

CONTACT INFORMATION

- Website: www.supermicro.com
- General Information: marketing@supermicro.com
- Technical Support: support@supermicro.com
- Phone: +1 (408) 503-8000, Fax: +1 (408) 503-8008

FOR YOUR SYSTEM TO WORK PROPERLY, PLEASE DOWNLOAD APPROPRIATE

DRIVERS/IMAGES/USER'S MANUAL FROM THE LINKS BELOW:

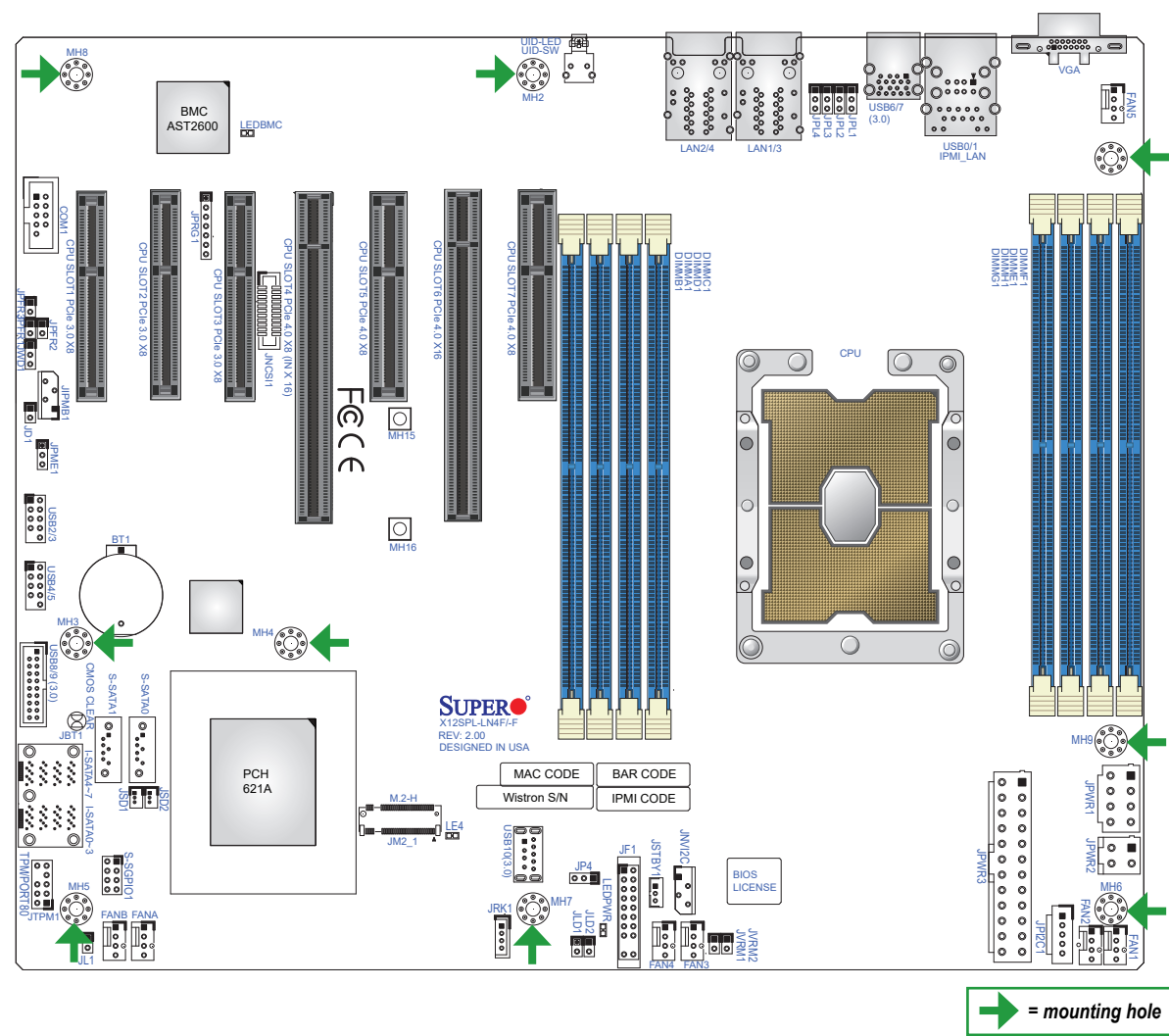
- Manuals: <http://www.supermicro.com/support/manuals>
- Drivers & Utilities: <https://www.supermicro.com/wdl/driver/>
- Safety: http://www.supermicro.com/about/policies/safety_information.cfm

PACKAGE CONTENTS

- One Supermicro Motherboard
- Two SATA Cables
- One I/O Shield
- One Quick Reference Guide



Motherboard Layout and Features



→ = mounting hole

Jumpers and Connectors

Jumpers		
Jumper	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
JPME1	ME Recovery	Pins 1-2 (Normal)
JPL1 - JPL4	LAN1/LAN2/LAN3/LAN4 Enable (JPL3/JPL4 are on -LN4F only)	Pins 1-2 (Enabled) Pins 2-3 (Disabled)

Connectors	
Connector	Description
BT1	Onboard CMOS battery (To clear CMOS, remove the battery, short pins 1-2 for more than 10 seconds and install the battery.)
COM1	COM Header
FAN1 - FAN5, FANA, FANB	CPU/System Fan Headers
I-SATA0 - I-SATA7	Intel® PCH SATA 3.0 Ports (with RAID 0, 1, 5, 10)
IPMI_LAN	Dedicated IPMI LAN Port
JF1	Front Control Panel Header
JIPMB1	4-pin BMC External I²C Header
JL1	Chassis Intrusion Header
JLD1	LAN3 Activity LED Connector (X12SPL-LN4F only)
JLD2	LAN4 Activity LED Connector (X12SPL-LN4F only)
JNCSI1	NC-SI Header for IPMI Support
JNVPC1	NVMe I²C Header
JPI²C1	Power System Management Bus (SMB) I²C Header
JPWR1	8-pin Power Connector
JPWR2	4-pin Power Connector
JPWR3	24-pin ATX Power Connector
JRK1	Intel® RAID Key Header
JSD1, JSD2	SATA DOM Power Connectors
JSTBY1	Standby Power Header
JTPM1	Trusted Platform Module (TPM)/Port 80 Connector
LAN1 - LAN4	1GbE LAN (RJ45) Ports (LAN3/LAN4 for -LN4F Only)
M.2-H	M.2 M-Key 2280/22110 Slot (supports PCIe 3.0 x4/SATA3)
SLOT1, SLOT2, SLOT 3	CPU PCIe 3.0 x 8
SLOT4	CPU PCIe 4.0 x8 (IN x16)
SLOT6	CPU PCIe 4.0 x16
SLOT5, SLOT7	CPU PCIe 4.0 x8
S-SGPIO1	Serial Link General Purpose I/O Connection Header
S-SATA0, S-SATA1	SATA 3.0 Ports with SATA DOM Power
UID-SW	Unit Identifier (UID) Switch/BMC Reset
USB0/1	Back Panel Universal Serial Bus (USB) 2.0 Ports
USB2/3, USB4/5	Front Accessible USB 2.0 Headers
USB6/7	Back Panel USB 3.2 Gen 1 Ports
USB8/9	Front Accessible USB 3.2 Gen 1 Header
USB10	USB 3.2 Gen 1 Type-A Header
VGA	VGA Port

LED Indicators

LED	Description	Status
LE4	M.2 LED	Blinking Green: Device Working
LEDBMC	BMC Heartbeat LED	Blinking Green: BMC Normal
LEDPWR	Onboard Power LED	Solid Green: Power On
UID-LED	Unit Identifier (UID) LED	Solid Blue: Unit Identified

CPU Support

The X12SPL-LN4F-F motherboard supports a 3rd generation Intel® Xeon® Scalable Processor (Socket P+ (LGA4189)) with up to 40 cores and a thermal design power (TDP) of up to 270 W.

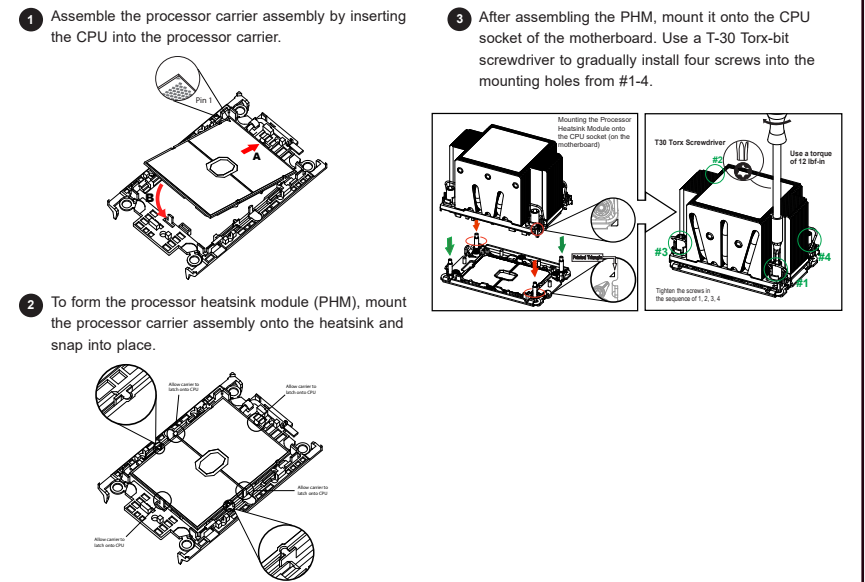
Memory Support

The X12SPL-LN4F-F supports up to 2048 GB of ECC RDIMM/LRDIMM/3DS LRDIMM with speeds of up to 3200 MT/s in eight slots. See below for additional memory information.

- It's recommended to use DDR4 memory of the same type, size and speed. Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will not support odd-numbered modules except for a single DIMM module necessary for board operation. For more information, refer to https://www.supermicro.com/support/resources/memory/X12_memory_config_guide.pdf.
- To achieve the best memory performance, a balanced memory population is recommended.
- Memory capacity and frequency is CPU dependent.

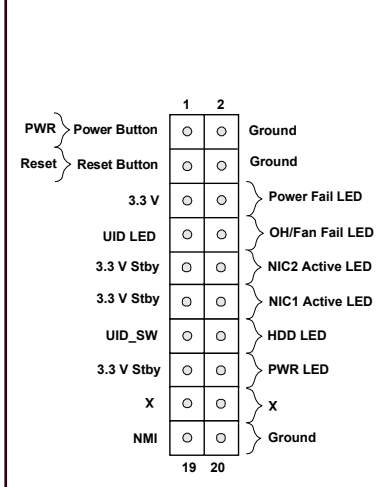
1 CPU, 8-DIMM Slots	
Number of DIMMs	Memory Population Sequence
1	DIMMA1
2	DIMMA1 / DIMME1
4	DIMMA1 / DIMME1 / DIMMC1 / DIMMG1
6	DIMMA1 / DIMME1 / DIMMC1 / DIMMG1 / DIMMB1 / DIMMF1
8	DIMMA1 / DIMME1 / DIMMC1 / DIMMG1 / DIMMB1 / DIMMF1 / DIMMD1 / DIMMH1

CPU and PHM Installation



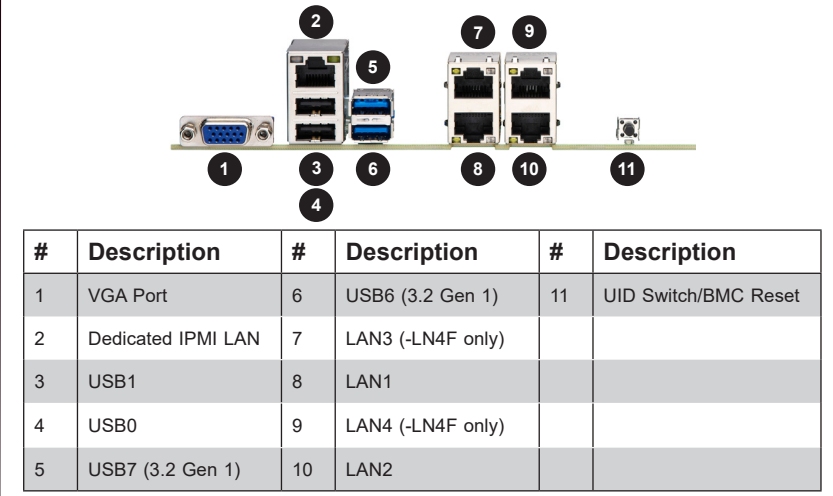
Note: Graphics shown in this quick reference guide are for illustration only. Your components may or may not look exactly the same as drawings shown in this guide.

Front Control Panel (JF1)



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

Back Panel I/O Connectors



Note: LAN3/4 are only found on -LN4F. -F will not have a second row of LAN ports.

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