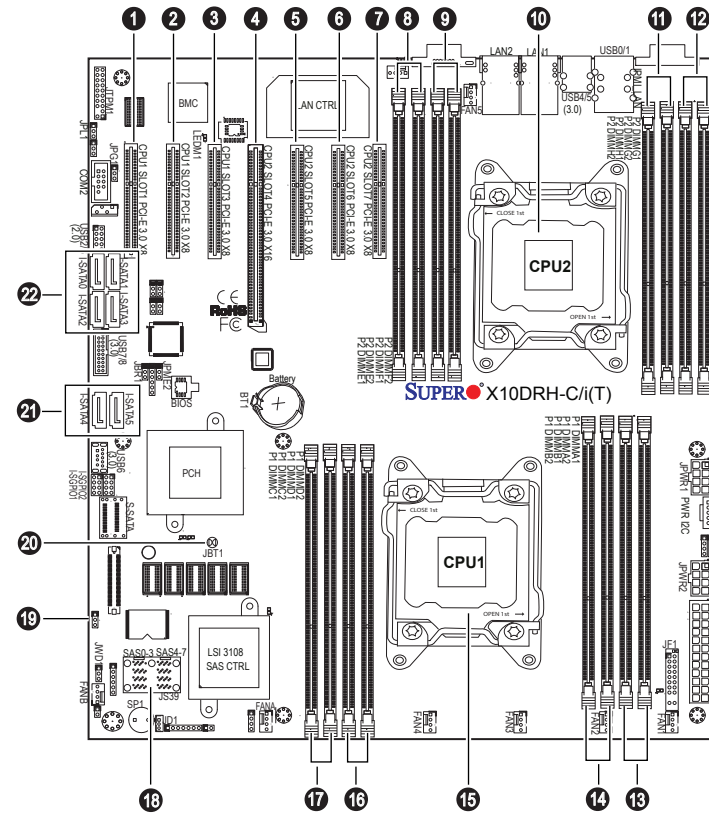


# SUPERMICR SuperServer 2028R-C1R/C1RT Quick Reference Guide

## Board Layout



No.	Description
1	CPU1 Slot1 PCI-E 3.0 x8
2	CPU1 Slot2 PCI-E 3.0 x8
3	CPU1 Slot3 PCI-E 3.0 x8
4	CPU2 Slot4 PCI-E 3.0 x16
5	CPU2 Slot5 PCI-E 3.0 x8
6	CPU2 Slot6 PCI-E 3.0 x8
7	CPU2 Slot7 PCI-E 3.0 x8
8	DIMME1(Blue)/DIMME2 slot
9	DIMMF1(Blue)/DIMMF2 slot
10	CPU2
11	DIMMH1(Blue)/DIMMH2 slot
12	DIMMG1(Blue)/DIMMG2 slot
13	DIMMA1(Blue)/DIMMA2 slot
14	DIMMB1(Blue)/DIMMB2 slot
15	CPU1 (Install CPU1 first)
16	DIMMD1(Blue)/DIMMD2 slot
17	DIMMC1(Blue)/DIMMC2 slot
18	SAS 0~3 & SAS 4~7: SAS 3.0 connections supported by the LSI 3108 controller
19	(S)SATA 0~3: SATA 3.0 supported by Intel SCU (S-SATA 0~3)
20	JBT1: Clear CMOS
21	(I-)SATA 4~5: SATA 3.0 supported by Intel PCH (I-SATA 4~5)
22	(I-)SATA 0~3: SATA 3.0 supported by Intel PCH (I-SATA 0~3)

## Memory

Processors and their Corresponding Memory Modules								
CPU#	Corresponding DIMM Modules							
CPU1	P1-A1	P1-B1	P1-C1	P1-D1	P1-A2	P1-B2	P1-C2	P1-D2
CPU2	P2-E1	P2-F1	P2-G1	P2-H1	P2-E2	P2-F2	P2-G2	P2-H2

Processor and Memory Module Population	
Number of CPUs+DIMMs	CPU and Memory Population Configuration Table (*For memory to work proper, please install DIMMs in pairs)
1 CPU & 2 DIMMs	CPU1 P1-A1/P1-B1
1 CPU & 4 DIMMs	CPU1 P1-A1/P1-B1, P1-C1/P1-D1
1 CPU & 5~8 DIMMs	CPU1 P1-A1/P1-B1, P1-C1/P1-D1 + Any memory pairs in P1-A2/-B2/-C2/-D2 DIMM slots
2 CPUs & 4 DIMMs	CPU1 + CPU2 P1-A1/P1-B1, P2-E1/P2-F1
2 CPUs & 6 DIMMs	CPU1 + CPU2 P1-A1/P1-B1/P1-C1/P1-D1, P2-E1/P2-F1
2 CPUs & 8 DIMMs	CPU1 + CPU2 P1-A1/P1-B1/P1-C1/P1-D1, P2-E1/P2-F1/P2-G1/P2-H1
2 CPUs & 10~16 DIMMs	CPU1/CPU2 P1-A1/P1-B1/P1-C1/P1-D1, P2-E1/P2-F1/P2-G1/P2-H1 + Any memory pairs in P1, P2 DIMM slots
2 CPUs & 16 DIMMs	CPU1/CPU2 P1-A1/P1-B1/P1-C1/P1-D1, P2-E1/P2-F1/P2-G1/P2-H1, P1-A2/P1-B2/P1-C2/P1-D2, P2-E2/P2-F2/P2-G2/P2-H2

### 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			
			1DPC	2DPC	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†	8Rx4	64GB 128GB	2133	2133	2133	2133	2133	1600		

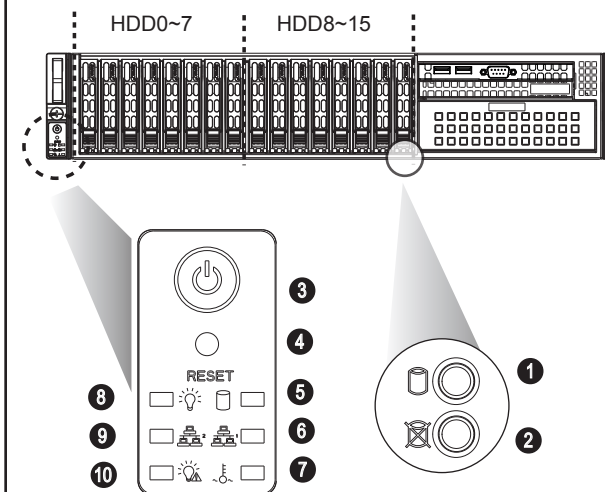
**Note:** For the memory modules to work properly, please install DIMM modules in pairs (with an even number of DIMMs installed).

**Note:** For detailed information on memory support and updates, please refer to the SMC Recommended Memory List posted on our website at <http://www.supermicro.com/support/resources/mem.cfm>.

## Beep Codes

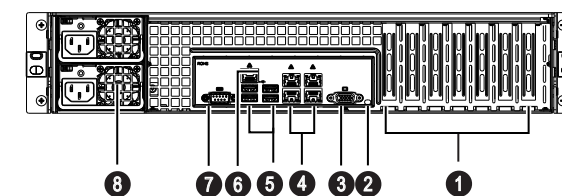
Beep Code/LED	Error Message	Description
1 beep	Refresh	Ready to boot
5 short beeps + 1 long beep	Memory error	No memory detected in the system
5 beeps	No Con-In or No Con-Out devices	Con-In includes USB or PS/2 keyboard, PC or Serial Console Redirection, IPMI KVM or SOL. Con-Out includes Video Controller,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

## Front View & Interface



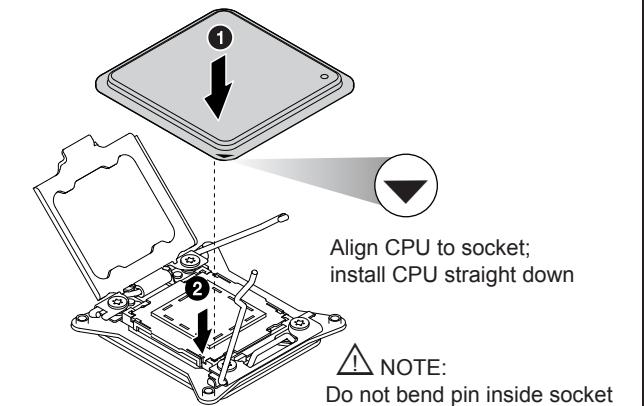
No.	Description
1	Hard Drive Signal
2	Hard Drive Fail
3	Power Button
4	Reset Button
5	Device Activity LED
6	LAN1 LED
7	Overheat & Fan Fail LED
8	Power LED
9	LAN2 LED
10	Power Failure LED

## Rear View

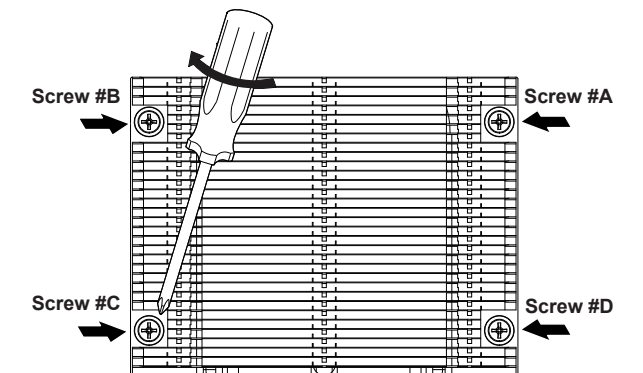


No.	Description
1	PCI Expansion Slots
2	UID Button
3	VGA Port
4	LAN 1/2/3/4 Ports
5	USB 0/1/2/3 Ports
6	Dedicated LAN for IPMI
7	COM Port
8	Redundant Power Supply Modules

## 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>

