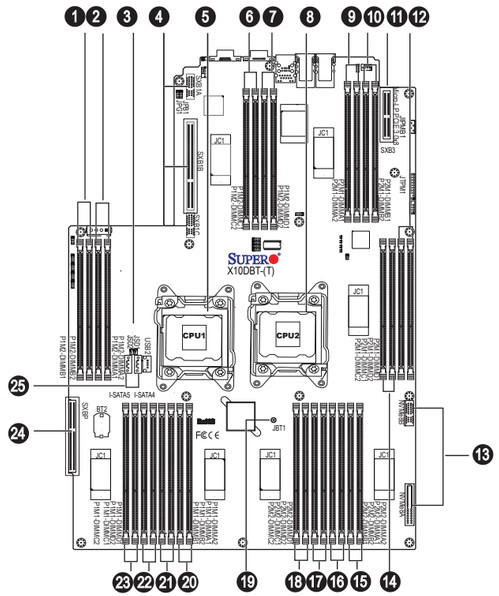
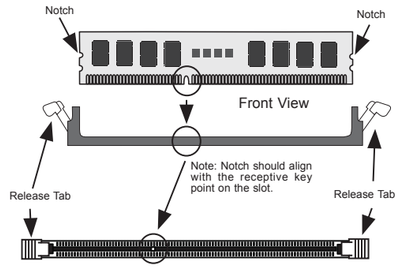
SUPERMICRO® SuperServer 2028UT-BTNRT/BC1NRT Quick Reference Guide

Board Layout



No.	Description
1	P1M2-DIMMB1/P1M2-DIMMB2 slot
2	P1M2-DIMMA1/P1M2-DIMMA2 slot
3	JSD1 = SATA DOM Power
4	SXB1A/SXB1B/SXB1C: Proprietary PCIe 3.0 x16+x16 slot fro riser card support (Left)
5	CPU1
6	P1M2-DIMMC1/P1M2-DIMMC2 slot
7	P1M2-DIMMD1/P1M2-DIMMD2 slot
8	CPU2
9	P2M1-DIMMA1/P2M1-DIMMA2 slot
10	P2M1-DIMMB1/P2M1-DIMMB2 slot
11	SXB3: Micro-LP (Low-Profile) PCIe 3.0 x8 slot
12	P2M1-DIMMD1/P2M1-DIMMD2 slot
13	NVMe8B/NVMe8A
14	P2M1-DIMMC1/P2M1-DIMMC2 slot
15	P2M2-DIMMA1/P2M2-DIMMA2 slot
16	P2M2-DIMMB1/P2M2-DIMMB2 slot
17	P2M2-DIMMD1/P2M2-DIMMD2 slot
18	P2M2-DIMMC1/P2M2-DIMMC2 slot
19	JBT1: CMOS Clear
20	P1M1-DIMMA1/P1M1-DIMMA2 slot
21	P1M1-DIMMB1/P1M1-DIMMB2 slot
22	P1M1-DIMMD1/P1M1-DIMMD2 slot
23	P1M1-DIMMC1/P1M1-DIMMC2 slot
24	SXBP: Prioprietary PCIe 3.0 x8 slot
25	I-SATA 4/5: Intel SATA 3.0 connectors (4/5) from Intel PCH

Memory



Top View of DDR4 Slot

Fully-Populated Configuration

Processors and their Corresponding Memory Modules								
CPU#	Corresponding DIMM Modules for Full-Populated Configuration							
CPU 1	P1M1-DIMM A1/B1	P1M1-DIMM C1/D1	P1M1-DIMM A2/B2	P1M1-DIMM C2/D2	P1M2-DIMM A1/B1	P1M2-DIMM C1/D1	P1M2-DIMM A2/B2	P1M2-DIMM C2/D2
CPU2	P2M1-DIMM A1/B1	P2M1-DIMM C1/D1	P2M1-DIMM A2/B2	P2M1-DIMM C2/D2	P2M2-DIMM A1/B1	P2M2-DIMM C1/D1	P2M2-DIMM A2/B2	P2M2-DIMM C2/D2

Half-Polulated Configuration

Processors and their Corresponding Memory Modules				
CPU#	Corresponding DIMM Modules for Half-Populated Configuration			
CPU 1	P1M1-DIMM A1/B1	P1M1-DIMM C1/D1	P1M2-DIMM A1/B1	P1M2-DIMM C1/D1
CPU2	P2M1-DIMM A1/B1	P2M1-DIMM C1/D1	P2M2-DIMM A1/B1	P2M2-DIMM C1/D1

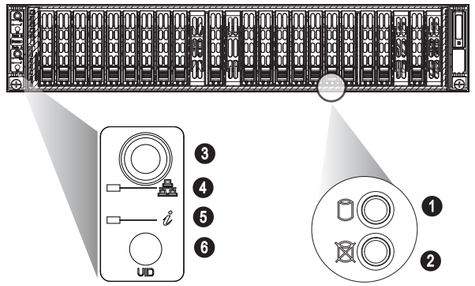
RDIMM/LRDIMM DDR3 ECC in Performance Mode (2:1)

Type	Rank per DIMM and Data Width (x8 is supported for RDIMMs but not listed)	Max DIMM Capacity(GB)		Speed (MT/s), Voltage (V), Slot per Channel (SPC) and DIMM Per Channel (DPC)									
				2 SPC				3 SPC					
				1DP		2DPC		1DPC		2DPC		3DPC	
	SR Single Rank DR Dual Rank QR Quad Rank	2Gb	4Gb	1.5V	1.35V	1.5V	1.35V	1.5V	1.35V	1.5V	1.35V	1.5V	1.35V
RDIMM	SRx4	4GB	8GB	1333	1333	1333	1333	1333	1333	1333	1066	1066	N/A
RDIMM	DRx4	8GB	16GB	1333	1333	1333	1333	1333	1333	1333	1066	1066	N/A
RDIMM	QRx4	16GB	32GB	1066	1066	1066	1066	1066	1066	N/A	N/A	N/A	N/A
LRDIMM	QRx4	16GB	32GB	1333	1333	1333	1333	1333	1333	1333	1333	1333	N/A
LRDIMM (RM)	8Rx4	32GB	64GB	1066	N/A	1066	N/A	1066	N/A	1066	N/A	1066	N/A

RDIMM/LRDIMM DDR3 ECC in Lockstep Mode (1:1)

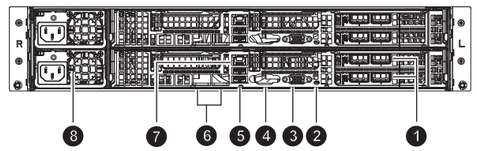
Type	Rank per DIMM and Data Width (x8 is supported for RDIMMs but not listed)	Max DIMM Capacity(GB)		Speed (MT/s), Voltage (V), Slot per Channel (SPC) and DIMM Per Channel (DPC)									
				2 SPC				3 SPC					
				1DP		2DPC		1DPC		2DPC		3DPC	
	SR Single Rank DR Dual Rank QR Quad Rank	2Gb	4Gb	1.5V	1.35V	1.5V	1.35V	1.5V	1.35V	1.5V	1.35V	1.5V	1.35V
RDIMM	SRx4	4GB	8GB	1600	1333	1600	1333	1333	1333	1333	1066	1066	N/A
RDIMM	DRx4	8GB	16GB	1600	1333	1600	1333	1333	1333	1333	1066	1066	N/A
RDIMM	QRx4	16GB	32GB	1066	1066	1066	1066	1066	1066	N/A	N/A	N/A	N/A
LRDIMM	QRx4	16GB	32GB	1600	1333	1600	1333	1600	1333	1600	1333	1333	N/A
LRDIMM (RM)	8Rx4	32GB	64GB	1066	N/A	1066	N/A	1066	N/A	1066	N/A	1066	N/A

Front View & Interface



No.	Description
1	Hard Drive Signal
2	Hard Drive Fail
3	Power Button
4	LAN Activity LED
5	Information LED
6	UID Button

Rear View

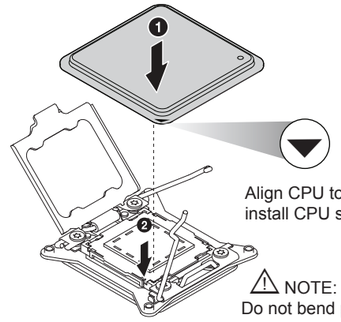


No.	Description
1	PCI Expansion Slot
2	UID Button (Unit Identifier Button)
3	VGA Port
4	COM Port
5	USB Ports
6	LAN1 & LAN2 (1GbE)
7	Dedicated LAN for IPMI
8	Power Supply Module

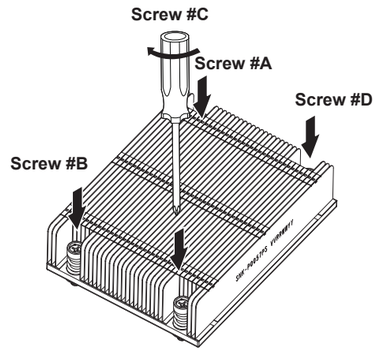
Beep Codes

Beep Code	Error Message	Description
1 beep	Refresh	Circuits have been reset (Ready to power up)
5 short beeps and 1 long beep	Memory error	No memory detected in the system
5 beeps	No Con-In or Con-Out devices	Con-In includes USB or PS/2 keyboard, PCI or serial console redirection, IPMI KVM or SOL. Con-Out includes video controller, PCI or serial console redirection, IPMI SOL.
Countinuous high (pitch) + low (pitch)	System Overheat	System overheat

CPU Installation



Heatsink Installation



1. Place heatsink on top of installed CPU
2. Line up the four screws to socket
3. Push down heatsink and screw down as shown (cross pattern, in order: A, C, B, D)
4. NOTE: Only use 6-8 lb/f of torque; otherwise, hand-tighten each screw, to avoid damaging the system

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