SUPERMICRO®

X12SPi-TF

Quick Reference Guide Rev. 1.0a

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:

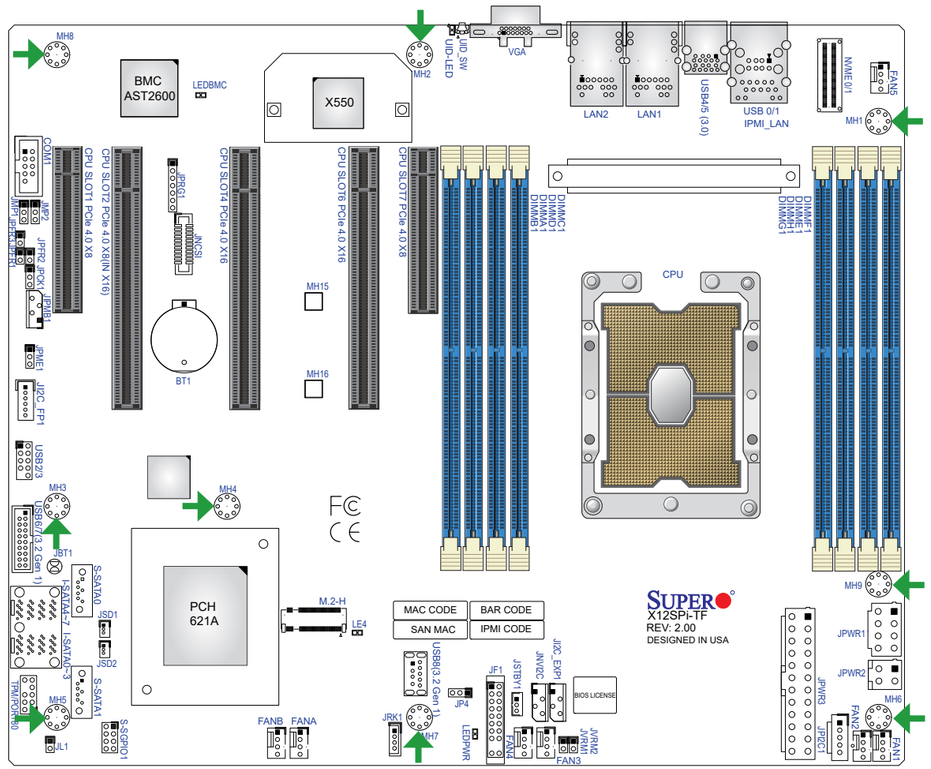
- Manuals: http://www.supermicro.com/support/manuals
- Drivers & Utilities: https://www.supermicro.com/wdl/driver/
- Safety: http://www.supermicro.com/about/policies/safety_information.cfm

Package Contents

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

WARNING: This product can expose you to chemicals including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

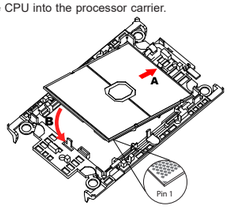
Motherboard Layout and Features



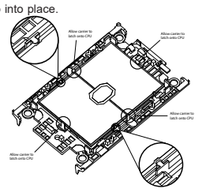
= *mounting hole*

CPU and PHM Installation

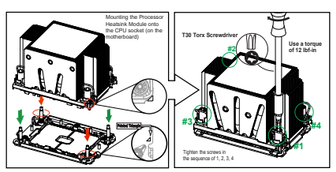
1. Assemble the processor carrier assembly by inserting the CPU into the processor carrier.



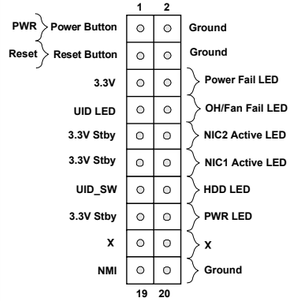
2. To form the processor heatsink module (PHM), mount the processor carrier assembly onto the heatsink and snap into place.



3. After assembling the PHM, mount it onto the CPU socket of the motherboard. Use a T-30 Torx-bit screwdriver to gradually install four screws into the mounting holes from #1-4.



Front Control Panel (JF1)



Connectors, LED Indicators, and Jumpers

Jumpers

Jumper	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
JPME1	ME Recovery	Pins 1-2 (Normal)

Connectors

Connector	Description
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
JI2C_EXP1	SMBus I²C for Expander
JI2C_FP1	SMBus I²C for LCD Devices
JIPMB1	4-pin BMC External I²C Header (for an IPMI card)
JL1	Chassis Intrusion Header
JNCSI	NC-SI Header for IPMI Support
JNVI2C1	NVMe I²C Header
JPI2C1	Power System Management Bus (SMB) I²C Header
JPWR1	8-pin Power Connector
JPWR2	4-pin Power Connector
JPWR3	24-pin Power Connector
JRK1	Intel RAID Key Header
JSD1, JSD2	SATA DOM Power Connectors
JSTBY1	Standby Power Header
LAN1, LAN2	Dual 10G Base-T Ports
M.2-H	M.2 M-Key 2280/22110 (supports PCIe 3.0 x4/SATA3) Slot
NVME0/1	PCIe 4.0 Slimline SAS Connector
SLOT1	CPU PCIe 4.0 x8
SLOT2	CPU PCIe 4.0 x8 (IN x 16)
SLOT4, SLOT6	CPU PCIe 4.0 x16
SLOT7	CPU PCIe 4.0 x8
S-SATA0, S-SATA1	SATA 3.0 Ports with SATA DOM Power
S-SGPIO1	Serial Link General Purpose I/O Connection Header
TPM/PORT80	Trusted Platform Module/Port 80 Connector
UID-SW	Unit Identifier (UID) Switch
USB0/1	Back Panel Universal Serial Bus (USB) 2.0 Ports
USB2/3	Front Accessible USB 2.0 Headers
USB4/5	Back Panel USB 3.2 Gen 1 Ports
USB6/7	Front Accessible USB 3.2 Gen 1 Header
USB8	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 X12SPi-TF motherboard supports the 3rd generation Intel® Xeon Scalable Processor (Socket P+ (LGA4189) processors with up to 40 cores and a thermal design power (TDP) of up to 270W.

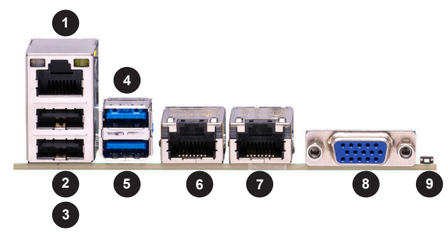
Memory Support

The X12SPi-TF Supports up to 2048GB of ECC RDIMM/LRDIMM/LRDIMM 3DS with speeds of up to 3200MHz 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 support odd-numbered modules (one or three modules installed). However, 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

Back Panel I/O Connectors



#	Description	#	Description
1	Dedicated IPMI LAN	6	LAN1
2	USB1	7	LAN2
3	USB0	8	VGA Port
4	USB5 (3.2 Gen 1)	9	UID Switch
5	USB4 (3.2 Gen 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.

Note: Refer to Chapter 1 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.

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