



A+ Server  
AS -4125GS-TNRT  
AS -4125GS-TNRT1  
AS -4125GS-TNRT2



USER'S MANUAL

Revision 1.0b

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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. Installation and maintenance should be performed by certified service technicians only.

Please refer to the AS -4125GS-TNRT, AS -4125GS-TNRT1, and AS -4125GS-TNRT2 server specifications pages 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: [http://www.supermicro.com/about/policies/safety\\_information.cfm](http://www.supermicro.com/about/policies/safety_information.cfm)

If you have any questions, please contact our support team at:  
[support@supermicro.com](mailto: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/Log9\\_Secure\\_Data\\_Deletion\\_Utility/](https://www.supermicro.com/about/policies/disclaimer.cfm?url=/wdl/utility/Log9_Secure_Data_Deletion_Utility/)

## Warnings

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



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



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

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# Chapter 1

## Introduction

### 1.1 Overview

This chapter provides a brief outline of the functions and features of the AS -4125GS-TNRT/TNRT1/TNRT2. The AS -4125GS-TNRT/TNRT1/TNRT2 is based on the H13DSG-O-CPU motherboard and the CSE-418G2TS chassis.

System Overview	
<b>Motherboard</b>	H13DSG-O-CPU
<b>Chassis</b>	CSE-418G2TS
<b>Processor</b>	<p>Single AMD EPYC™ 9005/9004 Series Processors: AS -4125GS-TNRT1 (CPU socket 2 is disabled.)</p> <p>Dual AMD EPYC™ 9005/9004 Series Processors: AS -4125GS-TNRT and AS -4125GS-TNRT2</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Drop-in support for AMD EPYC™ 9005 Series processors requires board revision 2.x for AS -4125GS-TNRT, AS -4125GS-TNRT1, and AS -4125GS-TNRT2.</li> <li>• TNRT, TNRT1, and TNRT2 feature an SP5 socket and support Thermal Design Power (TDP) ratings up to 400 W, depending on thermal validation and system configuration. Contact a Supermicro representative for details.</li> </ul>
<b>Memory</b>	<p>AS -4125GS-TNRT and AS -4125GS-TNRT2:</p> <p>24 DIMM slots with 1DPC that support up to</p> <ul style="list-style-type: none"> <li>• 6 TB 6000 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9005 Series CPU)</li> <li>• 6 TB 4800 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9004 Series CPU)</li> </ul> <p>AS -4125GS-TNRT1:</p> <p>12 DIMM slots with 1DPC that supports up to</p> <ul style="list-style-type: none"> <li>• 3 TB 6000 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9005 Series CPU)</li> <li>• 3 TB 4800 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9004 Series CPU)</li> </ul> <p><b>Note:</b> For AS -4125GS-TNRT1 systems with AMD EPYC™ 9004 or 9005 Series CPUs, DIMMs connected to CPU socket 2 are disabled. For additional information, see <a href="#">Memory Support and Installation</a>.</p>
<b>Storage</b>	<p>24 2.5" hot-swap NVMe/SATA/SAS drive bays:</p> <p>(AS -4125GS-TNRT: Four 2.5" NVMe and two 2.5" SATA drives supported by default)</p> <p>(AS -4125GS-TNRT1/AS -4125GS-TNRT2: Eight 2.5" NVMe and two 2.5" SATA drives supported by default)</p> <p>One M.2 NVMe or one M.2 SATA3 (not available on AS -4125GS-TNRT1)</p>

System Overview	
<b>Expansion Slots</b>	Nine PCIe 5.0 x16 FHFL slots: AS -4125GS-TNRT 12 PCIe 5.0 x16 FHFL slots: AS -4125GS-TNRT1/AS -4125GS-TNRT2
<b>I/O Ports</b>	One VGA port One serial port Two USB ports Two RJ45 LAN ports One RJ45 BMC port
<b>System Cooling</b>	Eight heavy duty fans with optimal fan speed control
<b>Power</b>	Four 2000 W Redundant (2+2) Titanium Level (96%) Power Supplies <b>Note:</b> Full redundancy depends on system configuration and application load.
<b>Form Factor</b>	4U Rackmount 17.2 x 7 x 29 in. / 437 x 178 x 737 mm (WxHxD)

Quick Reference Guides can be found on the product pages of the Supermicro website:

[AS -4125GS-TNRT](#), [AS -4125GS-TNRT1](#), [AS -4125GS-TNRT2](#)

The following safety models associated with the AS -4125GS-TNRT/TNRT1/TNRT2 have been certified as compliant with UL or CSA: 418G-Q20H13, 418G-Q27H13, 418G-H13

## 1.2 System Features

The following table provides you with an overview of the main features of the AS -4125GS-TNRT/TNRT1/TNRT2. Please refer to [Appendix B](#) for additional specifications.

### Front Features (AS -4125GS-TNRT)

The CSE-418G2TS is a 4U chassis. See the illustration below for the features included on the front of the AS -4125GS-TNRT. The numbers indicate the logical drive locations.



Figure 1-1. System Front View (AS -4125GS-TNRT)

Front System Features		
Item	Feature	Description
0 to 23	2.5" Hybrid Drive Bays	By default, slots 0 to 3 are dedicated to NVMe, and slots 20 to 21 are dedicated to SATA.

Front Features (AS -4125GS-TNRT1/AS -4125GS-TNRT2)

The CSE-418G2TS is a 4U chassis. See the illustration below for the features included on the front of the AS -4125GS-TNRT1/AS -4125GS-TNRT2. The numbers indicate the logical drive locations.

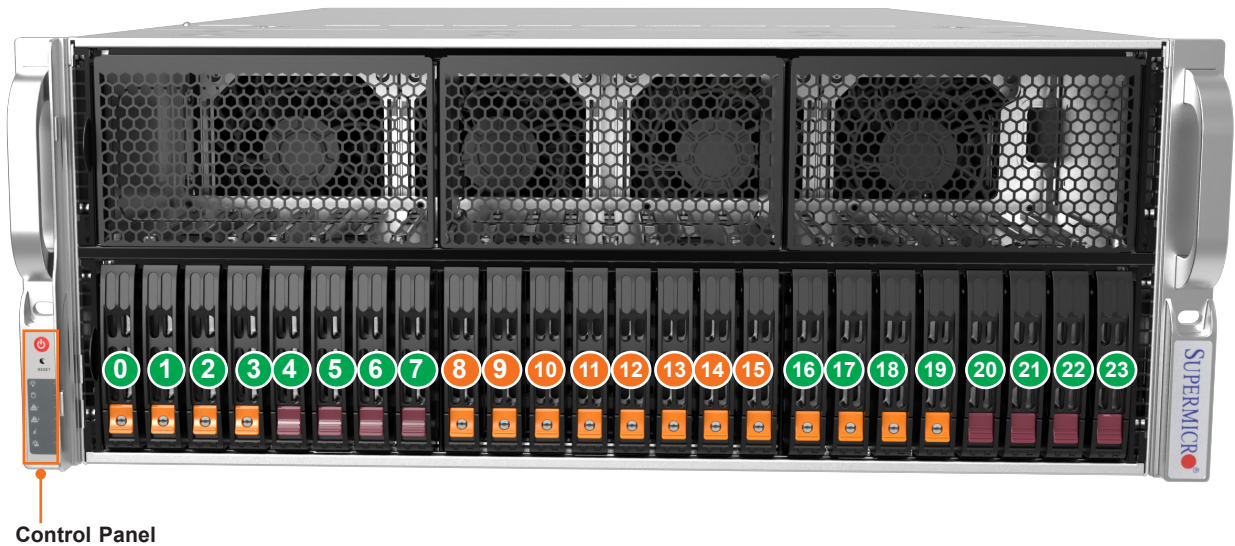


Figure 1-2. System Front View (AS -4125GS-TNRT1 and AS -4125GS-TNRT2)

Front Chassis Features		
Item	Feature	Description
0 to 23	2.5" Hybrid Drive Bays	By default, slots 8 to 15 are dedicated to NVMe, and slots 20 to 21 are dedicated to SATA.

## Control Panel

There are two buttons located on the front of the chassis: a power on/off button and a reset button. In addition there are six LEDs. The locations of these buttons and LEDs on the control panel are described below. See Chapter 4 for details on the control panel connections.

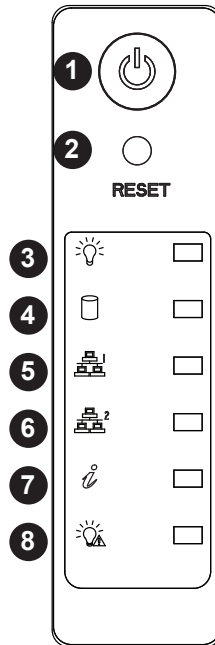


Figure 1-3. Control Panel View

Control Panel Features		
Item	Feature	Description
1	Power Button	The main power switch applies or removes primary power from the power supply to the server but maintains standby power. To perform most maintenance tasks, unplug the system to remove all power.
2	Reset Button	The reset button is used to reboot the system.
3	Power LED	Indicates power is being supplied to the system power supply units. This LED is illuminated when the system is operating normally.
4	HDD LED	Indicates IDE channel activity. SAS2/SATA drive activity when flashing.
5	NIC1 LED	Indicates network activity on GLAN2 when flashing.
6	NIC2 LED	Indicates network activity on GLAN1 when flashing.
7	Universal Information LED	See the following table for the status shown by this LED.
8	Power Fail LED	Indicates a power supply module has failed.

Universal Information LED	
Status	Description
Continuously on and red	An overheat condition has occurred (This may be caused by cable congestion).
Blinking red (1 Hz)	Fan failure: check for an inoperative fan.
Blinking red (0.25 Hz)	Power failure: check for an inoperative power supply.
Solid blue	Local UID has been activated. Use this function to locate the server in a rack environment.
Blinking blue (300 msec)	Remote UID has been activated. Use this function to activate the server from a remote location.

## Rear Features

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

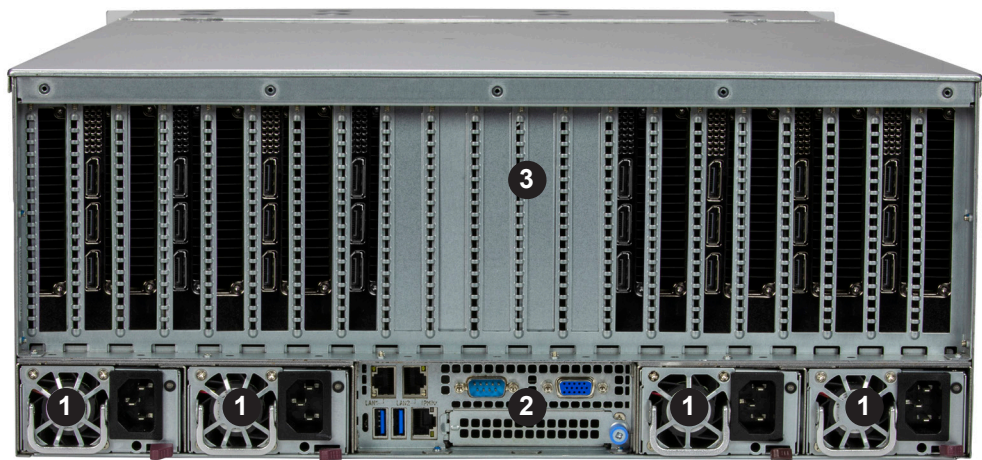


Figure 1-4. System Rear View

Rear System Features		
Item	Feature	Description
1	Power Supplies	2+2 hot-swappable redundant power supplies
2	Rear I/O ports	See <a href="#">Motherboard Layout</a> for details on the rear I/O ports.
3	Rear PCIe Expansion Slots	Up to 12 slots on the rear of the chassis are provided for PCIe expansion cards.

## 1.3 System Architecture

This section covers the locations of the system's main components, a system block diagram, and a motherboard layout with the connectors and jumpers called out.

### Main Components

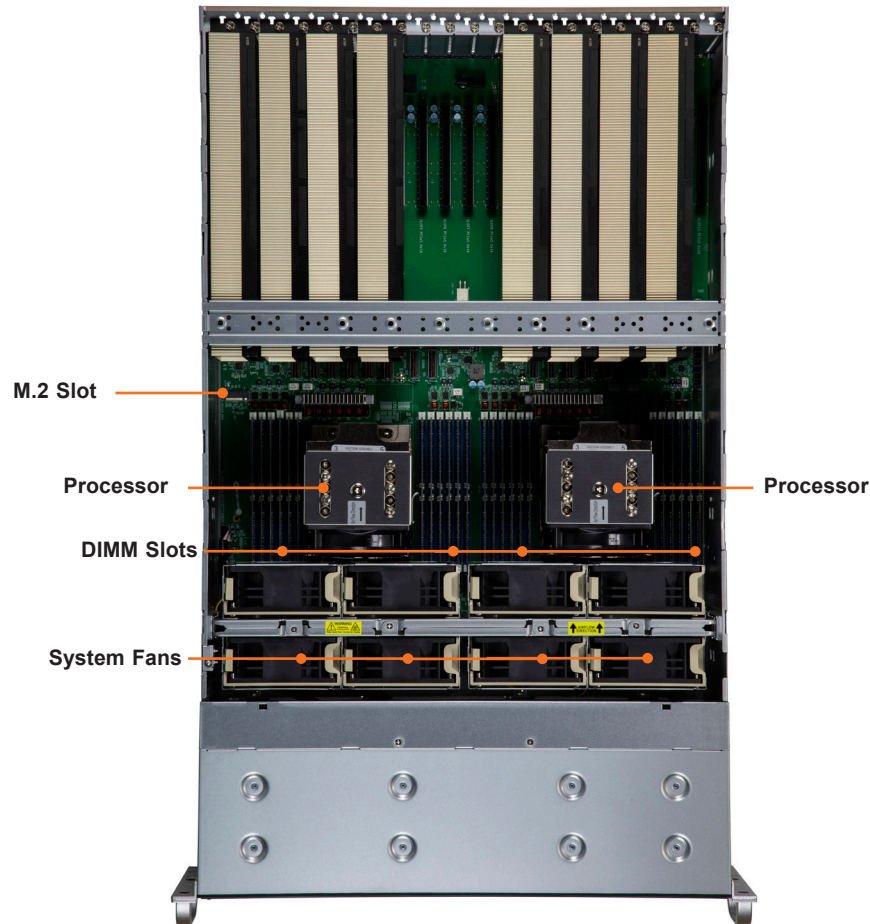


Figure 1-5. System: Top View (AS -4125GS-TNRT)

System Features: Top	
Feature	Description
M.2 Slot	One slot for M.2 NVMe (Only available on AS -4125GS-TNRT and AS -4125GS-TNRT2)
DIMM Slots	Twelve usable memory slots: AS -4125GS-TNRT1 (Note that DIMMs from CPU socket 2 are disabled.) Twenty-four memory slots: AS -4125GS-TNRT and AS -4125GS-TNRT2
Processors	Single AMD EPYC™ 9004 series processor: AS -4125GS-TNRT1 (Note that CPU socket 2 is disabled.) Dual AMD EPYC™ 9004 series processors: AS -4125GS-TNRT and AS -4125GS-TNRT2
System Fans	Four 8-cm heavy duty fans with Optimal Fan Speed Control



## 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	Blinking Green: BMC Normal Green: Fast blinking (BMC Initializing)
Connector	Description	
JIPMB1	4-pin External I <sup>2</sup> C Header (for an IPMI card)	
AIOM	Supermicro Advanced I/O Module	
JSLOT1	Supermicro I/O Riser Slot (AOM-PIO-i2G)	
JMCIO-RA1/JMCIO-RA2	AIOM Input. Connection to any JSA/JSB.	
USB2/3 (2.0)	USB2/3 (2.0) Front Side Pin Header	
P1-PCle1A	Processor 1 PCIe 5.0 x8	
P1-PCle1B		
P1-PCle2A		
P1-PCle2B		
P1-PCle3A_VPP		
P1-PCle3B		
P1-PCle4A_VPP		
P1-PCle4B		
P1-PCle5A_VPP		
P1-PCle5B		
P1-PCle6A		
P1-PCle6B		
P2-PCle1A_VPP	Processor 2 PCIe 5.0 x8	
P2-PCle1B		
P2-PCle2A		
P2-PCle2B		
P2-PCle3A		
P2-PCle3B		
P2-PCle4A		
P2-PCle4B		
P2-PCle5A_VPP		
P2-PCle5B		
P2-PCle6A		
P2-PCle6B		
FAN1~FAN10	4-pin System/CPU Fan Headers	
JF1	Front Control Panel Header	
SATA0~SATA1	SATA 3.0 Ports	
S1	For System Configuration	

Connector	Description
JNCSI1~2	NCSI
JL1	Chassis Intrusion Header
JPW1~JPW4	Motherboard Main Power Supply Connector
GPU_PWR1~20	12V 8-pin Power Connector for Riser Card GPU
BP PWR1~3	12V 8-pin Power Connector for Backplane
JTPM1	Trusted Platform Module/Port 80 Connector

**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 4 for details on installing those specific components.

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

### 2.2 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**

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

## 2.3 Procedure for Rack Mounting

This section provides information on installing a 4U chassis into a rack unit with the rails provided. There are a variety of rack units on the market, so the assembly procedure may differ slightly. Also refer to the installation instructions for your rack unit.

**Note:** This rail will fit a rack between 26.5" and 36.4" deep.

### Identifying the Inner Rack Rails

The chassis package includes one pair of rack rail assemblies in the rack mounting kit. Each assembly consists of an inner rail that secures to the chassis and an outer rail that is attached directly to the rack. The inner rails are etched with "L" (Left side) and "R" (Right side).

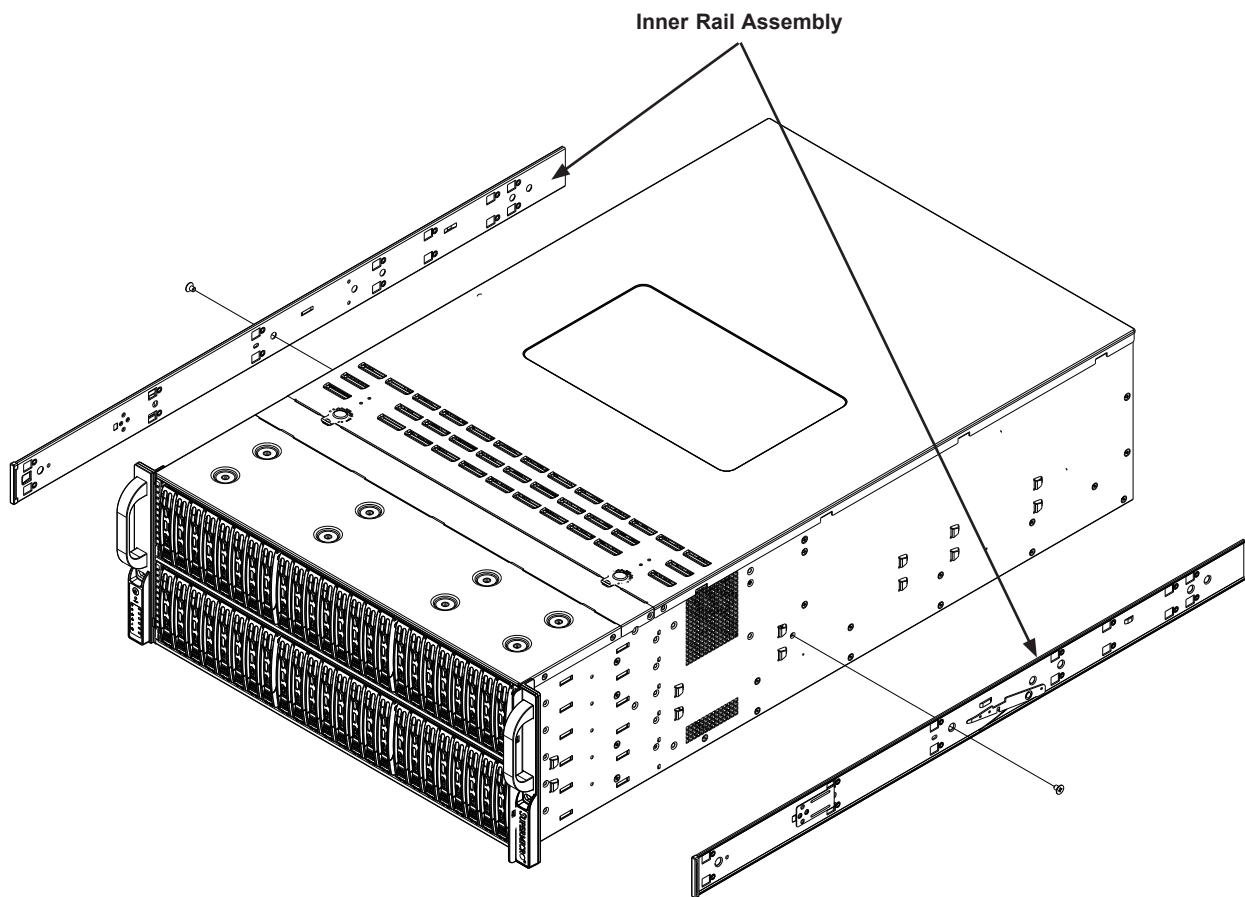
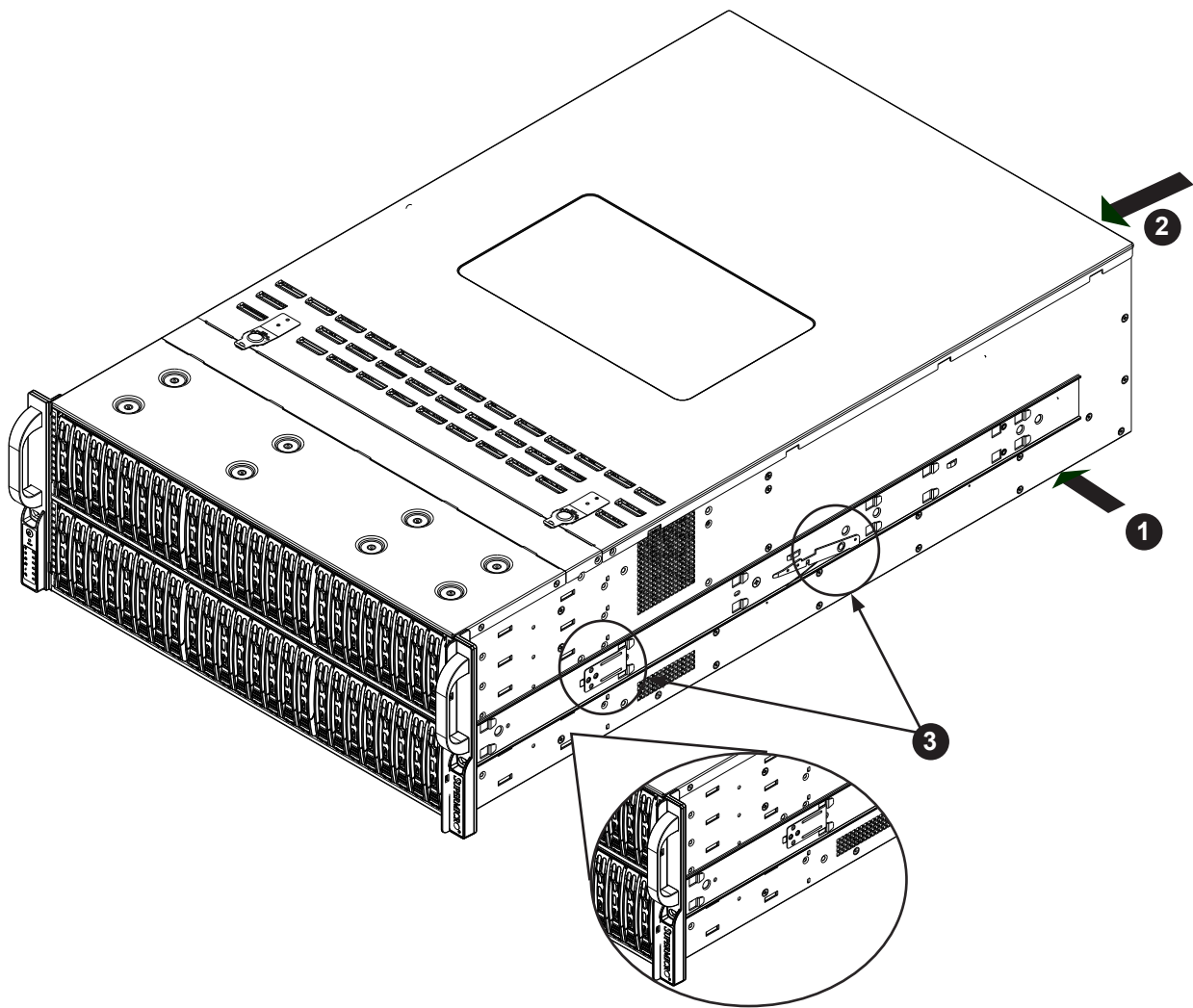


Figure 2-1. Identifying the Rack Rails

**Note:** The figure above is for illustrative purposes only. Always install servers at the bottom of the rack first.



**Warning:** do not pick up the server with the front handles. They are designed to pull the system from a rack only.



**Figure 2-2. Installing the Inner Rails**

**Note:** The figure above is for illustrative purposes only. Always install servers at the bottom of the rack first.

## Installing the Inner Rails on the Chassis

### *Installing the Inner Rails*

1. Identify the left and right side inner rails. Place the correct inner rail on the side of the chassis, aligning the hooks of the chassis with the inner rail holes. Make sure the rail faces "outward" so that it will fit with the rack's mounting bracket.
2. Slide the rail toward the front of the chassis to hook the inner rail onto the side of the chassis.
3. If desired, secure the rail with two flat head M4 x 4mm screws as illustrated.
4. Repeat for the other inner rail.

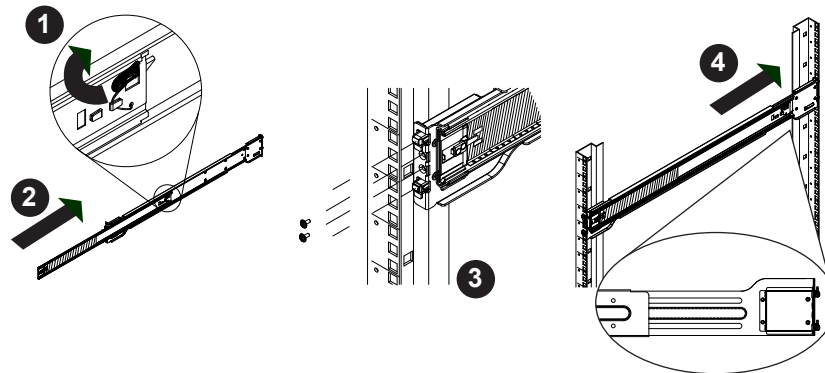


**Warning:** Stability hazard. The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.

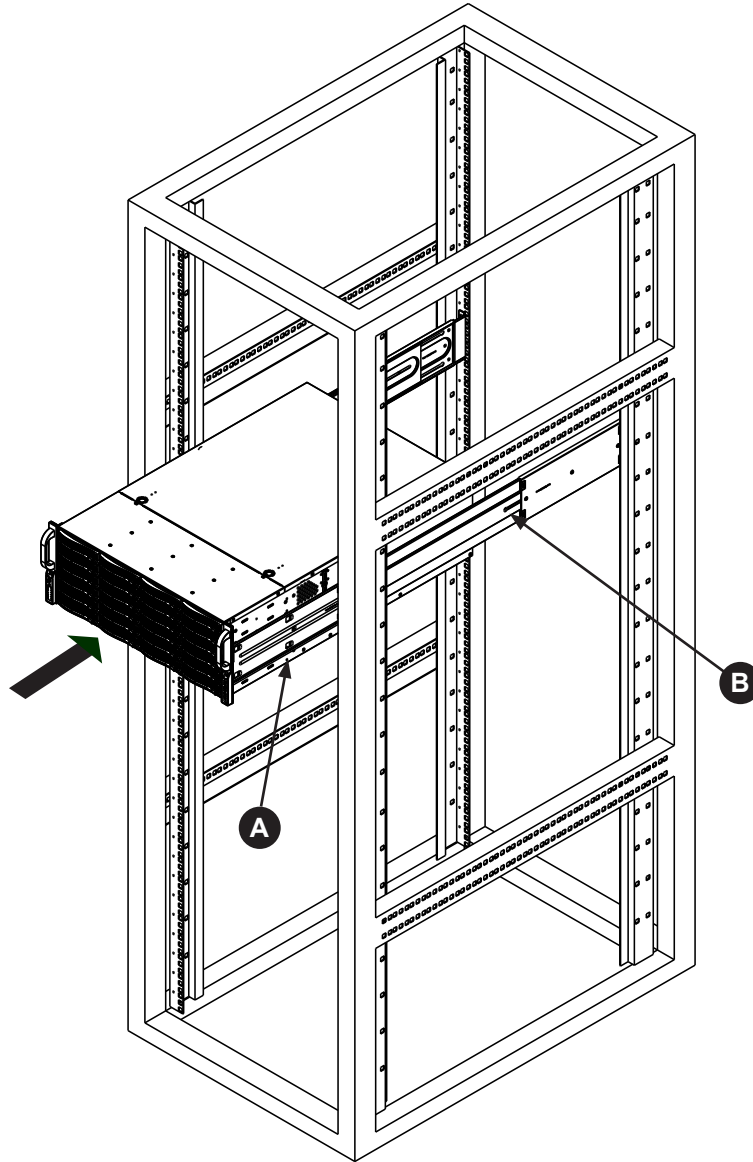
## Installing the Outer Rails onto the Rack

### *Installing the Outer Rails*

1. Press upward on the locking tab at the rear end of the middle rail.
2. Push the middle rail back into the outer rail.
3. Hang the hooks on the front of the outer rail onto the square holes on the front of the rack. If desired, use screws to secure the outer rails to the rack.
4. Pull out the rear of the outer rail, adjusting the length until it just fits within the posts of the rack.
5. Hang the hooks of the rear section of the outer rail onto the square holes on the rear of the rack. Take care that the proper holes are used so the rails are level. If desired, use screws to secure the rear of the outer rail to the rear of the rack.
6. Repeat for the other outer rail.



**Figure 2-3. Extending and Mounting the Outer Rails**



**Figure 2-4. Installing the Chassis into a Rack**

**Note:** Figures are for illustrative purposes only. Always install servers into racks in the lower positions first.

### Installing the Chassis into a Rack

#### *Installing the Chassis into a Rack:*

1. Align the chassis rails (A) with the front of the rack rails (B).
2. Slide the chassis rails into the rack rails, keeping the pressure even on both sides. You may have to depress the locking tabs while inserting. When the server has been pushed completely into the rack, the locking tabs should "click" into the locked position.
3. If screws are used, tighten the screws on the front and rear of the outer rails.
4. (Optional) Insert and tightening the thumbscrews that hold the front of the server to the rack.

## Removing the Chassis from the Rack

**Caution!** It is dangerous for a single person to off-load the heavy chassis from the rack without assistance. Be sure to have sufficient assistance supporting the chassis when removing it from the rack. Use a lift.

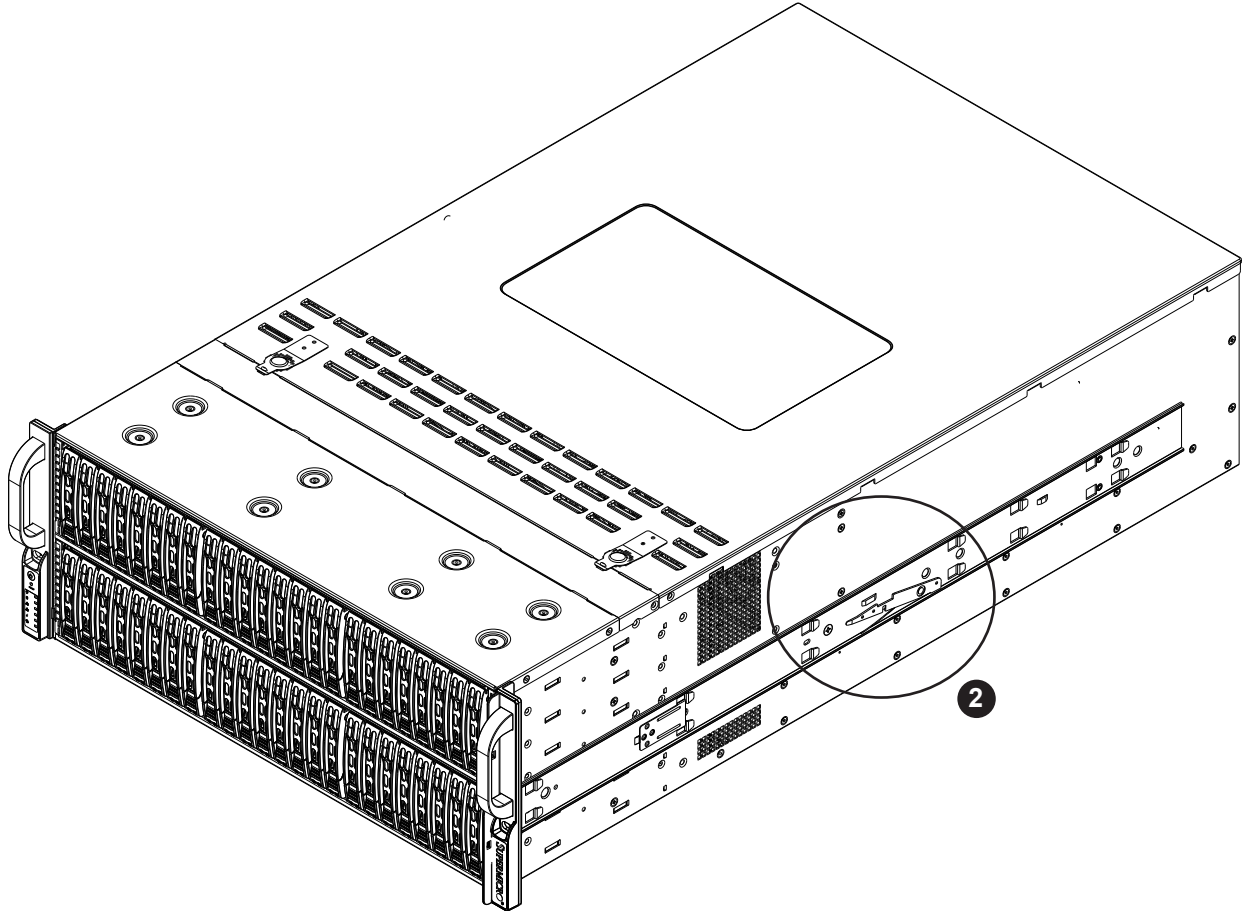


Figure 2-5. Removing the Chassis From the Rack

### *Removing the Chassis from the Rack*

1. Pull the chassis forward out the front of the rack until it stops.
2. Press the release latches on each of the inner rails downward simultaneously and move the chassis forward in the rack.

**Note:** The figure above is for illustrative purposes only. Always install servers at the bottom of the rack first.

## Chapter 3

# Maintenance and Component Installation

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

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

### 3.1 Removing Power

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

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

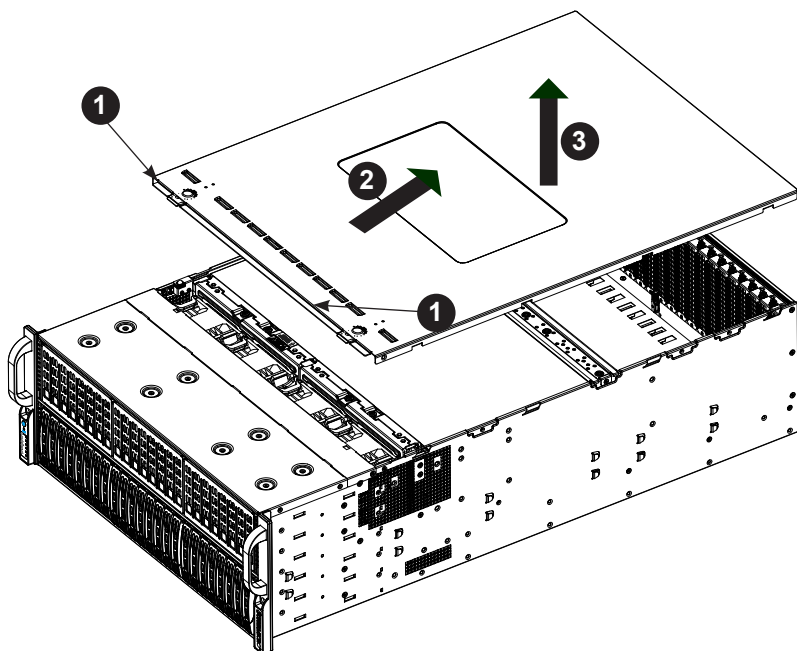
### 3.2 Accessing the System

The CSE-418G2TS features a removable top cover, which allows easy access to the inside of the chassis.

#### ***Removing the Top Cover***

1. Begin by removing power from the system as described in Section 3.1.
2. Remove the screws securing the cover to the chassis.
3. Slide the cover toward the rear of the chassis. See Figure 3-1.
4. Lift the cover from the chassis.

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



**Figure 3-1. Accessing the Inside of the System**

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

## 3.3 Motherboard Components

### Processor and Heatsink Installation

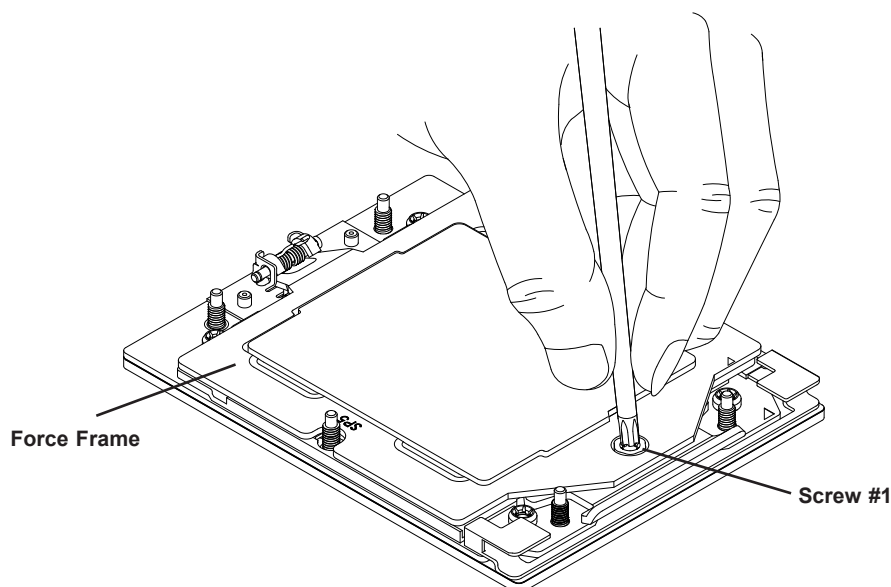
**Warning:** When handling the processor package, avoid placing direct pressure on the label area of the fan.

**Important:**

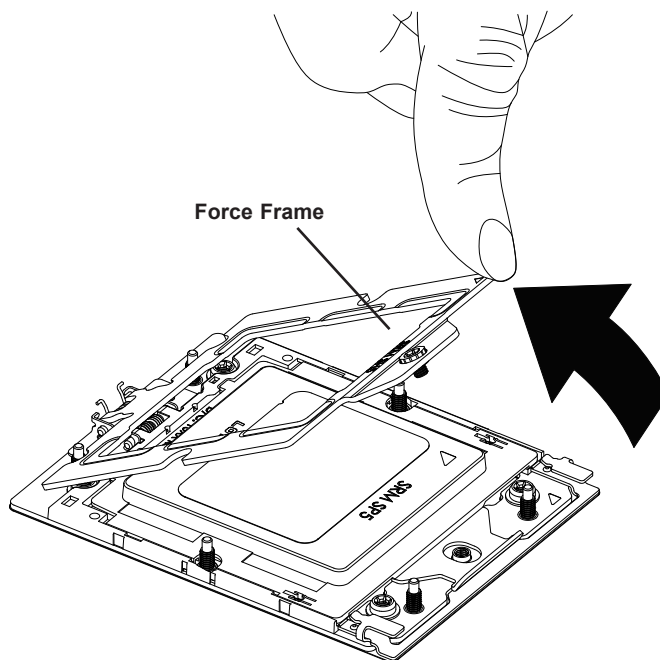
- For the Processor/Heatsink installation you need to use a T20 screwdriver when opening/closing the CPU socket.
- Always connect the power cord last, and always remove it before adding, removing or changing any hardware components. Make sure that you install the processor into the CPU socket before 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.

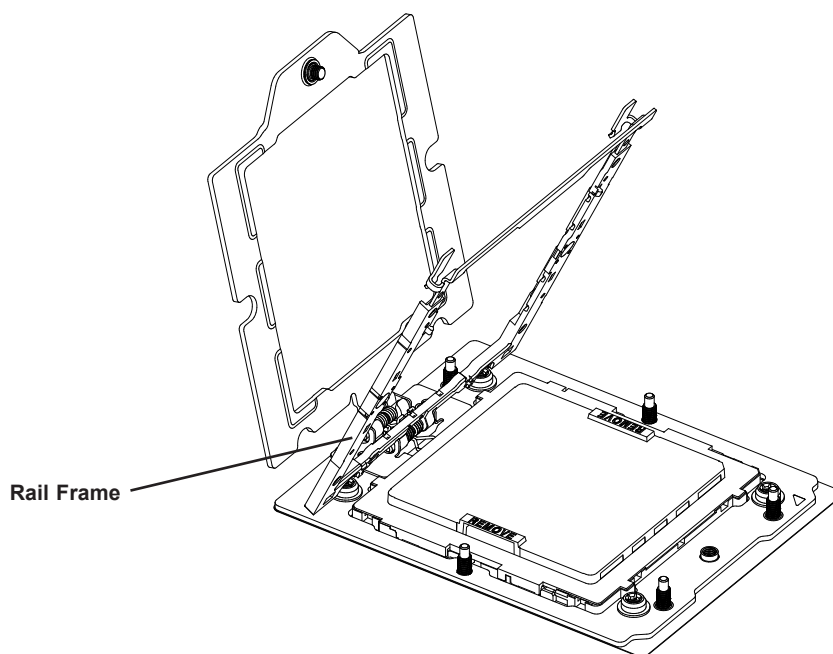


2. The spring-loaded force frame will raise up after the screw securing it (#1) is removed. Gently allow it to lift up to its stopping position.

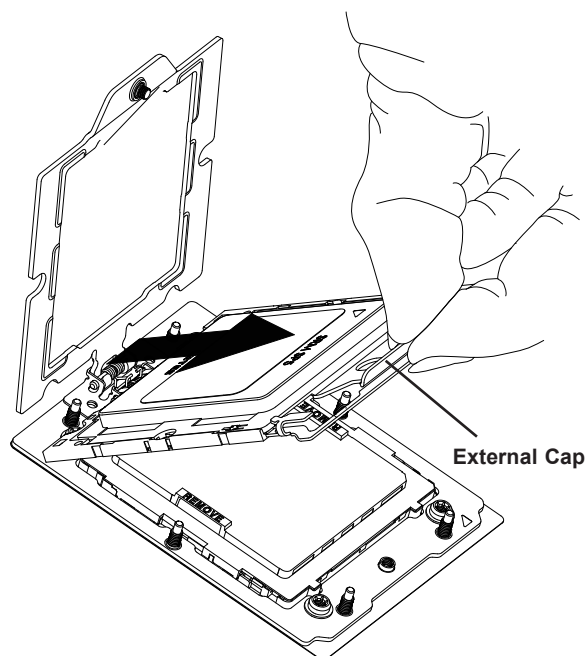


3. Lift the rail frame up by gripping the lift tabs near the front end of the rail frame. While keeping a secure grip of the rail frame, lift it to a position so you can do the next step of removing the external cap.

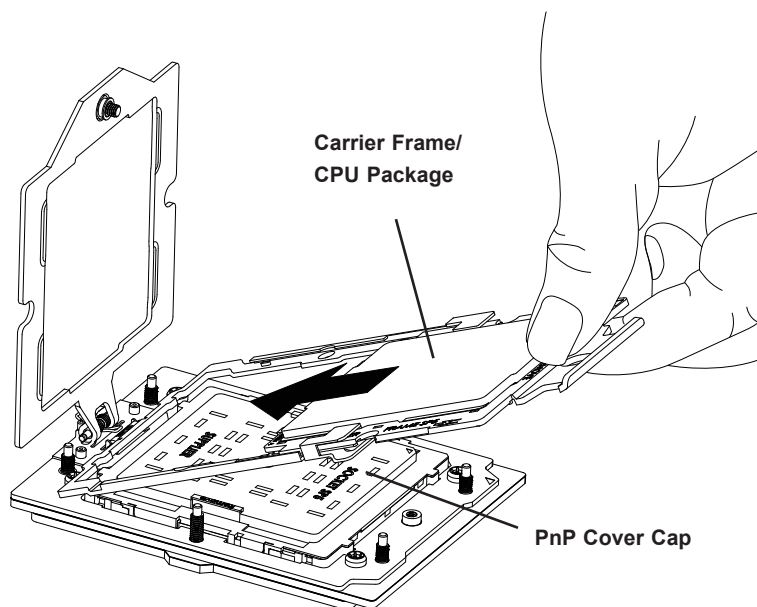
**Note:** The rail frame is spring loaded, so keep a secure grip on it as you lift it so it does not snap up.



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

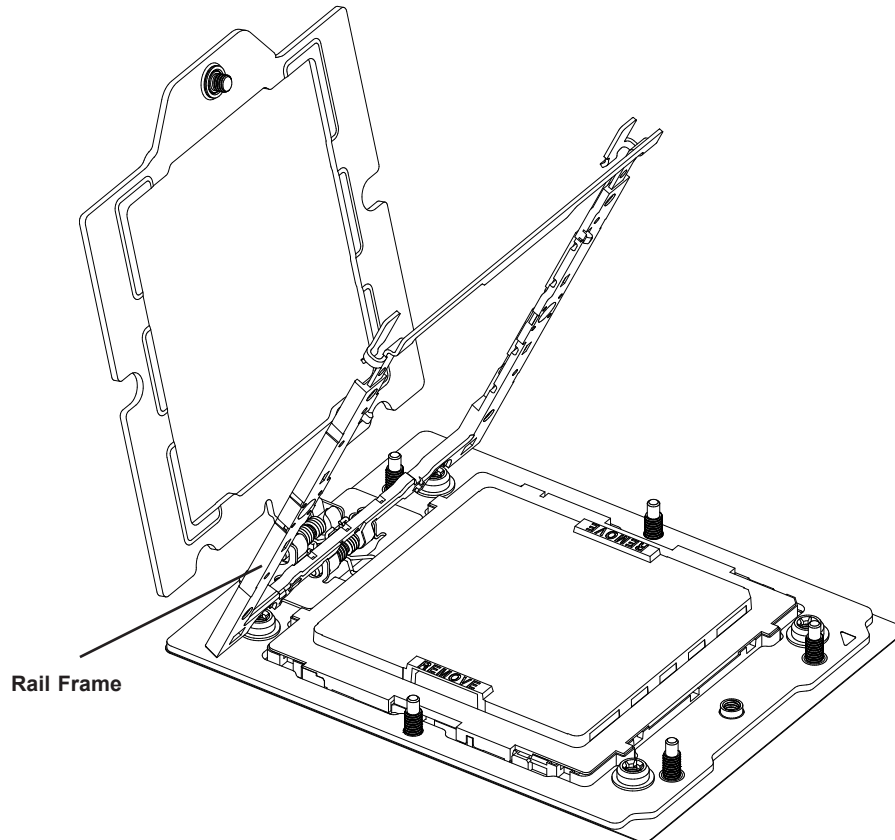


5. The CPU package is shipped from the factory with the carrier frame pre-assembled. Grip the handle of the carrier frame/CPU package assembly from its shipping tray, and while gripping the handle, align the flanges of the carrier frame onto the rails of the rail frame so its pins will be at the bottom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



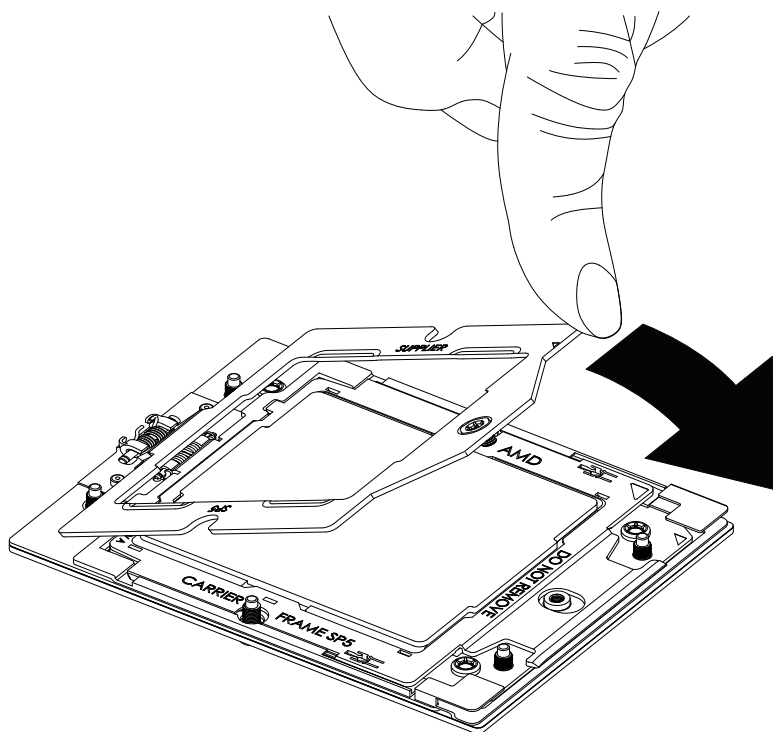
**Note:** You can only install the CPU inside the socket in one direction with the handle at the top. Make sure that it is properly inserted into the CPU socket before closing the rail frame plate. If it doesn't close properly, do not force it as it may damage your CPU. Instead, open the rail frame plate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

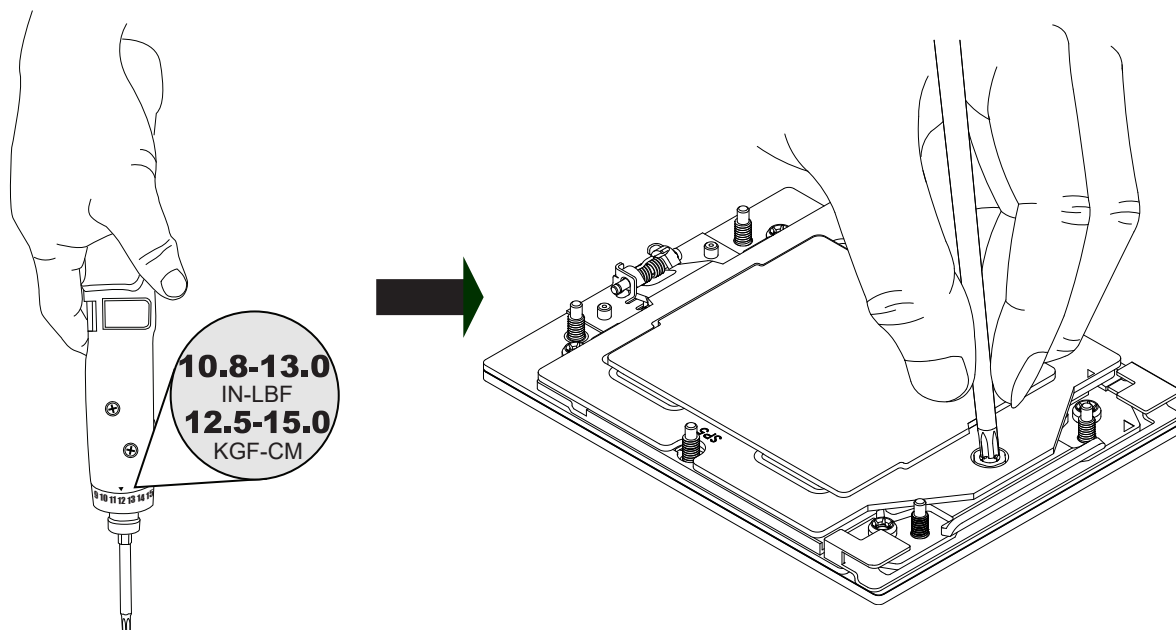


**Warning!** The exposed socket contacts are extremely vulnerable and can be damaged easily. Do not touch or drop objects onto the contacts and be careful removing the PnP cover cap and when placing the rail frame over the socket.

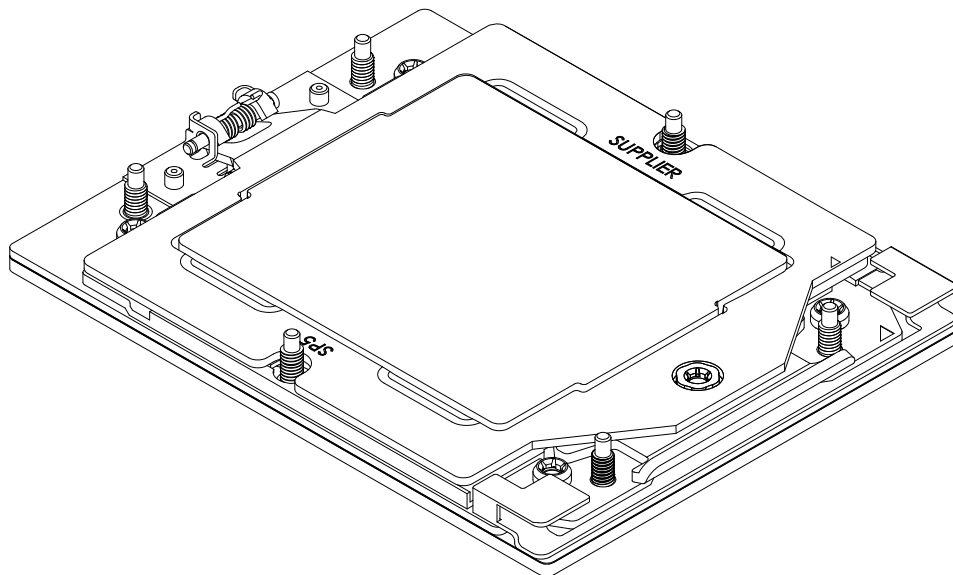
8. Gently lower the rail frame down onto the socket until the latches on the rail frame engage with the socket housing and it rests in place. **DO NOT** force it into place!



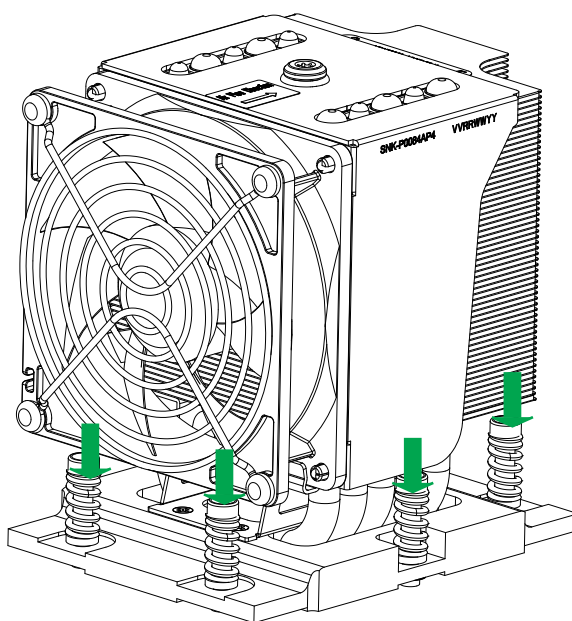
9. The force frame is spring loaded and has to be held in place before it is secured.  
**Important: Use a torque screwdriver, set it at 12.5-15 kgf-cm (10.8-13 in-lbf) with a Torx T20 screw head bit, to prevent damage to the CPU.**



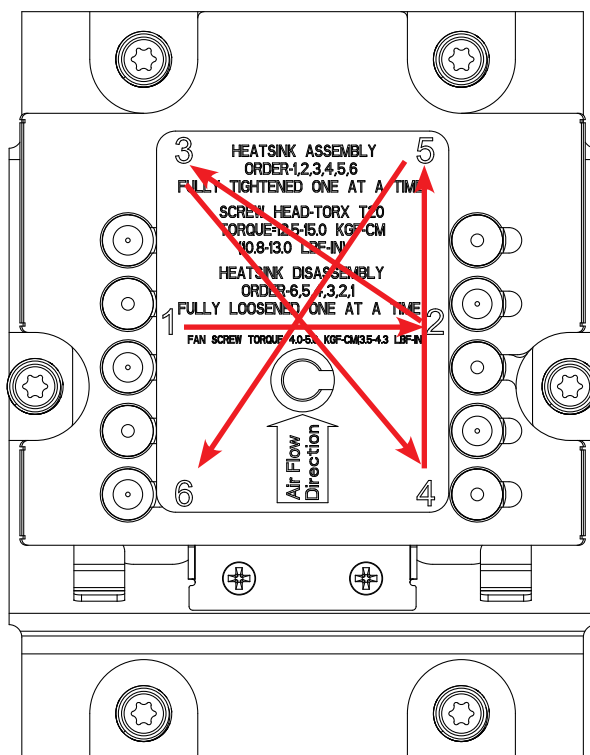
10. Place and re-screw the screw in the middle to the way you removed it. When finished, the force frame will be secure over both the rail frame and CPU package.



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. "Loosen the six screws in the reversed order from #6 to #1 (see the figure in step 12) and fully loosen each screw one at a time."
3. 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.
4. Reverse the procedure for installing the Force Frame onto the socket, unscrewing the plate in the 3-2-1 screw order and lift the Force Frame to the vertical position.
5. 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.
6. 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.
7. Grip the handle on the External Cap and return it to the Rail Frame sliding it downwards till it rests in the frame.
8. Gripping the Rail Frame, rotate it downwards till it rests above and locks over the socket housing in its horizontal position.
9. Push and rotate down the Force Frame till it is over the External Cap and Rail Frame into a horizontal position.
10. While holding down the Force Frame, secure it back to the socket frame by securing screw 1 in place. Note that without a CPU Package in place, it is not necessary to tighten down screws 2 and 3 at this time.

## Memory Support and Installation

**Note:** Check the Supermicro website for recommended memory modules.

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

### Memory Support

The H13DSG-O-CPU supports up to 6TB of ECC DDR5 4800 MT/s speed, RDIMM//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.

When One CPU Is Installed (\*Only applies to AS -4125GS-TNRT1)

*When two CPUs are installed*

DIMM Population Guide for Single CPU														
Type	Channel													
	F1	E1	D1	C1	B1	A1	CPU	G1	H1	I1	J1	K1	L1	Nodes per Socket (NPS) Supported
CPU1 & 1 DIMM						V								NPS1
CPU1 & 2 DIMM						V		V						NPS2, NPS1
CPU1 & 4 DIMM*				V		V		V		V				NPS4, NPS2, NPS1
CPU1 & 6 DIMM				V	V	V		V	V	V				NPS2, NPS1
CPU1 & 8 DIMM		V		V	V	V		V	V	V		V		NPS4, NPS2, NPS1
CPU1 & 10 DIMM		V	V	V	V	V		V	V	V	V	V		NPS2, NPS1
CPU1 & 12 DIMM	V	V	V	V	V	V		V	V	V	V	V	V	NPS4, NPS2, NPS1

**Note:** Fully populate the motherboard with validated memory modules to achieve optimal

DIMM Population Guide for Dual CPUs														
Type		Channel												Nodes per Socket (NPS) Supported
		F1	E1	D1	C1	B1	A1	G1	H1	I1	J1	K1	L1	
2 CPUs and 2 DIMMs	CPU1						V							NPS1
	CPU2						V							
2 CPUs and 4 DIMMs	CPU1						V	V						NPS2, NPS1
	CPU2						V	V						
2 CPUs and 8 DIMMs	CPU1				V		V	V		V				NPS4, NPS2, NPS1
	CPU2				V		V	V		V				
2 CPUs and 12 DIMMs	CPU1				V	V	V	V	V	V				NPS2, NPS1
	CPU2				V	V	V	V	V	V				
2 CPUs and 16 DIMMs	CPU1		V		V	V	V	V	V	V		V		NPS4, NPS2, NPS1
	CPU2		V		V	V	V	V	V	V		V		
2 CPUs and 20 DIMMs	CPU1		V	V	V	V	V	V	V	V	V	V		NPS2, NPS1
	CPU2		V	V	V	V	V	V	V	V	V	V		
2 CPUs and 24 DIMMs	CPU1	V	V	V	V	V	V	V	V	V	V	V	V	NPS4, NPS2, NPS1
	CPU2	V	V	V	V	V	V	V	V	V	V	V	V	

memory performance. The NPS setting depends on the application. Selecting Auto in the BIOS defaults to NPS1.

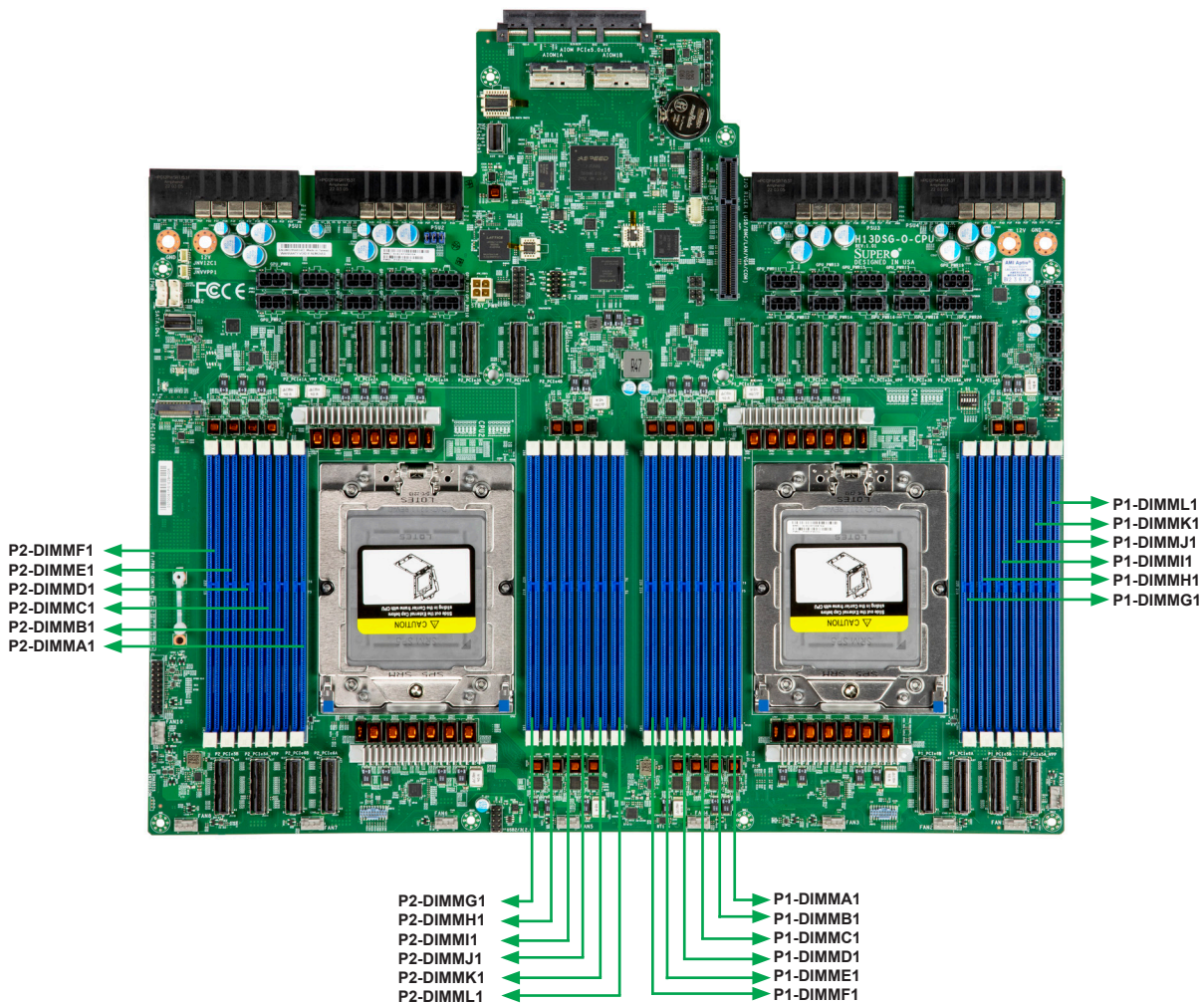
Populating RDIMM/RDIMM 3DS DDR5 Memory Modules with AMD EPYC™ 9004 Series Processor		
Type	DIMM Population	Maximum Frequency (MT/s)
	DIMM1	4800 MT/s Grade DIMM
RDIMM	1R	4800
	2R	4800
3DS RDIMM	2S2R (4 ranks)	4800
	2S4R (8 ranks)	4800

Populating RDIMM/RDIMM 3DS DDR5 Memory Modules with AMD EPYC™ 9005 Series Processor		
Type	DIMM Population	Maximum Frequency (MT/s)
	DIMM1	6000 MT/s Grade DIMM
RDIMM	1R	6000
	2R	6000
3DS RDIMM	2S2R (4 ranks)	6000
	2S4R (8 ranks)	6000

**Note:** Performance may vary depending on the memory DIMM model. Use only Supermicro-validated memory for optimal results. Contact your Supermicro representative for more information.

### *DIMM Module Population Sequence*

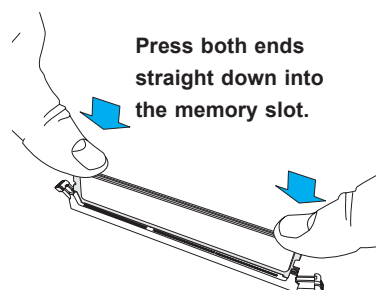
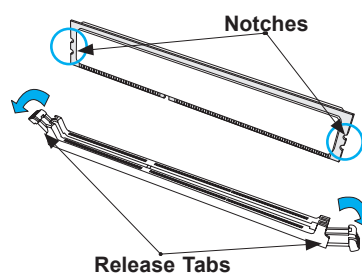
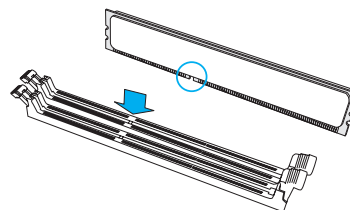
- It is recommended that DDR5 DIMM modules of the same type, size and speed should be installed.
- Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will support odd-numbered modules (1 or 3 modules installed). However, to achieve the best memory performance, fully populate the motherboard with validated memory modules.



**Figure 3-2. DIMM Numbering**

### **DIMM Installation**

1. Insert the desired number of DIMMs into the memory slots in the order given on the previous page. For best performance, please use the memory modules of the same type and speed.
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**

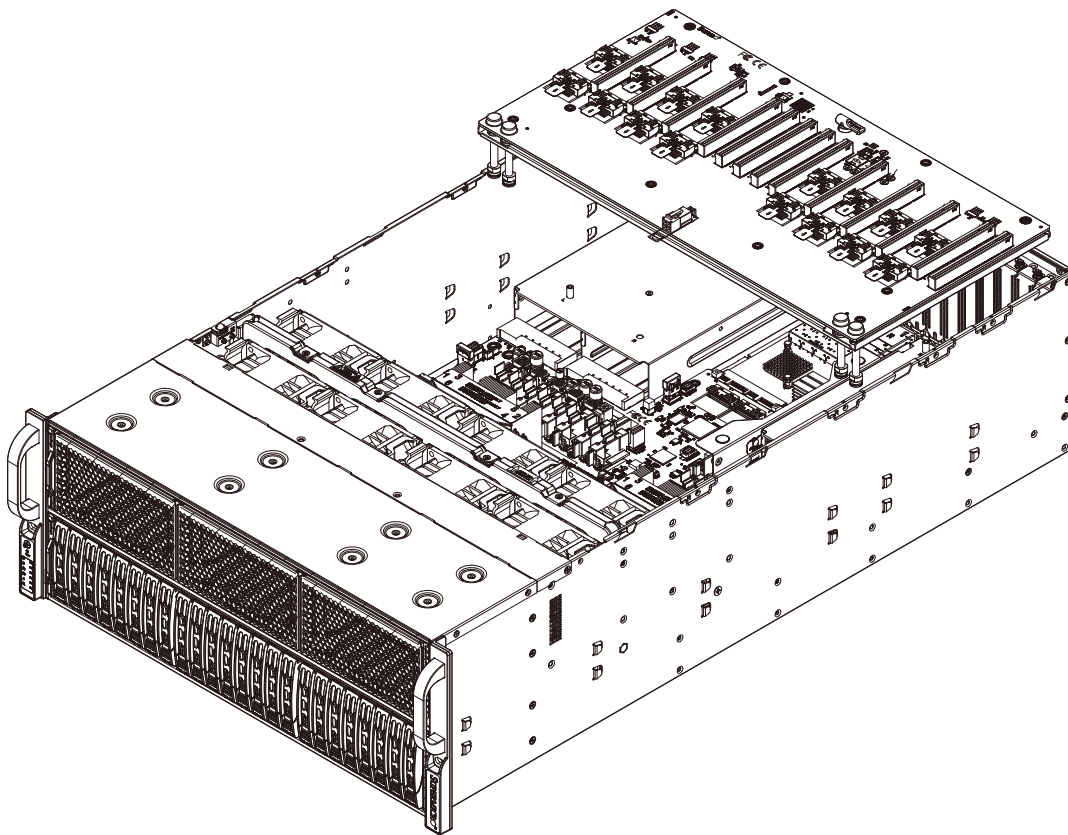
Press both release tabs on the ends of the DIMM module to unlock it. Once the DIMM module is loosened, remove it from the memory slot.

## PCI Expansion Card Installation

The system includes a daughterboard for GPU/PCIe expansion capabilities: AOM-PCIE5-418N-1-P is the daughterboard used in the AS -4125GS-TNRT system, while AOM-PCIE5-418P-1-P is used in both AS -4125GS-TNRT1 and AS -4125GS-TNRT2 systems. See Figure 3-3 for an example of the daughterboard in the system. For topologies of two daughterboards, see Figures 3-4 and 3-5.

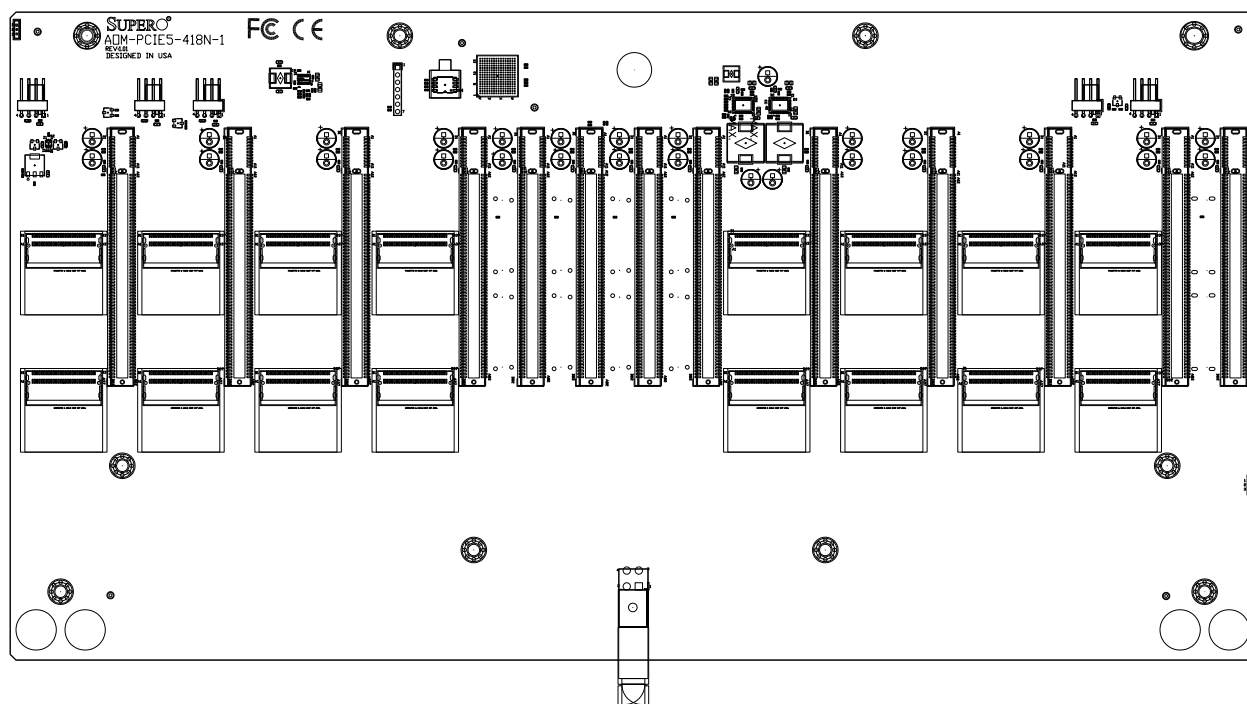
### *Installing Expansion Cards*

1. Power down the system and open the chassis cover.
2. Remove the screw holding the chassis slot shield in place.
3. Insert the expansion card into the motherboard slot, while aligning the expansion card shield with the slot in the rear of the chassis.
4. Secure expansion card shield to the chassis using the screw previously removed.

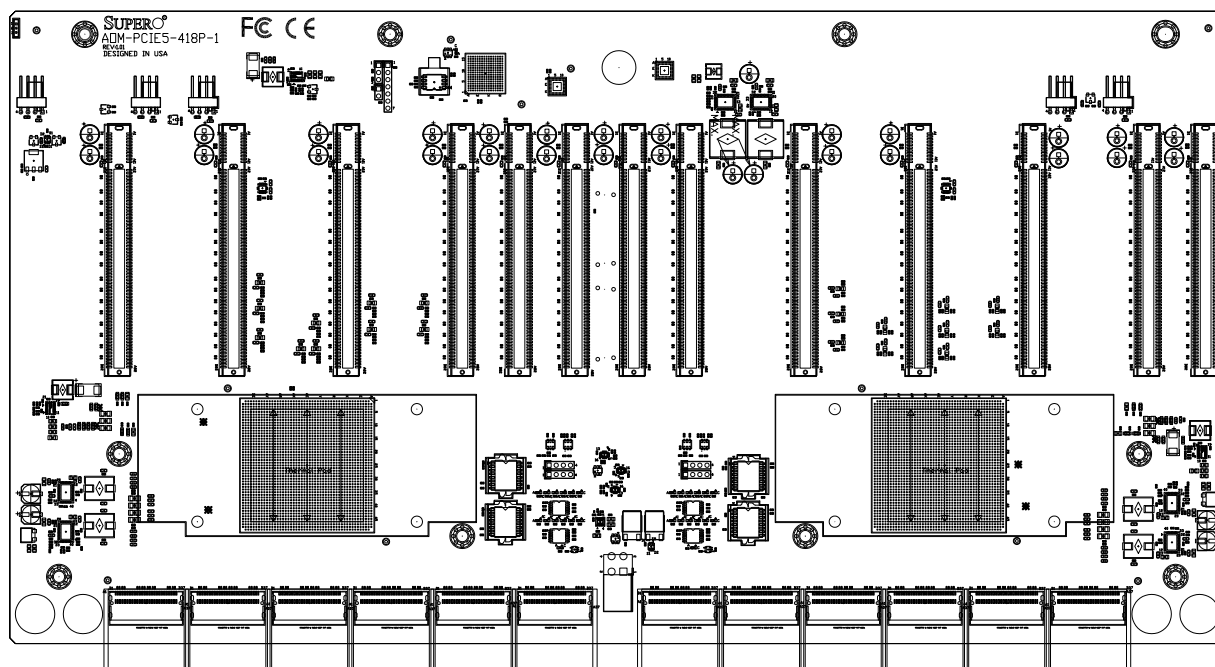


**Figure 3-3. Daughterboard in System**

**Note:** The figures above are intended to show the PCIe expansion card installation locations only. The motherboard may differ from that found in the AS -4125GS-TNRT/TNRT1/TNRT2.



**Figure 3-4. AOM-PCIE5-418N-1-P Daughterboard  
(Used in AS -4125GS-TNRT)**



**Figure 3-5. AOM-PCIE5-418-1-P Daughterboard  
(Used in AS -4125GS-TNRT1 and AS -4125GS-TNRT2)**

## Motherboard Battery

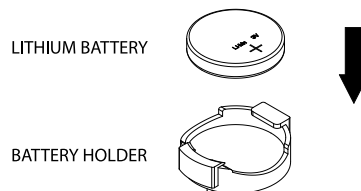
The motherboard uses non-volatile memory to retain system information when system power is removed. This memory is powered by a lithium battery residing on the motherboard.

### *Replacing the Battery*

Begin by removing power from the system as described in section 3.1.

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

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



**Figure 3-6. Installing the Onboard Battery**

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

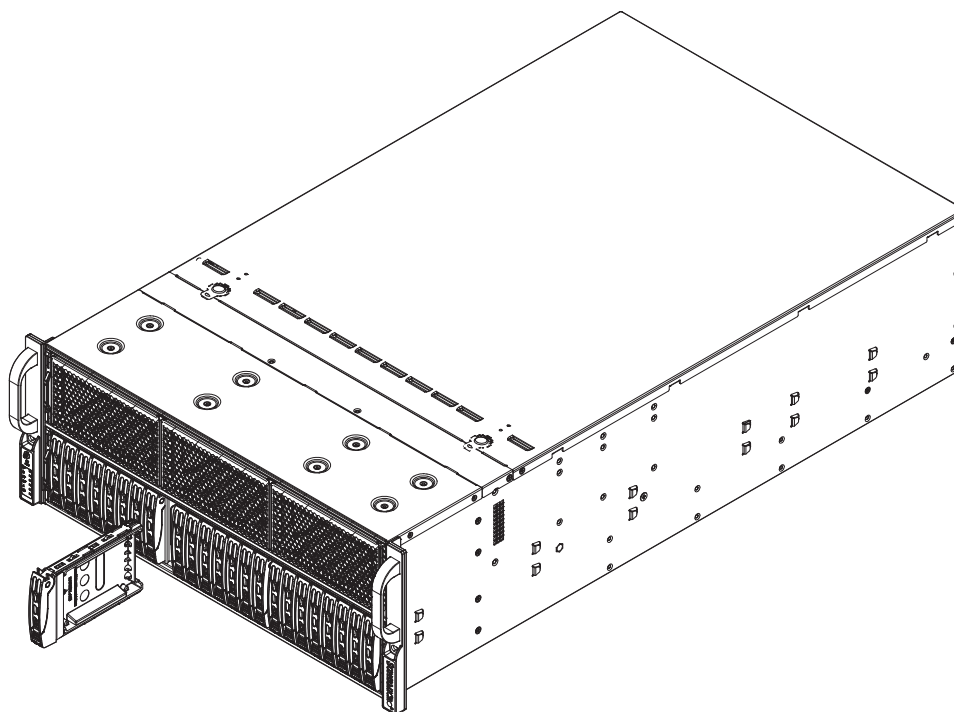
## 3.4 Chassis Components

### Storage Drives

The SC418G supports a total of 24 storage disk drives, which are mounted in drive carriers and reside within the storage drive bays. These drives are hot-swappable and can be removed or replaced without powering down the chassis. Enterprise NVMe, SAS or SATA HDDs only are recommended.

#### ***Removing Storage Drives and Their Carriers from the Storage Drive Bays***

1. Press the release button on the drive carrier. This extends the drive carrier handle.
2. Use the handle to pull the drive and its carrier out of the chassis.



**Figure 3-7. Removing a Storage Drive Carrier**

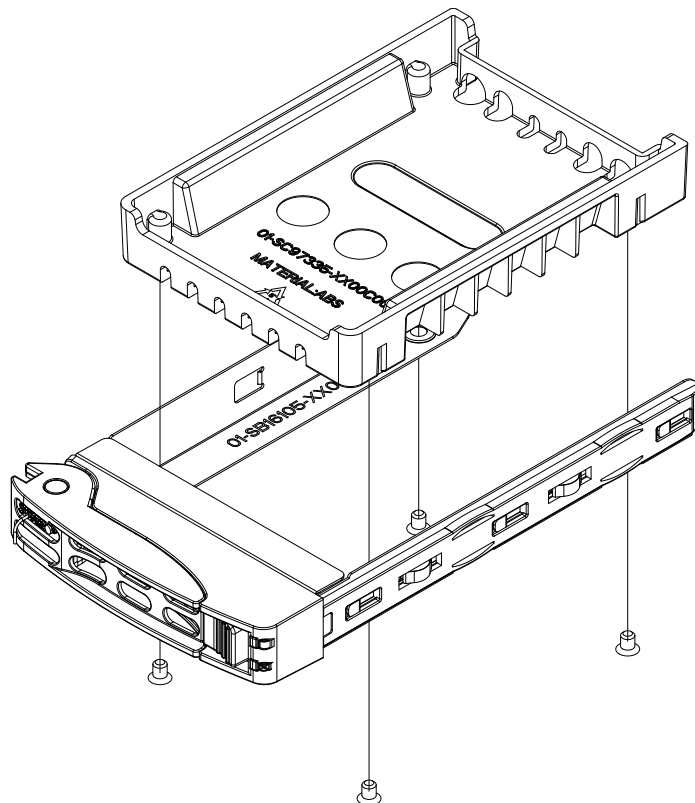
### ***Installing a Storage Drive into a Drive Carrier***

1. Insert a drive into the carrier with the PCB side facing down and the connector end toward the rear of the carrier.
2. Align the drive in the carrier so that the screw holes of both line up. Note that there are holes in the carrier marked "SATA" to aid in correct installation.
3. Secure the drive to the carrier with four screws as illustrated below.
4. Insert the drive carrier into its bay, keeping the carrier oriented so that the storage drive is on the top of the carrier and the release button is on the right side. When the carrier reaches the rear of the bay, the release handle will retract.
5. Push the handle in until it clicks into its locked position.

**Note:** Your operating system must have RAID support to enable the hot-plug capability of the storage drives.

**Note:** Refer to the following FTP site for RAID setup guidelines: <[ftp://ftp.supermicro.com/driver/SAS/LSI/LSI\\_SAS\\_EmbMRAID\\_SWUG.pdf](ftp://ftp.supermicro.com/driver/SAS/LSI/LSI_SAS_EmbMRAID_SWUG.pdf)> and Supermicro's web site for additional information < <http://www.supermicro.com/support/manuals/>>.

**Note:** Enterprise level storage disk drives are recommended for use in Supermicro chassis and servers. For information on recommended storage drives, visit the Supermicro website at <http://www.supermicro.com/products/nfo/files/storage/SBB-HDDCompList.pdf>



**Figure 3-8. Removing a Dummy Drive from a Tray**

**Caution:** Use caution when working around the storage drive backplane. Do not touch the backplane with any metal objects and make sure no ribbon cables touch the backplane or obstruct the holes, which aid in proper airflow.

**Caution:** Regardless of how many storage drives are installed, all drive carriers must remain in the drive bays to maintain proper airflow.

### ***Storage Drive Carrier Indicators***

Each storage drive carrier has two LED indicators: an activity indicator and a status indicator. In RAID configurations, the status indicator lights to indicate the status of the drive. In non-RAID configurations, the status indicator remains off. See the table below for details.

	LED Color	State	Status
Activity LED	Blue	Solid On	SAS/NVMe drive installed
	Blue	Blinking	I/O activity
	Green	Solid On	Safe to remove NVMe device
	Amber	Blinking at 1 Hz	Attention state—do not remove NVMe device

## Replacing Fans

The chassis contains eight 9 cm system fans that provide cooling for the system. All fans are hot-swappable, so there is no need to power down the system when switching fans.

### *Changing a System Fan*

1. If necessary, open the chassis while the power is running to determine which fan has failed. (Never run the server for an extended period of time with the chassis cover open).
2. Press the fan housing lever to unlock the fan from the bracket.
3. While applying pressure to fan housing lever, gently push the fan upwards from underneath the fan housing to remove it.
4. Place the new fan into the vacant space in the housing. Apply pressure to the top of the new fan to lock it into the fan housing. The new fan should 'click' into place.
5. Confirm that the fan is working properly before replacing the chassis cover.

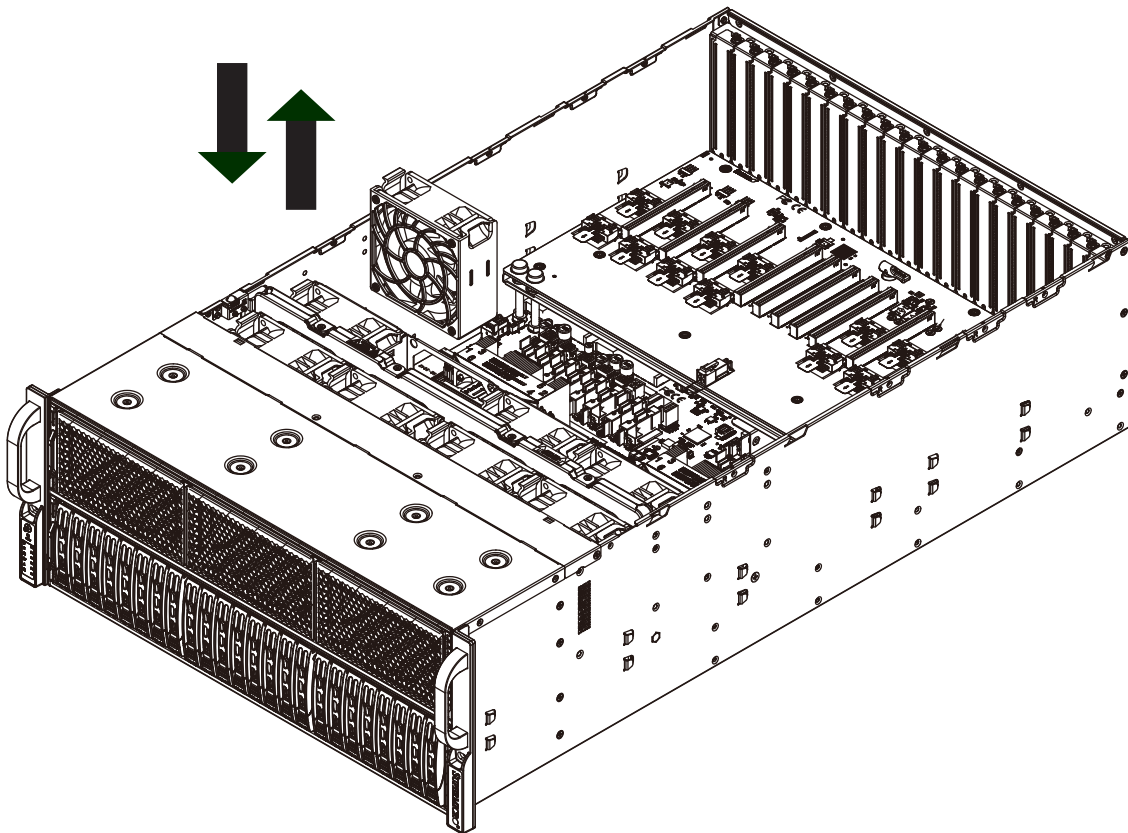


Figure 3-9. Replacing a System Fan

## Power Supply

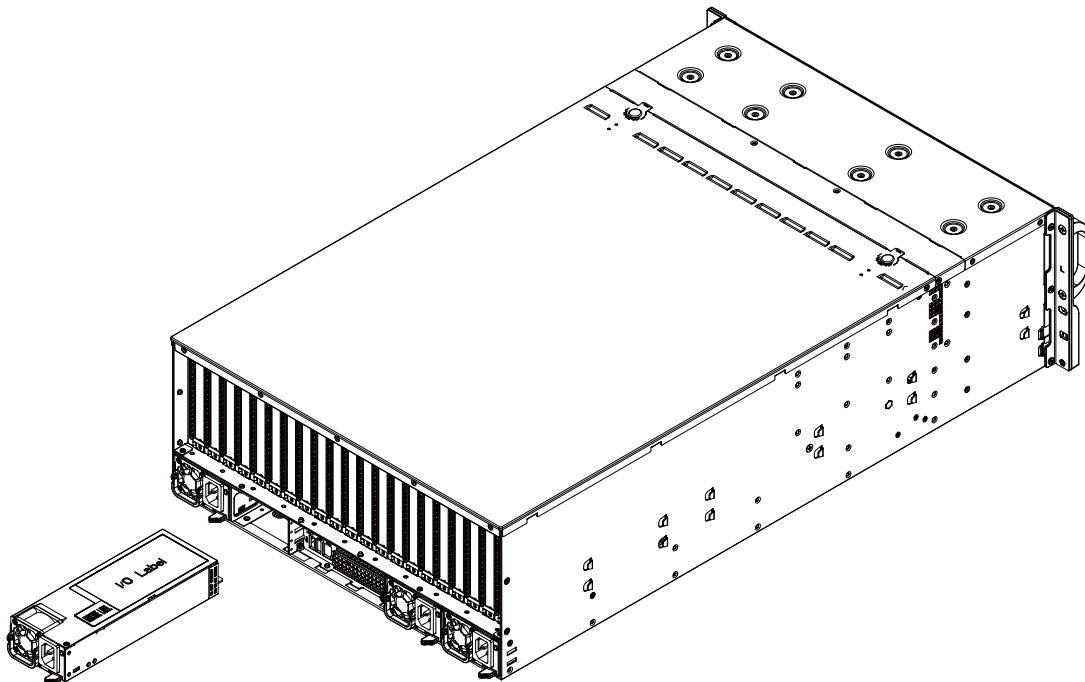
The system includes four hot-plug power 2000 W supply modules. They automatically sense the input voltage between 100 V to 240 V, and operate at that voltage. Note that different input voltages will result in different maximum power output levels.

In the event of a power supply failure, the remaining power supply will automatically take over. The failed power module can be replaced without powering-down the system. Replace with the same model. Replacement modules can be ordered directly from Supermicro.

An amber light on the power supply is illuminated when the power is switched off. An green light indicates that the power supply is operating.

### ***Replacing the Power Supply***

1. Unplug the AC power cord from the failed power supply module.
2. Push and hold the release tab on the back of the power supply.
3. Grasp the handle of the power supply and pull it out of its bay.
4. Push the new power supply module into the power bay until it clicks into the locked position.
5. Plug the AC power cord back into the power supply module.



**Figure 3-10. Replacing a Power Supply**

## 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 Chapter 3 before installing or removing components.

## 4.1 Power Connections

### Power Supply Connectors

JPW1~JPW4 are the 12V power sources for the H13DSG-O-CPU motherboard. Refer to the table below for pin definitions.

4-pin HDD Power Pin Definitions	
Pin#	Definition
1	Ground (Black)
2	+12V (Red)
3	Tachometer (Yellow)
4	PWM control (Blue)

### Backplane 12V and 5V 8-pin Power Connectors

BP\_PWR1, BP\_PWR2 and BP\_PWR3 are 8-pin 12 V and 5 V DC 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	4	+12V
2	Ground	5	+12V
3	Ground	6	+5V

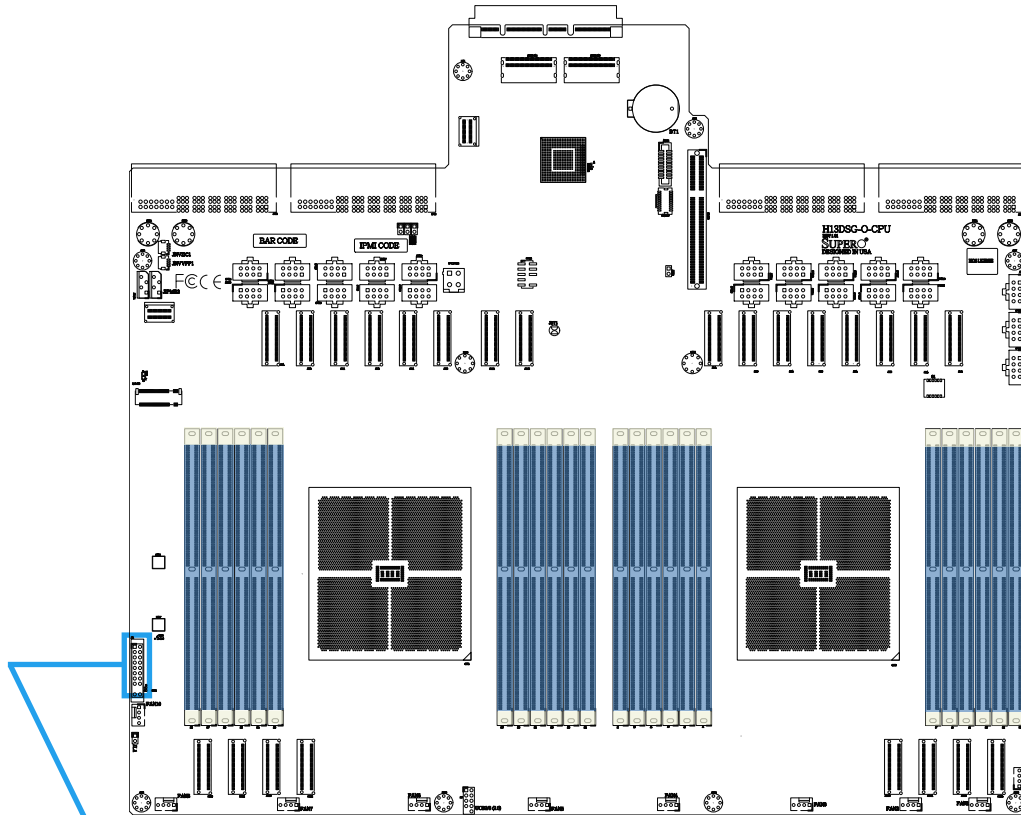
**GPU 12V 8-pin Power Connectors**

JPWR1~20/GPU are 8-pin 12 V DC 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	6	+12V
2	Ground	7	+12V
3	Ground	8	+12V
4	Ground	9	+12V
11	LAD0	12	GND
13	NC	14	NC
15	3.3V_STBY	16	SERIPQ
17	GND	18	NC
19	NC	20	NC

## 4.2 Front Control Panel

JF1 contains header pins for various buttons and indicators located on a control panel at the front of the chassis. This connector is designed specifically for use with Supermicro chassis. See the figure below for the descriptions of the front control panel buttons and LED indicators.



**Figure 4-1. JF1 Header Pins**

	1	2	
Power Switch	○	○	Ground
Reset Switch	○	○	Ground
Power Fail LED+	○	○	Power Fail LED-
UID LED+	○	○	UID LED-
NIC2 LED+	○	○	NIC2 LED-
NIC1 LED+	○	○	NIC1 LED-
HDD LED+/UID Button+	○	○	HDD LED-
Power LED+	○	○	Power LED-
KEY, no pin			KEY, no pin
NMI Switch Shift	○	○	Ground
	19	20	

## Power Switch

The Power Switch connection is located on pins 1 and 2 of JF1. Attach it to a hardware power switch on the computer case to power on/off the system. To force the system to be powered off, press the button for at least 4 seconds. Refer to the table below for pin definitions.

Power Switch Pin Definitions (JF1)	
Pin#	Definition
1	Power Switch
2	Ground

## Reset Switch

The Reset Switch connection is located on pins 3 and 4 of JF1. Attach it to a hardware reset switch on the computer case to reset the system. Refer to the table below for pin definitions.

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

## Power Fail LED

The Power Fail LED connection is located on pins 5 and 6 of JF1.

Power Fail LED Pin Definitions (JF1)	
Pin#	Definition
5	Power Fail LED+
6	Power Fail LED-

Power Fail LED Status	
LED State	Status
Solid on	Overheat
Fast Blinking	Fan Fail
Slow Blinking	Power Fail

### Unit Identifier Button/UID LED Indicator

A Unit Identifier (UID) button is located on the I/O backplane, and two UID LED indicators are located on the motherboard. The rear UID LED is located next to the UID button. The front UID LED is located on pins 7 & 8 on the front control panel (JF1). When you press the UID button, both rear and front UID LED indicators will be turned on. Press the UID button again to turn off the LED indicators. The UID Indicators provide easy identification of a system unit that may be in need of service.

**Note:** UID can also be triggered via IPMI on the motherboard. For more information on IPMI, please refer to the IPMI User's Guide posted on our website at <http://www.supermicro.com>.

UID LED Pin Definitions (JF1)	
Pin#	Definition
7	UID LED+
8	UID LED-

### NIC1/NIC2 (LAN1/LAN2)

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

LAN1/LAN2 LED Pin Definitions (JF1)	
Pin#	Definition
9	NIC2 LED+
10	NIC2 LED-
11	NIC1 LED+
12	NIC1 LED-

### HDD LEED/UID Button

The HDD LED/UID Button connection is located on pins 13 and 14 of JF1. Attach a cable to Pin 14 to show hard drive activity status. Attach a cable to Pin 13 to use UID button. Refer to the table below for pin definitions.

HDD LED Pin Definitions (JF1)	
Pin#	Definition
13	HDD LED+/UID Button+
14	HDD LED-

## Power LED

The Power LED connection is located on pins 15 and 16 of JF1. Attach a cable to Pin 15 and Pin 16 to show system power status. Refer to the table below for pin definitions.

Power LED Pin Definitions (JF1)	
Pin#	Definition
15	Power LED+
16	Power LED-

## NMI Switch

The non-maskable interrupt switch header is located on pins 19 and 20 of JF1. Attach it to a hardware NMI switch on the computer case to trigger the NMI. Refer to the table below for pin definitions.

Power LED Pin Definitions (JF1)	
Pin#	Definition
19	NMI Switch
20	Ground

## 4.3 Connectors

### 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	+3.3V	2	SPI_CS#
3	RESET#	4	SPI_MISO
5	SPI_CLK	6	GND
7	SPI_MOSI	8	NC
9	+3.3V Stdby	10	SPI_IRQ#

### SATA Ports

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

## 4.4 Headers

### Fan Headers

There are ten 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	+12V (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.

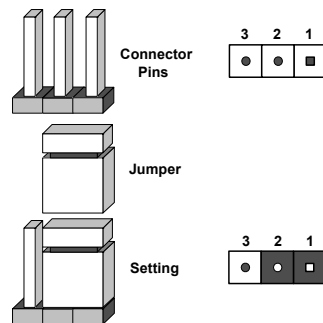
IPMB Header Pin Definitions	
Pin#	Definition
1	Data
2	Ground
3	Clock
4	No Connection

## 4.5 Jumpers

### *Explanation of Jumpers*

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 CMOS 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 CMOS battery on the motherboard.
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.



## Watch Dog

JWD1 controls the Watch Dog function. Watch Dog is a monitor that can reboot the system when a software application hangs. Jumping pins 1-2 will cause Watch Dog to reset the system if an application hangs. Jumping pins 2-3 will generate a non-maskable interrupt signal for the application that hangs. Watch Dog must also be enabled in BIOS. The default setting is Reset.

**Note:** When Watch Dog is enabled, the user needs to write their own application software to disable it.

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

## 4.6 LED Indicators

### LAN Port LEDs

The IPMI Ethernet port has two LED indicators. The Activity LED is yellow and indicates connection and activity. The Link LED may be green, amber, or off to indicate the speed of the connection. Refer to the tables below for more information.

LAN1/2 LED (Connection Speed Indicator)	
LED Color	Definition
Off	10 Mb/s
Green	100 Mb/s
Amber	1 Gb/s

Activity Indicator		
Color	Status	Definition
Off	No Connection	
Yellow	Flashing	Active

### Onboard Power LED

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

A BMC Heartbeat LED is located at LED2 on the motherboard. When LED2 is blinking, BMC functions normally. See the table below for more information.

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

### Unit Identified LED

The Rear UID LED is located next to the UID switch. The UID indicators provide easy identification of a system unit that may be in need of service.

UID LED Status	
LED State	Status
Solid On	Local Unit Identified
Blinking	Remote Unit Identified

## 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, or the BMC KVM console.
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.
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.

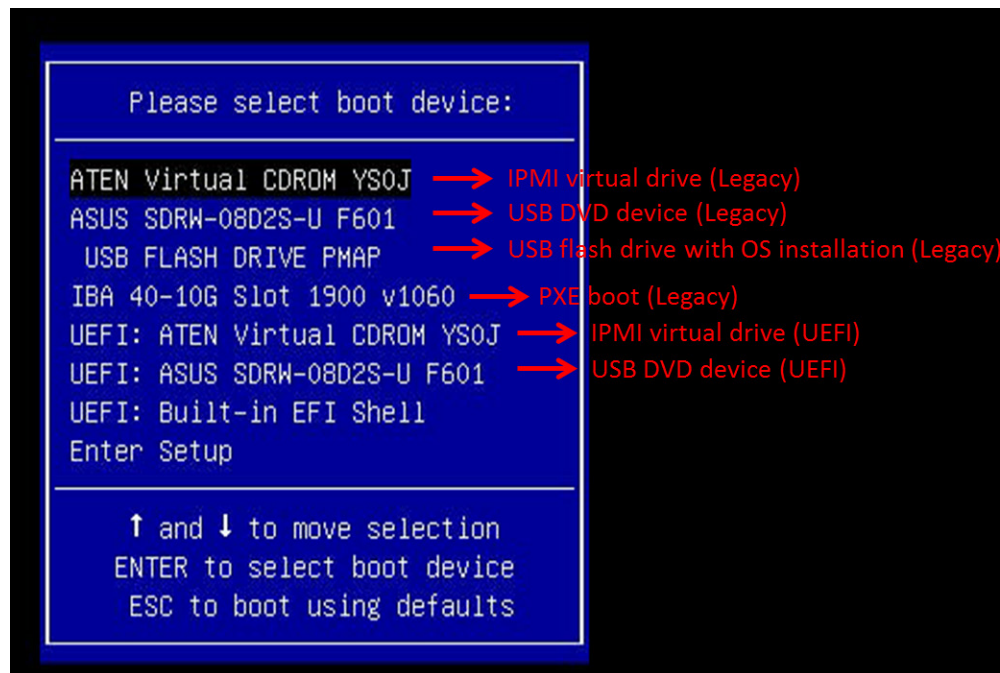


Figure 5-1. Select Boot Device

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.

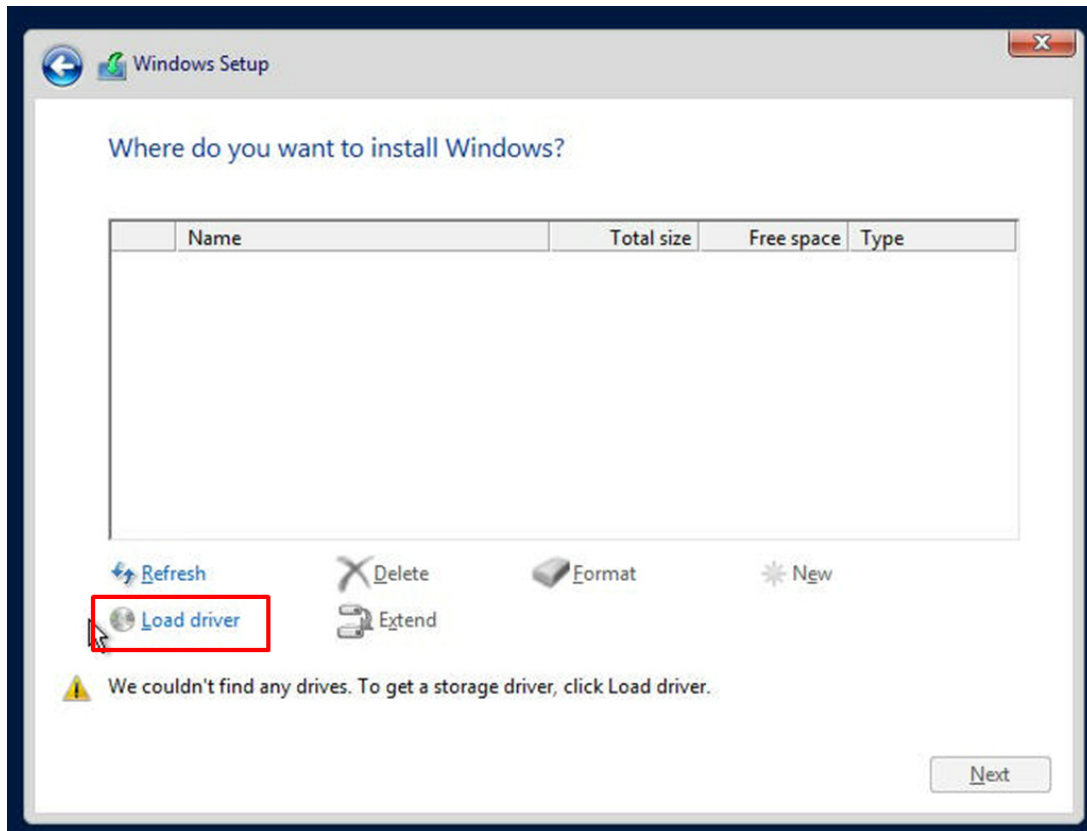


Figure 5-2. Load Driver Link

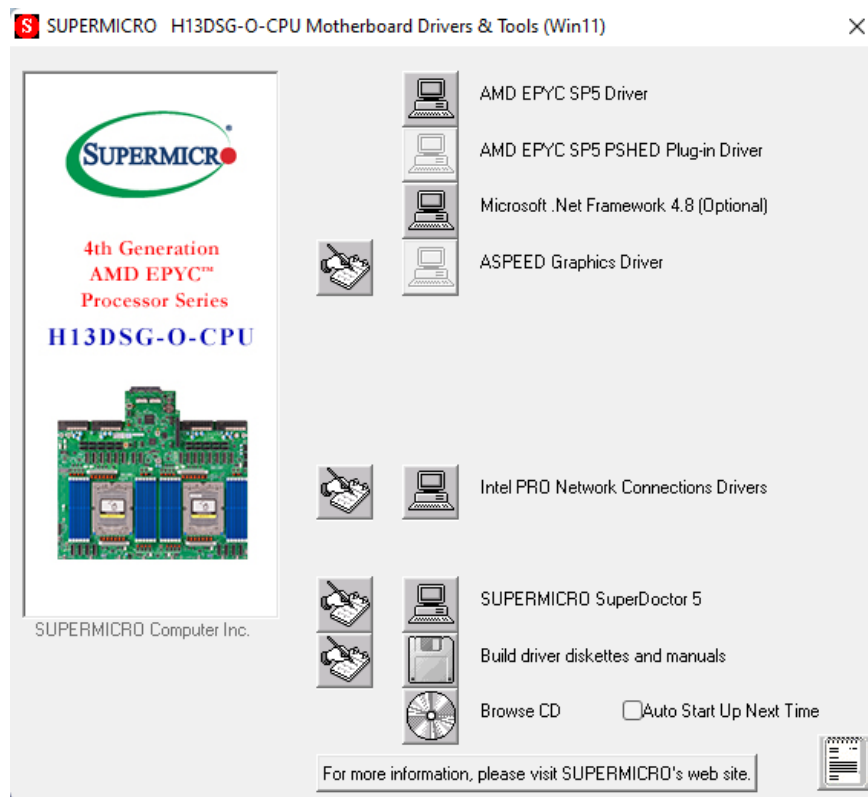
5. Once all devices are specified, continue with the installation.
6. After the Windows OS installation has completed, the system will automatically reboot multiple times.

## 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.

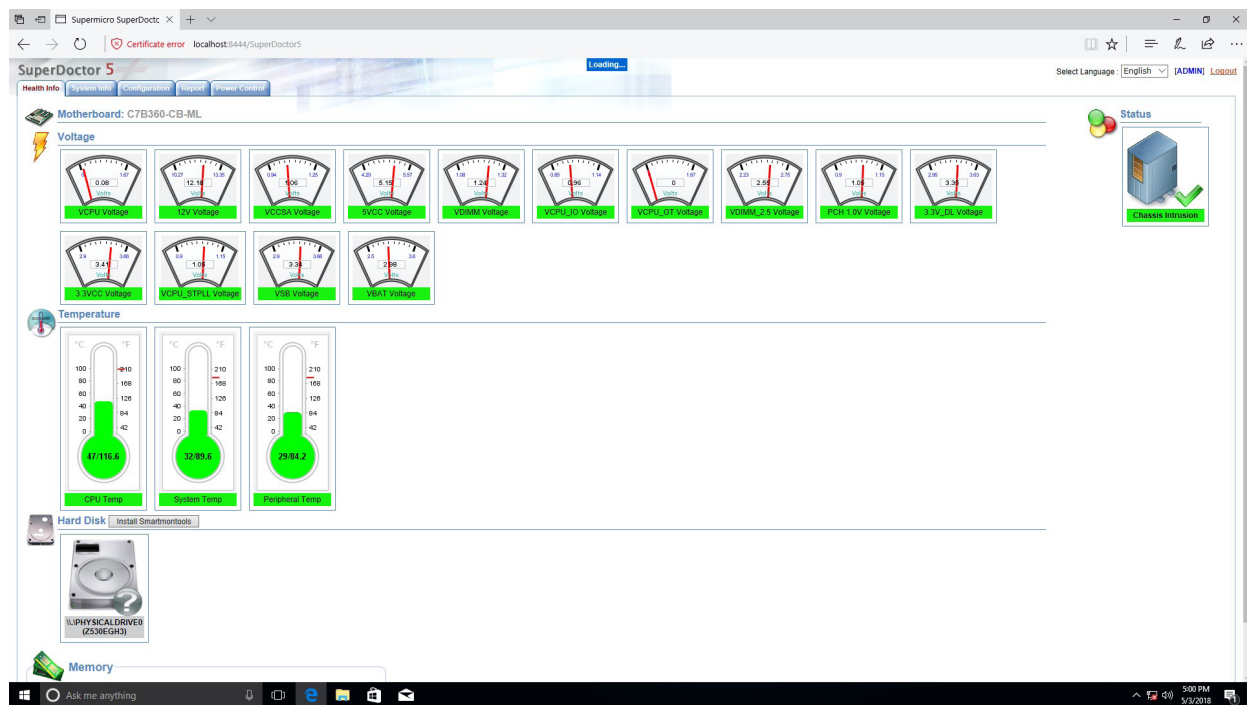


Figure 5-4. SuperDoctor 5 Interface Display Screen (Health Information)

## 5.4 BMC

The motherboard 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](http://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.

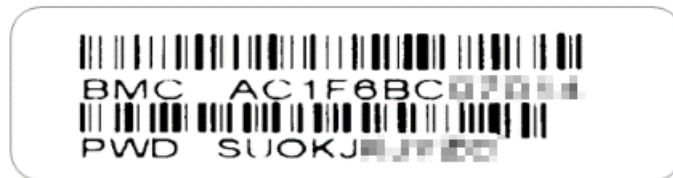


Figure 5-5. BMC Password Label

# Chapter 6

## Optional Components

This chapter describes alternate configurations and optional system components.

Optional Parts
Storage Protocols
PCIe Options
Power Options
<a href="#">Cable Management Arm</a>
<a href="#">TPM security module</a>

### 6.1 Storage Protocols Supported

The storage drive bays can be configured to support either SATA, SAS, or NVMe drives by adding optional parts to the system.

**SATA** – The system supports up to 16 SATA drive bays by adding an additional storage add-on cards and cables. Alternatively, the system can support up to 2 SATA drive bays using the motherboard's onboard SATA controller. Additional cables are still required.

**SAS** – The system supports up to 16 SAS drive bays. Additional storage add-on cards and cables are required.

**NVMe** – The AS -4125GS-TNRT system supports up to 4 NVMe drives, and the AS -4125GS-TNRT1 and AS -4125GS-TNRT2 systems support up to 8 NVMe drives. Additional cables are required.

See the following section for the supported storage drive bay configurations and the optional parts required.

## 6.2 Power Supply Configurations

Power Supply Module Options		
Watts	Part Number	80Plus Level
2700	PWS-2K70A	Titanium

## 6.3 Cable Management Arm

The system supports a cable management arm (CMA), which keeps the rear cables organized and clear of the rail mechanisms when the system is extended out the front of the rack for maintenance.

The CMA attaches to the rack mounting rails using four connectors. They are labeled on the connectors 1, 2, 3, and 4.

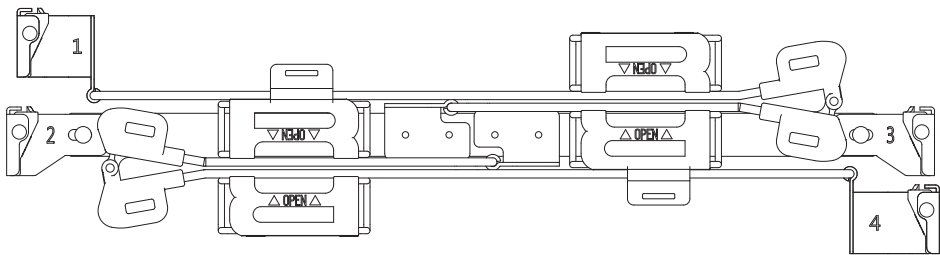
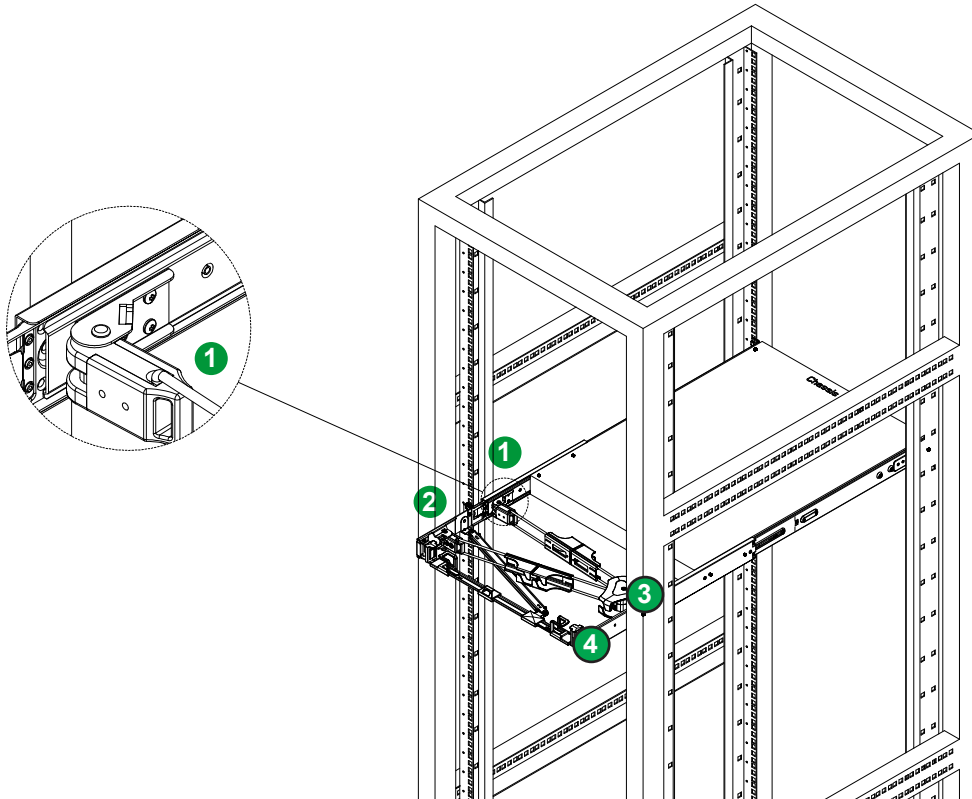


Figure 6-2. Cable Management Arm

Cable Arm Details		
Optional Part	Part Number	Description
Cable Arm	MCP-290-00168-0N	7.5" deep cable arm
Rail Set	MCP-290-11901-0N	41.2" rails (optimized for 1200 mm deep racks)

### ***Installing the Cable Management Arm***

1. Slide CMA connector #1 forward onto the two posts on the rear of the right *inner* rail (right side when viewed from the front). It snaps into place.
2. Slide CMA connector #2 forward onto the two posts on the rear of the right *middle* rail. It snaps into place.



**Figure 6-3. Installing the Connectors**

3. Slide CMA connector #3 forward onto the two posts on the rear of the left middle rail. It snaps into place.
4. For CMA connector #4, align the metal tabs with the slots on the rear of the left outer rail and push it forward. It snaps into place.
5. Route the cables through the holding brackets, leaving enough slack.

### ***Removing the Cable Management Arm***

1. Remove cables from the CMA,
2. For CMA connector #4, pull the metal release tab toward the center of the rack and slide the connector toward the rear to release it.
3. For CMA connectors #3, #2, and #1, depress the front edge of the yellow plastic rocker lock and slide the connector toward the rear to release it.

## 6.4 TPM Security Module

SPI capable TPM 2.0 (or 1.2) with Infineon 9670 controller, horizontal 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 hard drive is not installed in the system.

Details and installation procedures are at:

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

- AOM-TPM-9670V
- AOM-TPM-9671V

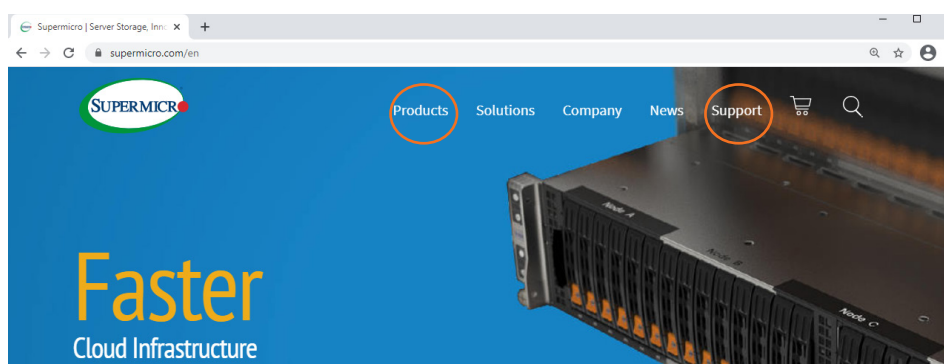
# Chapter 7

## Troubleshooting and Support

### 7.1 Information Resources

#### Website

A great deal of information is available on the Supermicro website, [supermicro.com](http://supermicro.com).



**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 -4125GS-TNRT/TNRT1/TNRT2 System***

Web [AS -4125GS-TNRT/TNRT1/TNRT2](#) specifications page

[H13DSG-O-CPU 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](#)

[TPM User Guide](#)

[General Memory Configuration 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 a Baseboard Management Controller (BMC) interface. It provides remote access, monitoring and management. There are several BIOS settings related to the BMC.

For general documentation and information on the BMC, please visit our website at: [https://www.supermicro.com/manuals/other/BMC\\_IPMI\\_X13\\_H13.pdf](https://www.supermicro.com/manuals/other/BMC_IPMI_X13_H13.pdf).

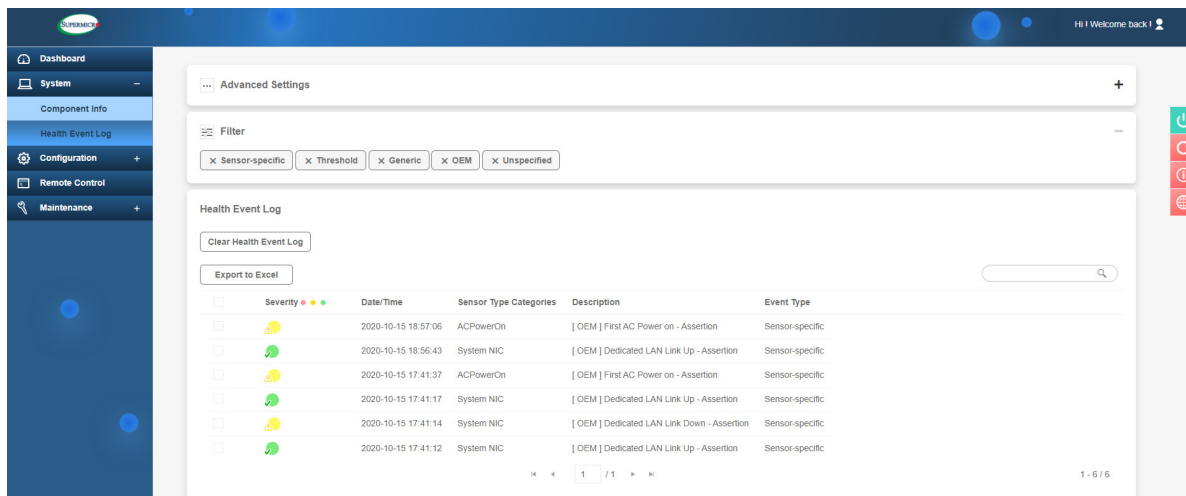


Figure 7-2. BMC Dashboard Sample

## 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](#) or [Returning Merchandise for Service](#) sections in this chapter. [Power down](#) the system before changing any non hot-swap hardware components.

### General Technique

If you experience unstable operation or get no boot response, try:

1. With power off, remove all but one DIMM and other added components, such as add-on cards, from the motherboard. Make sure the motherboard is not shorted to the chassis.
2. Set all jumpers to their default positions.
3. Power up. If the system boots, check for memory errors and add-on card problems.

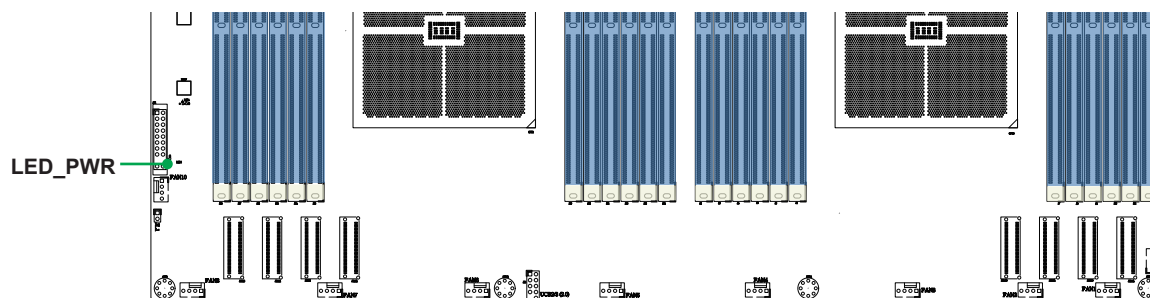


Figure 7-3. Location of the MB Power LED

### No Power

- Check that the power LED on the motherboard is on.
- Make sure that the power connector is connected to the power supply.
- Check that the motherboard battery still supplies approximately 3 VDC. If it does not, replace it.
- Check that the system input voltage is 100-120 V or 180-240 V.
- Turn the power switch on and off to test the system

### No Video

If the power is on but you have no video, remove all add-on cards and cables.

## System Boot Failure

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

- 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 below.

## Memory Errors

- Make sure that the DIMM modules are properly and fully installed.
- 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 3.3 for memory details.
- Check for bad DIMM modules or slots by swapping modules between slots and noting the results.

## Losing the System Setup Configuration

- Use a high quality power supply. A poor quality power supply may cause the system to lose the CMOS setup information.
- Check that the motherboard battery still supplies approximately 3 VDC. If it does not, replace it.

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

## When the System Becomes Unstable

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

- CPU/BIOS support: Make sure that your CPU is supported and that you have the latest BIOS installed in your system.
- Memory: Make sure that the memory modules are supported. Refer to the product page on our website at [www.supernmicro.com](http://www.supernmicro.com). Test the modules using **memtest86** or a similar utility.
- Storage drives: Make sure that all drives work properly. Replace if necessary.
- System cooling: Check that all heatsink fans and system fans 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 Control panel Overheat LED.

- Adequate power supply: Make sure that the power supply provides adequate power to the system. Make sure that all power connectors are connected. Refer to the Supermicro website for the minimum power requirements.
- Proper software support: Make sure that the correct drivers are used.

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

- Source of installation: Make sure that the devices used for installation are working properly, including boot devices.
- Cable connection: Check to make sure that all cables are connected and working properly.
- Use 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.
- Identify a bad component by isolating it. Check and change one component at a time.
  - Remove a component in question from the chassis, and test it in isolation. Replace it if necessary.
  - Or swap in a new component for the suspect one.
  - Or install the possibly defective component into a known good system. If the new system works, the component is likely not the cause or the problem.

## Issues with NVMe Storage Devices

***The numbering of NVMe storage devices are not shown as sequential in the operating system.***

This only happens after an M.2 NVMe device is installed. In the example of a twelve-bay system, NVMe4 (from CPU1) is occupied and NVMe9 (from CPU2) is occupied, causing the numbering of the NVMe storage devices in the operating system to be different from that of the physical presence of drives.

Before two M.2 device two installed:

NVMe2	NVMe5	NVMe8	NVMe11
NVMe1	NVMe4	NVMe7	NVMe10
NVMe0	NVMe3	NVMe6	NVMe9

After two M.2 devices are installed:

NVMe2	NVMe6	NVMe10	NVMe13
NVMe1	NVMe5	NVMe8	NVMe12
NVMe0	NVMe3	NVMe7	NVMe11

Note that NVMe4 and NVMe9 are gone. Once an M.2 NVMe device is installed, the operation system recognizes the storage devices based on the PCIe training sequences. (The numbering sequence begins with CPU1-connected devices and then CPU2-connected devices.)

***An NVMe drive is successfully ejected via the BMC Web GUI, but it displays "Exception" in the log.***

This is perfectly fine at this stage and will not affect your normal use of the drives and the BMC Web GUI.

## 7.4 BIOS Error Beep (POST) Codes

During the POST (Power-On Self-Test) routines, which are performed each time the system is powered on, errors may occur.

**Non-fatal errors** are those which, in most cases, allow the system to continue the boot-up process. The error messages normally appear on the screen.

**Fatal errors** are those which will not allow the system to continue the boot-up procedure. If a fatal error occurs, you should consult with your system manufacturer for possible repairs.

These fatal errors are usually communicated through a series of audible beeps. The table below lists some common errors and their corresponding beep codes encountered by users.

BIOS Error Beep (POST) Codes		
Beep Code	Error Message	Description
1 short	Refresh	Circuits have been reset (Ready to power up)
5 short, 1 long	Memory error	No memory detected in system
5 long, 2 short	Display memory read/write error	Video adapter missing or with faulty memory
1 long continuous	System OH	System overheat condition

### Additional BIOS POST Codes

The AMI BIOS supplies additional checkpoint codes, which are documented online at <http://www.supernmicro.com/support/manuals/> ("AMI BIOS POST Codes User's Guide").

When BIOS performs the Power On Self Test, it writes checkpoint codes to I/O port 0080h. If the computer cannot complete the boot process, a diagnostic card can be attached to the computer to read I/O port 0080h (Supernmicro p/n AOC-LPC80-20).

For information on AMI updates, please refer to [www.ami.com/products/](http://www.ami.com/products/).

## 7.5 Crash Dump Using the BMC Dashboard

In the event of a processor internal error (IERR) that crashes your system, you may want to provide information to support staff. You can download a crash dump of status information using the BMC Dashboard. The BMC manual is available at [https://www.supermicro.com/manuals/other/BMC\\_Users\\_Guide\\_X12\\_H12.pdf](https://www.supermicro.com/manuals/other/BMC_Users_Guide_X12_H12.pdf).

### Check Error Log

1. Access the BMC web interface.
2. Click the **Server Health** tab, then **Event Log** to verify an IERR error.

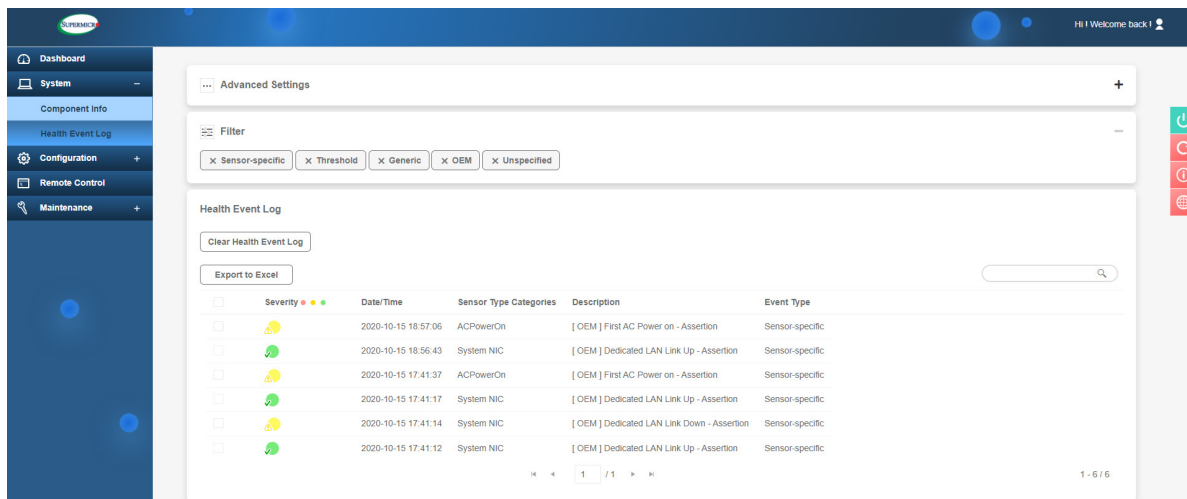


Figure 7-4. BMC Event Log

In the event of an IERR, the BMC executes a crash dump. You must download the crash dump and save it.

## 7.6 UEFI BIOS Recovery

**Warning:** Do not upgrade the BIOS unless your system has a BIOS-related issue. Flashing the wrong BIOS can cause irreparable damage to the system. In no event shall Supermicro be liable for direct, indirect, special, incidental, or consequential damages arising from a BIOS update. If you do update the BIOS, do not shut down or reset the system while the BIOS is updating to avoid possible boot failure.

### Overview

The Unified Extensible Firmware Interface (UEFI) provides a software-based interface between the operating system and the platform firmware in the pre-boot environment. The UEFI specification supports an architecture-independent mechanism that will allow the UEFI OS loader stored in an add-on card to boot the system. The UEFI offers clean, hands-off management to a computer during system boot.

### Recovering the UEFI BIOS Image

A UEFI BIOS flash chip consists of a recovery BIOS block and a main BIOS block (a main BIOS image). The recovery block contains critical BIOS codes, including memory detection and recovery codes for the user to flash a healthy BIOS image if the original main BIOS image is corrupted. When the system power is turned on, the recovery block codes execute first. Once this process is complete, the main BIOS code will continue with system initialization and the remaining POST (Power-On Self-Test) routines.

**Note 1:** Follow the BIOS recovery instructions below for BIOS recovery when the main BIOS block crashes.

**Note 2:** When the BIOS recovery block crashes, you will need to follow the procedures to make a Returned Merchandise Authorization (RMA) request. Also, you may use the Supermicro Update Manager (SUM) Out-of-Band ([https://www.supermicro.com.tw/products/nfo/SMS\\_SUM.cfm](https://www.supermicro.com.tw/products/nfo/SMS_SUM.cfm)) to reflash the BIOS.

### Recovering the Main BIOS Block with a USB Device

This feature allows the user to recover the main BIOS image using a USB-attached device without additional utilities used. A USB flash device such as a USB Flash Drive, or a USB CD/DVD ROM/RW device can be used for this purpose. However, a USB Hard Disk drive cannot be used for BIOS recovery at this time.

The file system supported by the recovery block is FAT (including FAT12, FAT16, and FAT32) which is installed on a bootable or non-bootable USB-attached device. However, the BIOS might need several minutes to locate the SUPER.ROM file if the media size becomes too large due to the huge volumes of folders and files stored in the device.

To perform UEFI BIOS recovery using a USB-attached device, follow the instructions below.

1. Using a different machine, copy the "Super.ROM" binary image file into the Root "\" directory of a USB device or a writable CD/DVD.

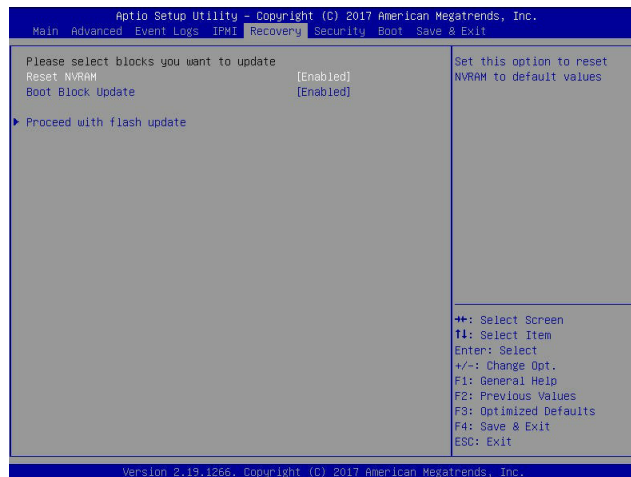
**Note 1:** If you cannot locate the "Super.ROM" file in your drive disk, visit our website at [www.supermicro.com](http://www.supermicro.com) to download the BIOS package. Extract the BIOS binary image into a USB flash device and rename it "Super.ROM" for the BIOS recovery use.

**Note 2:** Before recovering the main BIOS image, confirm that the "Super.ROM" binary image file you download is the same version or a close version meant for your motherboard.

2. Insert the USB device that contains the new BIOS image ("Super.ROM") into your USB drive and reset the system when the following screen appears.
3. After locating the healthy BIOS binary image, the system will enter the BIOS Recovery menu as shown below.



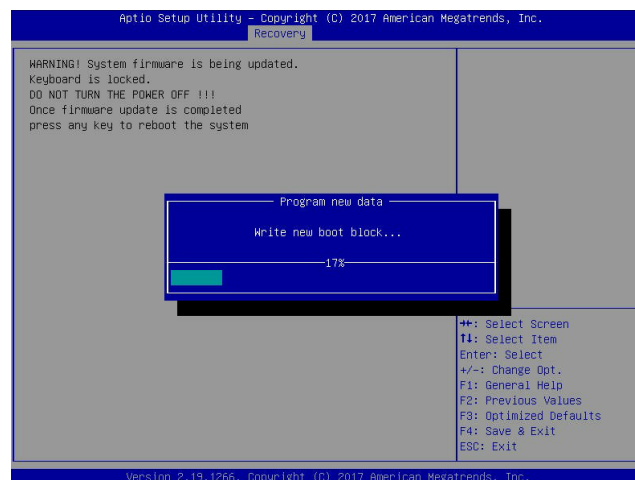
**Note:** At this point, you may decide if you want to start the BIOS recovery. If you decide to proceed with BIOS recovery, follow the procedures below.



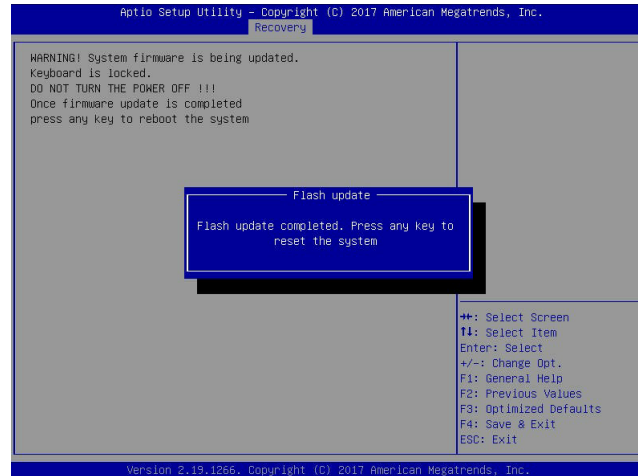
4. When the screen as shown above displays, use the arrow keys to select the item "Proceed with flash update" and press the <Enter> key. You will see the BIOS recovery progress as shown in the screen below.

**Note:** Do not interrupt the BIOS flashing process until it has completed.

5. After the BIOS recovery process is complete, press any key to reboot the system.
6. Using a different system, extract the BIOS package into a USB flash drive.

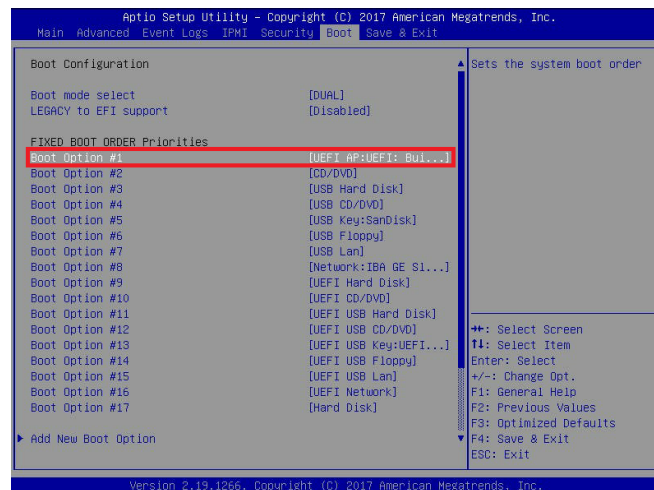


7. Press the <Del> key continuously during system boot to enter the BIOS Setup utility. From the top of the tool bar, select Boot to enter the submenu. From the submenu list, select Boot Option #1 as shown below. Then, set Boot Option #1 to [UEFI AP:UEFI:



Built-in EFI Shell]. Press the <F4> key to save the settings and exit the BIOS Setup utility.

8. When the UEFI Shell prompt appears, type `fs#` to change the device directory path. Go to the directory that contains the BIOS package you extracted earlier from Step 6. Enter `flash.nsh BIOSname.###` at the prompt to start the BIOS update process.



**Note:** Do not interrupt this process until the BIOS flashing is complete.

```

UEFI Interactive Shell v2.1
EDK II
UEFI v2.50 (American Megatrends, 0x0005000C)
Mapping table
FS0: Alias(s):HD0:0b0:BLK1:
      PciRoot(0x0)/Pci(0x14,0x0)/USB(0x11,0x0)/H0(1,MBR,0x3791072,0x800,0x1
      0A3592)
      BLK0: Alias(s):
      PciRoot(0x0)/Pci(0x14,0x0)/USB(0x11,0x0)
Press F80 in 1 seconds to skip startup.nsh or any other key to continue.
Shell> f80
FS0:\> cd \FUD00
FS0:\FUD00> cd \SNJPM2_03162017
FS0:\FUD00\SNJPM2_03162017> flash.nsh X10PU7.314_

```

9. The screen above indicates that the BIOS update process is complete. When you see the screen above, unplug the AC power cable from the power supply, clear CMOS, and plug the AC power cable in the power supply again to power on the system.

```

Done.
[ Access Cmos Port Ex ]
<Read>
Index 0x51: 0x10

Done.
*****
* Program BIOS and ME (including FDT) regions...
*****
| AMT Firmware Update Utility v5.09.01.1317 |
| Copyright (C)2017 American Megatrends Inc. All Rights Reserved. |
+-----+
CPUID = 50652

Reading flash ..... done
- ME Data Size checking - ok
- FFS checksums ..... ok
- Check RomLayout ..... OK
Erasing Boot Block ..... done
Updating Boot Block ..... done
Verifying Boot Block ..... done
Erasing Main Block ..... 0x00132000 (0%)

```

10. Press the <Del> key continuously to enter the BIOS Setup utility.
11. Press the <F3> key to load the default settings.

```

Verifying NDB Block ..... done
- Update success for FDR
- Update success for IEV -
- Successful Update Recovery Loader to OPRx!!
- Successful Update MFSB!!-
- Successful Update FPR!!-
- Successful Update WFS, IVB1 and IVB2!!
- Successful Update FLOG and UTDK!!
- ME Entire Image update success !!
WARNING : System must power-off to have the changes take effect!
Moving FS0:\FUD00\SNJPM2_03162017\rdtx64.efi -> FS0:\FUD00\SNJPM2_03162017\
dt.smc
- [ok]
Moving FS0:\FUD00\SNJPM2_03162017\afuef1x64.efi -> FS0:\FUD00\SNJPM2_0316201
7\afuef1.smc
- [ok]
*****
* Please ignore this 'Shell: Cannot read from file - Device Error'
* warning message due to it does not impact flashing process.
*****
Deleting 'afuef1.smc'
Delete successful.
FS0:\>

```

12. After loading the default settings, press the <F4> key to save the settings and exit the BIOS Setup utility.

## 7.7 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 completely.
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. Replace the cover, reconnect the power cords and power on the system.



JBT1 contact pads

**Notes:** Clearing CMOS will also clear all passwords.

*Do not use the PW\_ON connector to clear CMOS.*

## 7.8 BMC Reset

The BMC can be reset using the UID button.

- Reset – Press and hold the button. After six seconds, the LED blinks at 2 Hz. The BMC resets and the reset duration is approximately 250 ms. Then the BMC starts to boot.
- Restore factory default configuration – Hold the button for twelve seconds. The LED blinks at 4 Hz while defaults are configured. **Note:** All BMC settings including username and password will be removed except the FRU and network settings.

Firmware update – When the BMC firmware is being updated, the UID LED blinks at 10 Hz.

BMC Reset Options		
Event	UID LED	BMC Heartbeat LED
Reset	Blue, Blinks at 2 Hz	Green, solid
Restore Defaults	Blue, Blinks at 4 Hz	Off
Update	Blue, Blinks at 10 Hz	

## 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 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:
  - 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. To provide feedback on our manuals, please email us at [techwriterteam@supermicro.com](mailto:techwriterteam@supermicro.com).

## 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](mailto:marketing@supermicro.com) (General Information)  
[Sales-USA@supermicro.com](mailto:Sales-USA@supermicro.com) (Sales Inquiries)  
[Government\\_Sales-USA@supermicro.com](mailto:Government_Sales-USA@supermicro.com) (Gov. Sales Inquiries)  
[support@supermicro.com](mailto:support@supermicro.com) (Technical Support)  
[RMA@supermicro.com](mailto:RMA@supermicro.com) (RMA Support)  
[Webmaster@supermicro.com](mailto:Webmaster@supermicro.com) (Webmaster)

Website: [www.supermicro.com](http://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](mailto:Sales_Europe@supermicro.com) (Sales Inquiries)  
[Support\\_Europe@supermicro.com](mailto:Support_Europe@supermicro.com) (Technical Support)  
[RMA\\_Europe@supermicro.com](mailto:RMA_Europe@supermicro.com) (RMA Support)

Website: [www.supermicro.nl](http://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](mailto:Sales-Asia@supermicro.com.tw) (Sales Inquiries)  
[Support@supermicro.com.tw](mailto:Support@supermicro.com.tw) (Technical Support)  
[RMA@supermicro.com.tw](mailto:RMA@supermicro.com.tw) (RMA Support)

Website: [www.supermicro.com.tw](http://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](http://www.supermicro.com/about/policies/safety_information.cfm).

### Warning Definition



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

警告の定義

この警告サインは危険を意味します。

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

此警告符号代表危險。

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

此警告符號代表危險。

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

## Warnung

### WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

### INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

### IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

## תקנון הזהרות אזהרה

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

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

안전을 위한 주의사항

경고!

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

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

## BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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

## BEWAAR DEZE INSTRUCTIES

### Installation Instructions



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

警告

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.

اقرأ 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.

**警告**

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

**警告**

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

**警告**

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

**Warnung**

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

**¡Advertencia!**

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

**Attention**

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

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

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

**경고!**

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

**Waarschuwing**

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

## Power Disconnection Warning



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



### 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、シャーシ内部にアクセスするには、システムの電源はすべてのソースから切断され、電源コードは電源モジュールから取り外す必要があります。

### 警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

### 警告

在您打開機殼安裝或移除內部元件前，必須將系統完全斷電，並移除電源線。

### Warnung

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

### ¡Advertencia!

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

### Attention

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

אזהרה מפני ניתוק חשמלי

אזהרה!

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

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

انصل إلى انطاقت انداخييت نههيككم نثبيج أو إزانت مكناث الجهاز

경고!

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

Waarschuwing

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

## Equipment Installation



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

警告

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せん。

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).

**警告**

このユニットは、アクセス制限区域に設置されることを想定しています。

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

**警告**

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

**警告**

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

**Warnung**

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

**¡Advertencia!**

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

**Attention**

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

אזור עם גישה מוגבלת

אזהרה!

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

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

**경고!**

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

**Waarschuwing**

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

## Battery Handling



**CAUTION:** There is risk of explosion if the battery is replaced by an incorrect type. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions

### 警告

バッテリーを間違ったタイプに交換すると爆発の危険があります。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

如果更换的电池类型不正确，则存在爆炸危险。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

如果更換的電池類型不正確，則有爆炸危險。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

Es besteht Explosionsgefahr, wenn die Batterie durch einen falschen Typ ersetzt wird. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

### ATTENTION

Il existe un risque d'explosion si la batterie est remplacée par un type incorrect. 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 riesgo de explosión si la batería se reemplaza por un tipo incorrecto. 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 אם הסוללה תוחלף בסוג שגוי. יש להחליף את הסוללה בסוג התואם מחברת יצרן מומלצת. סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן.

هناك خطر الانفجار إذا تم استبدال البطارية بنوع غير صحيح.  
 اسحبذال البطارية  
 فقط بنفس النوع أو ما يعادلها مما أوصت به الشركة المصنعة  
 جخلص من البطاريات المسحمة وفقا لعمليات الشركة الصانعة

경고!

배터리를 잘못된 종류로 교체하면 폭발의 위험이 있습니다. 기존 배터리와 동일하거나 제조사에서 권장하는 동등한 종류의 배터리로만 교체해야 합니다. 제조사의 안내에 따라 사용된 배터리를 처리하여 주십시오.

#### WAARSCHUWING

Er bestaat explosiegevaar als de batterij wordt vervangen door een verkeerd type. 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.

警告

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告

此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung

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

**¡Advertencia!**

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

**Attention**

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

אם קיים יותר מספק אחד

אזהרה!

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

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة .

يجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

**경고!**

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

**Waarschuwing**

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

## Backplane Voltage



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

### 警告

システムの稼働中は危険な電圧または電力が、バックプレーン上にかかっています。  
修理する際には注意ください。

### 警告

当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

### 警告

當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

### Warnung

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

### ¡Advertencia!

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

### Attention

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

מתח בפנל האחורי

אזהרה!

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

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

경고!

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

Waarschuwing

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

## Comply with Local and National Electrical Codes



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

警告

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

Attention

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

תיאום חוקי החשמל הארצי

אזהרה!

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمثل للقوايه المحلية والطية المتعلقة  
بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

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

## Product Disposal



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

警告

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

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

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

¡Advertencia!

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

## Attention

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

סילוק המוצר

אזהרה!

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

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

경고!

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

## Waarschuwing

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

## Fan Warning



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

警告

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

警告!

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

警告

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

**Warnung**

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

**¡Advertencia!**

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

**Attention**

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

**אזהרה!**

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

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

**경고!**

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

**Waarschuwing**

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

## Power Cable and AC Adapter



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

### 警告

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

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

### 警告

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

### 警告

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

### Warnung

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

## ¡Advertencia!

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

## Attention

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

AC ימאתמו מילמשח מילבכ

!הרהזא

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

תאלבאלא אארשב מק וא ענדחמל וא ערפוטמל תאליסוולא מודחטסאב מק, גתנמל בייקרת דנע כלז יפ אמב עילחמל עמאלסל תאבלטתמו נינאווקב מאזתלאל עמ דדרתמל ראיטל תאלוחמו עיזאברמלל קיירח וא לטע יפ בבסטטי דק ירזא תאלוחמו תאלבאלא יא מודחטסא. מילסל סבאלאו לטוולא מרח CSA וא UL לבק נמ ענדחמל תאלבאלא מודחטסא תאדעמל עיזאברמלל עזגאלל עמאלסל נונאק רזחי Supermicro לבק נמ ענדחמל עינעמל תאגתנמל ריג ירזא תאדעמ יא עמ (UL/CSA) עמאלע למחת יטלוא

### 전원 케이블 및 AC 어댑터

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

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

### Stroomkabel en AC-Adapter

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

# Appendix B

## System Specifications

### Processors

Single AMD EPYC™ 9005/9004 Series Processors: AS -4124GS-TNRT1 (CPU socket 2 is disabled.)

Dual AMD EPYC™ 9005/9004 Series Processors: AS -4125GS-TNRT and AS -4125GS-TNRT2

#### Notes:

- Drop-in support for AMD EPYC™ 9005 Series processors requires board revision 2.x for AS -4125GS-TNRT, AS -4124GS-TNRT1, and AS -4125GS-TNRT2.
- TNRT, TNRT1, and TNRT2 feature an SP5 socket and support Thermal Design Power (TDP) ratings up to 400 W, depending on thermal validation and system configuration. Contact a Supermicro representative for details.

### Chipset

SoC chipset

### BIOS

AMI 32Mb SPI Flash ROM

### Memory

AS -4125GS-TNRT and AS -4125GS-TNRT2:

24 DIMM slots with 1DPC that support up to

- 6 TB 6000 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9005 Series CPU)
- 6 TB 4800 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9004 Series CPU)

AS -4124GS-TNRT1:

12 DIMM slots with 1DPC that supports up to

- 3 TB 6000 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9005 Series CPU)
- 3 TB 4800 MT/s ECC DDR5 RDIMM (AMD EPYC™ 9004 Series CPU)

**Note:** For AS -4124GS-TNRT1 systems with AMD EPYC™ 9004 or 9005 Series CPUs, DIMMs connected to CPU socket 2 are disabled. For additional information, see [Memory Support and Installation](#).

### SATA Controller

On-chip (SoC chipset) controller

### Drive Bays

Twenty-four 2.5" drives

### PCI Expansion Slots

AS -4124GS-TNRT1/AS -4125GS-TNRT2: Twelve PCIe 5.0 x16 FHFL slots

AS -4125GS-TNRT: Nine PCIe 5.0 x16 FHFL slots

### Motherboard

H13DSG-O-CPU; 17" (L) x 16.8" (W) (431.8 x 426.72 mm)

### Chassis

SC418GTS-R4016BP; 4U Rackmount, (WxHxD) 17.2 x 7 x 29 in. (437 x 178 x 737 mm)

### System Cooling

Eight 92 mm PWM fans

**Power Supply**

Model: PWS-2K08A-1R, Titanium Level Power Supply (80 Plus)

Full redundancy depends on system configuration and application load.

AC Input Voltages: 100-240 VAC auto-range

Rated Input Current: 100-127 Vac / 12-9 A / 50-60 Hz

200-220 Vac / 10-9.8 A / 50-60 Hz

220-230 Vac / 10-9.8 A / 50-60 Hz

230-240 Vac / 10-9.8 A / 50-60 Hz

220-240 Vac / 11-10 A / 50-60 Hz (UL only)

Rated Input Frequency: 50-60 Hz

Rated Output Power: 1000 W: 100 – 127 Vac

1800 W: 200 – 220 Vac

1980 W: 220 – 230 Vac

2000 W: 230 – 240 Vac

2000 W: 220 – 240 Vac (UL only)

Rated Output Voltages: 12 V+

Max: 83 A / Min: 0 A (100-127 Vac)

Max: 150 A / Min: 0 A (200-220 Vac)

Max: 165 A / Min: 0 A (220-230 Vac)

Max: 166 A / Min: 0 A (230-240 Vac)

Max: 166 A / Min: 0 A (220-240 Vac) (UL only)

12 Vsb: Max: 3.5 A / Min: 0 A

**Operating Environment**

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

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

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

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

Operating temperature varies depending on the system configuration.

**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 Subpart B  
 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

Product Safety: 2014/35/EU (LVD Directive)  
 UL/CSA 62368-1 (USA and Canada)  
 Electrical Equipment (Safety) Regulations 2016  
 IEC/BS/EN 62368-1

Environment:  
 2011/65/EU (RoHS Directive)  
 EC 1907/2006 (REACH)  
 2012/19/EU (WEEE Directive)  
 California Proposition 65

**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](http://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