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SR4108G 4U Rack Server User Manual

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Shenzhen Gooxi Information Security Co., Ltd.

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Statement

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Foreword

This manual is the product technical manual of SR4108G (4U) rack server, which mainly introduces the appearance, structure, hardware installation and basic configuration of this product.

This manual is for reference and research by professional technicians. This product should only be installed and maintained by experienced technicians.

Convention:

Note: it is used to transmit equipment or environmental safety warning messages, if not avoided, it may lead to equipment damage, data loss, equipment performance degradation or other unpredictable results.

Warning: indicates a potentially hazardous situation which, if not avoided, it may result in death or serious personal injury.

Red arrow: means pointing to a certain location.

- **†** Blue arrows: means the action of pulling out or inserting at an angle.
- > Dark blue rotation arrow 1: represents the action of turning the screw clockwise or pulling it outward.
- S Dark blue rotating arrow 2: represents the action of turning the screw counterclockwise or buckling inward.
- \Rightarrow Hollow arrow: represents the next action or result.

Modification record

Manual version	Release date	Remarks
01	2023/JAN/17	Initial release
-	-	-

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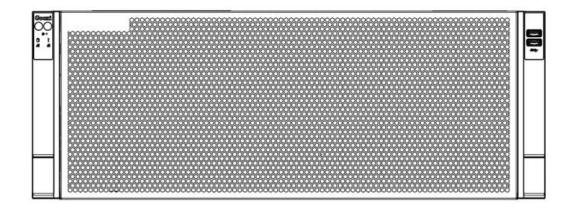
1. Product Introduction

1.1 Product overview

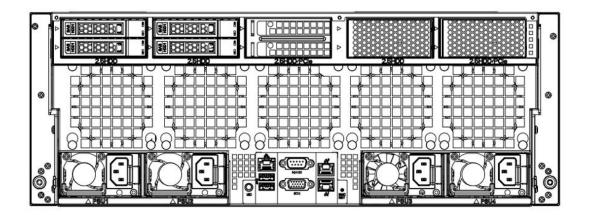
SR4108G series of 4U rack server is a GPU computing server launched by Gooxi for the application requirements of artificial intelligence, big data processing and high-performance computing.

The main features of the product are:

- Support 1 AMD EPYC 7003/7002/7001 series processor.
- CPU pass-through design, CPU-GPU does not need to communicate through PCIe Switch.
- 8 double-width or 6 triple-width GPU cards are supported in a 4U space.
- Support 10* 2.5-inch hard drives and provide large-capacity local storage solutions.



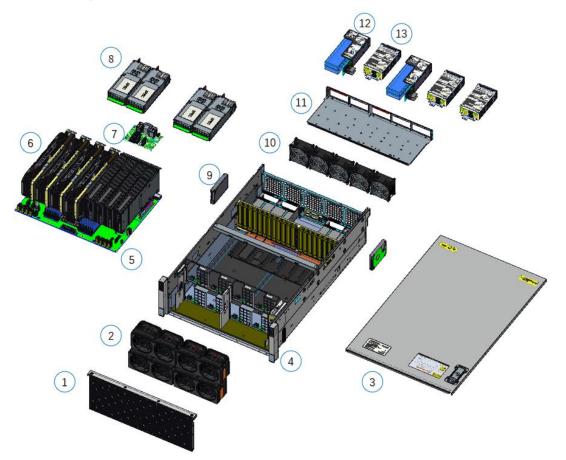
Front view (1-1)



Rear view (1-2)

1.2 Product structure

The physical structure of SR4108G 4U rack server (the configuration maybe vary due to different requirements) is shown in the following figure:



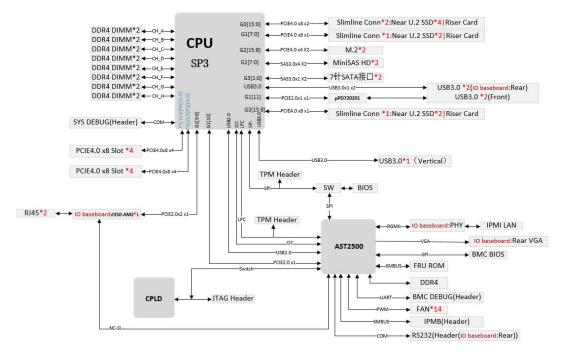
Structure diagram (1-3)

S/N	Name	S/N	Name	
1	4U vent panel	8	Power module	
2	Fan module	9 Built-in 2.5-inch hard drive		
3	Upper cover	10	Rear fan module	
4	Chassis	11	11 Bracket	
5	5 Motherboard		PCIE expansion module	
6	GPU card	13	2.5 inch hard drive module	
7	IO module board	-	-	

Table (1-1)

1.3 Logical structure

The logic of SR4108G series server is shown in the figure below:



Motherboard logic block diagram (1-4)

- Support 1 AMD EPYC 7001/7002/7003 series processor;
- Support 8 DDR4 channels, each channel supports 2 DIMMs, 16 DIMMs are supported DDR4 memory;
- Support 8 PCIe x 16 slots (PCI e x8 signal);
- The motherboard provides 2 M.2 SSD slots (only supports 2280 size SSD), PCIe X4 signal.

System	
Model	SR4108G-S04R-8F
Chassis	4U rackmount chassis
Motherboard	G2SWA-B
Processor	* Support 1 AMD EPYC 7001/7002/7003 series processor, TDP 240W.
	DDR4 RDIMM/LRDIMM;
Memory	Frequency support 2400/2666/2933/3200MHz;
wiemory	Support single memory capacity of 8G/ 16GB/ 32GB/ 64GB/ 128GB/
	256GB, and supports a maximum memory capacity of 4 TB.
	The system supports 2*2.5-inch SATA hard disks built-in, and the rear
Hard disk	supports expansion of 8*2.5-inch SATA disks or (4*NVMe hard disks +
	6*SATA disks)
Internet function	2 RJ45 1Gigabit Ethernet ports
Management	1 RJ45 IPMI management network port
interface	

1.4 Product parameters



Display function	Onboard Aspeed AST2500 chip, support VGA output	
M.2	Support 2 M.2 ports (only support 2280 size NVMe SSD)	
USB	Front 2 USB3.0 ports, rear 2 USB3.0 ports	
PCIE extension	8 PCIe x 16 slots (PCIe x8 signal), 3 Slimline ports	
Power supply	4* 1200W/1300W/1600/2000W/2200W power supplies, support 2 +2 redundant modes or 3 +1 redundant	
Fan	8* 8038 temperature-controlled fans (5 rear fans are optional in the rear)	
System size	695mm*444mm*176.5mm (L*W*H)	
Operating system	m support	
OS	CentOS 7.6/ CentOS 8.0 SLES11 SP4 Ubuntu 17.04/Ubuntu 18.04/Ubuntu 20.04 Windows server 2016/Windows server 2019 VMware ESXi vSphere6/Vmware ESXi vSphere7, etc.	
System ambient temperature		
Operating temperature and humidity	Temperature 5°C~35°C; Humidity 35%~80% non-condensing	
Storage temperature and humidityShort time (\leq 72H): temperature -40°C~70°C/ humidity 20%~90% non-condensing (including packaging) Long time (>72H): temperature 20°C~28°C/ humidity 30%~70% non-condensing (including packaging)		
Note:* Supported firmware support.	AMD EPYC 7001/7002/7003 series processors need corresponding	
	T_{1}	

Table (1-2)

2. Hardware Description

2.1 Front panel

2.1.1 Appearance

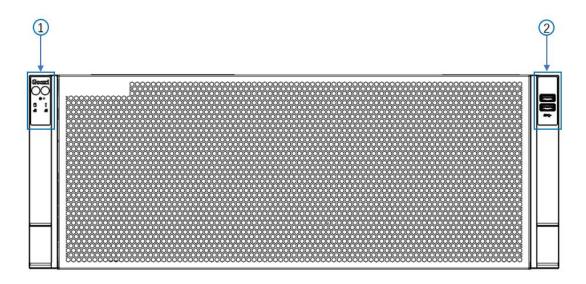




Figure (2-1)					
S/N Name S/N Name					
1 Front panel 2 USB 3.0 interface					

Table (2-1)

2.1.2 LED and button

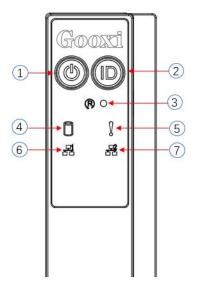


Figure (2-2)

S/N		LED/button		S/N	LED/button
1	Power	switch button/LED		5	System alarm LED
2	UID bu	JID button/LED		6	Network port1 connection status LED
3	3 Reset server button		7	Network port2 connection status LED	
4	Hard d	rive LED		-	-
		LED s	tatus d	lescripti	ion
Log	go	LED/button			Status description
Power LED Power Stand Gree power and the Press and the Press power off.		power Green standl Green power Press and th Press power off.	red on no n flashin, by. n off: In red on. r button the button the button and holo r-on stat	dicates that the device has been ormally. g: Indicates that the device is in adicates that the device is not description: on shortly in the power-on state, ill shut down normally. d the button for 6 seconds in the te to force the server to power on shortly in the power-on state	



		to start the machine.		
	UID button/ LED	The UID button/LED is used to conveniently locate the server to be operated, and the LED can be turned off or on by manually pressing the UID button or remotely controlling the BMC command. Description of UID LED: Blue (on/flashing): 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	Reset server button	Press to restart the server		
	Hard drive LED	Green flashing: The hard disk is operating normally		
	System alarm LED	System warning LED. Including system alarms, fan alarms, power supply alarms, etc., which can be viewed through the IPMI management software		
	Network port connection status LED	Corresponds to the Ethernet port LED of the network card. Green 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 LED	 Corresponds to the Ethernet port LED of the network card. Green 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 port on the motherboard. 		

Table (2-2)

2.1.3 Interface

• Interface location

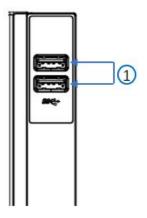


Figure (2-3)

S/N	Name	Qty	Description	
1	USB 3.0 interface	2	For accessing USB devices	

Table (2-3)

2.2 Rear panel

2.2.1 Appearance

• Appearance of the rear panel

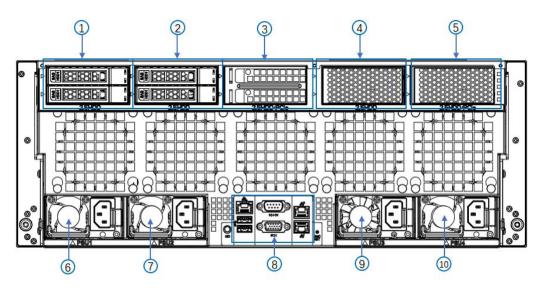


Figure (2-4)

S/N	Name	S/N	Name
1	2.5-inch hard disk module	2	2.5-inch hard disk module
	(optional)		(optional)
3	PCIE module (optional)	4	2.5-inch hard disk module
			expansion bay (optional)
	2.5-inch hard disk module/PCIE		
5	module expansion bay	6	Power module1
	(optional)		
7	Power module2	8	I/O ports
9	Power module3	10	Power module4

Table (2-4)

Description:

- 1) 2.5-inch hard disk module and PCIE module can be selected according to needs.
- 2) This picture is for reference only, the actual configuration shall prevail.

2.2.2 LED and button

• Rear panel LED and button

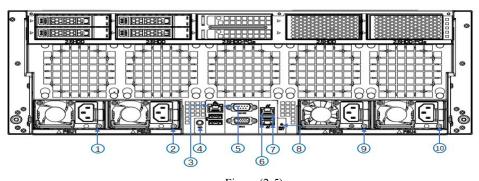


Figure (2-5)

S/N	Name	S/N	Name
1/2/9/10	Power module LED	5/7	Data transmission status LED
3/6	Network connection status LED	8	BMC reset button
4	UID LED	-	_

• LED description

LED/button	Status description
Power module LED	Green on: Indicates that the input and output are normal. Yellow on: Indicates that the AC power cord is unplugged or the power module is lost, 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. Green (1Hz/flashing): Indicates that the input is normal, and the output is turned off due to power-on or in-position; the input is over-voltage or under-voltage. Green (2Hz/flashing): Indicates that the Firmware is being upgraded online. Yellow (1Hz/flashing): Indicates power supply warning events that the power supply continues to run; power supply over-temperature protection, power supply output overcurrent/overvoltage, and fan speed is slow.
	Off: Indicates no AC power input. Green: Indicates 1000M Link.
Network connection status LED	Orange: Indicates 100M link. Off: 10M Link.
Data transmission	Yellow flashing: Indicates data is being transmitted.
status LED	Off: Indicates no data transmission.
UID LED	The blue LED will be on when it is powered on, and it will be off when it is powered off. It can be controlled via IPMI page or UID button on the server
BMC reset button	Click to reset BMC



2.2.3 Interface

• Rear panel interface

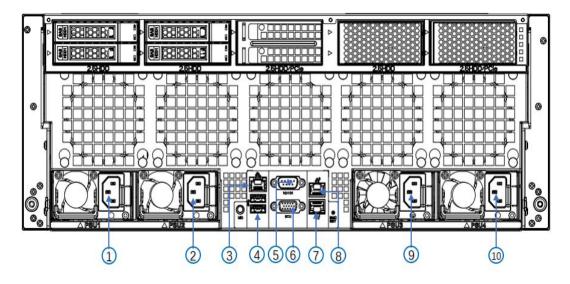


Figure	(2-6)
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S/N	Name	S/N	Name
1/2/9/10	Power AC interface	5	COM port
3	IPMI management network port	6	VGA
4	USB interface	7/8	1Gigabit Ethernet port

Table (2-7)

Interface description

Name	Туре	Qty	Description
VGA	DB15	1	For connecting display terminal, such as a monitor or KVM.
IPMI management network port	GE BASE-T	1	Provide outgoing 1000Mbit/s Ethernet port. The server can be managed through this interface.
USB interface	USB 3.0	2	USB devices can be connected through this interface. Note: When using an external USB device, please make sure that the USB device is in good condition, otherwise it may cause the server to work abnormally.
1Gigabit Ethernet port	GE BASE-T	2 Server network port.	
Power AC interface	/	/	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	DB9	1	Serial communication port
Table (2-8)			

2.3 Processor

- Support 1 AMD EPYC 7003/7002/7001 processor
- The location of the processor is shown in the figure below:

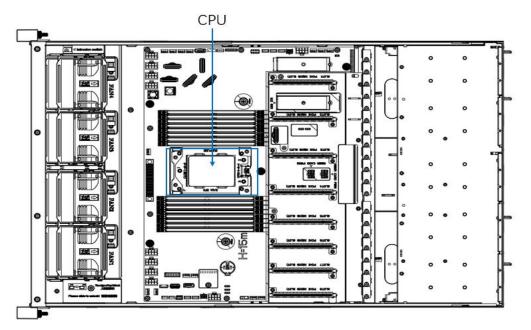


Figure (2-7)

2.4 Memory

2.4.1 Memory slot location

The motherboard supports 8 DDR4 channels, each channel supports 2DIMMs, and supports a total of 16 DIMM DDR4 memories (when only one memory is inserted, insert the slot on the motherboard whose plastic color is blue first).

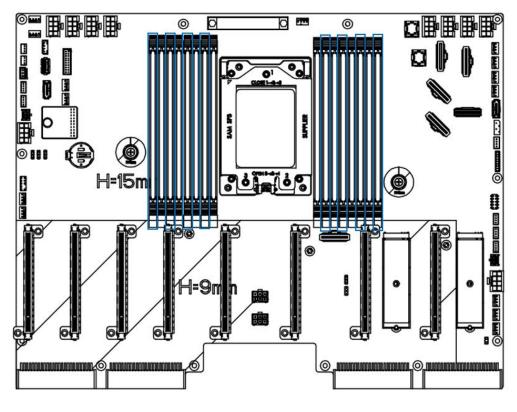


Figure (2-8)

2.4.2 Memory compatibility information

The motherboard supports DDR4 RDIMM/LRDIMM server memory, and the memory frequency supports 2400/2666/2933/3200MHz.

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:
- Memory speed supported by specific CPU.
- Maximum operating speed of specific memory configuration (for example, 3200MHz memory can only be achieved with a single blue slot).
- DDR4 memories of different types (RDIMM, LRDIMM) and specifications (capacity, bay width, rank, height, etc.) do not support mixed use.

2.5 Storage

2.5.1 Hard disk configuration

Configuration	Number of built-in hard	*Maximum number of rear hard	Description
Configuration	drives	drives	Description



2x2.5 inch hard	N/A	2 SAS/ SATA hard drives or 2	
drives	IN/A	NVMe hard drives	
4x2.5 inch hard	N/A	4 SAS/ SATA hard drives or 4	SAS hard
drives	IN/A	NVMe hard drives	drives need
6 x 2.5-inch hard		6 SAS/ SATA hard drives or (4	to be
drives	N/A	NVMe hard drives + 2 SATA hard	supported by
dives		drives)	an optional
8x2.5 inch hard		8 SAS/ SATA hard drives or (4	SAS
drives	N/A	NVMe hard drives + 2 SATA hard	pass-through
dives		drives)	card or
10x2.5 inch hard	Built-in 2 SATA hard	8 SAS/ SATA hard drives or (4	RAID card
drives	drives	NVMe hard drives + 4 SATA hard	
arrives	unves	drives)	

Notice:

*The rear hard disk module is an optional accessory, and the number of rear hard disks is affected by the number of hard disk modules.

* The rear 2.5-inch hard disk module does not support SGPIO lighting.

Table (2-9)

2.6 Power supply

- Support 4 power modules;
- Support AC or DC power modules;
- Support hot swap;
- Configure 4 power modules, and support 2+2 redundant backup;
- For power modules configured on the same server, the power module models must be the same;
- The location of the power supply is shown in the figure below:

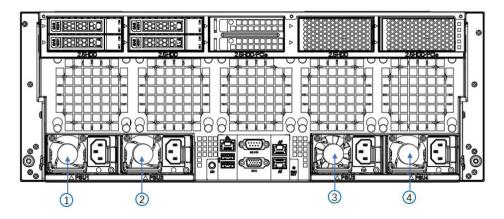


Figure (2-9)

2.7 Fan



- Support 8 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;
- The location of the fan is shown in the figure below:

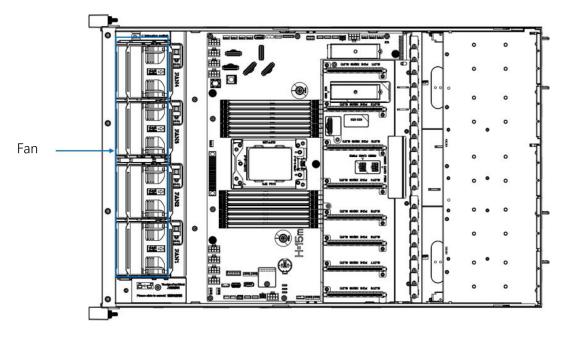
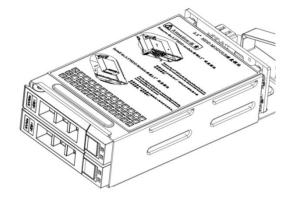


Figure (2-10)

2.8 Expansion module

- 2.8.1 Rear hard disk module
 - 2.5-inch hard disk module

Supports two 2.5-inch hard drives.



- Figure (2-11) The server can be installed up to five 2.5-inch hard disk modules. 1 2 4 5 3 6 6



The expansion bays of serial numbers 3 and 5 can be equipped with PCIE modules.

2.8.2 PCIE module

- PCIE module
 - 2*Slimline x8 to 2*PCIe3.0x8 (1*x16 SLOT+1*x8 SLOT)
 - Provides 1 PCIe X16 slot and 1 PCIe X8 slot.

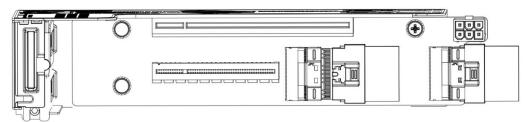


Figure (2-13)

The server can be installed up to 2 PCIE modules

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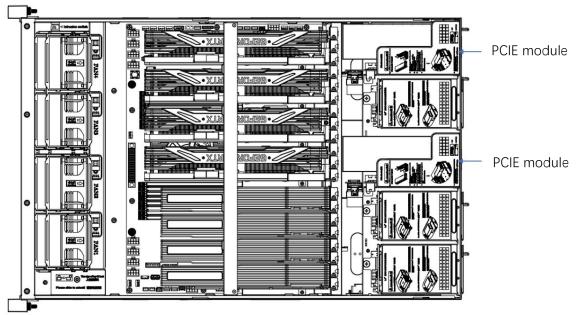
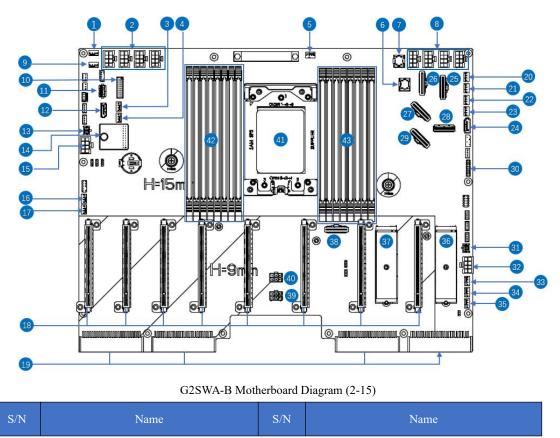


Figure (2-14)

2.9 PCBA

2.9.1 Motherboard

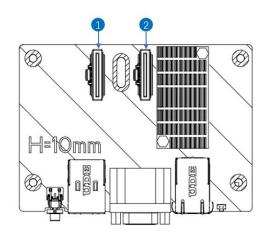


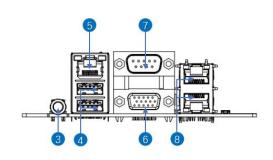


1	FAN2 4PIN fan interface	23	FAN 3 4PIN fan socket
2	GPU power supply interface (GPU POWER5 ~ 8)	24	SATA2 (SATA3.0 Ports)
3	FAN6 4PIN fan socket	25	Slim line1 interface
4	FAN5 4PIN fan socket	26	Slim line2 interface
5	FAN9 4PIN fan socket	27	Slim line3 interface
6	MINI SAS HD1	28	Rear IO Conn1 interface (for connection to IO board)
7	MINI SAS HD2	29	Slim line4 interface
8	GPU power supply interface (GPU POWER1~4)	30	FP panel cable socket
9	FAN1 4PIN fan socket	31	HDD POWER1 (2* 2PIN)
10	FP USB3.0 cable socket	32	HDD POWER2 (2* 4PIN)
11	USB 3.0 interface	33	FAN14 4PIN fan socket
12	SATA1 (SATA 3.0 Ports)	34	FAN13 4PIN fan socket
13	HDD POWER3 (2* 2PIN)	35	FAN12 4PIN fan socket
14	TPM2.0 interface	36	M.2 interface
15	HDD POWER4 (2* 4PIN)	37	M.2 interface
16	FAN10 4PIN fan socket	38	Rear IO Conn2 interface (for connection to IO board)
17	FAN11 4PIN fan socket	39	RISER CARD PWR1 (2* 3PIN)
18	PCIE SLOT (SLOT1~8)	40	RISER CARD PWR2 (2* 3PIN)
19	CRPS power connector (PSU1~4)	41	CPU Socket (SP3 socket)
20	FAN7 4PIN fan socket	42	DDR4 memory slot (DIMME1/E2/F1/F2/G1/G2/H1/H2)
21	FAN8 4PIN fan socket	43	DDR4 memory slot (DIMMA1/A2/B1/B2/C1/C2/D1/D2)
22	FAN4 4PIN fan socket	-	-

Table (2-10)

2.9.2 I/O board





IO board diagram (2-16)

S/N	Name	S/N	Name		
1	Rear IO Conn2 interface		IDMI and a second a start of the second		
1	(for connection to motherboard)	5	IPMI management network port		
2	Rear IO Conn1 interface		NCA		
2	(for connection to motherboard)	6	VGA		
3	UID button	7	COM port		
4	USB 3.0 interface	8	1Gigabit Ethernet port		

Table (2-11)

2.9.3 Hard disk backplane

• 2 × 2.5 rear hard disk backplane (SAS/SATA) TOP surface

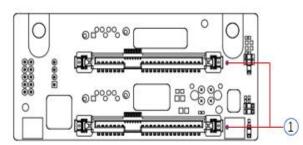


Figure (2-17)

	S/N	Description	Function
1	SAS/SATA hard disk	Support 12Gb/s SAS hard disk or 6Gb/s SATA	
	1	connector	hard disk.

Table (2-12)

Bottom side

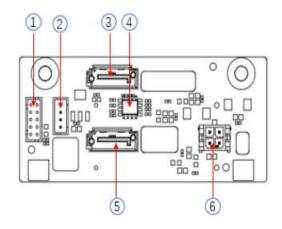


Figure (2-18)

S/N	Description	Function
1	SGPIO signal interface	Used for hard disk LED positioning light and fault LED indication function Note: This server does not support this function
2	I2C interface	For I2C signal interface Note: This server does not support this function
3, 5	7PIN SATA interface	SATA disk signal cable interface
4	Temperature sensor IC	Temperature sensor chip
6	Power interface	Backplane power transmission connector, used for 12V power transmission

Table (2-13)

• 2×2.5 rear hard disk backplane (NVMe)

TOP surface

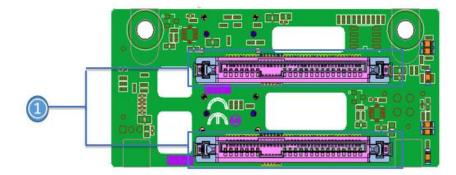


Figure (2-19)

S/N	S/N Description Function	
1 SFF-8639 connector Support PCIe×4 for connecting NVMe SSD		Support PCIe×4 for connecting NVMe SSD
Table (2-14)		

Bottom side

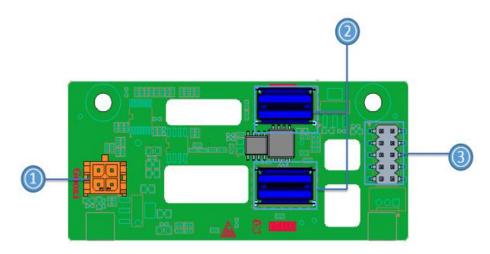


Figure	(2-20)
1 iguit	(2 20)

Description	Function	
Power socket	4Pin power socket for power supply	
Slimline 4i connector	Provide PCIe×4 interface to connect CPU and	
	NVMe SSD	
JATG debugging	JTAG debug interface for program and version	
interface	CPLD	
	Power socket Slimline 4i connector JATG debugging	

Table (2-15)

2.10 GPU card

The 4U chassis can support 8 double-width GPU cards or 6 triple-width GPU cards (the length of the GPU card should not exceed 320 mm).

2.10.1 Double-width GPU card

8 double-width GPU cards can be installed in the chassis:



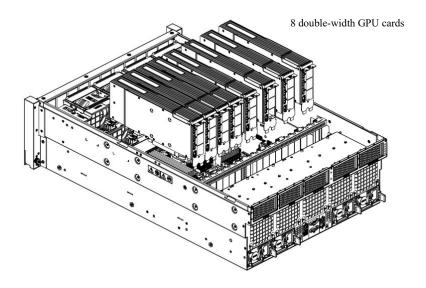


Figure (2-21)

2.10.2 Three-width GPU card

6 triple-width GPU cards can be installed in the chassis:

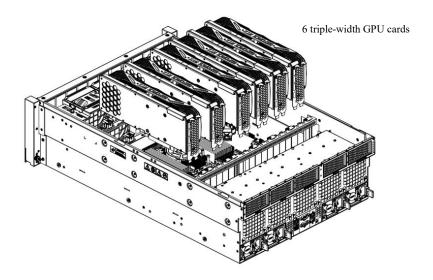


Figure (2-22)

3. Installation Instructions

3.1 Installation of the upper cover of the chassis

Steps: Install the rear upper cover of the chassis

- 1. Align the nails on the upper cover with the opening of the box and place it downwards
- 2. Rotate the upper cover lock in the direction of the arrow to lock it in place

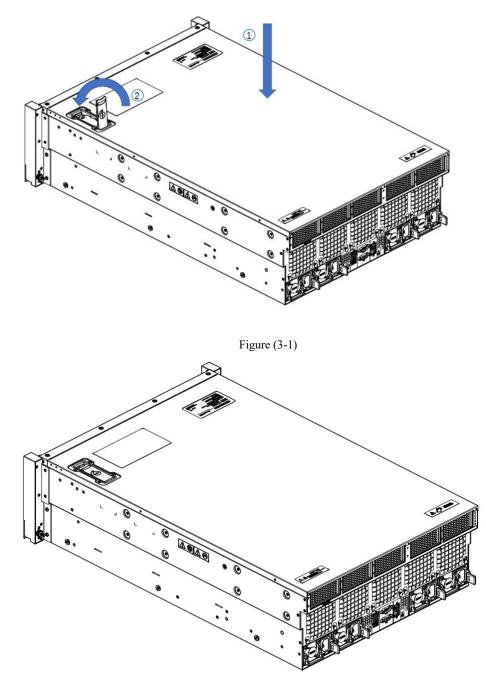


Figure (3-2)

3.2 Mounting accessories

3.2.1 Install CPU

Before starting to install the CPU, please read the following guides:

- Make sure the motherboard supports the CPU.
- Before installing the CPU, be sure to turn off the computer and unplug the power cord from the electrical outlet to prevent damage to the hardware.
- Unplug all cables from electrical outlets.
- Disconnect all communication cables from their ports.
- Place the system unit on a flat and stable surface.
- Follow the instructions to turn on the system.

Warning!

Serious damages could result if the server is not properly shut down before component installation begins. Do not attempt the procedures described in the following sections unless you are a qualified service technician.

Follow the instructions below to install the CPU:

1. In sequence $(3 \rightarrow 2 \rightarrow 1)$, loosen the three fixing screws that secure the CPU cover.

- 2. Flip open the CPU cover.
- 3. Use the handle on the CPU tray to remove the CPU tray from the CPU rack.

4. Using the handle on the CPU tray, insert the new CPU tray with the CPU installed into the CPU rack.

Note: Make sure the CPU is installed in the correct orientation in the CPU tray, with

the triangle on the CPU aligned with the upper left corner of the CPU carrier.

5. Flip the CPU rack with the CPU installed into the proper position in the CPU socket.

6. Flip the CPU cover into place over the CPU socket.

7. Tighten the CPU cover screws in sequence $(1 \rightarrow 2 \rightarrow 3)$ to secure the CPU cover in place. Torque: 16.1 kgf-cm (14.0 lbf-in)

8. Repeat steps 1-7 for the second CPU.

9. To remove the CPU, perform steps 1-7 in reverse order.

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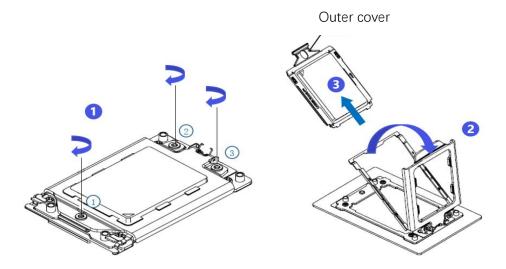


Figure (3-3)

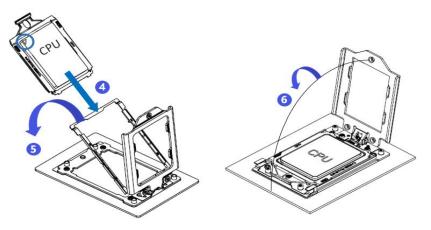


Figure (3-4)

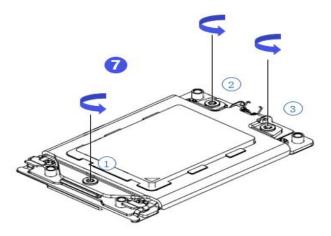


Figure (3-5)

3.2.2 Installing the heat sink

Before starting to install the heat sink, please read the following guidelines:

- Always turn off the computer and unplug the power cord from the electrical outlet before installing the heat sink to prevent damage to the hardware.
- Unplug all cables from electrical outlets.
- Disconnect all communication cables from their ports.
- Place the system unit on a flat and stable surface.
- Follow the instructions to turn on the system.

Marning!

Failure to shut down the server before beginning component installation could result in serious damage. Do not attempt the procedures described in the following sections unless you are a qualified service technician.

Note: When installing the heat sink to the CPU, use a Phillips screwdriver to tighten the 4 fixing nuts in the order of 1-4.

Follow the instructions below to disassemble and install the heat sink:

1. Loosen the screws holding the heat sink in place in reverse order $(4 \rightarrow 3 \rightarrow 2 \rightarrow 1)$.

2. Lift the heat sink and remove it from the system.

3. To install the heat sink, reverse steps 1-2 while making sure to tighten the set screws in order (1 \rightarrow 2 \rightarrow 3 \rightarrow 4) as shown in the image below.

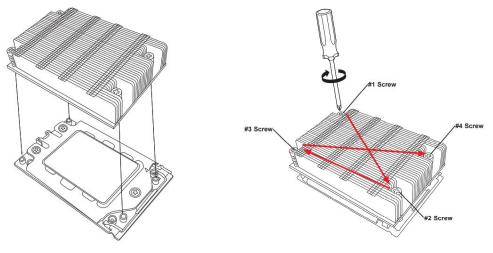


Figure (3-6)

3.2.3 Install memory

The 16 memory sockets controlled by the motherboard CPU are: DIMMA1/A2, DIMMB1/B2, DIMM C1/C2, DIMM D1/D2, DIMM E1/E2, DIMM F1/F2, DIMM G1/G2 and DIMM H1/H2; Note that the notch in the memory coincides with the notch in the DIMM slot, and snap each DIMM module vertically into place to prevent incorrect installation.

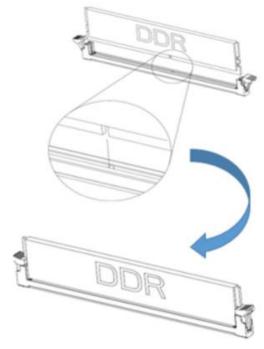


Figure (3-7)

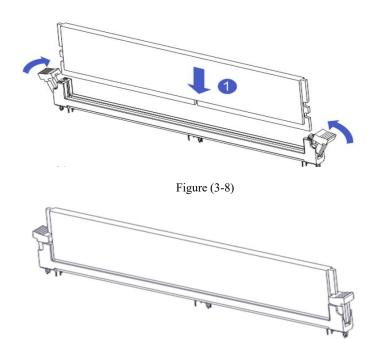


Figure (3-9)

3.2.4 Installing server rails

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

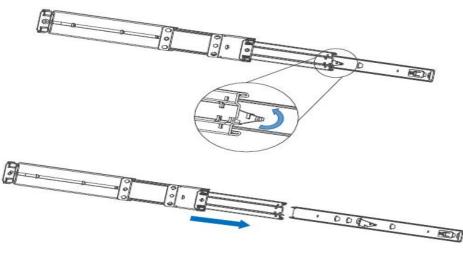


Figure (3-10)

- Bon 0 0 0 4940 0 . 0
- Step 2: Fasten the inner rails to the sides of the case



(The server in the picture is a schematic diagram, the actual object shall prevail)

Step 3: Mount the outer rails on the cabinet brackets and secure the screws

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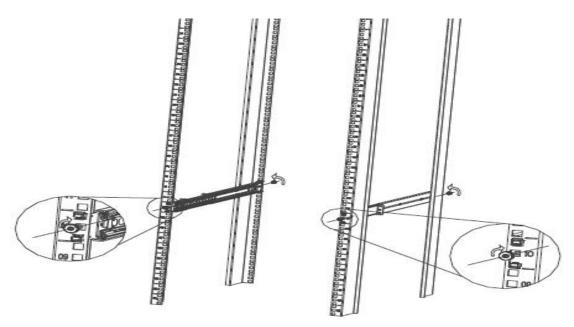
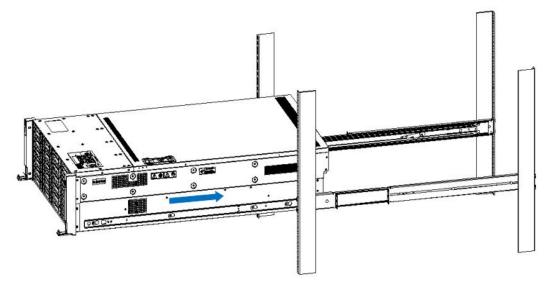


Figure (3-12)

Note: When installing the guide rail, it is necessary to align with the U mark, and fix it with M 5 screws after hearing a snap sound when it is installed in place.

• Step 4: Align the chassis with the inner rails installed on the outer rails for installation





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: When the chassis is pushed forward and cannot slide, fix the screws and the installation is complete.

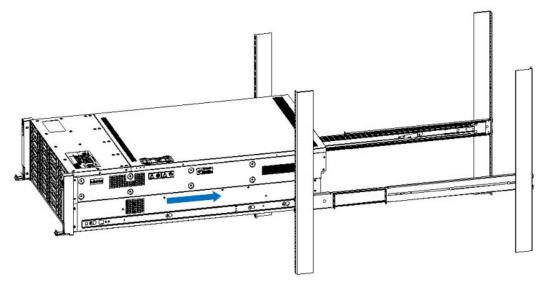


Figure (3-14)

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 disks, 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 LED is yellow.
 Power on, the server starts up, and the power LED is green.
- How to power on the server: The server's system defaults to "power-on strategy", that is, the server will automatically start after power-on. Users can modify it on 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)

• AC Loss Control power-on control

Status setting, the menu options are:

Always off: Power on and start up directly

Always on: To power on, you need to press the Power button to turn on

P previous: Leave the power state unchanged

- 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-> can execute according to requirements.



=			
Ρ	Power Control on Host Server		
	Power Actions	0	
	Host is currently on		
	Power Off		
	Power On		
	Power Cycle		
	✓ Hard Reset		
	ACPI Shutdown		
		ひ Perform Action	

Figure (4-2)

4.1.2 Initial data

- BMC default account: admin
- BMC default password: admin
- BMC default address: 192.168.1.100
- BIOS Default Password: None

4.1.3 Configure BIOS

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



	lity – Copyright (C) 2023 Ameri Event Logs Security Boot Sa	
BIOS Information Project Version Build Date and Time	G2SWA 5.02 x64 01/03/2023 09:51:58	Choose the system default language
CPLD name CPLD version Build Date and Time	03 11/01/2022	
Access Level BoardId	Administrator 1	
CPU Information Processor 0	7532 32-Core Proces	++: Select Screen
Memory Information Total Memory	Total Memory: 8 GB (DDR4)	<pre>14: Select Item Enter: Select +/-: Change Opt. F1: General Help</pre>
System Language	[English]	F2: Previous Values F3: Optimized Defaults
System Date System Time	[Sat 01/01/2011] [20:47:02]	F4: Save & Exit ESC: Exit

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.

• Navigation key description:

Select Screen Select Item
Select
Change Opt.
General Help
Previous Values
Optimized Defaults
Save & Reset
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 to enter the IP address in the same LAN as the BMC management network, and the login interface is as shown in the figure:



iBMC	
Username	
Password	
Remember User Password	
Sign me in	
I forgot my password	



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:

	=	
Host Online	Network IP Settings	
Quick Link 🔻		
# Dashboard		0
🙆 Sensor	U Enable LAN	
System Inventory	LAN Interface	
FRU Information	bond0	~
🔟 Logs & Reports >	MAC Address	
Settings	AA:27:88:A4:E4:AF	
🖵 Remote Control	Cnable IPv4	
Image Redirection	Enable IPv4 DHCP	
🗲 Maintenance	IPv4 Address	
🕒 Sign out	192.168.1.80	
	IPv4 Subnet	
	255.255.254.0	
	IPv4 Gateway	
	192.168.1.1	
	Enable IPv6	
	Enable IPv6 DHCP	
	IPv6 Index	
	0	~
	IPv6 Address	
	fe80::a827:88ff:fea4;e4af	
	Subnet Prefix Length	
	64	



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 is powered on, turn it on, pay attention to the POST process, press the keyboard or <ESC> key, ready to enter the BIOS Setup interface, switch to the following interface:

Aptio Setup Utility Server Mgmt	– Copyright (C) 2023 Americ	an Megatrends, Inc.
BMC network configuration ***********************************	[Unspecified] DynamicAddressBmcDhcp 192.168.0.30 255.255.254.0 00-24-EC-F4-85-76 192.168.1.1	Select to configure LAN channel parameters statically or dynamically(by BIOS or BMC). Unspecified option will not modify any BMC network parameters during BIOS phase
Router MAC address ***********************************	00-DD-86-D8-3E-A8	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit</pre>
IPv6 Support	[Enabled]	ESC: Exit

Figure (4-6)

- Configure IPV4 support
- BMC sharelink Management Channel
- Configuration Address source configures the BMC IP address allocation mode, the menu options are:

Unspecified: Do not change BMC parameters (default)

- Static: BIOS static IP setting
- DynamicBmcDhcp: BMC runs DHCP to dynamically assign IP
- DynamicBmcNonDhcp: BMC runs Non-DHCP protocol to dynamically assign IP
- BMC Dedicated Management Channel
- Configuration Address source configures the BMC IP address allocation mode, the menu options are:

Unspecified: Do not change BMC parameters (default)

Static: BIOS static IP setting

DynamicBmcDhcp: BMC runs DHCP to dynamically assign IP

DynamicBmcNonDhcp: BMC runs Non-DHCP protocol to dynamically assign IP



 Configure IPV6 support Choose whether to support IPV6, the menu options are: Enabled: support IPV6 (default) Disabled: does not support IPV6

Change from Unspecified to other parameters, save and restart the execution, the option will restore the value of Unspecified, no need to configure BMC IP every time the startup process. When the Configuration Address source option is Unspecified, it will display the network parameter information (IPV4) of the system shared network port, the current IP configuration mode, BMC IP, subnet mask, MAC address, routing IP, routing MAC.

5. Appendix

Common fault diagnosis:

No display after power on

- Make sure the monitor cable is fully seated and that the monitor's power light is on when the monitor is powered on
- Make sure the monitor is connected to the server
- If the above operation does not solve the fault problem, it is recommended to replace the known correct monitor to confirm whether the original monitor is faulty
- If there are no problems, please contact Gooxi technical team to solve the problem

Warning light on the front panel

- Please confirm the specific alarm information of the alarm LED according to the instructions of the front panel LEDs and buttons in the manual
- The power failure LED warning, please check whether the LED of the power module on the rear window of the server is abnormal.
 If the LED of the power module is normal, please contact Gooxi technical end to solve the problem
 If the LED of the power module is abnormal, please confirm whether the server & power module & power cord are working normally
- The system alarm LED warning, please check the external environment first
- Other LED alarming, please contact Gooxi technical end to solve the problem

Hard disk LED is abnormal

- Make sure the hard drive is installed properly.
- Please confirm the specific alarm information of the alarm LED according to the instructions on the rear panel LEDs and buttons in the manual
- Please confirm whether the Raid card is configured correctly
- Install the OS to confirm whether there is a phenomenon of hard disk failure. If there is such a phenomenon, please contact Gooxi technical team to solve it

Raid card cannot be used

- Make sure that the Raid card assembly is in place
- Re-insert the Raid card & PCIe adapter card to confirm whether it can work normally
- Please replace the Raid card that is known to be available. After troubleshooting the problem of the card itself, it still cannot work normally. Please restore the factory settings and update the BIOS version, and contact Gooxi technical team to solve the problem.

IPMI connection failed

- Check whether the BMC function is enabled correctly in the BIOS.
- Confirm that the switch and network cable are normal, and the regular

connection to the IPMI port is still invalid. Check the network environment.

- PING can be enabled by setting static or dynamic. If the WEB interface is invalid, please change to a new version of IE to connect.
- If the problem is still not resolved, please contact Gooxi technical team to solve it.