Board Layout

SUPER●X9DRFR

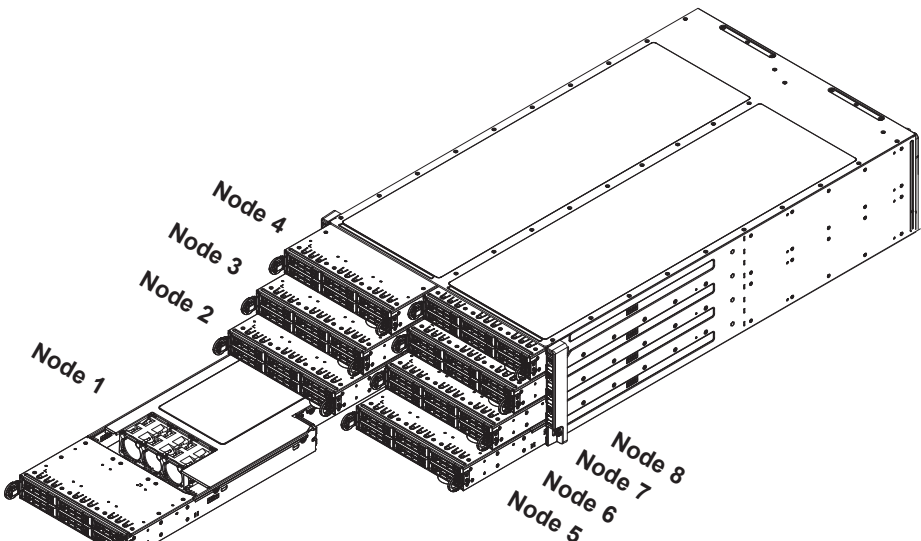| No.	Description	No.	Description
1	CPU1 Slot1 PCI-E 3.0 x8 Micro Low-Profile	11	P2-DIMMF1 (Blue Slot) / DIMMF2
2	I-SATA2~5: SATA 2.0 Ports	12	CPU2 Socket
3	S-SATA0~1: SATA 2.0 Ports	13	P2-DIMMH1 (Blue Slot) / DIMMH2
4	JBT1: CMOS Clear	14	P2-DIMMG1 (Blue Slot) / DIMMG2
5	CPU1 Slot3 PCI-E 3.0 x16	15	CPU1 Slot1 PCI-E 3.0 x8 Slot for SMC-Proprietary Add-On Card
6	JTPM1: Trusted Platform Module Header	16	P1-DIMMB1 (Blue Slot) / DIMMB2
7	CPU1 Socket	17	P1-DIMMA1 (Blue Slot) / DIMMA2
8	P1-DIMMC1 (Blue Slot) / DIMMC2	18	JSD2: Disk-On-Module power connector
9	P1-DIMMD1 (Blue Slot) / DIMMD2	19	I-SATA 0/1: SATA 3.0 Ports
10	P2-DIMME1 (Blue Slot) / DIMME2		

Memory

Processors and their Corresponding Memory Modules

CPU#	Corresponding DIMM Modules							
CPU 1	P1-DIMMA1	P1-DIMMB1	P1-DIMMC1	P1-DIMMD1	P1-DIMMA2	P1-DIMMB2	P1-DIMMC2	P1-DIMMD2
CPU 2	P2-DIMME1	P2-DIMMF1	P2-DIMMG1	P2-DIMMH1	P2-DIMME2	P2-DIMMF2	P2-DIMMG2	P2-DIMMH2

Processors and Memory Module Population for Optimal Performance

| Number of CPUs + DIMMs	CPU and Memory Population Configuration Table (For memory to work properly, 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 & 10~16 DIMMs	CPU1 + CPU2 & P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1 + Any memory pair in P1, P2 DIMM slots
2 CPUs & 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

Installing RDIMM Memory

Ranks per DIMM & Data Width	Memory Capacity Per DIMM (See the Note below)			Speed (MT/s) and Voltage Validated by Slot per Channel (SPC) and DIMM Per Channel (DPC)			
				2 Slots Per Channel			
				1DPC		2DPC	
				1.35V	1.5V	1.35V	1.5V
SRx8	1GB	2GB	4GB	1066, 1333	1066, 1333, 1600, 1866	1066, 1333	1066, 1333, 1600
DRx8	2GB	4GB	8GB	1066, 1333	1066, 1333, 1600, 1866	1066, 1333	1066, 1333, 1600
SRx4	2GB	4GB	8GB	1066, 1333	1066, 1333, 1600, 1866	1066, 1333	1066, 1333, 1600
DRx4	4GB	8GB	16GB	1066, 1333	1066, 1333, 1600, 1866	1066, 1333	1066, 1333, 1600
QRx4	8GB	16GB	32GB	800	800, 1066	800	800
QRx8	4GB	8GB	16GB	800	800, 1066	800	800

Intel E5-2600 v2 Series Processor RDIMM Memory Support

Nodes and Corresponding Hard Drives

Node 4
Node 3
Node 2
Node 1
Node 8
Node 7
Node 6
Node 5

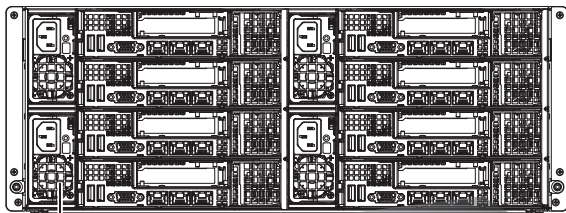| Node 4 Controls six 2.5" HDDs, D1-D6	Node 8 Controls six 2.5" HDDs, H1-H6
Node 3 Controls six 2.5" HDDs, C1-C6	Node 7 Controls six 2.5" HDDs, G1-G6
Node 2 Controls six 2.5" HDDs, B1-B6	Node 6 Controls six 2.5" HDDs, F1-F6
Node 1 Controls six 2.5" HDDs, A1-A6	Node 5 Controls six 2.5" HDDs, E1-E6

Front View & Interface

Node 1
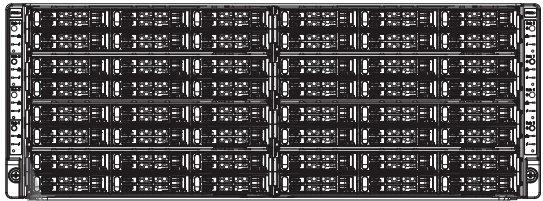
No.	Description
1	Power Button
2	LAN LED
3	Information LED
4	UID Button

Rear View

No.	Description
1	Micro Low-Profile Expansion Slot
2	Low-Profile PCI-E Expansion Slot
3	Dedicated LAN for IPMI
4	GbE LAN1/LAN2 Ports
5	VGA Port
6	USB 0/1 Ports
7	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 long and 2 short beeps	Display memory read/write error	Video adapter missing or with faulty memory
1 continuous beep	System overheat	System overheat

CPU Installation

Align CPU to socket; install CPU straight down

⚠ NOTE:
Do not bend pin inside socket

Heatsink Installation

SNK-P0047PSM for CPU2   SNK-P0047PF for CPU1
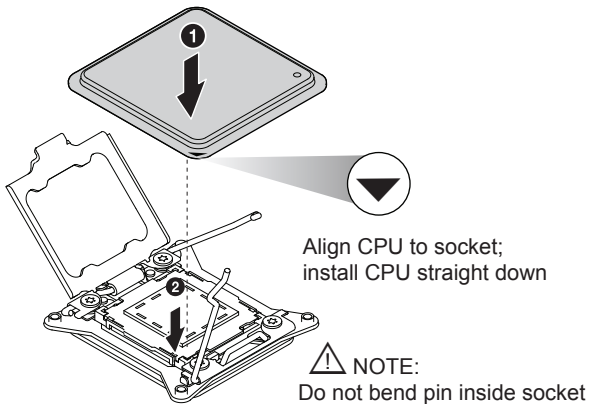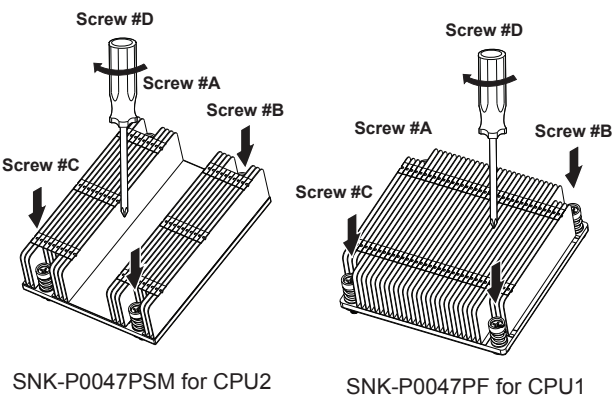
1. Place the heatsink on top of the installed CPU.
2. Align the four screws to the socket.
3. Holding the heatsink in place, screw down as shown (cross pattern, in order: A, C, B, D).
4. Note: Only use 6-8 lb/f of torque; otherwise, hand-tighten each screw to avoid damaging the CPU.

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