P/N: 15G065249000AK V1.0

Quick Installation Guide

ROME2D16-2T | ROME2D16-2L+ | ROME2D16-NL | ROME2D16-2T/BCM

www.asrockrack.com

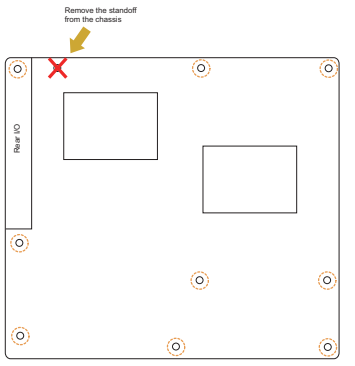
ROME2D16-2T ROME2D16-2L+ ROME2D16-NL ROME2D16-2T/BCM

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.

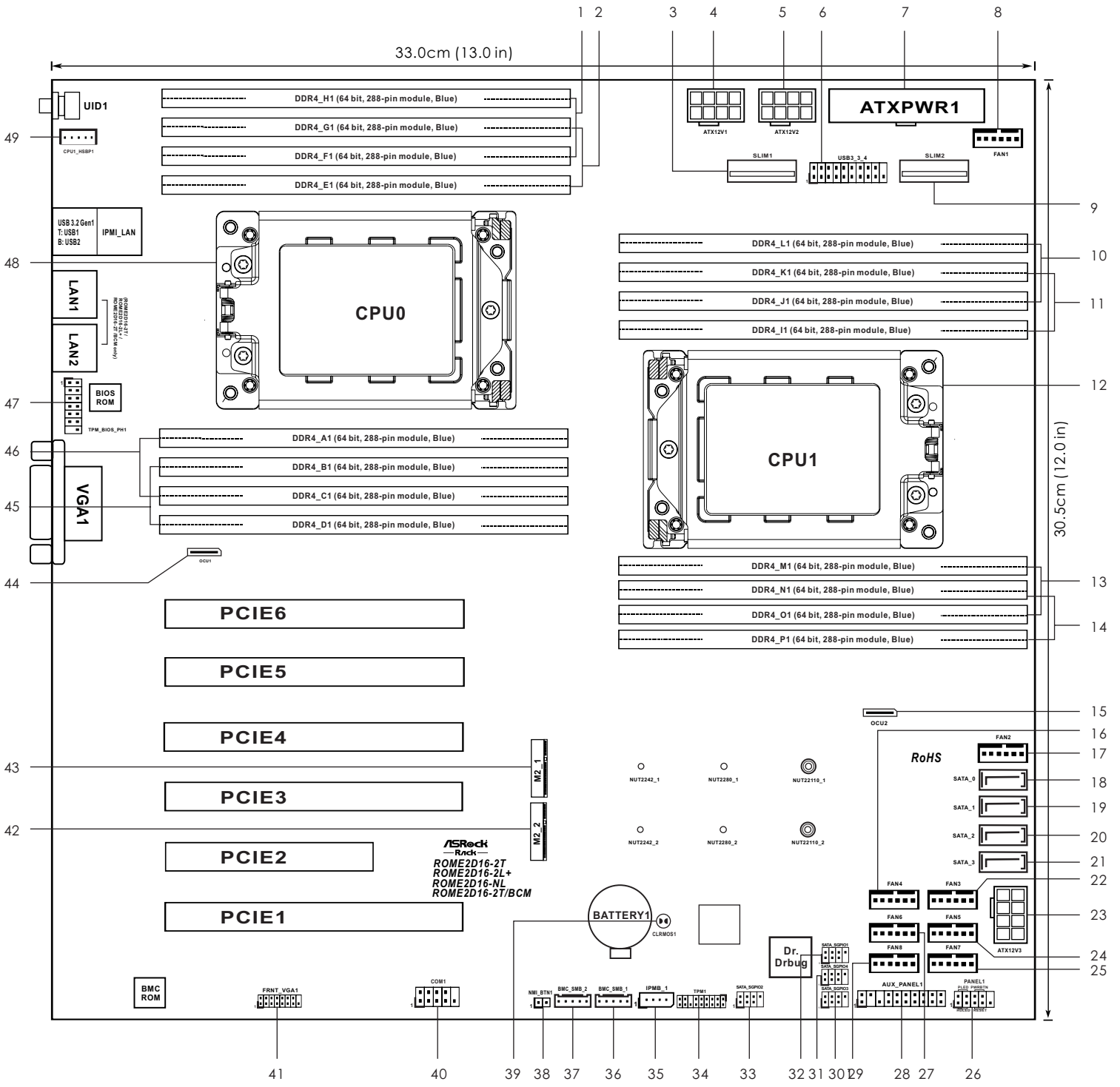
1 Install the Server Board



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

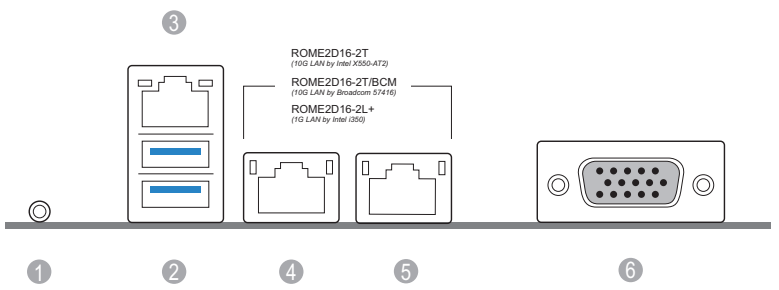
Attention! Before installing this motherboard, be sure to unscrew and remove the standoff at the marked location, under the motherboard, from the chassis, in order to avoid electrical short circuit and damage to your motherboard.

2 Motherboard Layout



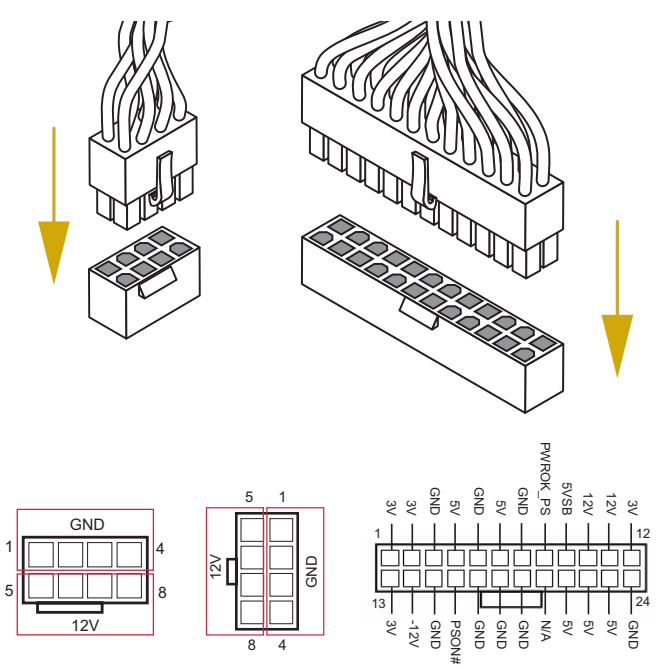
1	2 x 288-pin DDR4 DIMM Slots (DDR4_F1, DDR4_H1)
2	2 x 288-pin DDR4 DIMM Slot (DDR4_E1, DDR4_G1)
3	SlimSAS Connector (SLIM1)
4	ATX 12V Power Connector (ATX12V1)
5	ATX 12V Power Connector (ATX12V2)
6	USB 3.2 Gen1 Header (USB3_3_4)
7	ATX Power Connector (ATXPWR1)
8	System Fan Connector (FAN1)
9	SlimSAS Connector (SLIM2)
10	2 x 288-pin DDR4 DIMM Slots (DDR4_J1, DDR4_L1)
11	2 x 288-pin DDR4 DIMM Slot (DDR4_I1, DDR4_K1)
12	AMD Socket SP3 (CPU1)
13	2 x 288-pin DDR4 DIMM Slots (DDR4_M1, DDR4_O1)
14	2 x 288-pin DDR4 DIMM Slot (DDR4_N1, DDR4_P1)
15	OCuLink x4 Connector (OCU2)
16	System Fan Connector (FAN4)
17	System Fan Connector (FAN2)
18	SATA3 Connector (SATA_0)
19	SATA3 Connector (SATA_1)
20	SATA3 Connector (SATA_2)
21	SATA3 Connector (SATA_3)
22	System Fan Connector (FAN3)
23	ATX 12V Power Connector (ATX12V3)
24	System Fan Connector (FAN5)
25	System Fan Connector (FAN7)
26	System Panel Header (PANEL1)
27	System Fan Connector (FAN6)
28	Auxiliary Panel Header (AUX_PANEL1)
29	System Fan Connector (FAN8)
30	SATA SGPIO Connector (SATA_SGPIO3)
31	SATA SGPIO Connector (SATA_SGPIO4)
32	SATA SGPIO Connector (SATA_SGPIO1)
33	SATA SGPIO Connector (SATA_SGPIO2)
34	TPM Header (TPM1)
35	Intelligent Platform Management Bus Header (IPMB_1)
36	BMC SMBus Header (BMC_SMB_1)
37	BMC SMBus Header (BMC_SMB_2)
38	Non Maskable Interrupt Button (NMI_BTN1)
39	Clear CMOS Pad (CLRMOS1)
40	COM Port Header (COM1)
41	Front VGA Header (FRNT_VGA1)
42	M.2 Socket (M2_2) (Type 2242 / 2280 / 22110)
43	M.2 Socket (M2_1) (Type 2242 / 2280 / 22110)
44	OCuLink x4 Connector (OCU1)
45	2 x 288-pin DDR4 DIMM Slots (DDR4_B1, DDR4_D1)
46	2 x 288-pin DDR4 DIMM Slot (DDR4_A1, DDR4_C1)
47	TPM-SPI Header (TPM_BIOS_PH1)
48	AMD Socket SP3 (CPU0)
49	Backplane PCI Express Hot-Plug Connector (CPU1_HSBP1)

3 I/O Panel



No.	Description	No.	Description
1	UID Switch (UID)	4	**ROME2D16-2T / ROME2D16-2T/BCM:** 10G LAN RJ-45 Port (LAN1) **ROME2D16-2L+:** 1G LAN RJ-45 Port (LAN1) **ROME2D16-NL:** N/A
2	USB 3.2 Gen1 Ports (USB3_1_2)	5	**ROME2D16-2T / ROME2D16-2T/BCM:** 10G LAN RJ-45 Port (LAN2) **ROME2D16-2L+:** 1G LAN RJ-45 Port (LAN2) **ROME2D16-NL:** N/A
3	LAN RJ-45 Port (IPMI_LAN)	6	VGA Port (VGA1)

4 Install the Power Cables



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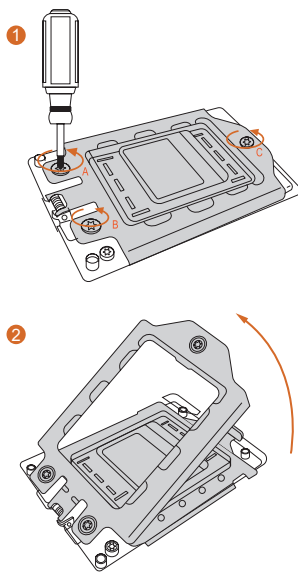
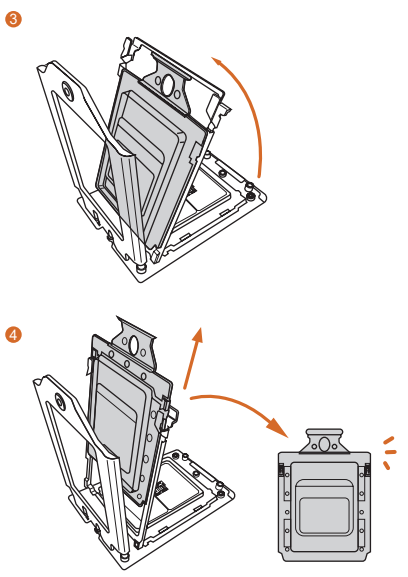
5 Install the Processor and Heatsink

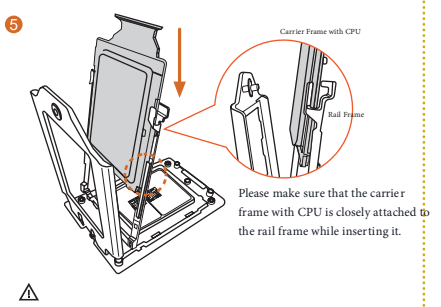
Locate the three torx screws on the CPU socket and unscrew them according to the order A→B→C. Open the first retention cover.



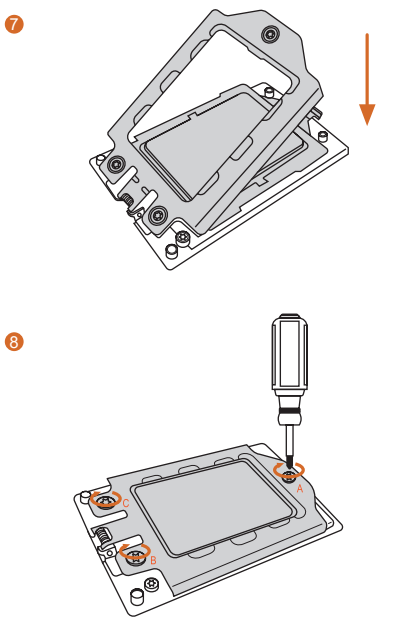
Open the second bracket. Take out the internal plastic cover.



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.



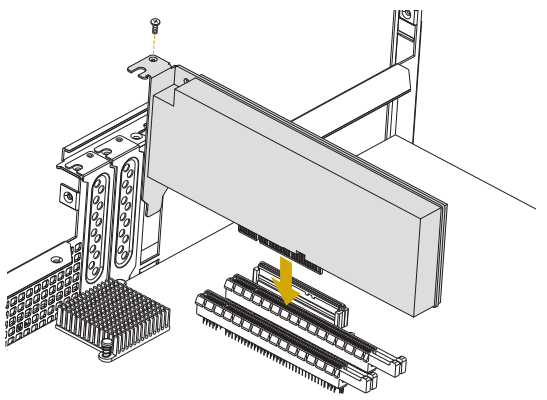
Close the bracket that holds the CPU. Close the retention cover. Fasten the torx screw according to the order A→B→C.



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

6 Install the PCIE Card

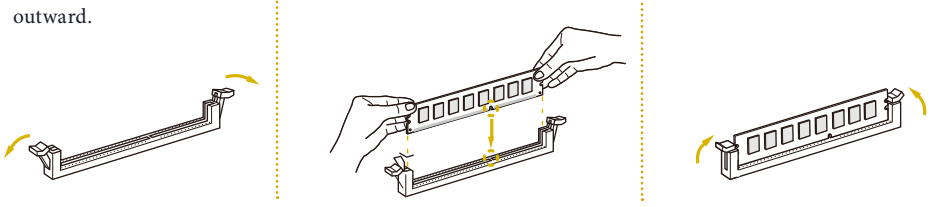
1. Remove the bracket facing the slot that you intend to use. Keep the screw for later use.
2. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
3. Fasten the card to the chassis with the screw.



Slot	Generation	Mechanical	Electrical	Source
PCIE 6	4.0	x16	x16	CPU1
PCIE 5	4.0	x16	x16	CPU0
PCIE 4	4.0	x16	x16	CPU1
PCIE 3	4.0	x16	x16	CPU0
PCIE 2	4.0	x8	x8	CPU1
PCIE 1	4.0	x16	x16	CPU0

7 Install the Memory

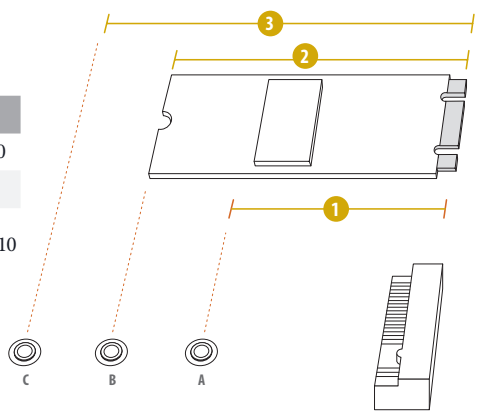
1. Unlock a DIMM slot by pressing the module clips outward.
2. Insert the memory module.
3. Lock the clips.



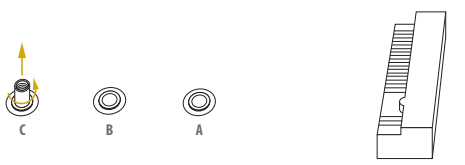
8 M.2 SSD Module Installation

1. Find the corresponding nut location to be used.

No.	1	2	3
Nut Location	NUT42	NUT80	NUT110
PCB Length	4.2cm	8cm	11cm
Module Type	Type2242	Type 2280	Type 22110

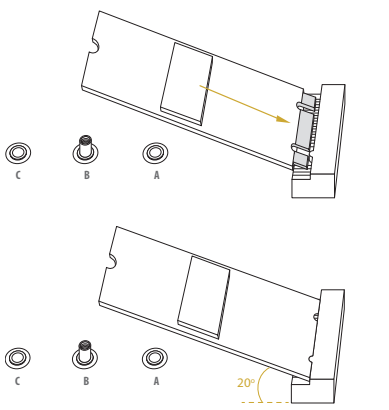


2. Move the standoff based on the module type and length.

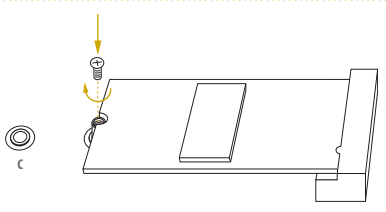


3. Peel off the yellow protective film on the nut. Hand tighten the standoff into the desired location.

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

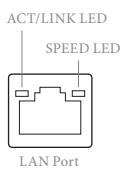


5. Tighten the screw with a screwdriver to secure the module into place. Please do not overtighten the screw.



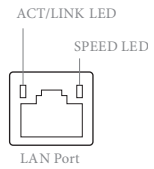
9 LAN Port LED Indications

IPMI LAN Port



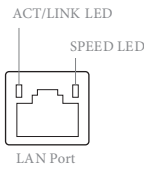
Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10M bps connection or no link
Blinking Yellow	Data Activity	Yellow	100M bps connection
On	Link	Green	1Gbps connection

1G LAN Port



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

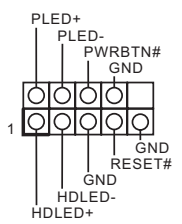
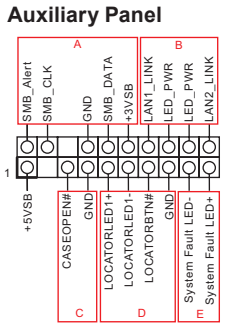
10G LAN Port



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

10 Panel Headers

System Panel



Auxiliary Panel