



P/N: 15G065198000AK V1.0

Quick Installation Guide

ROME2D32LM3



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.

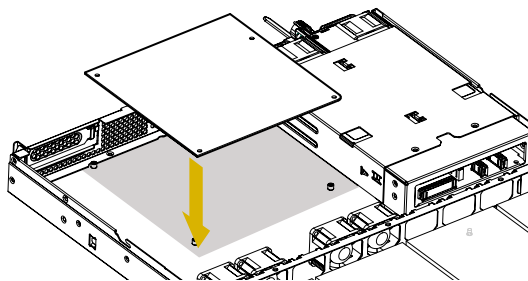
1. Unplug the power cord from the wall socket before touching any components.
2. To avoid damaging the server board's components due to static electricity, NEVER place your server board directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before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

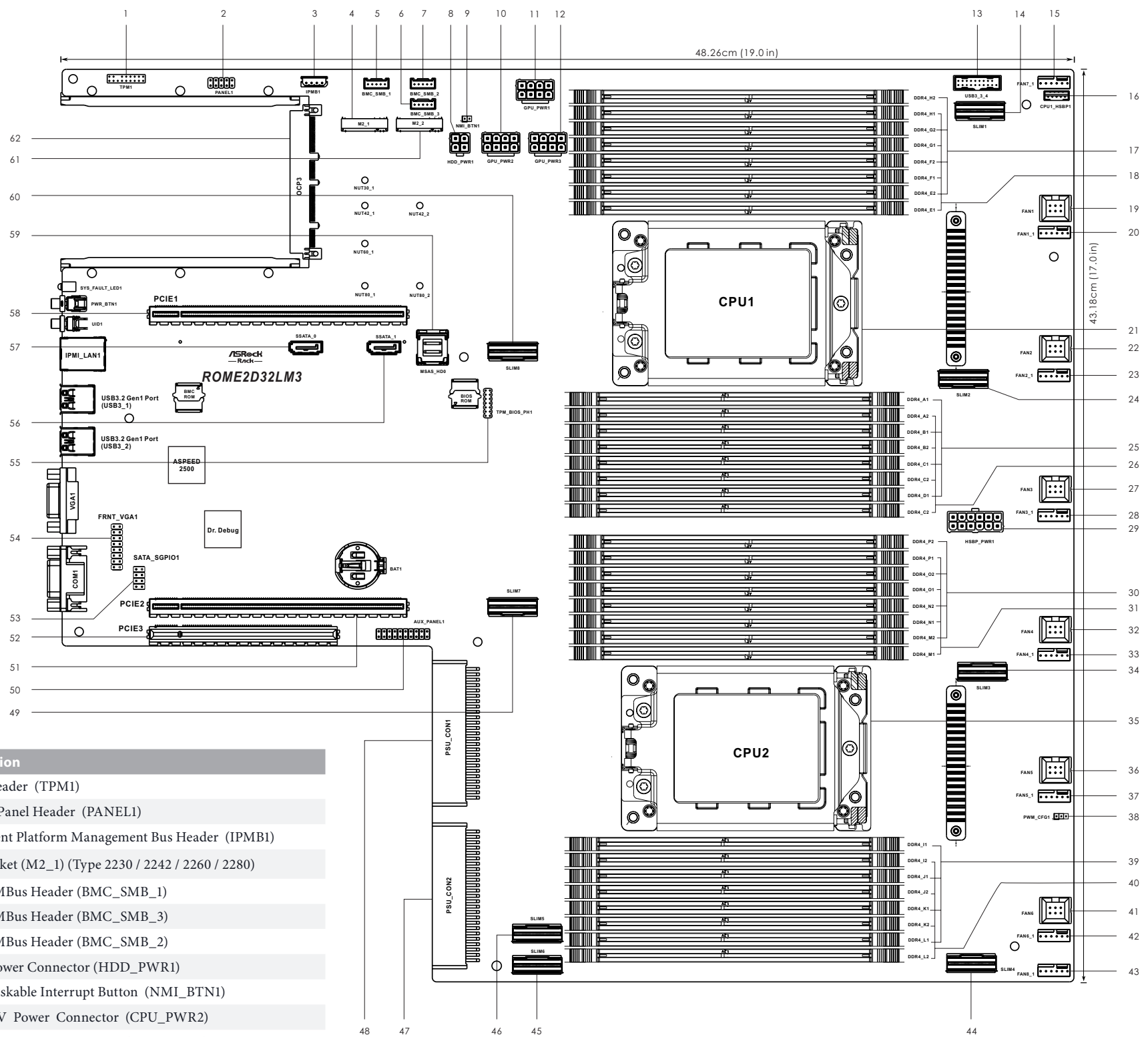
- 1 Insert the server board into the chassis.

- 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 | TPM Header (TPM1) |
| 2 | System Panel Header (PANEL1) |
| 3 | Intelligent Platform Management Bus Header (IPMB1) |
| 4 | M.2 Socket (M2_1) (Type 2230 / 2242 / 2260 / 2280) |
| 5 | BMC SMBus Header (BMC_SMB_1) |
| 6 | BMC SMBus Header (BMC_SMB_3) |
| 7 | BMC SMBus Header (BMC_SMB_2) |
| 8 | HDD Power Connector (HDD_PWR1) |
| 9 | Non Maskable Interrupt Button (NMI_BTN1) |
| 10 | ATX 12V Power Connector (CPU_PWR2) |
| 11 | ATX 12V Power Connector (CPU_PWR1) |
| 12 | ATX 12V Power Connector (CPU_PWR3) |
| 13 | USB 3.2 Gen1 Header (USB3_3_4) |
| 14 | Slimline NVMe Connector (SLIM1) |
| 15 | CPU Fan Connector (FAN7_1) |
| 16 | Backplane PCI Express Hot-Plug Connector (CPU1_HSBP1) |
| 17 | 4 x 288-pin DDR4 DIMM Slots (DDR4_E2, DDR4_F2, DDR4_G2, DDR4_H2) |
| 18 | 4 x 288-pin DDR4 DIMM Slots (DDR4_E1, DDR4_F1, DDR4_G1, DDR4_H1) |
| 19 | System Fan Connector (FAN1) |
| 20 | CPU Fan Connector (FAN1_1) |
| 21 | AMD Socket SP3 (CPU1) |
| 22 | System Fan Connector (FAN2) |
| 23 | CPU Fan Connector (FAN2_1) |
| 24 | Slimline NVMe Connector (SLIM2) |
| 25 | 4 x 288-pin DDR4 DIMM Slots (DDR4_E2, DDR4_F2, DDR4_G2, DDR4_H2) |
| 26 | 4 x 288-pin DDR4 DIMM Slots (DDR4_E1, DDR4_F1, DDR4_G1, DDR4_H1) |

No. Description

- | | |
|----|--|
| 27 | System Fan Connector (FAN3) |
| 28 | CPU Fan Connector (FAN3_1) |
| 29 | Backplane Power Connector (HSBP_PWR1) |
| 30 | 2 x 288-pin DDR4 DIMM Slots (DDR4_F1, DDR4_H1) |
| 31 | 2 x 288-pin DDR4 DIMM Slots (DDR4_F1, DDR4_H1) |
| 32 | System Fan Connector (FAN4) |
| 33 | CPU Fan Connector (FAN4_1) |
| 34 | AMD Socket SP3 (CPU2) |
| 35 | Slimline NVMe Connector (SLIM3) |
| 36 | System Fan Connector (FAN5) |
| 37 | CPU Fan Connector (FAN5_1) |
| 38 | PWM Configuration Header (PWM_CFG1) |
| 39 | 2 x 288-pin DDR4 DIMM Slot (DDR4_I1, DDR4_K1) |
| 40 | 2 x 288-pin DDR4 DIMM Slot (DDR4_I1, DDR4_K1) |
| 41 | System Fan Connector (FAN6) |
| 42 | CPU Fan Connector (FAN6_1) |
| 43 | CPU Fan Connector (FAN8_1) |
| 44 | Slimline NVMe Connector (SLIM4) |

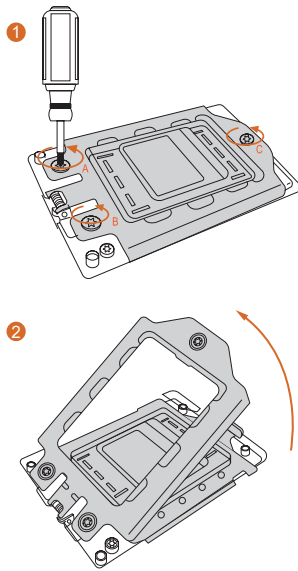
No. Description

- | | |
|----|--|
| 45 | Slimline NVMe Connector (SLIM6) |
| 46 | Slimline NVMe Connector (SLIM5) |
| 47 | PSU Connector (PSU_CON2) |
| 48 | PSU Connector (PSU_CON1) |
| 49 | Slimline NVMe Connector (SLIM7) |
| 50 | Auxiliary Panel Header (AUX_PANEL1) |
| 51 | PCI Express 4.0 Slot (PCIE2) |
| 52 | PCI Express 4.0 Slot (PCIE3) |
| 53 | SATA SGPIO Connector (SATA_SGPIO1) |
| 54 | Front VGA Header (FRNT_VGA1) |
| 55 | TPM-SPI Header (TPM_BIOS_PH1) |
| 56 | SATA3 Connector (SSATA_1) |
| 57 | SATA3 Connector (SSATA_0) |
| 58 | PCI Express 4.0 Slot (PCIE1) |
| 59 | MiniSAS HD Connector (MSAS_HD0) |
| 60 | SlimSATA x8 Connector (SLIM8) |
| 61 | M.2 Socket (M2_2) (Type 2242 / 2280) |
| 62 | OC 3.0 Gen4 x16 Mezzanine Card Slot (OCP3) |

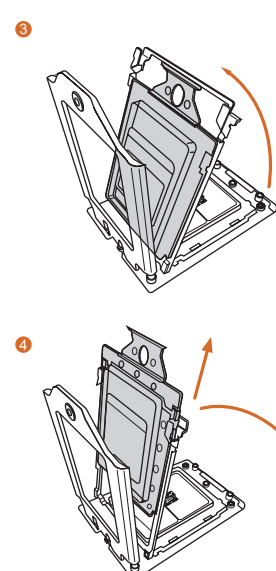


3 Install the Processor and Heatsink

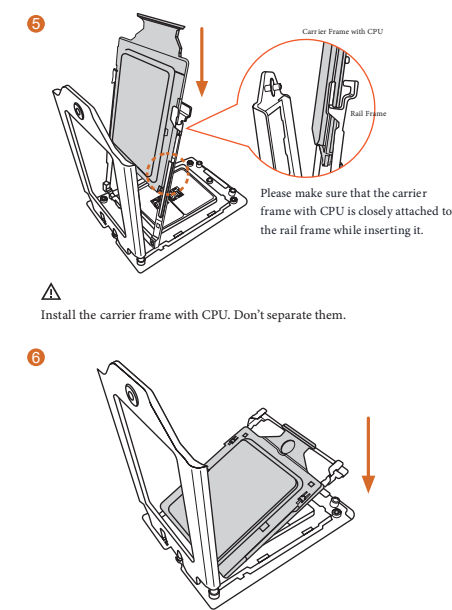
Locate the three torx screws on the CPU socket and unscrew them according to the order A→B→C. Open the first retention cover.



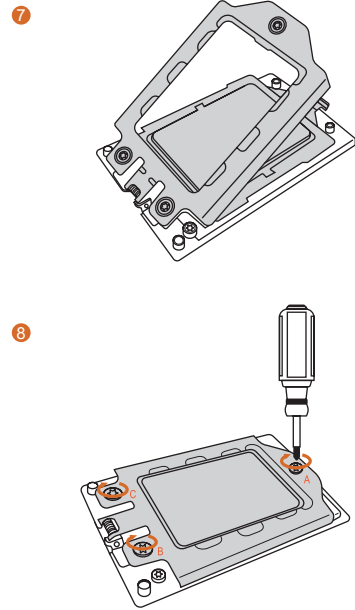
Open the second bracket. Take out the internal plastic cover.



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.



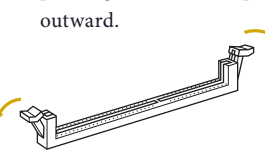
Close the bracket that holds the CPU. Close the retention cover. Fasten the torx screw according to the order A→B→C.



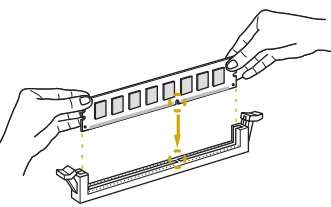
We recommend using the CPU Installation tool to avoid CPU pin-bent problem.

4 Install the Memory

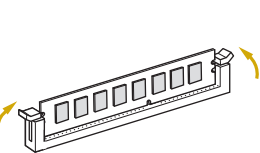
1 Unlock a DIMM slot by pressing the module clips outward.



2 Insert the memory module.



3 Lock the clips.



6 M.2_SSD (NGFF) Module Installation

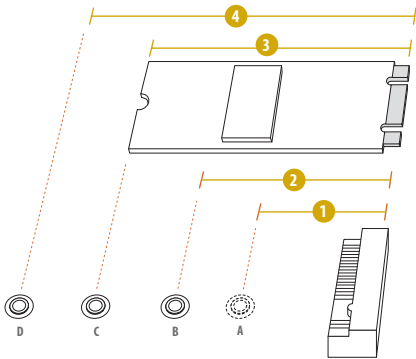
1 Find the corresponding nut location to be used.

M2_1:

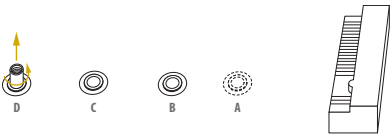
No.	1	2	3	4
Nut Location	A	B	C	D
PCB Length	3cm	4.2cm	6cm	8cm
Module Type	Type 2230	Type 2242	Type 2260	Type 2280

M2_2:

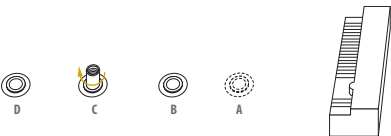
No.	1	2
Nut Location	A	B
PCB Length	4.2cm	8cm
Module Type	Type 2242	Type 2280



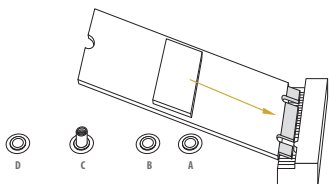
2 Move the standoff based on the module type and length.



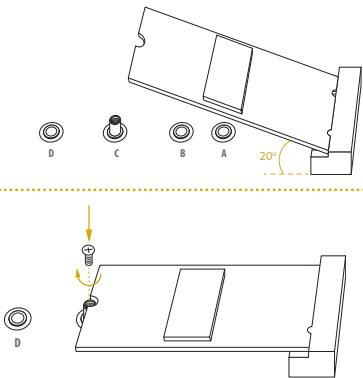
3 Peel off the yellow protective film on the nut. Hand tighten the standoff into the desired location.



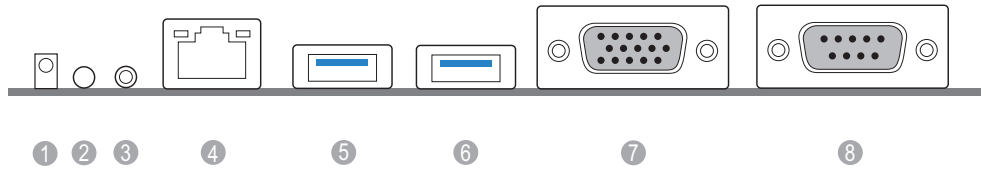
4 Align and gently insert the M.2 module into the slot.



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



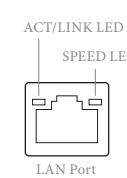
5 I/O Panel



No.	Description	No.	Description
1	System Fault LED (SYS_FAULT_LED1)	5	USB 3.2 Gen1 Port (USB3_1)
2	Power Switch (PWR_BTN1)	6	USB 3.2 Gen1 Port (USB3_2)
3	UID Switch (UID1)	7	VGA Port (VGA1)
4	LAN RJ-45 Port (IPMI_LAN)	8	Serial Port (COM1)

7 LAN Port LED Indications

IPMI LAN Port



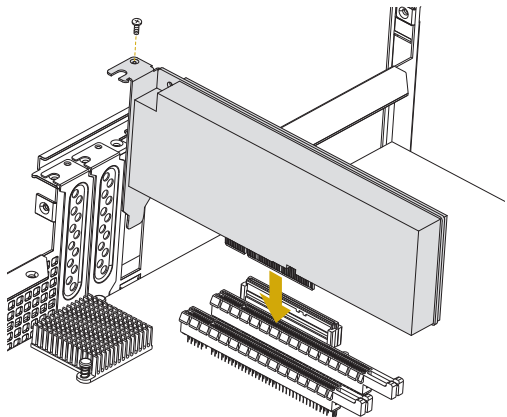
Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10M bps connection or no link
Blinking Yellow	Data Activity	Off	100M bps connection
On	Link	Green	1G bps connection

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.

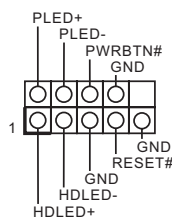


*Images shown are for illustrative purposes only and may differ depending on model.

Slot	Generation	Mechanical	Electrical	Source
PCIE3	4.0	x16	x16	CPU2
PCIE2	4.0	x24	x24	CPU2
PCIE1	4.0	x24	x24	CPU1

9 Panel Headers

System Panel



Auxiliary Panel

