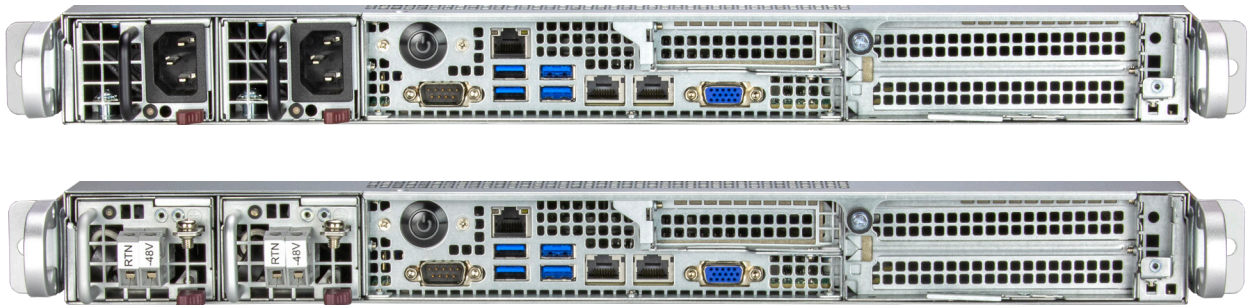




A+ Server<sup>®</sup>  
AS -1115S-FWTRT  
AS -1115S-FDWTRT  
AS -1115S-FWTRT-OS1  
AS -1115S-FDWTRT-OS1



USER'S MANUAL

Revision 1.0a

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Manual Revision 1.0a

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# Preface

## About this Manual

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

Please refer to the AS -1115S-FWTRT, AS -1115S-FDWTRT, AS -1115S-FWTRT-OS1, AS -1115S-FDWTRT-OS1 server specifications page on our website for updates on supported memory, processors and operating systems (<http://www.supermicro.com>).

## Notes

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

- Supermicro product manuals: <http://www.supermicro.com/support/manuals/>
- Product drivers and utilities: <https://www.supermicro.com/wdl>
- Product safety info: [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:  
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This manual may be periodically updated without notice. Please check the Supermicro website for possible updates to the manual revision level.

## Secure Data Deletion

A secure data deletion tool designed to fully erase all data from storage devices can be found on our website: [https://www.supermicro.com/about/policies/disclaimer.cfm?url=/wdl/utility/Lot9\\_Secure\\_Data\\_Deletion\\_Utility/](https://www.supermicro.com/about/policies/disclaimer.cfm?url=/wdl/utility/Lot9_Secure_Data_Deletion_Utility/)

## Warnings

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



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



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

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# Chapter 1

## Introduction

### 1.1 Overview

This chapter provides a brief outline of the functions and features of the AS -1115S-FWTRT, AS -1115S-FDWTRT, AS -1115S-FWTRT-OS1, and AS -1115S-FDWTRT-OS1. The systems are based on the H13SVW-NT/ H13SVW-NT-OS1 motherboard and the CSE-515B-R000WNP chassis. The following provides an overview of the specifications and capabilities.

System Overview	
<b>Chassis</b>	CSE-515B-R000WNP
<b>Motherboard</b>	H13SVW-NT: AS -1115S-FWTRT/AS -1115S-FDWTRT H13SVW-NT-OS1: AS -1115S-FWTRT-OS1/AS -1115S-FDWTRT-OS1
<b>Processor</b>	Single AMD EPYC™ 8004 Series processor with up to 64C cores and a thermal design power (TDP) of up to 200 W
<b>Memory</b>	Up to 576 GB of Registered ECC DDR5 up to 4800 MT/s SDRAM memory in six slots
<b>Drive Support</b>	Two internal 2.5" SATA/SAS/NVMe drive bays
<b>Expansion Slots</b>	Two PCIe 5.0 x16 slots (full-height, full-length) One PCIe 5.0 x16 slots (low-profile)
<b>I/O Ports</b>	One RJ45 Dedicated IPMI LAN port Two RJ45 10 GbE ports (Broadcom BCM57416) Four USB ports One VGA port One COM port
<b>System Cooling</b>	Six 4-cm counter-rotating fans Passive heatsink for 1U system One air shroud for CPU One optional air shroud for PCIe cards
<b>Power</b>	Two redundant power supply modules AS -1115S-FWTRT/AS -1115S-FWTRT-OS1: AC 800 W AS -1115S-FDWTRT/AS -1115S-FDWTRT-OS1: DC 600 W
<b>Form Factor</b>	1U rackmount: (WxHxD) 17.2 x 1.7 x 16.9 in. (437 x 43 x 429 mm)

**Notes:** The Quick Reference Guide can be found on the product page. The following safety agency or regulatory models associated with the AS -1115S-FWTRT, AS -1115S-FDWTRT, AS -1115S-FWTRT-OS1, and AS -1115S-FDWTRT-OS1 have been certified as compliant with UL or CSA: 515B-R8H13, 515B-R6DH13, 515B-8, and 515B-6D.

## 1.2 System Features

The following views of the system display the main features. Refer to [Appendix C](#) for additional specifications.

### Front View

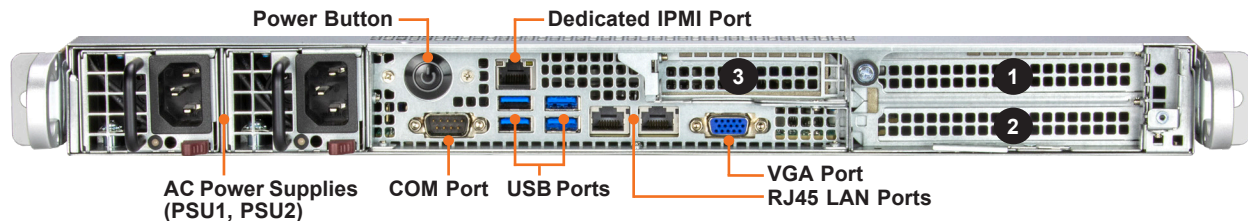


Figure 1-1. Front View: AS -1115S-FWTRT/AS -1115S-FWTRT-OS1

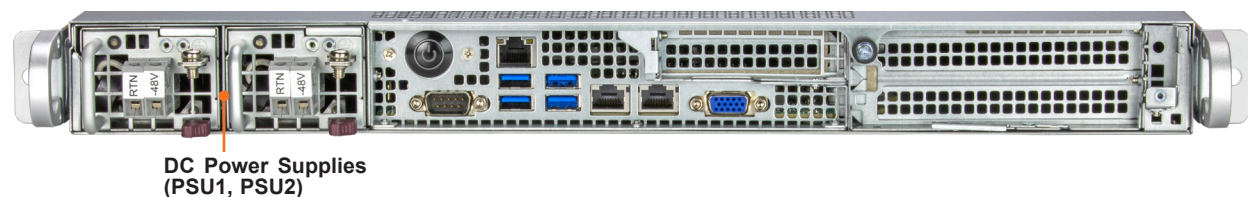


Figure 1-2. Front View: AS -1115S-FDWTRT/AS -1115S-FDWTRT-OS1

System Features: Front	
Feature	Description
Power Supplies	Two redundant power supply modules (PSU1 on the left, PSU2 on the right) AS -1115S-FWTRT/AS -1115S-FWTRT-OS1: AC 800 W 100-240 V input AS -1115S-FDWTRT/AS -1115S-FDWTRT-OS1: DC 600 W 48 V input
Power Button (with Status LED)	The main power switch applies or removes primary power from the power supplies to the server but maintains standby power. To perform most maintenance tasks, unplug the system to remove all power. This LED is illuminated when the system is operating normally. Indicates drive activity when flashing.
COM Port	One serial communication port
Dedicated IPMI Port	One RJ45 Dedicated IPMI LAN port (with two LED indicators)
USB Ports	Four USB 3.0 ports
RJ45 LAN Ports	Two LAN ports Speed indicator is green when the connection is 1 Gb/s. Speed indicator is orange when the connection is 10 Gb/s.
VGA Port	One video port
Expansion Slot Locations	
Item	Description
1	PCIe 5.0 x16 slot (full-height, full-length)
2	PCIe 5.0 x16 slot (full-height, full-length)
3	PCIe 5.0 x16 slot (low-profile)

## Rear View

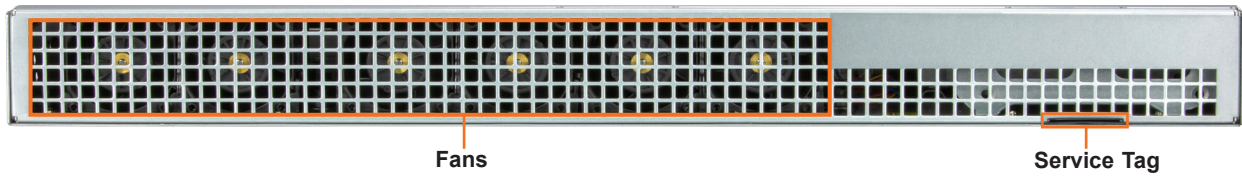


Figure 1-3. Rear View

System Features: Rear	
Feature	Description
Fans	Six (internal) 4-cm counter-rotating fans
Service Tag	Service or asset tag has the <a href="#">BMC password</a> details

## 1.3 System Architecture

This section covers the locations of the system's main components.

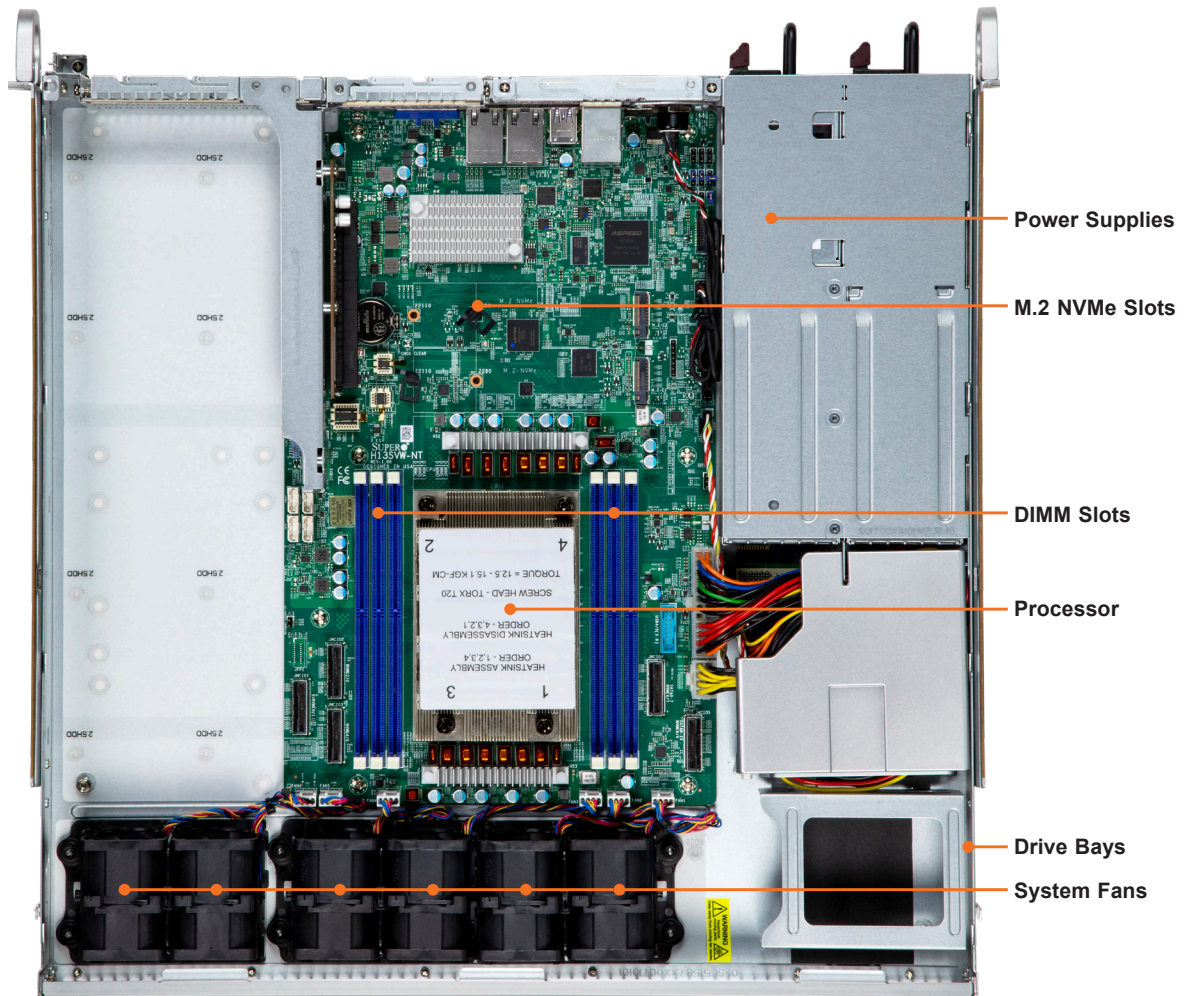


Figure 1-4. Main Component Locations

System Features: Top	
Feature	Description
Power Supplies	Dual redundant modules AS -1115S-FWTRT/AS -1115S-FWTRT-OS1: PWS-804S-1R AS -1115S-FDWTRT/AS -1115S-FDWTRT-OS1: PWS-601S-1R
M.2 NVMe Slots	Two M.2 NVMe slots
DIMM Slots	Six DDR5 DIMM slots
Processor	AMD EPYC™ 8004 Series processor
Drive Bays	Two internal 2.5" drive bays
System fans	Six 4-cm fans, FAN-0167L4

## 1.4 Motherboard Layout

Below is a layout of the H13SVW-NT motherboard with the jumper, connector and LED locations shown. See the table on the following page for descriptions. For detailed descriptions, pinout information and jumper settings, refer to [Chapter 4](#) or the [Motherboard Manual](#).

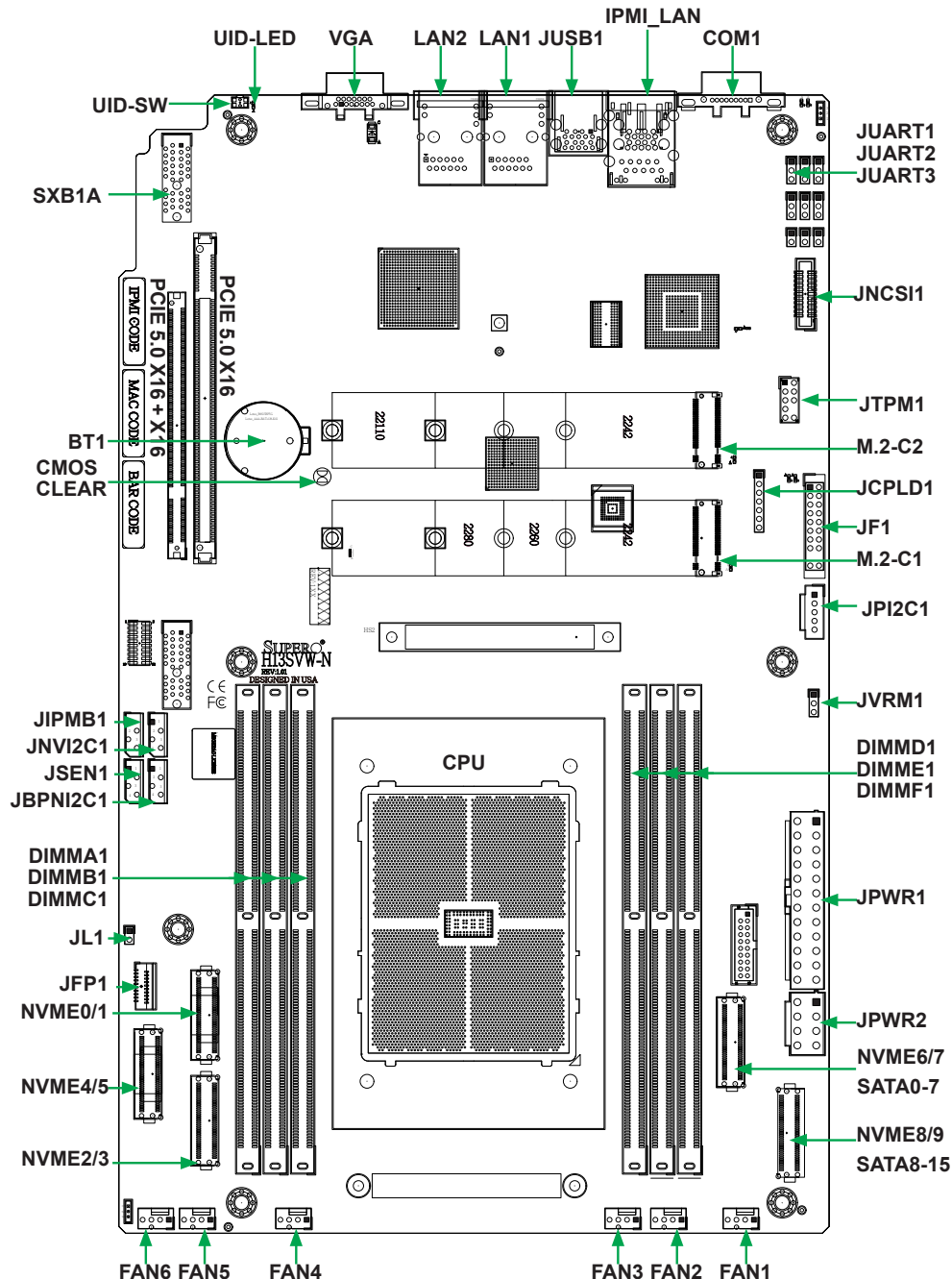


Figure 1-5. Motherboard Layout

### Notes:

- "■" indicates the location of Pin 1.
- Use only the correct type of onboard CMOS battery as specified by the manufacturer. To avoid possible explosion, do not install the onboard battery upside down.

## Quick Reference Table

Jumper	Description	Default Setting
UID SW	Unit ID switch (push-button toggle switch ON/OFF)	Off
JBT1	Clear CMOS	Open (Normal)
JSATA1	Hybrid MCIO select for JMCIO4	Pins 1-2 (Auto)
JSATA2	Hybrid MCIO select for JMCIO5	Pins 1-2 (Auto)
JPL1	LAN enable/disable	Pins 1-2 (Enabled)

LED	Description	Status
LED9	UID LED	Blue: UID Activated
LED8	Power LED	On: Power On
LEDBMC	BMC Heartbeat	Blinking: BMC Normal/Working

Connector	Description
Battery (BT1)	Onboard CMOS battery
COM 1	Rear panel COM port 1
FAN 1~6	System cooling fan headers
JF1	Front control panel
JTPM1	Trusted Platform Module (TPM)/Port 80 connector
JL1	Chassis intrusion header
USB 0/1 (3.0)	Back panel USB 3.0 ports (USB 0/1)
USB 2/3 (3.0)	Back panel USB 3.0 ports (USB 2/3)
USB 4/5 (3.0)	Internal USB 3.0 header (USB 4/5)
JSXB1A, JSXB1B, JSXB1C, JSXB2	Slots for Supermicro riser cards
JPI2C1	PWR supply (I2C) System Management Bus
JPWR1	24-pin ATX power supply connector
JPWR2	12 V 8-pin ATX CPU power connector
M.2-C1, M.2-C2	M.2 slots
JIPMB1	4-pin external BMC I2C header (for an IPMI card)
LAN1, LAN2	Back panel LAN1, LAN2 connectors
VGA	Back panel VGA port
NVMe0-5	NVMe slots 0-5

# Motherboard Block Diagram

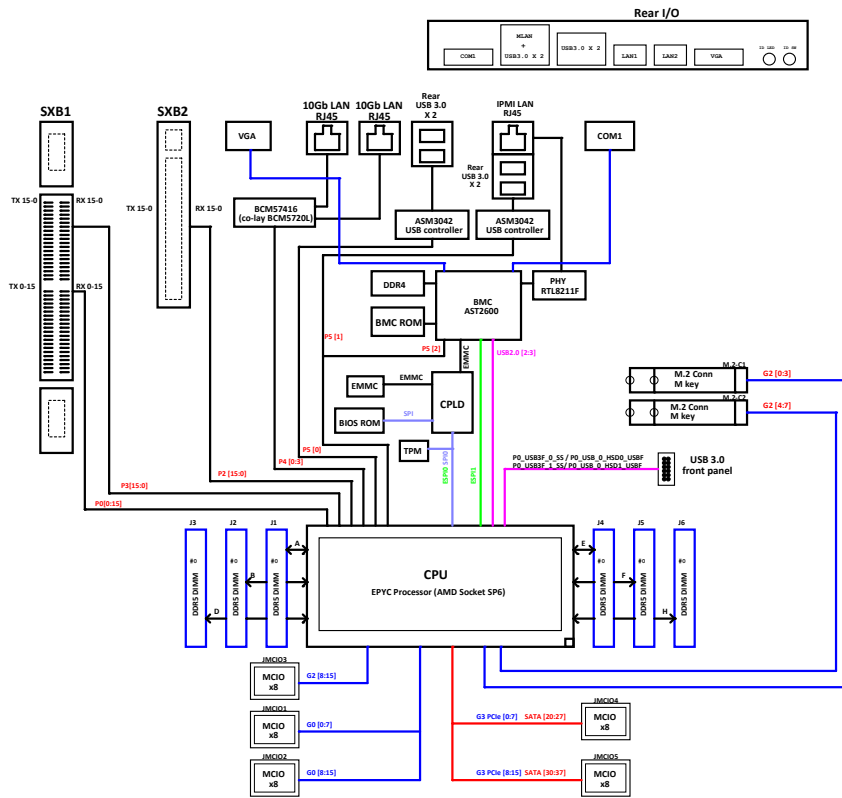


Figure 1-6. Motherboard Block Diagram

# Chapter 2

## Server Installation

### 2.1 Overview

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

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

### 2.2 Unpacking the System

Inspect the box in which the system was shipped, and note if it was damaged. If any equipment appears damaged, file a claim with the carrier.

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

### 2.3 Preparing for Setup

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

#### Choosing a Setup Location

- The system should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated.
- Leave enough clearance in front of the rack so that you can open the front door completely (approximately 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.



The ports of this equipment are suitable for connection to intra-building or unexposed wiring or cabling only. The intra-building port(s) of the equipment or subassembly must not be metallically connected to interfaces that connect to the outside plant wiring. These interfaces are designed for use as intra-building interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE, issue 6) and require isolation from the exposed outside plan cabling. The addition of primary protectors is not sufficient protection in order to connect these interfaces metallically to outside plant wiring.



**Warning:** The intra-building port(s) (10 Gb DAC SFP and 100Gb DAC QSFP ports) of the equipment or subassembly must use shielded intra-building cabling/wiring that is grounded at both ends.

## 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 A](#) and [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.
- The AC power input ports are intended for installation in NEBS environments where rapid changes in line voltage may occur. A Surge Protective Device (SPD) should be used instead of an Uninterruptible Power Supply (UPS).

## **Rack Mounting Considerations**

### ***Ambient Operating Temperature***

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

### ***Airflow***

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

### ***Mechanical Loading***

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

### ***Circuit Overloading***

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

### ***Reliable Ground***

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



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

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.
- Slide rail mounted equipment is not to be used as a shelf or a work space.

## 2.4 Installing the Rails

There are a variety of rack units on the market, which may require a slightly different assembly procedure. This rail set fits a rack between 25.6" and 33" deep.

The following is a basic guideline for installing the system into a rack with the rack mounting hardware provided. You should also refer to the installation instructions that came with the specific rack you are using.

If you are installing into a two-post "telco" rack, skip to that section later in this chapter.

### Identifying the Rails

The chassis comes with two sets of rack rails, one set for the right side of the chassis and one for the left. Each set consists of an inner rail that is pre-attached to the chassis, an outer rail that attaches to the rack, and a middle rail that slides forward in the outer rail.

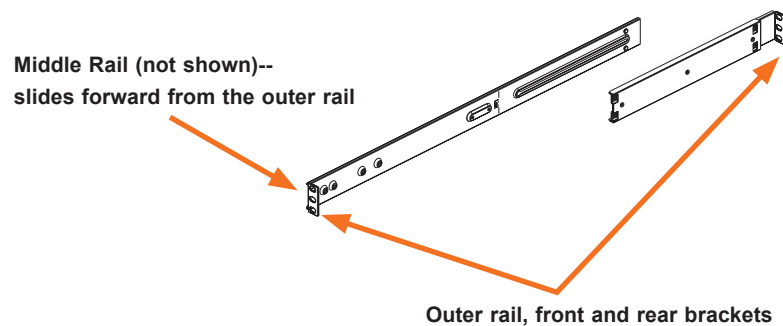


Figure 2-1. Identifying the Sections of the Rack Rails



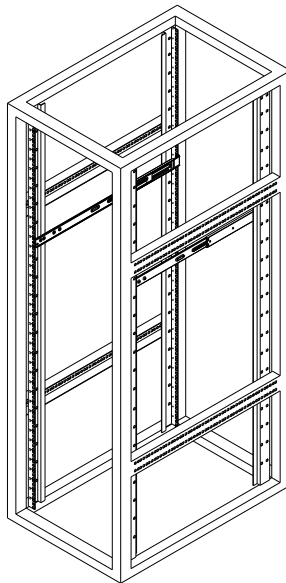
Slide rail mounted equipment is not to be used as a shelf or a work space.

## Installing the Outer Rails onto the Rack

Each end of the assembled outer rail includes a bracket with square pegs to fit into your rack holes. If you have an older rack with round holes, these brackets must be removed, and you must use screws to secure the rail to the rack.

### **Outer Rail Installation**

1. Align the square pegs on the front end of the rail with the square holes on the front of the rack (C). Push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack. Keep the rail horizontal.
2. Adjust the rail to reach just past the full depth of your rack.
3. Align the square pegs on the rear end of the rail to the holes on the rack (D) and push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack.



**Figure 2-2. Installing the Outer Rails to the Rack**

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



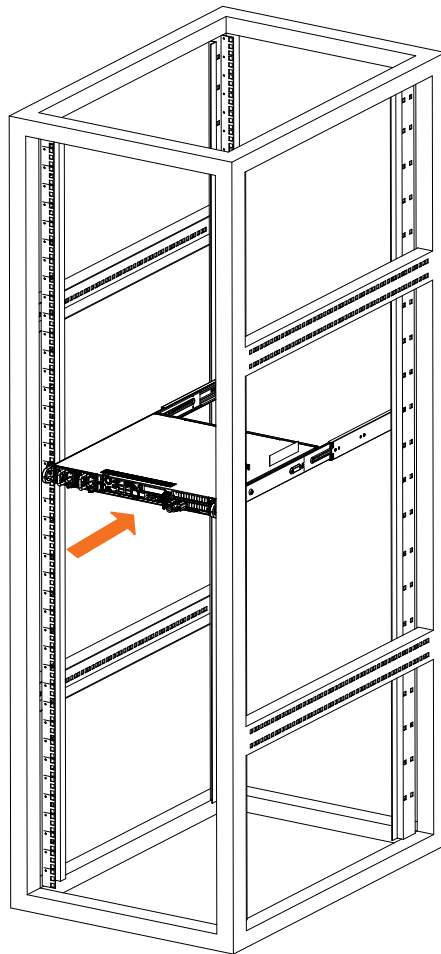
**Stability hazard.** The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.

## 2.5 Installing the Server into a Rack

Once rails are attached to the chassis and the rack, the chassis is ready to be installed into a rack.

### *Installing the Chassis into a Rack*

1. Confirm that inner and outer rails have been properly installed.
2. Align the chassis rails with the front of the rack rails.
3. Slide the chassis rails into the rack rails, keeping the pressure even on both sides (It may be necessary to depress the locking tabs when inserting). When the server has been pushed completely into the rack, the locking tabs will "click" into the locked position.
4. (Optional) Insert and tightening the thumbscrews that hold the front of the server to the rack.



**Figure 2-3. Installing the Server into a Rack**

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

## Removing the Server 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.

1. If necessary, loosen the thumb screws on the front of the chassis that hold it in the rack.
2. Pull the chassis forward out the front of the rack until it stops.
3. Press the release latches on each of the inner rails downward simultaneously and continue to pull the chassis forward and out of the rack.



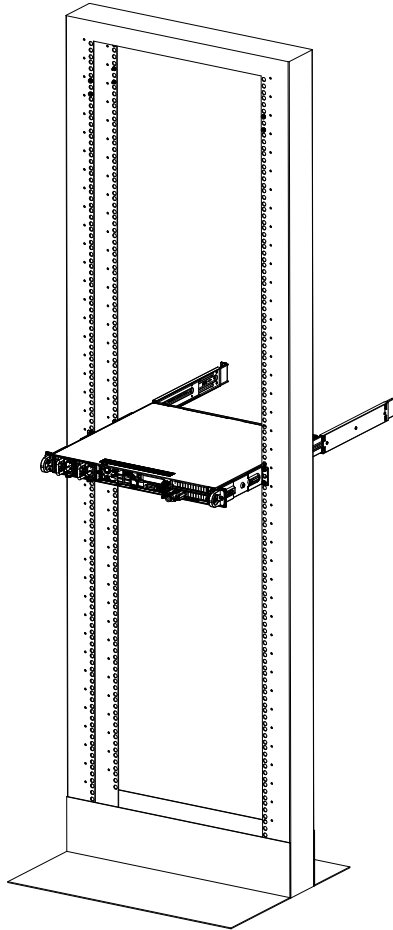
**Warning:** Do not pick up the server with the front handles. They are designed to pull the system from a rack only.

## Installing the Server into a Telco Rack

Follow the procedure below to install the chassis into a Telco (open type) rack.

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

1. Use the two L-shaped brackets (four total) to suspend the sides of the chassis within the rack.
2. Determine how far the chassis will extend out the front of the rack. Larger chassis should be positioned to balance the weight between front and back. If a bezel is included on your server, remove it.
3. Attach the two front brackets to each side of the chassis, then the two rear brackets positioned with just enough space to accommodate the width of the Telco rack.
4. Finish by sliding the chassis into the rack and tightening the brackets to the rack.



**Figure 2-4. Installing the Server into a Telco Rack**

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

## 2.6 Connecting Power and Ground in a NEBS environment

### DC Power Source, Power Connection, and Grounding

**Note:** This product should be installed only in a Restricted Access Location, that is, a dedicated equipment room, service closet, etc. A Restricted Access Location is an area intended for qualified and trained personnel only and is access controlled.



A reliable ground to the DC power supply must be maintained at all times. The server must be grounded with the chassis ground studs, which ensures the equipment is not energized through cable connections when both power supplies are removed. Simultaneous connections to both the chassis ground stud and the DC power supply ground is permissible.



The DC power source shall be in the same building as the server to minimize the possibility of transient energy to the main inputs of the server.



**Figure 2-5. DC Input Power Cable Connector**

The DC power supply has three connections/conductors:

- -48 Vdc, negative terminal (Battery).
- Safety Ground, indicated by “Earth GND Symbol”. (Optional because Chassis GND stud is connected)
- +Return, positive terminal (Battery Return, BR).

Supermicro provides a cable for connection to the DC power supply. You should use the provided cable or an equivalent cable with the following specifications:

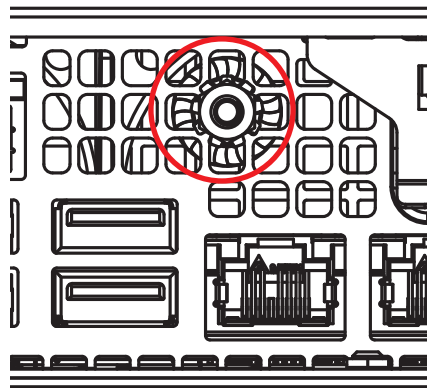
- Positronic CBD connector.
- Conductor Wire size: 8WG.
- Safety Ground insulation color: Green/Yellow.
- Use copper conductors only.

**Note:** If using the Supermicro provided DC power cables, the connector and contacts do not need to be treated with anti-oxidants prior to connection to the power supply in the server. Otherwise, the cable wires should be prepared to a bright finish, and coated with an appropriate anti-oxidant prior to crimping or connections to the battery, battery return, and Earth Ground per GR1089 R9-19 [84].

**Note:** The AS -1115S-FDWTRT is DC-I and can be grounded in both CBN and IBN networks. It is suitable for installation in Network Telecommunication Facilities and in locations where the NEC applies. Connection of the +Return (BR) supports both North America, Isolated GP (single point connection to CBN) and Europe, Integrated GP (Multiple point connection to CBN) configurations. DC power source must meet TNV-2 requirements as defined by UL 60950-1 and IEC 60950-1.

## Server Ground Stud connections for AC and DC systems

Both the AC and DC server products will include a chassis ground terminal as part of the chassis. This terminal is identified with the IEC 60417 #5019 Protective Earth Symbol. This equipment is designed to connect to the Common Bonding Network (CBN) of the facility in which it is installed.



**Figure 2-6. Server Ground Studs (Earth Ground)**

The chassis ground connection should use a single 8 AWG conductor with a cable insulation color of green/yellow. Multiple conductors are not allowed per attachment point. A standard ring terminal is recommended for the connection to the GND stud.

The connection to the chassis ground stud must establish metal to metal contact. Paint and other non-conductive coatings shall be removed on the surfaces between the mounting hardware. The surfaces shall be cleaned and an anti-oxidant shall be applied before being joined.

Prior to making crimp connections, coat all bare conductors with an appropriate anti-oxidant compound. Bring the ground terminal and connecting hardware to a bright finish and coat with an anti-oxidant before making a connection.



Do not mix copper and aluminum conductors (or other dissimilar metals) on the same terminal. Use lugs rated for copper if using copper conductors, and aluminum-rated lugs if using aluminum conductors.

## 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 system features a removable top cover, which allows easy access to the inside of the chassis.

### **Removing the Top Cover**

1. Remove one screw and loosen the thumbscrew that holds the top cover in place.
2. Slide the top cover towards the back, then lift the top cover up.

Check that all ventilation openings on the top cover and the top of the chassis are clear and unobstructed.

**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 for proper airflow and to prevent overheating.

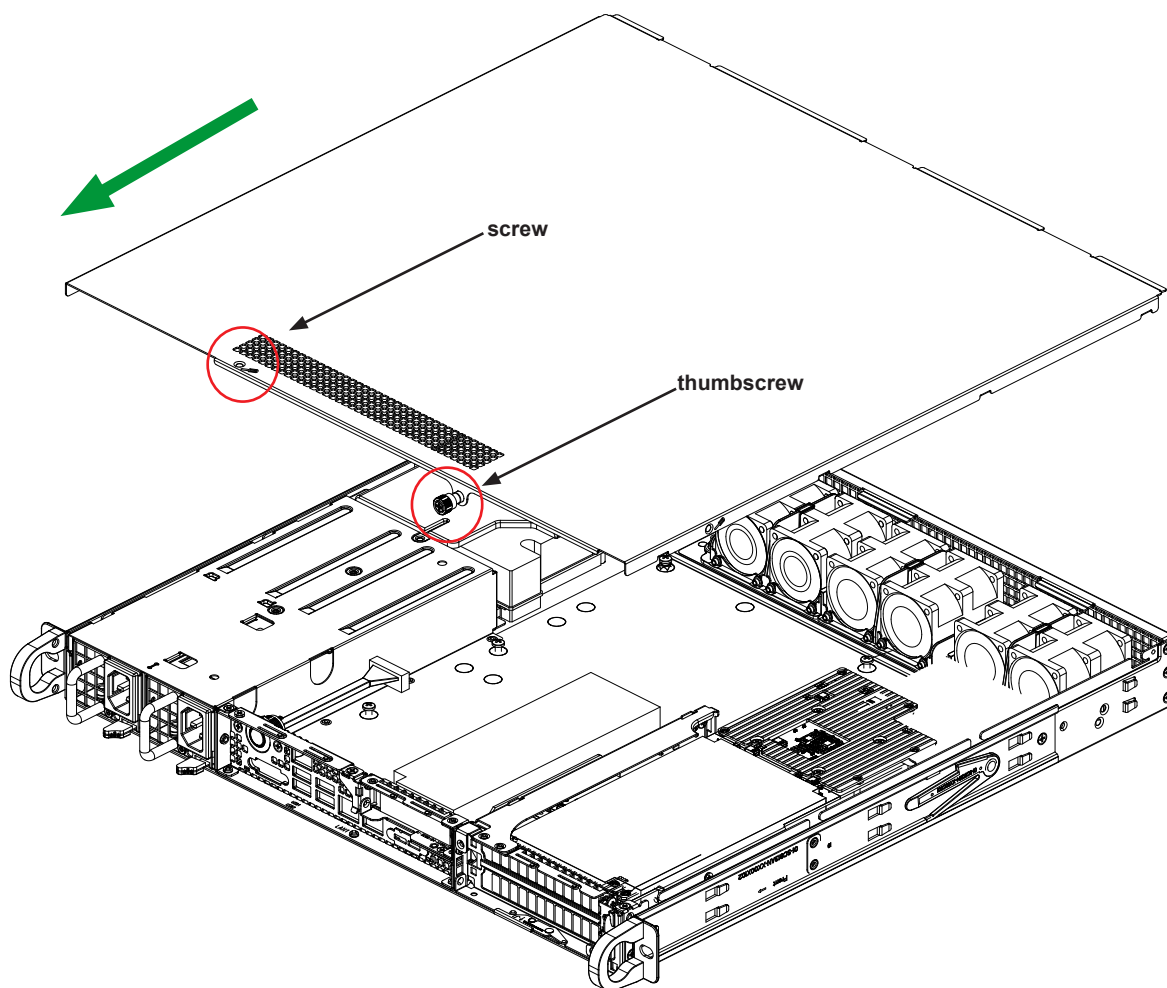


Figure 3-1. Removing the Chassis Cover

### 3.3 Processor and Heatsink Installation

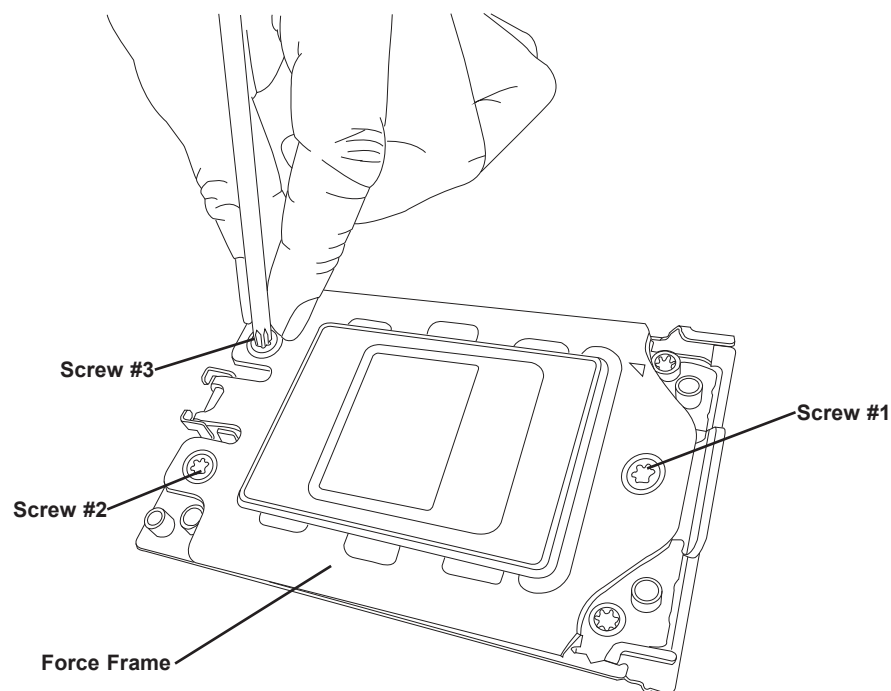
**Warning:** When handling the processor package, avoid placing direct pressure on the label area of the fan.

**Important:**

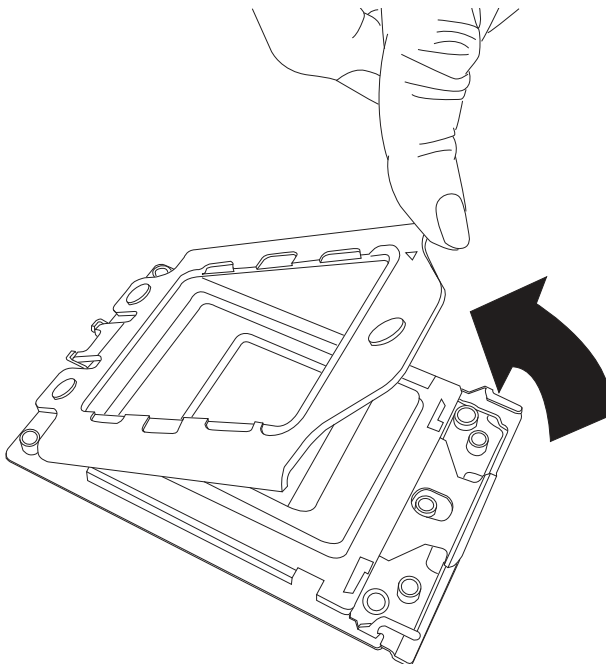
- For the processor/heatsink installation you need to use a T20 screwdriver when opening/closing the CPU socket.
- Always connect the power cord last, and always remove it before adding, removing or changing any hardware components. Make sure that you install the processor into the CPU socket before you install the CPU heatsink.
- If you buy a CPU separately, make sure that you use an AMD-certified 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 screws holding down Force Frame in the sequence of 3-2-1. The screws are numbered on the force frame next to each screw hole.

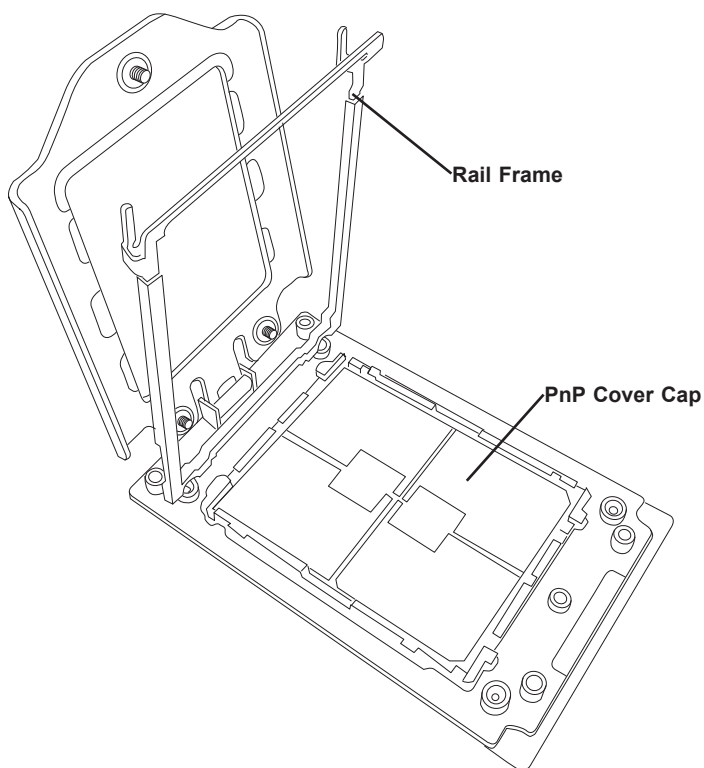


2. The spring-loaded force frame will raise up after the last screw securing it (#1) is removed. Gently allow it to lift up to its stopping position.

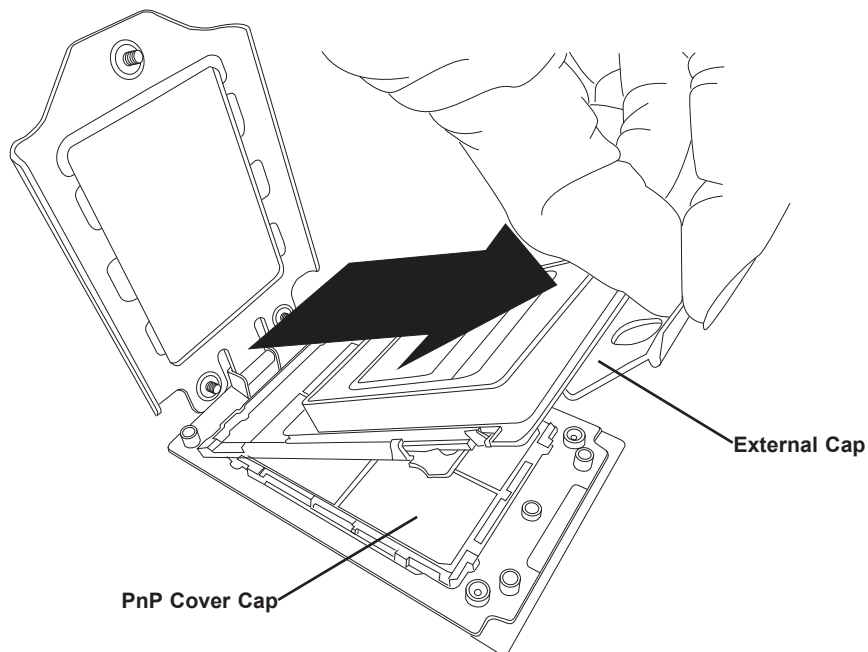


3. Lift the rail frame up by gripping the lift tabs near the front end of the rail frame. While keeping a secure grip of the rail frame, lift it to a position so you can do the next step of removing the external cap.

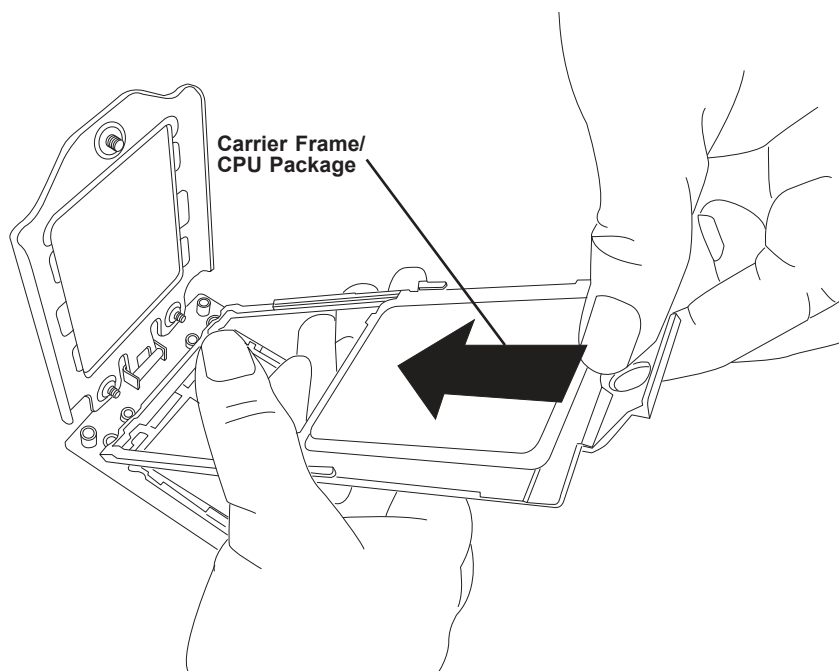
**Note:** The rail frame is spring loaded, so keep a secure grip on it as you lift it so it does not snap up.



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 blue 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.

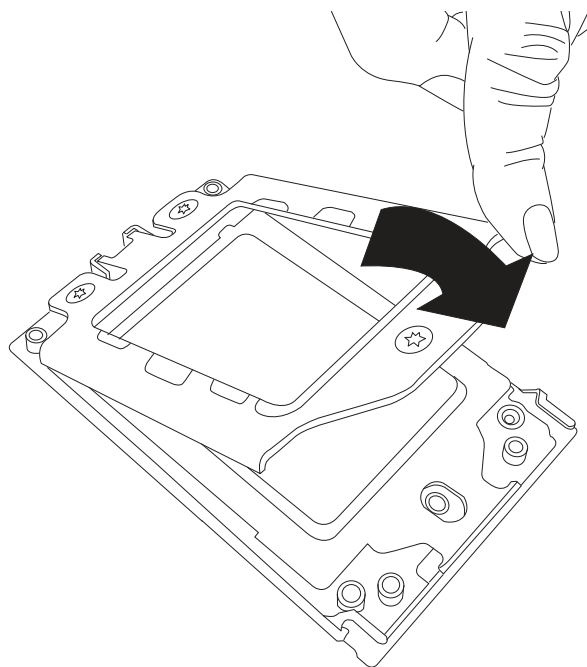


**Note:** You can only install the CPU inside the socket in one direction with the handle at the top. Make sure that it is properly inserted into the CPU socket before closing the rail frame plate. If it doesn't close properly, do not force it as it may damage your CPU. Instead, open the rail frame plate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

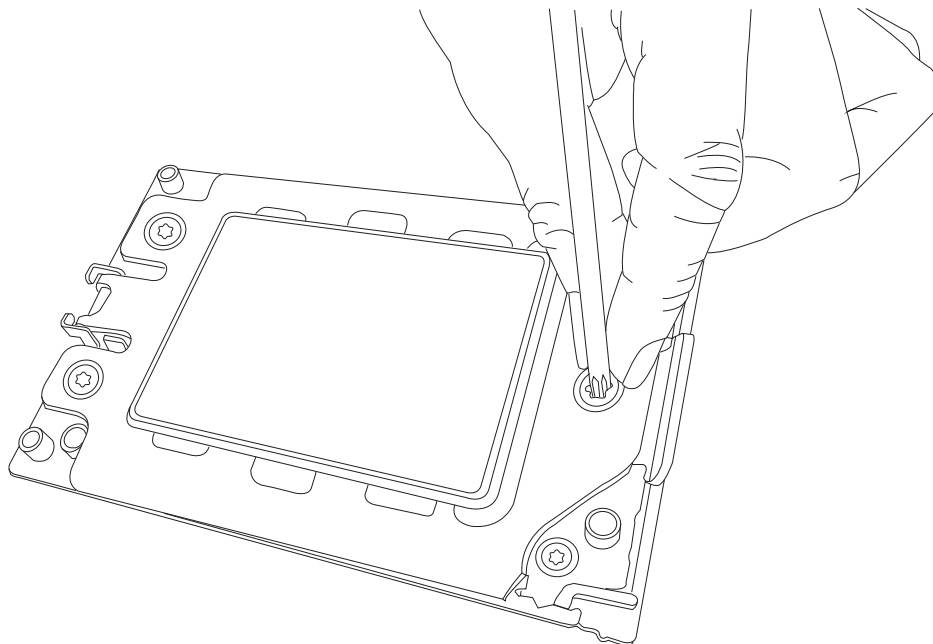
7. Lift up the rail frame till it securely rests in upright position. Then remove the PnP cover cap from the CPU socket below. Grip the two lift tabs marked "Remove" at the middle of the cap and pull vertically upwards to remove the PnP cover cap.

**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.

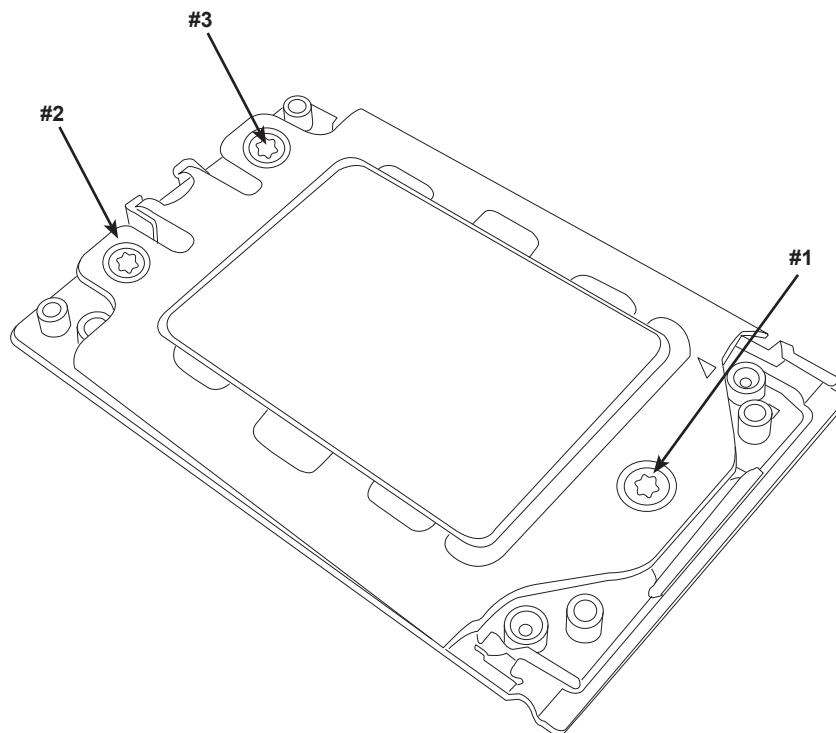
8. Gently lower the rail frame down onto the socket until the latches on the rail frame engage with the socket housing and it rests in place. **DO NOT** force it into place!



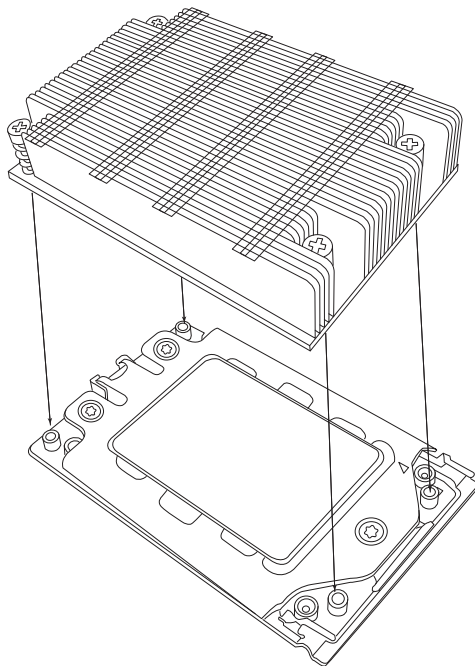
9. Gently lower the force frame down onto the rail frame and hold it in place until it is seated in the Socket housing. Note that the force frame is spring loaded and has to be held in place before it is secured. **Important: Use a torque screwdriver, set it at 16.1 kgf-cm (14.0 lbf-in) with a Torx T20 screw head bit, to prevent damage to the CPU.**



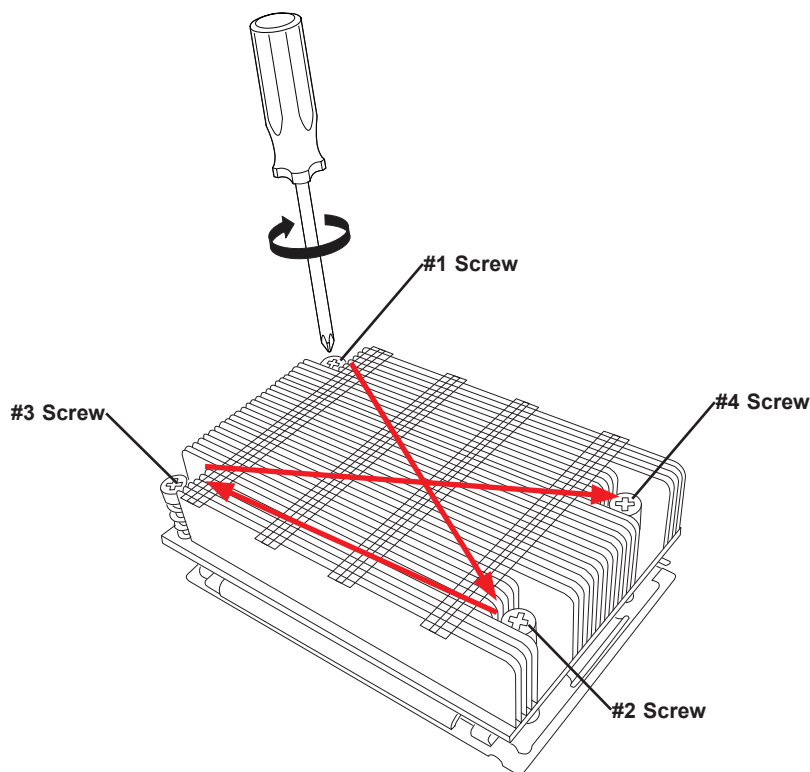
10. Place and re-screw the screws in the reverse order to the way you removed them (holes 1-2-3 in order). When finished, the force frame will be secure over both the rail frame and CPU package.



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 four screw holes on CPU package on the socket frame.



12. Using a diagonal pattern, tighten the four 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.



### **Uninstalling the Processor and Heatsink**

1. Remove the heatsink attached to the top of the CPU package by reversing the installation procedure.
2. Clean the Thermal grease left by the heatsink on the CPU package lid to limit the risk of it contaminating the CPU package land pads or contacts in the socket housing.
3. 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.
4. Lift the rail frame using the lift tabs near the front end of the rail frame. Note that the rail frame is spring loaded, so be careful lifting it up into a vertical position.
5. Grip the handle of the carrier frame and pull upwards to extract it from the rail frame. Return the carrier frame/CPU package to its original shipping container.
6. Grip the handle on the external cap and return it to the rail frame sliding it downwards till it rests in the frame.
7. Gripping the rail frame, rotate it downwards till it rests above and locks over the socket housing in its horizontal position.
8. Push and rotate down the force frame till it is over the external cap and rail frame into a horizontal position.
9. While holding down the force frame, secure it back to the socket frame by securing screw 1 in place. Note that without a CPU package in place, it is not necessary to tighten down screws 2 and 3 at this time.

## 3.4 Memory Support and Installation

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

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

### Memory Support

The H13SVW-NT supports up to 576 GB of ECC DDR5 4800 MT/s speed, RDIMM memory in six slots. Refer to the table below for additional memory information.

Populating RDIMM DDR5 Memory Modules with 8004 Processors				
Type	DIMM Population	Maximum DIMM Capacity (GB)		Maximum Frequency (MT/s)
	DIMM1	1 Channel	6 Channels	
RDIMM	1Rx8	16 GB	96 GB	4800
	1Rx4	32 GB	192 GB	4800
	2Rx4	64 GB	384 GB	4800
	2Rx4	96 GB	576 GB	4800

## DIMM Module Population

When populating the motherboard with DIMM modules, please keep in mind the following:

- Always use DDR5 DIMM modules of the same type, size and speed.
- All six memory channels should be populated with each channel having equal capacity, which should provide the best performance in most cases.
- In most configurations, populating fewer than six channels is supported, but not recommended.

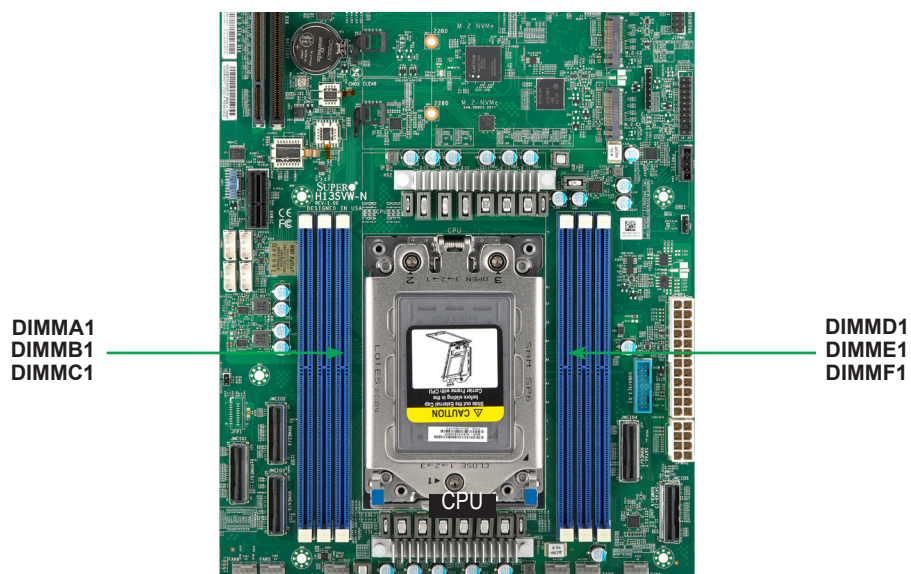
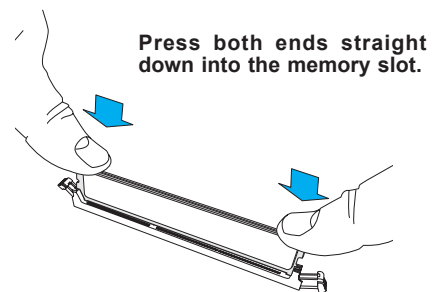
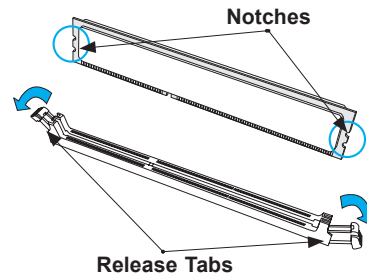
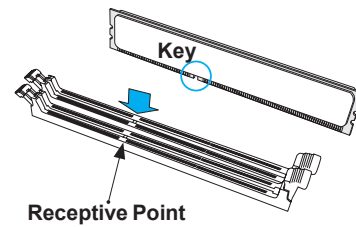


Figure 3-2. DIMM Numbering

Recommended Memory Channels						Node per Socket (NPS)
Channel						
C1	B1	A1	D1	E1	F1	
1 Channel						
		✓				NPS1
2 Channels						
		✓	✓			NPS2, NPS1
4 Channels						
✓		✓	✓		✓	NPS4, NPS2, NPS1
6 Channels						
✓	✓	✓	✓	✓	✓	NPS2, NPS1

## DIMM Installation

1. Insert the desired number of DIMMs into the memory slots, starting from DIMMA1. Refer to the [DIMM Module Population](#) section.
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.

## 3.5 Motherboard Battery

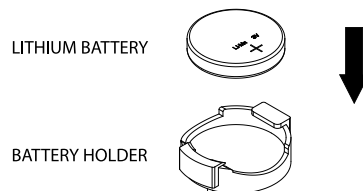
The motherboard uses non-volatile memory to retain system information when system power is removed. This memory is powered by a lithium battery residing on the motherboard.

### *Replacing the Battery*

Begin by [removing power](#) from the system.

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 3-3. 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).

## 3.6 Storage Drives

The system supports two internal 2.5" storage drives in drive carriers to simplify their removal from the chassis. These carriers also help promote proper airflow.

**Note:** Enterprise level drives are recommended for use in Supermicro chassis and servers. For information on recommended drives, visit the Supermicro website product pages at [www.supermicro.com/products](http://www.supermicro.com/products).

### *Installing 2.5" Drives*

1. Remove power as described in Section 3.1 and remove the chassis cover.
2. If necessary, remove the PCI expansion card from the chassis.
3. Remove the drive brackets from the chassis. Insert the drive into the drive brackets and secure the drive to the bracket with screws, as shown below.

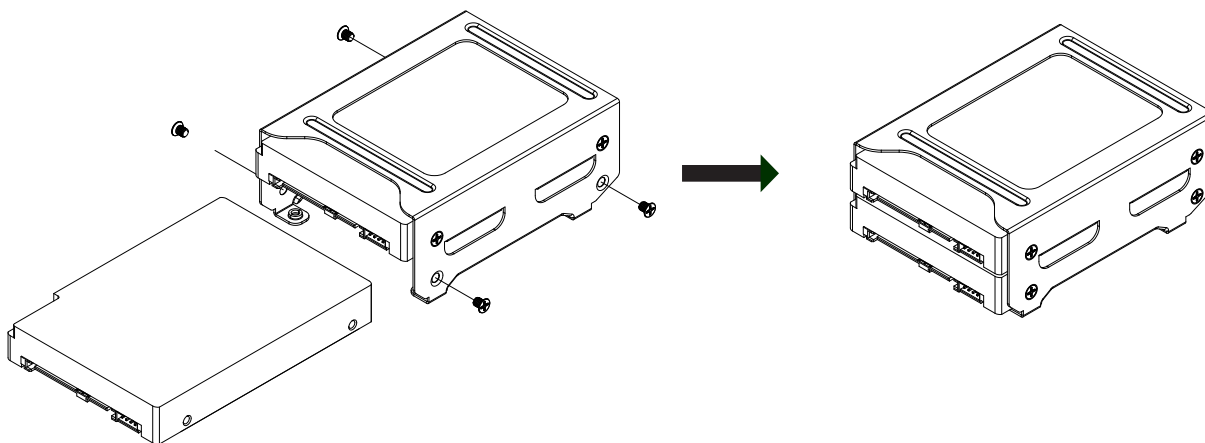
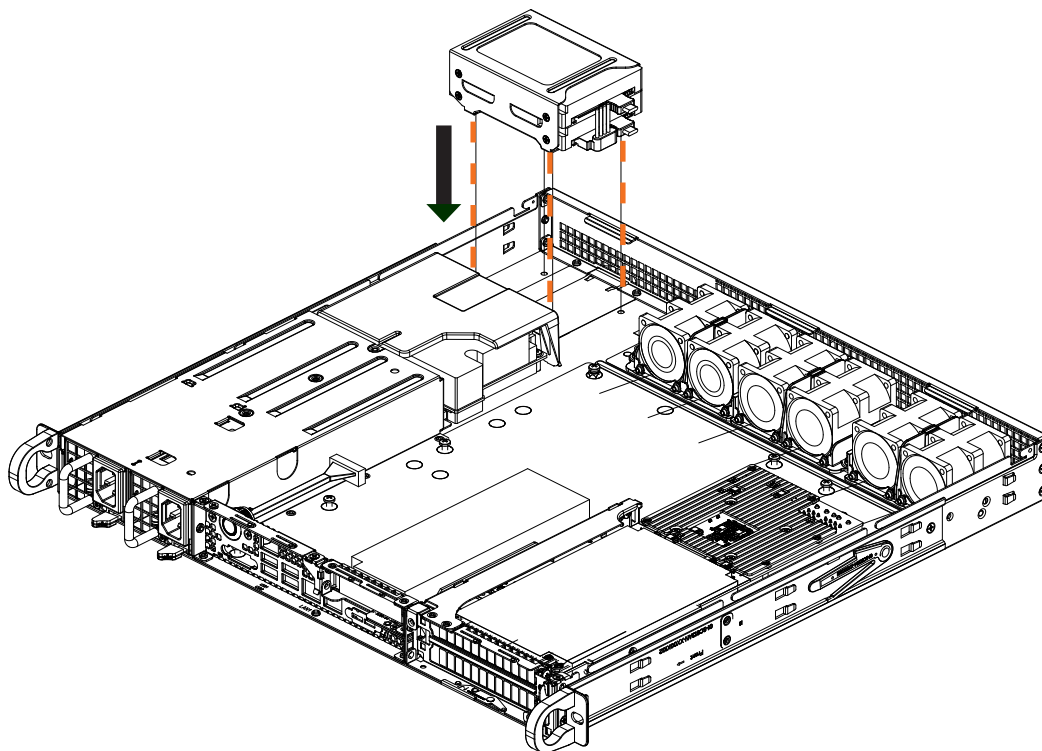


Figure 3-4. Securing the Drives

4. Secure the drive bracket to the chassis floor using four screws, as shown below.
5. Connect the drive cables to the motherboard and the power supply.
6. If necessary, reinstall the PCI expansion card.
7. Reinstall the chassis cover, reconnect the power cord, and power up the system.



**Figure 3-5. Installing 2.5" Drives**

## Checking the Temperature of an NVMe Drive

There are two ways to check using the BMC Dashboard.

### *Checking a Drive*

- **BMC Dashboard > Server Health > NVMe SSD** – Shows the temperatures of all NVMe drives.
- **BMC Dashboard > Server Health > Sensor Reading > NVME\_SSD** – Shows the single highest temperature among all the NVMe drives.

## 3.7 System Cooling

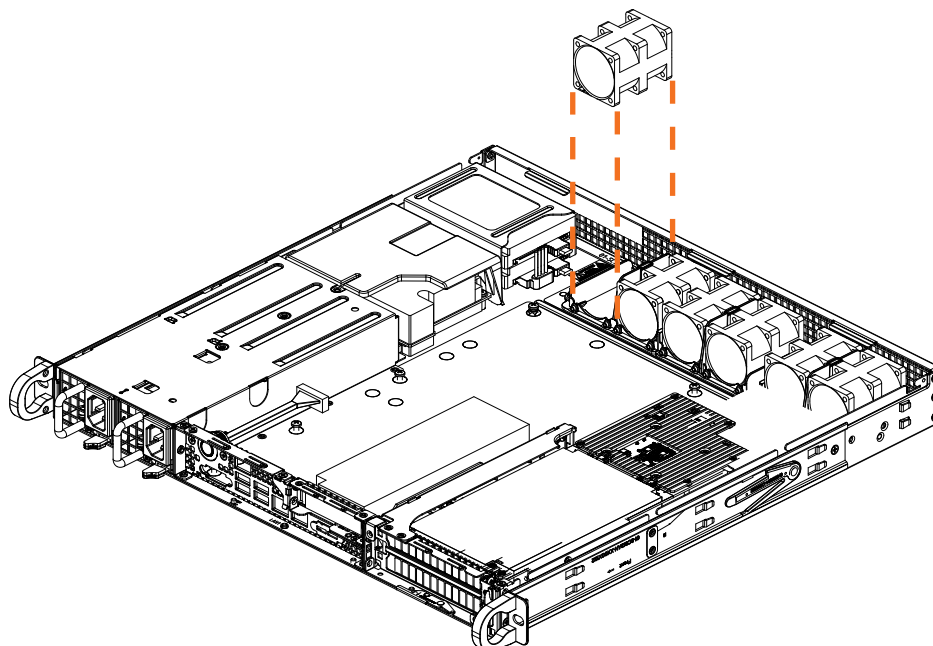
The system comes standard with six counter-rotating fans. Two additional fans may be added as an option.

The fans can adjust their speed according to the heat level sensed in the system, which results in more efficient and quieter operation. Fan speed is controlled by IPMI. Each fan has its own separate tachometer.

If a fan fails, the remaining fans will ramp up to full speed. Replace any failed fan at your earliest convenience with the same type and model. Note that it might take ten minutes to replace a fan.

### ***Replacing a System Fan***

1. Determine which fan has failed using a remote management utility.
2. Once the failed fan has been identified, remove power from the system as described in Section 3.1 and remove the chassis cover as described in Section 3.2.
3. Disconnect the failed fan from the motherboard.
4. Remove the failed fan from the fan tray.
5. Install a new fan into the drive tray.
6. Connect the fan to the motherboard.
7. Reinstall the chassis cover.
8. Reconnect the power cord and power up the system.



**Figure 3-6. Installing a Fan**

## Air Shrouds

The system supports two air shrouds, one to direct airflow to the CPU and another to direct airflow to the PCIe cards. There are two types of PCIe card air shrouds, one for full-height cards and one for half-height cards.

### *Replacing the Air Shroud*

1. Position the air shrouds in the chassis, as illustrated below. The air shroud fits just behind the fans.
2. Slide the air shroud into the grooves just behind the fan rack. If necessary, move any cables that interfere with the air shroud placement.
3. Remove perforated tabs, if necessary, for a good fit.

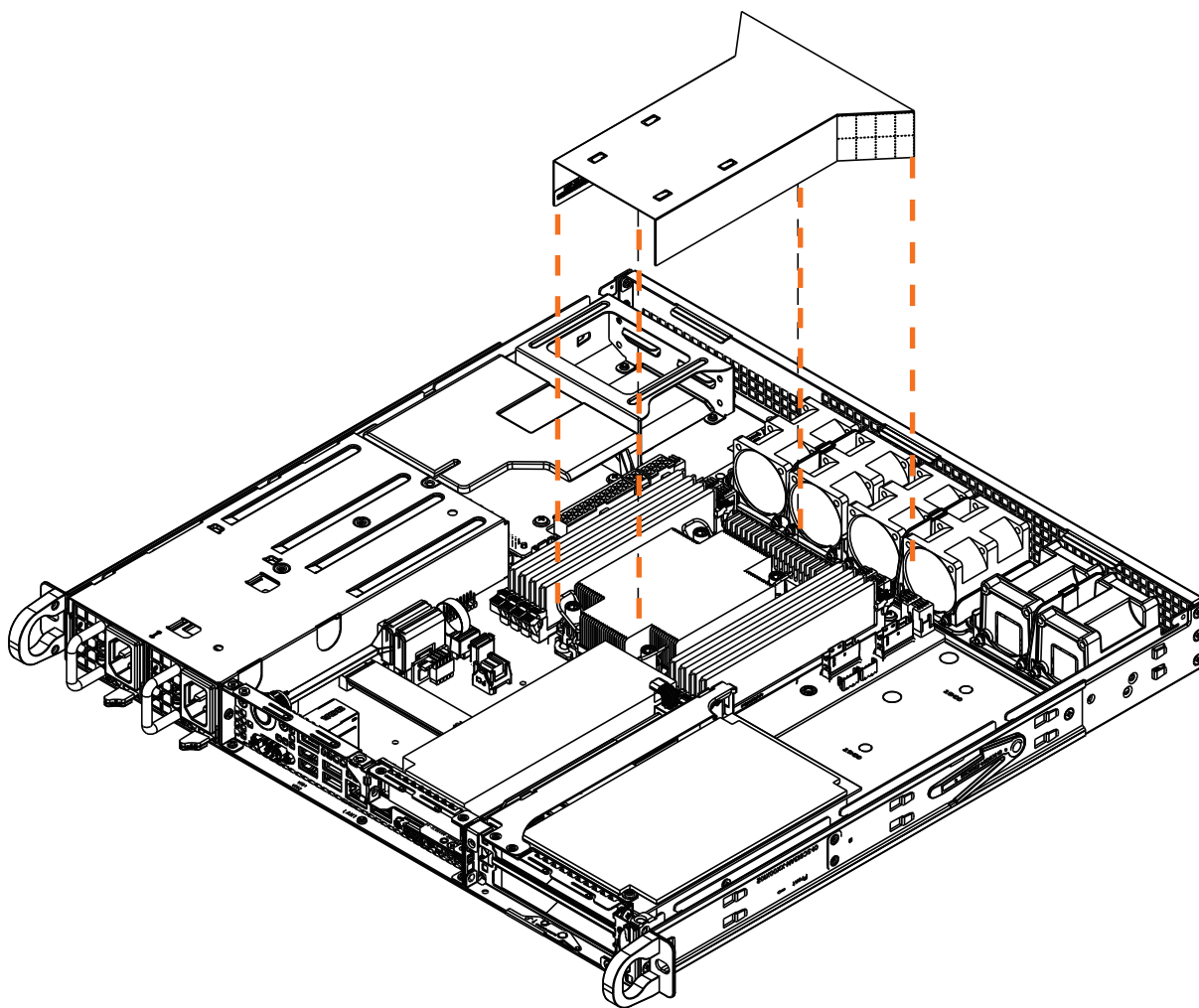


Figure 3-7. Installing Air Shrouds for CPU and Optional NVIDIA T4 GPU Cards

### ***Checking the Server Air Flow***

- Make sure there are no objects to obstruct airflow in and out of the server.
- Use only recommended server parts.
- Make sure no wires or foreign objects obstruct air flow through the chassis. Pull all excess cabling out of the airflow path or use shorter cables.

The control panel LEDs display system heat status. See “Control Panel” in Chapter 1 for details.

### ***Overheating***

There are several possible responses if the system overheats.

#### ***If the server overheats:***

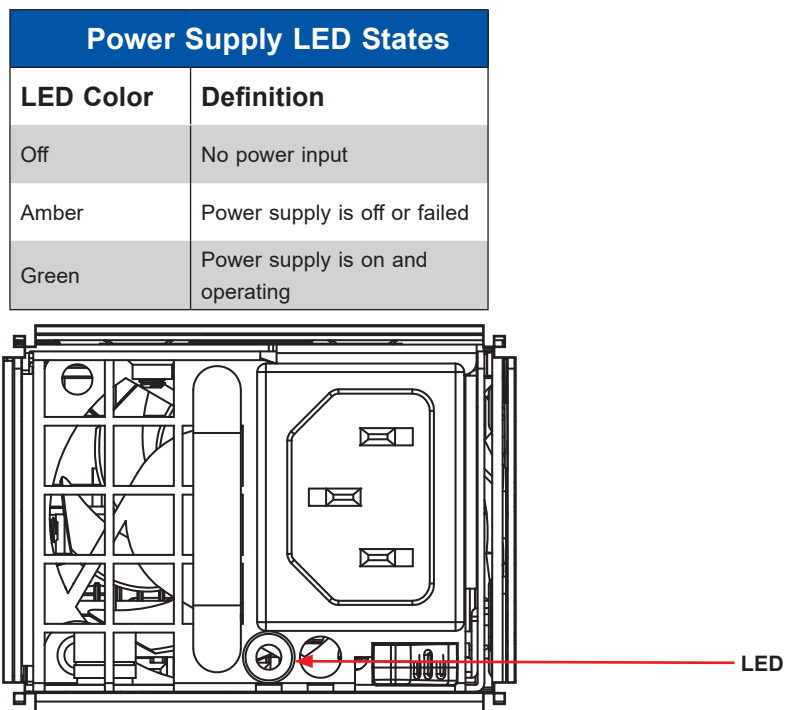
1. Use the overheat/fan fail LED to determine the nature of the overheating condition.
2. Confirm that the chassis covers are installed properly.
3. Make sure all fans are present and operating normally.
4. Check the routing of the cables.
5. Verify that the air shroud is installed properly.

## 3.8 Power Supply

The AS -1115S-FWTRT/AS -1115S-FWTRT-OS1 has two 800 W AC hot-swappable redundant power supplies and the AS -1115S-FDWTRT/AS -1115S-FDWTRT-OS1 has two 600 W DC hot-swappable redundant power supplies. The power supplies are auto-switching capable. The 800 W AC power supplies can operate at a 100 V to 240 V input range. The 600 W DC power supplies can operate at a -44 Vdc to -65 Vdc input range. If replacing a power supply, the system does not need to be powered down. New units can be ordered directly from Supermicro or authorized distributors.

### ***Replacing an AC Power Supply***

1. Use the system's remote management utility to find the failed power supply.

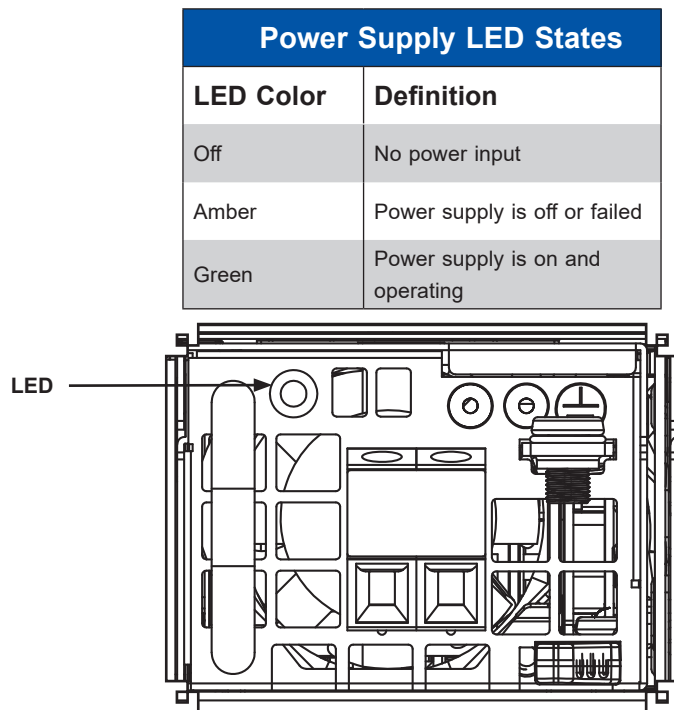


**Figure 3-8. AC Power Supply Rear View**

2. Check the power supply's LED.
3. Disconnect the power cord from the power strip or outlet.
4. Disconnect the power cord from the power supply inlet.
5. Push the release button towards the handle.
6. Using the handle, pull the power supply out of the chassis.
7. Slide the new power supply into the chassis until it clicks into place.
8. Reconnect the power cord to the power supply inlet.
9. Reconnect the power cord to the power strip or outlet and power the system back up.

**Replacing a DC Power Supply**

1. Use the system's remote management utility to find the failed power supply.
2. Check the power supply's LED.



**Figure 3-9. DC Power Supply Rear View**

3. Disconnect the power supply from the external power source.
4. Push the release button towards the handle.
5. Using the handle, pull the power supply out of the chassis.
6. Slide the new power supply into the chassis until it clicks into place.
7. Reconnect the power supply to the external power source.
8. Check the power supply's LED.
9. Use remote management utility to check the power supply status.

## Chapter 4

# Motherboard Connections

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

Please review the Safety Precautions in [Appendix A](#) or [Appendix B](#) before installing or removing components.

## 4.1 Power Connection

### Power Switch

The Power Switch connection is located on pins 1 and 2 of JF1. Momentarily contacting both pins will power on/off the system. This switch can also be configured to function as a suspend button. To turn off the power in the suspend mode, press the switch for at least 4 seconds. Refer to the table below for pin definitions.

Power Switch Pin Definitions (JF1)	
Pin#	Definition
1	Signal
2	+3 V Standby

### Reset Switch

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

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

**Power Fail LED**

The Power Fail LED connection is located on pins 5 and 6 of JF1. Refer to the table below for pin definitions.

Power Fail LED Pin Definitions (JF1)	
Pin#	Definition
5	Vcc
6	Ground

**UID LED**

The UID LED is on pins 7 and 8 of JF1. Connect the front panel UID LED to this header to indicate when the rear UID switch is turned on. Refer to the table below for pin definitions.

UID LED Pin Definitions (JF1)	
Pin#	Definition
7	Vcc
8	Ground

**NIC1/NIC2 Link LED**

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 to display network activity. Refer to the table below for pin definitions.

NIC1/NIC2 LED Pin Definitions (JF1)	
Pin#	Definition
9/11	Vcc
10/12	Ground

**Drive Activity LED**

The Drive Activity LED connection is located on pins 13 and 14 of JF1. Attach a drive LED cable here to display drive activity detected on the motherboard's built-in drive controllers. See the table below for pin definitions.

Drive Activity LED Pin Definitions (JF1)	
Pin#	Definition
13	+5 V
14	Drive Active

### Power LED

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

Power LED Pin Definitions (JF1)	
Pin#	Definition
15	+5 V
16	Ground

### NMI Switch

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

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

### Main Power Supply Connector (JPWR1)

The primary power supply connector (JPWR1) is an ATX power connector that the power supply plugs into directly.

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

**12 V 8-pin Auxiliary Power Connector (JPWR2)**

JPWR2 is an 8-pin ATX power input to provide auxiliary power to the processor. Refer to the table below for pin definitions.

<b>12 V 8-pin Power Connector Pin Definitions</b>	
<b>Pins</b>	<b>Definition</b>
1 through 4	Ground
5 through 8	+12 V

## 4.2 Headers and Connectors

### Power SMB Header (JPI2C1)

The Power System Management Bus (I2C) header monitors power supply, fan, and system temperatures. See the table below for pin definitions.

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

### Onboard Fan Headers (FAN1-FAN6)

There are six 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 Thermal Management (via Hardware Monitoring) in the BMC. When using Thermal Management setting, please use all 4-pin fans.

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

### NVMe Ports (NVMe 0-5)

The motherboard has three dedicated NVMe ports (two ports on a MCIO connector). These ports provide high-speed, low-latency PCIe 5.0 x4 connections directly from the CPU to NVMe Solid State (SSD) drives. This greatly increases SSD data-throughput performance and significantly reduces PCIe latency by simplifying driver/software requirements resulting from direct PCIe interface from the CPU to the NVMe SSD drives.

### SATA/NVMe Hybrid Ports (SATA 0-7/NVMe 6-7; SATA 8-15/NVMe 8-9)

Each SATA/NVMe hybrid port can support up to eight SATA 3.0 ports or two NVMe ports (PCIe x4), for a total of 16 SATA ports or four NVMe ports.

### Onboard Battery (BATTERY)

The onboard back up battery is located at BATTERY. The onboard battery provides backup power to the on chip CMOS, which stores the BIOS' setup information. It also provides power to the Real Time Clock (RTC) to keep it running.

### SPI TPM

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

Trusted Platform Module Header Pin Definitions			
Pin#	Definition	Pin#	Definition
1	+3.3 V	2	SPI_CS#
3	RESET#	4	SPI_MISO
5	SPI_CLK	6	GND
7	SPI_MOSI	8	NC
9	+3.3 V Stdby	10	SPI_IRQ#

### PCIe M.2 Connector (M.2-C1, M.2-C2)

The PCIe M.2 connectors are for devices such as memory cards, wireless adapters, etc. These devices must conform to the PCIe M.2 specifications (formerly known as NGFF). These particular PCIe M.2 supports M-Key (PCIe x2) storage cards.

### USB Ports (USB 0-3, USB 4/5)

There are a total of seven USB ports supported on the motherboard. Four are located on the back panel; USB 0/1, and USB 2/3 (both are USB 3.1 compliant). There are also three ports located on the motherboard, two are on one header, USB 4/5 (3.1).

Front Panel USB 3.0 Pin Definitions			
Pin#	Definition	Pin#	Definition
1	VBUS	19	Power
2	Stda_SSRX-	18	USB3_RN
3	Stda_SSRX+	17	USB3_RP
4	GND	16	GNd
5	Stda_SSTX-	15	USB3_TN
6	Stda_SSTX+	14	USB3_TP
7	GND	13	GND
8	D-	12	USB_N
9	D+	11	USB_P
10			

### Chassis Intrusion (JL1)

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	
Pins	Definition
1	Ground
2	Intrusion Input

### Expansion Slots

The motherboard features several expansion slots. The table below describes each slot's type and speed.

Expansion Slots	
Name	Description
<b>SXB1A</b>	Riser Slot
<b>SXB1B</b>	Riser Slot (for CPU Slot1 PCIe 5.0 x16, Slot3, PCIe 5.0 x16)
<b>SXB1C</b>	Riser Slot
<b>SXB2</b>	Riser Slot (for CPU Slot2, PCIe 5.0 x16)

### Overheat LED/Fan Fail (JOH1)

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

Overheat / Fan Fail Pin Definitions	
Pins	Definition
1	5 VDC
2	OH Active

Overheat / Fan Fail LED Status	
Status	Definition
Off	Normal
On, Solid	Overheat
On, Blinking	Fan Failure

**IPMB System Management Bus Header (JIPMB1)**

A System Management Bus header for IPMI 2.0 is located at JIPMB1. Connect the appropriate cable here to use the IPMB I<sup>2</sup>C connection on your system.

IPMB Header Pin Definitions	
Pin#	Definition
1	Data
2	Ground
3	Clock
4	+3.3 V Stdby

## 4.3 Input/Output Ports

See the figure below for the locations and descriptions of the I/O ports on the rear of the motherboard.

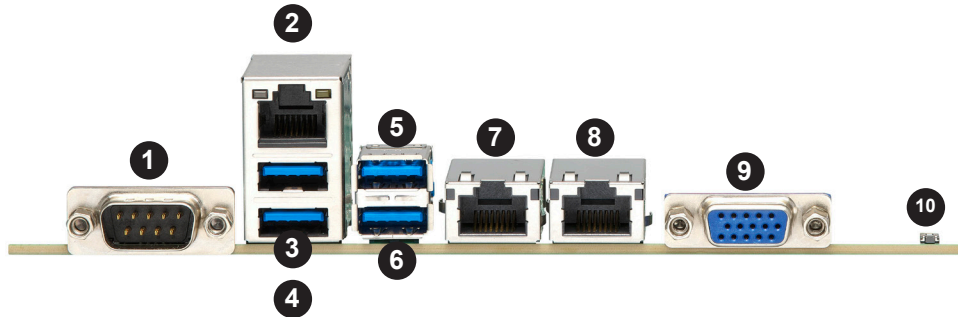


Figure 4-1. I/O Port Locations and Definitions

Rear I/O Ports					
#	Description	#	Description	#	Description
1	COM Port	5	USB 2 (3.0)	9	VGA Port
2	BMC LAN Port	6	USB 3 (3.0)	10	UID Switch & UID LED
3	USB 0 (3.0)	7	10 GbE LAN Port 1		
4	USB 1 (3.0)	8	10 GbE LAN Port 2		

### 1. COM Port

There is one serial communications port (COM) on the rear I/O panel.

### 2. BMC LAN Port

One BMC LAN port is located on the I/O back panel. This port accepts an RJ45 type cable.

### 3-6. Universal Serial Bus (USB) Ports

There are four USB 3.0 ports (USB 0/1, 2/3) on the I/O back panel. These support the type A connector.

### 7-8. LAN Ports

There are two 10 GbE LAN ports located on the I/O back panel (LAN1 & LAN2). These ports accept RJ45 type cables.

### 9. VGA Port

There is one VGA port on the rear I/O panel.

## 10. UID Switch and UID LED Indicator

A Unit Identifier (UID SW) switch and UID LED (LED1) are located on the I/O backpanel. The rear UID LED (LED1) is located next to the UID switch. When you press the UID switch, both rear and front UID LED indicators will turn on. Press the UID switch again to turn off the LED indicators. The UID Indicator provides easy identification of a system 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>

## 4.4 Front Control Panel

JF1 contains header pins for various buttons and indicators that are normally located on a control panel at the front of the chassis. These connectors are designed specifically for use with Supermicro chassis. See the figure below for the location of JF1.

	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-
Drive Activity LED+/UID Switch+	○	○	Drive Activity LED-
Power LED+	○	○	Power LED-
KEY, no pin	○	○	KEY, no pin
NMI Switch Shift	○	○	Ground
	19	20	

Figure 4-2. JF1 Pin Definitions

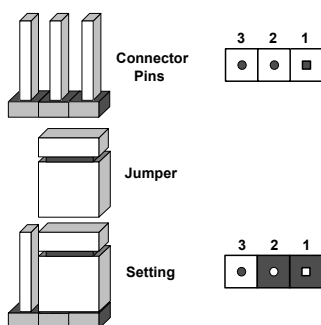
## 4.5 Jumpers

### *Explanation of Jumpers*

To modify the operation of the motherboard, jumpers can be used to choose between optional settings. Jumpers create shorts between two pins to change the function of the connector.

Pin 1 is identified with a thicker border line on the printed circuit board. See the diagram below for an example of jumping pins 1 and 2.

**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.



### **LAN Enable/Disable (JPL1)**

Jumper JPL1 will enable or disable LAN1/LAN2. See below for jumper settings. The default setting is enabled.

LAN Enable Jumper Settings	
Pin#	Definition
1-2	Enabled (default)
2-3	Disabled

## 4.6 LED Indicators

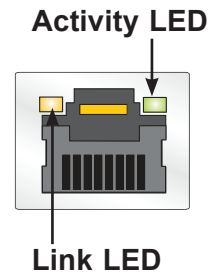
### Onboard LAN Port LEDs

The motherboard's Ethernet ports have two LED indicators. The Activity LED is green and indicates connection and activity. The Link LED may be green, orange/amber, or off to indicate the speed of the connection. Refer to the tables below for more information.

Link LED, Connection Link, Speed Indicator		
LED Color	Definition	
Orange	1 Gb/s	
Green	10 Gb/s	

Activity LED		
Color	State	Definition
None	No Connection	
None	Off	Link
Green	Flashing	Active



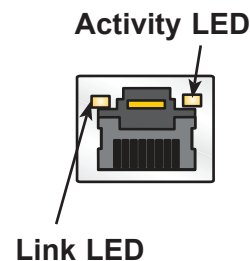
### BMC LAN Port LEDs

A dedicated BMC LAN is located on the rear I/O panel and has two LED indicators. The LED on the right indicates connection and activity, while the LED on the left indicates the speed of connection. The Link LED may be amber, or off to indicate the speed of the connection. Refer to the tables below for more information.

Link LED, Connection Link, Speed Indicator		
LED Color	Definition	
Amber	1 Gb/s	
Green	100 Mb/s	
Off	10 Mb/s	

Activity LED		
Color	State	Definition
None	No Connection	
Yellow	Solid On	Link
Yellow	Flashing	Active



### UID LED Indicator (LED9)

The rear LED9 is located next to the UID switch. The front UID LED is located on the front panel. When you press the UID switch, both rear LED9 and front UID LED indicators will turn on. Press the UID switch again to turn off the LED indicators. Use this UID Indicator to "mark" the system, so the system can be easily identified whether on the front or back (e.g., a system rack with multiple units installed). See also UID LED.

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

### BMC Heartbeat LED (LEDBMC1)

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

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

### Onboard Power OK LED (LED8)

LED8 is an onboard power OK LED. When this LED8 is lit, it means the system is turned on and all the system power rails are ready. When the system is turned off or any one of the system power rails fail, this LED will turn off. Turn off the system and unplug the power cable before removing or installing any component(s).

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

# Chapter 5

## Software

### 5.1 Driver Installation

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

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

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

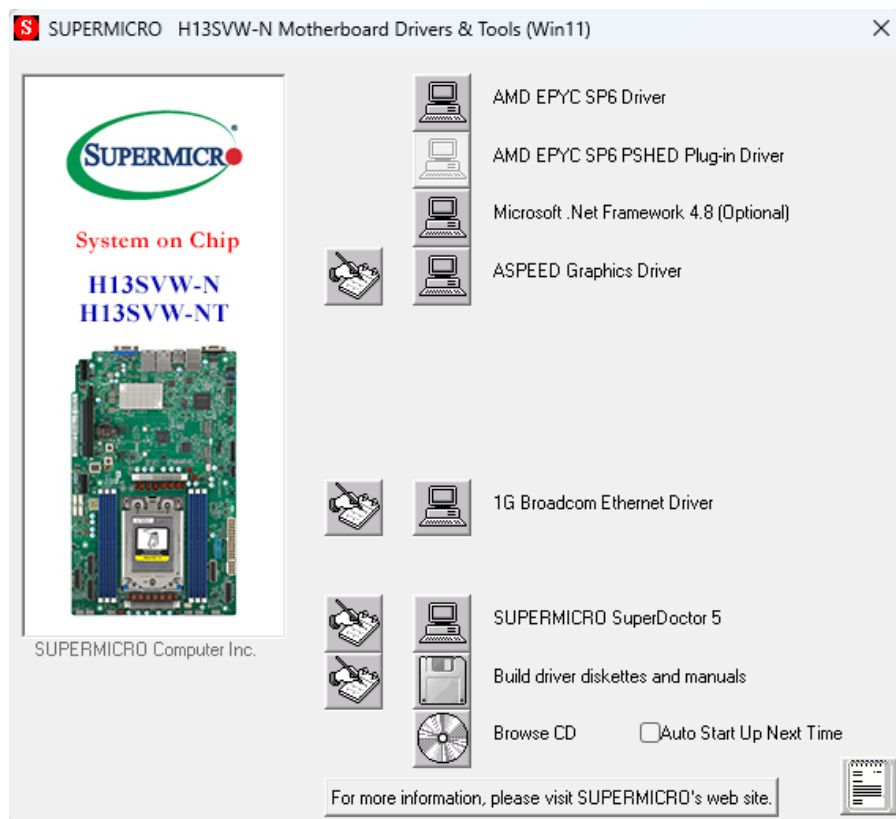


Figure 5-1. Driver & Tool Installation Screen

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

## 5.2 SuperDoctor® 5

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

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

[SuperDoctor® Manual and Resources](#)

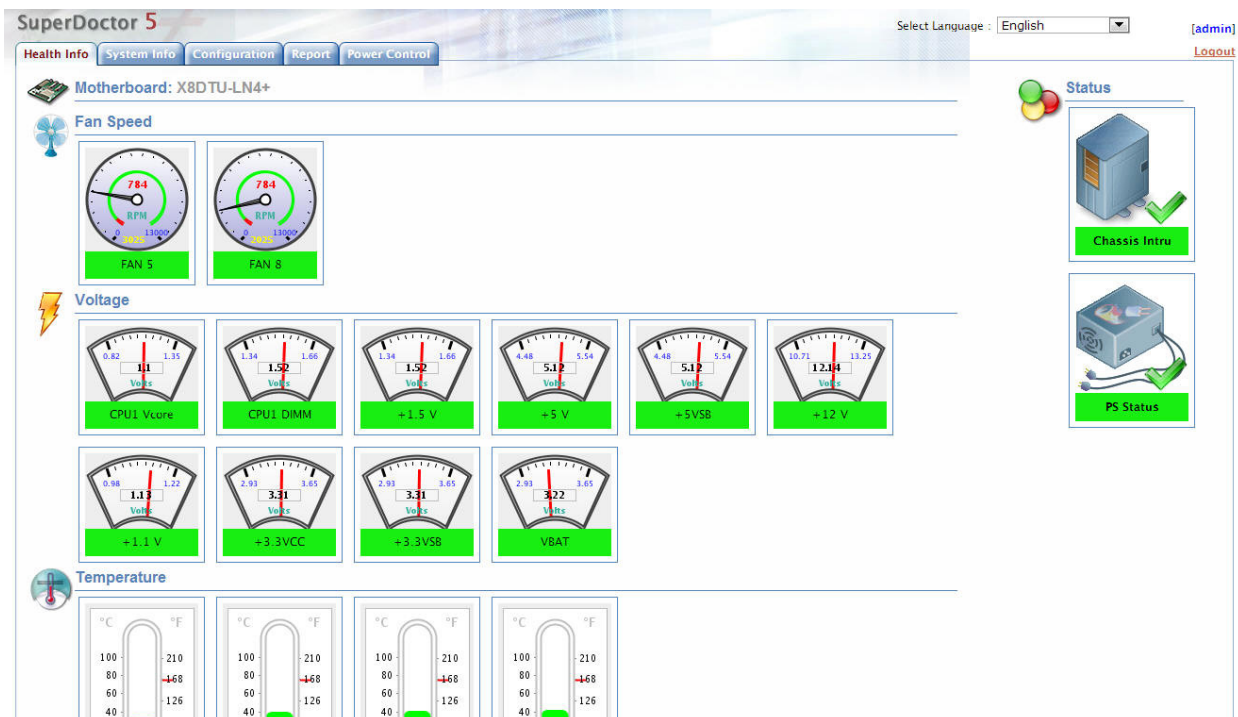


Figure 5-2. SuperDoctor 5 Interface Display Screen (Health Information)

**Note:** Both AS -1115S-FWTRT-OS1 and AS -1115S-FDWTRT-OS1 are compatible with Supermicro OpenBMC. However, OpenBMC does not support SuperDoctor.

## 5.3 BMC

The H13SVW-NT/H13SVW-NT-OS1 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:

<https://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 5-3. BMC Password Label

## Chapter 6

# Optional Components

This chapter describes optional system components and installation procedures.

### 6.1 Optional Parts List

Optional Parts List	
Description	Part Number
GPU power cable	CBL-PWEX-1361-10 CBL-PWEX-1240
SATA cable	CBL-SAST-1251-100
Air shroud	MCP-310-51512-0B

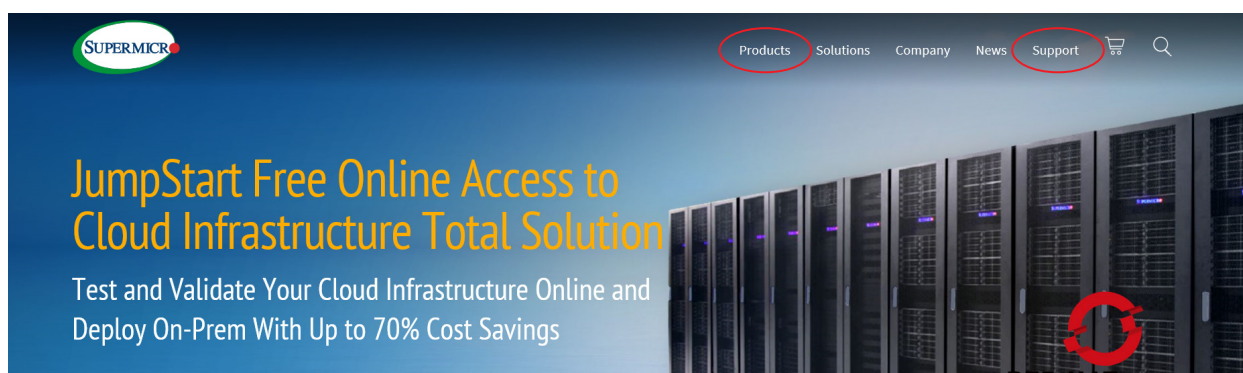
## Chapter 7

# 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 menu icon, then selecting 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 -1115S System***

[AS -1115S-FWTRT](#), [AS -1115S-FDWTRT](#), [AS -1115S-FWTRT-OS1](#), [AS -1115S-FDWTRT-OS1](#) specifications page

[H13SVW-NT](#), [H13SVW-NT-OS1](#) motherboard page for links to the Quick Reference Guide, User Manual, validated storage drives, etc.

### ***Direct Links for General Support and Information***

[Frequently Asked Questions](#)

[Add-on card descriptions](#)

[TPM User Guide](#)

[BMC User Guide](#)

[SuperDoctor5 Large Deployment Guide](#)

## Direct Links (continued)

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

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

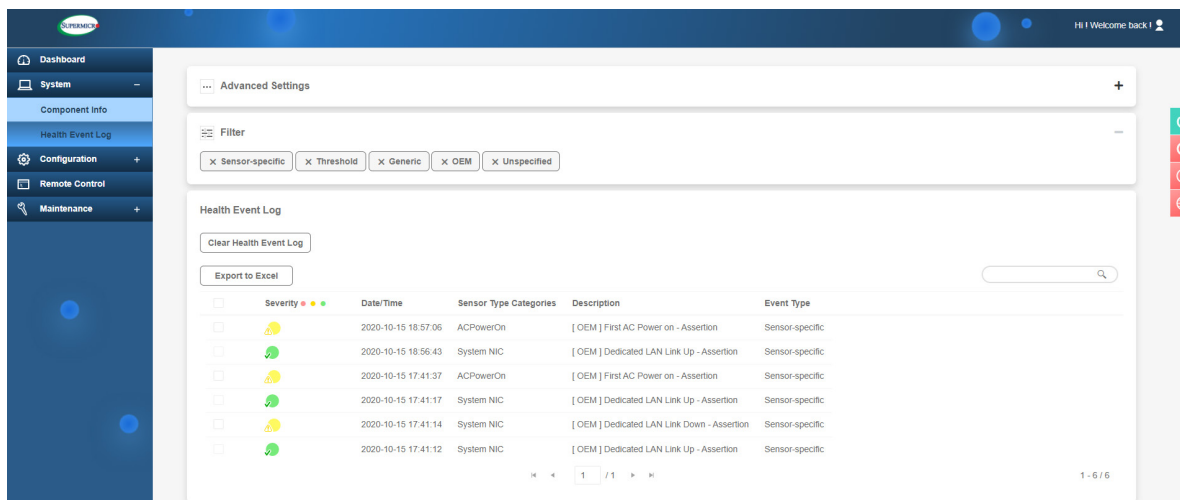
[Security Center](#) for recent security notices

[Supermicro Phone and Addresses](#)

## 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).



The screenshot shows the BMC interface with the following data in the Health Event Log table:

Severity	Date/Time	Sensor Type Categories	Description	Event Type
Warning	2020-10-15 18:57:06	ACPowerOn	[ OEM ] First AC Power on - Assertion	Sensor-specific
Info	2020-10-15 18:56:43	System NIC	[ OEM ] Dedicated LAN Link Up - Assertion	Sensor-specific
Warning	2020-10-15 17:41:37	ACPowerOn	[ OEM ] First AC Power on - Assertion	Sensor-specific
Info	2020-10-15 17:41:17	System NIC	[ OEM ] Dedicated LAN Link Up - Assertion	Sensor-specific
Warning	2020-10-15 17:41:14	System NIC	[ OEM ] Dedicated LAN Link Down - Assertion	Sensor-specific
Info	2020-10-15 17:41:12	System NIC	[ OEM ] Dedicated LAN Link Up - Assertion	Sensor-specific

Figure 7-2. BMC 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](#) section(s) 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.

### No Power

- Onboard Power OK LED (LED8)

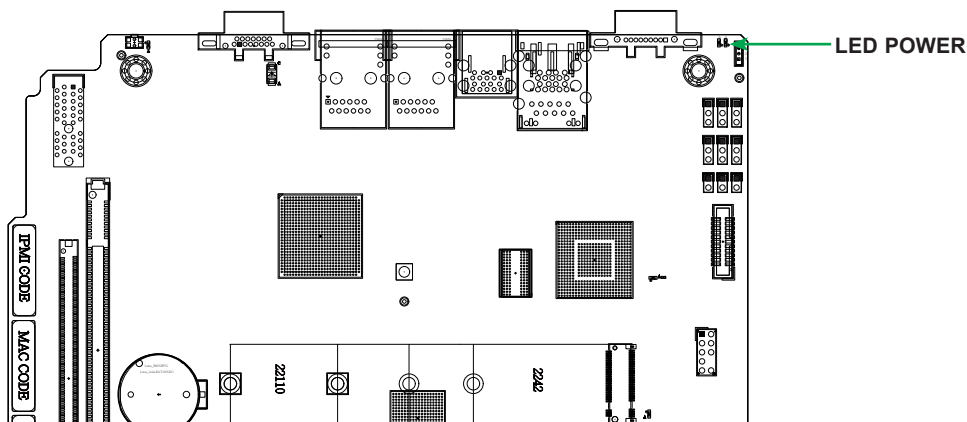


Figure 7-3. Location of the MB Power LED

- 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 3.4 for memory details.
- Check for bad DIMM modules or slots by swapping modules between slots and noting the results.

## Losing the System Setup Configuration

- Always replace power supplies with the exact same model that came with the system. A poor quality power supply may cause the system to lose the CMOS setup configuration.
- 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.supermicro.com](http://www.supermicro.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.

## 7.4 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\\_IPMI\\_X13\\_H13.pdf](https://www.supermicro.com/manuals/other/BMC_IPMI_X13_H13.pdf).

### Check Error Log

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

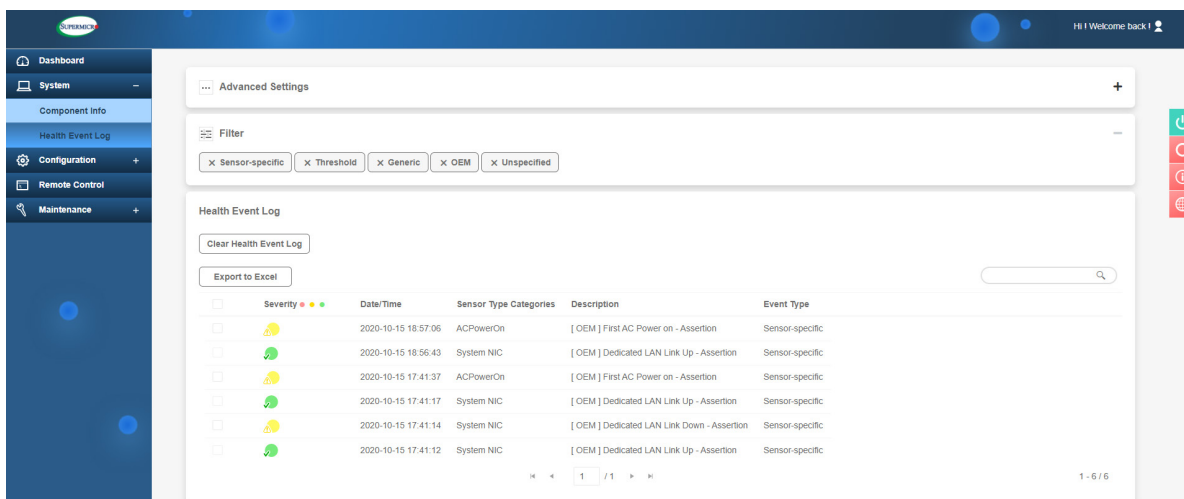


Figure 7-4. BMC Event Log

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

## 7.5 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.

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

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



## 7.6 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.

## 7.7 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.

## **7.8 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).

## 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 وُكي اَي تتسبب ف اصابة جسدهُ هذا الزهز عُ خطر! تحذُرُ .  
 قبل اَي تعول على اَي هعدات، كي على علن بالوخاطز ال اُجوة عي الذوائر  
 الكهزبائِة  
 وكي على دراةُ بالووارسات النقاىِة لو عُ وقع اَي حادث  
 استخدم رقن الب اى الو صُص ف هاةُ كل تحذُرُ للعشر تزجوتها

안전을 위한 주의사항

경고!

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

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

## BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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

BEWAAR DEZE INSTRUCTIES

## Installation Instructions



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

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前,请先阅读安装说明。

警告

將系統與電源連接前，請先閱讀安裝說明。

**Warnung**

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

**¡Advertencia!**

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

**Attention**

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

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقر إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

**Waarschuwing**

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

**Circuit Breaker**

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

**サーキット・ブレーカー**

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

**警告**

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

**警告**

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

**Warnung**

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

**¡Advertencia!**

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

**Attention**

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

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

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

**경고!**

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

**Waarschuwing**

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

## Power Disconnection Warning



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



### 電源切断の警告

システムコンポーネントの取り付けまたは取り外しのために、シャーシ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 chasis pour installer ou enlever des composants de système.

אזהרה מפני ניתוק חשמלי

אזהרה!

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

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

انصل إلى امناطق انداخييت نههيكم نشييج أو إزانت مكنناث الجهاز

경고!

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

Waarschuwing

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

## Equipment Installation



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

機器の設置

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

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

只有經過受訓且具資格人員才可安裝、更換與維修此設備。

Warnung

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

¡Advertencia!

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

**Attention**

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

אזהרה!

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

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

**경고!**

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

**Waarschuwing**

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

**Restricted Area**

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

**アクセス制限区域**

このユニットは、アクセス制限区域に設置されることを想定しています。

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

**警告**

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

**警告**

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

**Warnung**

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

**¡Advertencia!**

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

**Attention**

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

אזור עם גישה מוגבלת

אזהרה!

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

تخصيص هذه انحدة نترك بُها ف مناطق محظورة تم .

،ممكن اننصل إن منطقت محظورة فقط من خلال استخذاو أداة خاصت أو أ وس هُت أخري نلالأمما 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

### 電池の取り扱い

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.

冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告

此装置连接的电源可能不只一个，必须切断所有电源才能停止对该装置的供电。

Warnung

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

## ¡Advertencia!

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

## Attention

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

אם קיים יותר מספק אחד

אזהרה!

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

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة .

يجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

## 경고!

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

## Waarschuwing

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

## Backplane Voltage



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

バックプレーンの電圧

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

修理する際には注意ください。

警告

当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告

當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

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

¡Advertencia!

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

Attention

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

מתח בפנל האחורי

אזהרה!

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

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

경고!

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

Waarschuwing

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

## Comply with Local and National Electrical Codes



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

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

La 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 يمتثل للقوايه المحلية والبطية المتعلقة  
بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

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

## Product Disposal



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

製品の廃棄

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

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

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

¡Advertencia!

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

## Attention

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

סילוק המוצר

אזהרה!

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

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

경고!

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

## Waarschuwing

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

## Fan Warning



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

ファンの警告

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

警告!

警告! 危險的可移動性零件。請務必與轉動的风扇叶片保持距離。當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇

警告

危險的可移動性零件。請務必與轉動的风扇叶片保持距離。當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇。

**Warnung**

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

**¡Advertencia!**

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

**Attention**

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

**אזהרה!**

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

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

**경고!**

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

**Waarschuwing**

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

## Power Cable and AC Adapter



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

### 電源コードとACアダプター

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

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

### 警告

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

### 警告

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

### Warnung

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



### 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

# Standardized Warning Statements for DC Systems

## B.1 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。

您目前所處的工作環境可能讓您受傷。在您使用任何設備之前，請注意觸電的危險，並且要熟悉預防事故發生的標準工作程序。請依照每一注意事項後的號碼找到相關的翻譯說明內容。

## Warnung

## WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

## INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

## IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

תקנון הצהרות אזהרה

הצהרות הבאות הן אזהרות על פי תקני התעשייה, על מנת להזהיר את המשתמש מפני חבלה

פיזית אפשרית. במידה ויש שאלות או היתקלות בבעיה כלשהי, יש ליצור קשר עם מחלקת תמיכה

טכנית של סופרמיקרו. טכנאים מוסמכים בלבד רשאים להתקין או להגדיר את הרכיבים. יש לקרוא את הנספח במלואו לפני התקנת או הגדרת הרכיבים במארזי סופרמיקרו.

اَكْ ف حالة وُكي اَي تتسبب ف اصابة جسدهُ هذا الزهز عُ خطر! تحذُرُ .  
 قبل اَي تعول على اَي هعدات، كي على علن بالوخاطز ال اُجوة عي الذوائر  
 الكهزبائِة  
 وكي على دراةُ بالووارسات النقاىِة لو عُ وقع اَي حادث  
 استخدم رقن الب اى الو صُص ف هاةُ كل تحذُرُ للعشر تزجوتها

안전을 위한 주의사항

경고!

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

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

## BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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

BEWAAR DEZE INSTRUCTIES

## Installation Instructions



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

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前,请先阅读安装说明。

警告

將系統與電源連接前，請先閱讀安裝說明。

Warnung

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

¡Advertencia!

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

Attention

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

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقر إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

Waarschuwing

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

## Circuit Breaker



**Warning!** This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 60VDC, 20A.

サーキット・ブレーカー

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が60VDC、20A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60VDC,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60VDC,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: 60VDC, 20A 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: 60VDC, 20A.

**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 :60VDC, 20A.

מוצר זה מסתמך על הגנה המותקנת במבנים למניעת קצר חשמלי. יש לוודא כי המכשיר המגן מפני הקצר החשמלי הוא לא יותר מ-60VDC, 20A

هذا المنتج يعتمد على معدات الحماية مه الدوائر القصيرة التي تم تثبيتها في المبنى  
تأكد من أن تقييم الجهاز الوقائي ليس أكثر من : 20A, 60VDC

**경고!**

이 제품은 전원의 단락(과전류)방지에 대해서 전적으로 건물의 관련 설비에 의존합니다. 보호장치의 정격이 반드시 60VDC(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 60VDC, 20A.

## Power Disconnection Warning



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

### 電源切斷の警告

システムコンポーネントの取り付けまたは取り外しのために、シャーシ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斷され、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 החשמלי מהספק לפני גישה לחלק הפנימי של המארז לצורך התקנת או הסרת רכיבים.

يجب فصل انظاؤ من جميع مصادر انطاقت وإزانت سهك انكهرباء من وحدة امداد  
انطاقت قيم  
انصل إلى امناطق انداخهيت نههيكم نتشيج 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.

機器の設置

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

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

只有經過受訓且具資格人員才可安裝、更換與維修此設備。

Warnung

Das Installieren, Ersetzen oder Bedienen dieser Ausrüstung sollte nur geschultem, qualifiziertem Personal gestattet werden.

¡Advertencia!

Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.

## Attention

Il est vivement recommandé de confier l'installation, le remplacement et la maintenance de ces équipements à des personnels qualifiés et expérimentés.

אזהרה!

צוות מוסמך בלבד רשאי להתקין, להחליף את הציוד או לתת שירות עבור הציוד.

والمدربيه لتزكيب واستبدال أو خدمة هذا الجهاز يجب أن يسمح فقط للمظفيه المؤهليه

## 경고!

훈련을 받고 공인된 기술자만이 이 장비의 설치, 교체 또는 서비스를 수행할 수 있습니다.

## Waarschuwing

Deze apparatuur mag alleen worden geïnstalleerd, vervangen of hersteld door geschoold en gekwalificeerd personeel.

## Restricted Area



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

### アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

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

### 警告

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

### 警告

此装置仅限安装於進出管制區域，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 اننصل إن منطقت محظورة فقط من خلال استخدام أداة خاصت  
أو أ وس هُت أخري نلالأما 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

### 電池の取り扱い

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.

#### 冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

#### 警告

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

#### 警告

此装置连接的电源可能不只一个，必须切断所有电源才能停止对该装置的供电。

#### Warnung

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

¡Advertencia!

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

Attention

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

אם קיים יותר מספק אחד

אזהרה!

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

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة .  
يجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

경고!

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

Waarschuwing

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

## Backplane Voltage



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

バックプレーンの電圧

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

修理する際には注意ください。

警告

当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告

當系統正在進行時，背板上危險的電壓或能量，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 المتجددة على اللوحة  
عندما يكون النظام يعمل كه حذرا عند خدمة هذا الجهاز

경고!

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

Waarschuwing

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

## Comply with Local and National Electrical Codes



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

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

La 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 يمتثل للقوايه المحلية والبطية المتعلقة  
بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

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

## Product Disposal



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

製品の廃棄

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

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

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

¡Advertencia!

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

## Attention

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

סילוק המוצר

אזהרה!

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

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

## 경고!

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

## Waarschuwing

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

## Fan Warning



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

## ファン・ホットスワップの警告

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

## 警告!

警告! 危險的可移動性零件。請務必與轉動的风扇叶片保持距離。當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇

## 警告

危險的可移動性零件。請務必與轉動的风扇叶片保持距離。當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇。

**Warnung**

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

**¡Advertencia!**

Riesgo de piezas móviles. Mantener alejado de las aspas del ventilador. Los ventiladores podran dar vuelta cuando usted quite 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.

## DC Power Supply



**Warning!** When stranded wiring is required, use approved wiring terminations, such as closedloop or spade-type with upturned lugs. These terminations should be the appropriate size for the wires and should clamp both the insulation and conductor.

### 警告

より線が必要な場合、承認済みのケーブル終端(上向きの端子を備えたクローズループ型またはU字型の終端など)を使用してください。使用するワイヤーに適したサイズで、絶縁体および導体が両方ともクランプされている終端でなければなりません。

### 警告

需要多股佈線時，請使用經核准的佈線終端，例如閉環或鏟型接線片。這些終端的大小應適合線路，並且可以同時夾住絕緣體和導體。

### 警告

需要使用绞线连接时，请使用经认可的连接端子，如闭环端子或具有接线柱的铲形端子。这些端子的大小应与线缆相吻合，并且可以将绝缘部分和导体夹紧固定。

### Warnung

Wenn Litzenverdrahtung erforderlich ist, sind zugelassene Verdrahtungsabschlüsse, z.B. für einen geschlossenen Regelkreis oder gabelförmig, mit nach oben gerichteten Kabelschuhen zu verwenden. Diese Abschlüsse sollten die angemessene Größe für die Drähte haben und sowohl die Isolierung als auch den Leiter festklemmen.

### ¡Advertencia!

Quando se necesite hilo trenzado, utilizar terminales para cables homologados, tales como las de tipo "bucle cerrado" o "espada", con las lengüetas de conexión vueltas hacia arriba. Estos terminales deberán ser del tamaño apropiado para los cables que se utilicen, y tendrán que sujetar tanto el aislante como el conductor.

### Attention

Quand des fils torsadés sont nécessaires, utiliser des douilles terminales homologuées telles que celles à circuit fermé ou du type à plage ouverte avec cosses rebroussées. Ces douilles terminales doivent être de la taille qui convient aux fils et doivent être refermées sur la gaine isolante et sur le conducteur.

## 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.

### تحذير

وأقول غم قق ل ح لشم ،اهي ل ع قق ف او مل ءاهن! كالسأل ا مادختساو ،لبسلا مهب تاعطقت ني ذل ا كالسأل ا بولطم نوكي امدن ع بجي و كالسأل ا بس ان مل ا مجحلا نوكي تاءاهن ال ا هذل يغبني و .ةبولقم تاورعلا عم عونلا ةيقي قحلا اهئ امس أب ءاي شأل ا لصوصو لزعل ا نم لك حبك

주의!

꼬인 배선이 요구 될 때에는 폐회로나 돌출부가 위로 튀어 나온 Spade 형태의 승인된 배선 터미네이션들을 사용하세요.

이 터미네이션들은 배선들을 위해 적절한 크기여야 하고, 절연체와 도체 모두를 고정시킬 수 있어야 합니다.

Waarschuwing

Wanneer geslagen bedrading vereist is, dient u bedrading te gebruiken die voorzien is van goedgekeurde aansluitingspunten, zoals het gesloten-lus type of het grijperschop type waarbij de aansluitpunten omhoog wijzen. Deze aansluitpunten dienen de juiste maat voor de draden te hebben en dienen zowel de isolatie als de geleider vast te klemmen.

## DC Power Disconnection



**Warning!** Before performing any of the following procedures, ensure that power is removed from the DC circuit.

警告

次の手順を開始する前に、DC回路から電源が切断されていることを確認してください。

警告

進行以下任一操作程序前，請確保直流電路已斷電。

警告

请在进行以下任一操作程序前，确保直流电路的电源已经断开。

**Warnung**

Vor Ausführung der folgenden Vorgänge ist sicherzustellen, daß die Gleichstromschaltung keinen Strom erhält.

**¡Advertencia!**

Antes de proceder con los siguientes pasos, comprobar que la alimentación del circuito de corriente continua (CC) esté cortada (OFF).

**Attention**

Avant de pratiquer l'une quelconque des procédures ci-dessous, vérifier que le circuit en courant continu n'est plus sous tension.

**אזהרה!**  
**לפני ביצוע אחת הפעולות הבאות, ודא כי אספקת החשמל למעגל הזרם הישר**  
**DC הינה מנותקת.**

**تحذير**

وأقول غم ققلح لشم، ادهي لع ققفاومل اءاهن! كالسأل مادختساو، لبسلا مهب تعطقت نيذلا كالسأل ابولطم نوكي امدنع بجي وكالسأل بسانملا مچحل نوكي تاءاهن إل اذهل يغبنني و. ةبولقم تاورعل عم عونلا ةيقي قحلا اءئامس أب اءيشأل لصوصم و لزعل نم لك حبك.

**주의!**

다음 절차들을 수행하기 전에, 전원이 DC 회로로부터 제거되었는지를 확인해 주십시오.

**Waarschuwing**

Wanneer geslagen bedrading vereist is, dient u bedrading te gebruiken die voorzien is van goedgekeurde aansluitingspunten, zoals het gesloten-lus type of het grijperschop type waarbij de aansluitpunten omhoog wijzen. Deze aansluitpunten dienen de juiste maat voor de draden te hebben en dienen zowel de isolatie als de geleider vast te klemmen.

## Hazardous Voltage or Energy Present on DC Power Terminals



**Warning!** Hazardous voltage or energy may be present on DC power terminals. Always replace cover when terminals are not in service. Be sure uninsulated conductors are not accessible when cover is in place.

### 警告

直接電力端子に危険な電圧やエネルギーが発生している可能性があります。使用していない端子には常にカバーをつけてください。カバーがついているときは非絶縁形コンダクターに接触していないことを確認してください。

### 警告

直流電源終端可能產生危險的電壓或能量。終端不使用時，請務必蓋上機蓋。當蓋上機蓋，確認不絕緣導體無法使用。

### 警告

直流电源终端可能会产生危险的电压或能量。终端不使用时，请务必盖上机盖。机盖盖上后，请确保导体未绝缘部分无法使用。

### Warnung

In mit Gleichstrom betriebenen Terminals kann es zu gefährlicher Spannung kommen. Die Terminals müssen abgedeckt werden, wenn sie nicht in Betrieb sind. Stellen Sie bei Benutzung der Abdeckung sicher, dass alle nicht isolierten, stromführenden Kabel abgedeckt sind.

### ¡Advertencia!

Puede haber energía o voltaje peligrosos en los terminales eléctricos de CC. Reemplace siempre la cubierta cuando no estén utilizándose los terminales. Asegúrese de que no haya acceso a conductores descubiertos cuando la cubierta esté colocada.

### Attention

Le voltage ou l'énergie électrique des terminaux à courant continu peuvent être dangereux. Veillez à toujours replacer le couvercle lors les terminaux ne sont pas en service. Assurez-vous que les conducteurs non isolés ne sont pas accessibles lorsque le couvercle est en place.

### אזהרה!

מקור מתח מסוכן עלול להיות נוכח על הקטבים של זרם ה-DC. החלף תמיד את המכסה כאשר הקטבים לא בשימוש. ודא כי המוליכים הלא מבודדים אינם נגישים כאשר המכסה נמצא במקומו.

**تحذير**

امدنع امئاد ءاطغ لادبتسا . ءمصاعل ءق اظلا تاظحم ىلع ءدوجوم نوكت ءق اظلا واً ءرطخل دهجل دق  
ءاطغلا امدنع اهـلل لوصولاً نكمـي ال لوزعم ريغ تالصومل هـيـف كـش ال امم . ءمدخل اـيـف تـسـيـل تاظحمـل  
هنكم يف .

**주의!**

DC전원 단자들에 위험한 전압이나 에너지가 발생할 수 있습니다.

단말기들을 운영하지 않을 때에는 덮개로 다시 덮어 놓아 주십시오. 덮개가 제자리에 있어야만 절연되지 않은 도체들의 접근을 막을 수 있습니다.

**Waarschuwing**

Op DC-aansluitingspunten kunnen zich gevaarlijke voltages of energieën voordoen. Plaats altijd de afsluiting wanneer de aansluitingspunten niet worden gebruikt. Zorg ervoor dat blootliggende contactpunten niet toegankelijk zijn wanneer de afsluiting is geplaatst.

# Appendix C

## System Specifications

### Processor

Single AMD EPYC™ 8004 Series processor with up to 64C cores and a thermal design power (TDP) of up to 200 W

### BIOS

AMI 256 MB ACPI 6.2, SMBIOS 3.1.1, Plug-and-Play (PnP)

### Memory

Up to 576 GB of Registered ECC DDR5 up to 4800 MT/s SDRAM memory in six slots

### Storage Drives

Two internal 2.5" SATA/SAS/NVMe drive bays

### Expansion Cards

Two PCIe 5.0 x16 slots (full-height, full-length)

One PCIe 5.0 x16 slots (low-profile)

### Input/Output

One RJ45 Dedicated IPMI LAN port

Two RJ45 10 GbE ports (Broadcom BCM57416)

Four USB ports

One VGA port

One COM port

### Motherboard

H13SVW-NT/H13SVW-NT-OS1: length 13", width 8" (330.2 mm x 203.2 mm)

### Chassis

CSE-515B-R000WNP: 1U Rackmount, (WxHxD) 17.2 x 1.7 x 16.9 in. (437 x 43 x 429 mm)

### System Cooling

Six 4-cm counter-rotating fans, one CPU heatsink, one air shroud to direct air flow

### Power Supply

AS -1115S-FWTRT/AS -1115S-FWTRT-OS1: Two redundant AC 800 W

AS -1115S-FDWTRT/AS -1115S-FDWTRT-OS1: Two redundant DC 600 W

5 V SB: Max: 3 A / Min: 0 A

**Operating Environment**

Operating Temperature: 0° to 40° C (32°F to 104°F)  
 Non-operating Temperature: -40° to 70° C (-40° to 158° F)  
 Operating Relative Humidity: 8% to 90% (non-condensing)  
 Non-operating Relative Humidity: 5% to 95% (non-condensing)

**Regulatory Compliance**

FCC, ICES, CE, UKCA, VCCI, RCM, 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/EN 55032  
 BS/EN 55035  
 CISPR 32  
 CISPR 35  
 BS/EN 61000-3-2  
 BS/EN 61000-3-3  
 BS/EN 61000-4-2  
 BS/EN 61000-4-3  
 BS/EN 61000-4-4  
 BS/EN 61000-4-5  
 BS/EN 61000-4-6  
 BS/EN 61000-4-8  
 BS/EN 61000-4-11

Product Safety: 2014/35/EU (LVD Directive)  
 UL/CSA 62368-1 (USA and Canada)  
 Electrical Equipment (Safety) Regulations 2016  
 IEC/BS/EN 62368-1  
 Environment:  
 2011/65/EU (RoHS Directive)  
 EC 1907/2006 (REACH)  
 2012/19/EU (WEEE Directive)  
 California Proposition 65

**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