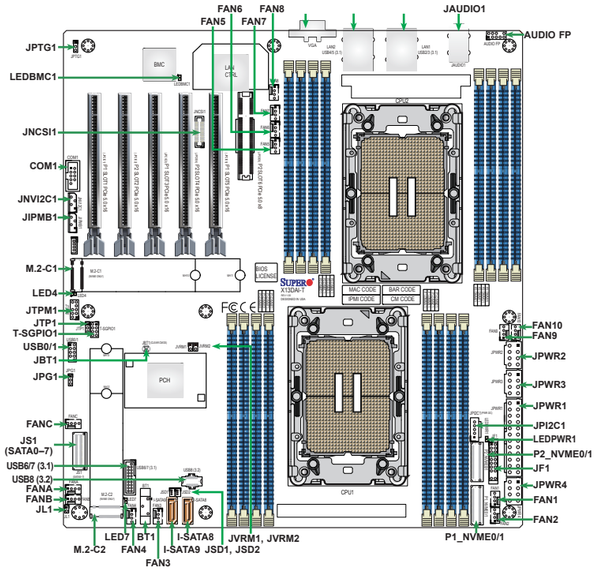
SUPERMICRO® SuperWorkstation 751A-I Quick Reference Guide

Board Layout

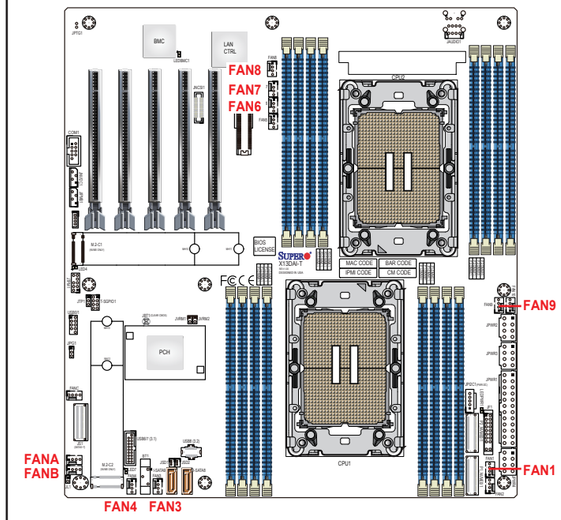


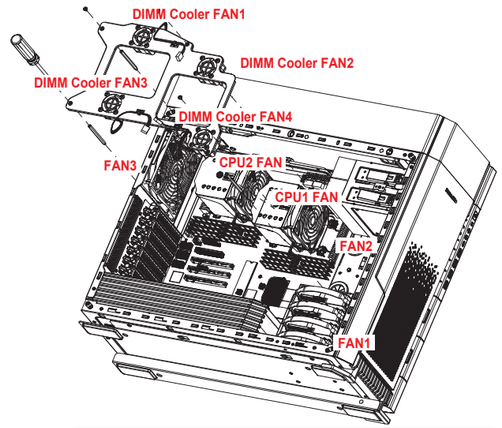
Quick Reference Table

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 (Onboard TPM Module Enabled)
JVRM1	VRM SMBus Clock (to BMC or PCH)	Pins 1-2 (BMC, Normal)
JVRM2	VRM SMBus Data (to BMC or PCH)	Pins 1-2 (BMC, Normal)

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
JPWR2-4	8-pin Power Connectors
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)
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 3.1 Ports
USB6/7	Front-accessible USB 3.1 Header
USB8	Internal USB 3.2 Connector
VGA	Rear I/O VGA Port

Fan Cable Connections



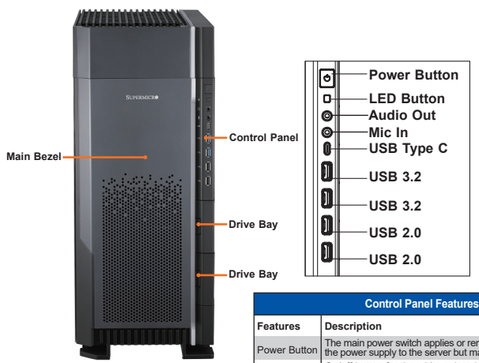


Component	FAN Connector	Component	FAN Connector
CPU1 FAN	FAN 3	DIMM Cooler FAN1	FAN 9
CPU2 FAN	FAN 6	DIMM Cooler FAN2	FAN 1
FAN1	FAN A	DIMM Cooler FAN3	FAN 7
FAN2	FAN B	DIMM Cooler FAN4	FAN 4
FAN3	FAN 8		

Memory Support

Memory Population for the X13 DP Motherboard,16 DIMM Slots	
CPUs/DIMMs	**Memory Population Sequence**
2 CPUs & 2 DIMMs	CPU1 & CPU2: A1 or B1 or E1 or F1
2 CPUs & 4 DIMMs	CPU1 & CPU2: A1, G1 or CPU1 & CPU2: C1, E1
2 CPUs & 8 DIMMs	CPU1: A1, C1, E1, G1 CPU2: A1, C1, E1, G1
2 CPUs & 12 DIMMs	CPU1 & CPU2: A1, C1, D1. E1, F1, G1 or CPU1 & CPU2: A1, B1, C1. E1, G1, H1 or CPU1 & CPU2: B1, C1. D1, E1, F1, H1 or CPU1 & CPU2: A1, B1, D1. F1, G1, H1
2 CPUs & 16 DIMMs	CPU1: A1, B1, C1. D1, E1, F1, G1, H1 CPU2: A1, B1, C1. D1, E1, F1, G1, H1

Front view & Interface



Front View Features	
Item	**Description**
Control Panel	See later page for details.
Drive Bays	Two 2.5" SATA storage drive bays
Main Bezel	For up to two optional 5.25" ODD drives

Control Panel Features	
Features	**Description**
Power Button	The main power switch applies or removes primarypower from the power supply to the server but maintains standby power.
LED Button	On/off button for the white colored LED strip along the edge of the chassis.
Audio Out	HD audio output port.
Mic In	Microphone input port.
USB Type C	USB 3.2 Gen2 port
USB 3.2	Two USB 3.2 Gen1 ports
USB 2.0	Two USB 2.0 ports

Caution

SAFETY INFORMATION:

IMPORTANT: See installation instructions and safety warning before connecting system to power supply.
http://www.supermicro.com/about/policies/safety_information.cfm

WARNING:

To reduce risk of electric shock/damage to equipment, disconnect power from server by disconnecting all power cords from electrical outlets. If any CPU socket empty, install protective plastic CPU cap.

CAUTION:

Always be sure all power supplies for this system have the same power output. If mixed power supplies are installed, the systemwill not operate.

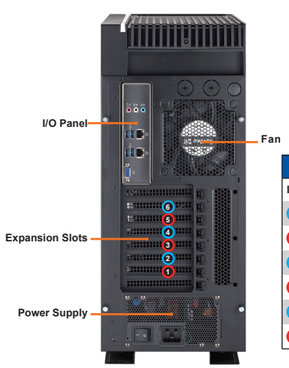
CAUTION:

This unit has redundant power sources. Please disconnect all the power cords before servicing.

PRODUCT RESOURCES:

For more information go to:
http://www.supermicro.com/support

Rear view

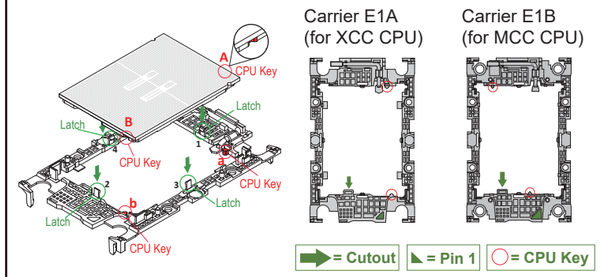


Expansion Slot Locations	
Item	**Description**
6	PCIe 5.0 x8 full-height, 6.6" slot (CPU2)
5	PCIe 5.0 x16 full-height, 10.5" slot (CPU1)
4	PCIe 5.0 x16 full-height, 10.5" slot (CPU2)
3	PCIe 5.0 x16 full-height, 10.5" slot (CPU1)
2	PCIe 5.0 x16 full-height, 10.5" slot (CPU2)
1	PCIe 5.0 x16 full-height, 10.5" slot (CPU1)

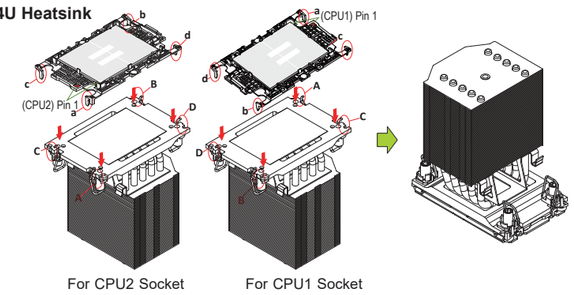
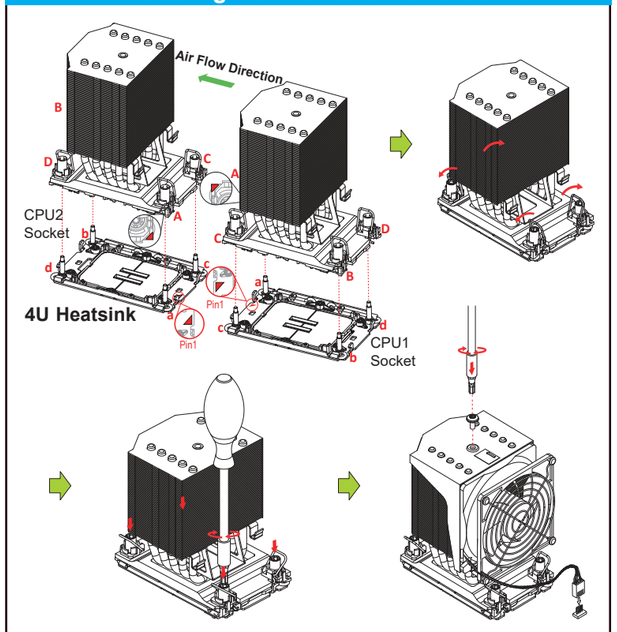
System Features: Rear	
Feature	**Description**
I/O Panel	Line In/Out, USB Port, LAN Port, VGA Port
Fan	12-cm exhaust fan
Expansion Slots	Six PCIe 5.0 slots; five x16 and one x8; see the following table
Power Supply	Fixed internal module, including a system On/Off switch

Heatsink Installation

1. CPU Carrier Assembly



2. Creating Processor Heatsink Module (PHM)



3. Installing the PHM to the CPU Socket