# SUPERMICRO®

## X9DR3-F/X9DRi-F
### QUICK REFERENCE GUIDE 1.0B

## Motherboard Layout and Features



SUPER● X9DR3/i-F
Rev. 1.11a

### CPU Installation



CPU Keys
Socket Keys

### Heatsink Installation



Screw #4
Screw #2
Screw #1
Screw #3
Motherboard
Mounting Hole

### JF1 Header Pins

| | 20 | 19 | |
|---|---|---|---|
| Ground | ○ | ○ | NMI |
| X | ○ | ○ | X |
| Power LED | ○ | ○ | Vcc |
| HDD LED | ○ | ○ | Vcc |
| NIC1 LED | ○ | ○ | Vcc |
| NIC2 LED | ○ | ○ | Vcc |
| OH/Fan Fail LED | ○ | ○ | Vcc |
| PWR Fail LED | ○ | ○ | Vcc |
| Ground | ○ | ○ | Reset } Reset Button |
| Ground | ○ | ○ | PWR } Power Button |
| | 2 | 1 | |

**Note:** Graphics shown in this quick reference guide are for illustration only. Your components may or may not look exactly the same as drawings shown in this guide.

## Jumpers, Connectors and LED Indicators

### Jumpers

| Jumper | Item # | Description | Default |
|---|---|---|---|
| JBT1 | 27 | Clear CMOS | None |
| JPB1 | 14 | BMC Enabled | Pins 1-2 (Enabled) |
| JPG1 | 12 | VGA Enabled | Pins 1-2 (Enabled) |
| JPL1 | 11 | GLAN1/GLAN2 Enable | Pins 1-2 (Enabled) |
| JPME1 | 18a | Management Engine (ME) Recovery Mode | Pins 1-2 (Normal) |
| JPME2 | 32a | Management Engine (ME) Manufacture Mode | Pins 1-2 (Normal) |
| JWD | 23 | Watch Dog | Pins 1-2 (Reset) |

### Connectors

| Connector | Item # | Description |
|---|---|---|
| COM1, COM2 | 1, 15 | Back Panel Com Port1 / Front Accessible COM2 Header |
| Fan 1~3 | 45, 44, 43 | CPU/System Fan Headers |
| Fan 4~6 | 42, 9, 10 | CPU/System Fan Headers |
| FanA, FanB | 41, 33 | CPU/System Fan Headers |
| I-SATA 0/1 | 31 | Intel SB SATA 3.0 Connectors 0/1 |
| I-SATA 2~5 | 30 | Intel SB SATA 2.0 Connectors 2~5 |
| J22 (JPWR3) | 46 | ATX 24-Pin Power Connector |
| JD1 | 37 | Speaker/Power LED Indicator |
| JF1 | 39 | Front Panel Control Header |
| JI²C1/JI²C2 | 17, 16 | SMBus I²C Header |
| JIPMB1 | 18 | 4-Pin External BMC I²C Header (for IPMI card) |
| JL1 | 29 | Chassis Intrusion |
| JOH1 | 38 | Overheat LED Indicator |
| JPI²C1 | 48 | Power Supply SMBus I²C Header |
| JPWR1/2 | 49, 47 | 12V 8-Pin Power Connectors |
| JSTBY1 | 34 | Standby Header |
| JTPM1 | 19 | TPM (Trusted Platform Module) Port 80 |
| JWF1 | 28 | SATA DOM (Disk on Module) Power Connector |
| LAN1, LAN2 | 6, 7 | G-bit Ethernet Ports 1/2 |
| (IPMI) LAN | 3 | IPMI Dedicated LAN |
| SCU 0~3 | 36 | SCU Connectors 0~3 |
| SCU 4~7 | 35 | SCU Connectors 4~7 (for X9DR3-F only) |
| SP1 | 32 | Onboard Buzzer (Internal Speaker) |
| T-SGPIO 1, 2 | 21, 20 | Serial Link General Purpose I/O Headers |
| BP USB 0/1, USB 2/3 | 2, 4 | Back Panel USB 0/1, 2/3 |
| USB 4/5, USB 6, | 25, 22 | Front Panel Accessible USB Connections |
| USB 8/9, USB 10/11 | 24, 26 | Front Panel Accessible USB Connections |
| VGA | 8 | Back Panel VGA Port |

### LED Indicators

| LED | Item # | Description | Color/State | Status |
|---|---|---|---|---|
| DM1 | 13 | BMC Heartbeat LED | Green: Blinking | BMC Normal |
| LE1 | 40 | Standby PWR LED | Green: On | SB Power On |

**Note:** Refer to Chapter 2 of the User Manual for detailed information on jumpers, connectors, and LED indicators.

**Note:** Item numbers are listed in counterclockwise order.

↗ = mounting hole

## Memory Support

This motherboard supports up to 1 TB of Load Reduced (LRDIMM), 512 GB of Registered (RDIMM) or 128 GB of Unbuffered (UDIMM) ECC/Non-ECC DDR3 800/1066/1333/1600/1866 MHz 240-pin 4-channel memory modules in 16 DIMM slots.

**Note:** For memory optimization, use only DIMM modules that have been validated by Supermicro. For the latest memory updates, please refer to our website at http://www.supermicro.com/products/motherboard.

### DIMM Installation

Insert the desired number of DIMMs into the memory slots, starting with P1-DIMMA1. For memory to work properly, follow the tables below for memory population order. Refer to the motherboard layout (at left) for the location of the DIMM slots.
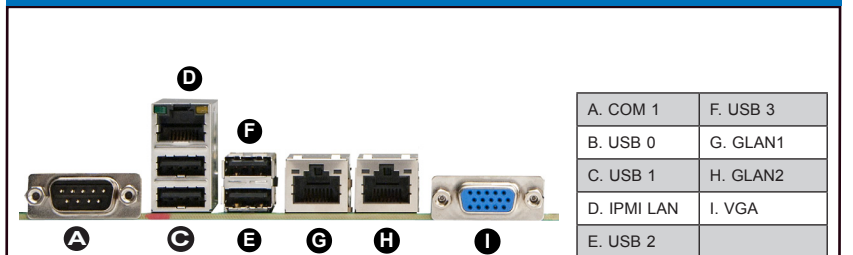
#### Processors and their Corresponding Memory Modules

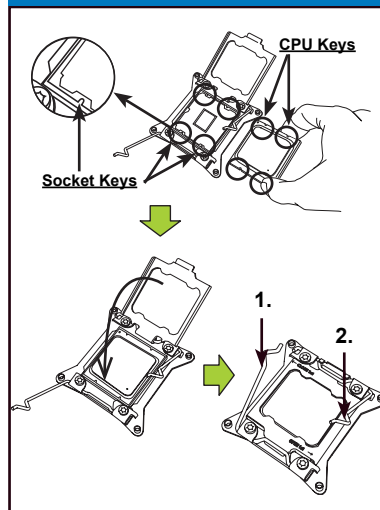| CPU# | Corresponding DIMM Modules | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CPU 1 | P1-DIMMA1 | P1-DIMMB1 | P1-DIMMC1 | P1-DIMMD1 | P1-DIMMA2 | P1-DIMMB2 | P1-DIMMC2 | P1-DIMMD2 |
| CPU2 | P2-DIMME1 | P2-DIMMF1 | P2-DIMMG1 | P2-DIMMH1 | P2-DIMME2 | P2-DIMMF2 | P2-DIMMG2 | P2-DIMMH2 |

#### Processor and Memory Module Population for Optimal Performance

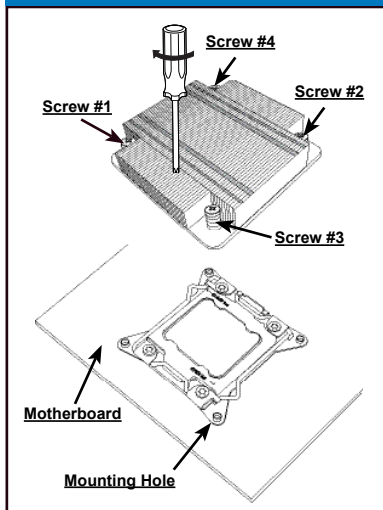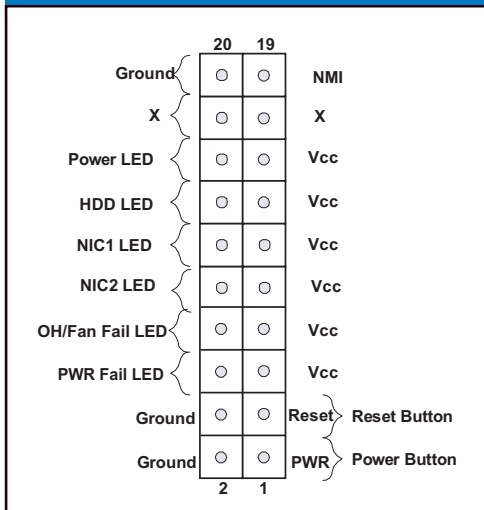| Number of CPUs+DIMMs | CPU and Memory Population Configuration Table (For memory to work properly, please follow the instructions below.) |
|---|---|
| 1 CPU & 2 DIMMs | CPU1 P1-DIMMA1/P1-DIMMB1 |
| 1 CPU & 4 DIMMs | CPU1 P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1 |
| 1 CPU & 5-8 DIMMs | CPU1 P1-DIMMA1/P1-DIMMB1, 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 & 10-16 DIMMs | CPU1/CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1 + Any memory pairs 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 |

### Back Panel IO Connectors



| A. COM 1 | F. USB 3 |
|---|---|
| B. USB 0 | G. GLAN1 |
| C. USB 1 | H. GLAN2 |
| D. IPMI LAN | I. VGA |
| E. USB 2 | |

**Note:** Refer to Chapter 2 of the User Manual for detailed information on memory support and CPU/motherboard installation instructions.