

Netweb Technologies India Ltd.

Tyrone

USER GUIDE

ADI200A3R-212

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1. Regulatory Notices

1.1 Environment Compliances – EPR (E-Waste)

- As per India's E-Waste (Management) Rules, 2022, electrical and electronic equipment (EEE) cannot be disposed of as regular municipal waste.
- A toll-free consumer helpline is available to assist customers with safe e-waste disposal and provide details of the nearest authorized drop-off point.



Tel: [1800-419-0688](tel:1800-419-0688), Email : compliance@netwebindia.com; E-waste bins are placed at service centers, collection points, and branch offices for convenient and secure disposal.

Please contact your local distributor or visit our website for information on proper disposal and take-back options

URL Link- <https://www.netwebindia.com/gogreen.php>

Do not dispose of the motherboard in regular waste. This product is designed for recycling and reuse. The cross-out wheeled bin symbol means this product should not go in regular municipal waste. Look up local rules for safe disposal of electronic products.



Do not dispose of mercury-containing button cell batteries with household waste. The cross-out wheeled bin symbol indicates that the battery must be taken to company's authorized recycling facilities instead of being discarded in municipal waste.



1.2 Hazardous substances Information

- This product complies with applicable chemical substance regulations related to hazardous materials used in electrical and electronic equipment.
- The technical documentation has been prepared in accordance with **IEC 63000:2016/AMD1:2022**, which specifies procedures to demonstrate compliance with restrictions on hazardous substances.
- The product does not contain restricted substances beyond permissible limits as defined in applicable environmental directives, such as:
 - RoHS (Restriction of Hazardous Substances): The product does not contain restricted substances beyond permissible limits as defined under the RoHS framework. For official substance limits and guidance, refer to the competent authority's published materials.
 - E-Waste (Management) Rules, 2022: For the latest rules and updates, consult the Central Pollution Control Board's official resources. For more information regarding material composition or compliance documentation,
 - please contact: [Email: compliance@netwebindia.com](mailto:compliance@netwebindia.com)

1.3 Battery Information

Safety Warnings: —

Please take special precautions if this product comes with a battery.



Warning! There's danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

- Do not dispose of batteries in fire or a hot oven, or crush or cut them mechanically, as this may result in an explosion.
- Avoid leaving a battery in an extremely high temperature or extremely low air pressure environment that can result in an explosion or the leakage of flammable liquid or gas.
- Do not ingest battery. If the coin/button cell battery is swallowed, it can cause severe internal burns and can lead to death. Keep new and used batteries away from children.

Battery Disposal (India)



Batteries, battery packs, and accumulators must not be disposed of with regular household waste.

Please use authorized collection centers or recycling facilities for proper disposal or recycling of batteries.

Proper disposal helps protect the environment and complies with India's Battery Waste Management Rules.

1.4 Environmental Policy

Environmental, Social, and Governance (ESG) Ranking Overview

At NETWEB, we are committed to sustainable and responsible business practices that support environmental protection, social well-being, and strong governance.

Our ESG Focus Areas:

- **Environmental:** Minimizing our environmental impact through energy-efficient products, responsible e-waste management, and reducing carbon footprint.
- **Social:** Supporting employee welfare, community engagement, and diversity and inclusion initiatives.
- **Governance:** Maintaining transparency, ethical business conduct, and compliance with all applicable laws and regulations.

1.5 Legal Information

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No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of Netweb Technologies.

Specifications and information in this manual are provided for informational purposes only and are subject to change without notice. Netweb Technologies assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual, including those related to the products and software described.

2. Safety Information

Important

1. Please read and follow these safety instructions carefully before installing, operating or performing maintenance on the server.

2.1 General Safety Instructions

- Always read the safety instructions carefully.
- Keep this User's Manual for future reference.
- Keep this equipment away from humidity.
- Lay the equipment on a stable, flat surface before setting it up.
- Do not cover the air openings to prevent overheating.
- Avoid spilling liquids into the equipment to prevent damage or electrical shock.
- Do not leave the equipment in an unconditioned environment. Storage temperatures above 60°C (140°F) may cause damage.

2.2 Electrical Safety

2.2.1 Power Setup and Protection

- Ensure the power source matches the equipment voltage before connection.
- Plug the power cord into a grounded (earthed) electrical outlet that is always easily accessible. Do not disable the power cord grounding plug, as it is an important safety feature.
- Do not use a power adapter other than the one provided.
- Place the power cord to avoid being stepped on or crushed.
- Protect the server from power fluctuations and outages using a regulated uninterruptible power supply (UPS).

2.2.2 Handling Power Connections

- Unplug the power cord before inserting add-on cards or modules.
- Disconnect all power supplies before maintenance to avoid electrical shock. If the unit has more than one power supply, disconnect all of them.
- Unplug the power cord to fully disconnect the system. The front panel Power On/Standby button does not completely shut off system power. Portions of the power supply and some internal circuitries remain active until AC/DC power is removed.

2.3 Assembly and Installation

This equipment must be installed in restricted access areas and handled only by qualified personnel. Installation should comply with all relevant safety standards.

- Before proceeding with installation, ensure that:
- The area is free from dust, moisture, and vibration.
- Proper grounding and electrical protection (circuit breakers, surge protection) are in place.
- All power connections and cable routes follow the manufacturer's guidelines.
- Adequate ventilation is maintained to prevent overheating.
- Warning: Failure to follow these instructions may result in equipment damage, electrical hazards, or personal injury.

2.3.1 Lifting and Placement

- Warning: Heavy equipment. Use team lifting and approved handling practices.
- Follow occupational health and safety guidelines for manual material handling.
- A minimum of two people is required to lift or install the server. For installations above chest height, a third person may be needed for alignment.
- Secure the chassis to the slide rails before extending; an unsecured or partially extended server can destabilize the rack.

Hot Surfaces

- Allow components like drives and power supplies to cool before touching.

2.3.2 Energy Pack Handling after Removal

To reduce the risk of fire or burns:

- Do not disassemble, crush, or puncture the energy pack.
- Avoid shorting external contacts.
- Do not dispose of the energy package in fire or water.

2.3.3 Other Components

- Keep away from hazardous moving parts, such as fan blades, to prevent injury.
- Do not drop or jolt the system, as this may damage internal components or compromise safety.

2.4 General Precautions During Operation

- Avoid operating the server with the access panel open or removed for extended periods, as this disrupts airflow and may cause overheating.
- Do not insert incorrect connectors into ports to avoid damage to components or the risk of electrical hazards.
- This equipment is not suitable for use in locations where children are likely to be present.

2.5 When to Contact Service Personnel

Immediately contact qualified service personnel if you observe any of the following:

- The power cord or plug is damaged.
- Liquid has spilled into the equipment.
- The equipment has been exposed to excessive moisture or water.
- The system fails to operate as described in the User Guide.
- The equipment has been dropped or suffered physical impact.
- There are visible signs of damage, cracks, or broken parts.



Warning

1. Do not attempt to open, repair, or disassemble the equipment yourself. Doing so may void the warranty and pose safety risk.

3. System Specifications

Category	Specification
System Overview	Form factor: 2U Dimension: 436 mm (W) × 87 mm (H) × 660 mm (D) Motherboard: AE12XH-L6i
Processor System	Supports Dual Intel Xeon 4 th & 5 th Gen E1 (LGA 4677-X), Up to 350W TDP Chipset- Intel C741
Memory	16 × DDR5 DIMM, 8-channel (1DPC), Supports DDR5 288-pin RDIMM/RDIMM-3DS Support up to 4TB Max. Capacity: 256 GB per DIMM Max. DIMM Frequency: RDIMM up to 5600 MT/s (1DPC)
PCIe Expansion Slot	3x PCIe 5.0 x16 FHFL slot, CPU0 2x PCIe 5.0 x16 FHFL slot, CPU1 1x PCIe 5.0 x 8 FHHL slot, CPU1
Storage	12x Hot-swap 3.5"/2.5" Drive Bays SAS/SATA (Front) 2x M.2 2280 PCIe Gen 4.0 x4 (Onboard)
Internal Port	2x MCIO x8 PCIe 5.0, CPU0 1x MCIO x8 PCIe 5.0, CPU1 2x SATA 3.0 (6 Gb/s) 7-Pin Connector 1x Slimline (up to 8 SATA Support) Connector
Front Panel	Button: Power w/ LED, Reset, UID LEDs: 2x LAN Activity, 1x HDD Activity, 1x Alarm LED I/O port: 2x USB 3.0 Type A
Rear I/O	Button: UID LED Button I/O port: 1x COM Port, 2x USB 3.0 Type-A, 2x RJ45 LAN, 1x VGA Port, 1x IPMI port
Server Management	BMC Controller: ASPEED AST2600 IPMI: 1 Realtek RTL8211FS for dedicated management GLAN,
Network Port	Broadcom BMC5720 1GbE Dual Port
Power Supply	Supports 1300W/1600W CRPS Efficiency: 80+ Titanium

Category	Specification
Security	TPM 2.0 Chassis Intrusion
Environmental	0°C~35°C System Operation Temperature -20°C~70°C Non-Operating Temperature 8% – 80% Operating Relative Humidity (Non-Condensing) 8% – 90% Non-Operating Relative Humidity (Non-Condensing)

4. System Overview



Fig.1(Complete System View)

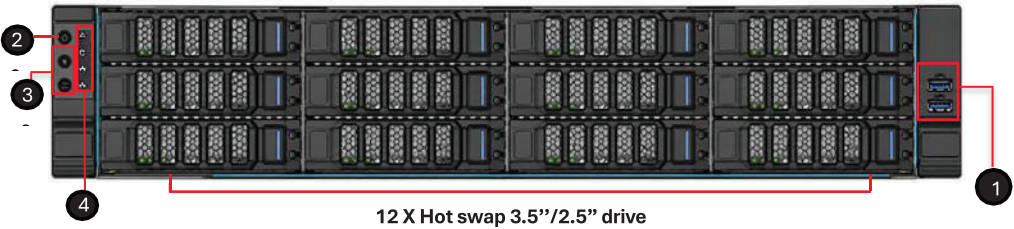


Fig.1(a) Front View System

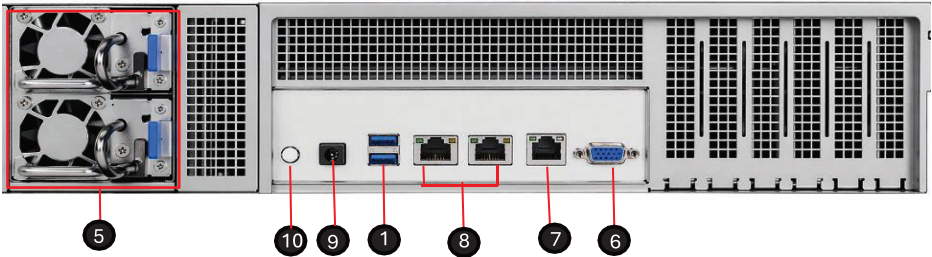


Fig.1(b) Rear View System

Number	Name
1	USB 3.0 Type-A Port
	This connector is provided for USB peripheral devices.
	 Important High-speed devices are recommended for USB 3.2 ports whereas low speed devices, such as mouse or keyboard, are suggested to be plugged into the USB 2.0 ports.
2	 System Power Button/ LED
3	UID Button/ LED
	 System Reset Button
4	 System Alarm LED
	 LAN Activity LEDs
	 M.2 Activity LED
5	Power Supply Unit
6	VGA Port (DB-15)
7	BMC IPMI Port
8	RJ45 LAN Port
9	COM Port
10	UID LED Button (default) & System Reset Button

4.1 System Storage Topology



Fig.2



SAS/SATA Configuration

Fig.2(a)

SAS/SATA Table			
SAS/SATA	SAS/SATA	SAS/SATA	SAS/SATA
SAS/SATA	SAS/SATA	SAS/SATA	SAS/SATA
SAS/SATA	SAS/SATA	SAS/SATA	SAS/SATA

4.2 System LED Indicators



Fig.3

LED	LED State	Description
System Power LED	Blue	System power is on
	Blinking	System power is on ACPI S0 state
	Off	System is sleeping
	Off	System power is off
UID LED	Blue	System power is on ACPI S4, S5 state
	Off	Identify active via command or button
System Alarm LED	Green	No identification
	Red	BMC initialization
	Off	System has failed
NIC Link LED	Blinking	System is running/ normal operation
	Off	NIC activity is occurring
M.2 Activity LED	Amber	NIC link is not established
	Blinking	M.2 present, no activity
	Off	M.2 accessing
	Off	No M.2 activity

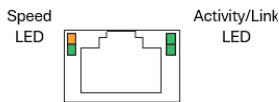
Important

1.The system photos provided for demonstration purposes only. The appearance of your system may vary depending on the model you purchased.

4.3 System Board LEDs

4.3.1 LAN LEDs indicator

The LAN LED Indicator is a small light located near the Ethernet (LAN) port on the motherboard. It shows the status of the network connection, helping users quickly identify whether the LAN port is linked and transmitting data.



LED	LED Status	Description
Activity/Link LED	 Blinking	Activity detected.
	OFF	LAN cable no connects.
	ON	Link.

4.3.2 Rear Chassis LEDs

The network ports (NIC) and their LED indicators should be powered by standby voltage (Vaux) so they remain active even when the system is off. For both onboard network ports (NIC 1 and NIC 2), each has two LED indicators:

4.3.2.1 NIC 1- JLAN1 & NIC 2- JLAN2 LEDs

The right LED shows activity. It blinks green when there is network activity and stays off when no cable is connected. The left LED shows connection speed. Orange indicates a 1 Gbps connection, green indicates 100 Mbps, and it remains off if the speed is 10 Mbps or if no cable is connected.

LED	LED Status	Description
NIC 1 - JLAN1	 Green (Blinking)	Activity detected
	Off	LAN cable no connects
NIC 2 - JLAN2	 Green (Blinking)	Activity detected
	Off	LAN cable no connects

4.3.2.2 BMC Management-RJ45-0

The right LED blinks green when there is management network activity and is off when inactive or disconnected. The left LED indicates link speed in the same way: orange for 1 Gbps, green for 100 Mbps, and off for 10 Mbps or no connection.

LED	LED Status	Description
BMC	 Green (Blinking)	BMC Management activity detected
Management – RJ45_0	Off	BMC Management is not active

4.3.3 Internal LEDs

4.3.3.1 Heartbeat LEDs

This LED shows whether the system’s management controller (BMC) is running properly. A blinking light means the controller is active and functioning, while no light indicates it is inactive or not running.

LED	LED Status	Description
Heartbeat	 Green (Blinking)	Indicates that BMC is active
	Off	Indicates that BMC is not active

4.3.3.2 CPLD LED (Mode Indicator)

This LED reflects the operating mode controlled by the CPLD (Complex Programmable Logic Device). It indicates which system mode is currently active, such as diagnostic/debug mode (e.g., Port 80) or normal operation (sequence mode).

LED	LED Status	Description
CPLD	 Yellow (Blinking)	System is operating on port 80 mode
	Off	System is operating in sequence mode

4.3.3.3 JNGFF1 Activity LED

This LED indicates activity on the JNGFF1 interface (such as storage or expansion connection). A blinking light shows that data activity is happening on the interface, while no light means there is no activity or the interface is not in use.

LED	LED Status	Description
JNGFF1	 Blue (Blinking)	It indicates that JNGFF1 interface is active.
	Off	It indicates that JNGFF1 interface is not active.

4.4 Motherboard Layout

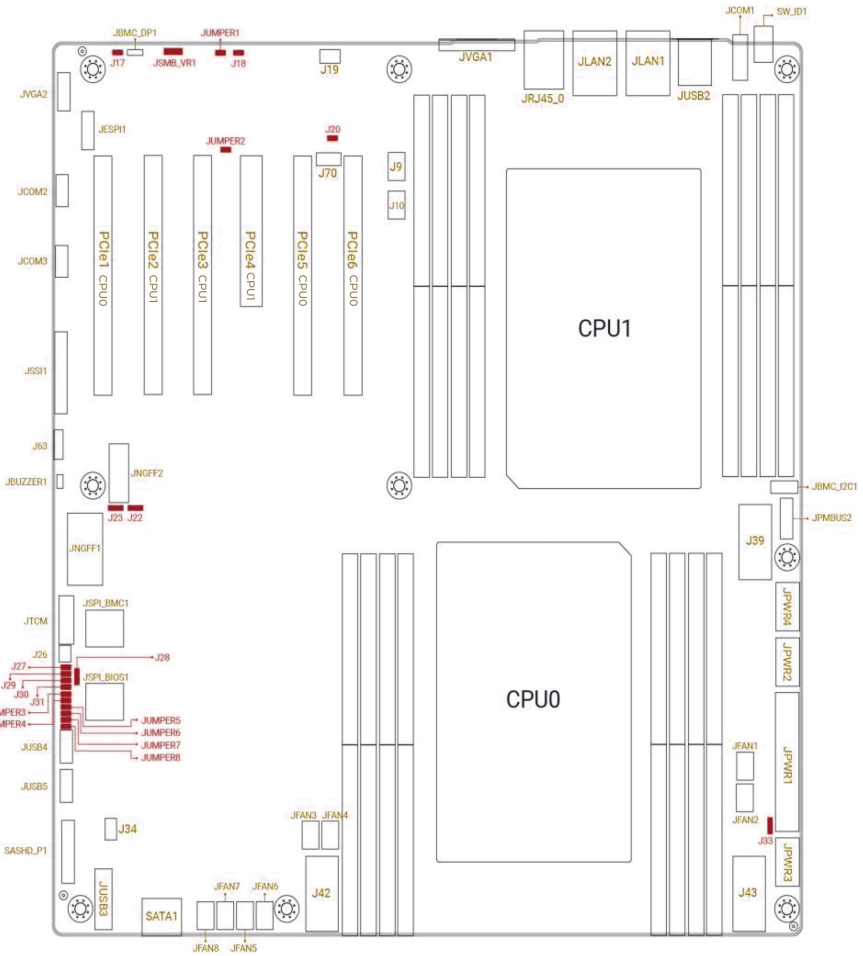


Fig.4

4.4.1 Motherboard layout Information

Name	Description	Location
Power CONN	4 x 2 Pin ATX CONN	JPWR2, JPWR3, JPWR4: 12V
Power CONN	12 x 2 Pin ATX CONN	PWR1: 12V, 5V, 3.3V, 5VSB
CPU	SPR-LGA4677	U4, U5
Front Panel	2 x 12 Pin 2.54mm Box Header	JSS1
Front USB3.0	10 x 2 Pin 2.0mm Box Header	JUSB3
Front USB2.0	5 x 2 Pin 2.0mm Box Header	JUSB4, JUSB5
PCIe Gen5	MCIO X8 CONN	J42, J43, J39
Serial ATA	Slimline X8 CONN	SASHD_P1
Dual Serial ATA	2 x 7 Pin 1.27 mm CONN	SATA1
VGA	2 x 8 Pin 2.0mm Box Header	JVGA2
COM1	2 x 5 Pin 2.0mm Box Header	JCOM3
COM2	2 x 5 Pin 2.0mm Box Header	JCOM2
Intruder	2 Pin 2.0mm Box Header	J26
BMC GPIO	2 x 3 Pin 2.0mm Box Header	J19
BMC IPMB	4 Pin 2.0mm Box Header	J70
PFR Module	GEN4_M2_KEY_M_H=8.5MM	JNGFF2
M.2 2280	GEN4_M2_KEY_M_H=10.85MM	JNGFF1
XDP CONN	Samtec QSH 60-Pin CONN	JXDP1
Battery Socket	2 Pin Socket	BAT1
Clear CMOS	2 Pin 2.54mm Header	JUMPER6
DIMM Sockets	288 Pin DDR5 DIMM	J1-16
BMC Debug Port	3 x 1 Pin 2.0mm Header	JBMC_DP1
BIOS SPI ROM Socket	SOIC-16 Socket	JSPI_BIOS1
BMC SPI ROM Socket	SOIC-16 Socket	JSPI_BMC1
BMC Reset	2 x 1 Pin 2.00mm Header	J20

BMC Buzzer	2 x 1 Pin 2.00mm Header	JBUZZER1
BMC Socflash Enable	2 x 1 Pin 2.00mm Header	JUMPER2
VROC Key	4 x 1 Pin 2.0mm Box Header	J63
FAN CONN	4 x 1 Pin 2.54mm Box Header	JFAN1~JFAN10
PMBUS Power Select	3 x 1 Pin 2.0mm Header	J33
BMC Through PFR or Bypass	3 x 1 Pin 2.0mm Header	J28
PCH Through PFR or Bypass	3 x 1 Pin 2.0mm Header	J22, J23
BMC RST Password	2 x 1 Pin 2.0mm Header	J17
BMC Disable	2 x 1 Pin 2.0mm Header	J18
VRM SMB	3 x 1 Pin 2.54mm Header	JSMB_VR1
Program CPLD FW	8 x 1 Pin 2.54mm Header	J35
BMC Reset	2 x 1 Pin 2.0mm Header	J20
BMC Debug Port	3 x 1 Pin 2.0mm Header	JBMC_DP1
BMC I2C	4 x 1 Pin 1.25mm Header	JBMC_I2C1
SGPIO	3 x 1 Pin 2.0 mm Header	J34

4.5 Motherboard Jumpers



Warning

1.Avoid adjusting jumpers when the system is on, it will damage the motherboard.

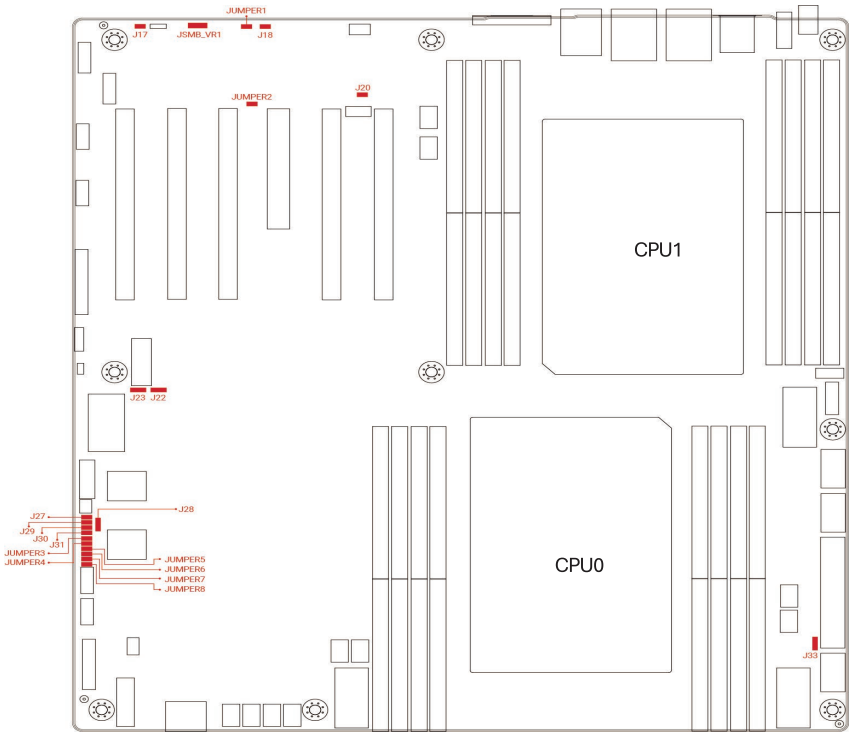


Fig.5

4.5.1 CMOSJumper(Jumper6)

The CMOS Jumper (Jumper6) is a motherboard component used to clear or reset the BIOS/UEFI configuration settings stored in CMOS memory. It restores the system to its default factory settings by erasing stored configuration data such as system time, boot order, and hardware parameters.

Name	Configuration	Function	Default
Jumper6	Short	Clear CMOS	No
	Open	Normal Operation	Yes

4.5.2 BMC Reset Jumper (J20)

The BMC Reset Jumper (J20) is a motherboard component used to reset the Baseboard Management Controller (BMC). It restores the BMC to its default state, clearing any temporary faults or configuration issues and reinitializing the system management functions.

Name	Configuration	Function	Default
J20	Short	Reset BMC	No
	Open	Normal Operation	Yes

4.5.3 BMC Disable Jumper (J18)

The BMC Disable Jumper (J18) is a motherboard component used to enable or disable the Baseboard Management Controller (BMC). When set to the disabled position, it turns off BMC functionality, preventing remote management and monitoring features. When set to the default position, the BMC operates normally.

Name	Configuration	Function	Default
J18	Short	Clear CMOS	No
	Open	Normal Operation	Yes

4.5.4 CPU SPI Flash Jumper (J22, J23)

The CPU SPI Flash Jumpers (J22, J23) are motherboard components used to control access to the CPU's SPI flash memory. They allow for functions such as programming, updating, or protecting the CPU firmware by enabling or disabling SPI flash operations.

Name	Configuration	Function	Default
J22 & J23	Pin1-2 / Pin1-2	CPU to Flash Bypass	Yes
	Pin1-2 / Pin2-3	CPU to PFR Module	No
	Pin2-3 / Pin1-2	BMC to Flash Bypass	No
	Pin2-3 / Pin2-3	BMC to PFR Module	No

4.5.5 BMC Reset Password Jumper (J17)

The BMC Reset Password Jumper (J17) is a motherboard component used to clear or reset the password stored in the Baseboard Management Controller (BMC). When activated, it removes the current BMC password, allowing access without authentication. When in the normal position, BMC password protection remains enabled.

Name	Configuration	Function	Default
J17	Short	Reset BMC Password	No
	Open	Normal Operation	Yes

4.5.6 BMC Socflash Configuration Jumper (JUMPER2)

The BMC Socflash Configuration Jumper (JUMPER2) is a motherboard jumper used to control the configuration settings of the BMC's onboard SPI flash memory. It determines how the BMC accesses or programs its firmware stored in the flash, allowing for normal operation or special programming/debug modes.

Name	Configuration	Function	Default
Jumper2	Short	Reset BMC Password	No
	Open	Normal Operation	Yes

4.5.7 BMC SPI MUX Jumper (J28)

The BMC SPI MUX Jumper (J28) is a motherboard jumper that controls the SPI (Serial Peripheral Interface) signal routing between the Baseboard Management Controller (BMC) and other system components. It allows switching the SPI bus connection to enable firmware updates, debugging, or normal operation modes.

Name	Configuration	Function	Default
J28	Pin1-2	BMC to PFR Module	No
	Pin2-3	BMC to Flash Bypass	Yes

4.5.8 PMBUS Power select Jumper (J33)

The PMBus Power Select Jumper (J33) is a motherboard jumper used to select the power source for the PMBus interface. It allows the system to choose between different power inputs for monitoring and controlling power-related functions, ensuring proper operation of voltage and current management features.

Name	Configuration	Function	Default
J33	Short	Select Power Source 1	Yes
	Open	Select Power Source 2	No

4.6 USB Connectors

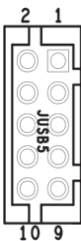
4.6.1 Front I/O USB Header (JUSB3)

The Front I/O USB Header (JUSB3) is a connector on the motherboard that allows you to connect the front-panel USB ports of a computer case. It provides data transfer and power to USB devices connected via the front panel, enabling easy access to USB functionality without reaching the rear I/O ports.



4. 6. 2 USB2.0 Header (JUSB4 & JUSB5)

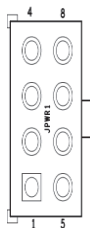
The USB 2.0 Headers (JUSB4 and JUSB5) are motherboard connectors used to provide additional USB 2.0 ports. They allow internal or external devices to connect to the motherboard, supporting data transfer and power for USB 2.0 peripherals. These headers are typically used for front-panel USB ports, expansion brackets, or internal USB devices.



4.7 Other Connectors and Components

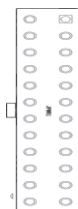
4.7.1 Power Connector (JPWR2, JPWR3, JPWR4)

The main power connector consists of two 4-pin and two 12-pin connectors, designed to support HDD backplanes, SATA backplanes, and the CEM interface. The power connectors JPWR2, JPWR3, and JPWR4 are motherboard interfaces used to supply electrical power from the power supply unit (PSU) to the motherboard and its components. They provide the necessary voltage and current for system operation, including CPU, memory, PCIe slots, and other onboard devices, ensuring stable and reliable power distribution across the motherboard.



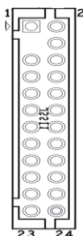
4.7.2 Power Connector (JPWR1)

The Power Connector JPWR1 is the main motherboard power interface that connects to the power supply unit (PSU). It delivers primary electrical power to the motherboard, supporting the CPU, memory, chipset, and other critical components to ensure stable system operation.



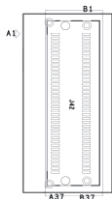
4.7.3 LED/Bezel Button Header (JSSI1)

It is a 2x12 pin header, LED/Bezel Button Header (JSSI1) is a motherboard connector used to interface with the system's front panel LEDs and control buttons, such as power, reset, and status indicators. It allows the motherboard to communicate system status to the user through visual signals and provides control inputs from the case buttons.



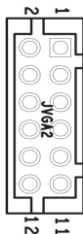
4.7.4 MCIO CONN (J39, J42, J43)

This connector is a 74-pin connector. MCIO (Management Controller I/O) connectors are motherboard interfaces used to provide communication and control links between the system management controller (BMC) and various management devices or modules. They support tasks such as system monitoring, firmware updates, and peripheral management, enabling remote control and diagnostic functions.



4.7.5 Front VGA Header (JVGA2)

This is a 2×6-pin header used to provide front VGA functionality. The Front VGA Header (JVGA2) is a motherboard connector that transmits VGA video signals from the integrated or discrete graphics subsystem to the front panel or an expansion module, enabling video output to an external display.



4.7.6 BMC GPIO Header (J19)

This connector is a 2×3-pin header. The BMC GPIO Header (J19) is a motherboard connector that provides general-purpose input/output (GPIO) interfaces for the Baseboard Management Controller (BMC). It allows the BMC to monitor, control, and interact with system components, sensors, and external modules for management, signaling, and diagnostic functions.



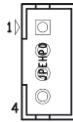
4.7.7 FAN Headers (JFAN1 ~ JFAN10)

This is a 4-pin fan header. The FAN Headers (JFAN1 to JFAN10) are motherboard connectors used to connect system fans for cooling purposes. They provide power, speed control, and monitoring signals to regulate fan operation, helping maintain optimal system temperature and ensuring reliable performance of the CPU, GPU, and other components.



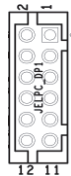
4.7.8 PCIe Hot-Plug Header (JPEHP0, JPEHP1)

This is a 1×4-pin header used to provide PCIe Hot-Plug functionality. The PCIe Hot-Plug Headers (JPEHP0 and JPEHP1) are motherboard connectors that enable hot-plug support for PCI Express (PCIe) slots. They provide control signals and monitoring for power, presence, and reset, allowing PCIe devices to be safely added or removed while the system is running.



4.7.9 IPMB Header (JESPI1)

This is a 2×6-pin header used to provide eSPI Debug Port functionality. The IPMB Header (JESPI1) is a motherboard connector that enables communication between the Baseboard Management Controller (BMC) and other management controllers or modules within the system, supporting system monitoring, remote management, and diagnostic functions.



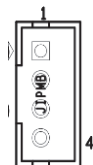
4.7.10 VROC KEY Box Header (J63)

This is a 1×4-pin header used to provide VROC KEY functionality. The VROC Key Box Header (J63) is a motherboard connector that interfaces with the VROC (Virtual RAID on CPU) key module, allowing the system to detect and validate the VROC key and enable software-based RAID functionality for NVMe storage devices.



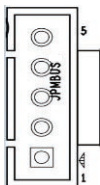
4.7.11 BMC IPMB BOX Header (J70)

This is a 1×4-pin header used to provide BMC I2C14 IPMB functionality. The BMC IPMB BOX Header (J70) is a motherboard connector that enables communication between the Baseboard Management Controller (BMC) and other management controllers or modules, supporting system monitoring, remote management, and diagnostic operations.



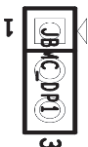
4.7.12 PMBUS Box Header (JPMBUS2)

This is a 1×5-pin header used to provide PMBus functionality. The PMBus Box Header (JPMBUS2) is a motherboard connector that allows communication between the power management controller and external PMBus-compatible devices, enabling monitoring, control, and configuration of power-related parameters.



4.7.13 BMC Debug port Header (JBMC_DP1)

This is a 1×3-pin header used to provide BMC Debug Port functionality. The BMC Debug Port Header (JBMC_DP1) is a motherboard connector that allows direct access to the Baseboard Management Controller (BMC) for debugging, firmware development, and diagnostic purposes, enabling engineers to monitor and troubleshoot BMC operations.



4.7.14 BUZZER Header (JBUZZER1)

This is a 1×2-pin header used to provide buzzer functionality. The BUZZER Header (JBUZZER1) is a motherboard connector that allows connection of an audible buzzer, which provides audio alerts for system events such as power-on, error notifications, and hardware faults.



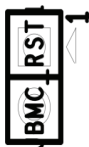
4.7.15 Chassis Intrusion Header (J26)

This is a 1×2-pin header used to provide chassis intrusion functionality. The Chassis Intrusion Header (J26) is a motherboard connector that connects to a chassis intrusion switch, allowing the system to detect and log if the case has been opened, enhancing physical security and alerting administrators to unauthorized access.



4.7.17 BMC RESET Header (J20)

This is a 1×2-pin header used to provide BMC RESET functionality. The BMC RESET Header (J20) is a motherboard connector that allows the Baseboard Management Controller (BMC) to be reset, clearing temporary faults or reinitializing the BMC without affecting the main system operation.



4.7.18 CPLD JTAG Header (J35)

This is a 1×8-pin header used to provide CPLD JTAG functionality. The CPLD JTAG Header (J35) is a motherboard connector that allows engineers to access the Complex Programmable Logic Device (CPLD) for programming, debugging, and testing purposes using the JTAG interface.



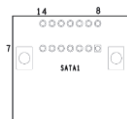
4.7.19 VRM SMB Header (JSMB_VR1)

This is a 1×3-pin header used to provide VRM SMB functionality. The VRM SMB Header (JSMB_VR1) is a motherboard connector that allows communication between the system and the Voltage Regulator Module (VRM) via the SMBus interface, enabling monitoring, control, and management of power delivery to the CPU and other components.



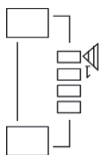
4.7.20 Dual port SATA Connector (SATA1)

This is a 2×7-pin header used to provide data and power connections for SATA storage devices. The Dual Port SATA Connector (SATA1) allows two SATA drives to be connected to the motherboard, supporting high-speed data transfer and enabling storage expansion or RAID configurations



4.7.21 BMC I2C Header (JBMC_I2C1)

This is a 1×4-pin header used to provide BMC I2C functionality. The BMC I2C Header (JBMC_I2C1) is a motherboard connector that allows the Baseboard Management Controller (BMC) to communicate with I²C-compatible devices for system monitoring, control, and management tasks



4.7.22 SGPIO Header (J34)

This is a 1×4-pin header used to provide SGPIO functionality. The SGPIO Header (J34) is a motherboard connector that allows communication with storage devices or backplanes to transmit activity, status, and drive presence signals, commonly used for managing and monitoring SAS/SATA drive bays



5. System Setup & Getting Started

⚠ Important

1. All information is subject to change without prior notice.
2. The system photos provided for demonstration purposes only. The appearance and internal view of your system may vary depending on the model you purchased.

5.1 Necessary Tools



Screwdriver



Pliers



Tweezers



Anti-Static Gloves

Safety Precautions

Follow these precautions when handling the system:

- Place the system on a flat, stable surface.
- Avoid installing the system in areas with moisture, smoke, vibration, excessive dust, salty or greasy air, or corrosive gases.
- Do not drop or jolt the system.
- Use only the supplied power adapter.
- Disconnect the power cord before performing any installation or maintenance.
- Never handle components with wet hands.
- Prevent liquids, chemicals, or foreign objects from entering the system.
- Wear a grounded wrist strap when handling components such as the CPU, memory, hard drive, or expansion cards.
- Place components on a grounded anti-static pad or their original packaging when removed from system.

5.2 DriveBay

⚠ Important

1. Before removing or installing any components, make sure the system is not connected to the power.

5.2.1 Installing 3.5"/2.5" Storage Drive

- Align and insert the two embossed pins on the carrier into the side dimples of the 3.5" drive.
- For a 2.5" drive, align it with the screw holes on the tray and secure it with screws.
- Gently press down the other side of the 3.5" drive until the remaining pins lock into place.
- With the lever open, slide the drive carrier horizontally into the drive bay until it clicks into position.
- Finally, push the lever in to lock the carrier securely.

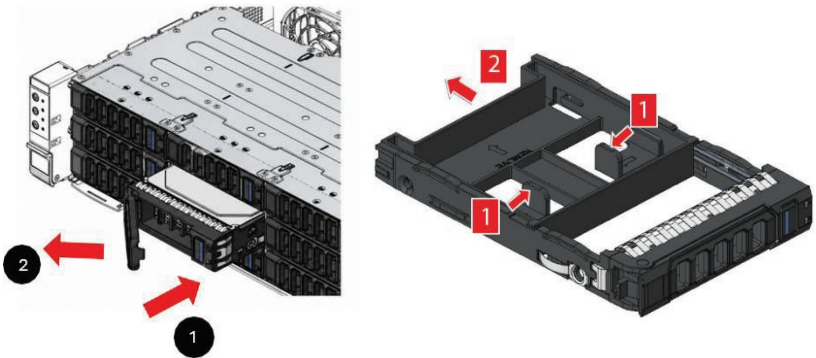


Fig.6

5.2.2 Installing M.2

- To install the M.2 card, first ensure the card is properly aligned with the M.2 socket on the motherboard. Insert the M.2 card into the connector at a slight angle until it is fully seated.
- Once inserted, gently press the free end of the M.2 card downward toward the standoff until it locks into place with the retention latch.

Removal

- Before removing the M.2 card, ensure that the system is powered off and disconnected from the power source.
- Begin by removing the top cover of the chassis.
- Locate the M.2 slot on the motherboard and pull the retention latch to release the M.2 card from its locked position. Once the latch is released, the M.2 card will automatically rise slightly from the slot.
- Carefully lift the M.2 card at an angle and remove it from the connector.

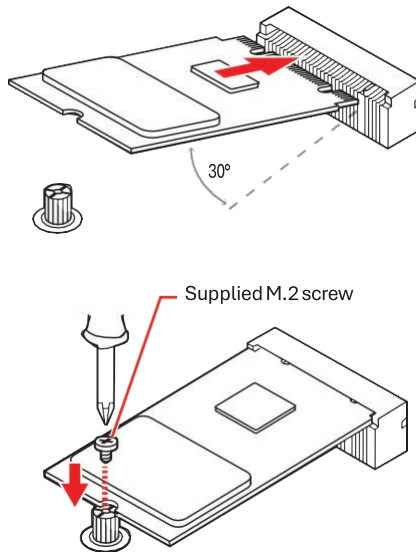


Fig.7

5.3 System Cover

5.3.1 Removing System Cover

- Align the rivets on the front cover plate with the corresponding holes on the chassis base. Then slide the front panel until it locks into place properly.
- Tighten the two screws as indicated in the diagram.

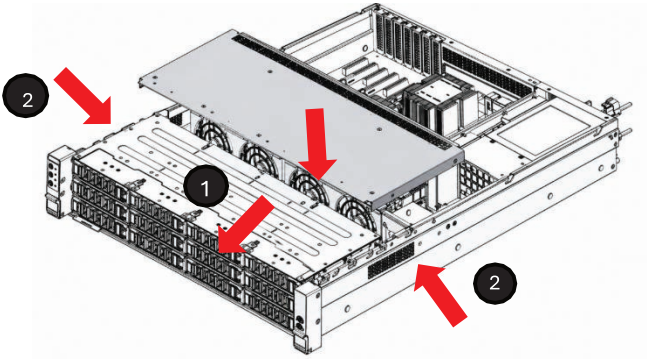


Fig.8

5.3.2 Installing Rear System Cover

- Open the lock as shown (turn the door upward).
- Align the rear cover plate rivets and lock hole with the chassis before installation, then slide the panel forward until it engages properly.
- Press the buckle to align it with the side cover as shown in the diagram.

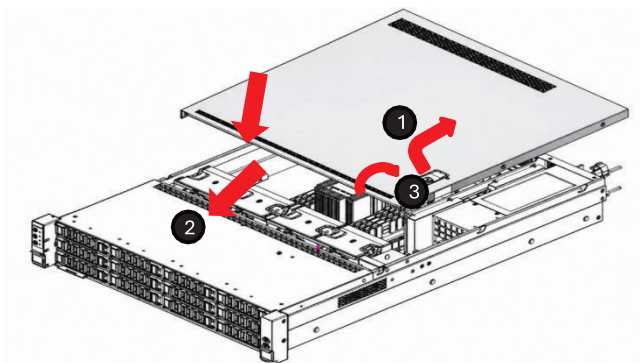


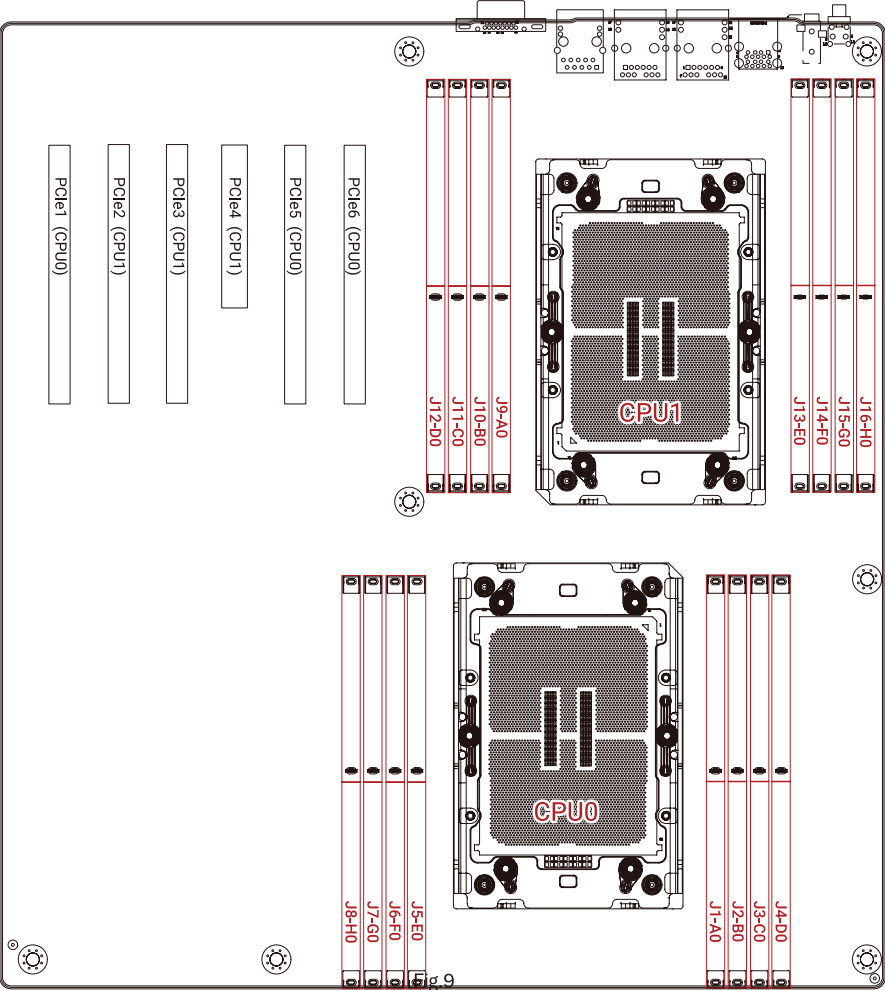
Fig.8 (a)



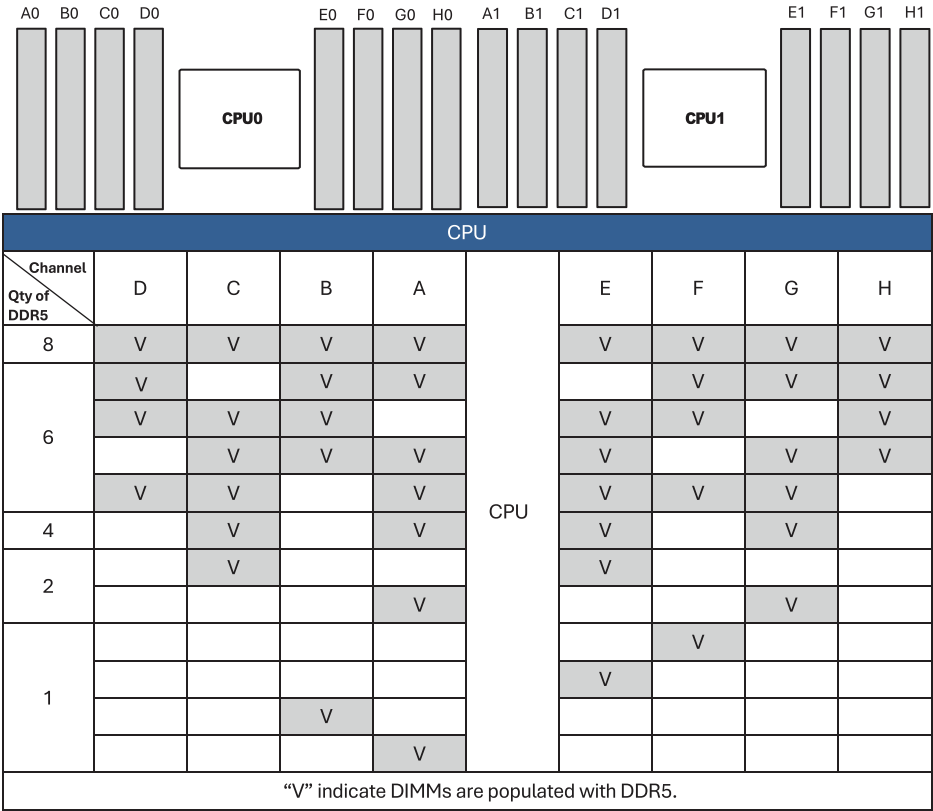
Important

- Prevent overheating: Ensure the cooling fan functions properly and apply an even layer of thermal paste or tape between the CPU and heatsink.
- Power safety: Always turn off and unplug the power supply before replacing the CPU.
- Handle with care: Avoid touching the CPU socket pins to prevent damage.
- Protect the socket: Keep the plastic cap on the socket when the CPU is not installed.
- Verify CPU status in the BIOS after installation.

5.4 Memory



Recommended Memory Population



△Important

1. There should be at least one DDR5 DIMM populated.

5.5 System Fan

The server has PWM Controlled hot-swappable fans that provide the main airflow to keep the system cool and prevent overheating.

5.5.1 The fan features include

- Each fan has a tachometer, allowing the BMC to monitor fan speed in real time.
- The BMC firmware automatically adjusts fan speed based on system temperature for stable performance.
- A fault LED on each fan lights red if the fan fails, making it easy to identify issues.
- All fans are installed in a removable fan cage, allowing easy access for cable routing, maintenance, and upgrades.

5.5.2 Installing 2U Fan

- Align the connectors and press the fan release tabs.
- Slide the fan into the slot until it fits properly.
- Release the tabs to lock the fan in place.

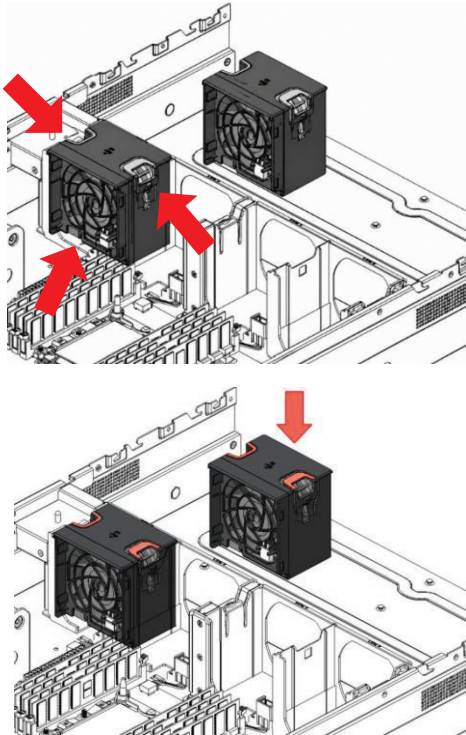


Fig.10

5.6 CPU & Heatsink Installation

⚠ Important

1. Use proper ESD protection during CPU installation.
2. Power off the system and unplug the power cord before installing the CPU.
3. Do not touch the CPU socket pins.
4. Always install the protective socket cap when the CPU is not present.
5. Apply an even layer of thermal paste or thermal pad between the CPU and heatsink.
6. Ensure the CPU heatsink and cooling fan are correctly installed and operational to prevent overheating.
7. Follow the CPU cooler manufacturer's installation instructions.
8. Check CPU status in BIOS after installation.

5.6.1 CPU Installation Procedure

A standard processor assembly consists of the following five components:

1. Processor Carrier
2. Processor
3. Bolster Plate Assembly
4. Socket (LGA 4677-X)
5. Back Plate

Additional components involved in the assembly include:

- Heatsink
- Dust Cover

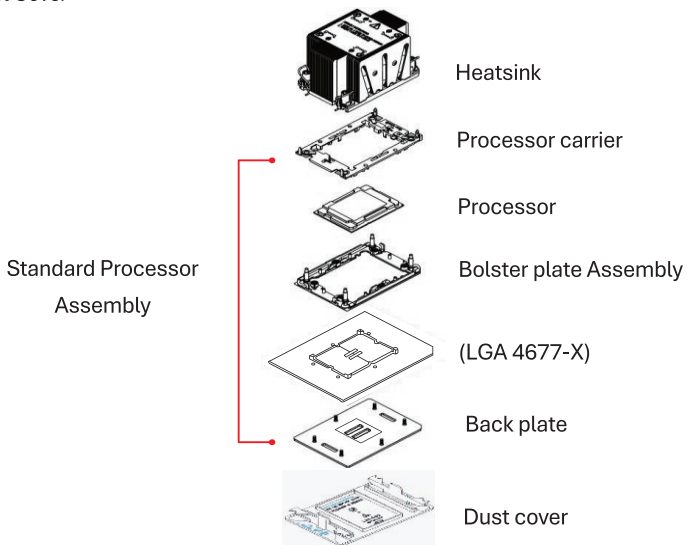


Fig.11

⚠ Important

1.Images are for demonstration purpose only. Actual parts may vary.

5.6.2 CPU Carrier assembly

- Remove the dust cover by pushing the tabs inward on both sides, then lift it off.
- Release the handle on the CPU carrier.
- Insert the CPU into the carrier by carefully aligning it, placing one side first, then gently lowering the other side into position.
- Close the handle to secure the CPU in the carrier.

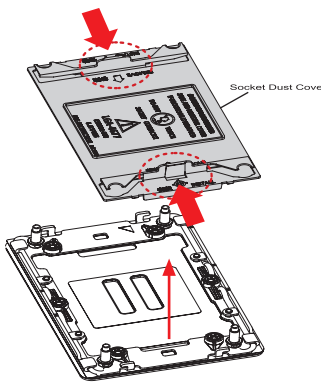


Fig.12

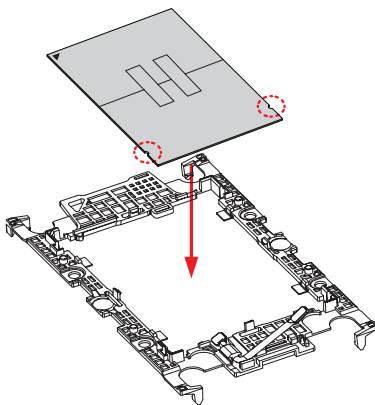
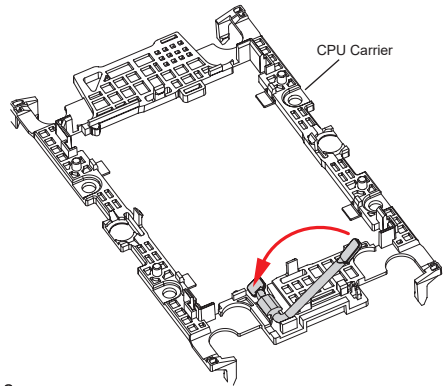
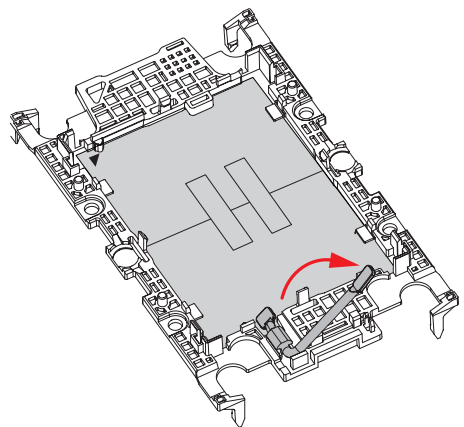


Fig.12(a)



5.6.3 Heatsink assembly

- Install the assembled heat sink and CPU carrier onto the CPU socket.
- Press the rotating clips located at the four corners of the heat sink into the latch position to secure it firmly.
- Using a T-30 torque driver, tighten the four corner nuts of the heat sink in the sequence marked: 1 → 2 → 3 → 4.

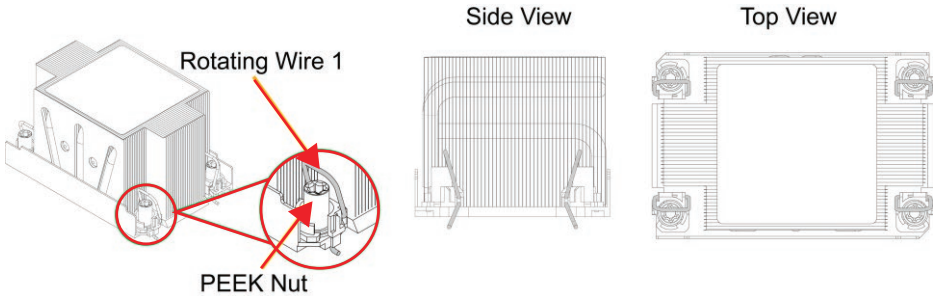


Fig.13

A, B, C, D:
PEEK Nut on the Heatsink

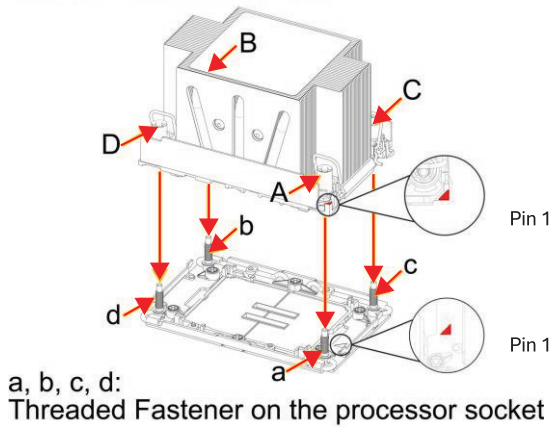


Fig.13(a)

6. Power Supply Unit (PSU)

The server supports two hot-swappable power supplies, which can be inserted or removed from the rear of the system without tools.

⚠ Important

1. Both power supplies must be identical, and both power cords must be connected.
2. Failing to connect both power supplies could result in CPU throttling.

6.1 Installing PSU

- Remove the PSU blank cover.
- Slide the PSU into the chassis bay until the release latch clicks into place.
- Connect the power cable to the PSU outlet.

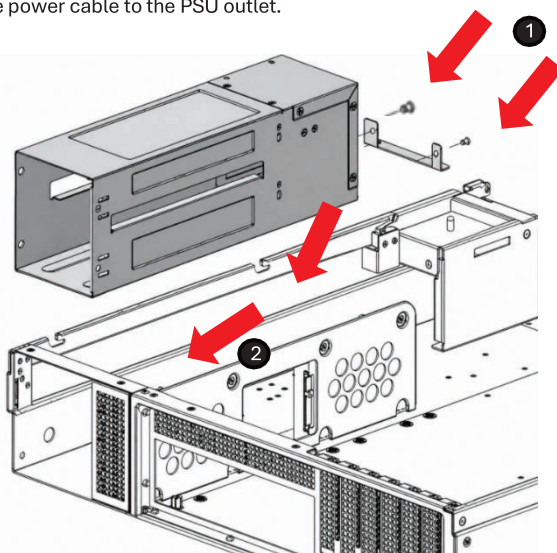


Fig.14

7. Slide Rail

Important

1. The illustrations are provided for demonstrative purposes only. The appearance of the system may differ based on the model you have purchased.

7.1 Installing Slide Rail

- Attach the guide rails to both sides of the cabinet.
- Open the front locking slot on the slide rail.
- Slide the rail forward until the locating boss aligns with the cabinet hole.
- Insert the slide rail boss through the cabinet slot from the inside, then secure it using the locking hook.
- Pull the inner rail out from the slide rail.

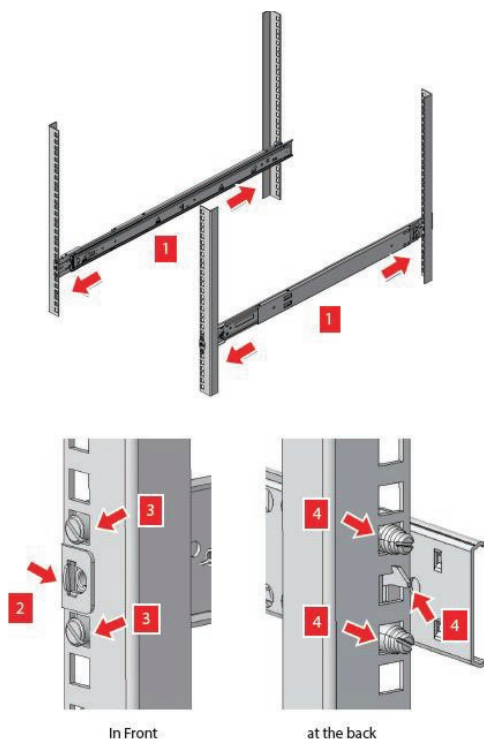


Fig. 15

7.2 Retracting Outer Rail Bracket

Pull the latch upward and slide the middle rail backward until it is fully retracted into the outer rail bracket.

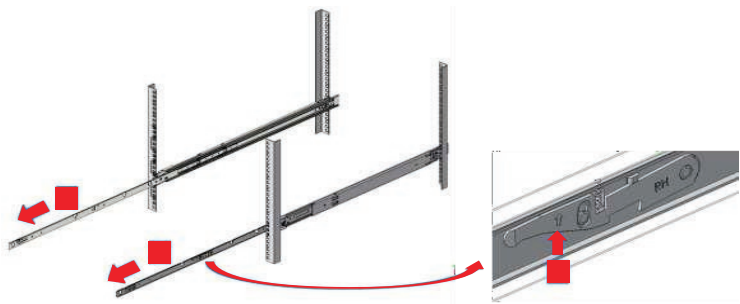


Fig. 16

7.3 Installing Chassis into Rack

7.3.1 Extend the middle rails

- Pull the middle rails out from both sides of the rack until they are fully extended.
- Make sure the ball bearing retainers are locked in the forward position to hold the rails steady during installation.

7.3.2 Engage the inner rails

- Align the inner rails (attached to the chassis) with the middle rails on the rack.
- Carefully slide the chassis forward along the rails until it stops at the end of the travel range.

7.3.3 Insert the chassis into the rack

- While supporting the chassis, press the two-way release tabs (on both sides) forward or backward to allow the chassis to slide further into the rack.
- Gently push the chassis all the way in until it is seated properly.

7.3.4 Secure the chassis

- Once aligned, tighten the mounting screws on both sides to secure the chassis firmly in place.

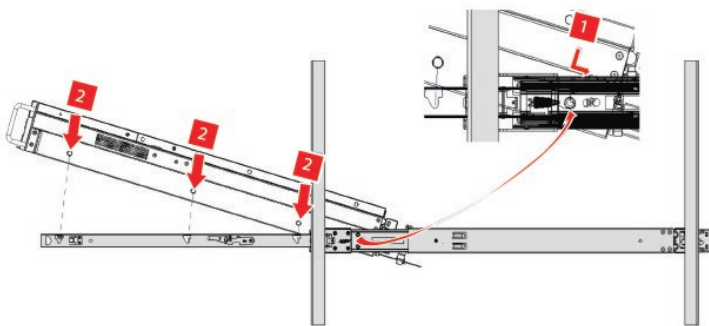


Fig. 17

7.4 Removing Chassis from Rack

- Pull out the handles on both sides of the case, as shown in the figure.
- Loosen the illustrated screw.
- Firmly grip both handles and extract the server from the cabinet.

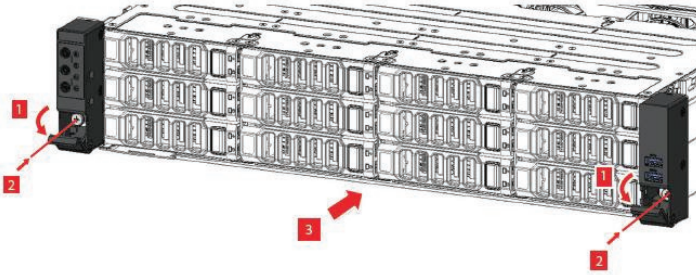


Fig. 18

7.5 Detaching Outer Rail Bracket from Rack Frame

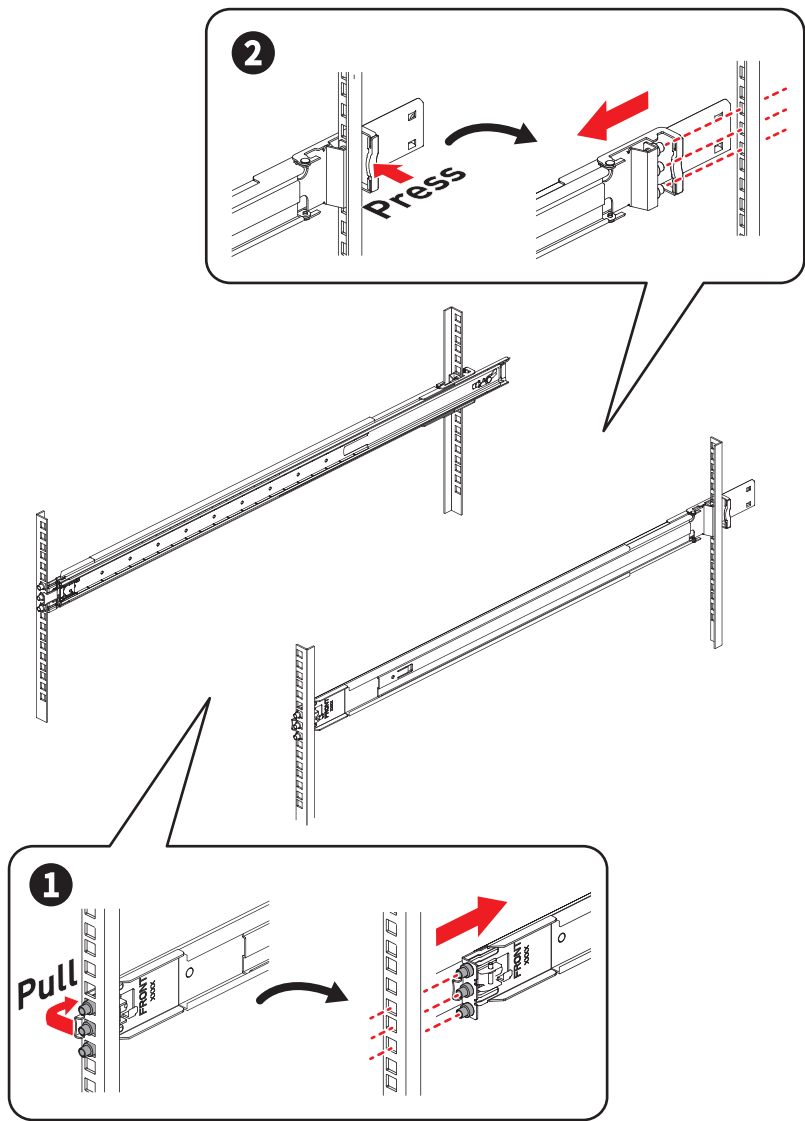


Fig.19

8. Service & Technical Support

If a problem arises with your product and no solution can be obtained from the user's manual, please contact your place of purchase or local distributor. Alternatively, please talk to our Netweb Expert-

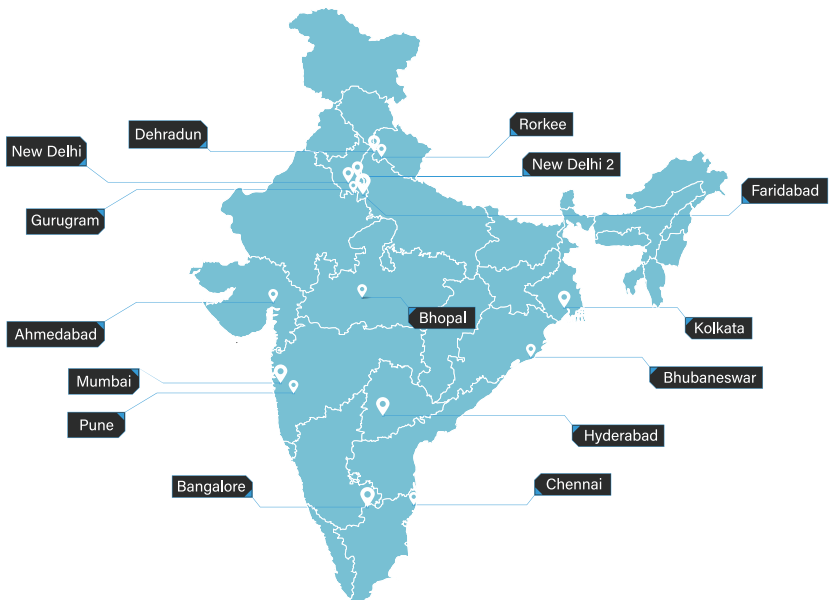
Our Netweb Experts have the expertise to assist you with any inquiries you may have about our products and solutions.

Tel: +91 11 4324 0000

Fax: +91 11 4324 0000

Email: Supportdel@netwebindia.com

Website: [Contact Us - Netweb Technologies](#)



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Support Inquiries

Email: tyronecare@tyronesystems.com