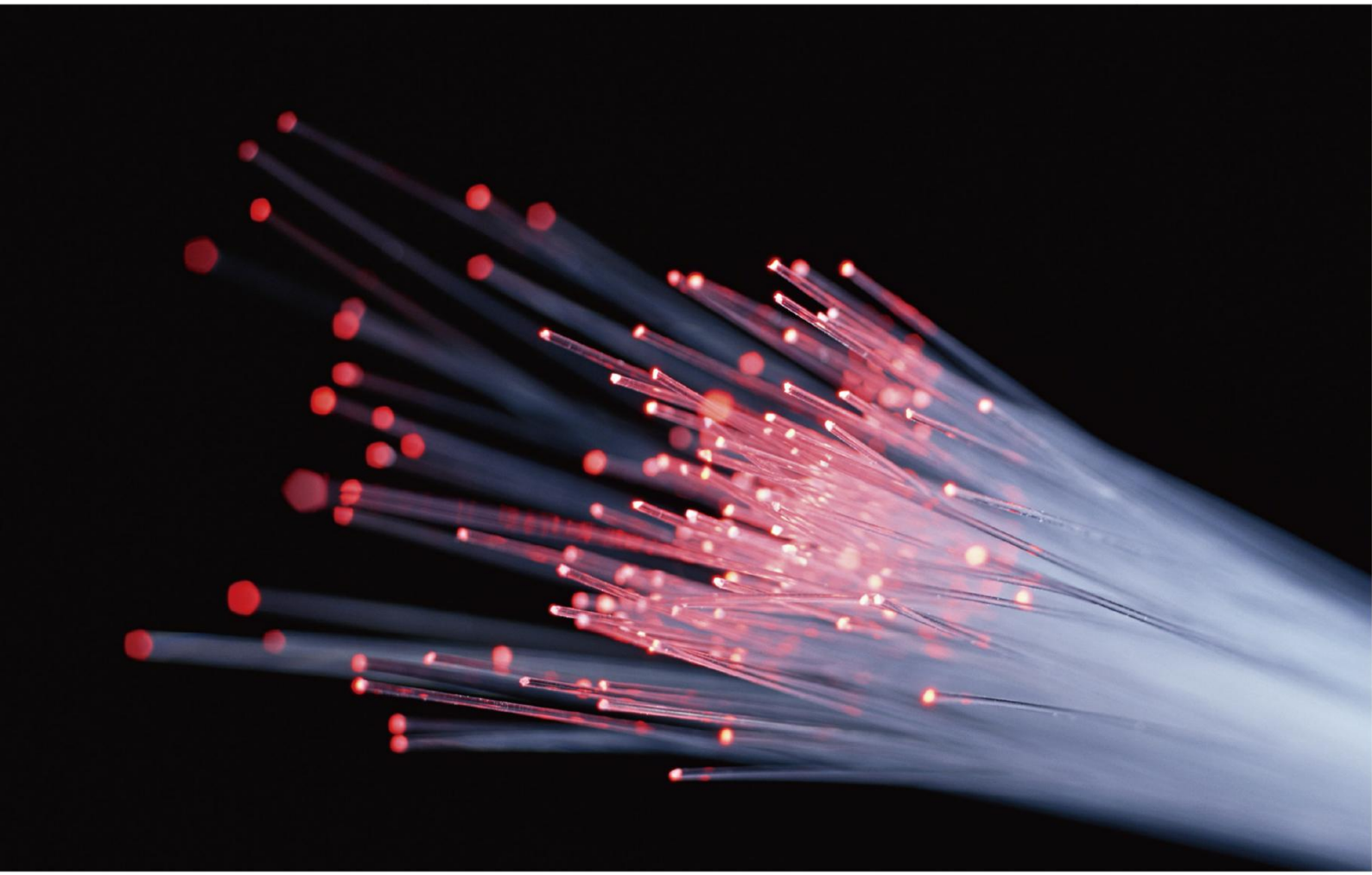
FS | Data Center, Enterprise & ISP Network Solutions



Concentration, Innovation, Progression

RS-7188 Rack Server Installation Guide

CONTENTS

Chapter Ⅰ Overview

FS.COM 2U 2-socket rack server helps to simplify deployment and dilivers high scalability with lower cost. It is an ideal choice for workloads, including Big Data analysis, cloud computing, virtualization and greatly improves the resource utilization in data centers. The architecture of the platform is based on modular design for flexible configuration and maintenance.This server has the advantages of low energy consumption, strong scalability, high reliability, easy management, and easy deployment.

Figure 1-1 shows the appearance of the server with twelve drive bays.

Figure 1-1 Appearance

Chapter Ⅱ Features

2.1 Product Introduction

FS.COM 2U 2-socket rack server adopts Intel® Xeon® Scalable processors; Supports 12 DDR4 Channels, 24 DDR4 slots; Maximum support for 3.0TB memory capacity;

Maximize Performance and Scalability

- Support up to two full-series Intel® Xeon® Scalable Processors to drive applications faster and more flexible
- With new generation of Xeon® Scalable processor to meet more workloads and maximize the resource utilization
- 24 DDR4 DIMM slots, up to 2666MT/s, 3TB max to meet the demand of different applications
- Accelerate data throughput with up to 8x PCI expansion slots including 1x non-standard PCIe x8 SAS/RAID mezzanine card + 1x non-standard PCIe x8 NIC mezzanine card

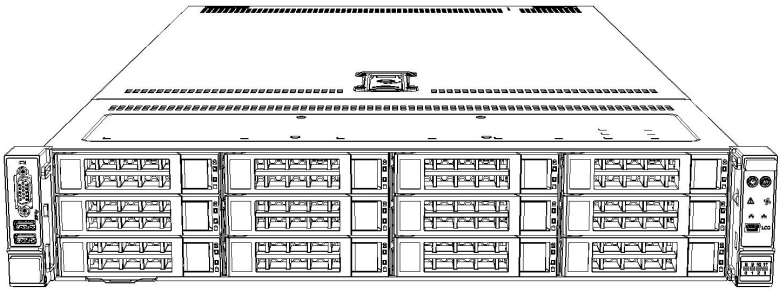
Flexible Storage Design

- Front Bays: up to 12x hot-swap 3.5" SAS/SATA (HDD/SSD) or up to 25x hot-swap 2.5" SAS/SATA(HDD/SSD)
- Rear Bays: up to 6x hot-swap 2.5" SAS/SATA (HDD/SSD) or up to 4x hot-swap 3.5" + 2x 2.5" SAS/SATA(HDD/SSD)
- Support up to 16 NVMe drives to optimize storage utilization and extendibility in data centers
- Improving data storage capability and ensure data security with RAID controller
- Support RAID 0/1/10&5, optional 12 Gb RAID 0/1/5/6/10/50/60

Perfect Hardware Design

- Hot-plug redundant fans and power supplies
- High quality electronic components and Low power consumption
- With modular design for flexible configuration and maintenance

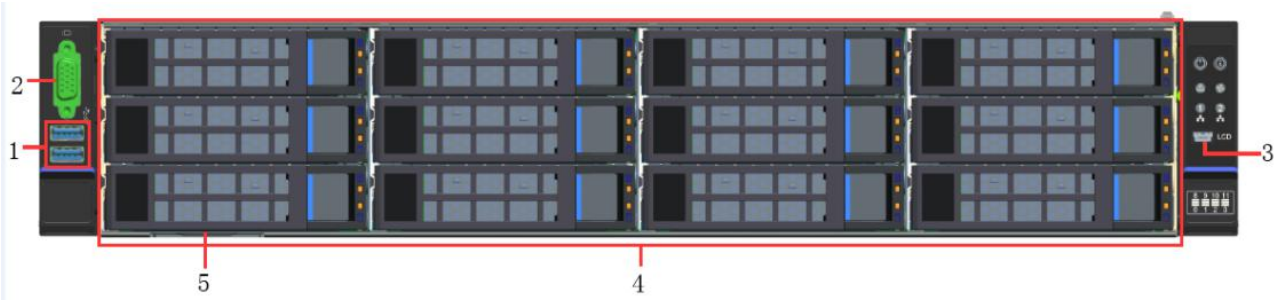
2.2 Product Specifications



Item	Description
CPU Type	2x Intel® Xeon® Silver 4112 2.6G, 4C
Memory Capacity	2x 32GB RDIMM, 2666MT/s, Dual Rank
Drives	2x 240GB SSD SATA 2.5in Hot-plug Drives
Form factor	2U rack server
CPU	Up to two full-series Intel® Xeon® Scalable processors
Memory	DDR4 ECC RDIMMs/ LRDIMMs server memory, Memory Frequency 1866/ 2133/ 2400/ 2666MHz 12x DDR4 Channel, each Channel has 2x DIMM, 24x DDR4 slot totally Support 8GB, 16GB, 32GB, 64GB, 128GB, up to 3.0TB
Drive Bays	Front: up to 12x hot-swap 3.5” SAS/SATA (HDD/SSD) Or up to 25x hot-swap 2.5” SAS/SATA(HDD/SSD) Rear: up to 6x hot-swap 2.5” SAS/SATA (HDD/SSD) Or up to 4x hot-swap 3.5”+ 2x 2.5” SAS/SATA (HDD/SSD) NVMe: up to 16 hot-swap 2.5” NVMe/SAS/SATA (HDD/SSD)
Chipset	Intel® PCH server C621 series chipset
Storage Controller	Internal storage controller: PCH support RAID 0/1/10&5, optional 12 Gb RAID 0/1/5/6/10/50/60 (1G/2G/4G cache) External storage HBA (not RAID): 12 Gb SAS HBA On-board SSD/ SATA DOM: 1x PCIe 3.0 x4 M.2 slot, 2x Mini SSD Slot (SATA DOM)
M.2 SSD	PCIe Gen3 X4 M.2 SSD (Support M.2 SSD length 80mm and 110mm)
Power Supply	Platinum Level 550W, 800W, 1300W hot-swap redundant CRPS, optional support 240 and 338 VDC PSU
I/O	Front port: VGA, 2x USB3.0, 1x LCD specified Mini USB; Rear port: VGA, 2x USB3.0, 1x management interface, 2x RJ45 port
Warranty	3 Years

Chapter Ⅲ Hardware Description

3.1 Front Panel

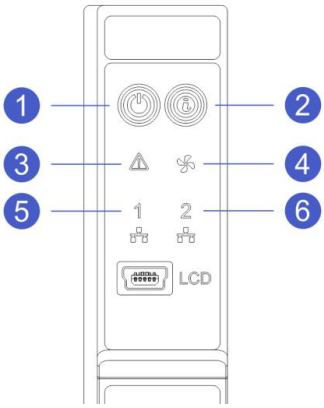


1	USB 3.0 interface	4	Hard disk
2	VGA interface	5	Tag card
3	LCD dedicated interface		

- **Front panel interface description**

Port	Type	Description
VGA interface	DB15	Used to connect display terminals such as monitors Or KVM.
USB interface	USB 3.0	Provides an out-of-office USB interface through which USB devices can be accessed. **NOTE:** When using an external USB device, make sure that the USB device is in good condition. Otherwise, the server may work abnormally.
LCD dedicated interface	Mini USB	Used to connect an external LCD module. It is mainly used to reflect the in-position and running status of various parts of the server. It can also be used to set the IP address of the server's iBMC management network port and query the device status information and alarms. The LCD and the iBMC management module on the server together form the LCD subsystem. The LCD obtains device information directly from the iBMC management module. The LCD subsystem does not store device data.

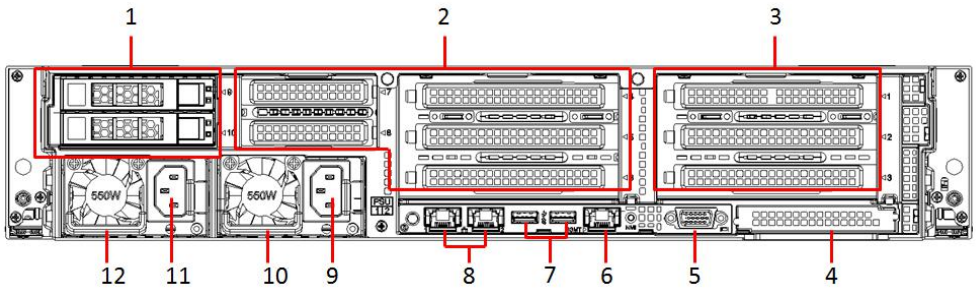
- **Front panel lights and buttons instructions**



1	Power switch button/indicator	4	Fan failure indicator
2	UID button/indicator	5	Network port connection status indicator
3	System fault indicator	6	Network port connection status indicator

Identification	Indicator and Button	State Description
	Power switch button/indicator	Power indicator description: • Steady green: The device is powered on. • Green (flashing): Indicates that the device is in the standby state. • Green off: The device is not powered on. • Power button description: • Short press the button in the boot state, the OS shuts down normally. • Press and hold the button for 6 seconds to turn off the server. • When the power is turned on, press this button briefly to boot.
	UID button/indicator	The UID button/indicator is used to conveniently locate the server to be operated. It can be turned off or on by pressing the UID button or remote control via iBMC command. • UID indicator description: • Blue (solid/blinking): Indicates that the server is located. • Off: The server is not located. • UID button description: • Short press this button to turn the positioning light on/off.
	System fault indicator	• Off: The device is operating normally. • Blinking yellow: It indicates that the device is faulty during operation.
	Fan failure indicator	• Off: The fan is normal. • Blinking yellow: The fan has failed.
	Network port connection status indicator	Corresponds to the Ethernet port indicator of the network card. • Green (Chang): indicates that the network port is connected properly. • Off: The network port is unused or faulty. • Instructions Corresponds to the two 1GE network ports on the motherboard.
	Network port connection status indicator	Corresponds to the Ethernet port indicator of the network card. • Green (Chang): indicates that the network port is connected properly. • Off: The network port is unused or faulty. Instructions Corresponds to two 1GE network ports on the motherboard.

3.2 Rear Panel



1	I/O module 1	7	USB 3.0 interface
2	I/O module 2	8	GE electrical interface
3	I/O module 3	9	Power Module 2 AC Interface
4	Extended network card (optional)	10	Power Module 2
5	VGA interface	11	Power Module 1 AC Interface
6	Management network port	12	Power Module 1

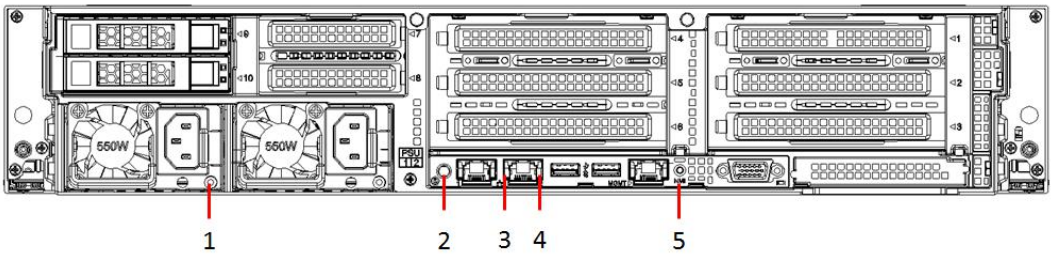
✧ **Explanation:**

The I/O module 1 can only be configured with a 2.5" hard disk module. Both the I/O module 2 and the I/O module 3 can be equipped with a rear hard disk module or a riser module. This figure is for reference only, and the actual configuration shall prevail.

- **Rear panel interface description**

Port	Type	Quantity	Description
VGA interface	DB15	1	Used to connect a display terminal such as a monitor or KVM.
Management network port	GE BASE-T	1	Provides outbound 1000Mbit/s Ethernet ports. The server can be managed through this interface.
USB interface	USB 3.0	2	Provides an out-of-port USB interface through which USB devices can be accessed. **NOTE:** When using an external USB device, make sure that the USB device is in good condition. Otherwise, the server may work abnormally.
GE electrical interface	GE BASE-T	2	Server service network port.
Power Module AC Interface	/	1 or 2	You can choose the number of power supplies according to your actual needs, but you must ensure that the rated power of the power supply is higher than the rated power of the complete machine.

- **Rear panel lights and buttons instructions**



1	Power module indicator	4	Data transmission status indicator
2	UID indicator	5	NMI button
3	Connection status indicator		

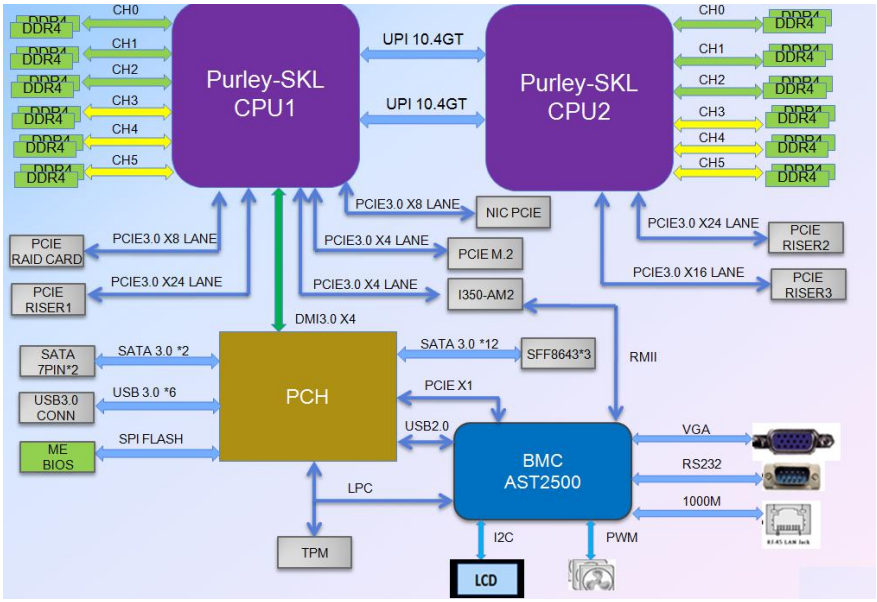
Indicator and Button	State Description
Power module indicator	• Green (Constant): Indicates that the input and output are normal. • Red (Chang): indicates that the input is normal, power supply over-temperature protection, power output over-current/short circuit, output over-voltage, short-circuit protection, device failure (excluding all device failures), etc. result in no output. • Green (1Hz/blinking): indicates that the input is normal, and the power supply is turned off due to power-on or in-position; the input is undervoltage. • Green (4Hz/Flashing): Indicates the firmware upgrade process. • Off: No AC power input.
UID indicator	• The UID indicator is used to conveniently locate the server to be operated. It can be turned off or turned on by pressing the UID button or the iBMC command remotely. • Blue (solid/blinking): Indicates that the server is located. • Off: The server is not located.
Connection status indicator	• Green light: indicates Gigabit Link. • Orange Long: Indicates Fast Link. • Off: Ten Mega Link.
Data transmission status indicator	• Yellow (blinking): Indicates that data is being transmitted. • Off: No data transmission.
NMI button	The NMI button can trigger the server to generate a non-maskable interrupt. You can press the NMI button manually or remotely through the iBMC Web interface. **NOTE** • The NMI button is mainly used when the operating system cannot be used. This function should not be used during normal server operation. • The NMI button is only used for internal debugging. When it is used, it needs the corresponding NMI interrupt handler in the operating system. Otherwise, the system may crash. Please use it with caution.

3.3 Mainboard Structure Description

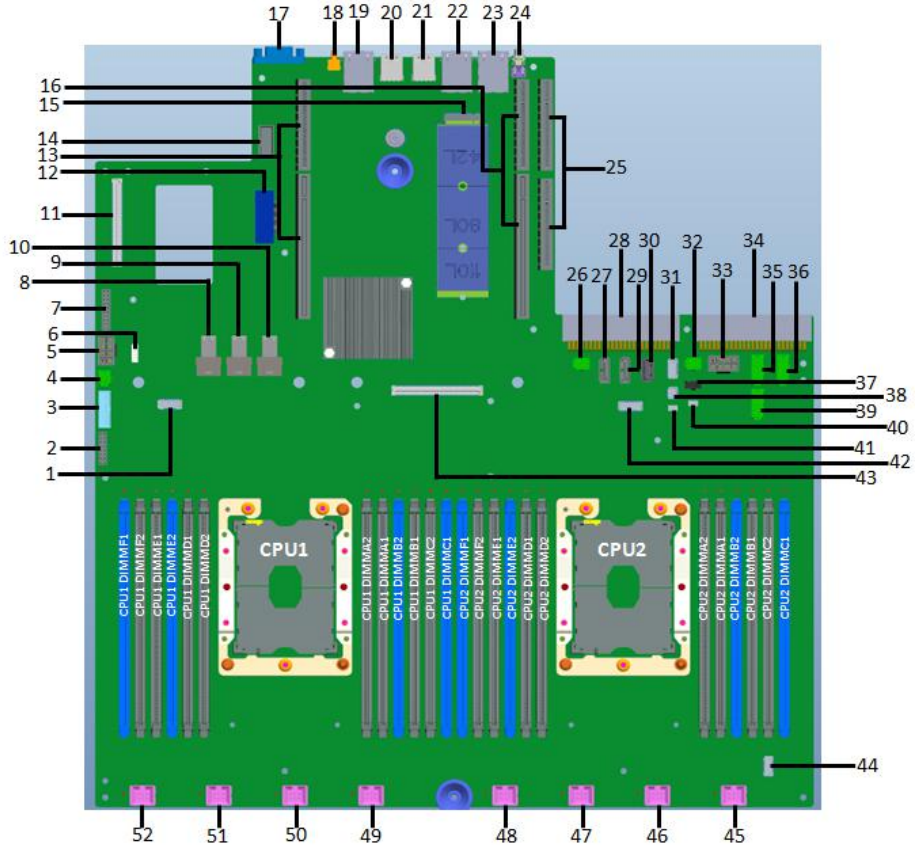
The mainboard features are as follows:

- CPU uses Intel LGA3647-P0 SKY-LAKE processor; (Remark: CPU supports normal and SKY-Fabric processors.)
- Each CPU supports six channels of DDR4, two DIMMs per channel, RDIMM/LRDIMM. Each CPU supports a maximum capacity of 1.5TB;
- DDR4 type: DDR4-1866/2133/2400/2666 ECC-RDIMM, ECC-LRDIMM;
- There are three PCIe RISER slots on the board. Among them: RISER1 24 PCIe LANs are all from CPU1, RISER2's 24 LANEs are from CPU2, and RISER3's 16 PCIe LANEs are also from CPU2.
- There are two MEZZANINE CONNs on the main board to insert the SAS daughter board and I/O daughter board. The supported SAS daughter boards include: LSI3008 and PMC8068; Supported I/O daughter boards: I350-AM2/AM4, JL82599ES, X710L -BM1, X710L-BM2;
- One PCIe PORT: X4 LANE-to-PCIe M.2 SLOT leads out from the CPU 1 on the mainboard and supports PCIe M.2 storage media;
- Two Gigabit BASE-Ts are integrated on the main board and Intel I350-AM2 chips are used from CPU1;
- Southbridge PCH adopts INTEL LEWISBURG C620 series chipset;
- PCH leads to 14 SATA ports, the highest rate: 6Gb / s, compatible with SATA 1.5Gb / s, 3.0Gb / s; SATA Controller out of 8 SATA PORT, and SSATA out of 6 SATA PORT, which SATA PORT 8 PORT, according to Sequentially introduced into two SFF8643 connectors, and the first four PORTs of SSATA are introduced into one SFF8643 connector, and the second two PORTs are introduced into the 7PIN SATA connector to access the SATA DOM and DVD;
- The BMC chip in the single board adopts ASPEED's AST2500 control chip and is used for IPMI remote management. Debug port, VGA output, dedicated Gigabit RJ45, and RMII/NCSI connection to I350-AM2 for sharing the I350-AM2 network ports.

- **The system architecture board diagram is as follows:**



- **The interface description is as follows:**



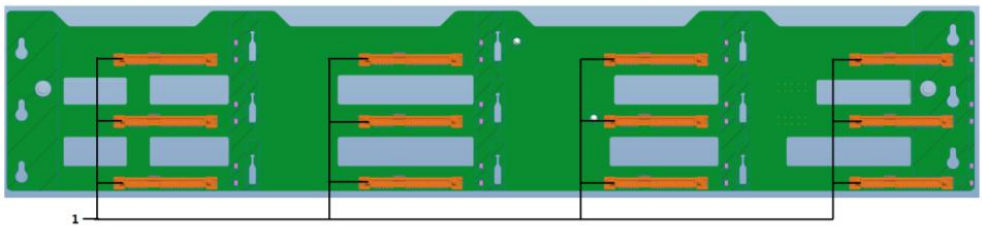
1	HFI CPU1 SIDEBAND	2	FP VGA CONN
3	FP USB3.0 CONN	4	HDD PWR3
5	GPU PWR2 (RISER1)	6	RAID KEY
7	LPC TPM	8	MINI HD SATA PORT2
9	MINI HD SATA PORT0	10	MINI HD SATA PORT1
11	MEZZCONN 0	12	MCP XDP
13	RISER1(PCIe3.0X24)	14	RS232
15	M.2 CONN	16	RISER2(PCIe3.0X24)
17	VGA	18	NMI BUTTON
19	DEDICATED LAN	20	USB2
21	USB1	22	Ethernet 2
23	Ethernet 1	24	ID BUTTON
25	RISER3(PCIe3.0X16)	26	HDD PWR2
27	SATA DOM/DVD1	28	Power Module 2 Connector (J2)
29	SATA DOM/DVD2	30	USB3.0 CONN
31	LED CONN2	32	HDD PWR1
33	GPU PWR 1(RISER2)	34	Power Module 1 Connector (J1)
35	BP PWR3	36	BP PWR1
37	CD_PWR1	38	LED CONN1
39	BP PWR2	40	DOM_PWR2
41	DOM_PWR1	42	HFI CPU2 SIDEBAND
43	MEZZCONN 1	44	FP_CON1

45	FAN8(FAN14/15)	46	FAN7(FAN12/13)
47	FAN6(FAN10/11)	48	FAN5(FAN8/9)
49	FAN4(FAN6/7)	50	FAN3(FAN4/5)
51	FAN2(FAN2/3)	52	FAN1(FAN0/1)

3.4 Hard Disk Backplane Assembly

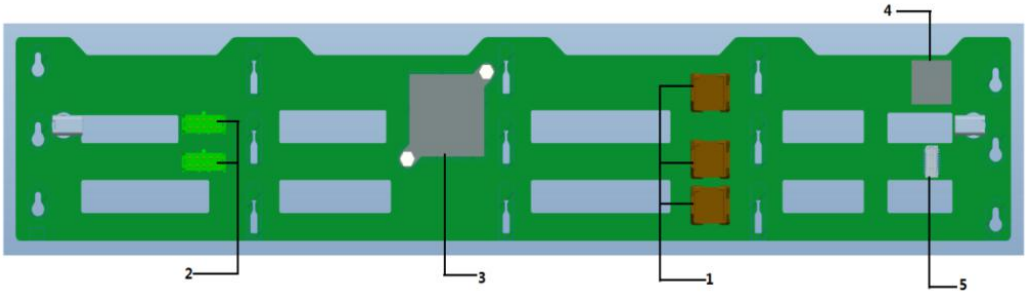
- **2U 12 3.5″ expansion backplane as shown**

Top face:



ITEM	Description	Function	Location
1	SAS/SATA hard disk connector	1. Maximum support 12G/b SAS hard drive; 2. Maximum support 6G/b SATA hard disk; 3. Support SAS/SATA hard disk hot swap.	J5、J6、J7、J8、J9、J10、J11、J12、J13、J14、J15、J16

Bottom surface:

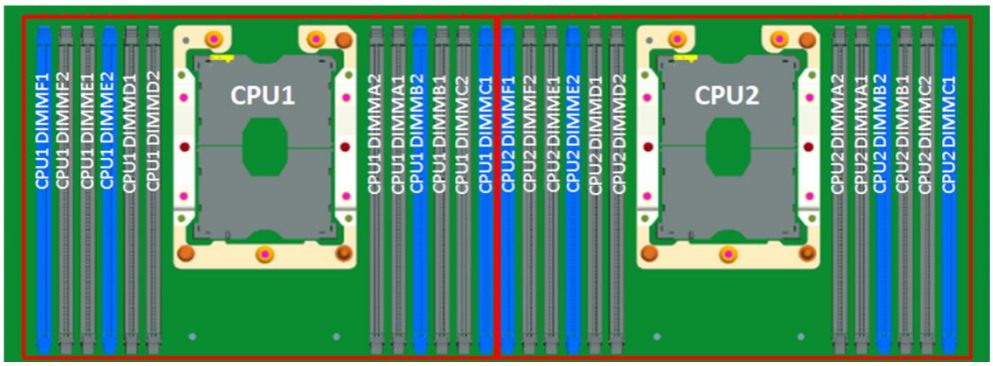


ITEM	Description	Function	Location
1	MINI SAS HD High Speed Connector	For 12G/b SAS or 6G/b SATA signal transmission.	J1、J2、J3
2	Power connector	Backplane power transfer connector for transmission of 12V power.	J7
3	EXPANDER chip	PM8043 SXP 24Sx12G 24-port 12G SAS Expander	U1

4	Programmable logic device	Used to control the backplane hard disk indicator.	U4
5	REAR BP LED Connector	Used to control the rear hard disk indicator.	J18

3.5 DIMM Slot Location

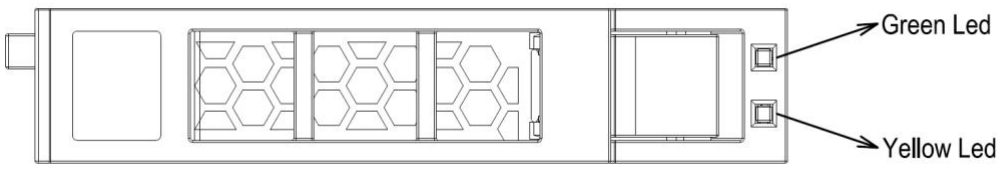
The server supports Intel® Xeon® Scalable processors and provides 24 DDR4 DIMM slots, 1866/2133/2400/2666MHz. The location of slots as shown below:



3.6 Hard Disk Label

- **2U12 3.5 inch disk type**

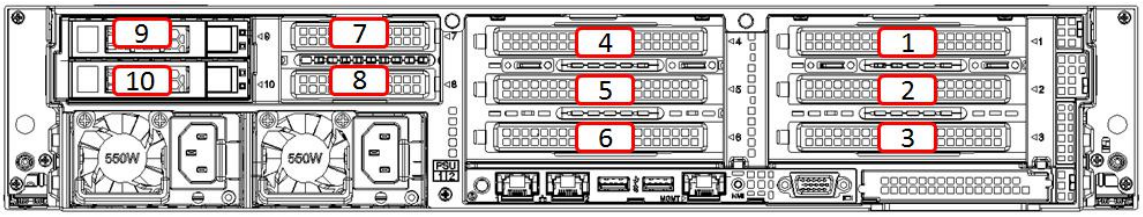
3.7 Hard Disk Indicator



Hard disk status	Green LED	Yellow LED
Hard disk is not in place	OFF	OFF
Hard disk in place, but no data activity	ON	OFF

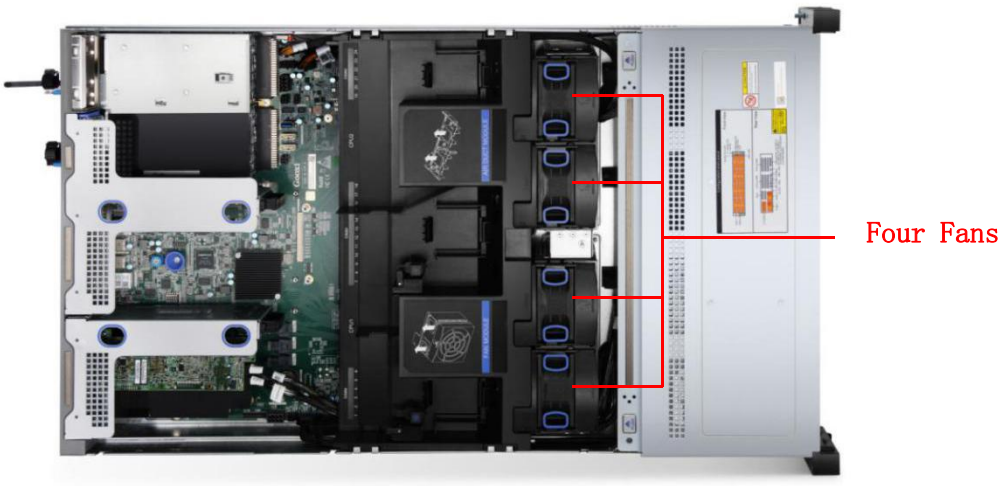
Hard disk in place, and normal activities	The flash frequency of the hard disk itself	OFF
Hard disk failure	N/A	ON
Hard disk is positioned	N/A	4HZ blinks
Hard disk is in Rebuild state	N/A	1HZ blinks

3.8 PCIe Slot Distribution Rear Overview



- The slot provided by I/O module 1 is Slot 9 ~ Slot 10; the slot provided by I/O module 2 is Slot 4 ~ Slot 8; the slot provided by I/O module 3 is Slot 1 ~ Slot 3.
- 2.5" HDD or SSD can be connected on the I/O module 1
- The I/O module 2 can be connected to the hard disk module and the PCIe expansion module. The Slot 7 to Slot 8 can only connect to the 2*PCIeX8 or 1*PCIeX16. When the 3.5” hard disk module is connected, the Slot 4 to the Slot 6 cannot receive any other extensions. Module; When connected to a 2.5” hard disk module, Slot 4 to Slot 5 are occupied and can only expand 1* PCIeX8; when Slot 4 to Slot 6 use two PCIe riser modules, Slot 5 is unavailable.
- The I/O module 3 can be connected to a hard disk module and a PCIe expansion module. When a 3.5" hard disk module is connected, Slot 1 to Slot 3 cannot be connected to any other expansion module; when a 2.5" hard disk module is connected, Slot 1 to Slot 2 is occupied, can only expand 1* PCIeX8; When Slot 1 ~ Slot 3 adopts PCIe riser module of 2 slots, Slot 2 is not available.

The server supports variable fan speeds. In general, the fan rotates at the lowest speed. If the server temperature increases, the fan will increase the speed to cool down.



Chapter Ⅳ Installing System Components

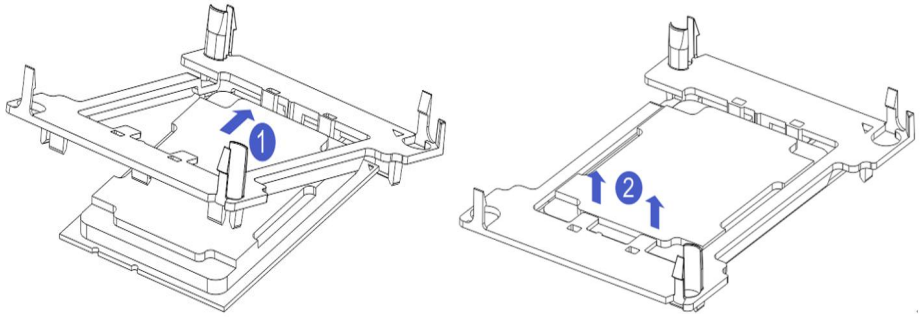
4.1 CPU Installation

Install the processor:

Step 1: CPU installation

1-1. Tilt the CPU angle as shown in the figure, and align the A1 angle (triangle mark) to the end of the holding plate.

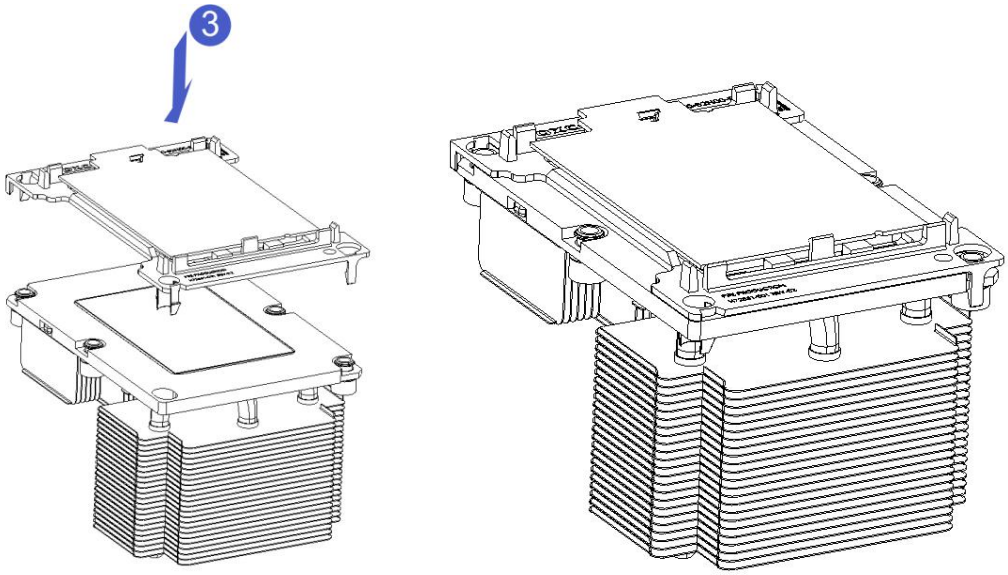
1-2. Press the other end of the holding tab in the direction of the arrow to secure the CPU to the holding tab.



Step 2: Install the CPU on the heat sink to ensure that the surface of the CPU and heat sink is clean, free of oil and foreign matter. (As shown below)

2-1. Apply approximately 0.4 ml volume of thermal grease to the CPU and apply evenly.

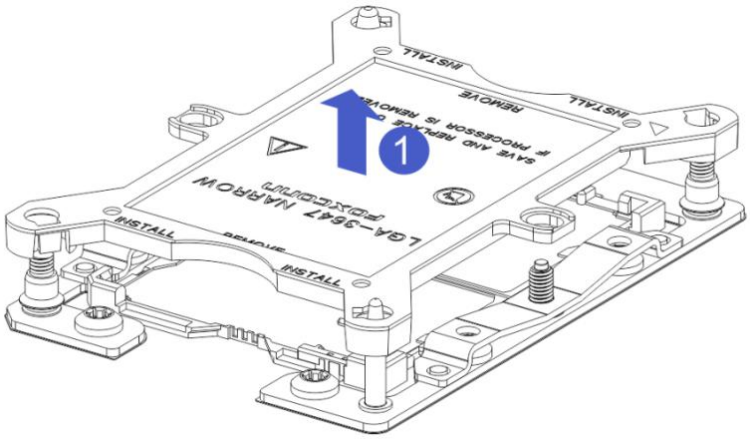
2-2. Align the A1 corner (triangle mark) and attach the CPU to the heat sink.



4.2 Radiator Installation

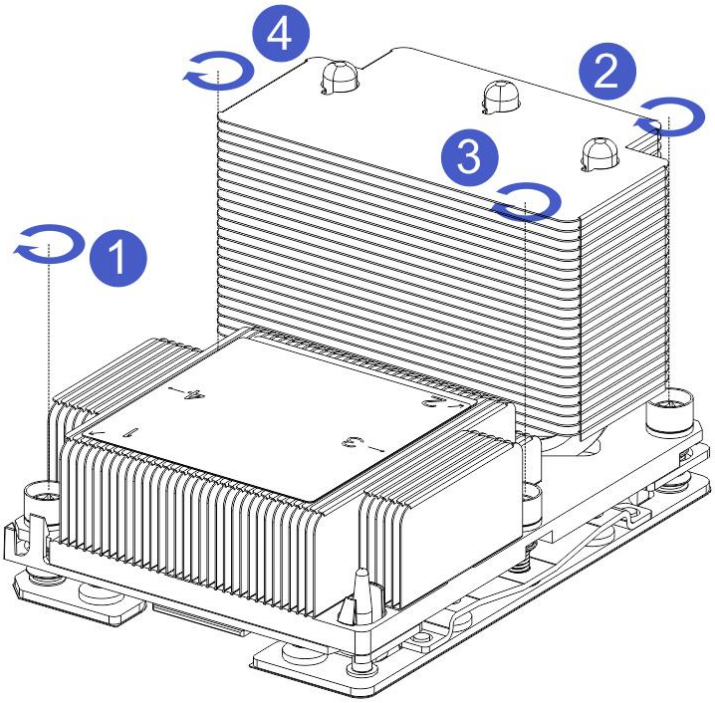
Installation steps:

1. Remove the processor blanking plate (shown below)



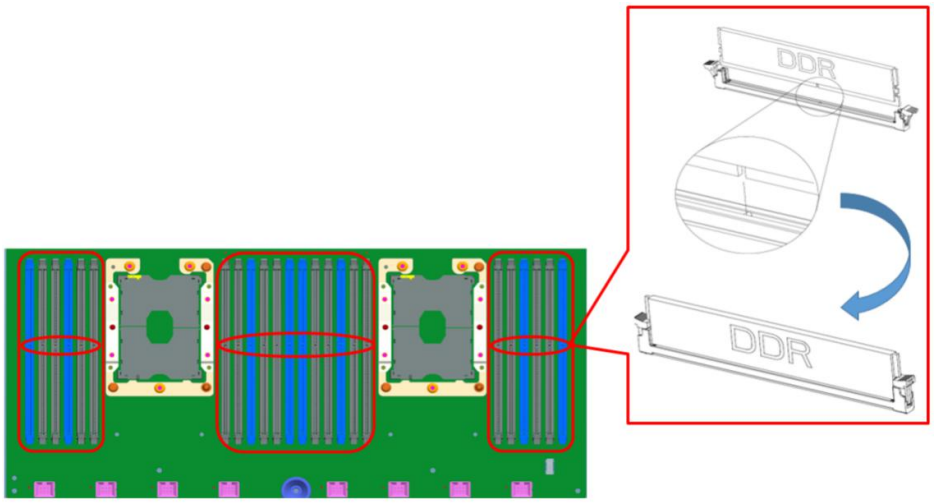
2. Align the heat sink with the heat sink retention studs on the CPU base, and tighten the heat sink retention screws as indicated. (As shown below).

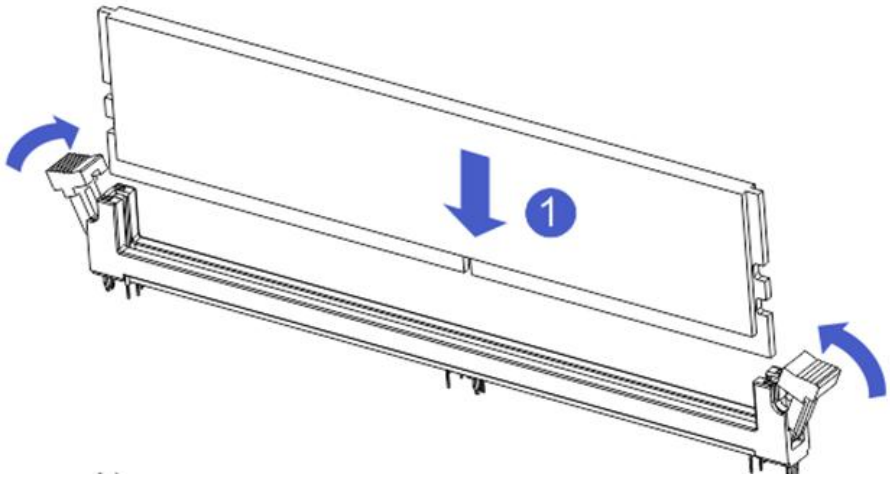
Note: The pins on the motherboard are extremely fragile and easily damaged. To avoid damaging the motherboard, do not touch the processor or processor socket contacts.

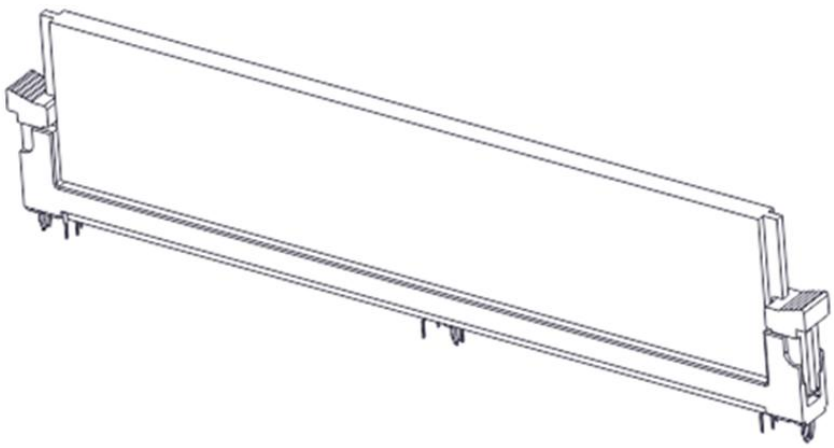


4.3 Memory Installation

The eight memory slots controlled by the mainboard CPU 1 are: DIMMA1, A2, DIMMB1, B2, DIMM C1, C2, and DIMMs D1, D2; the eight memory slots controlled by the CPU 2 are: DIMME1, E2, DIMMF1, F2 , DIMMG1, G2 and DIMMH1, H2, should pay attention to the memory of the gap with the DIMM slot gap, each DIMM module vertically snap into place to prevent the incorrect installation.





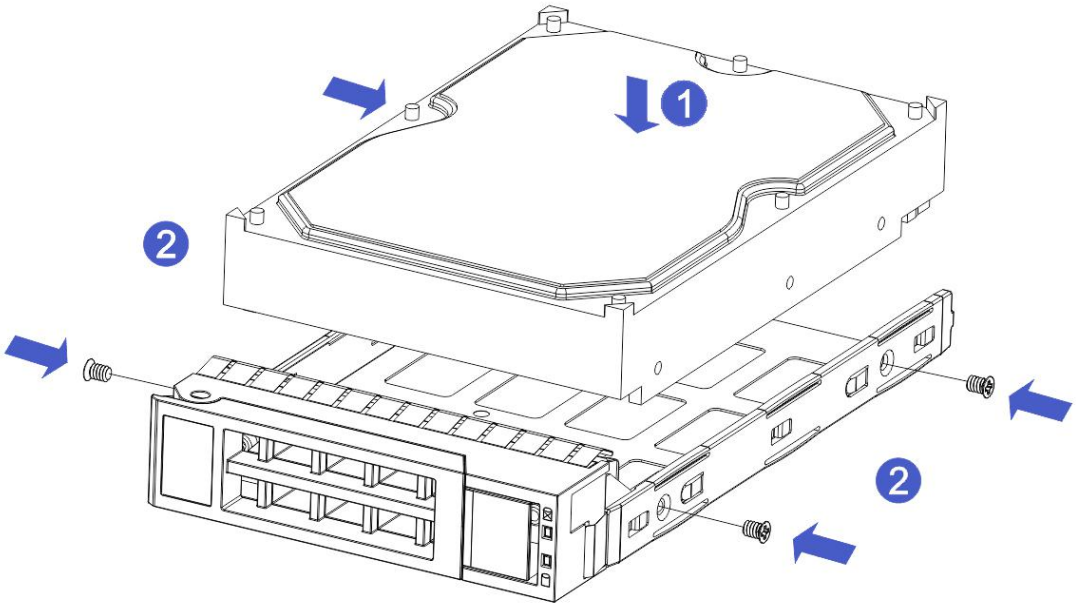


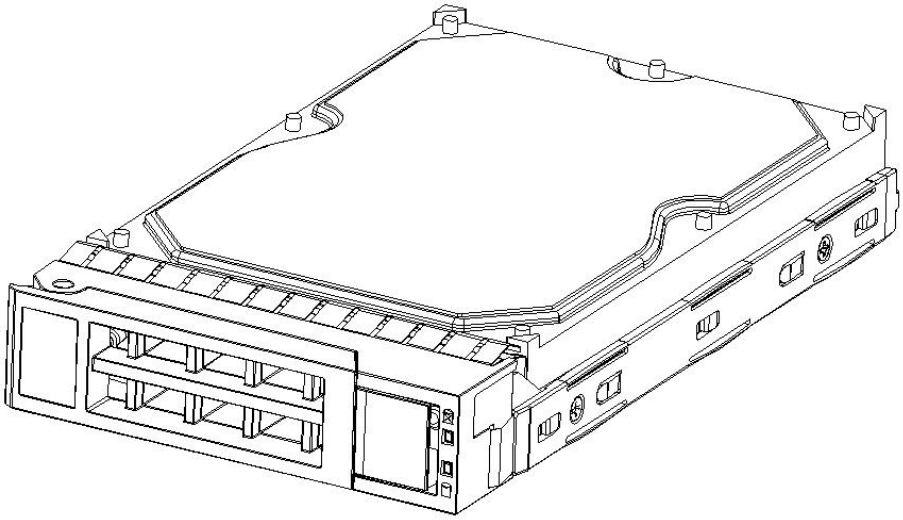
4.4 Hard Disk Installation

Installing a 3.5-inch hard disk

1-1. Put the hard disk in the tray

1-2. There are 4 countersunk screws on the left and right sides to lock the hard disk (the screw head must not protrude from the slide surface on both sides of the tray)

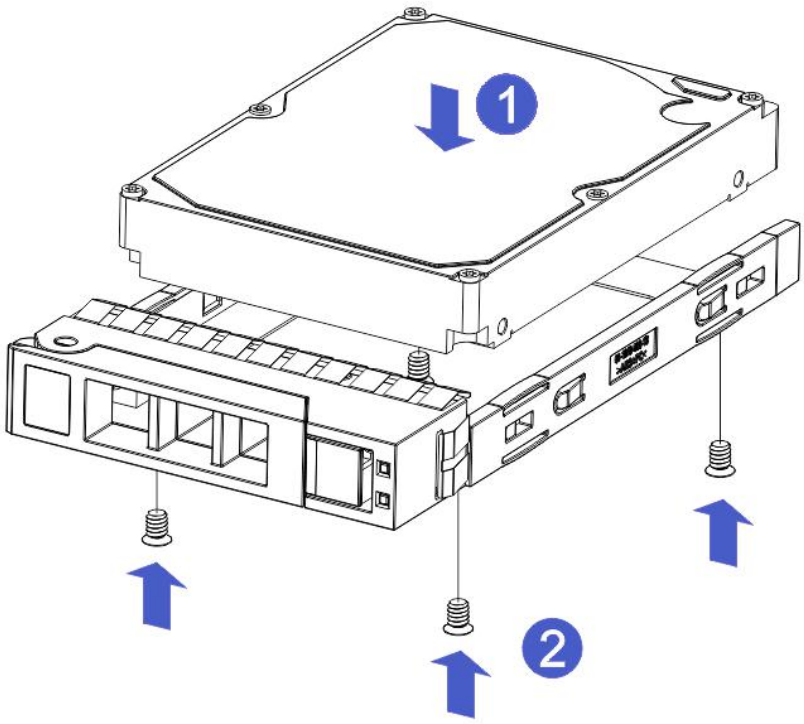


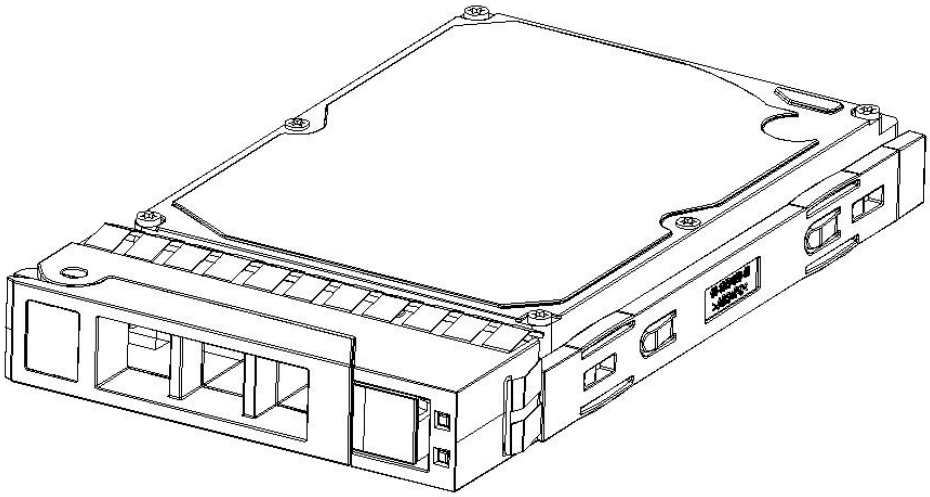


Installing a 2.5-inch hard disk

1-1. Put the hard disk in the tray

2-2. The bottom four countersunk screws lock the hard disk (screw head protrudes from the underside of the tray)



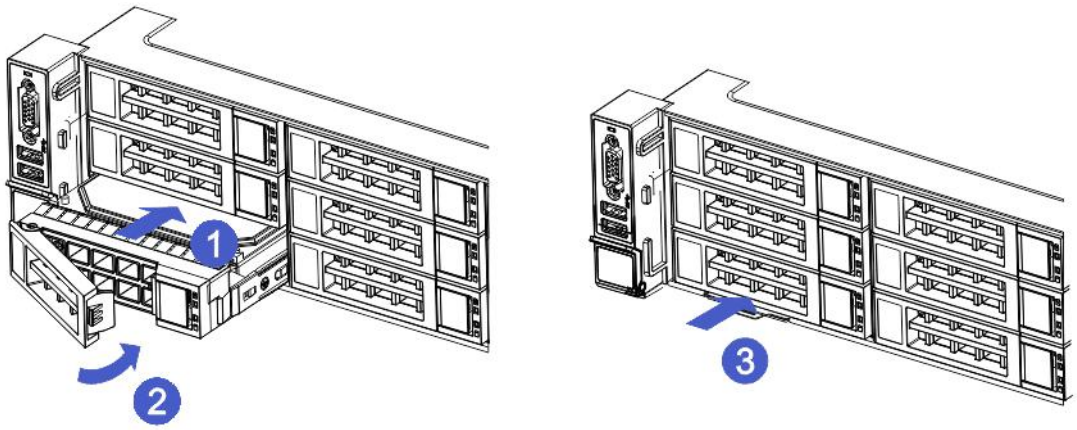


Hard disk tray assembly installed in the chassis

1-1. With the hard disk wrench open, push it into the chassis

1-2. When the hard disk gold finger touches the backplane device, turn the wrench in the direction of the arrow.

1-3. Hard Disk Installation in Place



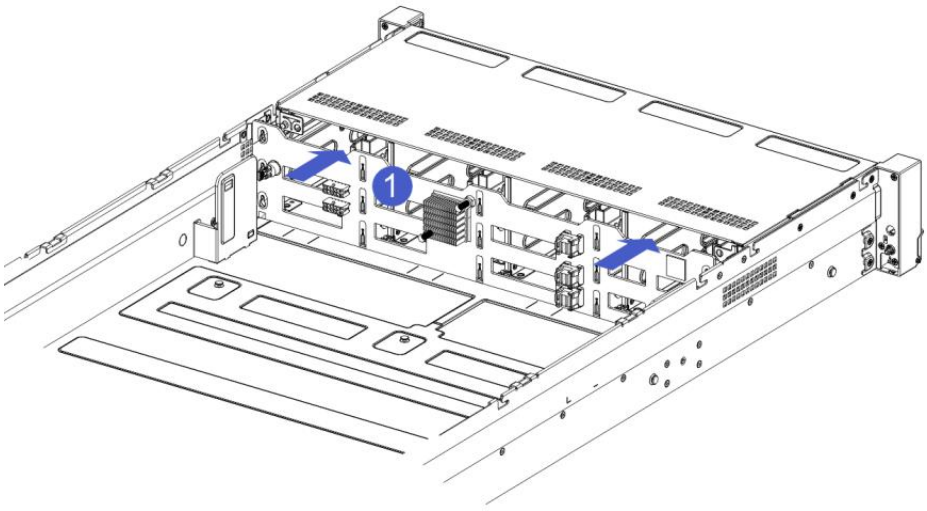
4.5 Front Hard Disk Backplane Installation

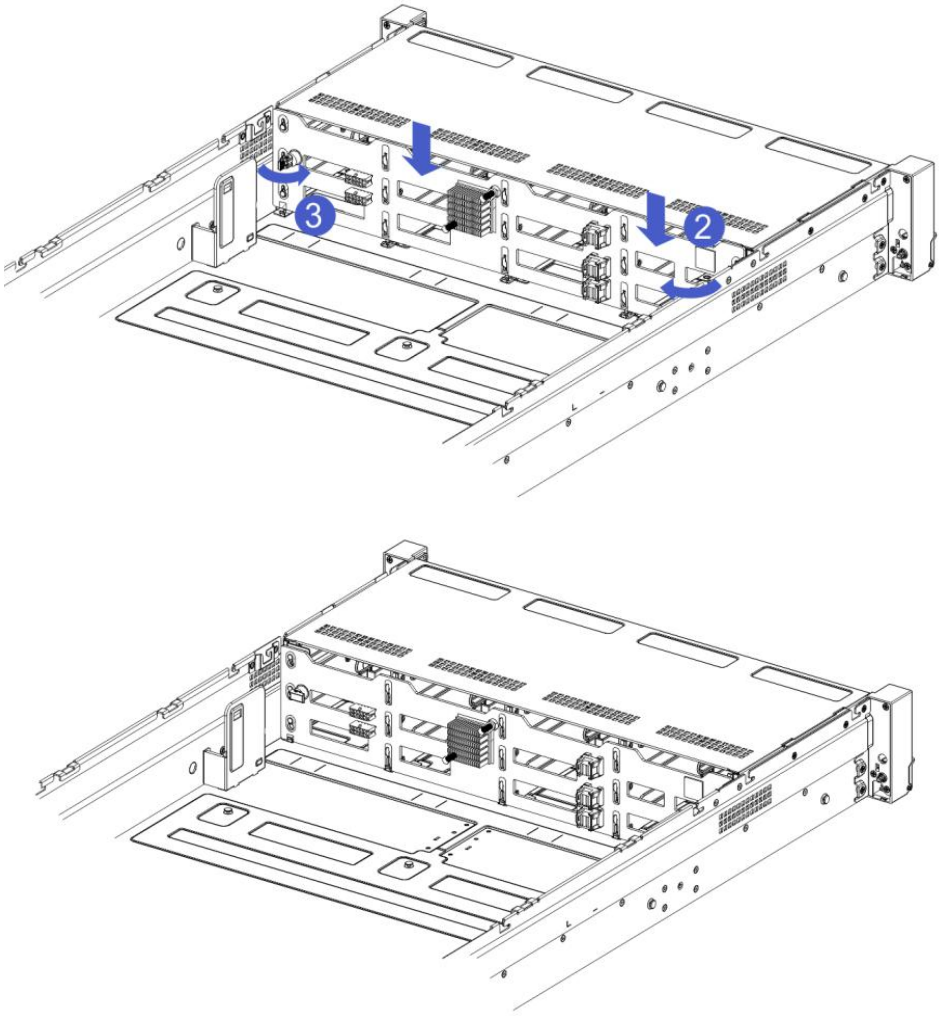
Front hard disk backplane installation

1-1. The goggle holes and hanging holes on the left and right sides of the hard disk backplane are aligned with the pegs of the hard disk frame and pushed in the direction of the arrow.

1-2. After the hard disk backplane is pushed fully into place, press down on the backplane until the gourd nails and holes on both sides are in place.

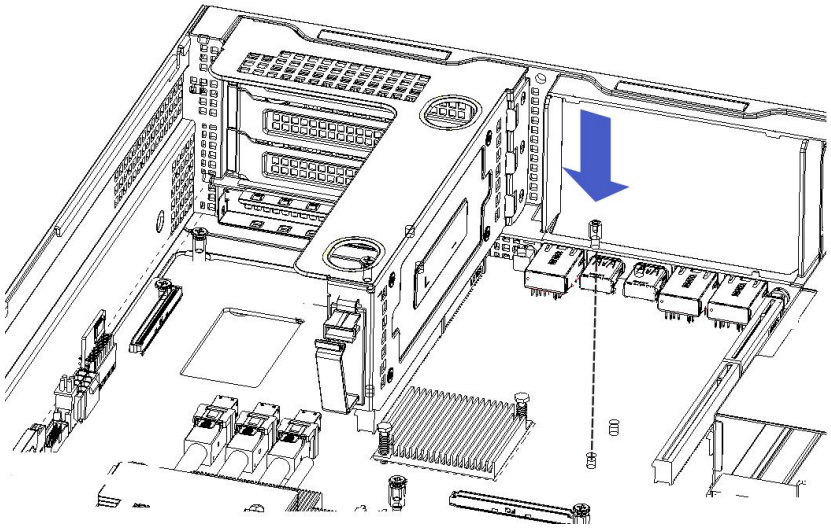
1-3. Flip the left and right fasteners on the hard disk backplane.





4.6 M.2 SSD Installation

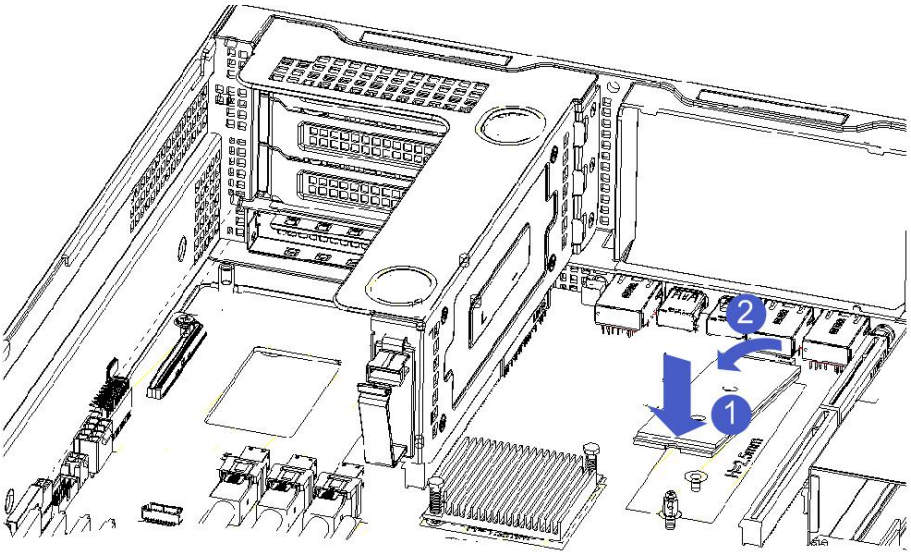
Step 1: Install the positioning studs according to the length of the M.2 card to be installed.



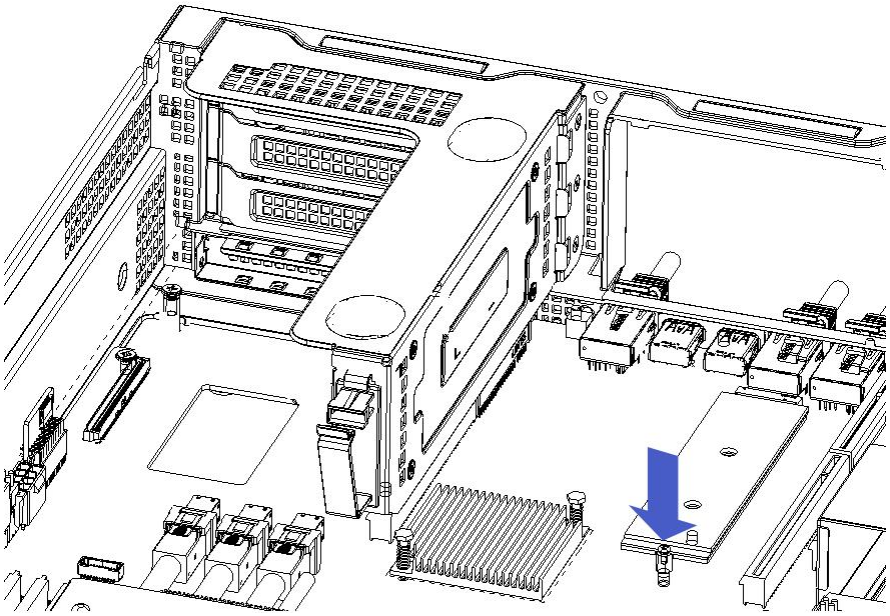
Step 2: Install the M.2 Card

2-1. Insert the M.2 card connector end into the motherboard connector as shown.

2-2. Press the other end of the M.2 card to the positioning stud plane in step 1.



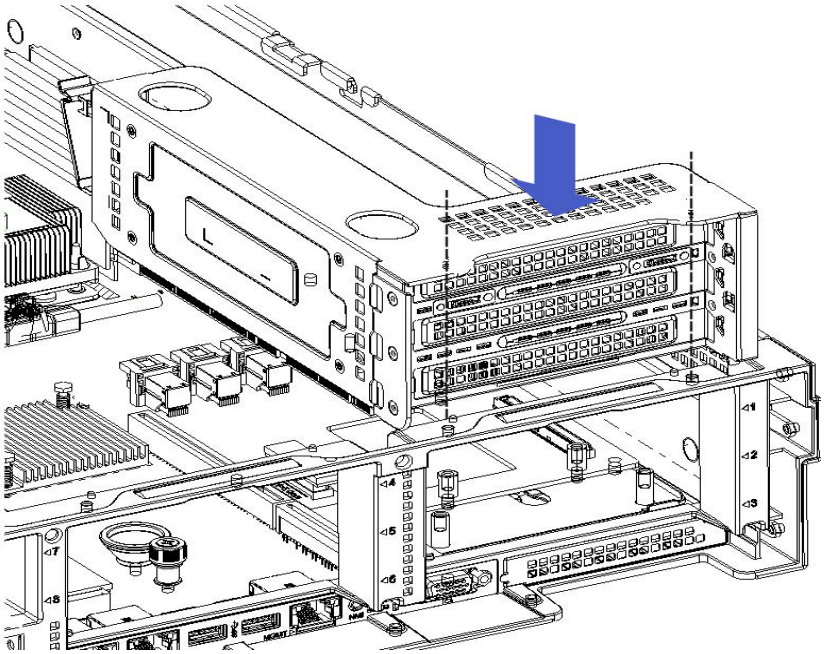
Step 3: Install the M.2 card fixing screws.

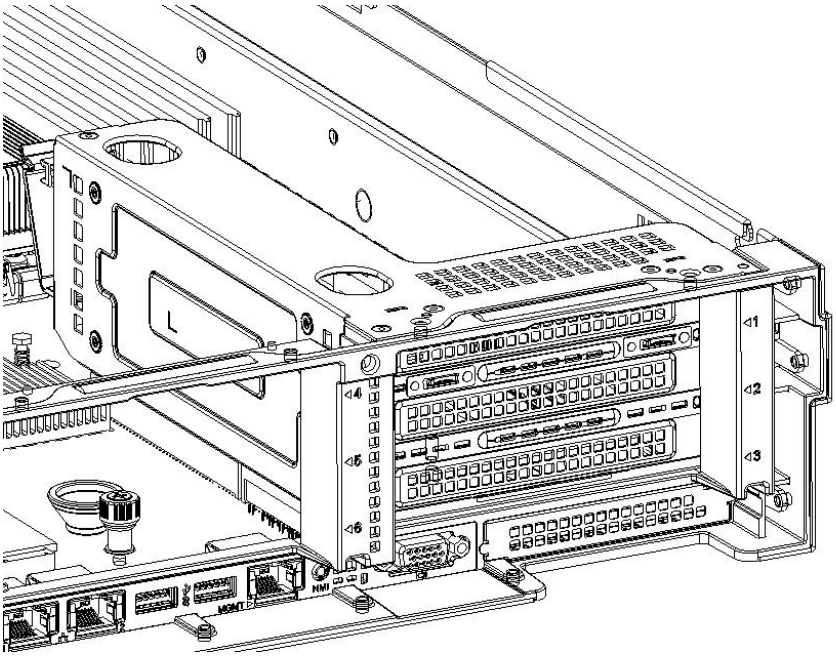


4.7 PCIe Module Installation

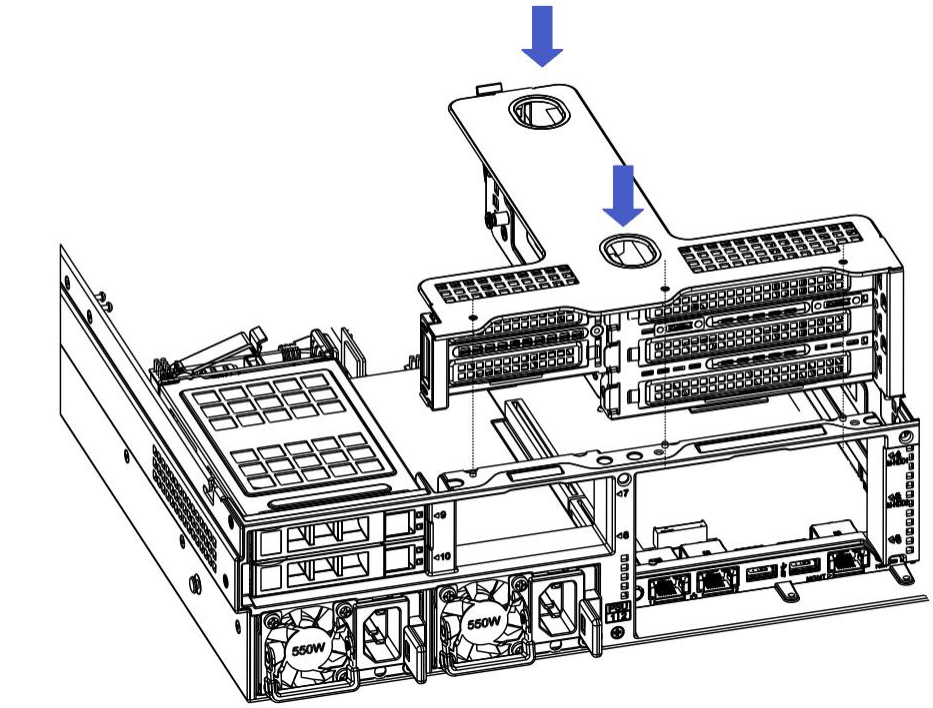
Steps: Rear window PCIe assembly, placed vertically downwards - aligned with the PCIe slot, aligned with the locating hole, placed flush with the rear window.

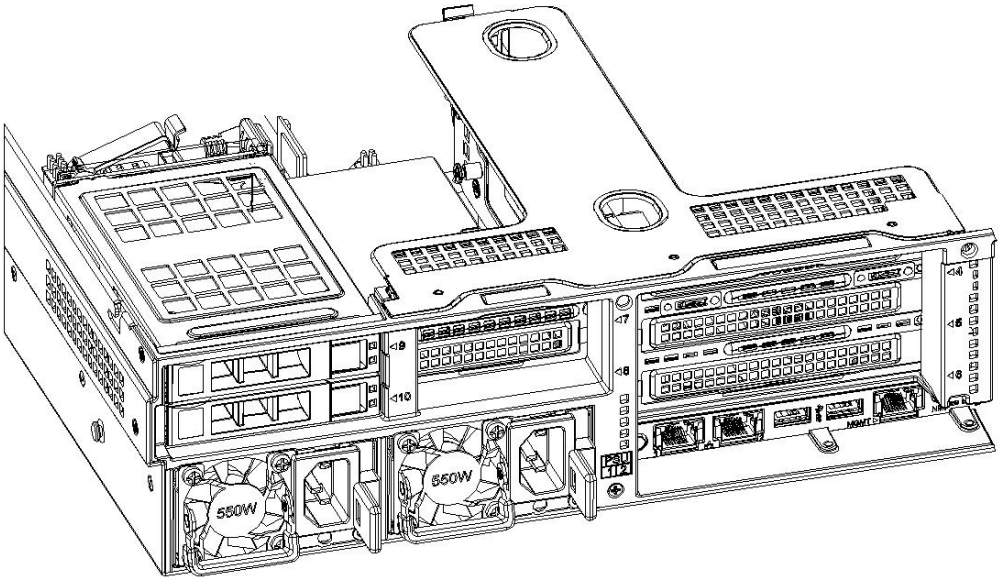
- **I/O module 3 installation method:**





- **I/O module 2 installation method:**





4.8 Rear Hard Disk Module Installation

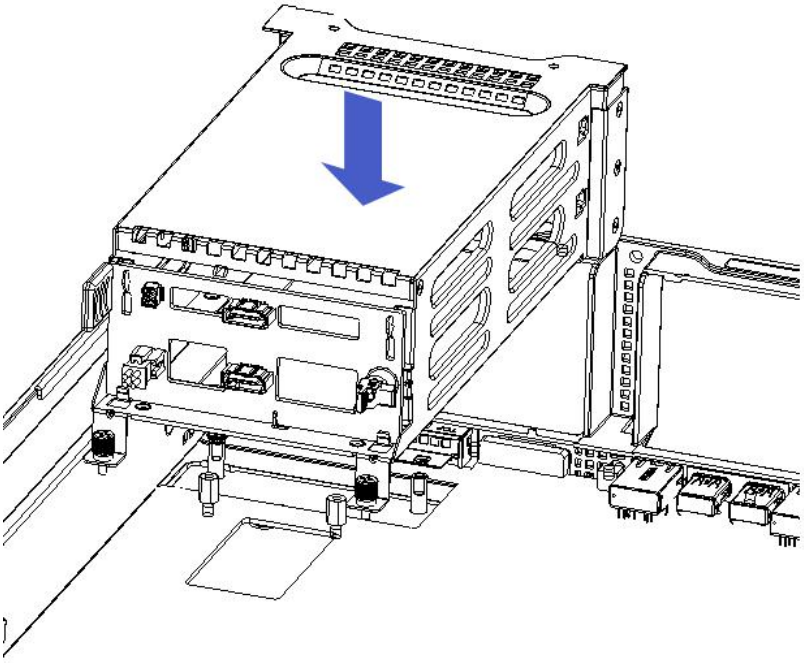
- **Rear HDD tray installation**

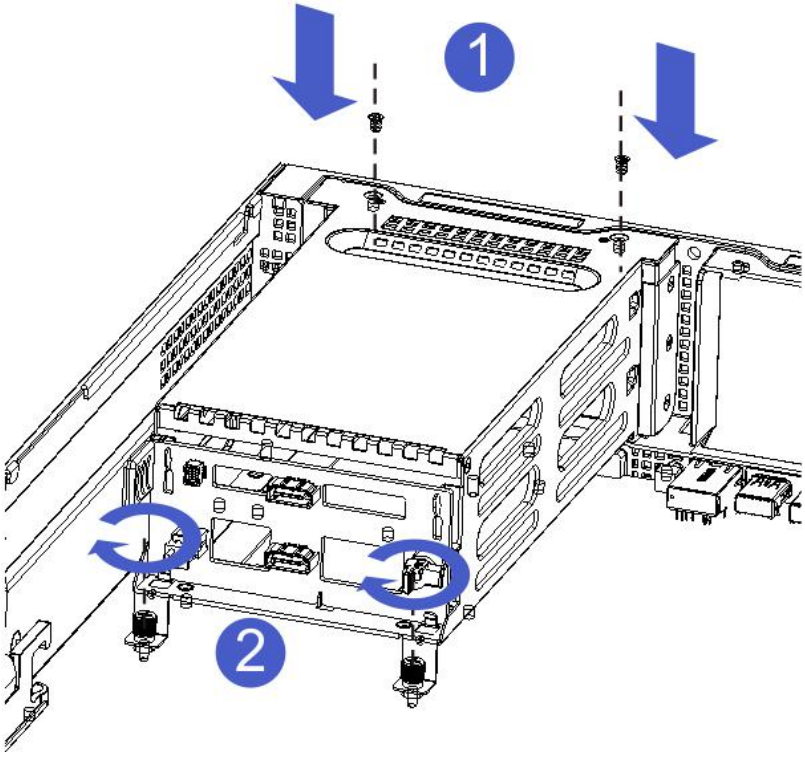
Step 1. HDD tray is placed vertically and flush with the rear window

Step 2. Post-fixed HDD tray assembly

2-1. Lock two countersunk screws

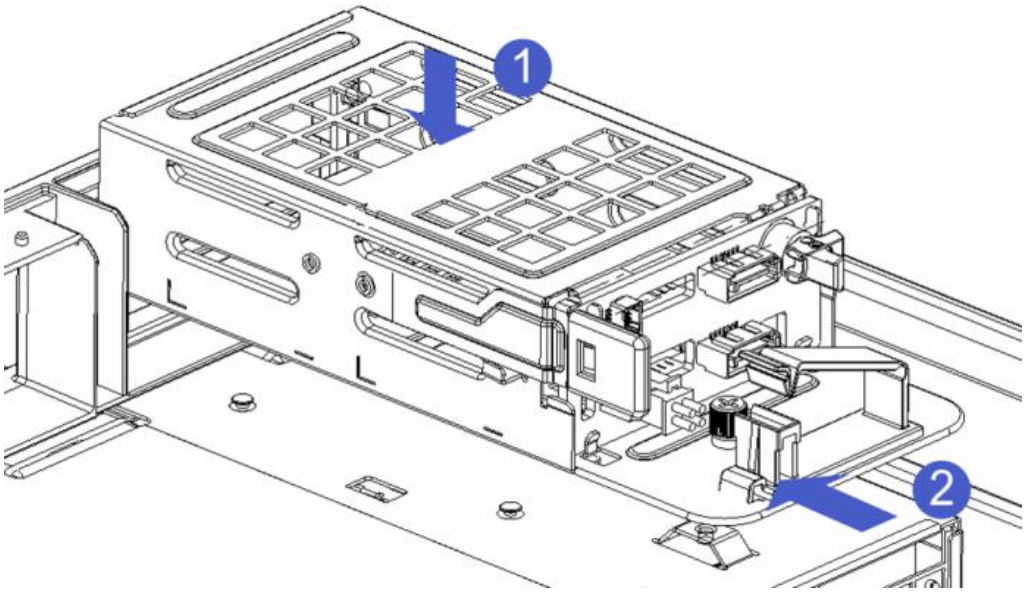
2-2. Lock the two captive screws



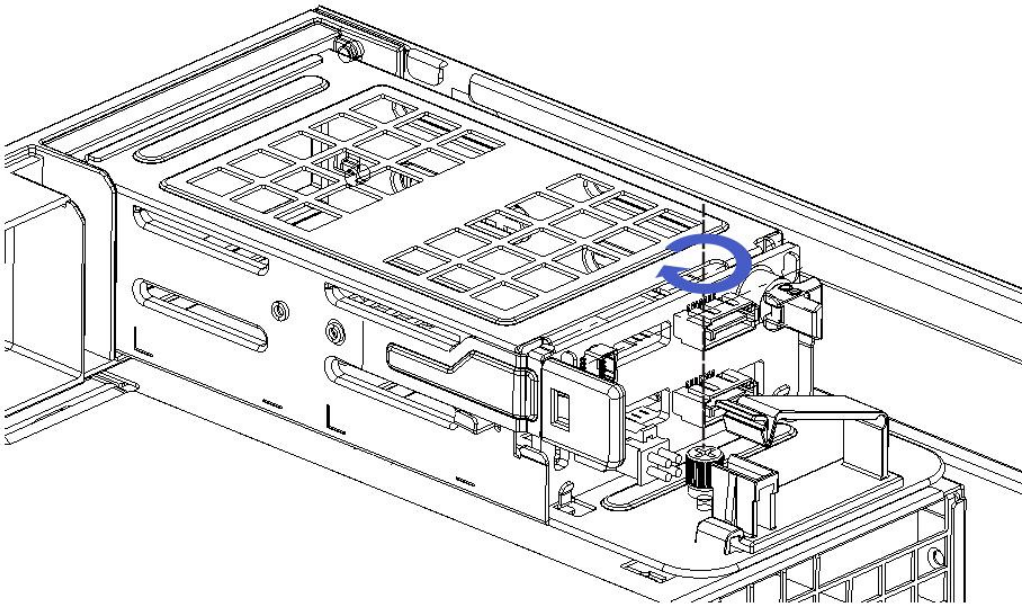


- **I/O Module 1 (2.5-inch HDD tray Rear) Installation**

1-1. Place it vertically downwards and align it with the lower guide pin
1-2. After flattening, push it in the direction of the arrow.



1-3. Locking the captive screw



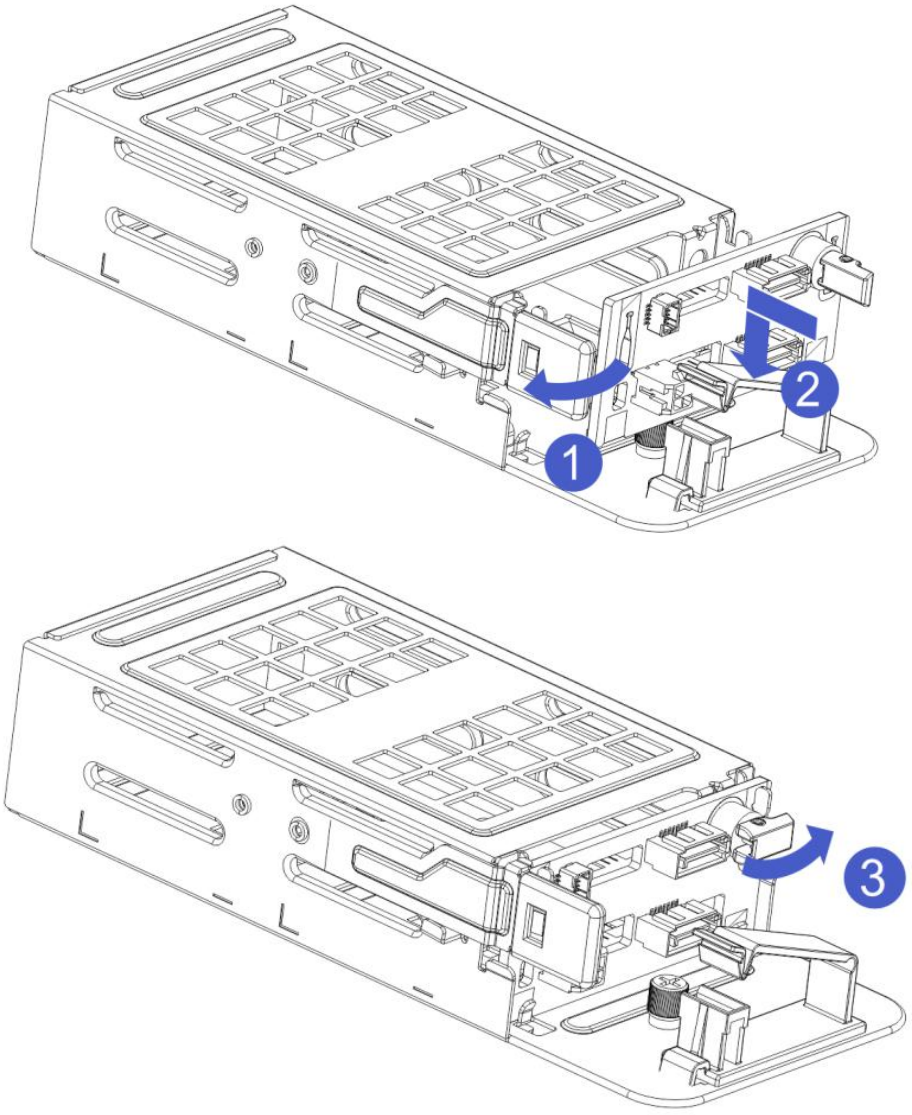
4.9 Rear Hard Disk Module Backplane Installation

Step 1: Rear disk module backplane installation

1-1. Turn the backplane limit spring outwards by hand and press it against your hand - keep the shrapnel open.

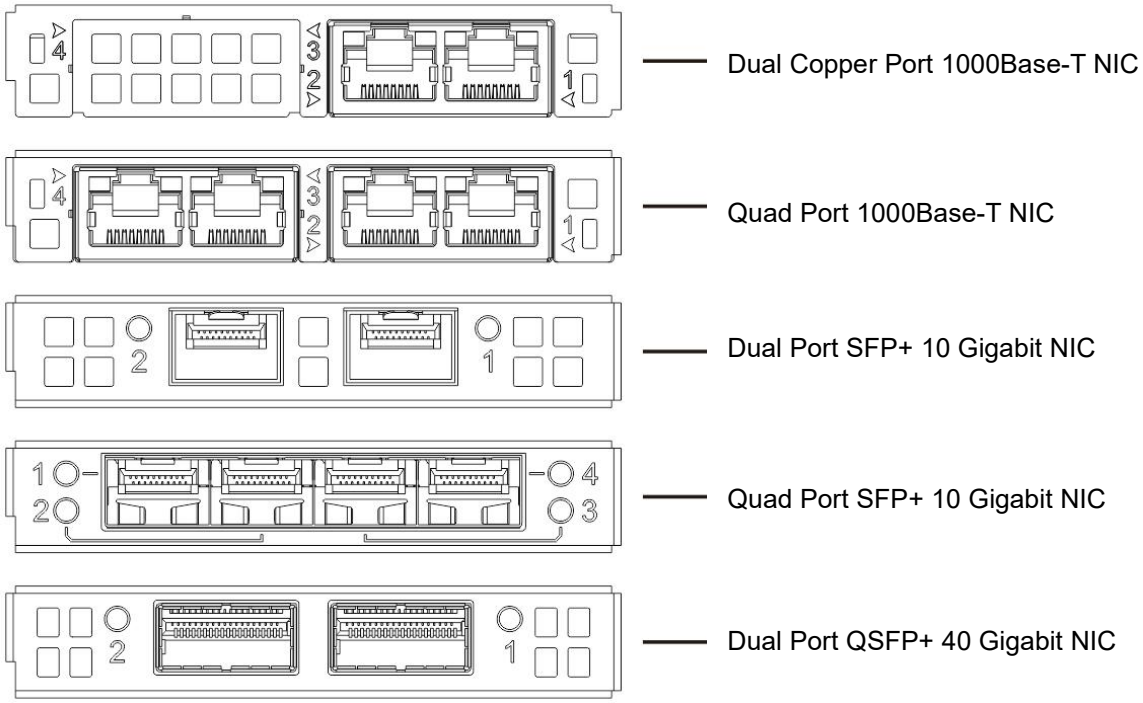
1-2. The hard disk backplane peg holes are aligned with the hard disk module bracket after the pegs are pushed in. After being lowered into place, the hard disk limit spring is released and the shrapnel springs back to its original position automatically.

1-3. Flip the fasteners on the backplane of the hard disk, as shown in the figure - the fasteners can be placed flat.



4.10 Network Module Installation

For server systems, a total of five dedicated expansion network cards have been developed. Each type of network card has a dedicated blank for installation.

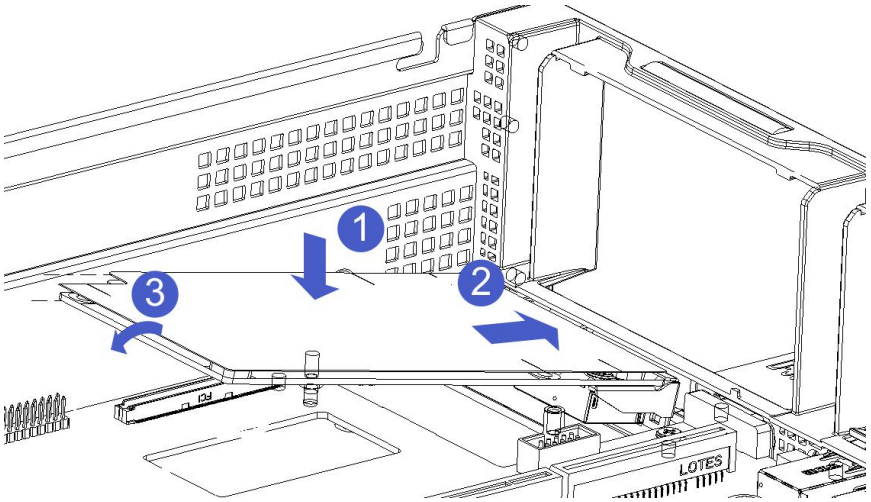


Step 1. Install the back-end expansion network card

1-1. Schematically obliquely downwards

1-2. Align the expansion card window and push it in the direction of the arrow

1-3. After retreating, lay flat

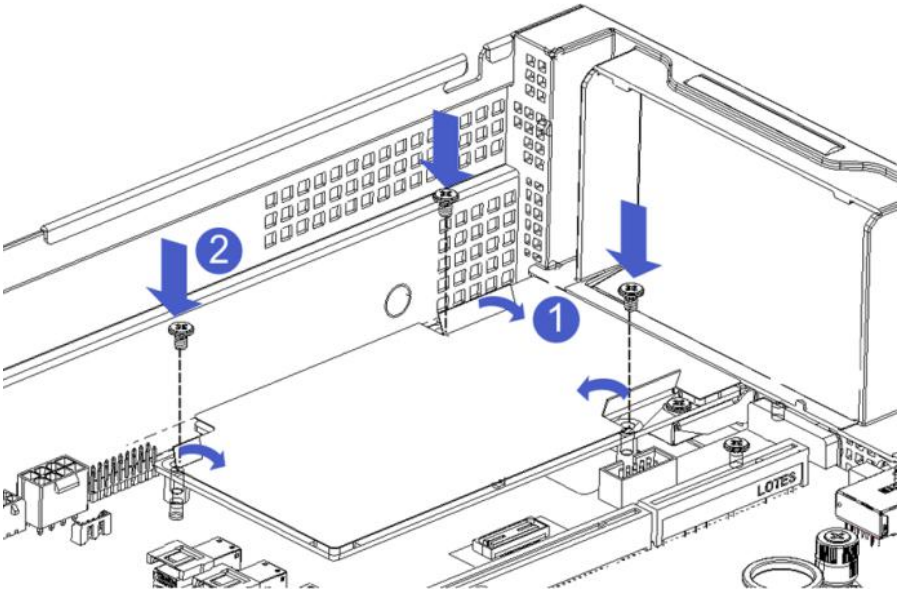


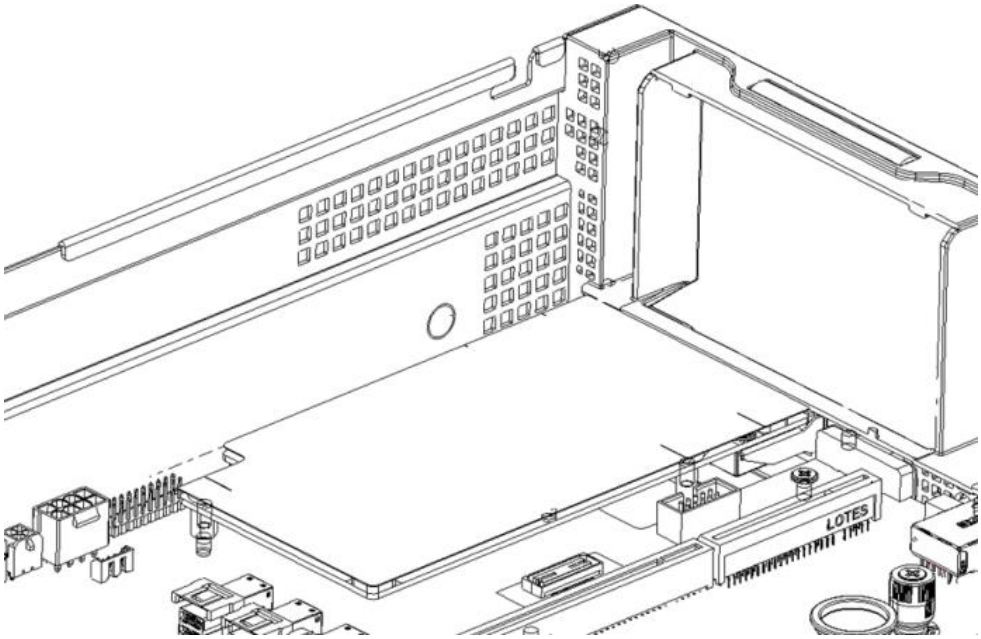
Step 2. Fix the back-end expansion network card

2-1. Turn the insulation pad up and down in the direction of the arrow to leak out the screw holes

2-2. Locking 3 Flathead Screws

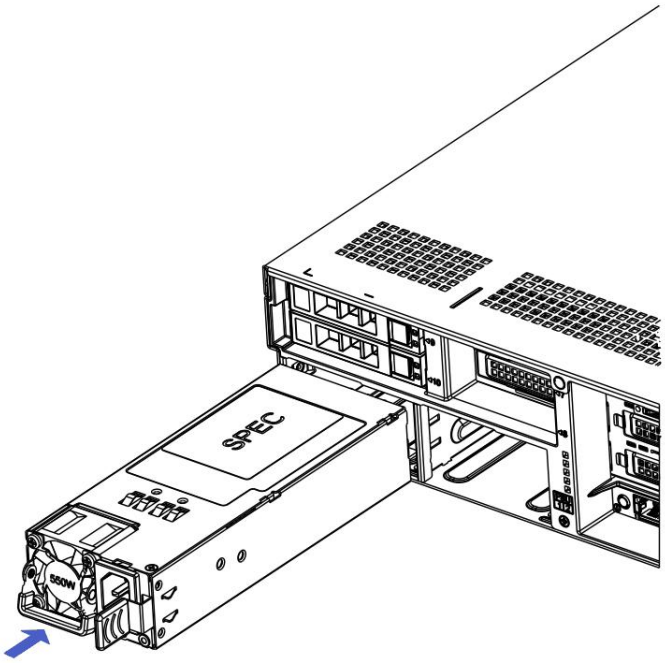
2-3. After the screws are locked, reset and smooth the insulation pad flipped by the 2-1 operation.

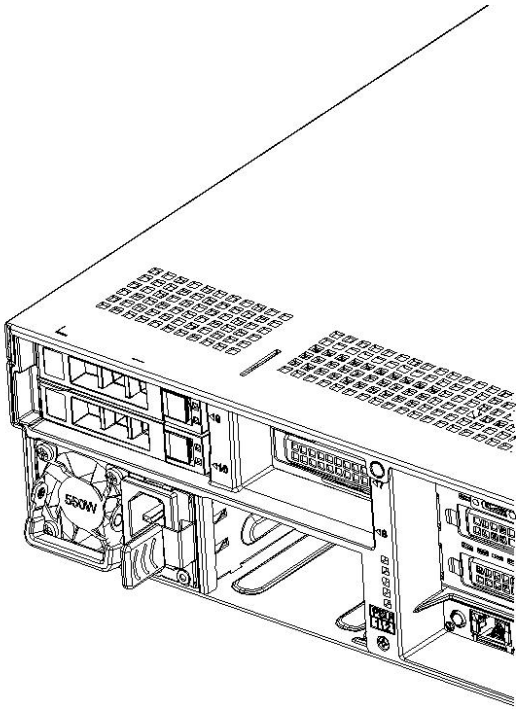




4.11 Power Module Installation

Step: The power supply is pushed in the direction of the arrow, and the shrapnel wrench on the right emits a sound, indicating that it is in place;





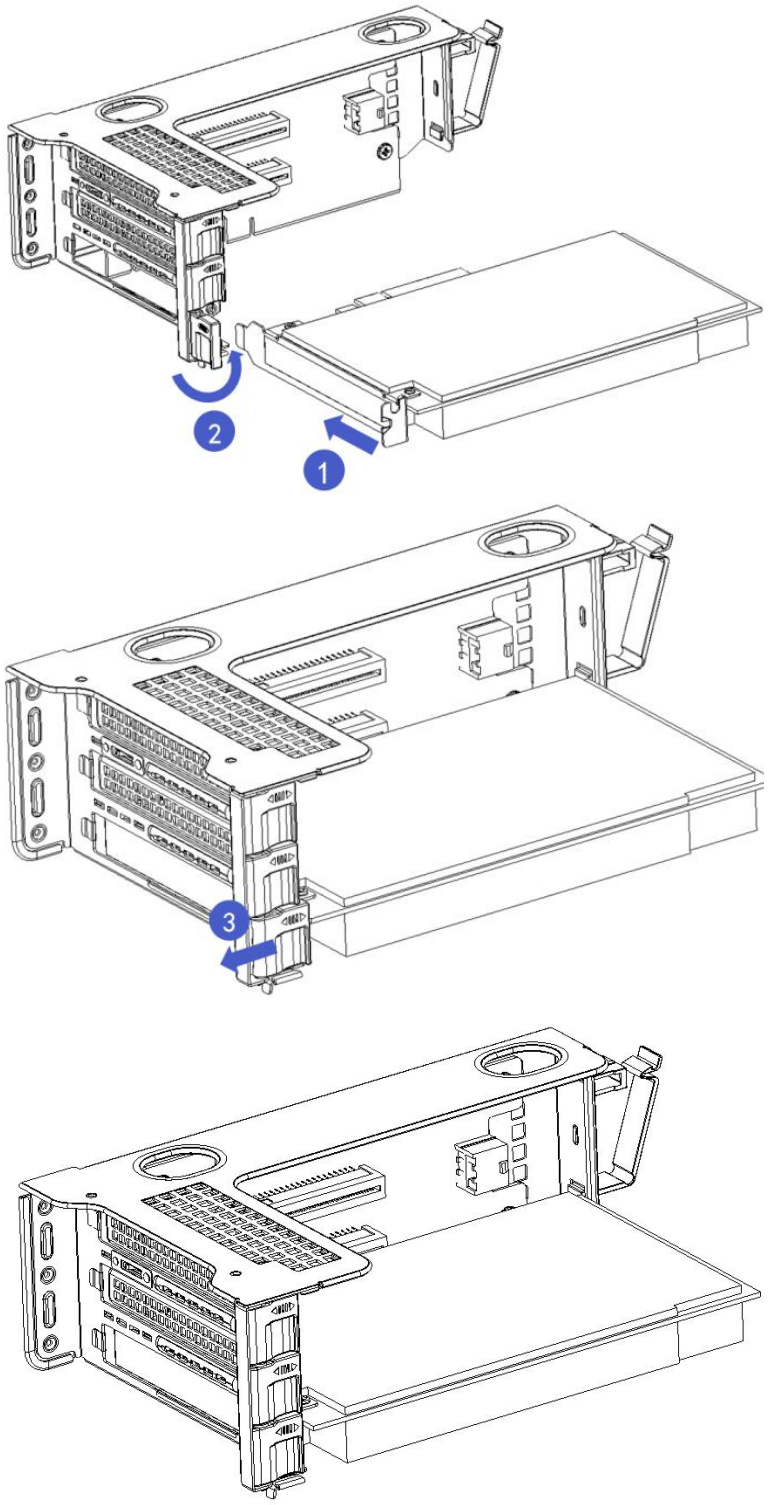
4.12 PCIe Expansion Card Installation

Step: Install the PCIe card

1-1. Load the PCIe card in the direction indicated in the figure

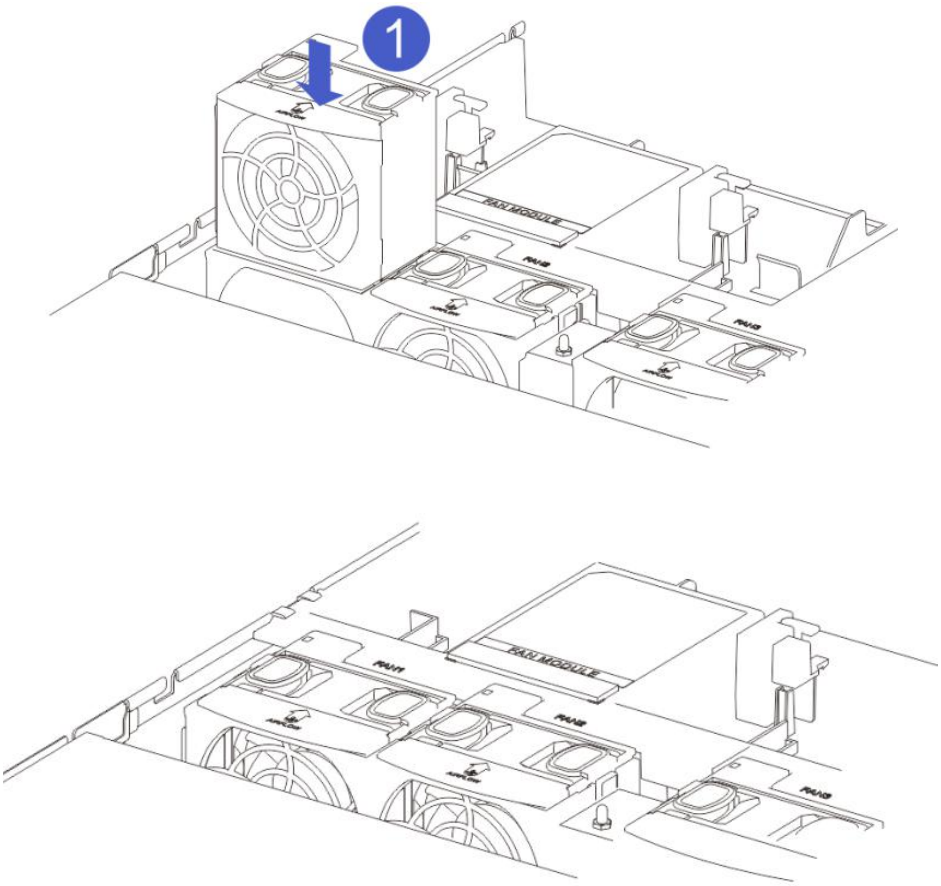
1-2. Rotate the PCIe card lock

1-3. Lock the PCIe card lock according to the arrow scheme



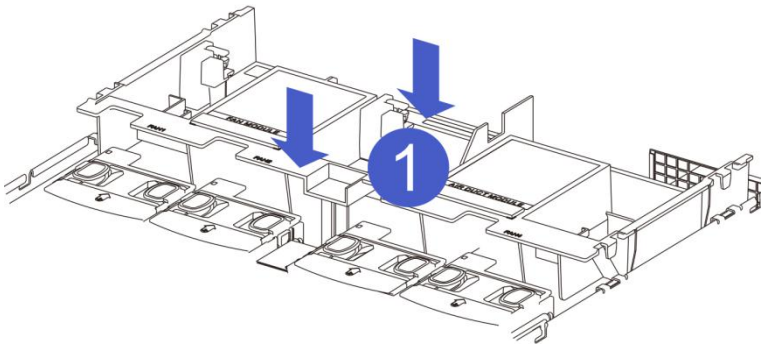
4.13 Fan Module Installation

Steps: Place the fan module vertically downwards by pressing the arrow (Caution that the fan module faces)



4.14 Windshield Installation

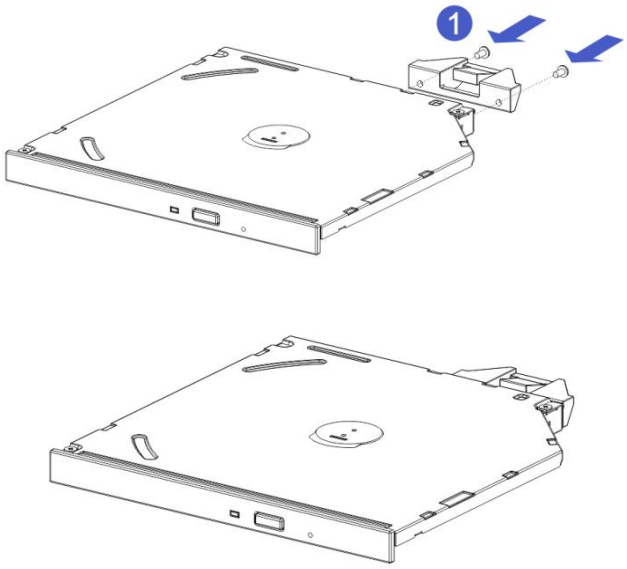
Step: The wind shield module is aligned with the hanging points on the left and right sides and placed vertically downwards - the height is lower than the height of the box



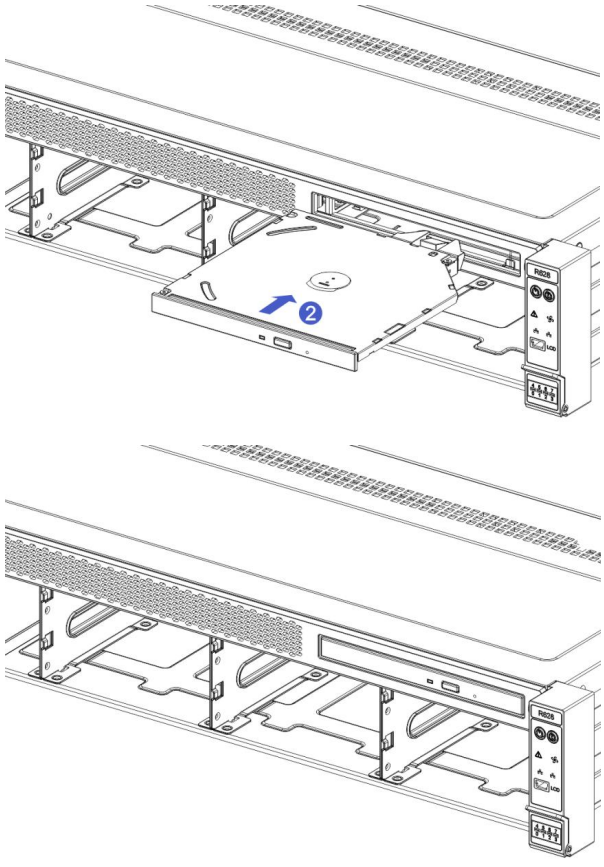
4.15 Optical Drive Installation

Step: Install the optical drive

1-1. Install the optical drive fasteners in the direction of the arrow and tighten the pan head screws



1-2. Align the opening of the optical drive on the chassis and push the optical drive in the direction of the arrow until it locks automatically.

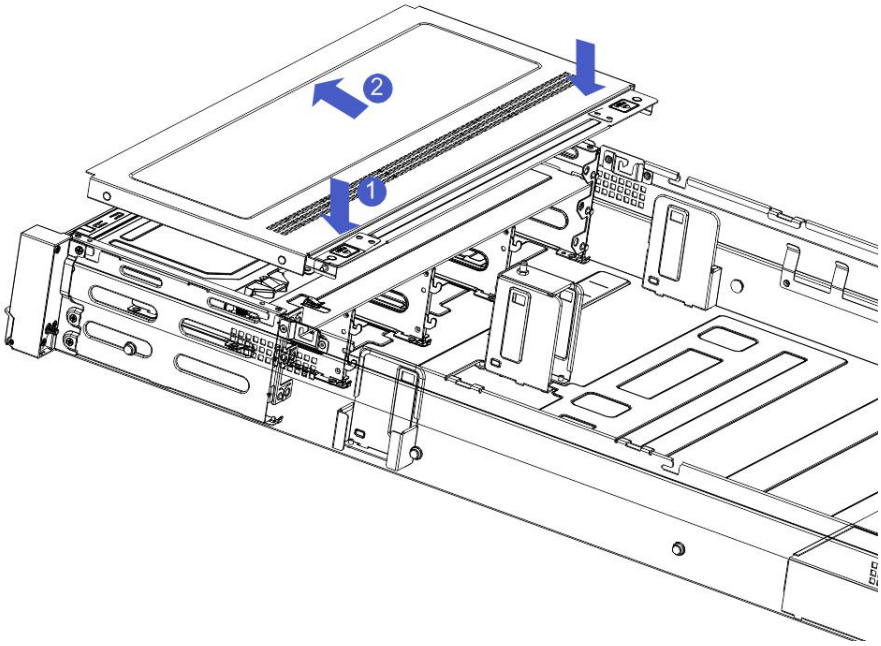


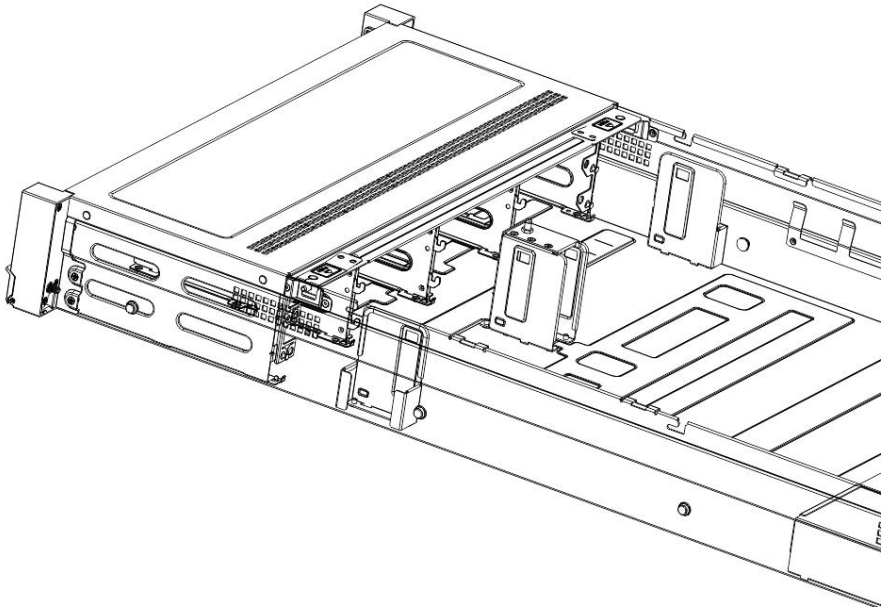
4.16 Chassis Cover Installation

Step 1: Install the front cover of the chassis

1-1. Top Peg Placement Aligns the open position of the cabinet and places it downwards

1-2. Push in the direction of the arrow until the front cover is flush with the front face of the chassis and the latches on both sides are locked in place.

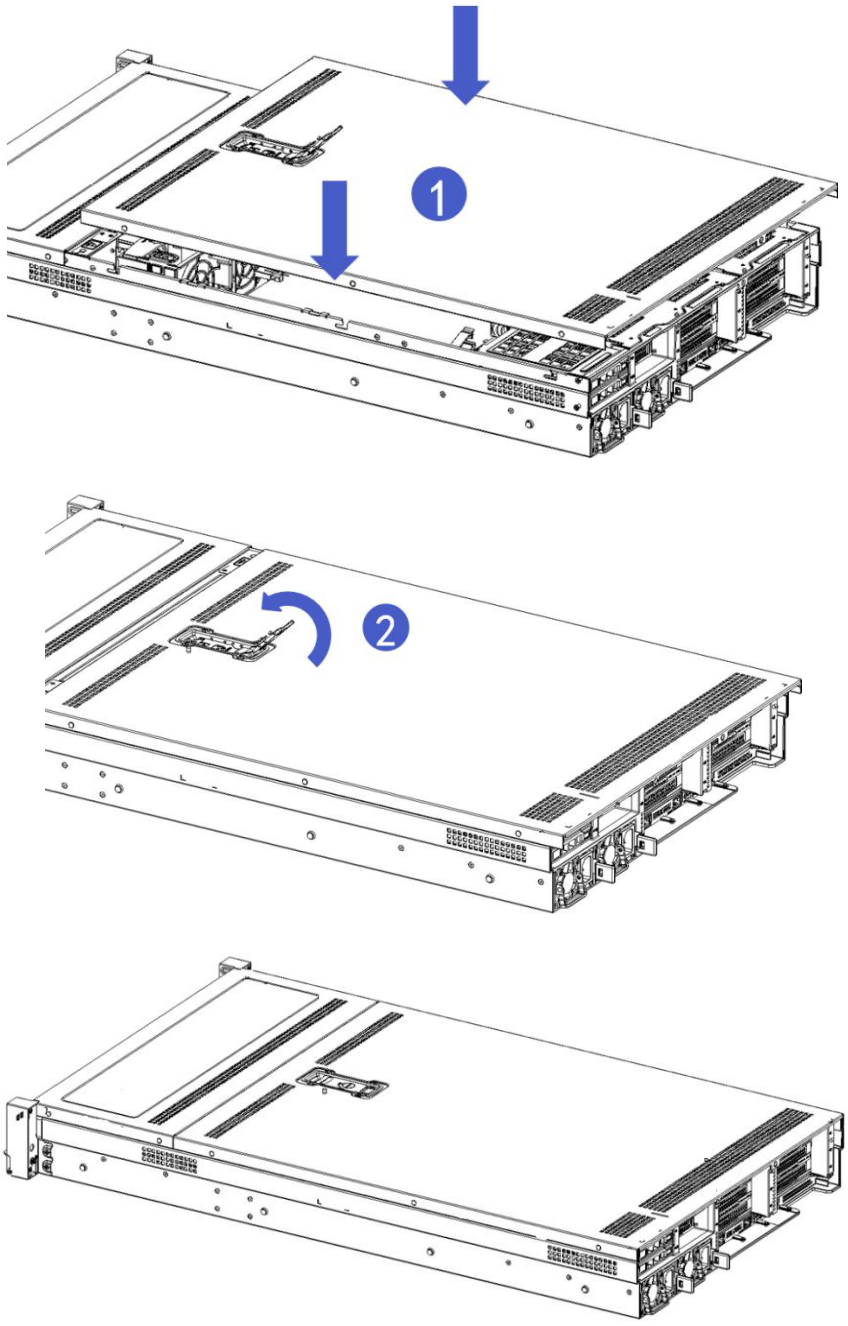




Step 2: After installing the chassis cover

2-1. Top cover pegs are aligned with the opening of the cabinet and are placed downward

2-2. Rotate the upper cover lock in the direction of the arrow to lock it in place



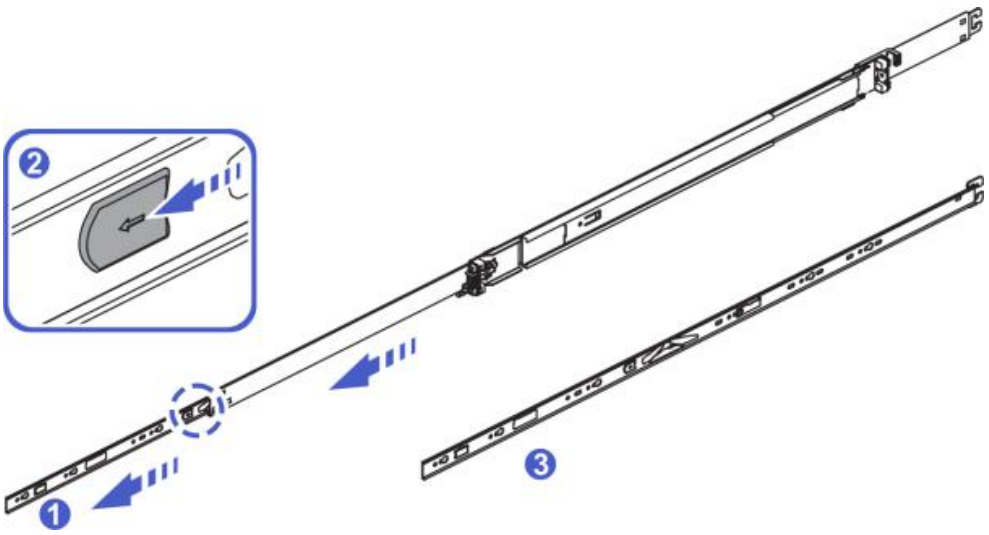
Chapter Ⅴ System Cabinet Installation

Step 1. After removing the inner rail from the rail, push the middle rail into the rail

1-1. Pull out the inner rail from the guide rail, and you can hear a click and stop

1-2. Push the white button in the direction of the arrow while pulling out the inner rail completely outwards

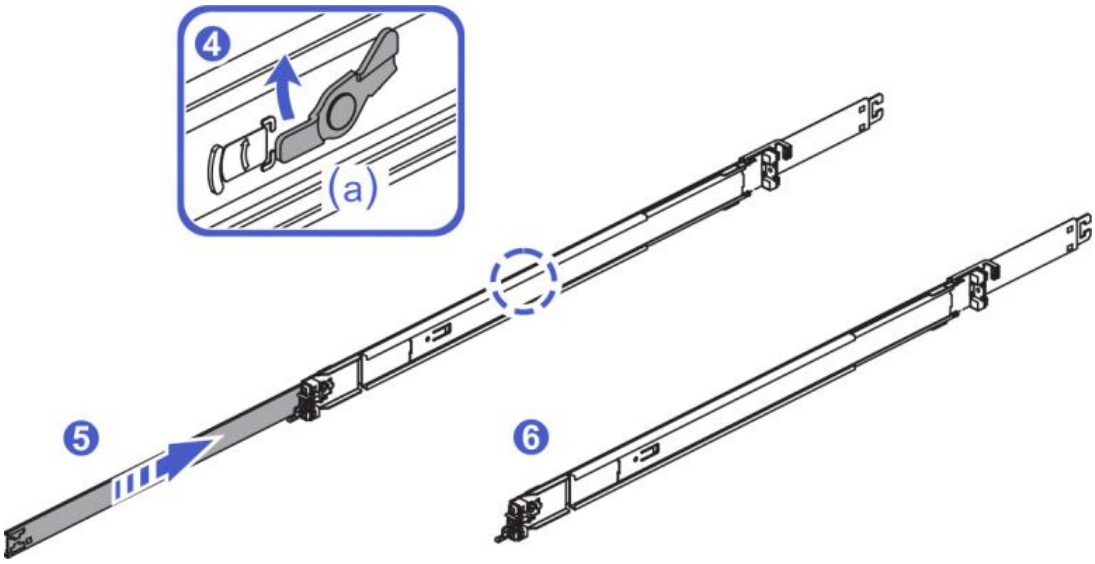
1-3. Complete the removal of the inner rail



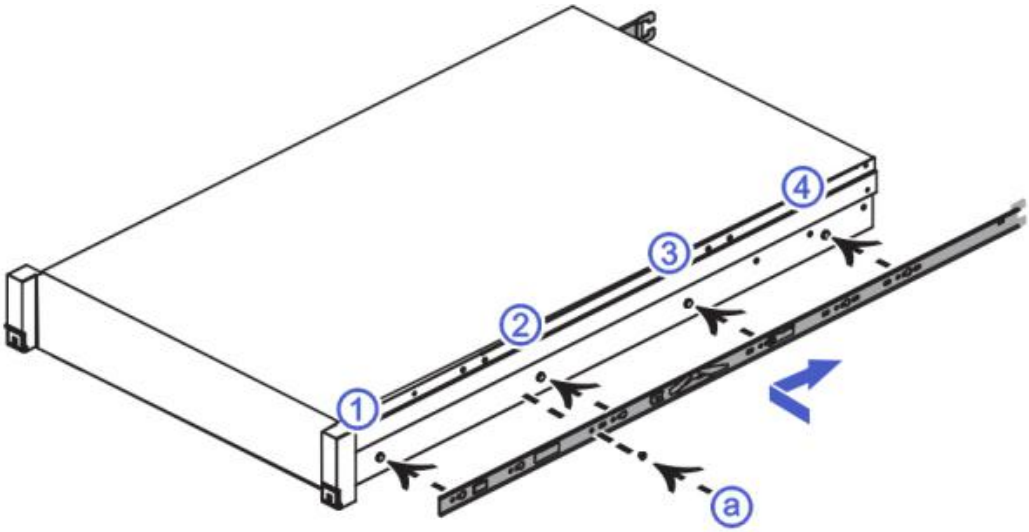
1-4. Push a snap in the guide rail in the direction of the arrow

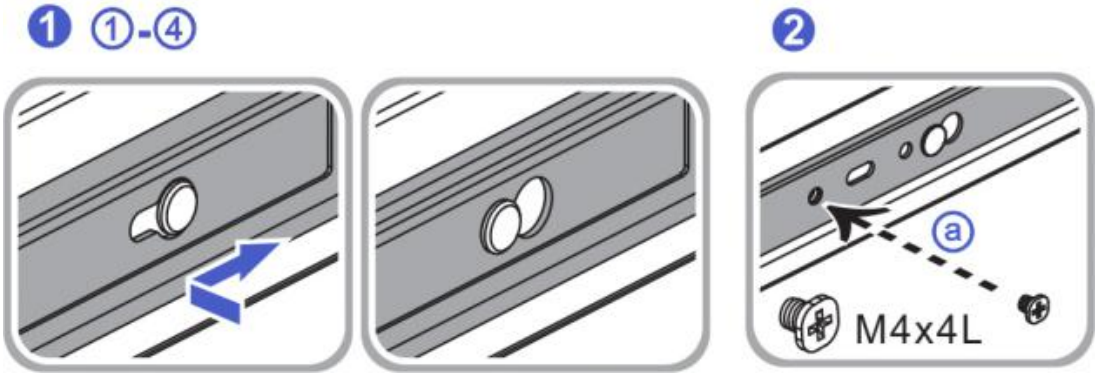
1-5. Simultaneously pushing the middle rail into sliding rail

1-6. Complete Step 1

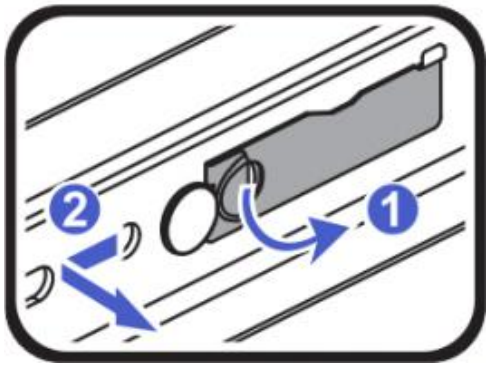


Step 2. Install the inner rail to the chassis (same as left and right inner rails, please repeat the installation)
2-1. Align the positioning holes of the inner rail with the four hanging screws on the side of the chassis, and install the inner rail to the chassis according to the diagram.
After the installation is completed, you can hear a click and need to be installed in place.
2-2. At chassis a, lock the M4x4 screws in the accessories to chassis a. Complete step 2





Note: When removing the inner rail from the chassis, unlock the buckle in the inner rail as shown in the figure



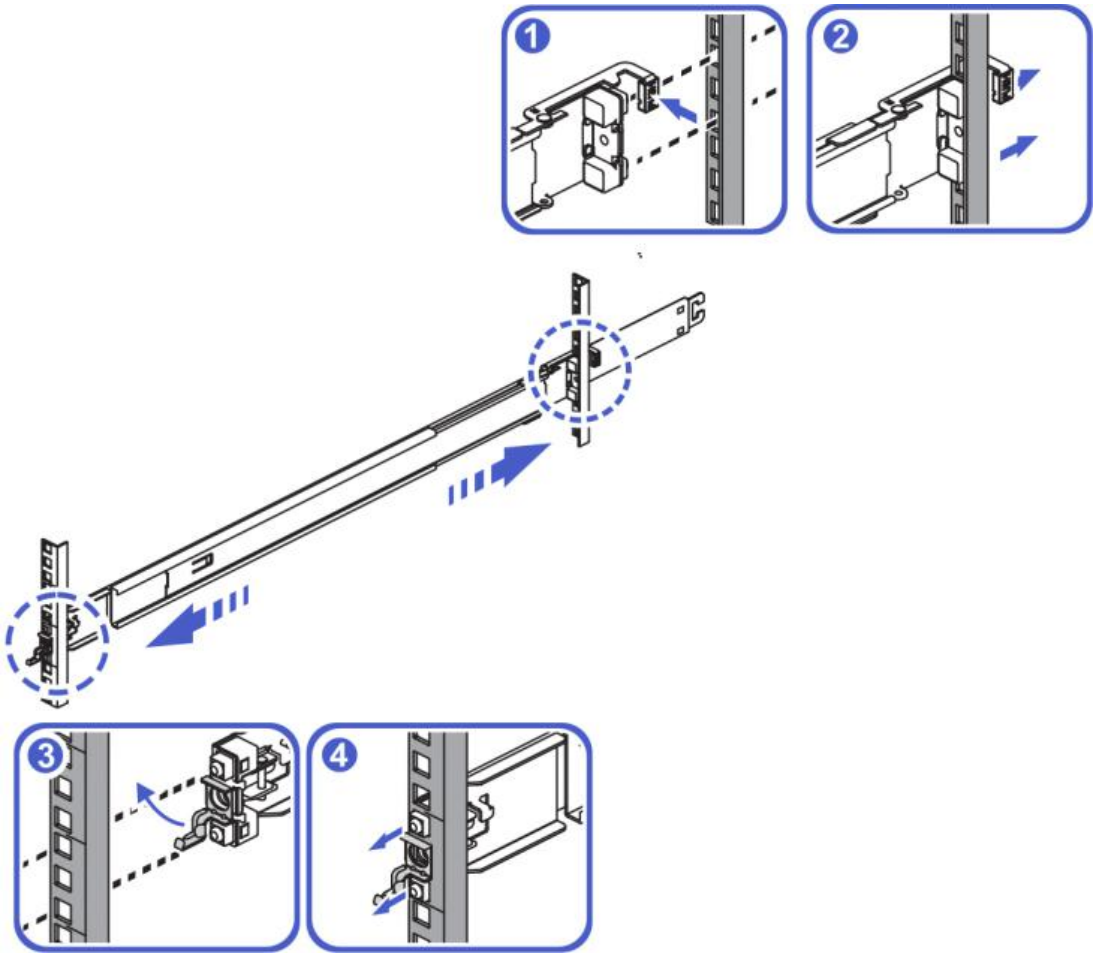
Step 3. Install the guide rail to cabinet (symmetry between the left and right guide rails, please repeat the installation)

3-1. Push the rear end hook of the guide rail in accordance with the arrow, align the cabinet hole position and install the guide rail into the cabinet.

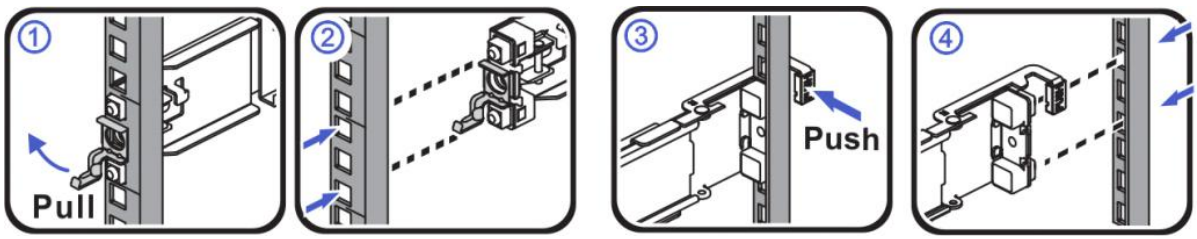
3-2. After installing the rail into the cabinet rear end, you can hear the click sound and complete the installation of the rear rail.

3-3. Push the front end of the rail in accordance with the arrow to align the cabinet hole and insert the rail into the cabinet.

3-4. After installing the rail into the front of the cabinet and hearing a beep, complete Step 3.



Note: To remove the rail from the cabinet, unlock the buckle in the rail as shown



Step 4. Install the server to cabinet.

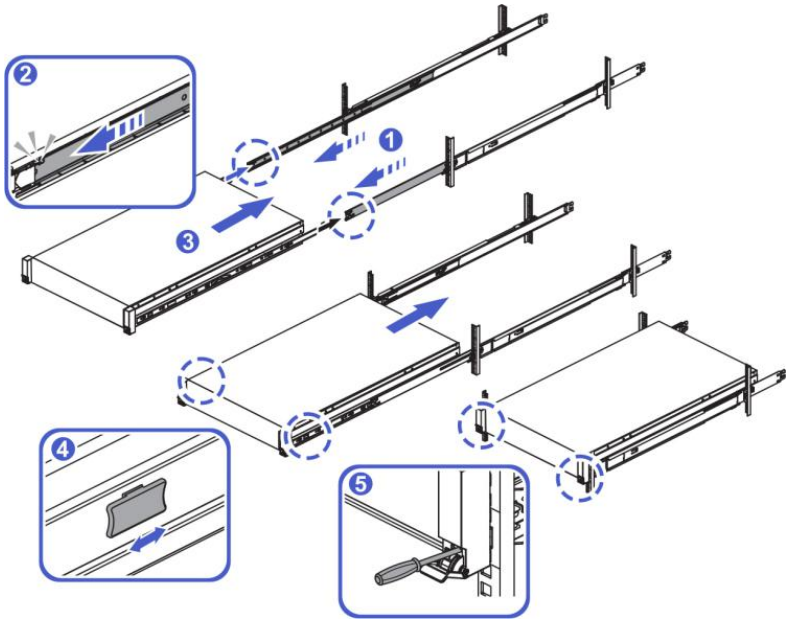
4-1. Pull out the middle rails on both sides of the cabinet and hear a click and stop.

4-2. Raise the server and align the guide rails with the center rails. Push the server into the cabinet in the direction of the arrow to ensure that the inner rails fit smoothly into the center rail.

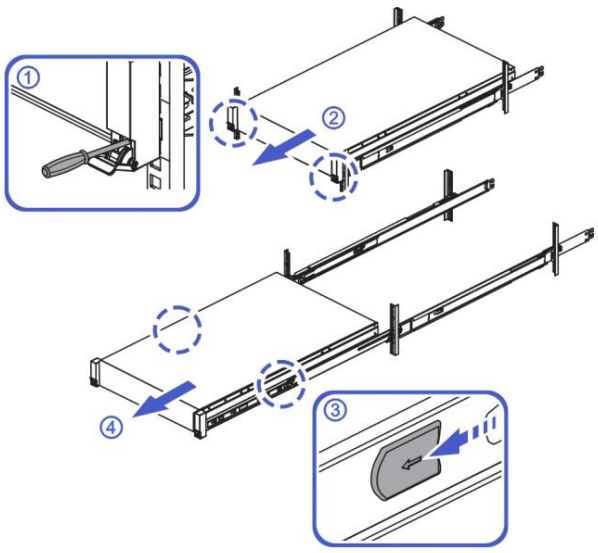
4-3. After pushing the server into the middle track, you can hear a click and stop.

4-4. Push the blue button in the direction of the arrow and hold the button while pushing the server into cabinet.

4-5. Open the front mounting ears on both sides and use a screwdriver to tighten the screws. Complete step 4



Note: To remove the server from the cabinet, unlock the screws on both sides and the white button, as shown in the figure



Chapter Ⅵ System Management and Configuration

The server uses iBMC for remote server management and supports IPMI 2.0. Providing highly reliable hardware management. Integrates with the standard management system through the following methods:

- KVM and text console redirection
- Remote virtual media
- IPMI
- Browser-based login

6.1 BIOS Setting Description

6.1.1 Enter BIOS Setup Interface

Steps:

1. Power on the server board and connect the keyboard.
2. During the POST process, observe the prompt at the bottom left of the Logo screen and enter the BIOS Setup screen. “Press <DEL> or <ESC> to enter setup, <F7> to enter Boot Menu”.
3. Press the <DEL> or <ESC> key to enter the BIOS Setup interface.

6.2 Setup menu parameter description

6.2.1 Navigation key description

→←:	Menu Switch (Select Screen)
↑↓:	Item Switch (Select Item)
Enter:	Select
+/-:	Change Opt.
F1:	General Help (General Help)
F2:	Last Values
F3:	Default Defaults
F4:	Save changes and reboot the system (Save & Reset)
ESC:	Exit

6.3 Rapid IPMI Deployment

6.3.1 Rapid deployment of IPMI

How to quickly deploy the IPMI function of the server is as shown in Figure 2-1.

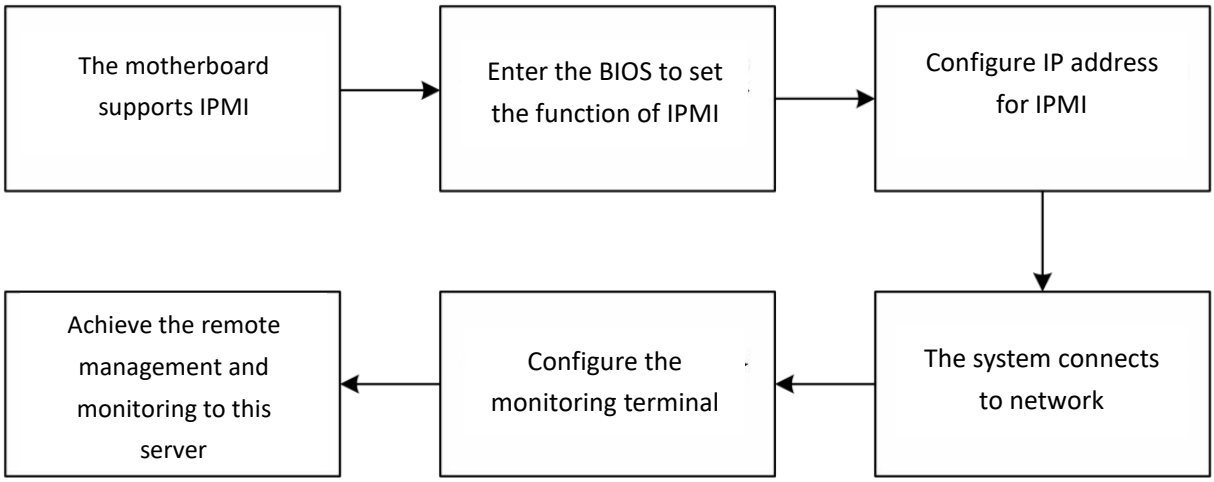


Figure 2-1 IPMI Deployment Process

6.3.2 Make sure the motherboard supports IPMI

Check the motherboard specification and confirming that the motherboard supports IPMI, then finding the dedicated IPMI port on the motherboard, or to select the shared Ethernet port, as shown in Figure 2-2.

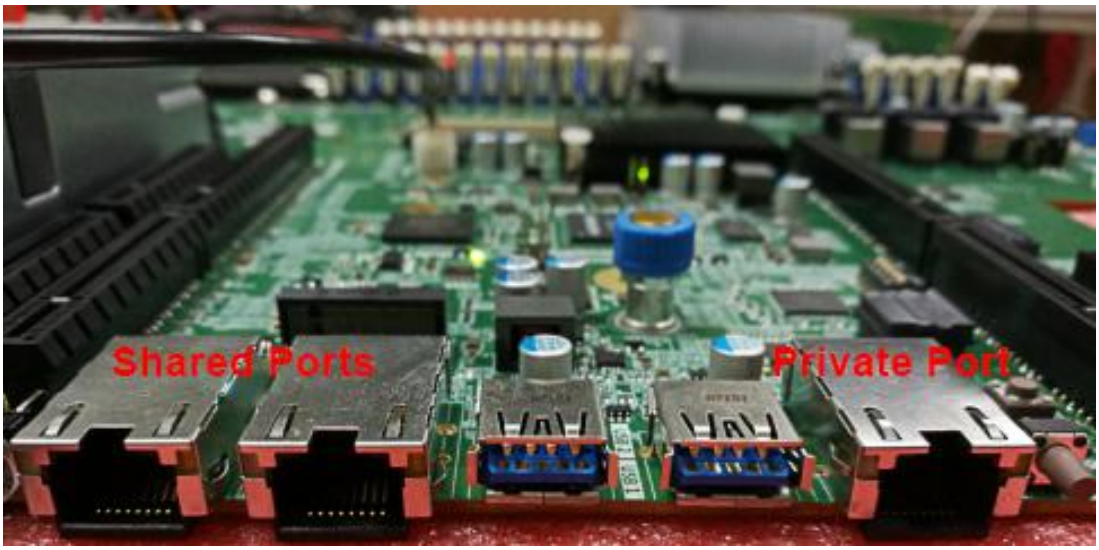


Figure 2-2 Motherboard Dedicated Interface

6.3.3 Enter the BIOS setting IPMI function

Restart the system. Press ESC or DEL while the device is starting to enter the BIOS interface, as shown in Figure 2-4.

Figure 2-4 BIOS Setting Interface

After entering the interface, use the left and right keys of the keyboard to switch the menu item to the “Server Mgmt”, and the page shown in Figure 2-5.

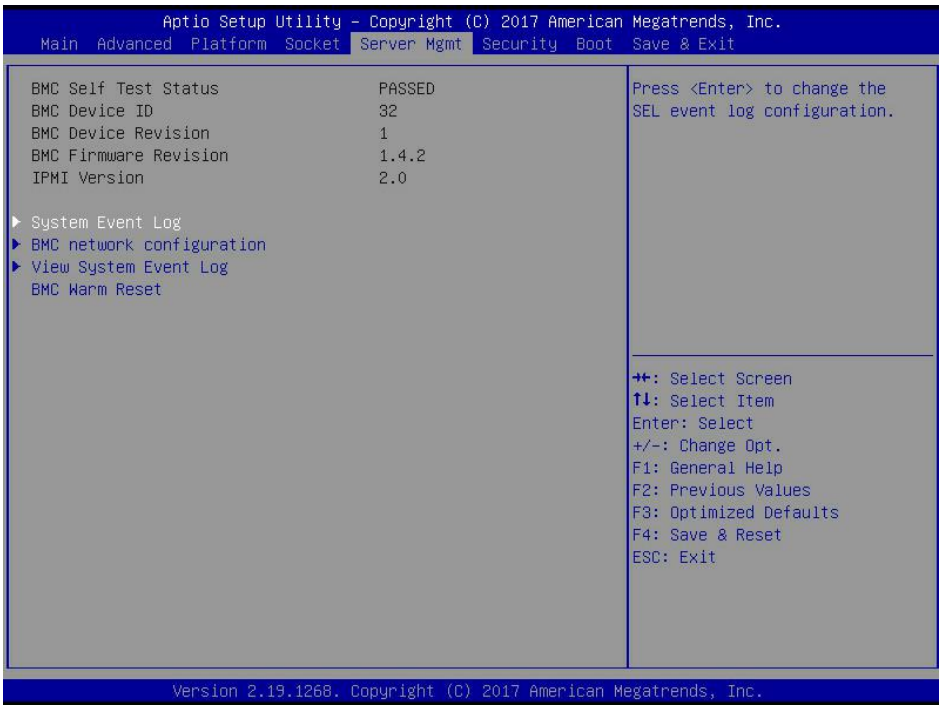


Figure 2-5 Server Mgmt Interface

After entering the interface, enter the “BMC network configuration” through the keyboard. The following interface will be displayed, as shown in Figure 2-6.

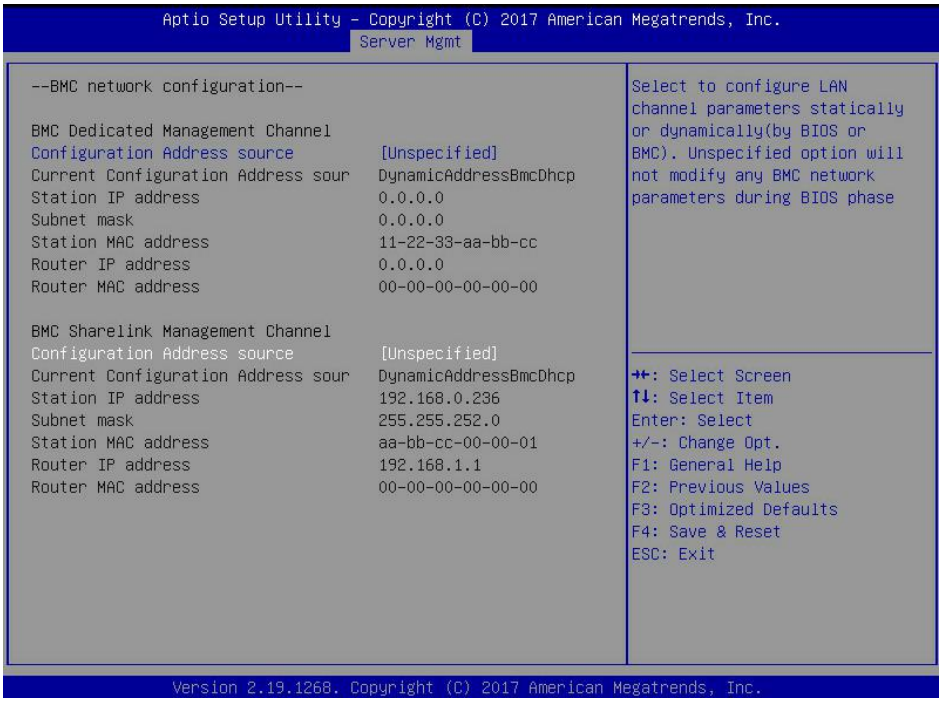


Figure 2-6 BMC Network Configuration Interface

On this page, there are two channels to configure, the one of channels is the Dedicated private port and another one is the shared port for “Sharelink”. Take the shared port for example. If you connect a dedicated port, the setting method is the same as that of the shared port. And then choose the “Configuration Address Source” option and press “Enter” to set the network mode, as shown in Figure 2-7.

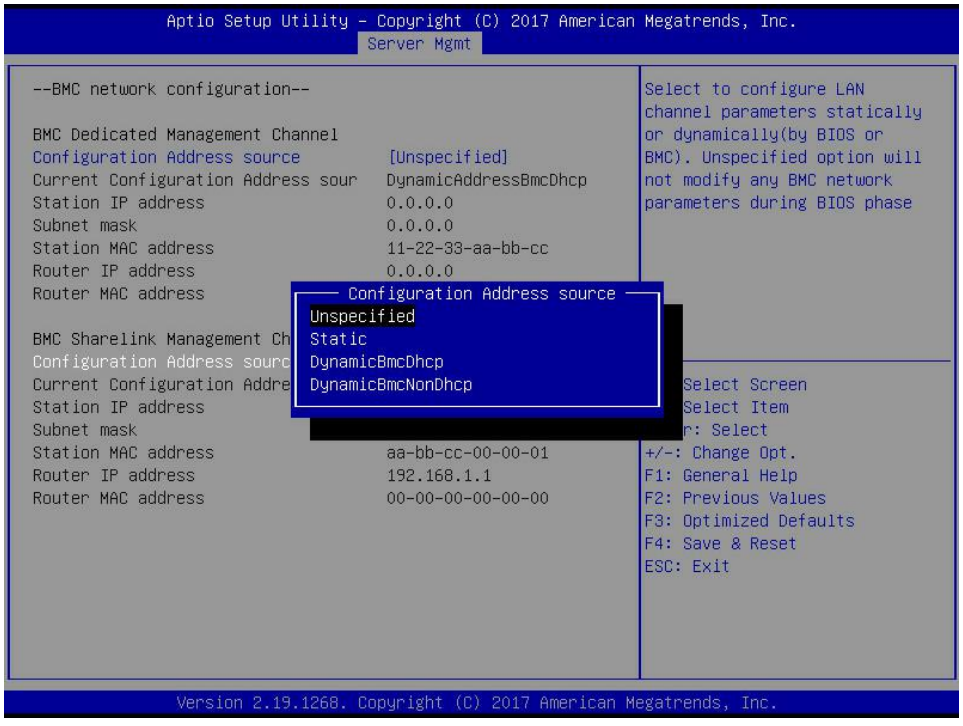


Figure 2-7 Network port configuration network mode

There are four network modes that can be configured on this interface: Unspecified, Static, Dynamic BMC DHCP, and Dynamic BMC Non DHCP. Static is in static mode. You can set the IP address manually. DHCP is dynamic mode. Setting this option allows the BMC to automatically obtain the IP address from the DHCP server.

6.3.4 IPMI interface configuration static mode

If you choose to configure Static mode for the IPMI interface, you should pay attention to the following issues:

(1) If there are multiple IPMI devices in your LAN, you should be aware that the IP addresses between the devices cannot be duplicated. Otherwise, communication cannot be established.

(2) If the IP of your IPMI device is an intranet address, the terminal device that communicates with it must be on the same network segment as the IPMI device's address.

(3) The IP address of the IPMI device can be mapped to the WAN through a routing device to implement remote management.

(4) The IPMI port has the function of obtaining an IP address through DHCP.

(5) IPMI supports both TCP/IP v4 and TCP/IP v6.

Configure the IP address and subnet mask according to your actual situation. For example, here we set the IP address to 192.168.0.236 and set the subnet mask to 255.255.252.0, as shown in Figure 2-8 below. After setting, press F4 to save and exit the BIOS interface.

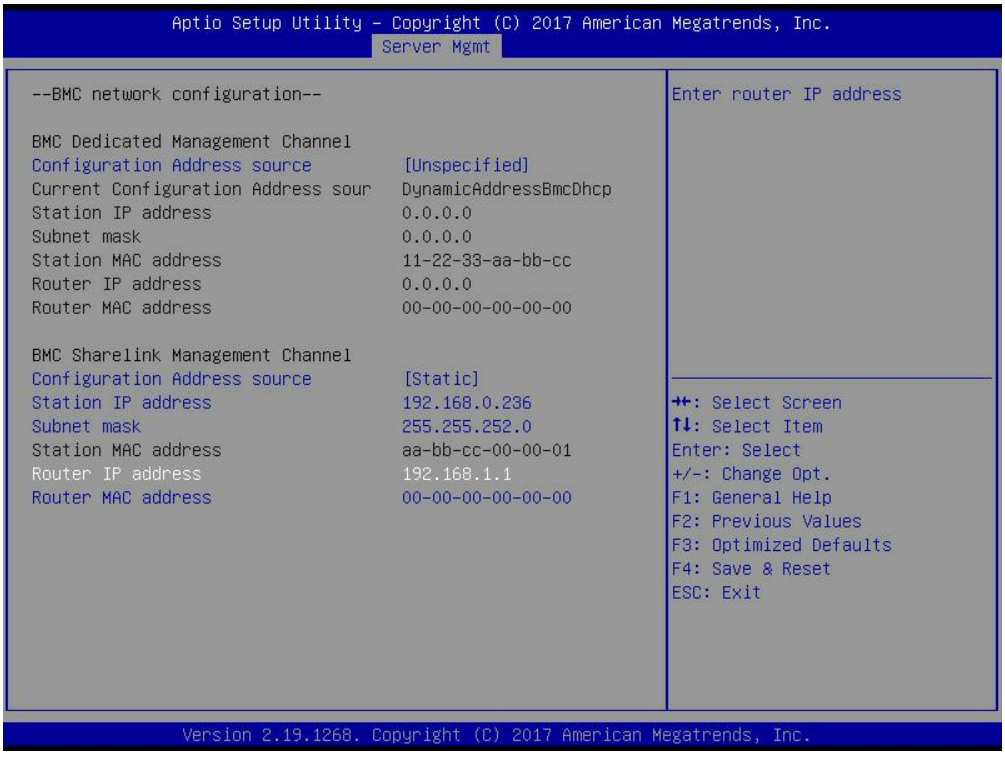


Figure 2-8 Satic Mode Settings

At this point, we have completed the operation of configuring the IPMI function.

6.3.5 IPMI Configuration Java SOL

1. Press <Del> at system start-up to enter BIOS setup interface.
2. Switch to the Advanced menu, select Serial Port Console Redirection, and press <Enter>.
3. Make sure the Console Redirection of COM0 is in the [Enabled] state. If it is not, select Console Redirection and press <Enter> to set the status to [Enabled]. In order to ensure the normal operation of iBMC, the factory default setting this option to [Enabled].

6.4 IPMI Function Explanation

After completing the previous configuration steps, we can start to log in to the IPMI management interface. The IPMI management interface can be accessed using a standard web browser. Here we recommend Google Chrome browser, Firefox browser and IE browser. (IE 11 or above) for the best browsing experience. Since the new version of the user interface is based on HTML5, the overhead of computer resources is relatively large. We recommend that the user configure more than 8 GB of memory when the user uses KVM.

6.4.1 Enter the operation interface

Take the Firefox browser as an example, enter the IPMI access address in the browser's address bar and press Enter to access the IPMI management interface. Since the HTTP link has all been turned into an HTTPS encrypted link, you will enter Figure 3-1. The privacy settings shown on the error page may not be the same for other browsers.

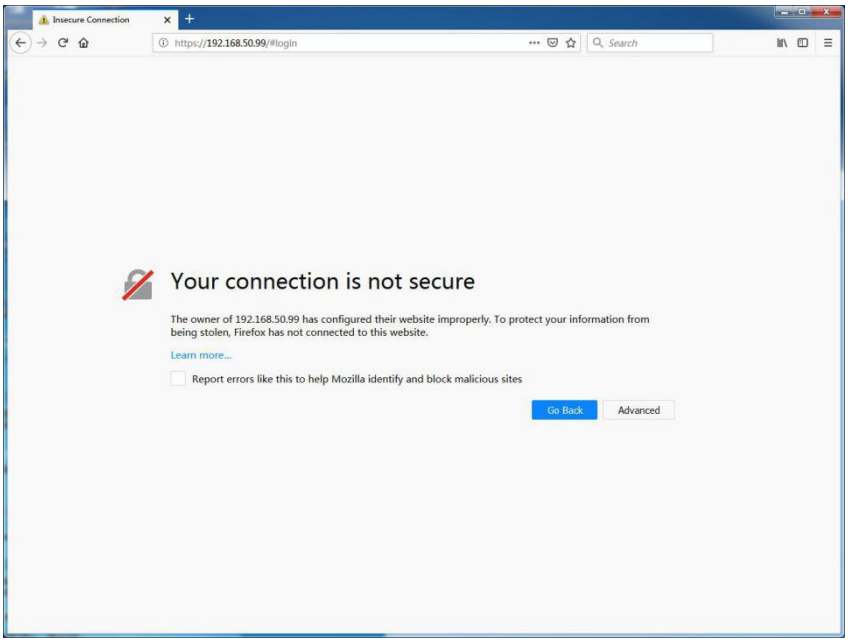
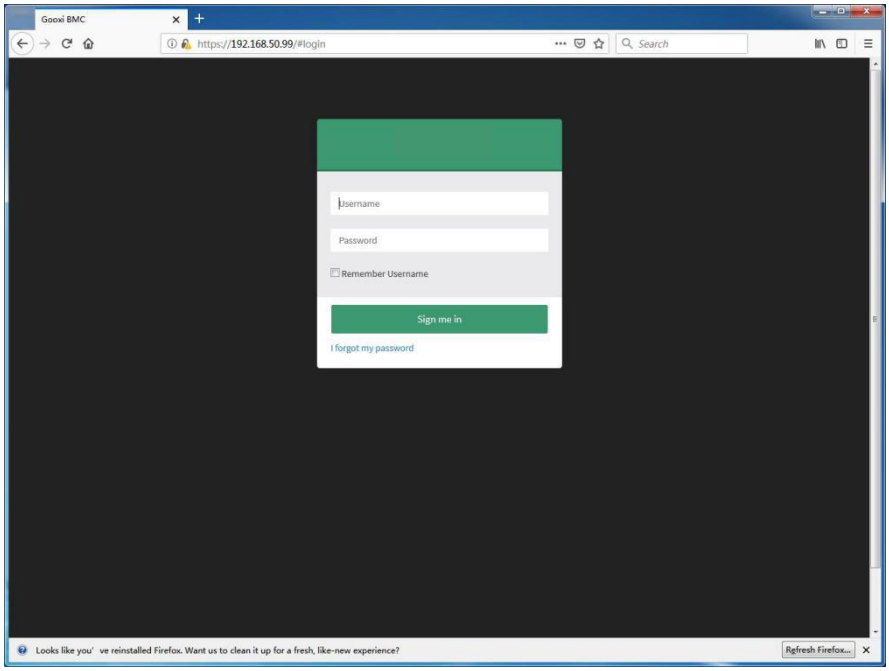


Figure 3-1 Google Chrome Privacy Settings Error Page

In this page, click "Advanced" >> "Continue to" to access the IPMI management page normally and enter the login page, as shown in Figure 3-1.



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