AS201-G4 2U Rackmount Server User Manual

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Shenzhen Gooxi Digital Intelligence Technology Co., Ltd.

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Foreword

This manual is the technical product manual for the Gooxi Eagle Stream platform 2U general rackmount server. It primarily provides an overview and explanation of the product's appearance, structure, hardware installation, and basic configuration.

This manual is intended for reference and study by professional technical personnel. The product should only be installed and maintained by experienced technicians.

Modification Record

Manual version	Release date	Modification instructions
V1.0	2024-10-20	First release
V1.1	2024-12-27	Added rack installation illustration
V1.2	2025-02-09	Added 12-bay expansion configuration and 8-bay direct connection configuration
V1.3	2025-03-31	Updated product specifications

Contents

1. Product Introduction

1.1 Product Overview

AS201-G4 Series 2U Dual-Socket Rackmount Server is a new-generation Eagle Stream platform product developed by Gooxi to meet the demands of internet services, IDC (Internet Data Centers), cloud computing, enterprise markets, and telecommunications applications. It is suitable for IT core workloads, cloud computing virtualization, high-performance computing, big data processing, enterprise or telecom operations, and other complex tasks. This server offers advantages such as low power consumption, strong scalability, high reliability, easy management, and rapid deployment.

Main Configurations:

- Supports up to 2 Intel® 4th/5th Gen Xeon® Scalable processors
- Supports up to 16 DDR5 DIMM slots
- Available in two front panel configurations: 12 x 3.5" or 8 x 3.5" drive bays
- Rear panel supports expansion with 2 x 2.5" drive bays
- Up to 9 PCIe expansion slots supported

Physical view of the server is shown below:

12-Bay Front View 1-1

8-Bay Front View 1-2
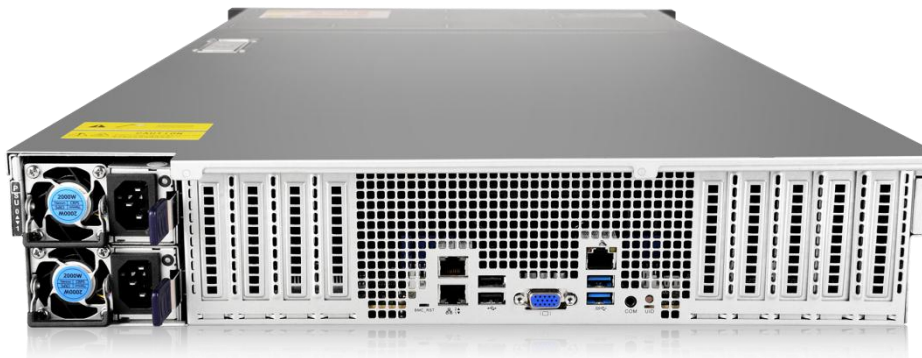
Vertical Slot Rear View 1-3

Horizontal Slot Rear View 1-4

1.2 Product Structure

Eagle Stream 2U Dual-Socket Rackmount Server Exploded View (12-Bay Model Example)
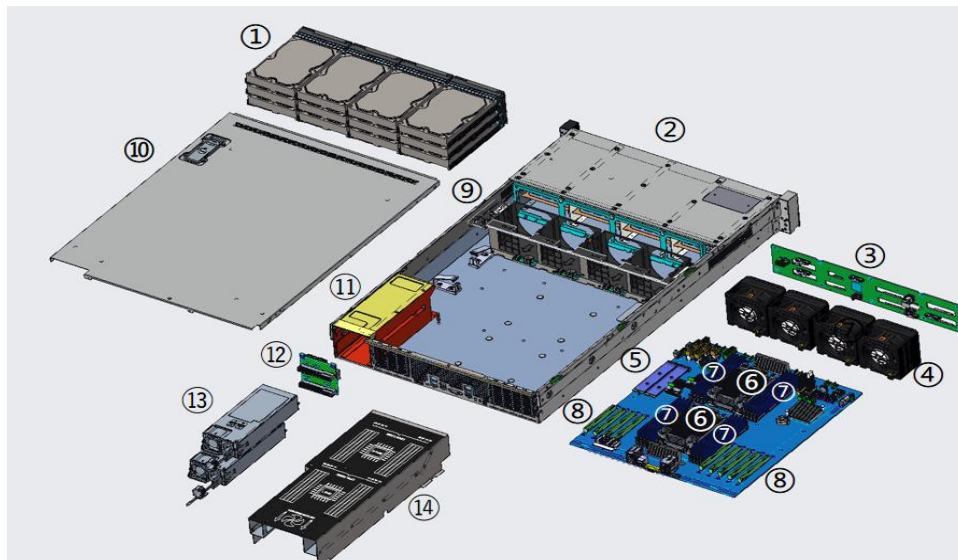
Structure diagram 1-3

No.	Name	No.	Name
1	Hard Drive	8	PCIe Expansion Slot
2	Hard Drive Bracket Module	9	Fan Bracket
3	Backplane	10	Top Cover
4	Fan Module	11	Power Frame
5	M.2 SSD Slot	12	Power Board
6	CPU Heatsink	13	Power Module
7	Memory Module	14	Air Duct Module

Table 1-1

1.3 Logical Structure

The logic diagram of the AS201-G4 series dual-socket rackmount server is shown below:
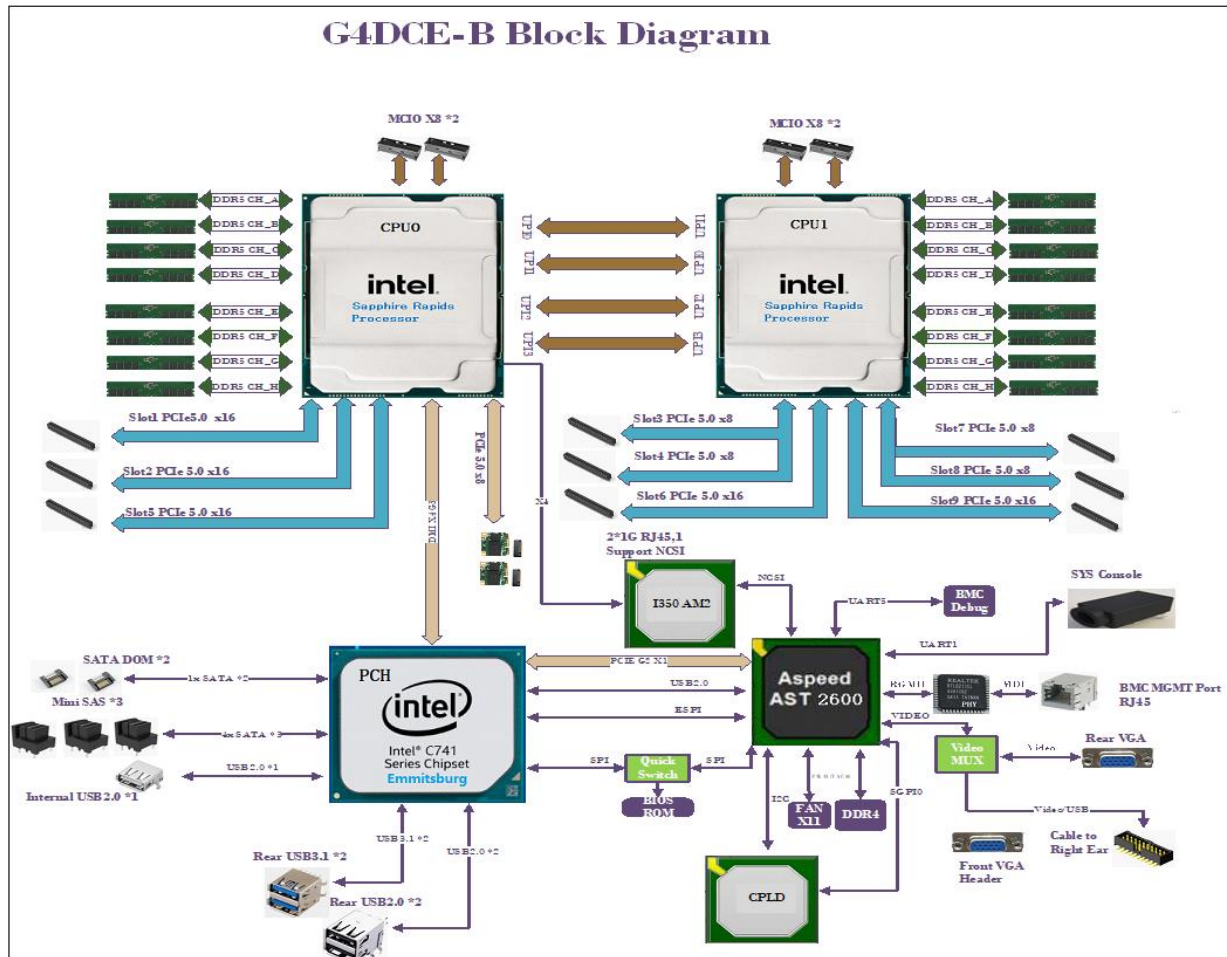
Motherboard logic block diagram 1-4

● Supports 4th/5th Gen Intel® Xeon® Scalable processors with LGA4677 socket

● Each CPU supports 8 channels, with one DDR5 RDIMM/LRDIMM memory module per channel

● PCH uses Intel® C741 chipset

● BMC uses ASPEED AST2600 control chip for IPMI remote management. Provides VGA output, a dedicated Gigabit RJ45 management port, and connects to the PCH via RMII/NCSI

1.4 Product Specifications

Product Series	AS201-D12R-NV-G4	AS201-D12RE-G4	AS201-D08R-G4
Form Factor	2U Rackmount Server		
Dimensions	745 * 444 * 87.6 mm (D * W * H)		
Processor	Supports 2 Intel® Xeon® 4th/5th Gen Scalable Processors, with TDP up to 350W		
Memory	16 DDR5 slots, supports DDR5 4400/4800/5600 MHz RDIMM memory		
Internal Storage Interface	2 M.2 (PCIe 5.0 x4) interfaces, 3 MiniSAS HD interfaces, 2 SATA DOM interfaces		
Front Hard Drives	Supports up to 4 hot-swap 3.5"/2.5" SATA/SAS/NVMe and 8 3.5"/2.5" SAS/SATA hard drives	Supports up to 12 hot-swap 3.5"/2.5" SATA/SAS hard drives	Supports up to 8 hot-swap 3.5"/2.5" SATA/SAS hard drives
Rear Hard Drives	Supports up to 2 hot-swap 2.5" SAS/SATA/NVMe hard drives		
External Ports	Front: 2x USB 3.0, 1x VGA		
	Rear: 1 VGA, 1 COM port, 2 USB 3.0, 1 management port, 2 RJ45 ports		
PCIE Expansion	Rear optional: Supports 9 half-height, half-length, single-width PCIe 5.0 slots		
	Rear optional: Supports 1 full-height, full-length, dual-width PCIe 5.0 slot and 5 half-height, half-length, single-width PCIe 5.0 slots		
Security	Supports TPM/TCM hardware encryption modules, BMC remote access encryption, BIOS access encryption		
Power Supply	800W/1300W/1600W/2000W CRPS 1+1 Redundant（1+1）		
Fans	Standard 4x8038 hot-swappable N+1 redundant fans		
IPMI	IPMI 2.0		
Management Port	1 RJ45 management port		
Operating Temperature & Humidity	Temperature: 5°C to 35°C / Humidity: 20% to 80% RH (non-condensing)		
Storage Temperature &	Short-term storage (≤72H): Temperature -40°C to 70°C / Humidity 20% to 90% RH (non-condensing, with packaging)		

Humidity	Long-term storage (>72H): Temperature 20°C to 28°C / Humidity 30% to 70% RH (non-condensing, with packaging)

2. Hardware Description

2.1 Front Panel

2.1.1 Appearance

- 12x3.5-inch hard drive configuration
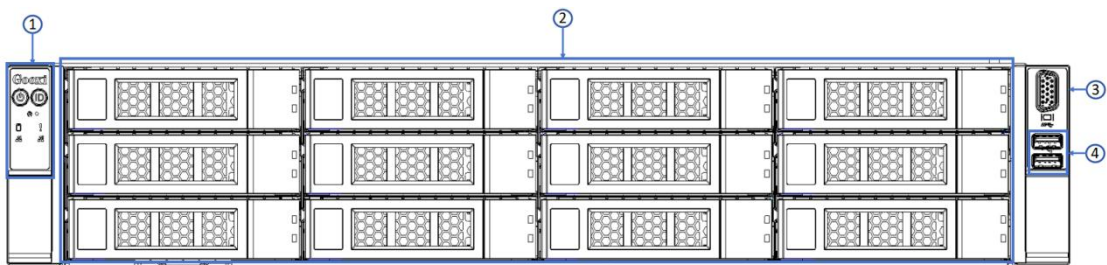
Figure 2-1

No.	Name	No.	Name
1	Switch Panel	3	VGA Port
2	3.5-inch Hard Drive	4	USB 3.1 Port

Table 2-1

2.1.2 Indicator lights and buttons
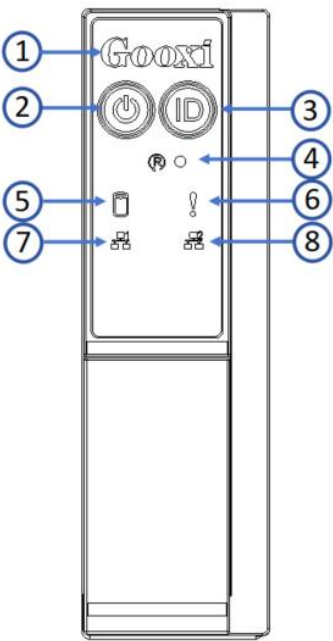
Figure 2-2

No.	Indicator/button	No.	Indicator/button
1	GOOXI Logo	5	Hard Drive Activity Indicator

2	Power Button/Indicator	6	System Alarm Indicator
3	UID Button/Indicator	7	OCP1 NIC Presence Indicator
4	Reset Button	8	OCP2 NIC Presence Indicator

Table 2-2

LED status description		
Logo	Indicator/button	Status description
Gooxi		Gooxi logo
(power icon)	Power indicator	Description of the power indicator light: Green (steady on): Indicates that the device has been powered on normally. Green (blinking): Indicates that the device is in standby. Green off: Indicates that the device is not powered on. Power button description: Short press this button in the power-on state, and the OS will shut down normally. Press and hold the button for 6 seconds in the power-on state to force the server to Power off. Short pressing this button in the standby state allows for powering on.
(ID icon)	UID button/indicator	The UID button/indicator is used to conveniently locate the server to be operated, and the indicator can be turned off or on by manually pressing the UID button or remotely controlling the BMC command. Description of UID indicator light: Blue (steady on/blinking): Indicates that the server is located. Off: Indicates that the server is not located. UID button description: Short press this button to turn on/off the positioning light.
(R icon)	Reset server button	Press to restart the server
(drive icon)	Hard drive indicator	Blinking green light: The hard drive is operating normally
(! icon)	System alarm indicator light	System alarm indicator light. It includes system, fan, and power alarms, etc. Specific details can be viewed through the IPMI management software.
(network 1 icon)	Network port connection status indicator light	Indicator lights for Ethernet ports corresponding to the network card slots. Green (steady): Indicates a normal network connection. Off: Indicates an unused or faulty network port. Note: Corresponds to the two 1GE Ethernet ports on the motherboard.
(network 2 icon)	Network port connection status indicator light	Indicator lights for Ethernet ports corresponding to the network card slots. Green (steady): Indicates a normal network connection. Off: Indicates an unused or faulty network port. Note: Corresponds to the two 1GE Ethernet ports on the motherboard.

Table 2-3

2.1.3 Interface

- Interface location
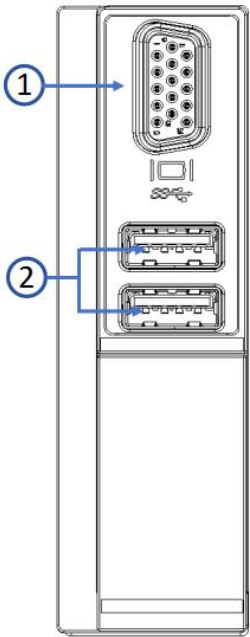
Figure 2-3

No.	Name	No.	Name
1	VGA Port	2	USB3.0 Interface

Table 2-4

- Interface description

Name	Type	Qty	Description
VGA Port	DB15	1	Used to connect display terminals, such as monitors or KVMs
USB Interface	USB3.1	2	Used to connect USB devices

Table 2-5

2.2 Rear Panel

2.2.1 Appearance
- 9*PCIE Rear Panel View
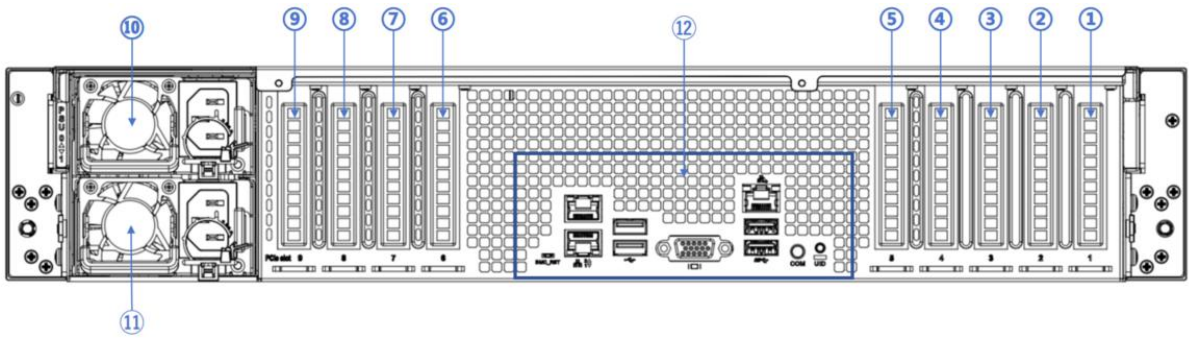
Figure 2-4

No.	Name	No.	Name
1-9	PCIe Slots	10	Power Module (PDU 0)
11	Power Module (PDU 1)	12	I/O Module

Table 2-6

2.2.2 Indicator lights and buttons
- Rear Panel Indicators
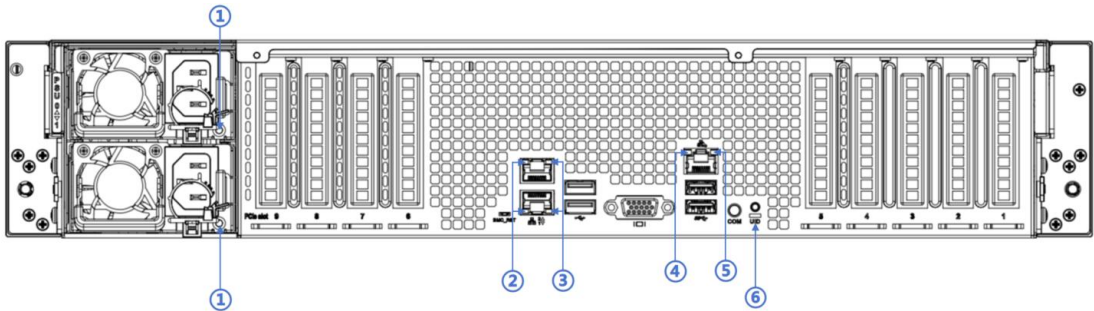
Figure 2-5

No.	Name	No.	Name
1	Power Module Indicator	2	Network Port Link Indicator
3	Network Port Activity Indicator	4	Management Port Link Indicator
5	Management Port Activity Indicator	6	UID Indicator

Table 2-7

- Description of Power Module Indicators

Indicator light /button	Status description
Power module indicator	Green (steady): Indicates normal input and output. Orange (steady): Indicates AC power cord unplugged or power module missing. Only one parallel-connected power module has AC input. Power module malfunction leads to output shutdown, such as OVP, OCP, fan failure, etc. Green (1Hz/blinking): Indicates normal input, but low voltage (less than 12V) or the power supply is in intelligent on state. Green (2Hz/blinking): Indicates firmware online upgrade process. Orange (1Hz/blinking): Indicates continuous power-running warning events such as high temperature, high power, high current. Off: Indicates no AC power input.

Table 2-8

2.2.3 Interfaces

● Rear Panel Indicators
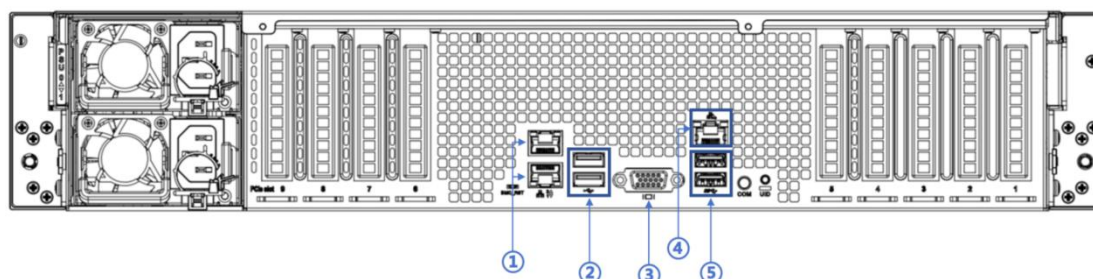
Figure 2-6

No.	Name	No.	Name
1	Gigabit network port	2	USB 2.0 port
3	VGA port	4	Management network port
5	USB 3.1 port		

Table 2-9

2.3 Processors

● Supports one or two 4th/5th Gen Intel® Xeon® Scalable processors

● When a single processor is configured, it must be installed in the CPU 0 socket

● Processors installed in the same server must be of the same model

● For specific optional components, please consult Gooxi sales

● Processor locations are shown in the figure below:
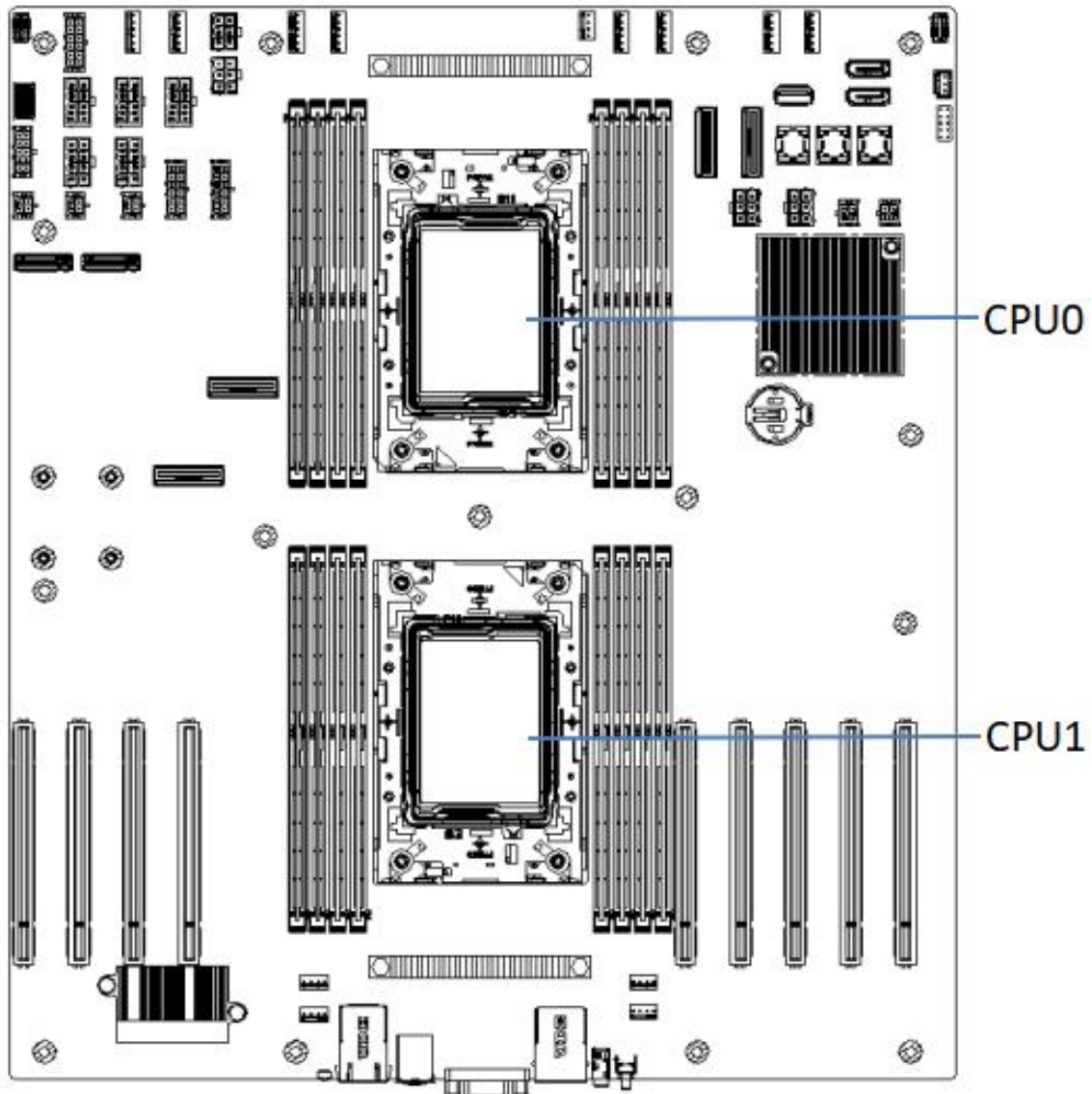
Figure 2-7

2.4 Memory

2.4.1 Memory slot location

This motherboard is based on the Eagle Stream platform and supports Intel® Xeon® Sapphire Rapids/Emerald Rapids CPUs. Each CPU supports 4 channels, with 2 DIMMs per channel. The motherboard supports up to 16 DIMMs and is compatible with DDR5 RDIMM memory, with supported frequencies of 4400/4800/5600 MHz. The memory slot locations are shown in the figure below:

● memory slot location
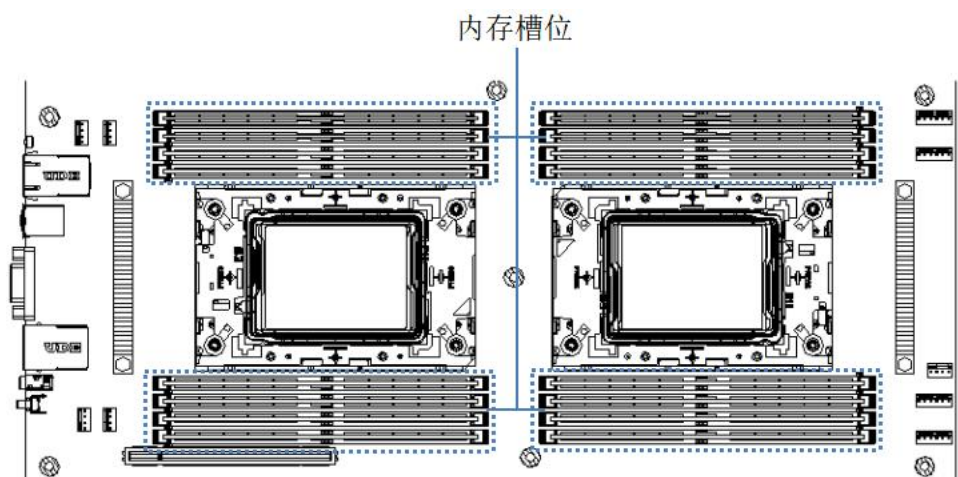
Figure 2-8

2.4.2 Memory Installation Guidelines

The motherboard supports DDR5 RDIMM memory, with supported memory speeds of 4400/4800/5600 MHz.

Note:

- The same model of DDR5 memory must be used across the entire server, and all memory modules must run at the same speed. The operating speed is determined by the lowest of the following:
- The maximum memory speed supported by the specific CPU
- The maximum operational speed based on the specific memory configuration
- Mixing different types (RDIMM, LRDIMM) or specifications (capacity, bit width, rank, height, etc.) of DDR5 memory is not supported.
- The maximum supported memory capacity varies by model of the Intel® Xeon® Scalable processor.

2.4.3 Memory Installation Rules

The server supports up to 16 DDR5 memory modules. Memory configuration must follow the memory installation guidelines.

DDR5 QTY	内存槽位								
	DIMMH1	DIMMG1	DIMMF1	DIMME1		DIMMA1	DIMMB1	DIMMC1	DIMMD1
1						DDR5			
							DDR5		
				DDR5					
			DDR5						
2		DDR5				DDR5			
				DDR5	CPU0/1			DDR5	
4		DDR5		DDR5		DDR5		DDR5	
6		DDR5	DDR5	DDR5		DDR5		DDR5	DDR5
	DDR5	DDR5		DDR5		DDR5	DDR5	DDR5	
	DDR5		DDR5	DDR5			DDR5	DDR5	DDR5
	DDR5	DDR5	DDR5			DDR5	DDR5		DDR5
8	DDR5	DDR5	DDR5	DDR5		DDR5	DDR5	DDR5	DDR5

Figure 2-9

2.5 Storage

2.5.1 Hard drive configuration

Configuration	Max Front Hard Drives	Max Rear Hard Drives	Description
12 x 3.5-inch Drive Configuration	Front: 12 x 3.5"	Rear Module: 2 x 2.5"	SAS drives require optional SAS passthrough card or RAID card.
	Slots 0–3 support SAS/SATA drives. Slots 4–11 support SAS/SATA/NVMe drives.	Rear module supports SAS/SATA/NVMe drives.	

Table 2-10

2.5.2 Hard drive serial number
- 12x3.5-inch hard drive configuration
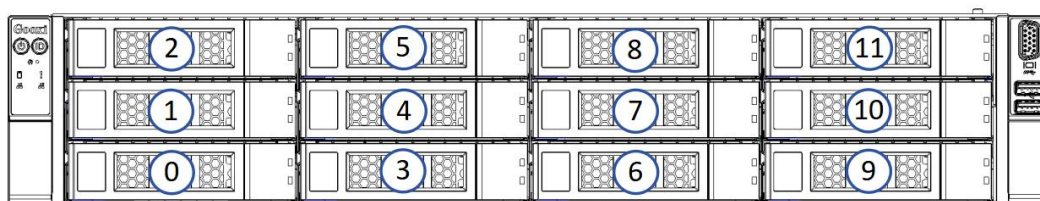
Figure 2-10

2.5.3 Hard drive status indicator
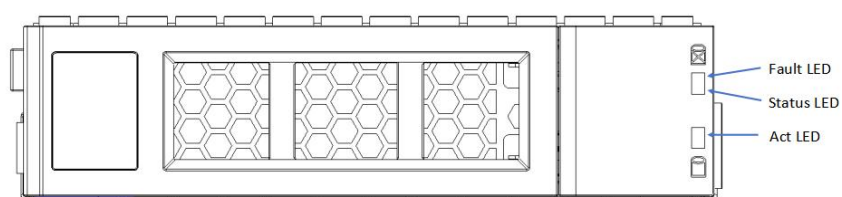
Figure 2-11

- Hard drive status indicator description

Function	Act LED	Fault LED	Status LED
Hard drive Presenting	Steady on	Off	Off
Hard drive activity	Blinking at 4Hz/sec	Off	Off
Hard drive positioning	Steady on	Blinking at 4Hz /sec	Off
Hard drive error	Steady on	Off	Steady on
Raid rebuilding	Steady on	Off	Blinking at 1Hz/sec

Table 2-11

2.6 Power Supply

- Supports 1 or 2 power modules
- Hot-swappable support
- When configuring with 2 power modules, supports 1+1 redundancy
- Power modules configured in the same server must be of the same model
- For specific optional system components, please consult Gooxi sales
- The power module locations are shown in the diagram below:
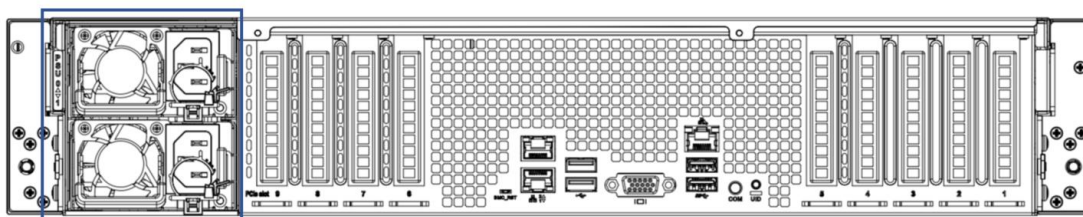
Figure 2-12

2.7 Fans

- Supports 4 fan modules.
- Hot-swappable support.
- Supports single fan failure.
- Supports variable fan speed.
- Fan modules configured in the same server must be of the same model.
- The fan locations are shown in the diagram below:
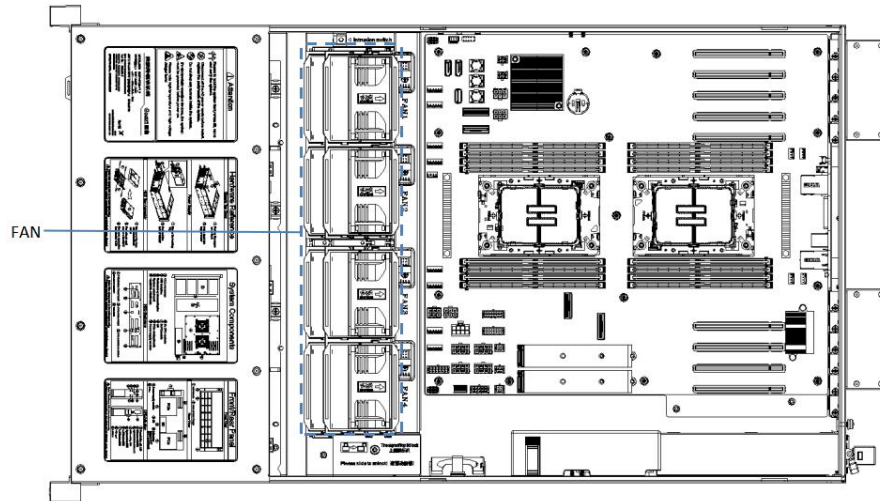
Figure 2-13

2.8 I/O expansion

2.8.1 PCIe slot location
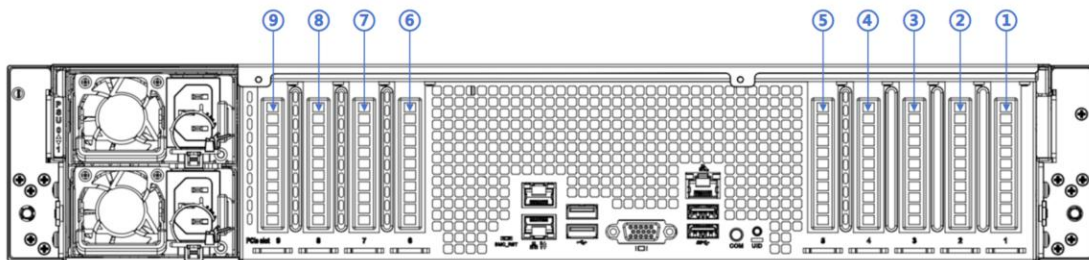
Figure 2-14

- The motherboard provides the following slots: Slot1, Slot2, Slot3, Slot4, Slot5, Slot6, Slot7, Slot8, and Slot9.

2.8.2 PCIe slot description

When CPU1 is not installed, the corresponding PCIe slots will be unavailable.

PCIe slot	Subordinate CPU	PCIe standard	Bus bandwidth	Slot size
Slot 1	CPU0	PCIe 5.0	X16	half-height, half-length
Slot 2	CPU0	PCIe 5.0	X16	half-height, half-length
Slot 3	CPU1	PCIe 5.0	X8	half-height, half-length
Slot 4	CPU1	PCIe 5.0	X8	half-height, half-length
Slot 5	CPU0	PCIe 5.0	X16	half-height, half-length
Slot 6	CPU1	PCIe 5.0	X16	half-height, half-length
Slot 7	CPU1	PCIe 5.0	X8	half-height, half-length
Slot 8	CPU1	PCIe 5.0	X8	half-height, half-length
Slot 9	CPU1	PCIe 5.0	X16	half-height, half-length

Note:
◆PCIe x16 slots are backward compatible with PCIe x8, PCIe x4, and PCIe x1 cards. However, upward compatibility is not supported, meaning the slot bandwidth cannot be smaller than the PCIe card's bandwidth.
◆Full-height, full-length PCIe slots are backward compatible with half-height, half-length PCIe cards.
◆All slots can supply up to 75W of power to PCIe cards, though the actual power consumption depends on the specific model of the PCIe card.

Table 2-12

2.8.3 Expansion Module
- 2.5-inch Hard Drive Module
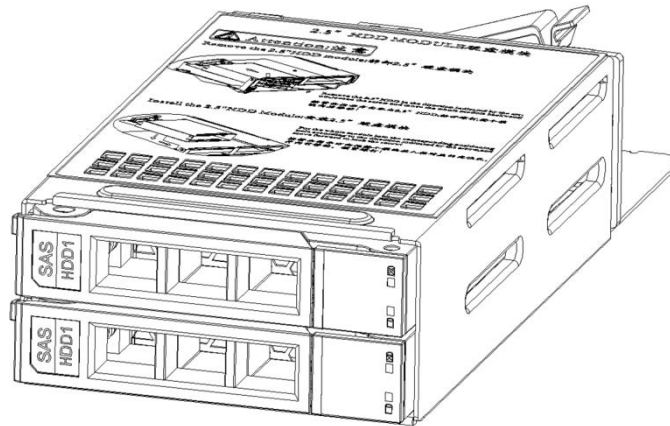
Figure 2-15

- PCIe Module
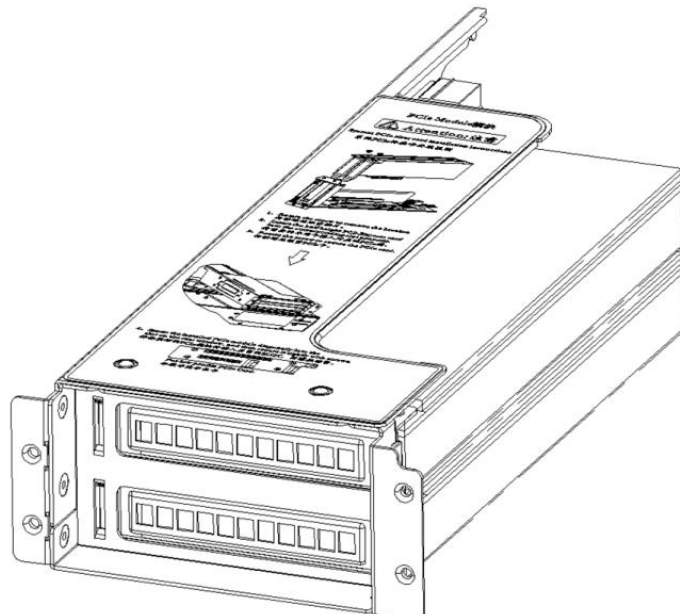
Figure 2-16

2.9 PCBA

2.9.1 Motherboard
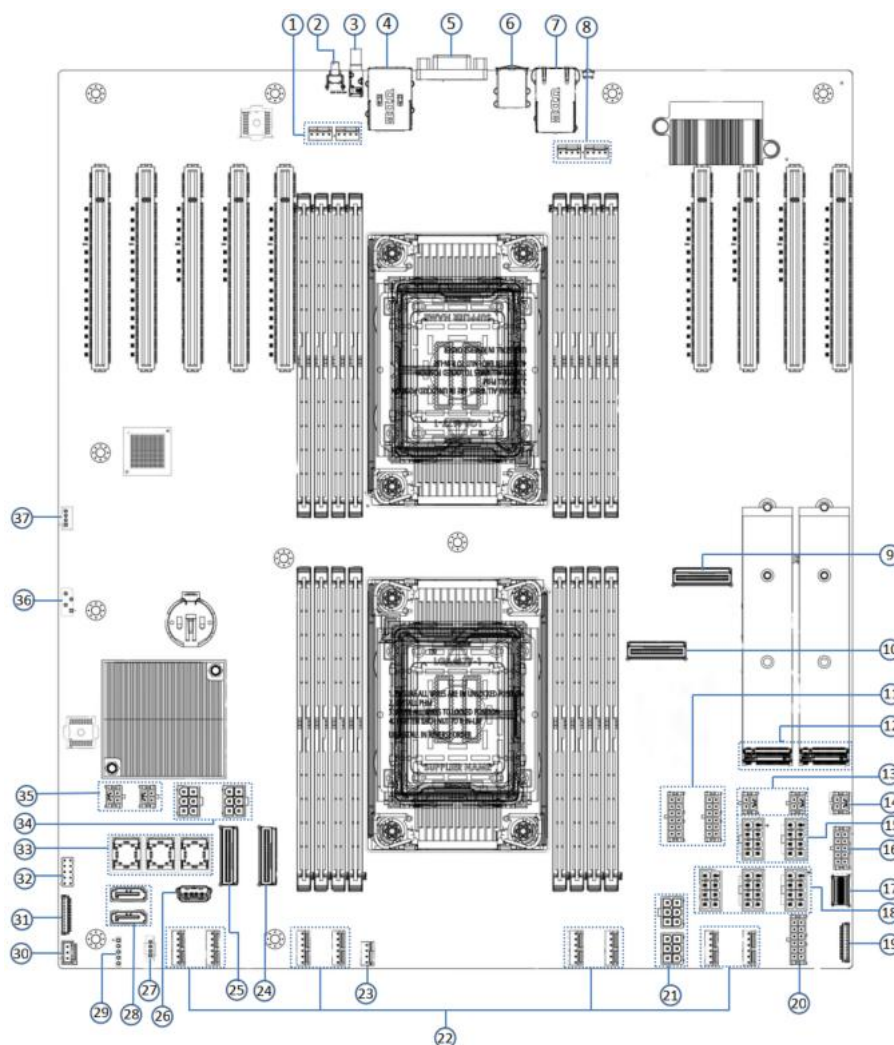
Motherboard Figure 2-17

No.	Name
1、8	System Fan 4-Pin Connector
2	UID Button
3	COM Port
4	BMC_LAN/USB3.0
5	Rear VGA
6	Rear USB 2.0
7	RJ45 Gigabit Network Port
9	CPU1 PCIE5.0 Port0(lane8~15) X8 MCIO Connector
10	CPU1 PCIE5.0 Port0(lane0~7) X8 MCIO Connector
11	12Pin Backplane Power Connector
12	PCIE CPU0 M.2 Connector

13	4Pin Rear Backplane Power Connector
14	NIC Power Connector
15	8Pin Power Board Connector
16	Motherboard to Power Communication Control Connector
17	Front USB 3.0 Connector
18	8-Pin Power Board Connector
19	Front VGA Connector
20	12-Pin Backplane Power Connector
21	Riser Power Connector
22	System Fan 6-Pin Connector
23	System Fan 4-Pin Connector
24	CPU0 PCIE5.0 Port3(lane0~7) X8 MCIO Connector
25	CPU0 PCIE5.0 Port3(lane8~15) X8 MCIO Connector
26	Internal USB 2.0 Connector
27	RAID KEY Connector
28	SATA Port 1/2 Connector
29	SGP IO
30	CHASSIS INTRUSION Connector
31	Front Panel Power Button Ear Connector
32	TPM Connector
33	HDD Mini SAS Connector
34	Riser Power Connector
35	4Pin Rear Backplane Power Connector
36	IPMB
37	Rear HDD Backplane I2C Connector

Table 2-13

2.9.2 Hard drive backplane

- 12×3.5-inch Direct Connection Backplane

TOP surface
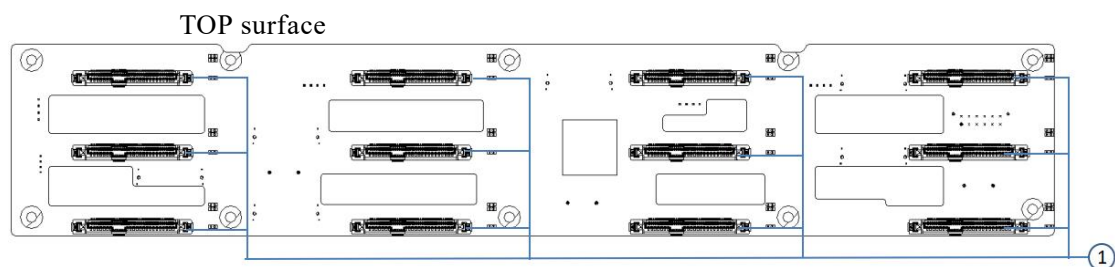
Figure 2-18

No.	Description	Function
1	SFF-8639 U.2 Drive Connector	Supports PCIe ×4 and SAS/SATA U.2 interfaces for connecting HDD/SSD/NVMe

Table 2-14

Bottom surface
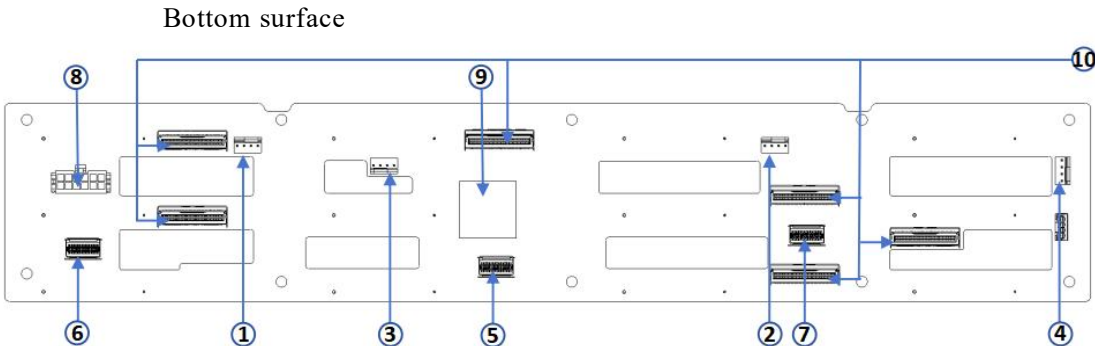
Figure 2-19

No.	Description	Function
1、2、3、4	Temperature-controlled Fan Sockets	For 4-pin fan interfaces
5、6、7	SFF-8654 Slimline Connectors	Provide SAS/SATA x4 interfaces for connecting to PCH or HBA/RAID cards
8	Power Connector	Backplane power transmission connector, used for 12V power transmission
9	CPLD Chip	Mainly used for lighting control of NVMe SSDs and SAS/SATA HDDs
10	MCIO Connector	Provides PCIe x8 interface for connecting to CPU and NVMe SSD

Table 2-15

- 2×2.5 NVMe Rear Drive Backplane-1

TOP surface
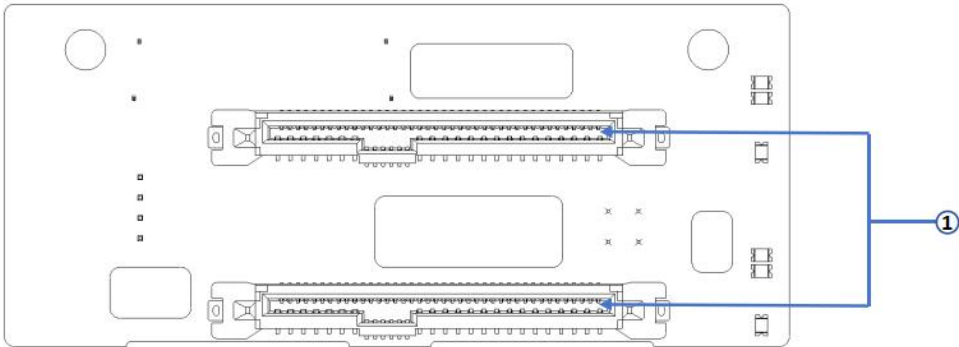
Figure 2-20

No.	Description	Function

| 1 | SFF-8639 U.2 Drive Connector | Supports PCIe×4 U.2 interface for connecting NVMe SSDs |

Table 2-16

Bottom surface
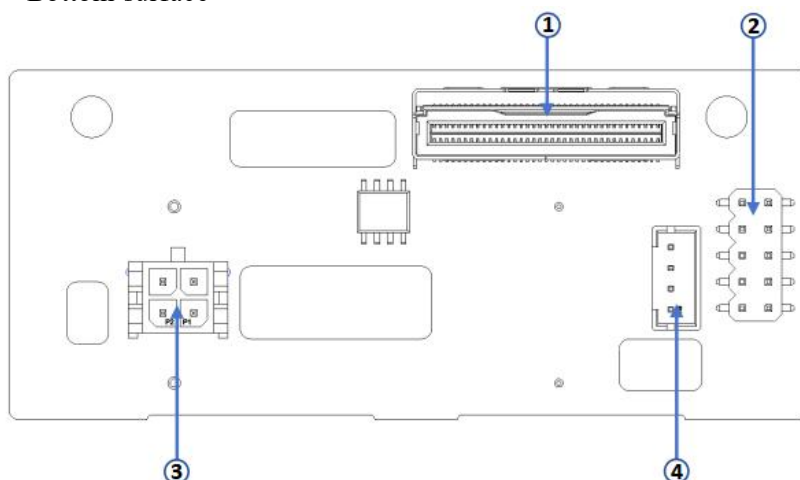
Figure 2-21

No.	Description	Function
1	MCIO Connector	Provides a PCIe×8 interface for connecting CPU and NVMe SSD
2	JTAG Debug Interface	Used for CPLD programming and firmware upgrade
3	4-pin Power Socket	Connects to PSU 4-pin plug to supply power to the board
4	I2C Interface	Used for I2C signal communication

Table 2-18

● 2×2.5 Rear SAS/SATA Hard Drive Backplane

TOP surface
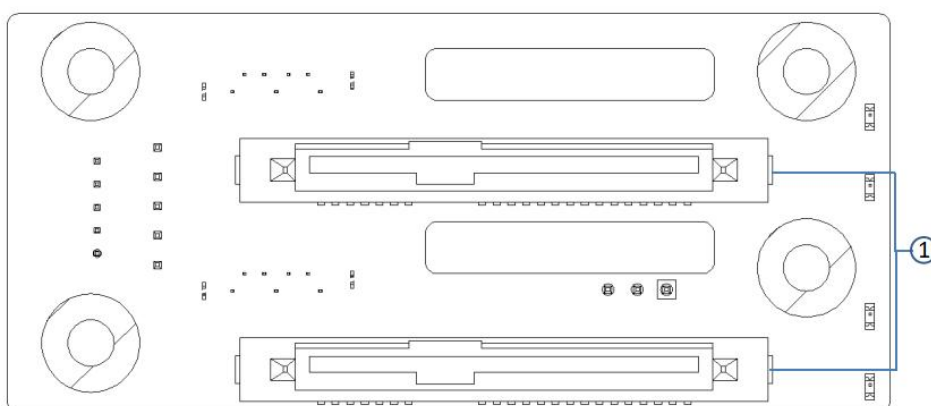
Figure 2-22

No.	Description	Function
1	SAS/SATA Hard Drive Connector	1. Supports SAS hard drives up to 12 Gb/s 2. Supports SATA hard drives up to 6 Gb/s

Table 2-19

Bottom surface
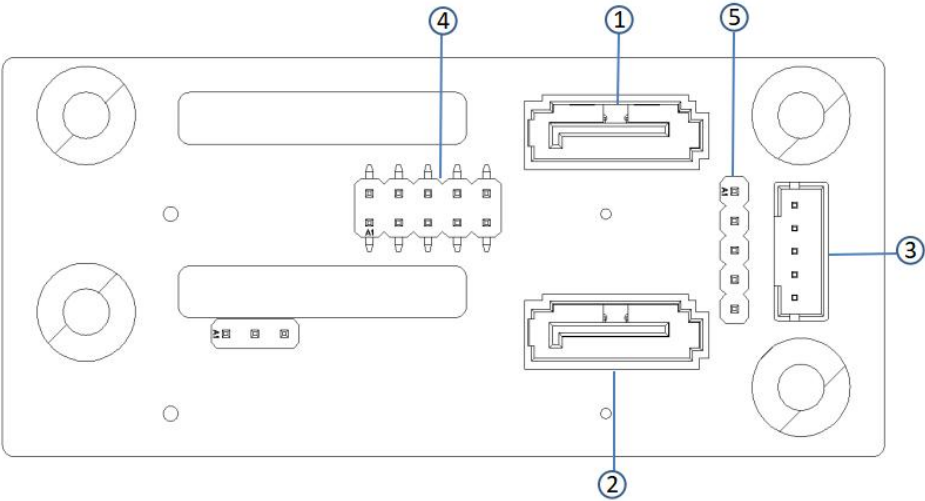
Figure 2-23

No.	Description	Function
1, 2	7-pin SATA Connector	Signal interface for SATA drives
3	5-pin Connector	Backplane power transmission connector for 12V power delivery
4	JTAG Debug Interface	Used for CPLD programming and firmware upgrades
5	SGPIO LED Signal	Provides LED locating and fault indication for hard drives

Table 2-20

3. Installation Instructions

3.1 Chassis Top Cover Installation

- Step 1: Lift the slot at the opening position, push and lift it in the direction indicated by the diagram.
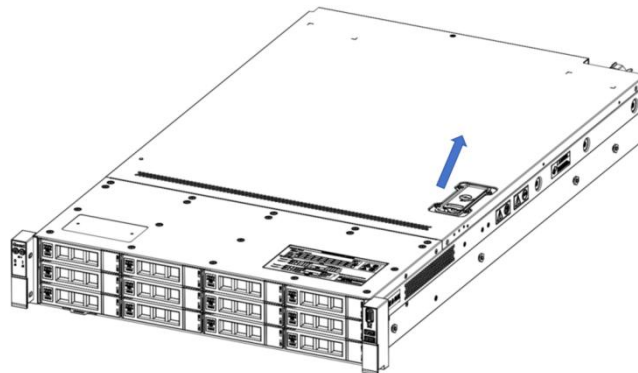
Figure 3-1

3.2 Installation of Accessories

3.2.1 CPU installation

- Step 1: Install the retention clip. Tilt the CPU at an angle as shown in the illustration, aligning the A1 corner (triangle mark) with one end of the retention clip. Press down on the other end of the retention clip to secure the CPU onto the retention clip.
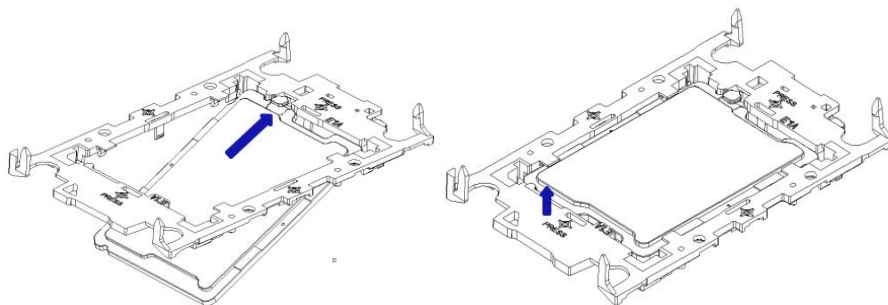
Figure 3-2

- Step 2: Install the CPU on the radiator, and ensure that the surfaces of the CPU and the radiator are clean, free of oil and foreign objects .

- Apply about 0.4 ml of thermal grease on the CPU and smooth it evenly.

- Step 3: Align the A 1 corner (triangle mark), and buckle the CPU on the radiator. (As

shown below)
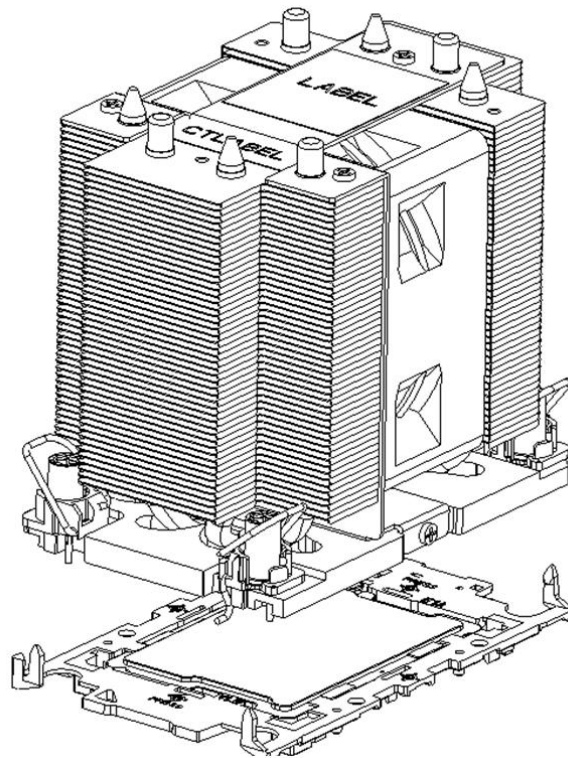
Figure 3-3

3.2.2 Heatsink installation

● Step 1: Remove the processor baffle (as shown in the figure below).
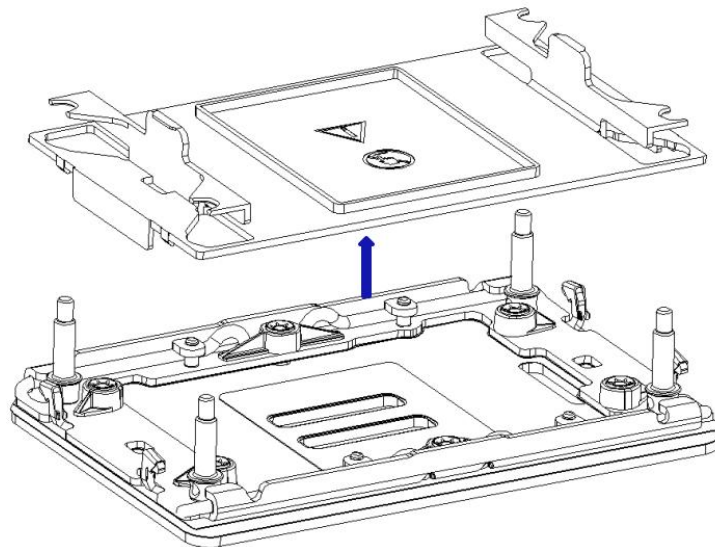
Figure 3-4

● Step 2: Install the CPU and heatsink onto the motherboard.
● Align the heatsink with the mounting standoffs on the CPU socket, then tighten the screws in sequence as indicated to secure the heatsink. (As shown below)
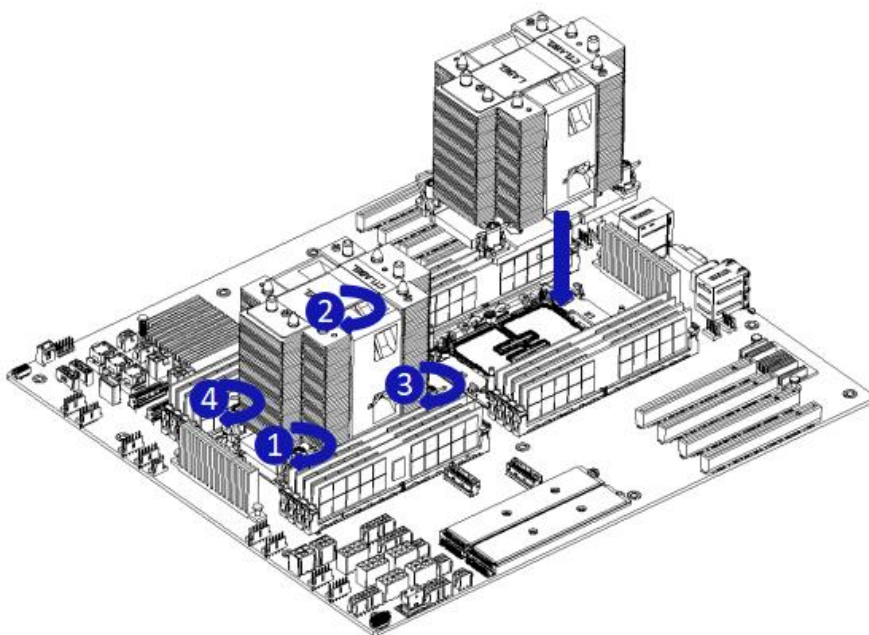
Figure 3-5

⚠ CAUTION: The pins on the motherboard are very delicate and prone to damage. To avoid damaging the motherboard, please do not touch the processor or the processor socket contacts.

3.2.3 Memory installation

The 8 memory slots controlled by CPU0 on the motherboard are: DIMM_A1, DIMM_B1, DIMM_C1, DIMM_D1, DIMM_E1, DIMM_F1, DIMM_G1, and DIMM_H1.

The 8 memory slots controlled by CPU1 on the motherboard are: DIMM_A1, DIMM_B1, DIMM_C1, DIMM_D1, DIMM_E1, DIMM_F1, DIMM_G1, and DIMM_H1.

Ensure the notch on the memory module aligns with the notch in the DIMM slot. Insert each DIMM module vertically into place to prevent improper installation.
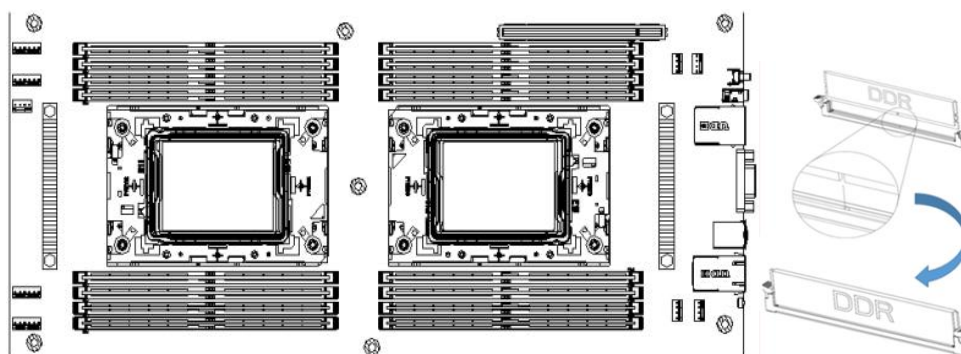
Figure 3-6
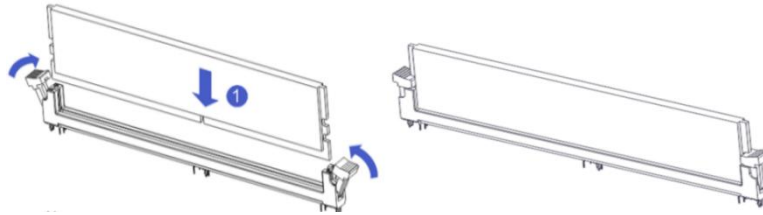
Figure 3-7

⚠️ Note:

Use memory modules with identical CAS latency values on this motherboard. We recommend using memory modules of the same capacity, frequency, and from the same manufacturer.

⚠️ In addition, it is necessary to specify:

In the same channel, the memory module with the larger capacity must be inserted into the first slot.

3.2.4 M.2 installation

- Step 1: Install locating screw A according to the length of the M.2 card to be installed.

- Step 2: Install the M.2 card.

Insert the connector end of the M.2 card into the motherboard connector, as shown in the following diagram:
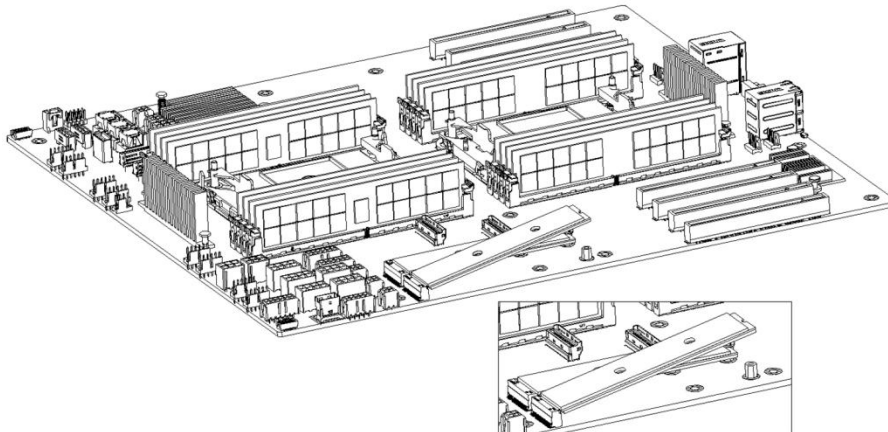
Figure 3-8

3.2.5 Server slide rail installation

- Step 1: Prepare two slide rails and pull out the inner rail.
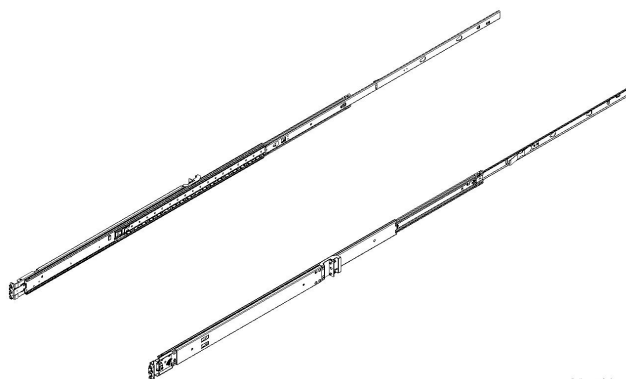
Figure 3-9

● Step 2: Fasten the inner rails to the sides of the chassis.
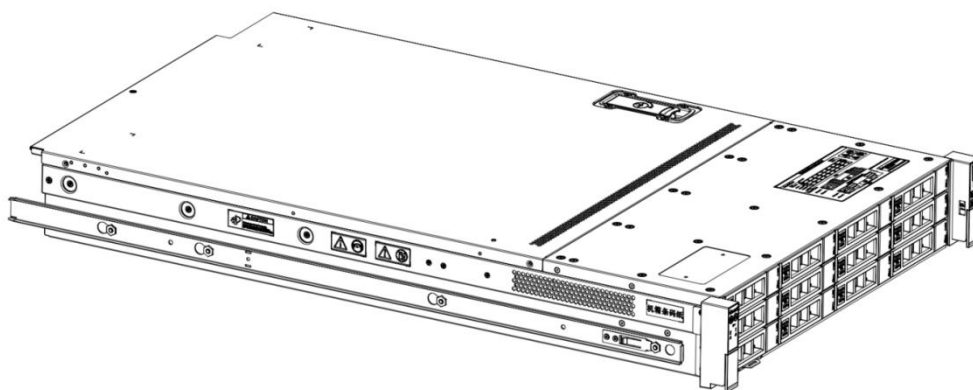
Figure 3-10

● Step 3: Install the outer rails on the cabinet brackets and secure the screws.
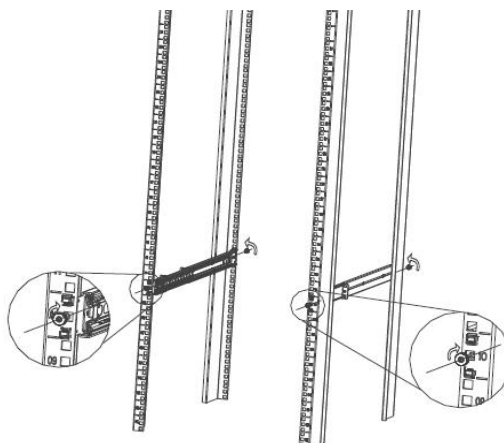
Figure 3-11

⚠ Note: When installing the guide rail, align it with the U-mark, and push it into place until you hear a click sound. Secure it firmly using M5 screws.

● Step 4: Align the chassis with the inner rails installed with the outer rails for installation.
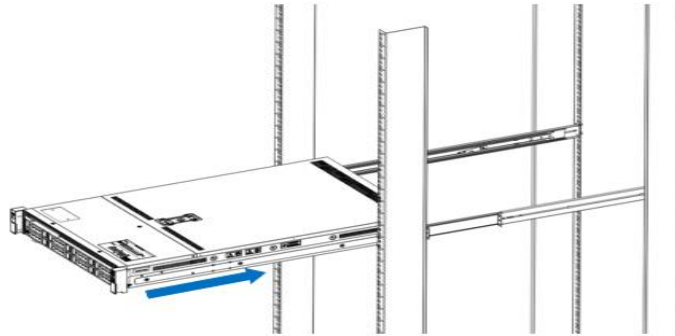
Figure 3-12

⚠ Note: When you push the chassis forward, you will hear a snapping sound. If you can't push it, you need to pull down the buckle of the inner rail to continue to push the chassis gently.

● Step 5: Push the chassis forward until it cannot slide and make sure that the screws are securely installed to complete the installation.
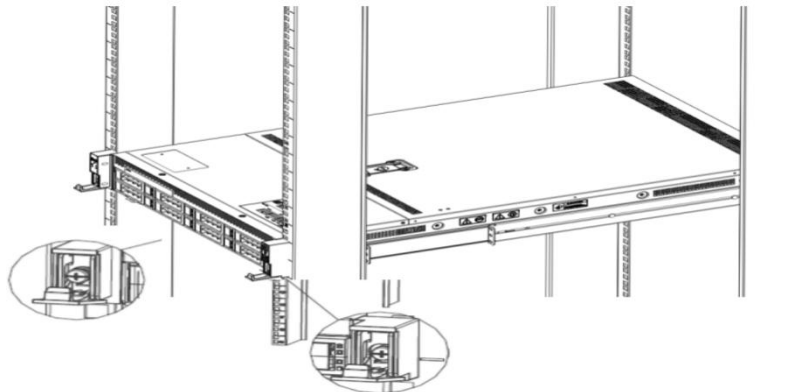
Figure 3-13

⚠ Note: During equipment maintenance, it is necessary to loosen the panel screws and pull the chassis lightly. Do not push or pull the chassis at random speed to avoid damage to the equipment.

4. Configuration Instructions

4.1 Initial Configuration

4.1.1 Power on and start

- Before powering on, it is necessary to ensure that all configurations of the server are installed in accordance with the corresponding specifications and standards, and keep the server turned off but not unplugged from the power supply. And all cables are connected properly, and the power supply voltage is consistent with that of the device.

- During the power-on process, please do not plug in hard drives, power modules, network cables or other external devices and cables.

- If the server has just been unplugged from the power supply, please wait for 1 minute before turning on the power.

- Server power-on power status:
  The power is on, but the server is not booting up. The power indicator light is yellow.
  Power on, the server starts up, and the power indicator light is green.

- How to power on the server:
  The server's default power-on policy is "Power-On Boot," which means the server will automatically power on when it receives power. Users can modify this setting in the BIOS Setup interface.

- Press the <DEL> or <ESC> key on the keyboard during the boot process to enter the BIOS Setup interface, and find the following interface:

```
                Aptio Setup Utility - Copyright (C) 2020 American Megatrends, Inc.
                  Platform Configuration

         Miscellaneous Configuration                              Select S0/S5 for ACPI state
         ------------------------------------------------          after a G3

         PCH state after G3                    [S0]
         Max Page Table Size Select            [1G]
         Active Video                          [Auto]


                                                                 →←: Select Screen
                                                                 ↑↓: Select Item
                                                                 Enter: Select
                                                                 +/-: Change Opt.
                                                                 F1: General Help
                                                                 F2: Previous Values
                                                                 F3: Optimized Defaults
                                                                 F4: Save & Exit
                                                                 ESC: Exit



                Version 2.20.1275. Copyright (C) 2020 American Megatrends, Inc.      B4
```

Figure 4-1

● PCH state after G3

PCH state setting after G3, the menu options are:

S0: Power on and start up directly

S5: You need to press the Power button to turn on the power

leave power state unchanged: Leave the power state unchanged .

Default: S0

● Log in to the iBMC management interface to perform remote power-on and power-off control.

● Enter the BMC IP address -> enter the BMC account&password -> find the remote control interface -> power controller -> It can be executed according to requirements.

Figure 4-2

⚠️ For detailed usage of BMC and BIOS, please refer to the corresponding user manual.

4.1.2 Initial data

- BMC default account: admin
- BMC default password: Gooxi@123
- BMC default address: 192.168.100.1
- BIOS Default Password: N/A

4.1.3 Configure BIOS

Press the <DEL> or <ESC> key on the keyboard during power-on and start-up to enter the BIOS Setup interface, as shown below:

```
                              Aptio Setup - AMI
  Main  Advanced  Platform Configuration  Socket Configuration  Server Mgmt  Security  Boot     ►

  BIOS Information
  BIOS Vendor                    American Megatrends
  Core Version                   5.29
  Compliancy                     UEFI 2.8; PI 1.7
  Project Version                G4DEL 0.07 x64
  Build Date and Time            09/28/2023 08:51:46
  Access Level                   Administrator

  CPLD name                      G4DEL-B
  CPLD version                   0.04.00000000
  Build Date and Time            08/28/2023
  Processor Type                 Intel(R) Xeon(R) Gold
                                 5420+
  ME Firmware Version            18:6.0.4.25              ►◄: Select Screen
  BMC Firmware Revision          1.06.010000             ↑↓: Select Item
                                                         Enter: Select
  Platform Information                                   +/-: Change Opt.
  Platform                       TypeArcherCityRP        F1: General Help
  Processor                      806F8 - SPR-SP S3       F2: Previous Values
  PCH                            EBG A0/A1/B0/B1 SKU - B1 F3: Optimized Defaults
  RC Revision                    9409.P09                F4: Save & Exit
                                                         ESC: Exit
  Memory Information
  Total Memory                   524288 MB

                       Version 2.22.1287 Copyright (C) 2023 AMI
```

Figure 4-3

The Main interface contains the basic information of the BIOS system, such as the BIOS version number, CPU model, memory capacity, and the system time can be set. For detailed instructions, please refer to the "BIOS User Manual".

- Navigation key description:

→←:   Select Screen

↑↓:   Select Item

Enter: Select

+/-:   Change Opt.

F1:   General Help

F2:   Previous Values

F3:   Optimized Defaults

F4:   Save & Reset

ESC: Exit

4.1.4 Configure BMC

When the server is powered on, make sure that the BMC dedicated management network port cable is properly connected.

Use another device, make sure it is in the same LAN as the BMC management network, and enter the BMC IP address on the web page.

Check the BMC IP address as follows:

- After the server is powered on, turn it on. Pay attention to the POST process when starting the server. In the lower left corner of the logo screen, the IP address is displayed.

- After the server powers on, pay attention to the POST process. Press the <DEL> or <ESC> key on the keyboard to enter the BIOS Setup interface. Switch to the following screen:

```
Aptio Setup Utility - Copyright (C) 2020 American Megatrends, Inc.
                                                    Server Mgmt
--BMC network configuration--                      ▲ Select to configure LAN
***********************                               channel parameters statically
Configure IPV4 support                               or dynamically(by BIOS or
***********************                               BMC). Unspecified option will
                                                     not modify any BMC network
BMC Sharelink Management channel                     parameters during BIOS phase
Configuration Address source        [Unspecified]
Current Configuration Address sour  DynamicAddressBmcDhcp
Station IP address                  0.0.0.0
Subnet mask                         0.0.0.0
Station MAC address                 00-24-EC-F2-7D-DD
Router IP address                   0.0.0.0
Router MAC address                  00-00-00-00-00-00
                                                   →←: Select Screen
BMC Dedicated Management channel                   ↑↓: Select Item
Configuration Address source        [Unspecified]  Enter: Select
Current Configuration Address sour  DynamicAddressBmcDhcp +/-: Change Opt.
Station IP address                  192.168.1.210  F1: General Help
Subnet mask                         255.255.255.0  F2: Previous Values
Station MAC address                 00-24-EC-F2-7D-DE F3: Optimized Defaults
Router IP address                   192.168.1.1    F4: Save & Exit
Router MAC address                  9C-A6-15-57-5B-D9 ESC: Exit

***********************
Configure IPV6 support                             ▼

        Version 2.20.1275. Copyright (C) 2020 American Megatrends, Inc.
```
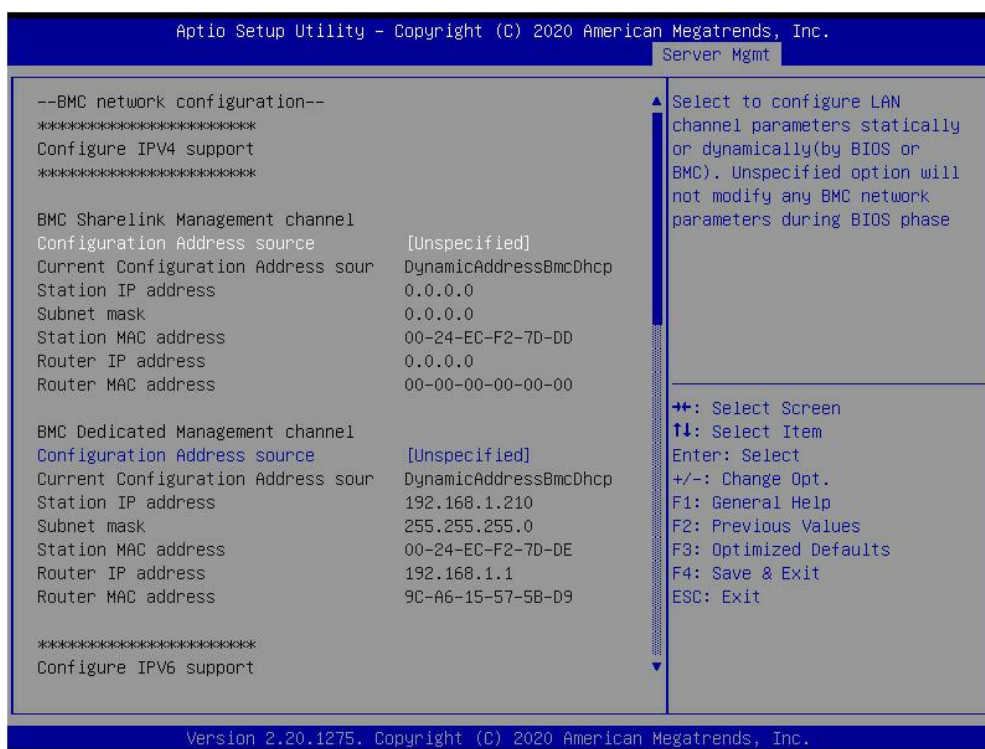
Figure 4-4

Configure IPV4 support :

- BMC sharelink Management Channel

- Configuration Address source

- Configure the BMC IP address allocation mode, the menu options are:
    Unspecified: Do not change BMC parameters
    Static: BIOS static IP setting
    DynamicBmcDhcp: BMC runs DHCP to dynamically assign IP
    DynamicBmcNonDhcp: BMC runs the Non-DHCP protocol to dynamically
assign IP
    Default: Unspecified

When changing from "Unspecified" to other parameters, saving and rebooting will result in the options reverting to the "Unspecified" value. There is no need to configure the BMC IP during every startup process.

- When the "Configuration Address Source" option is set to "Unspecified," it will display the network parameters (IPv4) for the system's shared Ethernet port. The displayed information includes the current IP configuration method, BMC IP, subnet mask, MAC address, router IP, and router MAC.

- BMC Dedicated Management Channel

- Configuration Address source

- Configure the BMC IP address allocation mode, the menu options are:
  Unspecified: No change to BMC parameters
  Static: BIOS static IP setting
  DynamicBmcDhcp: BMC runs DHCP to dynamically assign IP
  DynamicBmcNonDhcp: BMC runs the Non-DHCP protocol to dynamically assign IP
  Default: Unspecified

- When changing from "Unspecified" to other parameters, saving and rebooting will result in the options reverting to the "Unspecified" value. There is no need to configure the BMC IP during every startup process.

- When the "Configuration Address Source" option is set to "Unspecified," it will display the network parameters (IPv4) for the system's dedicated Ethernet port. The displayed information includes the current IP configuration method, BMC IP, subnet mask, MAC address, router IP, and router MAC.

- Configure IPV6 support

- BMC Sharelink Management Channel

- IPV6 Support

- Choose whether to support IPV6, the menu options are:
  Enabeld: support IPV6
  Disabled: does not support IPV6
  Default: Enabeld

- When changing from "Unspecified" to other parameters, saving and rebooting will result in the options reverting to the "Unspecified" value. There is no need to configure the BMC IP during every startup process.

- When the "Configuration Address Source" option is set to "Unspecified," it will display the network parameters (IPv6) for the system's shared Ethernet

port.

● BMC Dedicated Management Channel

● IPV6 Support

● Choose whether to support IPV6, the menu options are:
    Enabeld: support IPV6
    Disabled: does not support IPV6
    Default: Enabeld

● When changing from "Unspecified" to other parameters, saving and rebooting
  will result in the options reverting to the "Unspecified" value. There is no
  need to configure the BMC IP during every startup process.

● When the "Configuration Address Source" option is set to "Unspecified," it
  will display the network parameters (IPv6) for the system's dedicated Ethernet
  port.

Log in to the BMC management interface

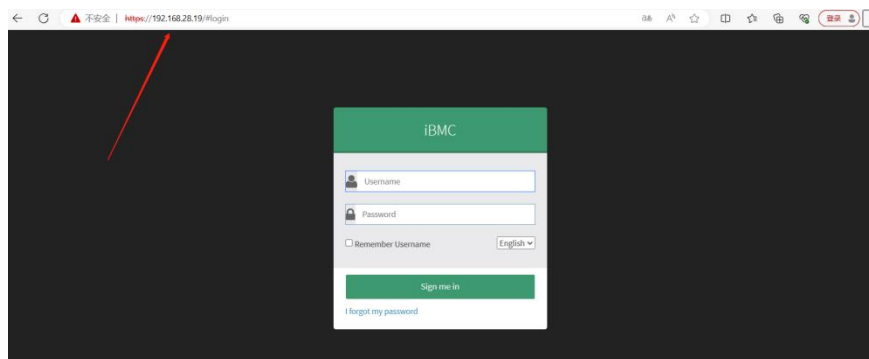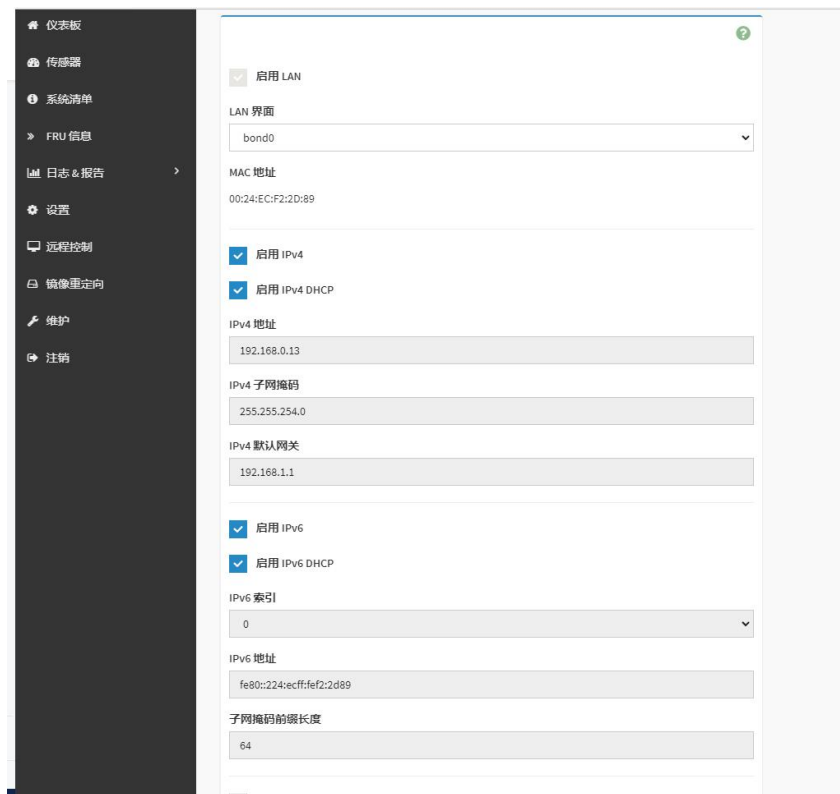Enter the IP address on the web page, as shown in the figure:

Figure 4-5

Enter the account password to enter the home page, and you can set the BMC IP address on
the management interface.

On the left side of the interface, switch to "Settings Page" -> "Network Settings" ->
"Network IP Settings". As shown below:

Figure 4-6

This page sets the IP address of the BMC management network port.

5. Appendix

(Common fault diagnosis)

No display after power on
- Make sure the monitor cable is properly connected and the power indicator on the monitor lights up when the monitor is powered on.
- Ensure the monitor is connected to the server.
- If the above steps do not resolve the issue, try replacing the monitor with a known working one to confirm if the original monitor is faulty.
- If the issue persists, please contact Gooxi's customer service department for resolution.

Front Panel Indicator Lights Alarm
- Refer to the instructions in the manual to determine the specific alarm information indicated by the front panel lights and buttons.
- For power failure indicator lights alarm, check if the power module indicator lights on the rear window of the server are abnormal.

If the power module indicator lights are normal, please log in to the BMC web interface to check the BMC logs for any alarms. If there are alarms, please record the specific alarm information and contact Gooxi's customer service department for resolution.

If the power module indicator lights are not normal, please ensure that the server, power module, and power cords are functioning correctly.
- For system alarm indicator lights, first check the external environment.
- For other indicator light alarms, please contact Gooxi's customer service department for resolution.

Abnormal Hard Drive Indicator Lights
- Ensure the hard drives are properly installed.
- Refer to the instructions in the manual to determine the specific alarm information indicated by the rear panel lights and buttons.
- Confirm if the RAID card is configured correctly.
- Check for any drive dropouts during OS installation. If this occurs, please contact Gooxi's customer service department for resolution.

Unable to Use RAID Card
- Ensure the RAID card is properly installed.

● Try reseating the RAID card and PCIe adapter to confirm if they are functioning correctly.

● If replacing the known working RAID card doesn't resolve the issue, please restore to factory settings and update the BIOS version. If the problem persists contact Gooxi's customer service department for further assistance and resolution.

IPMI Connection Failure

● Confirm if the BMC function is correctly enabled in the BIOS.

● Check if the switch and network cables are functioning properly. If the regular IPMI connection is not effective, check the network environment.

● Set static or dynamic IP and ensure ping connectivity. If the web interface does not open, try using a newer version of Internet Explorer.

● If the problem is not resolved, please contact Gooxi's customer service department for further assistance and resolution.

6. Scrap Recycling

- For environmental protection and resource reuse, we earnestly ask you to properly handle discarded server products.
- Before discarding the server, we recommend that you completely demagnetize the storage media, clear data, and physically destroy them to ensure that your personal data is not leaked.
- In order to recycle and reuse, please hand over the discarded server to local recycling companies for processing. This will ensure that electronic waste is properly handled and can be put back into use after environmental treatment.