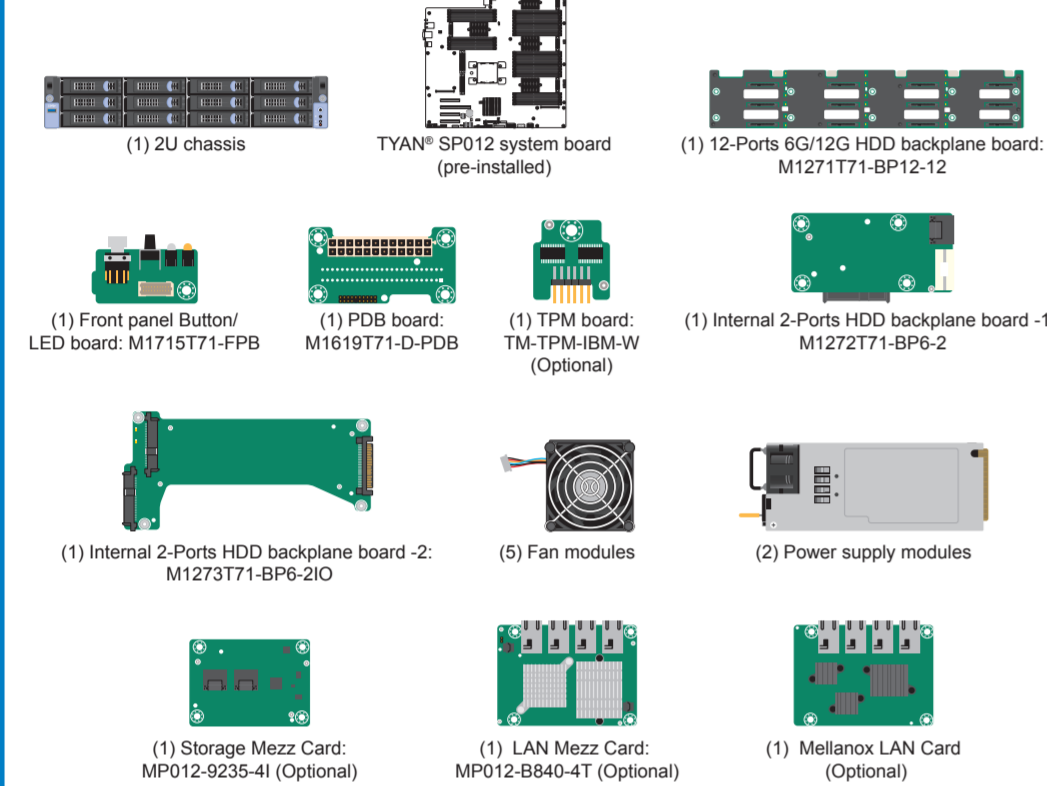


1 General Information

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.

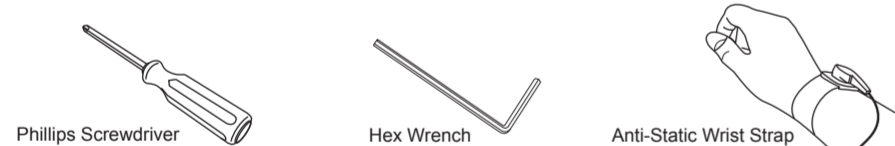
Box Content



Required Hardware Components

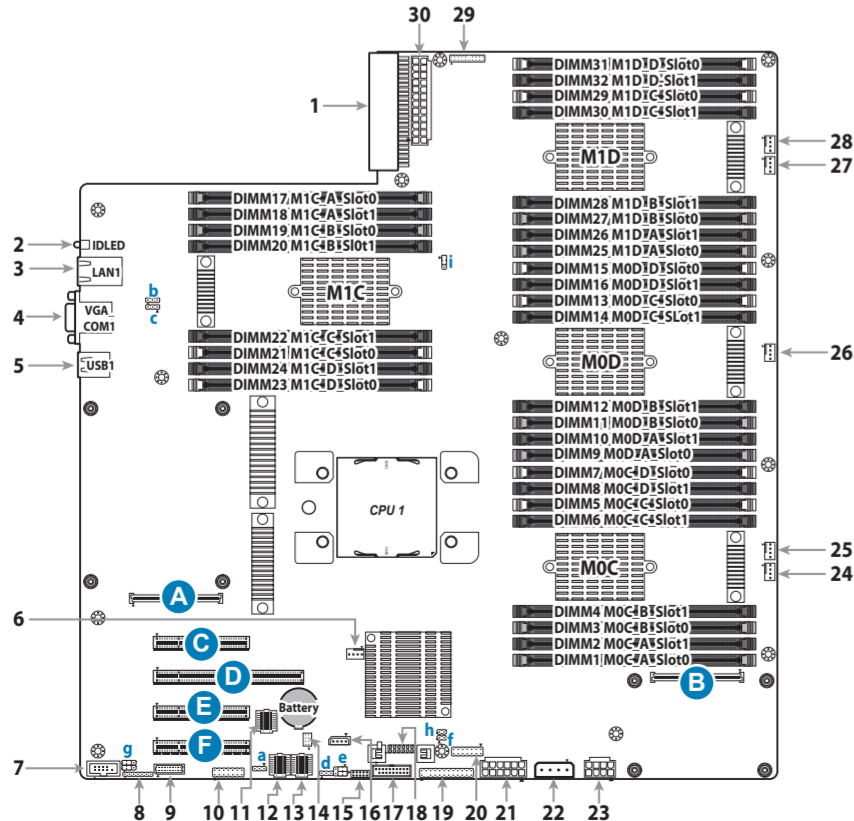
- Minimum Hardware Requirements**
- To avoid integration difficulties and possible board damage, your system must meet the following minimum requirements:
- Processor: (pre-installed)
 - Memory: Tyan certified memory
 - Hard Disk Drives: 2.5"/3.5" SATA/SAS HDD
 - Rack Mount Kit (Industry 19" rack-mountable)
- NOTE:** The updated hardware requirements of the system please refer to the barebones user's manual on our website at www.tyan.com

Tools Required



3 Motherboard Placement

Motherboard Placement



CONNECTORS

- Power supply Connector (PWR1)
- ID LED
- LAN Port+USB Connector (LAN1)
- VGA+COM Connector (VGA_COM1)
- USB3.0+USB3.0 Connector (USB1)
- FAN Connector (CPU0_FAN)
- COM Connector (COM2)
- TUSB JTAG Header (J13)
- SYS_FAN Header (J48)
- APSS JTAG Header (J8)
- Golden BMC flash Socket (BMC2)
- Primary BMC flash Socket (BMC1)
- PNOR Socket (BIOS1)
- SPI debug Connector (BIOS_DEBUG1)
- VPD Header (J9)
- IPMB Connector (IPMB1)
- USB3.0 Header (USB3_2)
- TPM Header (J47)
- Front Panel Header (SSL_FP1)
- BMC JTAG Header (J16)
- Power Connector (PWR3)
- Power Connector (12V+5V, PWR4)
- Power Connector (GPU_12V, PWR5)
- FAN Connector (SYS_FAN1)
- FAN Connector (SYS_FAN2)
- FAN Connector (SYS_FAN3)
- FAN Connector (SYS_FAN4)
- FAN Connector (SYS_FAN5)
- PSU Signal Header (J46)
- Power supply Connector (PWR2)

SLOTS

- A** OCP Slot (x8, J4)
- B** OCP Slot (x8, J6)
- C** PCI-E CPU Slot (x8, PCIE_SLOT3)
- D** PCI-E CPU Slot (x16, PCIE_SLOT2)
- E** PCI-E PLX Slot (x8, PCIE_SLOT1)
- F** PCI-E PLX Slot (x8, PCIE_SLOT0)

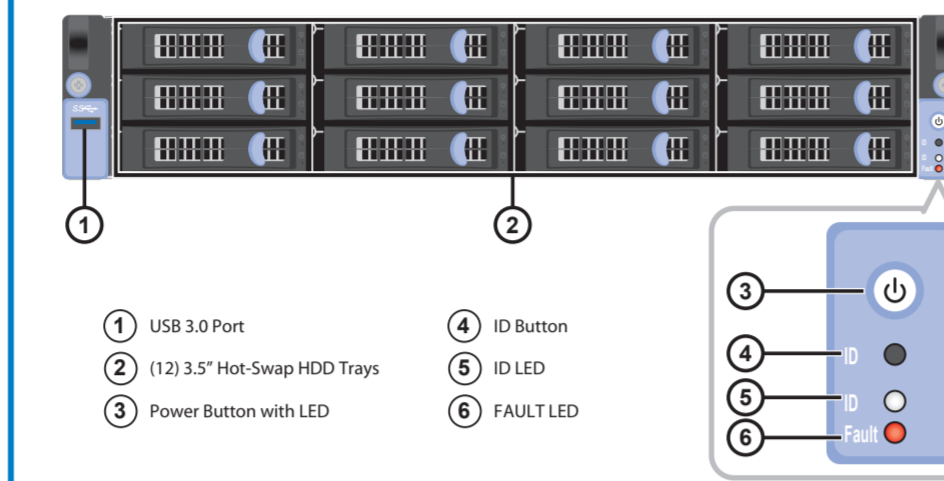
JUMPER

- a** SMBUS Header (J14)
- b** SMBUS Header (J15)
- c** SMBUS Header (J18)
- d** SMBUS Header (J41)
- e** SMBUS Header (J42)
- f** ID LED SW Header (ID_SW1)
- g** BMC debug Header (BMC_DEBUG1/BMC_DEBUG2)
- h** Chassis Intrusion Pin Header (INTRUSION1)
- i** CPU FSI Connector (J10)

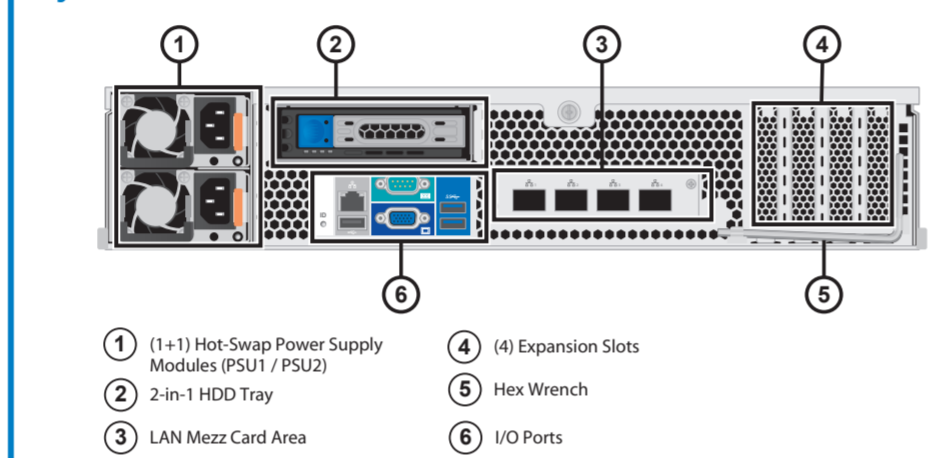
NOTE: There is risk when setting the jumper by yourself.

2 About the Product

System Front View



System Rear View

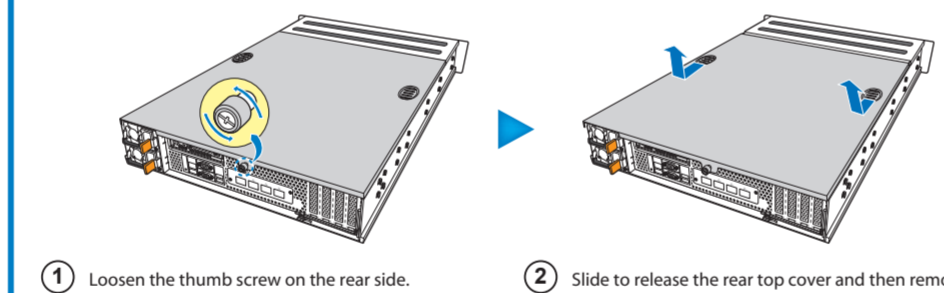


4 System Installation

Open the Chassis

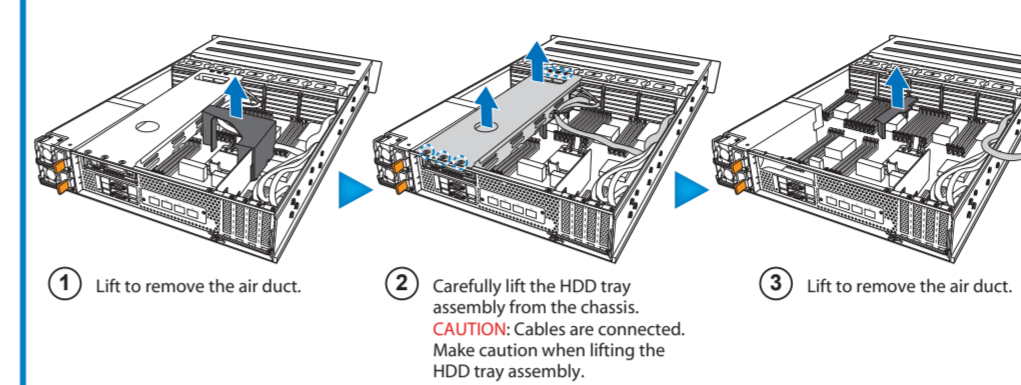
Preparing the Chassis

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.

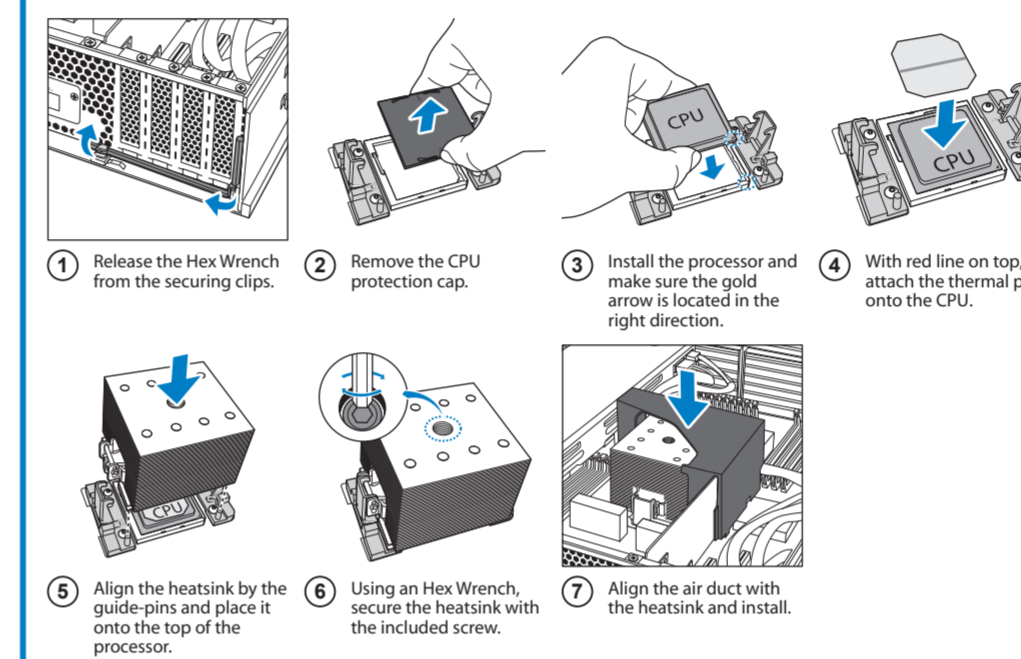


4 System Installation

Remove the Air Duct



Install the Processor



Memory Population

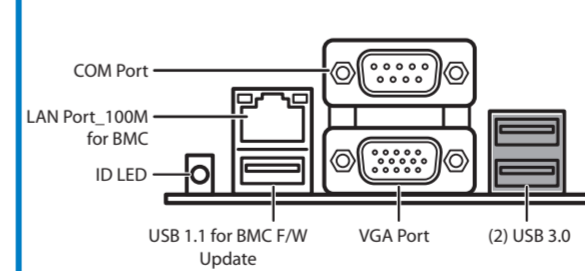
Recommended DIMM plug sequence:

Centaur	Port(s)	Slot	DIMM quantity	DIMM connector tab color	Sequence
M0-C	A and B	0	2	Blue	1
M1-C	A and B	0	2	Blue	2
M0-D and M1-D	A and B	0	4	Blue	3
M0-C, M0-D, M1-C and M1-D	C and D	0	8	Ivory	4
M0-C, M0-D, M1-C and M1-D	A, B, C and D	1	16	Black	5

- NOTE:**
- DIMMs must be plugged in pairs.
 - DIMMs should all be the same size when progressing in this recommended sequence.
 - These are simplified rules to guarantee the same or better BW and latency for all workloads after an upgrade.
 - All DIMM connector housings are black color.

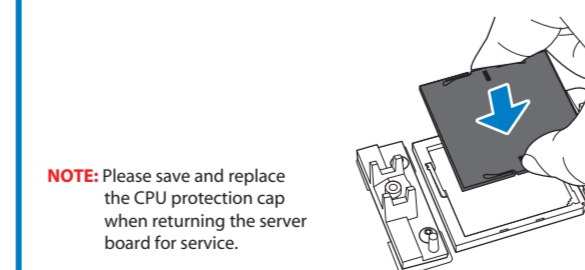
5 I/O Ports

Locate the External I/O Port



6 Caution

CPU Cover for DOA/RMA

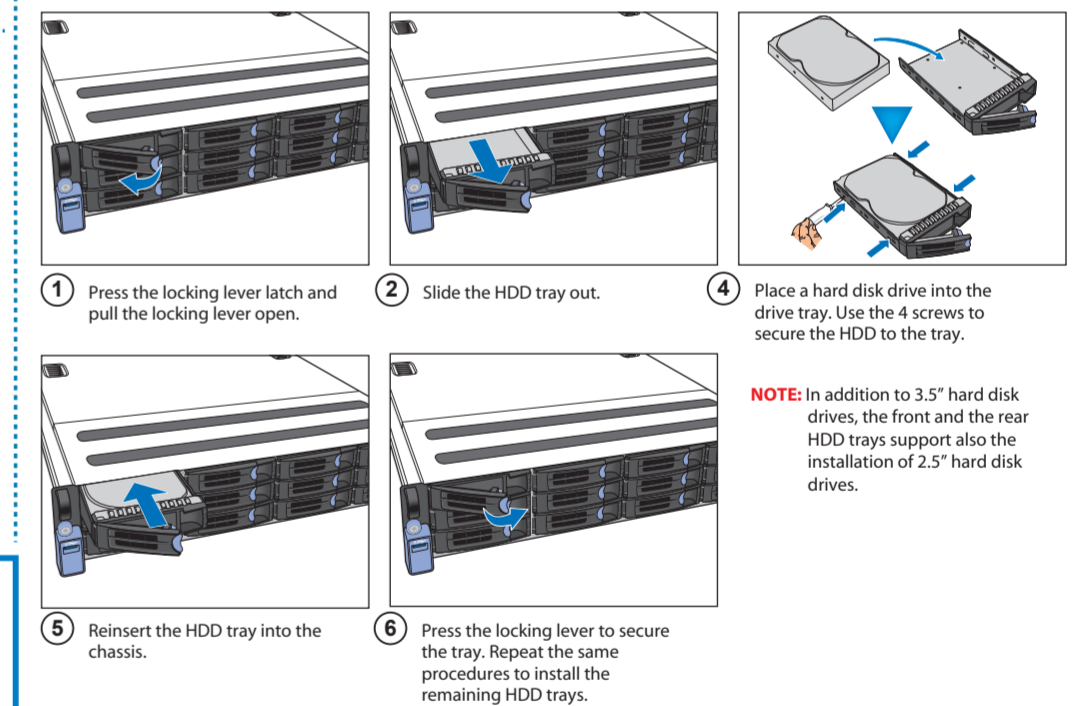


DIMM configurations including frequency and information on DMI bandwidth:

Slot 1	Slot 0	Slot 1	Slot 0	Frequency	Frequency	-Bandwidth
Port AB	Port CD	Port AB	Port CD	DMI	DDR	GB/s
Empty	1	Empty	Empty	9.6	1333	13.44
Empty	Empty	Empty	1	9.6	1333	13.44
Empty	1	Empty	1	9.6	1333	25.06
1	1	Empty	Empty	9.6	1333	14.93
Empty	2	Empty	Empty	9.6	1333	17.92
Empty	Empty	1	1	9.6	1333	17.92
Empty	Empty	Empty	2	9.6	1333	17.92
1	1	Empty	1	9.6	1333	25.06
Empty	1	1	1	9.6	1333	25.06
Empty	1	Empty	2	9.6	1333	25.06
Empty	2	Empty	1	9.6	1333	25.06
1	1	1	1	9.6	1333	25.06
1	1	Empty	2	9.6	1333	25.06
Empty	2	1	1	9.6	1333	25.06
Empty	2	Empty	2	9.6	1333	25.06
2	2	Empty	Empty	9.6	1333	17.92
Empty	4	Empty	Empty	9.6	1333	17.92
Empty	Empty	2	2	9.6	1333	17.92
Empty	Empty	Empty	4	9.6	1333	17.92
Empty	1	2	2	9.6	1333	25.06
Empty	1	Empty	4	9.6	1333	25.06
Empty	2	2	2	9.6	1333	25.06
2	2	1	1	9.6	1333	25.06
2	2	Empty	2	9.6	1333	25.06
Empty	2	2	2	9.6	1333	25.06
Empty	2	Empty	4	9.6	1333	25.06
Empty	4	1	1	9.6	1333	25.06
Empty	4	Empty	2	9.6	1333	25.06
2	2	2	2	9.6	1333	25.06
2	2	2	2	9.6	1333	25.06
Empty	2	2	4	9.6	1333	25.06
Empty	4	2	2	9.6	1333	25.06
Empty	4	Empty	4	9.6	1333	25.06
Empty	Empty	4	4	9.6	1333	25.06
4	4	Empty	4	8	1066	14.33
4	4	Empty	4	8	1066	14.33
4	4	4	4	8	1066	20.88

- NOTE:**
- Blue highlight shows DIMM rank in each slot and includes 2DIMMs.
 - Yellow highlight shows reduced frequency or bandwidth from DIMM configuration.

Install Front 3.5" Hard Disk Drives



Install Rear 3.5" Hard Disk Drives

