P/N: 15G065297000AK V1.0

Quick Installation Guide

GENOAD12M3-2Q | GENOAD12M3/T

ASRock Rack

www.asrockrack.com GENOAD12M3-2Q GENOAD12M3/T

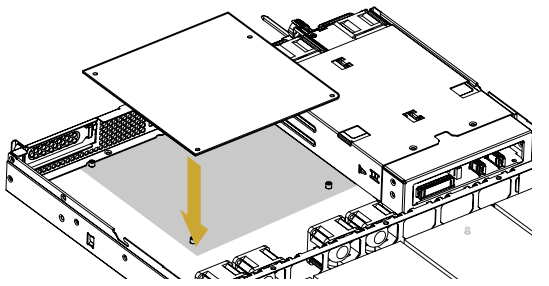
The server board User's Manual is available for download from the ASRock Rack's official website at http://www.asrockrack.com.

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

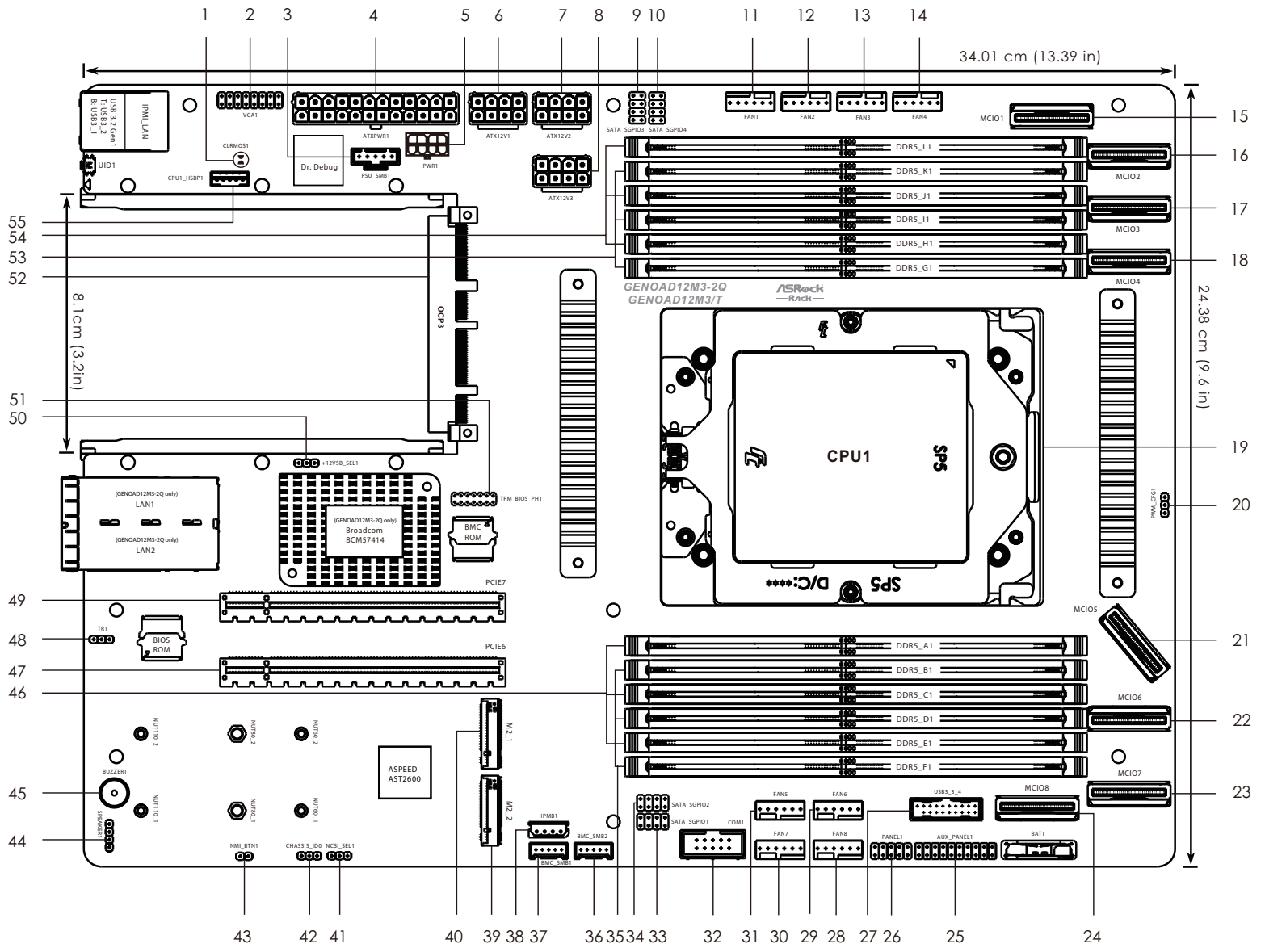
1. Unplug the power cord from the wall socket before touching any components.
2. To avoid damaging the server board's components due to static electricity, NEVER place the server board directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before 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

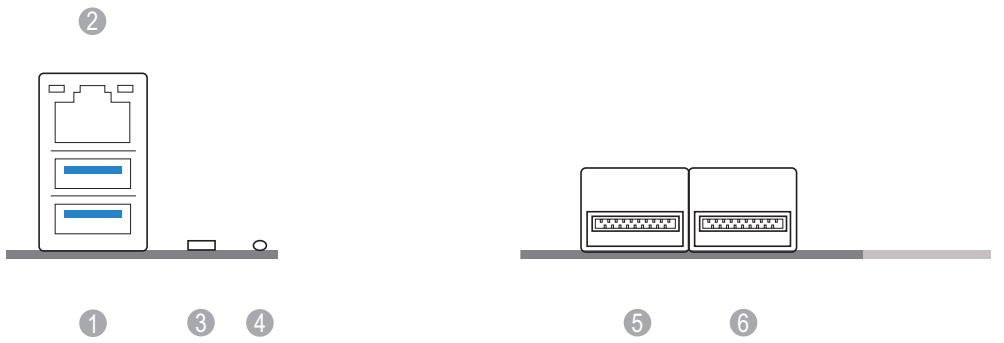


2 Motherboard Layout



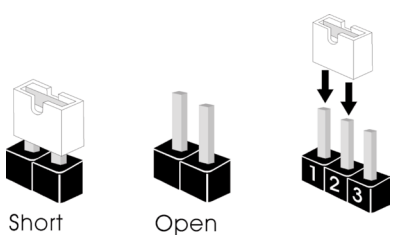
No.	Description
19	AMD Socket SP5 (SM-LGA-6096) (CPU1)
20	PWM Configuration Header (PWM_CFG1)
21	Mini Cool Edge IO Connector (MCIO5)
22	Mini Cool Edge IO Connector (MCIO6)
23	Mini Cool Edge IO Connector (MCIO7)
24	Mini Cool Edge IO Connector (MCIO8)
25	Auxiliary Panel Header (AUX_PANEL1)
26	System Panel Header (PANEL1)
27	USB 3.2 Gen1 Header (USB3_3_4)
28	System Fan Connector (FAN8)
29	System Fan Connector (FAN6)
30	System Fan Connector (FAN7)
31	System Fan Connector (FAN5)
32	COM Port Header (COM1)
33	SATA SGPIO Connector (SATA_SGPIO1)
34	SATA SGPIO Connector (SATA_SGPIO2)
35	3 x 288-pin DDR5 DIMM Slots (DDR5_B1, DDR5_D1, DDR5_F1)
36	MC SMBus Header (BMC_SMB2)
37	MC SMBus Header (BMC_SMB1)
38	Intelligent Platform Management Bus Header (IPMB1)
39	M.2 Socket (M2_2) (Type 2260/2280/22110)
40	M.2 Socket (M2_1) (Type 2260/2280/22110)
41	NCSI Mode Jumper (NCSI_SEL1)
42	Chassis ID Jumper (CHASSIS_ID0)
43	Non Maskable Interrupt Button (NMI_BTN1)
44	Speaker Header (SPEAKER1)
45	Buzzer (BUZZER1)
46	3 x 288-pin DDR5 DIMM Slots (DDR5_A1, DDR5_C1, DDR5_E1)
47	PCI Express 5.0 x16 Slot (PCIE6)
48	Thermal Sensor Header (TR1)
49	PCI Express 5.0 x16 Slot (PCIE7)
50	OCP3 +12VSB Power Jumper (+12VSB_SEL1)
51	SPI TPM Header (TPM_BIOS_PH1)
52	OCP NIC 3.0 Slot (PCIe5.0 x16) (OCP3)
53	3 x 288-pin DDR5 DIMM Slots (DDR5_G1, DDR5_I1, DDR5_K1)
54	3 x 288-pin DDR5 DIMM Slots (DDR5_H1, DDR5_J1, DDR5_L1)*
55	Backplane PCI Express Hot-Plug Connector (CPU1_HSBP1)

3 I/O Panel



No.	Description	No.	Description
1	USB 3.2 Gen1 Ports (USB3_1_2)	4	UID LED (UID_LED1)
2	IPMI LAN Header (IPMI_LAN)	5	25G SFP28 (Fiber) (LAN1, Shared NIC) *(GENOAD12M3-2Q only)*
3	UID Switch (UID1)	6	25G SFP28 (Fiber) (LAN2) *(GENOAD12M3-2Q only)*

4 Jumper Cap On/Off

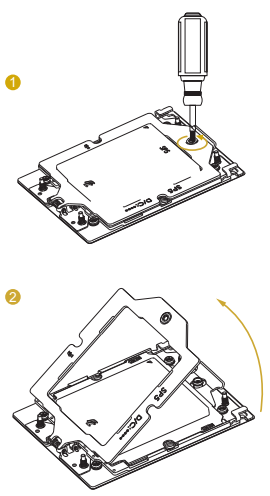


When the jumper cap is placed on the pins, the jumper is "Short". If no jumper cap is placed on the pins, the jumper is "Open".

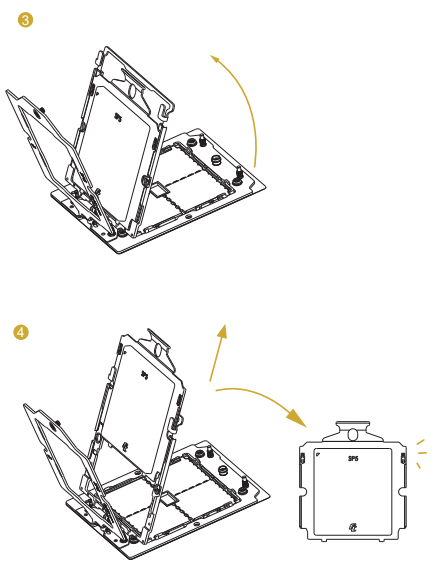
The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when a jumper cap is placed on these 2 pins.

5 Install the Processor and Heatsink

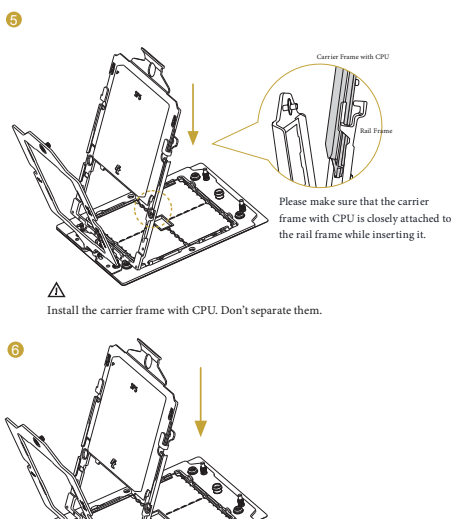
Locate the screw on the CPU socket and unscrew it. Open the first retention cover.



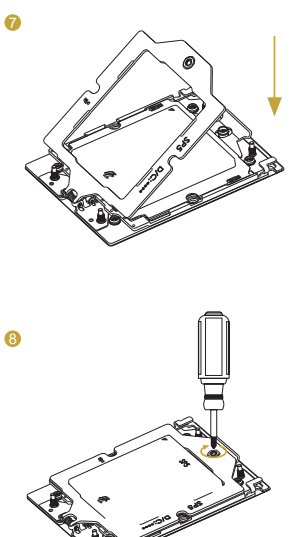
Open the second bracket. Take out the internal plastic cover.



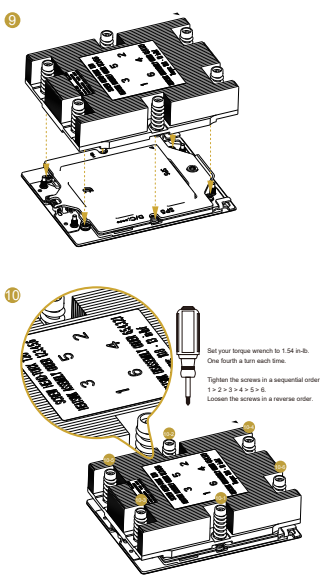
Install CPU along with the carrier frame, do not separate them. Please make sure the carrier frame with CPU is closely attached to the rail frame while inserting it.



Close the bracket that holds the CPU. Close the retention cover. Fasten the screw.



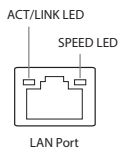
Install the Heatsink and tighten the screws in a sequential order 1->2->3->4->5->6.



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

6 LAN Port LED Indications

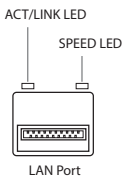
IPMI LAN Port



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

SFP LAN Port

(*GENOAD12M3-2Q only*)



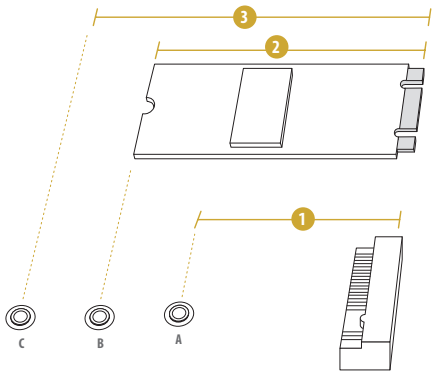
Activity / Link LED		Speed LED	
Status	**Description**	**Status**	**Description**
Off	No Link	Off	1G/100Mbps connection or no link
Blinking Yellow	Data Activity	Orange	10Gbps connection
On	Link	Green	25Gbps connection

7 M.2 SSD Module Installation

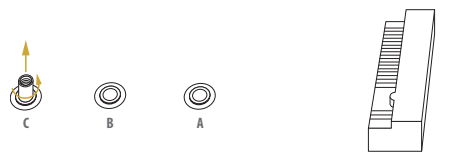
1 Find the corresponding nut location to be used.

The diagrams are for reference only. The actual supported M.2 type varies per motherboard.

No.	1	2	3
Nut Location	A	B	C
PCB Length	6cm	8cm	11cm
Module Type	Type 2260	Type 2280	Type 22110

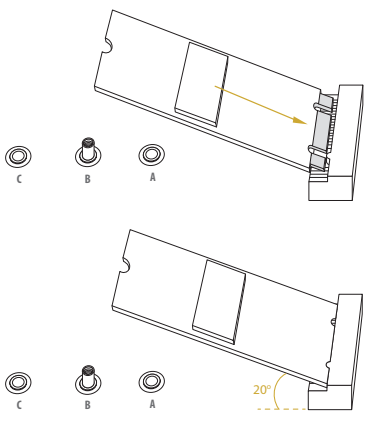


2 Move the standoff based on the module type and length.

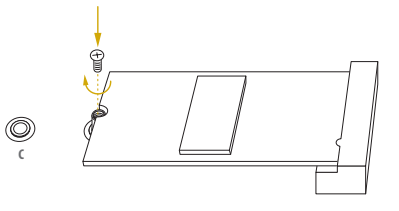


3 Peel off the yellow protective film on the nut. Hand tighten the standoff into the desired location.

4 Gently insert the M.2 module into the slot.



5 Tighten the screw with a screwdriver to secure the module into place. Please do not overtighten the screw.

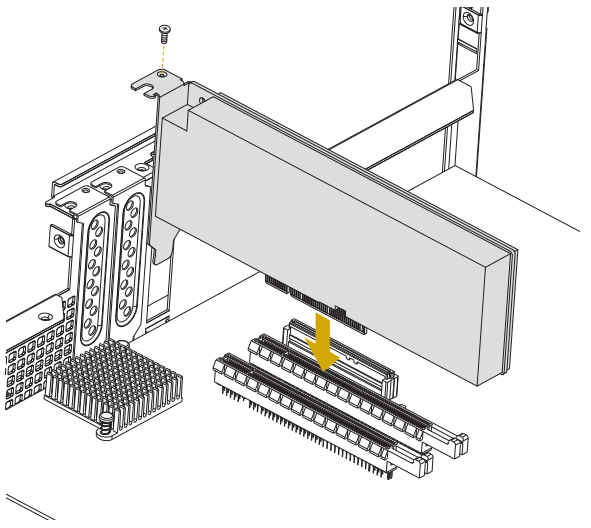


8 Install the PCIE Card

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.

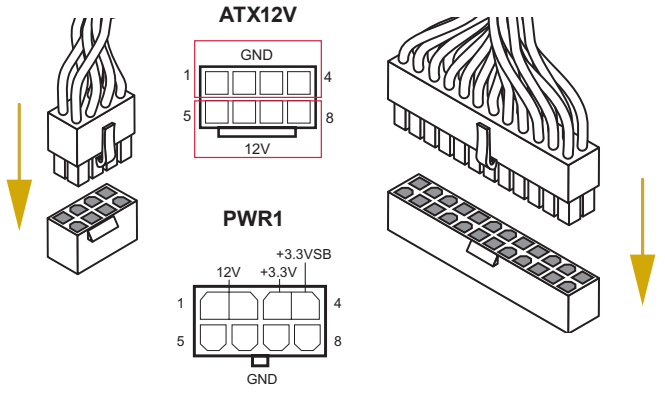
3 Fasten the card to the chassis with the screw.



**Images shown are for illustrative purposes only and may differ depending on model.*

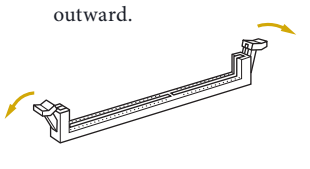
Slot	Generation	Mechanical	Electrical	Source
PCIE6	5.0	x16	x16	CPU1
PCIE7	5.0	x16	x16	CPU1

9 Install the Power Cables

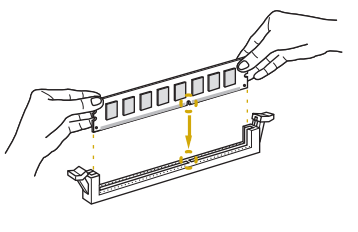
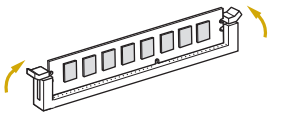


10 Install the Memory

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



2 Insert the memory module.



3 Lock the clips.