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MINISFORUM 2A49R-MS-A1 MINI PC High-Performance Intel 13th Generation i9 CPU

MINISFORUM 2A49R-MS-A1 MINI PC High-Performance Intel 13th Generation i9 CPU Instruction Manual

Contents

MINIS FORUM

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Product Information

- **Product Name:** MINI PC
- **Manufacturer:** Micro Computer (HK) Tech Limited
- **Copyright Year:** 2022

Product Usage Instructions

1. **Unboxing and Setup:**
   When unboxing your MINI PC, ensure all components are included as per the packaging list. Connect the necessary cables and peripherals to set up the device.
2. **Powering On:**
   Press the power button to turn on the MINI PC. Wait for the system to boot up and display the desktop interface.
3. **Operating System:**
   Use the operating system provided with the MINI PC to navigate and access various applications and features.
4. **Maintenance:**
   Regularly clean the MINI PC vents and ensure proper ventilation to prevent overheating. Update software and drivers as recommended by the manufacturer.
5. **Shutting Down:**
   Properly shut down the MINI PC through the operating system to avoid data loss and ensure safe operation.

Frequently Asked Questions (FAQ):

- **Q: How do I reset my MINI PC to factory settings?**
  A: To reset your MINI PC to factory settings, access the system settings or recovery options provided in the operating system. Follow the on-screen instructions to perform a factory reset.
- **Q: Can I upgrade the hardware components of my MINI PC?**
  A: Some MINI PCs allow for hardware upgrades such as RAM or storage. Refer to the user manual or contact

the manufacturer for specific upgrade options and compatibility.

Disclaimer And Safety Instructions

HDMI Disclaimer
The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Disclaimer

1. Thank you for purchasing the MS-A1 product.
2. The contents mentioned in this disclaimer are related to your safety, legal rights and responsibilities. Please pay attention to any warnings, cautions and attention signs on the instructions and product labels, and install according to the instructions in the instructions.
3. The product is relatively complex, and users need to have basic hands-on installation skills and safety knowledge. You should be careful during installation.
4. Before using this product, please read the instructions carefully to ensure that the product can be set up correctly. Failure to follow the instructions, warnings, cautions, and attention signs may damage the product or data and may result in personal or property injury or loss.
5. Once you use this product, you are deemed to have carefully read the content requirements of the disclaimer, warning, caution, and attention signs, understood and accepted all the contents. You promise to take full responsibility for the consequences of using this product. You promise to use this product only for legitimate purposes and agree to this statement and any policies and guidelines formulated by MINISFORUM.
6. In addition to the warranty terms, MINISFORUM is not legally responsible for damage or injury caused directly or indirectly by using this product, especially those caused by failure to operate under safety guidelines. Users should follow the instructions mentioned in this statement and all safety guidelines.
7. The final interpretation right of this statement belongs to MINISFORUM.

Tips for use

1. Dust, moisture and drastic temperature changes will affect the product's life, so please try to avoid placing the product in these places.
2. The suitable temperature for the MINI PC and accessories is 0℃ ~ 35℃.
3. Before you use this product, make sure you leave enough space around the device for ventilation. Please don't block or cover these openings. Never insert objects of any kind into the ventilation openings.
4. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.
5. When you use the power extension cords, the total current of all connected products should be within the rated current of cables, ensuring stable operation.

Safety Precautions

- **Warning:** OCulink must be disconnected when the power is off. Otherwise, it may damage the external expansion device or the host.
- **Warning:** All M.2 solid-state drive slots only support SSDs with the NVME protocol and do not support the SATA protocol. If you insert an SSD with the SATA protocol incorrectly, your SSD may be damaged.
- **Caution:** When removing the PCIE expansion card, please make sure that your fingers are not between the PCIE expansion card and the casing, otherwise your fingers may be pinched.
- **Warning:** Please be sure to use a 19V DC-IN power adapter. Using a power adapter with a voltage other than 19V can cause the device to operate unstably and may even lead to power loss issues.

Maintenance Guideline

1. Do not step on the power cord or put anything on your Mini PC.
2. Do not spill water or any other liquid over this product.
3. There's still some current passing through even when the system is off. To avoid severe damage caused by possible electric shock, plug out all power cables from sockets temporarily before cleaning or moving this product.
4. If you encounter technical problems with the product unplug the power cord and contact a qualified service technician or your retailer.
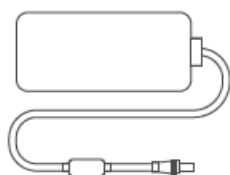
FAQ

1. If you have purchased a barebones system and installed the Windows operating system yourself, please make sure to disable the Fast Startup feature of Windows. This feature may cause abnormal behaviour in your device.
2. The DP function does not support daisy chaining.
3. The Oculink expansion connects directly to the CPU's PCIe 4.0 x4 bus. PCIe signals may degrade with each adapter used and the length of the cable. If you use more than three levels of adapters, your Oculink expansion PCIe devices may malfunction.
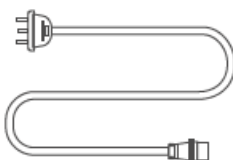4. Be careful when operating the SSD screws on the CPU side, as they may strip (screw slide).

Conventions Used In This Manual

1. **Note —** This message contains additional instructions for this item.
2. **Important —** This information contains instructions that must be followed.
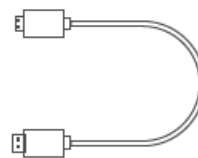3. **Warning —** This message contains information about user safety and product safety.

Package Contents
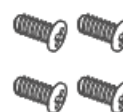
Ac Power Adapter */

Power Cord */

HDMI Cable /

SSD Heatsink */

Customized U.2 to M.2 */
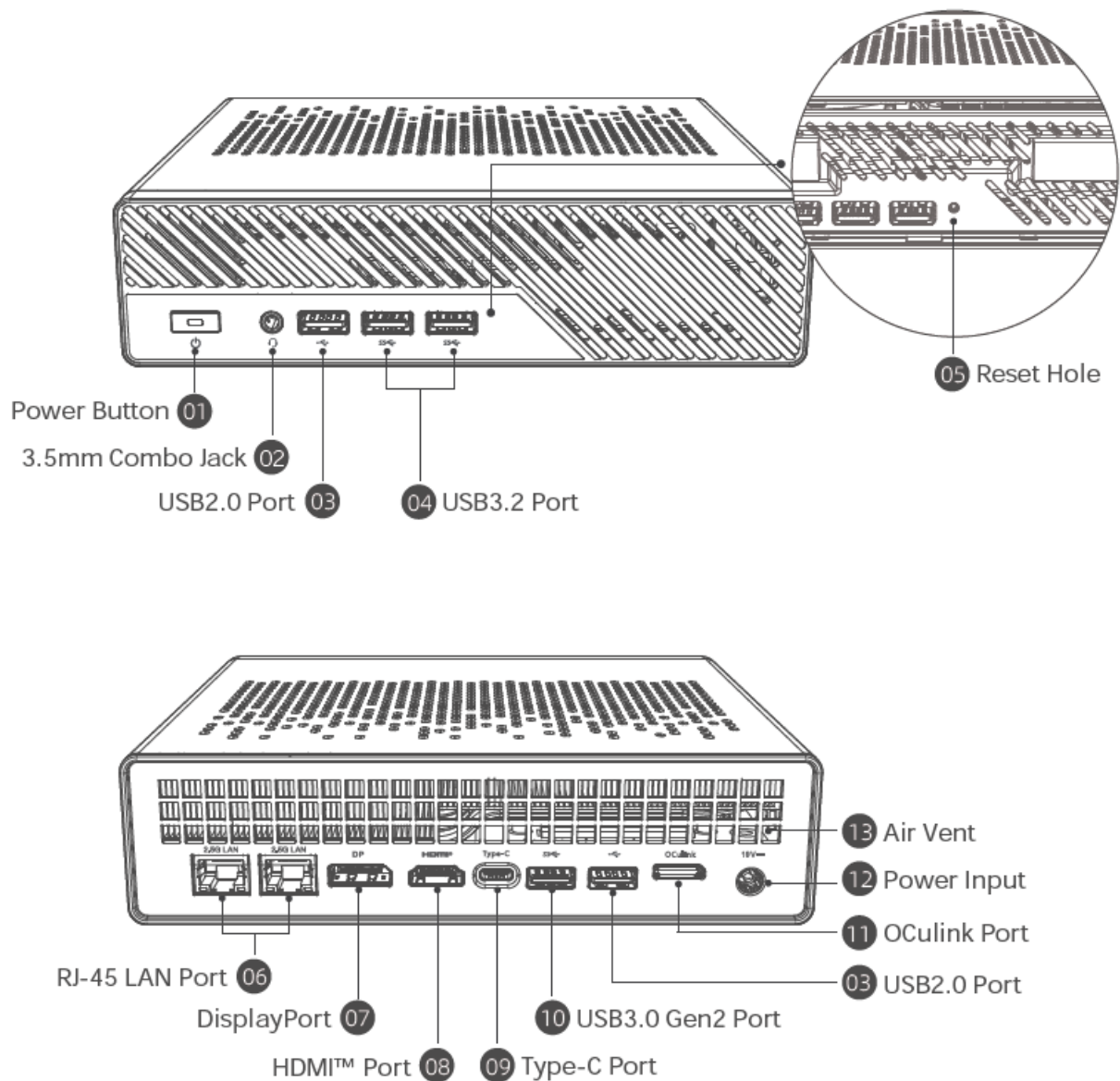
U.2 Mounting Screw Set */

Clip /

User Manual /

NOTE:
The power adapter and other accessories included in the box will vary depending on the model parameter or are purchased.

Getting To Know Your Mini PC

Interface

1. **Power Button**

   The power button allows you to turn the Mini PC on /off. You can press the power button to put your Mini PC to sleep mode or press it for 10 seconds to force the shutdown of your Mini PC.

2. **3.5mm Combo Jack**

   This connector is used to connect audio output signals to a power amplifier or headphones. You can also use it to connect an external microphone or output signals from audio equipment.

3. **USB2.0 Port**

   The USB (Universal Serial Bus) port is compatible with USB2.0 or USB1.1 devices such as keyboards, and printers.

4. **USB3.2 Port**

   USB 3.2 (Universal Serial Bus) port provides a transfer rate of up to 5 Gbit/s.It can be connected to keyboards, pointing devices, cameras, hard disks, printers and scanners.

5. **Reset Hole**

   - Please remove the power source and hold the reset hole for ten seconds to restore the BIOS to its factory default settings.

- **Important!** If you encounter certain issues during use, you can first try to resolve them by holding the reset hole.

6. **RJ-45 LAN Port**

   This RJ-45 network interface supports standard Ethernet cables and can be connected to a local area network. (Transmission speed 2.5Gbps)

7. **DisplayPort**

   This DisplayPort supports 8K@60Hz/4K@240Hz display output. It can transmit digital audio information while transmitting video signals.

8. **HDMI™ Port**

   The HDMI™ port (High-Definition Multimedia Interface) is an uncompressed, fully digital audio/video interface that provides a common data connection channel for compatible devices, It can be used to connect external display devices and televisions.

9. **Type-C Port**

   Note! This interface supports different protocols depending on the CPU used.

   1. When using a Raphael architecture CPU, it supports a full-featured Type-C with USB 3.2 protocol. It supports Alt DP. The highest USB speed is 10Gbps.
   2. When using a PHX/PHX2 architecture CPU, it supports a full-featured Type-C with USB4 protocol. It supports Alt DP. The highest USB4 transmission speed is 40Gbps, and the highest USB3 transmission speed is 10Gbps.

10. **USB 3.2 Gen2 Port**

    USB 3.2 Gen2 (Universal Serial Bus) port provides a transfer rate of up to 10 Gbit/s. It can be connected to keyboards, pointing devices, cameras, hard disks, printers and scanners.

11. **OCuLink Interface**

    - This interface supports up to PCIE4.0x4 speed and is capable of connecting external graphics cards and other PCIe devices.
    - **Note!** A specialized expansion device is required.

12. **Power Input**

    The power adapter can convert AC power to DC power. The converted power provides power to your Mini PC through the power input interface. To avoid damaging your Mini PC, please use the power adapter provided with the product.

    - **Warning!** When the power supply is in use, the temperature of the power adapter may rise and become hot. Do not place the power adapter close to your body.
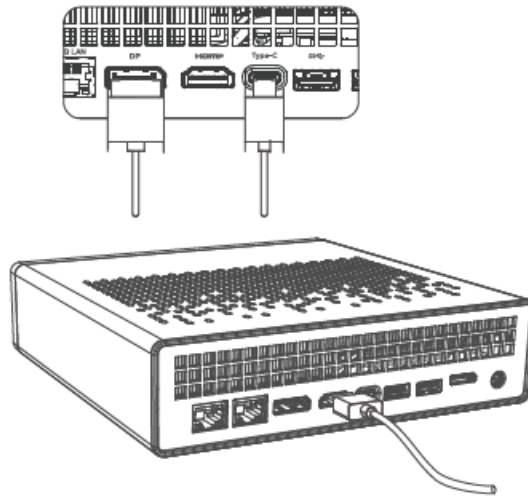   - **Power adapter:** DC 19V

13. **Air Vent**

    - The air vents allow your Mini PC chassis to expel hot air out.
    - **Important!** For optimum heat dissipation and air ventilation, ensure that the air vents are free from obstructions (such as Paper, books, clothes, and transmission lines).
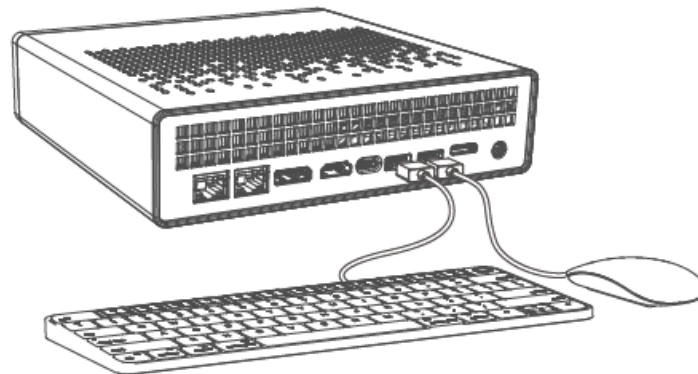
Getting Started With Your Mini PC

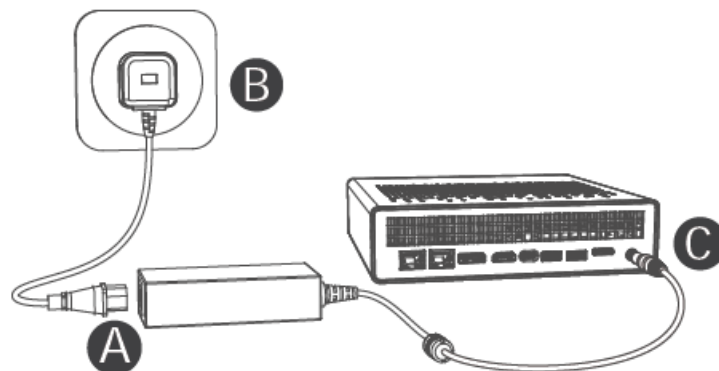1. Connect the display to the Mini PC's HDMI™ port DP port or Type-C port.
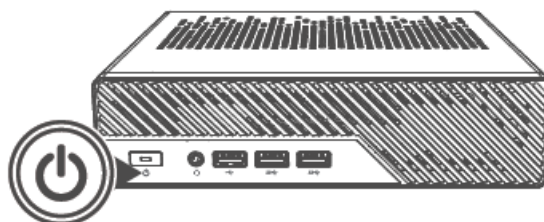
2. Connect the keyboard and mouse.

3. Connect the provided power adapter to your Mini PC.

4. Turn on the power and start the Mini PC.

- If the Mini PC is frozen or slow to respond, press and hold the power button at least for 10 seconds to force it to shut down.
- To put your Mini PC on Sleep mode, press the Power button once.

Installation Guide

1. Remove the two screws from the bottom cover using the tool, then use the included tool to pull out the

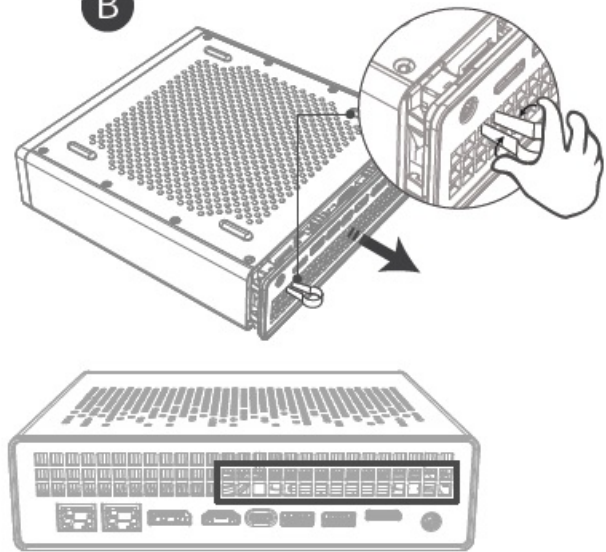motherboard slot at the position shown in the diagram.

Warning:

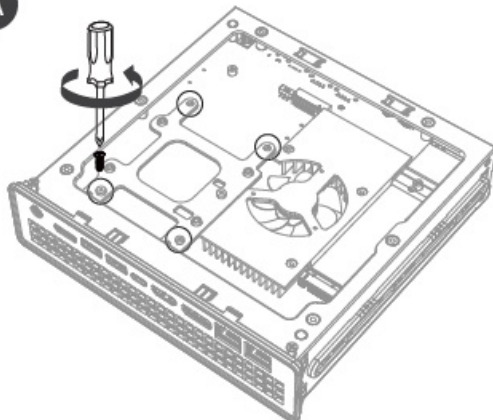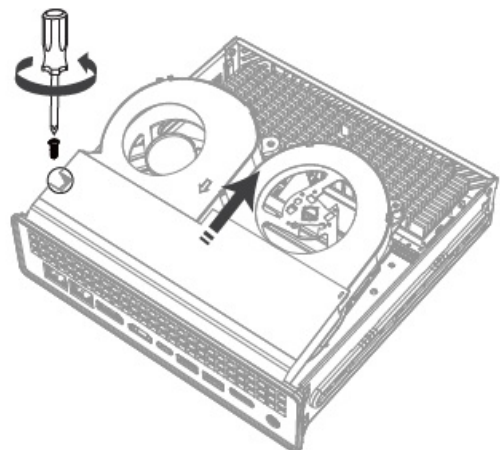Only use the clip at the position shown in the diagram.

DIY CPU

2. First, remove the screws from the back of the motherboard's CPU cooling assembly, then remove the screws from the front of the motherboard's cooling module and remove the entire cooling module.
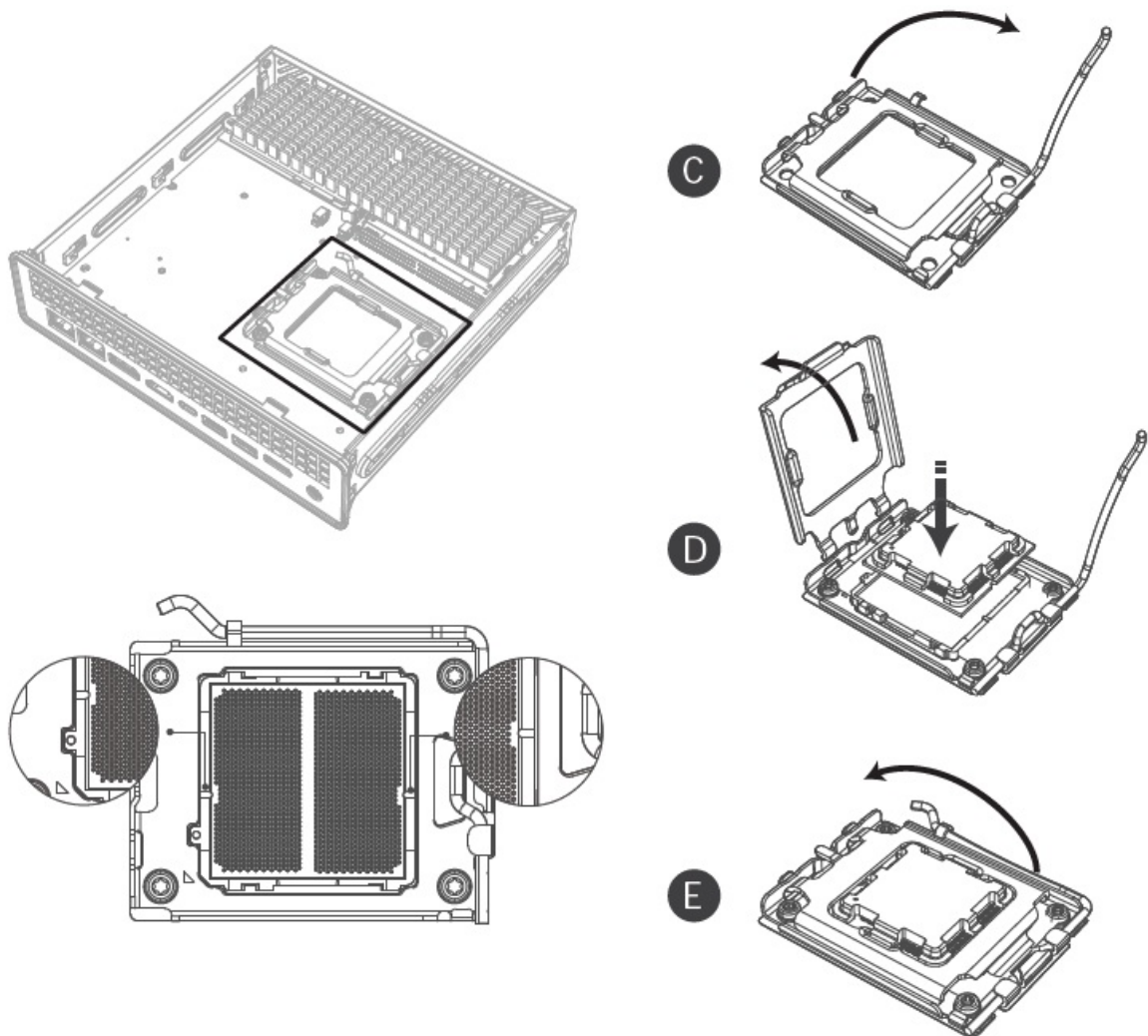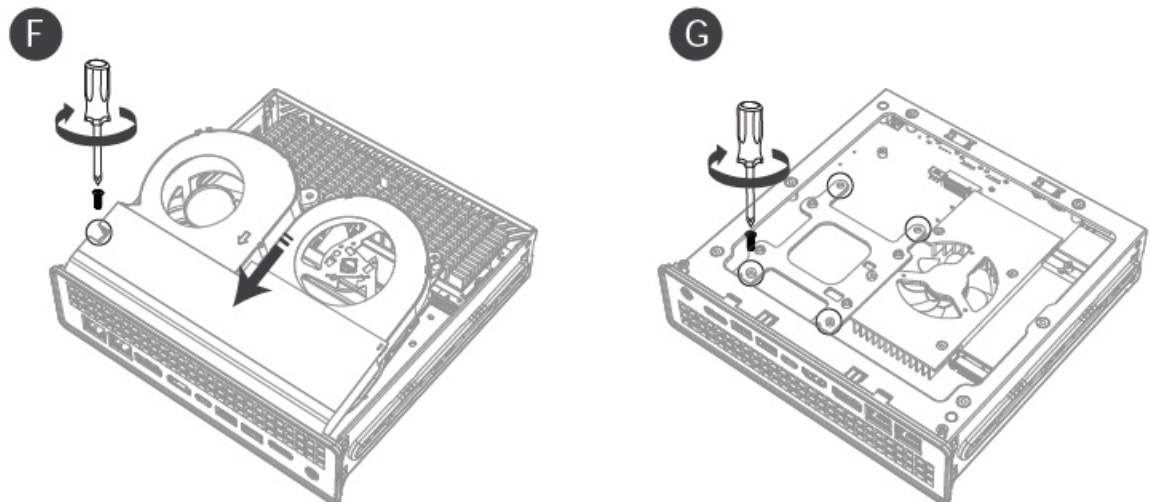

3. Install the CPU.

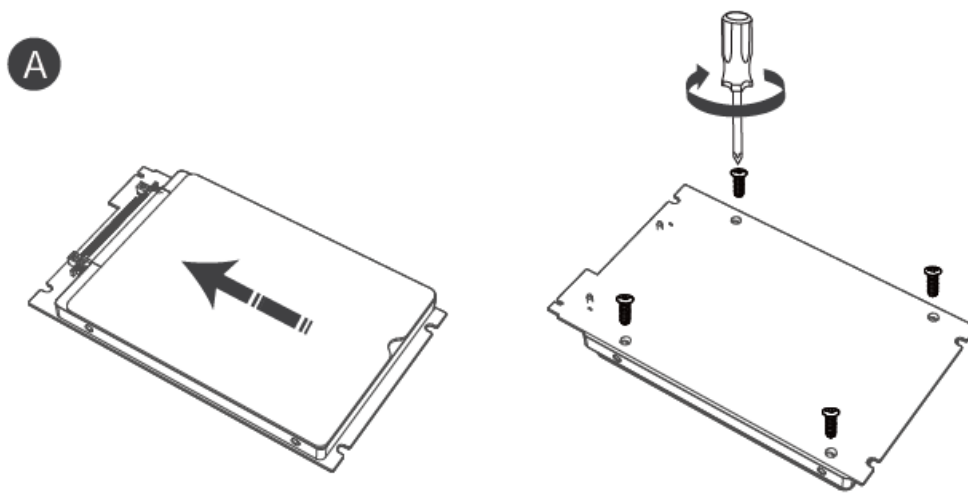**Important!** Match the position of the CPU's foolproof notch.

4. Reinstall the cooling module onto the motherboard, securing the screws of the cooling module on the front of the motherboard to the screws of the CPU cooling assembly on the back.
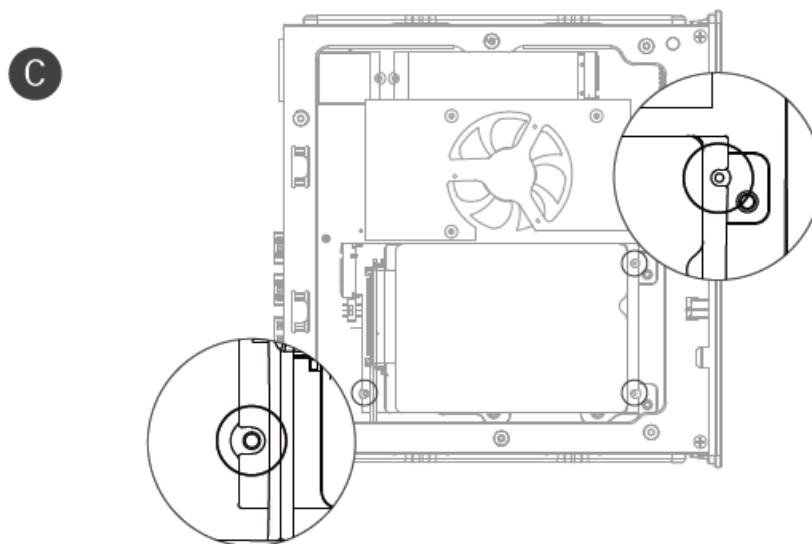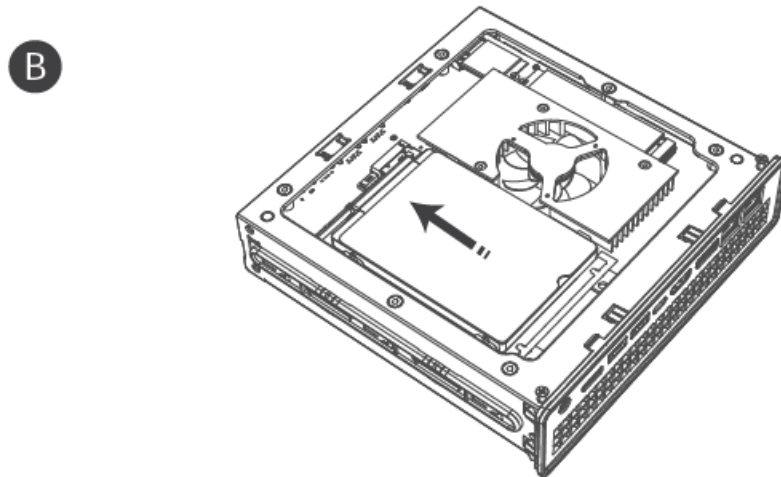

DIY Customized U.2 To M.2

5. Assemble the U.2 hard drive to the U.2 to custom M.2 adapter card and lock the screws.
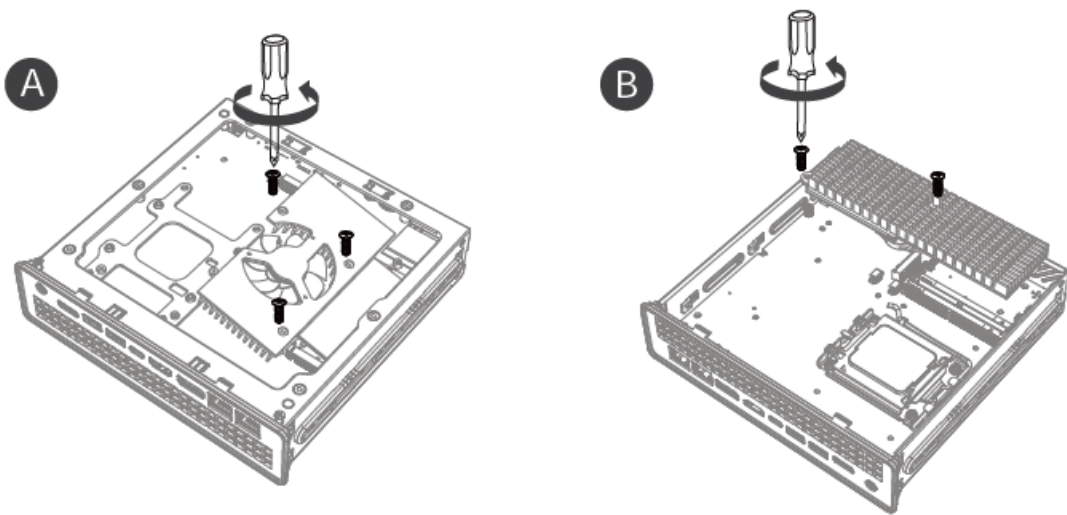
6. Insert the U.2-to-private-M.2 adapter card into the M.2 slot and align it with the positioning post.
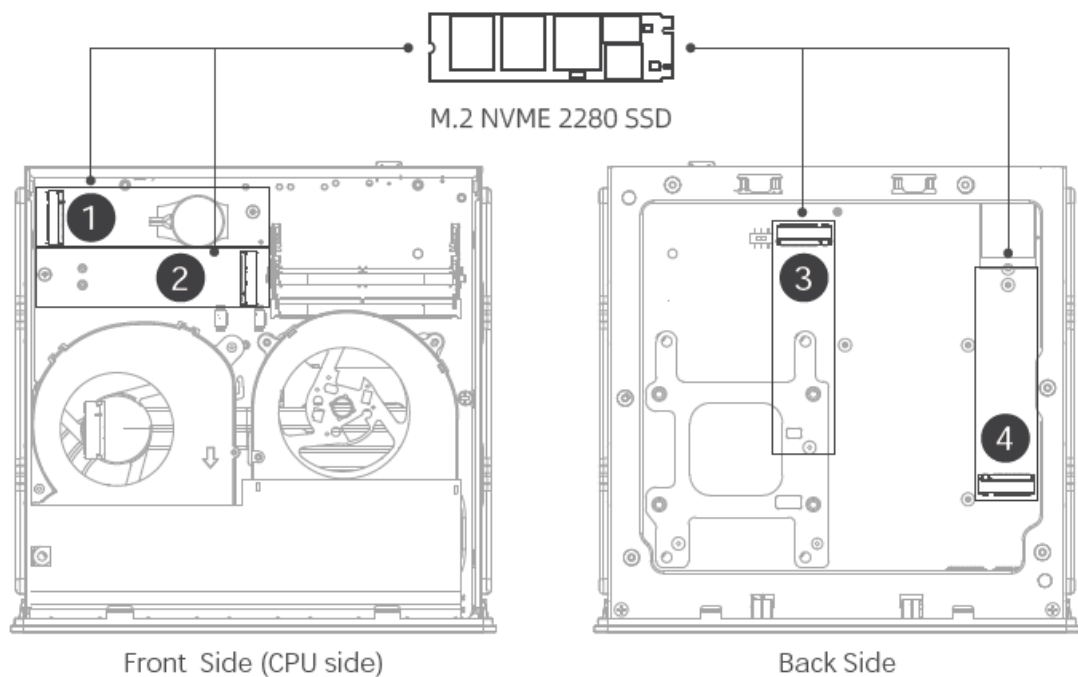

DIY SSD

7. Use the tool to remove the SSD cooling module from both sides.

8. Align the SSD card with the slot notch and insert it at an angle, then secure it with a screw. The SSD on the CPU side does not require a locking screw.
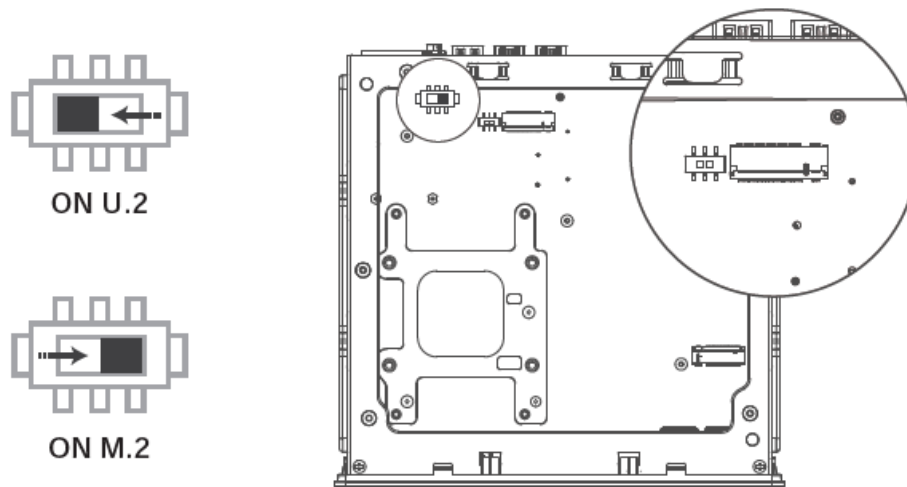

M.2 NVME 2280 SSD

Front Side (CPU side)   Back Side

	1	2	3	4
Raphael architecture	PCIE3.0x4	PCIE4.0x1	PCIE4.0x4	PCIE4.0x4
Phoenix architecture	PCIE3.0x4	PCIE4.0x1	PCIE4.0x2	PCIE4.0x4
Phoenix2 architecture	Not Supported	PCIE4.0x1	PCIE4.0x2	PCIE4.0x4

Note:

- The speed and availability of the SSD on this motherboard may vary when inserting different CPUs.
- Raphael architecture, such as 7600/7900;
- Phoenix architecture, such as 8700G/8600G;
- Phoenix2 architecture, such as 8500G.

Warn!

- When using a U.2 hard drive in this slot, you need to turn on the ON U.2 switch;
- When using an M.2 hard drive in this slot, make sure the switch is in the ON M.2 position. If the switch is not ON M.2, the M.2 hard drive may be damaged.

FCC Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, under Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used under the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1)this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body.

Documents / Resources

MINISFORUM 2A49R-MS-A1 MINI PC High-Performance Intel 13th Generation i9 CPU [pdf]
Instruction Manual
2A49R-MS-A1 MINI PC High-Performance Intel 13th Generation i9 CPU, 2A49R-MS-A1, MINI PC High-Performance Intel 13th Generation i9 CPU, High-Performance Intel 13th Generation i9 CPU, Performance Intel 13th Generation i9 CPU, Intel 13th Generation i9 CPU, Generation i9 CPU, CPU

References

- **User Manual**