

SUPERMICRO® X11SPH-NCTPF/-NCTF Quick Reference Guide 1.1

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:

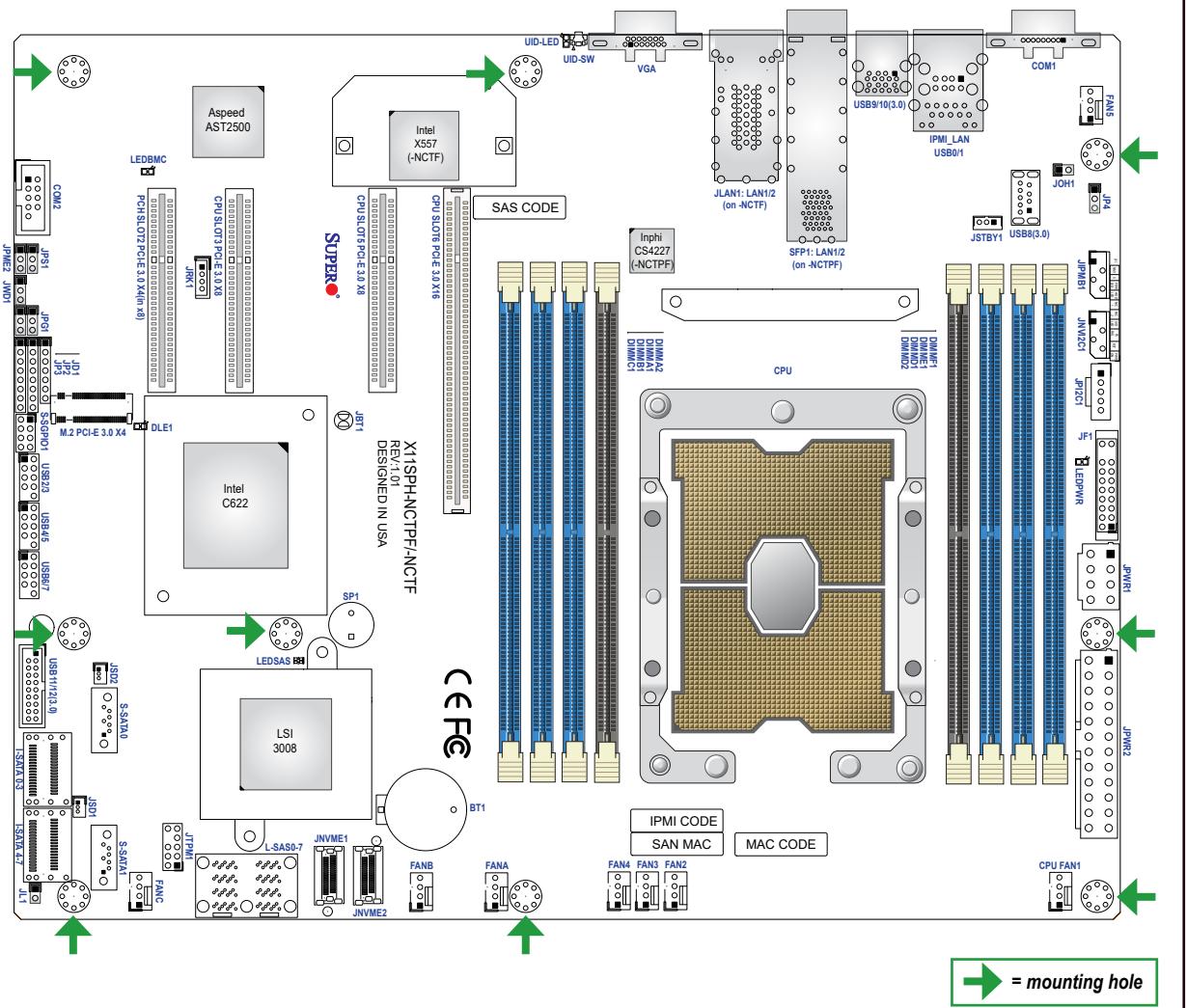
- Manuals: <http://www.supermicro.com/support/manuals>
- Drivers & Utilities: <https://www.supermicro.com/wftp/driver>
- Safety: http://www.supermicro.com/about/policies/safety_information.cfm

PACKAGE CONTENTS

- One (1) Supermicro Motherboard
- Two (2) SATA Cables
- One (1) I/O Shield
- One (1) Quick Reference Guide

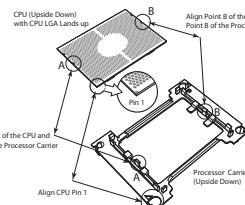
WARNING: This product can expose you to chemicals including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Motherboard Layout and Features

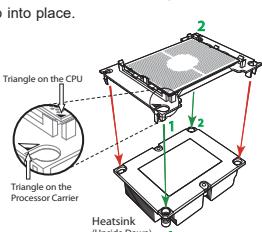


CPU and PHM Installation

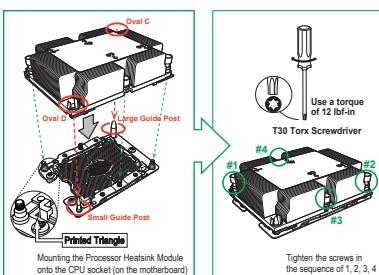
1 Assemble the processor carrier assembly by inserting the CPU into the processor carrier.



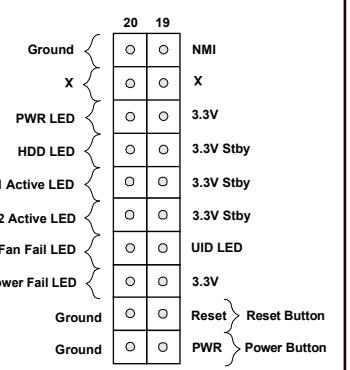
2 To form the processor heatsink module (PHM), mount the processor carrier assembly onto the heatsink and snap into place.



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 and LED Indicators

Connectors

Connector	Description
BT1	Onboard Battery
COM1, COM2	COM Port, COM Header
FAN1 ~ FAN5, FANA ~ FANC	CPU/System Fan Headers (FAN1: CPU Fan)
IPMI_LAN	Dedicated IPMI LAN Port
I-SATA0~3, I-SATA4~7	Intel® PCH SATA 3.0 Ports (with RAID 0, 1, 5, 10)
JD1	Power LED/Speaker Header (Pins 1-3: Power LED, Pins: 4-7: Speaker)
JF1	Front Control Panel Header
JIPMB1	4-pin BMC External I²C Header (for an IPMI Card)
JL1	Chassis Intrusion Header
JNVi²C1	NVM Express (NVMe) I²C Header
JNVME1, JNVME2	NVMe PCI-Express 3.0 x4 Connectors
JOH1	Overheat LED Indicator
JPPC1	Power I²C System Management Bus (SMB) Header
JPWR1	8-pin 12V CPU Power Connector
JPWR2	24-pin ATX Power Connector
JRK1	Intel RAID Key Header
JSD1, JSD2	SATA DOM Power Connectors
JSTBY1	Standby Power Header
JTPM1	Trusted Platform Module/Port 80 Connector
LAN1, LAN2	Dual 10G SFP+ Ports (for X11SPH-NCTPF) and Dual 10G Base-T Ports (for X11SPH-NCTF)
L-SAS0~7	Eight SAS 3.0 Ports
M.2 Slot	M.2 PCI-E 3.0 x4 Slot or SATA 3.0 Slot (Supports M-Key 2280)
S-SATA0, S-SATA1	SATA 3.0 Ports with SATA DOM Power
S-SSGPIO1	Serial Link General Purpose I/O Connection Header
SLOT2	PCH PCI-E 3.0 x4 (in x8) Slot
SLOT3	CPU PCI-E 3.0 x8 Slot
SLOT5, SLOT6	CPU PCI-E 3.0 x8/x16 Slot (Supports Auto Switch)
SP1	Internal Speaker/Buzzer
UID SW	Unit Identifier (UID) Switch
USB0/1	Back Panel Universal Serial Bus (USB) 2.0 Ports
USB2/3, USB4/5, USB6/7	Front Accessible USB 2.0 Headers
USB8	USB 3.0 Type-A Header
USB9/10	Back Panel USB 3.0 Ports
USB11/12	Front Accessible USB 3.0 Header
VGA	VGA Port

LED Indicators

LED	Description	Status
DLE1	PCI-E 3.0 M.2 LED	Blinking Green: Device Working
LEDBMC	BMC Heartbeat LED	Blinking Green: BMC Normal
LEDPWR	Onboard Power LED	Solid Green: Power On
LEDSAS	SAS Activity LED	Blinking Green: SAS Active Solid Red: SAS Error
UID LED	Rear UID LED	Blue On: Unit Identified

Jumpers

Jumpers		
Jumpers	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
JPS1	SAS 3.0 Enable/Disable	Pins 1-2 (Enabled)
JPG1	VGA Enable/Disable	Pins 1-2 (Enabled)
JPM2	ME Manufacturing Mode	Pins 1-2 (Normal)
JWD1	Watchdog Timer	Pins 1-2 (Reset)

CPU Support

The X11SPH-NCTPF/-NCTF supports the Intel® Xeon 81xx/61xx/51xx/41xx/31xx and 82xx/62xx/52xx/42xx/32xx series (Socket P0-LGA3647) processors with up to 28 cores and a thermal design power (TDP) of up to 205W.

Memory Support

The X11SPH-NCTPF/-NCTF supports up to 512GB of RDIMM, 1TB of LRDIMM, and 2TB of 3DS LRDIMM DDR4 (288-pin) ECC memory with speeds of up to 2933MHz in eight memory slots. See below for additional memory information.

- The blue slots must be populated first. Only populate DIMM2 and DIMM2 if needed.
- Always 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, a balanced memory population is recommended for the best performance.
- Memory capacity and frequency is CPU dependent.
- 2933MHz memory is supported by the 82xx/62xx series processors.

1 CPU, 8-DIMM Slots	
Number of DIMMs	Memory Population Sequence
1	DIMMA1
2	DIMMA1 / DIMMD1
3	DIMMC1 / DIMMB1 / DIMMA1
4	DIMMB1 / DIMMA1 / DIMMD1 / DIMME1
5 (Unbalanced: Not Recommended)	DIMMC1 / DIMMB1 / DIMMA1 / DIMMD1 / DIMME1
6	DIMMC1 / DIMMB1 / DIMMA1 / DIMMD1 / DIMMF1
7 (Unbalanced: Not Recommended)	DIMMC1 / DIMMB1 / DIMMA1 / DIMMA2 / DIMMD1 / DIMME1 / DIMMF1
8	DIMMC1 / DIMMB1 / DIMMA1 / DIMMA2 / DIMMD2 / DIMMD1 / DIMME1 / DIMMF1

Back Panel I/O Connectors

X11SPH-NCTPF



X11SPH-NCTF



#	Description	#	Description
1	COM Port 1	6	USB9 (3.0)
2	Dedicated IPMI LAN	7**	SFP1: LAN1/2 (-NCTPF only)
3	USB1	8**	JLAN1: LAN3/4 (-NCTF only)
4	USB0	9	VGA Port
5	USB10 (3.0)	10	UID Switch

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.