P/N: 15G065288001AK V2.0

*Quick Installation Guide*

# *GENOAD8X-2T/BCM*

www.asrockrack.com

GENOAD8X-2T/BCM

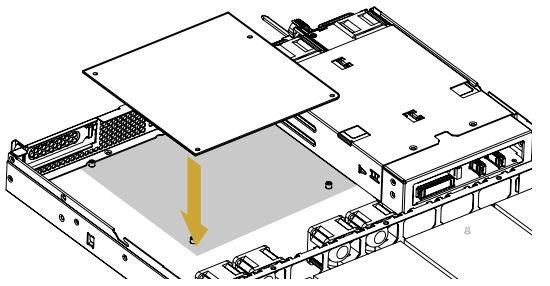
The server board User's Manual is available for download from the ASRock Rack's official website at http://www.asrockrack.com.

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

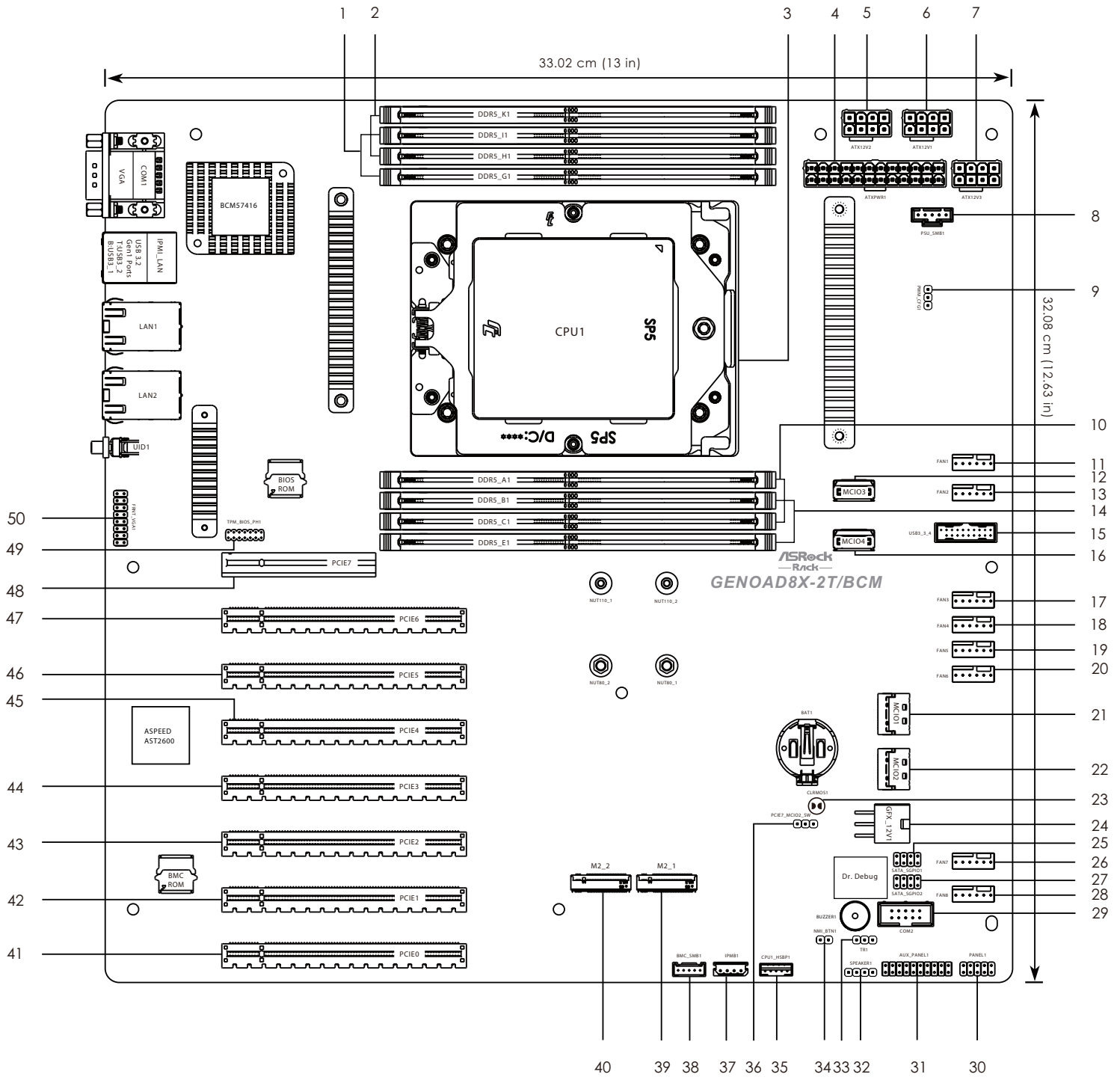
1. Unplug the power cord from the wall socket before touching any components.
2. To avoid damaging the server board's components due to static electricity, NEVER place your server board directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle the components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever you 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

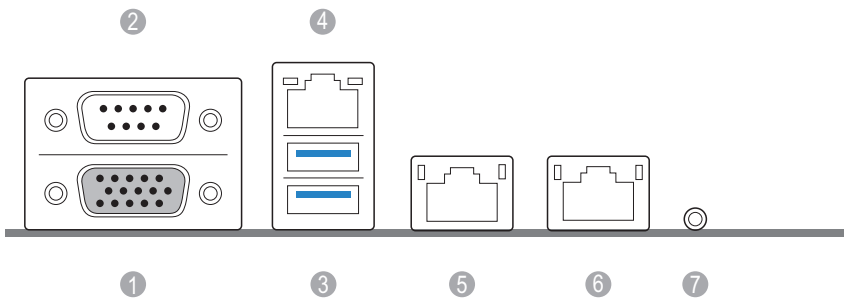


## 2 Motherboard Layout



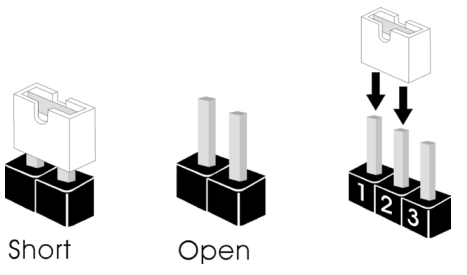

| No. | Description |
|---|---|
| 1 | 2 x 288-pin DDR5 DIMM Slots (DDR5_G1, DDR5_I1) |
| 2 | 2 x 288-pin DDR5 DIMM Slots (DDR5_H1, DDR5_K1) |
| 3 | AMD Socket SP5 (SM-LGA-6096) (CPU1) |
| 4 | ATX Power Connector (ATXPWR1) |
| 5 | ATX 12V Power Connector (ATX12V2) |
| 6 | ATX 12V Power Connector (ATX12V1) |
| 7 | ATX 12V Power Connector (ATX12V3) |
| 8 | PSU SMBus Header (PSU_SMB1) |
| 9 | PWM Configuration Header (PWM_CFG1) |
| 10 | 2 x 288-pin DDR5 DIMM Slots (DDR5_A1, DDR5_C1) |
| 11 | System Fan Connector (FAN1) |
| 12 | Mini Cool Edge IO x4 Connector (MCIO3) |
| 13 | System Fan Connector (FAN2) |
| 14 | 2 x 288-pin DDR5 DIMM Slots (DDR5_B1, DDR5_E1) |
| 15 | USB 3.2 Gen1 Header (USB3_3_4) |
| 16 | Mini Cool Edge IO x4 Connector (MCIO4) |
| 17 | System Fan Connector (FAN3) |
| 18 | System Fan Connector (FAN4) |
| 19 | System Fan Connector (FAN5) |
| 20 | System Fan Connector (FAN6) |
| 21 | Mini Cool Edge IO x4 Connector (MCIO1) |
| 22 | Mini Cool Edge IO x4 Connector (MCIO2) |
| 23 | Clear CMOS Pad (CLRMOS1) |
| 24 | Graphics 12V Power Connector (GFX_12V1) |
| 25 | SATA SGPIO Connector (SATA_SGPIO1) |
| 26 | System Fan Connector (FAN7) |
| 27 | SATA SGPIO Connector (SATA_SGPIO2) |
| 28 | System Fan Connector (FAN8) |
| 29 | COM Port Header (COM2) |
| 30 | System Panel Header (PANEL1) |
| 31 | Auxiliary Panel Header (AUX_PANEL1) |
| 32 | Speaker Header (SPEAKER1) |
| 33 | Thermal Sensor Header (TR1) |
| 34 | Non Maskable Interrupt Button (NMI_BTN1) |
| 35 | Backplane PCI Express Hot-Plug Connector (CPU1_HSBP1) |
| 36 | PCIE Signal Source Selection Jumper (PCIE7_MCIO2_SW) |
| 37 | Intelligent Platform Management Bus Header (IPMB1) |
| 38 | BMC SMBus Header (BMC_SMB1) |
| 39 | M.2 Socket (M2_1) (Type 2280/22110) |
| 40 | M.2 Socket (M2_2) (Type 2280/22110) |
| 41 | PCI Express 5.0 x16 Slot (PCIE0) |
| 42 | PCI Express 5.0 x16 Slot (PCIE1) |
| 43 | PCI Express 5.0 x16 Slot (PCIE2) |
| 44 | PCI Express 5.0 x16 Slot (PCIE3) |
| 45 | PCI Express 5.0 x16 Slot (PCIE4) |
| 46 | PCI Express 5.0 x16 Slot (PCIE5) |
| 47 | PCI Express 5.0 x16 Slot (PCIE6) |
| 48 | PCI Express 5.0 x8 Slot (PCIE7) |
| 49 | SPI TPM Header (TPM_BIOS_PH1) |
| 50 | Front VGA Header (FRNT_VGA1) |

## 3 I/O Panel



| No. | Description | No. | Description |
|---|---|---|---|
| 1 | VGA Port (VGA) | 5 | 10G LAN RJ-45 Port (LAN1)** |
| 2 | Serial Port (COM1) | 6 | 10G LAN RJ-45 Port (LAN2)** |
| 3 | USB 3.2 Gen1 Ports (USB3_1_2) | 7 | UID Switch (UID1) |
| 4 | IPMI LAN Header (IPMI_LAN1)* | | |

## 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.

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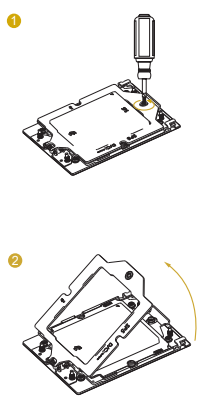
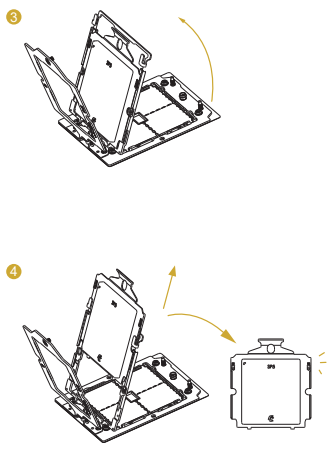
## 5 Install the Processor and Heatsink

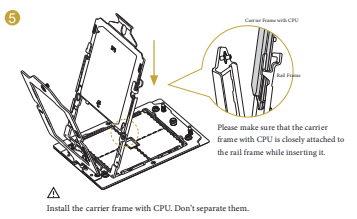
Locate the screw on the CPU socket and unscrew it. Open the first retention cover.



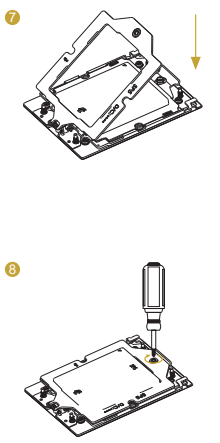
Open the second bracket. Take out the internal plastic cover.



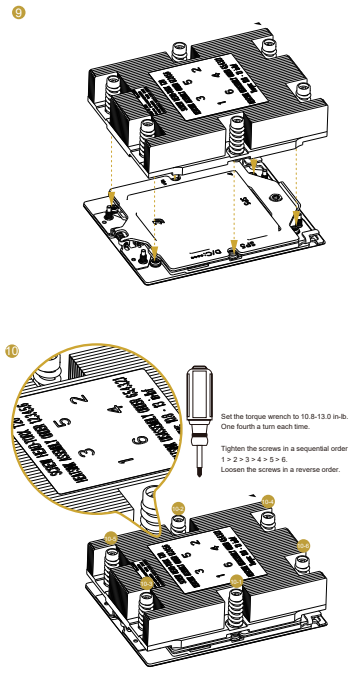
Install CPU along with the carrier frame, do not separate them. Please make sure the carrier frame with CPU is closely attached to the rail frame while inserting it.




Close the bracket that holds the CPU. Close the retention cover and fasten the screw .



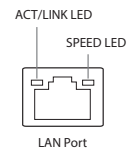
Install the heatsink to the CPU carrier. Secure the heastink to the CPU carrier with a screwdriver.




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

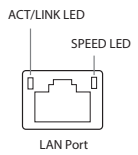
## 6 LAN Port LED Indications

**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 |

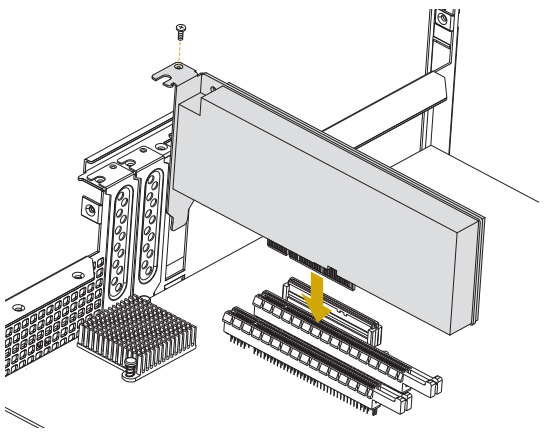
**10G LAN Port**




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

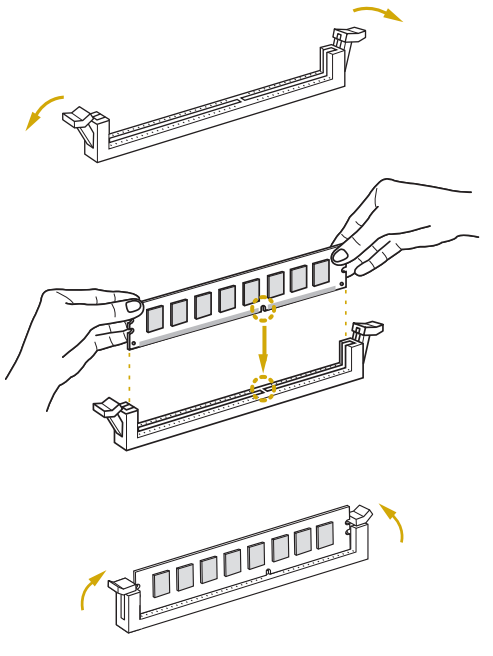
## 8 Install the PCIE Card

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.



## 9 Install the Memory

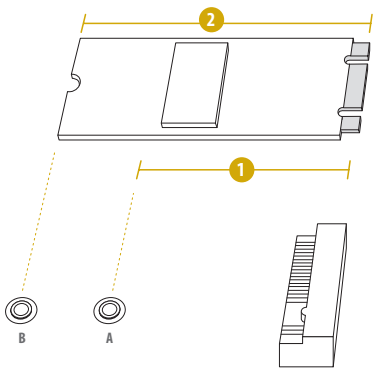
1. Unlock a DIMM slot by pressing the module clips outward.
2. Insert the memory module.
3. Lock the clips.



## 7 M.2 SSD Module Installation

1. Find the corresponding nut location to be used.

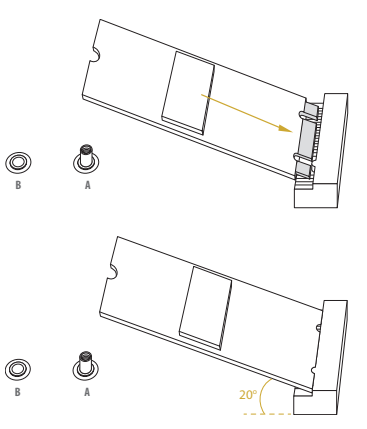
| No. | 1 | 2 |
|---|---|---|
| Nut Location | A | B |
| PCB Length | 8cm | 11cm |
| Module Type | Type2280 | Type 22110 |

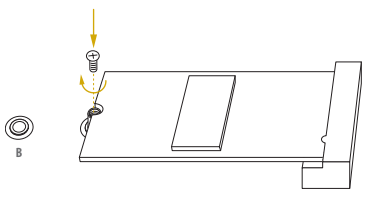



2. Move the standoff based on the module type and length.

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.