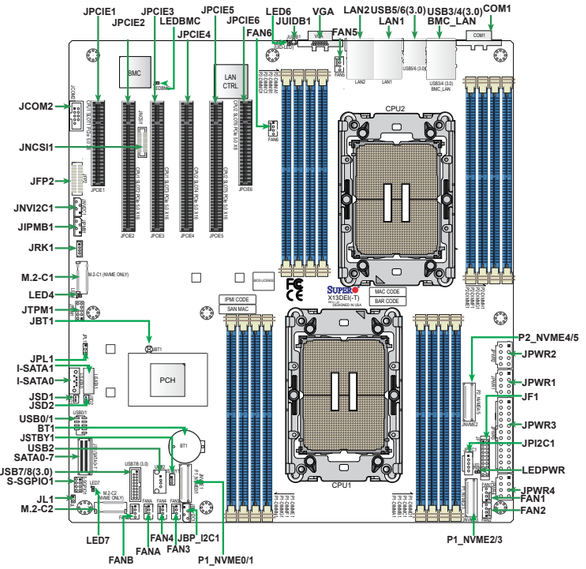
SUPERMICRO® SuperServer 741P-TR(T) Quick Reference Guide

Board Layout



Quick Reference Table

Jumper	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
JPL1	LAN1, LAN2 Enable/Disable	Pins 1-2 (Enabled)

LED	Description	Status
LED4, LED7	M.2 LEDs (for M.2-C1, M.2-C2)	Blinking Green: Device Working
LED6	Unit Identifier (UID) LED	Solid Blue: Unit Identified
LEDBMC	BMC Heartbeat LED	Blinking Green: BMC Normal (Active), Solid Green: (During BMC Reset or during a Cold Reboot)
LEDPWR	Power LED	LED On: Onboard Power On

Connector	Description
BT1	Onboard CMOS Battery
BMC_LAN	Dedicated BMC LAN Port
COM1	Rear I/O COM Port
FAN1 - FAN6, FANA, FANB	CPU/System Fan Headers
I-SATA0, I-SATA1	Intel PCH Powered I-SATA 3.0 Ports with support of SuperDOM devices *DOM: Disk on Module
JBP_I2C1	4-pin BMC External I²C Header
JCOM2	Front Accessible COM Port Header
JF1	Front Control Panel Header
JFP2	Front Accessible VGA Connection Header
JIPMB1	4-pin BMC External I²C Header (for Inlet Temperature Sensor)
JL1	Chassis Intrusion Header
JNCSI1	NC-SI (Network Controller Sideband Interface) Connector
JNVI2C1	NVMe SMBus I²C Header with hot-plug support
JPCIE1 (SLOT1), JPCIE6 (SLOT6)	PCIe 5.0 x8 Slots (SLOT1: supported by CPU1, SLOT6: supported by CPU2)
JPCIE2/3 (SLOT2/3), JPCIE4/5 (SLOT4/5)	PCIe 5.0 x16 Slots (SLOT2/3: supported by CPU1, SLOT4/5: supported by CPU2)
JPI2C1	Power System Management Bus (SMBus) I²C Header
JPWR1, JPWR2, JPWR4	8-pin Power Connectors
JPWR3	24-pin ATX Power Connector
JS1 (SATA 0 - SATA7)	SlimSAS x8 Connector with support of eight Intel PCH SATA 3.0 connections (RAID 0, 1, 5, and 10 supported)
JSD1, JSD2	SATA DOM Power Connectors
JSTBY1	5V Standby Power Header
JSD1, JSD2	SATA DOM Power Connectors
JSTBY1	5V Standby Power Header
JTPM1	Trusted Platform Module/Port 80 Header
JUIDB1	Unit Identifier (UID) Switch / BMC Reset Button
LAN1, LAN2	Ethernet LAN (RJ45) Port 1 and Port 2 (1G LAN support on X13DEI and 10G LAN support on X13DEI-T)
M.2-C1, M.2-C2	PCIe 4.0 x2 NVMe M.2 Slots supported by CPU1 (with support of M-Key 2280 and 22110)
P1_NVME0/1 (JNVME1) P1_NVME2/3 (JNVME2)	MCIO x8 Connectors supported by CPU1 with four PCIe 5.0 x4 NVMe connections
P2_NVME4/5 (JNVME3)	MCIO x8 Connector supported by CPU2 with two PCIe 5.0 x4 NVMe connections
S-SGPIO1	Serial General Purpose I/O Header (for I-SATA0/1 SuperDOM support)
USB0/1	USB 2.0 Header with support of two USB connections
USB2	Internal USB 2.0 Vertical Type-A Connector
USB3/4 (3.0)	Back Panel USB 3.0 Ports (5Gbps, Type-A)
USB5/6 (3.0)	Back Panel USB 3.0 Ports (5Gbps, Type-A)
USB7/8 (3.0)	USB 3.0 Header with support of two USB connections
VGA	Rear I/O VGA Port

Memory

DIMM Population Guidelines for Optimal Performance

DDR5 Memory Support for the 5th Gen. Intel Xeon Scalable Processors

Type	Ranks Per DIMM & Data Width (Stack)	DIMM Capacity (GB)		Speed (MT/s); Voltage (V); DIMM Per Channel (DPC)	
				1DPC Note 1	2DPC
		16 Gb (DRAM Density)	24 Gb (DRAM Density)	1.1V	
RDIMM	SRx8 (RC D)	16 GB	24 GB Note 2	5600	4400
	SRx4 (RC C)	32 GB	48 GB Note 2		
	SRx4 (RC F) 9x4	32 GB	48 GB Note 2		
	DRx8 (RC E)	32 GB	48 GB Note 2		
	DRx4 (RC A)	64 GB	96 GB		
	DRx4 (RC B) 9x4	64 GB	96 GB		
RDIMM 3DS	(4R/8R) x4 (RC A)	2H-128 GB 4H-256 GB	N/A		
LRDIMM/LRDIMM-3DS	N/A	N/A	N/A	Not Supported	Not Supported

Note 1: 1DPC applies to 1 SPC (Sockets Per Channel) or 2 SPC implementation.
Note 2: The 24 Gb 2DPC configuration with 24 GB and 48 GB DIMMs is NOT recommended.

DDR5 Memory Support for the 4th Gen. Intel Xeon Scalable Processors

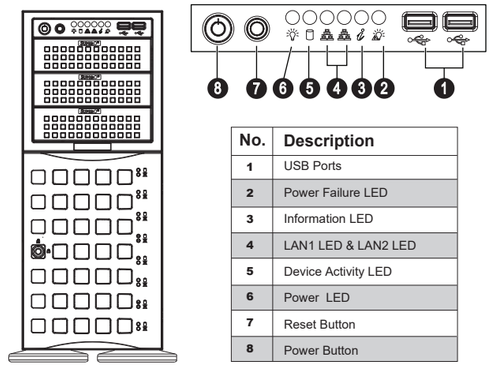
Type	Ranks Per DIMM & Data Width (Stack)	DIMM Capacity (GB)	Speed (MT/s); Voltage (V); DIMM Per Channel (DPC)	
			1DPC (Note)	2DPC
		16Gb (DRAM Density)	1.1V	
RDIMM	SRx8 (RC D)	16GB	4800	4400
	SRx4 (RC C)	32GB		
	SRx4 (RC F) 9x4	32GB		
	DRx8 (RC E)	32GB		
	DRx4 (RC A)	64GB		
	DRx4 (RC B) 9x4	64GB		
RDIMM 3DS	(4R/8R) x4 (RC A)	2H-128GB 4H-256GB		
LRDIMM/LRDIMM-3DS	N/A	N/A	Not Supported	Not Supported

Note: This memory configuration is recommended by Supermicro for optimal memory performance. Please use this configuration to maximize your memory performance.

DDR5 Memory Population Table for X13 DP Motherboards (with 16 DIMMs installed)

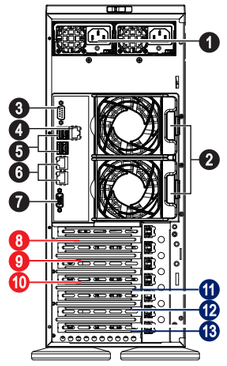
1 CPU	*Memory Population Sequence*
1 CPU & 1 DIMM	P1-DIMMA1 or P1-DIMME1 or P1-DIMMB1 or P1-DIMMF1
1 CPU & 2 DIMMs	P1-DIMMA1 / P1-DIMMG1 or P1-DIMMC1 / P1-DIMME1
1 CPU & 4 DIMMs	P1-DIMMA1 / P1-DIMMC1 / P1-DIMME1 / P1-DIMMG1
1 CPU & 6 DIMM	P1-DIMMA1 / P1-DIMMC1 / P1-DIMMD1 / P1-DIMME1 / P1-DIMMF1 / P1-DIMMG1 or P1-DIMMA1 / P1-DIMMB1 / P1-DIMMC1 / P1-DIMME1 / P1-DIMMG1 / P1-DIMMH1 or P1-DIMMB1 / P1-DIMMC1 / P1-DIMMD1 / P1-DIMME1 / P1-DIMMF1 / P1-DIMMH1 or P1-DIMMA1 / P1-DIMMB1 / P1-DIMMD1 / P1-DIMMF1 / P1-DIMMG1 / P1-DIMMH1
1 CPU & 8 DIMMs	P1-DIMMA1 / P1-DIMMB1 / P1-DIMMC1 / P1-DIMMD1 / P1-DIMME1 / P1-DIMMF1 / P1-DIMMG1 / P1-DIMMH1
2 CPUs (Recommended)	*Memory Population Sequence*
2 CPUs & 2 DIMMs	**CPU1:** P1-DIMMA1, **CPU2:** P2-DIMMA1 or **CPU1:** P1-DIMME1, **CPU2:** P2-DIMME1 or **CPU1**: P1-DIMMB1, **CPU2:** P2-DIMMB1 or **CPU1:** P1-DIMMF1, **CPU2:** P2-DIMMF1
2 CPUs & 4 DIMMs	**CPU1:** P1-DIMMA1 / P1-DIMMG1, **CPU2:** P2-DIMMA1 / P2-DIMMG1 or **CPU1:** P1-DIMMC1 / P1-DIMME1, **CPU2:** P2-DIMMC1 / P2-DIMME1
2 CPUs & 8 DIMMs	**CPU1:** P1-DIMMA1 / P1-DIMMC1 / P1-DIMME1 / P1-DIMMG1 **CPU2:** P2-DIMMA1 / P2-DIMMC1 / P2-DIMME1 / P2-DIMMG1
2 CPUs & 12 DIMMs	**CPU1:** P1-DIMMA1/P1-DIMMC1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1/P1-DIMMG1 **CPU2:** P2-DIMMA1/P2-DIMMC1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1/P2-DIMMG1 **CPU1:** P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMME1/P1-DIMMG1/P1-DIMMH1 **CPU2:** P2-DIMMA1/P2-DIMMB1/P2-DIMMC1/P2-DIMME1/P2-DIMMG1/P2-DIMMH1 **CPU1:** P1-DIMMB1/P1-DIMMC1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1/P1-DIMMH1 **CPU2:** P2-DIMMB1/P2-DIMMC1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1/P2-DIMMH1 **CPU1:** P1-DIMMA1/P1-DIMMB1/P1-DIMMD1/P1-DIMMF1/P1-DIMMG1/P1-DIMMH1 **CPU2:** P2-DIMMA1/P2-DIMMB1/P2-DIMMD1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1
2 CPUs & 16 DIMMs	**CPU1:** P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1/P1-DIMMG1/P1-DIMMH1 **CPU2:** P2-DIMMA1/P2-DIMMB1/P2-DIMMC1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1

Front View & Interface



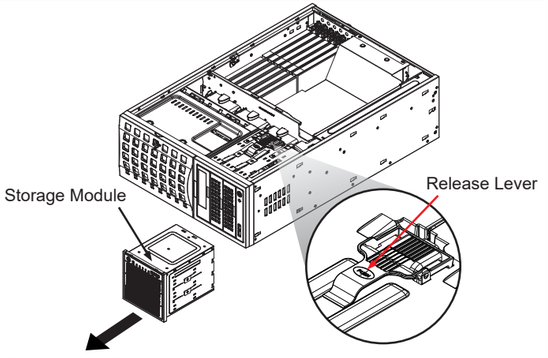
No.	Description
1	USB Ports
2	Power Failure LED
3	Information LED
4	LAN1 LED & LAN2 LED
5	Device Activity LED
6	Power LED
7	Reset Button
8	Power Button

Rear View



No.	Description
1	Redundant 1200W Power Supply
2	2x Rear Fans
3	Serial Port
4	Dedicated IPMI LAN Port
5	4 USB 3.0 Ports
6	2x LAN Ports
7	VGA Port
8	PCI-E 5.0 x8 Slot, Full Height
9	PCI-E 5.0 x16 Slot, Full Height
10	PCI-E 5.0 x16 Slot, Full Height
11	PCI-E 5.0 x16 Slot, Full Height
12	PCI-E 5.0 x16 Slot, Full Height
13	PCI-E 5.0 x8 Slot, Full Height

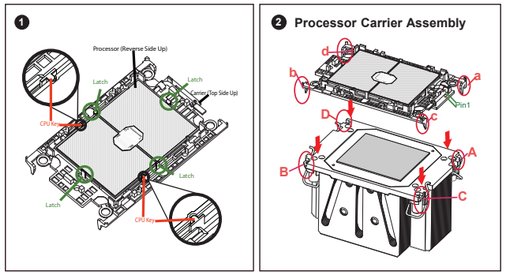
Rotating the Optional Storage Module

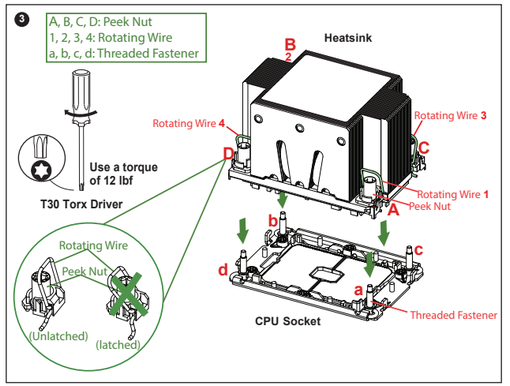


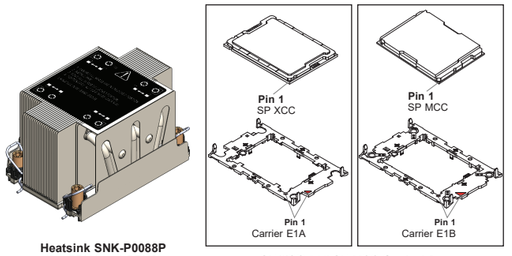
Rotating the Storage Module for Rack Mounting

1. Open the chassis cover.
2. Locate the storage module and disconnect any cables from the storage module to any component in the chassis.
3. Push the storage module release lever. This lever unlocks the storage module.
4. Grasp the external edges of the storage module and pull the unite from the chassis.
5. Turn the storage module 90 degrees.
6. Reinsert the module into the chassis and reconnect the cords.

CPU/Heatsink Installation







Heatsink SNK-P0088P
(for CPU1 and CPU2)

SP XCC and SP MCC Carrier View

Note:
Thermal grease is pre-applied on new heatsinks. No additional thermal grease is needed.
CPU carrier is optional, Please select CPU carrier by CPU model. (E1A for XCC, E1B for MC)

Caution

⚠ 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 system will not operate.

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