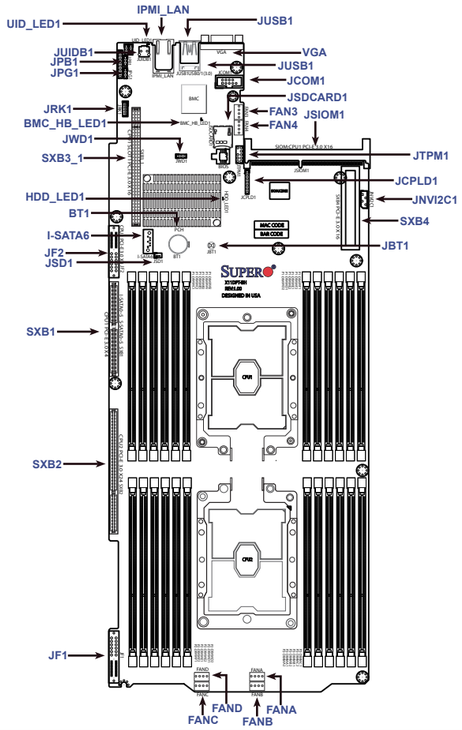
SUPERMICRO SuperServer 2029BZ-HNR Quick Reference Guide

Board Layout



Jumper	Description	Default Setting
JBT1	Clear CMOS	Open (Normal)
JWD1	Watch Dog Timer Enable	Pins 1-2 (Normal)
JPG1	VGA Enable/Disable	Pins 1-2 (Enabled)
JPB1	BMC Enable	Pins 1-2 (Enabled)

Connector	Description
Battery (BT1)	Onboard CMOS battery
JCOM1	COM port 1
FANA~FAND	System cooling fan headers
IPMI_LAN	Dedicated IPMI LAN port
JF1	Front control panel header
JF2	PCI-E 3.0 x4 slot (CPU1)
JNVI²C1	NVMe I²C header
JRK1	RAID Key for onboard NVMe devices
JSD1	SATA DOM power connector
JSDCARD1	Micro SD card slot
JTPM1	Trusted Platform Module (TPM)/Port 80 connector
JSIOM1	CPU1 PCI-E 3.0 x16 networking slot
SXB1	PCI-E 3.0 (x4 + x4) slot supported by CPU1 and SATA connections (I-SATA0~5 & S-SATA0~5)
SXB2	PCI-E 3.0 x24 (x16 + x8) slot for SMCI storage add-on card (AOC)
SXB3_1	PCI-E 3.0 x16 left hand riser slot supported by CPU1
SXB4	PCI-E 3.0 x16 right hand riser slot supported by CPU2
I-SATA0~5	I-SATA 3.0 connectors supported by the Intel PCH
S-SATA0~5	S-SATA 3.0 connectors supported by the Intel PCH
I-SATA6	SATADOM power
UID-SW	UID switch
USB0/1	Back panel USB 3.0 ports
VGA	Back panel VGA port

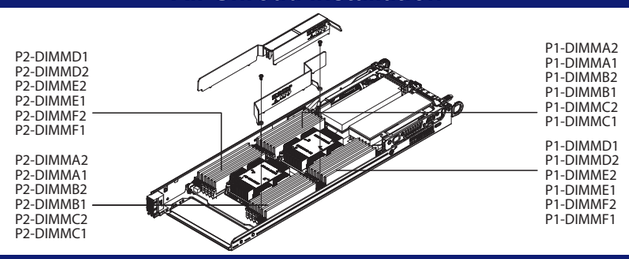
LED	Description	State	Status
BMC_HB_LED1	BMC Heartbeat LED	Green: Blinking	BMC Normal
HDD_LED1	HDD Activity LED	Green: Blinking	HDD Normal
UID_LED1	Rear UID LED	Blue: On	Unit Identified

Memory Support

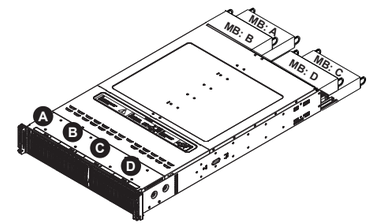
Memory Population Table

When 2 CPUs are used	Memory Population Sequence
2 CPUs & 2 DIMMs	CPU1: P1-DIMMA1 CPU2: P2-DIMMA1
2 CPUs & 4 DIMMs	CPU1: P1-DIMMA1/P1-DIMMD1 CPU2: P2-DIMMA1/P2-DIMMD1
2 CPUs & 6 DIMMs	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1 CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1
2 CPUs & 8 DIMMs	CPU1: P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1 CPU2: P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-DIMME1
2 CPUs &10 DIMMs	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 CPU2: P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-DIMME1
2 CPUs & 12 DIMMs	CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1
2 CPUs & 14 DIMMs	CPU1: P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/P1-DIMMD2/P1-DIMMD1/ P1-DIMME2/P1-DIMME1 CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1
2 CPUs & 16 DIMMs	CPU1: P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/P1-DIMMD2/P1-DIMMD1/ P1-DIMME2/P1-DIMME1 CPU2: P2-DIMMB1/P2-DIMMB2/P2-DIMMA1/P2-DIMMA2/P2-DIMMD2/P2-DIMMD1/ P2-DIMME2/P2-DIMME1
2 CPUs & 18 DIMMs	CPU1: P1-DIMMC1/P1-DIMMC2/P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/ P1-DIMMD2/P1-DIMMD1/P1-DIMME2/P1-DIMME1/P1-DIMMF2/P1-DIMMF1 CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1
2 CPUs & 20 DIMMs	CPU1: P1-DIMMC1/P1-DIMMC2/P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/ P1-DIMMD2/P1-DIMMD1/P1-DIMME2/P1-DIMME1/P1-DIMMF2/P1-DIMMF1 CPU2: P2-DIMMB1/P2-DIMMB2/P2-DIMMA1/P2-DIMMA2/P2-DIMMD2/P2-DIMMD1/ P2-DIMME2/P2-DIMME1
2 CPUs & 22 DIMMs (Unbalanced: not recommended)	CPU1: P1-DIMMC1/P1-DIMMC2/P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/ P1-DIMMD2/P1-DIMMD1/P1-DIMME2/P1-DIMME1/P1-DIMMF1 CPU2: P2-DIMMC1/P2-DIMMC2/P2-DIMMB1/P2-DIMMB2/P2-DIMMA1/P2-DIMMA2/ P2-DIMMD2/P2-DIMMD1/P2-DIMME2/P2-DIMME1/P2-DIMMF1
2 CPUs & 24 DIMMs	CPU1: P1-DIMMC1/P1-DIMMC2/P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/ P1-DIMMD2/P1-DIMMD1/P1-DIMME2/P1-DIMME1/P1-DIMMF2/P1-DIMMF1 CPU2: P2-DIMMC1/P2-DIMMC2/P2-DIMMB1/P2-DIMMB2/P2-DIMMA1/P2-DIMMA2/ P2-DIMMD2/P2-DIMMD1/P2-DIMME2/P2-DIMME1/P2-DIMMF2/P2-DIMMF1

Air Shroud installation

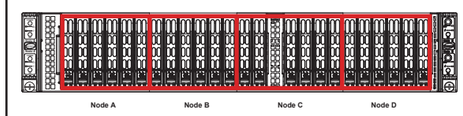


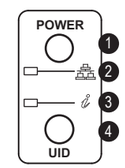
Nodes and Corresponding Hard Drives



Drives Controled by Nodes	
Motherboard B controls HDDs B0, B1, B2, B3, B4, and B5	Motherboard D controls HDDs D0, D1, D2, D3, D4, and D5
Motherboard A controls HDDs A0, A1, A2, A3, A4, and A5	Motherboard C controls HDDs C0, C1, C2, C3, C4, and C5

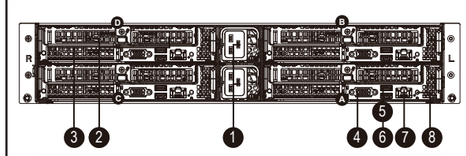
Front view & Interface





No.	Description
1	Power
2	NIC
3	Information LED
4	UID

Rear View



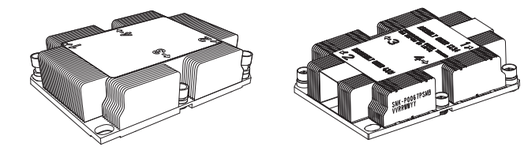
Rear Chassis Features	
Item	Description
A, B, C, D	Independent computing nodes
1	Redundant power modules
2	Two PCI-E 3.0 x16 slots in each node
3	SIOM Network ports
4	VGA port
5	USB1 (3.0)
6	USB0 (3.0)
7	Dedicated IPMI LAN
8	Unit Identifier Switch

Beep Codes

BIOS Error Beep (POST) Codes

Beep Code	Error Message	Description
1 short	Refresh	Circuits have been reset (Ready to power up)
5 short, 1 long	Memory Error	No memory detected in the 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

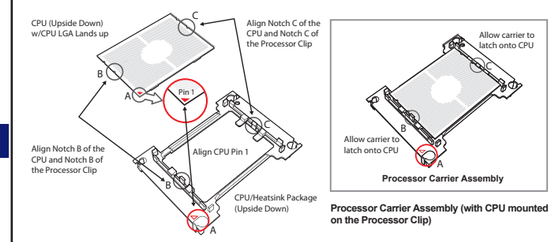
Heatsinks



Heatsink SNK-P0067PS
(for CPU1)

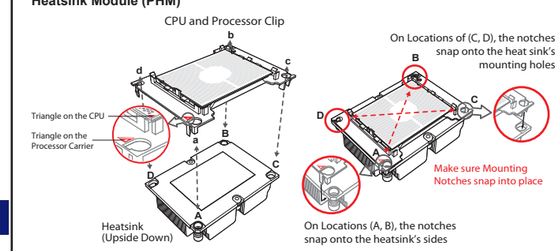
Heatsink SNK-P0067PSM
(for CPU2)

CPU Installation



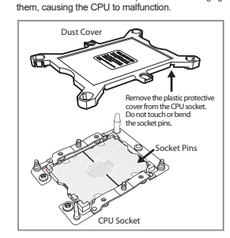
Processor Carrier Assembly (with CPU mounted on the Processor Clip)

Attaching the Processor Carrier Assembly to the Heatsink to Form the Processor Heatsink Module (PHM)



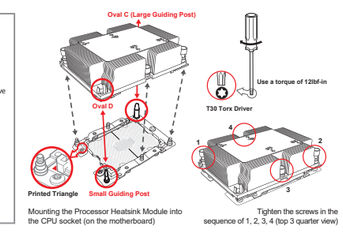
Removing the Dust Cover from the CPU Socket

Remove the dust cover from the CPU socket, exposing the socket and socket pins as shown on the illustration below.
Note: Do not touch the socket pins to avoid damaging them, causing the CPU to malfunction.



Installing the Processor Heatsink Module (PHM)

Note: Do not use excessive force when tightening the screws to avoid damaging the LGA lands and the processor.



Mounting the Processor Heatsink Module into the CPU socket (on the motherboard)

Tighten the screws in the sequence of 1, 2, 3, 4 (top 3 quarter view)

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

⚠ **WARNING:**
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