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**FOR YOUR SYSTEM TO WORK PROPERLY, PLEASE DOWNLOAD APPROPRIATE DRIVERS/IMAGES/USER'S MANUAL FROM THE LINKS BELOW:**
- Manuals: http://www.supermicro.com/support/manuals
- Drivers & Utilities: http://www.supermicro.com/wftp
- Safety: http://www.supermicro.com/about/policies/safety_information.cfm

**PACKAGE CONTENTS**
- One (1) Supermicro Motherboard
- Six (6) SATA Cables
- One (1) I/O Shield
- One (1) Supermicro QRG

MNL-2082-QRG-10c

## Motherboard Layout and Features



= mounting hole
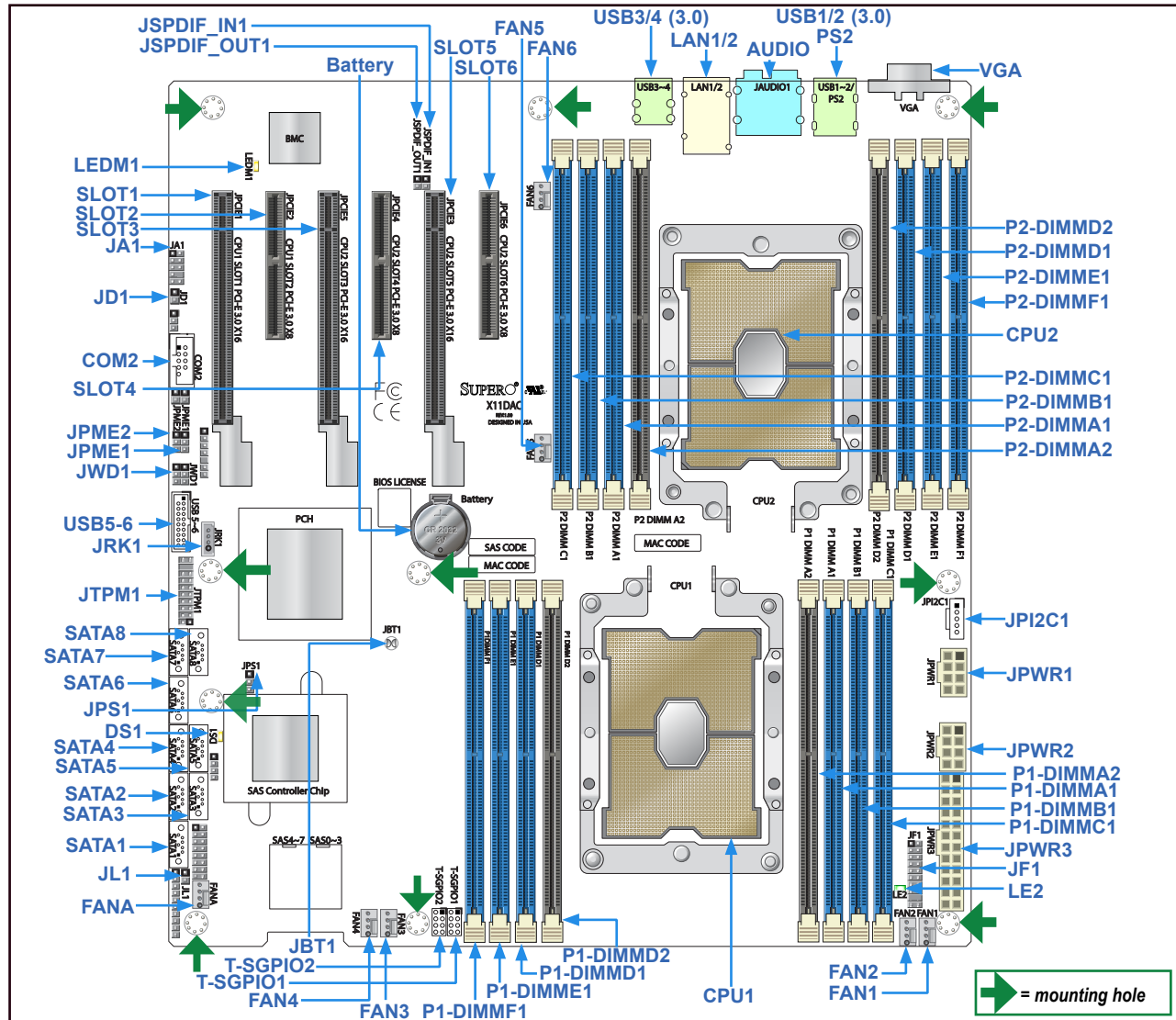
## Jumpers/Connectors/LED Indicators

### Jumper

| JBT1 | CMOS Clear | Open (Normal) |
|---|---|---|
| JPME1 | ME Recovery | Pins 1-2 (Normal) |
| JPME2 | Manufacturing Mode Select | Pins 1-2 (Normal) |
| JPS1 | SAS Status | Pins 1-2 (Enabled) |
| JWD1 | Watch Dog Timer Enable | Pins 1-2 (Reset) |

### Connectors

| BT1 | Onboard CMOS battery socket |
|---|---|
| COM2 | COM header for front access |
| FAN1-6, FANA | System/cooling fan headers (FAN1-6, A) |
| SATA0~3, SATA 4~7 | SATA 3.0 headers supported by the PCH |
| JA1 | Audio header for front access |
| JD1 | Speaker/buzzer header (optional) (**Note 1**) |
| JF1 | Front Control Panel header |
| JL1 | Chassis Intrusion header (**Note 2**) |
| JPI²C1 | Power Supply SMBus I²C header |
| JPWR1/JPWR2 | 8-pin Power Supply connectors |
| JPWR3 | 24-pin ATX main power supply connector |
| JRK1 | Intel VROC RAID Key for NVMe SSD |
| JSPDIF_IN1/JSPDIF_OUT1 | SPDIF Audio In/Out headers |
| JTPM1 | Port 80 connector for Trusted Platform Module (TPM) |
| LAN1/LAN2 | Dual 1GbE Ethernet ports on the IO back panel |
| SAS0~3 | SAS Connections 0-3 supported by LSI SAS 3008 Controller |
| SAS4~7 | SAS Connections 4-7 supported by LSI SAS 3008 Controlle |
| SLOT1 | PCI-Express 3.0 x16 Slot supported by CPU1 |
| SLOT2 | PCI-Express 3.0 x8 Slot supported by CPU1 |
| SLOT3/SLOT5 | PCI-Express 3.0 x16 Slots supported by CPU2 |
| SLOT4/SLOT6 | PCI-Express 3.0 x8 Slots supported by CPU2 |
| T-SGPIO1/T-SGPIO2 | General Purpose Serial I/O Port1/Port2 |
| USB1/2, USB3/4 | Back panel USB 3.0 Ports 1/2, 3/4 |
| USB5/6 | Front Accessible USB 3.0 header |
| VGA | VGA Port |

### LED Indicators

| DS1 | SAS Heartbeat LED | Blinking Green: SAS Normal |
|---|---|---|
| LE2 | Onboard Power LED | On: Onboard power on |
| LEDM1 | BMC Heartbeat LED | Blinking Green: BMC normal |

**Notes**: *1. This feature is available when an external speaker/buzzer is used. 2. Please connect a cable from the Chassis Intrusion header at JL1 to the chassis to receive an alert via IPMI. 3. To avoid causing interference with other components, please be sure to use an add-on card that is fully compliant with the PCI-standard on a PCI slot.*

## CPU Support

This motherboard supports dual Intel Xeon Scalable-SP or 2nd Gen Intel Xeon Scalable-SP (Socket P) series processors with support of UltraPath Interconnect (UPI) of up to 10.4 GT/s.
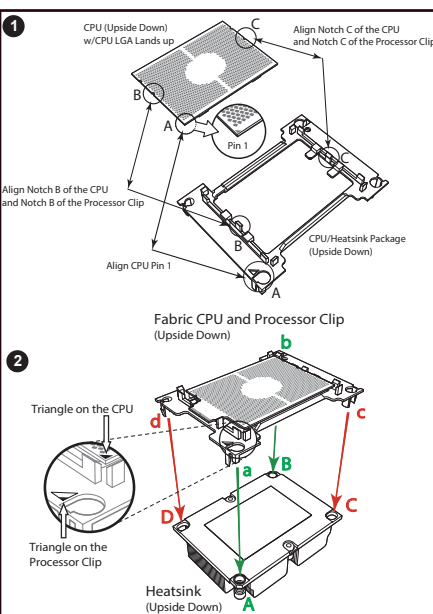
## Memory Support

This motherboard supports up to 4TB of 3DS LRDIMM, LRDIMM, 3DS RDIMM, RDIMM, NV-DIMM DDR4 (288-pin) ECC 2933/2666/2400/2133 MHz memory modules in 16 slots. (**Notes**: **1.** 2933 MHz memory is supported by 2nd Gen Intel Xeon Scalable-SP(82xx/62xx) series processors only. **2.** Unbalanced memory configuration decreases memory performance and is not recommended.)
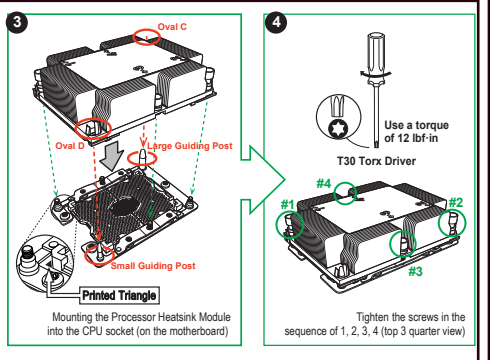
### Memory Population Table for the X11DP Motherboard w/16 DIMM Slots Onboard

| 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 DIMMs | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 |
| 1 CPU & 7 DIMMs (Unbalanced: not recommended) | CPU1: P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 |
| 1 CPU & 8 DIMMs (Unbalanced: not recommended) | CPU1: P1-DIMMB1/P1-DIMMB2/P1-DIMMA1/P1-DIMMA2/P1-DIMMD1/P2-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 / CPU2: P2-DIMMC1/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-DIMMA2/P1-DIMMD1/P1-DIMME1/P1-DIMMF1 / CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1/P2-DIMMA2/P2-DIMMD1/P2-DIMME1/P2-DIMMF1 |
| 2 CPUs & 16 DIMMs (Unbalanced: not recommended) | CPU1: P1-DIMMC1/P1-DIMMB1/P1-DIMMA1/P1-DIMMA2/P1-DIMMD1/P1-DIMMD2/P1-DIMMD1/P2-DIMME1/P1-DIMME1/P1-DIMMF1 / CPU2: P2-DIMMC1/P2-DIMMB1/P2-DIMMA1/P2-DIMMA2/P2-DIMMD1/P2-DIMMD2/P2-DIMME1/P2-DIMME1/P2-DIMMF1 |

**Notes**: *1. Memory speed is dependent on the type of processors used in the system. 2. Using unbalanced memory topology such as populating two DIMMs in one channel while populating one DIMM in another channel on the same motherboard will result in reduced memory performance. 3. To avoid causing interference with other components, please be sure to use an add-on card that is fully compliant with the PCI Standards on a PCI slot card that is fully compliant with the PCI Standards on a PCI slot.*
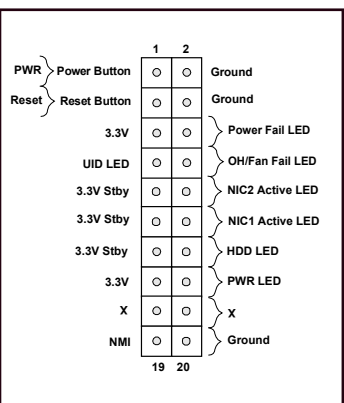
## PCI-E M.2 Slot Installation



| Hole Location on the MB | 42 |
|---|---|
| M.2 Card 60 | A+B+C |
| M.2 Card 80 | A+B+C |
| M.2 Card 110 | A+B+D |

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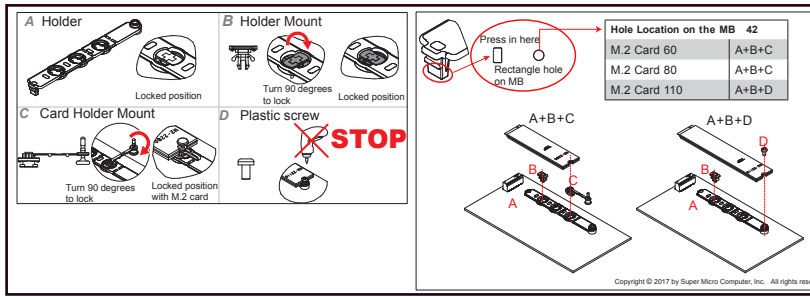
## CPU/Heatsink Installation



**Notes**: *1. Please refer to Chapter 2 of the user's manual for detailed instructions of CPU/Heatsink and memory Installation. 2. Please refer to our website at www.supermicro.com for CPU/Memory support updates. 3. All graphics shown in this quick reference guide are for illustration only. Your components may or may not look the same as the graphics shown in this quick reference guide.*

## Installing Processor/Heatsink Module



## Front Control Panel (JF1)

| | 1 | 2 | |
|---|---|---|---|
| PWR ▸ Power Button | ○ | ○ | Ground |
| Reset ▸ Reset Button | ○ | ○ | Ground |
| 3.3V | ○ | ○ | Power Fail LED |
| UID LED | ○ | ○ | OH/Fan Fail LED |
| 3.3V Stby | ○ | ○ | NIC2 Active LED |
| 3.3V Stby | ○ | ○ | NIC1 Active LED |
| 3.3V Stby | ○ | ○ | HDD LED |
| 3.3V | ○ | ○ | PWR LED |
| X | ○ | ○ | X |
| NMI | ○ | ○ | Ground |
| | 19 | 20 | |

## Back Panel I/O Connectors



### Back Panel I/O Ports

| No. | Description | No. | Description |
|---|---|---|---|
| 1. | VGA | 4. | AUDIO1 |
| 2. | USB 1/2 (USB 3.0) | 5. | LAN1/2 |
| 3. | PS2 | 6. | USB 3/4 (USB 3.0) |