



SuperWorkstation SYS-551A-T



USER'S MANUAL

Revision 1.0a

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Manual Revision 1.0a

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Preface

About this Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the workstation. Installation and maintenance should be performed by certified service technicians only.

Please refer to the SYS-551A-T workstation specifications page on our website for updates on supported memory, processors and operating systems (<http://www.supermicro.com>).

Notes

For your system to work properly, please follow the links below to download all necessary drivers/utilities and the user's manual for your workstation.

- Supermicro product manuals: <http://www.supermicro.com/support/manuals/>
- Product drivers and utilities: <https://www.supermicro.com/wdl/>
- Product safety info: http://www.supermicro.com/about/policies/safety_information.cfm

If you have any questions, please contact our support team at:
support@supermicro.com

This manual may be periodically updated without notice. Please check the Supermicro website for possible updates to the manual revision level.

Secure Data Deletion

A secure data deletion tool designed to fully erase all data from storage devices can be found on our website: https://www.supermicro.com/about/policies/disclaimer.cfm?url=/wdl/utility/Lot9_Secure_Data_Deletion_Utility/

Warnings

Special attention should be given to the following symbols used in this manual.



Warning! Indicates important information given to prevent equipment/property damage or personal injury.



Warning! Indicates high voltage may be encountered when performing a procedure.

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Appendix A Standardized Warning Statements for AC Systems

Appendix B System Specifications

Appendix C Energy Star

Contacting Supermicro

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Chapter 1

Introduction

1.1 Overview

This chapter provides a brief outline of the functions and features of the SuperWorkstation SYS-551A-T. It is based on the [X13SWA-TF](#) motherboard and the CSE-GS7A-2000B chassis. The following provides an overview of the specifications and capabilities.

System Overview	
Motherboard	X13SWA-TF
Chassis	CSE-GS7A-2000B
Processor Support	Supports a single Intel Xeon W-3400 Series processor (Socket E1, LGA4677), with up to 56 cores and a TDP of up to 350 W. Note: 4th Gen Intel® Xeon® Scalable processors are not supported in this system.
Chipset	Intel PCH W790
Memory	16 DDR5 ECC DIMM slots, 4800 MT/s (one DPC) / 4400 MT/s (two DPC) capacity up to 1 TB RDIMM, or 4 TB RDIMM-3DS
Storage Support	Drive Bays: Two 2.5" front SATA drive bays Four internal 3.5" drive bays Two 5.25" external peripheral bays (support DVD or mobile rack for additional drives) Onboard: Eight SATA 3.0 6Gb/s connectors (support RAID 0, 1, 5, 10) Four M.2 M-key slots via PCIe 5.0 (support 2280/22110, RAID 0, 1, 5, 10) Two U.2 connectors
Expansion Slots	Six PCIe 5.0 x16 slots support up to four dual slots or one triple slot GPU card
Networking	Intel i210AT for one 1 Gb Ethernet LAN port (shared IPMI port) Aquantia AQC113C for one 10 Gb Ethernet LAN port
I/O Ports	Front: two USB2.0 ports, two USB3.2 Gen1 (5 G) Type A ports, one USB3.2 Gen2 (10 G) Type C port, one Power Button, one Audio In, one Mic In, one LED on/off Button Rear: one 10 Gb LAN port, one 1Gb LAN port, one USB3.2 Gen2 x2 (20 Gbps) Type C port, four USB3.2 Gen2 x1 ports, two USB2.0 ports, one VGA port (for BMC interface), HD Audio 7.1 Channel connectors, one COM port Onboard: one USB3.2 Gen 2 Type C header, two USB3.2 Gen1 (5 G) headers, two USB2.0 headers, ten 4-pin fan headers, one 12V power header for water cooling pump, one DOM PW connector, one TPM 2.0 header
System Cooling	Two 12-cm front cooling fans, one 12-cm rear exhaust fan, three optional 12-cm top cooling fans
Power	One 2000 W multi-output PS2/ATX PS, 80PLUS Platinum Certified power supply
Form Factor	5U Tower; (W x H x D) 8.7 x 21.1 x 22.6 in. or 222 x 535 x 572 mm (with stand) 8.7 x 20 x 22.6 in. or 222 x 508 x 572 mm (without stand)

Notes: A Quick Reference Guide can be found on the [product page](#) of the Supermicro website. The following safety models associated with the SYS-551A-T have been certified as compliant with UL or CSA: GS7A-20 and GS7A-S20X13.

1.2 System Features

In addition to the control panel, the front features two tool-less drive bays that open via a latch and a front bezel that can be opened to access the front fans. The workstation feet support the system in its default tower position.

Front View

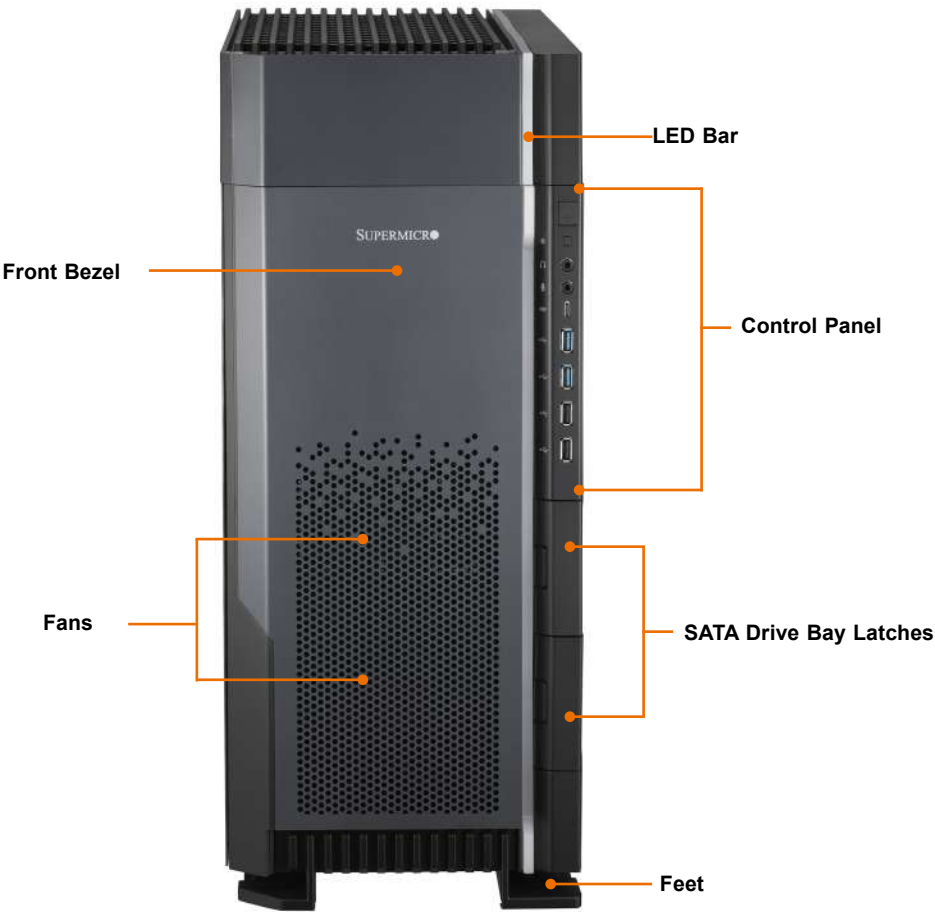


Figure 1-1. System: Front View

System Features: Front	
Feature	Description
Control Panel	See the below page for details.
Front Bezel	Vented bezel with filter that opens for access to front fans
SATA Drive Bay Latch	Two front access cable-based 2.5" SATA drive bays for tool-less storage drives
Fans	Two 12-cm front cooling fans
Feet	Workstation feet

Control Panel

The control panel includes one power button and one LED indicator. An LED bar runs along the front of the chassis. Next to the power button and LED indicator are I/O ports including one audio out, one mic in, and five USB ports.

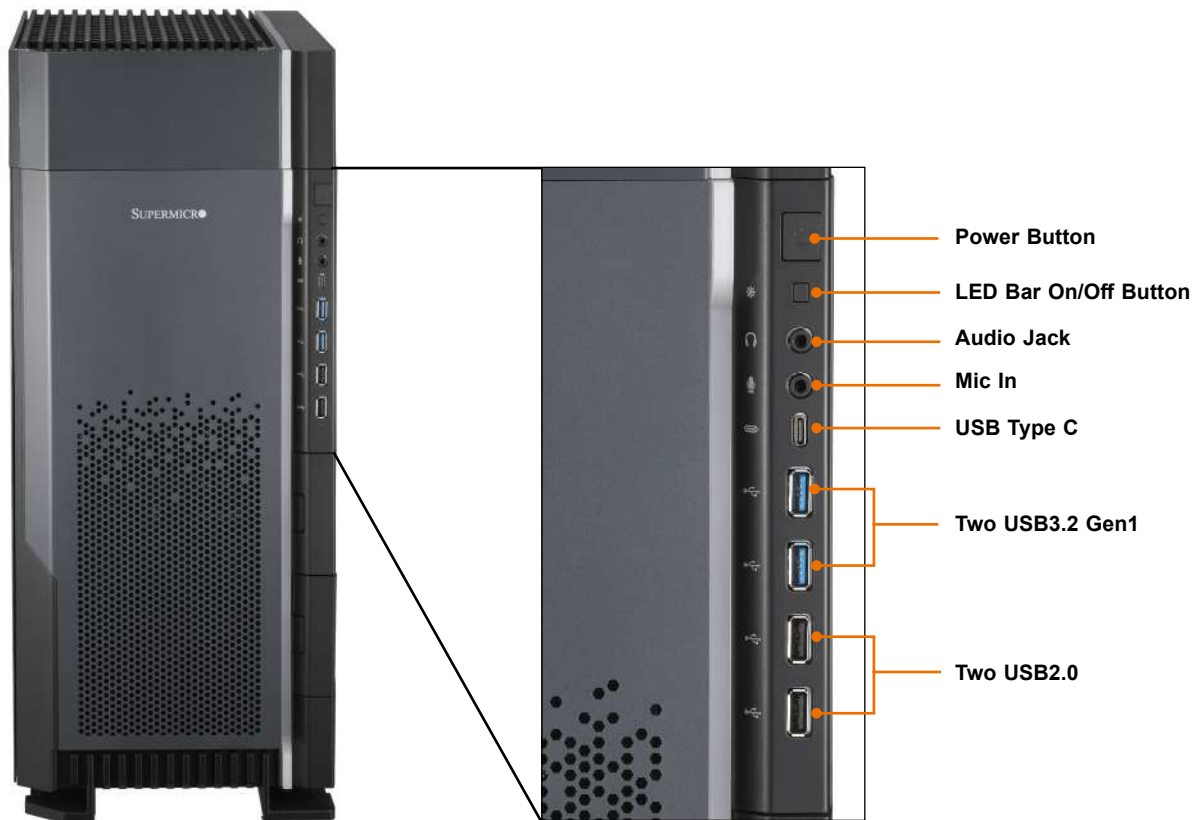


Figure 1-2. Control Panel

Control Panel Features	
Feature	Description
Power Button	The main power switch applies or removes primary power from the power supply to the workstation but maintains standby power. An illuminated white light indicates that the power supply is operating, and there will be no light when the power is switched off.
LED Bar On/Off Button	On/off button for the white colored LED strip along the edge of the chassis.
Audio Jack	Audio port
Mic in	Microphone port
USB Type C	One USB3.2 Gen 2 port (supports power usage at a maximum current of 3 A)
USB2.0	Two USB2.0 ports
USB3.2 Gen1	Two USB3.2 Gen 1 Type A ports

Rear View

The illustration below shows the features included on the rear of the chassis.

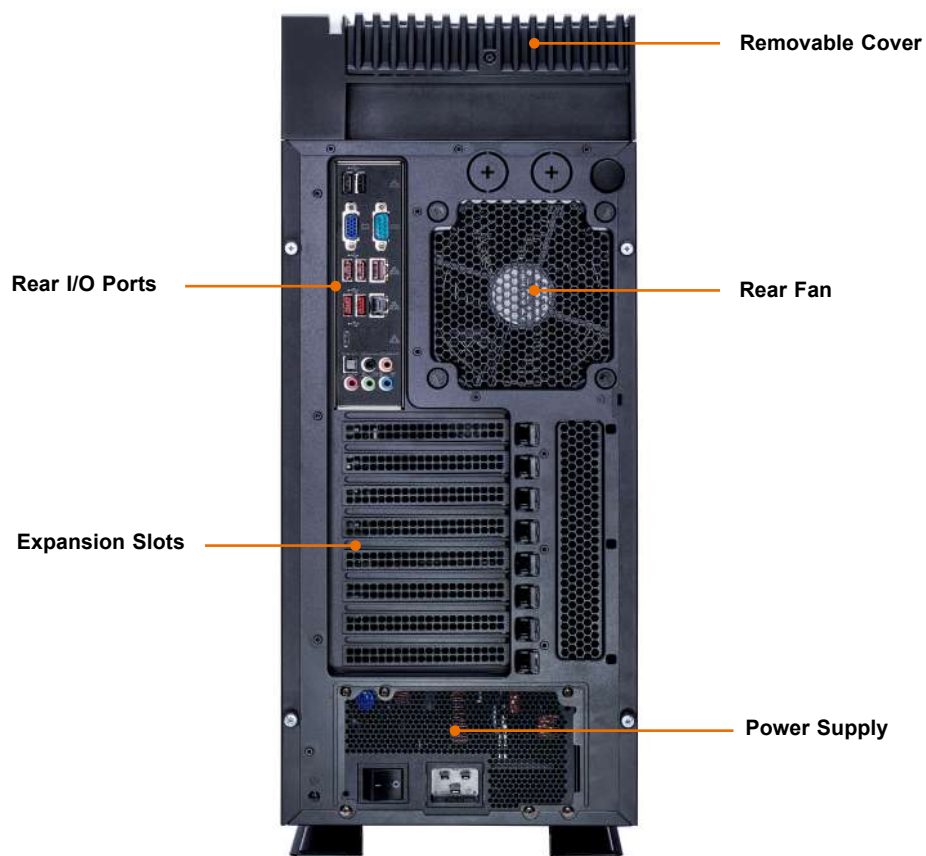


Figure 1-3. System: Rear View

System Features: Rear	
Feature	Description
Removable Cover	Dedicated and removable cover for access to top filter for optional liquid cooling installation
Fan	One 12-cm rear exhaust fan
I/O	Rear I/O ports. See Section 4.3 Rear I/O Ports for details.
Expansion Slots	PCIe expansion slots support up to four double-width GPUs
Power Supply	2000 W multi-output 80PLUS Platinum power supply

Side View



Figure 1-4. System: Side View

System Features: Side	
Feature	Description
Chamber	Dedicated water cooling chamber for optional water cooling kit
CPU	Supports Intel Xeon W-3400 Series processor up to 56 cores
DIMMs	16 x DDR5 ECC RDIMM slots, 4800 MT/s (1DPC) / 4400 MT/s (2DPC)
PCIe 5.0 x16 Slots	Six PCIe 5.0 x16 slots support up to four double-width GPUs
PCIe 5.0 x4 M.2 Slots	Four PCIe 5.0 x4 M.2 slots support 2280/22110
Power Supply	PS2 2000 W multi-output 80Plus Platinum power supply
Peripheral Bays	Two 5.25" peripheral bays supports DVD or mobile racks
U.2 Connectors	Two U.2 connectors
3.5" Drive Bays	Four Internal 3.5" drive bays Optional 2.5" drive adapter tray: MCP-220-73102-0N

1.3 Motherboard Layout

Below is a layout of the X13SWA-TF motherboard with jumper, connector and LED locations shown. See the table on the following page for descriptions. For detailed descriptions, pinout information and jumper settings, refer to [Chapter 4](#) or the [Motherboard Manual](#).

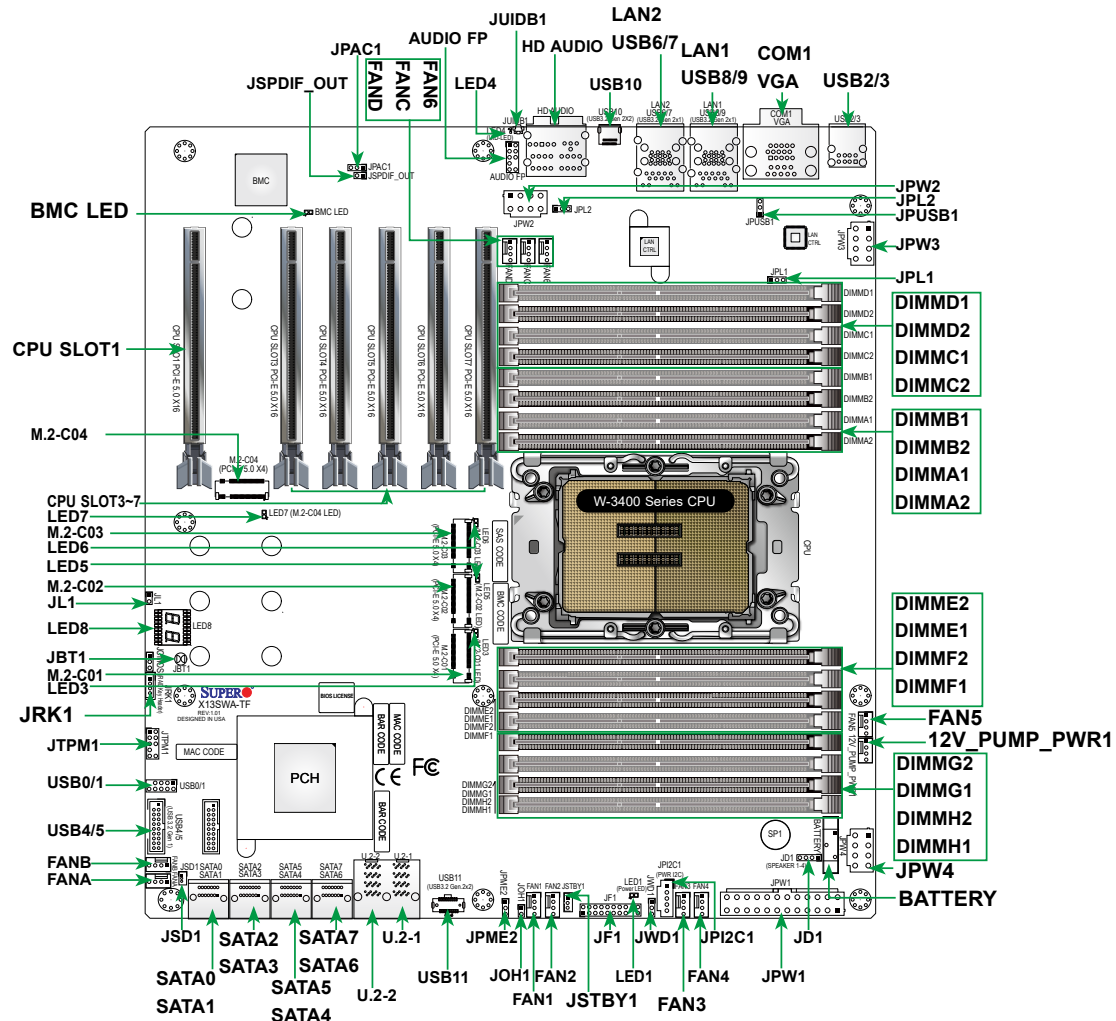


Figure 1-5. Motherboard Layout

Notes:

- For the TPM module (JTPM1), please use a horizontal one to prevent mechanical conflicts. The 4th Gen. Intel platform only supports TPM 2.0 standard.
- See [Chapter 4](#) for detailed information on jumpers, I/O ports, and JF1 front panel connections.
- " ■ " indicates the location of Pin 1.
- Jumpers/LED indicators not indicated are used for testing only.
- Use only the correct type of onboard CMOS battery as specified by the manufacturer. Do not install the onboard battery upside down to avoid possible explosion.

Quick Reference Table

Jumper	Description	Default Setting
JBT1	Clear CMOS (Onboard)	Contact Pads to clear CMOS
JPAC1	HD Audio Enable/Disable	Pins 1-2 (Enabled)
JPL1, JPL2	LAN1/LAN2 Enable/Disable	Pins 1-2 (Enabled)
JPME2	ME Manufacturing Mode	Pins 1-2 (Normal)
JPUSB1	USB8/9 Standby Power	Pins 1-2 (Enabled)
JWD1	Watch Dog Function Enable	Pins 1-2 (Reset)

LED	Description	Color/State
BMC LED	BMC Heartbeat LED	Blinking Green: BMC Normal
LED1	Onboard Power LED	Solid Green: Power On
LED3/5/6/7	M.2 LEDs for M.2-C01/02/03/C04	Blinking Green: Device Working
LED4 (UID-LED)	Unit Identifier (UID) LED	Blue On: Unit Identified
LED8	Status Code LED	Digital Readout

Note: The table above is continued on the next page.

Connector	Description
12V_PUMP_PWR1	12V 4-pin Power Connector for CPU Liquid Cooling Pump
AUDIO FP	Front Panel Audio Header
BATTERY	Onboard Battery
COM1	COM1: COM Port (Back Panel)
CPU SLOT1/3/4/5/6/7	PCIe 5.0 x16 Slots
FAN1 - FAN6	CPU Fan Headers
FANA - FAND	System Fan Headers
HD AUDIO	Back Panel High Definition Audio Port
JD1	Speaker/Buzzer Header
JF1	Front Control Panel Header
JL1	Chassis Intrusion Header
JOH1	Overheat LED Header
JPI2C1	Power Supply SMBus I ² C Header
JPW1	24-pin ATX Main Power Connector (Required)
JPW2, JPW3, JPW4	+12V 8-pin CPU Power Connectors
JRK1	Intel VROC RAID Key Header Note: A VROC hardware key is required for the VROC RAID function
JSD1	SATA DOM (Disk-On-Module) Power Connectors
JSPDIF_OUT	Sony/Philips Digital Interface (S/PDIF) Out Header
JSTBY1	Standby Power Header (5 V)
JTPM1	Trusted Platform Module (TPM)/Port 80 Header Note: If CPU SLOT1 is to be installed with a full-length PCIe card, please use a horizontal TPM module for JTPM1 to prevent mechanical conflicts.
JUIDB1	Unit Identifier (UID) Switch / BMC Reset Button
LAN1	RJ45 1 GbE LAN Port (Shared IPMI Port)
LAN2	RJ45 10 GbE LAN Port
M.2-C01 - M.2-C04	PCIe 5.0 x4 M.2 M-key Sockets (Support 22110 and 2280 form factors, and RAID 0/1/5/10) Note: Please use wide temperature (up to 85°C) M.2 devices for M.2-C4 and M.2-C3
SATA0 - SATA7	Intel Serial ATA (SATA 3.0) Ports 0 - 7 (6Gb/second) (Support RAID 0/1/5/10)
SP1	Internal Speaker/Buzzer
U.2-1, U.2-2	PCIe 3.0 x4 U.2 Connectors 1 and 2 for NVMe 2.5" SSDs (Support RAID 0/1)
USB0/1	Front Access USB2.0 Header
USB2, USB3	Back Panel USB2.0 Ports (Type A)
USB4/5	Front Access USB3.2 Gen. 1 Header (5 Gb, Type A)
USB6, USB7, USB8, USB9	Back Panel USB3.2 Gen. 2 x1 Ports (10 Gb, Type A)
USB10	Back Panel USB3.2 Gen. 2 x2 Port (20 Gb, Type C)
USB11	Front Access USB3.2 Gen. 2 x2 Header (20 Gb, Type C)
VGA	VGA Port (through BMC)

Note: For detailed instructions on how to configure VROC RAID settings, please refer to the VROC RAID Configuration User's Guide posted on the web page under the link: <http://www.supermicro.com/support/manuals/>.

System Block Diagram

The block diagram below shows the connections and relationships between the subsystems and major components of the overall system.

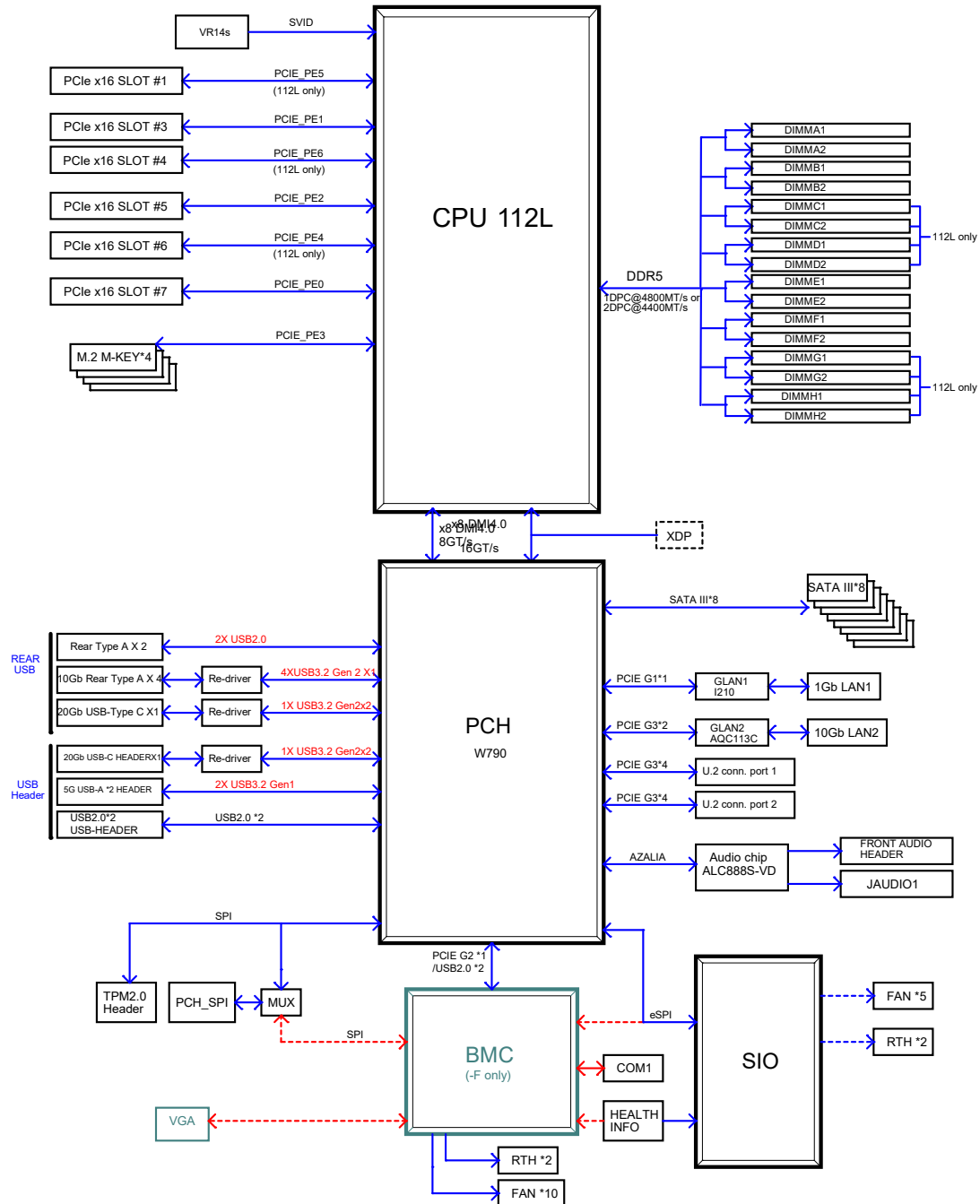


Figure 1-7. System Block Diagram

Chapter 2

Workstation Installation

2.1 Overview

This chapter provides advice and instructions for rack or workstation installation. If your system is not already fully integrated with processors, system memory, etc., refer to [Chapter 3](#) for details on installing those specific components.

Caution: Electrostatic Discharge (ESD) can damage electronic components. To prevent such damage to PCBs (printed circuit boards), it is important to use a grounded wrist strap, handle all PCBs by their edges and keep them in anti-static bags when not in use.

2.2 Unpacking the System

Inspect the box in which the SuperWorkstation SYS-551A-T was shipped, and note if it was damaged in any way. If any equipment appears damaged, file a damage claim with the carrier who delivered it.

Decide on a suitable location for the workstation. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. It will also require a grounded AC power outlet nearby. Be sure to read the precautions and considerations noted in [Appendix A](#).

2.3 Preparing for Setup

Please read this section in its entirety before you begin the installation.

Choosing a Setup Location

- Leave enough clearance in front and back of the system to allow sufficient airflow and access when servicing.
- This product is not suitable for use with visual display workplace devices according to §2 of the German Ordinance for Work with Visual Display Units.

Workstation Precautions

- Review the electrical and general safety precautions in [Appendix A](#).
- Use a regulating uninterruptible power supply (UPS) to protect the workstation from power surges, voltage spikes and to keep your system operating in case of a power failure.
- Allow the power supply unit to cool before touching it.
- To maintain proper cooling, always keep all chassis panels closed when not being serviced.

Chapter 3

Maintenance and Component Installation

This chapter provides instructions on installing and replacing main system components. To prevent compatibility issues, only use components that match the specifications and/or part numbers given.

Installation or replacement of most components require that power first be removed from the system. Please follow the procedures given in each section.

3.1 Removing Power

Use the following procedure to ensure that power has been removed from the system. This step is necessary when removing or installing non-hot-swap components or when replacing a non-redundant power supply.

1. Use the operating system to power down the system.
2. After the system has completely shut-down, disconnect the AC power cord(s) from the power strip or outlet. (If your system has more than one power supply, remove the AC or DC power cords from all power supply modules.)
3. Disconnect the power cord(s) from the power supply module(s).

3.2 Accessing the System

The CSE-GS7A-2000B chassis features a removable side cover for accessing the system need to remove power from the system as described in [Section 3.1](#).

Caution: Except for short periods of time, do not operate the system without the cover in place. The chassis cover must be in place to allow proper airflow and prevent overheating.

Left Side and Right Side Covers

Removing the Left Side Cover

Begin by powering down the system.

1. Using a screwdriver, remove the two screws at the rear of the chassis.
2. Push the release button located at the top rear of the chassis as shown below.
3. Lift the cover up to remove it from the chassis.

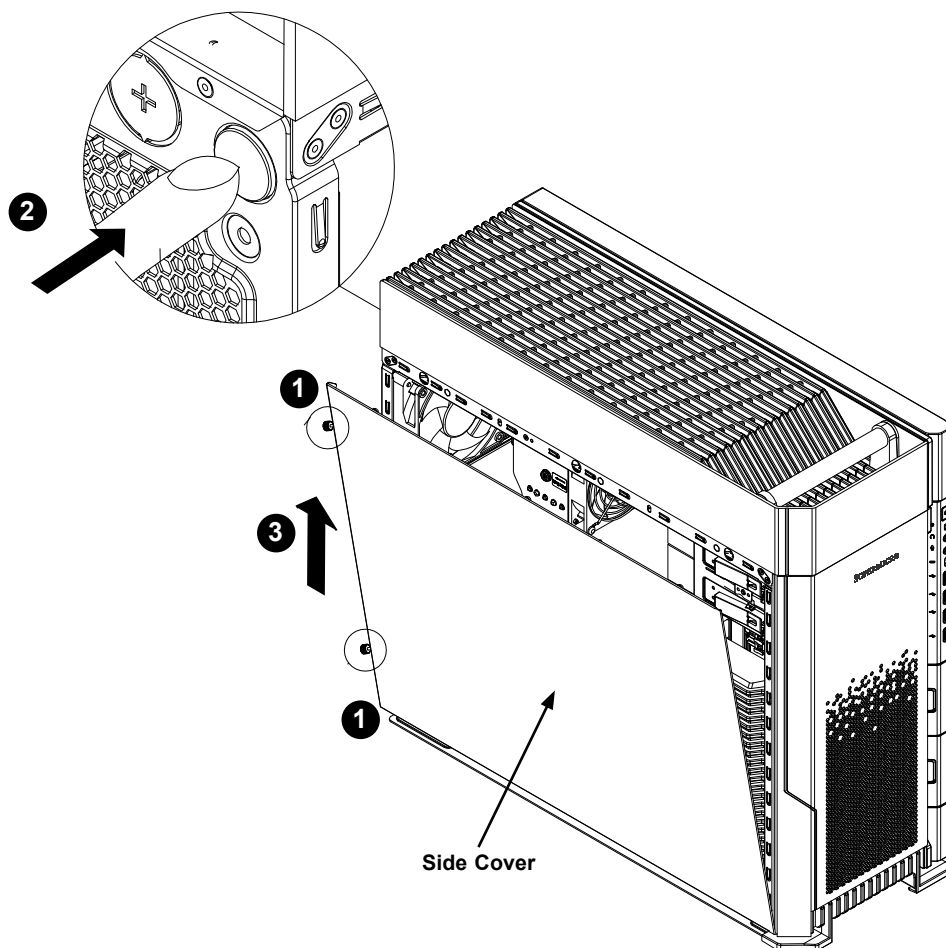


Figure 3-1. Removing the Left Side Cover

Removing the Right Side Chassis Cover

Begin by powering down the system.

1. Remove the two screws at the rear of the chassis.
2. Slide the cover back to remove it from the chassis.

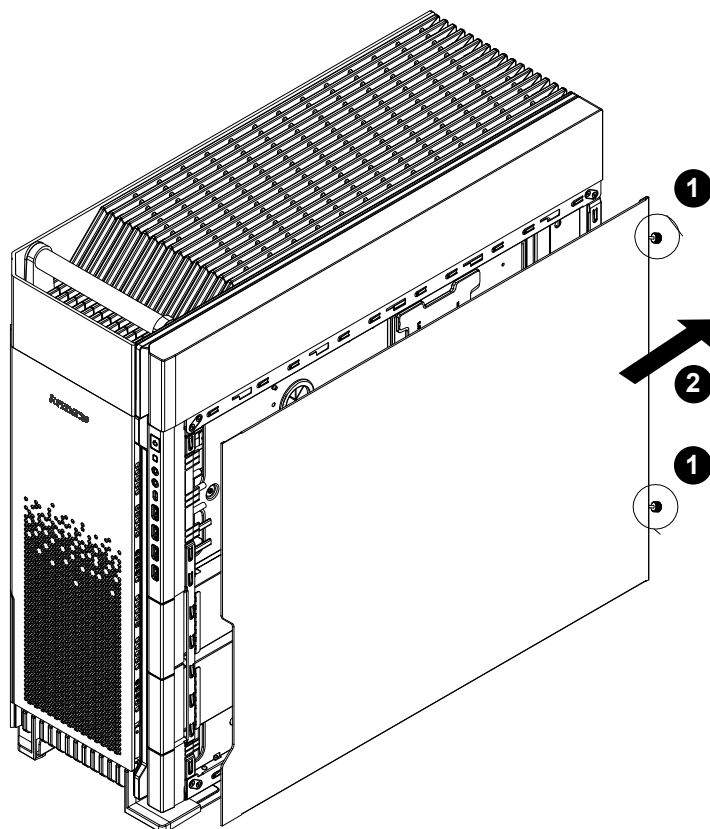


Figure 3-2. Removing the Right Side Cover

Front Bezel

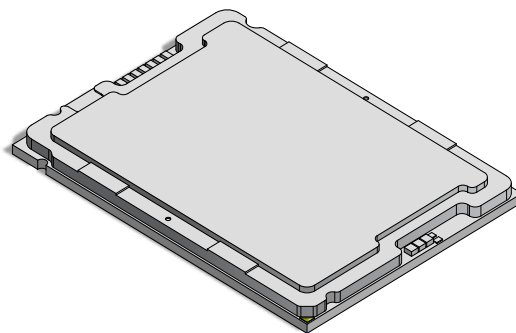
Remove the front bezel by pulling the right edge out and then swinging it away from the chassis. The front door can be opened to access the fans and filter.

3.3 Processor and Heatsink Installation

The processor (CPU) and processor carrier should be assembled together first to form the processor carrier assembly. This will be attached to the heatsink to form the processor heatsink module (PHM) before being installed into the CPU socket. Before installation, be sure to perform the following steps below:

- Please carefully follow the instructions given on the previous page to avoid ESD-related damages.
- Shut down the system and then unplug the AC power cord from all power supplies.
- Check that the plastic protective cover is on the CPU socket and none of the socket pins are bent. If they are, contact your retailer.
- When handling the processor, avoid touching or placing direct pressure on the LGA lands (gold contacts). Improper installation or socket misalignment can cause serious damage to the processor or CPU socket, which may require manufacturer repairs.
- Thermal grease is pre-applied on a new heatsink. No additional thermal grease is needed.
- Refer to the Supermicro website for updates on processor and memory support.
- All graphics in this manual are for illustrations only. Your components may look different.

Intel Xeon Scalable Processor

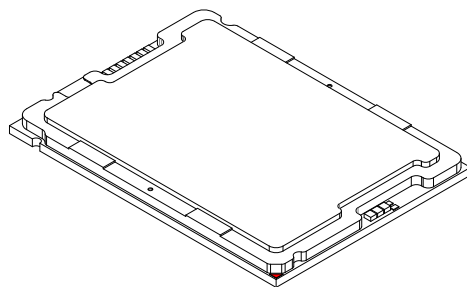


**Intel Xeon W-3400 series CPU
(112L, XCC)**

Overview of the Processor Carrier Assembly

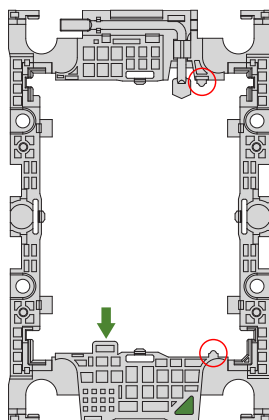
The processor carrier assembly includes a processor and a carrier as shown below:

1. Intel Xeon Processor



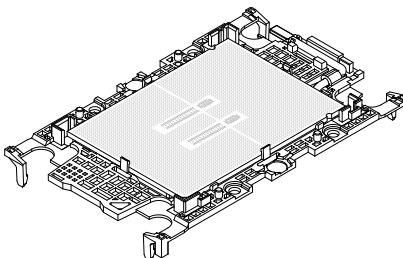
Intel Xeon W-3400 series CPU
(112L, XCC)

2. Processor Carrier



Carrier E1A (P/N: SKT-1333L-0001-LTS)
For XCC CPU

3. CPU Carrier Assembly (with CPU Seated inside the Carrier)



Carrier E1A with Intel Xeon W-3400 series CPU

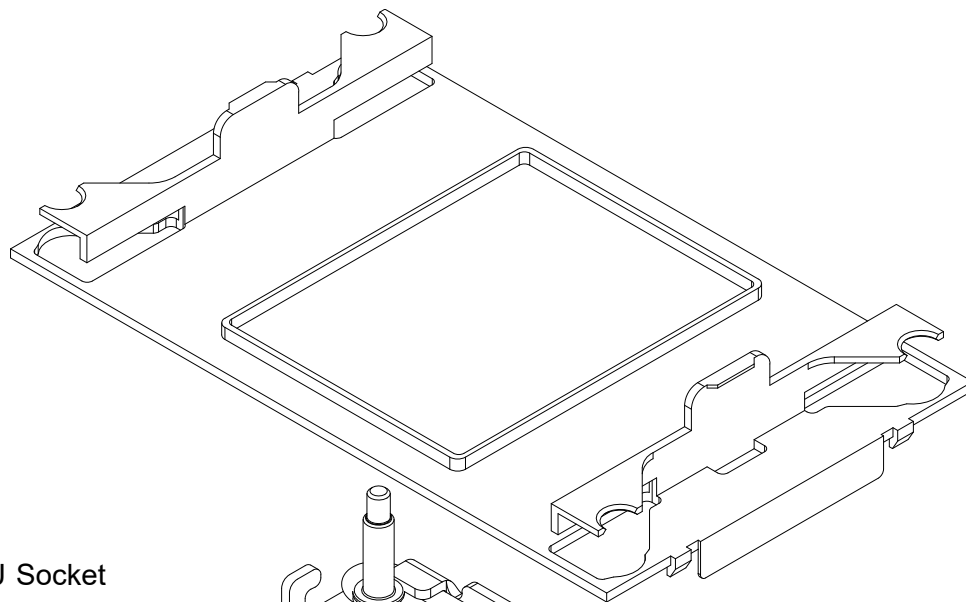
Note 1: Be sure to use the correct CPU carrier as shown above. Using a wrong carrier can cause damage to the CPU.

Note 2: The process of CPU and heatsink installation is basically the same for the two CPU SKUs. If not otherwise specified, the graphics throughout the installation section will show the Intel Xeon W-3400 series CPU (112L) with carrier E1A as examples.

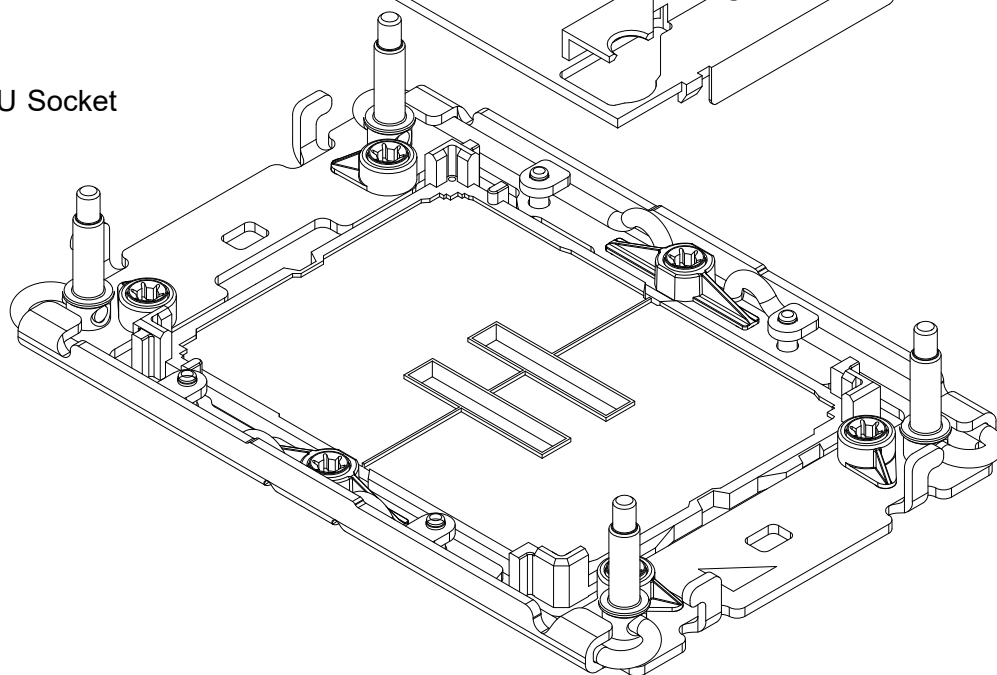
Overview of the CPU Socket

The CPU socket is protected by a plastic protective cover.

1. Plastic Protective Cover



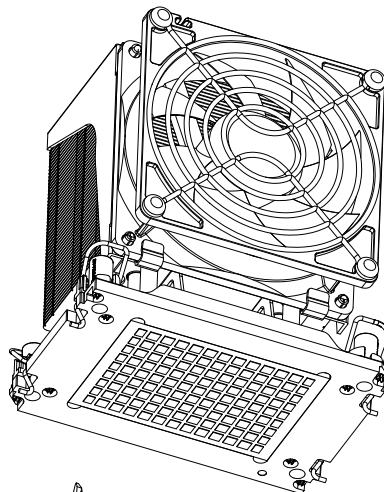
2. CPU Socket



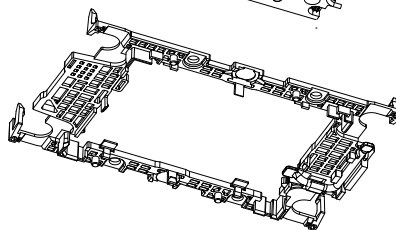
Overview of the Processor Heatsink Module

The Processor Heatsink Module (PHM) contains a heatsink, a processor carrier, and the Intel Xeon processor.

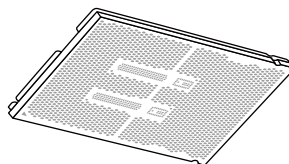
1. Heatsink with Thermal Grease



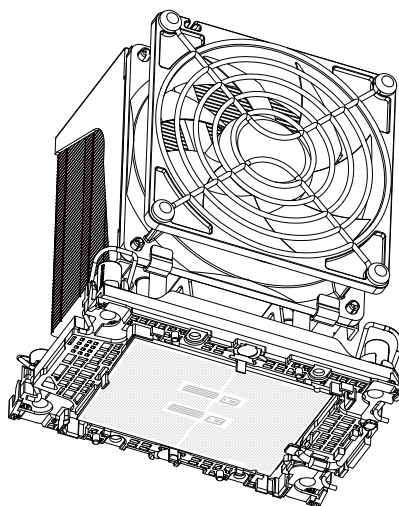
2. Processor Carrier



3. Intel Xeon Processor



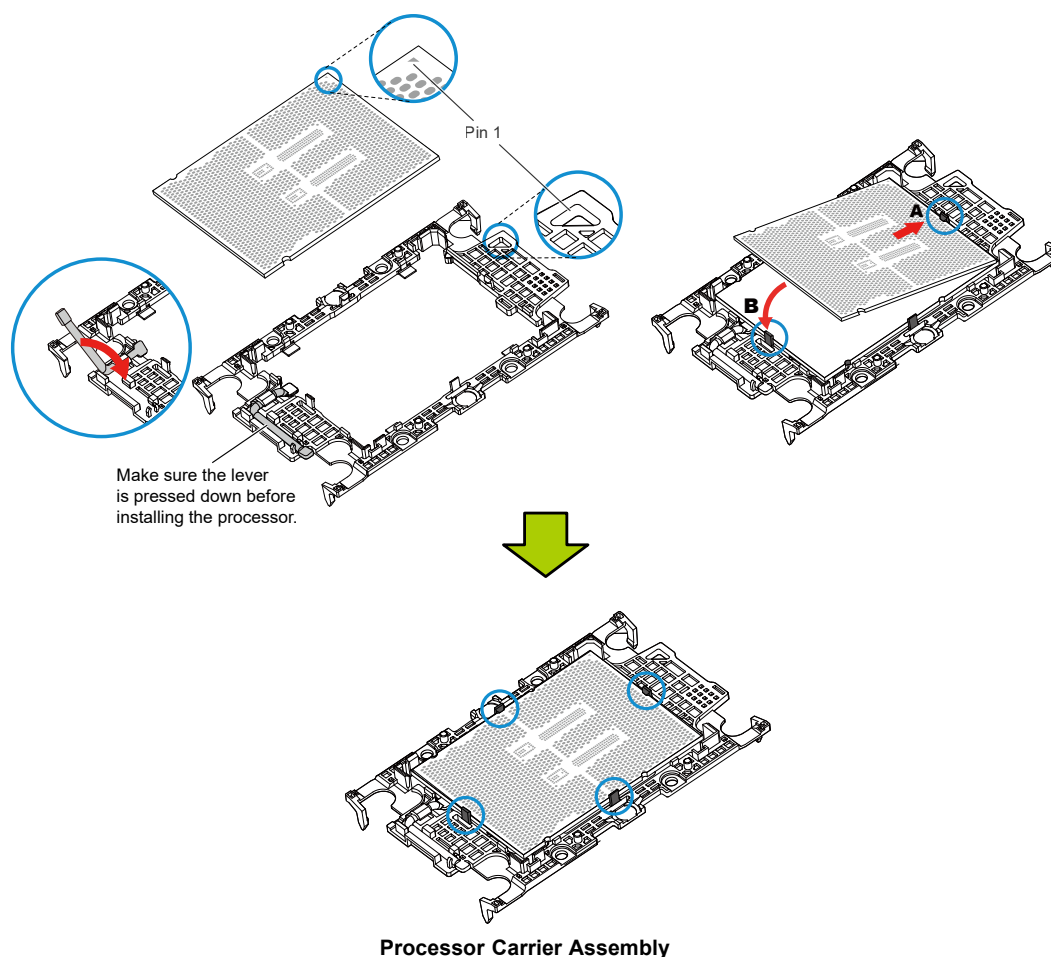
Processor Heatsink Module (PHM)



Creating the Processor Carrier Assembly

To install a processor into the processor carrier, follow the steps below:

1. Before installation, make sure the lever on the processor carrier is pressed down as shown below.
2. Hold the processor with the LGA lands (gold contacts) facing up. Locate the small, gold triangle in the corner of the processor and the corresponding hollowed triangle on the processor carrier. These triangles indicate pin 1. See the images below.
3. Use the triangles as a guide to carefully align and place one end of the processor into the latch marked A, and place the other end of processor into the latch marked B as shown below.
4. Examine all corners to ensure that the processor is firmly attached to the carrier.

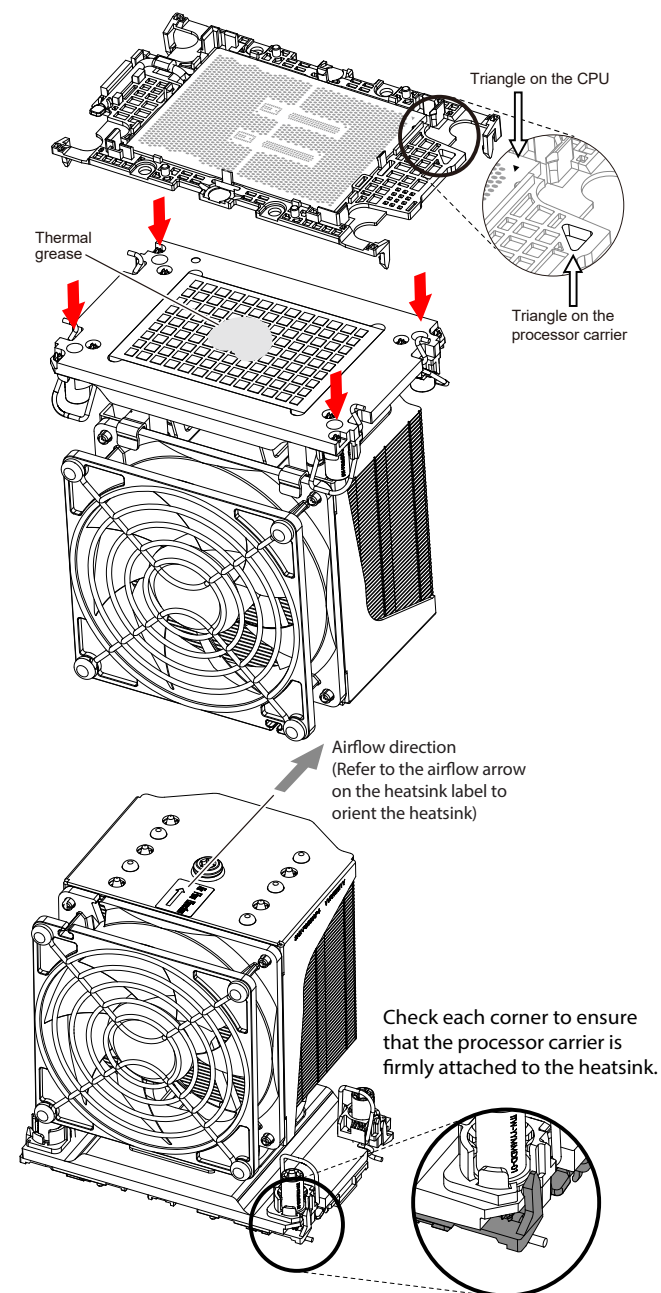


Assembling the Processor Heatsink Module

After creating the processor carrier assembly for the processor, mount it onto the heatsink to create the processor heatsink module (PHM):

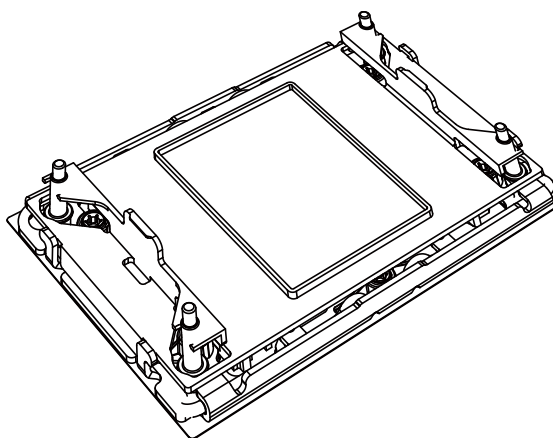
1. Note the label on top of the heatsink, which marks the airflow direction. Turn the heatsink over and orient the heatsink so the airflow arrow is pointing towards the triangle on the processor.
2. If this is a new heatsink, the thermal grease has been pre-applied. Otherwise, apply the proper amount of thermal grease.
3. Hold the processor carrier assembly so the processor's gold contacts are facing up, then align the holes of the processor carrier assembly with the holes on the heatsink. Press the processor carrier assembly down until it snaps into place. The plastic clips of the processor carrier assembly will lock at the four corners.
4. Examine all corners to ensure that the plastic clips on the processor carrier assembly are firmly attached to the heatsink.

Processor Carrier Assembly
(Upside Down)

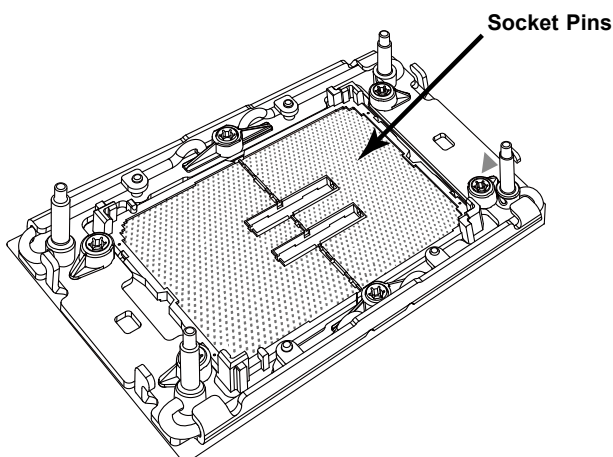
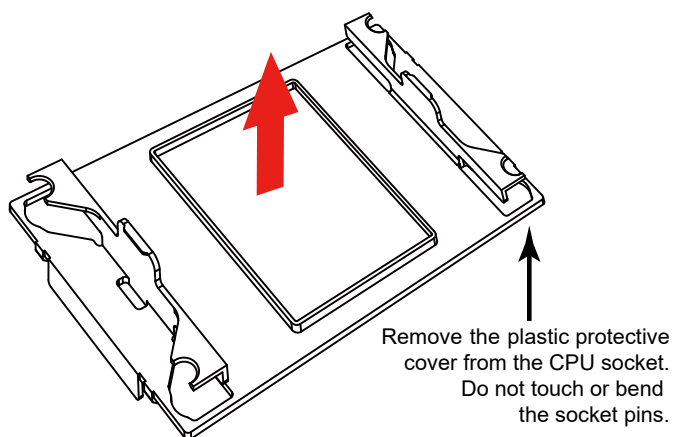


Preparing the CPU Socket for Installation

This motherboard comes with a plastic protective cover installed on the CPU socket. Remove it from the socket to install the Processor Heatsink Module (PHM). Gently pull up one corner of the plastic protective cover to remove it.



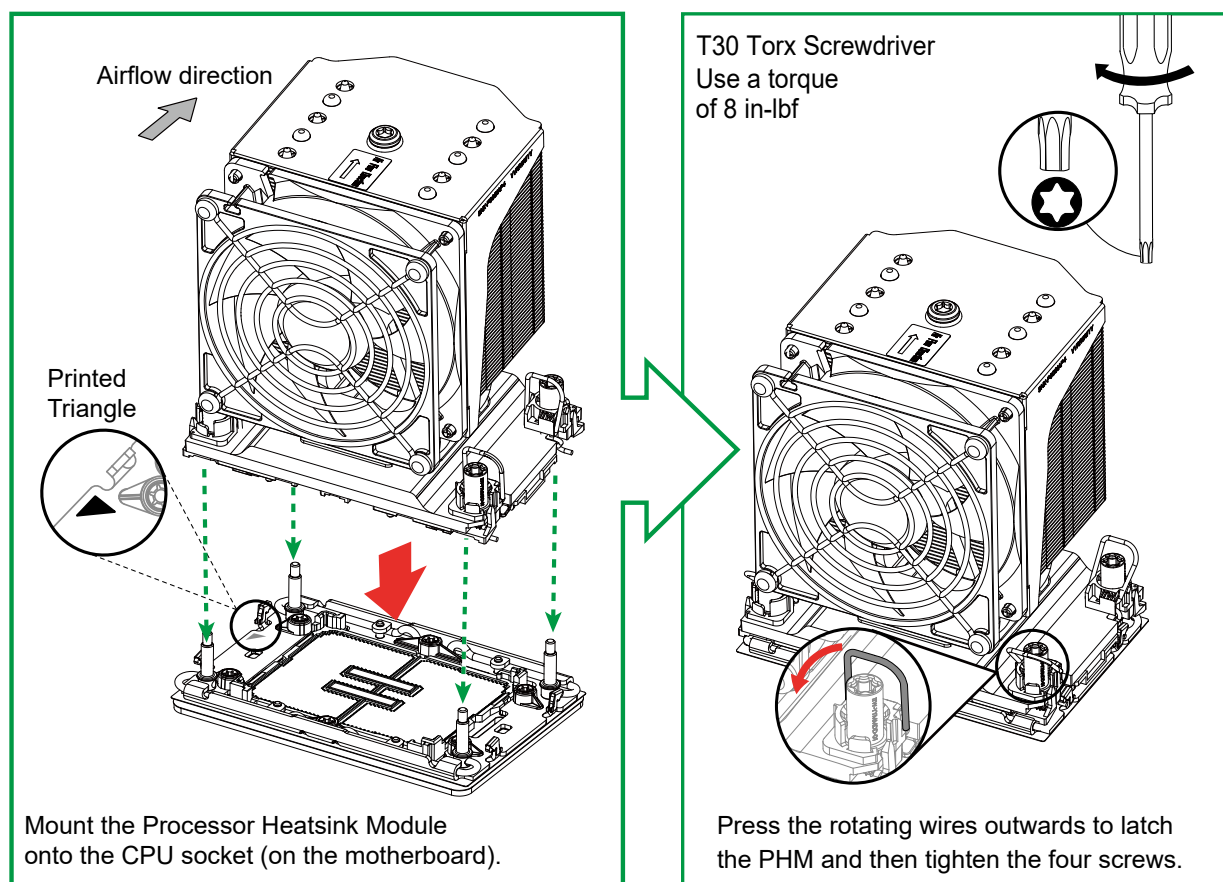
CPU Socket with Plastic Protective Cover



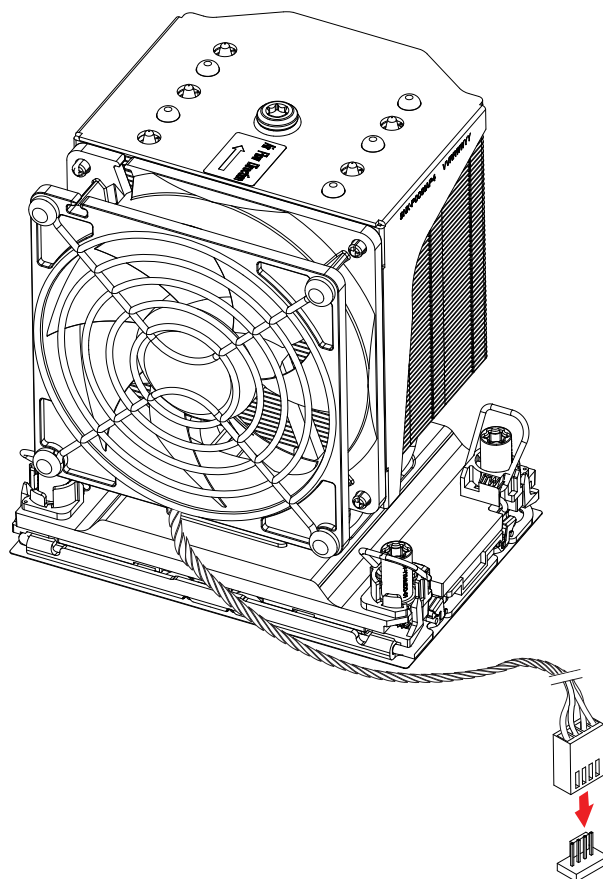
Installing the Processor Heatsink Module

After assembling the Processor Heatsink Module (PHM), install it onto the CPU socket:

1. Align pin 1 of the PHM with the printed triangle on the CPU socket. See the left image below.
2. Make sure all four holes of the heatsink are aligned with the socket, then gently place the heatsink on top of the CPU socket.
3. Press all four rotating wires outwards and make sure that the heatsink is securely latched into the CPU socket.
4. With a T30 Torx-bit screwdriver, gradually tighten the four screws to ensure even pressure. You can start with any screw, but make sure to tighten the screws in a diagonal pattern. To avoid damaging the processor or socket, do not use a force greater than 8 in-lbf when tightening the screws.
5. Examine all corners to ensure that the PHM is firmly attached to the socket.



6. Connect the fan power connector to a 4-pin fan header on the motherboard.

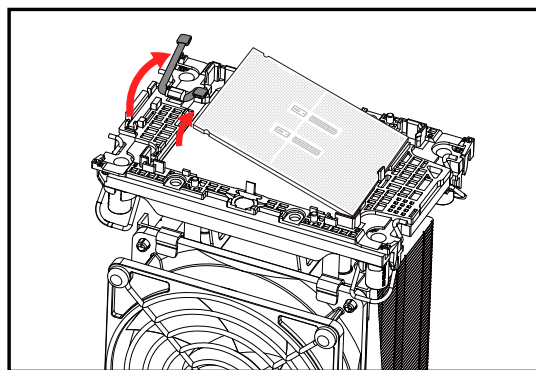
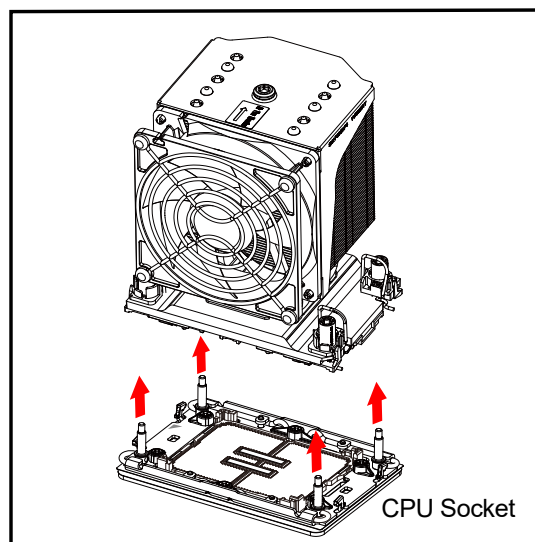
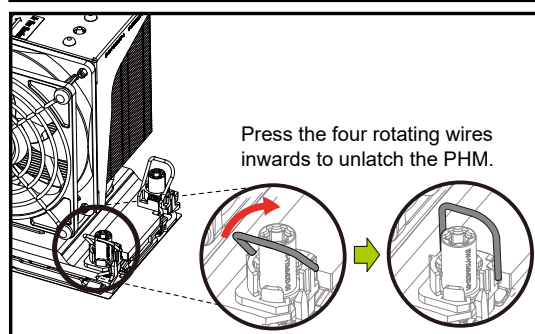
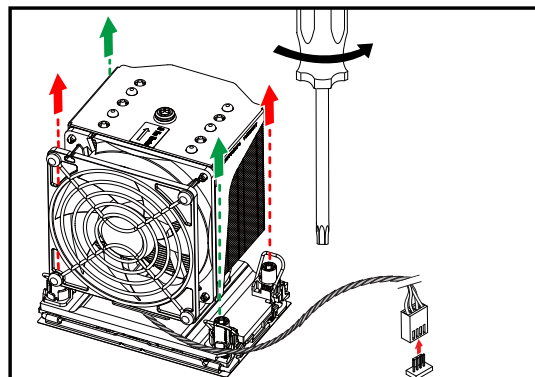


Removing the Processor Heatsink Module

Before removing the processor heatsink module (PHM) from the motherboard, shut down the system and then unplug the AC power cord from all power supplies.

Then follow the steps below:

1. Unplug the fan power connector from the fan header. Use a T30 Torx-bit screwdriver to loosen the four screws. You can start with any screw, but make sure to loosen the screws in a diagonal pattern.
2. Press the four rotating wires inwards to unlatch the PHM from the socket.
3. Gently lift the PHM upwards to remove it from the socket.
4. To remove the CPU, move the lever to its unlocked position and gently remove the CPU.



3.4 Memory Support and Installation

Note: Check the Supermicro website for recommended memory modules.

Important: Exercise extreme care when installing or removing DIMM modules to prevent any possible damage.

Memory Support

For Intel Xeon W-3400 series processors (112L): supports up to 1TB of RDIMM and 4TB of 3DS RDIMM with speeds of up to 4800 MT/s (1DPC) and 4400 MT/s (2DPC) in 16 ECC DDR5 (288-pin) SMD DIMM slots.

DDR5 Memory Support for the Intel Xeon W Processor

DDR5 Memory Support for the Intel Xeon Scalable Processors				
Type	Ranks Per DIMM & Data Width	DIMM Capacity (GB)	Speed (MT/s); Voltage (V); DIMM Per Channel (DPC)	
			1DPC (Note)	2DPC
		16GB	1.1V	
RDIMM	SRx8 (RC D)	16GB	4800	4400
	SRx4 (RC C)	32GB		
	DRx8 (RC E)	32GB		
	DRx4 (RC A))	64GB		
RDIMM 3DS	(4R/8R) x4 (RC A)	2H-128GB 4H-256GB		

Note: 1DPC applies to 1 SPC (Sockets Per Channel) or 2 SPC implementation.

DDR5 Memory Population Tables

DDR5 Memory Population Table for Intel Xeon W-3400 Series Processors (112L) (16 DIMM Slots)																		
DDR5	DIMMH1	DIMMH2	DIMMG1	DIMMG2	DIMMF1	DIMMF2	DIMME1	DIMME2	CPU	DIMMA2	DIMMA1	DIMMB2	DIMMB1	DIMMC2	DIMMC1	DIMMD2	DIMMD1	
1							DDR5				DDR5							
													DDR5					
					DDR5													
2			DDR5								DDR5							
							DDR5											
4			DDR5				DDR5				DDR5							
6			DDR5		DDR5		DDR5				DDR5					DDR5		DDR5
	DDR5		DDR5				DDR5				DDR5					DDR5		
	DDR5				DDR5		DDR5						DDR5		DDR5			DDR5
	DDR5		DDR5		DDR5						DDR5		DDR5					DDR5
8	DDR5		DDR5		DDR5		DDR5				DDR5		DDR5		DDR5		DDR5	
	DDR5		DDR5	DDR5	DDR5		DDR5	DDR5		DDR5	DDR5		DDR5	DDR5				DDR5
12	DDR5	DDR5	DDR5		DDR5	DDR5	DDR5				DDR5	DDR5	DDR5	DDR5		DDR5	DDR5	DDR5
16	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5			DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5	DDR5

3.5 Memory

General Guidelines for Optimizing Memory Performance

- It is recommended to use DDR5 memory of the same type, size, and speed.
- In a given channel, the black slot is enabled only when the gray slot is populated first..
- The motherboard will support odd-numbered modules (one module installed). However, to achieve the best memory performance, a balanced memory population is recommended.

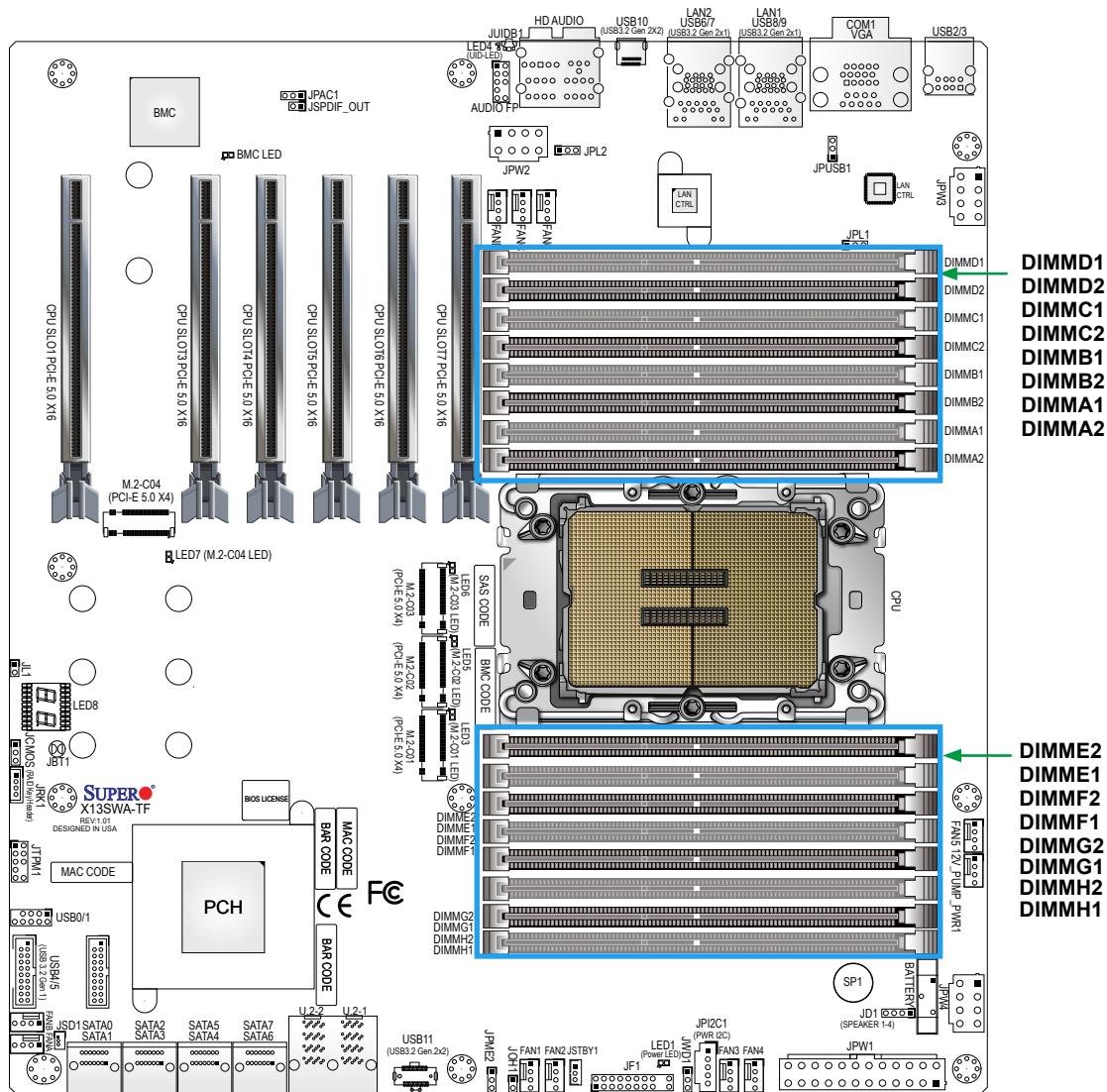
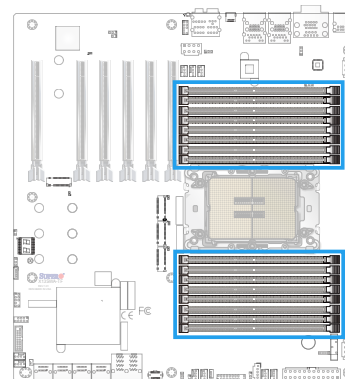


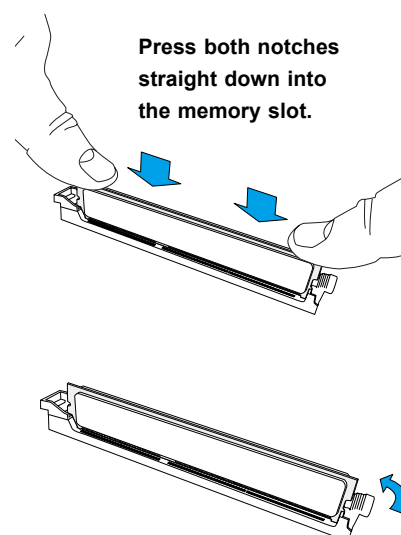
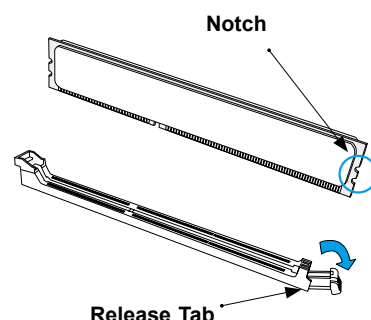
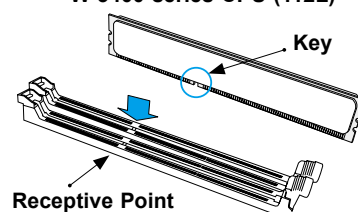
Figure 3-3. DIMM Numbering

DIMM Installation

1. Insert the desired number of DIMMs into the memory slots based on the recommended DIMM population tables in the previous section. Locate DIMM memory slots on the motherboard as shown on the left.
2. Align the DIMM module key with the receptive point on the single-latch DIMM slot.
3. Push the release tab outwards to unlock the slot.
4. Align the notch on the end of the module against the receptive point on the end of the slot.
5. Press both ends of the module straight down into the slot until the module snaps into place.
6. Push the release tab to the lock position to secure the module into the slot.



DIMM Slots for Intel Xeon W-3400 series CPU (112L)



DIMM Removal

Press the release tab on one end of the DIMM module to unlock it. Once the DIMM module is loosened, remove it from the memory slot.

Warning! Please do not use excessive force when pressing the release tabs on the ends of the DIMM socket to avoid causing any damage to the DIMM module or the DIMM socket. Please handle DIMM modules with care. Carefully follow all the instructions given on Page 1 of this chapter to avoid ESD-related damages done to your memory modules or components.

3.6 Motherboard Battery

The motherboard uses non-volatile memory to retain system information when system power is removed. This memory is powered by a lithium battery residing on the motherboard.

Replacing the Battery

Begin by removing power from the system as described in [Section 3.1](#).

1. Push aside the small clamp that covers the edge of the battery. When the battery is released, lift it out of the holder.
2. To insert a new battery, slide one edge under the lip of the holder with the positive (+) side facing up. Then push the other side down until the clamp snaps over it.

Note: Handle used batteries carefully. Do not damage the battery in any way; a damaged battery may release hazardous materials into the environment. Do not discard a used battery in the garbage or a public landfill. Please comply with the regulations set up by your local hazardous waste management agency to dispose of your used battery properly.

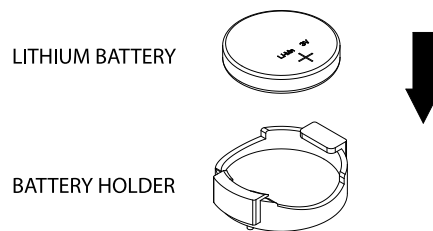


Figure 3-4. Installing the Onboard Battery

Warning 1: There is a danger of explosion if the onboard battery is installed upside down (which reverses its polarities). This battery must be replaced only with the same or an equivalent type recommended by the manufacturer (CR2032).

Warning 2: When the battery is removed, all the modified BIOS settings will be lost.

3.7 Storage Drives

Drive Cage

The removable drive cage is accessed by removing the left chassis cover. These drives are not hot-swappable. Power must be removed from the system before removing or installing drives. The cage can house up to four drives of either 3.5" or 2.5" (2.5" drives require an optional bracket: MCP-220-73102-0N).

Removing the Drive Cage

Begin by powering down the system and removing the left cover as previously described.

1. Use a Phillips-head screwdriver to remove the two screws at the top of the cage that secure it to the side of the chassis.
2. The drive cage is hooked onto the chassis floor. Slide the drive cage forward so that the holding studs move into the large release holes.
3. Lift the cage up and out of the chassis.
4. Install or remove drives as described on the next page.

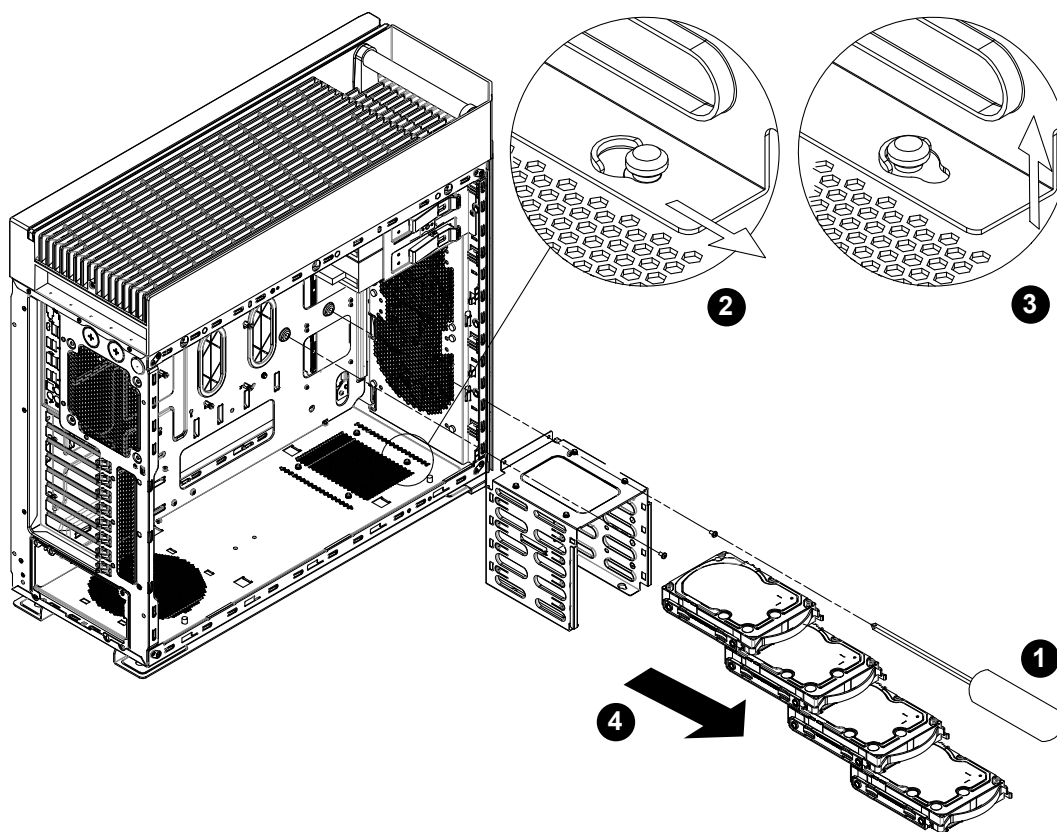


Figure 3-5. Removing the Drive Cage

Installing or Removing Drives

Installing Drive and Drive Tray

1. Using a tray that is compatible with the cage, install the drive onto the tray.
2. Install the drive and drive tray into the cage.

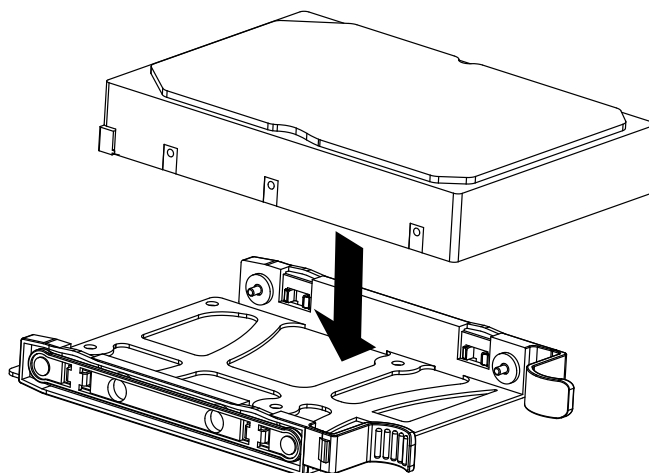


Figure 3-6. Installing Drive onto Tray

Removing Drive and Drive Tray

1. Using the handles, remove the drive tray from the cage.
2. Remove the drive from the drive tray.

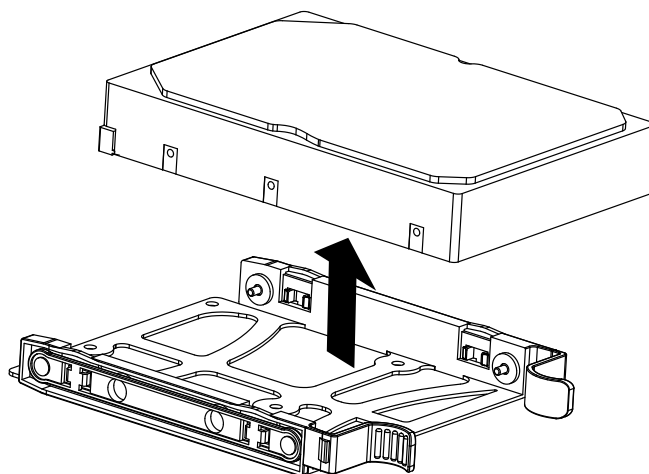


Figure 3-7. Removing Drive from Tray

Top Front Peripheral Drive Bays

Two 5.25" peripheral tool-less drive bays are located at the top front of the chassis. These drives are not hot-swap, power must be removed from the system before removing or installing drives.

Installing/Removing the Top Front Drive Bays

Begin by powering down the system and removing the left chassis cover as previously described.

1. Open the front bezel, then use a flat-head screwdriver to bend and remove the 5.25" drive bay plate as shown below.
2. Install drives as needed into one or both bays and attach the wiring. Do not reattach the cover plate.
3. To remove drives from these bays, disconnect their wiring then depress the two release latches to unlock the drives and slide them out of the chassis.

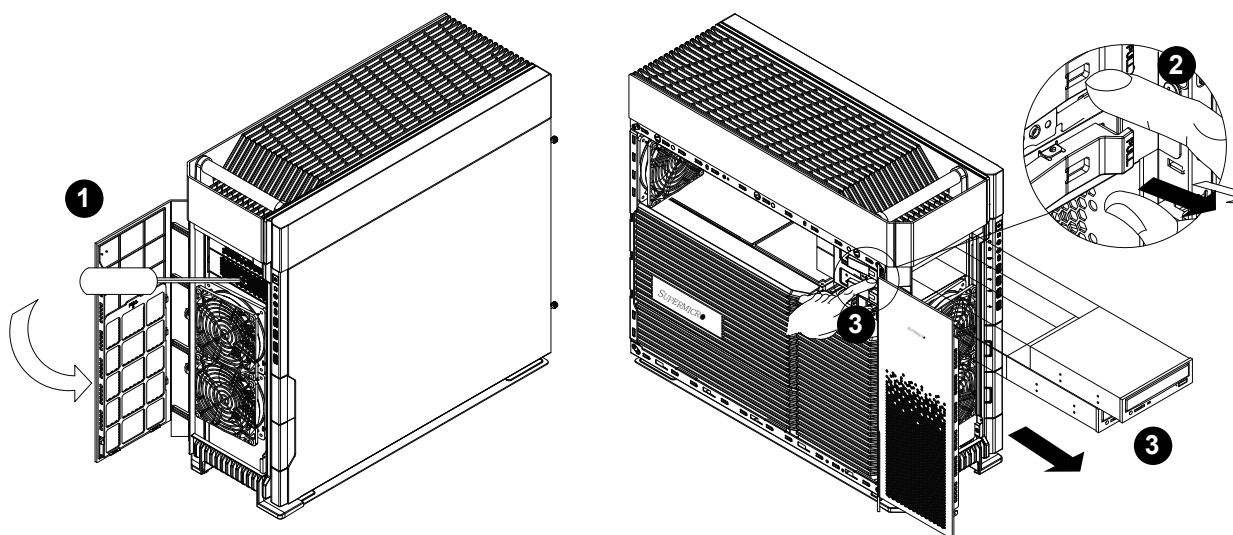


Figure 3-8. Installing Top Peripheral Drives

Front Side Drive Bays

Two 2.5" drive bays are included along the front right side of the chassis. These drives are not hot-swap, power must be removed from the system before removing or installing drives.

Installing/Removing the Front Side Drive Bays

Begin by powering down the system.

1. Push the release tab on either of the two drive bays so that the drive tray pops out from the chassis.
2. Pull the drive tray out and install drives as needed. See the next section.
3. Push the drive tray and drive back into the bay and attach the wiring.
4. To remove drives from these bays, disconnect their wiring before pulling the tray from the chassis.

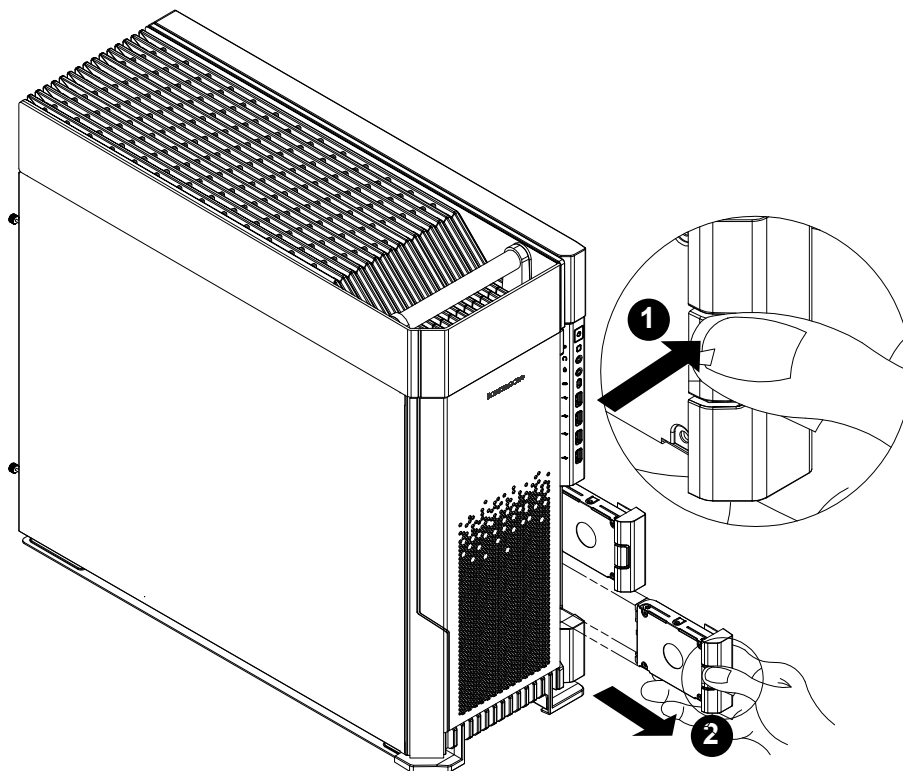


Figure 3-9. Installing Front Side Drives

Installing and Removing Drives from Trays

The drives must be inserted into tool-less drive trays before being installed in the system.

Installing a Drive into a Drive Tray

1. Pull out the two securing tabs on the tray as illustrated below.
2. With the tabs retracted, insert the drive sideways and at an angle. Make sure the tabs are in the drive screw holes or the tray will not insert correctly into the chassis. Then push it into the tray until it locks into place.

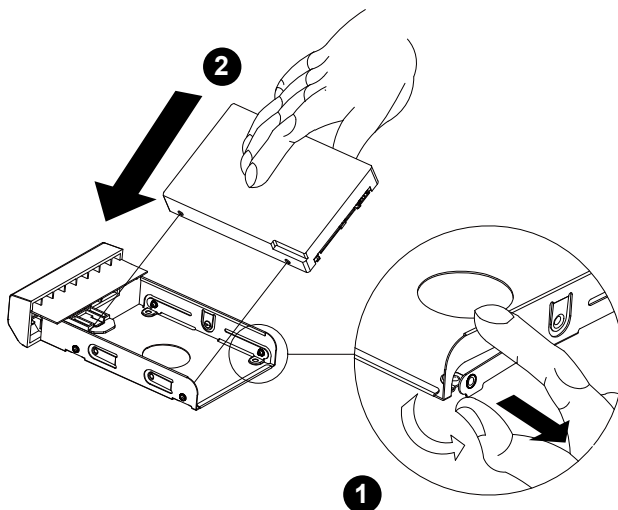


Figure 3-10. Installing a Drive into a Tray

Removing a Drive from a Drive Tray

1. Pull out the two securing tabs on the tray as illustrated below.
2. With the tabs retracted, use your finger to push the drive up and out of the tray through the hole in the tray bottom.
3. Remove the drive.

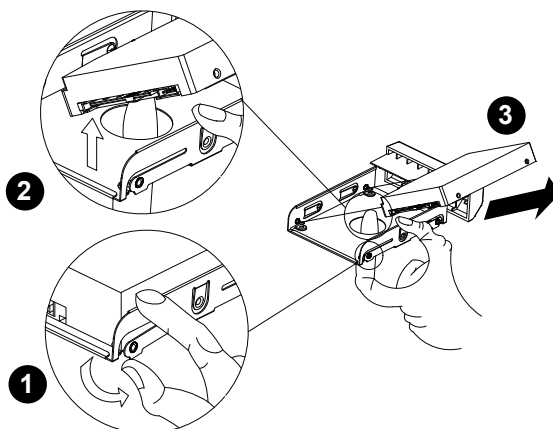


Figure 3-11. Removing a Drive from a Tray

M.2 Installation

The X13SWA-TF motherboard has four M.2 M-key sockets that support 2280 and 22110 M.2 devices. One standoff is pre-installed into the 22110 mounting hole. Refer to the illustration below for the locations of M.2 sockets and mounting holes. Follow the steps below to install the M.2 device.

Note 1: Please use wide temperature (up to 85°C) M.2 devices for M.2-C4 and M.2-C3.

Note 2: It is strongly recommended that you install a Supermicro M.2 heatsink (p/n SNK-C0156L) on the M.2 device as described in next section.

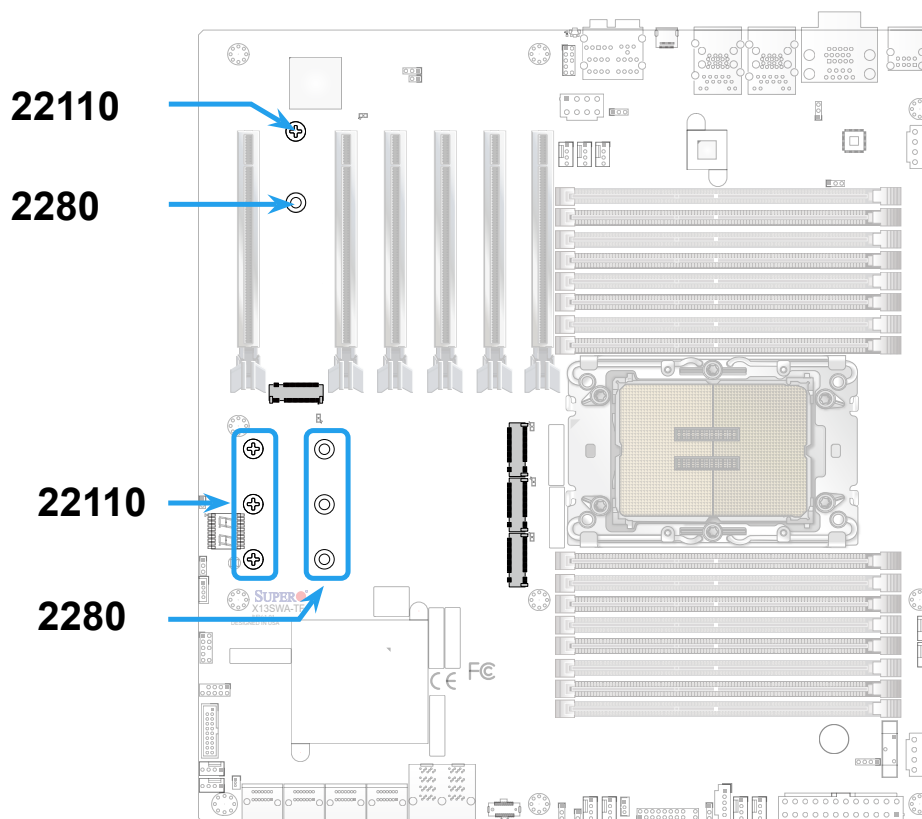
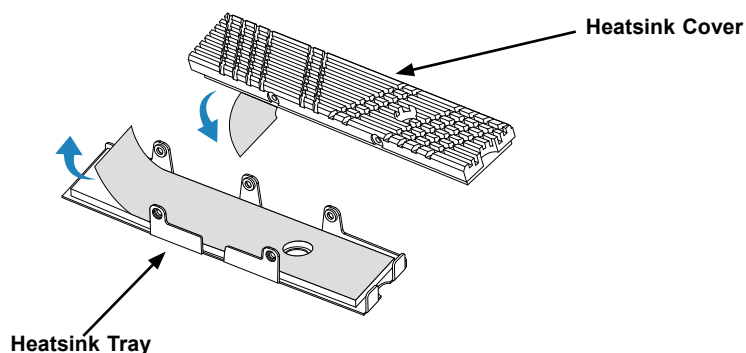


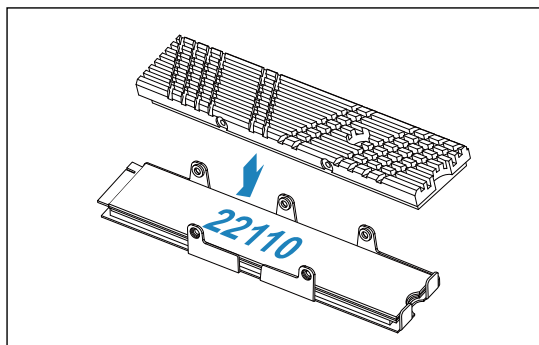
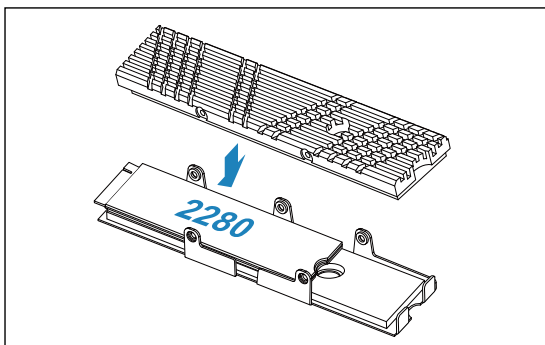
Figure 3-12. M.2 Slot Locations

M.2 Heatsink Installation (Optional)

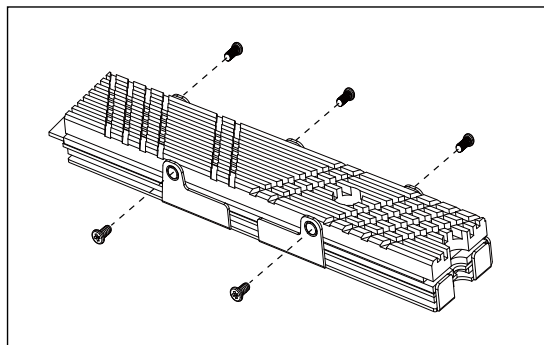
1. Remove the thermal pad protective films from the cover and the tray of the M.2 heatsink.



2. Place the M.2 device into the tray, and then put the heatsink cover in place. Be careful to align the holes on the tray with the holes on the cover.

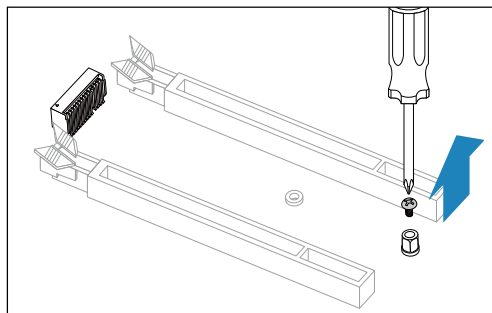


3. Tighten the screws to secure the heatsink assembly.

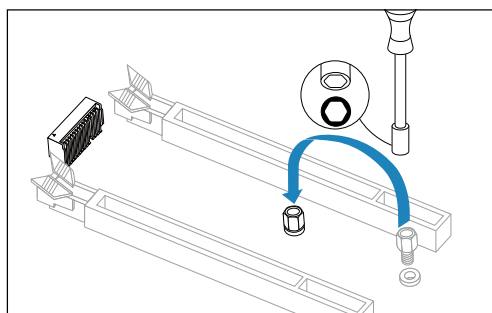


2280 M.2 Device Installation

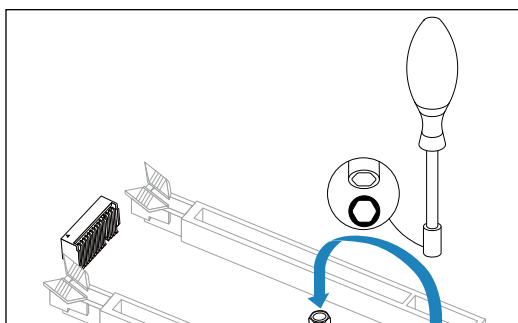
1. Locate the pre-installed standoff on the 2280 mounting hole. Remove the standoff screw and set it aside.



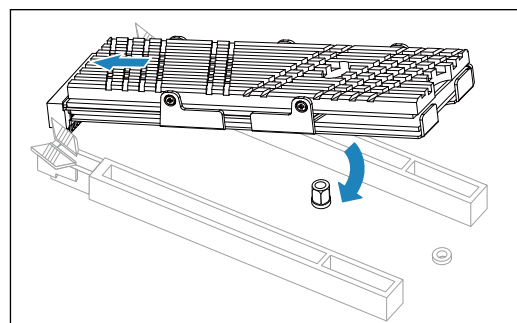
2. Using a hex socket screwdriver, remove and then re-install the standoff in 2280 mounting holes.



3. Insert the M.2 device or the heatsink assembly into the M.2 socket at a 30-degree angle and press it down.

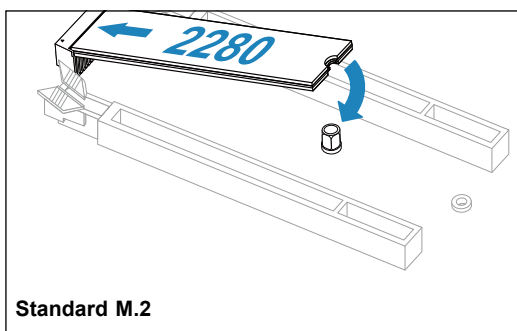


Standard M.2

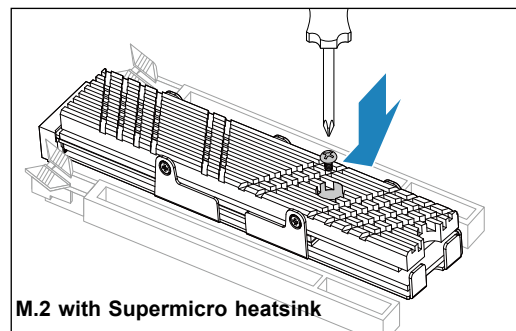


M.2 with Supermicro heatsink

4. Tighten the standoff screw to secure the M.2 device or the heatsink assembly into place. Do not overtighten so as to avoid damaging the M.2 device.



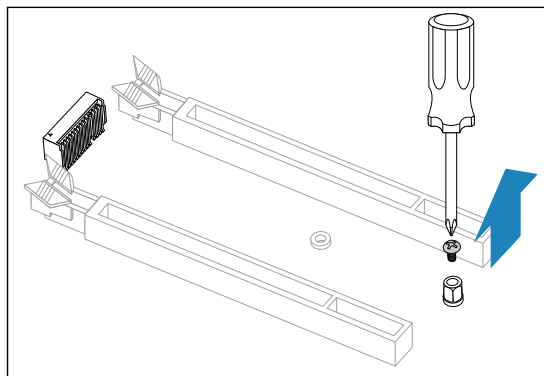
Standard M.2



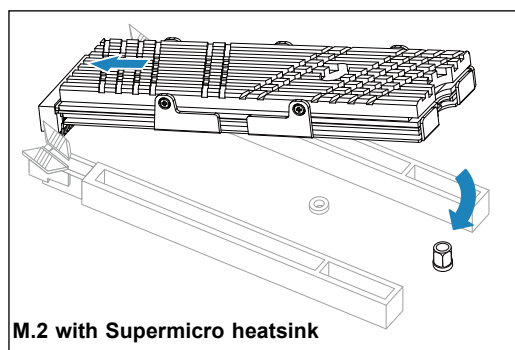
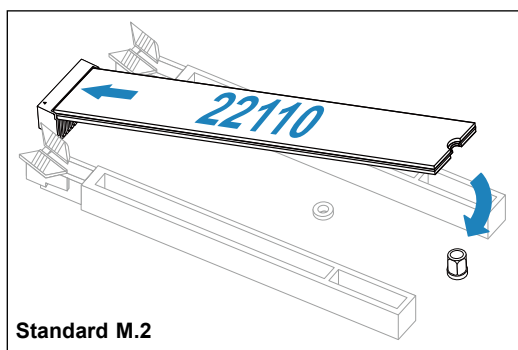
M.2 with Supermicro heatsink

22110 M.2 Device Installation

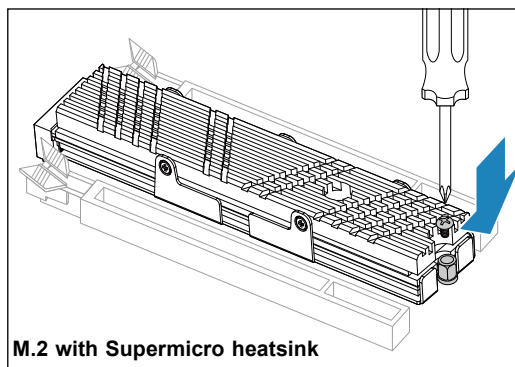
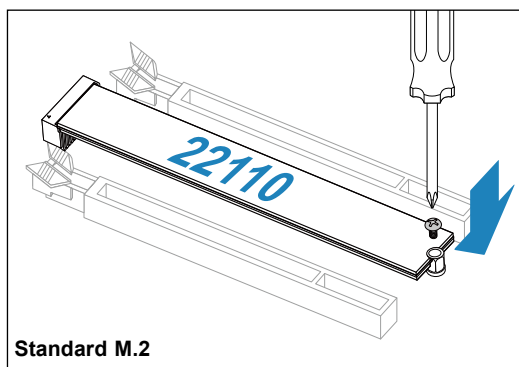
1. Locate the pre-installed standoff. Remove the standoff screw and set it aside.



2. Insert the M.2 device or the heatsink assembly into the M.2 socket at a 30-degree angle and press it down.



3. Tighten the standoff screw to secure the M.2 device or the heatsink assembly into place. Do not overtighten so as to avoid damaging the M.2 device.



Installing GPUs

Installing a GPU with Bracket and Holder

1. Align the screw holes of the GPU with the bracket by standing the gold finger on the surface.
2. Tighten two screws to secure the GPU to the bracket.

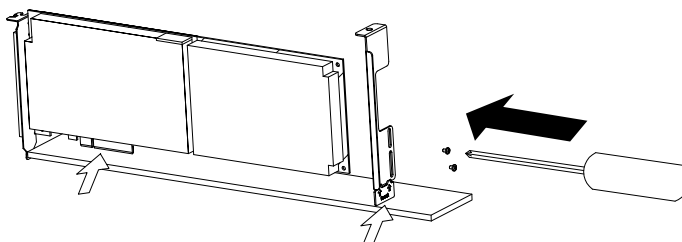


Figure 3-13. Securing the GPU to the Bracket

3. Bend and break the end of the bracket before plugging the GPU into the system, as shown below.

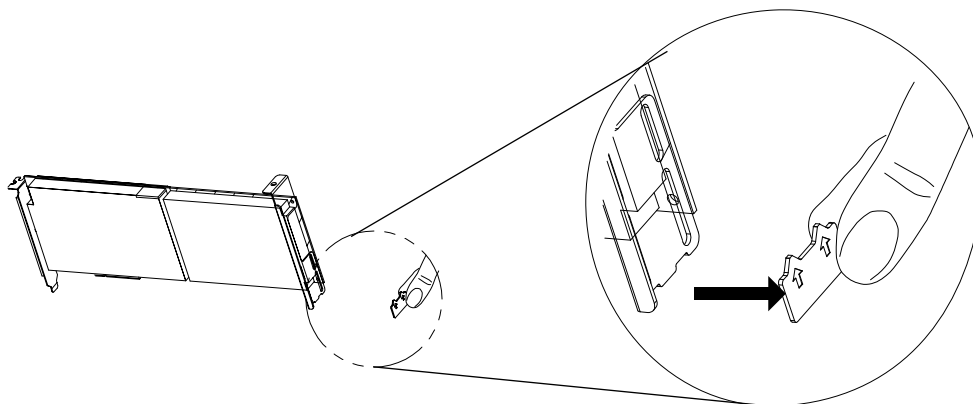


Figure 3-14. Breaking Off the End of the Bracket

4. Remove the PCIe bracket on the chassis.
5. Install the GPU to the motherboard.
6. Align the bracket to the GPU holder and secure it with a screw.

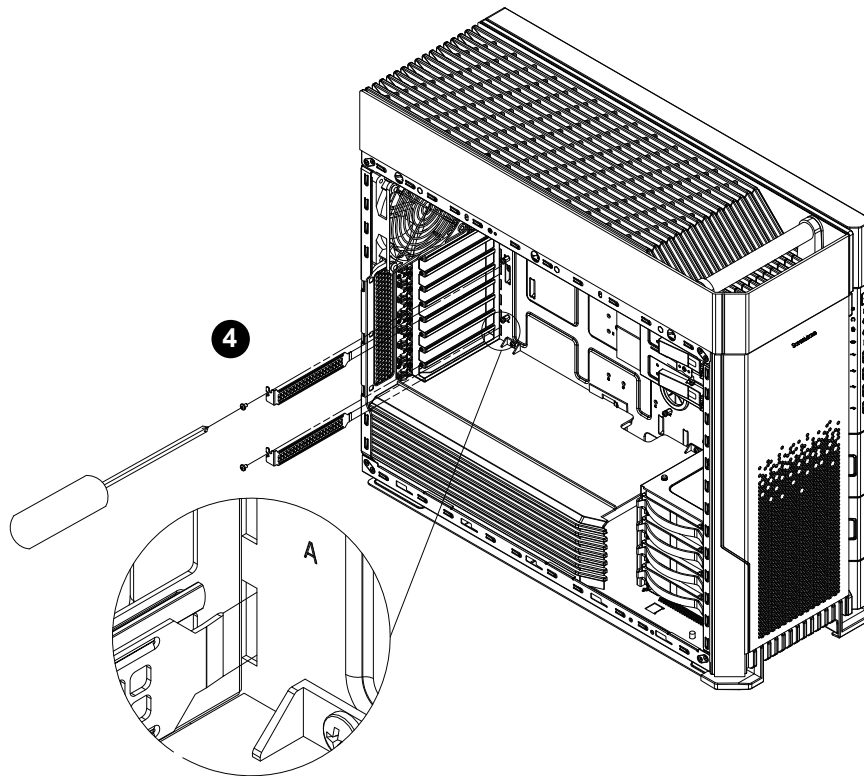


Figure 3-15. Remove the PCIe Bracket

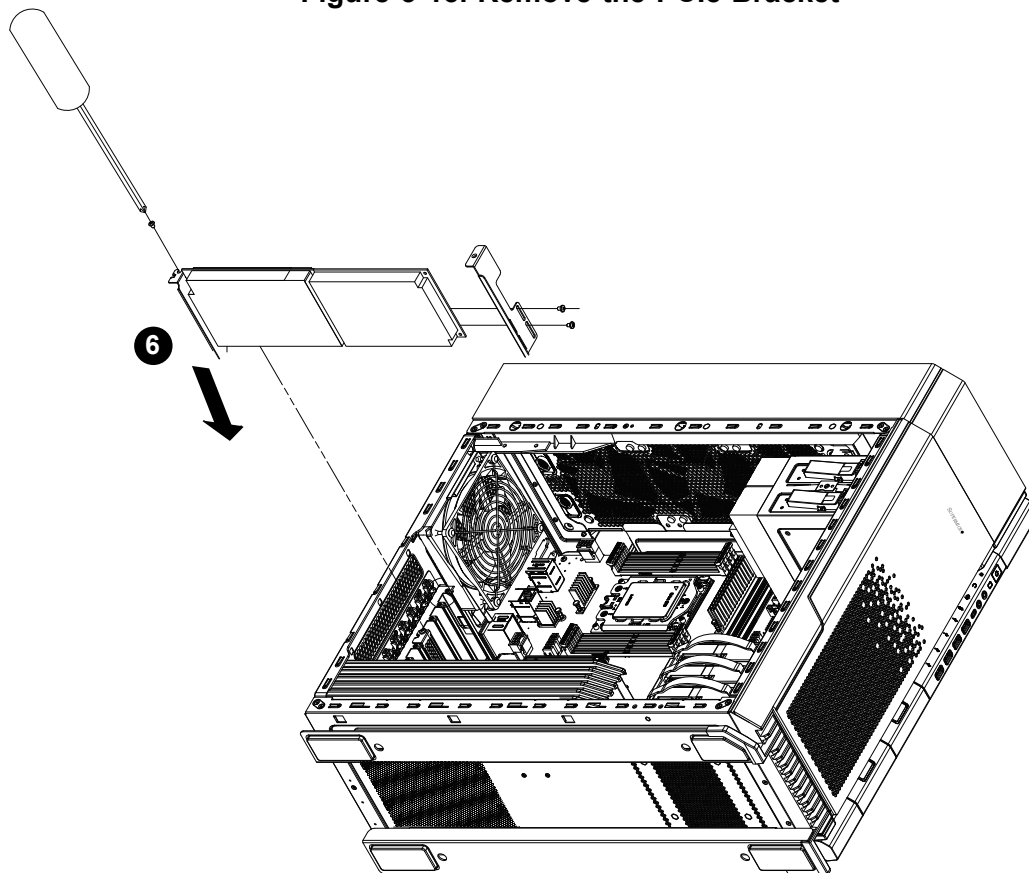


Figure 3-16. Installing the GPU to the Motherboard

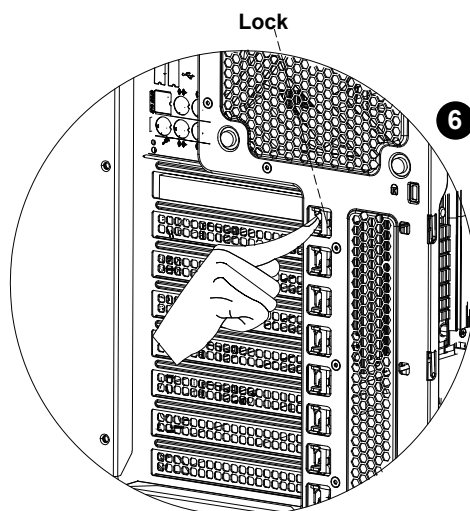


Figure 3-17. Locking the GPU

7. Install the GPU plastic cover and the left side cover.

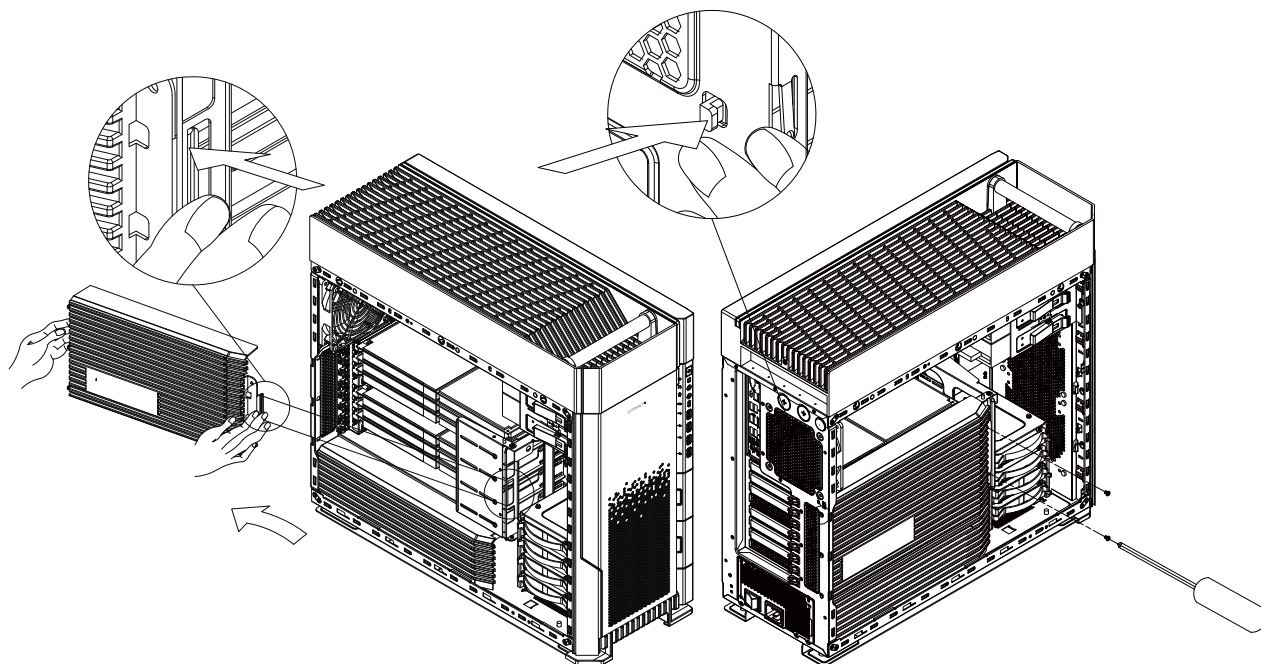


Figure 3-18. Installing the GPU Plastic Cover

3.8 System Cooling

The chassis includes two front intake fans and one rear exhaust fan. The top of the chassis can accommodate up to three optional 12-cm fans for three more GPU cards installation or an optional liquid cooling unit.

Air Flow

Make sure cables do not obstruct the cooling airflow.

Dust Filters

The chassis features a dust filter in front of the front fans and the other on the bottom of the chassis. They can be removed and washed to improve system air flow circulation.

Installing Top Fans

A total of three fans (all optional parts) may be added to the top chassis section.

1. Begin by removing the screw from the top chassis cover.
2. Once the screw has been removed, slide the cover toward the back of the chassis.
3. Lift the cover up and away from the chassis for full top access.

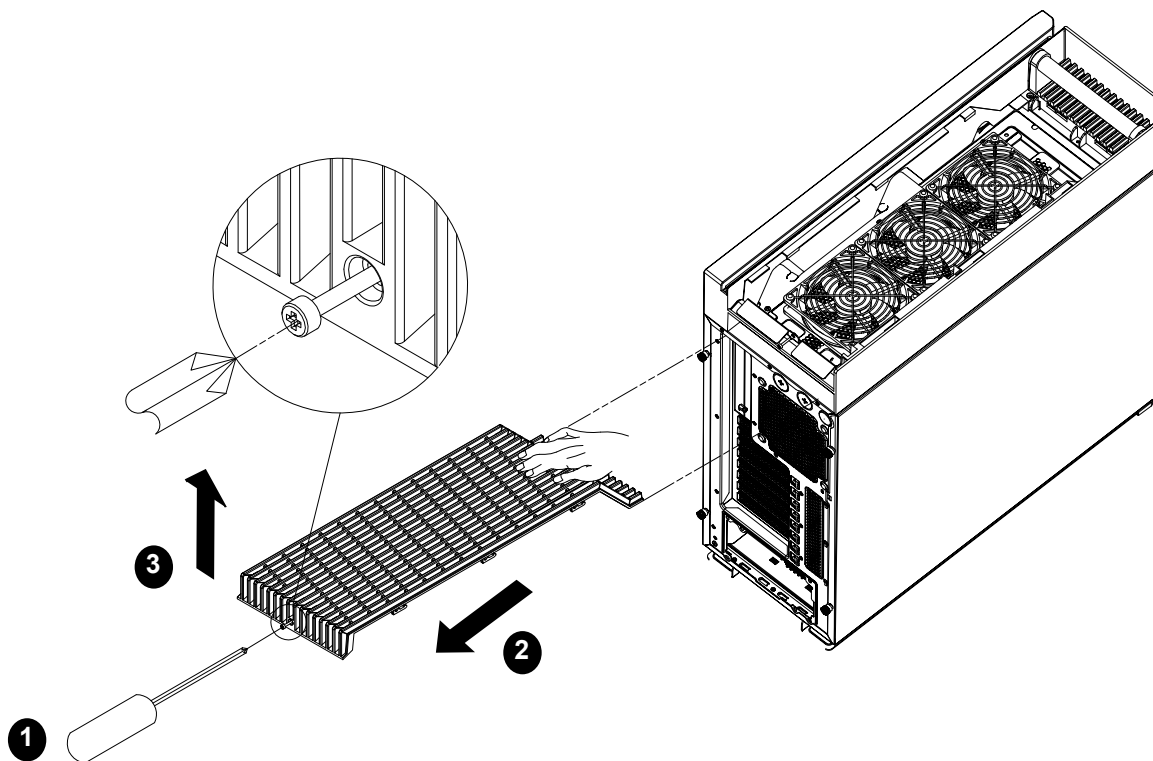


Figure 3-19. Removing the Top Cover

4. With the cover removed, remove all screws that secure the top panel to the chassis. Lift the top panel up and out of the chassis.
5. If necessary, disconnect the wiring of the failed fan, then replace it with a new fan and reconnect the wiring.
6. Proceed with the above steps in reverse order to re-install the top panel back onto the chassis.

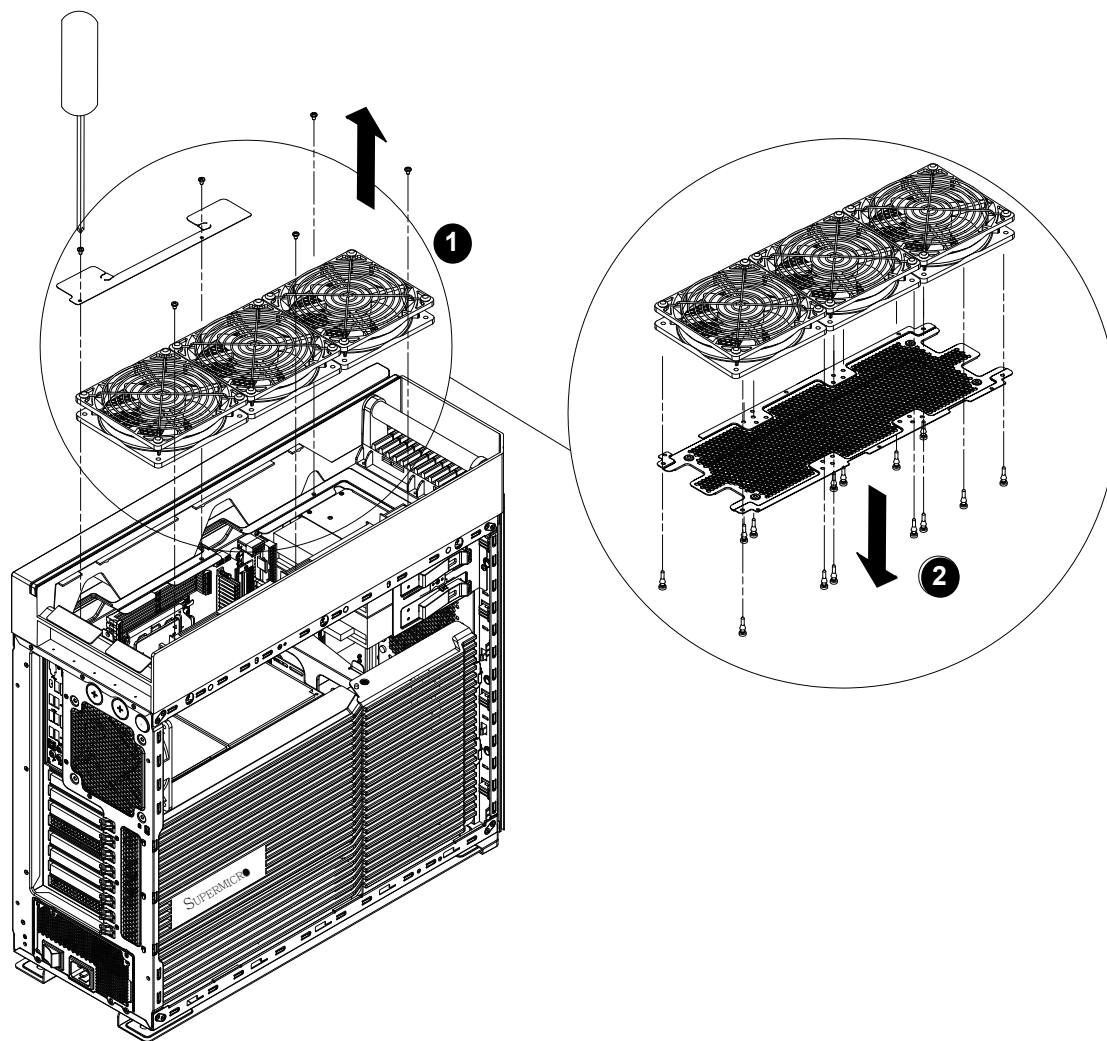


Figure 3-20. Installing the Top Fans

Replacing Front Fans

1. Open the front bezel to access the front fan area.
2. Disconnect the fan wiring.
3. If existing fans are mounted with rubber pins, pull the fans toward you. If the fans are mounted by screws, unscrew the fans.
4. Install new fans with rubber pins or screws.

Note: The chassis includes rubber mounting stands for these fans. Place the rubber mount in the fan mounting holes, and then align it to the proper holes in the front panel. Once aligned, pull the rubber mount to secure it in place.

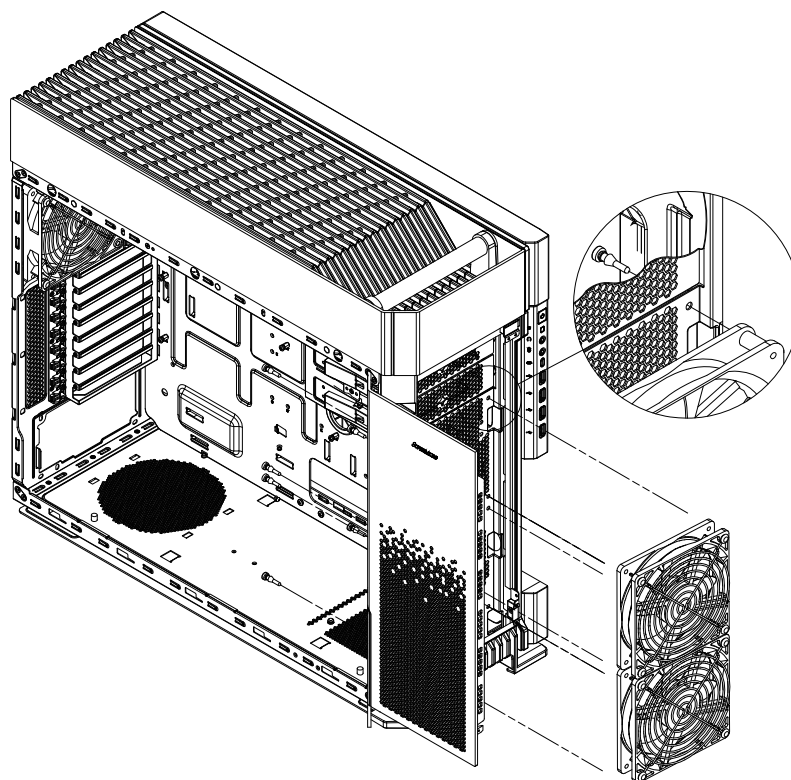
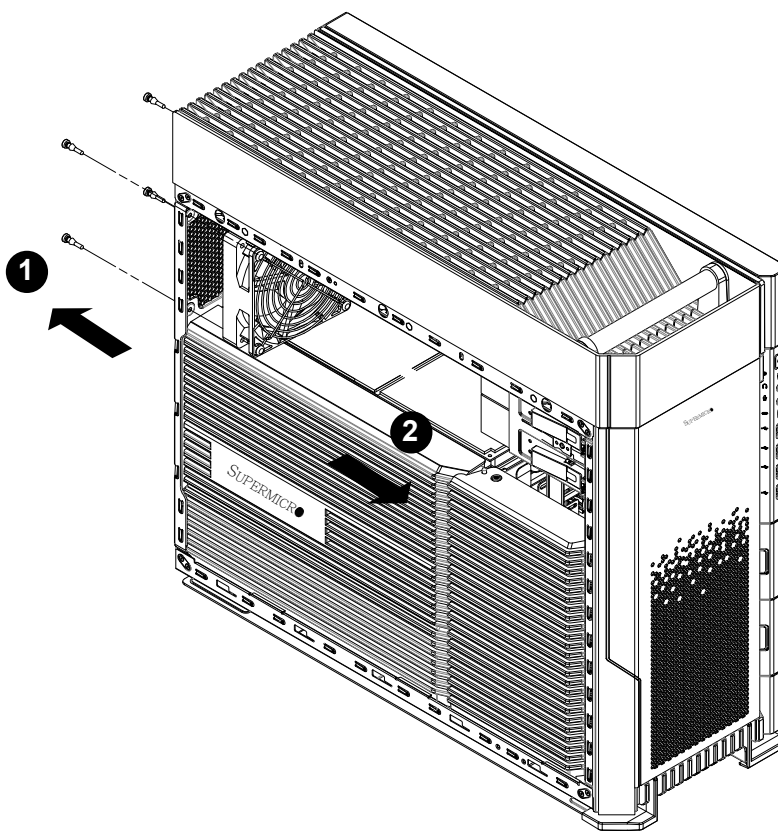


Figure 3-21. Installing the Front Fans

Replacing the Rear Fan

1. Open the left side cover for access to the rear fan.
2. Remove the screws at the top back of the chassis that secure the fan to the chassis.
3. Pull the fan out through the open space inside the chassis.
4. Replace the failed fan, then proceed with the above steps in reverse order to install the fan back into the chassis.

**Figure 3-22. Installing the Rear Fan**

Liquid Cooling

The GS7 may be outfitted with a liquid cooling system that installs in the top panel.

Installing a Liquid Cooling Unit

1. Begin by removing the screw from the top chassis cover.
2. Once the screw has been removed, slide the cover toward the back of the chassis.
3. Lift the cover up and away from the chassis for full top access.
4. With the cover removed, remove all screws that secure the top panel to the chassis.
5. Lift the top panel up and out of the chassis.
6. Attach the radiator of the liquid cooling unit to the metal lath.
7. Attach and secure the radiator under the top cover of the chassis.
8. Align the pump with the CPU and tighten the screws in a diagonal manner.
9. Connect the fans and pump to the motherboard using a 12V power connector.
10. Once the unit is installed, proceed with the above steps in reverse order to re-install the top panel back onto the chassis.

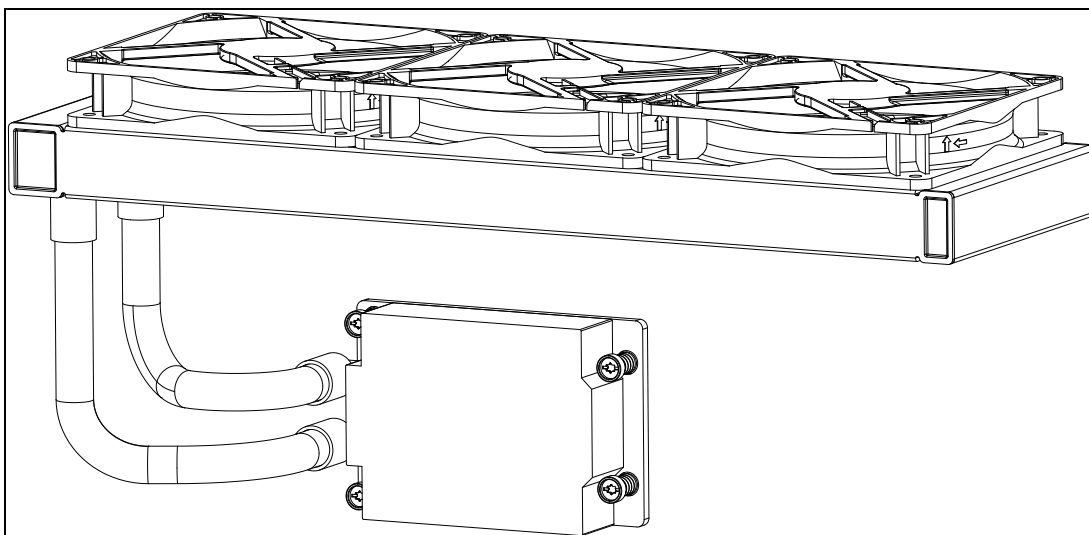


Figure 3-23. Installing a Liquid Cooling Unit

3.9 Installing Expansion Cards

Installing an Expansion Card

1. Power down the system as described in [Section 3.1](#).
2. Remove the left chassis cover.
3. Push in the long release tab on the right side and the small one on the left side of the cover to detach and remove the cover completely.
4. Remove the screws from the PCI slot cover.
5. Remove the PCI shield from the slot you wish to populate.
6. Insert the expansion card into the motherboard expansion slot while aligning the expansion card bracket with the opening in the rear of the chassis where the slot shield was removed.
7. Secure the expansion card bracket to the rear of the chassis with a screw.
8. Replace all covers and power up the system.

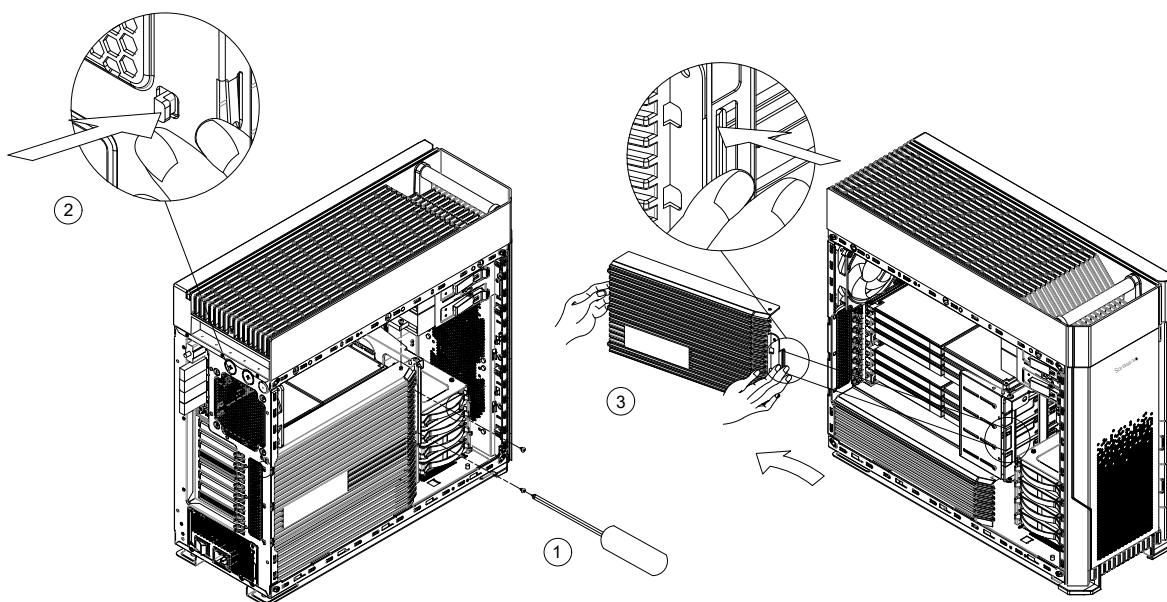


Figure 3-24. Installing an Expansion Card

3.10 Power Supply

The SYS-551A-T chassis supports a power supply on the rear floor of the chassis. It is recommended that the power requirements of installed components in the system total no more than 80% of the power supply rating.

The 2000W power supply that comes standard with the SYS-551A-T is a modular type power supply that allows you to connect only the wiring you need for your system's configuration. Attach all required wiring to the power supply then to your system as needed.

Installing Power Supply Cables

1. Power down the system as described in [Section 3.1](#) and open the left side chassis cover.
2. The power supply is isolated from the rest of the system with a cover. Remove the two screws at the top of this cover as shown below.
3. Push in the release tabs along the bottom of the power supply cover to detach it.
4. Lift the cover up and out of the chassis.
5. With access to the power supply, install the power supply cables.
6. Replace the power supply cover then the left chassis cover before restoring power to the system.

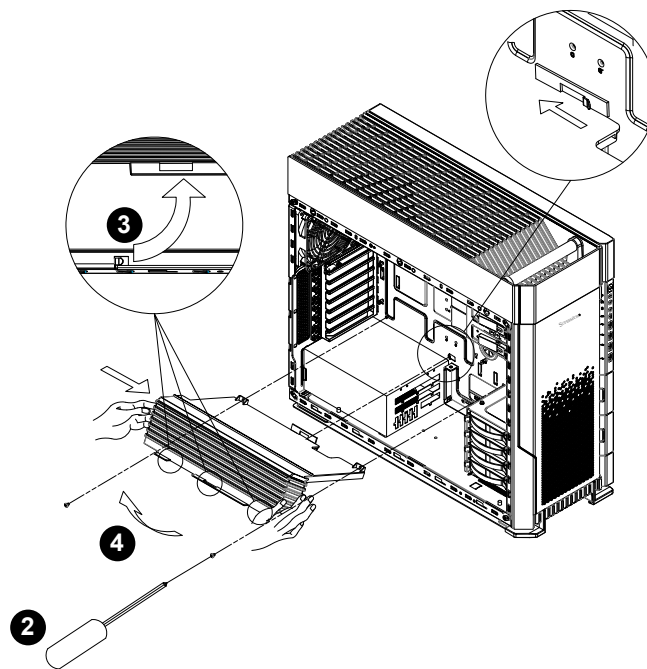


Figure 3-25. Removing the Power Supply Cover



Warning: Each power cord shall be connected to a socket outlet with earthing connection.

Chapter 4

Motherboard Connections

This section describes the connections on the motherboard and provides pinout definitions. Note that depending on how the system is configured, not all connections are required. The LEDs on the motherboard are also described here. A motherboard layout indicating component locations may be found in [Chapter 1](#). More detail can be found in the [Motherboard Manual](#). Please review the Safety Precautions in [Appendix A](#) before installing or removing components.

4.1 Power Connections

ATX Power Supply Connector

The 24-pin power supply connector (JPW1) meets the ATX SSI EPS 12V specification. If required, you must also connect the 8-pin 12V DC power connectors (JPW2/JPW3/JPW4) to the power supply to provide adequate power to your system.

ATX Power 24-pin Connector Pin Definitions (Required Connection)			
Pin#	Definition	Pin#	Definition
13	+3.3V	1	+3.3V
14	NC	2	+3.3V
15	Ground	3	Ground
16	PS_ON	4	+5V
17	Ground	5	Ground
18	Ground	6	+5V
19	Ground	7	Ground
20	Res (NC)	8	PWR_OK
21	+5V	9	5VSB
22	+5V	10	+12V
23	+5V	11	+12V
24	Ground	12	+3.3V

12V 8-pin Power Pin Definitions (Required Connection)	
Pin#	Definition
1 - 4	Ground
5 - 8	+12V

(Continued from the previous page)

Important: To provide adequate power supply to the motherboard, be sure to connect the 24-pin ATX power connector and the required 8-pin power connectors to the power supply. Failure to do so may void the manufacturer warranty on your power supply and motherboard.

When installing multiple GPU cards, you can refer to the table below to connect the required 8-pin connectors (JPW2, JPW3, and JPW4) to the power supply.

GPU Cards and the Required Connectors					
Type of GPU	Number of GPU Cards	JPW1	JPW2	JPW3	JPW4
Single-Width	GPU x1	V		V	V
	GPU x2	V		V	V
	GPU x3	V		V	V
	GPU x4 or more	V	V	V	V
Double-Width	GPU x1	V		V	V
	GPU x2	V		V	V
	GPU x3	V	V	V	V
	GPU x4 or more	V	V	V	V
Triple-Width	GPU x1	V		V	V
	GPU x2	V	V	V	V

Note 1: When using heavy loading devices, it is strongly recommended that you connect the power supplies to the 24-pin ATX power connector and all the 8-pin power connectors.

Note 2: To use the CPU overclocking feature, be sure to connect the power supplies to the 24-pin ATX power connector and all the 8-pin power connectors.

Note 3: To avoid possible system overheating, please be sure to provide adequate airflow to your system.

4.2 Headers and Connectors

Fan Headers

There are ten 4-pin fan headers (FAN1 - FAN6 and FANA - FAND) on the motherboard. All these 4-pin fan headers are backwards compatible with the traditional 3-pin fans. However, fan speed control is available for 4-pin fans only by Thermal Management via the IPMI 2.0 interface. Refer to the table below for pin definitions.

Fan Headers Pin Definitions	
Pin#	Definition
1	Ground
2	2.5 A/+12 V
3	Tachometer
4	PWM_Control

Pump Power Connector

The motherboard has one +12 V 4-pin header for optional CPU liquid cooling systems. When using a liquid cooling system, attach the pump power cable to the 12V_PUMP_PWR1 header.

Pump Power Header Pin Definitions	
Pin#	Definition
1	Ground (Black)
2	2A /+12 V (Red)
3	N/A
4	N/A

Front Panel Audio Header

A 10-pin audio header (AUDIO FP) located on the motherboard allows you to use the onboard sound chip (ALC888S) for audio function. Connect an audio cable to this header to use this feature. Refer to the table below for pin definitions

Front Panel Audio Header Pin Definitions			
Pin#	Definition	Pin#	Definition
1	Microphone_Left	2	Audio_Ground
3	Microphone_Right	4	Audio_Detect
5	Line_2_Right	6	Ground
7	Jack_Detect	8	Key
9	Line_2_Left	10	Ground

JSPDIF_OUT Header

The SPDIF OUT (JSPDIF_OUT) is used for digital audio output. You will also need the appropriate cable to use these features.

SPDIF OUT Pin Definitions	
Pin#	Definition
1	S/PDIF_OUT
2	Ground

Speaker/Buzzer Header

On the JD1 header, pins 1-4 are for the speaker and pins 3-4 are for the buzzer. If you wish to use an external speaker, connect its cable to pins 1-4.

Speaker Connector Pin Definitions	
Pin#	Signal
1-4	Speaker
3-4	Buzzer (Default)

Internal Speaker/Buzzer

The Internal Speaker/Buzzer (SP1) is used to provide audible indications for various beep codes. Refer to the table below for pin definitions.

Internal Buzzer Pin Definitions		
Pin#	Definition	Signal
1	Pos (+)	Beep In
2	Neg (-)	Alarm Speaker

TPM/Port 80 Header

The JTPM1 header is used to connect a Trusted Platform Module (TPM)/Port 80, which is available from Supermicro (optional). A TPM/Port 80 header is a security device that supports encryption and authentication in hard drives. It allows the motherboard to deny access if the TPM associated with the hard drive is not installed in the system. Refer to the layout below for the location of the TPM header. Please go to the following link for more information on the TPM: <http://www.supermicro.com/manuals/other/TPM.pdf>.

Note: For Intel Xeon W-3400 series CPU (112L), if PCIe slot of CPU SLOT1 is installed with a full-length add-on card, please use a horizontal TPM module to prevent mechanical conflict.

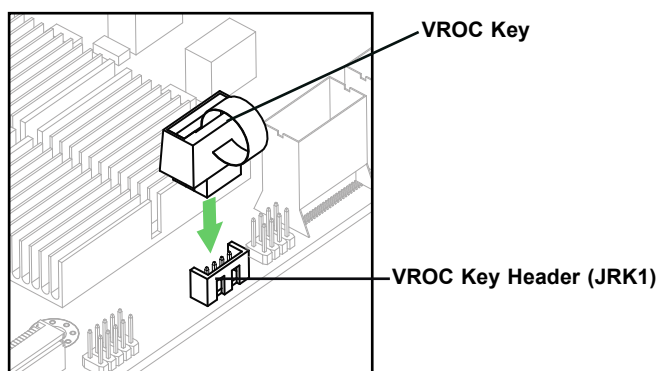
TPM/Port 80 Header Pin Definitions			
Pin#	Definition	Pin#	Definition
1	+3.3 V	2	SPI_CS#
3	RESET#	4	SPI_MISO
5	SPI_CLK	6	GND
7	SPI_MOSI	8	NC
9	+3.3 V Stdby	10	SPI_IRQ#

VROC RAID Key Header

A VROC RAID Key header is located at JRK1 on the motherboard. Install a VROC RAID Key on JRK1 for NVMe RAID support as shown in the illustration below. Refer to the [X13SWA-TF](#) for the location of JRK1.

Note: For detailed instructions on how to configure VROC RAID settings, refer to the VROC RAID Configuration User's Guide posted on the web page under the link: <http://www.supermicro.com/support/manuals/>.

Intel VROC Key Pin Definitions	
Pin#	Definition
1	Ground
2	3.3V Standby
3	Ground
4	PCH RAID Key



Note: The graphics contained in this user's manual are for illustration only. The components installed in your system may or may not look exactly the same as the graphics shown in the manual.

Standby Power

The Standby Power header is located at JSTBY1 on the motherboard. You must have a card with a Standby Power connector and a cable to use this feature. Refer to the table below for pin definitions.

Standby Power Pin Definitions	
Pin#	Definition
1	+5V Standby
2	Ground
3	No Connection

Disk-On-Module Power Connector

The Disk-On-Module (DOM) power connector at JSD1 provides 5V power to a solid-state DOM storage devices connected to one of the SATA ports. Refer to the table below for pin definitions.

DOM Power Pin Definitions	
Pin#	Definition
1	5V
2	Ground
3	Ground

Chassis Intrusion

A Chassis Intrusion header is located at JL1 on the motherboard. Attach the appropriate cable from the chassis to inform you when the chassis is opened. Refer to the table below for pin definitions.

Chassis Intrusion Pin Definitions	
Pin#	Definition
1	Intrusion Input
2	Ground

Power SMB (I²C) Header

The Power System Management Bus (I²C) connector (JPI2C1) monitors the power supply, fan, and system temperatures. Refer to the table below for pin definitions.

Power SMB Header Pin Definitions	
Pin#	Definition
1	Clock
2	Data
3	PMBUS_Alert
4	Ground
5	+3.3V

PCIe 5.0 x4 M.2 Sockets

The motherboard has four PCIe 5.0 x4 M.2 sockets (M.2-C01 - M.2-C04). M.2 allows for a variety of card sizes, increased functionality, and spatial efficiency. The M.2 sockets on the motherboard support NVMe SSDs in the 2280 and 22110 form factors, and RAID 0, 1, 5, and 10.

Overheat/Fan Fail LED Header

Header JOH1 is used to connect to an LED indicator to provide warnings of chassis overheating and fan failure. This LED will blink when a fan failure occurs. Refer to the tables below for pin definitions.

Overheat LED Header Status	
State	Definition
Solid	Overheat
Blinking	Fan Fail

Overheat LED Header Pin Definitions	
Pin#	Signal
1	Pull high to +3.3V power through 330 ohm resistor
2	OH Active

SATA Ports

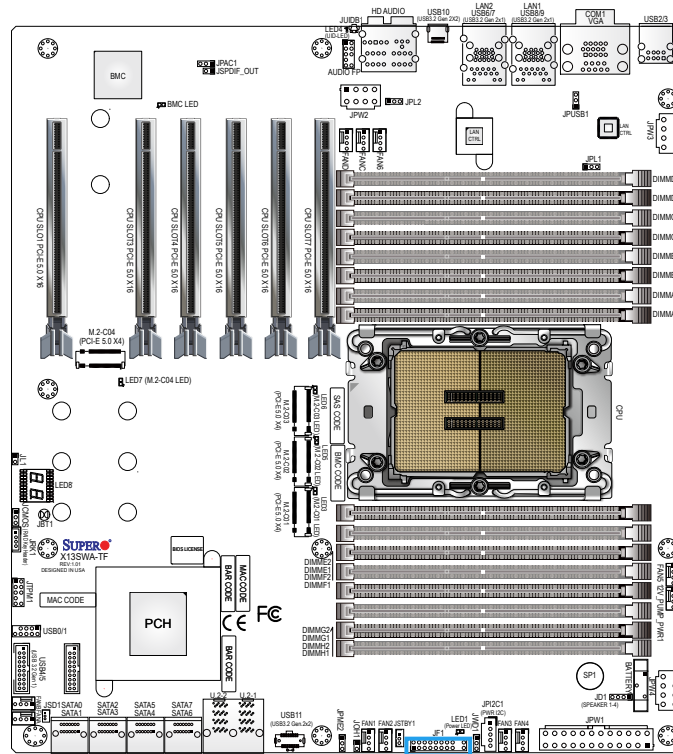
Eight SATA 3.0 ports (SATA0 - SATA7) are located on the motherboard, which are supported by the W790 chipset. These SATA ports support RAID 0, 1, 5, and 10.

U.2 Ports

There are two built-in U.2 ports (U.2-1/U.2-2) on the motherboard which support NVMe SSD to connect to the motherboard directly. It offers up to PCIe 3.0 x4 lanes to a connected SSD device. These U.2 ports support RAID 0 and 1.

Control Panel

The front control panel header (JF1) contains header pins for various buttons and indicators that are normally located on a control panel at the front of the chassis. These connectors are designed specifically for use with Supermicro chassis. Refer to the figure below for the descriptions of the front control panel buttons and LED indicators.



	1	2	
Power Button	○	○	Ground
Reset Button	○	○	Ground
3.3V	○	○	Power Fail (for LED6)
Red+ (Blue LED_Cathode_UID)	○	○	Blue+ (Red OH/Fan Fail/PWR Fail for LED5/Blue UID LED)
P3V3_STBY	○	○	NIC2 Active LED
P3V3_STBY	○	○	NIC1 Active LED
ID_UID/3.3V Stby	○	○	HDD LED
3.3V	○	○	FP PWR LED
Key	○	○	Key
NMI	○	○	Ground
	19	20	

Figure 4-1. JF1 Header Pins

Power On & BMC/BIOS Status LED Button

The Power On and BMC/BIOS Status LED button is located on pins 1 and 2 of JF1. Momentarily contacting both pins will power on/off the system or display BMC/BIOS status. Refer to the tables below for more information.

Power Button & BIOS/BMC Status LED Indicator Pin Definitions (JF1)	
Pin#	Definition
1	Signal
2	Ground

Power Button Pin Definitions (Pin 1 & Pin 2 of JF1)	
Status	Event
Solid green	System power on
BMC/BIOS blinking green at 4Hz	BMC/BIOS checking
BIOS blinking green at 4Hz	BIOS recovery/update in progress
BMC blinking red x2 (2 blinks red) at 4Hz, 1 pause at 2Hz (on-on-off-off)	BMC recovery/update in progress
BMC/BIOS blinking green at 1Hz	Flash not detected or golden image checking failure

Reset Button

The Reset Button connection is located on pins 3 and 4 of JF1. Momentarily contacting both pins will reset the system. Refer to the table below for pin definitions.

Reset Button Pin Definitions (JF1)	
Pin#	Definition
3	Reset
4	Ground

Power Fail LED

The Power Fail LED connection is located on pins 5 and 6 of JF1. When this LED turns solid red, it indicates a power failure. Refer to the table below for pin definitions.

Power Fail LED Pin Definitions (JF1)	
Pin#	Definition
5	3.3 V
6	PWR Fail for LED6 (Solid red on: PWR failure)

NIC1/NIC2 (LAN1/LAN2)

The Network Interface Controller (NIC) LED connection for LAN port 1 is located on pins 11 and 12 of JF1, and LAN port 2 is on pins 9 and 10. Attach the NIC LED cables here to display network activity. Refer to the table below for pin definitions.

LAN1/LAN2 LED Pin Definitions (JF1)	
Pin#	Definition
10	NIC 2 Activity LED
12	NIC 1 Activity LED

ID_UID Switch/HDD LED

The UID Switch/HDD LED connection is located on pins 13 and 14 of JF1. The UID switch is used for a chassis that supports a front UID switch. The front UID switch functions in the same way as the rear UID switch; both are for input only and cannot be used for output.

When this LED is blinking green, it indicates HDD is active. Attach a cable to pins 13 and 14 to show ID_UID status and hard drive activity. Refer to the tables below for pin definitions.

ID_UID/HDD LED Pin Definitions (JF1)	
Pins#	Definition
13	ID_UID/3.3 V Stby
14	HDD Activity

ID_UID/HDD LED Pin Definitions (JF1)	
Color	State
Blinking Green	HDD Active

FP Power LED

The Front Panel Power LED connection is located on pins 15 and 16 of JF1. Refer to the table below for pin definitions.

FP Power LED Pin Definitions (JF1)	
Pins#	Definition
15	3.3 V
16	FP PWR LED

NMI Button

The non-maskable interrupt (NMI) button header is located on pins 19 and 20 of JF1. Refer to the table below for pin definitions.

NMI Button Pin Definitions (JF1)	
Pins#	Definition
19	NMI
20	Ground

4.3 Rear I/O Ports

See Figure 4-2 below for the locations and descriptions of the I/O ports on the rear of the motherboard.

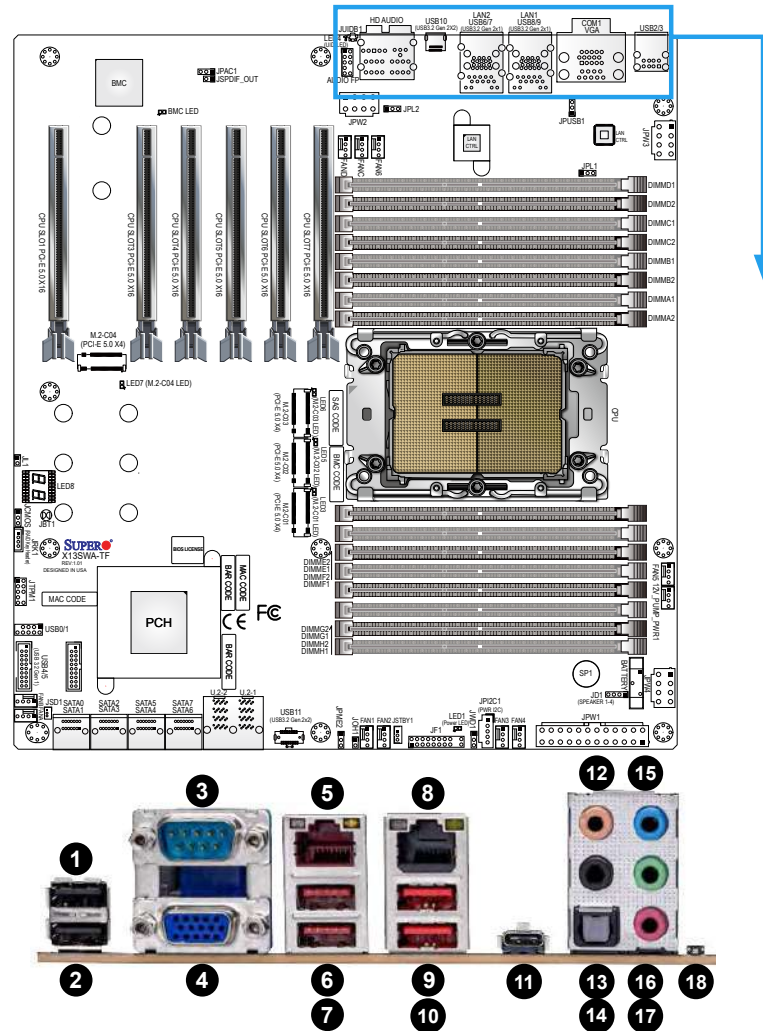


Figure 4-2. I/O Port Locations and Definitions

Rear I/O Ports							
#	Description	#	Description	#	Description	#	Description
1	USB2 (2.0)	6	USB8 (3.2 Gen. 2x1)	11	USB10 (3.2 Gen. 2x2)	16	Line Out
2	USB3 (2.0)	7	USB9 (3.2 Gen. 2x1)	12	Center/LFE Out	17	Min In
3	COM1 Port	8	LAN2 (10 GbE)	13	Surround Out	18	UID Switch/BMC Reset Button
4	VGA Port (IPMI only)	9	USB6 (3.2 Gen. 2x1)	14	S/PDIF Out		
5	LAN1 (1 GbE)	10	USB7 (3.2 Gen. 2x1)	15	Line In		

Note: Type C is 5V, 20Gbit/s.

Back Panel High Definition Audio (HD Audio)

This motherboard features a 7.1+2 Channel High Definition Audio (HDA) codec that provides 10 DAC channels. The HD Audio connections simultaneously support multiple-streaming 7.1 sound playback with two channels of independent stereo output through the front panel stereo out for front, rear, center, and subwoofer speakers. Use the Advanced software included in the CD-ROM with your motherboard to enable this function.

Audio Configuration					
#		2 Channel	4.1 Channel	5.1 Channel	7.1 Channel
1	Orange (Center/LFE Out)			Center/Subwoofer	Center/Subwoofer
2	Black (Surround)		Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
3	Light Blue (Line In/Side Speaker Out)	Line In	Line In	Line In	Side Speaker Out
4	Lime (Line Out/Front Speaker Out)	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
5	Pink (Mic In)	Mic In	Mic In	Mic In	Mic In

COM Port

One COM port (COM1) that supports serial link interface is located on the rear I/O panel. Refer to the layout below for the location of COM1.

VGA Connection (IPMI only)

One VGA port (VGA) is located on the rear I/O panel. The VGA connection provides analog interface support between the computer and the video displays.

LAN Ports

Two LAN ports (LAN1 and LAN2) are located on the I/O back panel. LAN1 supports 1 GbE LAN connection and shares with the IPMI port (via the Intel i210AT LAN controller). LAN2 supports 10 GbE LAN connection (via the Aquantia AQC113C LAN controller). All of these LAN ports accept RJ45 cables. Please refer to the LED Indicator section ([Section 4.5](#)) for LAN LED information.

Universal Serial Bus (USB) Connections

The motherboard provides the following USB ports on the rear I/O panel:

- Four USB3.2 Gen2 ports (USB6, USB7, USB8, USB9)
- One USB 3.2 Gen2 x2 port (USB10)
- Two USB2.0 ports (USB2/3)

The motherboard also provides the following headers for front accessible USB connections with a cable (not provided):

- One USB2.0 header (USB0/1) for two Type A connections
- One USB3.2 Gen1 header (USB4/5) for two Type A connections
- One USB3.2 Gen2 x2 header (USB11) for one Type C connection

UID (Unit Identifier)/BMC Reset Switch and UID/BMC Reset LED Indicators

A UID / BMC Reset switch (JUIDB1) is located on the rear side of the motherboard. This switch has dual functions. It can be used to identify a system unit that is in need of service, and it can also be used to reset the BMC settings.

When functioning as a BMC reset switch, JUIDB1 will trigger a cold reboot when you press and hold the switch for six seconds. It will also restore the BMC to the manufacturer's default when you press and hold the switch for 12 seconds.

When functioning as a UID LED switch, JUIDB1 will turn both rear UID LED (LED4) and front UID LED (Pin 7/Pin 8 of JF1) on and off when you press the switch on/off.

To achieve these dual purposes, the UID LED/BMC Reset switch works in conjunction with the BMC Heartbeat LED (BMC LED) and front/rear UID LEDs. Please note that UID can also be triggered via BMC on the motherboard. For more details on the UID LEDs and BMC LEDs, refer to the tables on next page. Also, refer to the BMC User's Guide posted on our website at <http://www.supermicro.com> for more information on BMC.

UID/BMC Reset Switch (JUIDB1) Features & Settings					
When Used as a UID LED Switch			When Used as a BMC Reset Switch		
Rear UID LED (LED4) & Front UID LED (JF1: Pins 7 & 8)			BMC Heartbeat LED (LEDBMC)		
Rear UID LED	LED4	Blue: Unit identified	BMC Heartbeat LED	LEDBMC	Green Blinking: BMC Normal
Front UID LED	Pins 7 & 8 (JF1)	Blue: Unit identified	BMC Reset: Press & hold the switch (JUIDB1) 6 seconds	LEDBMC: Solid green: during reboot Triggering a cold reboot; LED: solid green on during cold reboot	
Press the switch (JUIDB1) to turn on and off both rear and front UID LED indicators.			BMC Reset: Press & hold the switch (JUIDB1) 12 seconds	LEDBMC: Solid green: during BMC reset BMC: Reset to the manufacturer's default; LED solid on during BMC Reset	

UID/BMC Reset Switch (JUIDB1) Pin Definitions	
Pin#	Definition
1	Ground
2	Ground
3	Button In
4	Button In

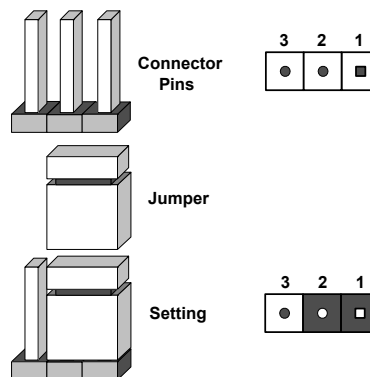
4.4 Jumpers

How Jumpers Work

To modify the operation of the motherboard, jumpers can be used to choose between optional settings. Jumpers create shorts between two pins to change the function of the connector. Pin 1 is identified with a square solder pad on the printed circuit board. See the diagram below for an example of jumping pins 1 and 2. Refer to the motherboard layout page for jumper locations.

Note 1: On two-pin jumpers, "Closed" means the jumper is on and "Open" means the jumper is off the pins.

Note 2: Unplug the power cord from all power supplies before adjusting jumper settings.



CMOS Clear

JBT1 and JCMOS are used to clear CMOS, which will also clear any passwords. Instead of pins, the JBT1 jumper consists of contact pads to prevent accidentally clearing the contents of CMOS.

To Clear CMOS

1. First power down the system and unplug the power cord(s).
2. Remove the cover of the chassis to access the motherboard and remove the battery from the motherboard.
3. To clear CMOS via JBT1: short the CMOS pads with a metal object such as a small screwdriver for at least four seconds. Then remove the screwdriver (or shorting device). To clear CMOS via JCMOS: close pins 2 and 3 of JCMOS. Then remove the jumper.
4. Replace the cover, reconnect the power cord(s), and power on the system.

Note: Clearing CMOS will also clear all passwords.



JBT1 contact pads

LAN Port Enable/Disable

JPL1 and JPL2 allow you to enable the onboard LAN ports (LAN1 and LAN2). The default setting is pins 1-2 to enable the connections. Refer to the table below for jumper settings.

LAN1/LAN2 Enable/Disable Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Enabled
Pins 2-3	Disabled

ME Manufacturing Mode

JPME2 is used for ME Firmware Recovery mode, which will limit system resource for essential function use only without putting restrictions on power use. In the single operation mode, online upgrade will be available via Recovery mode. Refer to the table below for jumper settings.

ME Recovery Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Normal (Default)
Pins 2-3	ME Manufacturing Mode

HD Audio Enable

JPAC1 allows you to enable or disable the onboard high definition audio support. The default position is on pins 1-2 to enable onboard audio connections. Refer to the table below for jumper settings.

Audio Enable/Disable Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Enabled (Default)
Pins 2-3	Disabled

Watchdog

Watchdog (JWD1) is a system monitor that can reboot the system when a software application hangs. Close pins 1-2 to reset the system if an application hangs. Close pins 2-3 to generate a non-maskable interrupt (NMI) signal for the application that hangs. Refer to the table below for jumper settings. For this function to work properly, please also enable the Watchdog setting in the BIOS.

Watchdog Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Reset
Pins 2-3	NMI
Open	Disabled

USB (USB8/9) Wake-Up

JPU8B1 allows you to enable or disable the USB8/9 power in S5 standby mode. The default is on pins 1-2 to enable USB8/9 power in S5 standby mode. Refer to the table below for jumper settings.

USB 8/9 Standby Power Enable/Disable Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Enabled (Default)
Pins 2-3	Disable

4.5 LED Indicators

LAN1/LAN2 LEDs

The LED on the left indicates the speed of the connection, and the LED on the right indicates activity. Refer to the tables below for more information.



LAN1/2 Link LED (Left) LED State	
LED Color	Definition
Green	10 Gbps
Yellow/Amber	1 Gbps

LAN1/2 Activity LED (Right) LED State		
Color	Status	Definition
Green	Flashing	Active

Onboard Power LED

The Onboard Power LED is located at LED1 on the motherboard. When this LED is on, the system is on. Be sure to turn off the system and unplug the power cord before removing or installing any component. Refer to the table below for more information.

Onboard Power LED Indicator	
LED Color	Definition
Off	System Off (power cable not connected)
Green	System On

M.2 LEDs

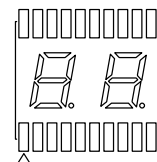
Four M.2 LEDs are located at LED3, LED5, LED6, and LED7 on the motherboard. When the M.2 LED is blinking, M.2 is functioning normally. Refer to the table below for more information.

M.2 LED State	
LED Color	Definition
Green: Blinking	Device Working

Status Code LED

LED8 is an alphanumeric display with two LED digits to provide the status or POST code when the motherboard is powered on. Please download the following AMI publication for a complete list of POST codes:

https://www.supermicro.com/manuals/other/AMI_AptioV_BIOS_POST_Codes_for_SM_Motherboards.pdf



Chapter 5

Software

5.1 Driver Installation

The Supermicro website that contains drivers and utilities for your system is at <https://www.supermicro.com/wdl/driver>. Some of these must be installed, such as the chipset driver.

After accessing the website, go into the CDR_Images (in the parent directory of the above link) and locate the ISO file for your motherboard. Download this file to a USB flash or media drive. (You may also use a utility to extract the ISO file if preferred.)

Another option is to go to the Supermicro website at <http://www.supermicro.com/products/>. Find the product page for your motherboard, and download the latest drivers and utilities. Insert the flash drive or disk and the screenshot shown below should appear.

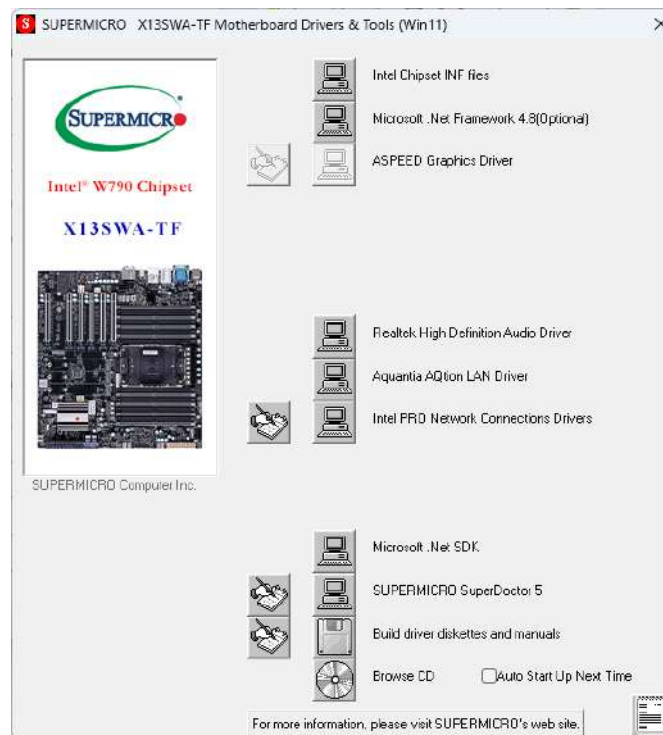


Figure 5-1. Driver & Tool Installation Screen

Note: Click the icons showing a hand writing on paper to view the readme files for each item. Click the computer icons to the right of these items to install each item (from top to the bottom) one at a time. **After installing each item, you must re-boot the system before moving on to the next item on the list.** The bottom icon with a CD on it allows you to view the entire contents.

5.2 SuperDoctor® 5

The Supermicro SuperDoctor 5 is a program that functions in a command-line or web-based interface for Windows and Linux operating systems. The program monitors such system health information as CPU temperature, system voltages, system power consumption, fan speed, and provides alerts via email or Simple Network Management Protocol (SNMP).

SuperDoctor 5 comes in local and remote management versions and can be used with Nagios to maximize your system monitoring needs. With SuperDoctor 5 Management Server (SSM Server), you can remotely control power on/off and reset chassis intrusion for multiple systems with SuperDoctor 5. SuperDoctor 5 Management Server monitors HTTP, FTP, and SMTP services to optimize the efficiency of your operation.

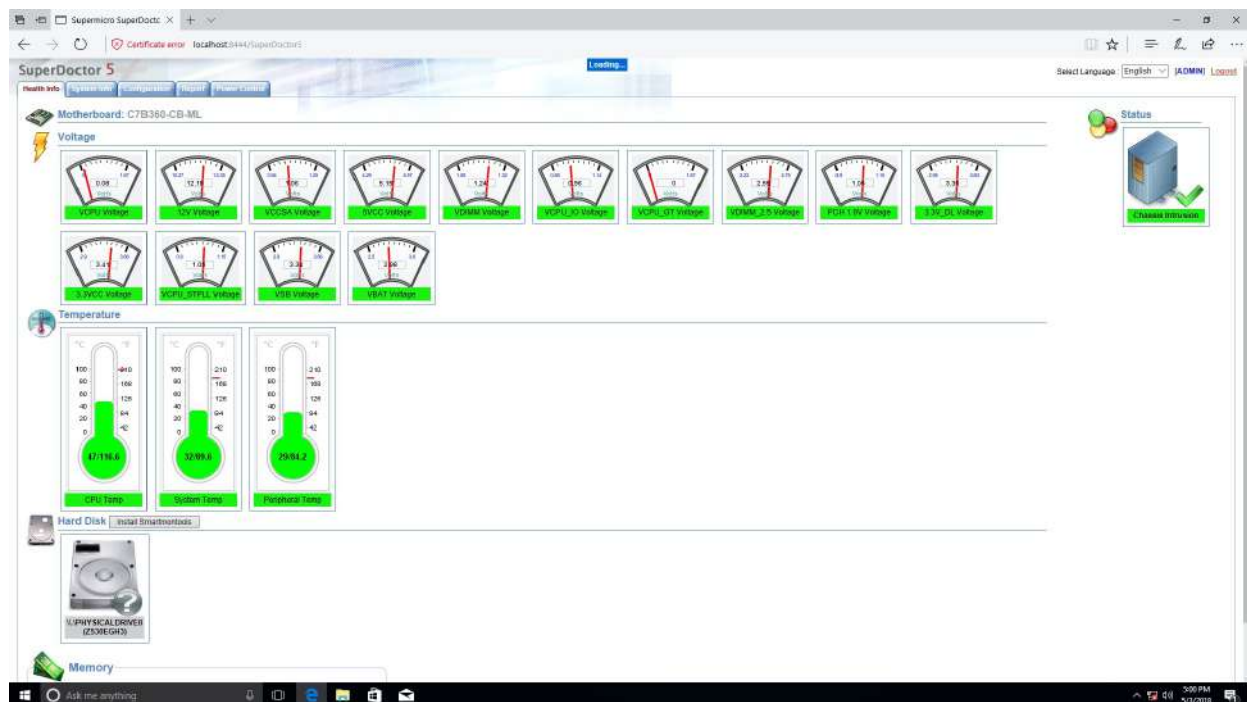


Figure 5-2. SuperDoctor 5 Interface Display Screen (Health Information)

5.3 IPMI

The X13SWA-TF motherboard supports the Intelligent Platform Management Interface (IPMI). IPMI is used to provide remote access, monitoring and management. There are several BIOS settings that are related to IPMI.

For general documentation and information on IPMI, please visit our website at:

<http://www.supermicro.com/products/nfo/IPMI.cfm>.

5.4 Logging into the Baseboard Management (BMC) Controller

Supermicro ships standard products with a unique password for the BMC ADMIN user. This password can be found on a label on the motherboard.

When logging in to the BMC for the first time, please use the unique password provided by Supermicro to log in as an administrator. After logging in, you can change the administrator password to protect your security. When logging in as an administrator, you can also create a user account and set the password of your choice for subsequent logins.

For more information regarding BMC passwords, please visit our website at <http://www.supermicro.com/bmcpassword>.



Figure 5-3. BMC Password Label

Chapter 6

Troubleshooting and Support

6.1 Information Resources

Website

A great deal of information is available on the Supermicro website, www.supermicro.com.

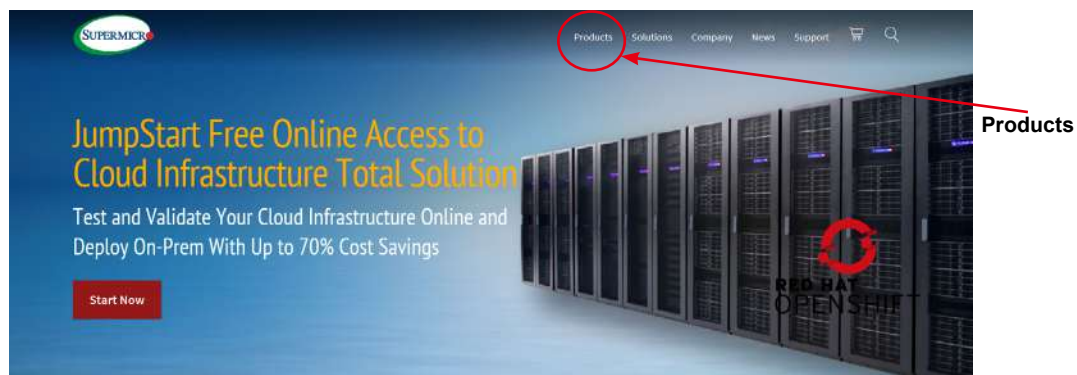


Figure 6-1. Supermicro Website

- Specifications for workstations and other hardware are available by clicking on Products.
- The Support option offers downloads (manuals, BIOS/BMC, drivers, etc.), FAQs, RMA, warranty, and other service extensions.

Direct Links for the SYS-551A-T System

[SYS-551A-T specifications page](#)

[X13SWA-TF motherboard page](#) for links to the Quick Reference Guide, User Manual, validated storage drives, etc.

Direct Links for General Support and Information

[Frequently Asked Questions](#)

[Add-on card descriptions](#)

[TPM User Guide](#)

General Memory Configuration Guide: [X13](#)

[BMC Users Guide](#)

Direct Links (continued)

[SuperDoctor5 Large Deployment Guide](#)

For validated memory, see our [Product Resources](#) page

[Product Matrices](#) page for links to tables summarizing specs for systems, motherboards, power supplies, riser cards, add-on cards, etc.

[Security Center](#) for recent security notices

[Supermicro Phone and Addresses](#)

6.2 Baseboard Management Controller (BMC)

The system supports the Baseboard Management Controller (BMC). BMC is used to provide remote access, monitoring, and management. There are several BIOS settings that are related to BMC.

For general documentation and information on BMC, please visit our website at:

<https://www.supermicro.com/en/solutions/management-software/bmc-resources>.

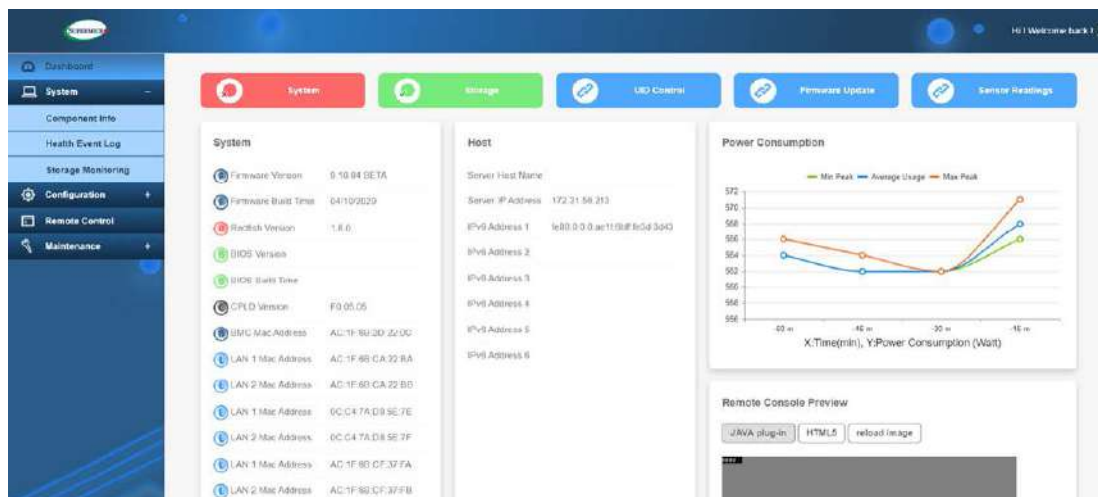


Figure 6-2. BMC Sample

6.3 Troubleshooting Procedures

Use the following procedures to troubleshoot your system. If you have followed all of the procedures below and still need assistance, refer to the 'Technical Support Procedures' or 'Returning Merchandise for Service' section(s) in this chapter. Always disconnect the AC power cord before adding, changing or installing any non hot-swap hardware components.

Before Power On

1. Make sure that there are no short circuits between the motherboard and chassis.
2. Disconnect all ribbon/wire cables from the motherboard, including those for the keyboard and mouse.
3. Remove all add-on cards.
4. Install the CPU (making sure it is fully seated) and connect the front panel connectors to the motherboard.

No Power

1. Make sure that there are no short circuits between the motherboard and the chassis.
2. Make sure that the ATX power connectors are properly connected.
3. Check that the 115V/230V switch, if available, on the power supply is properly set.
4. Turn the power switch on and off to test the system, if applicable.
5. The battery on your motherboard may be old. Check to verify that it still supplies approximately 3VDC. If it does not, replace it with a new one.

No Video

1. If the power is on, but you have no video, remove all add-on cards and cables.
2. Remove all memory modules and turn on the system (if the alarm is on, check the specs of memory modules, reset the memory, or try a different one).

System Boot Failure

If the system does not display Power-On-Self-Test (POST) or does not respond after the power is turned on, check the following:

1. Check for any error beep from the motherboard speaker.
 - If there is no error beep, try to turn on the system without DIMM modules installed. If there is still no error beep, replace the motherboard.
 - If there are error beeps, clear the CMOS settings by unplugging the power cord and contacting both pads on the CMOS clear jumper (JBT1). Refer to Clear CMOS in Chapter 2.
2. Remove all components from the motherboard, especially the DIMM modules. Make sure that system power is on and that memory error beeps are activated.
3. Turn on the system with only one DIMM module installed. If the system boots, check for bad DIMM modules or slots by following the Memory Errors Troubleshooting procedure in this chapter.

Memory Errors

When a no-memory beep code is issued by the system, check the following:

1. Make sure that the memory modules are compatible with the system and are properly installed. See Chapter 2 for installation instructions. (For memory compatibility, refer to the "Tested Memory List" link on the motherboard's product page to see a list of supported memory.)
2. Check if different speeds of DIMMs have been installed. It is strongly recommended that you use the same memory type and speed for all DIMM modules in the system.
3. Make sure that you are using the correct type of ECC DDR4 modules recommended by the manufacturer.
4. Check for bad DIMM modules or slots by swapping a single module among all memory slots and check the results.

Losing the System Setup Configuration

1. Make sure that you are using a high-quality power supply. A poor-quality power supply may cause the system to lose the CMOS setup information. Refer to Chapter 1 for details on recommended power supplies.
2. The battery on your motherboard may be old. Check to verify that it still supplies approximately 3VDC. If it does not, replace it with a new one.

When the System Becomes Unstable

A. If the system becomes unstable during or after OS installation, check the following:

1. CPU/BIOS support: Make sure that your CPU is supported and that you have the latest BIOS installed in your system.
2. Memory support: Make sure that the memory modules are supported by testing the modules using memtest86 or a similar utility.

Note: Click on the "Tested Memory List" link on the motherboard's product page to see a list of supported memory.

3. HDD support: Make sure that all hard disk drives (HDDs) work properly. Replace the bad HDDs with good ones.
4. System cooling: Check the system cooling to make sure that all heatsink fans and CPU/system fans, etc., work properly. Check the hardware monitoring settings in the IPMI to make sure that the CPU and system temperatures are within the normal range. Also check the front panel Overheat LED and make sure that it is not on.
5. Adequate power supply: Make sure that the power supply provides adequate power to the system. Make sure that all power connectors are connected. Please refer to our website for more information on the minimum power requirements.
6. Proper software support: Make sure that the correct drivers are used.

B. If the system becomes unstable before or during OS installation, check the following:

1. Source of installation: Make sure that the devices used for installation are working properly, including boot devices such as USB flash or media drives.
2. Cable connection: Check to make sure that all cables are connected and working properly.
3. Use the minimum configuration for troubleshooting: Remove all unnecessary components (starting with add-on cards first), and use the minimum configuration (but with the CPU and a memory module installed) to identify the trouble areas. Refer to the steps listed in Section A above for proper troubleshooting procedures.
4. Identify bad components by isolating them: If necessary, remove a component in question from the chassis, and test it in isolation to make sure that it works properly. Replace a bad component with a good one.
5. Check and change one component at a time instead of changing several items at the same time. This will help isolate and identify the problem.

6. To find out if a component is good, swap this component with a new one to see if the system will work properly. If so, then the old component is bad. You can also install the component in question in another system. If the new system works, the component is good and the old system has problems.

6.4 Technical Support Procedures

Before contacting Technical Support, please take the following steps. Also, please note that as a motherboard manufacturer, Supermicro also sells motherboards through its channels, so it is best to first check with your distributor or reseller for troubleshooting services. They should know of any possible problems with the specific system configuration that was sold to you.

1. Please go through the Troubleshooting Procedures and Frequently Asked Questions (FAQ) sections in this chapter or see the FAQs on our website (<http://www.supermicro.com/FAQ/index.php>) before contacting Technical Support.
2. BIOS upgrades can be downloaded from our website (http://www.supermicro.com/ResourceApps/BIOS_IPMI_Intel.html).
3. If you still cannot resolve the problem, include the following information when contacting Supermicro for technical support:
 - Motherboard model and PCB revision number
 - BIOS release date/version (This can be seen on the initial display when your system first boots up.)
 - System configuration
4. For immediate assistance, please have your account number ready when placing a call to our Technical Support department. We can be reached by email at support@supermicro.com.
5. For worldwide services and support, please visit our website at [Worldwide Services & Support | Supermicro](#).

6.5 Frequently Asked Questions

Question: What type of memory does my motherboard support?

Answer: For Intel Xeon W-3400 series processors (112L), this motherboard supports up to 1 TB of RDIMM and 4 TB of 3DS RDIMM with speeds of up to 4800 MT/s (1DPC) and 4400 MT/s (2DPC) in 16 ECC DDR5 (288-pin) SMD DIMM slots. To enhance memory performance, do not mix memory modules of different speeds and sizes. Please follow all memory installation instructions given on [Section 3.4](#).

Question: How do I update my BIOS?

Answer: It is recommended that you do not upgrade your BIOS if you are not experiencing any problems with your system. Updated BIOS files are located on our website at http://www.supermicro.com/ResourceApps/BIOS_IPMI_Intel.html. Please check our BIOS warning message and the information on how to update your BIOS on our website. Select your motherboard model and download the BIOS file to your computer. Also, check the current BIOS revision to make sure that it is newer than your BIOS before downloading.

Note: The SPI BIOS chip used on this motherboard cannot be removed. Send your motherboard back to our RMA Department at Supermicro for repair. For BIOS Recovery instructions, please refer to the AMI BIOS Recovery Instructions posted at <http://www.supermicro.com/support/manuals/>.

To update your BIOS under UEFI Shell

Note: We do not recommend that you update your BIOS if you are not experiencing a BIOS-related problem. If you need to update your BIOS, please follow the steps below to properly update your BIOS under UEFI Shell.

1. Download and save the BIOS update package to your computer.
2. Extract the files from the UEFI folder of the BIOS package to a USB flash drive.

Note: The USB flash drive doesn't have to be bootable; however, it has to be formatted with the FAT/FAT32 file system.

3. Insert the USB flash drive into a USB port, boot to the Build-In UEFI Shell, and enter the following commands to start the BIOS update:

```
Shell> fs0:
fs0:\> cd UEFI
fs0:\UEFI> flash.nsh BIOSname#.###
```

4. The FLASH.NSH script will compare the Flash Descriptor Table (FDT) code in the new BIOS with the existing one in the motherboard:

a. If a different FDT is found

- A new file, STARTUP.NSH, will be created, and the system will automatically reboot in 10 seconds without you pressing any key. BIOS will be updated after the system reboots.
- You can also press <Y> to force an immediate system reboot to shorten the process. During system reboot, press the <F11> key to invoke the boot menu and boot into the build-in UEFI Shell. Your BIOS will be updated automatically.

b. If the FDT is the same

- BIOS update will be immediately performed without a system reboot initiated.

Warning: Do not shut down or reset the system while updating the BIOS to prevent possible boot failure!

5. Perform an A/C power cycle after the message indicating the BIOS update has completed.
6. Go to the BIOS setup utility, and restore the BIOS settings.

6.6 Battery Removal and Installation

Battery Removal

To remove the onboard battery, follow the steps below:

1. Power off your system and unplug your power cable.
2. Locate the onboard battery as shown below.
3. Use a tool such as a pen or a small screwdriver, push the battery lock outwards to unlock it. Once unlocked, the battery will pop out from the holder.
4. Remove the battery.

Proper Battery Disposal

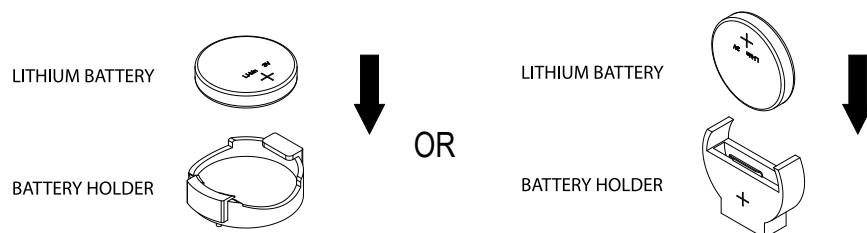
Warning: Please handle used batteries carefully. Do not damage the battery in any way; a damaged battery may release hazardous materials into the environment. Do not discard a used battery in the garbage or a public landfill. Please comply with the regulations set up by your local hazardous waste management agency to dispose of your used battery properly.

Battery Installation

To install an onboard battery, follow the steps below:

1. Power off your system and unplug your power cable.
2. Locate the onboard battery as shown below
3. Identify the battery's polarity. The positive (+) side should be facing up.
4. Insert the battery into the battery holder and push it down until you hear a click to ensure that the battery is securely locked.

Warning: When replacing a battery, be sure to only replace it with the same type.



6.7 Returning Merchandise for Service

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service will be rendered. You can obtain service by calling your vendor for a Returned Merchandise Authorization (RMA) number. When returning the motherboard to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton, and the shipping package is mailed prepaid or hand-carried. Shipping and handling charges will be applied for all orders that must be mailed when service is complete. For faster service, you can also request a RMA authorization online (<http://www.supermicro.com/RmaForm/>).

This warranty only covers normal consumer use and does not cover damages incurred in shipping or from failure due to the alternation, misuse, abuse or improper maintenance of products.

During the warranty period, contact your distributor first for any product problems.

6.8 Feedback

Supermicro values your feedback as we strive to improve our customer experience in all facets of our business. Please email us at techwriterteam@supermicro.com to provide feedback on our manuals.

6.8 Contacting Supermicro

Headquarters

Address: Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131 U.S.A.

Tel: +1 (408) 503-8000

Fax: +1 (408) 503-8008

Email: marketing@supermicro.com (General Information)
Sales-USA@supermicro.com (Sales Inquiries)
Government_Sales-USA@supermicro.com (Gov. Sales Inquiries)
support@supermicro.com (Technical Support)
RMA@supermicro.com (RMA Support)
Webmaster@supermicro.com (Webmaster)

Website: www.supermicro.com

Europe

Address: Super Micro Computer B.V.
Het Sterrenbeeld 28, 5215 ML
's-Hertogenbosch, The Netherlands

Tel: +31 (0) 73-6400390

Fax: +31 (0) 73-6416525

Email: Sales_Europe@supermicro.com (Sales Inquiries)
Support_Europe@supermicro.com (Technical Support)
RMA_Europe@supermicro.com (RMA Support)

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Address: Super Micro Computer, Inc.
3F, No. 150, Jian 1st Rd.
Zhonghe Dist., New Taipei City 235
Taiwan (R.O.C)

Tel: +886-(2) 8226-3990

Fax: +886-(2) 8226-3992

Email: Sales-Asia@supermicro.com.tw (Sales Inquiries)
Support@supermicro.com.tw (Technical Support)
RMA@supermicro.com.tw (RMA Support)

Website: www.supermicro.com.tw

Appendix A

Standardized Warning Statements for AC Systems

About Standardized Warning Statements

The following statements are industry standard warnings, provided to warn the user of situations which have the potential for bodily injury. Should you have questions or experience difficulty, contact Supermicro's Technical Support department for assistance. Only certified technicians should attempt to install or configure components.

Read this appendix in its entirety before installing or configuring components in the Supermicro chassis.

These warnings may also be found on our website at http://www.supermicro.com/about/policies/safety_information.cfm.

Warning Definition



Warning! This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

警告の定義

この警告サインは危険を意味します。

人身事故につながる可能性がありますので、いずれの機器でも動作させる前に、電気回路に含まれる危険性に注意して、標準的な事故防止策に精通して下さい。

此警告符号代表危險。

您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾的声明号码找到此设备的安全性警告说明的翻译文本。

此警告符號代表危險。

您正處於可能身體可能會受損傷的工作環境中。在您使用任何設備之前，請注意觸電的危險，並且要熟悉預防事故發生的標準工作程序。請依照每一注意事項後的號碼找到相關的翻譯說明內容。

Warnung

WICHTIGE SICHERHEITSHINWEISE

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS.

תקנון הזהרות אזהרה

הזהרות הבאות הן אזהרות על פי תקני התעשייה, על מנת להזהיר את המשתמש מפני חבלה פיזית אפשרית. במידה ויש שאלות או היתקלות בבעיה כלשהי, יש ליצור קשר עם מחלקת תמיכה טכנית של סופרמיקרו. טכנאים מוסמכים בלבד רשאים להתקין או להגדיר את הרכיבים. יש לקרוא את הנספח במלואו לפני התקנת או הגדרת הרכיבים במארזי סופרמיקרו.

اَكْ ف حالة وُكِي اَي تتسبب ف اصابة جسدهُ هذا الزهر عُ خطر! تحذُرُ .
 قبل اَي تعول على اَي هعدات، كي على علن بالوخاظر ال اُجوة عي الذوائر
 الكهزبائِة
 وكي على درا ة بالووارسات النقاىِة لو عُ وقع اَي حادث
 استخدم رقن الب اِى الو صُص ف ها ة كل تحذُر للعشر تزجوتها

안전을 위한 주의사항

경고!

이 경고 기호는 위험이 있음을 알려 줍니다. 작업자의 신체에 부상을 야기 할 수 있는
 상태에 있게 됩니다. 모든 장비에 대한 작업을 수행하기 전에 전기회로와 관련된
 위험요소들을 확인하시고 사전에 사고를 방지할 수 있도록 표준 작업절차를 준수해 주시기
 바랍니다.

해당 번역문을 찾기 위해 각 경고의 마지막 부분에 제공된 경고문 번호를 참조하십시오

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

Dit waarschuwings symbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij een elektrische installatie betrokken risico's en dient u op de hoogte te zijn van de standaard procedures om ongelukken te voorkomen. Gebruik de nummers aan het eind van elke waarschuwing om deze te herleiden naar de desbetreffende locatie.

BEWAAR DEZE INSTRUCTIES

Installation Instructions



Warning! Read the installation instructions before connecting the system to the power source.

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前,请先阅读安装说明。

警告

將系統與電源連接前，請先閱讀安裝說明。

Warnung

Vor dem Anschließen des Systems an die Stromquelle die Installationsanweisungen lesen.

¡Advertencia!

Lea las instrucciones de instalación antes de conectar el sistema a la red de alimentación.

Attention

Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقر إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

Waarschuwing

Raadpleeg de installatie-instructies voordat u het systeem op de voedingsbron aansluit.

Circuit Breaker

Warning! This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 250 V, 20 A.

サーキット・ブレーカー

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

警告

此产品的短路(过载电流)保护由建筑物的供电系统提供,确保短路保护设备的额定电流不大于250V,20A。

警告

此產品的短路(過載電流)保護由建築物的供電系統提供,確保短路保護設備的額定電流不大於250V,20A。

Warnung

Dieses Produkt ist darauf angewiesen, dass im Gebäude ein Kurzschluss- bzw. Überstromschutz installiert ist. Stellen Sie sicher, dass der Nennwert der Schutzvorrichtung nicht mehr als: 250 V, 20 A beträgt.

¡Advertencia!

Este equipo utiliza el sistema de protección contra cortocircuitos (o sobrecorrientes) del edificio. Asegúrese de que el dispositivo de protección no sea superior a: 250 V, 20 A.

Attention

Pour ce qui est de la protection contre les courts-circuits (surtension), ce produit dépend de l'installation électrique du local. Vérifiez que le courant nominal du dispositif de protection n'est pas supérieur à :250 V, 20 A.

מוצר זה מסתמך על הגנה המותקנת במבנים למניעת קצר חשמלי. יש לוודא כי המכשיר המגן מפני הקצר החשמלי הוא לא יותר מ-250VDC, 20A

هذا المنتج يعتمد على معدات الحماية مه الدوائر القصيرة التي تم تثبيتها في المبنى
تأكد من أن تقييم الجهاز الوقائي ليس أكثر من : 20A, 250V

경고!

이 제품은 전원의 단락(과전류)방지에 대해서 전적으로 건물의 관련 설비에 의존합니다. 보호장치의 정격이 반드시 250V(볼트), 20A(암페어)를 초과하지 않도록 해야 합니다.

Waarschuwing

Dit product is afhankelijk van de kortsluitbeveiliging (overspanning) van uw elektrische installatie. Controleer of het beveiligde apparaat niet groter gedimensioneerd is dan 250V, 20A.

Power Disconnection Warning



Warning! The system must be disconnected from all sources of power and the power cord removed from the power supply module(s) before accessing the chassis interior to install or remove system components (except for hot-swap components).



電源切断の警告

システムコンポーネントの取り付けまたは取り外しのために、シャーシー内部にアクセスするには、システムの電源はすべてのソースから切断され、電源コードは電源モジュールから取り外す必要があります。

警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

警告

在您打開機殼安裝或移除內部元件前，必須將系統完全斷電，並移除電源線。

Warnung

Das System muss von allen Quellen der Energie und vom Netzanschlusskabel getrennt sein, das von den Spg.Versorgungsteilmodulen entfernt wird, bevor es auf den Chassisinnenraum zurückgreift, um Systemsbestandteile anzubringen oder zu entfernen.

¡Advertencia!

El sistema debe ser disconnected de todas las fuentes de energía y del cable eléctrico quitado de los módulos de fuente de alimentación antes de tener acceso el interior del chasis para instalar o para quitar componentes de sistema.

Attention

Le système doit être débranché de toutes les sources de puissance ainsi que de son cordon d'alimentation secteur avant d'accéder à l'intérieur du chassis pour installer ou enlever des composants de système.

אזהרה מפני ניתוק חשמלי

אזהרה!

יש לנתק את המערכת מכל מקורות החשמל ויש להסיר את כבל החשמל מהספק לפני גישה לחלק הפנימי של המארז לצורך התקנת או הסרת רכיבים.

يجب فصل انظاؤ من جميع مصادر انطاقت وإزانت سهك انكهرباء من وحدة امداد انطاقت قيم

انصل إلى انمناطق انداخييت نههيككم نتبيج أو إزانت مكنناث الجهاز

경고!

시스템에 부품들을 장착하거나 제거하기 위해서는 새시 내부에 접근하기 전에 반드시 전원 공급장치로부터 연결되어있는 모든 전원과 전기코드를 분리해주어야 합니다.

Waarschuwing

Voordat u toegang neemt tot het binnenwerk van de behuizing voor het installeren of verwijderen van systeem onderdelen, dient u alle spanningsbronnen en alle stroomkabels aangesloten op de voeding(en) van de behuizing te verwijderen

Equipment Installation



Warning! Only authorized personnel and qualified service persons should be allowed to install, replace, or service this equipment.

機器の設置

トレーニングを受け認定された人だけがこの装置の設置、交換、またはサービスを許可されています。

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

只有經過受訓且具資格人員才可安裝、更換與維修此設備。

Warnung

Nur autorisiertes Personal und qualifizierte Servicetechniker dürfen dieses Gerät installieren, austauschen oder warten..

¡Advertencia!

Sólo el personal autorizado y el personal de servicio calificado deben poder instalar, reemplazar o dar servicio a este equipo.

Attention

Seul le personnel autorisé et le personnel de maintenance qualifié doivent être autorisés à installer, remplacer ou entretenir cet équipement..

אזהרה!

יש לאפשר רק צוות מורשה ואנשי שירות מוסמכים להתקין, להחליף או לטפל בציוד זה.

ينبغي السماح فقط للموظفين المعتمدين وأفراد الخدمة المؤهلين بتركيب هذا الجهاز أو استبداله أو صيانته.

경고!

승인된 직원과 자격을 갖춘 서비스 담당자만이 이 장비를 설치, 교체 또는 서비스할 수 있습니다.

Waarschuwing

Alleen geautoriseerd personeel en gekwalificeerd onderhoudspersoneel mag deze apparatuur installeren, vervangen of onderhouden..

Restricted Area

Warning! This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security. (This warning does not apply to workstations).

アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

アクセス制限区域は、特別なツール、鍵と錠前、その他のセキュリティの手段を用いてのみ出入りが可能です。

警告

此部件应安装在限制进出的场所，限制进出的场所指只能通过使用特殊工具、锁和钥匙或其它安全手段进出的场所。

警告

此裝置僅限安裝於進出管制區域，進出管制區域係指僅能以特殊工具、鎖頭及鑰匙或其他安全方式才能進入的區域。

Warnung

Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Der Zutritt zu derartigen Bereichen ist nur mit einem Spezialwerkzeug, Schloss und Schlüssel oder einer sonstigen Sicherheitsvorkehrung möglich.

¡Advertencia!

Esta unidad ha sido diseñada para instalación en áreas de acceso restringido. Sólo puede obtenerse acceso a una de estas áreas mediante la utilización de una herramienta especial, cerradura con llave u otro medio de seguridad.

Attention

Cet appareil doit être installé dans des zones d'accès réservés. L'accès à une zone d'accès réservé n'est possible qu'en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité.

אזור עם גישה מוגבלת

אזהרה!

יש להתקין את היחידה באזורים שיש בהם הגבלת גישה. הגישה ניתנת בעזרת 'מפתח, מנעול וכד' (כלי אבטחה בלבד).

تخصيص هذه انحدزة نترك بُها ف مناطق محظورة تم .
ممكن انصلل إن منطقت محظورة فقط من خلال استخداو أداة خاصت
أو أ وس هُت أخري نلاأمما ققم ومفتاح

경고!

이 장치는 접근이 제한된 구역에 설치하도록 되어있습니다. 특수도구, 잠금 장치 및 키, 또는 기타 보안 수단을 통해서만 접근 제한 구역에 들어갈 수 있습니다.

Waarschuwing

Dit apparaat is bedoeld voor installatie in gebieden met een beperkte toegang. Toegang tot dergelijke gebieden kunnen alleen verkregen worden door gebruik te maken van speciaal gereedschap, slot en sleutel of andere veiligheidsmaatregelen.

Battery Handling



Warning! There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions

電池の取り扱い

電池交換が正しく行われなかった場合、破裂の危険性があります。交換する電池はメーカーが推奨する型、または同等のものを使用下さい。使用済電池は製造元の指示に従って処分して下さい。

警告

電池更換不當會有爆炸危險。請只使用同類電池或制造商推荐的功能相当的電池更換原有電池。請按制造商的說明處理廢舊電池。

警告

電池更換不當會有爆炸危險。請使用製造商建議之相同或功能相當的電池更換原有電池。請按照製造商的說明指示處理廢棄舊電池。

Warnung

Bei Einsetzen einer falschen Batterie besteht Explosionsgefahr. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

Attention

Danger d'explosion si la pile n'est pas remplacée correctement. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

¡Advertencia!

Existe peligro de explosión si la batería se reemplaza de manera incorrecta. Reemplazar la batería exclusivamente con el mismo tipo o el equivalente recomendado por el fabricante. Desechar las baterías gastadas según las instrucciones del fabricante.

אזהרה!

קיימת סכנת פיצוץ של הסוללה במידה והוחלפה בדרך לא תקינה. יש להחליף את הסוללה בסוג התואם מחברת יצרן מומלצת. סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן.

هناك خطر من انفجار في حالة اسحبذال البطارية بطريقة غير صحيحة فعليل
 اسحبذال البطارية
 فقط بنفس النوع أو ما يعادلها مما أوصت به الشركة المصنعة
 جخلص من البطاريات المسحعملة وفقا لعمليات الشركة الصانعة

경고!

배터리가 올바르게 교체되지 않으면 폭발의 위험이 있습니다. 기존 배터리와 동일하거나 제조사에서 권장하는 동등한 종류의 배터리로만 교체해야 합니다. 제조사의 안내에 따라 사용된 배터리를 처리하여 주십시오.

Waarschuwing

Er is ontplofingsgevaar indien de batterij verkeerd vervangen wordt. Vervang de batterij slechts met hetzelfde of een equivalent type die door de fabrikant aanbevolen wordt. Gebruikte batterijen dienen overeenkomstig fabrieksvoorschriften afgevoerd te worden.

Redundant Power Supplies



Warning! This unit might have more than one power supply connection. All connections must be removed to de-energize the unit.

冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告

此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung

Dieses Gerät kann mehr als eine Stromzufuhr haben. Um sicherzustellen, dass der Einheit kein Strom zugeführt wird, müssen alle Verbindungen entfernt werden.

¡Advertencia!

Puede que esta unidad tenga más de una conexión para fuentes de alimentación. Para cortar por completo el suministro de energía, deben desconectarse todas las conexiones.

Attention

Cette unité peut avoir plus d'une connexion d'alimentation. Pour supprimer toute tension et tout courant électrique de l'unité, toutes les connexions d'alimentation doivent être débranchées.

אם קיים יותר מספק אחד

אזהרה!

ליחידה יש יותר מחיבור אחד של ספק. יש להסיר את כל החיבורים על מנת לרוקן את היחידה.

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة .

يجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

경고!

이 장치에는 한 개 이상의 전원 공급 단자가 연결되어 있을 수 있습니다. 이 장치에 전원을 차단하기 위해서는 모든 연결 단자를 제거해야만 합니다.

Waarschuwing

Deze eenheid kan meer dan één stroomtoevoeraansluiting bevatten. Alle aansluitingen dienen verwijderd te worden om het apparaat stroomloos te maken.

Backplane Voltage



Warning! Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing.

バックプレーンの電圧

システムの稼働中は危険な電圧または電力が、バックプレーン上にかかっています。

修理する際には注意ください。

警告

当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告

當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

Wenn das System in Betrieb ist, treten auf der Rückwandplatine gefährliche Spannungen oder Energien auf. Vorsicht bei der Wartung.

¡Advertencia!

Cuando el sistema está en funcionamiento, el voltaje del plano trasero es peligroso. Tenga cuidado cuando lo revise.

Attention

Lorsque le système est en fonctionnement, des tensions électriques circulent sur le fond de panier. Prendre des précautions lors de la maintenance.

מתח בפנל האחורי

אזהרה!

קיימת סכנת מתח בפנל האחורי בזמן תפעול המערכת. יש להיזהר במהלך העבודה.

هناك خطر من التيار الكهربائي أو الطاقة المبددة على اللوحة
عندما يكون النظام يعمل كه حذرا عند خدمة هذا الجهاز

경고!

시스템이 동작 중일 때 후면판 (Backplane)에는 위험한 전압이나 에너지가 발생 합니다.
서비스 작업 시 주의하십시오.

Waarschuwing

Een gevaarlijke spanning of energie is aanwezig op de backplane wanneer het systeem in gebruik is. Voorzichtigheid is geboden tijdens het onderhoud.

Comply with Local and National Electrical Codes



Warning! Installation of the equipment must comply with local and national electrical codes.

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

La instalacion del equipo debe cumplir con las normas de electricidad locales y nacionales.

Attention

L'équipement doit être installé conformément aux normes électriques nationales et locales.

תיאום חוקי החשמל הארצי

אזהרה!

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمثل للقوايه المحلية والطية المتعلقة
بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

Bij installatie van de apparatuur moet worden voldaan aan de lokale en nationale elektriciteitsvoorschriften.

Product Disposal



Warning! Ultimate disposal of this product should be handled according to all national laws and regulations.

製品の廃棄

この製品を廃棄処分する場合、国の関係する全ての法律・条例に従い処理する必要があります。

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

Die Entsorgung dieses Produkts sollte gemäß allen Bestimmungen und Gesetzen des Landes erfolgen.

¡Advertencia!

Al deshacerse por completo de este producto debe seguir todas las leyes y reglamentos nacionales.

Attention

La mise au rebut ou le recyclage de ce produit sont généralement soumis à des lois et/ou directives de respect de l'environnement. Renseignez-vous auprès de l'organisme compétent.

סילוק המוצר

אזהרה!

סילוק סופי של מוצר זה חייב להיות בהתאם להנחיות וחוקי המדינה.

التخلص النهائي من هذا المنتج ينبغي التعامل معه وفقا لجميع القوانين واللوائح الوطنية عند

경고!

이 제품은 해당 국가의 관련 법규 및 규정에 따라 폐기되어야 합니다.

Waarschuwing

De uiteindelijke verwijdering van dit product dient te geschieden in overeenstemming met alle nationale wetten en reglementen.

Fan Warning



Warning! Hazardous moving parts. Keep away from moving fan blades. The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

ファンの警告

警告!回転部品に注意。運転中は回転部(羽根)に触れないでください。シャーシから冷却ファン装置を取り外した際、ファンがまだ回転している可能性があります。ファンの開口部に、指、ドライバー、およびその他のものを近づけないで下さい。

警告!

警告! 危险的可移动性零件。请务必与转动的风扇叶片保持距离。当您从机架移除风扇装置，风扇可能仍在转动。小心不要将手指、螺丝起子和其他物品太靠近风扇

警告

危险的可移动性零件。请务必与转动的风扇叶片保持距离。当您从机架移除风扇装置，风扇可能仍在转动。小心不要将手指、螺丝起子和其他物品太靠近风扇。

Warnung

Gefährlich Bewegende Teile. Von den bewegenden Lüfterblätter fern halten. Die Lüfter drehen sich u. U. noch, wenn die Lüfterbaugruppe aus dem Chassis genommen wird. Halten Sie Finger, Schraubendreher und andere Gegenstände von den Öffnungen des Lüftergehäuses entfernt.

¡Advertencia!

Riesgo de piezas móviles. Mantener alejado de las aspas del ventilador. Los ventiladores podran dar vuelta cuando usted quite el montaje del ventilador del chasis. Mantenga los dedos, los destornilladores y todos los objetos lejos de las aberturas del ventilador

Attention

Pieces mobiles dangereuses. Se tenir a l'écart des lames du ventilateur Il est possible que les ventilateurs soient toujours en rotation lorsque vous retirerez le bloc ventilateur du châssis. Prenez garde à ce que doigts, tournevis et autres objets soient éloignés du logement du bloc ventilateur.

אזהרה!

חלקים נעים מסוכנים. התרחק מלהבי המאוורר בפעולה כאשר מסירים את חלקי המאוורר מהמארז, יתכן והמאווררים עדיין עובדים. יש להרחיק למרחק בטוח את האצבעות וכלי עבודה שונים מהפתחים בתוך המאוורר

تحذير! أجزاء متحركة خطيرة. ابتعد عن شفرات المروحة المتحركة. من الممكن أن المراوح لا تزال تدور عند إزالة كتلة المروحة من الهيكل يجب إبقاء الأصابع ومفكات البراغي وغيرها من الأشياء بعيدا عن الفتحات في كتلة المروحة

경고!

움직이는 위험한 부품. 회전하는 송풍 날개에 접근하지 마세요. 새시로부터 팬 조립품을 제거할 때 팬은 여전히 회전하고 있을 수 있습니다. 팬 조립품 외관의 열려있는 부분들로부터 손가락 및 스크류드라이버, 다른 물체들이 가까이 하지 않도록 배치해 주십시오.

Waarschuwing

Gevaarlijk bewegende onderdelen. Houd voldoende afstand tot de bewegende ventilatorbladen. Het is mogelijk dat de ventilator nog draait tijdens het verwijderen van het ventilatorsamenstel uit het chassis. Houd uw vingers, schroevendraaiers en eventuele andere voorwerpen uit de buurt van de openingen in de ventilatorbehuizing.

Power Cable and AC Adapter



Warning! When installing the product, use the provided or designated connection cables, power cables and AC adaptors. Using any other cables and adaptors could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL or CSA -certified cables (that have UL/CSA shown on the cord) for any other electrical devices than products designated by Supermicro only.

電源コードとACアダプター

製品を設置する場合、提供または指定および購入された接続ケーブル、電源コードとACアダプターを、該当する地域の条例や安全基準に適合するコードサイズやプラグと共に使用下さい。他のケーブルやアダプタを使用すると故障や火災の原因になることがあります。

電気用品安全法は、ULまたはCSA認定のケーブル(UL/CSAマークがコードに表記)を Supermicro が指定する製品以外に使用することを禁止しています。

警告

安装此产品时,请使用本身提供的或指定的或采购的连接线,电源线和电源适配器。包含遵照当地法规和安全要求的合规的电源线尺寸和插头。使用其它线材或适配器可能会引起故障或火灾。除了Supermicro所指定的产品,电气用品和材料安全法律规定禁止使用未经UL或CSA认证的线材。(线材上会显示UL/CSA符号)。

警告

安裝此產品時,請使用本身提供的或指定的或採購的連接線,電源線和電源適配器。包含遵照當地法規和安全要求的合規的電源線尺寸和插頭。使用其它線材或適配器可能會引起故障或火災。除了Supermicro所指定的產品,電氣用品和材料安全法律規定禁止使用未經UL或CSA認證的線材。(線材上會顯示UL/CSA符號)。

Warnung

Nutzen Sie beim Installieren des Produkts ausschließlich die von uns zur Verfügung gestellten Verbindungskabeln, Stromkabeln und/oder Adapter, die Ihre örtlichen Sicherheitsstandards einhalten. Der Gebrauch von anderen Kabeln und Adapter können Fehlfunktionen oder Feuer verursachen. Die Richtlinien untersagen das Nutzen von UL oder CAS zertifizierten Kabeln (mit UL/CSA gekennzeichnet), an Geräten oder Produkten die nicht mit Supermicro gekennzeichnet sind.

¡Advertencia!

Cuando instale el producto, utilice la conexión provista o designada o procure cables, Cables de alimentación y adaptadores de CA que cumplan con los códigos locales y los requisitos de seguridad, incluyendo el tamaño adecuado del cable y el enchufe. El uso de otros cables y adaptadores podría causar un mal funcionamiento o un incendio. La Ley de Seguridad de Aparatos Eléctricos y de Materiales prohíbe El uso de cables certificados por UL o CSA (que tienen el certificado UL / CSA en el código) para cualquier otros dispositivos eléctricos que los productos designados únicamente por Supermicro.

Attention

Lors de l'installation du produit, utilisez les cables de connection fournis ou désigné ou achetez des cables, cables de puissance et adaptateurs respectant les normes locales et les conditions de securite y compris les tailles de cables et les prises electriques appropriées. L'utilisation d'autres cables et adaptateurs peut provoquer un dysfonctionnement ou un incendie. Appareils électroménagers et la Loi sur la Sécurité Matériel interdit l'utilisation de câbles certifiés- UL ou CSA (qui ont UL ou CSA indiqué sur le code) pour tous les autres appareils électriques sauf les produits désignés par Supermicro seulement.

AC ימאתמו מילמשח מילבכ

!הרהזא

ךרוצל ומאתוה וא ושכרנ רשא AC מימאתמו מיקפס, מילבכב שמתשהל שי, רצומה תא מיניקתמ רשאכ לכב שומיש. עקתהו לבכה לש הנוכח הדימ ללוכ, תוימוקמה תוחיטבה תושירדל ומאתוה רשאו, הנקתהה למשחה ירישכמב שומישה יקוחל מאתהב. ילמשח רצק וא הלוקתל מורגל לולע, רחא גוסמ מאתמ וא לבכ לש דוק מהילע עיפומ רשאכ) UL-ב או CSA-ב -ב מיכמסומה מילבכב שמתשהל רוסיא מייק, תוחיטבה יקוחו דבלב Supermicro י"ע מאתוה רשא רצומב קר אלא, רחא ילמשח רצומ לכ רובע (UL/CSA)

תאלבאלא אארשב מץ וא ענדחמל וא ערפוטמל תאליסוולא מודחטסאב מץ, גתנמל בייקרת דנע כלז יפ אמב עילחמל עמאלסל תאבלטתמו נינאוץב מאזתלל עמ דדרתמל ראיטל תאלוחמו עיזאברמלל קיירח וא לטע יפ בבסטטי דץ ירזא תאלוחמו תאלבאלא יא מודחטסא. מילסל סבאלל ולסומל מץ ח CSA וא UL לבק נמ ענדחמל תאלבאלא מודחטסא תאדעמל עיזאברמלל עזחאלל עמאלסל נונאק רזחי Supermicro לבק נמ ענדחמל עיזאברמלל תאגתנמל ריזא ירזא תאדעמל יא עמ (UL/CSA) עמאלל למחתיטלל

전원 케이블 및 AC 어댑터

경고! 제품을 설치할 때 현지 코드 및 적절한 굵기의 코드와 플러그를 포함한 안전 요구 사항을 준수하여 제공되거나 지정된 연결 혹은 구매 케이블, 전원 케이블 및 AC 어댑터를 사용하십시오.

다른 케이블이나 어댑터를 사용하면 오작동이나 화재가 발생할 수 있습니다. 전기 용품 안전법은 UL 또는 CSA 인증 케이블 (코드에 UL / CSA가 표시된 케이블)을 Supermicro가 지정한 제품 이외의 전기 장치에 사용하는 것을 금지합니다.

Stroomkabel en AC-Adapter

Waarschuwing! Bij het aansluiten van het Product uitsluitend gebruik maken van de geleverde Kabels of een andere geschikte aan te schaffen Aansluitmethode, deze moet altijd voldoen aan de lokale voorschriften en veiligheidsnormen, inclusief de juiste kabeldikte en stekker. Het gebruik van niet geschikte Kabels en/of Adapters kan een storing of brand veroorzaken. Wetgeving voor Elektrische apparatuur en Materiaalveiligheid verbied het gebruik van UL of CSA -gecertificeerde Kabels (met UL/CSA in de code) voor elke andere toepassing dan de door Supermicro hiervoor beoogde Producten.

Appendix B

System Specifications

Processors

Supports a single Intel Xeon W-3400 Series processor (Socket E1, LGA4677), with up to 56 cores and a TDP of up to 350 W.

Note: 4th Gen Intel® Xeon® Scalable processors are not supported in this system.

Chipset

Intel PCH W790

BIOS

AMI BIOS

ACPI 3.0 or later, PCI firmware 4.0 support, BIOS rescue hot-key, SPI dual/quad speed support, Real Time Clock (RTC) wakeup, and SMBIOS 3.0 or later

Memory

For Intel Xeon W-3400 series processor (112L):

Supports up to 1 TB of RDIMM and 4 TB of 3DS RDIMM with speeds of up to 4800 MT/s (1DPC) and 4400 MT/s (2DPC) in 16 ECC DDR5 (288-pin) SMD DIMM slots.

Note: Memory speed and capacity support depends on the processor used in the system.

Storage Drives

Drive Bays:

Two 2.5" front drive bays

Four internal 3.5" drive bays

Two 5.25" external peripheral bays (support DVD or mobile rack for additional drives)

Onboard:

Eight SATA 3.0 6 Gb/s connectors (support RAID 0, 1, 5, 10)

Four M.2 M-key slots via PCIe 5.0 (support 2280/22110, RAID 0, 1, 5, 10)

Two U.2 connectors

PCI Expansion Slots

Six PCIe 5.0 x16 slots support up to six single slot or four dual slots or two triple slots GPU cards

Networking

Intel i210AT for one 1 Gb Ethernet LAN port (shared IPMI port)

Aquantia AQC113C for one 10Gb Ethernet LAN port

Input/Output**Front:**

Two USB2.0 ports
 Two USB3.2 Gen1 (5 G) Type A ports
 One USB3.2 Gen2 (10 G) Type C port
 One Power Button
 One Audio In
 One Mic In
 One LED on/off Button

Rear:

One 10 Gb LAN port
 One 1 Gb LAN port
 One USB3.2 Gen2 x2 (20 Gbps) Type C port
 Four USB3.2 Gen2 x1 ports
 Two USB2.0 ports
 One VGA port (for BMC interface)
 HD Audio 7.1 Channel connectors
 One COM port

Onboard:

One USB3.2 Gen 2 Type C header
 Two USB3.2 Gen1 (5 G) headers
 Two USB2.0 headers
 Ten 4-pin fan headers
 One 12 V power header for water cooling pump
 One DOM PW connector
 One TPM 2.0 header

Motherboard

X13SWA-TF, 13" (L) x 12" (W) E-ATX (330 mm x 305 mm)

Chassis

CSE-GS7A-2000B (WxHxD)

with stand: 8.7 x 21.1 x 22.6 in. (222 x 535 x 572 mm)

without stand: 8.7 x 20 x 22.6 in. (222 x 508 x 572 mm)

System Cooling

Two 12-cm front cooling fans, one 12-cm rear exhaust fan, three optional 12-cm top cooling fans (for GPU cards x3 pcs up)

Power Supply

Model: PWS-2K01-PQ, 2000 W, 80Plus Platinum level (92%+)

Total Output Power:

1200 W at 100-115 Vac

1500 W at 115-200 Vac

2000 W at 200-264 Vac

Input:

100-240 Vac/ 15-12 A/ 50-60 Hz

Regulation:

+3.3 V, +5 V, +1 2V, +5 Vsb: +/-5%

-12 V: +/-10%

Operating Environment

Operating Temperature: 10° to 35° C (50° to 95° F)

Non-operating Temperature: -40° to 60° C (-40° to 140° F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Non-operating Relative Humidity: 5% to 95% (non-condensing)

Regulatory Compliance

FCC, ICES, CE, VCCI, CSA/ UL, CB, UKCA, RCM

Applied Directives, Standards

EMC/EMI: 2014/30/EU (EMC Directive) CLASS B

Electromagnetic Compatibility Regulations 2016

FCC Part 15 Subpart B

ICES-003

VCCI-CISPR 32

AS/NZS CISPR 32

BS/EN 55032

BS/EN 55035

CISPR 32

CISPR 35

BS/EN 61000-3-2

BS/EN 61000-3-3

BS/EN 61000-4-2

BS/EN 61000-4-3

BS/EN 61000-4-4

BS/EN 61000-4-5

BS/EN 61000-4-6

BS/EN 61000-4-8

BS/EN 61000-4-11

Product Safety: 2014/35/EU (LVD Directive)

UL/CSA 62368-1 (USA and Canada)

Electrical Equipment (Safety) Regulations 2016

IEC/BS/EN 62368-1

Environment:

2011/65/EU (RoHS Directive)

EC 1907/2006 (REACH)

2012/19/EU (WEEE Directive)

California Proposition 65

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.

Perchlorate Warning

California Best Management Practices Regulations for Perchlorate Materials: This Perchlorate warning applies only to products containing CR (Manganese Dioxide) Lithium coin cells. Perchlorate Material-special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate

この装置は、クラスBの機械です。この装置は、住宅環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをしてください。

VCCI – B

Appendix C

Energy Star

Energy Star



ENERGY STAR qualified products save your money by reducing energy cost and protecting the environment without sacrificing features or performance. Supermicro is proud to offer our customers products with the ENERGY STAR mark.

About ENERGY STAR

Products that are ENERGY STAR qualified use less energy and prevent greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency. Supermicro is committed to offering products and services worldwide that help customers save money, conserve energy and improve the quality of our environment. The more energy we can save through higher energy efficiency, the more we reduce greenhouse gases and the risks of climate change. Supermicro products marked with the ENERGY STAR logo are following the ENERGY STAR specification established by the US Environmental Protection Agency, and the product power management function has been turned on. In addition, our equipment automatically go into "display sleep" within 10 minutes of inactivity respectively. The user can wake up the computer by pressing any key. Additional information about the energy and cost savings that power management features can provide can be found on the EPA ENERGY STAR Power Management website at:

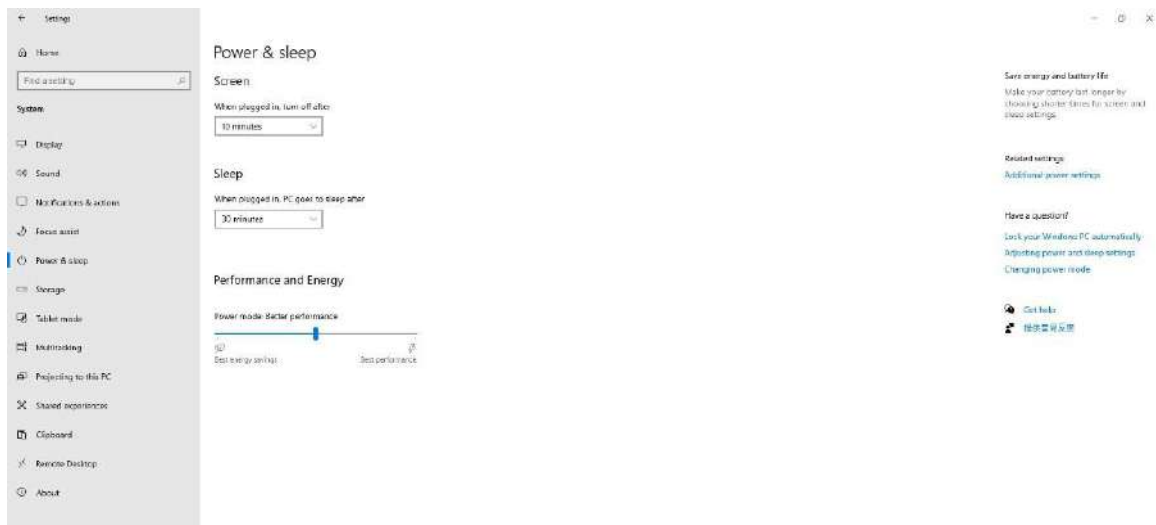
<http://www.energystar.gov/powermanagement>.

Additional information about the ENERGY STAR program and its environmental benefits can be found on the EPA ENERGY STAR website at:

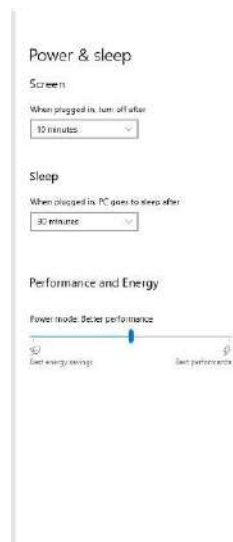
<http://www.energystar.gov>.

The picture as below showed that the power management settings of this computer have been enabled by default.

Note: The preset default power management settings are compliance with ENERGY STAR and are recommended by the ENERGY STAR program for optimal energy savings.



The timing settings can be changed to other power management plan through selecting other time option:



When the screen turns off or computer falls into sleep mode, you can move your mouse, click your keyboard or press power button to wake it up.