



P/N: 15G065398000AR V1.0

Quick Installation Guide

TURIN2D24TM3-2L+/500W



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

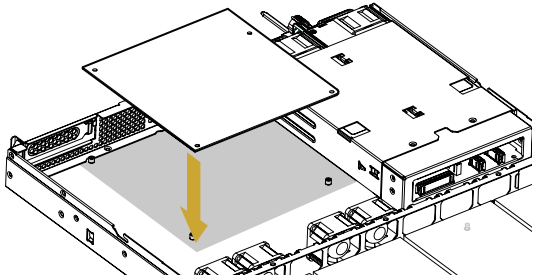
Take note of the following precautions before installing server board components or change any server board settings.

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.

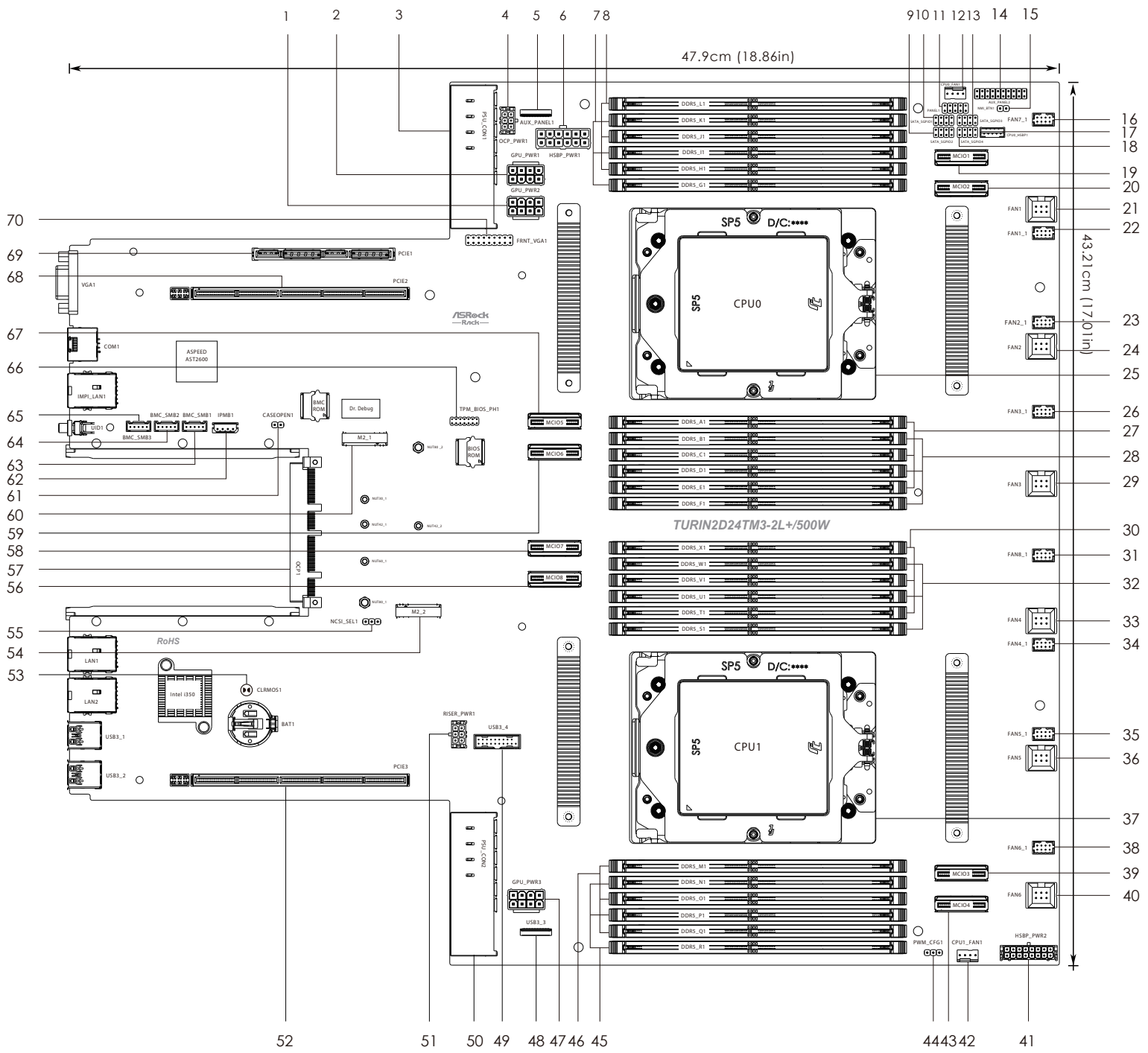
1 Install the Server Board

- 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

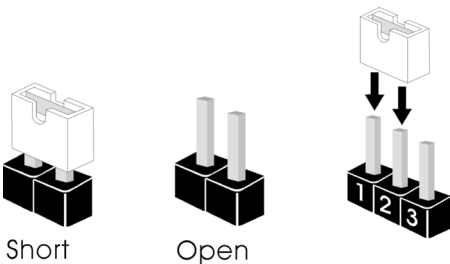


2 Motherboard Layout



| No. | Description                                             |
|-----|---------------------------------------------------------|
| 1   | GPU Power Connector (GPU_PWR2)                          |
| 2   | GPU Power Connector (GPU_PWR1)                          |
| 3   | Power Supply Unit Connector (PSU_CON1)                  |
| 4   | OC Power Connector (OCP_PWR1)                           |
| 5   | Auxiliary Panel Header (AUX_PANEL1)                     |
| 6   | HDD Backplane Power Connector (HSBP_PWR1)               |
| 7   | 3 x 288-pin DDR5 DIMM Slots (DDR5_G1, DDR5_I1, DDR5_K1) |
| 8   | 3 x 288-pin DDR5 DIMM Slots (DDR5_H1, DDR5_J1, DDR5_L1) |
| 9   | SATA SGPIO Connector (SATA_SGPIO2)                      |
| 10  | SATA SGPIO Connector (SATA_SGPIO1)                      |
| 11  | System Panel Header (PANEL1)                            |
| 12  | CPU0 Fan Connector (CPU0_FAN1)                          |
| 13  | SATA SGPIO Connector (SATA_SGPIO3)                      |
| 14  | Auxiliary Panel Header (AUX_PANEL2)                     |
| 15  | Non Maskable Interrupt Button (NMI_BTN1)                |
| 16  | System Fan Connector (FAN7_1) (for 1U system)           |
| 17  | Backplane PCI Express Hot-Plug Connector (CPU0_HSBP1)   |
| 18  | SATA SGPIO Connector (SATA_SGPIO4)                      |
| 19  | Mini Cool Edge IO Connector (MCIO1)                     |
| 20  | Mini Cool Edge IO Connector (MCIO2)                     |
| 21  | System Fan Connector (FAN1) (for 2U system)             |
| 22  | System Fan Connector (FAN1_1) (for 1U system)           |
| 23  | System Fan Connector (FAN2_1) (for 1U system)           |
| 24  | System Fan Connector (FAN2) (for 2U system)             |
| 25  | AMD Socket SP5 (LGA6096) (CPU0)                         |
| 26  | System Fan Connector (FAN3_1) (for 1U system)           |
| 27  | 3 x 288-pin DDR5 DIMM Slots (DDR5_A1, DDR5_C1, DDR5_E1) |
| 28  | 3 x 288-pin DDR5 DIMM Slots (DDR5_B1, DDR5_D1, DDR5_F1) |
| 29  | System Fan Connector (FAN3) (for 2U system)             |
| 30  | 3 x 288-pin DDR5 DIMM Slots (DDR5_T1, DDR5_V1, DDR5_X1) |
| 31  | System Fan Connector (FAN8_1) (for 1U system)           |
| 32  | 3 x 288-pin DDR5 DIMM Slots (DDR5_S1, DDR5_U1, DDR5_W1) |
| 33  | System Fan Connector (FAN4) (for 2U system)             |
| 34  | System Fan Connector (FAN4_1) (for 1U system)           |
| 35  | System Fan Connector (FAN5_1) (for 1U system)           |
| 36  | System Fan Connector (FAN5) (for 2U system)             |
| 37  | AMD Socket SP5 (LGA6096) (CPU1)                         |
| 38  | System Fan Connector (FAN6_1) (for 1U system)           |
| 39  | Mini Cool Edge IO Connector (MCIO3)                     |
| 40  | System Fan Connector (FAN6) (for 2U system)             |

3 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".

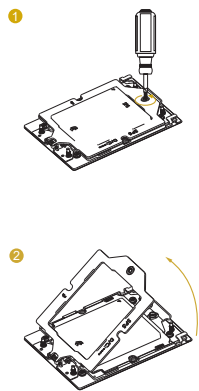
The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when a jumper cap is placed on these 2 pins.

| No. | Description                                        |
|-----|----------------------------------------------------|
| 55  | NCSI Mode Jumper (NCSI_SEL1)                       |
| 56  | Mini Cool Edge IO Connector (MCIO8)                |
| 57  | OC Power Connector (OCP1)                          |
| 58  | Mini Cool Edge IO Connector (MCIO7)                |
| 59  | Mini Cool Edge IO Connector (MCIO6)                |
| 60  | M.2 Socket (M2_1) (Type 2230/2242/2260/2280)       |
| 61  | Chassis Intrusion Header (CASEOPEN1)               |
| 62  | Intelligent Platform Management Bus Header (IPMB1) |
| 63  | BMC SMBus Header (BMC_SMB1)                        |
| 64  | BMC SMBus Header (BMC_SMB2)                        |
| 65  | BMC SMBus Header (BMC_SMB3)                        |
| 66  | TPM-SPI Header (TPM_BIOS_PH1)                      |
| 67  | Mini Cool Edge IO Connector (MCIO5)                |
| 68  | PCI Express 5.0 x32 Slot (PCIE2)                   |
| 69  | PCI Express 5.0 x16 Slot (PCIE1)                   |
| 70  | Front VGA Header (FRNT_VGA1)                       |

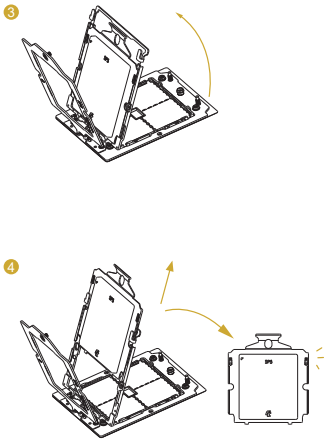
| No. | Description                                             |
|-----|---------------------------------------------------------|
| 41  | Micro-Fit HDD Backplane Power Connector (HSBP_PWR2)     |
| 42  | CPU1 Fan Connector (CPU1_FAN1)                          |
| 43  | Mini Cool Edge IO Connector (MCIO4)                     |
| 44  | PWM Configuration Header (PWM_CFG1)                     |
| 45  | 3 x 288-pin DDR5 DIMM Slots (DDR5_N1, DDR5_P1, DDR5_R1) |
| 46  | 3 x 288-pin DDR5 DIMM Slots (DDR5_M1, DDR5_O1, DDR5_Q1) |
| 47  | GPU Power Connector (GPU_PWR3)                          |
| 48  | Front USB 3.2 Gen1 Header (USB3_3)                      |
| 49  | USB 3.2 Gen1 Header (USB3_4)                            |
| 50  | Power Supply Unit Connector (PSU_CON2)                  |
| 51  | Micro-Fit Riser Card Power Connector (RISER_PWR1)       |
| 52  | PCI Express 5.0 x32 Slot (PCIE3)                        |
| 53  | Clear CMOS Pad (CLRSMOS1)                               |
| 54  | M.2 Socket (M2_2) (Type 2242/2280)                      |

4 Install the Processor and Heatsink

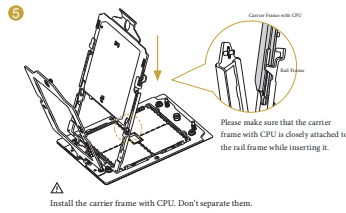
Locate the screw on the CPU socket and unscrew it. Open the first retention cover.



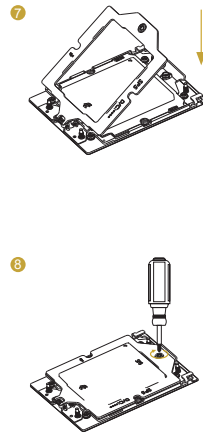
Open the second bracket. Take out the internal plastic cover.



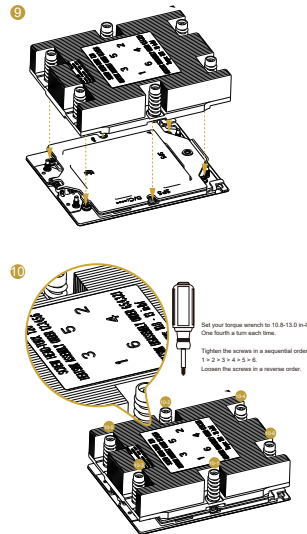
Install CPU along with the carrier frame, do not separate them. Please make sure the carrier frame with CPU is closely attached to the rail frame while inserting it.



Close the bracket that holds the CPU. Close the retention cover and fasten the screw.

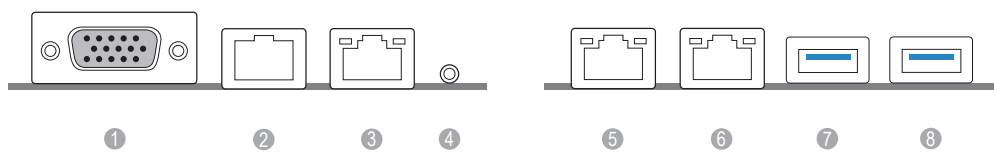


Install the heatsink to the CPU carrier. Secure the heatsink to the CPU carrier with a screwdriver.



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

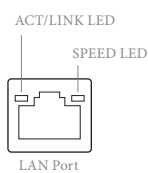
5 I/O Panel



| No. | Description                 | No. | Description                          |
|-----|-----------------------------|-----|--------------------------------------|
| 1   | VGA Port (VGA1)             | 5   | 1G LAN RJ-45 Port (LAN1, shared NIC) |
| 2   | RJ-45 Port (COM1)           | 6   | 1G LAN RJ-45 Port (LAN2)             |
| 3   | IPMI LAN Header (IPMI_LAN1) | 7   | USB 3.2 Gen1 Port (USB3_1)           |
| 4   | UID Switch (UID1)           | 8   | USB 3.2 Gen1 Port (USB3_2)           |

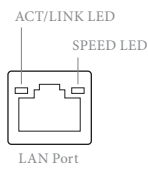
7 LAN Port LED Indications

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             |

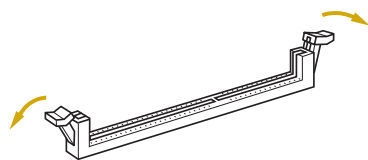
1G LAN Port



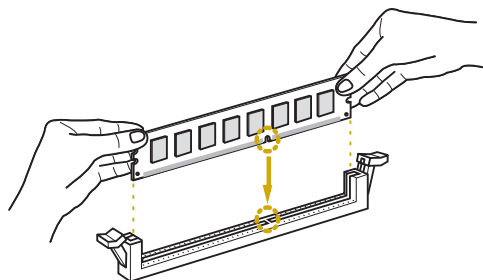
| Activity / Link LED |               | Speed LED |                              |
|---------------------|---------------|-----------|------------------------------|
| Status              | Description   | Status    | Description                  |
| Off                 | No Link       | Off       |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

9 Install the Memory

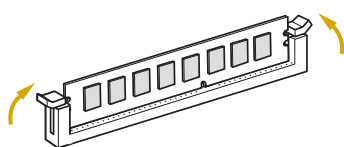
1 Unlock a DIMM slot by pressing the module clips outward.



2 Insert the memory module.

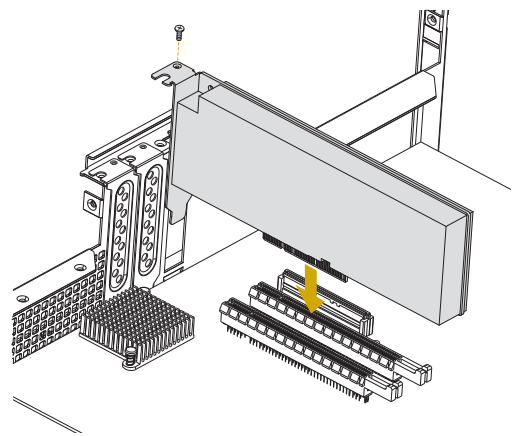


3 Lock the clips.



6 Install the PCIE Card

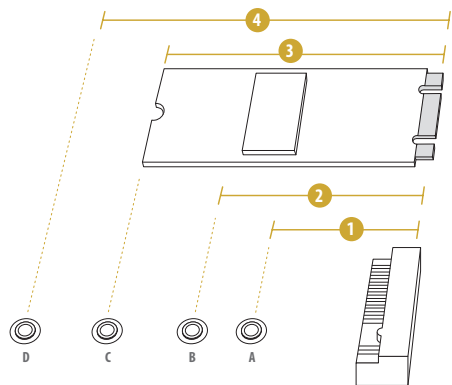
- 1 Remove the bracket facing the slot that you intend to use. Keep the screw for later use.
- 2 Align the card connector with the slot and press firmly until the card is completely seated on the slot.
- 3 Fasten the card to the chassis with the screw.



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

8 M.2 SSD Module Installation

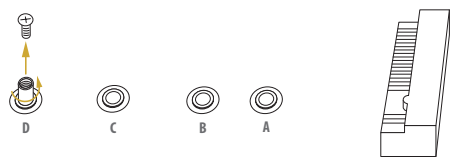
1 Find the corresponding nut location to be used.



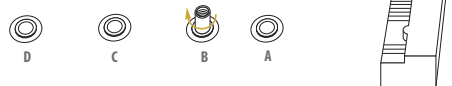
\*M2\_2 supports type 2242/2280 only.

| No.          | 1           | 2             | 3           | 4             |
|--------------|-------------|---------------|-------------|---------------|
| Nut Location | A (NUT30_1) | B (NUT42_1/2) | C (NUT60_1) | D (NUT80_1/2) |
| PCB Length   | 3cm         | 4.2cm         | 6cm         | 8cm           |
| Module Type  | Type 2230   | Type 2242     | Type 2260   | Type 2280     |

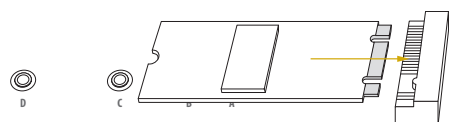
2 Move the standoff based on the module type and length.



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.

