

# R281-NOO Hardware Quick Installation Guide

## Motherboard Components

| J1 | ON/OFF         | ON  | OFF              |
|----|----------------|---|------------------|
| 1  | HOST_SMBUS_SEL | BIOS defined                                | BIOS defined     |
| 2  | PMBUS_SEL      | BIOS defined                                | BIOS defined     |
| 3  | S3_MASK        | Stop initial power on when BMC is not ready | Normal [Default] |
| 4  | DB_PLD         | CPLD debug mode                             | Normal [Default] |

  

| J2 | ON/OFF    | ON                        | OFF              |
|----|-----------|---------------------------|------------------|
| 1  | ME_UPDATE | Force ME update           | Normal [Default] |
| 2  | BIOS_PWD  | Clear supervisor password | Normal [Default] |
| 3  | BIOS_RCVR | BIOS recovery mode        | Normal [Default] |
| 4  | ME_RCVR   | ME recovery mode          | Normal [Default] |

  

- HDD back plane board connector
- Front panel connector
- Front panel USB 3.0 connector
- TPM module connector
- BMC firmware readiness LED
- Case open intrusion header
- IPMB connector
- OCM mezzanine connector#1 (without KR signal)
- Riser slot connector #1
- sSATA connector #5 (for rear HDD)
- sSATA connector #4 (for rear HDD)
- Slimline SAS connector #0 (SATA0)
- Slimline SAS connector #0 (SATA0)
- Slimline SAS connector #1 (SATA1)
- SATA DOM support power connector (for sSATA connector #4)
- SATA DOM support power connector (for sSATA connector #5)
- NCSI switch
- OCM mezzanine connector#2 (with KR signal)
- Riser slot connector #2
- NVMe upgrade key
- Power supply connector#1 (primary)
- Power supply connector#2 (secondary)
- 2 x 3 Pin Rear back plane board power connector
- 2 x 7 Pin HDD back plane board power connector
- 2 x 4 Pin GPGPU power connectors
- 2 x 2 Pin extension card power connectors

  

CPU0 (Primary) and CPU1 (Secondary) locations are indicated on the motherboard layout.

## System Components

- Riser #1
- Riser #2
- Rear HDDs (top)
- Power supply unit (bottom)
- DDR4 Memory (for CPU1/Secondary)
- DDR4 Memory (for CPU0/Primary)
- CPU0 (Primary)
- System fan #1
- System fan #2
- System fan #3
- System fan #3
- Hard Disk Drives

## CPU/Heatsink

- Remove top cover
- Install CPU
- Install heatsink
- Install fan
- Secure fan
- Install fan

## PCIe/Riser Card

- Remove cover
- Insert card
- Secure cover

## Memory

| Type       | Ranks Per DIMM and Data Width | DIMM Capacity (GB) |          | Speed (MT/s), Voltage (V) Slot Per Channel (SPC) DIMM Per Channel (DPC) |                    |                    |
|------------|-------------------------------|--------------------|----------|---|--------------------|--------------------|
|            |                               | 4Gb                | 8Gb      | 1 Slot per Channel  | 2 Slot per Channel | 2 Slot per Channel |
| RDIMM      | SRx4                          | 8GB                | 16GB     | 2666  | 2666               | 2666               |
| RDIMM      | SRx8                          | 4GB                | 8GB      |   |                    |                    |
| RDIMM      | DRx8                          | 8GB                | 16GB     |   |                    |                    |
| RDIMM      | DRx4                          | 16GB               | 32GB     |   |                    |                    |
| RDIMM 3DS  | 8Rx 4                         | N/A                | 2H-64GB  |   |                    |                    |
| RDIMM 3DS  | 8Rx 4                         | N/A                | 4H-128GB |   |                    |                    |
| LRDIMM     | QRx4                          | 32GB               | 2H 64GB  |   |                    |                    |
| LRDIMM 3DS | QRx4                          | N/A                | 4H 128GB |   |                    |                    |

## System Fan

- Remove cover
- Install fan
- Secure fan

## Fan Duct

- Remove cover
- Install fan duct
- Secure fan duct

## System Cover

- Remove cover
- Install cover
- Secure cover

## Power Supply

- Remove cover
- Install PSU
- Secure PSU

## Front Panel LEDs and Buttons

| No. | Name                    | Color       | Status   | Description  |
|-----|-------------------------|-------------|----------|--|
| 1   | Reset Button            |             |          | Press the button to reset the system.  |
| 2   | NMI Button              |             |          | Press the button to enable NMI function.   |
| 3   | Power Button with LED   | Green       | Solid On | System is powered on.  |
|     |                         | Green       | Blink    | System is in ACPI S1 state (sleep mode).   |
|     |                         | N/A         | Off      | System is not powered on or in ACPI S5 state (power off). System is in ACPI S4 state (hibernate mode).               |
| 4   | ID Button               |             |          | Press the button to activate system identification.  |
| 5   | HDD Status LED          | Green       | On       | HDD locate   |
|     |                         | Green       | Blink    | HDD access   |
|     |                         | Amber       | On       | HDD fault  |
|     |                         | Green/Amber | Blink    | HDD rebuilding   |
| 6   | System Status LED       | N/A         | Off      | No HDD access or no HDD fault.   |
|     |                         | Green       | Solid On | System is operating normally.  |
|     |                         | Amber       | Solid On | Critical condition, may indicate: System fan failure System temperature  |
| 6   | System Status LED       | Amber       | Blink    | Non-critical condition, may indicate: Redundant power module failure Temperature and voltage issue Chassis intrusion |
|     |                         | N/A         | Off      | System is not ready, may indicate: POST error NMI error Processor or terminator missing                              |
| 7/8 | LAN1/2 Active/Link LEDs | Green       | Solid On | Link between system and network or no access.  |
|     |                         | Green       | Blink    | Data transmission or receiving is occurring.   |
|     |                         | N/A         | Off      | No data transmission or receiving is occurring.  |

## Power Supply LEDs

| State                                      | Description   |
|--|---|
| Green On                                   | Output ON and OK  |
| Off  | No AC power to all power supplies   |
| Blink Green 1 Sec./On 1 Sec./Off 0.5Hz     | Standby mode normal   |
| Blink Green 0.25 Sec./On 0.25 Sec./Off 2Hz | Sleep PSU in cold Redundant/Offline mode  |
| Amber                                      | Standby mode with OTP range 12V Fault (OVP, UVP, OCP, SCP, and OTP) Power supply fan lock 15 seconds including standby mode |

NOTE!  
 • Firmware Update mode: 2Hz Blink Green  
 • Power supply warning event: 1Hz Blink Amber (0.5s: OFF, 0.5s:Amber)

## Hard Disk Drive

- Remove cover
- Install HDD
- Secure HDD

## Hard Disk Drive LED

| RAID SKU  | LED1                                 | Locate | HDD Fault | Rebuilding | HDD Access        | HDD Present (No Access) |
|---|--------------------------------------|--------|-----------|------------|-------------------|-------------------------|
| No RAID configuration (via HBA, ICH)                  | Disk LED (LED on Back Panel)         | Green  | ON(*1)    | OFF        | Green             | OFF                     |
|   |                                      | Amber  | OFF       | OFF        | Amber             | OFF                     |
|   | Removed HDD Slot (LED on Back Panel) | Green  | ON(*1)    | OFF        | Green             | --                      |
|   |                                      | Amber  | OFF       | OFF        | Amber             | --                      |
| RAID configuration (via HW RAID Card or SW RAID Card) | Disk LED                             | Green  | ON        | OFF        | Alternately       | OFF                     |
|   |                                      | Amber  | OFF       | ON         | (Low Speed: 2 Hz) | OFF                     |
|   | Removed HDD Slot                     | Green  | ON(*1)    | OFF        | (*3)              | --                      |
|   |                                      | Amber  | OFF       | ON         | (*3)              | --                      |

  

| LED 2 | HDD Present | No HDD |
|-------|-------------|--------|
| Green | ON          | OFF    |

# Regulatory Notices

## 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 ifre 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。

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<br>PCB   | ○                                | ○      | ○      | ○             | ○          | ○            |
| 结构件及风扇<br>Mechanical parts and Fan  | ×                                | ○      | ○      | ○             | ○          | ○            |
| 芯片及其他主动零件<br>Chip and other Active components                               | ×                                | ○      | ○      | ○             | ○          | ○            |
| 连接器<br>Connectors   | ×                                | ○      | ○      | ○             | ○          | ○            |
| 被动电子元件<br>Passive Components  | ×                                | ○      | ○      | ○             | ○          | ○            |
| 线材<br>Cables  | ○                                | ○      | ○      | ○             | ○          | ○            |
| 焊接金属<br>Soldering metal   | ○                                | ○      | ○      | ○             | ○          | ○            |
| 助焊剂、散热膏、标签及其他耗材<br>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

对销售之日的所发售产品，本表显示我公司供应链的电子信息产品可能包含这些物质。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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