



P/N: 15G065023100AK V1.0

Quick Installation Guide

EPC612D8 / EPC612D8A / EPC612D8A-TB



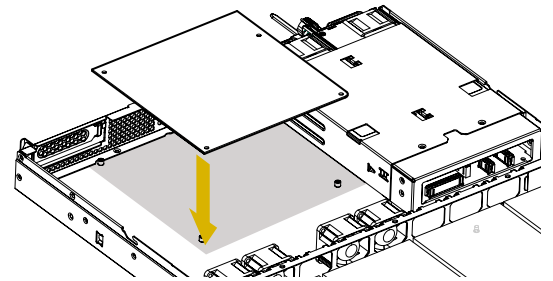
The server board User's Manual is available for download from the ASRock Rack's official website at <http://www.asrockrack.com>.

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

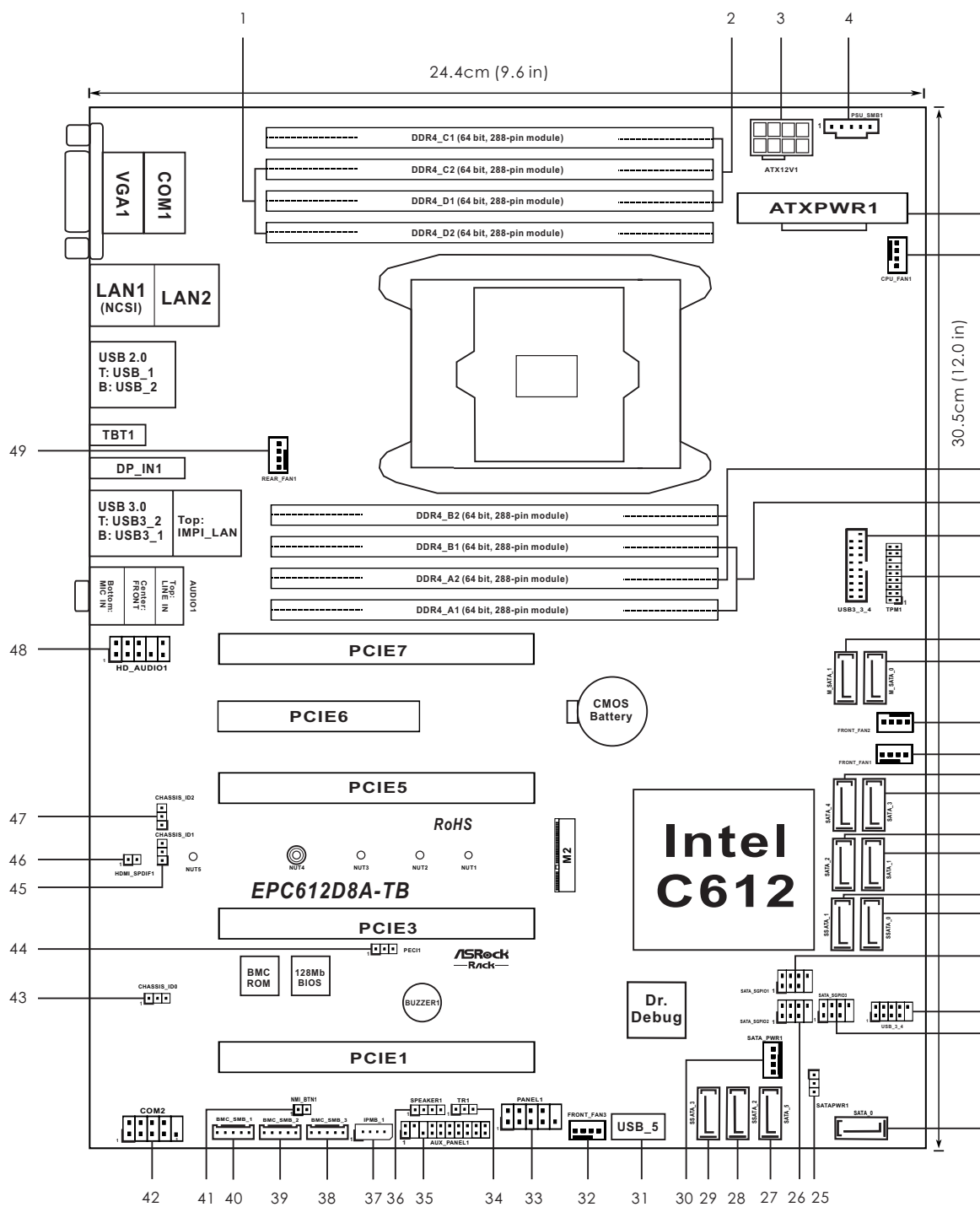
1. Unplug the power cord from the wall socket before touching any components.
2. To avoid damaging the server board's components due to static electricity, NEVER place your server board directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before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



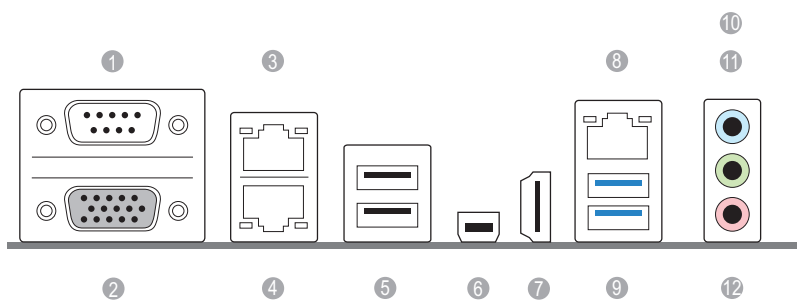
2 Motherboard Layout



No.	Description
1	2 x 288-pin DDR4 DIMM Slots (DDR4_C2, DDR4_D2, White)
2	2 x 288-pin DDR4 DIMM Slots (DDR4_C1, DDR4_D1, Blue)
3	ATX 12V Power Connector (ATX12V1)
4	PSU SMBus (PSU_SMB1)
5	ATX Power Connector (ATXPWR1)
6	CPU Fan Connector (CPU_FAN1)
7	2 x 288-pin DDR4 DIMM Slots (DDR4_A2, DDR4_B2, White)
8	2 x 288-pin DDR4 DIMM Slots (DDR4_A1, DDR4_B1, Blue)
9	USB 3.0 Header (USB3_3_4)
10	TPM Header (TPM1)
11	SATA3 Connector (M_SATA_1), White
12	SATA3 Connector (M_SATA_0), White
13	Front Fan Connector (FRONT_FAN2)
14	Front Fan Connector (FRONT_FAN1)
15	SATA3 Connector (SATA_4), White
16	SATA3 Connector (SATA_3), White
17	SATA3 Connector (SATA_2), White
18	SATA3 Connector (SATA_1), White
19	SATA3 Connector (SSATA_1), White
20	SATA3 Connector (SSATA_0), White
21	SATA SGPIO Connector (SATA_SGPIO1)
22	USB 2.0 Header (USB_3_4)
23	SATA SGPIO Connector (SATA_SGPIO3)
24	SATA3 DOM Connector (SATA_0), Red
25	SATA DOM Power Jumper (SATAPWR1)
26	SATA SGPIO Connector (SATA_SGPIO2)
27	SATA3 Connector (SATA_5), White
28	SATA3 Connector (SSATA_2), White (Marvell 9172)
29	SATA3 Connector (SSATA_3), White (Marvell 9172)
30	SATA DOM Power Header (SATA_PWR1)
31	Vertical Type A USB 2.0 (USB_5)
32	Front Fan Connector (FRONT_FAN3)
33	System Panel Header (PANEL1)
34	Thermal Sensor header (TR1)
35	Auxiliary Panel Header (AUX_PANEL1)
36	Speaker Header (SPEAKER1)
37	Intelligent Platform Management Bus header (IPMB_1)
38	BMC SMBus Header (BMC_SMB_3)
39	BMC SMBus Header (BMC_SMB_2)
40	BMC SMBus Header (BMC_SMB_1)
41	Non Maskable Interrupt Button (NMI_BTN1)
42	COM Port Header (COM2)
43	Chassis ID0 Jumper (Chassis ID0)
44	CPU PECI Jumper (PECI1)
45	Chassis ID0 Jumper (Chassis ID1)
46	HDMI_SPDIF Header (HDMI_SPDIF1)*
47	Chassis ID0 Jumper (Chassis ID2)
48	Front Panel Audio Header (HD_AUDIO1)*
49	Rear Fan Connector (REAR_FAN1)

*Supports EPC612D8A and EPC612D8A-TB only

3 I/O Panel

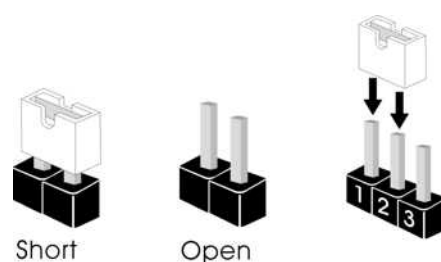


No.	Description	No.	Description
1	Serial Port (COM1)	7	Display Port Input (DP_IN1)*
2	VGA Port (VGA1)	8	LAN RJ-45 Port (IPMI_LAN)
3	LAN RJ-45 Port (LAN2)	9	USB 3.0 Ports (USB3_1-2)
4	LAN RJ-45 Port (LAN1) (NCSI)	10	Front Speaker (Lime)**
5	USB 2.0 Ports (USB_1_2)	11	Microphone (Pink)**
6	Thunderbolt Port (TBT1)*	12	Line In (Light Blue)**

*Supports EPC612D8A-TB only

**Supports EPC612D8A only

4 Jumper Cap On/Off

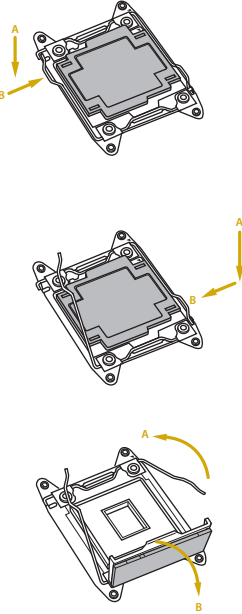


When the jumper cap is placed on the pins, the jumper is "Short". If no jumper cap is placed on the pins, the jumper is "Open".

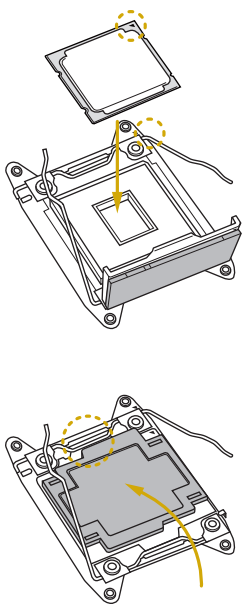
The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when a jumper cap is placed on these 2 pins.

5 Install the Processor

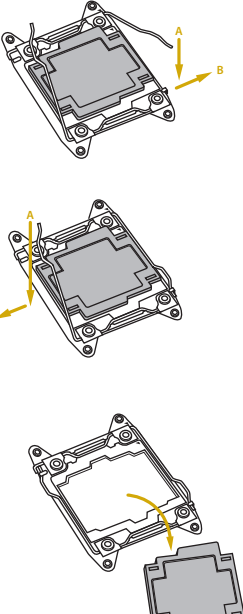
1 Open the socket levers and the CPU socket cover.



2 Install the processor and close the socket cover.



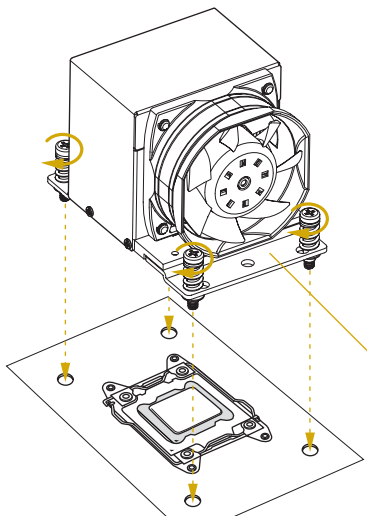
3 Close the socket levers. Remove the CPU protection cap.



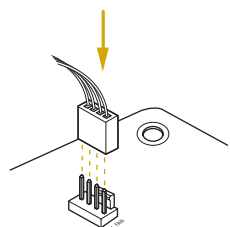
We recommend using the CPU Installation tool to avoid CPU pin-bent problem.

6 Install the CPU Fan and Heatsink

1 Apply the thermal grease. Install the CPU fan and heatsink and secure the screws.

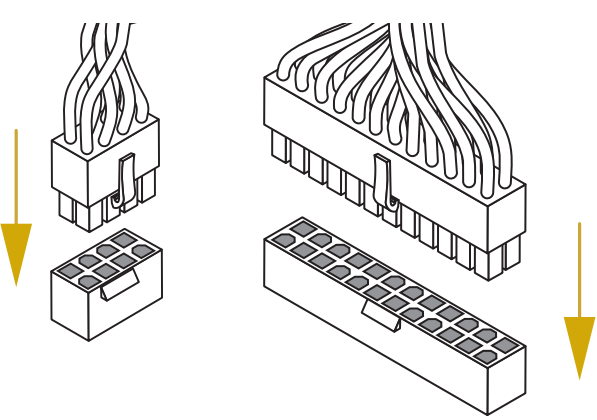


2 Connect the CPU fan to the CPU FAN connector.



CPU fan for narrow ILM socket
*Support an active or passive heatsink

7 Install the Power Cables



24-pin ATX Power Connector Pinout:

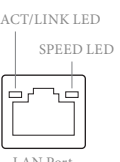
Pin	Color	Pin	Color
1	3V	13	3V
2	5V	14	5V
3	5V	15	5V
4	5V	16	5V
5	5V	17	5V
6	5V	18	5V
7	5V	19	5V
8	5V	20	5V
9	5V	21	5V
10	5V	22	5V
11	5V	23	5V
12	5V	24	5V

8-pin EPS Power Connector Pinout:

Pin	Color	Pin	Color
1	GND	4	GND
2	GND	5	GND
3	GND	6	GND
7	+12V2	8	+12V2

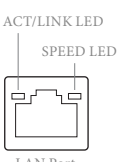
8 LAN Port LED Indications

IPMI LAN Port



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

1G LAN Port



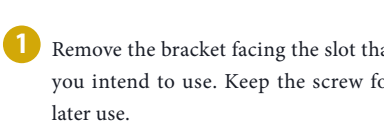
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9 Dr. Debug

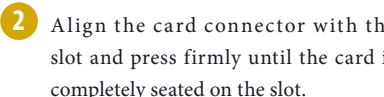
Code	Description
00	Please check if the CPU is installed correctly and then clear CMOS.
0d	Problem related to memory, VGA card or other devices. Please clear CMOS, re-install the memory and VGA card, and remove other USB, PCI devices.
01 - 54 (except 0d), 5A - 60	Problem related to memory. Please re-install the CPU and memory then clear CMOS. If the problem still exists, please install only one memory module or try using other memory modules.
55	The Memory could not be detected. Please re-install the memory and CPU. If the problem still exists, please install only one memory module or try using other memory modules.
61 - 91	Chipset initialization error. Please press reset or clear CMOS.
92 - 99	Problem related to PCI-E devices. Please re-install PCI-E devices or try installing them in other slots. If the problem still exists, please remove all PCI-E devices or try using another VGA card.
A0 - A7	Problem related to IDE or SATA devices. Please re-install IDE and SATA devices. If the problem still exists, please clear CMOS and try removing all SATA devices.
b0	Problem related to memory. Please re-install the CPU and memory. If the problem still exists, please install only one memory module or try using other memory modules.
b4	Problem related to USB devices. Please try removing all USB devices.
b7	Problem related to memory. Please re-install the CPU and memory then clear CMOS. If the problem still exists, please install only one memory module or try using other memory modules.
d6	The VGA could not be recognized. Please clear CMOS and try re-installing the VGA card. If the problem still exists, please try installing the VGA card in other slots or use other VGA cards.
d7	The Keyboard and mouse could not be recognized. Please try re-installing the keyboard and mouse.
d8	Invalid Password.
FF	Please check if the CPU is installed correctly and then clear CMOS.

10 Install the PCIE Card

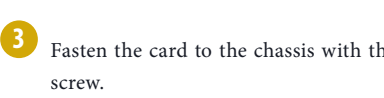
1 Remove the bracket facing the slot that you intend to use. Keep the screw for later use.



2 Align the card connector with the slot and press firmly until the card is completely seated on the slot.

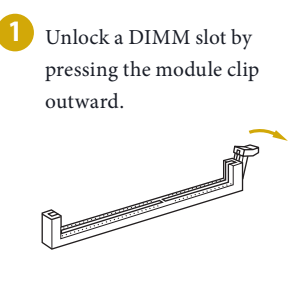


3 Fasten the card to the chassis with the screw.

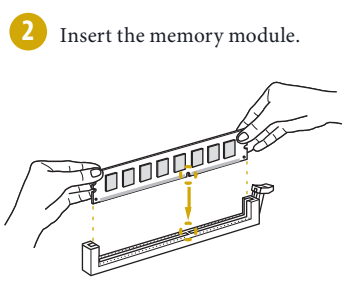


11 Install the Memory

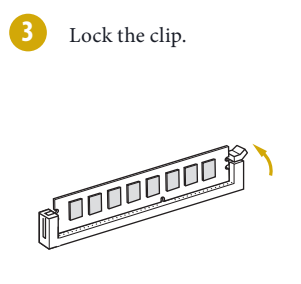
1 Unlock a DIMM slot by pressing the module clip outward.



2 Insert the memory module.

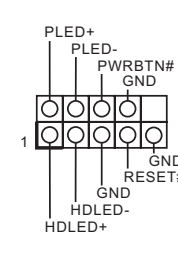


3 Lock the clip.

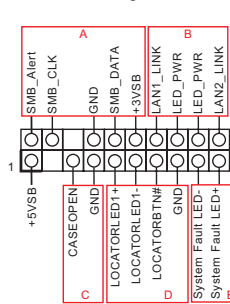


12 Headers

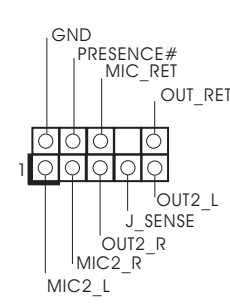
System Panel



Auxiliary Panel



Front Panel Audio



HDMI_SPDIF

