

Gooxi Whitley 4U Dual-socket 10-GPU Server User Manual

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Shenzhen Gooxi Information Security Co., Ltd.

Statement

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Foreword

This manual is the product technical manual for the Gooxi Whitley platform 4U model servers. It primarily provides an introduction and explanation of the product's appearance, structure, hardware installation, and basic configuration.

Please note that this manual is intended for reference and research purposes for professional technical personnel. The installation and maintenance of this product should only be performed by experienced technical personnel.

Modification Record

Manual version	Release date	Modification instructions
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Contents

Statement.....	1
Foreword.....	2
1. Product Introduction.....	5
1.1 Product Overview.....	5
1.2 Product Structure.....	5
1.3 Logical Structure.....	6
1.4 Product Specifications.....	7
2. Hardware Description.....	8
2.1 Front Panel.....	8
2.1.1 Appearance.....	8
2.1.2 Indicator lights and buttons.....	9
2.1.3 Interface.....	10
2.2 Rear Panel.....	10
2.2.1 Appearance.....	10
2.2.2 Indicator lights and buttons.....	11
2.2.3 Interface.....	12
2.3 Processor.....	13
2.4 Memory.....	13
2.4.1 Memory slot location.....	13
2.4.2 Memory Compatibility Information.....	14
2.5 Storage.....	14
2.5.1 Hard drive configuration.....	14
2.5.2 Hard drive serial number.....	15
2.5.3 Hard drive status indicator.....	15
2.6 Power Supply.....	16
2.7 Fans.....	16
2.8 I/O Expansion.....	17
2.8.1 PCIe slot location.....	17
2.8.2 PCIe slot description.....	17
2.9 PCBA.....	19
2.9.1 Motherboard.....	19
2.9.2 Hard drive backplane.....	20
3. Installation Instructions.....	21
3.1 Chassis Top Cover Installation.....	21
3.2 Installation of Accessories.....	22
3.2.1 CPU installation.....	22
3.2.2 Heatsink installation.....	22
3.2.3 GPU installation.....	23
3.2.4 Memory installation.....	24
3.2.5 M.2 installation.....	26
3.2.6 Server slide rail installation.....	26

4. Configuration Instructions	28
4.1 Initial Configuration	28
4.1.1 Power on and start	28
4.1.2 Initial data	30
4.1.3 Configure BIOS	30
4.1.4 Configure BMC	30
5. Appendix	34

1. Product Introduction

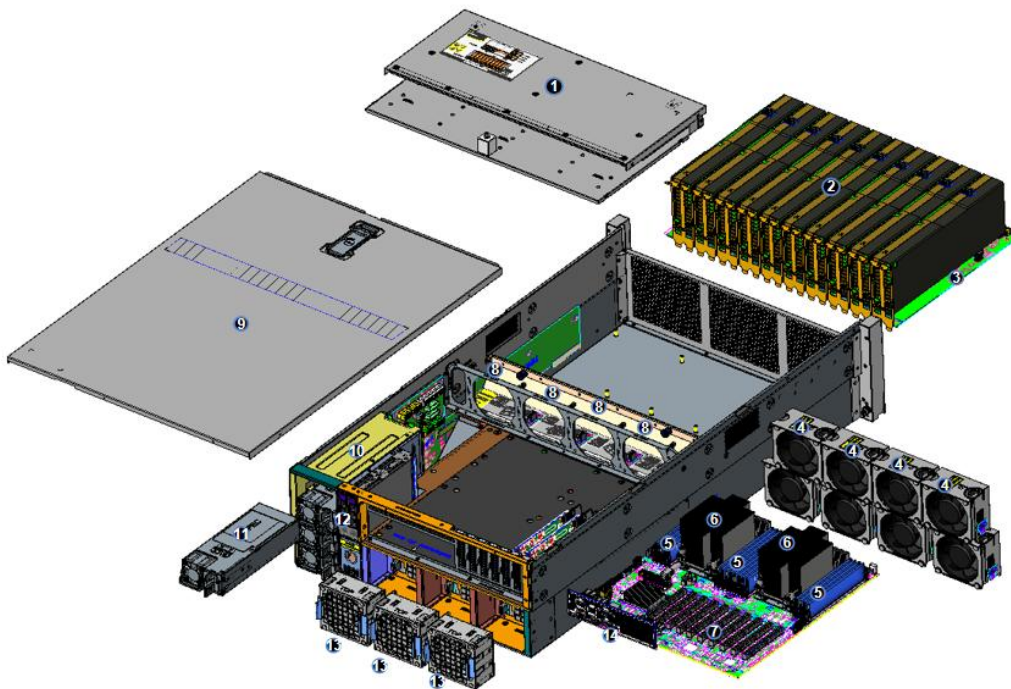
1.1 Product Overview

The AS4110G-D04R-G3/AS4110G-D10R-G3 4U dual-socket rack server supports 10 double-width GPU cards, four 3.5-inch or ten 2.5-inch hard drives on the front window, and four 2.5-inch hard drives on the rear window. It has shown extraordinary strength in terms of computing performance, storage expansion capability, and stability, and can satisfy the development and application of artificial intelligence and other emerging fields to the greatest extent. It is suitable for big data analysis, 3D graphics applications, video decoding, deep learning, Scientific computing and other application scenarios. The main configurations are:

- Supports the third generation Intel® Xeon® Scalable Processor (Ice Lake) Whitely series processors, and a single CPU supports 8 DDR4 DIMMs.
- The front window supports expansion of 4*3.5-inch hard drive bays/10*2.5-inch hard drive bays, and the rear window supports 4*2.5-inch hard drive bays.
- The front supports 10 full-height double-width full-length GPU cards; the rear supports 7 half-height PCIe expansion slots.

1.2 Product Structure

the exploded view of the server is shown in the figure below:



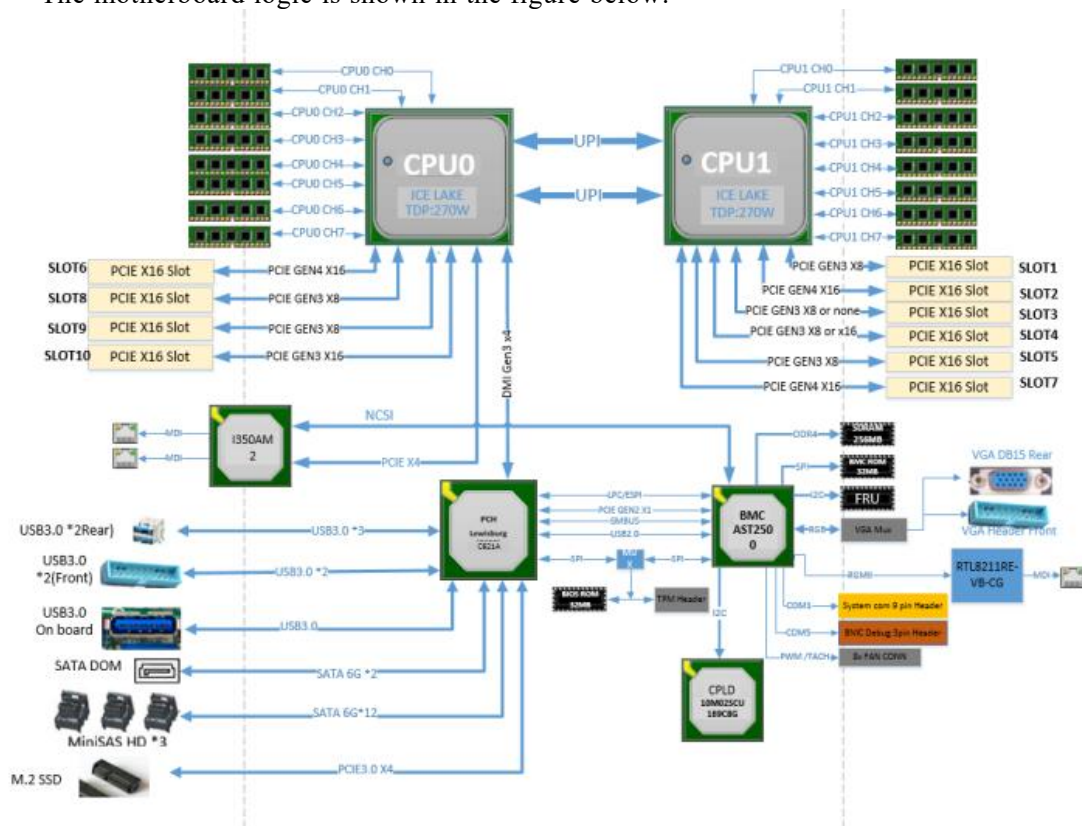
Structure diagram 1-1

No.	Name	No.	Name
1	3.5-inch hard drive module on the upper layer	8	fan bracket
2	10*GPU	9	upper cover
3	10*GPU card slot	10	fan bracket
4	fan module	11	power bracket combination
5	RAM	12	rear 2*2.5 inch module
6	CPU/cooler	13	rear fan module
7	PCIE extension channel	14	rear window combination

Table 1-1

1.3 Logical Structure

The motherboard logic is shown in the figure below:



Motherboard logic block diagram 1-2

- The CPU adopts the third generation Intel® Xeon® Scalable processor, LGA 4189 socket, TDP power consumption 270 W;
- Each CPU supports 8 memory sticks, a total of 16 DDR4 LRDIMM/RDIMM 2666/2933/3200 MHz;
- 10 PCIe slots on the board, among which: SLOT6, 8, 9, 10 are from CPU0, SLOT1, 2, 3, 4, 5, 7 are all from CPU 1;
- G3DE-B motherboard provides 1 M.2 MKey SSD slot, only supports 2280 size.
- Two Gigabit Ethernet ports are integrated on the motherboard, using I350-AM2 chip, from CPU0;
- PCH adopts INTEL C621 A chipset;

- PCH leads to 14 SATA Ports, the highest rate:6Gb/s, compatible with SATA 1.5Gb/s, 3.0Gb/s; SATA Controller leads to 8 SATA PORTs, and SSATA leads to 6 SATA PORTs, of which SATA PORTs have 8 PORTs, according to The first 4 PORTs of SSATA are introduced into one SFF8643 connector, and the last 2 PORTs are introduced into 7PIN SATA connectors for accessing SATA DOM and DVD;
- The BMC chip in the motherboard adopts AST2500 control chip of ASPEED Company, which is used for IPMI remote management, VGA output port, dedicated Gigabit RJ45 management network port, and connected to PCH through RMII/NCSI.

1.4 Product Specifications

Product Series	AS4110G-D04R-G3	AS4110G-D10R-G3
product type	4U 4-bay	4U 10-bay
system size	790mm*433mm*176.5mm(D*W*H)	
processor	Supports one or two 3rd Generation Intel® Xeon® Scalable series processors	
memory	16 DDR4 memory slots, support DDR4 LRDIMM/RDIMM 2666/2933/3200 MHz	
internal storage interface	1 M.2 interface, 3 MiniSAS HD interfaces, 2 SATA DOM interfaces	
external hard drive	Front 4*3.5/2.5-inch SAS/SATA hot-swappable hard drive, rear standard 2*2.5-inch SAS/SATA hard drive (U.2 module is optional), rear two 2.5-inch SAS/SATA optional or U.2 HDD	Supports up to 10*2.5 SAS/SATA hot-swappable hard drives, and the rear is equipped with 2*2.5 SAS/SATA hard drives (U.2 module is optional), and the rear is equipped with two 2.5-inch SAS/SATA or U.2 hard drive
external port	Front ports & buttons: 2 USB2.0, 1 power button, 1 reset button, 1 hard drive indicator, 1 system fault indicator, 2 network indicators Rear: 1 VGA, 2 USB3.0, 1 management network port, 2 RJ45 Gigabit Ethernet ports, 1 COM port	
PCIe expansion	System front support: 10 full-height PCIe*16 slots System back support: 7 half-height PCIe*16 (support 4 PCIe 3.0*8 (in PCIe 3.0*16 slot) and 3 PCIe 4.0*16 (slot2, 6, 7)	
safety	Support TPM module	
power supply	1200W, 1300W, 1600W, 2000W, 2200W 3+1 redundant power supply (select the power module according to the actual power consumption of the whole machine)	
system fan	Standard 11 8038 hot-swappable fans	
IPMI compatible	IPMI 2.0	
management port	1 dedicated RJ45 management network port	
working temperature and humidity	Temperature 5°C~35°C/humidity 20%~80%RH non-condensing	
storage temperature and humidity	Short-term storage (≤72H): temperature -40°C ~ 70°C/humidity 20% ~ 90%RH non-condensing (including packaging) Long-term storage (>72H): temperature 20°C~28°C/humidity 30%~70%RH non-condensing (including packaging)	

Table 1-2

2. Hardware Description

2.1 Front Panel

2.1.1 Appearance

- 4 x 3.5-inch hard drives

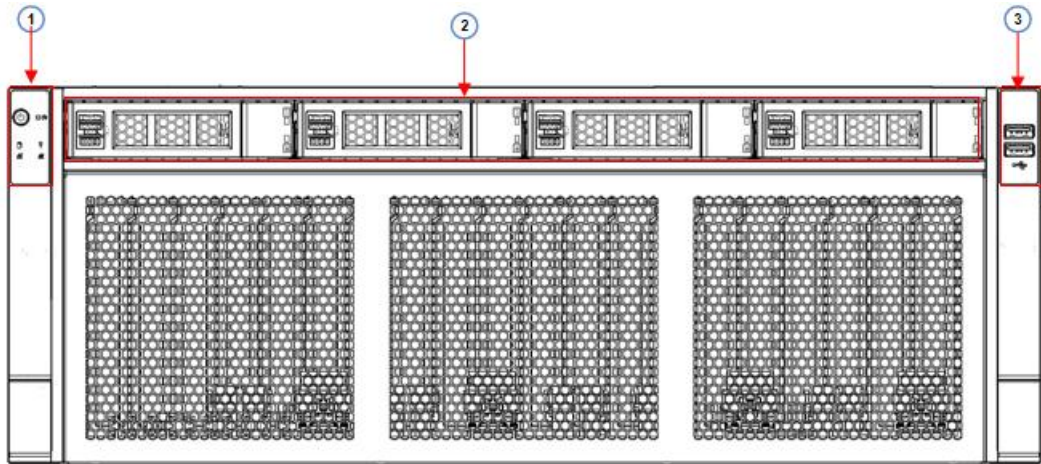


Figure 2-1

- 10 x 2.5 -inch hard drives

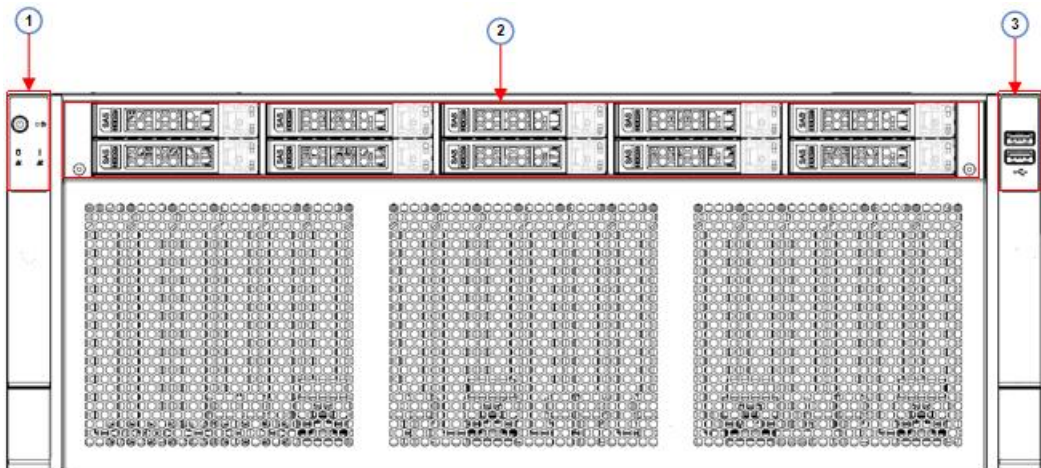


Figure 2- 2

No.	Name	No.	Name
1	left ear assembly	3	right ear assembly
2	3.5/2.5 inch hard drive		

table 2-1

2.1.2 Indicator lights and buttons

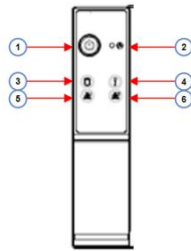






Figure 2-3

No.	Indicator light/button	No.	Indicator light/button
1	Power switch button/indicator	4	System Alarm Indicator
2	Reset server button	5	Network port 1 connection status indicator
3	Hard drive indicator	6	Network port 2 connection status indicator
LED status description			
logo	Indicator light/button	status description	
	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: Press the button shortly 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. Press the button shortly in the power-on state to start the machine.	
	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.	
	Reset server button	Press to restart the server	
	Hard drive indicator	Blinking green light: The hard drive is operating normally	




	System Alarm Indicator	System warning indicator. Including system alarms, fan alarms, power supply alarms, etc., which can be viewed through the IPMI management software
	Network port connection status indicator	Corresponds to the Ethernet port indicator of the network card. Green (steady on): Indicates that the network port is connected normally. Off: Indicates that the network port is not in use or faulty. Note: Corresponds to two 1GE network ports on the motherboard.
	Network port connection status indicator	Corresponds to the Ethernet port indicator of the network card. Green (steady on): Indicates that the network port is connected normally. Off: Indicates that the network port is not in use or faulty. Note: Corresponds to two 1GE network ports on the motherboard.

Table 2-2

2.1.3 Interface

- Interface location

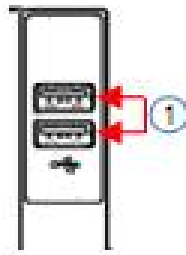


Figure 2-4

No.	Name
1	USB2.0 interface

Table 2-3

- Interface Description

Name	Type	Quantity	Description
USB interface	USB 2.0	2	For accessing USB devices

Table 2-4

2.2 Rear Panel

2.2.1 Appearance

- Appearance of the rear panel

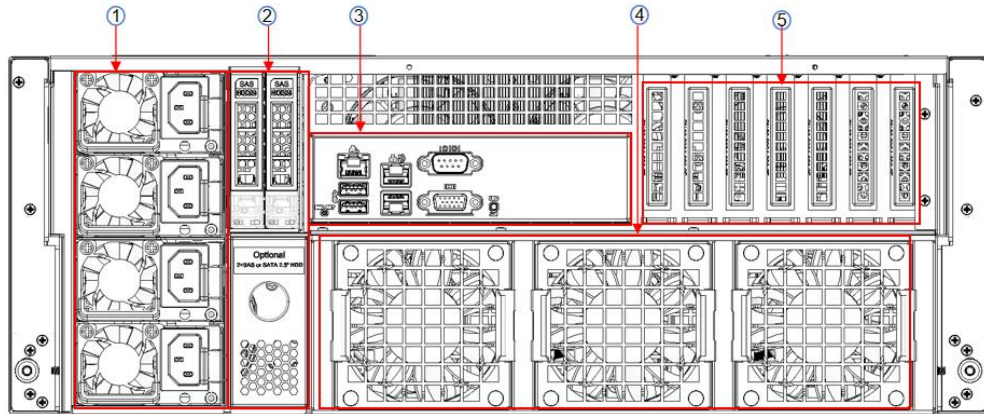


Figure 2-5

No.	Name	No.	Name
1	power module	4	8038 fan module
2	2*2.5 inch hard drive module	5	expansion slot
3	I/O panel		

Table 2-5

2.2.2 Indicator lights and buttons

- Rear Panel Indicators

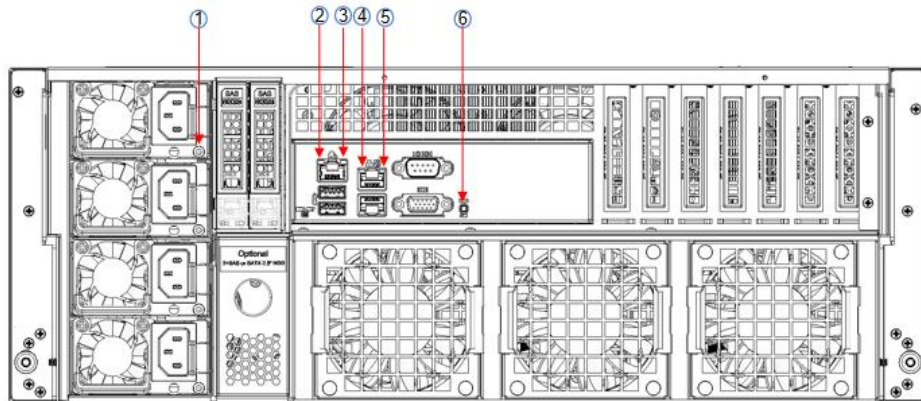


Figure 2-6

No.	Name	No.	Name
1	Power module indicator	4	Service network port connection status indicator
2	Management network port connection status indicator	5	Service network port data transmission status indicator
3	Management network port data transmission status indicator	6	UID indicator

Table 2-6

- Description of Power Module Indicators

Indicator light/button	Status description
------------------------	--------------------

Power module indicator	<p>Green (steady on): Indicates that the input and output are normal.</p> <p>Orange (steady on): Indicates that the AC power cord is unplugged or the power module is missing, and only one parallel-connected power module has AC input; the power module failure causes the output to be turned off, such as OVP, OCP, fan failure, etc.</p> <p>Green (1Hz/blinking): Indicates that the input is normal, the voltage is too low (less than 12V) or the power supply is in the intelligent standby mode.</p> <p>Green (2Hz/blinking): Indicates the firmware is undergoing online upgrade.</p> <p>Orange (1Hz/blinking): Indicates continuous power warning events during power operation, such as high temperature, high power, or large current.</p> <p>Off: Indicates no AC power input.</p>
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Table 2-7

2.2.3 Interface

- rear panel interface

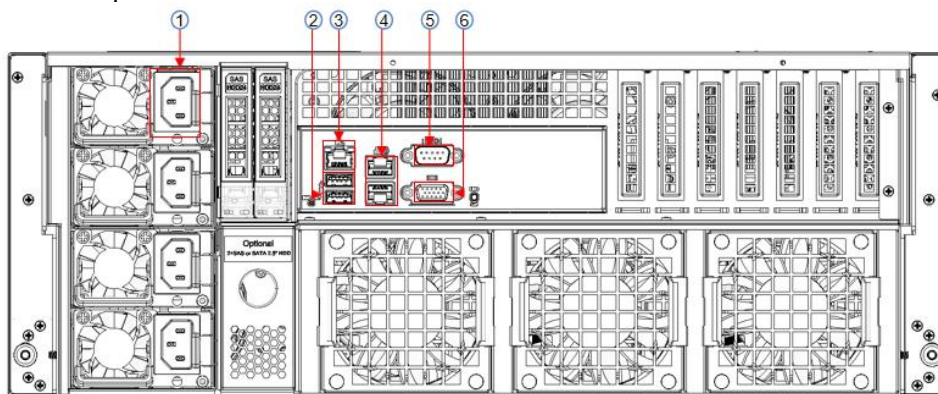


Figure 2-7

No.	Name	No.	Name
1	power module	4	Gigabit Ethernet port
2	USB3.0 interface	5	COM interface
3	Management network port	6	VGA interface

Table 2-8

- Rear panel interface description

Name	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	Provide an external 1000Mbit/s Ethernet port. The server can be managed through this interface.
USB interface	USB 3.0	2	Provide an external USB interface through which USB devices can be connected. Notice:

			When using an external USB device, please make sure that the USB device is in good condition, otherwise the server may work abnormally.
RJ45 Gigabit Ethernet port	GEBASE-T	2	Server network port.
AC port of the power module	/	1 or 2	You can choose the number of power supplies according to your actual needs, but make sure that the rated power of the power supply is greater than the rated power of the whole machine.
COM port		1	serial communication port

Table 2-9

2.3 Processor

- Support 1 or 2 Intel third-generation Xeon scalable CPUs;
- When configuring 1 processor, it needs to be installed in the CPU 0 position;
- Processors configured on the same server must have the same model;
- For specific available system options, please consult Gooxi sales.

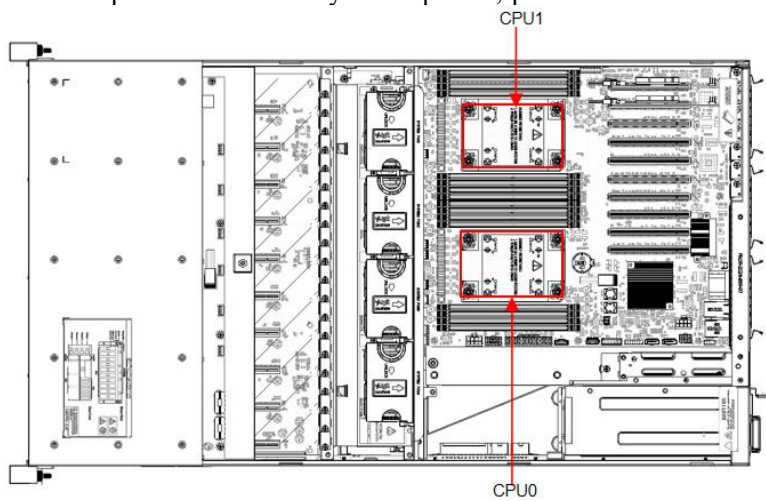


Figure 2-8

2.4 Memory

2.4.1 Memory slot location

Support two CPUs, each CPU supports 8 DDR4 Channels, a total of 16 DDR4 slots, supports 16*2666/ 2933/ 3200 MHz DDR4 LRDIMM/RDIMM/ ECC memory, supports 8 DDR4 Channels, a total of 16 DDR4 slots. Support single capacity of 8GB, 16GB, 32GB, 64GB, 128GB .

- memory slot location

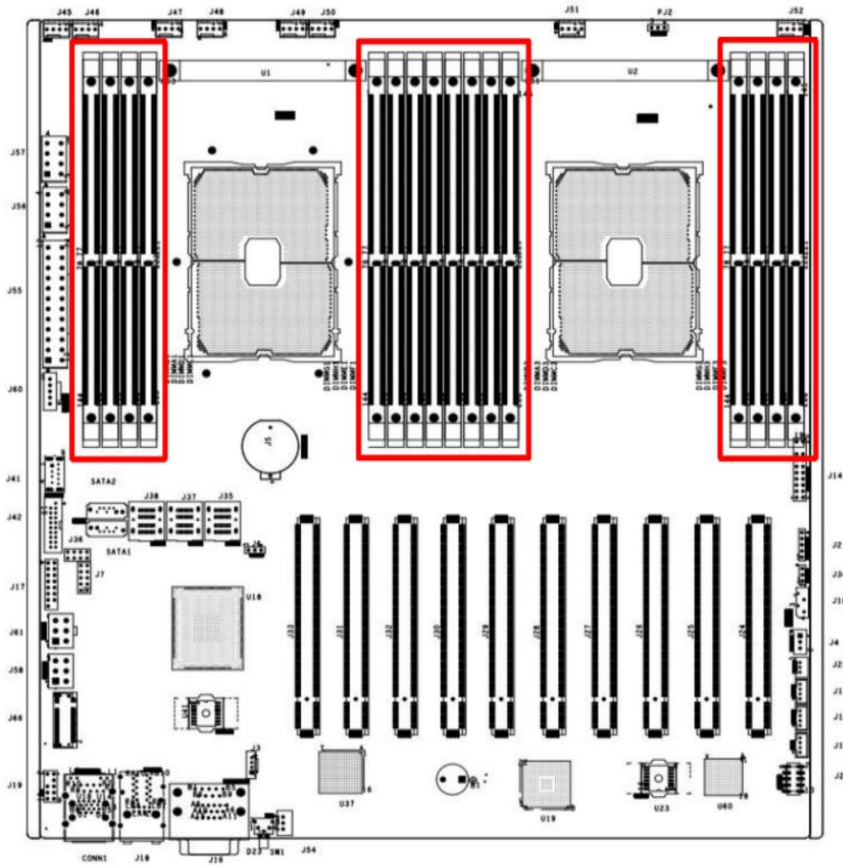


Figure 2-9

2.4.2 Memory Compatibility Information

The motherboard supports DDR4 RDIMM/LRDIMM server memory, and the memory frequency supports 2666/2933/3200;

Notice:

- The same server must use the same type of DDR4 memory, and all memory must run at the same speed, and the speed value is the lowest value of the following items:
- The memory speed supported by the specific CPU.
- The maximum operating speed supported by the specific memory configuration.
- Mixing different types (RDIMM, LRDIMM) and different specifications (capacity, bit width, rank, height, etc.) of DDR4 memory is not supported.
- Intel® Xeon® Scalable Processors (Ice Lake) support different maximum memory capacities.

2.5 Storage

2.5.1 Hard drive configuration

Configuration	Maximum number of	Description
---------------	-------------------	-------------

	hard drives (pieces)	
4x3.5 inch HDD	Front – Slots 0~3 support SAS/SATA hard drives	SAS hard drive needs to be supported by optional SAS pass-through card or RIAD card
10x2.5 inch HDD	Front – Slots 0~9 support SAS/SATA hard drives	SAS hard drive needs to be supported by optional SAS pass-through card or RIAD card
4x2.5 inch HDD	Rear – Slots 0~3 support SAS/SATA/U.2 hard drives	SAS hard drive needs to be supported by optional SAS pass-through card or RIAD card

Table 2-10

2.5.2 Hard drive serial number

- 4 x3.5 inch front hard drives

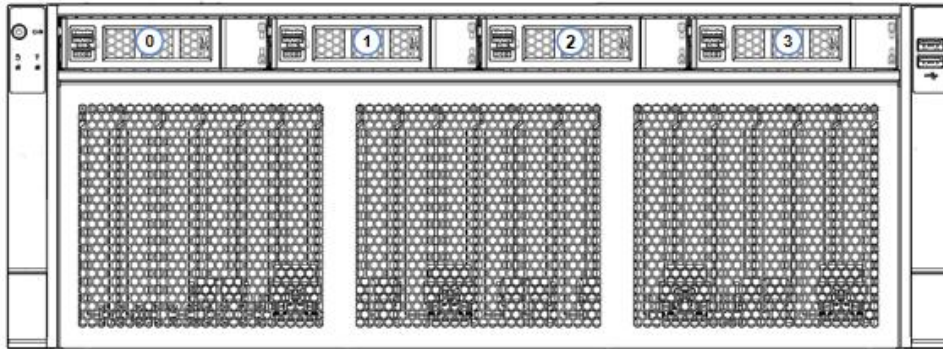


Figure 2-10

- 10 x 2.5 inch front hard drives

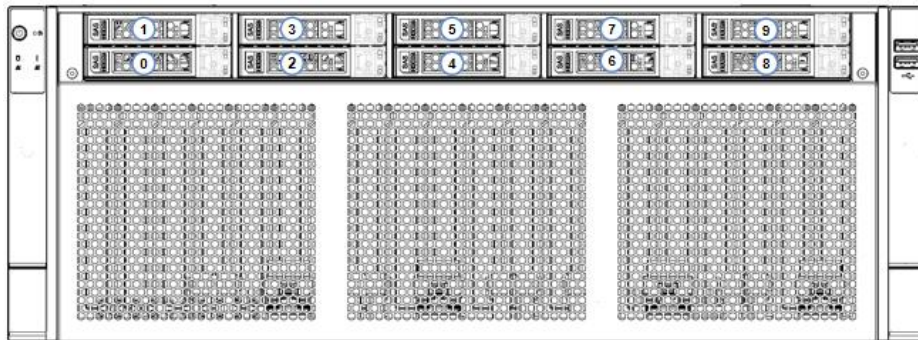


Figure 2-11

2.5.3 Hard drive status indicator

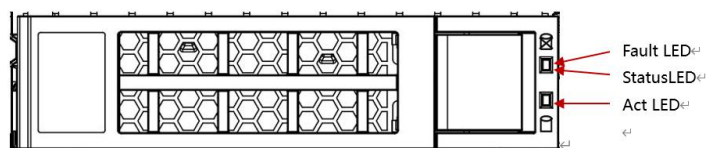


Figure 2-12

- hard drive status indicator description

Function	Act LED	Status LED	Fault LED
hard drive in place	always on	OFF	OFF
hard drive activity	blinking 4Hz/sec	OFF	OFF
hard drive positioning	steady on	blinking 4Hz/second	OFF
hard drive error	steady on	OFF	steady on
RAID rebuild	steady on	OFF	blinking 1Hz/second

Table 2-11

2.6 Power Supply

- Support 2 or 4 power modules;
- Supports AC or DC power modules;
- Support hot swap;
- When configuring 4 power modules, it supports 1 + 1 or 3+1 redundancy;
- For power modules configured on the same server, the power module models must be the same;
- For specific available system options, please consult Gooxi sales;

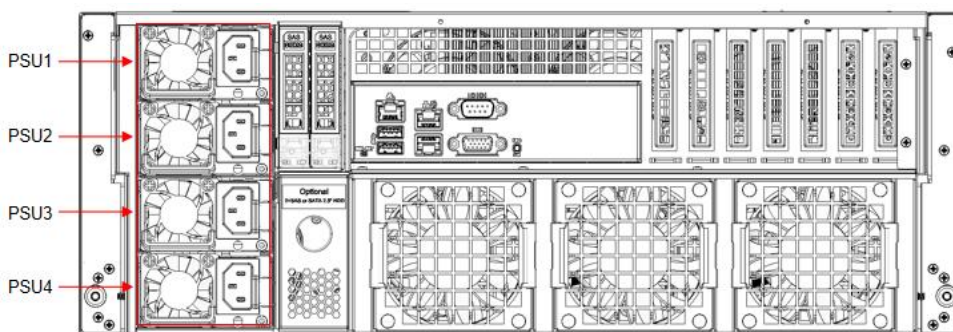


Figure 2-13

2.7 Fans

- Support 11 fan modules;
- Support hot swap;
- Support single fan failure;
- Support variable fan speed;
- For fan modules configured on the same server, the fan module models must be the same;

2.8 I/O Expansion

2.8.1 PCIe slot location

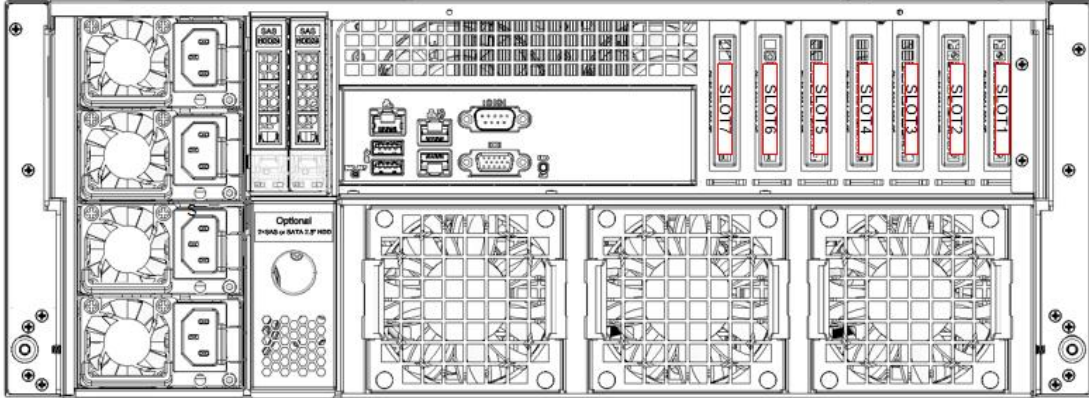


Figure 2-14

2.8.2 PCIe slot description

When CPU1 is not in place, its corresponding PCIe slot is unavailable.

PCIe slot	Associated CPU	PCIe standard	Bus bandwidth	Slot size
Slot 1	CPU1	PCIe 3.0	x8	half height half length
Slot 2	CPU1	PCIe 4.0	x16	half height half length
Slot 3	CPU1	PCIe 3.0	x8	half height half length
Slot 4	CPU1	PCIe 3.0	x8 or x16	half height half length
Slot 5	CPU1	PCIe 3.0	X8	half height half length
Slot 6	CPU0	PCIe 4.0	x16	half height half length
Slot 7	CPU1	PCIe 4.0	x16	half height half length
Slot 8	CPU0	PCIe 3.0	X8	half height half length
Slot 9	CPU0	PCIe 3.0	X8	half height half length
Slot 10	CPU0	PCIe 3.0	x16	half height half length

Note:

◆ PCIe slots with a bus bandwidth of PCIe x16 are backward compatible with PCIe x8, PCIe x4, and PCIe x1 cards. However, they are not upward compatible, meaning that the bandwidth of the PCIe slot cannot be smaller than the bandwidth of the inserted PCIe card.

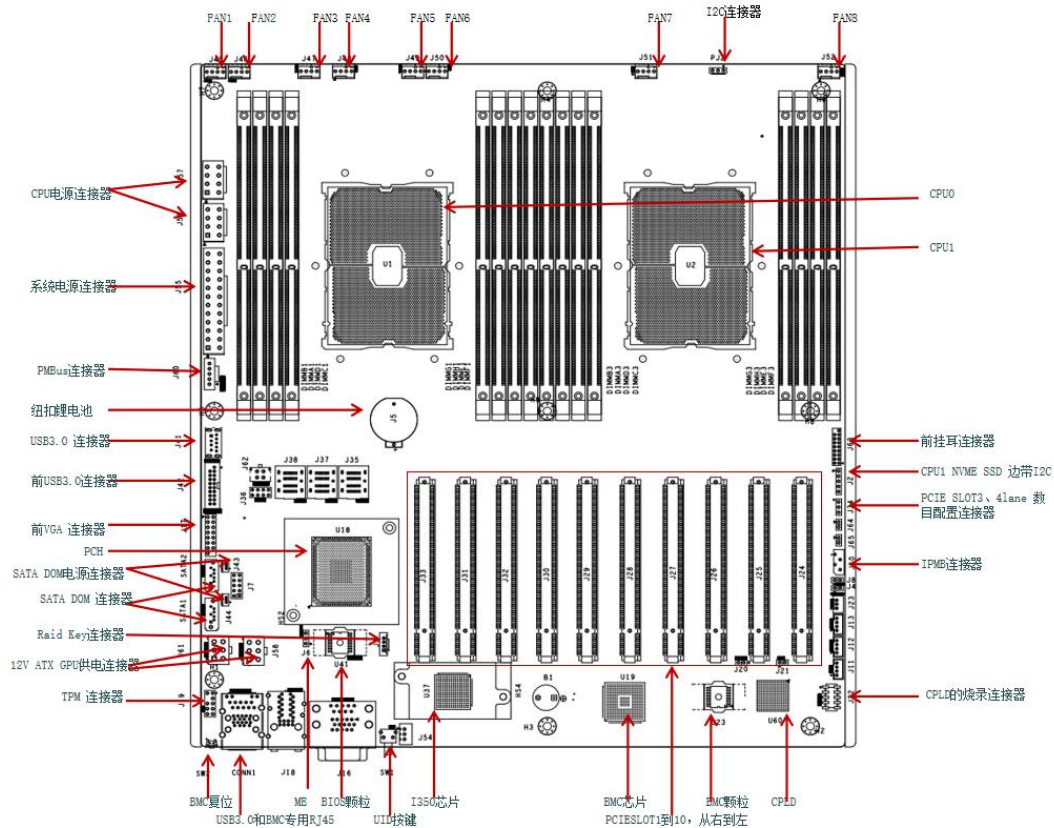
◆ The slot size of a full-height full-length PCIe slot is backward compatible with full-height half-length and half-height half-length PCIe cards. The slot size of a full-height half-length PCIe slot is backward compatible with half-height half-length PCIe cards.

◆ The power capacity of all slots can support PCIe cards with a maximum power of 75W. The power consumption of the PCIe card depends on the model of the card.

Table 2-12

2.9 PCBA

2.9.1 Motherboard



Motherboard Figure 2-15

No.	Name
J45~J52	Connectors for system fans 1, 5, 2, 6, 3, 7, 4, 8 in order
PJ2	VR upgrade burning I2C connector
J56, J57	2X8Pin ATX CPU power connector
J55	2x12Pin ATX system power connector
J60	Power PMBus connector
J41	On board USB3.0 connector
J42	Front USB3.0 Header x2
J17	Front VGA connector
SATA1 SATA2	SATA DOM connector
J66	M.2 connector
J7	PCH hardware strapping
J61, J58	4U 12V power connector, GPU power connector connected to atx power
J3	RAID KEY connector
J36	SSATA Sgpio connector
J62	Rear window 2 hard drive small board power supply connector
J35	S-SATA port 0~3 connector
J37, J38	ISATA PORT 0~7 connector
J5	RTC battery connector
DIMMB1/A1/D1/C1	DIMMB1/A1/D1/C1 CPU0's 2,1,4,3channel memory connection machine
DIMMG1/H1/E1/F1	SDIMMG1/H1/E1/F1 CPU0's 7,8,5,6 channel memory connection machine S

DIMMB3/A3/D3/C3	DIMMB3/A3/D3/C3 CPU1's 2,1,4,3channel memory connection machine
DIMMG3/H3/E3/F3	DIMMG3/H3/E3/F3 CPU1's 7, 8, 5, 6 channel memory connection machine S
J14	Front panel connector
J2	CPU1 NVME SSD Sideband I2C
J34	Select the number of PCIE SLOT4 and PCIE SLOT5 Pcie lane configuration connector
J10	IPMB connector
J8	The connector used to hold jumper caps.
J4	Chassis Intrusion Connector
J23	BMC debug serial port
J11, J12, J13	Reserved SMBus and BMC I2C7, I2C13 connectors
J22	CPLD programming connector
U1	CPU0
U2	CPU1
U18	PCH
U37	I350 network card chip
U19	BMC

Table 2-13

2.9.2 Hard drive backplane

- 4×3.5 rear hard drive backplane (SAS/SATA)

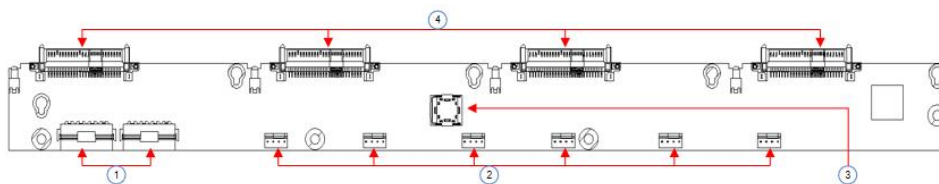


Figure 2-16

No.	Description	Function
1	BP power interface	Backplane power transmission connector, used for 12V and 5V power transmission
2	Temperature-controlled fan socket	For 4pin fan interface
3	SFF-8643 12Gb SAS interface	For 12G/b SAS or 6G/b SATA signal transmission
4	SAS/SATA hard drive connector	Support 12Gb/s SAS hard drive; 6Gb/s SATA hard drive;

Table 2-14

- 2×2.5 rear hard drive backplane (SAS/SATA)
TOP surface

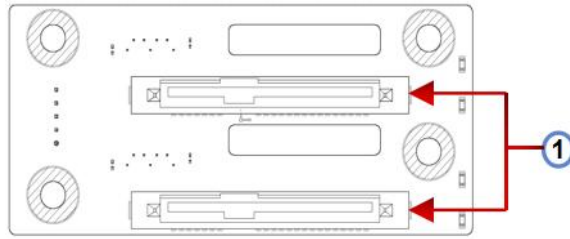


Figure 2-17

No.	Description	Function
1	SAS/SATA hard drive connector	Support 12Gb/s SAS hard drive; 6Gb/s SATA hard drive;

Table 2-15

Bottom side

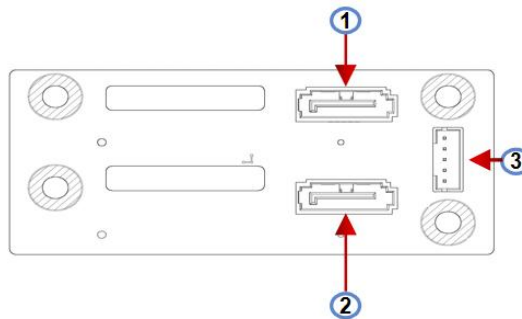


Figure 2-18

No.	Description	Function
1 , 2	7PIN SATA interface	SATA disk signal cable interface
3	5pin interface	Backplane power transmission connector, used for 12V power transmission

Table 2-16

3. Installation Instructions

3.1 Chassis Top Cover Installation

- Step 1: Lift the card slot at the opening position, and push it toward the rear of the chassis.

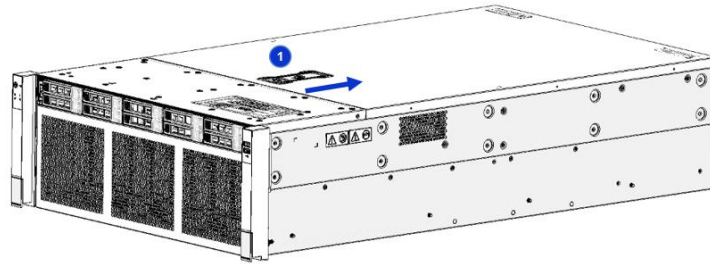


Figure 3-1

3.2 Installation of Accessories

3.2.1 CPU installation

- Step 1: Install the retention bracket and tilt the CPU at the angle shown in the diagram. Align corner A1 (indicated by a triangle mark) and place it on one end of the retention bracket. Press down on the other end of the retention bracket to secure the CPU onto the bracket.

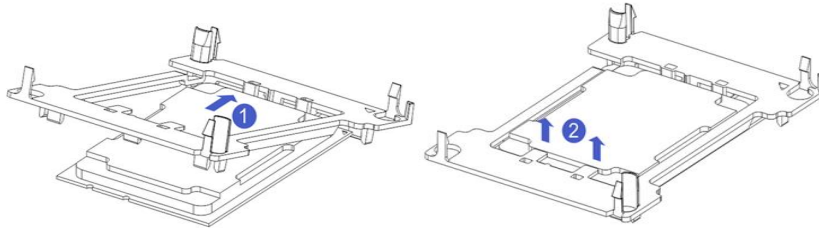


Figure 3-2

- Step 2: Install the CPU onto the heatsink, ensuring that both the CPU and heatsink surfaces are clean and free from oil or debris. Apply approximately 0.4ml of heat-conducting silicone grease to the CPU surface and spread it evenly.
- Step 3: Align corner A1 (indicated by a triangle mark) and buckle the CPU onto the heatsink. (As shown in the diagram below)

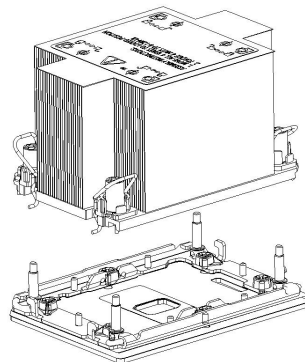


Figure 3-3

3.2.2 Heatsink installation

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

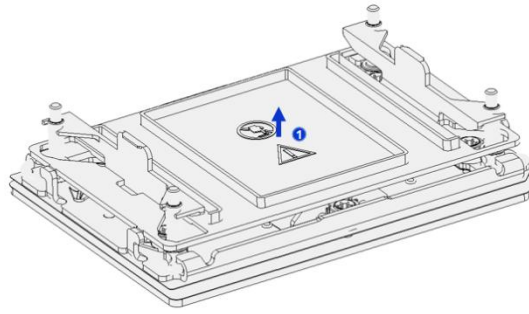


Figure 3-4

- Step 2: Align the heatsink with the mounting screws on the CPU socket bracket, and then tighten the heatsink's fixing screws in the indicated sequence (As shown below).

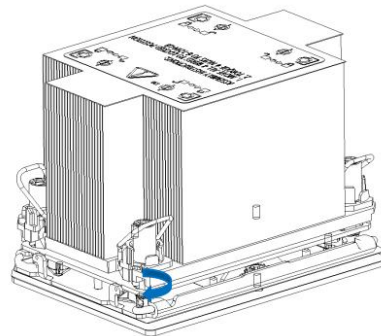


Figure 3-5

- ⚠ 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 GPU installation

- Step 1: Take out the screws on the left and right sides of the front hard drive module.

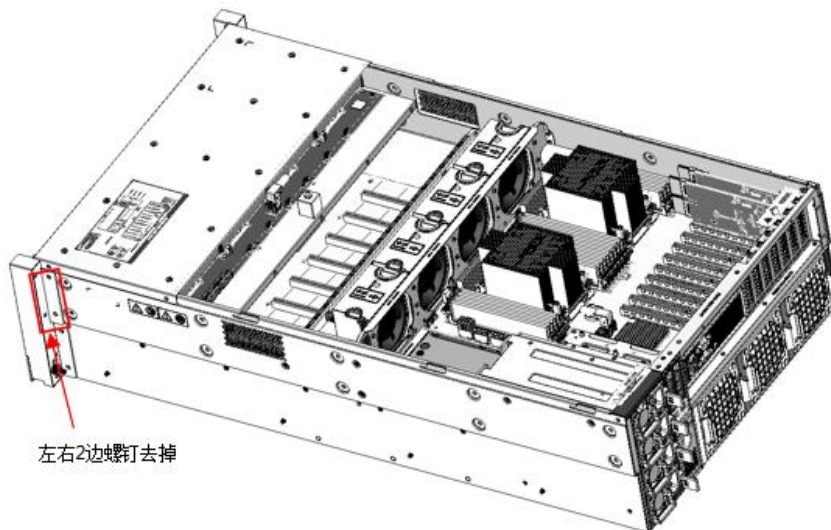


Figure 3-6

- Step 2: Take out the front hard drive module.

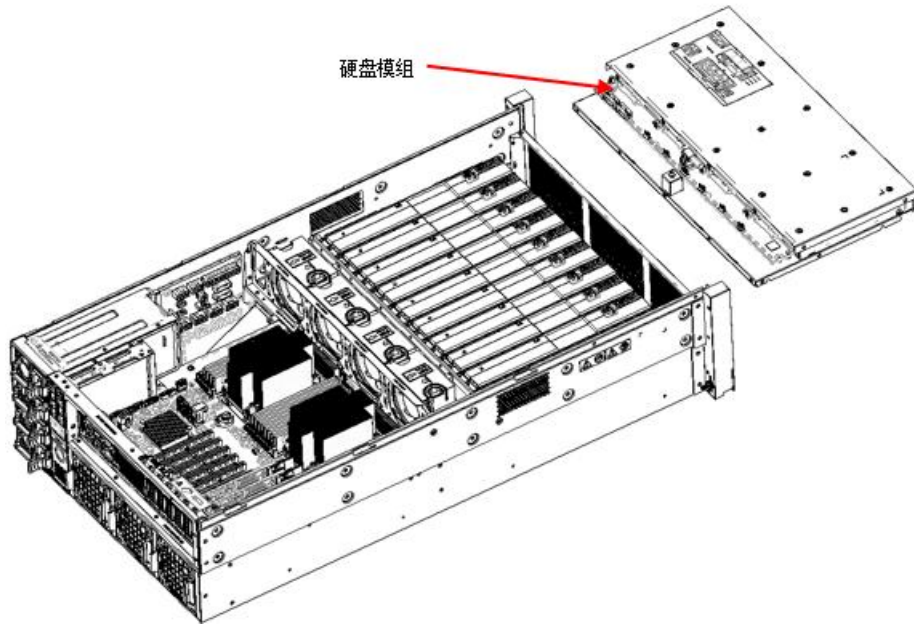


Figure 3-7

- Step 3: Take out the GPU bracket and install the GPU card.

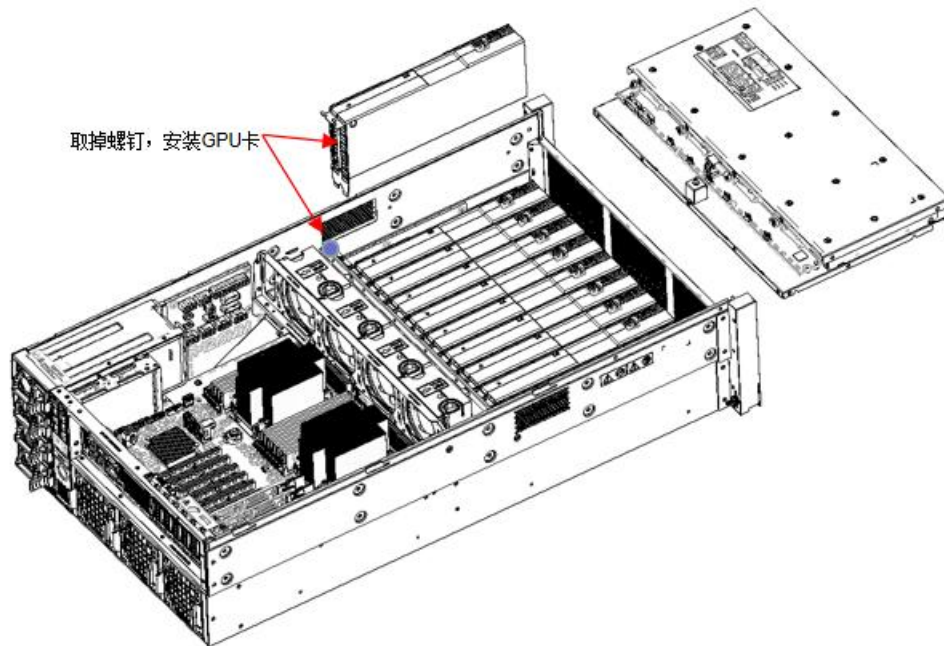


Figure 3-8

After installing the graphics card, you can proceed to reinstall the front hard drive module by following the reverse steps shown in the previous picture.

3.2.4 Memory installation

The 8 memory slots controlled by CPU1 are: DIMMA1, A2, DIMMB1, B2, DIMMC1, C2, and DIMMD1, D2. The 8 memory slots controlled by CPU2 are: DIMME1, E2, DIMMF1, F2, DIMMG1, G2, and DIMMH1, H2. Please make sure that the notch on the memory module aligns with the notch on the DIMM slot. Insert each DIMM module vertically into place to avoid incorrect installation.

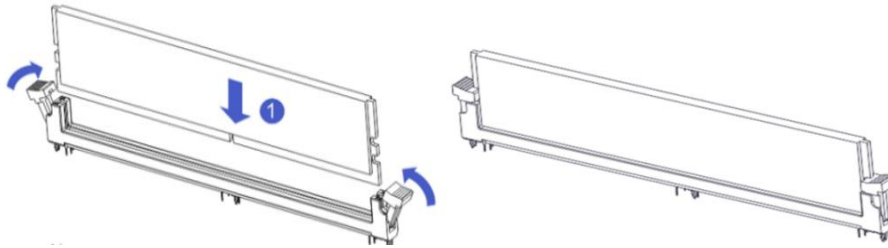


Figure 3-9

● Memory installation method

1. Refer to the memory compatibility list on the Gooxi® official website to make a selection.
2. Please use memory modules with the same CAS latency value on this motherboard. It is recommended that you use memory modules with the same capacity and the same frequency produced by the same manufacturer.
3. If you want to install a memory module under the configuration of a single CPU, please install the memory module in the A1 or D1 slot. The recommended settings are shown in the table below:

*Principles for accessing memory sticks: (1 CPU)				Amount of memory (recommended: / not recommended: 0)																	
processor	memory channel	memory location																			
			√	√	√	√	○	√	○	√											
			1	2	3	4	5	6	7	8											
CPU0	A	CPU1 DIMM A1	x		x	x		x	x	x											
		CPU1 DIMM A2										x	x								
	B	CPU1 DIMM B1		x	x	x	x	x	x	x	x										
		CPU1 DIMM C1			x			x	x	x	x										
	D	CPU1 DIMM D1					x	x	x	x	x										
		CPU1 DIMM D2													x						
	E	CPU1 DIMM E1				x	x	x	x	x											
	F	CPU1 DIMM F1							x	x											
*Principles for accessing memory sticks: (2 CPUs)				Amount of memory (recommended: / not recommended: 0)																	
Processor	memory channel	memory location																			
			○	√	○	√	○	√	○	√	○	○	○	○	○	○	○	√			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
CPU0	A	CPU1 DIMM A1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
		CPU1 DIMM A2																x	x	x	x
	B	CPU1 DIMM B1			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		CPU1 DIMM C1					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	D	CPU1 DIMM D1									x	x	x	x	x	x	x	x	x	x	x
		CPU1 DIMM D2																		x	x
	E	CPU1 DIMM E1										x	x	x	x	x	x	x	x	x	
	F	CPU1 DIMM F1												x	x	x	x	x	x	x	
CPU1	A	CPU2 DIMM A1		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
		CPU2 DIMM A2																	x	x	x
	B	CPU2 DIMM B1				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		CPU2 DIMM C1							x	x	x	x	x	x	x	x	x	x	x	x	x
	D	CPU2 DIMM D1									x	x	x	x	x	x	x	x	x	x	x
		CPU2 DIMM D2																			x
	E	CPU2 DIMM E1										x	x	x	x	x	x	x	x	x	
	F	CPU2 DIMM F1												x	x	x	x	x	x	x	

Table 3-1

3.2.5 M.2 installation

Step 1: According to the length of the M.2 card you want to install, position and install screw A accordingly.

Step 2: Install the M.2 card

2-1. Insert the M.2 card connector end into the motherboard connector, as shown in Figure 3-8 below :

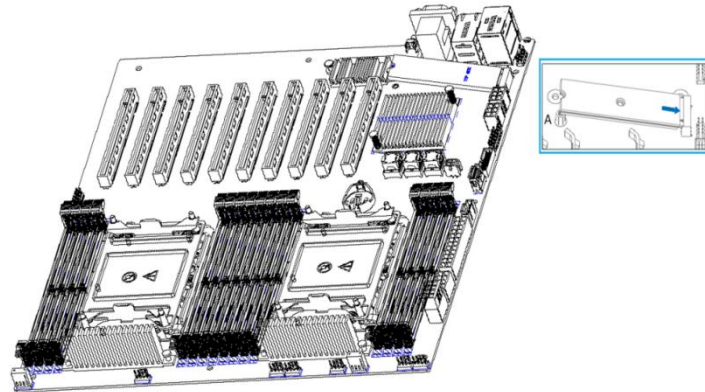


Figure 3-10

3.2.6 Server slide rail installation

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

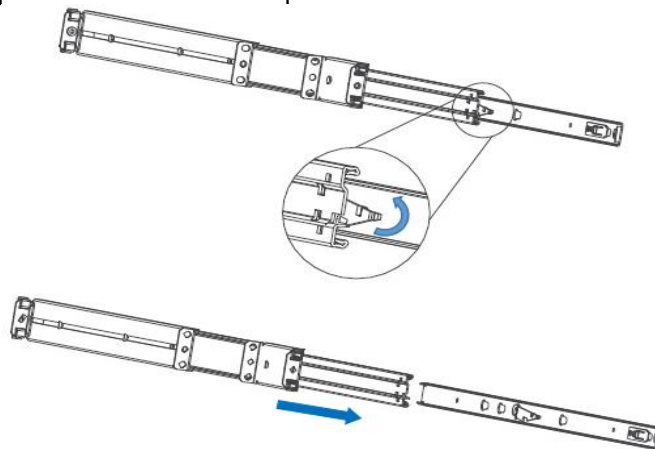


Figure 3-11

- Step 2: Fasten the inner rails to the sides of the chassis.

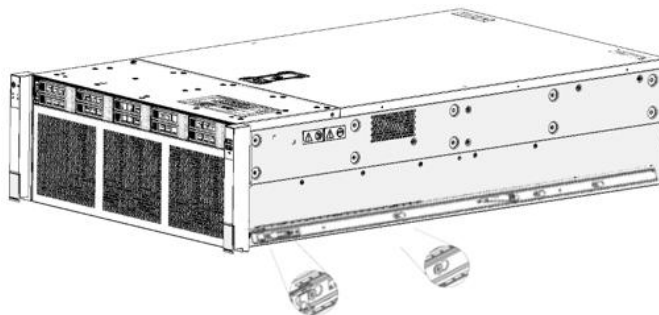


Figure 3-12

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

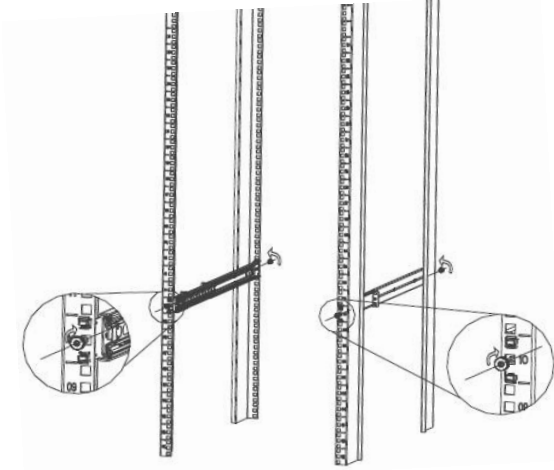



Figure 3-13

 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.

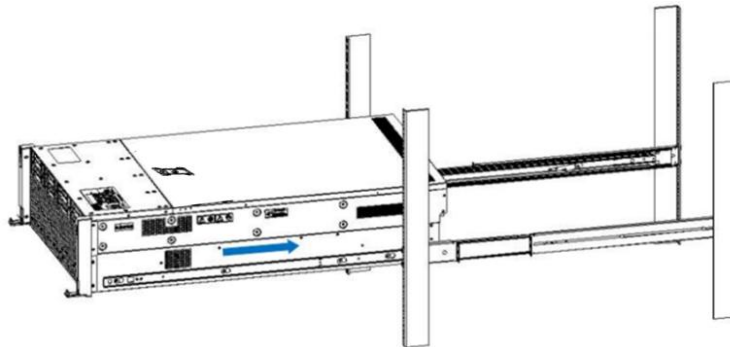



Figure 3-14

 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.

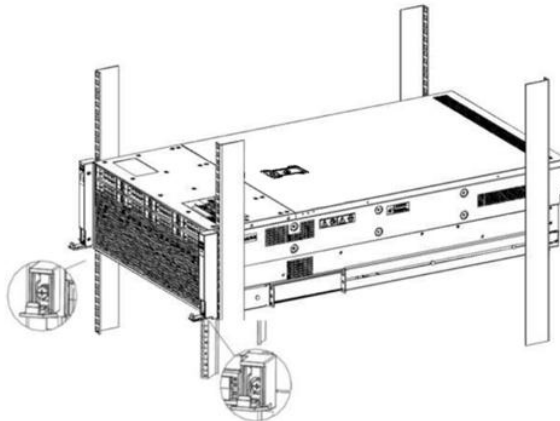


Figure 3-1 5



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 supply is powered on, but the server is not turned on, and the power indicator is amber.
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 or <ESC> key on the keyboard during the boot process to enter the BIOS Setup interface, and find the following interface:

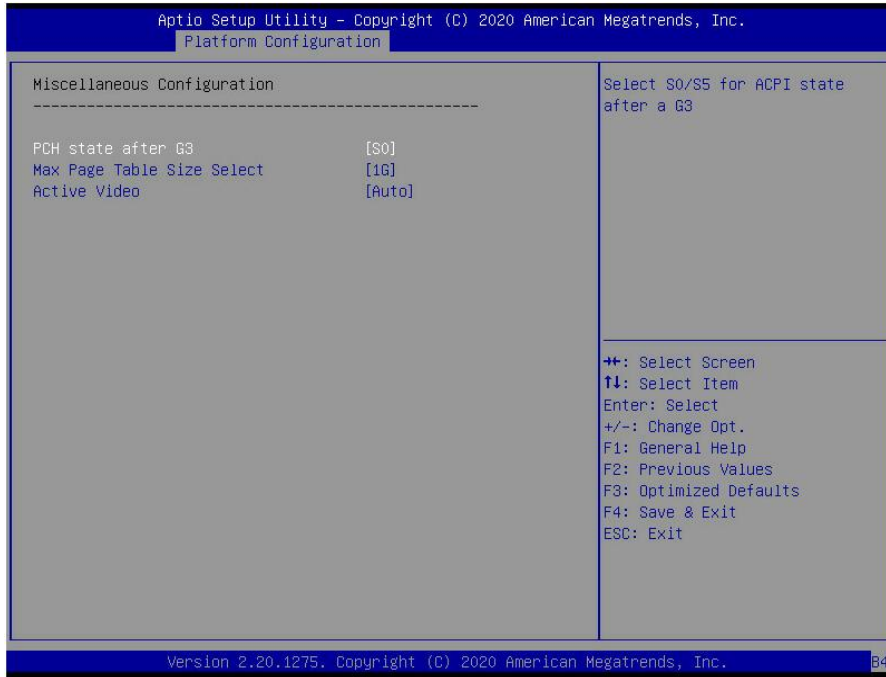


Figure 4-1

- 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.

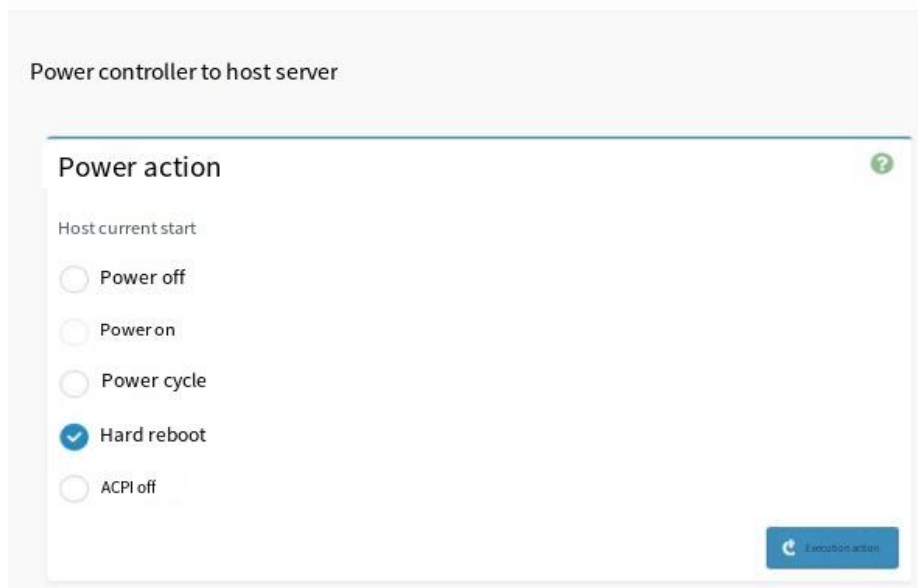


Figure 4-2

⚠ 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: None

⚠ Pay attention to password control, and pay attention to changing the login password! ! !

4.1.3 Configure BIOS

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

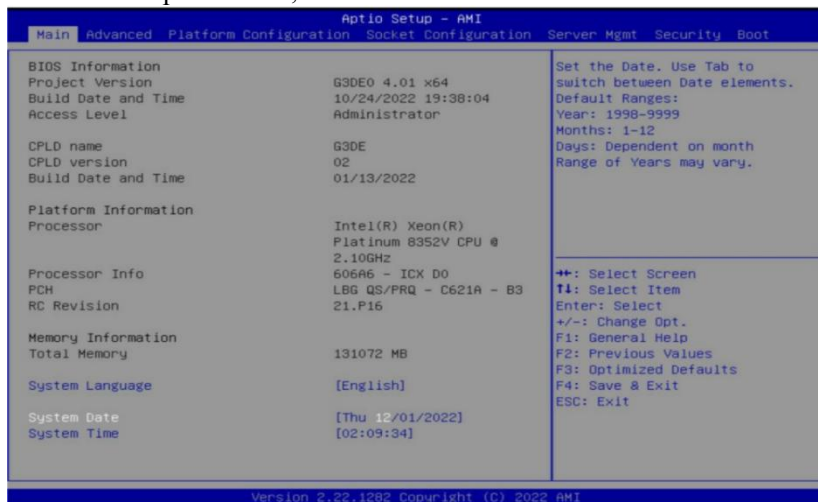


Figure 4-3

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 or <ESC> key on the keyboard to enter the BIOS Setup interface. Switch to the following screen:

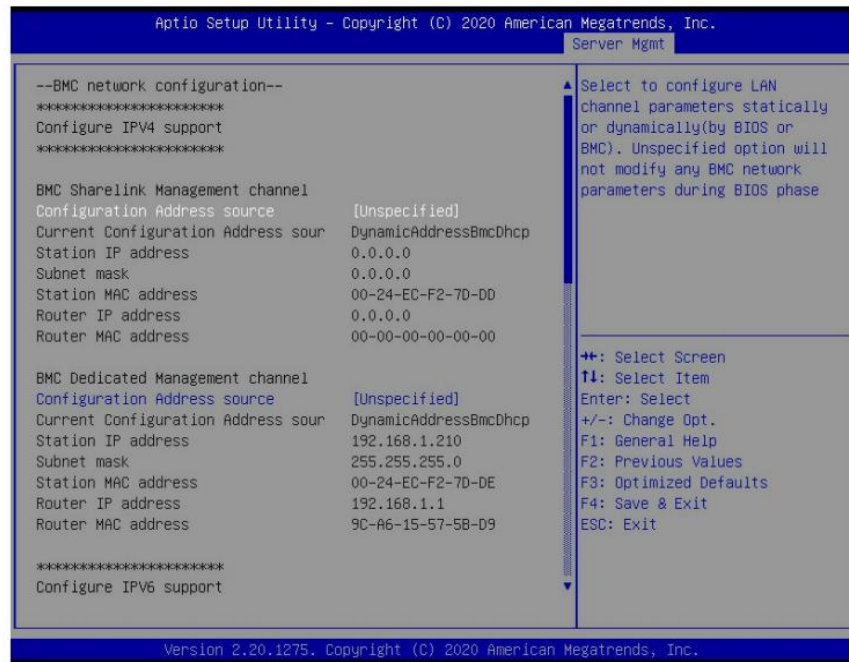


Figure 4-4

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:
 Enabled: support IPV6
 Disabled: does not support IPV6
 Default: Enabled
- 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:
 Enabled: support IPV6
 Disabled: does not support IPV6
 Default: Enabled
- 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:

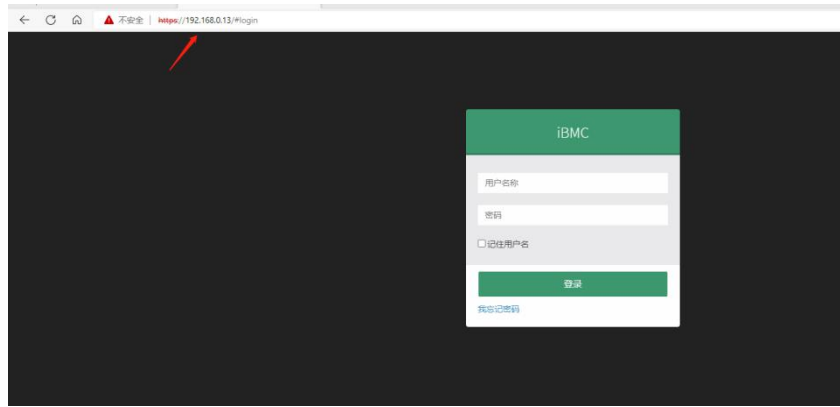


Figure 4-5

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:

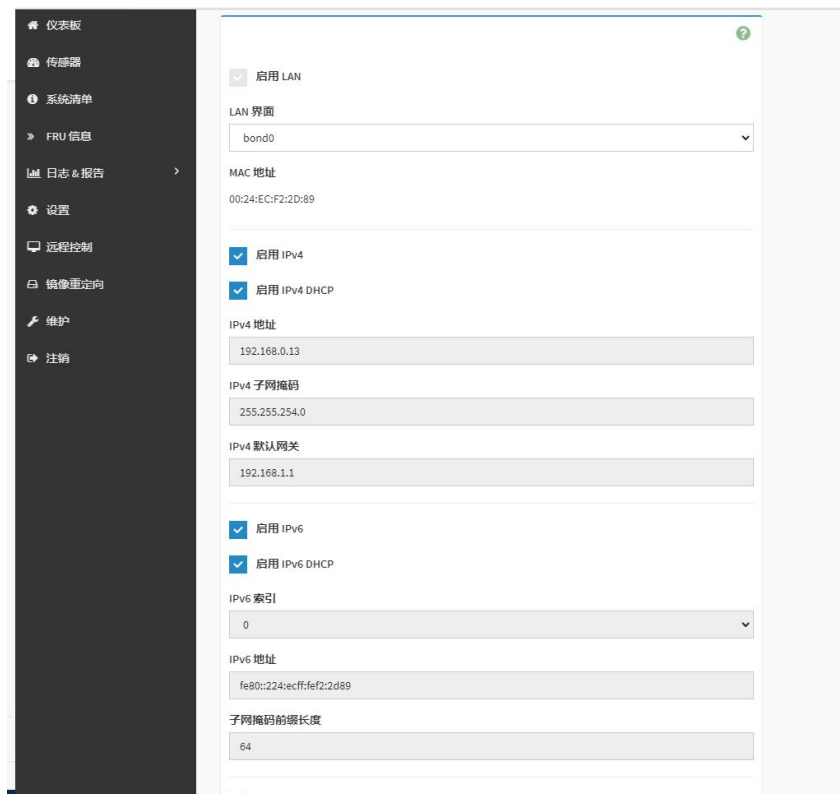


Figure 4-6

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 technical support for further assistance.

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 contact Gooxi technical support for further assistance. 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 technical support for further assistance.

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 technical support for further assistance.

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 the issue persists even after replacing the RAID card with a known working one, restore to factory settings and update the BIOS version. Contact Gooxi technical support for further assistance.

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 technical support for further assistance.