



P/N: 15G065375000AK V1.0

Quick Installation Guide

GNRD8UD-2Q

ASRock
Rack
www.asrockrack.com



GNRD8UD-2Q

The server board User's Manual is available for download from the ASRock Rack's official website at <http://www.asrockrack.com>.

Take note of the following precautions before installing server board components or change any server board settings.

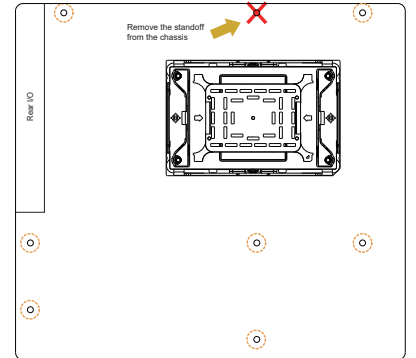
1. Unplug the power cord from the wall socket before touching any components.
2. To avoid damaging the server board's components due to static electricity, NEVER place the server board directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before handling the components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever uninstall any component, place it on a grounded anti-static pad or in the bag that comes with the component.
5. When placing screws into the screw holes to secure the server board to the chassis, please do not over-tighten the screws! Doing so may damage the server board.

1 Install the Server Board

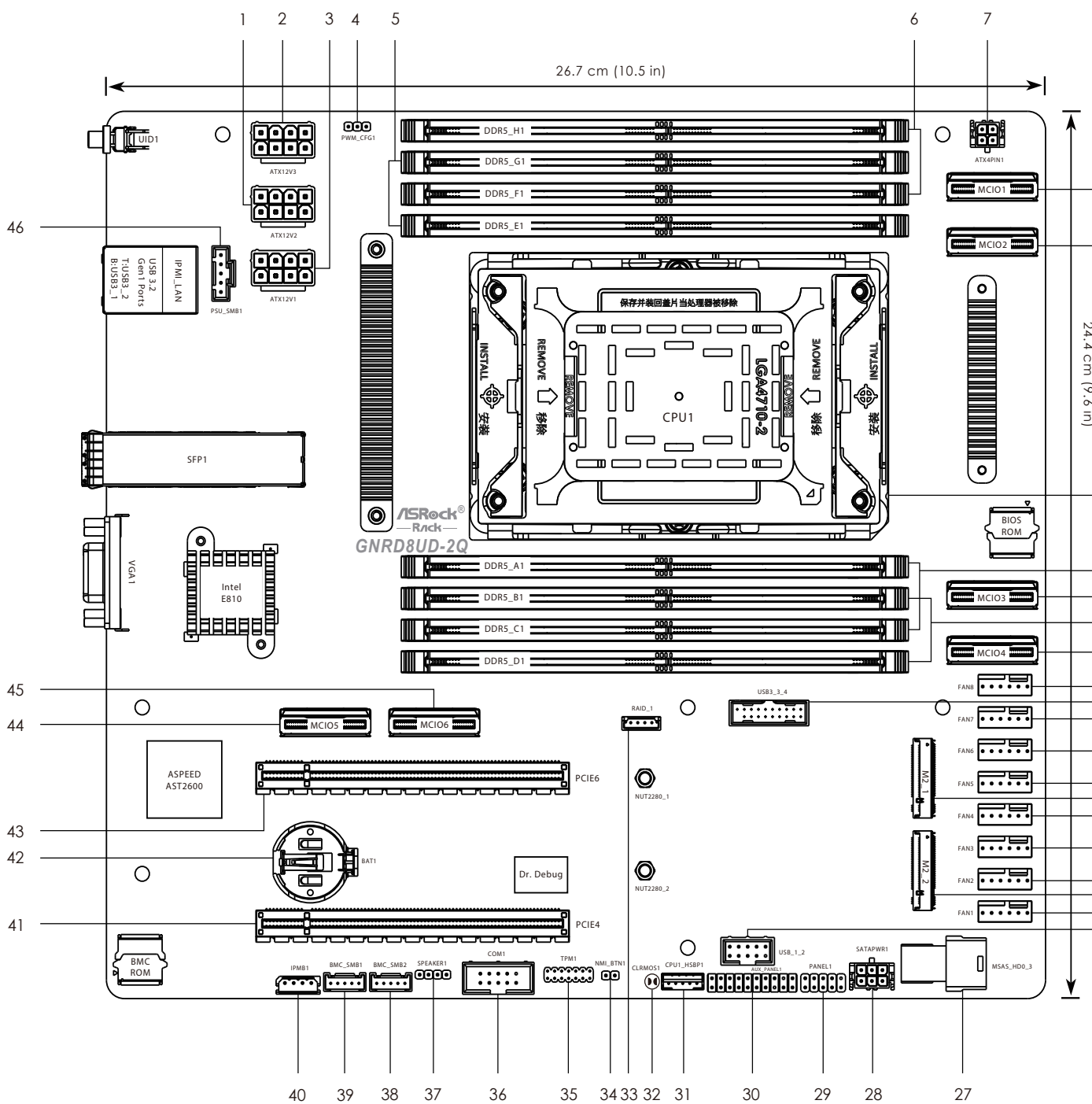
- 1 Insert the server board into the chassis.
- 2 Affix the screws clockwise into the mounting holes in all of the corners of the server board.
Do not over-tighten the screws



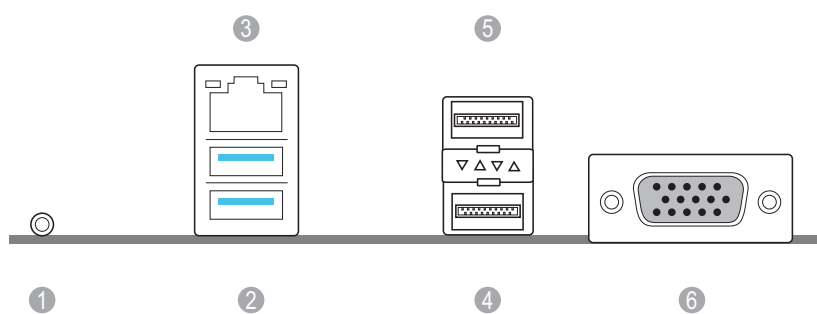
Attention! Before installing this motherboard, be sure to unscrew and remove the standoffs at the marked location, under the motherboard, from the chassis, in order to avoid electrical short circuit and damage to your motherboard.



2 Motherboard Layout

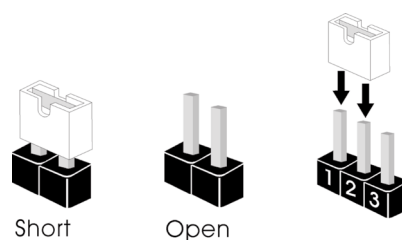


3 I/O Panel



No.	Description	No.	Description
1	UID Switch (UID1)	4	25G SFP28 (SFP1_1)
2	USB 3.2 Gen1 Ports (USB3_1_2)	5	25G SFP28 (SFP1_2)
3	LAN RJ-45 Port (IPMI_LAN)	6	VGA Port (VGA1)

4 Jumper Settings



When the jumper cap is placed on the pins, the jumper is "Short". If no jumper cap is placed on the pins, the jumper is "Open".

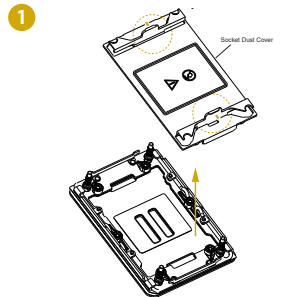
The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when a jumper cap is placed on these 2 pins.

No.	Description
1	ATX 12V Power Connector (ATX12V2)
2	ATX 12V Power Connector (ATX12V3)
3	ATX 12V Power Connector (ATX12V1)
4	PWM Configuration Header (PWM_CFG1)
5	2 DDR5 DIMM Slots (DDR5_E1, DDR5_G1)
6	2 DDR5 DIMM Slots (DDR5_F1, DDR5_H1)
7	Micro-Fit Power Connector (ATX4PIN1)
8	Mini Cool Edge IO Connector (MCIO1)
9	Mini Cool Edge IO Connector (MCIO2)
10	Socket E2 (LGA4710) (CPU1)
11	2 DDR5 DIMM Slots (DDR5_A1, DDR5_C1)
12	Mini Cool Edge IO Connector (MCIO3)
13	2 DDR5 DIMM Slots (DDR5_B1, DDR5_D1)
14	Mini Cool Edge IO Connector (MCIO4)
15	System Fan Connector (FAN8)
16	USB 3.2 Gen1 Header (USB3_3_4)
17	System Fan Connector (FAN7)
18	System Fan Connector (FAN6)
19	System Fan Connector (FAN5)
20	M.2 Socket (M2_1) (Type 2280)
21	System Fan Connector (FAN4)
22	System Fan Connector (FAN3)
23	System Fan Connector (FAN2)
24	M.2 Socket (M2_2) (Type 2280)
25	System Fan Connector (FAN1)
26	USB 2.0 Header (USB_1_2)
27	MiniSAS HD Connector (MSAS_HD0_3)
28	Micro-Fit SATA Power Connector (SATAPWR1)
29	System Panel Header (PANEL1)
30	Auxiliary Panel Header (AUX_PANEL1)
31	Backplane PCI Express Hot-Plug Connector (CPU1_HSBP1)
32	Clear CMOS Pad (CLRMOS1)
33	Virtual RAID On CPU Header (RAID_1)
34	Non Maskable Interrupt Button (NMI_BTN1)
35	SPI TPM Header (TPM1)
36	COM Port Header (COM1)
37	Speaker Header (SPEAKER1)
38	BMC SMBus Header (BMC_SMB2)
39	BMC SMBus Header (BMC_SMB1)
40	Intelligent Platform Management Bus Header (IPMB1)
41	PCI Express 5.0/CXL2.0 x16 Slot (PCIE4)
42	Battery (BAT1)
43	PCI Express 5.0/CXL2.0 x16 Slot (PCIE6)
44	Mini Cool Edge IO Connector (MCIO5)
45	Mini Cool Edge IO Connector (MCIO6)
46	PSU SMBus (PSU_SMB1)

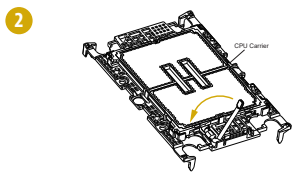
* MCIO5/6 only function with with selected processors

5 Install the Processor and Heatsink

Remove the CPU socket cover and open the socket lever.

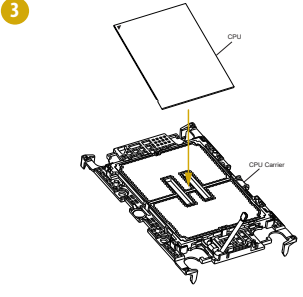


1

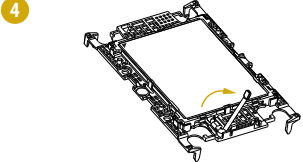


2

Align and install the processor on the carrier and make sure the arrow is located in the correct direction. Close the socket lever.

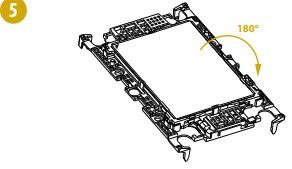


3

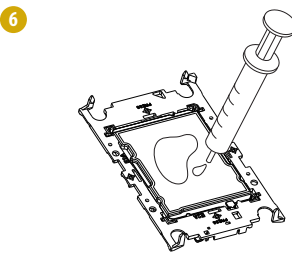


4

Carefully flip the carrier assembly. Apply a thermal paste.

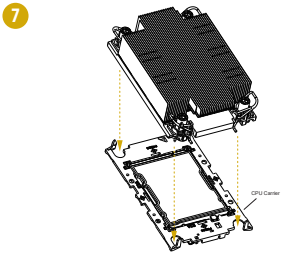


5

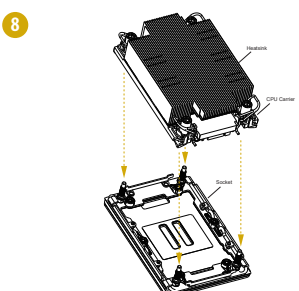


6

Install the heatsink to the CPU carrier. Then install the heatsink and CPU carrier to the socket.

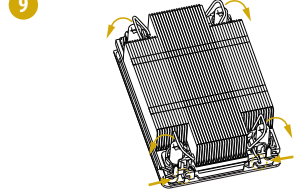


7

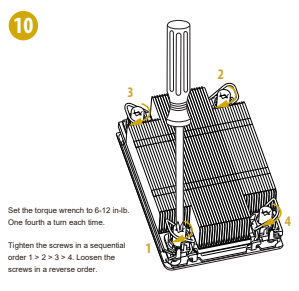


8

Tighten the corner fasteners. Secure the heatstink to the motherboard with a screwdriver.



9



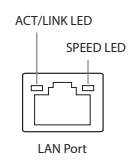
10

Set the torque wrench to 6-12 in-lb. One fourth a turn each time.
Tighten the screws in a sequential order 1 > 2 > 3 > 4. Loosen the screws in a reverse order.

We recommend using the CPU Installation tool to avoid CPU pin-bent problem.

6 LAN Port LED Indications

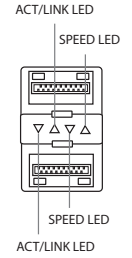
IPMI LAN Port



ACT/LINK LED
SPEED LED
LAN Port

Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection or no link
Blinking Yellow	Data Activity	Orange	100Mbps connection
On	Link	Green	1Gbps connection

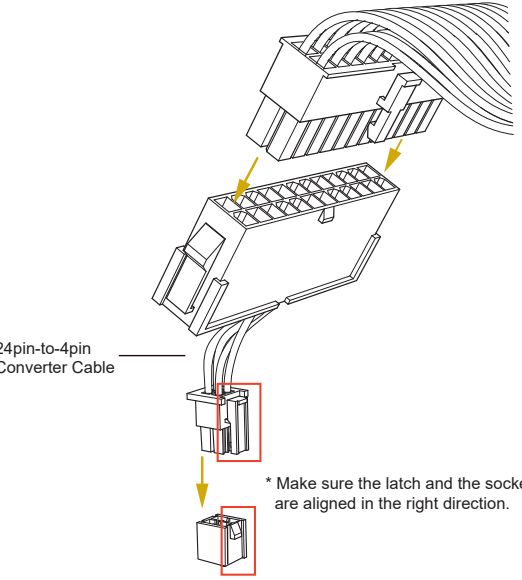
1G LAN Port



ACT/LINK LED
SPEED LED
SPEED LED
ACT/LINK LED

Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	100M/10Mbps connection or no link
Blinking Orang	Data Activity	Orange	10Gbps connection
On	Link	Green	25Gbps connection

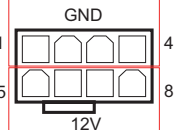
8 Install the Power Cables



24pin-to-4pin Converter Cable

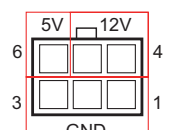
* Make sure the latch and the socket are aligned in the right direction.

ATX12V



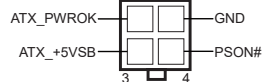
1 4 5 8
GND 12V

SATAPWR



6 4 3 1
5V 12V
GND

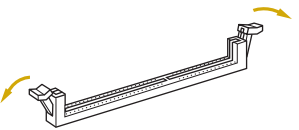
ATX4PIN1



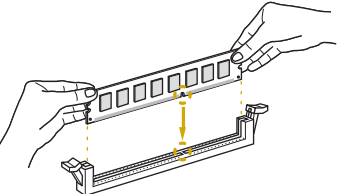
1 2 3 4
ATX_PWROK GND
ATX_+5VSB PSON#

10 Install the Memory

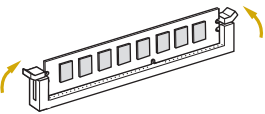
1 Unlock a DIMM slot by pressing the module clips outward.



2 Insert the memory module.

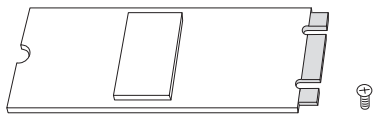


3 Lock the clips.

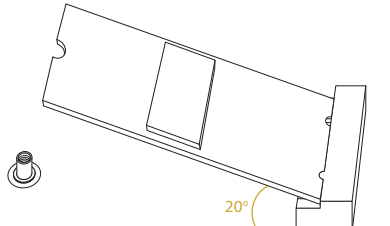


7 Install M.2 SSD Module

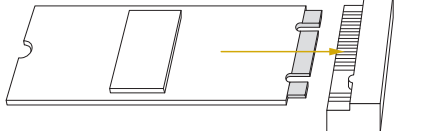
1 Prepare a M.2 SSD module and the screw.



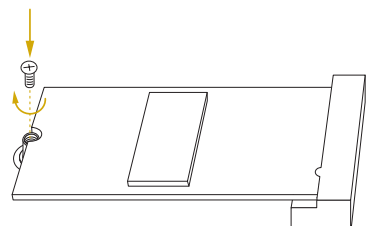
2 Align and gently insert the M.2 SSD module into the M.2 slot. Please be aware that the M.2 SSD module only fits in one orientation.



20°

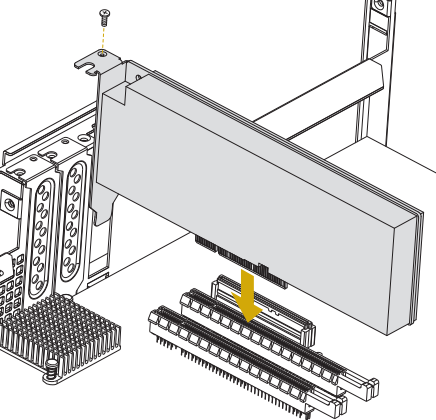


3 Tighten the screw with a screwdriver to secure the module into place. Please do not overtighten the screw as this might damage the module.

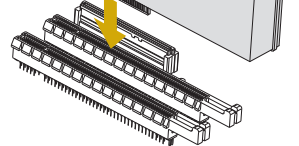


9 Install the PCIE Card

1 Remove the bracket facing the slot that you intend to use. Keep the screw for later use.



2 Align the card connector with the slot and press firmly until the card is completely seated on the slot.



3 Fasten the card to the chassis with the screw.

