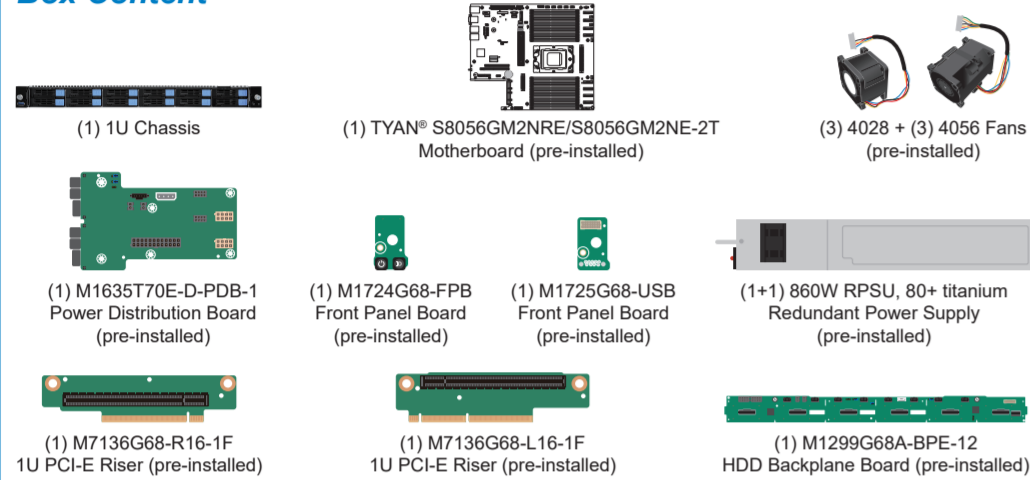


1 General Information

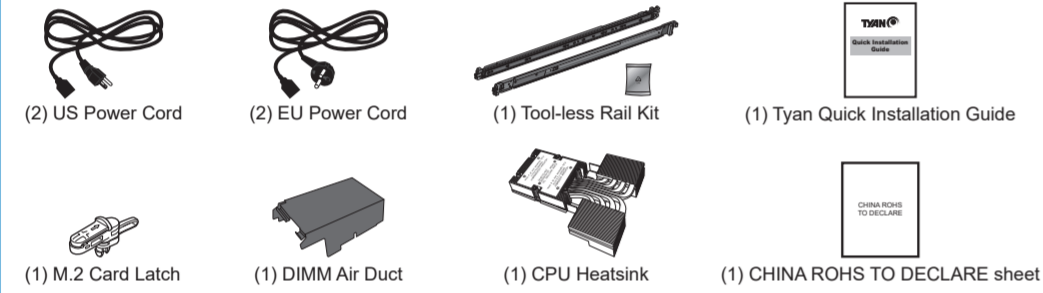
Read Me First

- The Barebone User's Manual is available for download from our Web site at <http://www.tyan.com>. Make sure to read all precautions and instructions before you start installing the server system.
- Refer all servicing to qualified personnel to avoid the risk of damage to the server system.
- Exercise normal ESD (Electrostatic Discharge) procedures during system integration. TYAN/MITAC recommends wearing gloves and an anti-static wrist strap to avoid possible damage to the equipment.
- Current processor socket design places the pins on the motherboard instead of the processor itself. Exercise caution when installing the processors as the manufacturer's warranty does not cover damage inflicted upon the motherboard, including damage to the CPU sockets.

Box Content



Accessories



Required Hardware Components

- Minimum Hardware Requirements**
To avoid integration difficulties and possible board damage, your system must meet the following minimum requirements:
- Processor: (1) AMD Zen 4 (Genoa) series CPU with TDP up to 400W
 - Memory Type:
 - (24) DIMM slots support
 - RDDR5 5200 w/ ECC (1.1V) when 2DPC/1DPC
 - RDDR5 5200 w/ ECC (1.1V) when 2DPC/1DPC
 - (24) DIMM slots per CPU
 - (12) memory channels per CPU
 - Hard Disk Drives: 12-port backplane, supports (12) NVMe U.2 SSD
 - Rack Mount Kit (Industry 19" rack-mountable)
- NOTE:** Please refer to the product user guide posted on <https://www.tyan.com> for product details.

Tools Required



3 System Installation

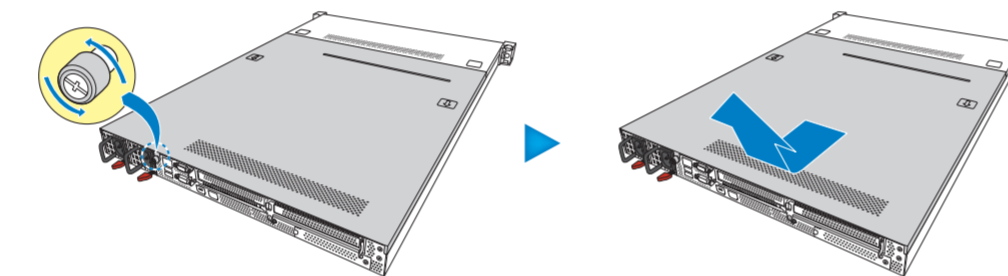


Open the Chassis

Preparing the Chassis

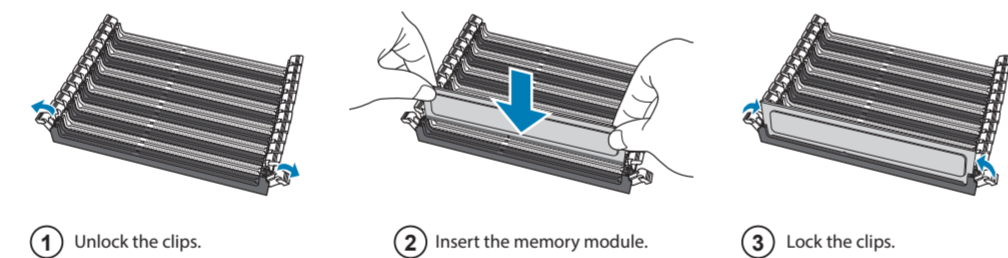
Read normal ESD (Electrostatic Discharge) procedures.

Place your TYAN® Server Chassis on a flat anti-static surface to perform the following integration procedures. Read ESD procedures before reaching inside to install components.



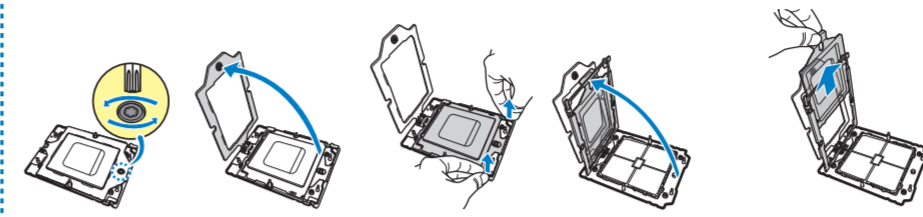
- Use a screwdriver to loosen the captive screw on the rear side of the system.
- Slide to release the top cover and then remove.

Install the Memory

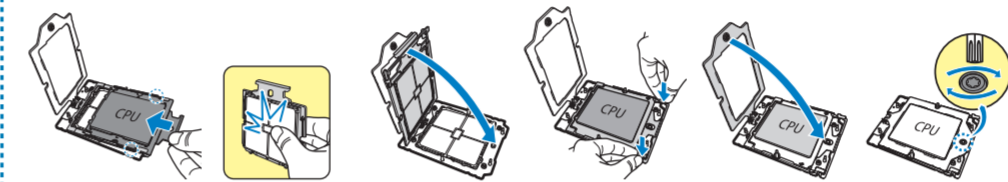


- Unlock the clips.
- Insert the memory module.
- Lock the clips.

Install the Processor

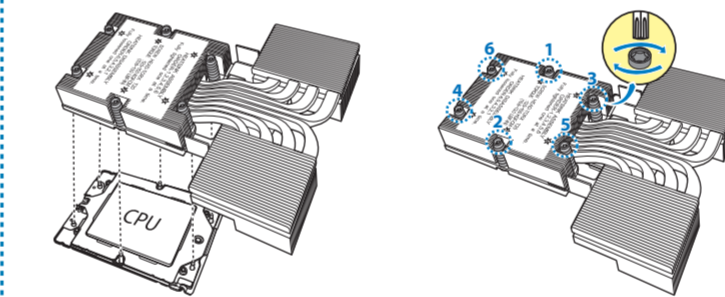


- Use a T20 Torx screwdriver to loosen the screw securing the force frame.
- By placing your both index fingers on the sides on the metal handle, pull to release the rail frame. Then lift the rail frame to its fully open position.
- Remove the external cap from the rail frame.



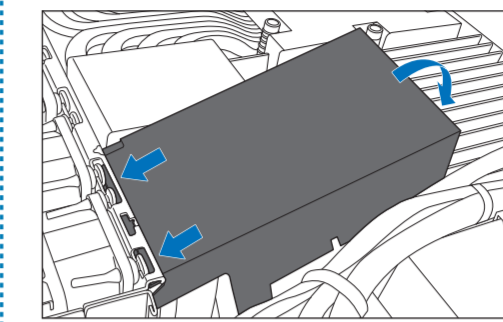
- Align and install the carrier frame with package into the slot on the rail frame.
 - Carefully close the rail frame with the installed package. Then push both edges of the rail frame firmly until it locks in place.
 - Close the force frame. Then use a T20 Torx screwdriver to tighten the screw to secure the force frame.
- NOTE:** During installation, observe the following:
 → make sure to push the carrier frame with package towards the end of the rail frame until it clicks into place.
 → do not drop the carrier frame or touch the package pad to avoid component damage.

Install the CPU Heatsink



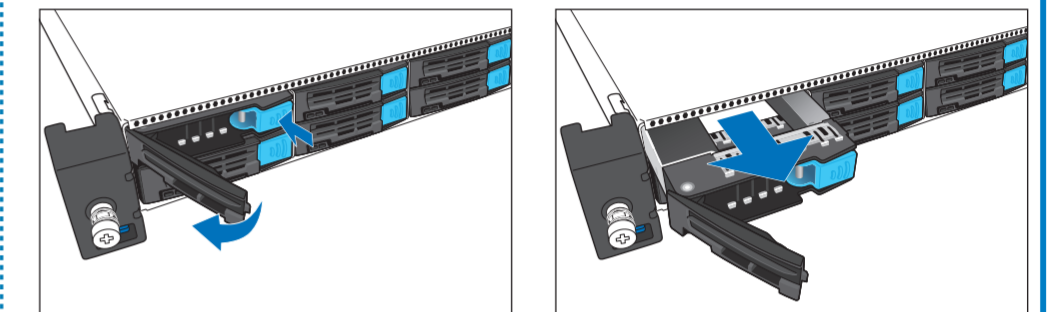
- Align and install the CPU heatsink onto the top of the CPU socket.
- Use a T20 Torx screwdriver to tighten the heatsink screws in a sequential order (1→2→3→4→5→6).

Install the DIMM Air Duct

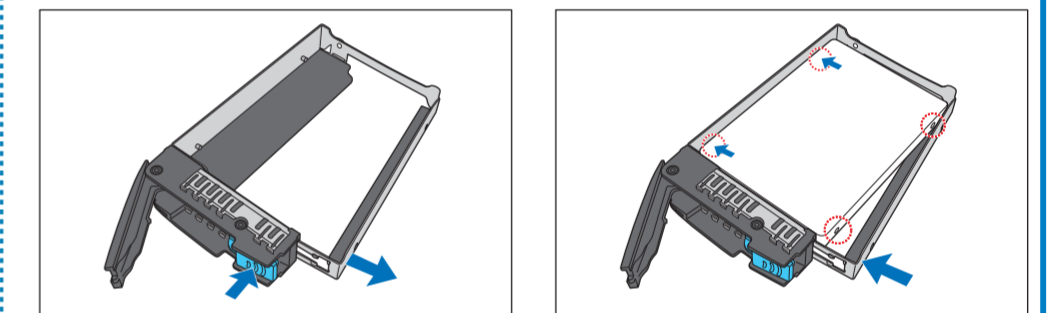


Align and insert the tabs on the DIMM air duct into the slots on the chassis. Then lower the DIMM air duct in place on top of the memory modules.

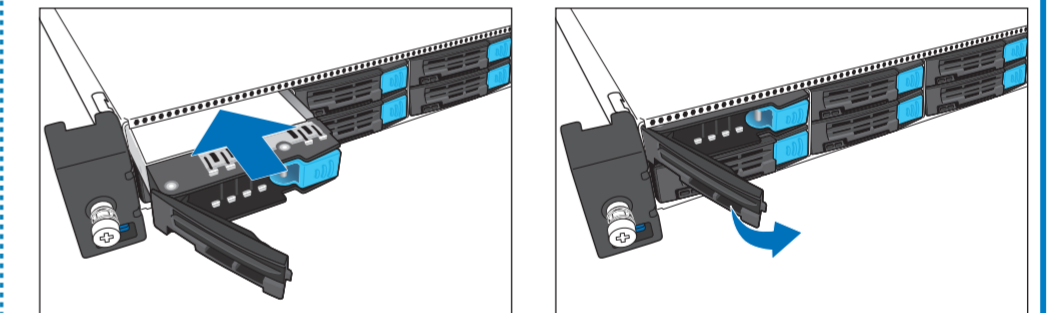
Install the Hard Disk Drives (2.5")



- Press on the locking lever latch. The locking lever opens automatically.
- Slide the drive tray out.



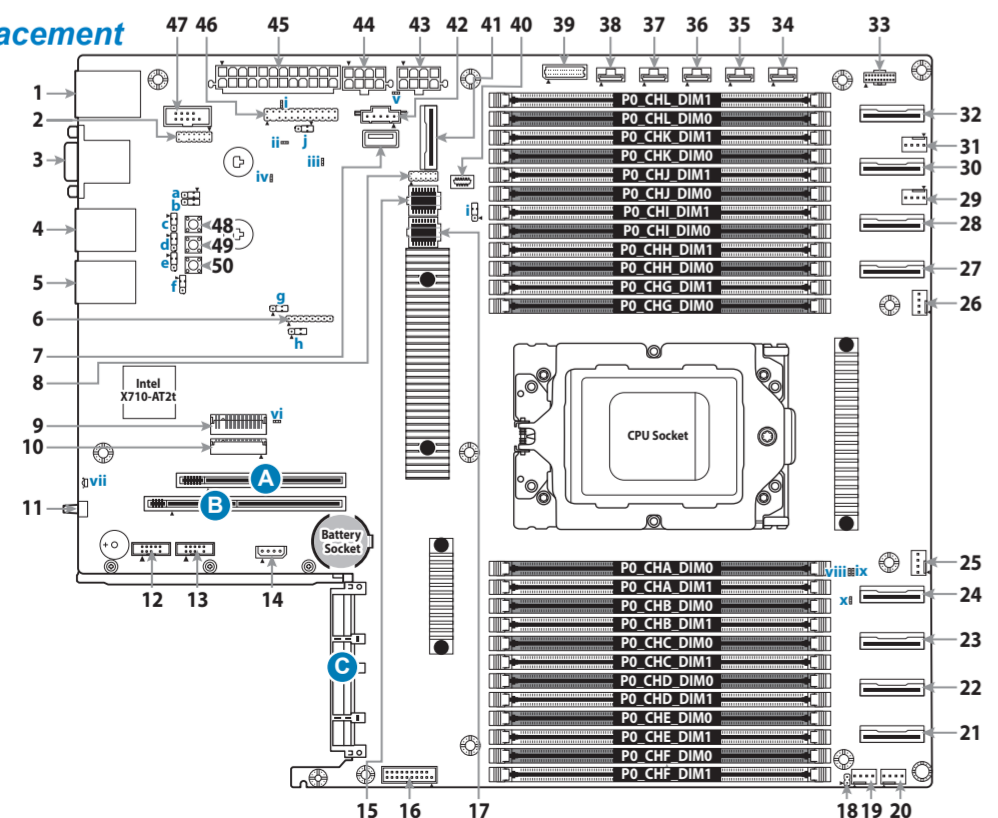
- Press on the locking lever latch steadily and pull the tray side rail outwards.
- By aligning with one side of the guide pins, install a 2.5" drive into the tray. Close the tray side rail firmly to secure the drive in place.



- Re-insert the drive tray into the chassis.
- Press the locking lever to secure the tray. Repeat the same procedures to install other drives.

2 Motherboard Placement

Motherboard Placement



CONNECTORS

- | | | |
|--|-----------------------------------|---|
| 1 RJ45 LAN Port (LAN3) Dedicated IPMI + | 17 BMC Socket | 34 HDD BP SMBUS Header (HDR_1) |
| 2 USB3.2 Gen1x2 | 18 Intrusion Header (J66) | 35 HDD BP SMBUS Header (HDR_2) |
| 3 VGA Header (VGA1) | 19 4-pin FAN Connector (SYS_FAN5) | 36 HDD BP SMBUS Header (HDR_3) |
| 4 RJ45 LAN Port (LAN1) | 20 4-pin FAN Connector (SYS_FAN4) | 37 HDD BP SMBUS Header (HDR_4) |
| 5 RJ45 LAN Port (LAN2) | 21 MCIO NVMe (CN4) | 38 HDD BP SMBUS Header (HDR_5) |
| 6 CPLD JTAG Connector (J12) | 22 MCIO NVMe (CN3) | 39 Fan Connector for BB (FAN_HD1) |
| 7 TYPE A USB3.2 Gen1 Header (TYPEA_USB1) | 23 MCIO NVMe (CN6) | 40 ESPI TPM Header (J56) |
| 8 TYAN Module Header (J62) | 24 MCIO NVMe (CN5) | 41 MCIO NVMe (CN1) |
| 9 M.2 Connector (M2_CN2) | 25 4-pin FAN Connector (CPU0_FAN) | 42 PSMI Connector (PSML_HD1) |
| 10 M.2 Connector (M2_CN1) | 26 4-pin FAN Connector (SYS_FAN3) | 43 CPU and Memory Power Connector (PW3) |
| 11 ID Button | 27 MCIO SATA/NVMe (CN10) | 44 CPU and Memory Power Connector (PW2) |
| 12 SGPIO0 Header (SGPIO0) | 28 MCIO SATA/NVMe (CN9) | 45 Power Connector (PW1) |
| 13 SGPIO1 Header (SGPIO1) | 29 4-pin FAN Connector (SYS_FAN2) | 46 Front Panel Connector (FPIO_2) |
| 14 IPMB Connector (IPMB1) | 30 MCIO NVMe (CN8) | 47 COM2 Header (COM2) |
| 15 BIOS Socket | 31 4-pin FAN Connector (SYS_FAN1) | 48 NMI Button |
| 16 USB3.2 Gen1 Header (USB3_FPIO1) | 32 MCIO NVMe (CN7) | 49 PWR Button |
| | 33 HDT Header (J1) | 50 COLD RST Button |

LEDS

- | | |
|------------------------------|-------------------------|
| i BMC ALERT LED (D18) | vi SATA & M.2 LED (D39) |
| ii SYS_PWROK LED (D32) | vii ID LED |
| iii BMC heartbeat LED (D1_2) | viii PWR_GOOD LED (D52) |
| iv PROCHOT LED (D26) | ix PWROK LED (D57) |
| v PSU_ALERT LED (D31) | x CPU RESET LED (D58) |

JUMPERS

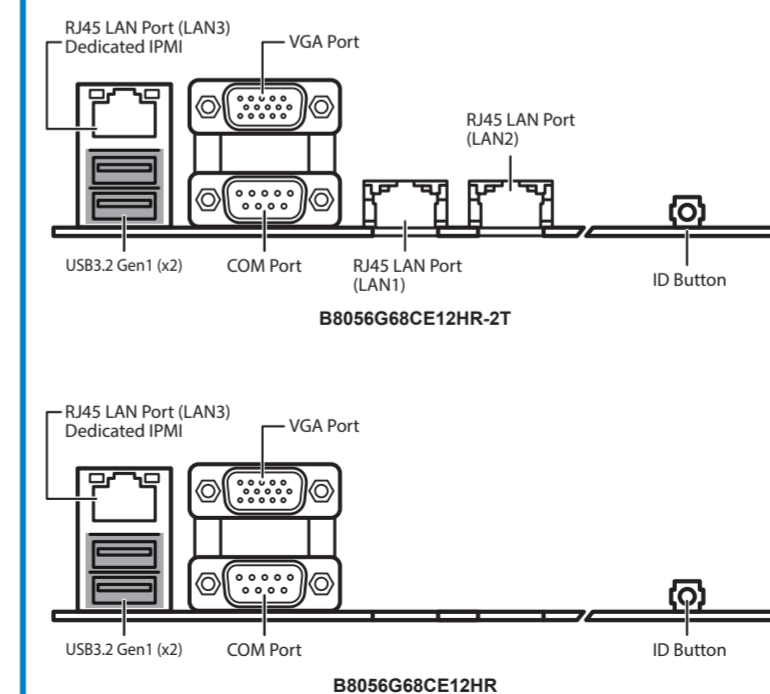
- | | |
|----------------------------|--------------------------------------|
| a COM2 Switch Jumper (J7) | h CPLD force PowerOn SEL Jumper (J3) |
| b COM2 Switch Jumper (J6) | i Clear CMOS Jumper (J75) |
| c BMC Jumper (J2) | j Reset Jumper (J33) |
| d COM1 Switch Jumper (J8) | |
| e COM1 Switch Jumper (J9) | |
| f NCSI SEL Jumper (J4) | |
| g SMBUS SEL Jumper (3PHD1) | |

SLOTS

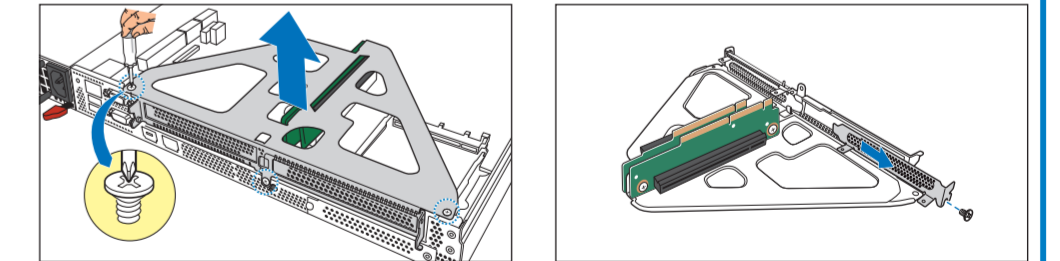
- | |
|--------------------------|
| A PCIe#1 x24 (PESLOT1) |
| B PCIe#2 x16 (PESLOT2) |
| C OCP 3.0 Mezzanine Slot |

4 I/O Ports

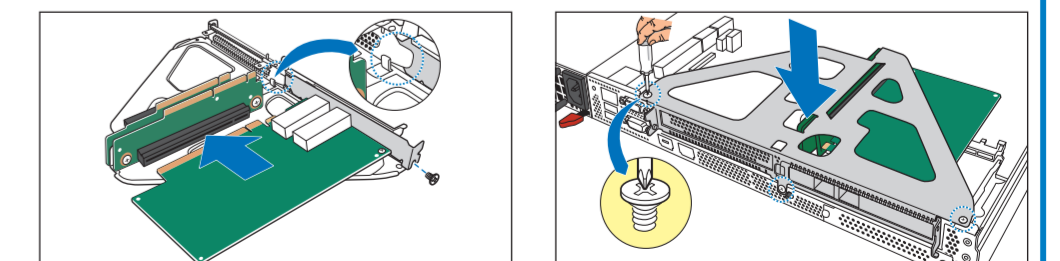
Locate the External I/O Port



Install the Add-On Card (Optional)



- Remove the three screws securing the riser bracket to the chassis. Then lift to remove the riser bracket.
- Flip the riser bracket and place it on the surface. Remove the fixing screw and the PCI dummy slot cover accordingly.



- Install the add-on card to the riser slot. Make sure the card is firmly latched into the riser bracket. Secure the add-on card to riser bracket with the screw released in step 2.
- Carefully flip the riser bracket. Then align and install the riser bracket to its slot on the chassis. Secure the riser bracket to chassis with the three screws released in step 1.

