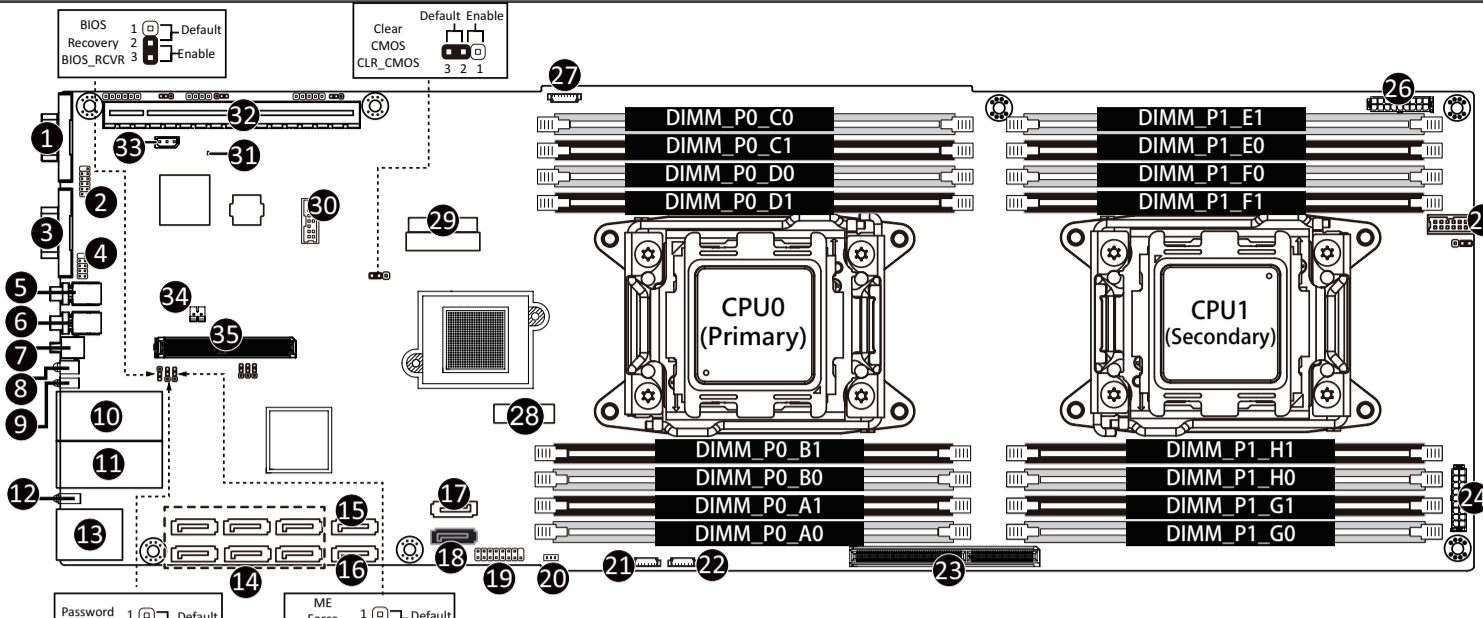


H23N-H60 Quick Installation Guide/H23N-H60 快速安装说明

Motherboard Components/ 主板组件

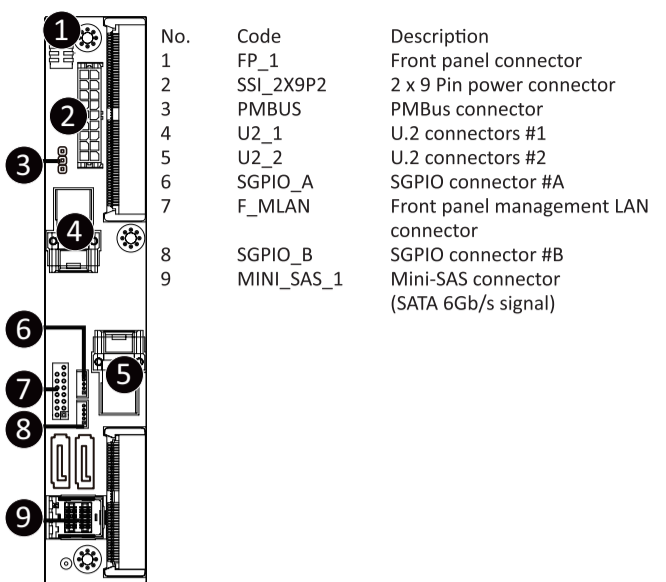


SATA DOM Power Cable Connector

No.	Pin Define
1	PSV
2	GND
3	NC

SATA/sSATA SGPIO Header/PCH SATA SGPIO 接头

No.	Pin Define
1	SGPIO_SATA_DATAOUT_R
2	GND
3	SGPIO_SATA_DIN
4	SGPIO_SATA_LOAD_R
5	SGPIO_SATA_CLOCK_R



SATA/sSATA SGPIO Header/SGPIO 接头

No.	Pin Define
1	SGPIO_SATA_DATAOUT_R
2	GND
3	SGPIO_SATA_DIN
4	SGPIO_SATA_LOAD_R
5	SGPIO_SATA_CLOCK_R

No.	Code	Description	No.	Code	Description	No.	Code	Description
1	VGA_1	Rear VGA port	14	SATA0~5	SATA 6Gb/s connectors #0~#5	27	BMC_SGPIOI01	BMC SGPIO connector
2	F_VGA1	Front VGA header	15	SSSATA0	sSATA 6Gb/s connector#0	28	BAT1	Battery socket
3	COM1	Rear COM port	16	SSSATA1	sSATA 6Gb/s connector#1	29	F_USB3	Front USB 3.0 connector
4	COM2	Front serial port cable header	17	SSSATA2	sSATA 6Gb/s connector#2	30	TPM	TPM module connector
5	SW_PWR1	Power button with LED	18	SSSATA3	sSATA 6Gb/s connector#3	31	LED_BMC	BMC firmware readiness LED
6	SW_ID	ID button with LED	19	F_MLAN	Management LAN header for front panel	32	PCIE_1	PCIe x16 slot
7	SW_RST_NMI	Reset button (top)/NMI button (bottom)	20	SATA_DOM0	SATA DOM support power connector for sSATA port#2	33	IPMB	IPMB connector
8	LED_STA	System status LED	21	SATA_SGP1	SATA SGPIO header	34	SW_RAID	SATA RAID upgrade key
9	LED_LAN1	SFP+ LAN link/activity/speed LED for port #1	22	SSATA_SGP1	sSATA SGPIO header	35	MEZZ_1	PCIe x8 slot (Proprietary slot)
10	SPF+_CN1N1	SFP+ LAN port #1	23	MEZZ_2	PCIe x16 slot (Proprietary slot)			
11	SPF+_CN1N2	SFP+ LAN port #2	24	SSI_2X9P1	2x9 pin power connector (for primary CPU)			
12	LED_LAN2	SFP+ LAN link/activity/speed LED for port #1	25	FP_1	Front panel header			
13	USB3_MLAN	Server management LAN port (top)/USB3.0 ports (bottom)	26	SSI_2X9P2	2x9 pin power connector (for secondary CPU)			

System Cover/ 机箱盖

CAUTION!
Before you remove or install the system cover: Make sure the system is not turned on or connected to AC power.
注意!
在卸下或安装系统机箱盖之前, 请注意下列事项: 确保系统未开启且未连接到交流电源。

Power Distribution Board Cage/ 电源主板

CAUTION!
Before you remove or install power distribution board cage cover: Make sure the system is not turned on or connected to AC power.
注意!
在替换或安装电源主板前, 请注意下列事项: 确保系统未开启且未连接到交流电源。

System Components/ 系统组件

No.	Description
1	HDD bays
2	System fan #1 (FAN1)
3	System fan #2 (FAN2)
4	System fan #3 (FAN3)
5	System fan #4 (FAN4)
6	Power supply board cage
7	Heat sink (Primary CPU)
8	DDR4 DIMM modules (for primary CPU)
9	Heat sink (Secondary CPU)
10	DDR4 DIMM modules (for secondary CPU)
11	Fan duct
12	PCIe card bay
13	Mezzanine card bay

Memory Population Configuration/ 安装内存

Type	Ranks Per DIMM and Data Width	Speed (MT/s): Slot Per Channel (SPC) and DIMM Per Channel (DPC)		
		1 Slot Per Channel	2 Slot Per Channel	2DPC
RDIMM	SRx4	2133	2133	1866
RDIMM	SRx8	2133	2133	1866
RDIMM	DRx8	2133	2133	1866
RDIMM	QRx4	2133	2133	1866
LRDIMM	QRx4	2133	2133	2133
LRDIMM 3DS	8Rx4	2400	2400	2400

• DIMM must be populated starting from DIMM_PO_A0/DIMM_PO_B0 socket and must be installed in matched pairs.
• DDR4 2400MHz is only available on Intel Xeon® E5-2600 V4 processor.
• System will not boot normally with incorrect populated sequence.
• DIMM必须从DIMM_PO_A0/DIMM_PO_B0插槽开始按顺序安装。DIMM必须成对安装。
• 仅Intel Xeon® E5-2600 V4处理器支持DDR4-2400MHz内存。
• 若安装顺序有误, 系统将无法正常开机。

Fan Duct/ 导风罩

CPU/ 处理器

Heat Sink/ 散热装置

WARNING!
CPU0 and CPU1 use the different CPU heat sinks. Failure to observe the warning could result in damage to the equipment.

Front & Rear/ 系统前部与后部概览

System Fan/ 系统风扇

CAUTION!
Before you remove or install the system fan: Make sure the system is not turned on or connected to the AC power.
• Disconnect all necessary cable connections.
Failure to observe these warnings could result in personal injury or damage to the equipment.
注意!
确保系统未开机且未连接到交流电源。
断开所有必要的线缆连接。若不遵循这些警告, 可能造成人员伤亡或设备损坏。

Power Supply/ 电源

CAUTION!
Before you remove or install the power supplies: Make sure the system is not turned on or connected to AC power.
注意!
在替换或安装电源前, 请注意下列事项: 确保系统未开启且未连接到交流电源。

PSU LED

State	Description
Green On	Output on and ready
Off	No AC power to all power supplies
1Hz Blink/Green	AC present / Only 12VSB on (PS off) in Cold redundant
Amber	AC cord unplugged, with a second power supply in parallel still with AC input power.
1Hz Blink/Amber	There is at least one warning alert, may indicate the following: high temperature, power, current and slow fan.
Amber	There is at least one critical alert, may indicate the following: shutdown, UVP, OTP, OVP, fan fail

Air Flow Bracket/ 风流引导片

CAUTION!
After installing the heat sinks, please ensure that the airflow brackets are installed as the illustration shows. Failing to do so delivers non-optimal airflow and may result in a non-operable system.
注意! 当您安装完成散热装置后, 请继续安装风流引导片以达到散热的最佳化。

No.	Description	No.	Description
1	CMC management LAN port	10	System status LED
2	Power supply fan	11	SFP+ LAN port #1 active/link LED (top)
3	Power supply module cord socket	13	SFP+ LAN port #1 speed LED (bottom)
4	VGA port	12	SFP+ LAN port #1
5	COM port	13	SFP+ LAN port #2
6	Power button with LED	14	SFP+ LAN port 2 active/link LED (top)
7	ID button with LED	15	SFP+ LAN port 2 speed LED (bottom)
8	Reset button	15	10/100/1000 Server management LAN port
9	NMI button	16	USB 3.0 ports

Hard Disk Drive Installation

HDD Backplane Board Components

No.	Description	No.	Description
1	SATA connector #1 (for Node1)	7	U.2 connectors #4
2	U.2 connectors #1	8	U.2 connector #4 (for Node4)
3	SATA connector #2 (for Node2)	9	JP1_SEL
4	U.2 connectors #2	10	JP2_SEL
5	SATA connector #3 (for Node3)	11	JP3_SEL
6	U.2 connectors #3	12	JP4_SEL

HDD Backplane Board SGPIO Configuration

Speed LED Link/Activity LED	State	Description	LAN Link/Activity LED:	State	Description
Speed LED Link/Activity LED	Green On	10 Gbps data rate	LAN Link/Activity LED:	Green On	Link between system and network
	Yellow On	1 Gbps data rate		Blink	LAN is active
	Off	10Mbps data rate			

PCI Express Expansion Card/PCI Express 扩展卡

CAUTION!
Before you remove or install the PCI express card: Voltages can be present within the server whenever an AC power source is connected. This voltage is present even when the main power switch is in the off position. Ensure that the system is powered-down and all power sources have been disconnected from the server prior to installing a PCI express card.
注意!
连接了交流电源时, 服务器内可能存在电压。甚至在主电源开关处于关闭位置时, 也存在此电压。在安装PCI卡之前, 确保系统处于关机状态并且断开服务器的所有电源。若不遵循这些警告, 可能造成人员伤亡或设备损坏。

Mezzanine Card (Optional)/ 附加卡 (选装)

CAUTION!
Before you remove or install the mezzanine card: Voltages can be present within the server whenever an AC power source is connected. This voltage is present even when the main power switch is in the off position. Ensure that the system is powered-down and all power sources have been disconnected from the server prior to installing a mezzanine card.
注意!
连接了交流电源时, 服务器内可能存在电压。甚至在主电源开关处于关闭位置时, 也存在此电压。在安装附加卡之前, 确保系统处于关机状态并且断开服务器的所有电源。若不遵循这些警告, 可能造成人员伤亡或设备损坏。

Front Panel LEDs and Buttons/ 前面板 LED 说明

No.	Name	Color	Status	Description	编号	名称	颜色	状态	说明
1	Node System Status LED	Green	Solid On	System is operating normally.	1	节点系统状态LED	绿色	恒亮	系统正常运行。
			Solid On	Critical condition, may indicate: System fan failure, System temperature				恒亮	严重情形, 可能为下列状况: 系统风扇故障, 系统温度/电压问题
		Amber	Blink	Non-critical condition, may indicate: Redundant power module failure, Temperature and voltage issue, Chassis intrusion			闪烁	非严重情形, 可能为下列状况: 系统温度/电压问题, 机箱侵入	
			N/A	Off			System is not ready, may indicate: POST error, NMI error, Processor or terminator missing	无亮灯	不亮
2	Power Button with LED	Green	Solid On	System is powered on.	2	电源按钮和LED	绿色	恒亮	系统处于开机状态。
		N/A	Off	System is not powered on or in ACPI S5 state (power off). System is in ACPI S4 state (hibernate mode).			无亮灯	不亮	系统未开机或处于ACPI S5状态(关机状态)。系统处于ACPI S4状态(休眠模式)。
3	ID Button with LED	Blue	On	Unit selected for identification.	3	ID按钮和LED	蓝色	恒亮	系统识别功能。
		N/A	Off	No identification.			无亮灯	不亮	无系统识别功能。
4	Enclosure Status LED	Green	Solid On	System is operating normally.	4	系统中控状态LED	绿色	恒亮	系统正常运行。
			Solid On	Critical condition, may indicate: Power module failure, System fan failure, Power supply voltage issue, System temperature				恒亮	严重情形, 可能为下列状况: 电源模块故障, 系统风扇故障, 电源电压问题, 系统温度/电压问题
		Amber	Blink	Non-critical condition, may indicate: Redundant power module failure, Temperature and voltage issue, Chassis intrusion			闪烁	非严重情形, 可能为下列状况: 冗余电源模块故障, 系统温度/电压问题, 机箱侵入	

State	Description	State	Description
Green On	System is powered on.	Green On	System is operating normally.
Off	System is not powered on or in ACPI S5 state (power off). System is in ACPI S4 state (hibernate mode).	Green Blink	Degrade condition, may indicate the following: - CPU failure - DIMM killed
		Amber On	Critical condition, may indicate the following: - Power module failure - System fan failure - Power supply voltage issue - System temperature/voltage issue
		Amber Blink	Non-critical condition, may indicate the following: - Redundant power module failure - Temperature and voltage issue - Chassis intrusion
		Off	System is not ready. May indicate the following: - POST error - NMI error - Processor or terminator missing

WEEE Symbol Statement



The symbol shown below is on the product or on its packaging, which indicates that this product must not be disposed of with other waste. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local government office, your household waste disposal service or where you purchased the product for details of environmentally safe recycling.

- When your electrical or electronic equipment is no longer useful to you, "take it back" to your local or regional waste collection administration for recycling.
- If you need further assistance in recycling, reusing in your "end of life" product, you may contact us at the Customer Care number listed in your product's user's manual and we will be glad to help you with your effort.

Restriction of Hazardous Substances (RoHS) Directive Statement

GIGABYTE products have not intended to add and safe from hazardous substances (Cd, Pb, Hg, Cr+6, PBDE and PBB). The parts and components have been carefully selected to meet RoHS requirement. Moreover, we at GIGABYTE are continuing our efforts to develop products that do not use internationally banned toxic chemicals.

限制使用有害物质 (RoHS) 指令声明

GIGABYTE产品未故意添加和使用有害物质 (Cd、Pb、Hg、Cr+6、PBDE和PBB)。所有部件和元件均经过严格挑选，符合RoHS要求。此外，我们GIGABYTE一直致力于开发不使用国际上禁止的有毒化学品的产品。

California Proposition 65 Warning

WARNING:
This product contains a chemicals, including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, please visit: <http://www.p65warnings.ca.gov/>



Battery Warning:

Incorrectly installing a battery or using incompatible battery may increase the risk of fire explosion. Replace the battery only with the same or equivalent type.

- Do not disassemble, crush, puncture batteries.
- Do not store or place your battery pack next to or in a heat source such as a fire, heatgenerating appliance, can or exhaust vent. Heating battery cells to temperatures above 65oC (149oF) can cause explosion or fire.
- Do not attempt to open or service batteries. Do not dispose of batteries in a fire or with household waste.



电池警告：

电池安装不当或使用不兼容的电池会增加火灾爆炸风险。更换电池时，只可使用相同或同等类型的电池。

- 请勿拆解、挤压、刺破电池。
- 请勿将电池存放或放置在热源中或旁边，如火源、产生热的设备、罐体或排气口。电池温度升至65oC (149oF)以上可能导致爆炸或火灾。
- 请勿尝试打开或维修电池。电池废弃时，请勿投入火中或者作为家庭废弃物进行处理。

中华人民共和国电子信息产品中有毒有害物质或元素的名称及含量标识格式

依照中华人民共和国的有毒有害物质的限制要求(China RoHS)提供以下的表格：



关于符合中国《电子信息产品污染控制管理办法》的声明
Management Methods on Control of Pollution from Electronic Information Products
(China RoHS Declaration)

产品中有毒有害物质或元素的名称及含量
Hazardous Substances Table

部件名称(Parts)	有毒有害物质或元素(Hazardous Substances)					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
PCB板	○	○	○	○	○	○
PCB	○	○	○	○	○	○
结构件及风扇 Mechanical parts and Fan	×	○	○	○	○	○
芯片及其他主动零件 Chip and other Active components	×	○	○	○	○	○
连接器 Connectors	×	○	○	○	○	○
被动电子元件 Passive Components	×	○	○	○	○	○
线材 Cables	○	○	○	○	○	○
焊接金属 Soldering metal	○	○	○	○	○	○
助焊剂、脱热膏、标签及其他耗材 Flux,Solder Paste,Label and other Consumable Materials	○	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下。
Indicates that this hazardous substance contained in all homogenous materials of this part is below the limit requirement SJ/T 11363-2006

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。
Indicates that this hazardous substance contained in at least one of the homogenous materials of this part is above the limit requirement in SJ/T 11363-2006

对销售之目的所发售产品，本表显示我公司供应链的电子产品信息可能包含这些物质。注意：在所售产品中可能会也可能不会含有所有列出的部件。
This table shows where these substances may be found in the supply chain of our electronic information products, as of the date of the sale of the enclosed products. Note that some of the component types listed above may or may not be a part of the enclosed product.

Ambient Operation

This equipment should not be operated above an ambient operation temperature of 35 degrees centigrade.

Restricted Access Location

This server is intended for installation only in restricted access locations where .

- Access can only be gained by SERVICE PERSONS who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken.
- Access is through the use of a TOOL or lock and key, or other means of security, and is controlled by the authority responsible for the location.



The system may have more than one power supply cable. To reduce the risk of electrical shock, a trained service technician may need to disconnect all power supply cables before servicing the system.

Power Supply

CAUTION: The power supplies in your system may produce high voltages and energy hazards, which can cause bodily harms. Unless you are instructed otherwise, only trained service technicians are authorized to remove the covers and access any of the components inside the system.

Reliable Earthing:

CAUTION: Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this server during an electrical storm
CAUTION: Connect all power cords to a properly wired and grounded electrical outlet.

Hazardous FAN

CAUTION: This server contains hazardous moving fan blades, keep fingers and other bodyparts away.
Disconnect all power supply cords before servicing. Connect power supply cord only after all the covers are properly installed.

Hazardous Energy



CAUTION: This server contains hazardous energy over 240VA on the backplane. To prevent accidental short circuit, always insert the HDD trays after servicing.

Rack Mount Instructions

The following or similar rack-mount instructions are included with the installation instructions:

- Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.
- Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips)."

Disconnect 2 power supply cords before servicing



CAUTION: Slider/rail mounted equipment is not to be used as a shelf or a work space.

FCC Statement

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3 (A)/NMB-3(A)

声明 本系统功率大于 1300W



CAUTION: Whenever you need to lift the system, get others to assist you.
To avoid injury, do not attempt to lift the system by yourself.

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For more information, visit our website at:

<http://b2b.gigabyte.com>

You are a professional?
Get access to our complete source of sales & marketing materials at:

<http://reseller.b2b.gigabyte.com>



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