

Quick Installation Guide
EP2C622D16FM / EP2C621D16FM



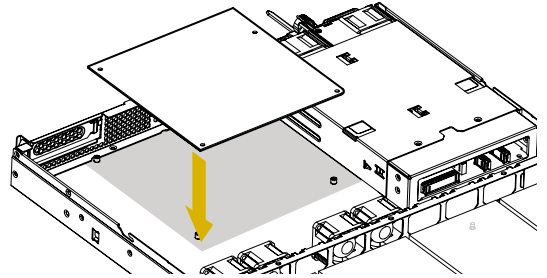
The server board User's Manual is available for download from the ASRock Rack's official website at <http://www.asrockrack.com>.

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

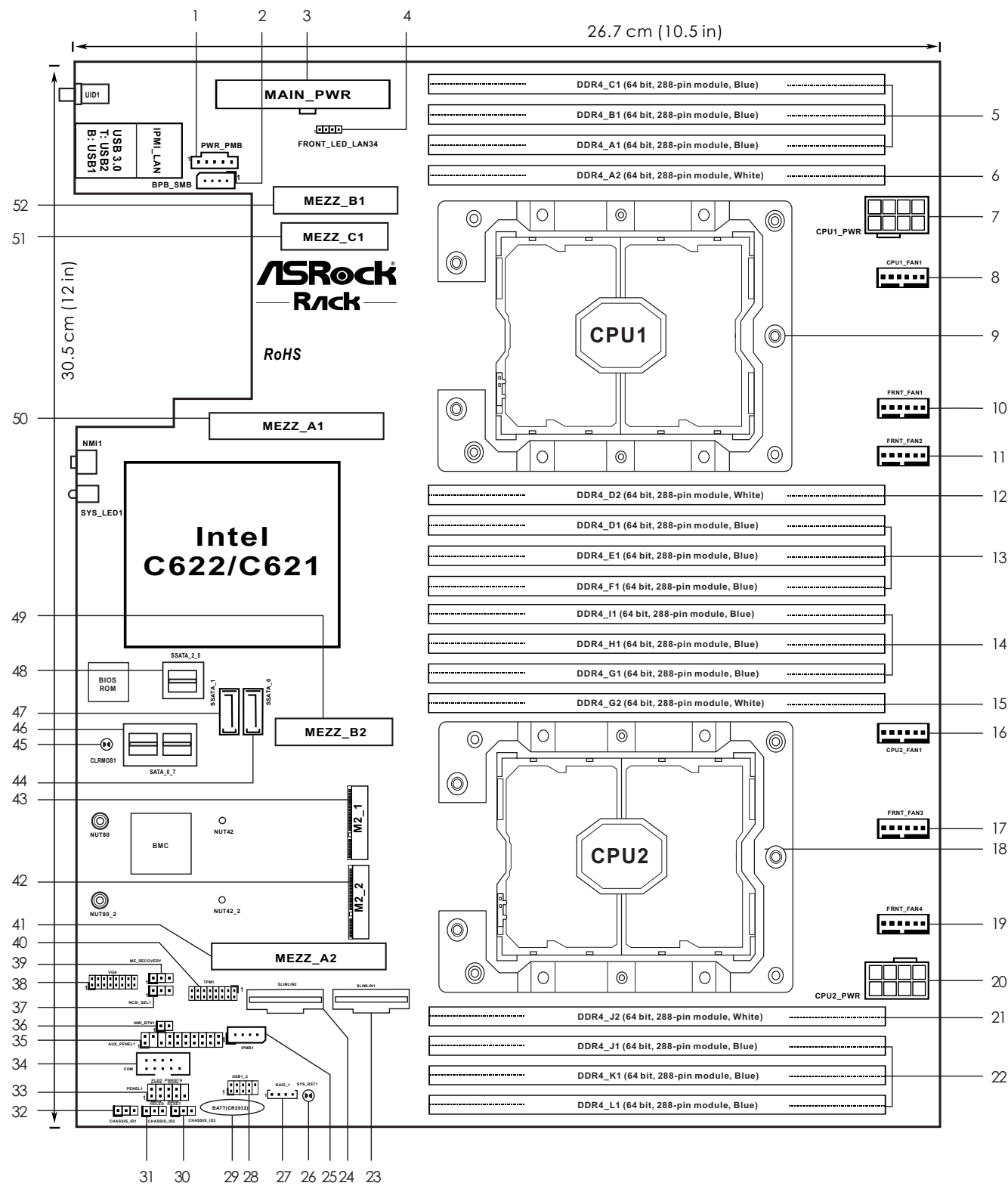
1. Unplug the power cord from the wall socket before touching any components.
2. To avoid damaging the server board's components due to static electricity, NEVER place your server board directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before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

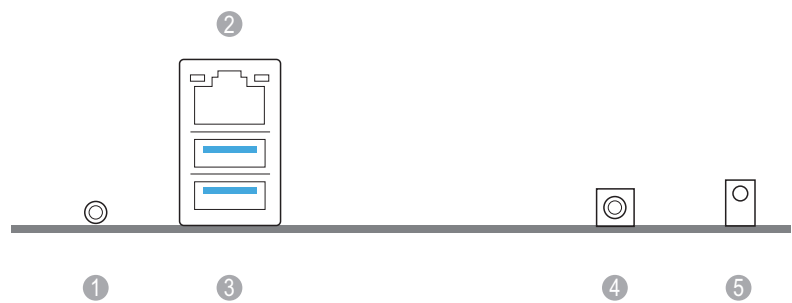


2 Motherboard Layout



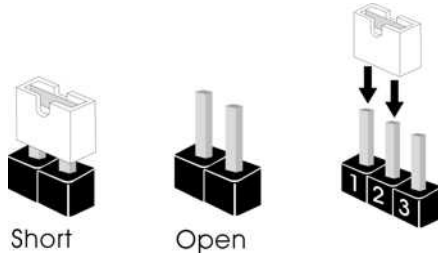
- 1 PWR PMBus Header (PWR_PMB1)
- 2 BPB SMBus Header (BPB_SMB)
- 3 ATX Power Connector (MAIN_PWR)
- 4 Front Lan LED Connector (FRONT_LED_LAN34)
- 5 3 x 288-pin DDR4 DIMM Slots (DDR4_A1, DDR4_B1, DDR4_C1)
- 6 1 x 288-pin DDR4 DIMM Slot (DDR4_A2)
- 7 CPU1 ATX 12V Power Connector (CPU1_PWR)
- 8 CPU1 Fan Connector (CPU1_FAN1)
- 9 CPU Socket 1 LGA-3647 (Socket P) (CPU1)
- 10 Front Fan Connector (FRNT_FAN1)
- 11 Front Fan Connector (FRNT_FAN2)
- 12 1 x 288-pin DDR4 DIMM Slot (DDR4_D2)
- 13 3 x 288-pin DDR4 DIMM Slots (DDR4_D1, DDR4_E1, DDR4_F1)
- 14 3 x 288-pin DDR4 DIMM Slots (DDR4_G1, DDR4_H1, DDR4_I1)
- 15 1 x 288-pin DDR4 DIMM Slot (DDR4_G2)
- 16 CPU2 Fan Connector (CPU2_FAN1)
- 17 Front Fan Connector (FRNT_FAN3)
- 18 CPU Socket 2 LGA-3647 (Socket P) (CPU2)
- 19 Front Fan Connector (FRNT_FAN4)
- 20 CPU2 ATX 12V Power Connector (CPU2_PWR)
- 21 1 x 288-pin DDR4 DIMM Slot (DDR4_J2)
- 22 3 x 288-pin DDR4 DIMM Slots (DDR4_J1, DDR4_K1, DDR4_L1)
- 23 Slimline NVMe Connector (SLIMLIN1)
- 24 Slimline NVMe Connector (SLIMLIN2)
- 25 Intelligent Platform Management Bus header (IPMB_1)
- 26 Clear CMOS Pad (SYS_RST1)
- 27 Virtual RAID On CPU Header (RAID_1)
- 28 USB 2.0 Header (USB1_2)
- 29 Battery (BATT(CR2032))
- 30 Chassis ID3 Jumper (CHASSIS_ID3)
- 31 Chassis ID2 Jumper (CHASSIS_ID2)
- 32 Chassis ID1 Jumper (CHASSIS_ID1)
- 33 System Panel Header (PANEL1)
- 34 COM Port Header (COM)
- 35 Auxiliary Panel Header (AUX_PANEL1)
- 36 Non Maskable Interrupt Button (NMI_BTN1)
- 37 NCSI Mode Jumper (NCSI_SEL1)
- 38 VGA Header (VGA)
- 39 ME Recovery Jumper (ME_RECOVERY1)
- 40 TPM Header (TPM1)
- 41 Mezzanine Card Slot (MEZZ_A2)
- 42 M.2 Socket (M2_2) (Type 2242 / 2280)
- 43 M.2 Socket (M2_1) (Type 2242 / 2280)
- 44 SATA3 Connector (SSATA_0)
- 45 Clear CMOS Pad (CLRMOS1)
- 46 MINI-SAS HD Connector (SATA_0_7)
- 47 SATA3 Connector (SSATA_1)
- 48 MINI-SAS HD Connector (SSATA_2_5)
- 49 Mezzanine Card Slot (MEZZ_B2)
- 50 Mezzanine Card Slot (MEZZ_A1)
- 51 Mezzanine Card Slot (MEZZ_C1)
- 52 Mezzanine Card Slot (MEZZ_B1)

3 I/O Panel



No.	Description	No.	Description
1	UID Switch (UID1)	4	NMI Button (NMI1)
2	LAN RJ-45 Port (IPMI_LAN)	5	System Stats LED (SYS_LED1)
3	USB 3.0 Ports (USB3_1_2)		

4 Jumper Cap On/Off



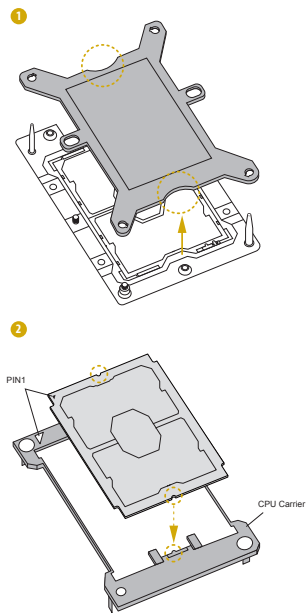
When the jumper cap is placed on the pins, the jumper is "Short". If no jumper cap is placed on the pins, the jumper is "Open".

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

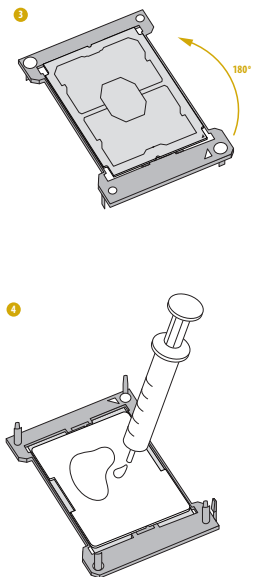


5 Install the Processor and Heatsink

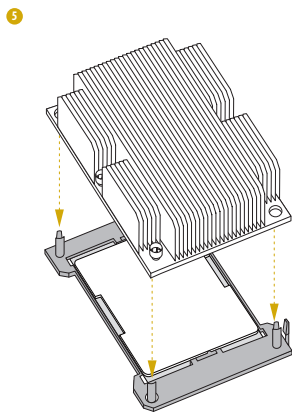
Remove the CPU socket cover. Align and install the processor on the carrier.



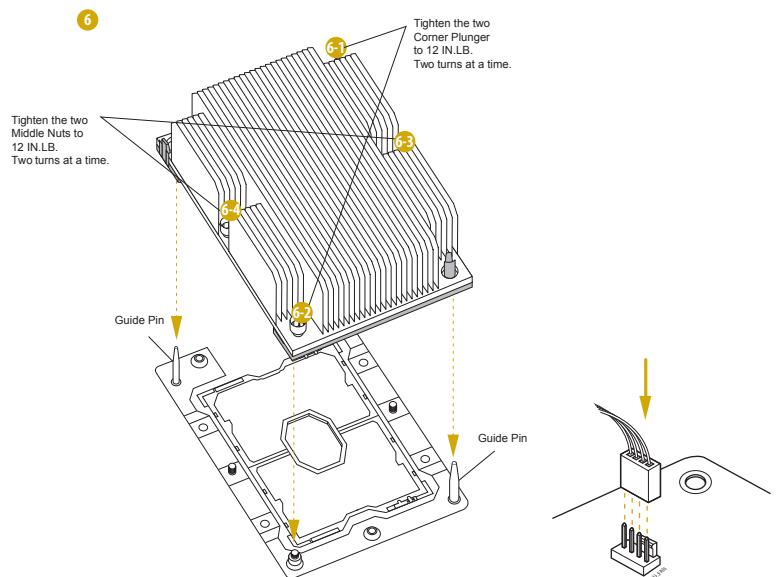
Carefully flip the carrier assembly. Apply a thermal paste.



Then install the heatsink to the carrier assembly and make sure the arrow is located in the correct direction.

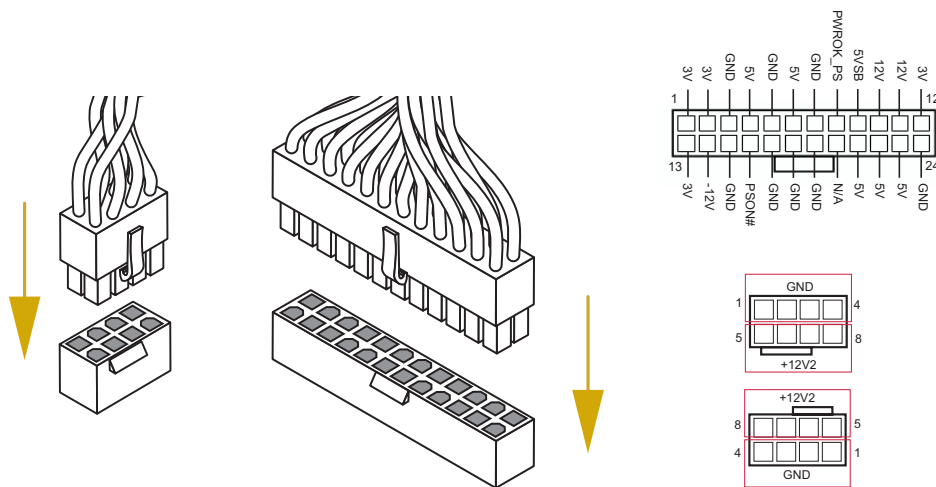


Install the heatsink. Tighten the screws in a sequential order (6-1>6-2>6-3>6-4). When disassembling the heatsink, loosen the screws in reverse order (6-4>6-3>6-2>6-1). Connect the CPU fan to the CPU FAN connector.



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

6 Install the Power Cables



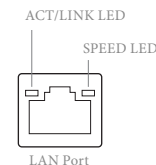
Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Signal	3V	12V	5V	5V/SSB	PS	PS	N/A	5V	5V	GND	GND	GND	-12V	3V	3V	GND	PS-ON#	GND	GND	GND	GND	GND	GND	GND

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Signal	GND	+12V2	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Signal	GND	+12V2	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND

7 LAN Port LED Indications

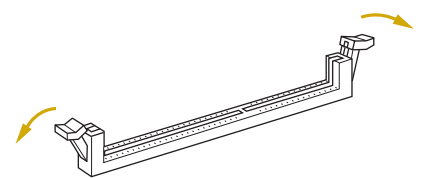
IPMI LAN Port



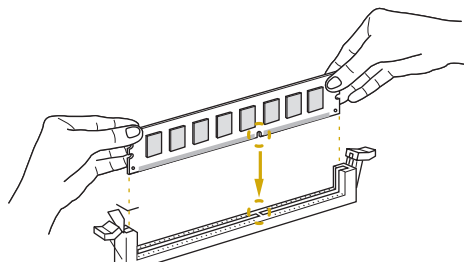
Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10M bps connection or no link
Blinking Yellow	Data Activity	Orange	100M bps connection
On	Link	Green	1Gbps connection

8 Install the Memory

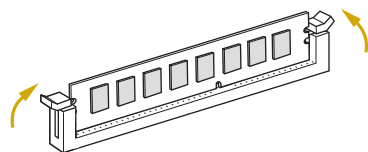
1 Unlock a DIMM slot by pressing the module clips outward.



2 Insert the memory module.



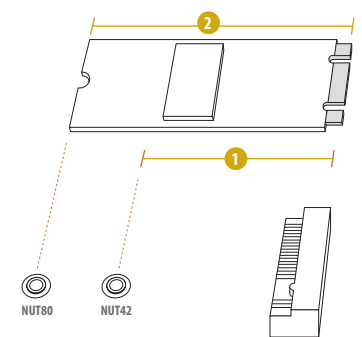
3 Lock the clips.



9 M.2_SSD (NGFF) Module Installation

1 Find the corresponding nut location to be used.

No.	1	2
Nut Location	NUT42	NUT80
PCB Length	4.2m	8cm
Module Type	Type2242	Type 2280



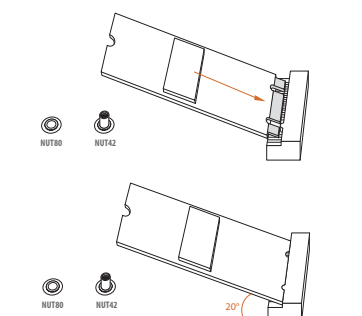
2 Move the standoff based on the module type and length.



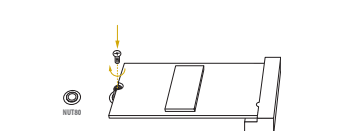
3 Peel off the yellow protective film on the nut. Hand tighten the standoff into the desired location.



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

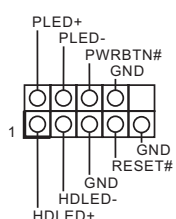


5 Tighten the screw with a screwdriver to secure the module into place. Please do not overtighten the screw.



10 Headers

System Panel



Auxiliary Panel

