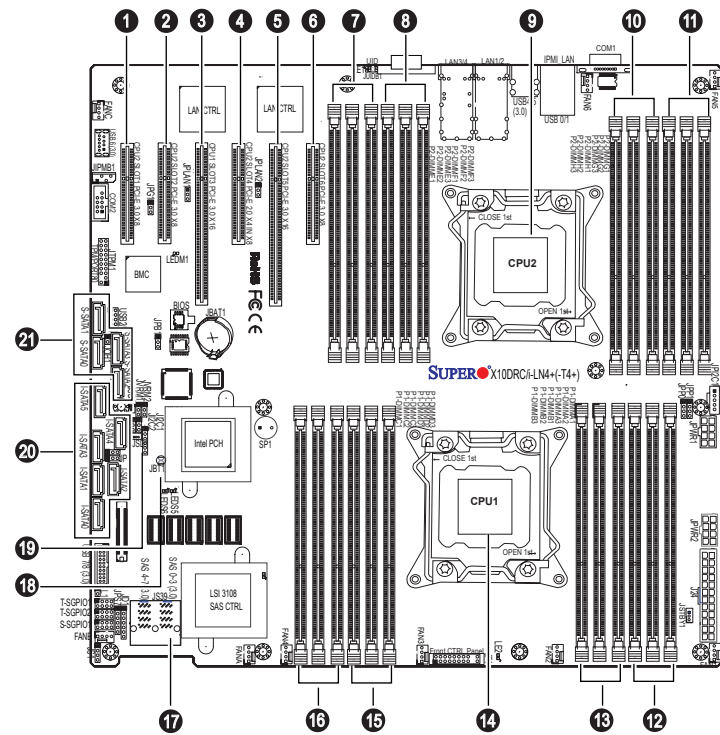


# SUPERMICR<sup>®</sup> SuperServer 2028R-C1R(T)4+ Quick Reference Guide

## Board Layout



No.	Description
1	CPU2 Slot1 PCI-E 3.0 x8
2	CPU2 Slot2 PCI-E 3.0 x8
3	CPU1 Slot3 PCI-E 3.0 x16
4	CPU2 Slot4 PCI-E 2.0 x4 (in x8)
5	CPU2 Slot5 PCI-E 3.0 x16
6	CPU2 Slot6 PCI-E 3.0 x8
7	DIMME1(Blue)/DIMME2/DIMME3 slot
8	DIMMF1(Blue)/DIMMF2/DIMMF3 slot
9	CPU2
10	DIMMH1(Blue)/DIMMH2/DIMMH3 slot
11	DIMMG1(Blue)/DIMMG2/DIMMG3 slot
12	DIMMA1(Blue)/DIMMA2/DIMMA3 slot
13	DIMMB1(Blue)/DIMMB2/DIMMB3 slot
14	CPU1 (Install CP1 first)
15	DIMMD1(Blue)/DIMMD2/DIMMD3 slot
16	DIMMC1(Blue)/DIMMC2/DIMMC3 slot
17	SAS 0~3 & SAS 4~7: SAS 3.0 connections supported by the LSI 3108 controller
18	JBT1: Clear CMOS
19	JSD1: SATA DOM (Device on Module) Power Connectors
20	(I-)SATA 0~5: SATA 3.0 supported by Intel PCH (I-SATA 0~5)
21	(S)SATA 0~3: SATA 3.0 supported by Intel SCU (S-SATA 0~3)

## Memory

Processors and their Corresponding Memory Modules												
CPU#	Corresponding DIMM Modules											
CPU 1	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3
CPU 2	E1	E2	E3	F1	F2	F3	G1	G2	G3	H1	H2	H3

Processor and Memory Module Population for Optimal Performance	
Number of CPUs+DIMMs	CPU and Memory Population Configuration Table (For memory to work properly, please follow the instructions below.)
1 CPU & 2 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1
1 CPU & 4 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1
1 CPU & 5~8 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1 + Any memory pairs in P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2 slots
2 CPUs & 4 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1, P2-DIMME1/P2-DIMMF1
2 CPUs & 6 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1
2 CPUs & 8 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1
2 CPUs & 8~16 DIMMs	CPU1/CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1, P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2, P2-DIMME2/P2-DIMMF2/P2-DIMMG2/P2-DIMMH2
2 CPUs & 16~24 DIMMs	CPU1/CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1, P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2, P2-DIMME2/P2-DIMMF2/P2-DIMMG2/P2-DIMMH2, P1-DIMMA3/P1-DIMMB3/P1-DIMMC3/P1-DIMMD3, P2-DIMME3/P2-DIMMF3/P2-DIMMG3/P2-DIMMH3

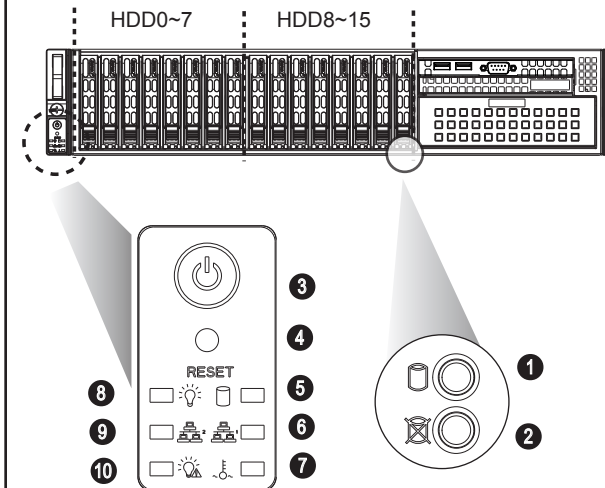
## DIMM Module Population Configuration

DDR4 Memory POR for Haswell-EP									
Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)		Speed (MT/s); Voltage (V); Slot Per Channel (SPC) and DIMM Per Channel (DPC)					
				1 Slot Per Channel		2 Slots Per Channel		3 Slots Per Channel	
		4Gb	8Gb	1DPC	1DPC	2DPC	1DPC	2DPC	3DPC
RDIMM	SRx4	8GB	16GB	2133	2133	1866	2133	1866	1600
RDIMM	SRx8	4GB	8GB	2133	2133	1866	2133	1866	1600
RDIMM	DRx8	8GB	16GB	2133	2133	1866	2133	1866	1600
RDIMM	DRx4	16GB	32GB	2133	2133	1866	2133	1866	1600
LRDIMM	QRx4	32GB	64GB	2133	2133	2133	2133	2133	1600
LRDIMM2DS <sup>†</sup>	8Rx4	64GB	128GB	2133	2133	2133	2133	2133	1600

## Beep Codes

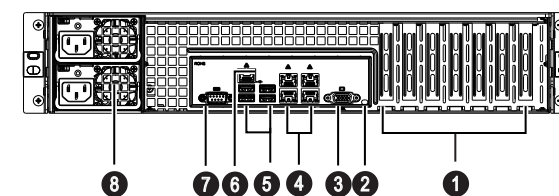
Beep Code/LED	Error Message	Description
1 beep	Refresh	Ready to boot
5 short beeps + 1 long beep	Memory error	No memory detected in the system
5 beeps	No Con-In or No Con-Out devices	Con-In includes USB or PS/2 keyboard, PC or Serial Console Redirection, IPMI KVM or SOL. Con-Out includes Video Controller, PCI or Serial Console Redirection, IPMI SOL
1 beep per device	Refresh	1 beep or each USB device detected

## Front View & Interface



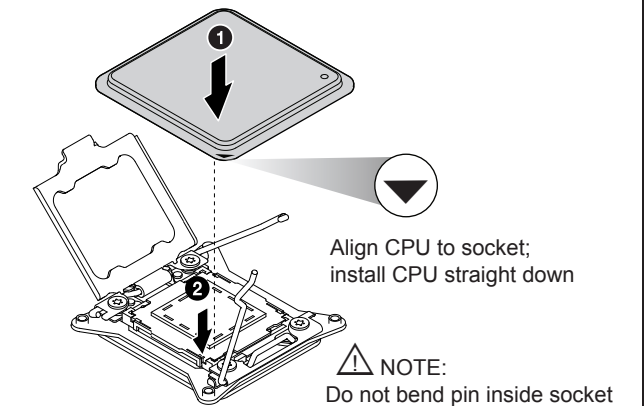
No.	Description
1	Hard Drive Signal
2	Hard Drive Fail
3	Power Button
4	Reset Button
5	Device Activity LED
6	LAN1 LED
7	Overheat & Fan Fail LED
8	Power LED
9	LAN2 LED
10	Power Failure LED

## Rear View

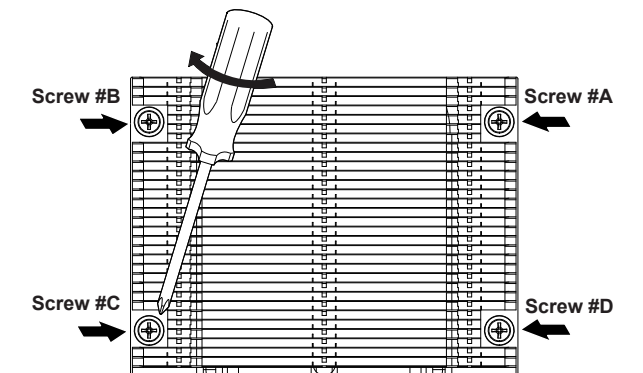


No.	Description
1	PCI Expansion Slots
2	UID Button
3	VGA Port
4	LAN 1/2/3/4 Ports
5	USB 0/1/2/3 Ports
6	Dedicated LAN for IPMI
7	COM Port
8	Redundant Power Supply Modules

## CPU Installation



## Heatsink Installation



- Place heatsink on top of installed CPU
- Line up the four screws to socket
- Push down heatsink and screw down as shown (cross pattern, in order: A, C, B, D)
- 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](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>

