

SUPERMICRO® SuperServer 6029BT-DNC0R Quick Reference Guide

Board Layout

| Jumper | Description | Default Setting |
|--------|-------------------------------|------------------------|
| JBT1 | Clear CMOS | Open (Normal) |
| JPME1 | ME Recovery | Pins 1-2 (Normal) |
| JVRM1 | VRM SMB Clock (to BMC or PCH) | Pins 1-2 (BMC, Normal) |

| Connector | Description |
|---------------|---|
| Battery (BT1) | Onboard CMOS battery |
| COM 1 | Front Panel COM Port 1 |
| FAN 3/4 | System cooling fan headers |
| IPMI_LAN | Dedicated IPMI LAN port |
| JF1 | Front control panel header |
| JF2 | PCI-E 3.0 x4 Slot (CPU1) |
| JNVI'C1 | NVMe I'C headers |
| JRK1 | RAID Key for onboard NVMe devices |
| JS1 | SATA DOM Power Connector |
| JS2 | Micro SD Card slot |
| JTPM1 | Trusted Platform Module (TPM)/Port 80 connector |
| SIOM | CPU1 PCI-E 3.0 x16 slot for proprietary add-on module use |
| 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 slot supported by CPU2 |
| SXB3 | 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-SATA6 | SATA DOM with power-pin connector |
| 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 1 CPU is used | Memory Population Sequence |
|--|--|
| 1 CPU & 1 DIMM | CPU1: P1-DIMMA1 |
| 1 CPU & 2 DIMMs | CPU1: P1-DIMMA1/P1-DIMMD1 |
| 1 CPU & 3 DIMMs | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1 |
| 1 CPU & 4 DIMMs | CPU1: P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1 |
| 1 CPU & 5 DIMMs (Unbalanced: not recommended) | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1 |
| 1 CPU & 6 DIMM | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 |
| 1 CPU & 7 DIMMs (Unbalanced: not recommended) | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMA2/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 |
| 1 CPU & 8 DIMMs (Unbalanced: not recommended) | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMA2/P1-DIMMD2/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 |
| 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 (Unbalanced: not recommended) | 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 & 16 DIMMs (Unbalanced: not recommended) | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMA2/P1-DIMMD2/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1/P2-DIMMA2/P2-DIMMD2/P2-DIMMD1/P2-DIMME1/P2-DIMMF1 |

Nodes and Corresponding Hard Drives

| Node Drawer Locations | |
|------------------------------|--|
| Node A controls drives A0–A5 | |
| Node B controls drives B0–B5 | |

Front view & Interface

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

Information LED

| Status | Description |
|-------------------------|---|
| Continuously on and red | An overheat condition has occurred. (This may be caused by cable congestion.) |
| Blinking red (1Hz) | Fan failure, check for an inoperative fan. |
| Blinking red (0.25Hz) | Power failure, check for a non-operational power supply. |
| Solid blue | UID has been activated locally to locate the server in a rack environment. |
| Blinking blue | UID has been activated using iPMI to locate the server in a rack environment. |

Rear View

| Item | Description |
|------|--|
| 1 | Two full-height PCIe x8 slots in each node |
| 2 | One low profile PCIe x16 slot in each node |
| 3 | SIOM Network ports |
| 4 | Redundant power modules |
| 5 | VGA port |
| 6 | Dedicated IPMI LAN |
| 7 | USB1 (3.0) |
| 8 | USB0 (3.0) |
| 9 | UID Switch and LED |

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 |

Air Shroud installation

Heatsinks

CPU Installation

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

Installing 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.

Removing the Dust Cover
Remove the basic protective cover from the CPU socket. Do not touch or bend the socket pins.

Oval C (Large Guiding Post)
Align Notch C of the CPU and Notch C of the Processor Clip

Oval D (Small Guiding Post)
Align Notch B of the CPU and Notch B of the Processor Clip

Processor Carrier Assembly
Align CPU Pin 1 with Notch A

Processor Carrier Assembly (with CPU mounted on the Processor Clip)
Align Notch B of the CPU and Notch B of the Processor Clip

CPU and Processor Clip
Align Notch C of the CPU and Notch C of the Processor Clip

Heatsink (Upside Down)
Align Notches snap onto the heat sink's mounting holes

Make sure Mounting Notches snap into place

On Locations (A, B), the notches snap onto the heatsink's sides

On Locations (C, D), the notches snap onto the heat sink's mounting holes

Triangle on the CPU
Triangle on the Processor Carrier

Triangle on the Processor Carrier
Triangle on the Processor Carrier

On Locations (A, B), the notches snap onto the heatsink's sides

On Locations (C, D), the notches snap onto the heat sink's mounting holes

Make sure Mounting Notches snap into place

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 use excessive force when tightening the screws to avoid damaging the LGA lands and the processor.

Oval C (Large Guiding Post)
Align Notch C of the CPU and Notch C of the Processor Clip

Oval D (Small Guiding Post)
Align Notch B of the CPU and Notch B of the Processor Clip

Printed Triangle
Printed Triangle

Processor Heatsink Module (PHM)
Mounting the Processor Heatsink Module into the CPU socket (on the motherboard) sequence of 1, 2, 3, 4 (top 3 quarter view)

Tighten the screws in sequence 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>