SUPERMICRO®

X13DAI-T

Quick Reference Guide Rev. 1.1

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For your system to work properly, please download appropriate drivers/images/user's manual from the links below:

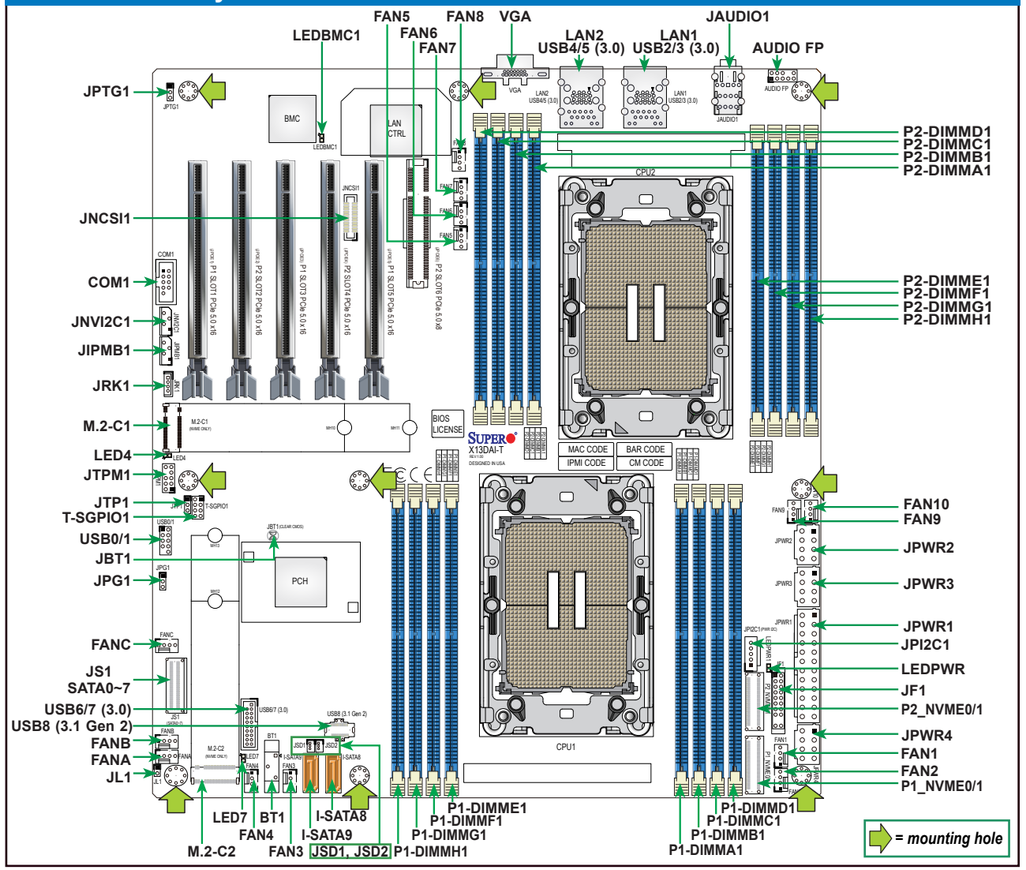
- Manuals: https://www.supermicro.com/support/manuals
- Drivers & Utilities: https://www.supermicro.com/wdl/driver
- Safety: https://www.supermicro.com/about/policies/safety_information.cfm

Package Contents

- One Supermicro Motherboard
- One I/O Shield (MCP-280-00181-0B)
- Two SATA Cables (CBL-0044L)
- One Quick Reference Guide (MNL-2569-QRG)
- Two E1A Carriers for XCC CPU (SKT-1333L-0000-FXC)
- Two E1B Carriers for MCC CPU (SKT-1424L-001B-LTS)

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



Connectors and LED Indicators

Connector	Description
AUDIO FP	Front Panel Audio Header
BT1	Onboard CMOS Battery
COM1	Front Accessible COM Header
FAN1 – FAN10, FANA, FANB, FANC	FAN1 – FAN10: CPU Fan Headers FANA, FANB, FANC: System Fan Headers
I-SATA8, I-SATA9	SATA 3.0 Connectors with support of SuperDOM devices *DOM: Disk on Module
JAUDIO1	Rear I/O Audio Ports
JF1	Front Control Panel Header
JIPMB1	4-pin BMC External I²C Header
JL1	Chassis Intrusion Header
JNCSI1	Network Controller Sideband Interface (NC-SI) Connector
JNVI2C1	NVMe SMBus I²C Header used for PCIe SMBus clock and data connections with hot-plug support
JPI2C1	Power SMBus I²C Header used for monitoring the power supply, fans, and system temperatures
JPWR1	24-pin ATX Main Power Supply Connector
JPWR2, JPWR3, JPWR4	8-pin Power Connectors
JRK1	Intel VROC Key Header for NVMe RAID support (See Note 3 below)
JS1 (SATA0~7)	SlimSAS LP Connector with support of eight Intel PCH SATA 3.0 connections (RAID 0, 1, 5, and 10 supported)
JSD1, JSD2	SATA DOM Power Connectors
JTPM1	Trusted Platform Module/Port 80 Header
LAN1, LAN2	Rear I/O 10GbE LAN Ports (Shared BMC LAN ports)
M.2-C1, M.2-C2	PCIe 5.0 NVMe M.2 Slots with support of M-Key 2280 and 22110 (See Note 3 below)
P1 SLOT1/3/5	PCIe 5.0 x16 Slots supported by CPU1
P2 SLOT2/4	PCIe 5.0 x16 Slot supported by CPU2
P2 SLOT6	PCIe 5.0 x8 Slot supported by CPU2
P1_NVME0/1	NVMe PCIe 5.0 x8 MCIO Connector supported by CPU1 with two NVMe connections
P2_NVME0/1	NVMe PCIe 5.0 x8 MCIO Connector supported by CPU2 with two NVMe connections
T-SGPIO1	Serial General Purpose I/O Header
USB0/1	Front-accessible USB 2.0 Header
USB2/3/4/5	Rear I/O USB 3.0 Ports
USB6/7	Front-accessible USB 3.0 Header
USB8	Internal USB 3.1 Gen 2 Connector
VGA	Rear I/O VGA Port

LED	Description	Status
LED4, LED7	M.2 LEDs	Blinking Green: Device Working
LEDBMC1	BMC Heartbeat LED	Blinking Green: BMC Normal (Active), Solid Green: During BMC Reset or during a Cold Reboot
LEDPWR1	Power LED	LED On: Onboard Power On

Note 1: *Refer to Chapter 2 of the user's manual for CPU/Heatsink and memory Installation instructions. Please also visit our website at www.supermicro.com for CPU/Memory support updates.*
Note 2: *All graphics shown in this quick reference guide (QRG) are for illustration only. Your components may or may not look the same as the graphics shown in this QRG.*
Note 3: *Refer to Chapter 1 and Chapter 2 of the user's manual for detailed instructions on how to use JRK1, M.2-C1, and M.2-C2.*

Jumpers

Jumper	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
JPG1	VGA Port Enable/Disable	Pins 1-2 (Enabled)
JPTG1	10GbE LAN Port Enable/Disable	Pins 1-2 (Enabled)
JTP1	TPM Module Mode	Pins 1-2 (On-board TPM Module)

CPU Support

This motherboard supports dual 5th/4th Generation Intel® Xeon® Scalable Family Processors (in Socket E LGA4677) with up to 64 CPU cores and a Thermal Design Power (TDP) of up to 350 W.

Memory Support

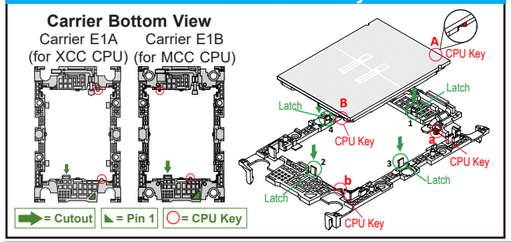
This motherboard supports up to 4 TB memory capacity with 16 DIMMs of 256 GB 3DS RDIMM/RDIMM DDR5 ECC memory.

DDR5 Memory Population Table for X13DP 16-DIMM Motherboards

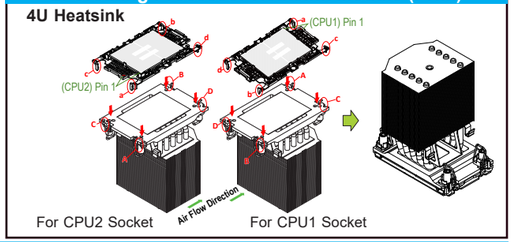
1 CPU	*Memory Population Sequence*
1 CPU & 1 DIMM	P1-DIMMA1 or P1-DIMME1 or P1-DIMMB1 or P1-DIMMF1
1 CPU & 2 DIMMs	P1-DIMMA1 / P1-DIMMG1 or P1-DIMMC1 / P1-DIMME1
1 CPU & 4 DIMMs	P1-DIMMA1 / P1-DIMMC1 / P1-DIMME1 / P1-DIMMG1
1 CPU & 6 DIMM	P1-DIMMA1 / P1-DIMMC1 / P1-DIMMD1 / P1-DIMME1 / P1-DIMMF1 / P1-DIMMG1 or P1-DIMMA1 / P1-DIMMB1 / P1-DIMMC1 / P1-DIMME1 / P1-DIMMG1 / P1-DIMMH1 or P1-DIMMB1 / P1-DIMMC1 / P1-DIMMD1 / P1-DIMME1 / P1-DIMMF1 / P1-DIMMH1 or P1-DIMMA1 / P1-DIMMB1 / P1-DIMMD1 / P1-DIMMF1 / P1-DIMMG1 / P1-DIMMH1
1 CPU & 8 DIMMs	P1-DIMMA1 / P1-DIMMB1 / P1-DIMMC1 / P1-DIMMD1 / P1-DIMME1 / P1-DIMMF1 / P1-DIMMG1 / P1-DIMMH1
2 CPUs (Recommended)	*Memory Population Sequence*
2 CPUs & 2 DIMMs	**CPU1:** P1-DIMMA1, **CPU2:** P2-DIMMA1 or **CPU1:** P1-DIMME1, **CPU2:** P2-DIMME1 or **CPU1**: P1-DIMMB1, **CPU2:** P2-DIMMB1 or **CPU1:** P1-DIMMF1, **CPU2:** P2-DIMMF1
2 CPUs & 4 DIMMs	**CPU1:** P1-DIMMA1 / P1-DIMMG1, **CPU2:** P2-DIMMA1 / P2-DIMMG1 or **CPU1:** P1-DIMMC1 / P1-DIMME1, **CPU2:** P2-DIMMC1 / P2-DIMME1
2 CPUs & 8 DIMMs	**CPU1:** P1-DIMMA1 / P1-DIMMC1 / P1-DIMME1 / P1-DIMMG1 **CPU2:** P2-DIMMA1 / P2-DIMMC1 / P2-DIMME1 / P2-DIMMG1
2 CPUs & 12 DIMMs	**CPU1:** P1-DIMMA1/P1-DIMMC1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1/P1-DIMMG1 **CPU2:** P2-DIMMA1/P2-DIMMC1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1/P2-DIMMG1 **CPU1:** P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMME1/P1-DIMMG1/P1-DIMMH1 **CPU2:** P2-DIMMA1/P2-DIMMB1/P2-DIMMC1/P2-DIMME1/P2-DIMMG1/P2-DIMMH1 **CPU1:** P1-DIMMB1/P1-DIMMC1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1/P1-DIMMH1 **CPU2:** P2-DIMMB1/P2-DIMMC1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1/P2-DIMMH1 **CPU1:** P1-DIMMA1/P1-DIMMB1/P1-DIMMD1/P1-DIMMF1/P1-DIMMG1/P1-DIMMH1 **CPU2:** P2-DIMMA1/P2-DIMMB1/P2-DIMMD1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1
2 CPUs & 16 DIMMs	**CPU1**: P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1/P1-DIMME1/P1-DIMMF1/P1-DIMMG1/P1-DIMMH1 **CPU2**: P2-DIMMA1/P2-DIMMB1/P2-DIMMC1/P2-DIMMD1/P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1

CPU/Heatsink Installation

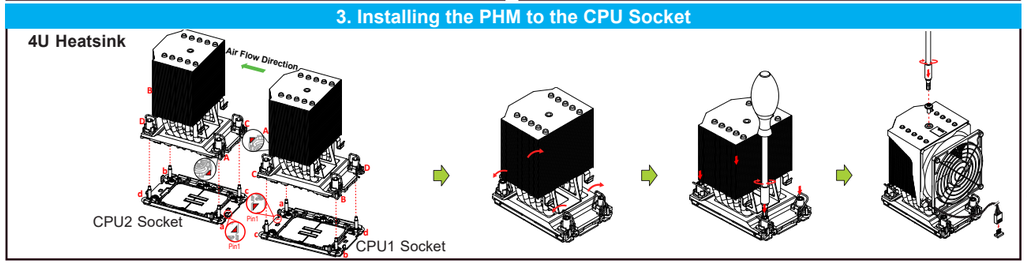
1. CPU Carrier Assembly



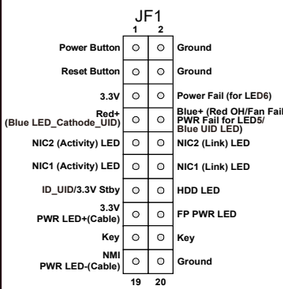
2. Creating Processor Heatsink Module (PHM)



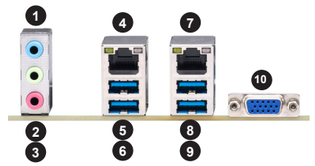
3. Installing the PHM to the CPU Socket



Front Control Panel



Rear I/O Connectors



Rear I/O Ports

No.	Description	No.	Description
1.	Line In	6.	USB3 (3.0) Port
2.	Line Out	7.	LAN2: 10GbE LAN Port
3.	Mic In	8.	USB4 (3.0) Port
4.	LAN1: 10GbE LAN Port	9.	USB5 (3.0) Port
5.	USB2 (3.0) Port	10.	VGA Port

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