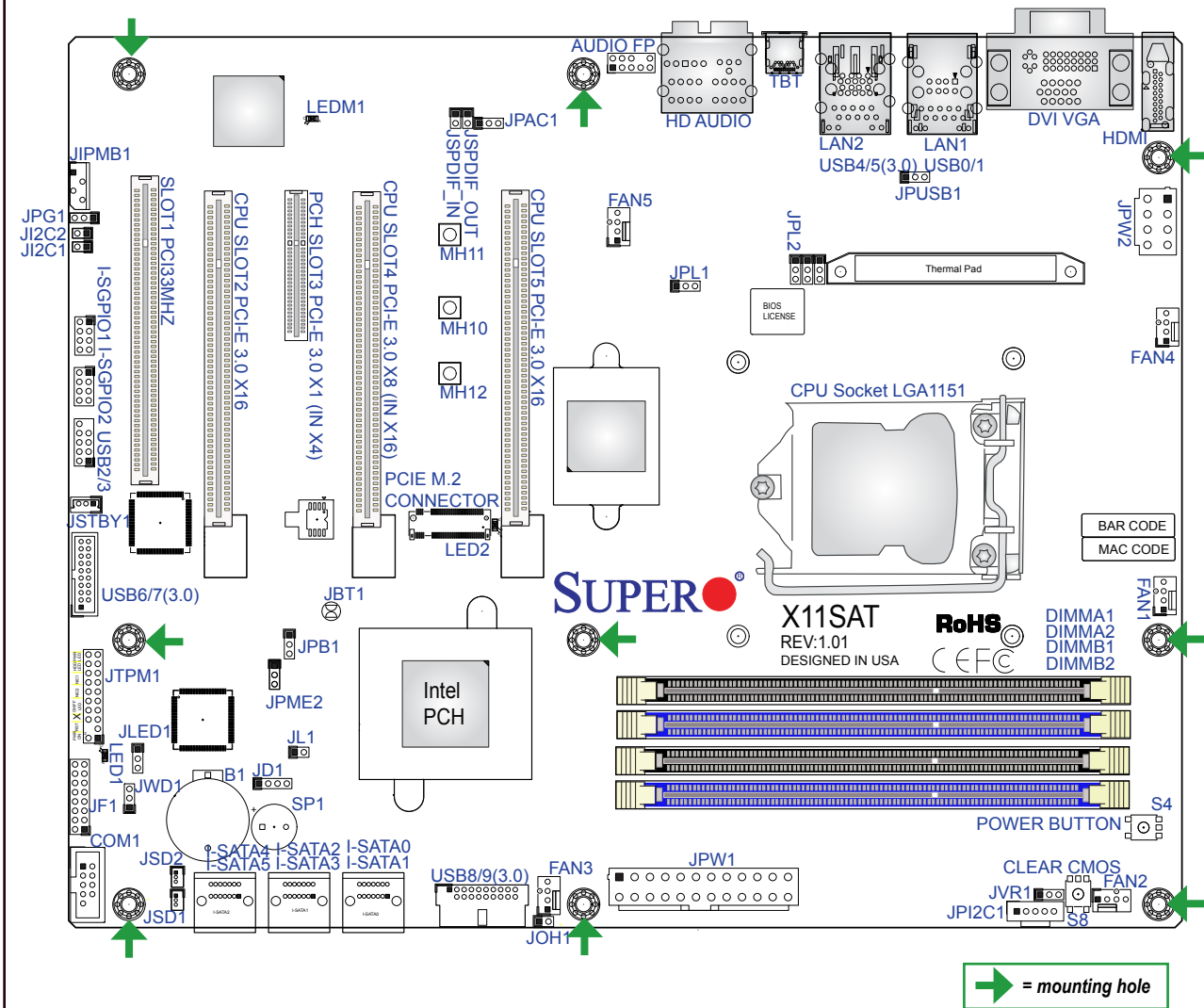




WARNING: This product can expose you to chemicals including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Motherboard Layout and Features



Jumpers and Connectors

Jumpers		
Jumper	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
J12C1/J12C2	SMB to PCI-E Slots Enable/Disable	Both Open (Disabled)
JPAC1	Audio Enable	Pins 1-2 (Enabled)
JPB1	BMC Enable/Disable	Pins 1-2 (Enabled)
JPG1	VGA Enable/Disable	Pins 1-2 (Enabled)
JPL1/JPL2	LAN1/2 Enable/Disable	Pins 1-2 (Enabled)
JPME2	Manufacturing Mode	Pins 1-2 (Normal)
JPUSB1	USB0/1 Wake up	Pins 1-2 (Enabled)
JWD1	Watch Dog	Pins 1-2 (Reset)

Connectors	
Connector	Description
AUDIO FP	Front Panel Audio Header
B1	Onboard Battery
COM1	COM Header
DVI/VGA	Digital Video Interface/VGA Connectors (VGA on X11SAT-F only)
FAN1 ~ FAN5	System/CPU Fan Headers (FAN1: CPU Fan)
HD Audio	High Definition Audio Ports
HDMI	High Definition Multimedia Interface Connector
I-SATA0 ~ I-SATA5	Intel PCH SATA 3.0 Ports
I-SGPIO1/I-SGPIO2	General Purpose I/O Headers
JD1	Speaker/Buzzer Header (Pins 1-4: Speaker, Pins 3-4: Buzzer)
JF1	Control Panel Header
JIPMB1	4-pin BMC External I2C Header (for an IPMI Card)
JL1	Chassis Intrusion Header
JLED1	3-pin Power LED Indicator Header
JOH1	Overheat LED
JPI2C1	Power Supply SMBus I2C Header
JPW1	24-pin ATX Power Connector
JPW2	12V 8-pin Processor Power Connectors
JSD1/JSD2	SATA DOM Power Connectors
JSPDIF_IN	Sony/Phillips Digital Interconnect Format Audio In Header
JSPDIF_OUT	Sony/Phillips Digital Interconnect Format Audio Output Header
JSTBY1	Standby Power Header
JTPM1	Trusted Platform Module/Port 80 Connector
JVR1	SMB Programming Header (for debugging only)
LAN1/LAN2	LAN (RJ45) Ports
MH10 ~ MH12	M.2 Mounting Holes
PCIE M.2 Connector	M.2 Connector
S4	POWER BUTTON
S8	CLEAR CMOS
SLOT1	PCI 33MHz Slot
SLOT2/SLOT5	CPU PCI-E 3.0 X16 Slots
SLOT3	PCH PCI-E 3.0 X1 (IN X4) Slot
SLOT4	CPU PCI-E 3.0 X8 (IN X16) Slot
SP1	Internal Speaker/Buzzer
TBT	Back panel Thunderbolt Port
USB0/1	Back panel Universal Serial Bus (USB) 2.0 Port
USB2/3	Front Accessible USB 2.0 Header
USB4/5	Back panel USB 3.0 Port
USB6/7, USB8/9	Front Accessible USB 3.0 Headers

LED Indicators

LED Indicators		
LED	Description	Status
LED1	Power LED	Solid Green: Power On
LED2	M.2 LED	On: M.2 on board
LEDM1	BMC Heartbeat LED	Blinking Green: BMC Normal

CPU Support

The X11SAT/X11SAT-F motherboard supports an Intel® Xeon E3-12XX v5, 6th Gen. Core i3/i5/i7, Pentium, and Celeron series processors in an LGA1151 type socket.

Memory Support

The X11SAT/X11SAT-F motherboard supports up to 64GB of DDR4 UDIMM memory at a speed of 2133 MHz in four memory slots. Populating these DIMM slots with a pair of memory modules of the same type and size will result in interleaved memory, which will improve memory performance.

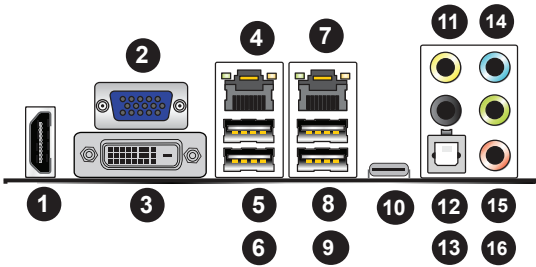
DIMM Memory Installation

When installing memory modules, the DIMM slots should be populated in the following order: DIMMB2, DIMMA2, DIMMB1, DIMMA1. Populate the blue sots first. See the motherboard layout on the left for the location of the DIMM slots.

Recommended Population (Balanced)

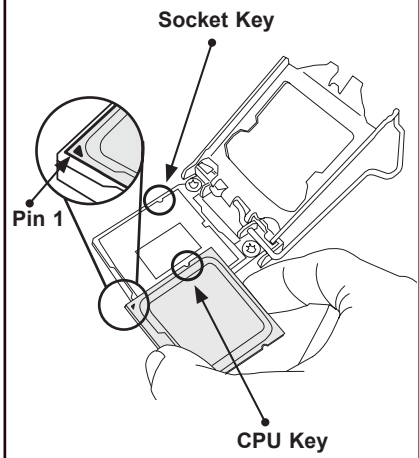
DIMMA1	DIMMB1	DIMMA2	DIMMB2	Total System Memory
		2GB	2GB	4GB
2GB	2GB	2GB	2GB	8GB
		4GB	4GB	8GB
4GB	4GB	4GB	4GB	16GB
		8GB	8GB	16GB
8GB	8GB	8GB	8GB	32GB
		16GB	16GB	32GB
16GB	16GB	16GB	16GB	64GB

Back Panel I/O Connectors

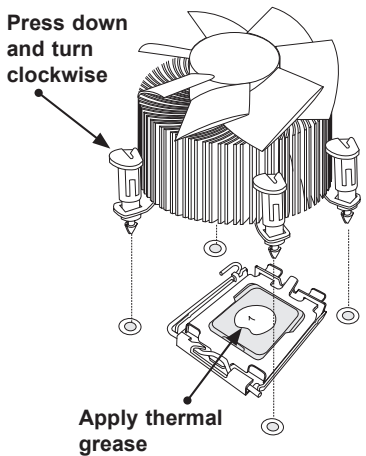


1. HDMI	6. USB0	11. CEN/LFE Out
2. VGA Port (X11SAT-F only)	7. LAN2	12. Surround Out
3. DVI Port	8. USB7 (3.0)	13. SPDIF Out
4. LAN1	9. USB6 (3.0)	14. Line In
5. USB1	10. Thunderbolt	15. Line Out
		16. Mic In

CPU Installation



Heatsink Installation



Front Panel Control (JF1)

PWR LED	16	15	3.3 V
HDD LED			3.3V Stby
NIC1 Link LED			NIC1 Activity LED
NIC2 Link LED			NIC2 Activity LED
OH/Fan Fail LED			3.3V Stby
Power Fail LED			3.3V
Ground			Reset
Ground			PWR
	2	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.