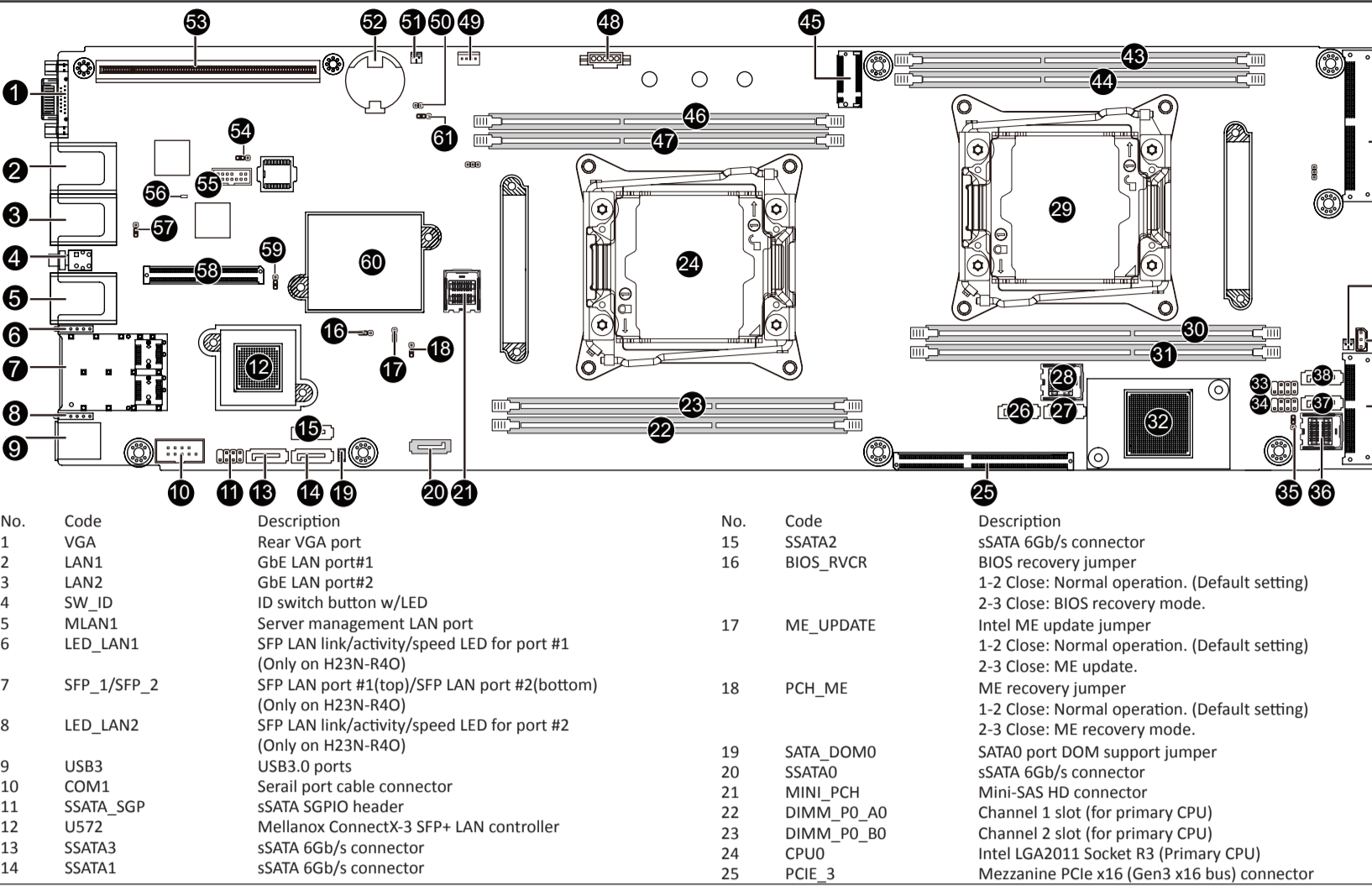


# H230-R4G/H23N-R4O Quick Installation Guide/H230-R4G/H23N-R4O 快速安装说明

## Motherboard Components/ 主板组件



| No. | Code        | Description   |
|-----|-------------|---|
| 1   | VGA         | Rear VGA port   |
| 2   | LAN1        | GbE LAN port#1  |
| 3   | LAN2        | GbE LAN port#2  |
| 4   | SW_ID       | ID switch button w/LED  |
| 5   | MLAN1       | Server management LAN port                                      |
| 6   | LED_LAN1    | SFP LAN link/activity/speed LED for port #1 (Only on H23N-R4O)  |
| 7   | SFP_1/SFP_2 | SFP LAN port #1(top)/SFP LAN port #2(bottom) (Only on H23N-R4O) |
| 8   | LED_LAN2    | SFP LAN link/activity/speed LED for port #2 (Only on H23N-R4O)  |
| 9   | USB3        | USB3.0 ports  |
| 10  | COM1        | Serial port cable connector                                     |
| 11  | SSATA_SGP   | sSATA SGPIO header  |
| 12  | US72        | Mellanox ConnectX-3 SFP+ LAN controller                         |
| 13  | SSATA3      | sSATA 6Gb/s connector   |
| 14  | SSATA1      | sSATA 6Gb/s connector   |
| 15  | SSATA2      | sSATA 6Gb/s connector   |
| 16  | BIOS_RVCR   | BIOS recovery jumper  |
| 17  | ME_UPDATE   | Intel ME update jumper  |
| 18  | PCH_ME      | ME recovery jumper  |
| 19  | SATA_DOM0   | SATA0 port DOM support jumper                                   |
| 20  | SSATA0      | sSATA 6Gb/s connector   |
| 21  | MINI_PCH    | Mini-SAS HD connector   |
| 22  | DIMM_PO_A0  | Channel 1 slot (for primary CPU)                                |
| 23  | DIMM_PO_B0  | Channel 2 slot (for primary CPU)                                |
| 24  | CPU0        | Intel LGA2011 Socket R3 (Primary CPU)                           |
| 25  | PCI_E_3     | Mezzanine PCIe x16 (Gen3 x16 bus) connector                     |
| 26  | SAS6_7      | SATA 6Gb/s connector (Only on H23N-R4O)                         |
| 27  | SAS7        | SATA 6Gb/s connector (Only on H23N-R4O)                         |
| 28  | MINI_LSI    | Mini-SAS HD connector   |
| 29  | CPU1        | Intel LGA2011 Socket R3 (Secondary CPU)                         |
| 30  | DIMM_P1_H0  | Channel 4 slot (for secondary CPU)                              |
| 31  | DIMM_P1_G0  | Channel 3 slot (for secondary CPU)                              |
| 32  | US36        | LSI 3800 SAS controller (Only on H23N-R4O)                      |
| 33  | SGPB        | SGPIO port B  |
| 34  | SGPA        | SGPIO port A  |
| 35  | LSI_EN      | LSI SAS enable/disable jumper (Only on H23N-R4O)                |
| 36  | MINI_GF     | Mini-SAS HD connector   |
| 37  | SATA6       | SATA 6Gb/s connector  |
| 38  | SATA7       | SATA 6Gb/s connector  |
| 39  | GF_1_1      | Hot-plug PSU module connector#1                                 |
| 40  | IPMB        | IPMB connector  |
| 41  | IMR_KEY1    | LSI RAID key header (Only on H23N-R4O)                          |
| 42  | GF_1_3      | Hot-plug PSU module connector#2                                 |
| 43  | DIMM_P1_E0  | Channel 1 slot (for secondary CPU)                              |
| 44  | DIMM_P1_F0  | Channel 2 slot (for secondary CPU)                              |
| 45  | M2_SK       | M.2 slot (Gen3 x4), NGFF-2242/2260/2280, M-Key                  |
| 46  | DIMM_PO_C0  | Channel 3 slot (for primary CPU)                                |
| 47  | DIMM_PO_D0  | Channel 4 slot (for primary CPU)                                |
| 48  | PMBUS       | PMBus connector   |
| 49  | HDD_PWR     | Hard disk drive power connector                                 |
| 50  | CASE_OPEN   | Chassis intrusion alert header                                  |
| 51  | SW_RAID     | Intel RAID Key Header   |
| 52  | BAT         | Battery socket  |
| 53  | PCI_E_1     | PCIe x16 (Gen3 x16 bus) connector                               |
| 54  | BMC_FRB     | Force to stop FRB timer jumper                                  |
| 55  | TPM         | TPM module connector  |
| 56  | S3_MASK     | S3 Power On Select Jumper                                       |
| 57  | LED_BMC     | BMC firmware readiness LED                                      |
| 58  | PCI_E_1     | Mezzanine PCIe x8 (Gen3 x8 bus) connector                       |
| 59  | BIOS_PWD    | Clearing Supervisor Password jumper                             |
| 60  | U351        | Intel C612 PCH  |
| 61  | CLR_CMOS    | Clear CMOS jumper   |
|     |             | 1-2 Close: Normal operation (Default setting)                   |
|     |             | 2-3 Close: Clear CMOS data.                                     |

### sSATA SGPIO Header/SGPIO 接头

| No. | Pin Define | No. | Pin Define |
|-----|------------|-----|------------|
| 1   | Data In    | 5   | GND        |
| 2   | No Pin     | 6   | Load       |
| 3   | Data Out   | 7   | No Connect |
| 4   | GND        | 8   | Clock      |

### SGPIO A/B Header/SGPIO 接头

| No. | Pin Define | No. | Pin Define |
|-----|------------|-----|------------|
| 1   | Data In    | 5   | GND        |
| 2   | No Pin     | 6   | Load       |
| 3   | Data Out   | 7   | No Connect |
| 4   | GND        | 8   | Clock      |

### 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   | CPU heatsink            |
| 8   | Memory module           |
| 9   | Fan duct                |
| 10  | Power supply modules    |

### System Components/ 系统组件

| No. | Description             |
|-----|-------------------------|
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| 5   | System fan #4 (FAN4)    |
| 6   | Power supply board cage |
| 7   | CPU heatsink            |
| 8   | Memory module           |
| 9   | Fan duct                |
| 10  | Power supply modules    |

### Fan Duct/ 导风罩

### CPU/ 处理器

### Heat Sink/ 散热装置

### 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  | 1DPC | 2 Slot Per Channel |
| RDIMM      | SRx4                          | 2133  | 2133 | 1866               |
| RDIMM      | SRx8                          | 2133  | 2133 | 1866               |
| RDIMM      | DRx8                          | 2133  | 2133 | 1866               |
| RDIMM      | DRx4                          | 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。

### 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。

### 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.

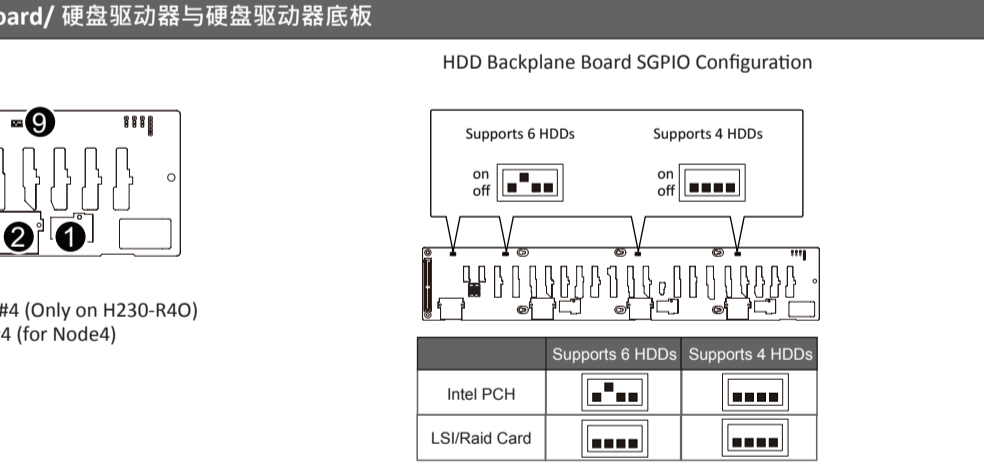
注意！当您安装完成散热中置后，请继续安装风流引导片以达到散热的最佳化。

### Front & Rear/ 系统前部与后部概览

### Hard Disk Drive Installation

### HDD Backplane Board Components

| No. | Description                          | No. | Description                          |
|-----|--------------------------------------|-----|--------------------------------------|
| 1   | U.2 connector #1 (for Node1)         | 7   | U.2 connectors #4 (Only on H230-R4O) |
| 2   | U.2 connectors #1 (Only on H230-R4O) | 8   | U.2 connector #4 (for Node4)         |
| 3   | U.2 connector #2 (for Node2)         | 9   | JP1_SEL                              |
| 4   | U.2 connectors #2 (Only on H230-R4O) | 10  | JP2_SEL                              |
| 5   | U.2 connector #3 (for Node3)         | 11  | JP3_SEL                              |
| 6   | U.2 connectors #3 (Only on H230-R4O) | 12  | JP4_SEL                              |



### System Front View/ 系统前部概览

No. Description  
 1 Front panel buttons with LEDs (for Node1/2)  
 2 Front panel buttons with LEDs (for Node3/4)

### Front Panel LEDs and Buttons/ 前面板 LED 说明

| No. | Name                   | Color | Status   | Description  |  |
|-----|------------------------|-------|----------|--|--|
| 1   | Node System Status LED | Green | Solid On | System is operating normally.  |  |
|     |                        |       | Solid On | Critical condition, may indicate: System fan failure, System temperature   |  |
|     |                        |       | Blink    | Non-critical condition, may indicate: Redundant power module failure, Temperature and voltage issue, Chassis intrusion     |  |
| 2   | Power Button with LED  | Green | Solid On | System is powered on.  |  |
|     |                        |       | N/A      | Off  | System is not powered on or in ACPI S5 state (power off). System is in ACPI S4 state (hibernate mode). |
|     |                        |       | N/A      | Off  | System is not ready, may indicate: POST error, NMI error, Processor or terminator missing              |
| 3   | ID Button with LED     | Blue  | On       | Unit selected for identification.  |  |
|     |                        |       | N/A      | Off  | No identification.   |
| 4   | Enclosure Status LED   | Green | Solid On | System is operating normally.  |  |
|     |                        |       | Solid On | Critical condition, may indicate: Power module failure, System fan failure, Power supply voltage issue, System temperature |  |
|     |                        |       | Blink    | Non-critical condition, may indicate: Redundant power module failure, Temperature and voltage issue, Chassis intrusion     |  |

### Front Panel LEDs and Buttons/ 前面板 LED 说明

| 编号 | 名称        | 颜色 | 状态  | 说明   |  |
|----|-----------|----|-----|--|--|
| 1  | 节点系统状态LED | 绿色 | 恒亮  | 系统正常运行。  |  |
|    |           |    | 恒亮  | 严重情形，可能为下列状况：<br>系统风扇故障<br>系统温度/电压问题                     |  |
|    |           |    | 闪烁  | 非严重情形，可能为下列状况：<br>系统温度/电压问题<br>机箱侵入                      |  |
| 2  | 电源按钮LED   | 绿色 | 恒亮  | 系统处于开机状态。  |  |
|    |           |    | 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)。     |
|    |           |    | 无亮灯 | 不亮   | 系统未正常运行，可能为下列状况：<br>POST错误<br>NMI错误<br>处理器或终结器缺失 |
| 3  | ID按钮LED   | 蓝色 | 恒亮  | 系统识别功能。  |  |
|    |           |    | 无亮灯 | 不亮   | 无系统识别功能。   |
| 4  | 系统中置状态LED | 绿色 | 恒亮  | 系统正常运行。  |  |
|    |           |    | 恒亮  | 严重情形，可能为下列状况：<br>电源模块故障<br>系统风扇故障<br>电源电压问题<br>系统温度/电压问题 |  |
|    |           |    | 闪烁  | 非严重情形，可能为下列状况：<br>冗余电源模块故障<br>系统温度/电压问题<br>机箱侵入          |  |

### Front Panel LEDs and Buttons/ 前面板 LED 说明

| No. | Description                            | No. | Description                           |
|-----|--|-----|---------------------------------------|
| 1   | Power supply fan                       | 7   | SFP+ LAN port 1 active/link LED (top) |
| 2   | Power supply module cord socket        | 8   | SFP+ LAN port 1 speed LED (bottom)    |
| 3   | VGA port                               | 9   | SFP+ LAN ports                        |
| 4   | GbE LAN ports                          | 8   | SFP+ LAN port 2 active/link LED (top) |
| 5   | 10/100/1000 Server management LAN port | 9   | SFP+ LAN port 2 speed LED (bottom)    |
| 6   | ID button w/LED                        | 10  | USB 3.0 ports                         |

### System Rear View/ 系统后部概览

**Speed LED Link/Activity LED**

SFP+ LAN LED:

| State     | Description       | State   | Description                       |
|-----------|-------------------|---------|-----------------------------------|
| Green On  | 10 Gbps data rate | Blue On | Unit selected for identification. |
| Yellow On | 1 Gbps data rate  | Off     | System is powered off             |

ID button/LED:

| State    | Description       | State    | Description                     |
|----------|-------------------|----------|---------------------------------|
| Green On | 10Gbps data rate  | Green On | Link between system and network |
| Green On | 100Mbps data rate | Blink    | LAN is active                   |
| Off      | 10Mbps data rate  |          |                                 |

**Speed LED Link/Activity LED**

10/100/1000 LAN LED:

| State     | Description       | State    | Description                     |
|-----------|-------------------|----------|---------------------------------|
| Yellow On | 1Gbps data rate   | Green On | Link between system and network |
| Green On  | 100Mbps data rate | Blink    | LAN is active                   |
| Off       | 10Mbps data rate  |          |                                 |

LAN Link/Activity LED:

| State    | Description       | State    | Description                     |
|----------|-------------------|----------|---------------------------------|
| Green On | 10Gbps data rate  | Green On | Link between system and network |
| Green On | 100Mbps 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。

### Add-on Card (Optional)/ 附加卡 (选购)

**CAUTION!** Before you remove or install the Add-on 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 an add-on 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。

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**CAUTION!** Before you remove or install the Add-on 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 an add-on 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。