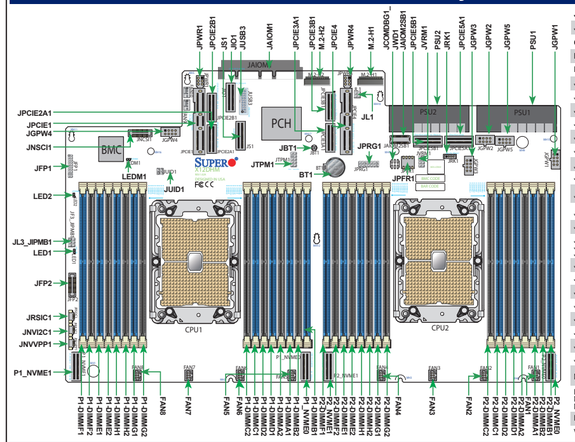
SUPERMICRO® SuperServer 220H-TN24R Quick Reference Guide

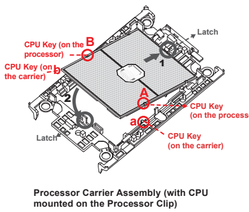
Board Layout



Jumper	Description	Default Setting
JBT1	CMOS clear	Open (Normal)
Connector	**Description**	
BT1	Onboard CMOS battery	
FAN1 ~ FAN8	6-pin system cooling fan headers	
JAOM1	The Supermicro® Advanced I/O Module (AIOM) slot	
JF3_JIPMB1	6-pin BMC external I²C header (for an BMC card)	
JFP1	Front control panel header	
JFP2	Front VGA header	
JGPW1~5	8-pin power connector	
JIO1	Low-profile slimSAS 8x I/O connector	
JL1	Chassis intrusion header	
JNCSI1	NC-SI (Network Controller Sideband Interface) connector	
JNVI2C1	NVMe SMBus (I²C) headers used for PCIe hot-plug SMBus clock and data connections	
JNVVPP1	CPU VPP bus header for backplane NVMe riser card device	
JPCIE1, JPCIE4	CPU PCIe 4.0 x16 slots	
JPCIE2A1, JPCIE2B1, JPCIE3A1,JPCIE3B1, JPCIE5A1, JPCIE5B1	CPU PCIe 4.0 x8 slots	
JPRG1	Complex Programmable Logical Device (CPLD) header	
JPWR1, JPWR4	6-pin power connector	
JRSIC1	SMBus header for riser card	
JS1	I-SATA 0~7 connector	
JTPM1	Trusted Platform Module/Port 80 Connector	
JUID1	Multi-purpose UID switch and reset switch	
JUSB3	USB 3.0 header (supports two USB 3.0 ports)	
JVRM1	VRM SMB clock to BMC	
M.2-H1/M.2-H2	M.2 PCIe 3.0 x2 or SATA 3.0 hybrid slots (Supports M-Key 2280and 22110) supported by PCH	
P1_NVME0/P1_NVME1/P2_NVME0/P2_NVME1	NVMe PCIe 4.0 x4 ports (Note: When installing an NVMe device on a motherboard, please be sure to connect JNVME0 first for your system to work properly.)	
PSU1~2	Power supply unit connectors	
VROC (JRK1)	Intel VROC RAID key header for NVMe SSD	

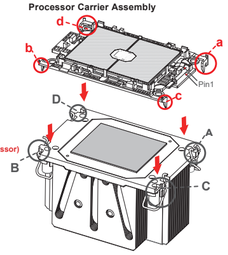
CPU Installation

1. Put processor into bracket – attention to the lineup Pin and key on both processor and carrier.

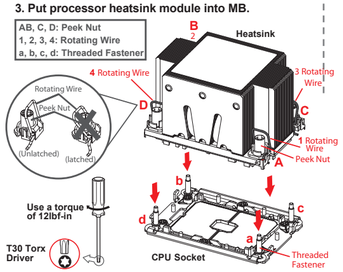


Processor Carrier Assembly (with CPU mounted on the Processor Clip)

2. Put processor carrier module into HS.



3. Put processor heatsink module into MB.

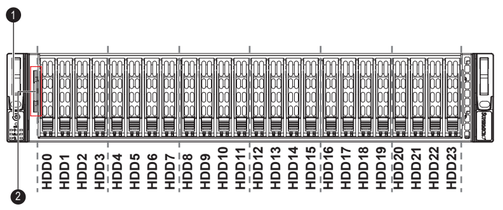


Memory Support

CPUs/DIMMs	Memory Population Sequence * Unbalanced, not recommended.
2 CPUs & 2 DIMMs	CPU1: P1-DIMMA1 CPU2: P2-DIMMA1
2 CPUs & 4 DIMMs	CPU1: P1-DIMMA1/P1-DIMME1 CPU2: P2-DIMMA1/P2-DIMME1
2 CPUs & 6 DIMMs*	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1 CPU2: P2-DIMMA1/P2-DIMME1
2 CPUs & 8 DIMMs	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1
2 CPUs & 10 DIMMs*	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1
2 CPUs & 12 DIMMs	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1
2 CPUs & 14 DIMMs*	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1
2 CPUs & 16 DIMMs	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1/P2-DIMMD1/P2-DIMMH1
2 CPUs & 18 DIMMs*	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1/ P1-DIMMA2/P1-DIMME2/P1-DIMMC2/P1-DIMMG2 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1
2 CPUs & 20 DIMMs*	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1/ P1-DIMMA2/P1-DIMME2/P1-DIMMC2/P1-DIMMG2 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1/P2-DIMMD1/P2-DIMMH1
2 CPUs & 22 DIMMs*	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1/ P1-DIMMA2/P1-DIMME2/P1-DIMMC2/P1-DIMMG2/P1-DIMMB2/P1-DIMMF2/P1-DIMMD2/P1-DIMMH2 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1/P2-DIMMD1/P2-DIMMH1
2 CPUs & 24 DIMMs	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1/ P1-DIMMA2/P1-DIMME2/P1-DIMMC2/P1-DIMMG2/P1-DIMMB2/P1-DIMMF2/P1-DIMMD2/P1-DIMMH2 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1/P2-DIMMD1/P2-DIMMH1
2 CPUs & 28 DIMMs*	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1/ P1-DIMMA2/P1-DIMME2/P1-DIMMC2/P1-DIMMG2/P1-DIMMB2/P1-DIMMF2/P1-DIMMD2/P1-DIMMH2 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1/P2-DIMMA2/P2-DIMME2/ P2-DIMMC2/P2-DIMMG2/P2-DIMMB2/P2-DIMMF2
2 CPUs & 32 DIMMs	CPU1: P1-DIMMA1/P1-DIMME1/P1-DIMMC1/P1-DIMMG1/P1-DIMMB1/P1-DIMMF1/P1-DIMMD1/P1-DIMMH1/ P1-DIMMA2/P1-DIMME2/P1-DIMMC2/P1-DIMMG2/P1-DIMMB2/P1-DIMMF2/P1-DIMMD2/P1-DIMMH2 CPU2: P2-DIMMA1/P2-DIMME1/P2-DIMMC1/P2-DIMMG1/P2-DIMMB1/P2-DIMMF1/P2-DIMMD1/P2-DIMMH1/ P2-DIMMA2/P2-DIMME2/P2-DIMMC2/P2-DIMMG2/P2-DIMMB2/P2-DIMMF2/P2-DIMMD2/P2-DIMMH2

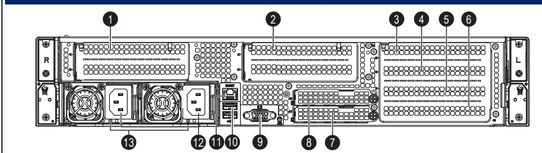
Note: Numbers of DIMM not listed are not supported

Front View



No.	Description
1	Front Control Panel
2	Service/Asset Tag with System Serial Number and BMC Unique Password

Rear View



No.	Description
1	Slots 1-2: Optional 2 PCI-E slots or 2 NVMe drive bays
2	Slots 3-4: Optional 2 PCI-E slots or 2 NVMe drive bays
3	Slot 5, PCI-E 4.0 x8 or x16 Slot (CPU1)*
4	Slot 6, PCI-E 4.0 x8 Slot (CPU1)*
5	Slot 7, PCI-E 4.0 x8 Slot or 16 Slot (CPU1)*

*Optional PCI-E Slots

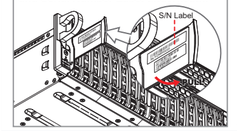
No.	Description
6	Slot 8, PCI-E 4.0 x8 Slot (CPU1)*
7	Slot A1, AIOM/OCP 3.0 Networking Slot (CPU1)
8	Slot A2, AIOM/OCP 3.0 Networking Slot (CPU2)
9	VGA Port
10	2x USB 3.0 Ports
11	Dedicated BMC LAN Port
12	Redundant 1600W Titanium Power Supplies

No.	Description	
13	Power Supply LED Solid Green	A valid power source is connected to the PSU and the PSU is operational.
	Power Supply LED Blinking Green	PSU is in standby state (12VSB standby power only).
	Power Supply LED Solid Amber	(Scenario 1) Power source to the PSU is disconnected or invalid but a second PSU is operational. (Scenario 2) PSU failure and the PSU is not operational.
	Power Supply LED Blinking Amber	A PSU warning event occurred and the PSU is still operational.

LBL-2469-T-QRG Rev 1.0a

System Information

Pull-out tag with BMC unique password and Serial Number Label underneath.



Each system comes with a unique default password for the ADMIN user. This can be found on a sticker on the motherboard and a sticker underneath the service tag on chassis.
If necessary, the password can be reset by the Supermicro IPMICFG tool.

For more information, please visit https://www.supermicro.com/en/solutions/management-software/bmc-resources

Caution and Product Resources

SAFETY INFORMATION:

IMPORTANT: See installation instructions and safety warning before connecting system to power supply.
http://www.supermicro.com/about/policies/safety_information.cfm

WARNING:

To reduce risk of electric shock/damage to equipment, disconnect power from server by disconnecting all power cords from electrical outlets. If any CPU socket empty, install protective plastic CPU cap.

CAUTION:

Always be sure all power supplies for this system have the same power output. If mixed power supplies are installed, the systemwill not operate.

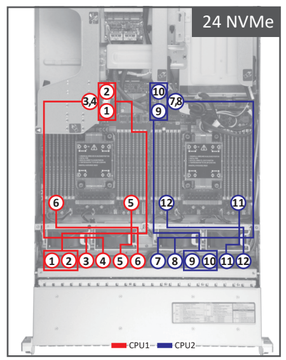
CAUTION:

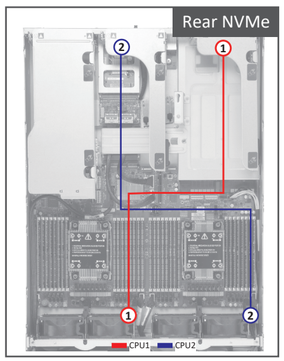
This unit has redundant power sources.
Please disconnect all the power cords before servicing.

PRODUCT RESOURCES:

For more information go to:
http://www.supermicro.com/support

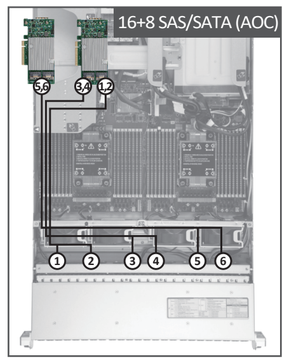
NVMe Drive Bay Cable Routing





Drive Configuration	Cable Part Number	① Drive Bay 0-1	② Drive Bay 2-3	③ Drive Bay 4-5	④ Drive Bay 6-7	⑤ Drive Bay 8-9	⑥ Drive Bay 10-11	⑦ Drive Bay 12-13	⑧ Drive Bay 14-15	⑨ Drive Bay 16-17	⑩ Drive Bay 18-19	⑪ Drive Bay 20-21	⑫ Drive Bay 22-23
24 NVMe		CBL-SAST-1302LP-85	CBL-SAST-1302LP-85	CBL-GNZ4-1258-85		CBL-SAST-1303LP-85	CBL-SAST-1303LP1-85	CBL-GNZ4-1259-85		CBL-SAST-1303LP2-85	CBL-SAST-1303LP2-85	CBL-SAST-1303LP-85	CBL-SAST-1303LP1-85
Rear NVMe		CBL-SAST-1205LP2-85	CBL-SAST-1205LP2-85										

SAS/SATA Drive Bay Cable Routing



Drive Configuration	Cable Part Number	① Drive Bay 0-3	② Drive Bay 4-7	③ Drive Bay 8-11	④ Drive Bay 12-15	⑤ Drive Bay 16-19	⑥ Drive Bay 20-23
16+8 SAS/SATA		CBL-SAST-1264F-100		CBL-SAST-1276F-100		CBL-SAST-1296F-100	

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