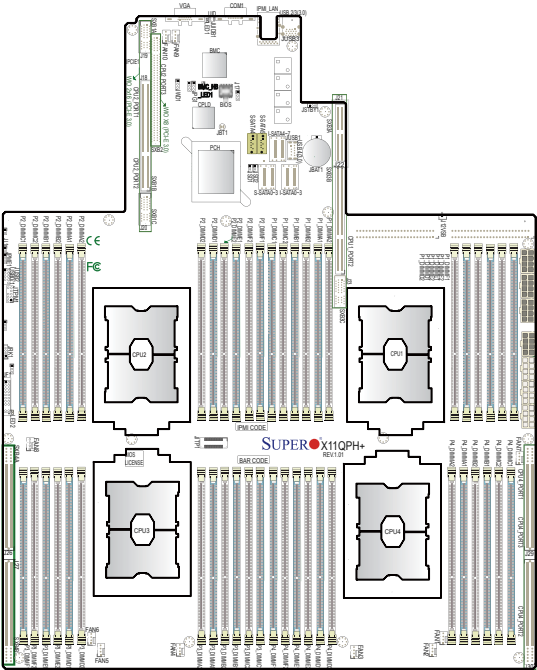


SUPERMICR SuperServer 2049U-TR4 Quick Reference Guide

Board Layout



Jumper	Description	Default Setting
J17	Power-Failure Throttling Enable	Pins 1-2 (Normal)
JBT1	CMOS Clear	Open (Normal)
JPG1	VGA Enable/Disable	Pins 1-2 (Enabled)
JPME1	Manufacturing Mode Select	Pins 1-2 (Normal)
JWD1	Watch Dog Enable	Pins 1-2 (Reset)
Connector	Description	
JBAT1	Onboard COMOS battery	
COM1	Backplane COM port	
FAN1-FAN10	System/CPU fan headers (FAN 1- FAN 10)	
IPMI_LAN	Dedicated IPMI LAN port	
J12VSB	12V standby power connector	
JF1	Front control panel header	
JL1	Chassis Intrusion header	
JPWR1-JPWR4	12V 8-pin power connectors 1-4 for use of onboard GPU devices	
JPWR5-JPWR7	12V 8-pin power connectors 5-7 for use of back panel devices	
JRK1	Onboard RAID Key header	
JSD1/JSD2	SATA DOM power connectors for onboard SATA devices	
JSTBY1	Onboard 5V standby power header	
JTPM1	Trusted Platform Module/Port 80 connector	
SXB1A/SXB1B/SXB1C	WIO 2x16 (PCI-E 3.0) slot (for CPU2 Port1/ CPU2 Port2) (J18/J19/J20)	
SXB2	WIO x8 (PCI-E 3.0) slot (for CPU2 Port3)	
SXB3A/SXB3B/SXB3C	Ultra IO x40 slot (for CPU1 Port3/CPU1 Port1/CPU1 Port2) (J21/J22/J23)	
SXB4A/SXB4B	PCI-E 3.0 riser card slot with support of 56 lanes (for CPU2 Port3/CPU3 Port2/CPU3 Port3/ CPU3 Port1) (J26/J27)	
SXB5A/SXB5B	PCI-E 3.0 riser card slot with support of 48 lanes (for CPU4 Port1/CPU4 Port3/CPU4 Port2) (J29/J30)	
I-SATA0-3, I-SATA4-7	SATA 3.0 ports 0-3 & 4-7 supported by Intel® PCH	
S-SATA0-3	S-SATA 3.0 ports 0-3 supported by Intel® SCU	
S-SATA4/5	S-SATA 3.0 ports 4/5 with power-pins built in with support of Super DOM (Device-On-Module)	
USB0/1 (JUSB2)	Universal Serial Bus (USB) header for two USB 2.0 connections for front access support	
USB2/3 (JUSB3)	Back panel USB 3.0 ports 2/3	
USB4 (JUSB1)	Type A USB 3.0 header	
PSU1/PSU2 (J24/J25)	Power Supply Unit (PSU) 1/ Power Supply Unit 2 for system use	
UID (JUIDB1)	Unit Identifier (UID) switch	
VGA	VGA port	
LED	Description	Status
BMC_HB_LED1	BMC Heartbeat LED	Blinking Green: BMC Normal
LED1	UID LED	Solid Blue: Unit Identified
LED2	Onboard Power LED	Solid Green: Power On

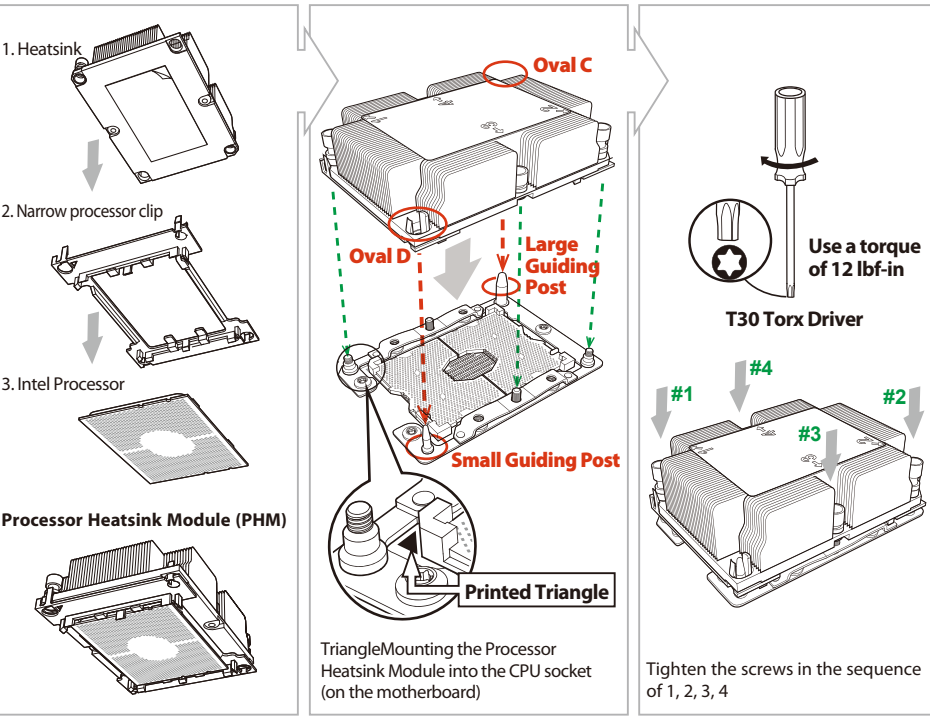
Memory

DDR4 Memory Support (for 2-Slot Per-Channel Configuration)					
Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)		Speed (MT/s); Voltage (V); Slots per Channel (SPC) and DIMMs per Channel (DPC)	
				2 Slots per Channel	
		4 Gb	8 Gb	1DPC (1-DIMM per Channel)	2DPC (2-DIMM per Channel)
RDIMM	SRx4	8 GB	16 GB	1.2 V	1.2 V
RDIMM	SRx8	4 GB	8 GB	2666	2666
RDIMM	DRx8	8 GB	16 GB	2666	2666
RDIMM	DRx4	16 GB	32 GB	2666	2666
RDIMM 3Ds	QRX4	N/A	2H-64GB	2666	2666
RDIMM 3Ds	8RX4	N/A	4H-128GB	2666	2666
LRDIMM	QRx4	32 GB	64 GB	2666	2666
LRDIMM 3Ds	QRX4	N/A	2H-64GB	2666	2666
	8Rx4	N/A	4H-128 GB	2666	2666

DDR4 Memory Support (for 1-Slot Per-Channel Configuration)					
Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)		Speed (MT/s); Voltage (V); Slots per Channel (SPC) and DIMMs per Channel (DPC)	
				1 Slot per Channel	
		4 Gb	8 Gb	1DPC (1-DIMM per Channel)	
RDIMM	SRx4	8 GB	16 GB	1.2 V	2666
RDIMM	SRx8	4 GB	8 GB	2666	2666
RDIMM	DRx8	8 GB	16 GB	2666	2666
RDIMM	DRx4	16 GB	32 GB	2666	2666
RDIMM 3Ds	QRX4	N/A	2H-64GB	2666	2666
RDIMM 3Ds	8RX4	N/A	4H-128GB	2666	2666
LRDIMM	QRx4	32 GB	64 GB	2666	2666
LRDIMM 3Ds	QRX4	N/A	2H-64GB	2666	2666
	8Rx4	N/A	4H-128 GB	2666	2666

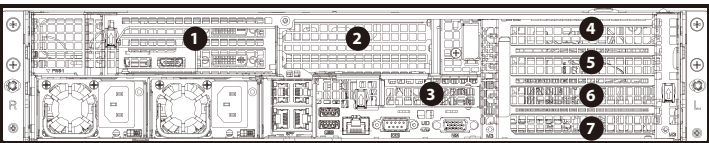
Note: max. memory frequency depends on each processor's specification.

Heatsink Installation

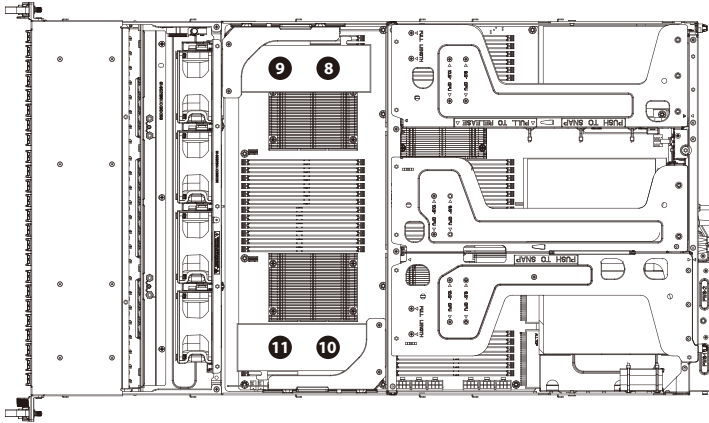


Rear View & PCI Expansion Card Installation

External PCI Expansion Card Slots, Rear View



Internal Riser Cards, Top View



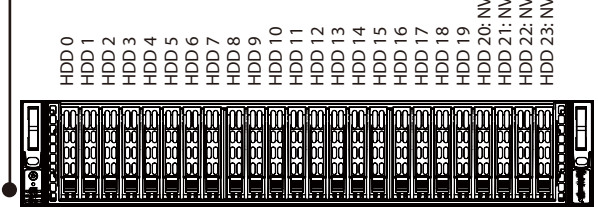
Expansion Card Configurations		
Slot	Mechanical	Electrical
1	Double Width Full Height(4.2"), 10.5"Length*	PCI-E3.0 x16 (CPU1)
2	Double Width Full Height(4.2"), 10.5"Length	PCI-E3.0 x16 (CPU1)
3	Low Profile(2.536"), Half Length(6.6")	PCI-E3.0 x8 (CPU2)
4	Full Height(4.2"), 10.5" Length	PCI-E3.0 x8 (CPU2)
5	Full Height(4.2"), 10.5" Length	PCI-E3.0 x8 (CPU2)
6	Full Height(4.2"), 6.6" Length	PCI-E3.0 x8 (CPU2)
7	Full Height(4.2"), 6.6" Length**	PCI-E3.0 x8 (CPU2)
8	Low Profile(2.536"), Half Length(6.6")^	PCI-E3.0 x16 (CPU3)
9	Low Profile(2.536"), Half Length(6.6")^	PCI-E3.0 x16 (CPU3)
10^^	Low Profile(2.536"), Half Length(6.6")^	PCI-E3.0 x16 (CPU4)
11	Low Profile(2.536"), Half Length(6.6")^	PCI-E3.0 x16 (CPU4)

*Slot 1: can't support GPU card.
**Slot 7: can't support any 4-port network card.
^Slot8-11: Internal slots for selected RAID cards
^^Slot 10 (bottom): Internal slot for NVMe AOC

Front View

No.	Description	No.	Description
1	Power Button	6	NIC1 LED
2	Reset Button	7	Power Fail LED
3	Power LED	8	Universal Information LED
4	HDD LED		
5	NIC2 LED		

Drive Bay Configuration



Drive Carrier LEDs
The chassis includes externally accessible SAS/SATA/NVMe drives. Each drive carrier displays two status LEDs on the front of the carrier.

	LED Color	State	Status
Activity LED	Blue	Solid On	SAS/NVMe drive installed
	Blue	Blinking	I/O activity
Status LED	Red	Solid On	Failed drive for SAS/SATA/NVMe with RSTe support
	Red	Blinking at 1 Hz	Rebuild drive for SAS/SATA/NVMe with RSTe support
	Red	Blinking with two blinks and one stop at 1 Hz	Hot spare for SAS/SATA/NVMe with RSTe support
	Red	On for five seconds, then off	Power on for SAS/SATA/NVMe with RSTe support
	Red	Blinking at 4 Hz	Identify drive for SAS/SATA/NVMe with RSTe support
	Green	Solid On	Safe to remove NVMe device
	Amber	Blinking at 1 Hz	Attention state—do not remove NVMe device

BIOS Error Beep (POST) Codes

During the POST (Power-On Self-Test) routines, which are performed each time the system is powered on, errors may occur.

BIOS Beep (POST) Codes		
Beep Code	Error Message	Description
1 beep	Refresh	Circuits have been reset (Ready to power up)
5 short, 1 long	Memory error	No memory detected in system
5 long, 2 short	Display memory read/write error	Video adapter missing or with faulty memory
1 long continuous	System OH	System overheat condition

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>

