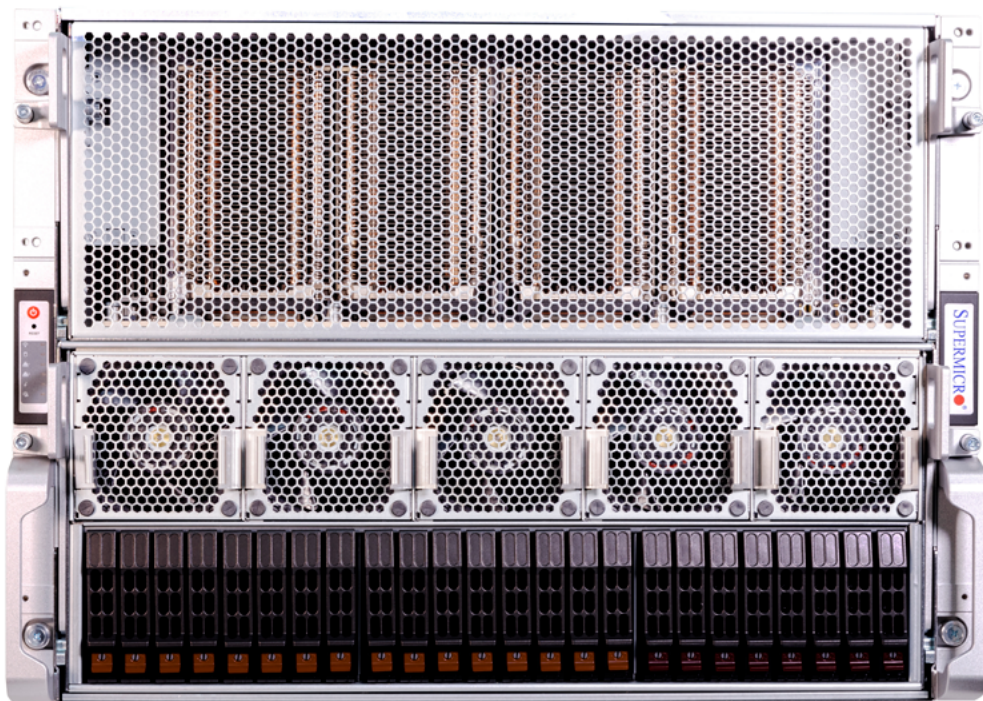# A+ Server
AS -8125GS-TNHR

USER'S MANUAL

Revision 1.0a

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Manual Revision 1.0a

Release Date: June 03, 2025

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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 A+ Server AS -8125GS-TNHR. Installation and maintenance should be performed by certified service technicians only.

Please refer to the server 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 server.

- Supermicro product manuals: http://www.supermicro.com/support/manuals/

- Product drivers and utilities: https://www.supermicro.com/wdl

- Product safety info: https://www.supermicro.com/en/about/policies/safety-information

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.

Contents

Chapter 3 Maintenance and Component Installation

Chapter 4 Motherboard Connections

Chapter 5 Software

Chapter 6 Optional Components

Chapter 7 Troubleshooting and Support

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Chapter 1

Introduction

1.1 Overview

This chapter provides a brief outline of the functions and features of the A+ Server AS -8125GS-TNHR. In addition to the H13DSG-O-CPU-D-P motherboard and CSE-GP801TS chassis, the following provides an overview of the specifications and capabilities.

System Overview	
Motherboard	H13DSG-O-CPU-D-P
Chassis	CSE-GP801TS
Processor Support	Dual AMD EPYC™ 9004 Series Processors in Socket SP5 and a Thermal Design Power unit up to 400 W (Depending on thermal validation and system configuration. Contact a Supermicro representative for details.)
Memory	Total 24 DIMM slots with 1DPC that support up to: 6 TB registered ECC DDR5 4800 MT/s speed in 24 DIMM slots with AMD EPYC™ 9004 Series processors installed *For details, please refer to Section 3.4.
GPUs	HGX H100 8-GPU SXM5 Multi-GPU Board PCIe 5.0 x16 CPU-to-GPU Interconnect, NVIDIA NVLink with NVSwitch
Storage	Twenty-four 2.5" hot-swap drive bays (Default: twelve 2.5" NVMe and two 2.5" SATA dedicated) One M.2 NVMe SSD
Chipset	System on Chip (SoC)
Expansion Slots	Eight PCIe 5.0 x16 LP slots Two PCIe 5.0 x16 FHFL slots Two PCIe 5.0 x16 slots via additional PCIe switch (optional)
I/O Ports	One RJ45 dedicated BMC LAN port Two USB 3.0 ports One VGA port
System Cooling	Five front and five rear counter-rotating fans with optimal fan speed control Two metal GPU air blockers One motherboard air shroud
Power	Six 3000 W Redundant (3 + 3) Titanium Level (96%) power supplies **Note:** Full redundancy based on configuration and application load
Form Factor	8U rackmount, 14 x 17.2 x 33.2 in. (356 x 437 x 843 mm) (H x W x D)

Note: A Quick Reference Guide can be found on the product page of the Supermicro website. The following safety models associated with the AS -8125GS-TNHR have been certified as compliant with UL or CSA: GP801-H30X13, GP801-GPU, and GP801-30.

1.2 System Features

The following views of the system display the main features. Refer to Appendix B for additional specifications.

Front View
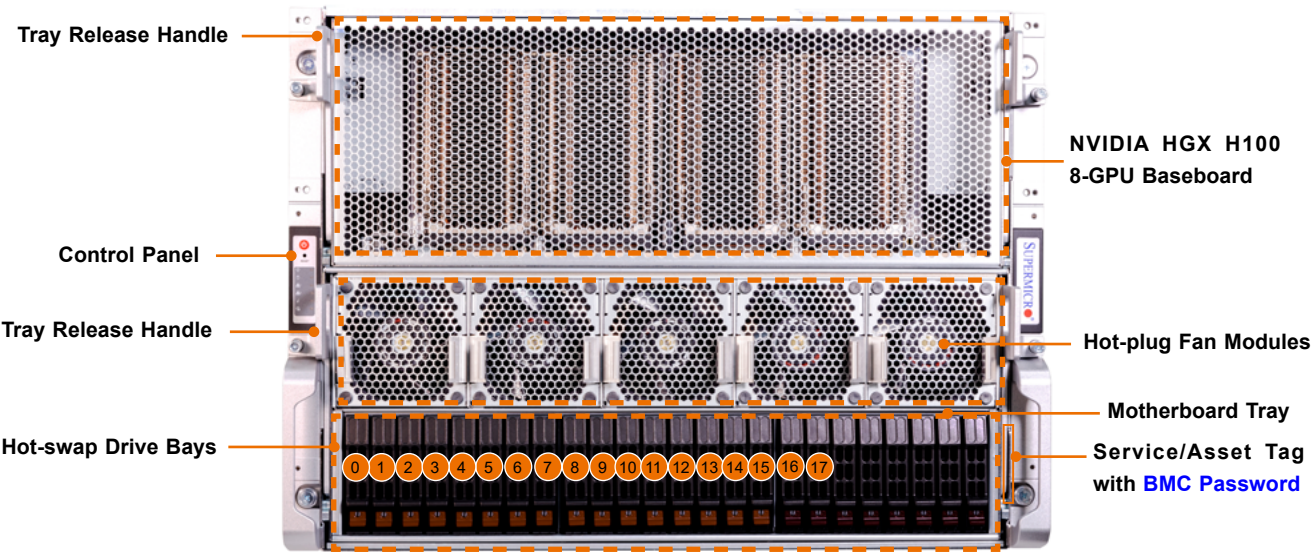
Figure 1-1. Front View

System Features: Front	
Feature	**Description**
Tray Release Handle	Handles to support tray removal
Control Panel	One control panel (see Control Panel for details)
0 to 23	Twenty-four 2.5" hot-swap drive bays
Hot-plug Fan Modules	Front five counter-rotating fans with optimal fan speed control
Service Tag	Pull-out service tag with BMC password label

Logical Storage Drive Numbers	
Drive Bay	**Description**
0 to 11	Twelve 2.5" hot-swap NVMe drive bays (default)
12 to 15	Four 2.5" hot-swap NVMe drive bays (optional)
16 to 17	Two 2.5" hot-swap SATA drive bays (default)
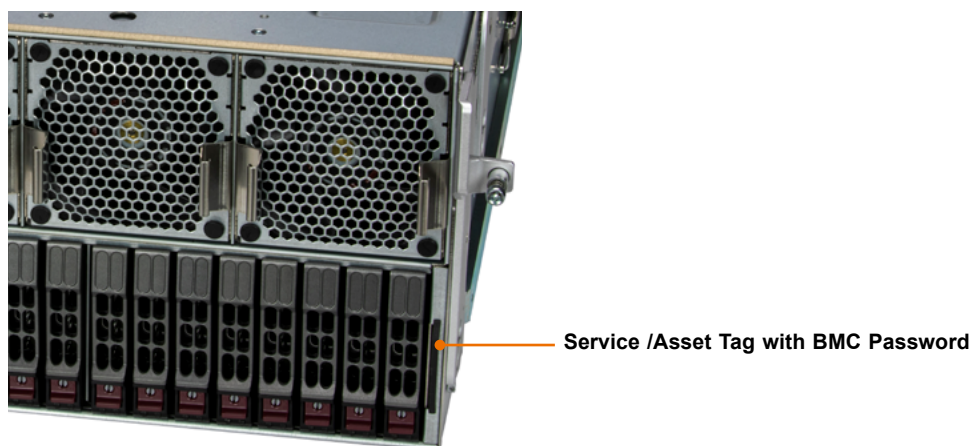
Figure 1-2. Service Tag Location

Drive Carrier Indicators

Each drive carrier has two LED indicators: an activity indicator and a status indicator. For RAID configurations using a controller, the meaning of the status indicator is described in the table below. For OS RAID or non-RAID configurations, some LED indications are not supported, such as hot spare.

System Features: Front			
	Color	**Blinking Pattern**	**Behavior for Device**
Activity LED	Blue	Blinking	I/O activity
	Off		Idle SATA drive installed
Status LED	Green	Solid On	Safe to remove NVMe drive
	Amber	Blinking at 1Hz	Do not remove NVMe drive

Control Panel

There are two buttons located on the front of the chassis: a power on/off button and an UID button. In addition there are six LEDs. The locations of these buttons and LEDs on the control panel are described below.
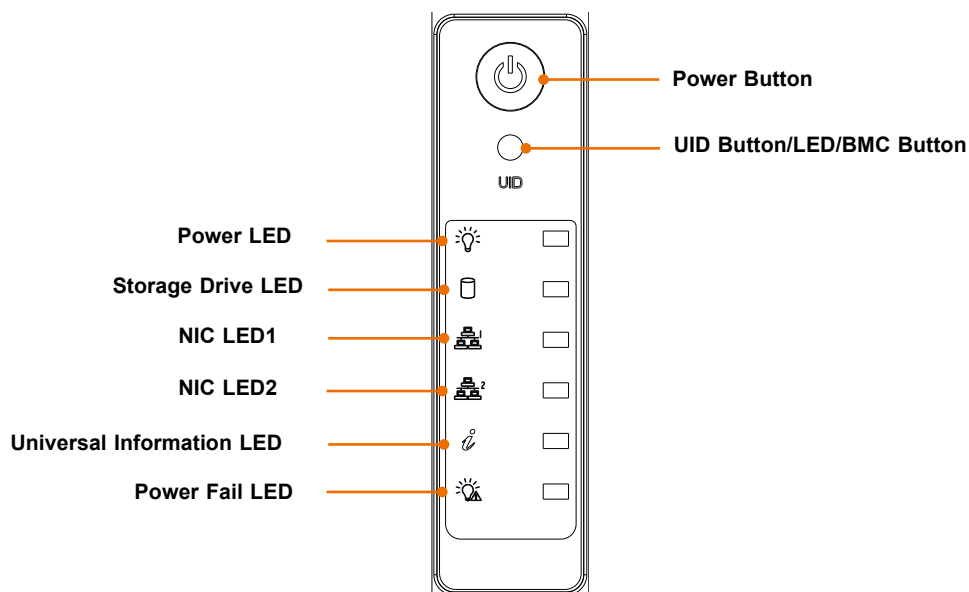
Figure 1-3. Control Panel

Control Panel Features	
Feature	**Description**
Power Button	The main power switch applies or removes primary power from the power supply to the server but maintains standby power.
UID Button/LED/ BMC Button	The unit identification (UID) button turns on or off the blue light function of the information LED and a blue LED on the rear of the chassis. This button can also be used to reset the BMC.
Power LED	Steady on – Power on Blinking at 4 Hz – Checking BIOS/BMC integrity Blinking at 4 Hz and "i" LED is blue – BIOS firmware updating Two blinks at 4 Hz, one pause 2 Hz and "i" LED blue – BMC firmware updating Blinking at 1 Hz and "i" LED red – Fault detected
Storage Drive LED	Indicates activity on the storage drives when flashing.
NIC LEDs	Non-functional, as there are no onboard network connections.
Information LED	Alerts operator to several states (noted in the table below).
Power Fail LED	Indicates a power supply module has failed.

Information LED	
Color, Status	**Description**
Red, solid	An overheat condition has occurred.
Red, blinking at 1 Hz	Fan failure, check for an inoperative fan.
Red, blinking at 0.25 Hz	Power failure, check for a non-operational power supply
Red, blinking at 10 Hz	CPLD recovery mode error
Blue, solid	Unit ID has been activated by switch
Blue, blinking at 1 Hz	Unit ID has been activated using the BMC
Blue, blinking at 2 Hz, and BMC Heartbeat LED on the motherboard is green	BMC is resetting
Blue, blinking at 4 Hz	BMC is setting factory defaults
Blue, blinking at 10 Hz	BIOS/BMC is recovering or updating
Red, blinking at 10 Hz and the rear UID LED is blue, blinking at 10 Hz	CPLD recovery or update is in progress

Front Control Panel LED Indicators						
Event	**Power**	**Drive**	**NIC**	**UID**	**Info**	**Power Fail**
Power On	Solid on					
Drive Activity		Blinking				
NIC Activity			Blinking			
Overheat					Solid On	
Fan Fail					Blinking 1 Hz	
Power Fail					Blinking 1/4 Hz	Solid On
Local UID On				Solid On		
Remote UID On				Blinking 1 Hz		
Checking BMC/BIOS	Blinking at 4Hz					
Recovering/Updating	BMC Blinking at 4Hz BMC 2 Blinks at 4 Hz, 1 Pause at 2 Hz (on-on-off-off)			BIOS/BMC Blinking at 10 Hz		
Flash Not Detected or Golden Image Check Failed	BMC/BIOS Blinking at 1 Hz					
CPLD Recovery Mode				Blinking at 10 Hz (MB UID LED)	Blinking at 10 Hz (FP Red LED)	

Rear View

The illustration below shows the features included on the rear of the chassis.
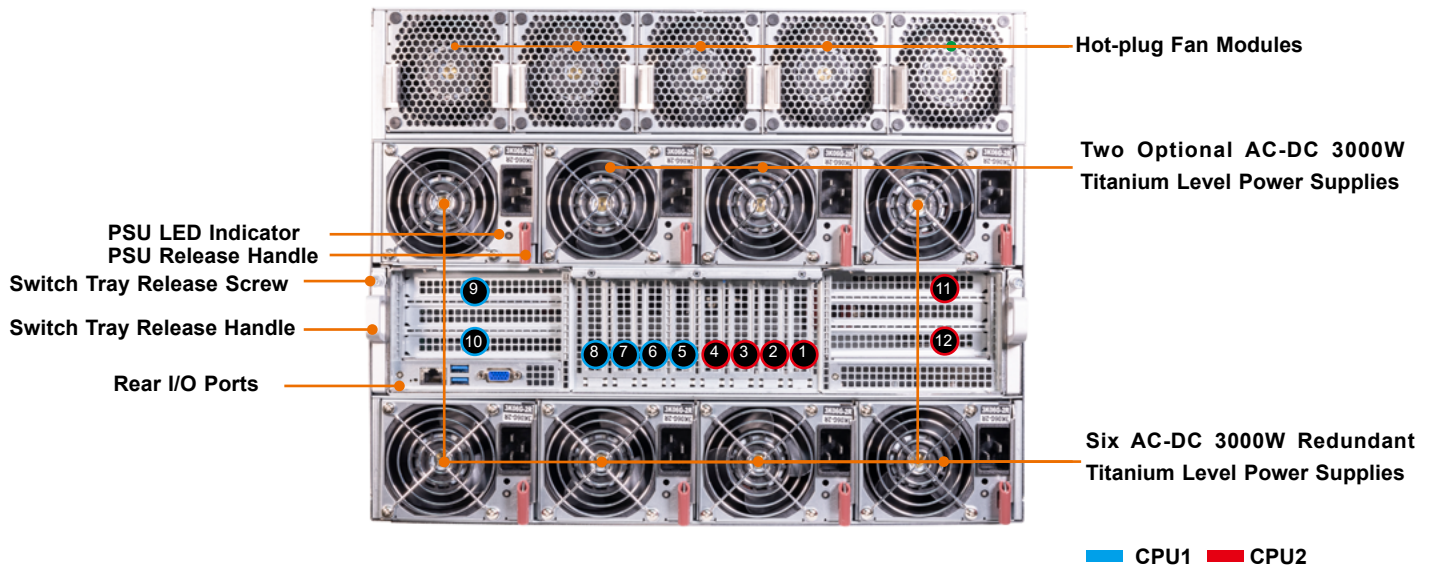
Figure 1-4. System: Rear View

System Features: Rear	
Feature	**Description**
PSU LED Indicator	Power supply LED
PSU Release Handle	Power supply handle to unlock and remove power supply
Switch Tray Release Screw	Screws securing the switch tray
Switch Tray Release Handle	Handles to support switch tray removal
Rear I/O ports	See the following section for details
Expansion Slots	12 slots for PCIe expansion cards, showing logical numbering
Hot-plug Fan Modules	Rear five counter-rotating fans with optimal fan speed control
Power Supply Modules	Six 3000 W Redundant (3 + 3) Titanium Level (96%) power supplies **Note:** Full redundancy based on configuration and application load (Default configuration comes with six power supplies and two fans.)

Exapnsion Slot Locations				
Slot	**Description**	**Slot**	**Description**
1	PCIe 5.0 x16 (LP) from PLX switch to GPUs	7	PCIe 5.0 x16 (LP) from PLX switch to GPUs
2	PCIe 5.0 x16 (LP) from PLX switch to GPUs	8	PCIe 5.0 x16 (LP) from PLX switch to GPUs
3	PCIe 5.0 x16 (LP) from PLX switch to GPUs	9	PCIe 5.0 x16 (FHFL)
4	PCIe 5.0 x16 (LP) from PLX switch to GPUs	10	PCIe 5.0 x16 (FHFL)
5	PCIe 5.0 x16 (LP) from PLX switch to GPUs	11	PCIe 5.0 x16 (FHFL) (optional)
6	PCIe 5.0 x16 (LP) from PLX switch to GPUs	12	PCIe 5.0 x16 (FHFL) (optional)

Figure 1-5. System: Input/Output Ports

Rear I/O Ports	
Feature	**Description**
BMC LAN Port	A dedicated LAN port provides access to the BMC.
USB	Two USB 3.0 ports
VGA	One VGA port
Unit Identifier Switch /UID LED Indicator	When you press the Unit Identifier (UID) switch, both front and rear UID LED indicators are toggled on or off. This can help identify a system in a rack. The UID can also be triggered using the BMC.

Power Supply Indicator	
LED Color and State	**Condition**
Solid Green	Indicates that the power supply is on and working
Blinking Green	Indicates the system is off
Solid Amber	Indicates failure or needs attention
Off	No AC power to module

Fan Module Indicator	
LED Color and State	**Condition**
Solid Green	Indicates that the fan is on and working
Solid Amber	Indicates failure or needs attention
Solid Red	Indicates that the fan is receiving standby power
Off	Indicates the fan is off

Top View, Motherboard Tray and Switch Module

PCIe Switches

Switch Module

M.2 Slot

Dual AMD EPYC 9004 Series Processors
up to 400 W TDP

24 DIMM Slots
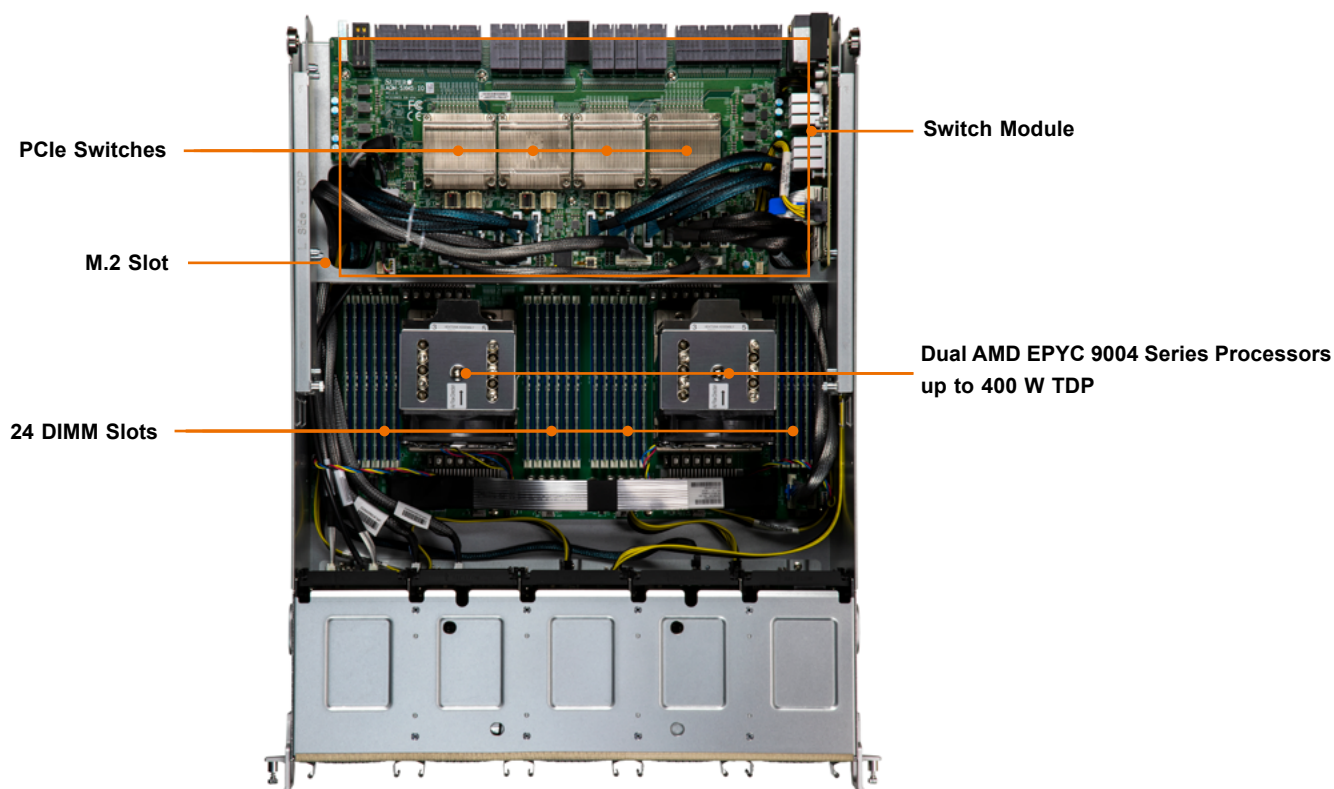
Figure 1-6. Motherboard Tray: Top View

Motherboard Tray Features	
Feature	**Description**
Switch Module	Platform for switches and I/O
PCIe Switches	Four switches to facilitate direct communication between GPUs
M.2 Slots	One slot for PCIe 3.0 x2 M.2 NVMe
Processors	Dual AMD EPYC™ 9004 Series Processors in Socket SP5 and a Thermal Design Power unit up to 400 W (Depending on thermal validation and system configuration. Contact a Supermicro representative for details.)
DIMM Slots	Total 24 DIMM slots with 1DPC that support up to: 6 TB registered ECC DDR5 4800 MT/s speed in 24 DIMM slots with AMD EPYC™ 9004 Series processors installed *For details, please refer to Section 3.4.

Top View: GPU Tray
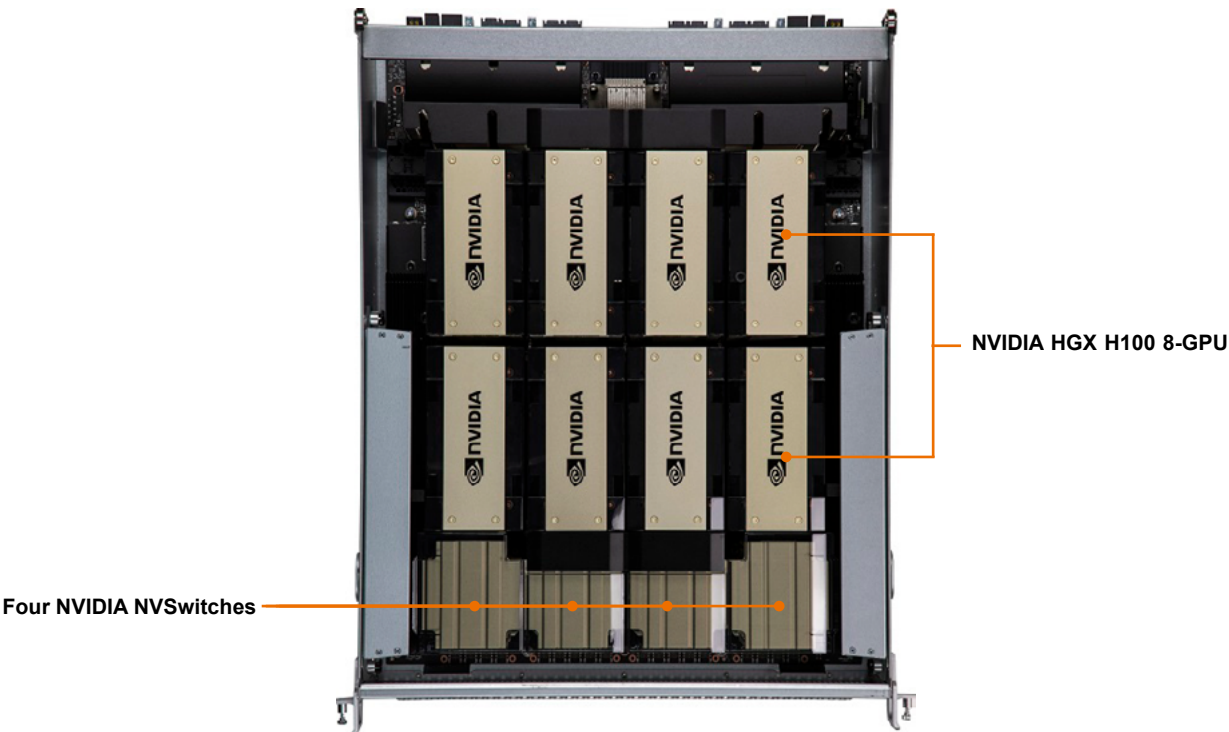
Figure 1-7. Nvidia 8 HGX H100 GPU baseboard: Top View

GPU Tray Features	
Feature	**Description**
GPU	NVIDIA HGX H100 8-GPU Baseboard, 8 H100 80GB SXM5

1.3 System Block Diagram
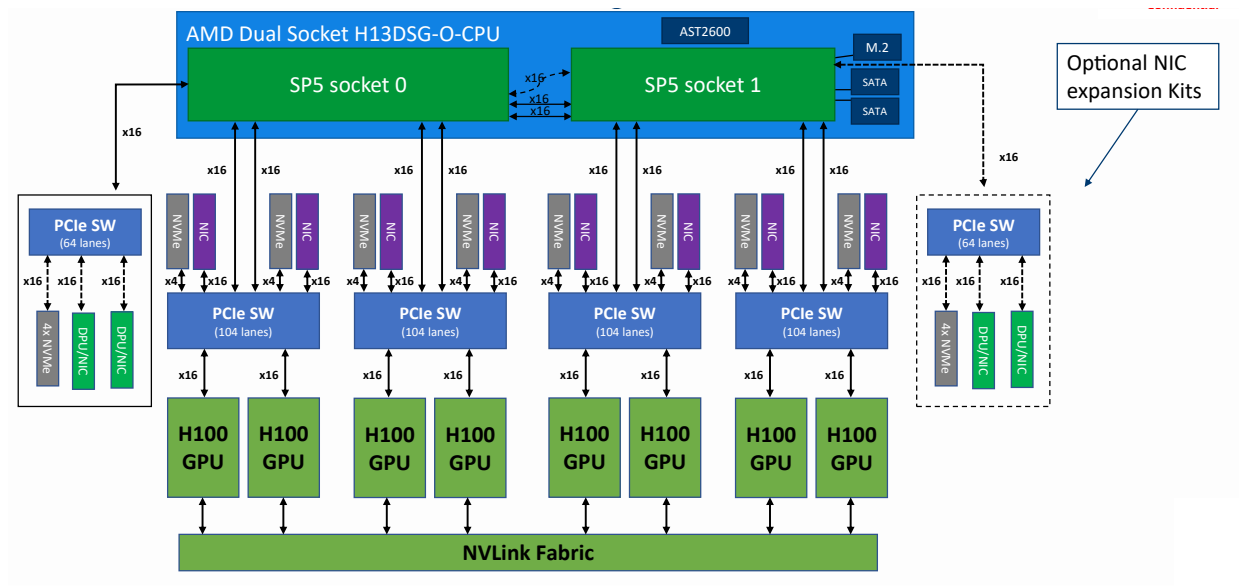
Figure 1-8. System Block Diagram

1.4 Motherboard Block Diagram

Figure 1-9. System Block Diagram

1.5 Motherboard Layout

Below is a layout of the H13DSG-O-CPU-D-P 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.
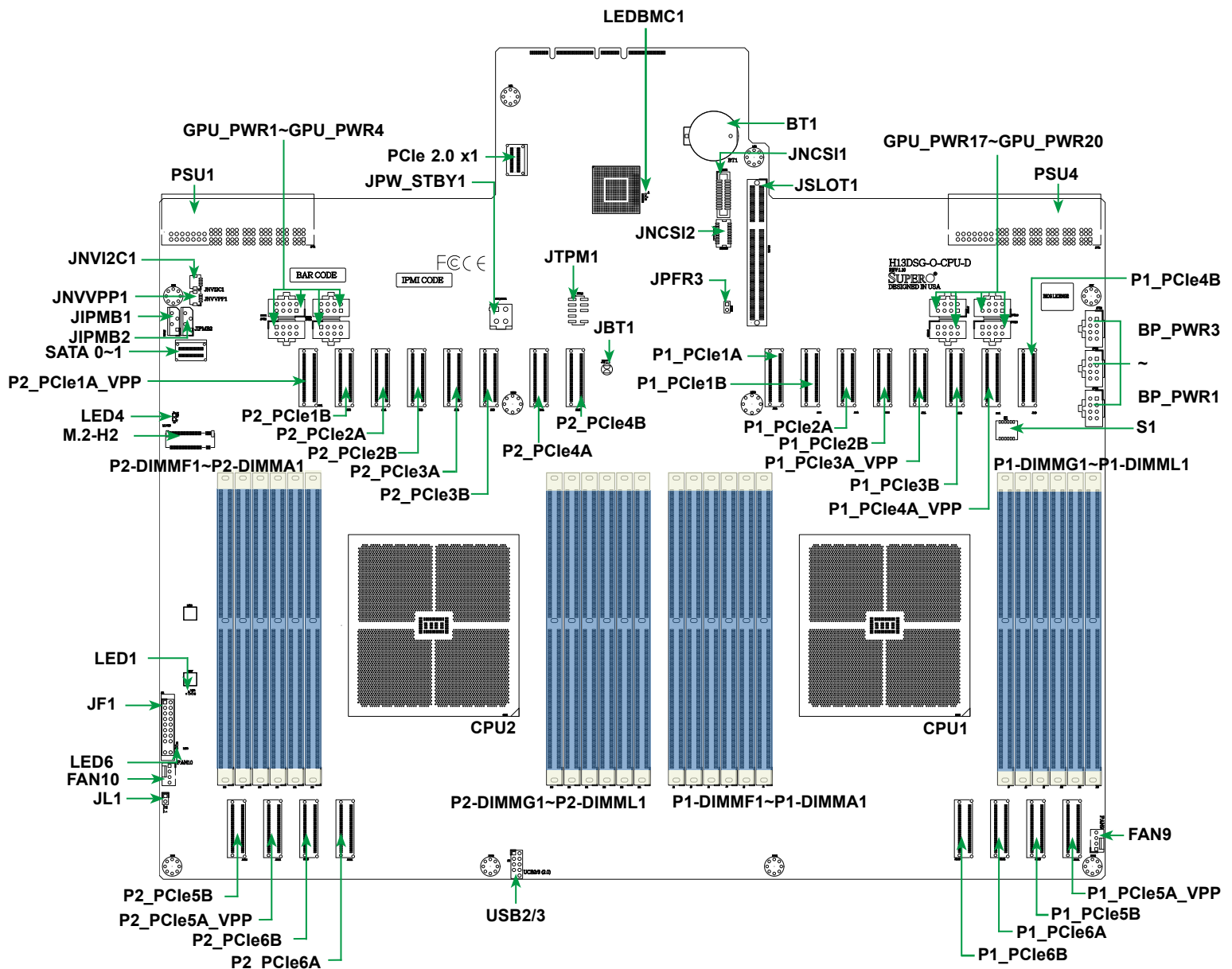
Figure 1-10. Motherboard Layout

Notes:

- See Chapter 4 for detailed information on jumpers, I/O ports, and JF1 front panel connections.

- Jumpers/LED indicators not indicated are used for testing only.

- Use only the correct type of onboard CMOS battery as specified by the manufacturer. To avoid possible explosion, do not install the onboard battery upside down.

Quick Reference Table

Jumper	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
JPFR3	PFR Function	Open (Normal)

LED	Description	Status
LED1	UID LED	Solid Blue: Unit Identified
LED4	M.2 LED	Green: On
LED6	Power LED	Solid Green: Power On
LEDBMC1	BMC Heartbeat LED	Green: Blinking Green: Fast blinking

Connector	Description
BP PWR1~3	12 V 8-pin Power Connector for Backplane
FAN9~FAN10	4-pin System/CPU Fan Headers
GPU_PWR1~4, 17~20	12 V 8-pin Power Connector for Riser Card GPU
JF1	Front Control Panel Header
JIPMB1	4-pin External I²C Header (for an IPMI card)
JL1	Chassis Intrusion Header
JNCSI1~2	NCSI
JPW1~JPW4	Serverboard Main Power Supply Connector
JSLOT1	Supermicro I/O Riser Slot
JTPM1	Trusted Platform Module/Port 80 Connector
P1-PCIe1A P1-PCIe1B P1-PCIe2A P1-PCIe2B P1-PCIe3A_VPP P1-PCIe3B P1-PCIe4A_VPP P1-PCIe4B P1-PCIe5A_VPP P1-PCIe5B P1-PCIe6A P1-PCIe6B	Processor 1 PCIe 5.0 x8
P2-PCIe1A_VPP P2-PCIe1B P2-PCIe2A P2-PCIe2B P2-PCIe3A P2-PCIe3B P2-PCIe4A P2-PCIe4B P2-PCIe5A_VPP P2-PCIe5B P2-PCIe6A P2-PCIe6B	Processor 2 PCIe 5.0 x8

Note: Table continued on next page.

SATA0~SATA1	SATA 3.0 Ports
S1	For System Configuration
USB2/3 (2.0)	USB2/3 (2.0) Front Side Pin Header

Note: Jumpers, connectors, switches, and LED indicators that are not described in the preceding tables are for manufacturing testing purposes only, and are not covered in this manual.

Chapter 2

Server Installation

2.1 Overview

This chapter provides advice and instructions for mounting your system in a server rack. If your system is not already fully integrated with processors, system memory etc., refer to Chapter 3 for details on installing those specific components.

Importnat: 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 system 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 rack unit that will hold the server. 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 or in Appendix A.

2.3 Preparing for Setup

The box in which the system was shipped should include the rackmount hardware needed to install it into the rack. Please read this section in its entirety before you begin the installation.

Choosing a Setup Location

- The system should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated.

- Leave enough clearance in front of the rack so that you can open the front door completely (~25 inches) and approximately 30 inches of clearance in the back of the rack to allow sufficient space for airflow and access when servicing.

- This product should be installed only in a Restricted Access Location (dedicated equipment rooms, service closets, etc.).

- 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.

Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are extended to the floor so that the full weight of the rack rests on them.

- In single rack installations, stabilizers should be attached to the rack. In multiple rack installations, the racks should be coupled together.

- Always make sure the rack is stable before extending a server or other component from the rack.

- You should extend only one server or component at a time - extending two or more simultaneously may cause the rack to become unstable.

Server Precautions

- Caution: The assembled system may weigh over 200 lbs. When moving it, remove the GPU tray to reduce weight, and use a lift and multiple people.

- Review the electrical and general safety precautions in Appendix A.

- Determine the placement of each component in the rack before you install the rails.

- Install the heaviest server components at the bottom of the rack first and then work your way up.

- Use a regulating uninterruptible power supply (UPS) to protect the server from power surges and voltage spikes and to keep your system operating in case of a power failure.

- Allow any drives and power supply modules to cool before touching them.

- When not servicing, always keep the front door of the rack and all covers/panels on the servers closed to maintain proper cooling.

Rack Mounting Considerations

Ambient Operating Temperature

If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the room's ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (TMRA).

Airflow

Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

Mechanical Loading

Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

Circuit Overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable Ground

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (i.e. the use of power strips, etc.).

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.

- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.

- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

- Slide rail mounted equipment is not to be used as a shelf or a work space.

2.4 Installing the Rails

There are a variety of rack units on the market, which may require a slightly different assembly procedure. Also refer to the installation instructions that came with the rack.

This rail set fits a rack between 28" and 33.5" deep. Do not use a two post "telco" type rack.

1. Identify the left rail set and right rail set, as they are different.

2. Position the template at the front of the system to determine the locations of the screws for the rails.
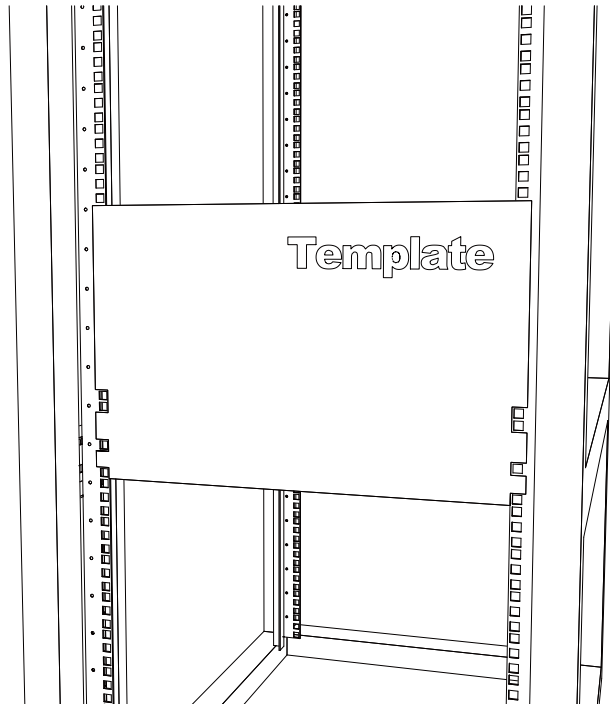
Figure 2-1. Placing the Template

3. In each rail set, the two sections are screwed together to keep them immobile during shipping. Release these screws just enough to allow the rail sections to slide apart. Note the arrow on the rail, which indicates the end that attaches to the front of the rack.

4. Slide the rails sections apart to match the depth of the rack. Position the rails with the template and secure the front of each to the front of the rack with two flat head screws, then secure the back of each rail to the rear of the rack with two flat head screws (see Figure 2-2).

5. Tighten the screws that keep the two rail sections from sliding.
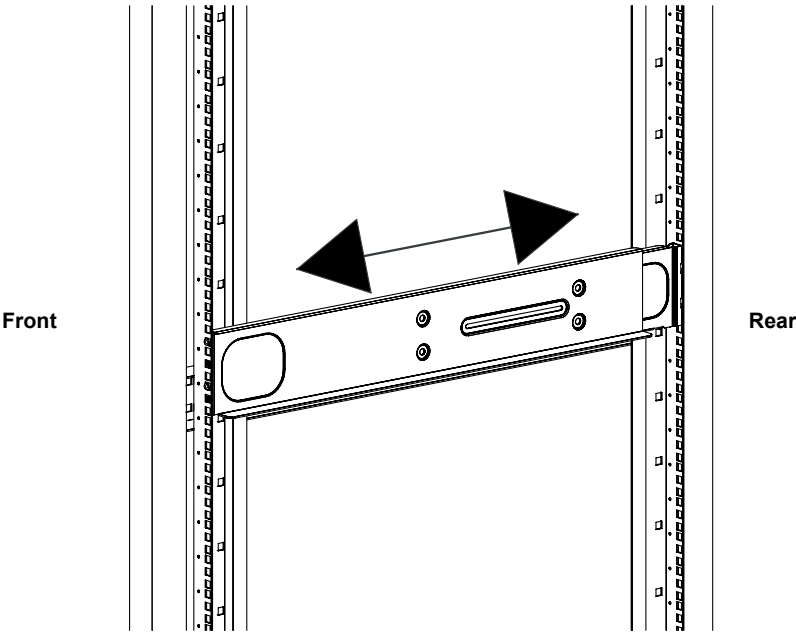
Figure 2-2. Installing the Left Rail
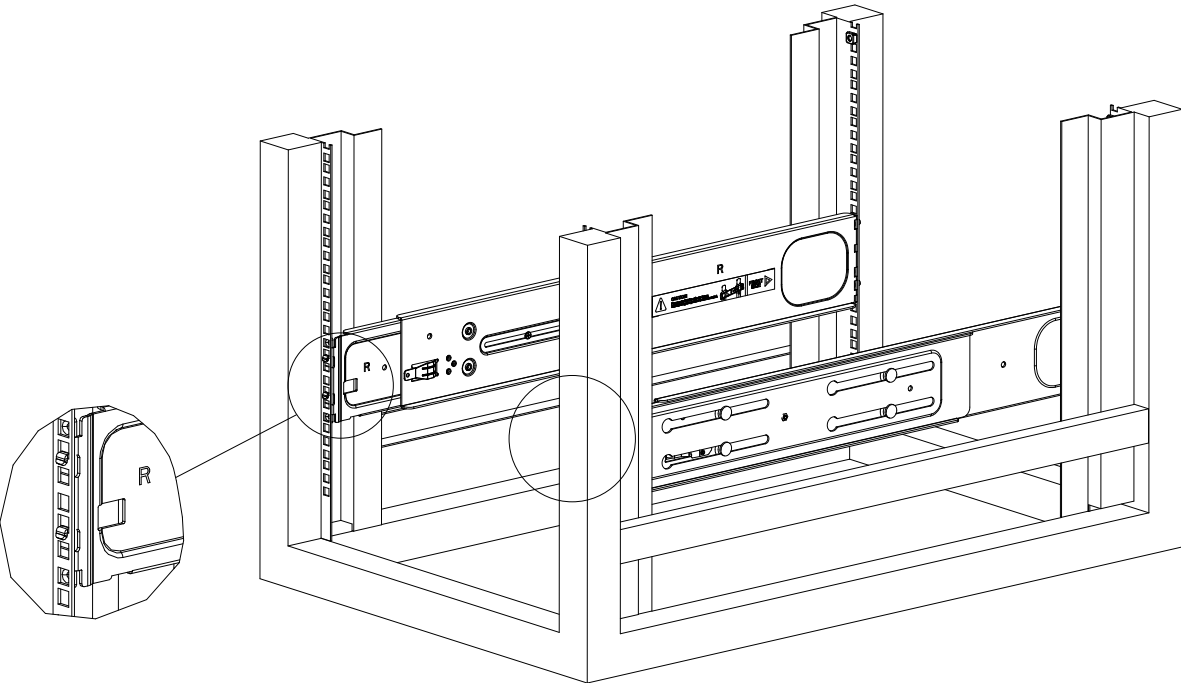
Figure 2-3. Outer Rails Installed on the Rack

2.5 Installing the Server

Once rails are attached to the chassis and the rack, you can install the server.

Caution: The assembled system is quite heavy. Use a lift and multiple pwople to move it.

1. Using a lift and as many people as necessary, lift the system and slide it onto the installed rails.

2. After pushing the enclosure all the way into the rack, use the thumbscrew on each side of the server to lock it into place.
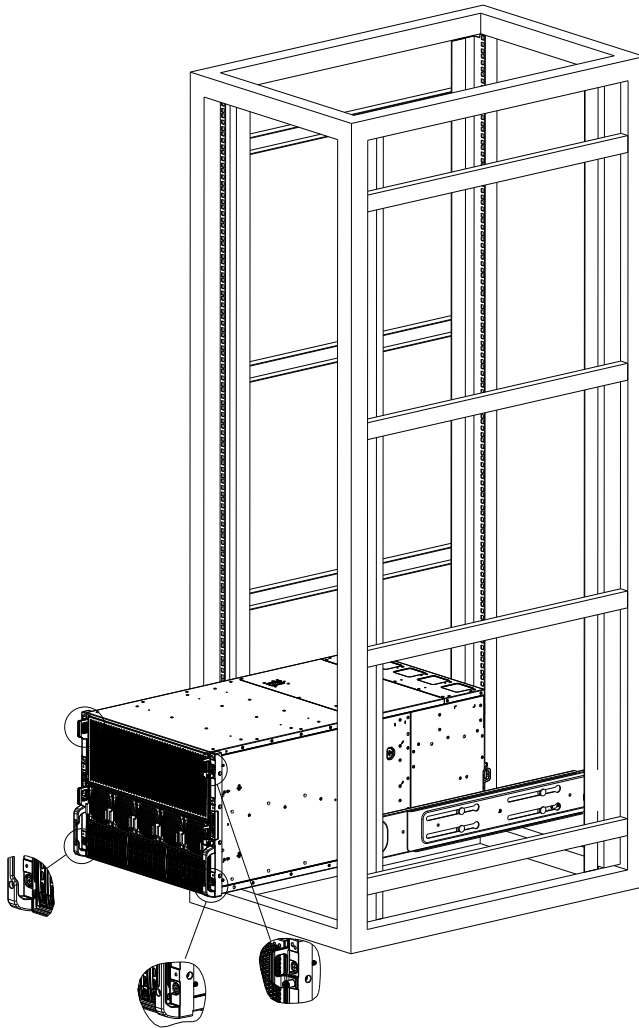
Figure 2-4. Installing the Server onto the Rails

Note: The figure is for illustrative purposes only. Some chassis components such as the GPU tray may be removed from the chassis enclosure before installing the system to the rack.

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.

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. Note that a complete shut-down means that all power supply fans have stopped spinning. If your system has more than one power supply, remove the AC 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 system is comprised of three trays. Each tray can be removed from the chassis using release levers. Before removing the trays, power down, as described in Section 3.1.

To replace the trays, be sure the primary handles start in the pulled down position. Once the tray is fully inserted, lift and close the handles to lock the tray in place.
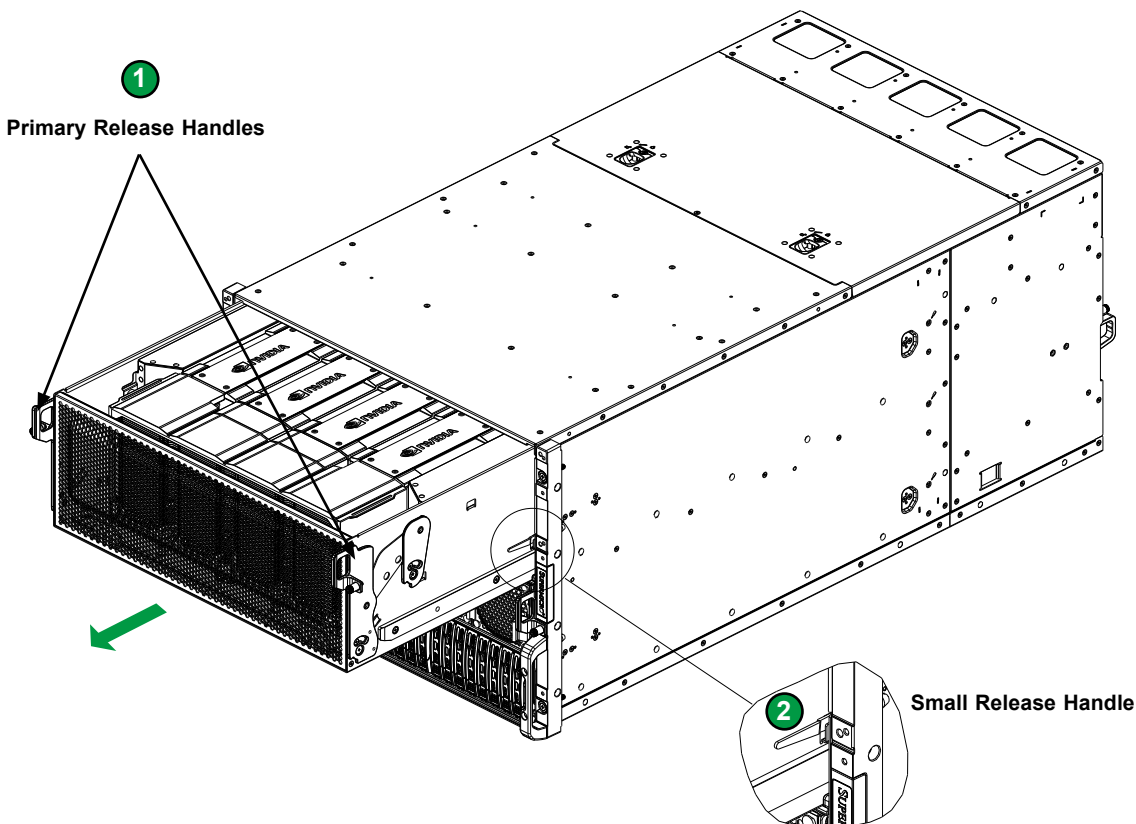
Figure 3-1. Chassis Front: Removing the GPU Tray

Removing the GPU Tray

1. Pull down the release handles on each side of the tray, and pull the tray part way out.

2. To fully release the tray, find and depress the the small handles on each side of the tray.
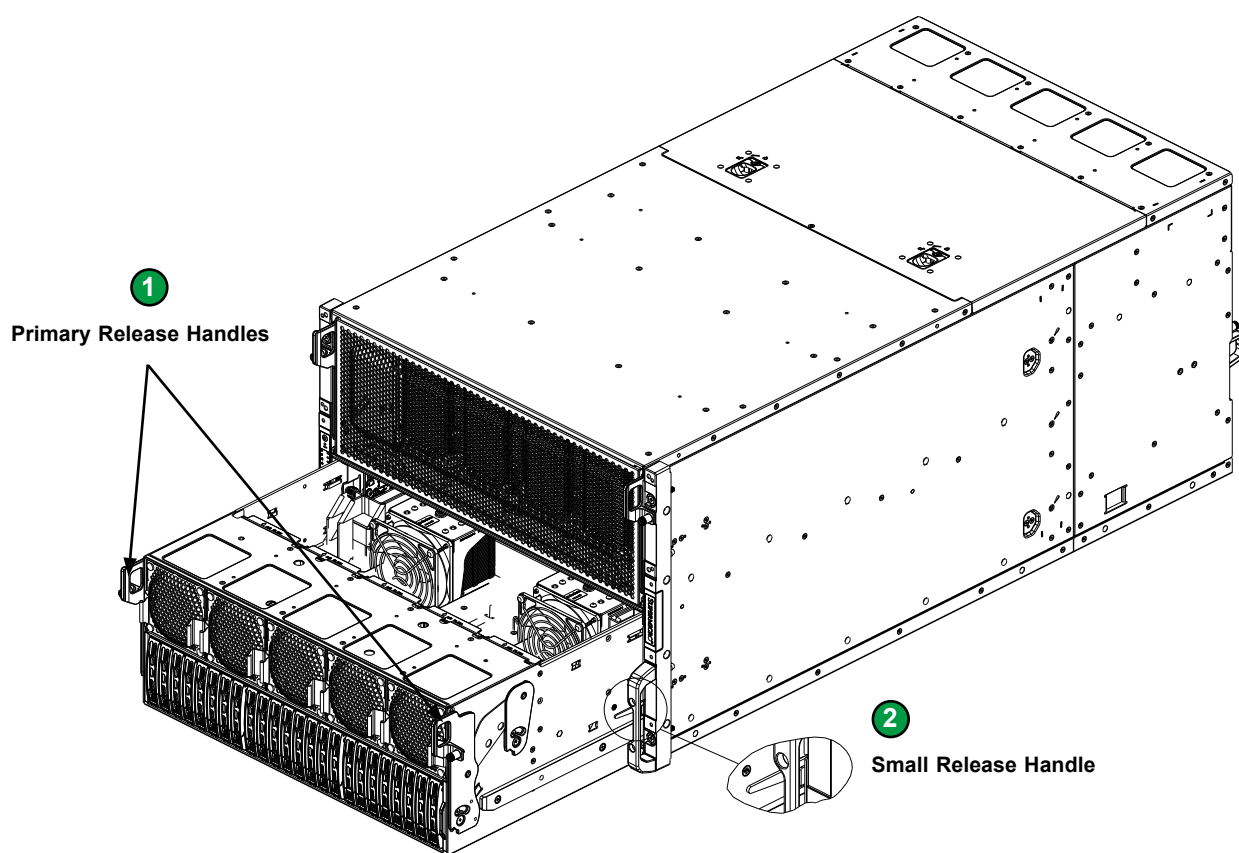
Figure 3-2. Chassis Front: Removing the Motherboard Tray

Removing the Motherboard Tray

1. Pull down the release handles on each side of the tray, and pull the tray part way out.

2. To fully release the tray, find and depress the the small handles on the side of each tray

   To replace the tray, be sure the primary handles start in the pulled down position. Once the tray is fully inserted, lift and close the handles to lock the tray in place.

   Note: When replacing trays, insert the motherboard tray before the rear PCIe tray.
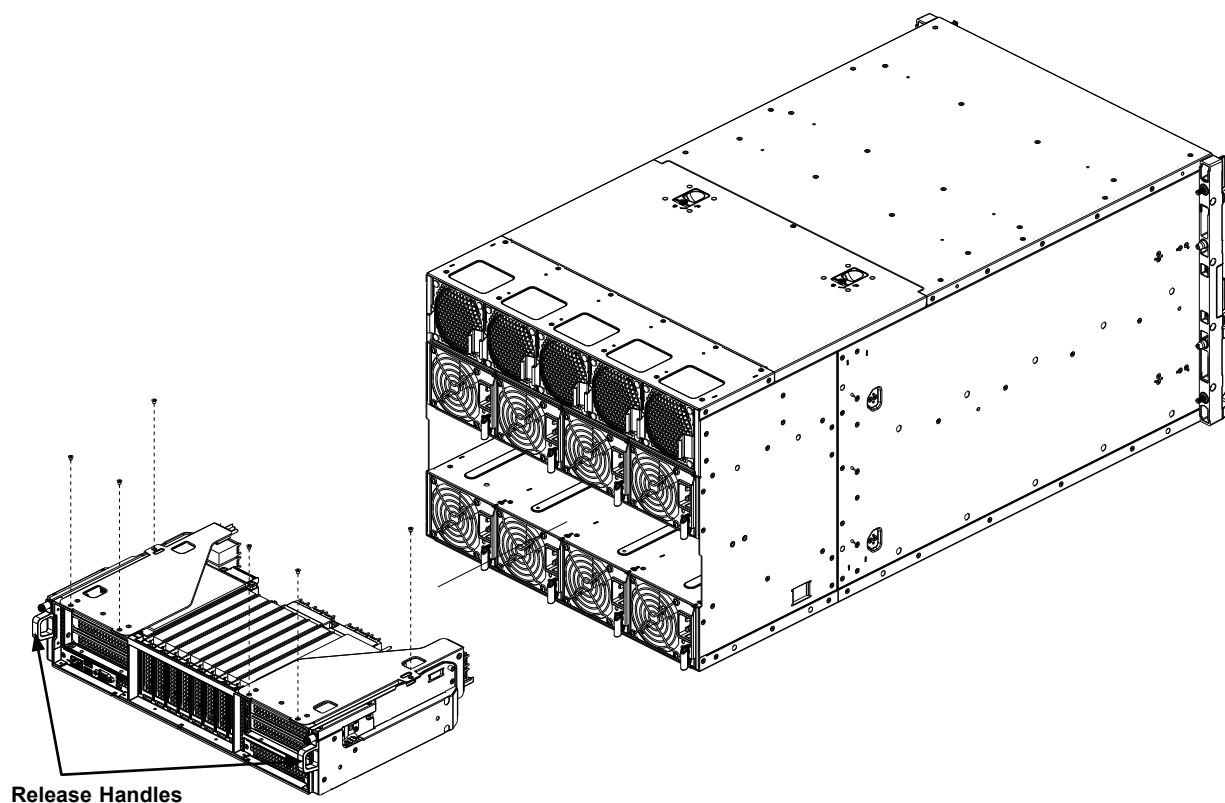
Release Handles

Figure 3-3. Chassis Rear: Removing the PCIe Expansion Tray

Removing the PCIe Expansion Tray

- Pull down the release handles on each side of the tray, and pull the tray out.

Note: When replacing trays, insert the motherboard tray (front) before the PCIe tray.

3.3 Processor and Heatsink Installation

Important: When handling the processor package, avoid placing direct pressure on the label area of the fan.

Important:

- For the Processor/Heatsink installation you need to use a T20 screwdriver when opening/ closing the CPU socket.

- Always connect the power cord last, and always remove it before adding, removing or changing any hardware components. Make sure that you install the processor into the CPU socket before you install the CPU heatsink.

- If you buy a CPU separately, make sure that you use an AMD-certified multi-directional heatsink only.

- Make sure to install the motherboard into the chassis before you install the CPU heatsink.

- When receiving a motherboard without a processor pre-installed, make sure that the plastic CPU socket cap is in place and none of the socket pins are bent; otherwise, contact your retailer immediately.

- Refer to the Supermicro website for updates on CPU support.

Installing the Processor and Heatsink

1. Unscrew the screw #1 holding down the force frame.
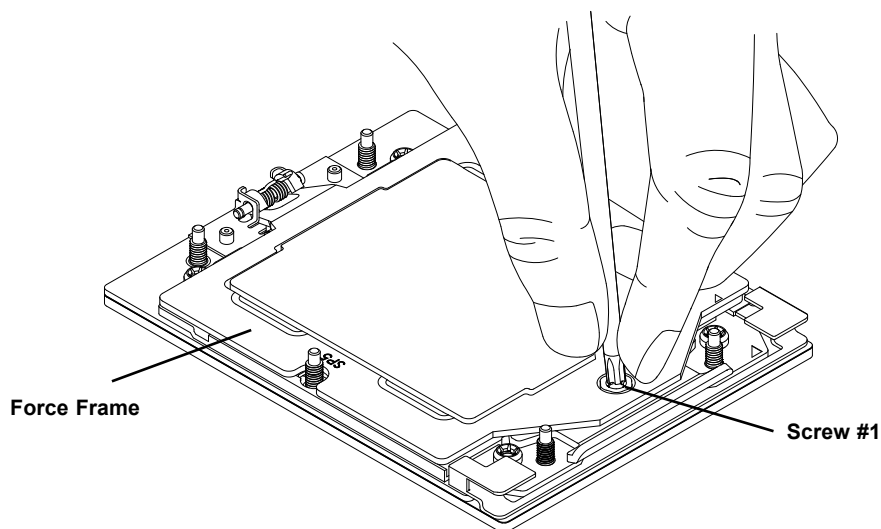
Force Frame

Screw #1

2. The spring-loaded force frame will raise up after the screw securing it (#1) is removed. Gently allow it to lift up to its stopping position.

Force Frame
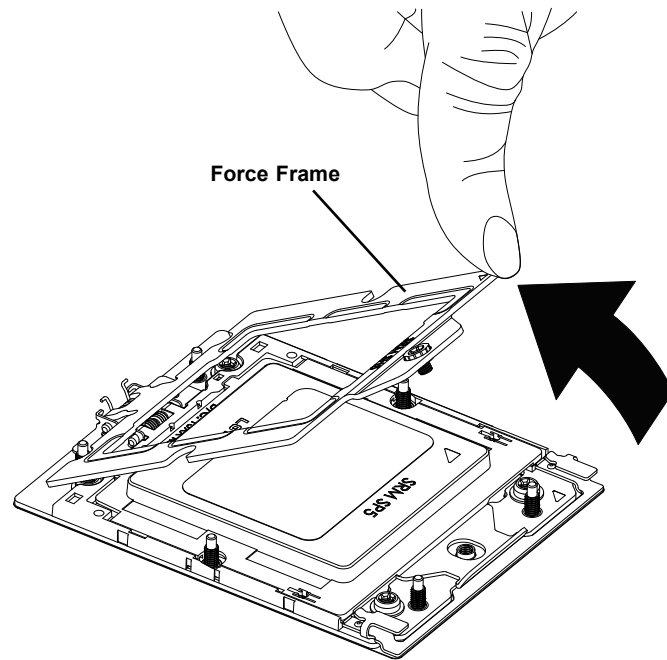
3. Lift the rail frame up by gripping the lift tabs near the front end of the rail frame. While keeping a secure grip of the rail frame, lift it to a position so you can do the next step of removing the external cap.

    Note: The rail frame is spring loaded, so keep a secure grip on it as you lift it so it does not snap up.
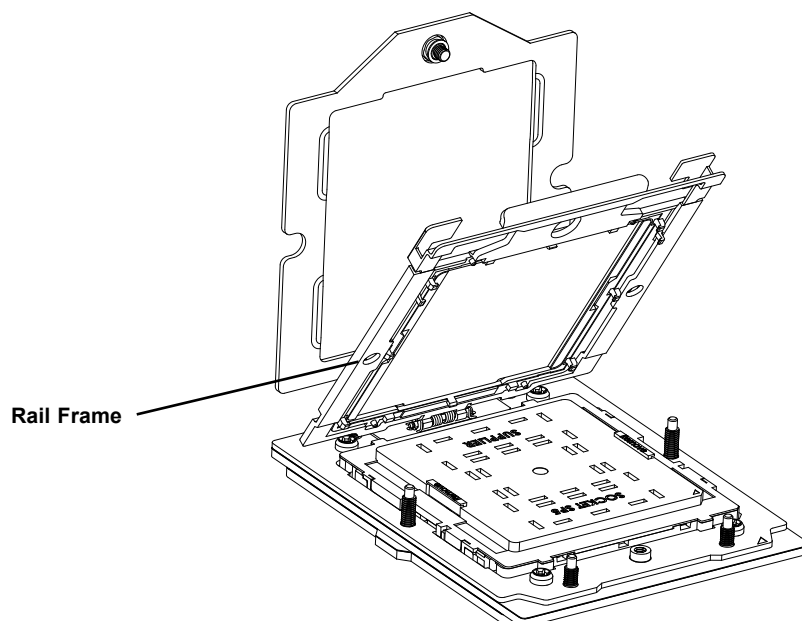
Rail Frame

4. Remove the external cap from the rail frame by pulling it upwards through the rail guides on the rail frame.

External Cap
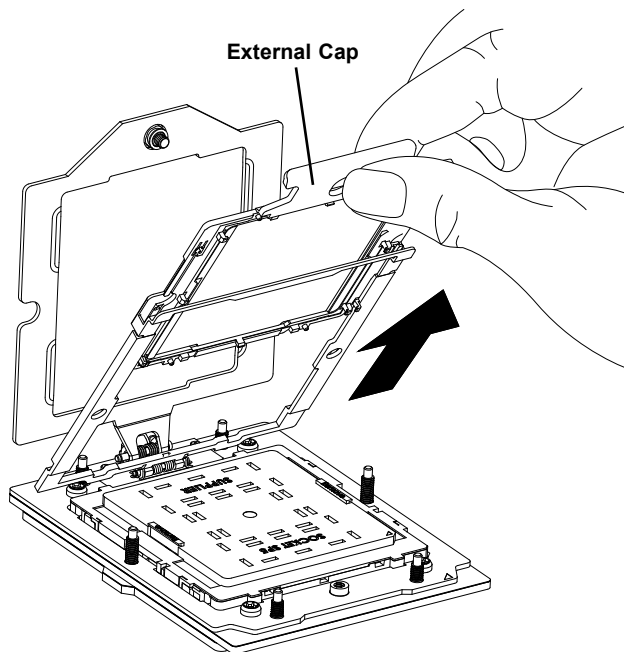
5. The CPU package is shipped from the factory with the carrier frame pre-assembled. Grip the handle of the carrier frame/CPU package assembly from its shipping tray, and while gripping the handle, align the flanges of the carrier frame onto the rails of the rail frame so its pins will be at the bottom when the rail frame is lowered later.

6. Slide the carrier frame/CPU package downwards to the bottom of the rail frame. Ensure the flanges are secure on the rails as you lower it downwards.

Carrier Frame/ CPU Package

PnP Cover Cap
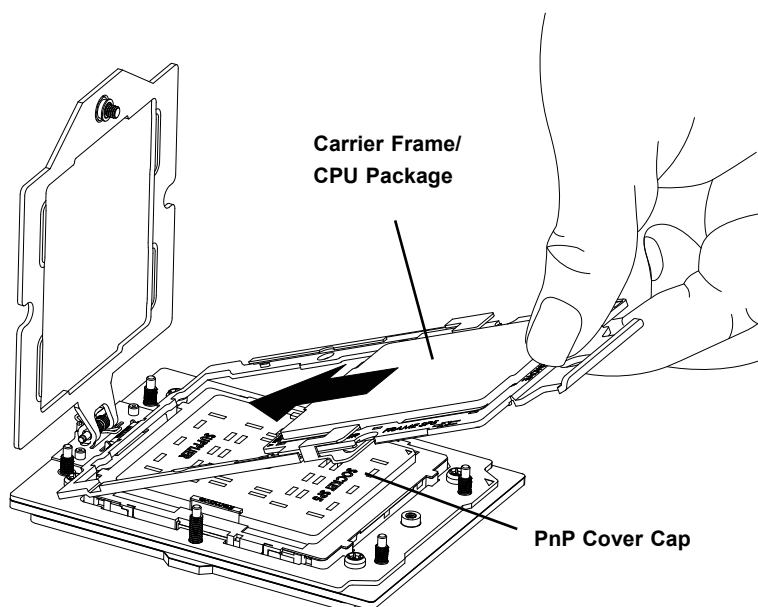
Note: You can only install the CPU inside the socket in one direction with the handle at the top. Make sure that it is properly inserted into the CPU socket before closing the rail frame plate. If it doesn't close properly, do not force it as it may damage your CPU. Instead, open the rail frame plate again, and double-check that the CPU is aligned properly.

7. Lift up the rail frame till it securely rests in upright position. Then remove the PnP cover cap from the CPU socket below. Grip the two lift tabs marked "Remove" at the middle of the cap and pull vertically upwards to remove the PnP cover cap.
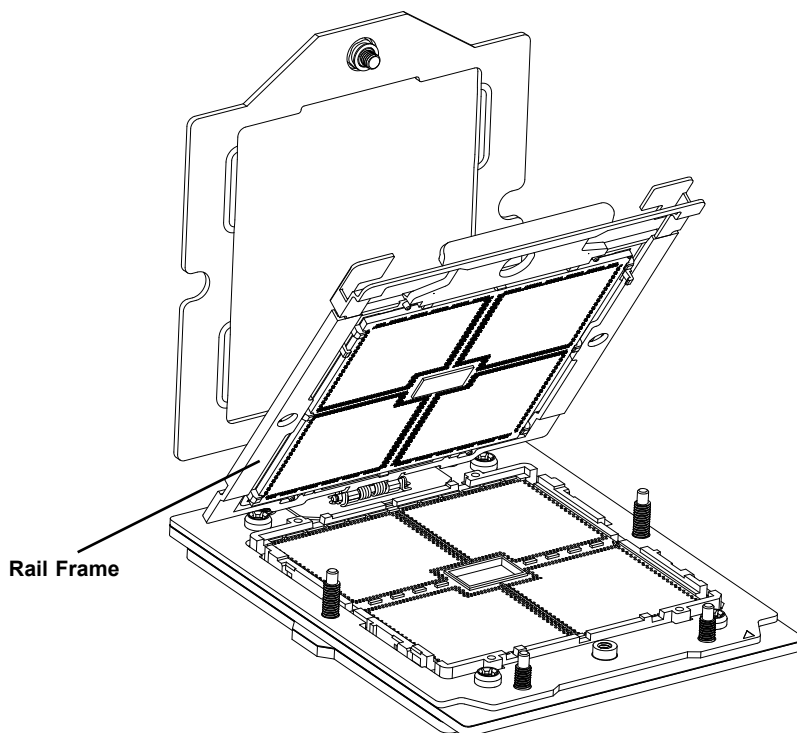
Rail Frame

Important: The exposed socket contacts are extremely vulnerable and can be damaged easily. Do not touch or drop objects onto the contacts and be careful removing the PnP cover cap and when placing the rail frame over the socket.

8. Gently lower the rail frame down onto the socket until the latches on the rail frame engage with the socket housing and it rests in place. DO NOT force it into place!
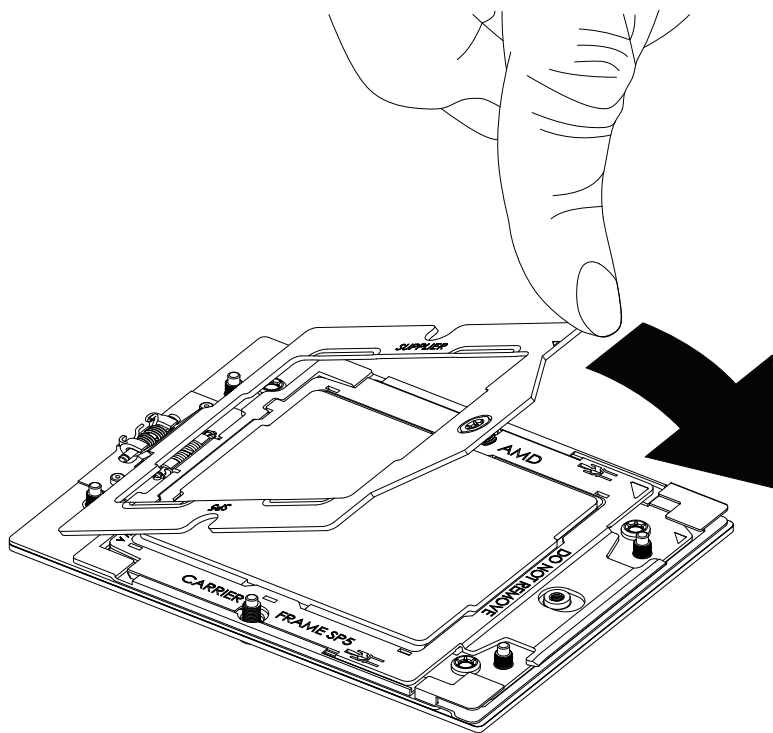
9. The force frame is spring loaded and has to be held in place before it is secured. **Important: Use a torque screwdriver, set it at 12.5~15.0 kgfcm (10.85~13.01 lbf-in) with a Torx T20 screw head bit, to prevent damage to the CPU.**
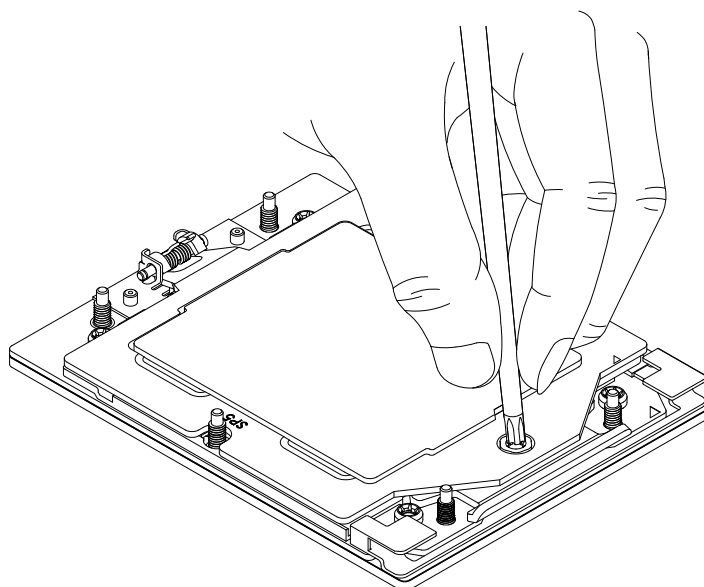
10. Place and re-screw the screw in the middle to the way you removed it. When finished, the force frame will be secure over both the rail frame and CPU package.
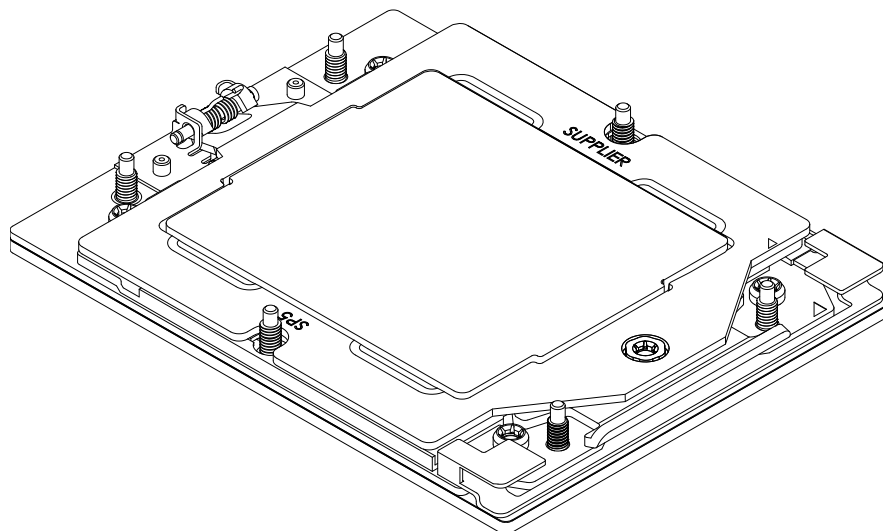
11. After the force frame is secured and the CPU package is in place, now you must install the heatsink to the frame. Lower the heatsink down till it rests securely over the six screw holes on CPU package on the socket frame.
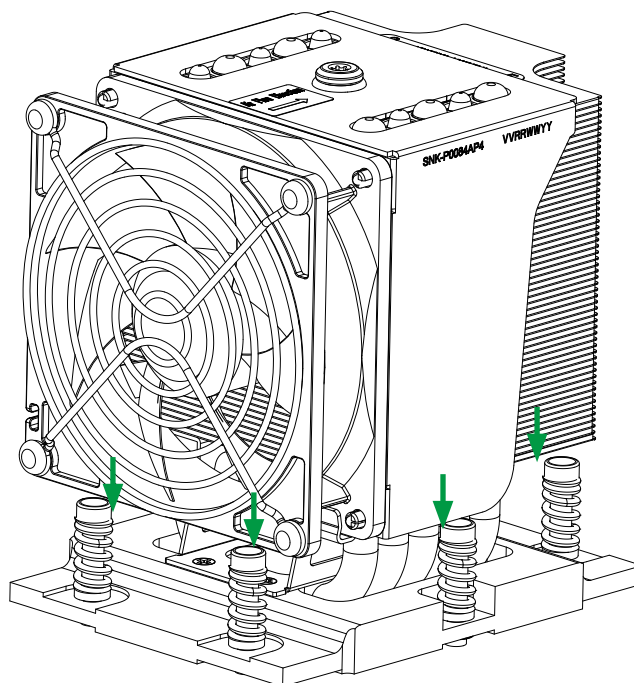
12. Using a diagonal pattern, tighten the six screws down on the heatsink in a clockwise fashion till it is secure. The heatsink will now be secured and you have finished installing the processor and heatsink onto the motherboard. Repeat this procedure for any remaining CPU sockets on the motherboard.
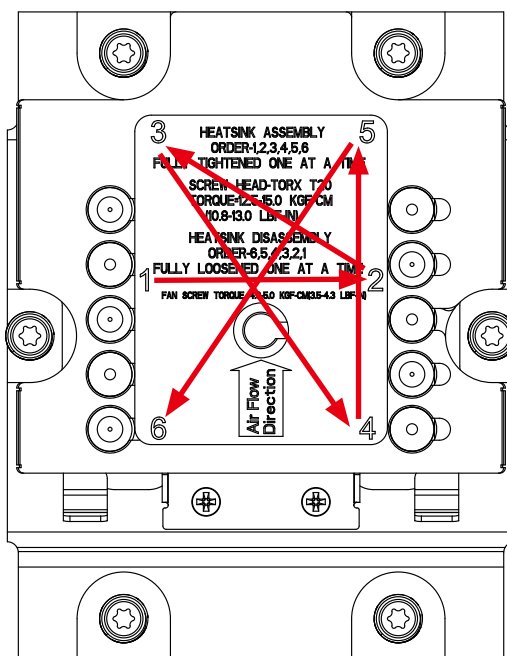
Un-installing the Processor and Heatsink

1. Remove the heatsink attached to the top of the CPU package by reversing the installation procedure.

2. Clean the thermal grease left by the heatsink on the CPU package lid to limit the risk of it contaminating the CPU package land pads or contacts in the socket housing.

3. Unscrewing the plate and lift the force frame to the vertical position.

4. Lift the rail frame using the lift tabs near the front end of the rail frame. Note that the rail frame is spring loaded, so be careful lifting it up into a vertical position.

5. Grip the handle of the carrier frame and pull upwards to extract it from the rail frame. Return the carrier frame/CPU package to its original shipping container.

6. Grip the handle on the external cap and return it to the rail frame sliding it downwards till it rests in the frame.

7. Gripping the rail frame, rotate it downwards till it rests above and locks over the socket housing in its horizontal position.

8. Push and rotate down the force frame till it is over the external cap and rail frame into a horizontal position.

9. While holding down the force frame, secure it back to the socket frame by securing screw #1 in place.

3.4 Memory 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

The H13DSG-O-CPU-D-P supports up to 6 TB of ECC DDR5 4800 MT/s speed, RDIMM/LRDIMM/3DS memory in 24 slots. Refer to the table below for additional memory information.

Note: Check the Supermicro website for possible updates to memory support.

DIMM Population Guide													
Type		**Channel**											
		F1	**E1**	**D1**	**C1**	**B1**	**A1**	**G1**	**H1**	**I1**	**J1**	**K1**	**L1**
2 CPUs & 16 DIMMs	CPU1		V		V	V	V	V	V	V		V	
	CPU2		V		V	V	V	V	V	V		V	
2 CPUs & 24 DIMMs	CPU1	V	V	V	V	V	V	V	V	V	V	V	V
	CPU2	V	V	V	V	V	V	V	V	V	V	V	V

Populating RDIMM/RDIMM 3DS DDR5 Memory Modules with AMD EPYC™ 9004 series Processor				
Type	**DIMM Population**	**Maximum DIMM Capacity**		**Maximum Frequency (MT/s)**
	DIMM1	**1 Channel**	**12 Channels**	
RDIMM	1R (1 rank)	32 GB	384 GB	4800
	2R (2 ranks)	64 GB	768 GB	4800
3DS RDIMM	2S2R (4 ranks)	128 GB	1.5 TB	4800
	2S4R (8 ranks)	256 GB	3 TB	4800

DIMM Module Population Sequence

- It is recommended that DDR5 DIMM modules of the same type, size and speed should be installed.

- The motherboard will support odd-numbered modules (1 or 3 modules installed). However, to achieve the best memory performance, fully populate the motherboard with validated memory modules.
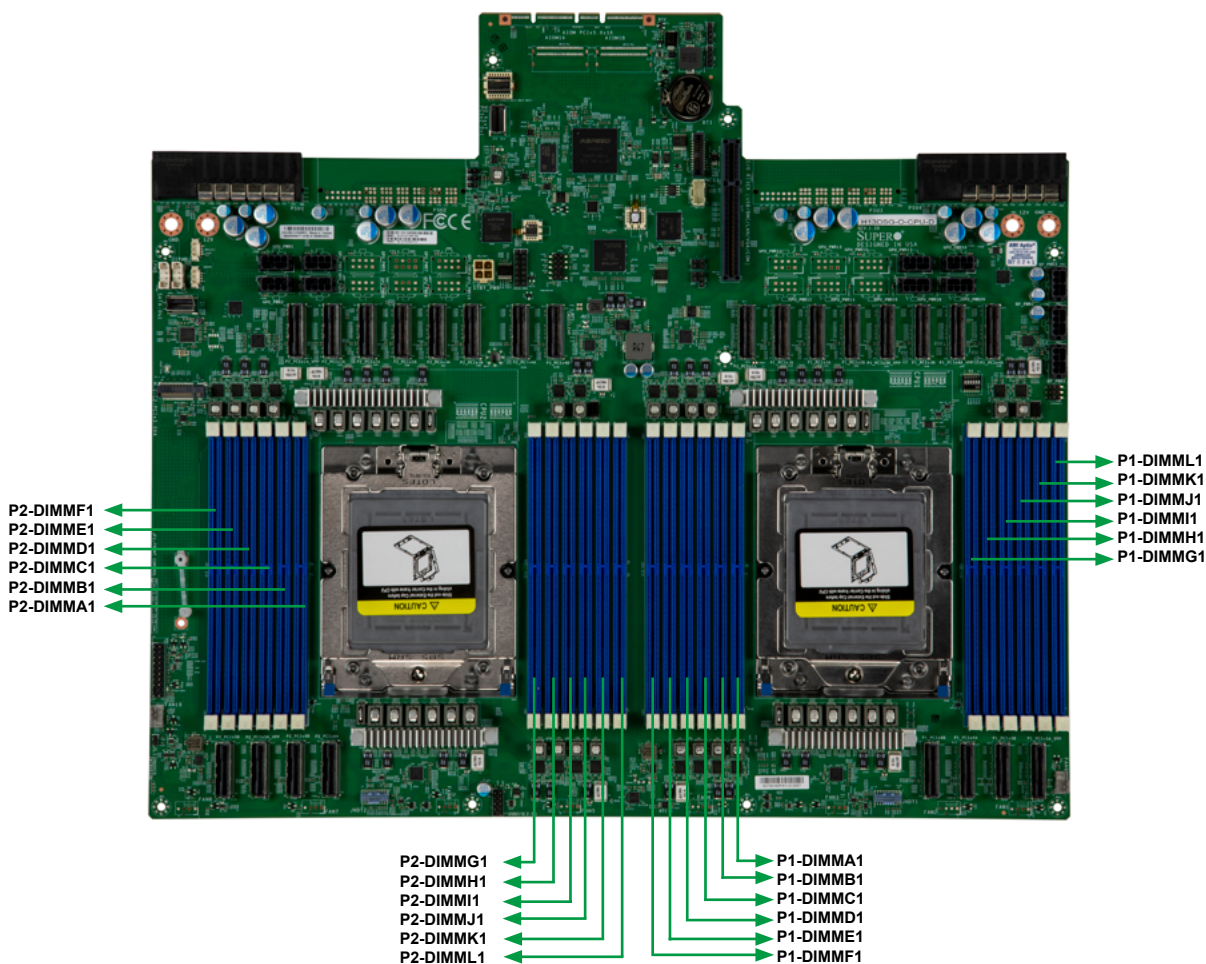
Figure 3-4. DIMM Numbering

DIMM Installation

1. Insert the desired number of DIMMs into the memory slots, see Memory Support for details on momory population guidelines.

2. Push the release tabs outwards on both ends of the DIMM slot to unlock it.

3. Align the key of the DIMM module with the receptive point on the memory slot.

4. Align the notches on both ends of the module against the receptive points on the ends of the slot.

5. Press both ends of the module straight down into the slot until the module snaps into place.

6. Press the release tabs to the lock positions to secure the DIMM module into the slot.
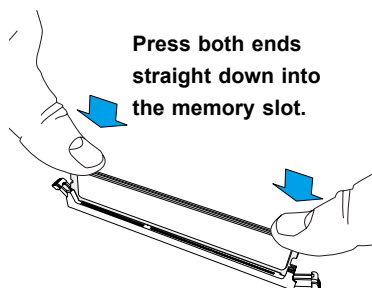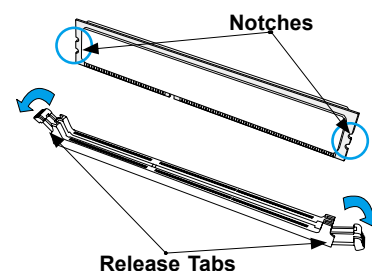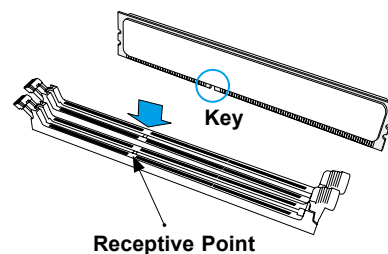
DIMM Removal

Press both release tabs on the ends of the DIMM module to unlock it. Once the DIMM module is loosened, remove it from the memory slot.

Key

Receptive Point

Notches

Release Tabs

Press both ends straight down into the memory slot.

3.5 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.

Battery Removal

Batery 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. Using 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

Important: 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

1. To install an onboard battery, follow the steps 1 & 2 above and continue below:

2. Identify the battery's polarity. The positive (+) side should be facing up.

3. Insert the battery into the battery holder and push it down until you hear a click to ensure that the battery is securely locked.

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

LITHIUM BATTERY

BATTERY HOLDER
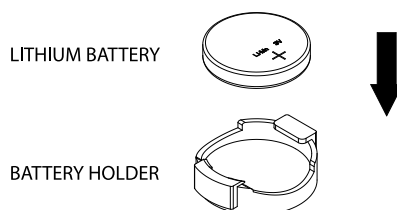
Figure 3-5. Installing the Onboard Battery

3.6 Storage Drives

The system supports sixteen 2.5" NVMe storage drives and eight 2.5" SATA storage drives. The drives are mounted in tool-less drive carriers that simplify their removal from the chassis. These carriers also help promote proper airflow. Drive carrier status indicators are described in Section 1.2.

Note: Enterprise level storage disk drives are recommended for use in Supermicro servers. For compatible storage drives, see the system web page.

Installing Hot-Swap Drives

Figure 3-6. Logical Drive Numbers

Logical Storage Drive Numbers	
Drive Bay	**Description**
0 to 11	Twelve 2.5" hot-swap NVMe drive bays (default)
12 to 15	Four 2.5" hot-swap NVMe drive bays (optional)
16 to 17	Two 2.5" hot-swap SATA drive bays (default)

To install drives, first remove the drive carrier from the system.

Removing a Hot-Swap Drive Carrier

1. Press the release button on the drive carrier, which will extend the drive carrier handle.

2. Use the drive carrier handle to pull the drive out of the chassis.

Release Button
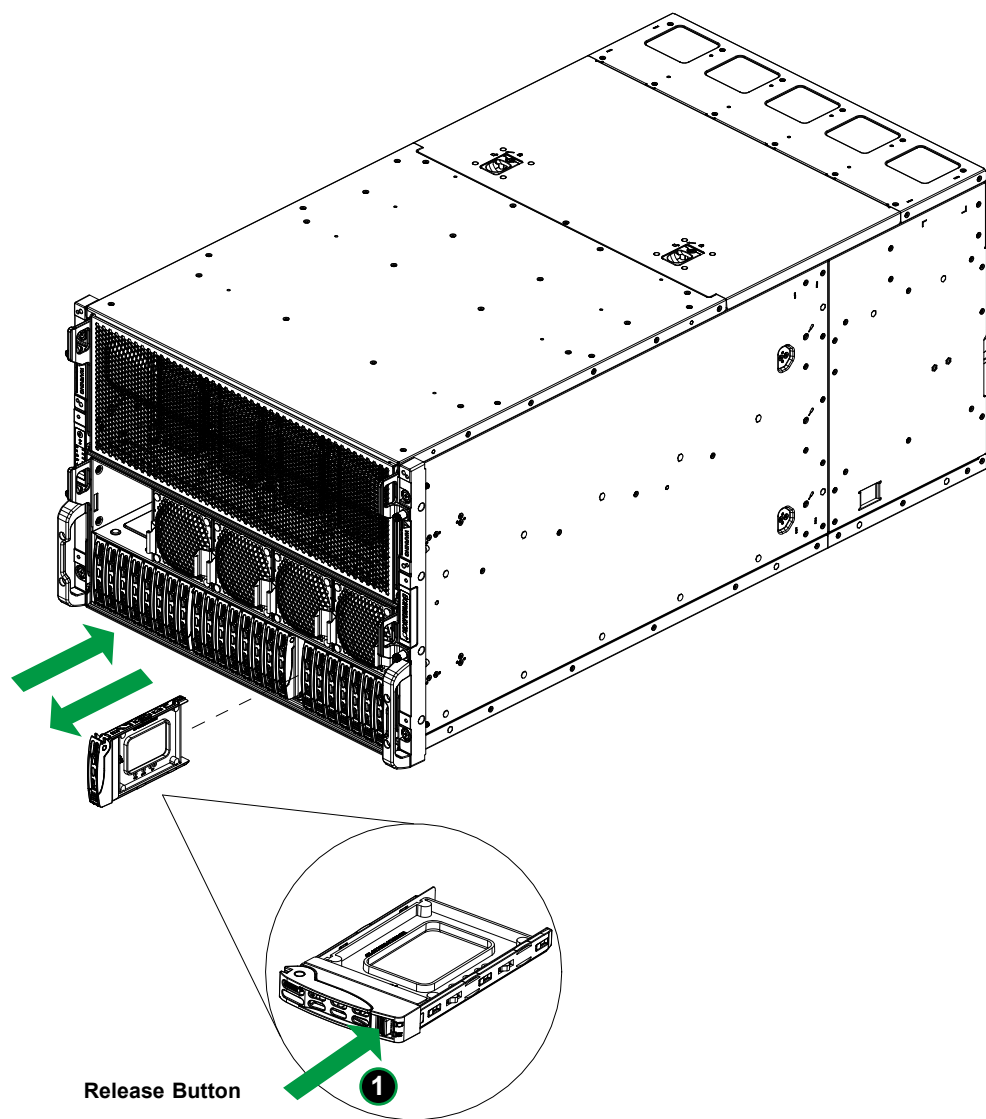
Figure 3-7. Removing a Drive Carrier

Important: Except for short periods of time (swapping drives), do not operate the server with the drive carriers removed from the bays, regardless of how many drives are installed, for proper airflow.

Installing a Drive

1. Remove the dummy drive, which comes pre-installed in the drive carrier. Pull out the two locking clasps on the left outside of the carrier and lift out the dummy drive.

2. Position the drive above the carrier with the PCB side facing down and the connector end toward the rear of the carrier.
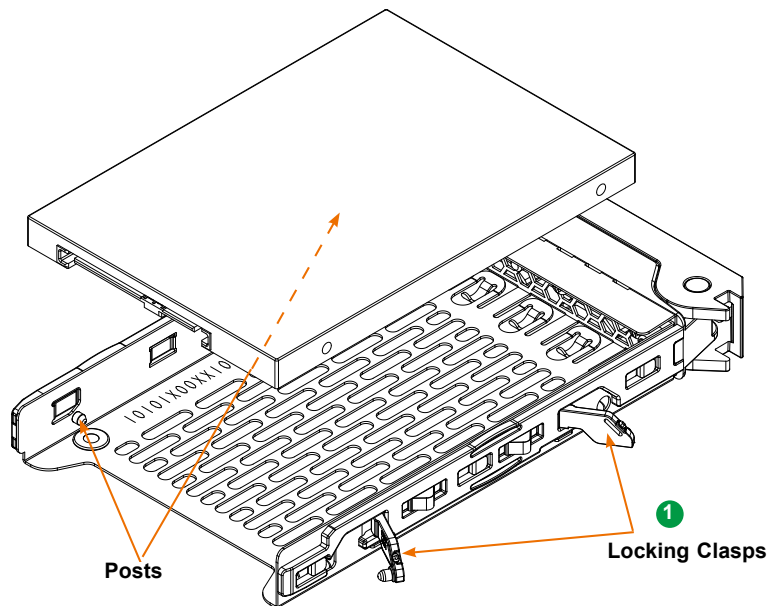
Figure 3-8. Installing a Drive into a Carrier

3. Tilt the drive to insert it onto the two posts on the right inside of the carrier.

4. Pull out the two spring locking clasps and allow the drive to sit fully in the carrier, then close them to secure the drive.

5. Insert the drive carrier into its bay, keeping the release button on the right. When the carrier reaches the rear of the bay, the release handle will retract.

6. Push the handle in until it clicks into its locked position.

Hot-Swap for NVMe Drives

Supermicro servers support NVMe surprise hot-swap. For even better data security, NVMe orderly hot-swap is recommended. NVMe drives can be ejected and replaced remotely using BMC.

Ejecting a Drive

1. **BMC Dashboard > Server Health > NVMe SSD**

2. Select Device, Group and Slot, and click **Eject**. After ejecting, the drive Status LED indicator turns green.

3. Remove the drive.

Note that Device and Group are categorized by the CPLD design architecture.

Slot is the slot number on which the NVMe drives are mounted.
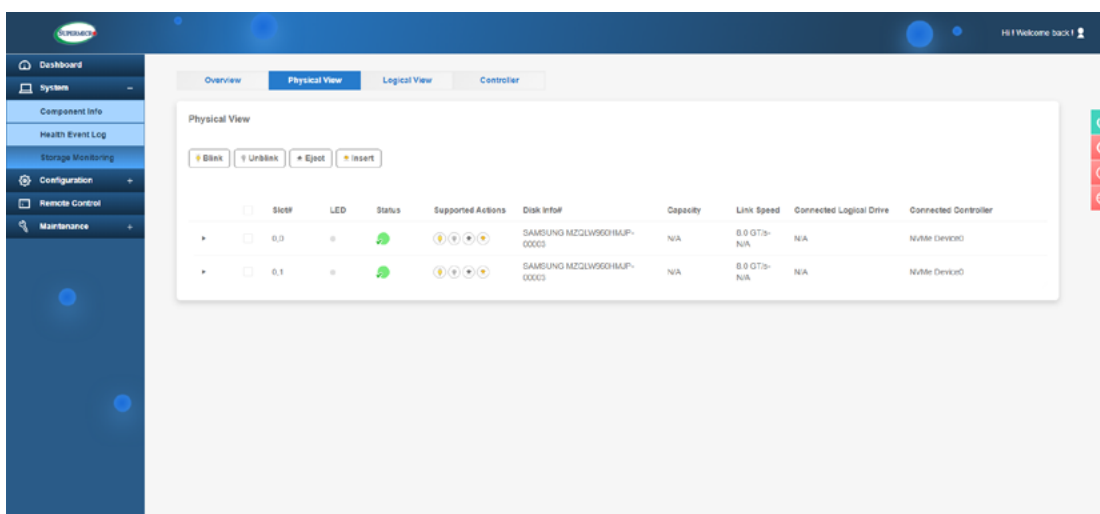
Figure 3-9. BMC Dashboard Screenshot

Replacing the Drive

1. Insert the replacement drive.

2. **BMC Dashboard > Server Health > NVMe SSD**

3. Select Device, Group and slot and click **Insert**. The drive Status LED indicator flashes red, then turns off. The Activity LED turns blue.

Checking the Temperature of an NVMe Drive

There are two ways to check using the BMC Dashboard.

Checking a Drive

- **BMC Dashboard > Server Health > NVMe SSD** – Shows the temperatures of all NVMe drives.

- **BMC Dashboard > Server Health > Sensor Reading > NVME_SSD** – Shows the single highest temperature among all the NVMe drives.

3.7 System Cooling

Multiple 8-cm fans provide the cooling for the system. Fans may be replaced while the system continues to operate. Cooling is aided by louvers in the chassis that help prevent expelled hot air from returning into the chassis.

Changing a System Fan

To replace fans in the chassis front, or on the top row of the chassis rear. The logical fan numbering is shown in Chapter 1.

1. Determine which fan is failing. If possible, use the BMC.

2. Push the metal release latches on each side of the fan, and pull the fan out.

3. Place the replacement fan into the vacant space. Push until the latches click and the fan is secure.
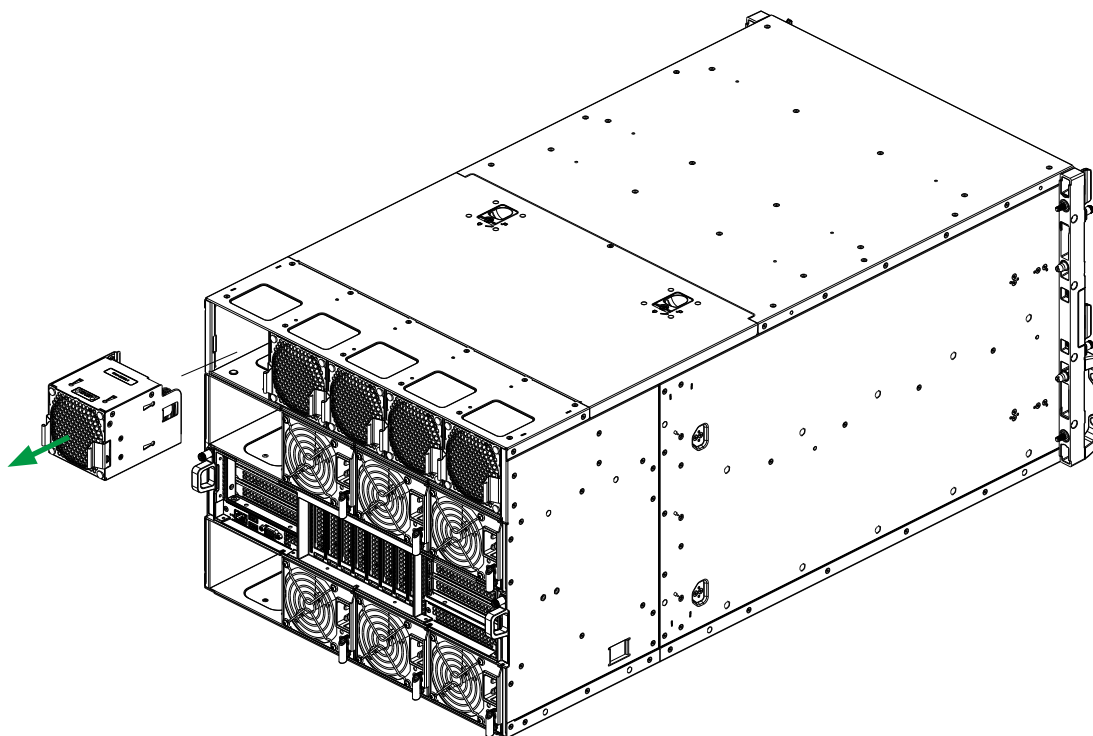
Figure 3-10. Replacing the Fans

Note: To replace a power supply/fan combination, see the Power Supply section.

Motherboard Air Shroud

The air shroud system concentrates airflow to maximize fan efficiency. It is installed on the motherboard tray around the CPU heatsinks, and above the DIMMs.
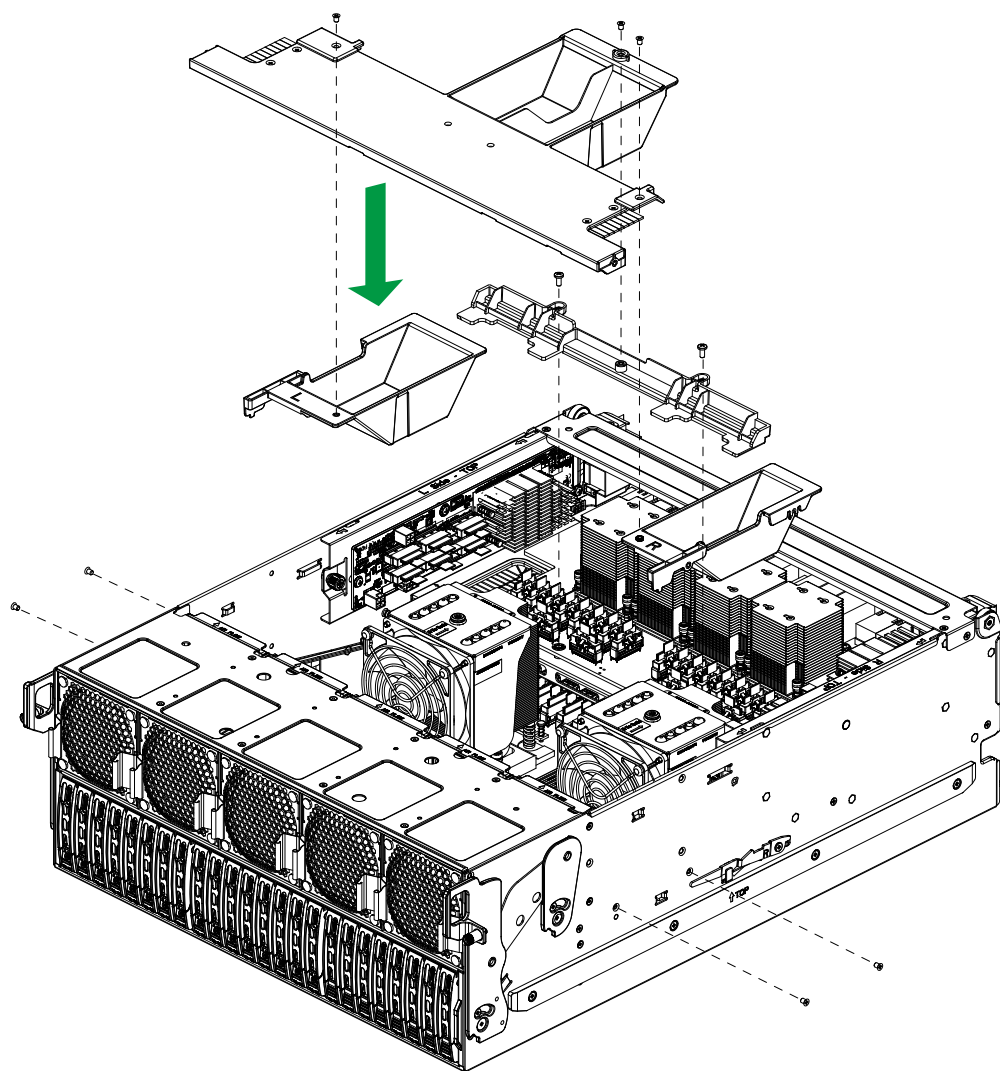
Figure 3-11. Installing the Motherboard Air Shrouds

GPU Air Blockers

Two metal GPU air blockers fit along the sides of the GPU tray to concentrate the airflow.
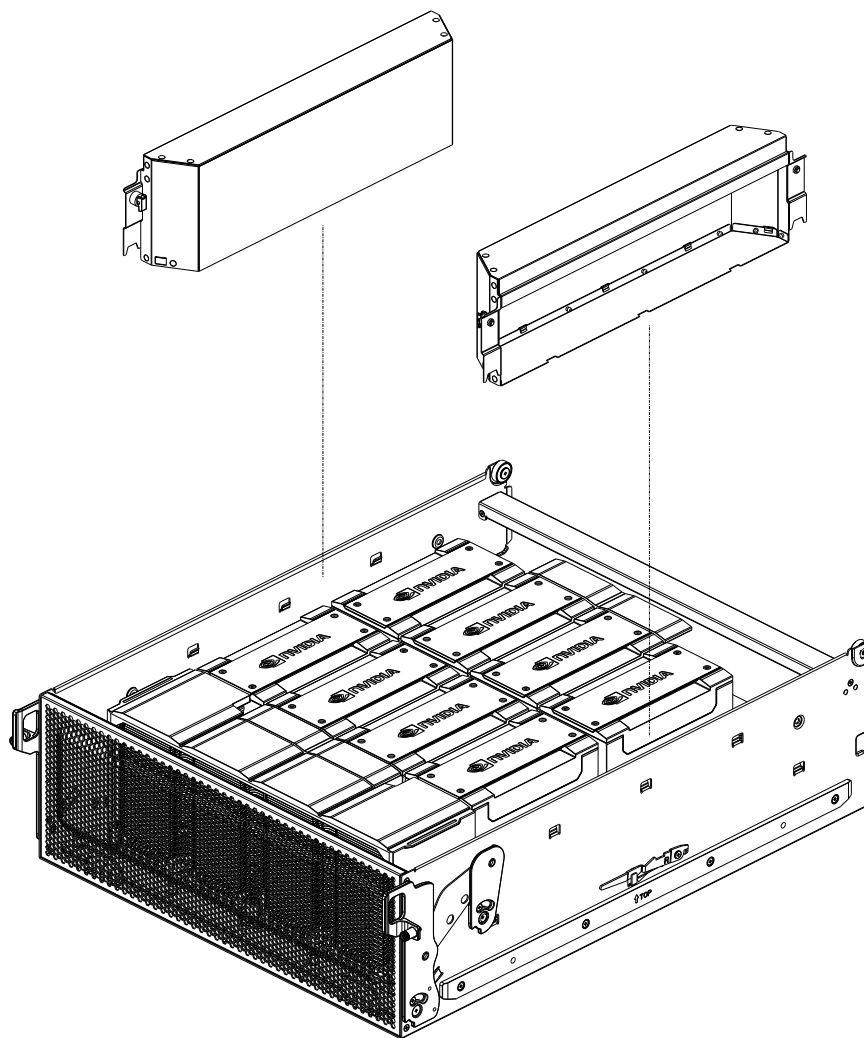
Figure 3-12. Installing the GPU Air Blockers

3.8 Power Supply

The chassis features redundant power supplies. The power modules can be changed without powering down the system, but only up to the redundancy supported. Standard configuration supports 3 + 3 redundancy. Up to three modules can be offline for service, although that is not recommended. New units can be ordered directly from Supermicro or authorized distributors. These power supplies are auto-switching capable. This feature enables them to automatically sense the input voltage and operate at a 100-120 V or 180-240 V.

Power Supply LEDs

On the rear of the power supply module, an LED displays the status.

Power Supply Indicator	
LED Color and State	**Power Supply Condition**
Solid Green	Indicates that the power supply is on and working
Blinking Green	Indicates the system is off
Solid Amber	Indicates failure or needs attention
Off	No AC power to module

Replacing the Power Supply

The logical power supply module numbering is shown in Chapter 1.

1. Unplug the AC cord from the module to be replaced.

2. Pull the release handle on the back of the power supply as illustrated.

3. Pull the power supply out using the handle.

4. Replace the failed power module with the same model.

5. Push the new power supply module into the power bay until it clicks.

6. Plug the AC power cord back into the module.
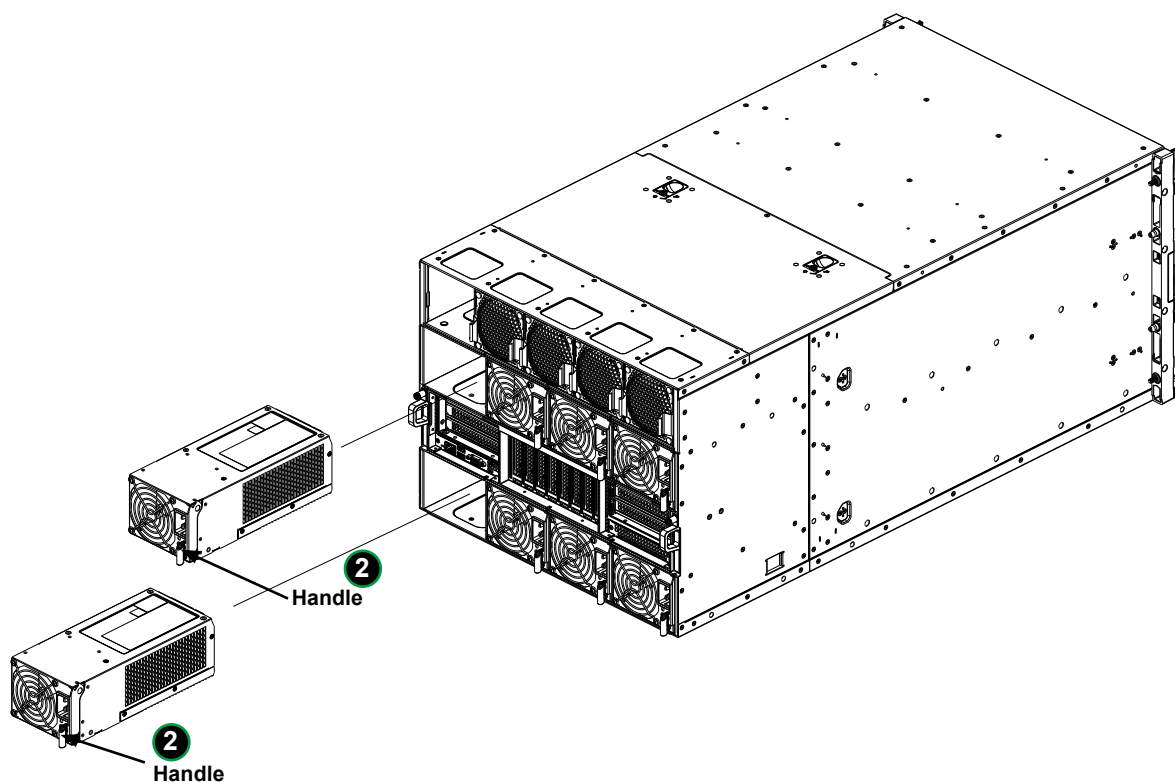
Figure 3-13. Installing a Power Supply Module

3.9 PCIe Expansion Cards

The system can accommodate 12 PCIe cards.

CPU1 **CPU2**

Figure 3-14. Expansion Cards

Slot	Description	Slot	Description
Exapnsion Slot Locations			
1	PCIe 5.0 x16 (LP) from PLX switch to GPUs	7	PCIe 5.0 x16 (LP) from PLX switch to GPUs
2	PCIe 5.0 x16 (LP) from PLX switch to GPUs	8	PCIe 5.0 x16 (LP) from PLX switch to GPUs
3	PCIe 5.0 x16 (LP) from PLX switch to GPUs	9	PCIe 5.0 x16 (FHFL)
4	PCIe 5.0 x16 (LP) from PLX switch to GPUs	10	PCIe 5.0 x16 (FHFL)
5	PCIe 5.0 x16 (LP) from PLX switch to GPUs	11	PCIe 5.0 x16 (FHFL) (optional)
6	PCIe 5.0 x16 (LP) from PLX switch to GPUs	12	PCIe 5.0 x16 (FHFL) (optional)

Installing Expansion Cards (1-8)

1. Power down the system and pull out the PCIe expansion tray as described in Section 3.2.

2. In the front of the carrier, remove the blank PCI shield that covers the chassis slot.

3. Slide the expansion card into the PCIe slot on the PCIe expansion tray floor while aligning the bracket with the chassis. It may be helpful to remove one of the riser card brackets to allow room to work (see next subsection).

4. Push the PCIe expansion tray into the chassis.

PCIe Expansion Tray
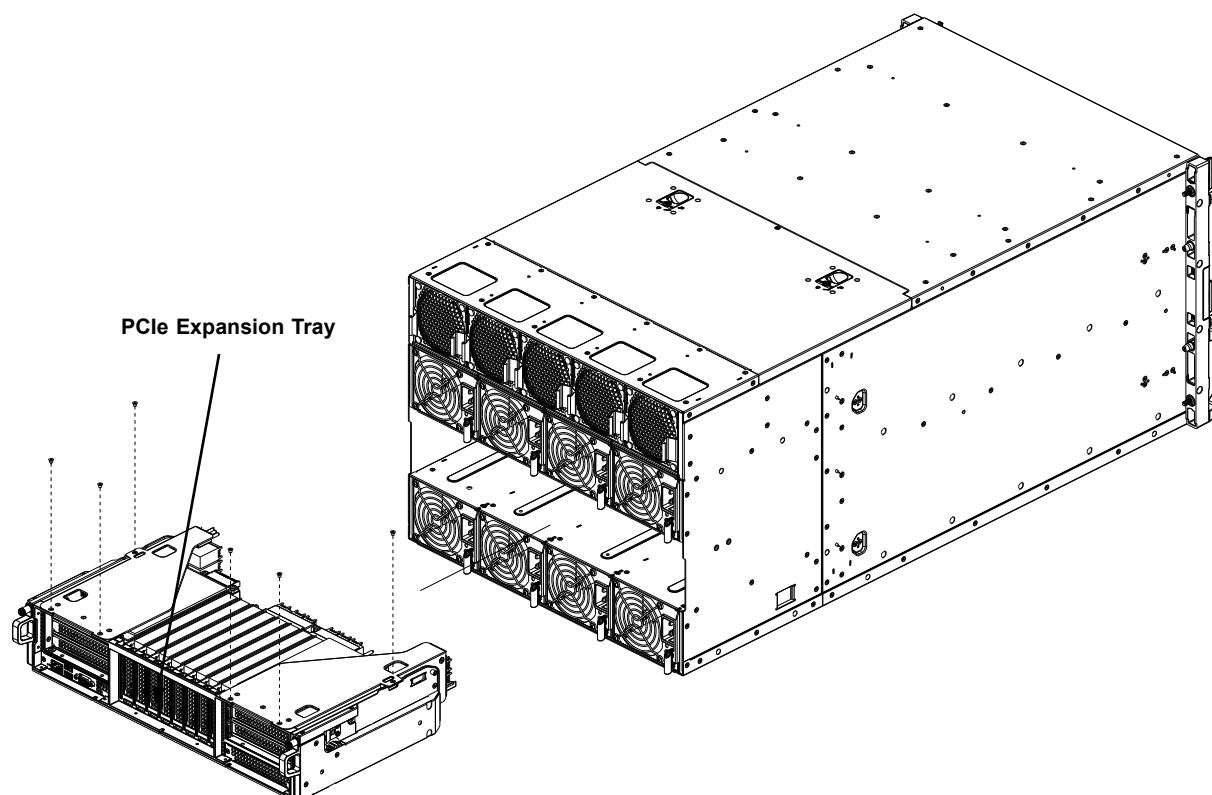
Figure 3-15. Adding Expansion Card (1-8)

Installing Riser Expansion Cards (9-12)

Expansion cards can be added in slots 9 -12 by means of riser cards mounted on riser card brackets as shown below.

1. Power down the system and remove the PCIe tray as described in Section 3.2.

2. Unscrew (four screws for each) and remove the riser card bracket for the slots you want to use.

Riser Card Brackets

4th Screw Hole
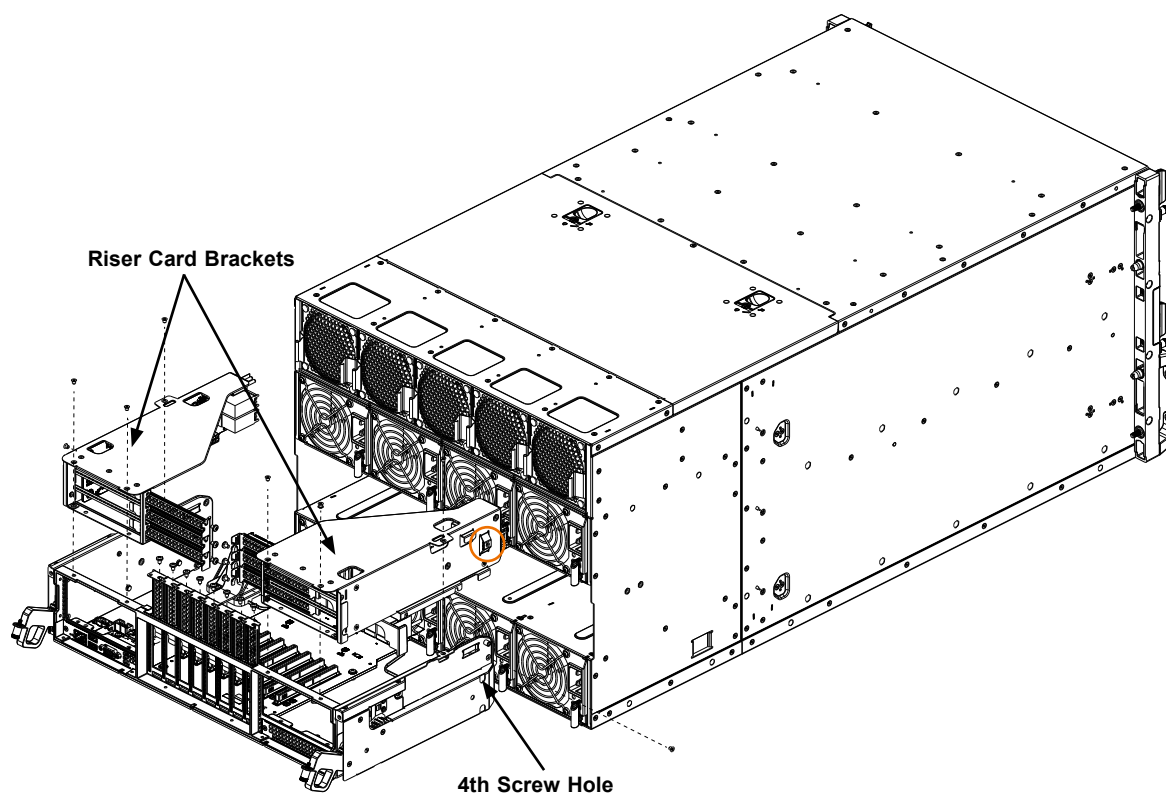
Figure 3-16. Removing Riser Card Brackets and Shields
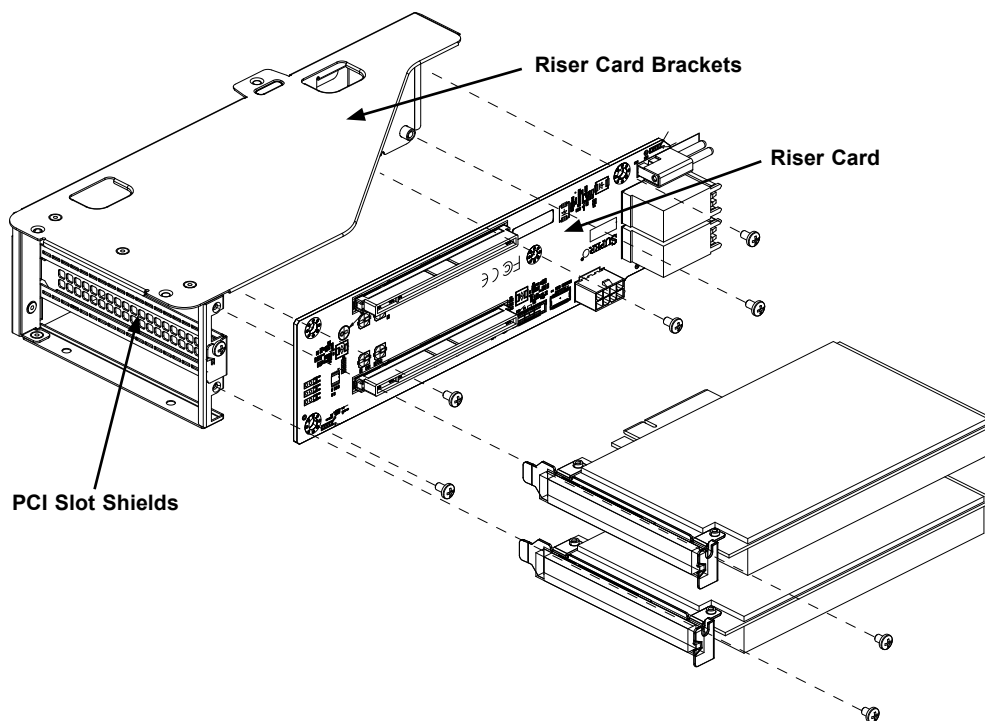
Figure 3-17. Riser Card Brackets and Shields

3. Remove the blank PCI shield that covers the bracket slot.

4. Slide the expansion cards into the slots on the riser card while aligning the shields with the bracket.

5. Return the brackets to the PCIe tray and the PCIe tray into the chassis.

Backplane Slot Assignments

Slot 0-11: Default NVMe   Slot 12-15: Optional NVMe

Slot 16-17: Default SATA
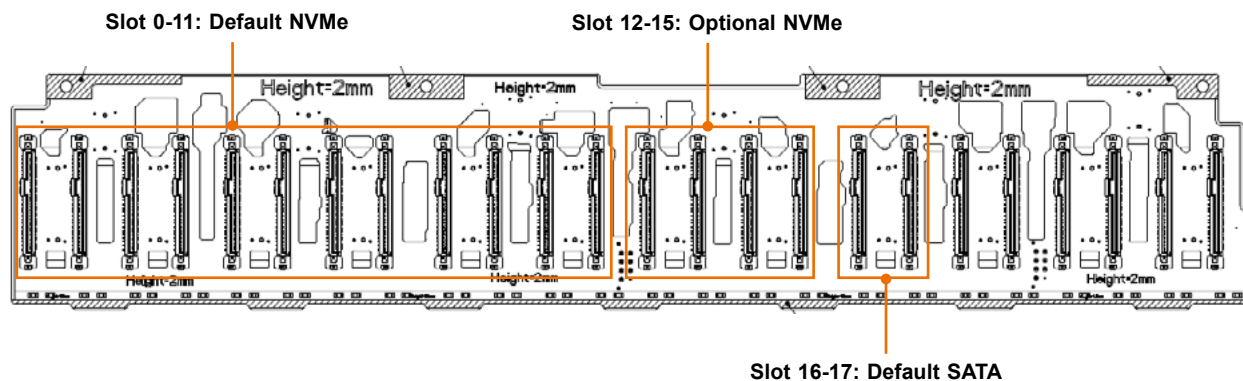
**Figure 3-18. Front View Slot Ordering Left to Right
Backplane BPN-NVME5-HS219N-S24**

Slot 16-17: Default SATA

Slot 12-15: Optional NVMe   Slot 0-11: Default NVMe
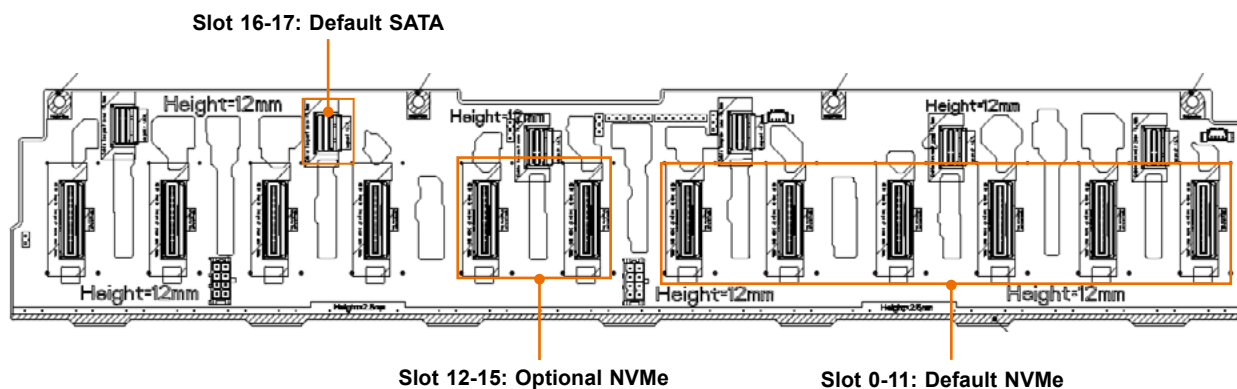
**Figure 3-19. Rear View Port Ordering Right to Left
Backplane BPN-NVME5-HS219N-S24**

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.

Please review the Safety Precautions in Appendix A before installing or removing components.

4.1 Power Connectors

Power Supply Connectors

JPW1~JPW4 are the 12 V power sources for the H13DSG-O-CPU-D-P motherboard.

Backplane 12V 8-pin Power Connectors

BP_PWR1, BP_PWR2, and BP_PWR3 are 8-pin 12 VDC power inputs for the system's backplane. Refer to the table below for pin definitions.

Backplane 8-pin Power Pin Definitions			
Pin#	Definition	Pin#	Definition
1	Ground	5	+12 V
2	Ground	6	+12 V
3	Ground	7	+12 V
4	Ground	8	+12 V

GPU 12V 8-pin Power Connectors

GPUPWR1~GPUPWR4 and GPUPWR17~GPUPWR20 are 8-pin 12 VDC power inputs for GPUs that are installed in the system's PCIe slots. Refer to the table below for pin definitions.

GPU 8-pin Power Pin Definitions			
Pin#	Definition	Pin#	Definition
1	Ground	17	+12 V
2	Ground	18	+12 V
3	Ground	19	+12 V
4	Ground	20	+12 V

Front Panel Connector (JF1)

JF1 contains various buttons and indicators that are normally located on a control panel at the front of the chassis. The JF1 connector is designed specifically for use with the Supermicro chassis.

TPM Header/Port 80 Connector

A Trusted Platform Module (TPM)/Port 80 header is located at JTPM1 to provide TPM support and Port 80 connection. Use this header to enhance system performance and data security. Refer to the table below for pin definitions. Please go to the following link for more information on the TPM: http://www.supermicro.com/manuals/other/TPM.pdf.

Trusted Platform Module 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#

SATA Ports

The H13DSG-O-CPU-D-P has two SATA 3.0 ports (SATA0~1) that are supported by ASMEDIA ASM1061.

4.2 Headers

Fan Headers

There are two fan headers on the motherboard. These are 4-pin fan headers; pins 1-3 are backward compatible with traditional 3-pin fans. The onboard fan speeds are controlled by Fan Mode in the BMC. When using Fan Mode setting, please use all 4-pin fans.

Fan Header Pin Definitions	
Pin#	**Definition**
1	Ground (Black)
2	+12 V (Red)
3	Tachometer (Yellow)
4	PWM control (Blue)

Chassis Intrusion

A Chassis Intrusion header is located at JL1 on the motherboard. Attach the appropriate cable from the chassis to the header to inform you when the chassis is opened.

Chassis Intrusion Pin Definitions	
Pin#	**Definition**
1	Intrusion Input+
2	Intrusion Input-

IPMB System Management Bus Header

A System Management Bus header for IPMI 2.0 is located at JIPMB1. Connect the appropriate cable here to use the IPMB I2C connection on your system.

IPMB Header Pin Definitions	
Pin#	**Definition**
1	Data
2	Ground
3	Clock
4	No Connection

4.3 Jumper Settings

How Jumpers Work

To modify the operation of the motherboard, jumpers are used to choose between optional settings. Jumpers create shorts between two pins to change the function associated with it. Pin 1 is identified with a square solder pad on the printed circuit board. See the motherboard layout page for jumper locations.

Note: On a two-pin jumper, "Closed" means the jumper is on both pins and "Open" indicates the jumper is either on only one pin or has been completely removed.
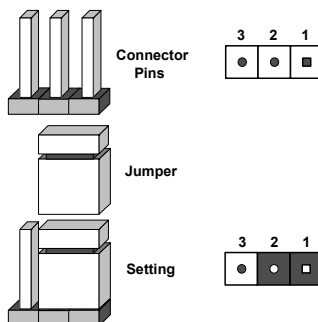
CMOS Clear

JBT1 is used to clear CMOS, which will also clear any passwords. Instead of pins, this 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.

3. Remove the onboard battery from the motherboard.

4. Short the CMOS pads with a metal object such as a small screwdriver for at least four seconds.

5. Remove the screwdriver (or shorting device).

6. Re-install the motherboard battery.

7. Replace the cover, reconnect the power cord(s) and power on the system.

Notes: Clearing CMOS will also clear all passwords.

Do not use the PW_ON connector to clear CMOS.

JBT1 contact pads

4.4 LED Indicators

UID LED Indicator (LED1)

A UID LED is located at LED1. The front UID LED is located on the front panel. When you press the UID switch, both rear LED1 and front UID LED indicators will turn on. Press the UID switch again to turn off the LED indicators. Use this UID Indicator to 'mark' the system, so the system can be easily identified whether on the front or back (e.g., a system rack with multiple units installed).

UID LEDLED Indicator		
Color	**State**	**Definition**
Blue	Solid On	Unit Identified
None	Off	UID Off

Onboard Power LED (LED6)

LED6 is an onboard power LED. When this LED is lit, it means system is in power-on state, and the onboard power status is ok. Turn off the system and unplug the power cord before removing or installing components.

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

BMC Heartbeat LED (LEDBMC1)

A BMC Heartbeat LED is located at LEDBMC1 on the motherboard. When this LED is blinking, the BMC is functioning normally. See the table below for more information.

BMC Heartbeat LED State		
Color	**State**	**Definition**
Green	Solid On	BMC is not ready.
Green	Blinking	BMC Normal
Green	Fast Blinking	BMC: Initializing

M.2 Active LEDs (LED4)

The M.2 Interface Detection LED indicate that an M.2 interface is detected, active, and working correctly.

Note: M.2 SATA devices are not supported, but these LEDs turns on (green light) when they are installed.

UID LED Status	
LED Color	**Definition**
Off	Off (Normal)
Green	On (Device active or a M.2 SATA device detected)

Chapter 5

Software

After the hardware has been installed, you can install the Operating System (OS), and install the drivers.

5.1 Microsoft Windows OS Installation

Installing the OS

1. Create a method to access the Microsoft Windows installation ISO file. That can be a USB flash or media drive.

2. Go to the Supermicro web page for your motherboard and click on "Download the Latest Drivers and Utilities", select the proper driver, and copy it to a USB flash drive.

3. Boot from a bootable device with Windows OS installation. You can see a bootable device list by pressing **<F11>** during the system startup.
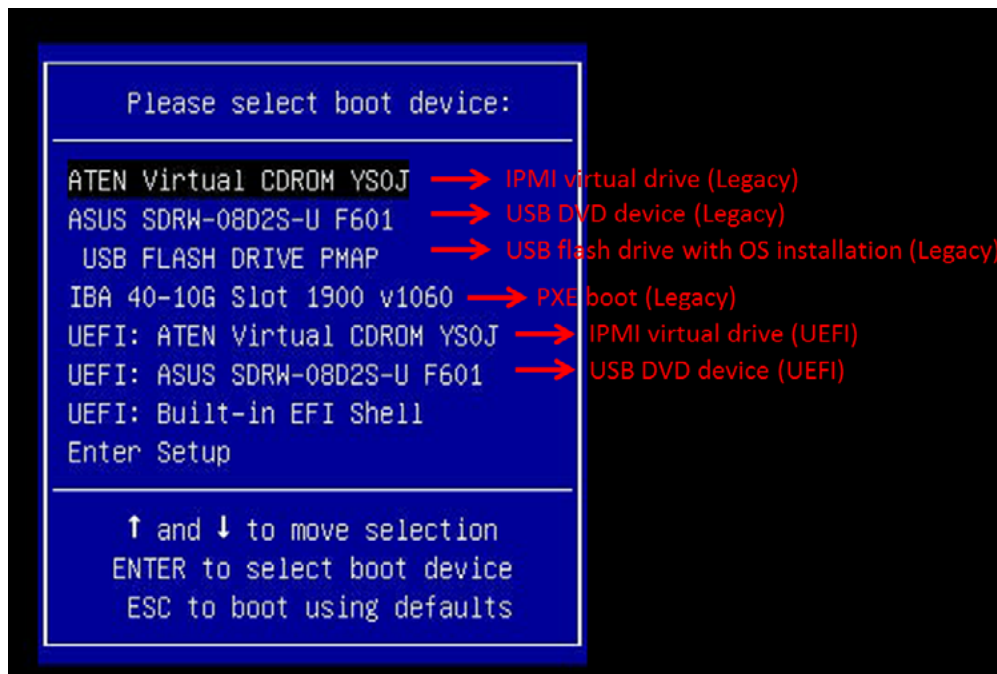
Figure 5-1. Select Boot Device

4. During Windows Setup, continue to the dialog where you select the drives on which to install Windows. If the disk you want to use is not listed, click on "Load driver" link at the bottom left corner.
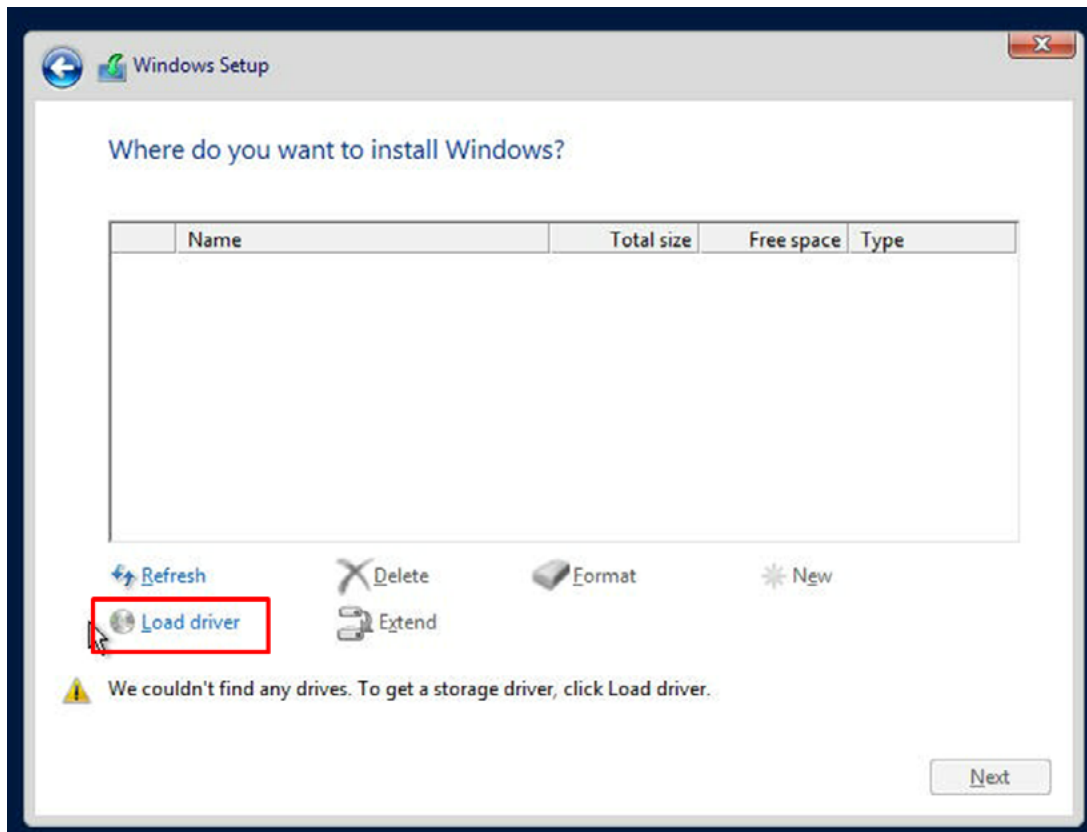
Figure 5-2. Load Driver Link

To load the driver, browse the USB flash drive for the proper driver files.

* For non-RAID, choose the SATA/sSATA AHCI driver indicated then choose the storage drive on which you want to install it.

5. Once all devices are specified, continue with the installation.

6. After the Windows OS installation has completed, the system will automatically reboot multiple times.

5.2 Driver Installation

The Supermicro website contains drivers and utilities for your system at https://www.supermicro.com/wdl/. 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.
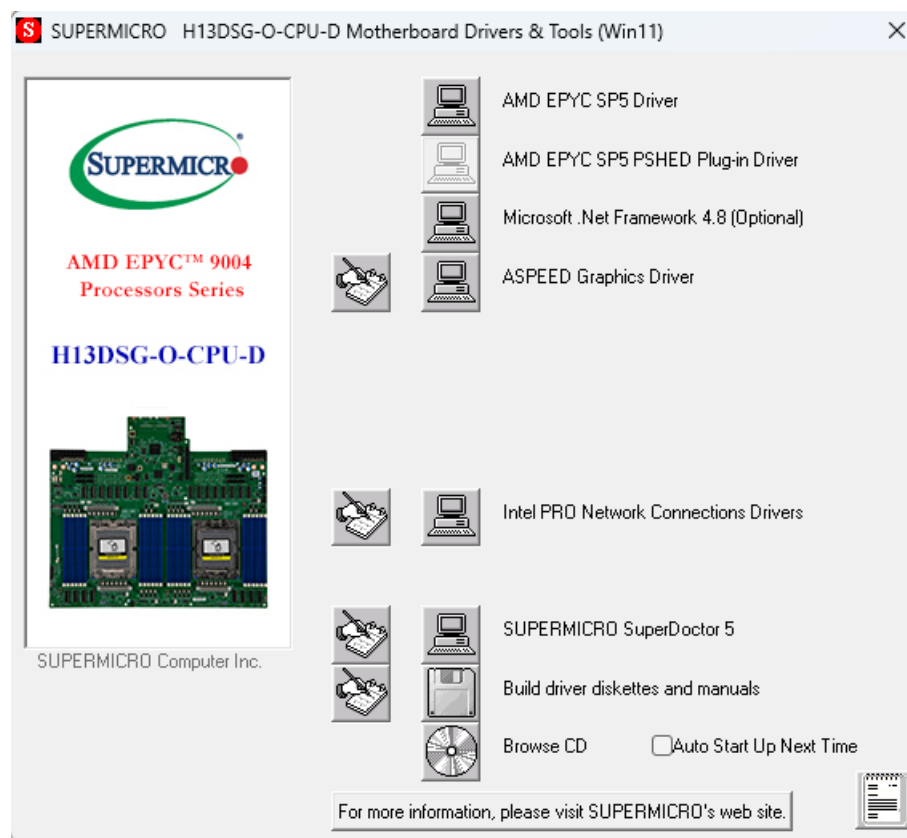
Figure 5-3. Driver & Tool Installation Screen

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.

5.3 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 or IPMI. SuperDoctor 5 Management Server monitors HTTP, FTP, and SMTP services to optimize the efficiency of your operation.

SuperDoctor® Manual and Resources

Figure 5-4. SuperDoctor 5 Interface Display Screen (Health Information)

5.4 BMC

The H13DSG-O-CPU-D-P provides remote access, monitoring and management through the baseboard management controller (BMC) and other management controllers distributed among different system modules. There are several BIOS settings that are related to BMC.

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

www.supermicro.com/en/solutions/management-software/bmc-resources

BMC ADMIN User Password

For security, each system is assigned a unique default BMC password for the ADMIN user. This can be found on a sticker on the chassis and a sticker on the motherboard. The sticker also displays the BMC MAC address.

Figure 5-5. BMC Password Label

See Chapter 1 for the locations of the labels.

Chapter 6

Optional Components

This chapter describes alternate configurations and optional system components.

Optional Parts
PWS-3K06G-2R (system can support up to eight total)
TPM security module: AOM-TPM-9670V

6.1 Storage Protocols Supported

The storage drive bays can support SATA/SAS/NVMe.

SATA – Additional cables are required.

SAS – An add-on controller card can support up to SAS (or SATA) drives. Additional cables are required.

NVMe – Additional cables are required.

6.2 TPM Security Module

SPI capable TPM 2.0 (or 1.2) with Infineon 9670 controller, vertical form factor.

The JTPM1 header is used to connect a Trusted Platform Module (TPM). A TPM is a security device that supports encryption and authentication in hard drives. It enables the motherboard to deny access if the TPM associated with the storage drive is not installed in the system.

Details and installation procedures are at:

http://www.supermicro.com/manuals/other/TPM.pdf.

• AOM-TPM-9670V

Chapter 7

Troubleshooting and Support

7.1 Information Resources

Website

A great deal of information is available on the Supermicro website.
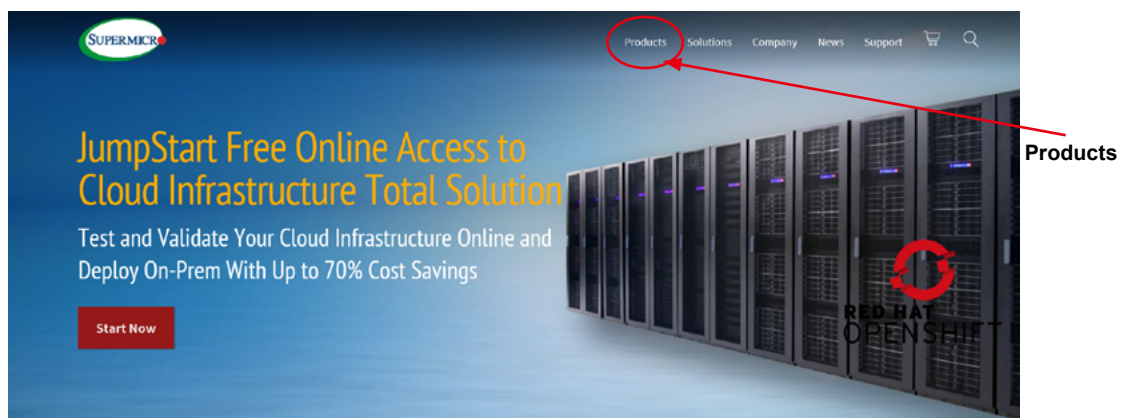
Figure 7-1. Supermicro Website

- Specifications for servers and other hardware are available by clicking the **Products** option.

- The **Support** option offers downloads (manuals, BIOS/BMC, drivers, etc.), FAQs, RMA, warranty, and other service extensions.

Direct Links for the AS -8125GS-TNHR System

Web AS -8125GS-TNHR specifications page

H13DSG-O-CPU-D-P 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

BMC User Guide

SuperDoctor5 Large Deployment Guide

For validated memory, use our Product Resources page

Direct Links (continued)

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

7.2 BMC Interface

The system supports the Baseboard Management Controller (BMC). It provides 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/manuals/other/BMC_IPMI_X13_H13.pdf
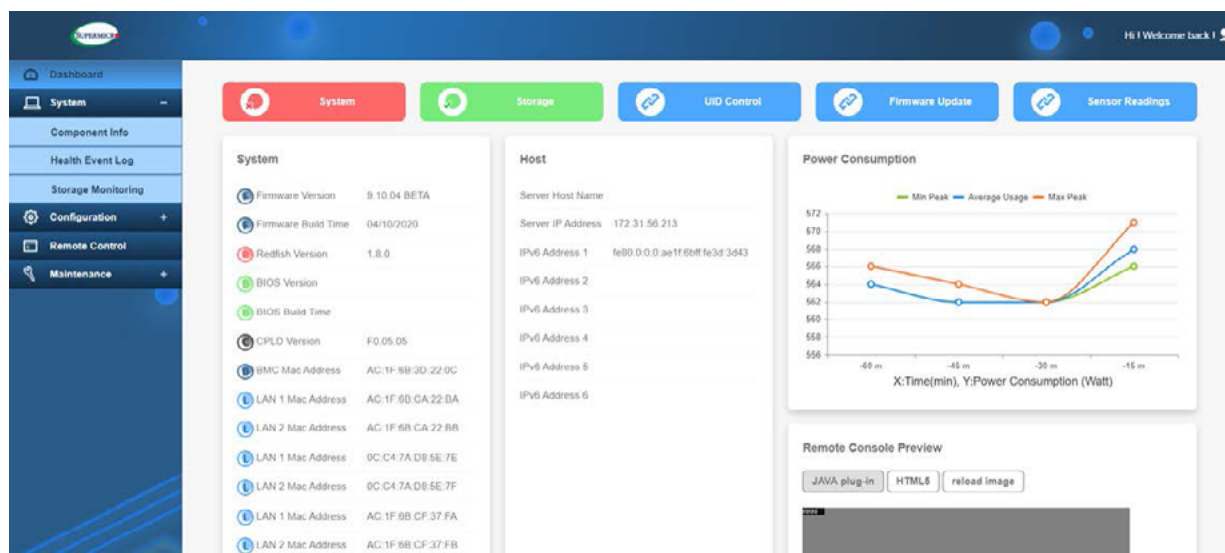
Figure 7-2. BMC Dashboard

7.3 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' and/ or 'Returning Merchandise for Service' section(s) in this chapter. <u>Always disconnect the AC power cord before adding, changing or installing any non hot-swap hardware components.</u>

Before Power On

1. Check that the BMC_HB LED is blinking before the motherboard is turned on.

2. Check that the PWROK LED on the motherboard is on.

3. Make sure that the power connector is connected to your power supply.

4. Make sure that no short circuits exist between the motherboard and chassis.

5. Disconnect all cables from the motherboard, including those for the keyboard and mouse.

6. Remove all add-on cards.

7. Install a CPU, a heatsink*, and at least one DIMM on the motherboard. Check all jumper settings properly. *Make sure that the heatsink is fully seated.

8. Use the correct type of onboard CMOS battery (CR2032) as recommended by the manufacturer. To avoid possible explosion, do not install the CMOS battery upside down.

No Power

1. Make sure that no short circuits exist between the motherboard and the chassis.

2. Verify that all jumpers are set to their default positions.

3. Check that the 115 V/230 V switch on the power supply is properly set.

4. Turn the power switch on and off to test the system

5. The CMOS battery on your motherboard may be old. Check to verify that it still supplies approximately 3 VDC. If it does not, replace it with a new one.

No Video

1. Check that the VGA cable is connected properly, and the monitor is on.

2. Check if you follow the guidelines to install the memory module (see DIMM Module Population in Chapter 3).

3. Reseat the memory DIMM module.

Note: If you are a system integrator, VAR or OEM, a POST diagnostics card is recommended.

System Boot Failure

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

1. Clear the CMOS settings by unplugging the power cord and contacting both pads on the CMOS Clear Jumper (JBT1).

2. Remove all components from the motherboard, especially the DIMM modules.

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

1. Make sure that the DIMM modules are properly and fully installed.

2. Confirm that you are using the correct memory. Also, it is recommended that you use the same memory type and speed for all DIMMs in the system. See Section 3.4 for memory details.

3. Check for bad DIMM modules or slots by swapping modules between slots and noting the results.

4. Check the power supply voltage 115 V/230 V switch.

The System Cannot Retain the Setup Configuration

1. Make sure that you are using a high-quality power supply. Always replace power supplies with the exact same model that came with the system. A poor quality power supply may cause the system to lose the CMOS setup configuration.

2. The battery on your motherboard may be old. Check to verify that it still supplies approximately 3 VDC. If it does not, replace it with a new one.

3. If the above steps do not fix the setup configuration problem, contact your vendor for repairs.

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: Refer to the product page on our website at http://www.supermicro.com for memory and CPU support and updates.

3. Storage drive support: Make sure that all storage drives work properly. Replace the failed storage drives 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 BMC 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 CD/Media drive.

2. Cable connection: Check to make sure that all cables are connected and working properly.

3. Using the minimum configuration for troubleshooting: Remove all unnecessary components (starting with add-on cards first), and use the minimum configuration (but with a CPU and a memory module installed) to identify the trouble areas. Refer to the steps listed in Section 7.3 above for proper troubleshooting procedures.

4. Identifying 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.

7.4 Technical Support Procedures

Before contacting Technical Support, please take the following steps. Also, note that as a motherboard manufacturer, we do not sell directly to end-users, so it is best to first check with your distributor or reseller for troubleshooting services. They should know of any possible problem(s) with the specific system configuration that was sold to you.

1. Please review the 'Troubleshooting Procedures' and 'Frequently Asked Questions' (FAQs) sections in this chapter or see the FAQs on our website before contacting Technical Support.

2. BIOS upgrades can be downloaded from our website.

   Note: Not all BIOS can be flashed depending on the modifications to the boot block code.

3. If you still cannot resolve the problem, include the following information when contacting us 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

An example of a Technical Support form is posted on our website.

Distributors: For immediate assistance, please have your account number ready when contacting our technical support department by e-mail.

7.5 Frequently Asked Questions

Question: What type of memory does my motherboard support?

Answer:

The H13DSG-O-CPU-D-P motherboard supports up to 6TB of ECC DDR5 4800 MT/s speed, RDIMM/LRDIMM/3DS memory in 24 slots. See Section 3.4 for details on installing memory.

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.

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. You can choose from the zip file and the .exe file. If you choose the zip BIOS file, please unzip the BIOS file onto a bootable USB device. Run the batch file using the format FLASH.BAT filename.rom from your bootable USB device to flash the BIOS. Then, your system will automatically reboot.

Question: Why can't I turn off the power using the momentary power on/off switch?

Answer: The instant power off function is controlled in BIOS by the Power Button Mode setting. When the On/Off feature is enabled, the motherboard will have instant off capabilities as long as the BIOS has control of the system. When the 4 Seconds Override feature is enabled or when the BIOS is not in control such as during memory count (the first screen that appears when the system is turned on), the momentary on/off switch must be held for more than four seconds to shutdown the system. This feature is required to implement the ACPI features on the motherboard.

7.6 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 to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton and 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, RMA authorizations may be requested online (http://www.supermicro.com/support/rma/).

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

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

7.7 System Reboot

This motherboard, intended to be used in a Supermicro GPU server, supports an innovative cooling technology, which will continue cooling down the system even after shutting down. After the system is shutdown, the power button LED on the front panel will start to blink green, indicating that the coolillng procedure is in progress. This cooling procedure will take 120 seconds to complete. When the procedure is complete, the power button LED will turn solid amber. We recommend the user to allow this cooling procedure to complete before issuing a power-on command or remocing power cable(s) from the system.

7.8 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.

3. Using 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

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

1. To install an onboard battery, follow steps 1 and 2 in the Battery Removal section and continue below:

2. Identify the battery's polarity. The positive (+) side should be facing up.

3. Insert the battery into the battery holder and push it down until you hear a click to ensure that the battery is securely locked.

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

LITHIUM BATTERY

BATTERY HOLDER

OR

LITHIUM BATTERY

BATTERY HOLDER
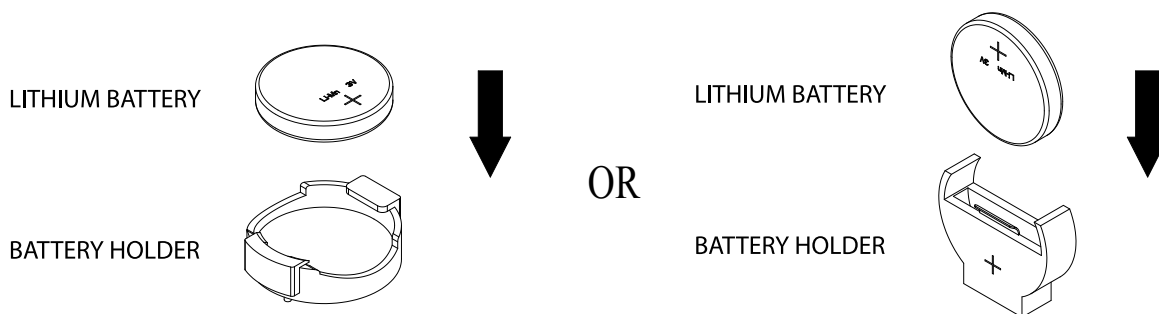
Figure 7-3. Battery Installation

7.9 Where to Get Replacement Components

If you need replacement parts for your system, to ensure the highest level of professional service and technical support, purchase exclusively from our Supermicro Authorized Distributors/System Integrators/Resellers. A list can be found at: http://www.supermicro.com/.

Click the "Where to Buy" tab.

7.10 Reporting an Issue

Technical Support Procedures

Before contacting Technical Support, please take the following steps. If your system was purchased through a distributor or reseller, please contact them for troubleshooting services. They have the best knowledge of your specific system configuration.

1. Please review the Troubleshooting Procedures in this manual and Frequently Asked Questions on our website of your specific system configuration.

2. BIOS upgrades can be downloaded from our website. **Note:** Not all BIOS can be flashed depending on the modifications to the boot block code.

3. If you still cannot resolve the problem, include the following information when contacting Supermicro for technical support:

   • System, motherboard, and chassis model numbers and PCB revision number

   • BIOS release date/version (This can be seen on the initial display when your system first boots up.)

   • System configuration

An example of a Technical Support form is posted on our website. Distributors: For immediate assistance, please have your account number ready when contacting our technical support department by email.

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 to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton, and 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, RMA authorizations may be requested online (http://www.supermicro.com/support/rma/).

Whenever possible, repack the chassis in the original Supermicro carton, using the original packaging material. If these are no longer available, be sure to pack the chassis securely, using packaging material to surround the chassis so that it does not shift within the carton and become damaged during shipping.

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

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

Vendor Support Filing System

For issues related to Intel, use the Intel IPS filing system:

https://www.intel.com/content/www/us/en/design/support/ips/training/welcome.html

For issues related to Red Hat Enterprise Linux, since it is a subscription based OS, contact your account representative.

7.11 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.

7.12 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)
Website:	www.supermicro.nl

Asia-Pacific

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。

此警告符号代表危险。

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 הצהרות אזהרה

הצהרות 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.

ا كَ ف حالة وُيَ أى تتسبب ف اصابة جسذ ةٌ هذا الزهز عٌ خطز !تحذ زٌ .
قبل أى تعول على أي هعذات،كي على علن بالوخاطز ال اُجوة عي الذوائز
الكهزبائَ ةٍ
وكَي على درا ةٌ بالووارسات النقائَ ةِ لو عٌ وقع أي حادث
استخذم رقن الب إى الو صُص ف هَا ةٌ كل تحذ زٌ للعثر 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 معداث الحمايت مه الدوائرالقصيرة 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 electrische installatie. Controleer of het beveiligde aparaat 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 systéme.

אזהרה מפני ניתוק חשמלי

אזהרה!

יש לנתק את המערכת מכל מקורות החשמל ויש להסיר את כבל החשמלי מהספק

לפני גישה לחלק הפנימי של המארז לצורך התקנת או הסרת רכיבים.

يجب فصم اننظاو من جميع مصادر انطاقت وإزانت سهك انكهرباء من وحدة امداد انطاقت قبم

انصل إن امناطق انداخهيت نههيكم نتثبيج أو إزانت مكناث الجهاز

경고!

시스템에 부품들을 장착하거나 제거하기 위해서는 섀시 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 installée 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

כלי אבטחה בלבד)מפתח, מנעול וכד.('

تخصيص هذه انحذة نترك بُها ف مناطق محظورة تم .

،مَكن انصبل إن منطقت محظورة فقط من خلال استخذاو أداة خاصت

أو أ وس هُت أخري نلالأمما قفم 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

电池更换不当会有爆炸危险。请只使用同类电池或制造商推荐的功能相当的电池更换原有电池。请按制造商的说明处理废旧电池。

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 النع أو ما يعادلها مما أوصث به الشرمة المصنعة
جخلص من البطاريات المسحعملة وفقا لحعليمات الشرمة الصانعة

경고!

배터리가 올바르게 교체되지 않으면 폭발의 위험이 있습니다. 기존 배터리와 동일하거나 제
조사에서 권장하는 동등한 종류의 배터리로만 교체해야 합니다. 제조사의 안내에 따라 사용
된 배터리를 처리하여 주십시오.

Waarschuwing

Er is ontploffingsgevaar 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 trom 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!
ליחדה 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 خطز مه التيار الكهزبائي أوالطاقة المجددة على اللحة
عندما يكن النظام يعمل كه حذرا عند خدمة هذا الجهاس

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 يمتثل للقواويه المحلية والطية والمتعلقة 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 القانين واللائح البطنية 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。請務必與轉動的風扇葉片保持距離。 當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇。

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 ell montaje del ventilador del chasis. Mandtenga los dedos, los destornilladores y todos los objetos lejos de las aberturas del ventilador

Attention

Pieces mobiles dangereuses. Se tenir a l'ecart 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 בפעולהכאשר מסירים את חלקי המאוורר מהמארז, יתכן והמאווררים עדיין עובדים. יש להרחיק למרחק בטוח את האצבעות וכלי עבודה שונים מהפתחים בתוך המאוורר

تحذير! أجزاء متحركة خطرة. ابتعد عن شفرات المروحة المتحركة.من الممكن أن المراوح لا تزال تدورعند 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. 섀시로부터 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 Adapater, 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 appropries. 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 certifies- 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.

כבלים חשמליים ומתאמי AC

אזהרה!

כאשר מתקינים את המוצר, שי להשתמש בכבלים, ספקים ומתאמים AC אשר נרכשו או שתואמו לצרור
שימוש לכב . העתקהו לבכה לש הנוכנ הדימ ללוכ, תוימוקמה תוחיטבה תושירדל ומאתוה רשאו, הנקתהה
לבכ וא םאתמ גוסמ רחא, לולע לורגל הלקתל וא רקזנ רתאמ .הבתאמ לוחקי השימושב םירישכמב הזחשמל
וחוקי הביטחות, קייק איסור להשתמש בכבלים מוסמכים ב- UL וא ב-CSA (כאשר מופיע הילע דוק לש
.(UL/CSA) רובע לכ רוצמ ילמשח רחא, אלא רק רצומב רשא מאתוה ע"י Supermicro דבלב.

عند تركيب المنتج، قم باستخدام التوصيلات المتوفرة أو المحددة قم بشراء الكابلات
الكهربائية ومحولات التيار المتردد مع الالتزام بقوانين ومتطلبات السلامة المحلية بما في ذلك
حجم الموصل والقابس السليم. استخدام أي كابلات ومحولات أخرى قد يتسبب في عطل أو حريق.
يحظر قانون السلامة للأجهزة الكهربائية استخدام المعدات واستخدام الكابلات المعتمدة من قبل UL أو CSA
والتي تحمل علامة (UL/CSA) مع أي معدات أخرى غير المنتجات المعنية والمحددة من قبل Supermicro.

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 Supermicro 가 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

Dual AMD EPYC™ 9004 Series Processors in Socket SP5 and a Thermal Design Power unit up to 400 W
(Depending on thermal validation and system configuration. Contact a Supermicro representative for details.)

BIOS

256 Mb SPI AMI BIOS® SM Flash UEFI BIOS
ACPI 6.4, SMBIOS 3.5 or later, Plug-and-Play (PnP), RTC (Real Time Clock) wakeup, Riser Card Auto-Detection Support

Memory

Total 24 DIMM slots with 1DPC that support up to:
6 TB registered ECC DDR5 4800 MT/s speed in 24 DIMM slots with AMD EPYCTM 9004 Series processors installed
*For details, please refer to Section 3.4.

Storage Drives

Twenty-four 2.5" hot-swap drive bays (Default: twelve 2.5" NVMe and two 2.5" SATA dedicated)
One M.2 NVMe SSD

PCI Expansion Slots

Eight PCIe 5.0 x16 LP slots
Two PCIe 5.0 x16 FHFL slots

Input/Output

LAN: One RJ45 dedicated BMC LAN port
USB: Two USB 3.0 ports
Video: One VGA port

Motherboard

H13DSG-O-CPU-D-P, 17" (W) x 14.7" (L), (431.80 mm x 373.38 mm)

Chassis

CSE-GP801TS, 8U rackmount, 14 x 17.2 x 33.2 in. (356 x 437 x 843 mm) (HxWxD)

Weight

Net Weight: 166 lbs (75.3 kg)
Gross Weight: 225 lbs (102.1 kg)

System Cooling

Five front and five rear counter-rotating fans with optimal fan speed control
Two metal GPU air blockers
One motherboard air shroud

Security

One TPM 2.0 header

Power Supply

Six 3000 W Redundant (3 + 3) Titanium Level (96%) power supplies
Note: Full redundancy based on configuration and application load
Input:
    2880 W: 200-207 Vac, 16-15.7 A, 50-60 Hz
    3000 W: 207.1-240 Vac, 16-14.5 A, 50-60 Hz
    3000 W: 240 Vdc, 15 A
DC Output:
    +54 V, 45 A
    +12 V, 91.66 A
    +12 Vsb, 3 A

Operating Environment

Operating Temperature: 10ºC to 35ºC (50ºF to 95ºF)

Non-operating Temperature: -40ºC to 60ºC (-40º to 140ºF)

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

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

Regulatory Compliance

FCC, ICES, CE, VCCI, RCM, UKCA, NRTL, CB

Applied Directives, Standards

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

Electromagnetic Compatibility Regulations 2016

FCC Part 15

ICES-003

VCCI-CISPR 32

AS/NZS CISPR 32

BS/EN55032

BS/EN55035

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

Environment:

2011/65/EU (RoHS Directive)

EC 1907/2006 (REACH)

2012/19/EU (WEEE Directive)

California Proposition 65

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

UL/CSA 62368-1 (USA and Canada)

Electrical Equipment (Safety) Regulations 2016

IEC/BS/EN 62368-1

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A機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI － A