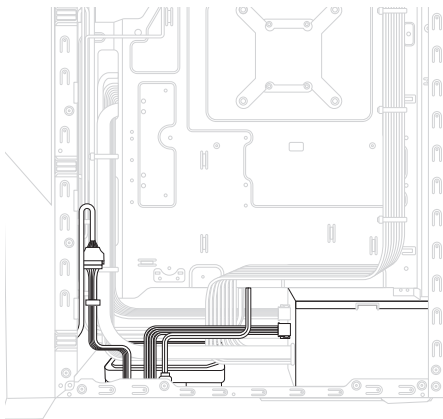


Installation

1. Put the right side cover on the chassis and align the screw holes.
2. Secure the right side cover using the screws you removed earlier.



HDD module



Before you begin

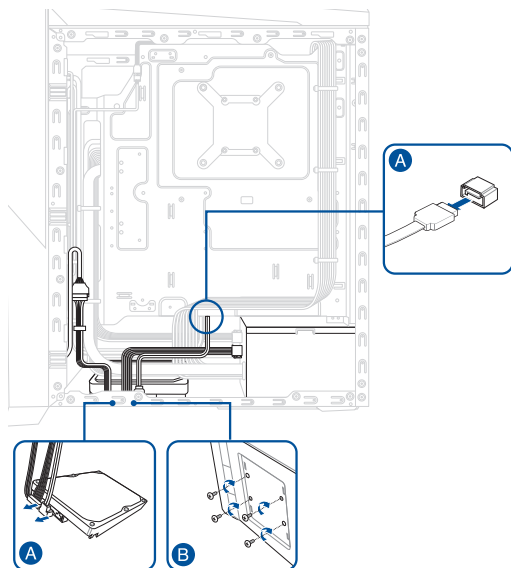
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following component:
 - Right side cover

Screw list

- ⊕ #6-32 * 6.3L (4pcs)

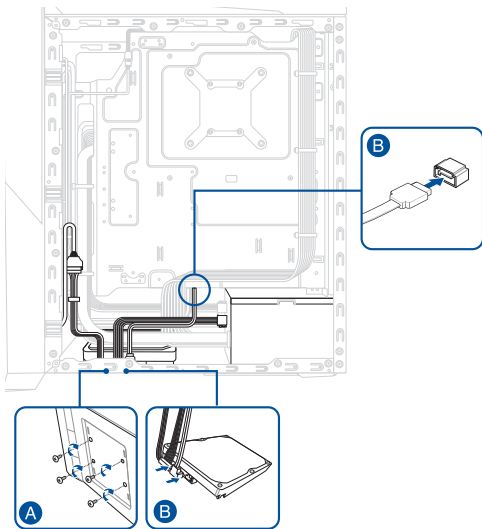
Removal

1. Disconnect the SATA cable and the SATA power cable from the HDD and the motherboard.
2. Remove the screws from the Desktop PC's bottom cover.
3. Take the HDD out.

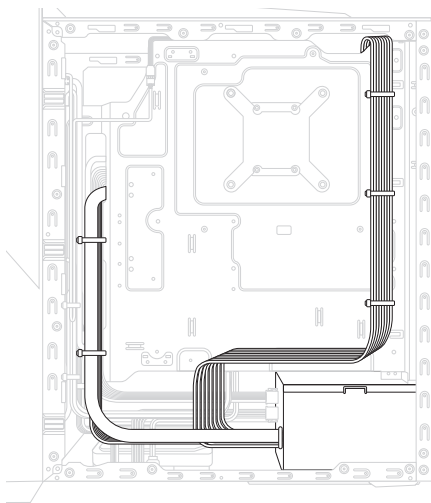


Installation

1. Put the HDD in the chassis and align the screw holes.
2. Secure the HDD using the screws you removed earlier.
3. Connect the SATA cable and the SATA power cable to the HDD and to the motherboard.
4. Install the component you removed in the *Before you begin* section.



Power supply unit (PSU) module



Before you begin

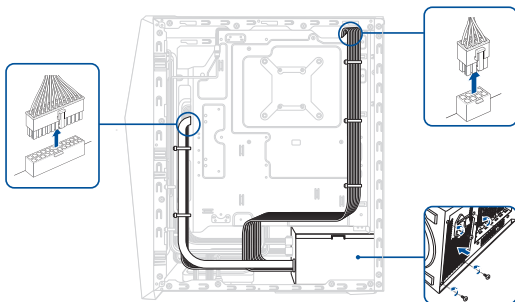
1. Read the **Safety Precautions** and **Pre-repair Checklist**.
2. Remove the following component:
 - Right side cover

Screw list

- ⊕ #6-32 * 6.3L (4pcs)

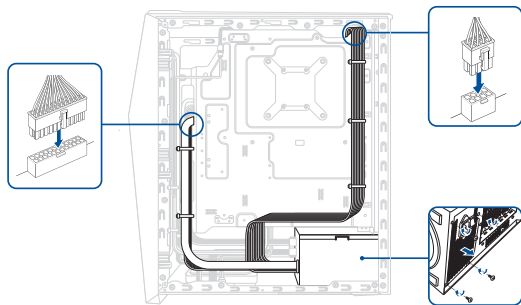
Removal

1. Release the cable ties.
2. Disconnect the 24-pin and the 8-pin power connectors from the motherboard.
3. Remove the screws on the rear side of the chassis and take the power supply unit out.



Installation

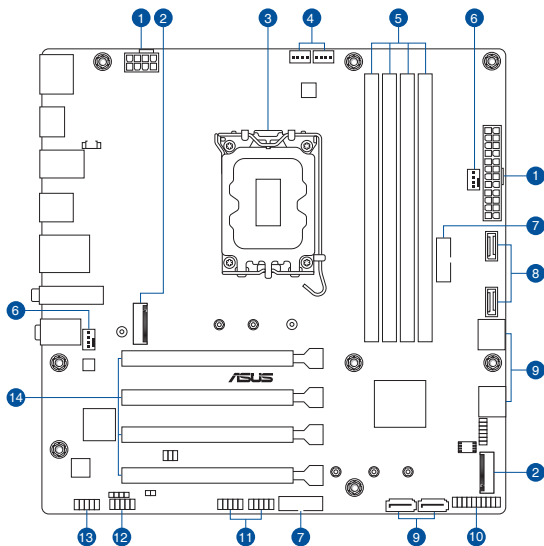
1. Put the power supply unit at the bottom of the chassis and align the screw holes.
2. Secure the power supply unit using the screws you removed earlier.
3. Route the power cable properly using cable ties.
4. Plug the 24-pin and the 8-pin power connectors to the motherboard.
5. Install the component you removed in the *Before you begin* section.



Appendix

Wiring and connection diagrams

Motherboard View



- | | |
|---------------------------------|------------------------------|
| 1. Power connectors | 8. USB 3.2 Gen 1 connectors |
| 2. M.2 SSD slots | 9. SATA ports |
| 3. CPU socket | 10. System panel header |
| 4. CPU fan / CPU cooler headers | 11. USB 2.0 headers |
| 5. DIMM slots | 12. COM port |
| 6. Chassis fan headers | 13. Front panel audio header |
| 7. USB 3.2 Gen 1 headers | 14. Expansion slots |