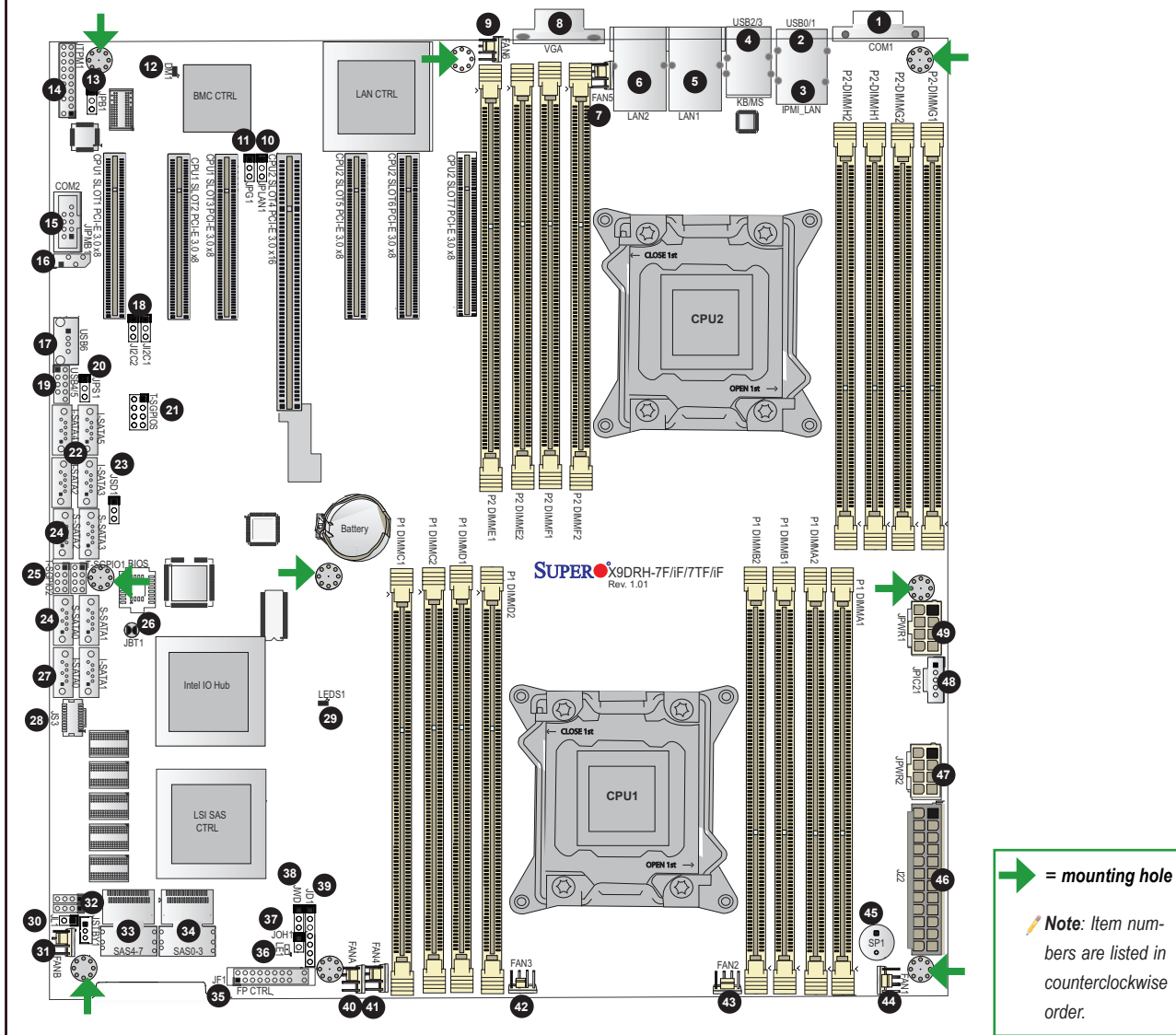


# SUPERMICR<sup>®</sup> X9DRH-7F/-iF/-7TF/-7iF QUICK REFERENCE GUIDE

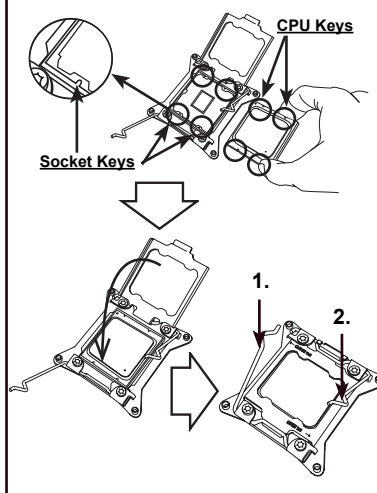
(MNL#1306-QRG)

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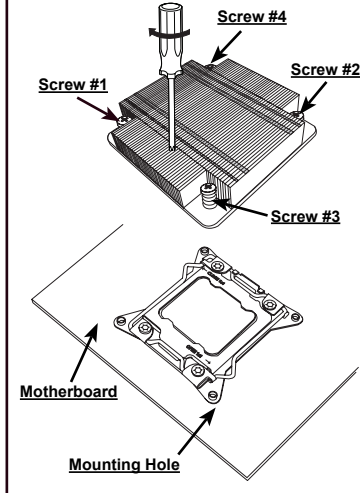
## Motherboard Layout and Features



### CPU Installation



### Heatsink Installation



### Front Panel Control (JF1)

|                 |    |    |              |
|-----------------|----|----|--------------|
| Ground          | 20 | 19 | 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        |
| Ground          |    |    | PWR          |
|                 | 2  | 1  | Reset Button |
|                 |    |    | Power Button |

## Jumpers, Connectors and LED Indicators

### Jumpers

| Jumper    | Item # | Description        | Default                    |
|-----------|--------|--------------------|----------------------------|
| JBT1      | 26     | Clear CMOS         | See Chpt 2. in User Manual |
| JPC1/JPC2 | 18     | SMB to PCI-E Slots | Pins 2-3 (Normal)          |
| JPB1      | 13     | BMC Enable         | Pins 1-2 (Enabled)         |
| JPG1      | 11     | VGA Enable         | Pins 1-2 (Enabled)         |
| JPLAN1    | 10     | LAN1/LAN2 Enable   | Pins 1-2 (Enabled)         |
| JPS1      | 20     | SAS Enable         | Pins 1-2 (Enabled)         |
| JWD       | 38     | Watch Dog          | Pins 1-2 (Reset)           |

### Connectors

| Connector          | Item #         | Description                                                                    |
|--------------------|----------------|--------------------------------------------------------------------------------|
| COM1/COM2          | 1, 15          | Back Panel COM Port1/Front Accessible COM2 Header                              |
| Fan1~Fan4          | 44, 43, 42, 41 | CPU/System Fan Headers                                                         |
| Fan5/6, FanA, FanB | 7, 9, 40, 31   | CPU/System Fan Headers (5/6) & IO Slot Fan Headers (A/B)                       |
| J22                | 46             | ATX 24-Pin Power Connector                                                     |
| JD1                | 39             | Speaker/Power LED Indicator                                                    |
| JF1                | 35             | Front Panel Control Header                                                     |
| JIPMB1             | 16             | 4-pin External BMC I <sup>2</sup> C Header (for an IPMI Card)                  |
| JL1                | 30             | Chassis Intrusion                                                              |
| JOH1               | 37             | Overheat/Fan Fail LED                                                          |
| JPIC1              | 48             | Power Supply SMBus I <sup>2</sup> C Header                                     |
| JPWR1/JPWR2        | 49, 47         | 12V 8-Pin Power Connectors                                                     |
| JSD1               | 23             | SATA DOM (Disk On Module) Power Header                                         |
| JSTBY1             | 32             | Standby Power                                                                  |
| JTPM1              | 14             | TPM (Trusted Platform Module)/Port 80 Header                                   |
| LAN1/2             | 5, 6           | GLAN Ports 1/2 for -7F/-iF, 10GLAN Ports 1/2 for -7TF/-iTF                     |
| (IPMI) LAN         | 3              | IPMI Dedicated LAN                                                             |
| (I-)SATA 0/1       | 27             | Intel SATA 3.0 Connectors 0/1 (from AHCI)                                      |
| (I-)SATA 2~5       | 22             | Intel SATA 2.0 Connectors (from AHCI): SATA2/3 (T-SGPIO1) & SATA4/5 (T-SGPIO2) |
| (S-)SATA 0~3       | 24             | SATA 2.0 Connectors 0~3 (from SCU)                                             |
| SAS 0~3, 4~7       | 34, 33         | Serial Attached SCSI Connectors 0~3, 4~7 (X9DRH-7F/-7TF)                       |
| SP1                | 45             | Onboard Buzzer (Internal Speaker)                                              |
| T-SGPIO1           | 25             | Serial Link General Purpose IO Headers (used with I-SATA 0~3)                  |
| T-SGPIO2           | 25             | Serial Link General Purpose IO Header (used with I-SATA 4/5)                   |
| T-SGPIO-S          | 21             | Serial Link General Purpose IO Header (used with S-SATA 0~3)                   |
| USB 0/1, 2/3       | 2, 4           | Back Panel USB 0/1, 2/3                                                        |
| USB 4/5, USB6      | 19, 17         | Front Panel USB 4/5 Header, Type A USB Port 6                                  |
| VGA                | 8              | Back Panel VGA Port (JVGA)                                                     |

### LED Indicators

| LED   | Item # | Description       | Color/State     | Status |
|-------|--------|-------------------|-----------------|--------|
| DM1   | 12     | BMC Heartbeat LED | Green: Blinking | Normal |
| LE1   | 36     | Power LED         | Green: On       | On     |
| LEDS1 | 29     | SAS LED           | Green: Blinking | Normal |

## Memory Support

This motherboard supports up to 512 GB of 240-pin Registered (RDIMM)/Load Reduced (LRDIMM) ECC or up to 128 GB of Unbuffered (UDIMM) ECC/Non-ECC DDR3 800/1066/1333/1600 MHz 4-channel (per CPU) memory 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.

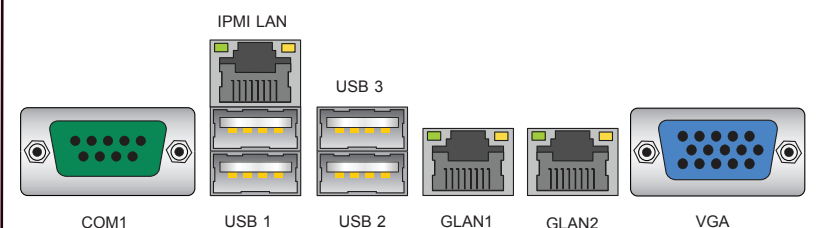
### Processors and their Corresponding Memory Modules

| 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<br>(For memory to work properly, please follow the instructions below.)                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 CPU & 2 DIMMs      | CPU1<br>P1-DIMMA1/P1-DIMMB1                                                                                                                                                     |
| 1 CPU & 4 DIMMs      | CPU1<br>P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1                                                                                                                                |
| 1 CPU & 5-8 DIMMs    | CPU1<br>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<br>P1-DIMMA1/P1-DIMMB1, P2-DIMME1/P2-DIMMF1                                                                                                                         |
| 2 CPUs & 6 DIMMs     | CPU1 + CPU2<br>P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1                                                                                                     |
| 2 CPUs & 8 DIMMs     | CPU1 + CPU2<br>P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1                                                                                 |
| 2 CPUs & 10-16 DIMMs | CPU1/CPU2<br>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<br>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



**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.

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

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