



P/N: 15G065329000AK V1.0

Quick Installation Guide

W790D8HM3



W790D8HM3

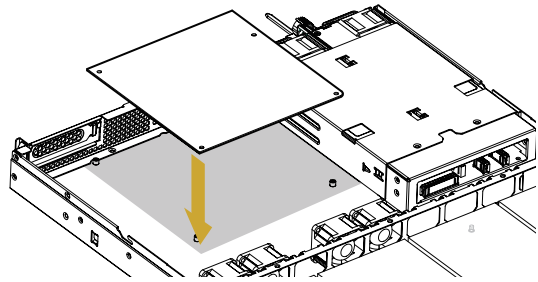
The server board User's Manual is available for download from the ASRock Rack's official website at <http://www.asrockrack.com>.

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

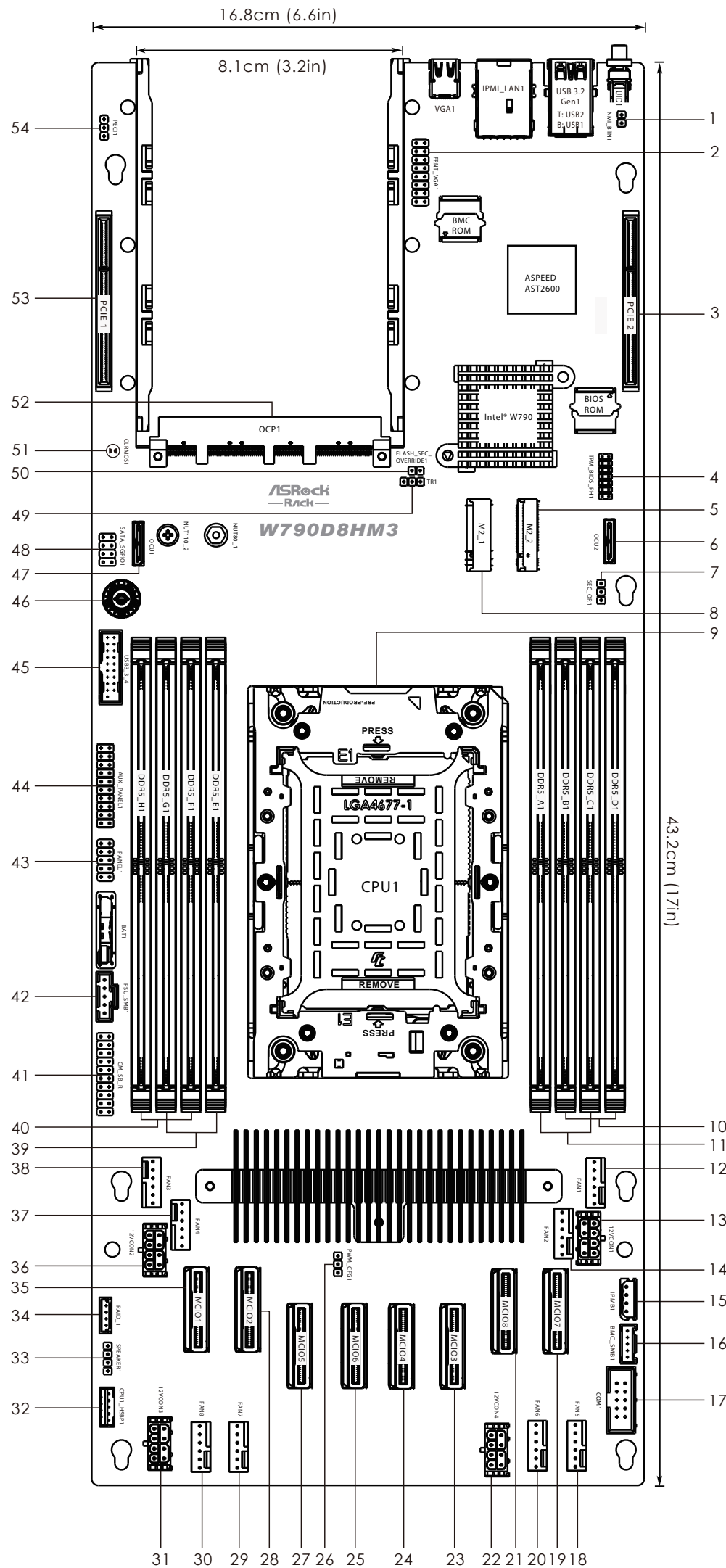
1. Unplug the power cord from the wall socket before touching any components.
2. To avoid damaging the server board's components due to static electricity, NEVER place the server board directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before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



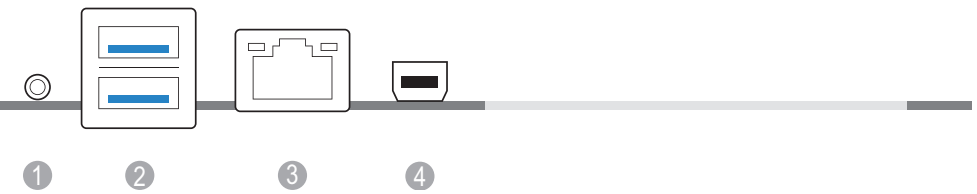
2 Motherboard Layout



No.	Description
1	Non Maskable Interrupt Button (NMI_BTN1)
2	Front VGA Header (FRNT_VGA1)
3	PCI Express 5.0 x16 Slot (PCIE2)
4	SPI TPM Header (TPM_BIOS_PH1)
5	M-key M.2 Socket (M2_2) (Type 22110)
6	OCuLink Connector (PCIe4.0 x4 or 4 SATA 6Gb/s) (OCU2)
7	Security Override Jumper (SEC_OR1)
8	M-key M.2 Socket (M2_1) (Type 2280)
9	LGA 4677 CPU Socket (CPU1)
10	2 x 288-pin DDR5 DIMM Slots (DDR5_B1, DDR5_D1)
11	2 x 288-pin DDR5 DIMM Slots (DDR5_A1, DDR5_C1)
12	System Fan Connector (FAN1)
13	Micro-Hi Power Connector (12VCON1)
14	System Fan Connector (FAN2)
15	Intelligent Platform Management Bus Header (IPMB1)
16	BMC SMBus Header (BMC_SMB1)
17	Serial Port Header (COM1)
18	System Fan Connector (FAN5)
19	Mini Cool Edge IO x8 Connector (MCIO7)
20	System Fan Connector (FAN6)
21	Mini Cool Edge IO x8 Connector (MCIO8)
22	Micro-Hi Power Connector (12VCON4)
23	Mini Cool Edge IO x8 Connector (MCIO3)
24	Mini Cool Edge IO x8 Connector (MCIO4)
25	Mini Cool Edge IO x8 Connector (MCIO6)
26	PWM Configuration Header (PWM_CFG1)
27	Mini Cool Edge IO x8 Connector (MCIO5)

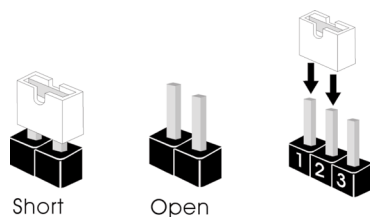
No.	Description
28	Mini Cool Edge IO x8 Connector (MCIO2)
29	System Fan Connector (FAN7)
30	System Fan Connector (FAN8)
31	Micro-Hi Power Connector (12VCON3)
32	Backplane PCI Express Hot-Plug Connector (CPU1_HSBP1)
33	Speaker Header (SPEAKER1)
34	Virtual RAID On CPU Header (RAID_1)
35	Mini Cool Edge IO x8 Connector (MCIO1)
36	Micro-Hi Power Connector (12VCON2)
37	System Fan Connector (FAN4)
38	System Fan Connector (FAN3)
39	2 x 288-pin DDR5 DIMM Slots (DDR5_E1, DDR5_G1)
40	2 x 288-pin DDR5 DIMM Slots (DDR5_F1, DDR5_H1)
41	CM Board Standby Power Header (CM_SB_R)
42	PSU SMBus Header (PSU_SMB1)
43	System Panel Header (PANEL1)
44	Auxiliary Panel Header (AUX_PANEL1)
45	USB 3.2 Gen1 Header (USB3_3_4)
46	Thumbscrew
47	OCuLink Connector (PCIe4.0 x4 or 4 SATA 6Gb/s) (OCU1)
48	SATA SGPIO Connector (SATA_SGPIO1)
49	Thermal Sensor Header (TR1)
50	Flash Security Jumper (FLASH_SEC_OVERRIDE1)
51	Clear CMOS Pad (CLRMOS1)
52	OCP 3.0 Gen5 x16 Mezzanine Card Slot (OCP1)
53	PCI Express 5.0 x16 Slot (PCIE1)
54	CPU PECE Mode Jumper (PECE1)

3 I/O Panel



No.	Description	No.	Description
1	UID Switch (UID1)	3	LAN RJ-45 Port (IPMI_LAN1)
2	USB 3.2 Gen1 Ports (USB3_1_2)	4	Mini Display Port (VGA1)

4 Jumper Settings

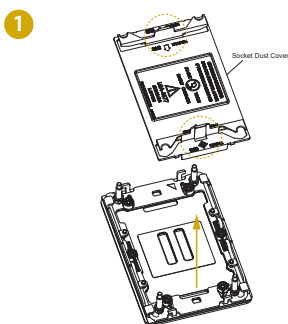


When the jumper cap is placed on the pins, the jumper is "Short". If no jumper cap is placed on the pins, the jumper is "Open".

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

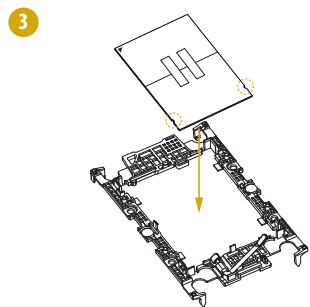
5 Install the Processor and Heatsink

Remove the CPU socket cover and open the socket lever.



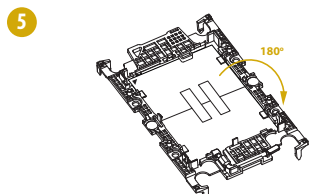
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Align and install the processor on the carrier and make sure the arrow is located in the correct direction. Close the socket lever.



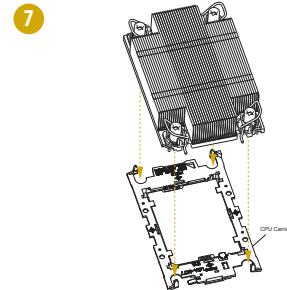
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Carefully flip the carrier assembly. Apply a thermal paste.



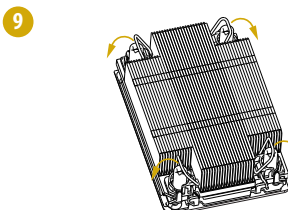
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Install the heatsink to the CPU carrier. Then install the heatsink and CPU carrier to the socket.

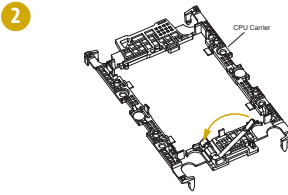


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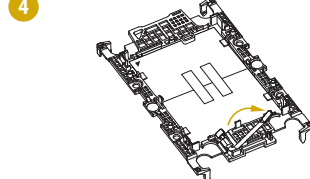
Tighten the corner fasteners. Secure the heatsink to the motherboard with a screwdriver.



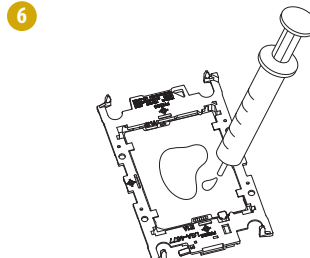
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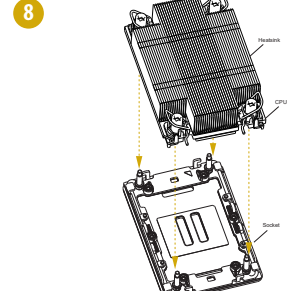
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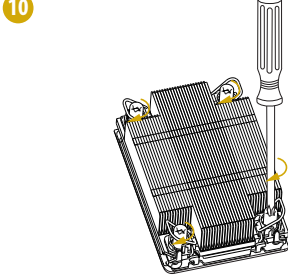
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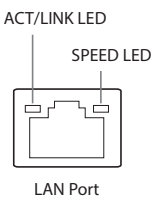


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We recommend using the CPU Installation tool to avoid CPU pin-bent problem.

6 LAN Port LED Indications

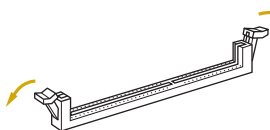
IPMI LAN Port



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

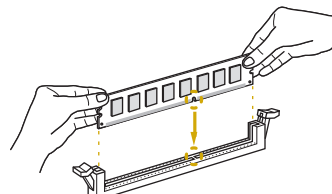
7 Install the Memory

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



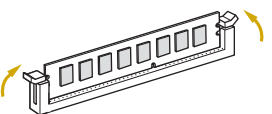
1

2 Insert the memory module.



2

3 Lock the clips.



3

8 Install the PCIE Card (with a Riser Card)

1 Remove the bracket facing the slot that intending to use on the chassis. Keep the screw for later use.

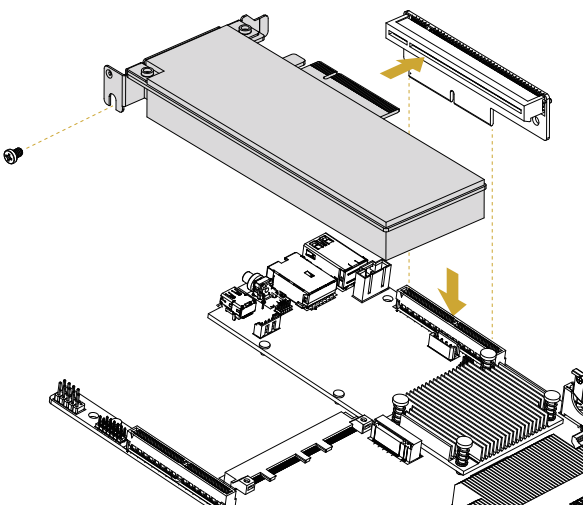
2 Install the PCIE card to the riser card.

If having any queries related to the riser card, please contact the local sales representative or technical support team.

3 Align the riser-card assembly connector with the slot on the system board. Press firmly until the riser-card assembly is completely seated on the slot.

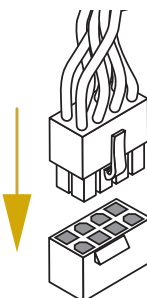
4 Fasten the card to the chassis with the screw.

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



Slot	Generation	Mechanical	Electrical	Source
PCIE1	5.0	x16	x16	CPU1
PCIE2	5.0	x16	x16	CPU1

10 Install the Power Cables



12V

5 1

8 4

12V

4 8

1 5

CM Board Standby Power

CM_SB_R

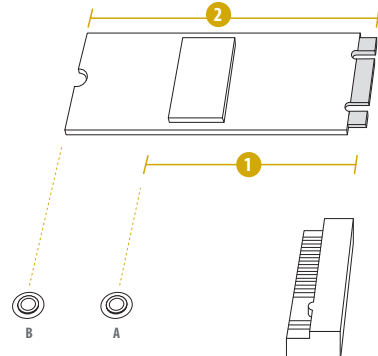
+12VSB	GND
+12VSB	GND
+12VSB	GND
RSVD	GND
RSVD	PD
PSU_FAN_FAIL_N	BMC_THROTTLE
NODE_ID_1	PSON#
NODE_ID_2	SMB_DATA
PSU_PG	SMB_CLK
SRST#	SMB_ALT

9 M.2 SSD Module Installation

1 Find the corresponding nut location to be used.

M2_1:	No.	1
Nut Location	A (NUT80_1)	
PCB Length	8cm	
Module Type	Type 2280	

M2_2:	No.	2
Nut Location	B (NUT110_2)	
PCB Length	11cm	
Module Type	Type 22110	



2

3

4

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



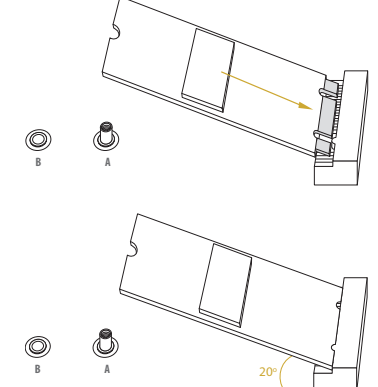
2

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



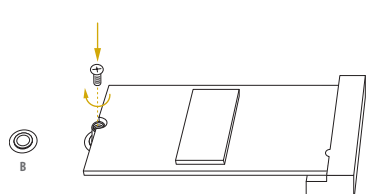
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4 Gently insert the M.2 module into the slot.



4

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



5