SUPERMICRO®

A+ Server
AS -1015A-MT

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 experienced technicians only.

Please refer to the AS -1015A-MT 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/driver

- Product safety info: http://www.supermicro.com/about/policies/safety_information.cfm

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

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

Secure Data Deletion

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

Warnings

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

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

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

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Chapter 3 Maintenance and Component Installation

Chapter 4 Motherboard Connections

Chapter 5 Software

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Chapter 1

Introduction

1.1 Overview

This chapter provides a brief outline of the functions and features of the A+ Server AS -1015A-MT. It is based on the H13SAE-MF motherboard and the CSE-514-505 chassis.

The following provides an overview of the specifications and capabilities.

System Overview	
Motherboard	H13SAE-MF
Chassis	CSE-514-505
Processor Support	AMD Ryzen 7000 Series Processor in Socket AM5
Chipset	AMD B650 chipset
Memory	Up to 128 GB ECC/Non-ECC UDIMM 5200 MT/s speed in four DIMM slots
Drive Support	One fixed 3.5" SATA drive bay or four fixed 2.5" SATA driver bays (Optional)
Expansion Slots	One PCIe 5.0 x16 slot (in slot 6) with riser card
I/O Ports	Front I/O: Power On/Off button, system reset button, power status LED, HDD activity LED, system Information LED, two Network Activity LEDs Rear I/O: Two 1 Gbe LAN (Intel i210) ports, one dedicated IPMI LAN port, one USB 3.2 Gen2 x2 (20 Gbps) Type C port, three USB3.2 Gen2 x1 (10 Gbps) Type A ports, two USB3.2 Gen2 Type C (10 Gbe) Alt Mode, one Display Port 1.4a, one HDMI 2.0, 7.1 Audio Channel connector (Realtek ALC888S)
System Cooling	One CPU cooling air shroud (MCP-310-51402-0B) One CPU heatsink (SNKP0076V) Six 4-cm counter-rotating fans (FAN-0156L4)
Power	PWS-505P-1H: single 500 W High-Efficiency multi-output module with PMBus, 80Plus Platinum level
Form Factor	17.2 x 1.7 x 16.9 in. / 437 x 43 x 429 mm (W x H x D)

Note: A Quick Reference Guide can be found on the product page of the Supermicro website. The following safety models associated with the AS -1015A-MT have been certified as compliant with UL or CSA: 514-S5H13, 514-5.

1.2 System Features

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

Front View
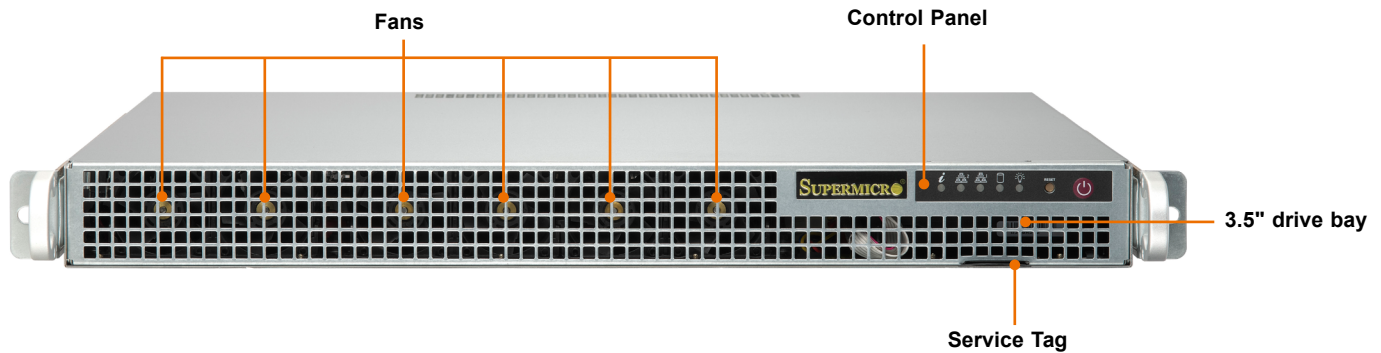
Figure 1-1. Front View

System Features: Front	
Feature	**Description**
Fans	Six sets of 4-cm counter-rotating cooling fans
Control Panel	Front control panel (see Control Panel for details)
Service Tag	One service tag with BMC password reset
Storage Drive	One 3.5" SATA drive bay

Control Panel

There are two buttons and several LEDs on the control panel to keep you constantly informed of the overall status of the system as well as the activity and health of specific components. There are also status lights for the power supply.
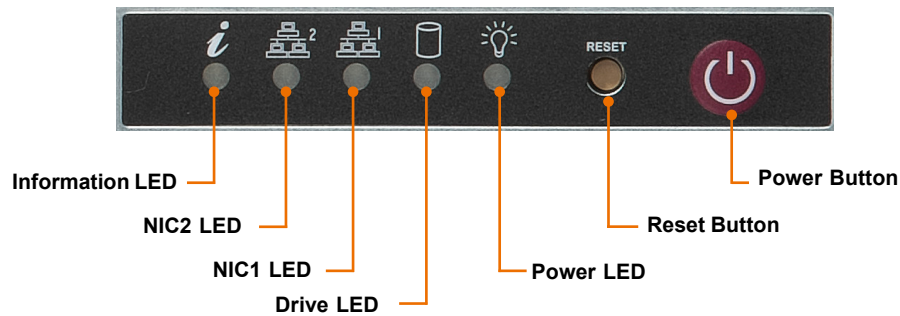
Figure 1-2. Control Panel

Control Panel Features	
Feature	**Description**
Information LED	Alerts operator to several states, as noted in the table below.
NIC2 LED	Indicates network activity on LAN port 2 when flashing.
NIC1 LED	Indicates network activity on LAN port 1 when flashing.
Drive LED	Indicates activity on the storage drive when flashing.
Power LED	Indicates power is being supplied to the system power supply units. This LED should normally be illuminated when the system is operating.
Reset Button	Use the reset button to reboot the system.
Power Button	The main power switch is used to apply or remove power from the power supply to the server. Turning off system power with this button removes the main power but maintains standby power. To perform many maintenance tasks, you must unplug the system before servicing.

Information LED	
Color, Status	**Description**
Red, solid	An overheat condition has occurred.
Red, blinking at 1 Hz	Fan failure, check for an inoperative fan.
Blue, solid	UID has been activated locally to locate the server in a rack environment.
Blue, blinking at 1 Hz	UID has been activated using the BMC to locate the server in a rack environment.

Rear View

Fan

Expansion Slot

Power Supply

Rear I/O Ports
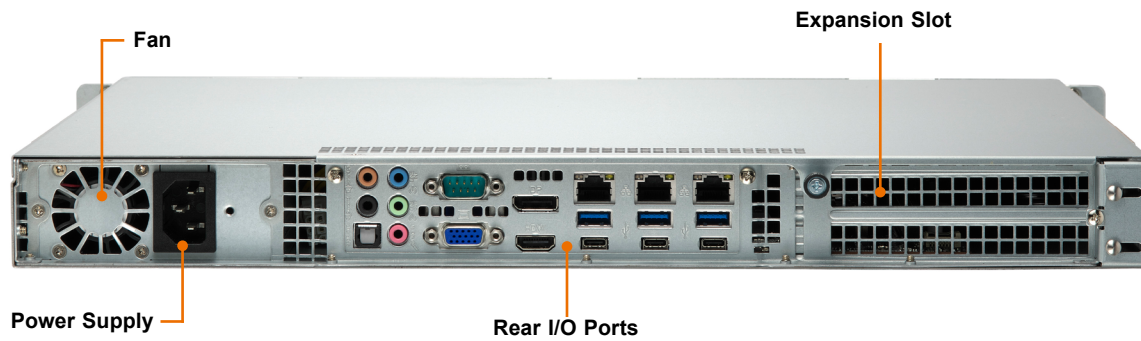
Figure 1-3. System: Rear View

System Features: Rear	
Feature	**Description**
Fan	One 4-cm rear exhaust fan
Power Supply	PWS-505P-1H: one 500 W high-efficiency (Platinum level) multi-output power supply
Rear I/O Backpanel	Rear I/O backpanel
Expansion Slot	One PCIe 5.0 x16 slot (full-height & full-length)

Top View
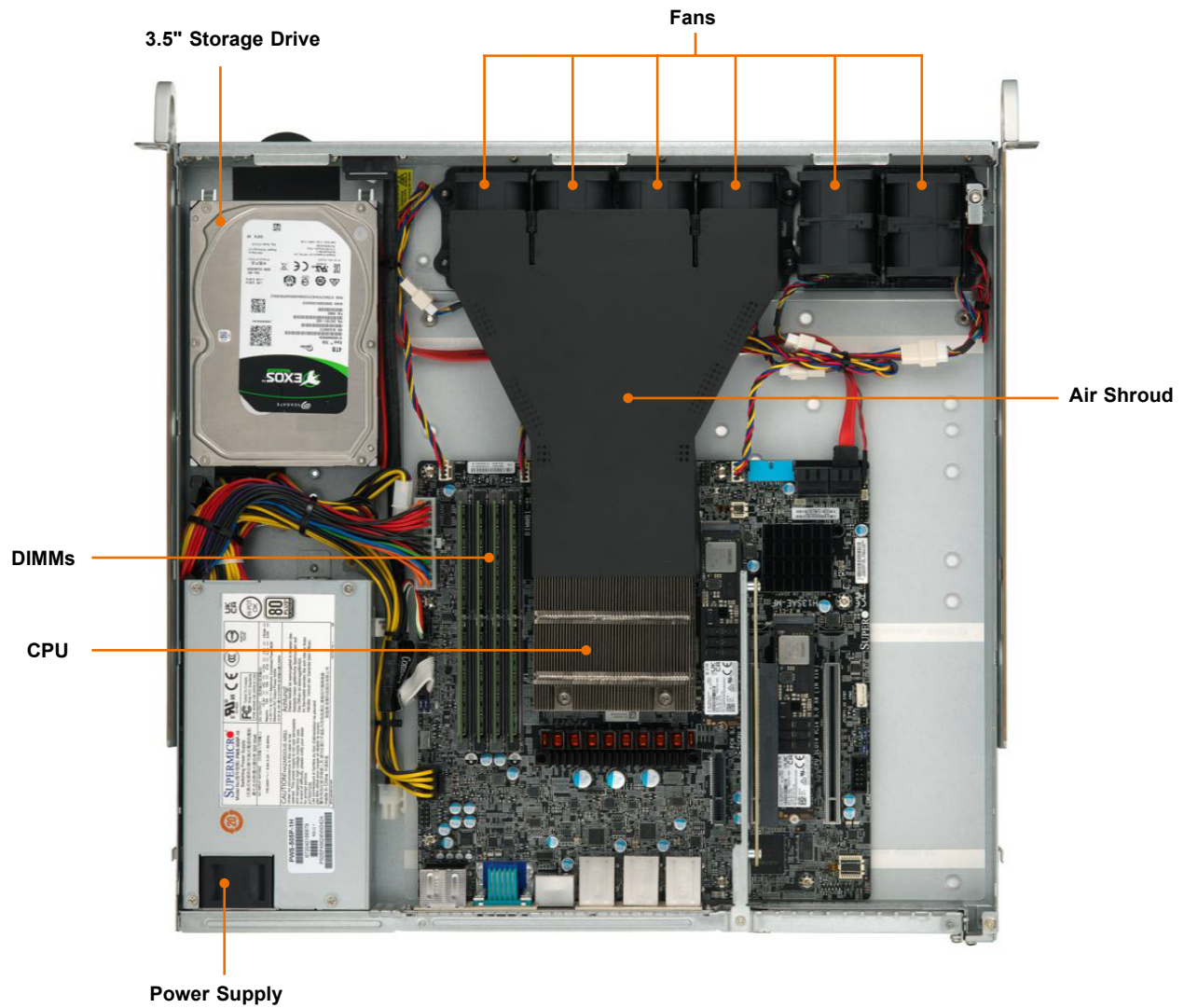
Figure 1-4. Main Component Locations

System Features: Side	
Feature	**Description**
Power Supply	PWS-505P-1H: one 500 W high-efficiency (Platinum level) multi-output power supply
Storage Drive	One 3.5" SATA drive bay

1.3 Motherboard Layout

Below is a layout of the H13SAE-MF motherboard with jumper, connector, and LED locations shown. See the table on the following page for descriptions. For detailed descriptions, pinout information, and jumper settings, refer to Chapter 4 or the Motherboard Manual.
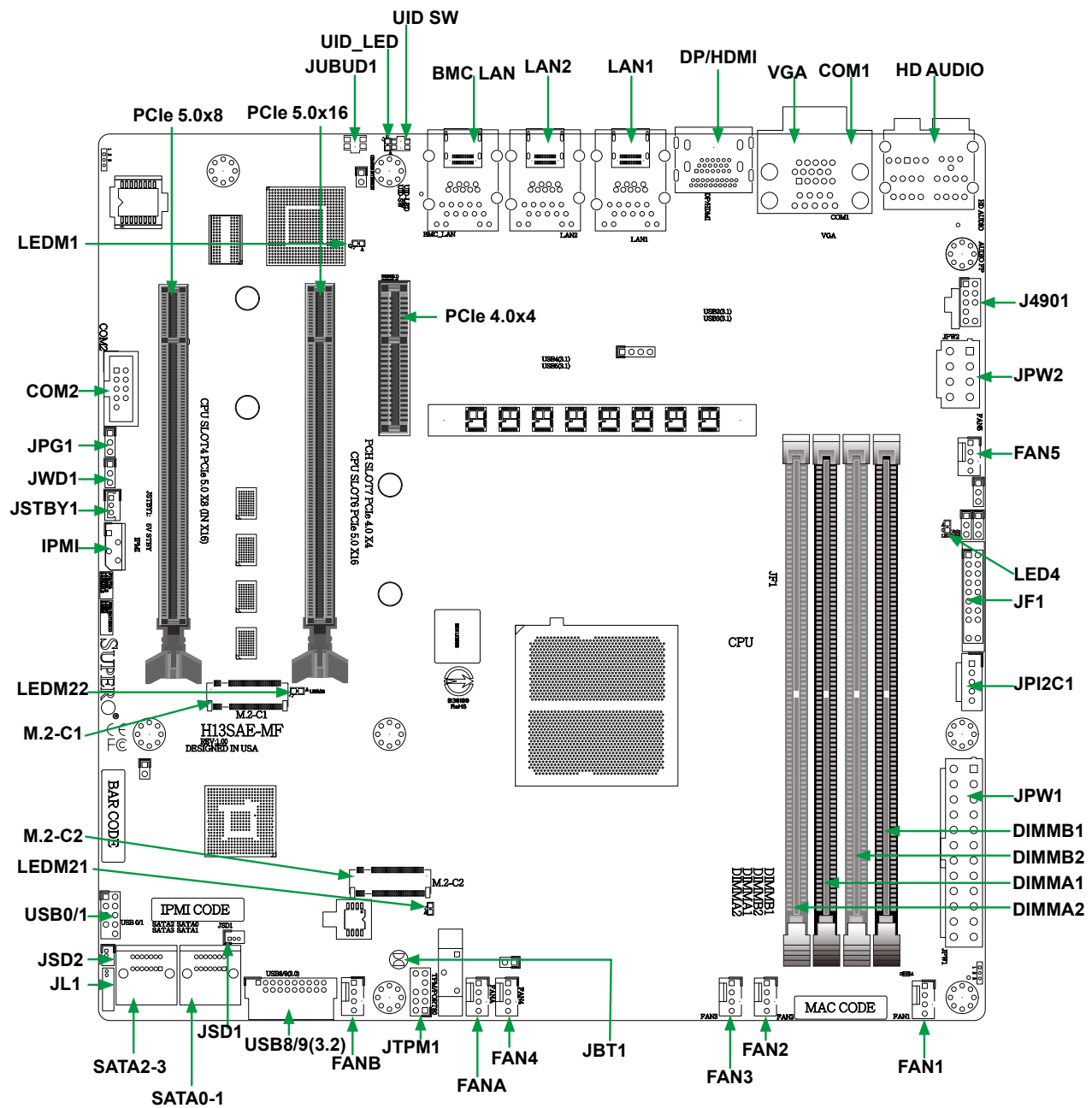
Figure 1-6. Motherboard Layout

Notes:

• Components not documented are for internal testing only.

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

Quick Reference Table

Jumper	Description	Default Setting
JBT1	CMOS Clear	Open (Normal)
UID SW	Unit ID Switch (Push-Button Toggle Switch ON/OFF)	Off
JPG1	VGA Enable	Pins 1-2 (Enabled)
JWD1	Watch Dog Control	Pins 1-2 (Reset)
JUBUD1	BIOS Update	Off

LED	Description	Status
LED1	Unit Identifier (UID) LED	Blue: UID Indentified
LED4	Onboard Power LED	Solid Green: Power On
LEDM1	BMC Heartbeat LED	Green: Blinking (BMC Normal) Green: Fast Blinking (BMC Initializing)
LEDM21~LEDM22	M.2 SSD LED	Blinking: Device Working

| Connector	Description
JL1	Chassis Intrusion Header
SATA0-1, SATA2-3	Dual SATA Port Connectors Supporting up to Four Devices
J4901	Front Panel HD Audio Header
JPW2	12V 8-pin CPU Core Power Supply Connector
JPW1	24-pin ATX Main Power Connector (Required)
JF1	Front Control Panel Header
BT1	Onboard Battery
M.2-C1/M.2-C2	M.2 PCIe Interfaces
JSTBY1	External P5V_STBY Power
JIPMB1	4-pin BMC External I²C Header (For an IPMI-Supported Card)
DIMMA1~DIMMB2	DIMM Slots
FAN1~FAN5	CPU Fans
FANA~FANB	System Cooling Fans
BMC LAN	BMC LAN Port
JTPM1	TPM (Trusted Platform Module)/Port 80
JPI2C1	Power System Management Bus (SMB) I²C Header
COM1/COM2	Serial Port/Header
VGA	Rear Panel VGA Port
USB0/1	USB 2.0 Ports
USB2/4	Rear USB 3.2 Gen1 Alt Ports
USB3/5/7	Rear USB 3.2 Gen2 Ports
USB6	USB3.2 Gen2x2 Port
USB8/9	Front USB 3.2 Gen1 Ports

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

System Block Diagram

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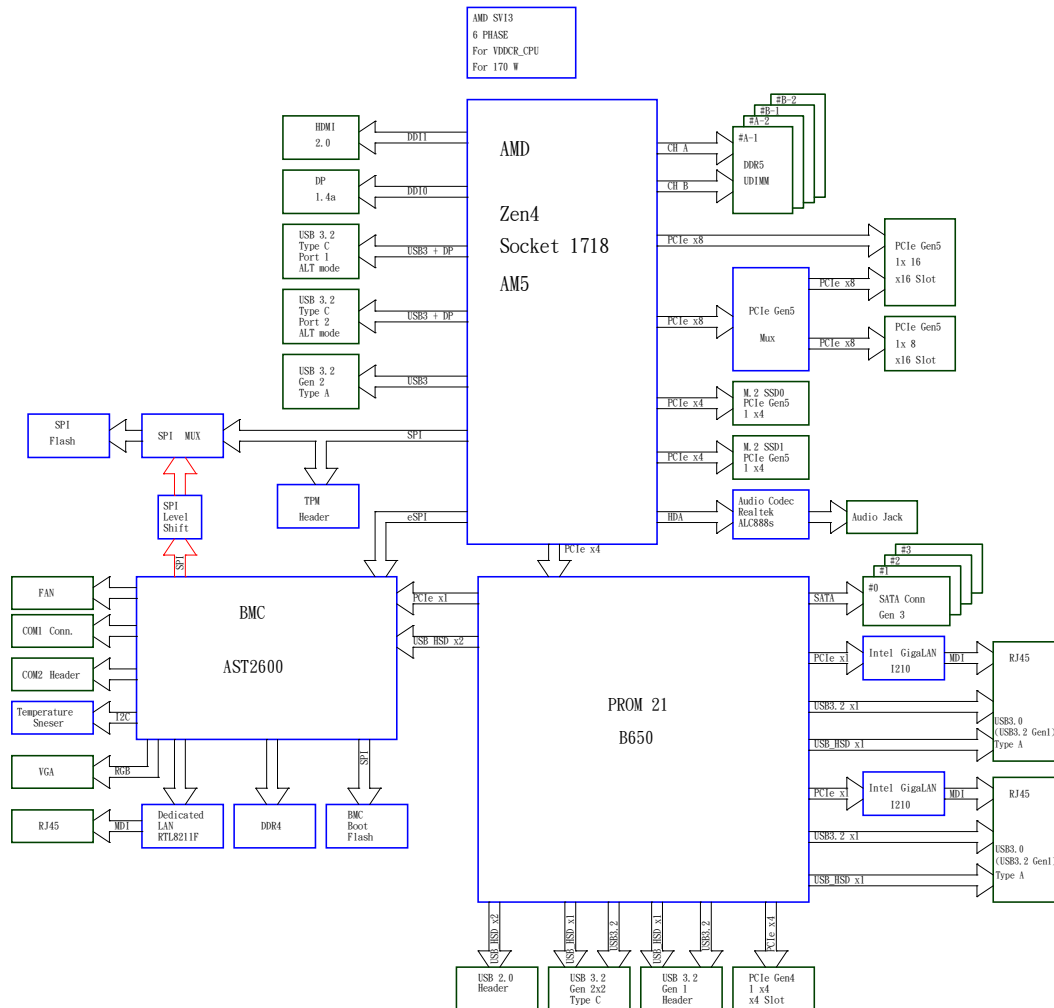

Figure 1-5. Block Diagram

Note: This is a general block diagram and may not exactly represent the features on your motherboard. See the previous pages for the actual specifications of your motherboard.

Chapter 2

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 in any way. If any equipment appears damaged, file a damage claim with the carrier who delivered it. Decide on a suitable location for the rack unit that will hold the server. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise, and electromagnetic fields are generated. It will also require a grounded AC power outlet nearby. Be sure to read the precautions and considerations noted or in Appendix A.

2.3 Preparing for Setup

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

Choosing a Setup Location

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

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

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

- This product is not suitable for use with visual display workplace devices according to §2 of the German Ordinance for Work with Visual Display Units.

Rack Precautions

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

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

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

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

Server Precautions

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

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

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

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

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

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

Rack Mounting Considerations

Ambient Operating Temperature

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

Airflow

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

Mechanical Loading

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

Circuit Overloading

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

Reliable Ground

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

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

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

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

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

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

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

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

2.4 Installing the System into a Rack

This section provides information on installing the chassis into a rack unit with the rails provided. There are a variety of rack units on the market, which may mean that the assembly procedure differs slightly. You should also refer to the installation instructions that came with the rack unit you are using.

Note: These rails will fit a rack between 26" and 33.5" deep.

Identifying the Sections of the Rack Rails

The chassis package includes two sets of rack rails, one set for the right side of the chassis and one for the left. Each set includes the outer rail pieces that attach to the rack. The outer rails accept an inner rail that is pre-attached directly to the chassis.
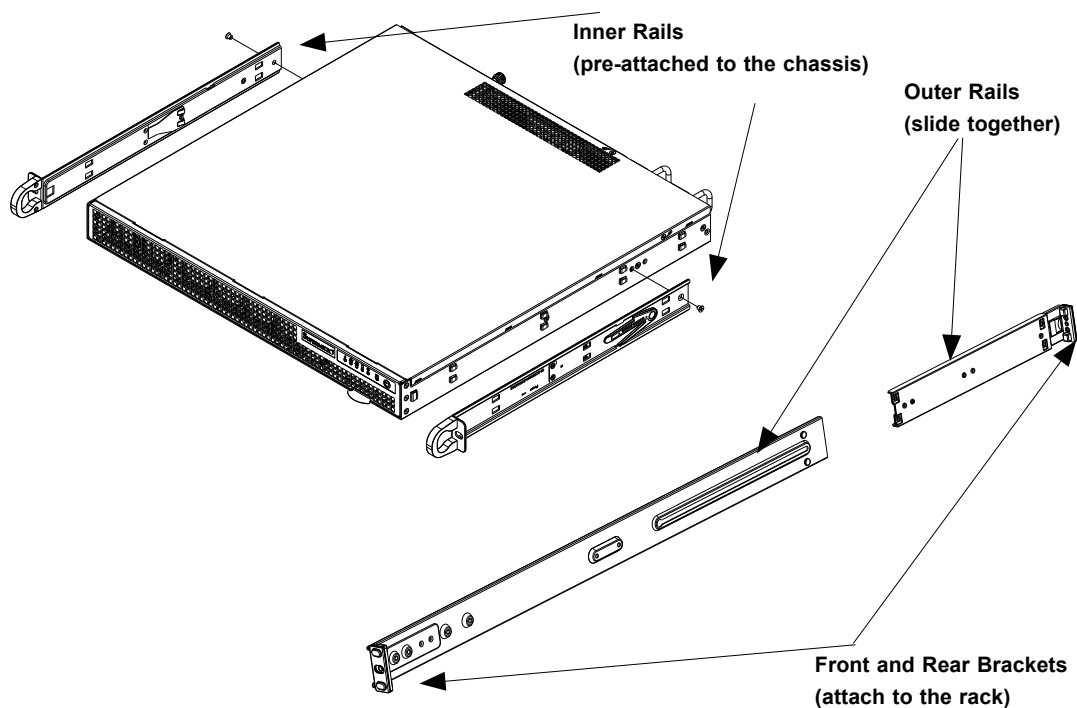
Figure 2-1. Identifying the Sections of the Rack Rails

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

Assembling the Outer Rails

Each outer rail comes in two sections that must be assembled before mounting onto the rack.

Assembling the Outer Rails

1. Identify the left and right outer rails by examining the ends, which bend outward. Match the left front outer rail with the left rear outer rail and the same for the right rails.

2. Align the round post in the rear rail (B) with the round hole at the end of the slot in the front rail (A), and slide the front section into the rear section.

Secure to the rear of the rack

Slide outer rails together

Round Hole

Secure to the front of the rack

B

A

Assembling the sections of the outer rail

Outer rail assembled

Bracket with Square Pegs

Figure 2-2. Assembling the Outer Rails

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.

Installing the Outer Rails

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.
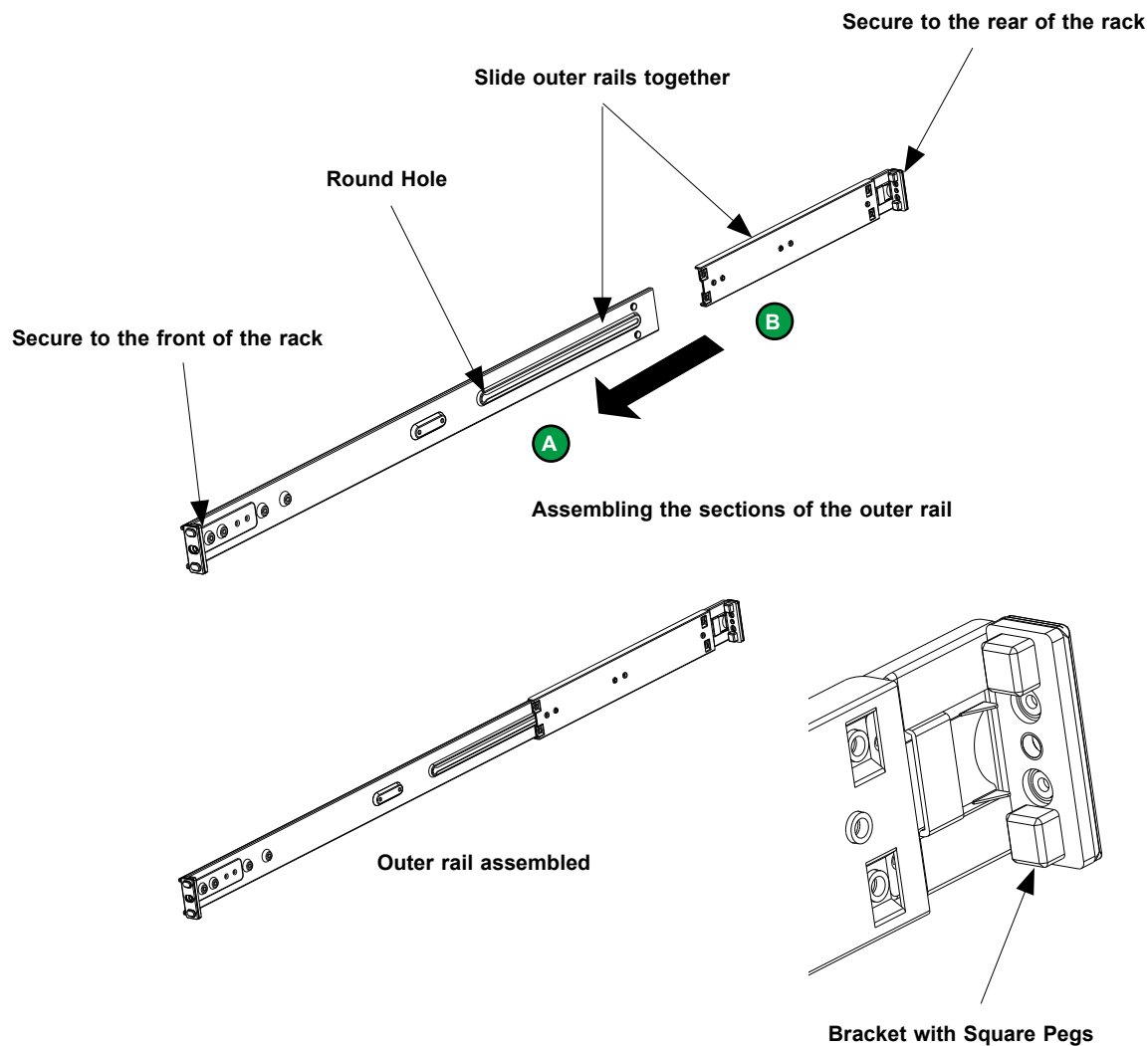
2. Adjust the rail to reach just past the full depth of your rack.

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.

4. Repeat the procedure for the other outer rail assembly.

Figure 2-3. 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 Hazzard:** 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.

Sliding the Chassis onto the Rack Rails

Installing the Chassis into a Rack

1. Align the chassis rails with the front of the rack rails.

2. Slide the chassis rails into the rack rails, keeping the pressure even on both sides. The spring latch engages when the chassis is part way in. Push the server completely into the rack.

3. (Optional) Insert and tighten the thumbscrews that hold the front of the server to the rack.

Figure 2-4. 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.

⚠️ **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 Two Post (Telco) Rack

Optional brackets (p/n MCP-290-00016-0N) are needed to install the server to a two post (telco type) rack. Use the two L-shaped brackets on either side of the chassis (four total).

1. First, determine how far follow the server 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.

2. 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.

3. Finish by sliding the chassis into the rack and tightening the brackets to the rack.
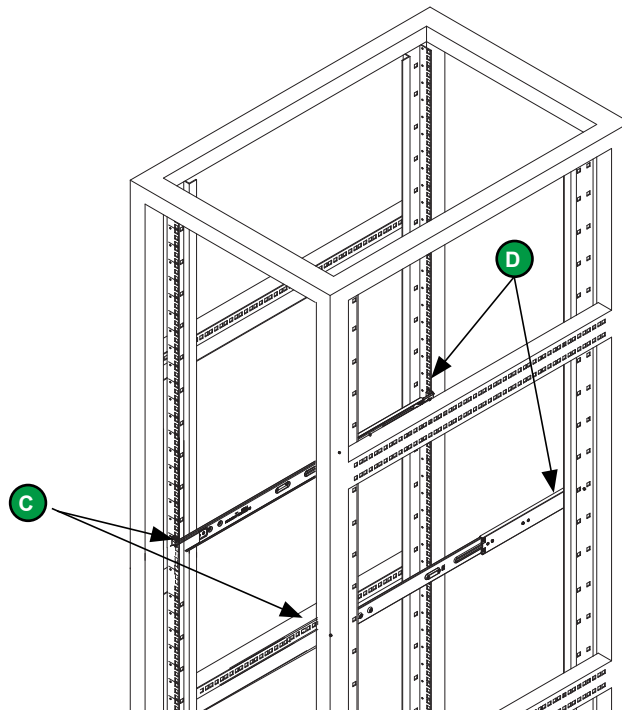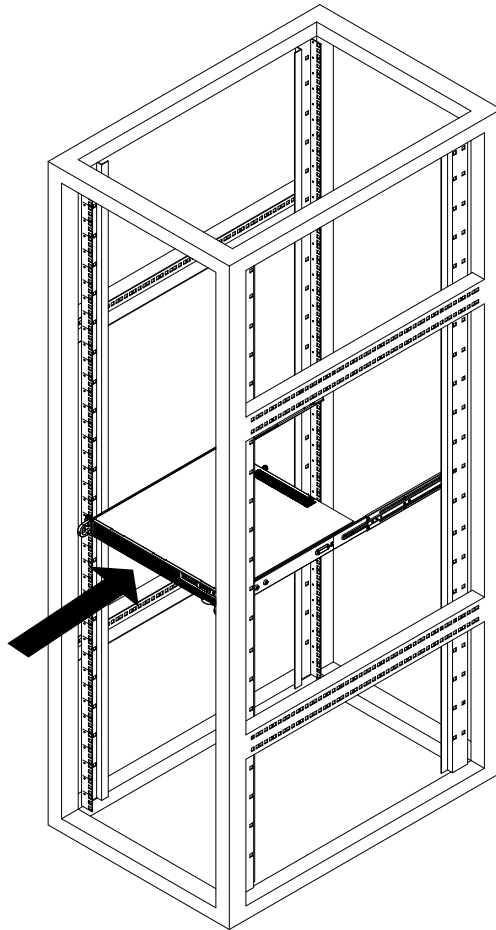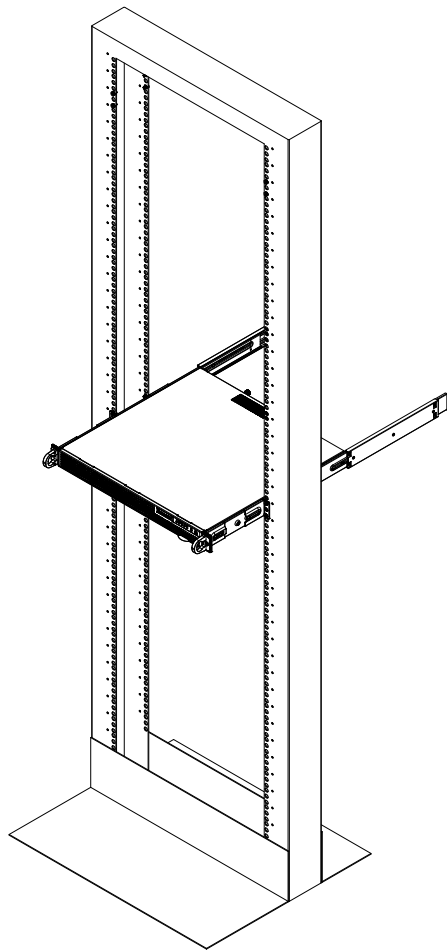
Figure 2-5. Installing the Server into a Telco Rack

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

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 requires that power first be removed from the system. Please follow the procedures given in each section.

3.1 Accessing the System

You may need to remove the top cover to access the inside of the system for some of the procedures desccibed in this chapter.

Removing the Chassis Top Cover

1. Remove the thumb screw securing the top cover to the chassis.

2. Remove the two screws on the sides of the chassis.

3. Lift the cover up and off of the chassis.

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.
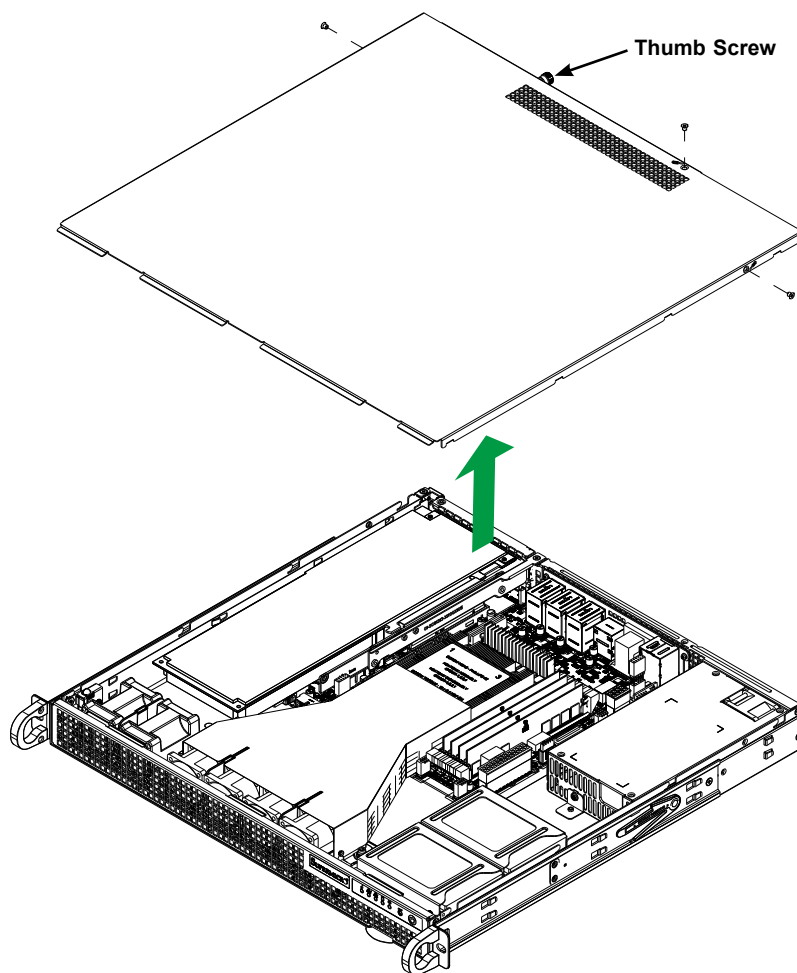
Figure 3-1. Removing the Chassis Cover

Note: All graphics in this manual are for illustrations only. Your components may look different.

3.2 Processor and Heatsink Installation

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

• Use ESD protection.

• Shut down the system and then unplug the AC power cord from all power supplies.

• Check that the plastic protective cover is on the CPU socket and none of the socket pins are bent. If they are, contact your retailer.

• When handling the processor, avoid touching or placing direct pressure on the LGA lands (gold contacts). Improper installation or socket misalignment can cause serious damage to the processor or CPU socket, which may require manufacturer repairs.

• Thermal grease is pre-applied on a new heatsink. No additional thermal grease is needed.

• Refer to the Supermicro website for updates on processor support.

• All graphics in this manual are for illustrations only. Your components may look different.

• Installing the processor does not require a screwdriver. Do not unscrew the processor socket.

• Installing the heatsink requires a Phillips #1 screwdriver.

The AMD Ryzen 7000 Series Processor
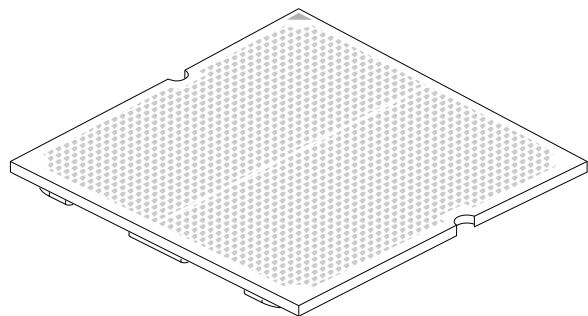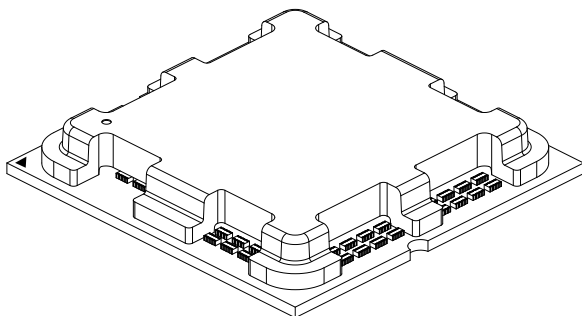
Overview of the Processor Socket

The processor socket is protected by an outer plastic protective cover.

1. Outer Plastic Cover
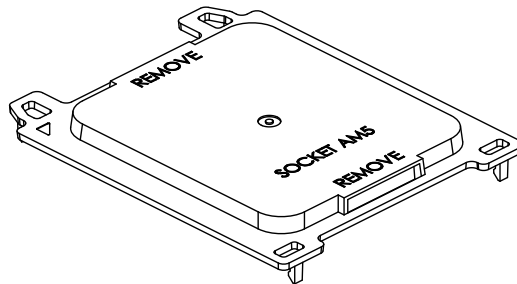
2. Socket AM5
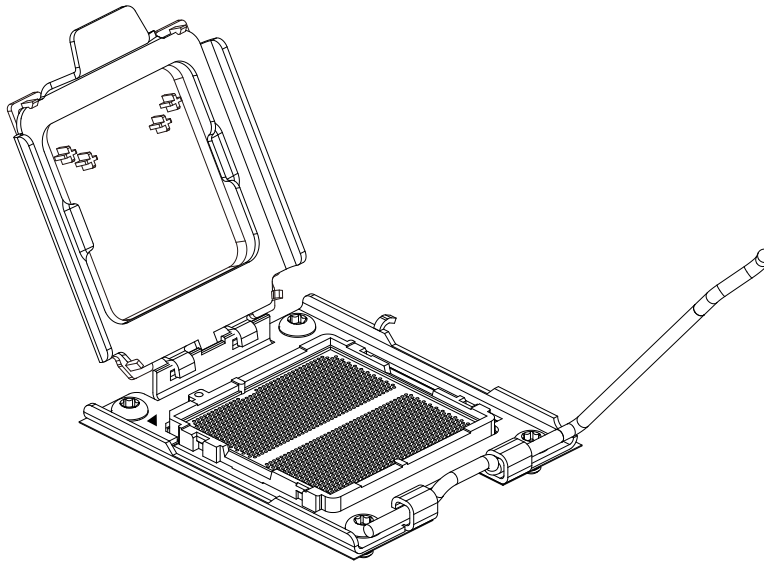
Overview of the Heatsink

The heatsink is attached to the socket with Phillips #1 screws after the processor is secured. If this is a new heatsink, thermal grease is pre-applied.
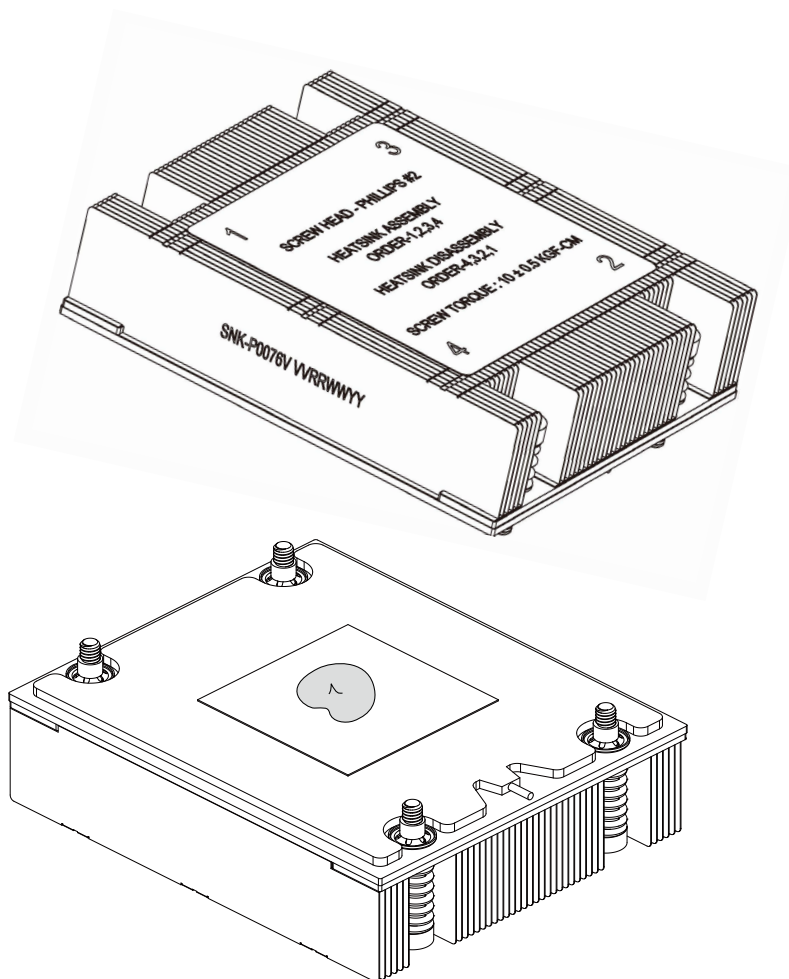
Installing the Processor

Note: Do not remove the plastic cover covering the outside of the socket. This cover will pop out during installation of the processor.

1. Use a finger to push down the lever, then move the lever rightward. Pull the lever until it passes over the processor socket.
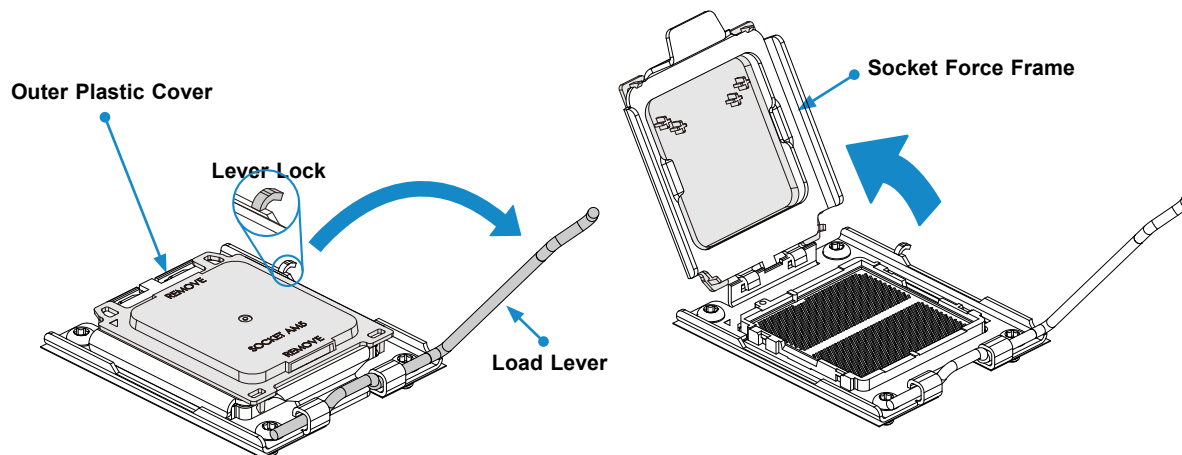
2. Pick up the processor on its left and right edges. Hold the processor over the socket and align the arrow on the top-left corner of the processor with the arrow on the top-left corner of the socket. Gently lower it onto the AM5 socket pins.
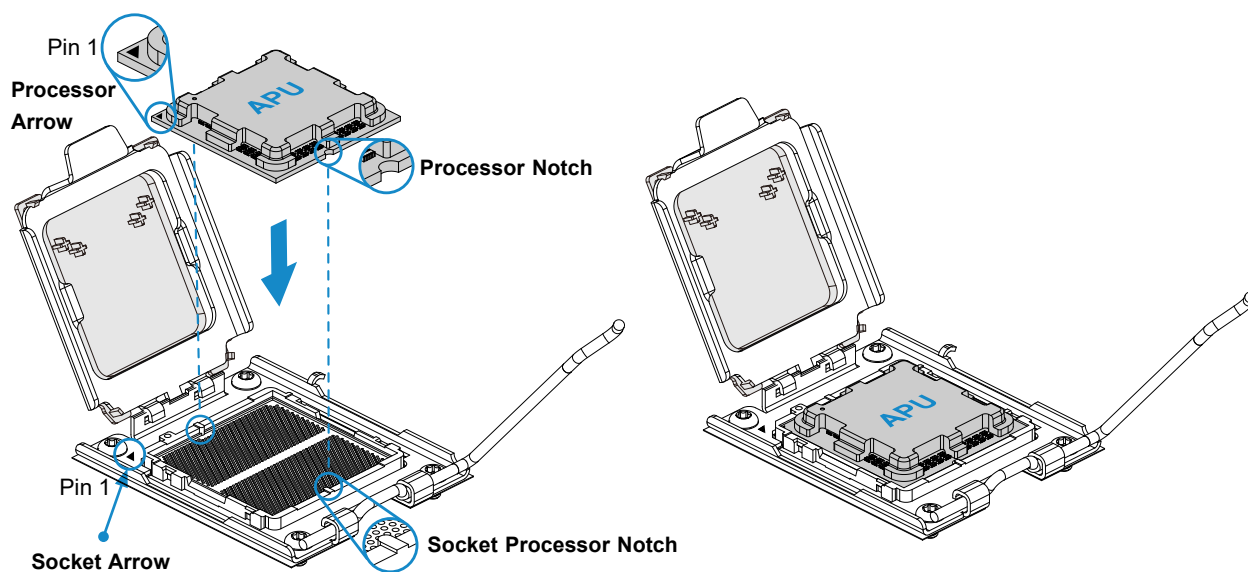
3. With the processor in the socket, lower the socket force frame.
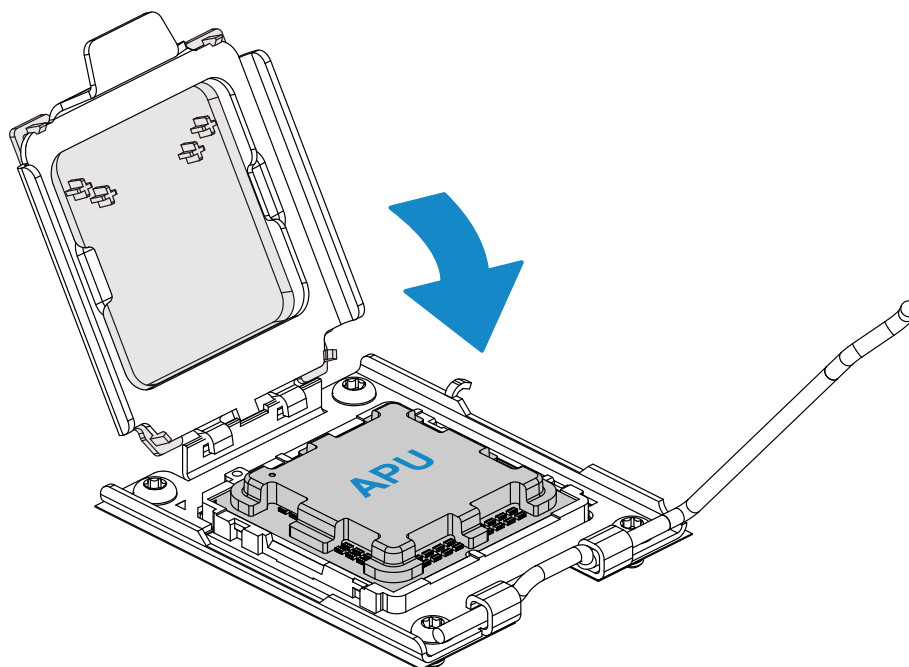
4. Reattach the lever arm onto the right side of the socket. The outer plastic cover will pop out when the lever arm is reattached.

    Note: Store the outer plastic cover. Attach the outer plastic cover to the socket force frame when storing or transporting the motherboard without a processor.
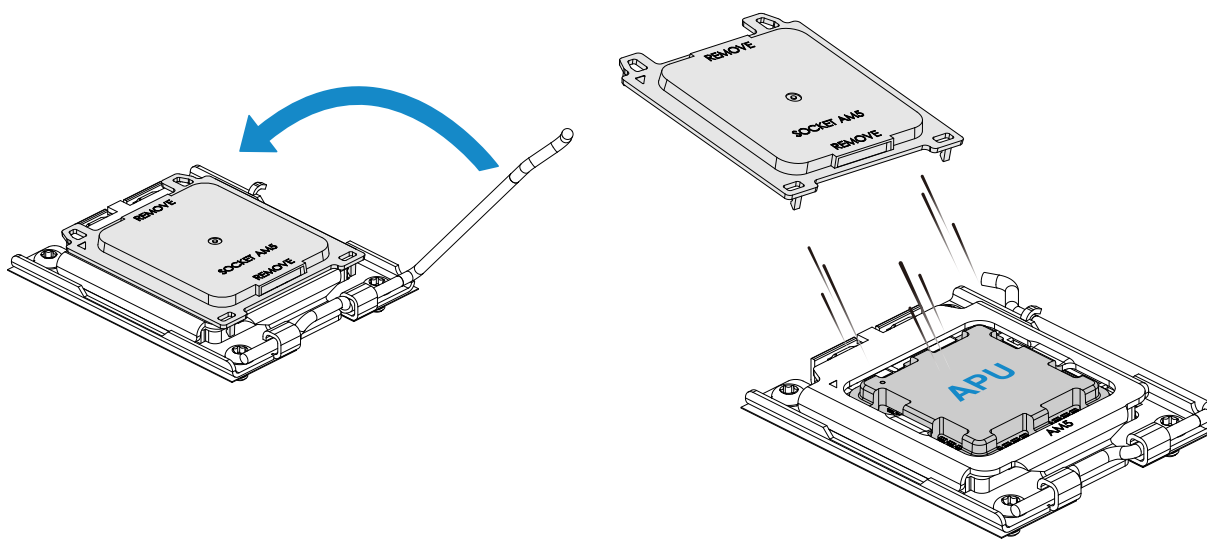
5.   When finished, the socket force frame will secure the processor.
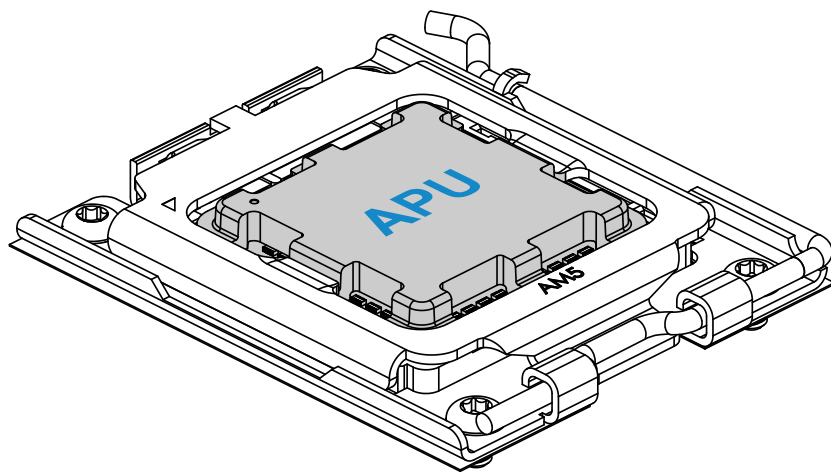
Installing the Heatsink

1. After the processor is secured, you must install the heatsink to the socket frame. Ensure a proper amount of thermal grease is applied to the heatsink. Lower the heatsink down until the four screws on the heatsink align with the four screw holes on the socket frame.

South of Heatsink

South of Socket
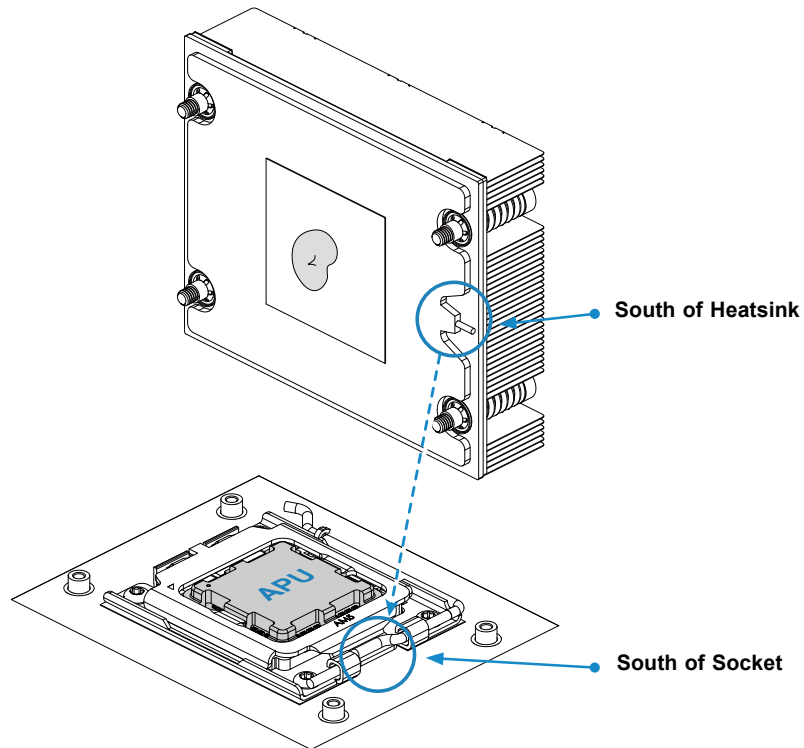
2. Using a diagonal pattern, tighten the four screws down on the heatsink in the scequence 1-2-3-4 till it is secure. The heatsink will now be secured and you have finished installing the processor and heatsink onto the motherboard. When finished, the heatsink will be secured over the socket and processor.
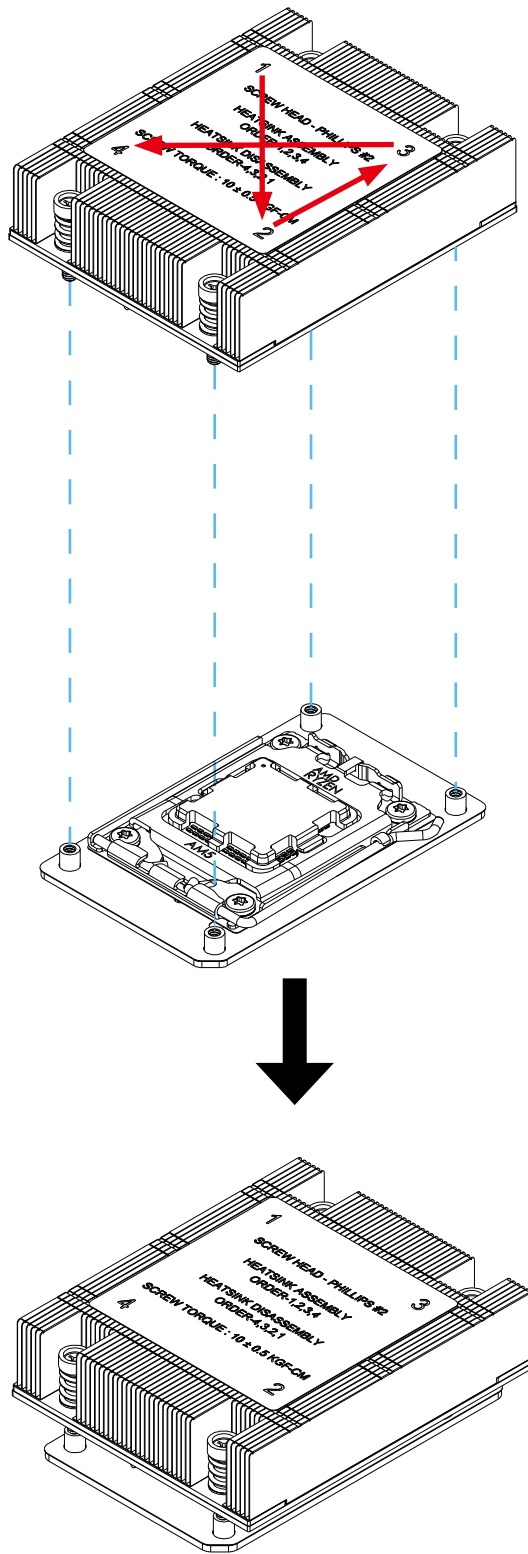
3.3 Memory

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 H13SAE-MF supports up to 128 GB of ECC/Non ECC UDIMM DDR5 5200 MT/s speed, populated in four DIMM slots. Refer to the table below for additional memory information.

Notes:

• Always use DDR5 DIMM modules of the same type, size and speed.

• DDR5 DIMM modules are NOT hot-swappable.

• Before inserting or removing the DDR5 DIMM modules, it is important that you must disconnect power for at least 20 seconds.

• Please be aware that removing a DDR5 DIMM module at a slant angle may cause damages. It is recommend that you lift the module straight up out of the slot.

Type	Channel			
	A1	**A2**	**B1**	**B2**
1 DIMM			V	
2 DIMMs	V		V	
4 DIMMs	V	V	V	V

Table title: **DIMM Population Guide**

Type	Number of DIMM Sockets per Channel	Number of DIMMs Populated	DIMM 0	DIMM 1
SMT UDIMM	1	1	SR: 5200 MT/s DR: 5200 MT/s	Not Valid
	2	1	Not Valid	SR: 5200 MT/s DR: 5200 MT/s
		2	SR: 3600 MT/s DR: 3600 MT/s	SR: 3600 MT/s DR: 3600 MT/s

Table title: **Populating DDDR5 Memory Modules with AMD Ryzen 7000 Series Processor**

DIMM Module Population Sequence

There is no specific order or sequence required when installing memory modules. However do keep the following in mind:

• The motherboard will support one, two or four modules. Note that three modules are not supported. To achieve the best memory performance, fully populate the motherboard with validated memory modules.
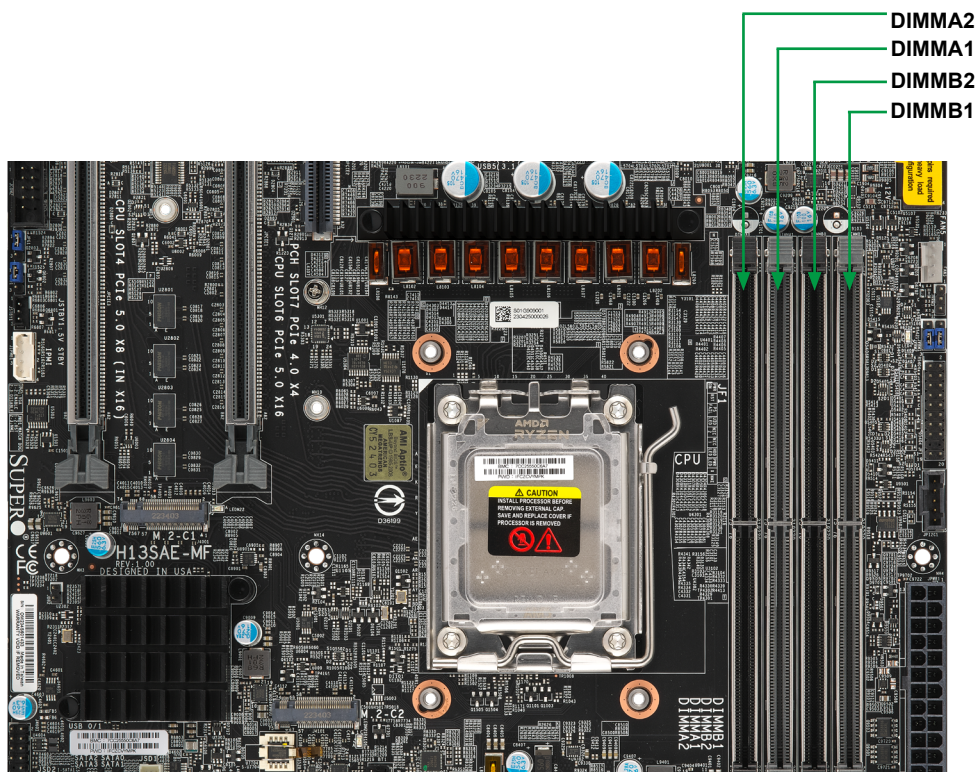
Figure 3-2. DIMM Numbering

DIMM Installation

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

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

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

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

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

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

Key

Receptive Point

Notches

Release Tabs

Push both ends straight down into the memory slot.
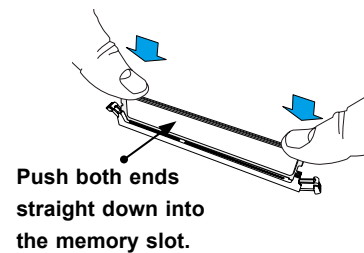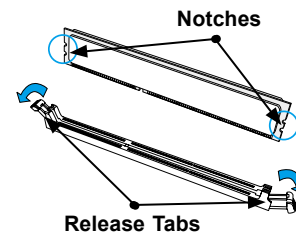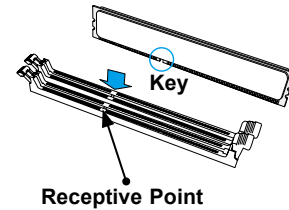
DIMM Removal

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

Warning! To avoid causing any damage to the DIMM module or the DIMM socket, do not use excessive force when pressing the release tabs on the ends of the DIMM socket. Handle DIMMs with care. Be aware and follow the ESD instructions given at the beginning of this chapter.

3.4 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

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.

LITHIUM BATTERY

BATTERY HOLDER

OR

LITHIUM BATTERY

BATTERY HOLDER
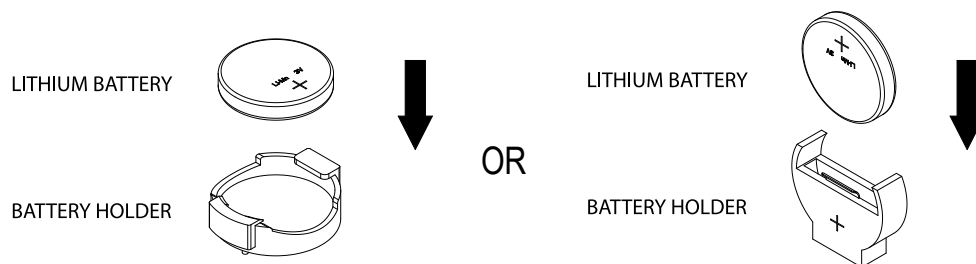
Figure 3-3. Installing the Onboard Battery

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).

3.5 Storage Drives

The system supports one fixed 3.5" or four 2.5" storage drives housed in the CSE-514-505 chassis. For the compatible storage drive, see the H13SAE-MF motherboard page. The drive is mounted in the drive carrier to simplify its installation and removal from the chassis. Installing four 2.5" drives requires the use of an optional bracket.

Note: Enterprise level hard disk drives are recommended for use in Supermicro servers. For information on recommended HDDs, visit the Supermicro website at https://www.supermicro.com/en/about/sitemap.

Installing a 3.5" Storage Drive

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

2. Remove the chassis cover.

3. For the 3.5" storage drive, secure the storage drive to the chassis floor with the four screws. (Figure 3-4)

4. Connect the drive cables to provide power and data connection.
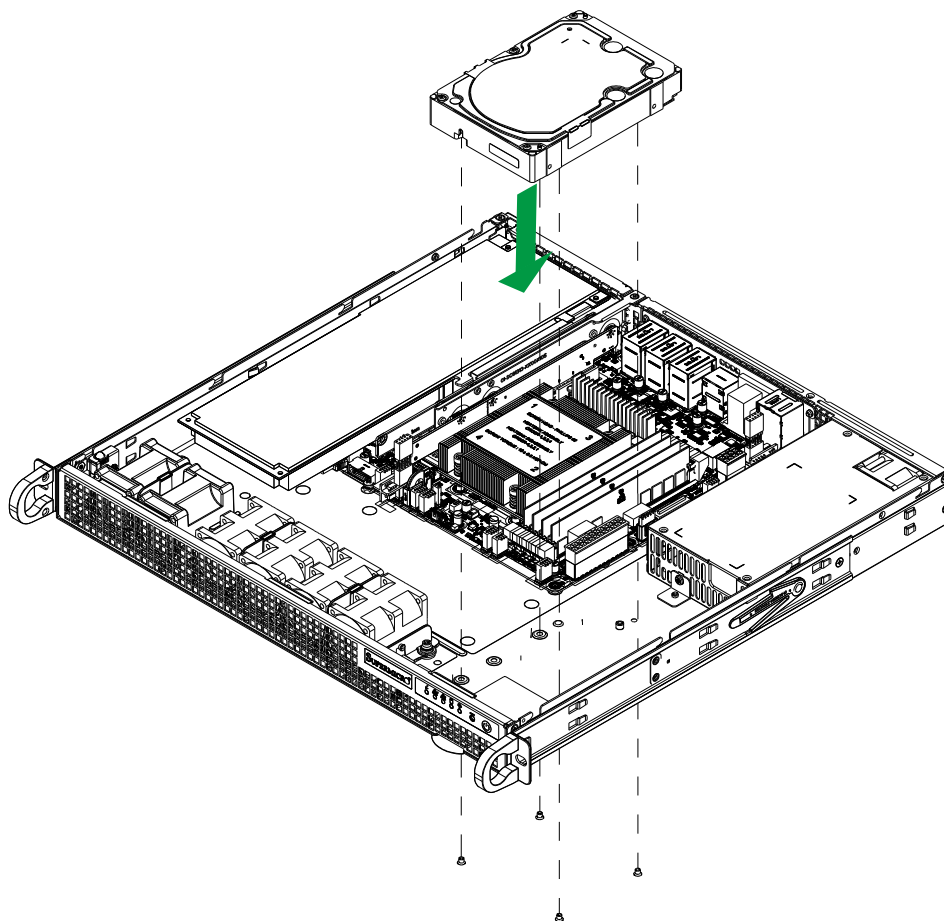
Figure 3-4. Securing the 3.5" Storage Drive to the Chassis Floor

Installing 2.5" (Optional) Storage Drives

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

2. Remove the chassis cover.

3. Obtain the optional bracket and secure the drive(s) to the bracket. (Figure 3-5)
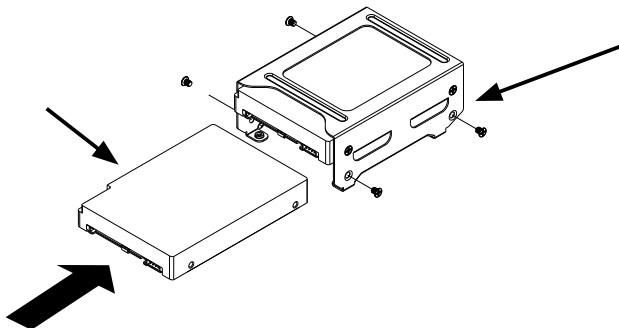
Figure 3-5. Installing 3.5" Storage Drives into the Bracket

4. Secure the bracket to the optional HDD mounting tray. (Figure 3-6)
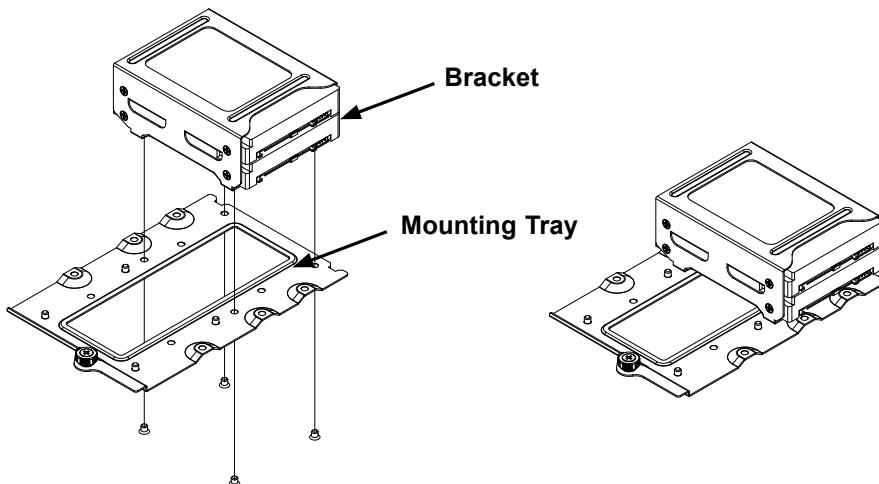
Figure 3-6. Securing the Bracket to the 2.5" Mounting Tray

5. Secure the tray to the chassis floor with one thumb screw (Figure 3-7).

6. Connect the drive cables to provide power and data connection.
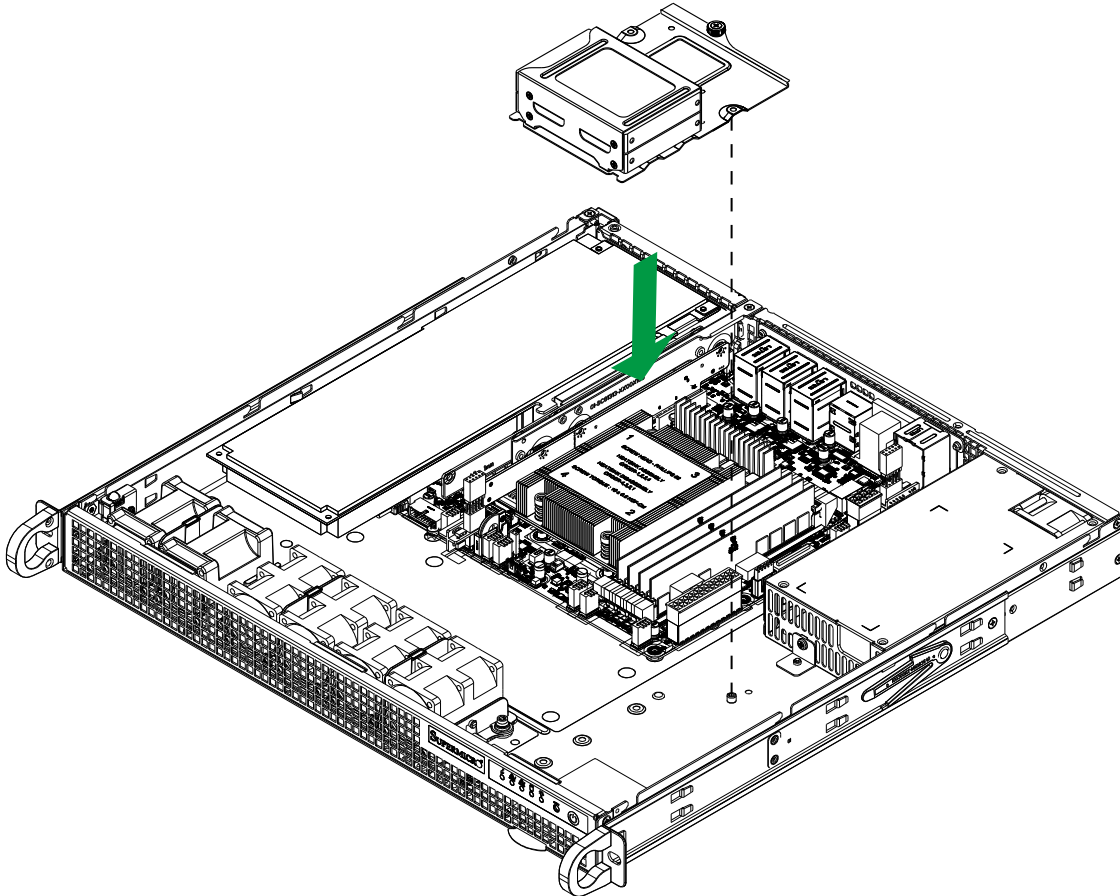
Figure 3-7. Securing the Optional 2.5" Storage Drive to the Chassis Floor

3.6 Installing Expansion Cards

The system supports two full-height, full-length PCI Express expansion cards. The expansion card is installed using a riser card (RSC-S-6G5) and a riser bracket.

Screw

1

Install Expansion Cards

3
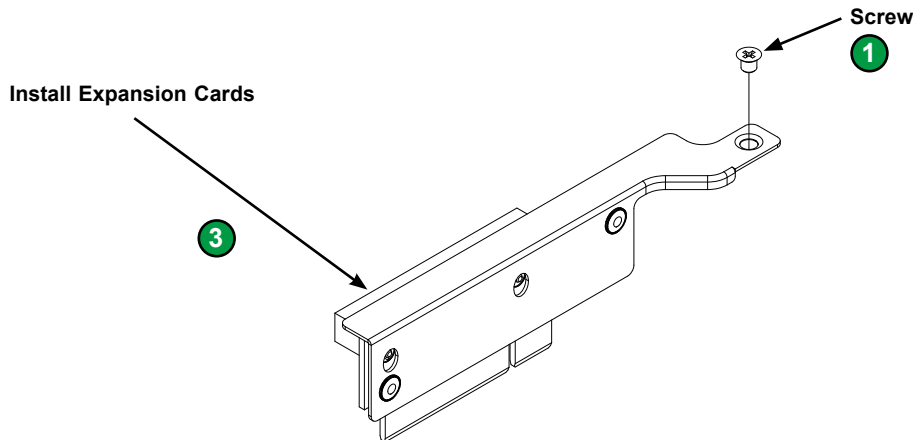
Figure 3-8. Removing the Riser Bracket

Installing Expansion Cards

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

2. Remove the chassis cover.

3. Remove the riser card bracket from the chassis by removing the screw indicated in Figure 3-8.

4. Lift the riser card bracket from the chassis.

5. Install the expansion card into the riser card slot.

6. Install the bracket into the slot on the serverboard while aligning the bracket in the rear of the chassis.
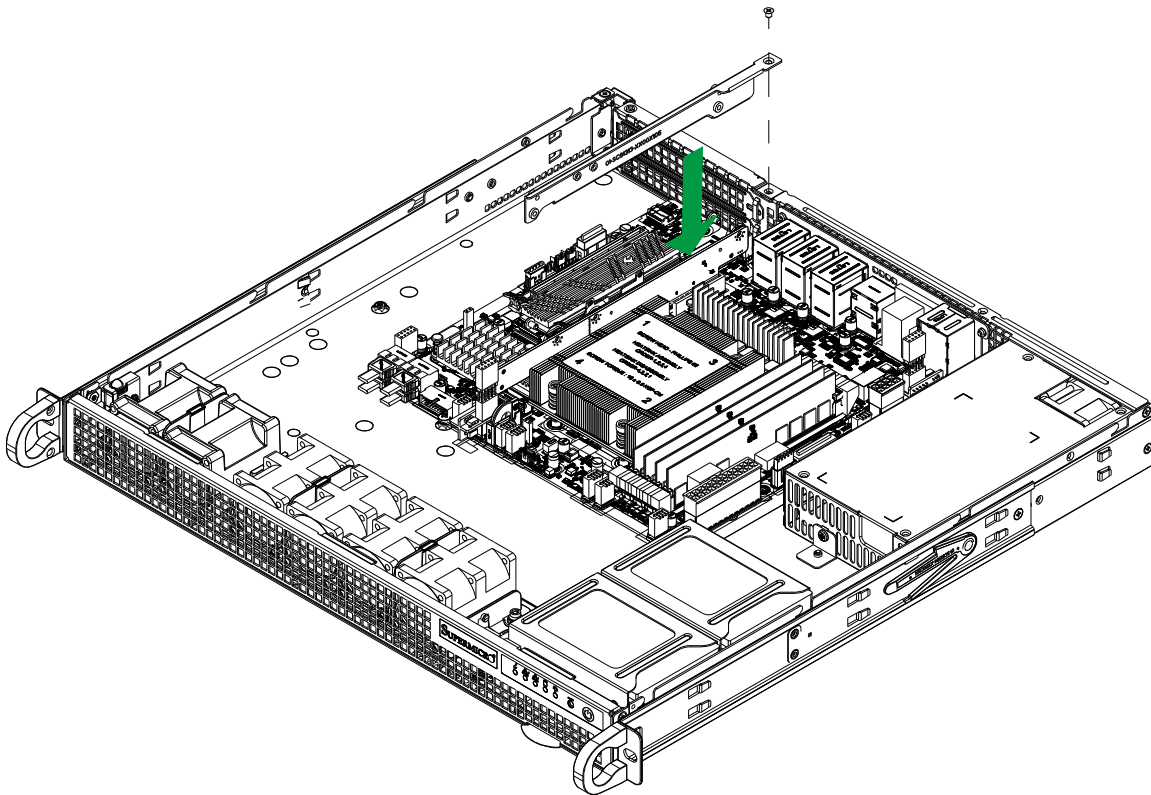
Figure 3-9. Installing the Riser Card Bracket

Note: All graphics in this manual are for illustrations only. Your components may look different.

3.7 System Cooling

The CSE-514-505 chassis includes six heavy-duty fans for system cooling.

Replacing a System Fan

1. If necessary, open the chassis cover while the power is running to determine which fan requires changing. (Do not run the server for an extended time with the chassis open.)

2. Power down the system.

3. Remove the failed fan's cable from the connector on the serverboard.

4. Lift the fan housing with the two fans attached up and out of the chassis. Remove the failed fan by gently pulling it out of the housing.

5. Place the new fan into the vacant space in the housing. Make sure that the arrows on the sides of the fan (indicating air direction) point in the same direction as the arrows on the other fans.

6. Plug the fan cable into the connector on the serverboard.

7. Place the fan housing into the chassis and secure it with the screws previously set aside.

8. Power up the system and check that the fan is working properly before replacing the top cover.

Checking the Server Airflow

- Make sure there are no objects to obstruct airflow in and out of the server.

- Make sure no cables or foreign objects obstruct airflow through the chassis. Pull all excess cabling out of the airflow path or use shorter cables.

The control panel LEDs inform you of the system heat status. See "Chapter 1: Control Panel" for details.
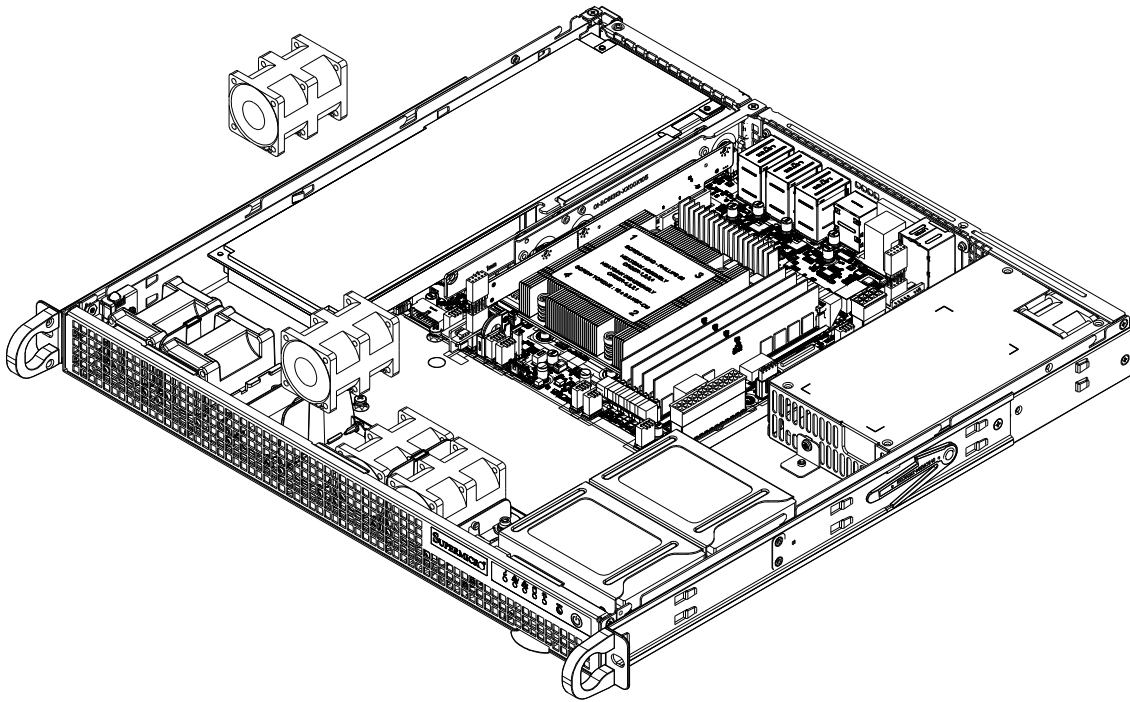
Figure 3-10. Fan Layout
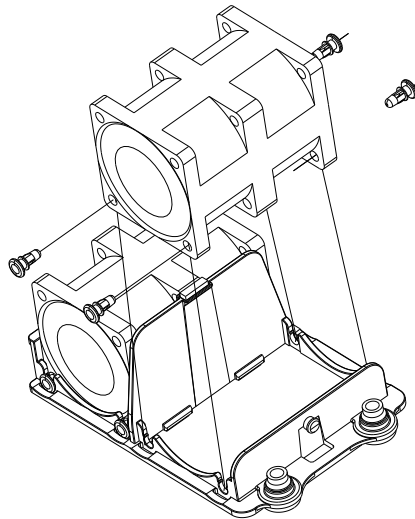
Figure 3-11. Removing a Fan from the Fan Housing

Note: All graphics in this manual are for illustrations only. Your components may look different.

Installing the Air Shroud

Air shrouds concentrate airflow to maximize fan efficiency. It does not require screws to install.

* Position the air shroud in the chassis as illustrated below. The air shroud fits over the fans and over the CPU. If necessary, move any cables that interfere with the air shroud placement. Remove perforated tabs if necessary for a good fit.
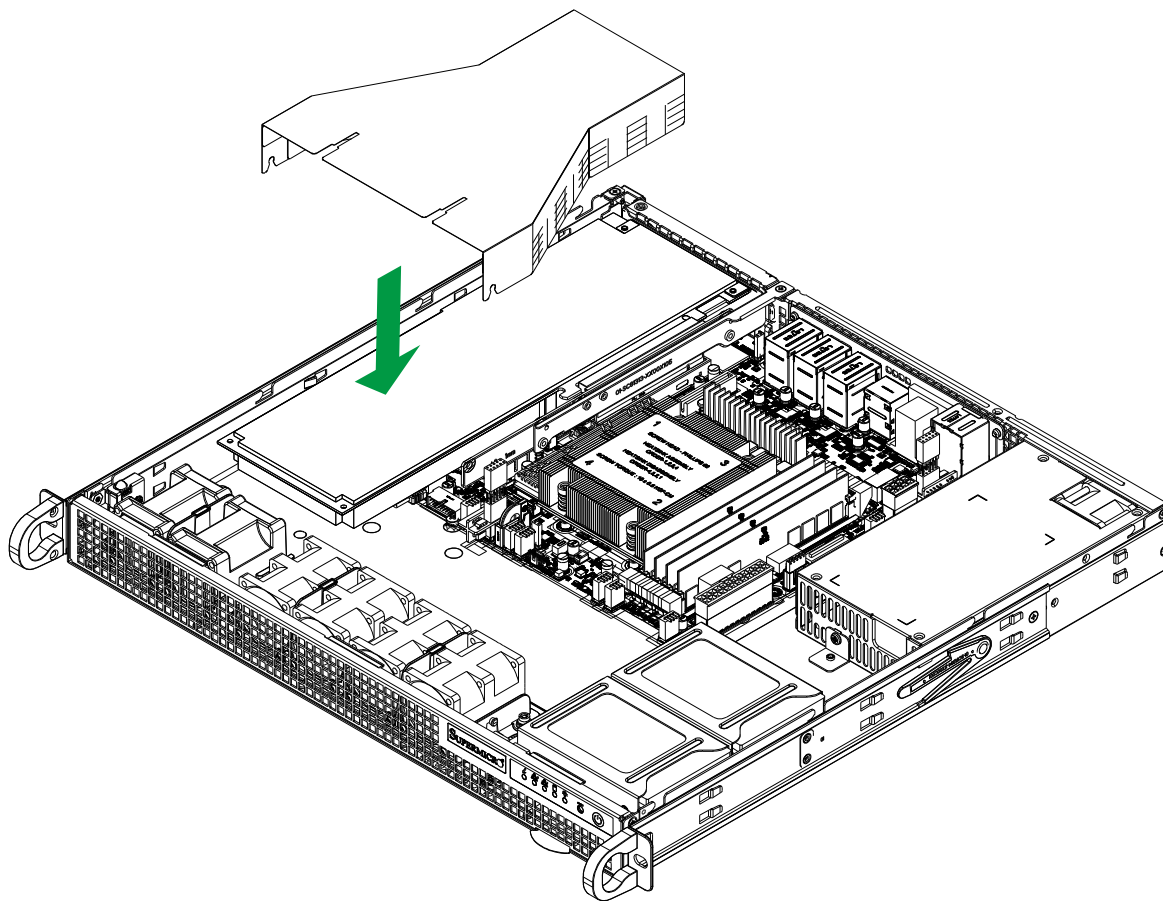
Figure 3-12. Installing the Air Shroud

3.8 Power Supply

The AS -1015A-MT has a single 500 W power supply. The power supply is auto-switching capable, which enables it to automatically sense and operate at a 100 V to 240 V input voltage. It will be necessary to shut down the system in order to change the power supply. If replacing, use the exact same model. New units can be ordered directly from Supermicro or authorized distributors.

Changing the Single Power Supply

1. Power down the system, then remove the chassis cover.

2. Remove the screws located on the end of the power supply bay and at the front of the power supply and the underside of the chassis. Set the screws aside for later use.

3. Gently slide the power supply out of the back of the chassis.

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

5. Slide the new power supply module into the power supply bay.

6. Align the holes in the power supply with the holes in the power supply bay and secure the power supply using the screws which were set aside in step 2.

7. Replace the chassis cover, plug the power cord into the rear of the power supply and power up the system.
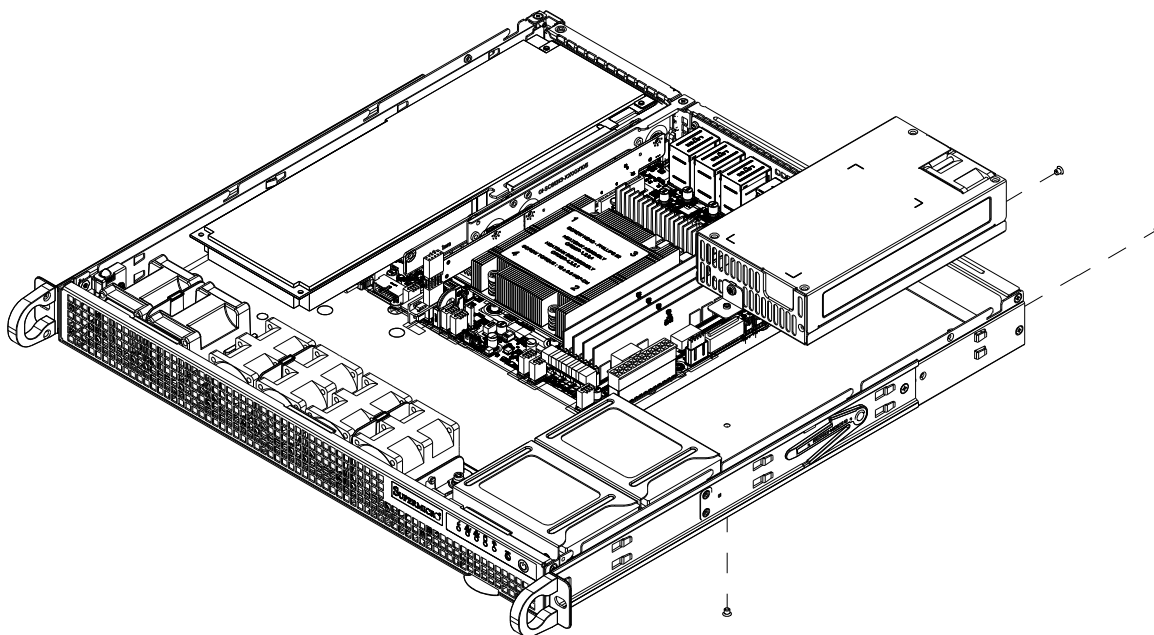
Figure 3-13. Changing the Power Supply

Chapter 4

Motherboard Connections

This section describes the connections on the motherboard and provides pinout definitions. Note that depending on how the system is configured, not all connections are required. The LEDs on the motherboard are also described here. The motherboard layout indicating component locations may be found in Chapter 1.

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

4.1 Power Connections

12V 8-pin Auxiliary Power Connector (JPW2)

JPW2 is an 8-pin ATX power input to provide auxiliary power to the processor. Refer to the table below for pin definitions.

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

Main Power Supply Connector (JPW1)

The primary power supply connector (JPW1) is an ATX power connector that the power supply plugs into directly.

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

4.2 Headers and Connectors

Audio Front Panel Header

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

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

4-pin External BMC I2C Header

A System Management Bus header for IPMI 2.0 is located at JIPMB1. Connect a cable to this header to use the IPMB I^{2}C connection on your system. Refer to the table below for pin definitions.

External I^{2}C Header Pin Definitions	
Pin#	Definition
1	Data
2	Ground
3	Clock
4	+3.3 V Stdby

TPM/Port 80 Header (JTPM1)

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	+1.8 V Stdby	10	SPI_IRQ#

PCIe M.2 Connectors (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 connectors support M-Key (PCIe x2) storage cards. M.2-C1 and M.2-C2 can support a speed of PCIe 5.0.

USB Ports (USB0~1, USB8~9)

There are a total of nine USB ports supported on the motherboard. Four are located on the front panel, and five are located on the back panel. Note that USB devices are not able to wake up from S3/S4 state.

Front Panel USB 0/1 (2.0) Pin Definitions			
Pin#	Definition	Pin#	Definition
1	+5 V	2	+5 V
3	USB_N	4	USB_N
5	USB_P	6	USB_P
7	Ground	8	Ground
9	NC	10	OC

Front Panel USB 8/9 (3.0) Pin Definitions			
Pin#	Definition	Pin#	Definition
1	+5 V		
2	USB3_RN	19	+5 V
3	USB3_RN	18	USB_SSRXN
4	GND	17	USB_SSRXP
5	USB3_TN	16	GND
6	USB3_TP	15	USB_SSTXN
7	GND	14	USB_SSTXP
8	USB_N	13	GND
9	USB_P	12	USB_D-
10	GND	11	USB_D+

Onboard Battery (BT1)

The onboard back up battery is located at BT1. 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.

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 has been opened.

Chassis Intrusion Pin Definitions	
Pin#	**Definition**
1	Intrusion input
2	Ground

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.
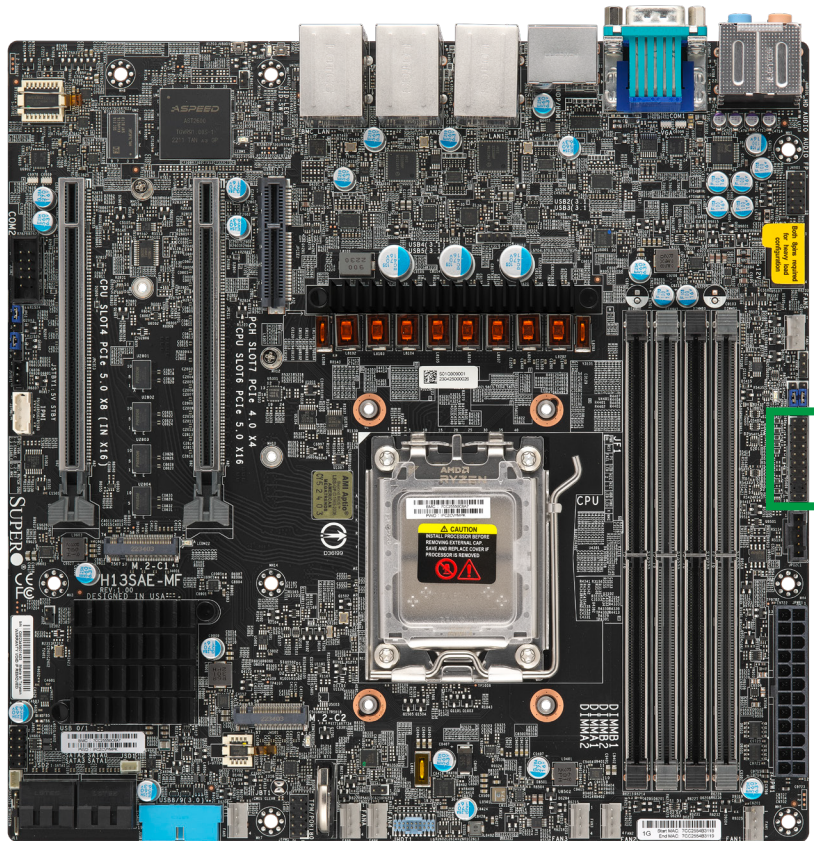
	1	2	
Power Switch	○	○	Ground
Reset Switch	○	○	Ground
Power Fail LED+	○	○	Power Fail LED-
UID LED+	○	○	UID LED-
NIC2 Link LED+	○	○	NIC2 Link LED-
NIC1 Link LED+	○	○	NIC1 Link LED-
HDD LED+/UID Switch+	○	○	HDD LED-
PWR LED+	○	○	PWR_LED-
Key, no pin	○	○	Key, no pin
NMI Switch	○	○	Ground

Figure 4-1. JF1 Pin Definitions

Front Control Panel Pin Definitions

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	PWR_LED+
16	PWR_LED

Storage Drive LED

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

Storage Drive LED Pin Definitions (JF1)	
Pin#	**Definition**
13	Drive LED+/UID Switch+
14	Drive_LED-

NIC1/NIC2 LED Indicators

The NIC (Network Interface Controller) LED connections for LAN ports 1 and 2 are located on pins 11 and 12 and 9 and 10 of JF1, respectively. See the table below for pin definitions.

NIC1/2 LED Pin Definitions (JF1)	
Pin#	**Definition**
9	NIC2 Link LED+
10	NIC2 Link LED-
11	NIC1 Link LED+
12	NIC1 Link LED-

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

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	Power Fail LED+
6	Power Fail LED-

COM Header

There are two COM headers on the motherboard. COM1 is located next to the VGA port and COM2 is located next to the JPG1 jumper. (PCI 33MHz). Refer to the table below for pin definitions.

COM Header Pin Definitions			
Pin#	Definition	Pin#	Definition
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI
5	Ground	10	N/A

Reset Button

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

Power Button

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

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

FAN Headers

There are two system fan headers (FANA~FANB) and six CPU fan headers (FAN1~FAN5) on this 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.

System Fan Headers Pin Definitions	
Pin#	Definition
1	Ground
2	+12 V (Red)
3	Tachometer
4	PWM Control

Standby Power Header

The Standby Power header is located at JSTBY1 on the motherboard.

Standby Power Pin Definitions	
Pin#	Definition
1	+5 V Standby
2	Ground
3	Wake-up

4.3 Input/Output Ports

Rear I/O Ports

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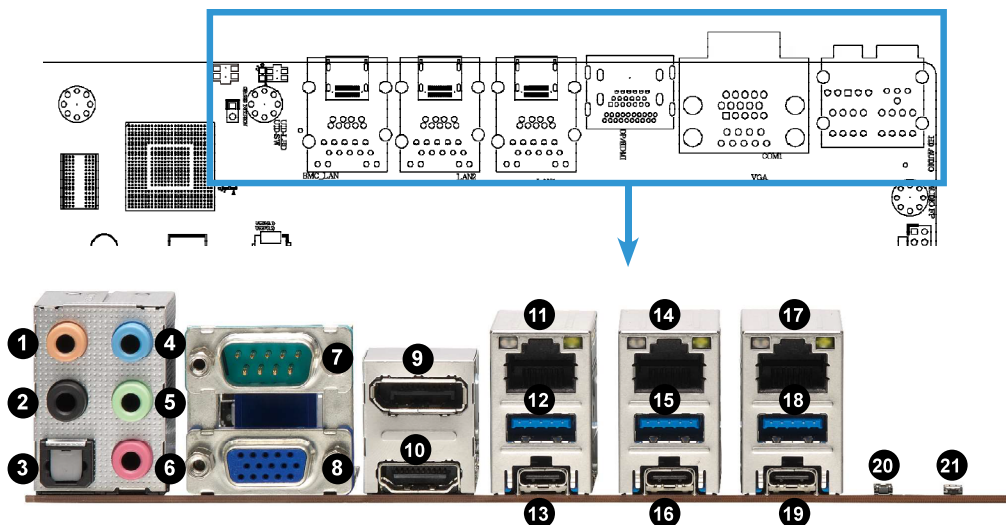
Figure 4-2. I/O Port Locations and Definitions

Rear I/O Ports			
#	Description	#	Description
1	Center/LFE Out	12	USB 3.2 Gen2 Type A (10 GbE)
2	Surround Out	13	USB 3.2 Gen2 Alt Mode*
3	S/PDIF Out	14	1 GbE RJ45 Port
4	Line In	15	USB 3.2 Gen2 Type A (10 GbE)
5	Line Out	16	USB 3.2 Gen2 Alt Mode*
6	Mic In	17	Dedicated IPMI LAN Port (1 GbE)
7	COM Port	18	USB 3.2 Gen2 Type A (10 GbE)
8	VGA Port	19	USB 3.2 Gen2x2 (20 GbE)
9	DisplayPort 1.4a	20	UID Switch
10	HDMI 2.0 Port	21	JUBUD1
11	1 GbE RJ45 Port		

*Video out only supports one output at the same time, and it must use Type C to DP (standard) cable.

1~2. Center/LFE Out and Surround Out

This motherboard features a 7.1+2 Channel High Definition Audio (HOA) codec that provides 10 DAC channels. The HD Audio connections simultaneously supports multiple-streaming 7.1 sound playback with two channels of independent stereo output through the front panel stereo out for front, rear, center and subwoofer speakers. To enable this function, download the advanced software for this motherboard.

CEN/LFE is the audio output for the center channel and low frequency channel.

3. S/PDIF Out

This is a fibre optic audio output for a TOSLINK connector and cable.

4. Line In

This type of connector attaches audio devices.

5. Line Out

This is a headphone jack.

6. Mic Port

This is a microphone jack.

7. COM Port

One serial communication (COM) port is included on the rear I/O panel.

8. VGA Port

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

9. DisplayPort 1.4a

A Display Port on the rear I/O panel delivers digital display at a fast refresh rate. It can connect to virtually any display device using a DisplayPort adapter for devices, such as VGA, DVI, and HDMI 2.0. Note that 8K resolution is not supported.

10. HDMI 2.0 Port

There is one HDMI 2.0 port on the rear I/O panel. Note that 8K resolution is not supported.

11 & 14. 1 Gbe RJ45 Ports

There are two 1 Gbe RJ45 ports on the rear I/O panel.

Note: Location 11 supports shared IPMI LAN port, location 14 does not support shared IPMI LAN port.

12~13, 15~16, 18~19 Universal Serial Bus (USB) Ports

There are two USB 3.2 Gen2 Alt Mode ports, three USB 3.2 Gen2 Type A ports, and one USB 3.2 Gen2 x2 port on the rear I/O panel.

17. Dedicated IPMI LAN Port

One dedicated IPMI LAN port is located on the rear I/O panel. This port accepts an RJ45 type cable.

20. UID Switch and UID LED

A Unit Identifier (UID SW) switch and UID LED (LED1) are located on the 1/0 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. See Front Control Panel for the front panel UID LED header location on JF1.

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

21. JUBUD1 Button

A JUBUD1 button on the rear I/O panel allows BIOS recovery.
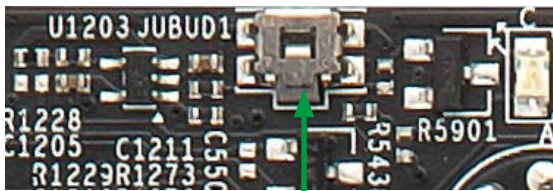
JUBUD1

4.4 Jumpers

How Jumpers Work

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

Note: On two-pin jumpers, "Closed" means the jumper is on and "Open" means the jumper is off the pins.
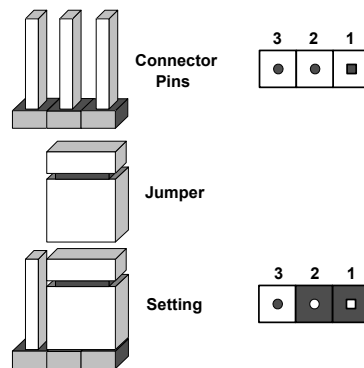
CMOS Clear (JBT1)

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

To Clear CMOS

1. First power down the system and unplug the power cord(s).

2. Remove the cover of the chassis to access the motherboard and remove the battery from the motherboard.

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

4. Remove the screwdriver (or shorting device).

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

Note: Clearing CMOS will also clear all passwords.

Do not use the PW_ON connector to clear CMOS.

JBT1 contact pads

VGA Enable/Disable (JPG1)

JPG1 allows you to enable or disable the VGA port using the onboard graphics controller. The default setting is Enabled.

VGA Enable/Disable Pin Definitions	
Pin#	Definition
1-2	Enabled
2-3	Disabled

Watch Dog

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

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

Watch Dog Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Reset (Default)
Pins 2-3	NMI
Open	Disables

Unit Identifier Switch

A Unit Identifier (UID) switch and an LED Indicator are located on the motherboard. The UID switch is located at JUIDB1, which is next to the VGA port on the back panel. The UID LED is located next to the UID switch. When you press the UID switch, the UID LED will be turned on. Press the UID switch again to turn off the LED indicator. The UID Indicator provides easy identification of a system unit that may be in need of service.

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

UID Switch Pin Definitions	
Pin#	Definition
1	GND
2	GND
3	Button In
4	Button In

4.5 LED Indicators

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 amber, green, 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 GbE/s
Green	100 Mb/s
Off	10 Mb/s

Activity LED

Link LED

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

UID LED Indicator (LED1)

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

UID LED Indicator		
Color	**State**	**Definition**
None	Off	UID Off
Blue	Solid On	Unit Identified by Local Site
Blue	Slow Blinking	Unit Identified by Remote Site

BMC Heartbeat LED (LEDM1)

A BMC Heartbeat LED is located at LEDM1 on the motherboard. When LEDM1 is blinking, the BMC is functioning normally. See the table below for more information.

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

RJ45 LEDs

The LED on the right indicates connection and activity, while the LED on the left indicates the speed of connection. The Link LED may amber, green, 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 GbE/s
Green	100 Mb/s
Off	10 Mb/s

Activity LED

Link LED

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

M.2-C1 and M.2-C2

Two M.2 indicators blink green when M.2 devices are functioning normally.

M.2-C1 and M.2-C2	
LED Color	**Definition**
Blinking Green	Device working

Chapter 5

Software

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

5.1 Microsoft Windows OS Installation

If you will be using RAID, you must configure RAID settings before installing the Windows OS and the RAID driver. Refer to the RAID Configuration User Guides posted on our website at www.supermicro.com/support/manuals.

Installing the OS

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

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

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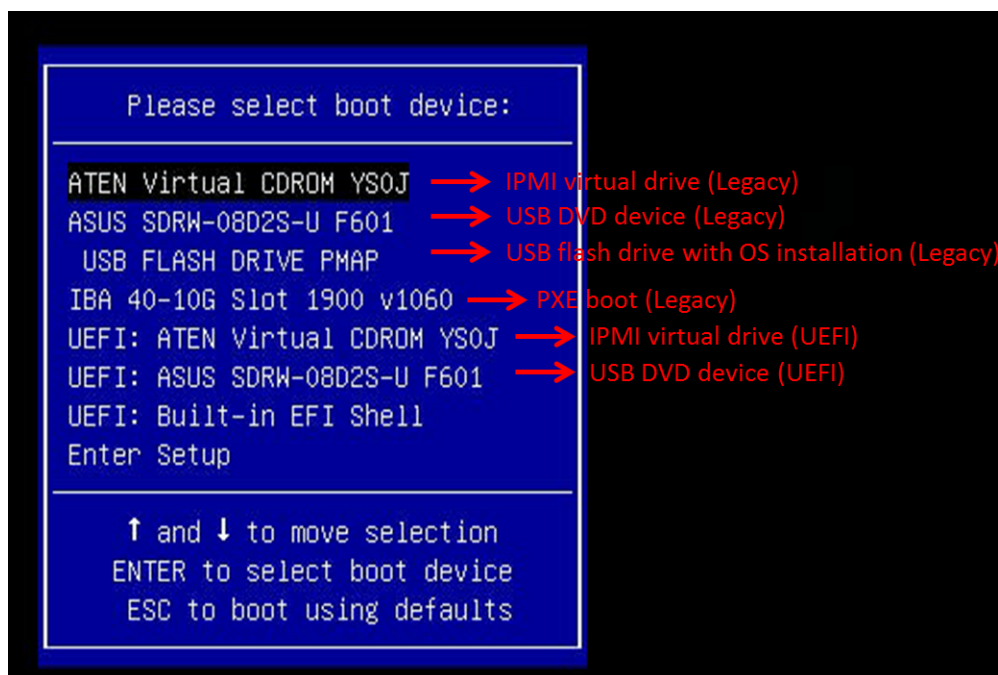
Figure 5-1. Select Boot Device

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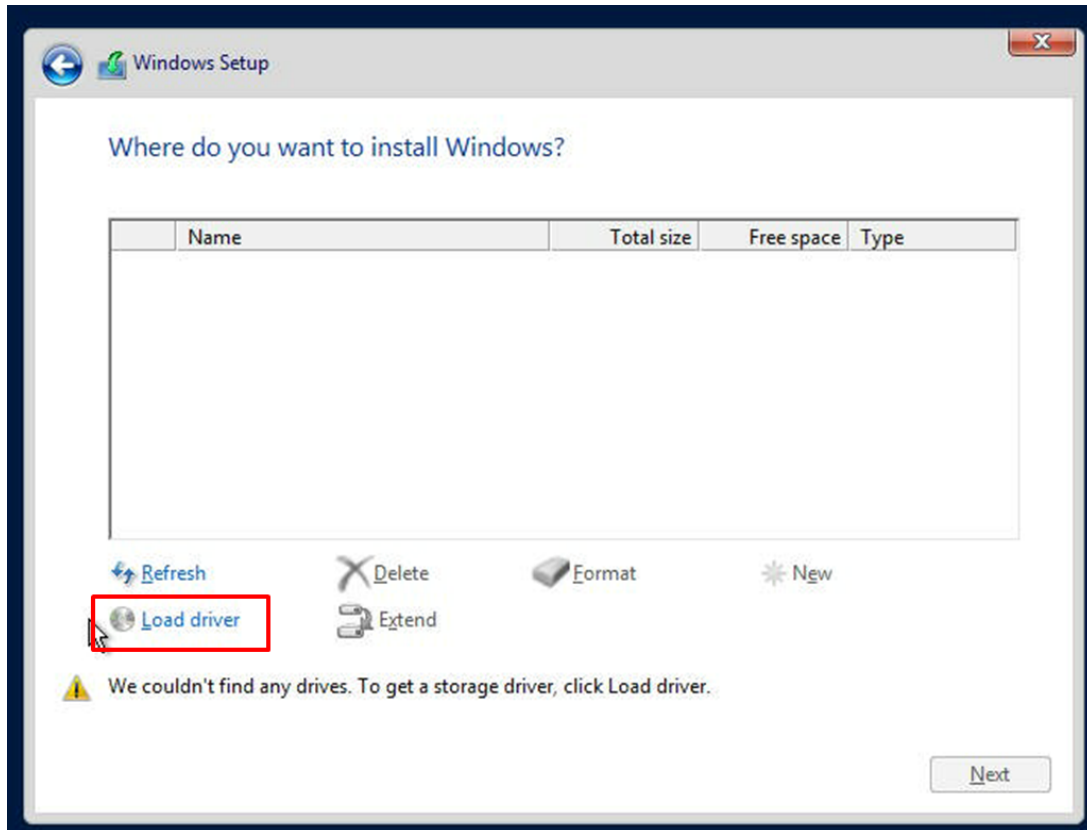
Figure 5-2. Load Driver Link

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

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

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

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

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

5.2 Driver Installation

The Supermicro website contains drivers and utilities for your system at https://www.supermicro.com/wdl/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 drive or media drive. (You may also use a utility to extract the ISO file if preferred.)

Another option is to go to the Supermicro website at http://www.supermicro.com/products/. Find the product page for your motherboard, and "Download the Latest Drivers and Utilities".

Insert the flash drive or disk, and the screenshot shown below should appear.
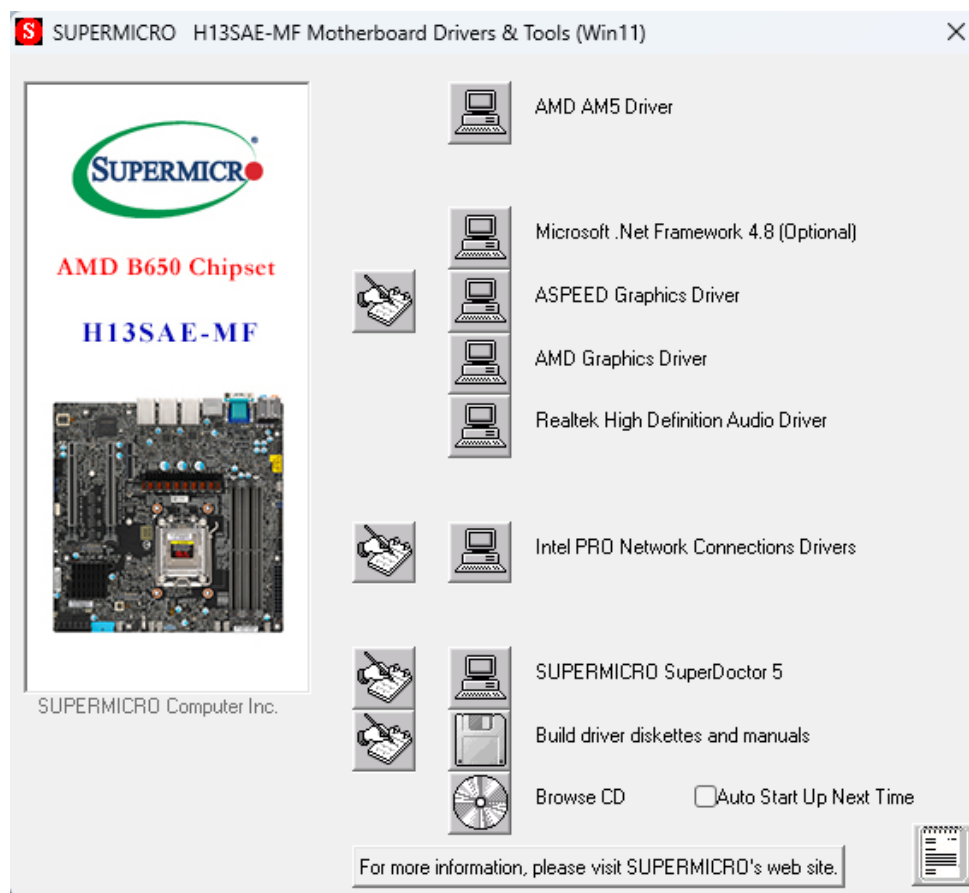
Figure 5-3. Driver and Tool Installation Screen

Note: Click the icons showing handwriting 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 reboot the system before moving on to the next item on the list.** The bottom icon with a CD on it allows you to view the entire contents.

5.3 SuperDoctor® 5

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

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

SuperDoctor® Manual and Resources
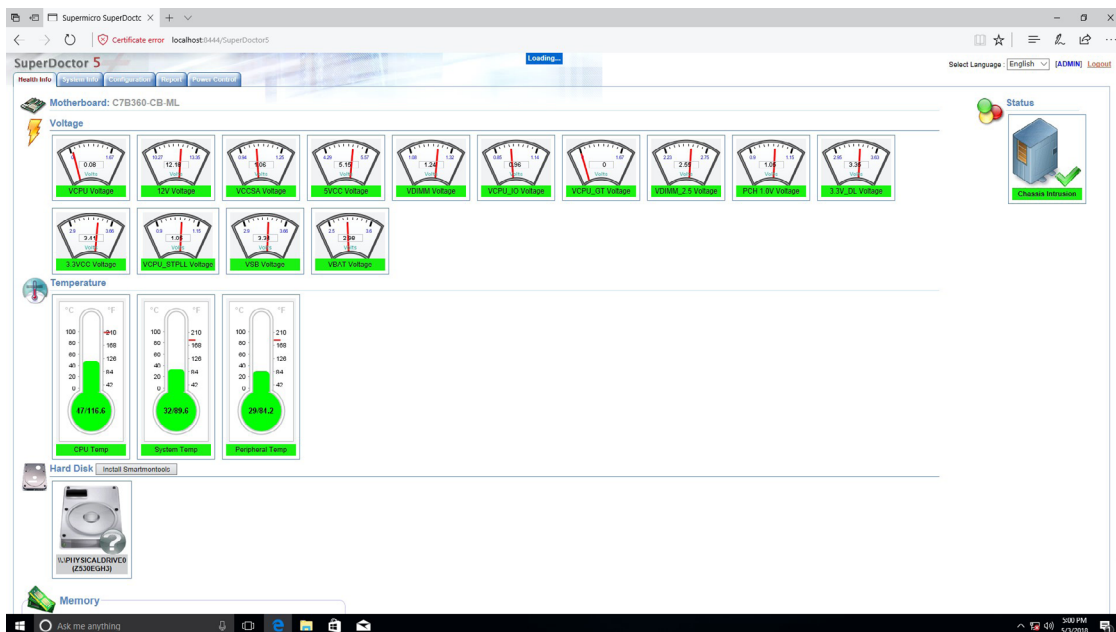
Figure 5-4. SuperDoctor 5 Interface Display Screen (Health Information)

5.4 IPMI

The H13SAE-MF supports the Intelligent Platform Management Interface (IPMI). IPMI is used to provide remote access, monitoring and management. There are several BIOS settings that are related to IPMI.

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

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

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

Chapter 6

Optional Components

This chapter describes alternate configurations and optional system components.

Optional Parts List		
Description	**Part Number**	**Quantity**
TPM Header	AOM-TPM-9670V	1
3.5" fixed drive tray	MCP-220-51402-0N	1
Dual 2.5" drive bracket	MCP-220-51401-0N	2

6.1 Storage Protocols Supported

The storage drive bays can support up to four 2.5" HDD/SSD storage devices. Once the supporting hardware is installed for a selection of bays, drives of any storage protocol type can be inserted.

6.2 TPM Header

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

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

Details and installation procedures are at:

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

- AOM-TPM-9670V

- AOM-TPM-9670H

Chapter 7

Troubleshooting and Support

7.1 Information Resources

Website

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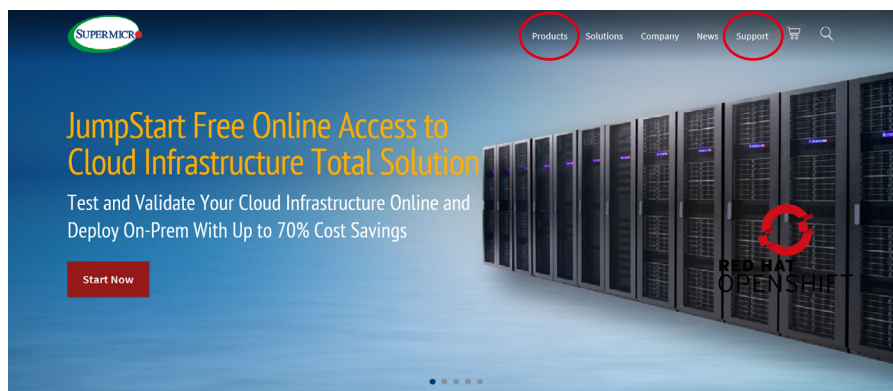
Figure 7-1. Supermicro Website

- 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 -1015A-MT System

AS -1015A-MT specifications page

H13SAE-MF 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

Direct Links (continued)

SuperDoctor5 Large Deployment Guide

For validated memory, see our Product Resources page

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

Security Center for recent security notices

Supermicro Phone and Addresses

7.2 Baseboard Management Controller (BMC)

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

For general documentation and information on BMC, please visit our website at: https://www.supermicro.com/en/solutions/management-software/bmc-resources.
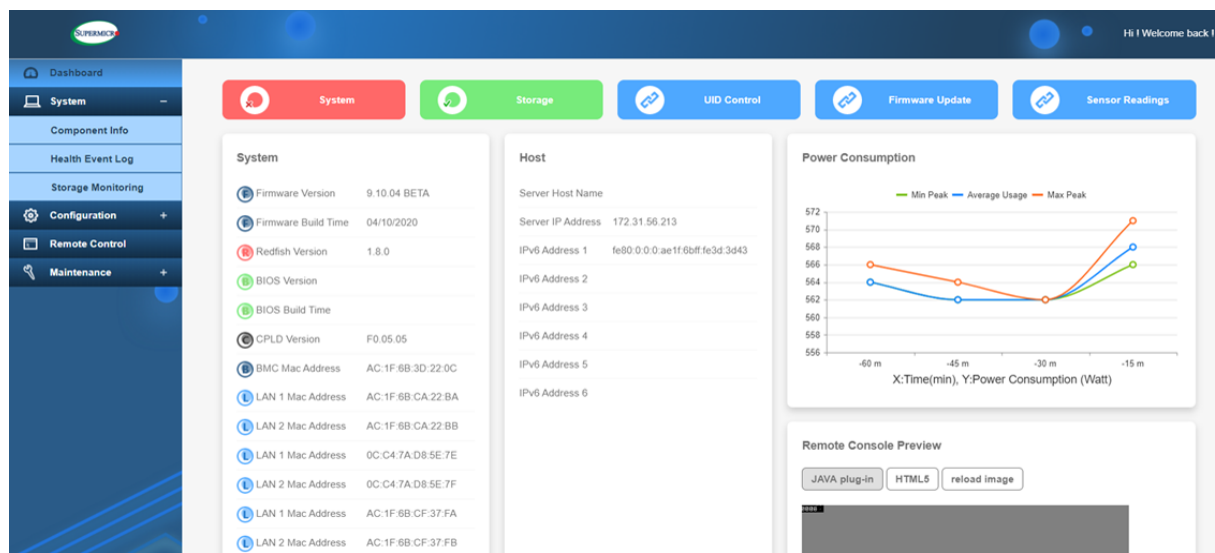
Figure 7-2. BMC Sample

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

Before Power On

1. Check that the BMC Heartbeat (LEDM1) is blinking before the motherboard is turned on.

2. Check that the Onboard Power OK (LED4) on the motherboard is on.

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

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

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

6. Remove all add-on cards.

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

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

No Power

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

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

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

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

No Video

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

2. Check if you followed the guidelines to install the memory module (see Section 3.4).

3. Reseat the memory DIMM module.

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

System Boot Failure

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

1. Clear the CMOS settings by unplugging the power cord and contacting both pads on the CMOS Clear Jumper (JBT1). Refer to Section 7.6.

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

3. Turn on the system with only one DIMM module installed. If the system boots, check for bad DIMM modules or slots by following the Memory Errors Troubleshooting procedure in this chapter.

Memory Errors

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

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

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

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

Losing the System Setup Configuration

1. Make sure that you are using a high quality power supply. A poor quality power supply may cause the system to lose the CMOS setup information. Refer to Section 7.3 for details on power supplies.

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

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

When the System Becomes Unstable

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

1. CPU/BIOS support: Make sure that your CPU is supported and that you have the latest BIOS installed in your system.

2. Memory support: Make sure that the memory modules are supported by testing the modules using memtest86 or a similar utility.

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

3. Storage drive support: Make sure that all storage drives work properly. Replace the bad storage drives with good ones.

4. System cooling: Check the system cooling to make sure that all heatsink fans and CPU/system fans, etc., work properly. Check the hardware monitoring settings in the IPMI to make sure that the CPU and system temperatures are within the normal range. Also check the front panel Overheat LED and make sure that it is not on.

5. Adequate power supply: Make sure that the power supply provides adequate power to the system. Make sure that all power connectors are connected. Please refer to our website for more information on the minimum power requirements.

6. Proper software support: Make sure that the correct drivers are used.

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

1. Source of installation: Make sure that the devices used for installation are working properly, including boot devices such as USB flash or media drives.

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

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

4. Identifying bad components by isolating them: If necessary, remove a component in question from the chassis, and test it in isolation to make sure that it works properly. Replace a bad component with a good one.

5. Check and change one component at a time instead of changing several items at the same time. This will help isolate and identify the problem.

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

When BIOS Firmware Update Fails

If the BIOS firmware fails to be updated or accidental disconnection causes firmware update fail, follow these steps to update BIOS firmware:

1. Locate these two files in the BIOS package and save them in a USB 2.0 flash drive: BIOSUBU.BIN and the BIOS image file, e.g., "BIOS_H13SAE-1C97_20230329_1.0_STDsp.bin."

2. Rename the BIOS image file (e.g., "BIOS_H13SAE-1C97_20230329_1.0_STDsp.bin.") as "PSPBIOS.IMG.

3. While the system is in shutdown state, insert the flash drive to the designated USB port, hold down the Update button on the motherboard and press the Power button on the system.

BIOS Update Button

The Designated USB Port
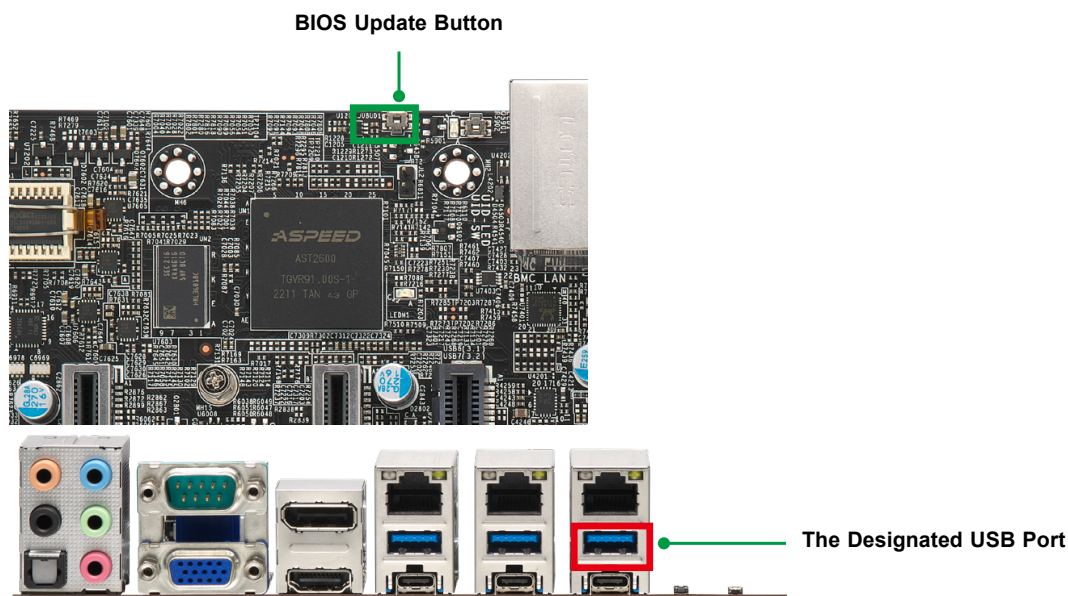
4. Wait about ten minutes for the update to complete. When the update is complete, the system will automatically restart.

7.4 Technical Support Procedures

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

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

2. BIOS upgrades can be downloaded from our website.

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

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

 - Motherboard model and PCB revision number

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

 - System configuration

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

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

7.5 Frequently Asked Questions

Question: What type of memory does my motherboard support?

Answer: The H13SAE-MF motherboard supports up to 128 GB of ECC DDR5 4800 MT/s speed, RDIMM/LRDIMM/3DS in four slots. See Section 3.5 for details on installing memory.

Question: How do I update my BIOS?

Answer: It is recommended that you do not upgrade your BIOS if you are not experiencing any problems with your system. Updated BIOS files are located on our website at http://www.supermicro.com.

To update your BIOS:

1. Please check the BIOS warning message and the information on how to update your BIOS on our website.

2. Select your motherboard model and check the current BIOS revision to make sure it is newer than your motherboard's installed BIOS before downloading.

3. Download the zip file and save the BIOS package to your computer.

4. Unzip the BIOS files onto a USB stick with FAT/FAT32 file system.

5. Boot to the motherboard's built-in UEFI Shell and type the following to start the BIOS update process:

    FLASH.nsh BIOSname#.### <ENTER>

    Note: Supermicro no longer supports the BIOS update method in DOS.

6. Perform an A/C power cycle after the message indicating the BIOS update has completed. You may refer to the "Readme" file in BIOS package for more details.

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

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

7.6 Returning Merchandise for Service

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service will be rendered. You can obtain service by calling your vendor for a Returned Merchandise Authorization (RMA) number. When returning to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton and mailed prepaid or hand-carried. Shipping and handling charges will be applied for all orders that must be mailed when service is complete.

For faster service, RMA authorizations may be requested online (http://www.supermicro.com/support/rma/).

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

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

7.7 Battery Removal and Installation

Battery Removal

To remove the onboard battery, follow the steps below:

1. Power off your system and unplug your power cable.

2. Locate the onboard battery (see Figure 7-1).

3. Using a tool such as a pen or a small screwdriver, push the battery lock outwards to unlock it. Once unlocked, the battery will pop out from the holder.

4. Remove the battery

Proper Battery Disposal

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

Battery Installation

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

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

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

   Important: When replacing a battery, be sure to only replace it with the same type.
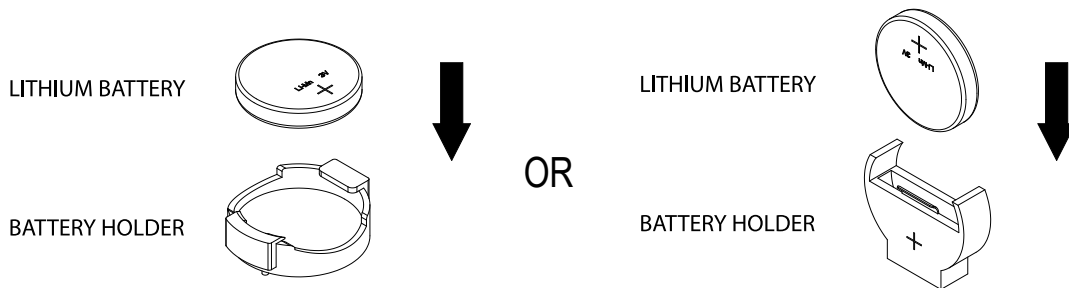
Figure 7-1. Battery Installation

7.8 Contacting Supermicro

Headquarters

Address:	Super Micro Computer, Inc.
	980 Rock Ave.
	San Jose, CA 95131 U.S.A.
Tel:	+1 (408) 503-8000
Fax:	+1 (408) 503-8008
Email:	marketing@supermicro.com (General Information)
	Sales-USA@supermicro.com (Sales Inquiries)
	Government_Sales-USA@supermicro.com (Gov. Sales Inquiries)
	support@supermicro.com (Technical Support)
	RMA@supermicro.com (RMA Support)
	Webmaster@supermicro.com (Webmaster)
Website:	www.supermicro.com

Europe

Address:	Super Micro Computer B.V.
	Het Sterrenbeeld 28, 5215 ML
	's-Hertogenbosch, The Netherlands
Tel:	+31 (0) 73-6400390
Fax:	+31 (0) 73-6416525
Email:	Sales_Europe@supermicro.com (Sales Inquiries)
	Support_Europe@supermicro.com (Technical Support)
	RMA_Europe@supermicro.com (RMA Support)
Website:	www.supermicro.nl

Asia-Pacific

Address:	Super Micro Computer, Inc.
	3F, No. 150, Jian 1st Rd.
	Zhonghe Dist., New Taipei City 235
	Taiwan (R.O.C)
Tel:	+886-(2) 8226-3990
Fax:	+886-(2) 8226-3992
Email:	Sales-Asia@supermicro.com.tw (Sales Inquiries)
	Support@supermicro.com.tw (Technical Support)
	RMA@supermicro.com.tw (RMA Support)
Website:	www.supermicro.com.tw

Appendix A

Standardized Warning Statements for AC Systems

About Standardized Warning Statements

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

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

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

Warning Definition

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

警告の定義

この警告サインは危険を意味します。

人身事故につながる可能性がありますので、いずれの機器でも動作させる前に、

電気回路に含まれる危険性に注意して、標準的な事故防止策に精通して下さい。

此警告符号代表危险。

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

此警告符號代表危險。

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

Warnung

WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

תקנון הצהרות אזהרה

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

احذ رُ! خطرٌ عُ هذا الزهز ةُ جسذ اصابة ف تتسبب أى أي وُي حالة ف اكَ ا
قبل أى تعول على أي هعذات،كي على علن بالوخاطز ال اُجوة عي الذوائز
الكهزبائ ةٍ
وكِ على درا ةٌ بالووارسات النقائ ةٍ لو عٌ وقع أي حادث
استخذم رقن الب إٍى الو صُّص ف هَّا ةٌ كل تحذ زٌ 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 معداث الحمايت مه الدوائرالقصيرة التي تم تثبيتها في المبنى
تأكد من أن تقييم الجهاز الوقائي ليس أكثر من : 20A, 250V

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

Waarschuwing

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

Power Disconnection Warning

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

電源切断の警告

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

警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

警告

在您打開機殼安裝或移除內部元件前，必須將系統完全斷電，並移除電源線。

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה מפני ניתוק חשמלי

אזהרה!

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

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

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

انطاقت قبم

انصل إى اىناطق انداخهيت نههيكم نتثبيج أو إزانت مكناث الجهاز

경고!

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

Waarschuwing

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

Equipment Installation

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

機器の設置

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

警告
只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告
只有經過受訓且具資格人員才可安裝、更換與維修此設備。

Warnung

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

¡Advertencia!

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

Attention

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

‏אזהרה!‏

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

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

경고!

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

Waarschuwing

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

Restricted Area

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

アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

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

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

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

Warnung

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

¡Advertencia!

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

Attention

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

אזור עם גישה מוגבלת

אזהרה!

יש להתקין את היחידה באזורים שיש בהם הגבלת גישה. הגישה ניתנת בעזרת

מפתח, מנעול וכד(כלי אבטחה בלבד.)'

تخصيص هذه انحذة نترك بُها ف مناطق محظورة تم .

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

أو أ وس هُت أخري نلالأمما قفم ومفتاح

경고!

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

Waarschuwing

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

Battery Handling

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

電池の取り扱い

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

警告

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

警告

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

Warnung

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

Attention

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

¡Advertencia!

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

אזהרה!

קיימת סכנת פיצוץ של הסוללה במידה והוחלפה בדרך לא תקינה. יש להחליף את הסוללה בסוג התואם מחברת יצרן מומלצת.

סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן.

هناك خطر من انفجار في حالة اسحبذال البطارية بطريقة غير صحيحة فعليل

اسحبذال البطارية

فقط بنفس النع أو ما يعادلها مما أوصث به الشرمة المصنعة

جخلص من البطاريات المسحعملة وفقا لحعليمات الشرمة الصانعة

경고!

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

Waarschuwing

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

Redundant Power Supplies

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

冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告
此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告
此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung

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

¡Advertencia!

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

Attention

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

אם קיים יותר מספק אחד
אזהרה!
ליחדה יש יותר מחיבור אחד של ספק. יש להסיר את כל החיבורים על מנת לרוקן
את היחידה.

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

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

Waarschuwing

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

Backplane Voltage

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

バックプレーンの電圧

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

修理する際には注意ください。

警告
当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告
當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

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

¡Advertencia!

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

Attention

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

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

هناك خطز مه التيار الكهزبائي أوالطاقة المجددة على اللحة
عندما يكن النظام يعمل كه حذرا عند خدمة هذا الجهاس

경고!

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

Waarschuwing

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

Comply with Local and National Electrical Codes

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

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

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

Attention

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

תיאום חוקי החשמל הארצי

אזהרה!

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمتثل للقاويه المحلية والطية المتعلقة بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

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

Product Disposal

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

製品の廃棄

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

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

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

¡Advertencia!

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

Attention

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

סילוק המוצר

אזהרה!

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

التخلص النهائي من هذا المنتج ينبغي التعامل معه وفقا لجميع القانين واللائح البطنية عند

경고!

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

Waarschuwing

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

Fan Warning

WARNING
Hazardous moving parts.
Keep away from moving fan blades.

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

ファンの警告

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

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

警告
危险的可移动性零件。請務必與轉動的風扇葉片保持距離。 當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇。

Warnung

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

¡Advertencia!

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

Attention

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

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

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

경고!

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

Waarschuwing

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

Power Cable and AC Adapter

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

電源コードとACアダプター

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

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

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

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

Warnung

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

¡Advertencia!

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

Attention

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

כבלים חשמליים ומתאמי AC

אזהרה!

כאשר מתקינים את המוצר, שי להשתמש בכבלים, ספקים ומתאמים אשר AC נרכשו או שמאתוה לצרור רשת מתקינים את המוצר, שי להשתמש בכבלים, ספקים ומתאמים אשר AC נרכשו או שמאתוה לצרור שימוש לכב . עקתהו לבכה לש הנוכנ הדימ ללוכ ,תוימוקמה תוחיטבה תושירדל ומאתוה רשאו ,הנקתהה בכל וא מתאמ גוסמ רחא ,ולעל לורגל הלקתל וא רצק ילמשחל .בהתאמ לחוקי השימוש ירישכמב החסמל וחוקי הבטיחות, קייק איסו רוסיא בכבלים מוסמכיב- UL וא ב- CSA (כאשר מופיע עלילה דוק לש (UL/CSA רובל כל רצומ ילמשח רחא, אלא קר רצומב רשא םאתוה ע"י Supermicro דבלב.

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

전원 케이블 및 AC 어댑터

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

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

Stroomkabel en AC-Adapter

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

Appendix B

System Specifications

Processor Support

AMD Ryzen 7000 Series Processor in Socket AM5

Chipset

AMD B650 chipset

BIOS

256 Mb SPI AMI BIOS® SM Flash UEFI BIOS

ACPI 6.4, SMBIOS 3.5.0, Plug-and-Play (PnP), RTC (Real Time Clock) wakeup, Riser Card Auto-Detection Support

Memory

Up to 128 GB ECC/Non-ECC DDR5 UDIMM 5200 MT/S speed in four DIMM slots

Storage Drives

One fixed 3.5" SATA drive bay or

Four fixed 2.5" SATA driver bays (Optional)

PCI Expansion Slots

One PCIe 5.0 x16 slot (in slot 6) with riser card

Input/Output

Front I/O:

Power On/Off button, system reset button, power status LED, HDD activity LED, system Information LED, two Network Activity LEDs

Rear I/O:

Two 1 Gb LAN (Intel i210) ports, one dedicated IPMI LAN port, one USB 3.2 Gen2 x2 (20 Gbps) Type C port, three USB3.2 Gen2 x1 (10 Gbps) Type A ports, two USB3.2 Gen2 Type C (10 Gb) Alt Mode, one Display Port 1.4, one HDMI 2.0, 7.1 Audio Channel connector (Realtek ALC888S)

Motherboard

H13SAE-MF

Chassis

CSE-514-505, 17.2 x 1.7 x 16.9 in. / 437 x 43 x 429 mm (W x H x D)

System Cooling

One CPU cooling air shroud (MCP-310-51402-0B)

One CPU heatsink (SNKP0076V)

Six 4-cm counter-rotating fans (FAN-0156L4)

Power Supply

Model: PWS-505P-1H, single 500 W High-Efficiency module with PMBus, 80Plus Platinum level

AC Input

 100-240 Vac, 50-60 Hz, 6.6 Amp max (500 W)

 +3.3 V: 12 A

 +5 V: 15 A

 +5 standby: 3 A

 +12 V: 41 A

 -12 V: 0.2 A

Operating Environment

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

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

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, CSA/ UL, CB

Applied Directives, Standards

EMC/EMI: 2014/30/EU (EMC Directive) CLASS A
Electromagnetic Compatibility Regulations 2016
FCC Part 15 Subpart B
ICES-003
VCCI-CISPR 32
AS/NZS CISPR 32
BS/EN 55032
BS/EN 55035
CISPR 32
CISPR 35
BS/EN 61000-3-2
BS/EN 61000-3-3
BS/EN 61000-4-2
BS/EN 61000-4-3
BS/EN 61000-4-4
BS/EN 61000-4-5
BS/EN 61000-4-6
BS/EN 61000-4-8
BS/EN 61000-4-11

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

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

Warning! This product can expose you to chemicals including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Perchlorate Warning

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

この装置は、クラス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