# SuperServer®

# SYS-E201-14AR

## USER'S MANUAL

Revision 1.0 (MNL-2844)

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Manual Revision 1.0

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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 SYS-E201-14AR server. Installation and maintenance should be performed by certified service technicians only.

## Notes

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

- Supermicro product manuals: https://www.supermicro.com/support/manuals
- Product drivers and utilities: https://www.supermicro.com/wdl
- Product safety info: https://www.supermicro.com/about/policies/safety_information.cfm
- 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
- Frequently Asked Questions: https://www.supermicro.com/FAQ/index.php
- If you still have questions after referring to our FAQs, contact our support team. Region-specific Technical Support email addresses can be found at: "Contacting Supermicro" on page 11
- If you have any feedback on Supermicro product manuals, contact our writing team at: Techwriterteam@supermicro.com

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

## Conventions Used in the Manual

Special attention should be given to the following symbols for proper installation and to prevent damage done to the components or injury to yourself.

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

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

**Important:** Important information given to ensure proper server installation or to relay safety precautions.

**Note:** Additional information given to differentiate various models or to provide information for proper server setup.

# Contents

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# Chapter 1:

# Introduction

This chapter provides a brief outline of the functions and features of the SYS-E201-14AR system. It is based on the X14SAV-LVDS motherboard and the CSE-101iF chassis.

## 1.1 System Overview

The following provides an outline of the functions and features of the SuperServer® SYS-E201-14AR. It is based on the X14SAV-LVDS motherboard and the CSE-101iF chassis.

| System Overview | |
|---|---|
| **Motherboard** | X14SAV-LVDS |
| **Chassis** | CSE-101iF |
| **Processor** | Single Intel® Core™ Ultra 9/7/5 (Series 2) processor (in a Socket LGA-1851), supports up to 65 W TDP CPUs (air cooled) |
| **Memory** | Two DIMM slots support up to 96 GB 6400 MT/s ECC/non-ECC DDR5 SO-DIMM (1DPC) |
| **Drive Support** | One M.2 PCIe 5.0 x4 NVMe slot (M-key 2280)<br>One internal fixed 2.5" SATA drive bay |
| **Expansion Slots** | One M.2 PCIe 4.0 x1 slot (E-key 2230) |
| **I/O Ports** | Two RJ45 2.5 GbE LAN ports (Intel® I226-LM)<br>Three USB 3.2 Gen2 (type-A) ports<br>One USB 3.2 Gen2 (type-c) port<br>Two DisplayPort ports<br>Two HDMI ports<br>One TPM Onboard/port 80 |
| **System Cooling** | One CPU heatsink with 80 x 15 mm fan<br>Two 4-pin PWM 60 x 60 x 15 mm fans |
| **Power** | One 180 W power adapter |
| **Form Factor** | Mini-ITX: 7.68 x 2.68 x 7.68 in. / 195 x 68 x 195 mm (WxHxD) |

**Note:** A Quick Reference Guide can be found on the product page of the Supermicro Website. The following safety models associated with the SYS-E201-14AR have been certified as compliant with UL or CSA: 101iF-18, 101iF-A18X14.

## 1.2 System Features

The following views of the system display the main features. Refer to the System Specifications appendix of this manual for additional specifications.

### Front View

The following features are located on the front of the SYS-E201-14AR server.


**Figure 1-1. SYS-E201-14AR Front View**

| Front View Features | |
|---|---|
| **Feature** | **Description** |
| Reset Button | Resets the system. |
| Power Button | Disconnects the main power while keeping standby power active. Always unplug the power cord before servicing. |

## Rear View

The following features are located on the rear of the SYS-E201-14AR server.

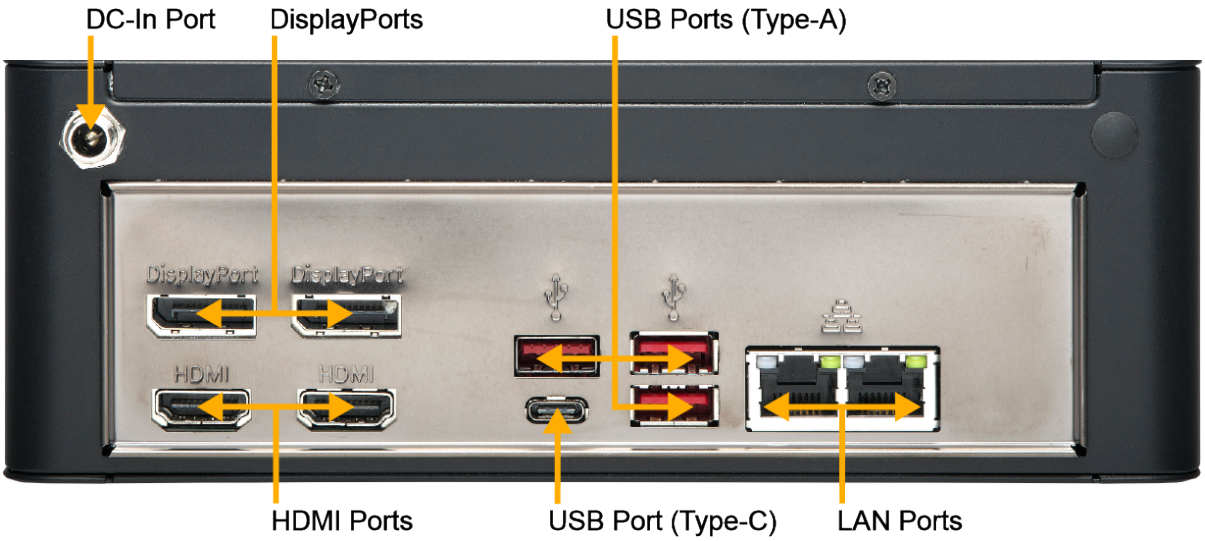



**Figure 1-2. SYS-E201-14AR Rear View**

| Rear View Features | |
|---|---|
| **Feature** | **Description** |
| DC-In Port | One 12 V DC-In port |
| DisplayPorts | Two DisplayPorts support fast refresh rates and can connect to various display devices using an adapter, compatible with VGA, DVI, or HDMI. |
| HDMI Ports | Two HDMI 2.0 ports transmit high-definition video and audio to HDMI-compatible displays. |
| USB Ports | Three USB 3.2 (type-A) ports<br>One USB 3.2 (type-C) port |
| LAN Ports | Two 2.5 GbE LAN network ports |

## 1.3 System Architecture

This section covers the locations of the system's main components and provides a motherboard block diagram.

### Main Components

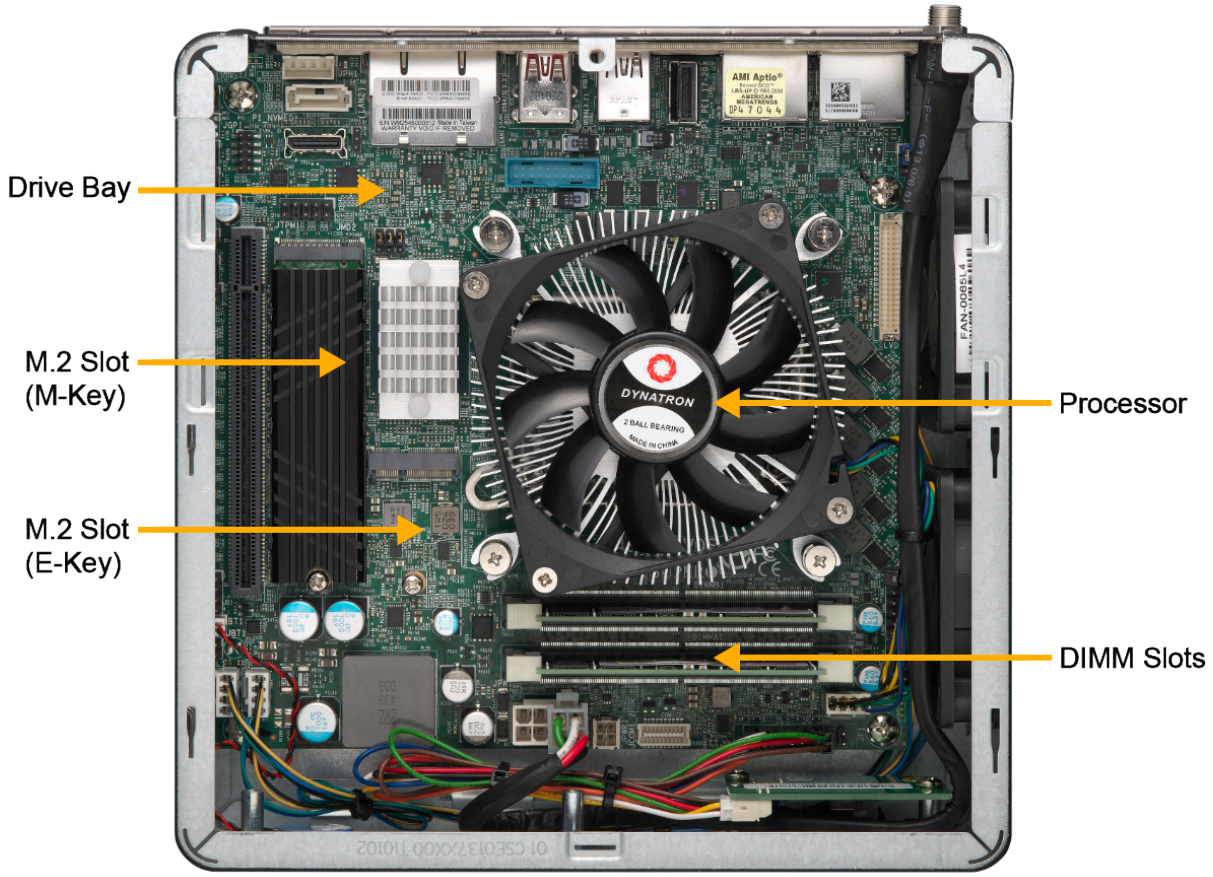



**Figure 1-3. SYS-E201-14AR Main Component Locations**

| Top View Features | |
|---|---|
| **Feature** | **Description** |
| Drive Bay | One internal SATA 2.5" drive bay |
| M.2 Slots | One PCIe 5.0 M.2 NVMe M-Key slot (2280)<br>One PCIe 4.0 M.2 E-Key slot (2230, USB 2.0) |
| Processor | Single Intel® Ultra 9/7/5 (Series 2) processor |
| DIMM Slots | Two DDR5 SODIMM slots |

# Motherboard Block Diagram

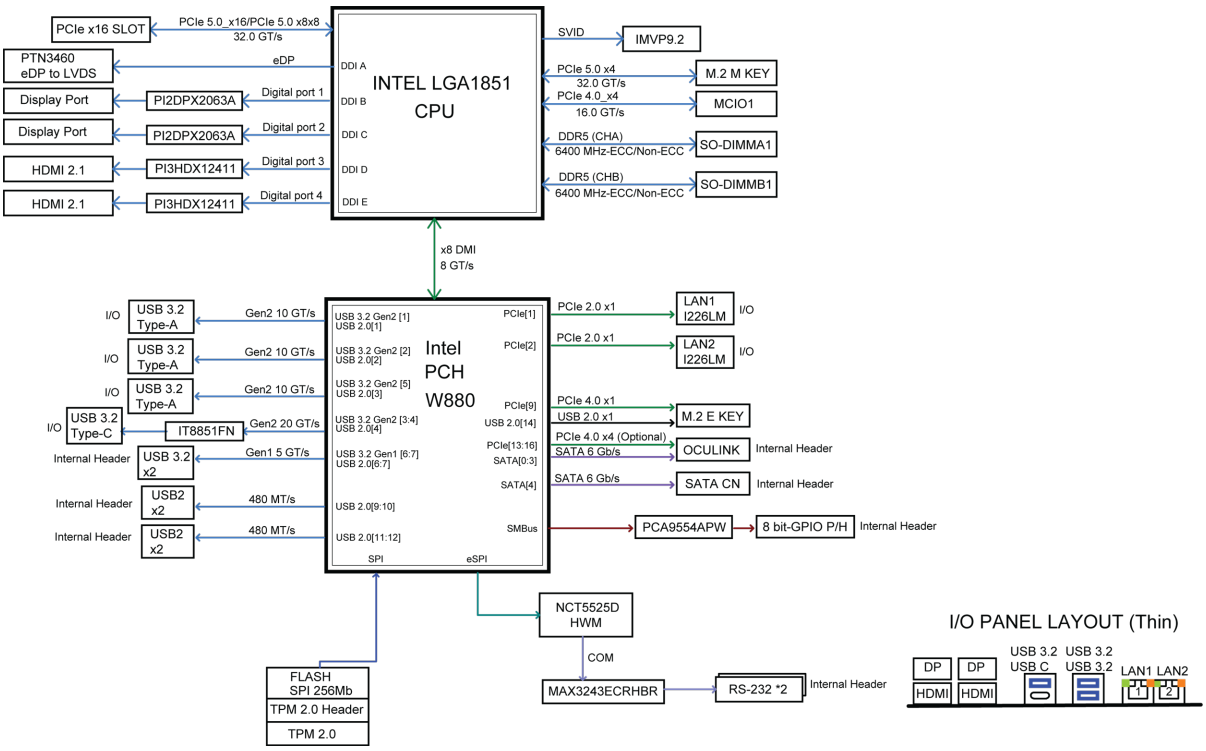



**Figure 1-4. X14SAV-LVDS Motherboard Block Diagram**

## 1.4 Motherboard Quick Reference

For details on the X14SAV-LVDS motherboard layout and other quick reference information, refer to the content below.

### Motherboard Layout

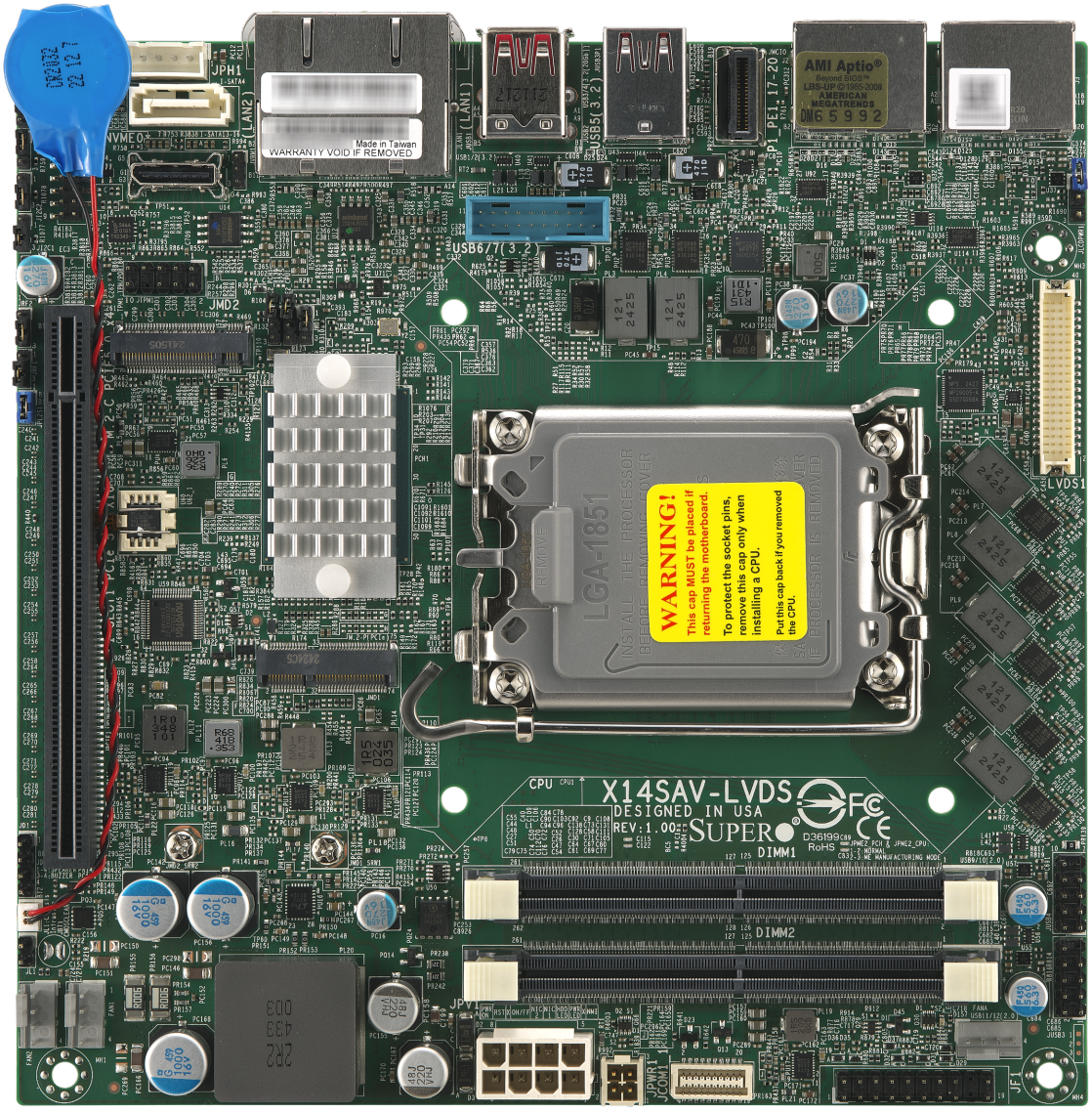



**Figure 1-5. X14SAV-LVDS Motherboard Photo**

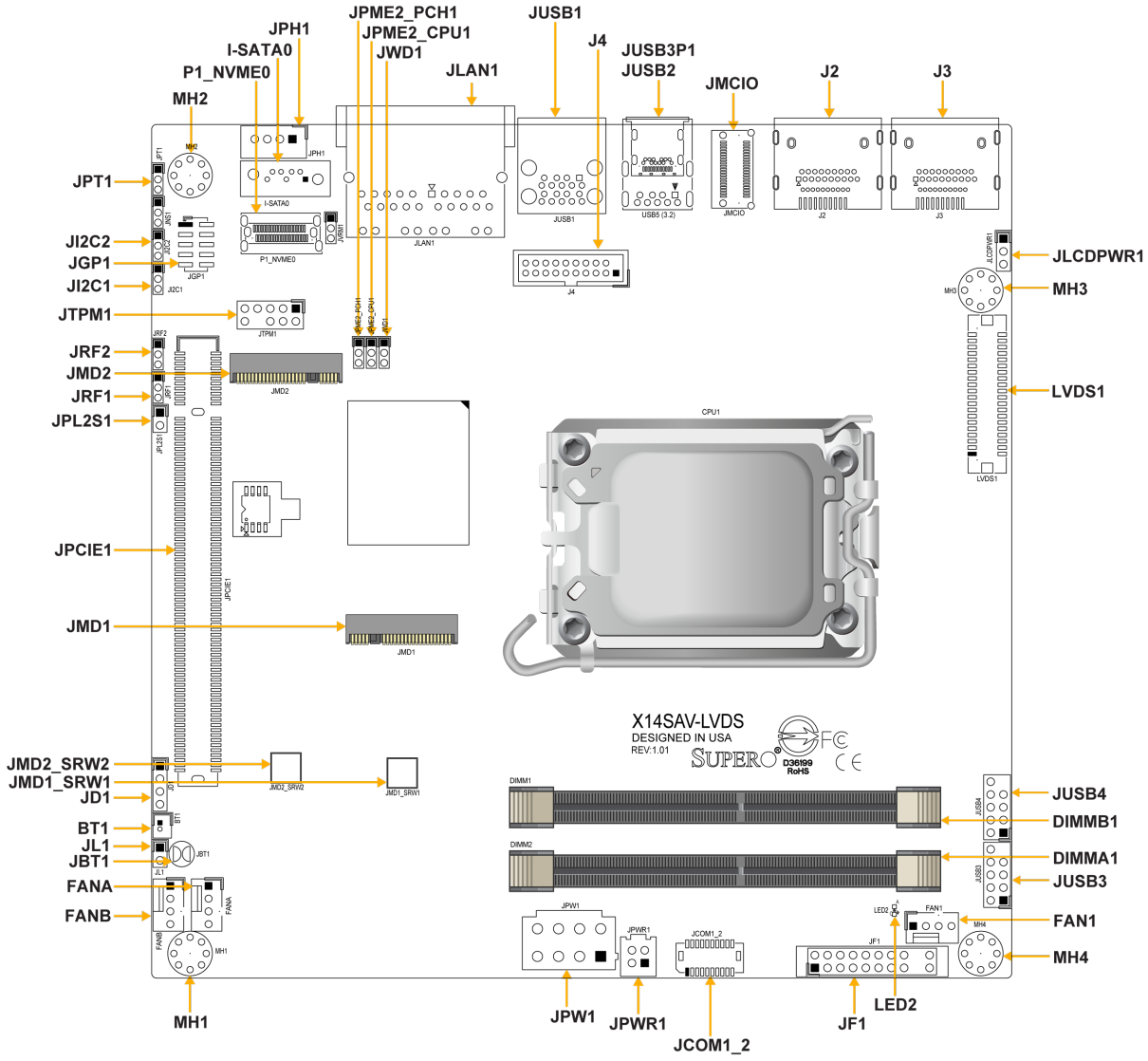



**Figure 1-6. X14SAV-LVDS Motherboard Layout**

**Notes:**

- For detailed information on jumpers, connectors, and LED indicators, see "Maintenance and Component Installation" on page 28.
- "■" indicates the location of pin 1.
- "MH" indicates the location of a mounting hole.
- Components not documented are for internal testing purposes 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.

## Motherboard Quick Reference Table

| Jumper | Description | Default Settings |
|---|---|---|
| JBT1 | CMOS Clear | Open (Normal) |
| JI2C1, JI2C2 | SMB to PCIe Enable/Disable | Pins 2–3 (Disabled) |
| JLCDPWR1 | LVDS Panel VCC Power +3.3/+5 V | Pins 1–2 (+3.3 V) |
| JPL2S1 | CPU PL2 Limit | Pins 1–2 PL2= PL1<br>Open: The CPU will operate at peak performance, and it is recommended to use a power supply of 500 W or higher for optimal performance and system stability. |
| JPME2_ CPU1 | ME Manufacturing Mode | Pins 1–2 (Normal) |
| JPME2_ PCH1 | ME Manufacturing Mode | Pins 1–2 (Normal) |
| JPT1 | Onboard TPM 2.0 Enable/Disable | Pins 1–2 (Enabled) |
| JRF1, JRF2 | PCIe Bifurcation | JRF1 JRF2 PEG<br>Pins 2–3 Pins 2–3 x16 (PCIe) |
| JWD1 | Watchdog Timer Selection | Pins 1–2 (Trigger Reset) |

| Connector | Description |
|---|---|
| BT1 | Onboard Battery |
| FAN1, FANA, FANB | Fan Headers |
| I-SATA0 | Intel® SATA 3.0 Ports |

| Connector | Description |
|---|---|
| J2, J3 | Two High Definition Multimedia Interface 2.1 and two DisplayPort 2.1 |
| JCOM1_2 | COM Header (supports RS232) |
| JD1 | Speaker (Pins: 1–4: Speaker) |
| JF1 | Front Control Panel Header |
| JGP1 | General Purpose I/O Header |
| JL1 | Chassis Intrusion Header |
| JMCIO | Mini Cool Edge I/O Connector (PCIe 4.0 x4) |
| JMD1 | M.2 E-Key PCIe 4.0 x1/USB 2.0 (2230 form factor) Slot |
| JMD2 | M.2 M-Key PCIe 5.0 x4 (2280 form factor) Slot |
| JMD1_SRW1 | M.2 Mounting Hole for JMD1 |
| JMD2_SRW2 | M.2 Mounting Hole for JMD2 |
| JPCIE1 | PCIe 5.0 x16 Slot |
| JPH1 | 4-pin HDD Power Connector |
| JPWR1 | Header for ATX Power Signal +5 VSTBY/Power ON/Power GOOD/Ground |
| JPW1 | 8-pin ATX +12 V Power Source<br>8-pin +12 V/+24 V DC Power Source |
| JTPM1 | Trusted Platform Module/Port 80 Connector |
| JLAN1 | Two 2.5G (RJ45) LAN Ports |
| LVDS1 | Low-Voltage Differential Signaling Connector |
| MH1–MH4 | Mounting Holes |
| P1_NVME0 | NVMe (SATA and OCulink) Connector |
| JUSB1 | USB 3.2 Gen 2 Port |
| JUSB3P1 | USB 3.2 port and USB Type-C (supports USB 3.2 Gen 2x2 20G) |
| JUSB2 | USB 3.2 Gen 2 Port |
| J4 | USB 3.2 Gen 1 Header |
| JUSB3, JUSB4 | USB 2.0 Headers |

| LED | Description | Status |
|---|---|---|
| LED2 | Power LED | Solid Green: Power On |

# Chapter 2:

# Server Installation

This chapter provides advice and instructions for mounting your server in a server rack. If your server is not already fully integrated with processors, system memory, etc., refer to "Maintenance and Component Installation" on page 28 for details on installing those specific components.

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

## 2.1 Preparing for Setup

The box in which the SYS-E201-14AR server was shipped should include the rackmount hardware needed to install it into the rack. Read this section in its entirety before you begin the installation.

### Choosing a Setup Location

- The server 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.

### System Precautions

- Review the electrical and general safety precautions in "Standardized Warning Statements for AC Systems" on page 154.
- 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

**Warning!** Stability hazard. The rack may tip over causing serious personal injury. Before extending the rack to the installation position, read the installation instructions. Do not put any load on the slide-rail mounted equipment in the installation position. Do not leave the slide-rail mounted equipment in the installation position.

**Avertissement!**
Danger d'instabilité. Le rack peut basculer et provoquer des blessures corporelles graves.
Avant d'étendre le rack en position d'installation, lire les instructions d'installation. Ne pas charger l'équipement monté sur rail de glissière en position d'installation. Ne pas laisser l'équipement monté sur rail de glissière en position d'installation.

**Important:** 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:

- If this unit is the only unit in the rack, it should be mounted at the bottom of the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top, placing 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.
- Do not pick up the server with the front handles. They are designed to pull the system from a rack only.

### *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.).

## 2.2 Installing Rack Mounting Brackets

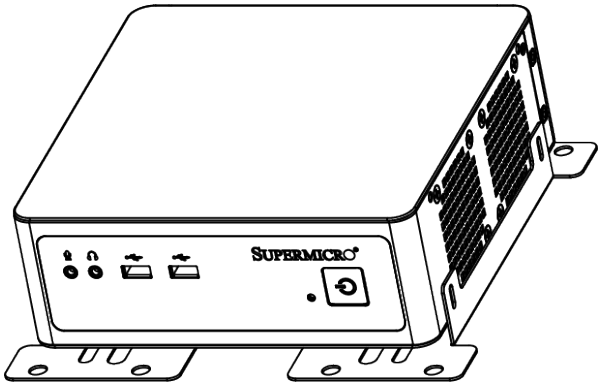


**Figure 2-1. Brackets Under Chassis**

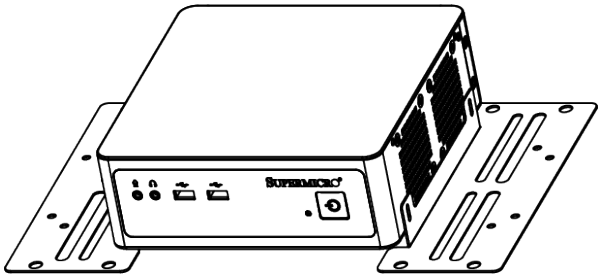


**Figure 2-2. Brackets Extended from Chassis**

The chassis includes mounting brackets that allow it to be mounted in any convenient space. They may be installed in either of two orientations.

1. Install the brackets, using two screws through the holes in each bracket to secure the bracket to the chassis.
2. Secure the brackets to the surface where you want the server to be mounted.

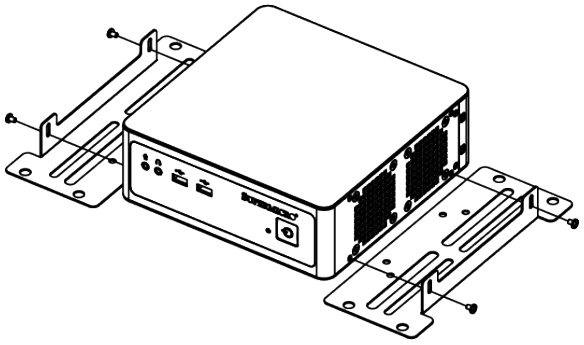


**Figure 2-3. Installing Mounting Brackets (Brackets Under the Chassis)**

# Chapter 3:

# Maintenance and Component Installation

This chapter provides instructions on installing and replacing main system components for the SYS-E201-14AR server. To prevent compatibility issues, only use components that match the specifications and/or part numbers given.

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

## 3.1 Removing Power

Before performing some setup or maintenance tasks, use the following procedure to ensure that power has been removed from the SYS-E201-14AR server. This step is necessary when removing or installing non hot-swap components or when replacing a non-redundant power supply.

1. Use the operating system to power down the system.
2. After the system has completely shut-down, disconnect the AC power cord(s) from the power strip or outlet.
3. Disconnect the power cord(s) from the power supply module(s).

## 3.2 Accessing the System

The CSE-101iF features a removable top cover to access to the inside of the chassis.

### Removing the Chassis Cover

1. Power down the system as described in section 2.1.
2. Remove the two screws on the rear of the chassis that hold the cover in place.
3. Slide the cover to the rear to release the front and rear cover hooks from the chassis.
4. Lift the cover up and off the chassis.

**Important:** 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.

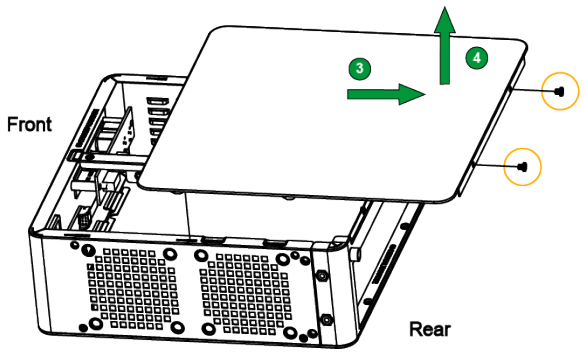



**Figure 3-1. Removing the Chassis Cover**

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

## 3.3 Static-Sensitive Devices

Electrostatic Discharge (ESD) can damage electronic components. To avoid damaging your motherboard, it is important to handle it very carefully. The following measures are generally sufficient to protect your equipment from ESD.

### Precautions

- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Handle the motherboard only by its edges. Do not touch its components, peripheral chips, memory modules, or gold contacts.
- When handling chips or modules, avoid touching their pins.
- Put the motherboard and peripherals back into their antistatic bags when not in use.
- For grounding purposes, make sure that your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners, and the motherboard.
- Use only the correct type of onboard CMOS battery. To avoid possible explosion, do not install the onboard battery upside down.

## 3.4 Processor and Heatsink Installation

This section provides procedures to install the processor(s) and heatsink(s).

**Notes:**

- Take industry standard precautions to avoid ESD damage. For details, see "Static-Sensitive Devices" on the previous page.
- Before starting, make sure that the plastic socket cap is in place and none of the socket pins are bent. If any damage is noted, contact your retailer.
- Do not connect the system power cord before the processor and heatsink installation is complete.
- 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 processor socket.
- When buying a processor separately, use only a Supermicro certified heatsink.
- Refer to the Supermicro website for the most recent processor support.
- When installing the heatsink, ensure a torque driver set to the correct force is used for each screw.
- Thermal grease is pre-applied on a new heatsink. No additional thermal grease is needed.

### Installing an LGA 1851 Processor

**Important:** You can only install the processor in one direction. Make sure it is properly inserted into the socket before closing the load plate. If it doesn't close properly, do not force it as it may damage your processor. Instead, open the load plate again and double-check that the processor is properly aligned.

1. Remove the plastic protective cover from the load plate.

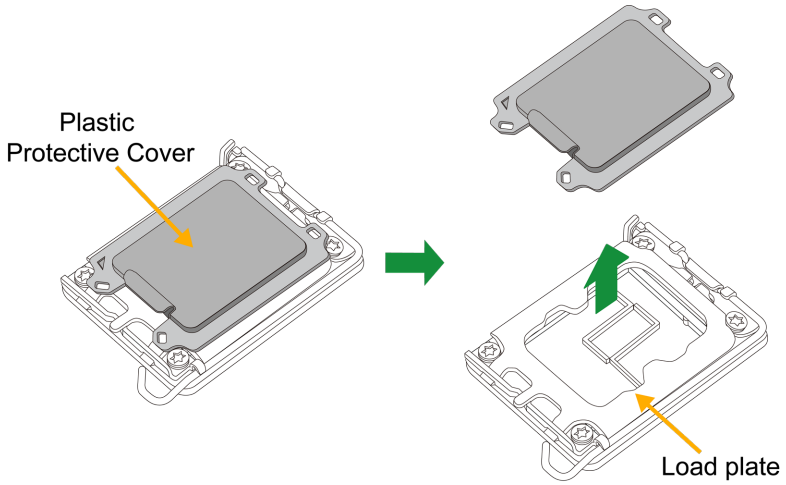



**Figure 3-2. Removing the Protective Cover**

2. Gently push the load lever down and away from the lever lock, then lift it up completely.

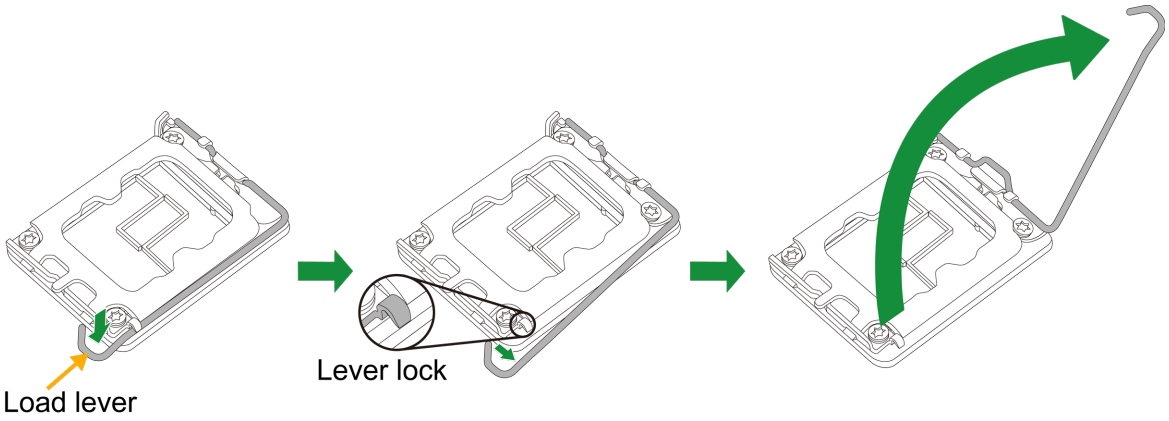



**Figure 3-3. Releasing and Lifting the Lever**

3. Lift the load plate to open it completely.

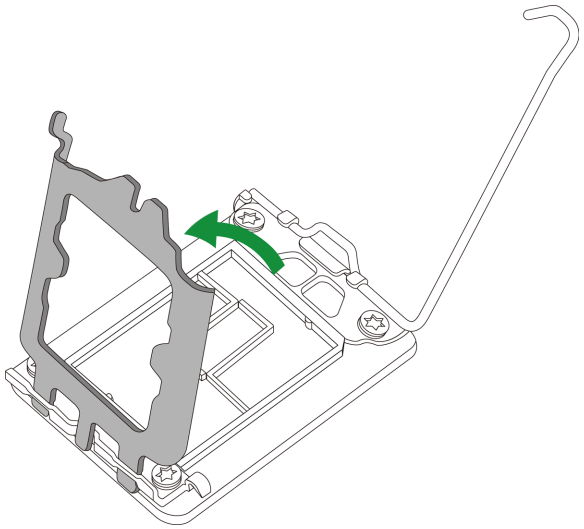


**Figure 3-4. Opening the Load Plate**

4. Carefully hold the processor by its edges. Align the small triangle marker and notches on the processor with the corresponding triangle marker and notches on the processor load bracket. Once aligned, carefully lower the processor straight down into the socket. (Do not drop the processor on the socket, or move it horizontally or vertically.)

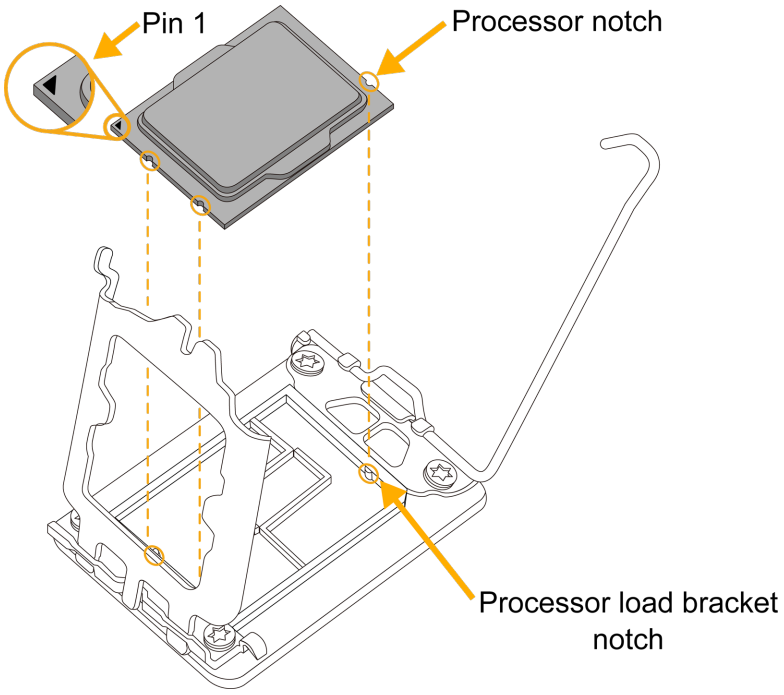



**Figure 3-5. Aligning the Notches and Installing the Processor**

5. Do not rub the processor against the surface or against any pins of the socket to avoid damaging the processor or the socket.

6. With the processor inside the socket, inspect all the corners to make sure it is properly installed.
7. Close the load plate with the processor inside the socket. Gently push the load lever down until it locks under the lever lock.

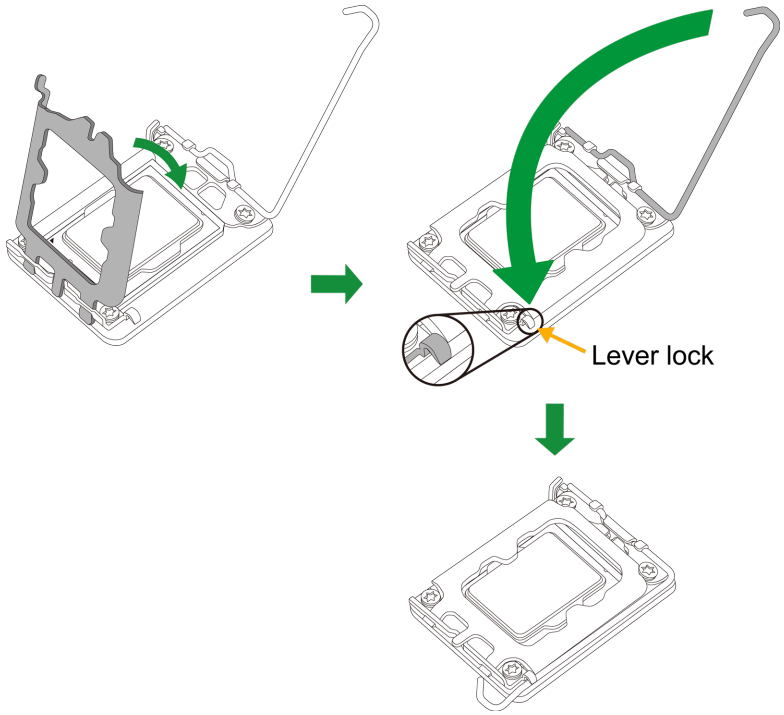



**Figure 3-6. Closing the Load Plate and Pushing the Lever Down**

## Installing a Processor Heatsink

1. Loosen four screws to release the backplate. Note that one screw is not shown in the illustration below.

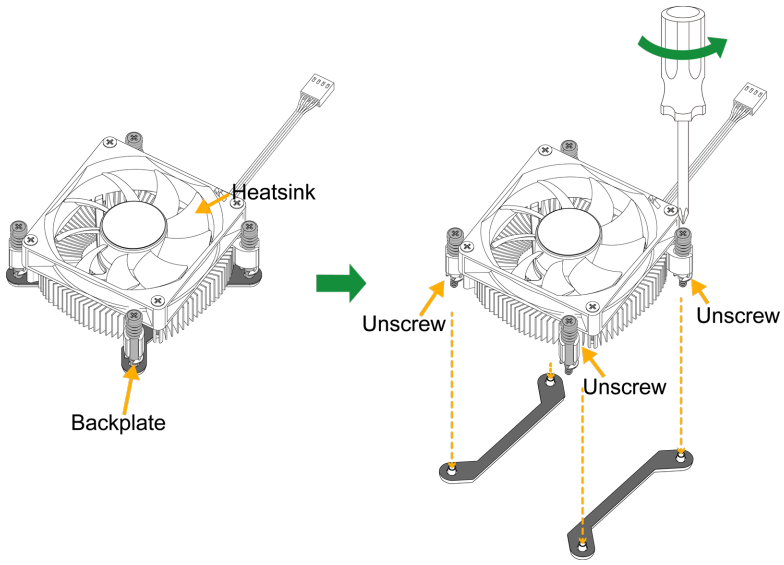



**Figure 3-7. Releasing the Backplate from the Heatsink**

2. If there is a thin layer of protective film on the backplate, remove it.

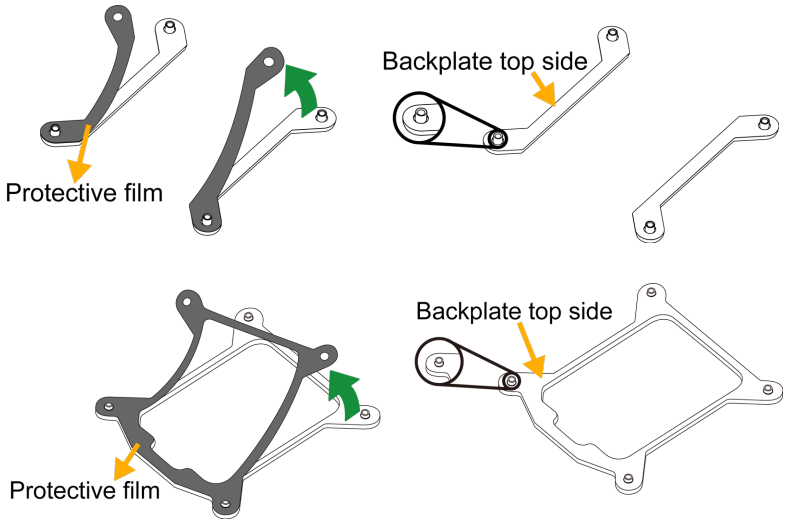
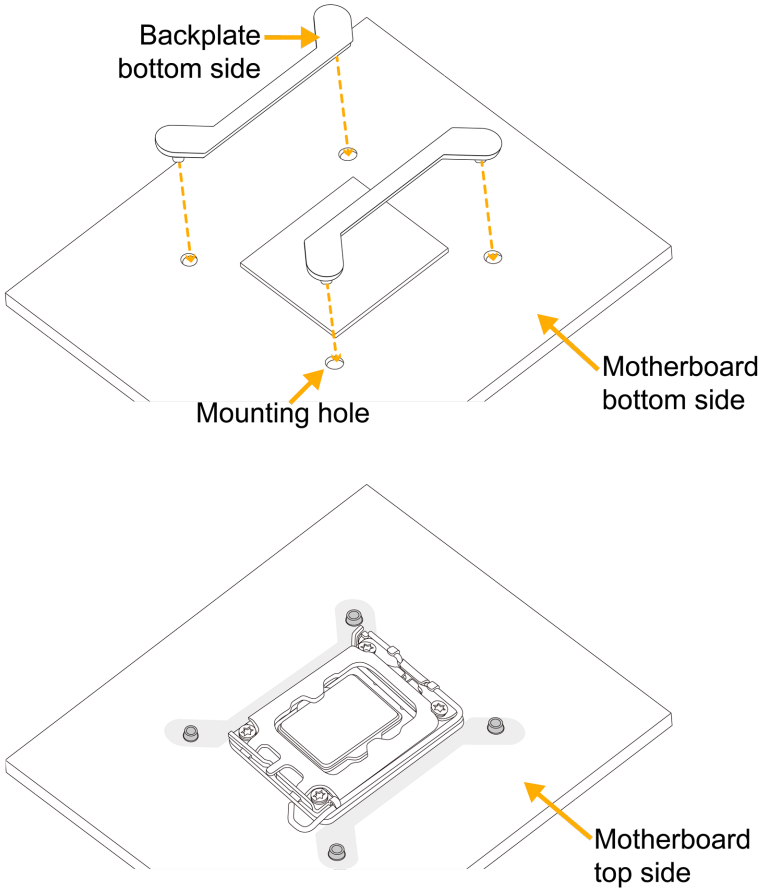



**Figure 3-8. Removing the Protective Film**

3. Attach the backplate into the mounting holes around the processor socket on the bottom side of the motherboard.



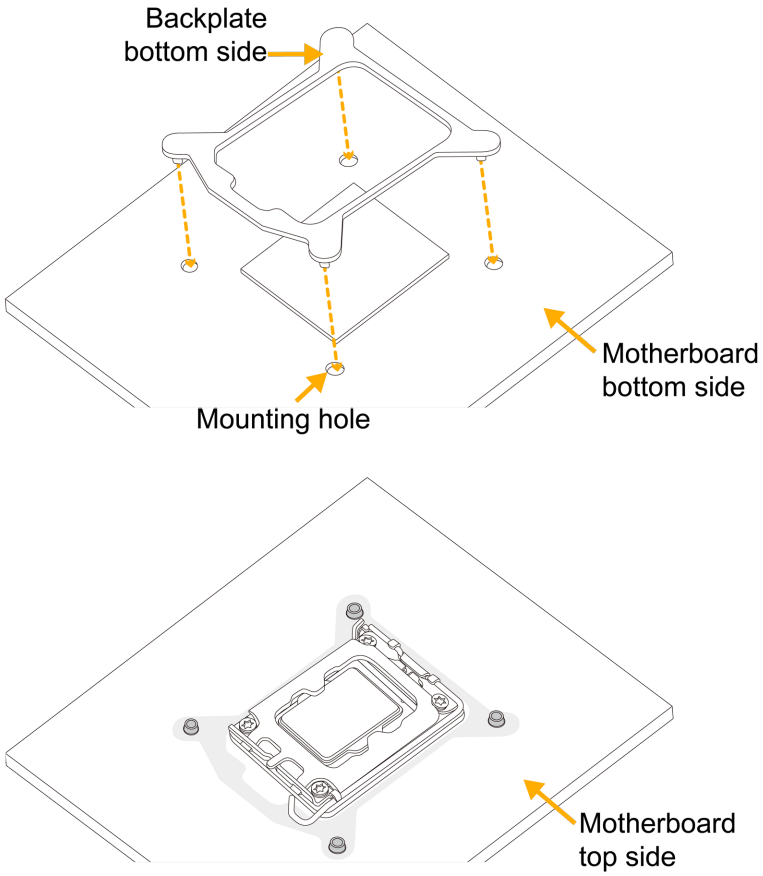



**Figure 3-9. Attaching the Backplate to the Bottom Side of the Motherboard**

4. Apply the proper amount of thermal grease on the processor.

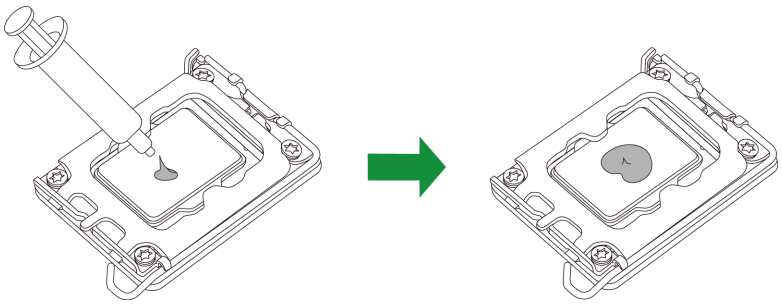


**Figure 3-10. Applying Thermal Grease**

5. Place the heatsink on top of the processor so that the four mounting holes on the heatsink are aligned with those on the retention mechanism.

6. Tighten the screws.

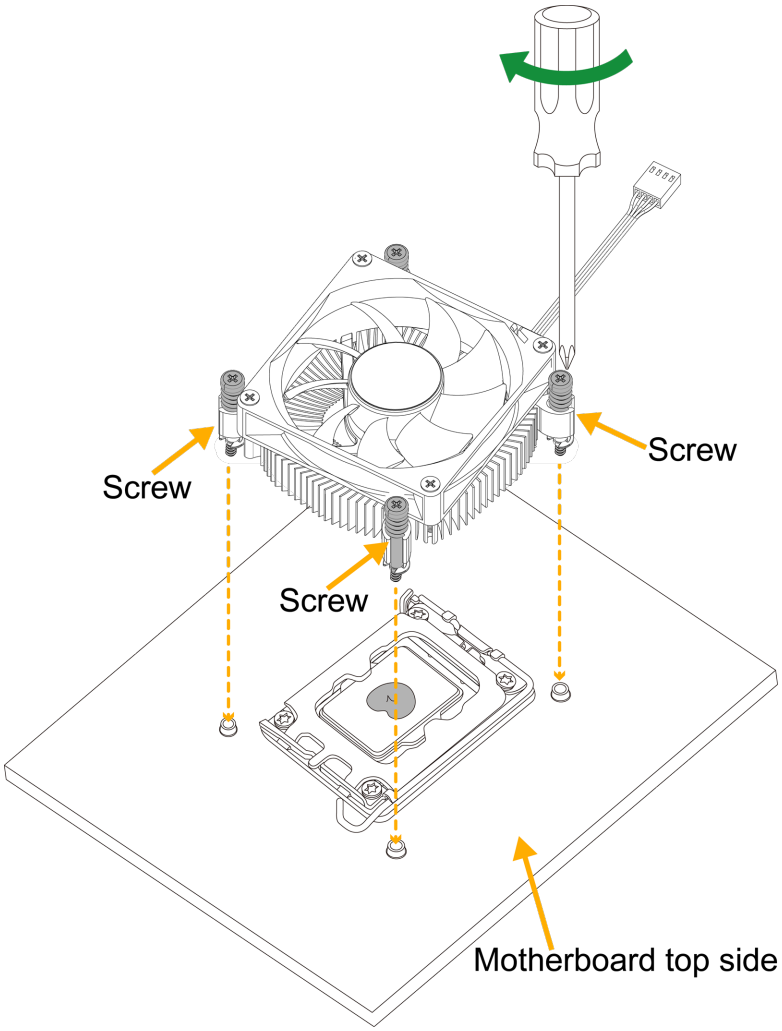



**Figure 3-11. Tightening the Heatsink Screws**

**Notes:**

- The installation described in this section is for reference only. The actual installation steps may vary depending on the CPU heatsink model. Refer to the heatsink instructions for more details.
- Images displayed are for illustration purposes only. Your components might look different from those shown in this manual.

## Removing the Processor Heatsink

**Important:** We do not recommend that the processor or heatsink be removed. However, if you do need to remove the heatsink, follow the instructions below to remove the heatsink and prevent damage done to the processor or other components.

1. Unplug the power cord from the power supply and the power connector from the cooler and fan header.
2. Loosen the screws as shown in figure in the next step.
3. Gently wiggle the heatsink to loosen it. Do not use excessive force when wiggling the heatsink.

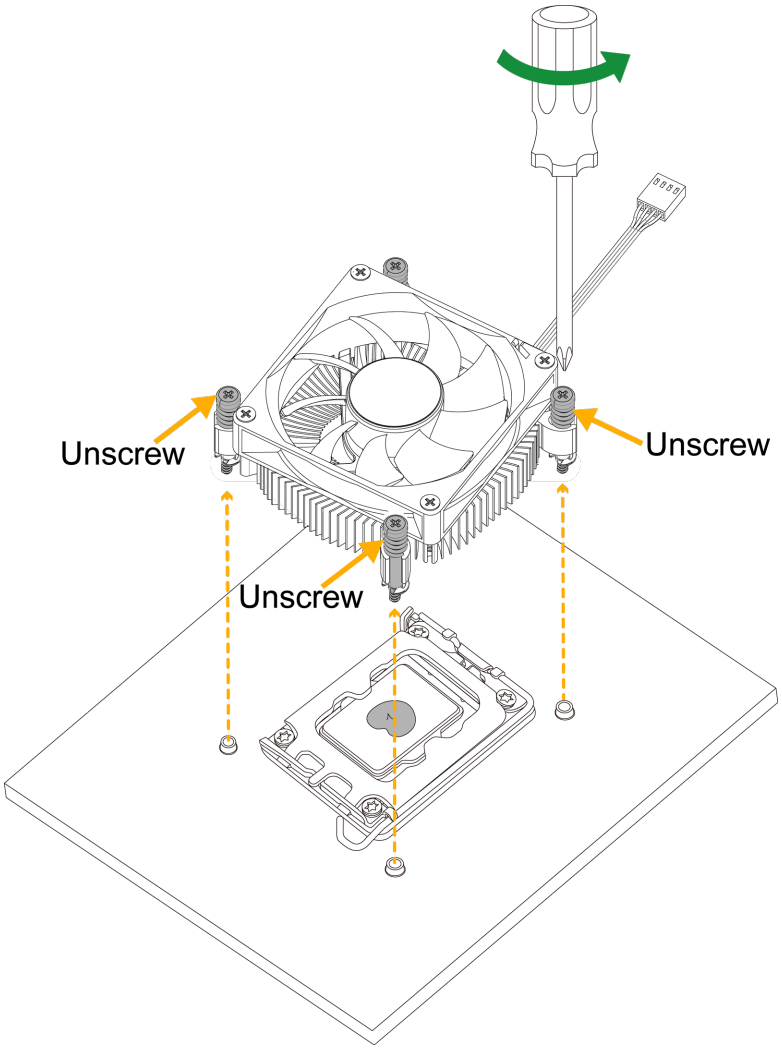



**Figure 3-12. Loosening the Heatsink Screws**

4. Once the heatsink is loosened, remove it from the motherboard.

## 3.5 Memory Support and Installation

**Important:** To prevent any damage, exercise extreme care when installing or removing memory modules.

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

### Memory Support

The X14SAV-LVDS supports up to 96 GB of ECC and Non-ECC DDR5 SODIMM/CSODIMM memory with speeds of up to 6400 MT/s in two memory slots.

The Intel Core Ultra 5 processor supports up to 5600 MT/s. The Intel Core Ultra 7 and 9 processors support up to 6400 MT/s.

### General Guidelines for Optimizing Memory Performance

- It is recommended to use DDR5 memory of the same type, size, and speed.
- Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will support an odd number amount of memory modules. However, to achieve the best memory performance, a balanced memory population is recommended.

### SO-DIMM Installation

**Important:** To avoid causing any damage to the memory module or the DIMM socket, do not use excessive force when pressing the release tabs on the ends of the DIMM socket. Handle memory modules with care. To avoid ESD-related damage to your memory modules or components, carefully follow all the instructions given in "Static-Sensitive Devices" on page 31.

1. Install the desired number of SODIMMs into the memory slots, starting with DIMMA1 and then DIMMB1.
2. Align the key on the bottom of the SODIMM module against the receptive point on the memory slot. Take note of the notches on the side of the SODIMM module and of the locking clips on the socket to avoid causing damage.

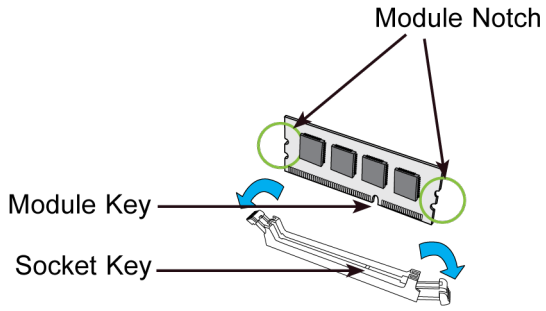



**Figure 3-13. Aligning the SODIMM**

3. Press the SODIMM module straight down into the socket with both hands until it is securely seated. The side clips will automatically lock the module into place.

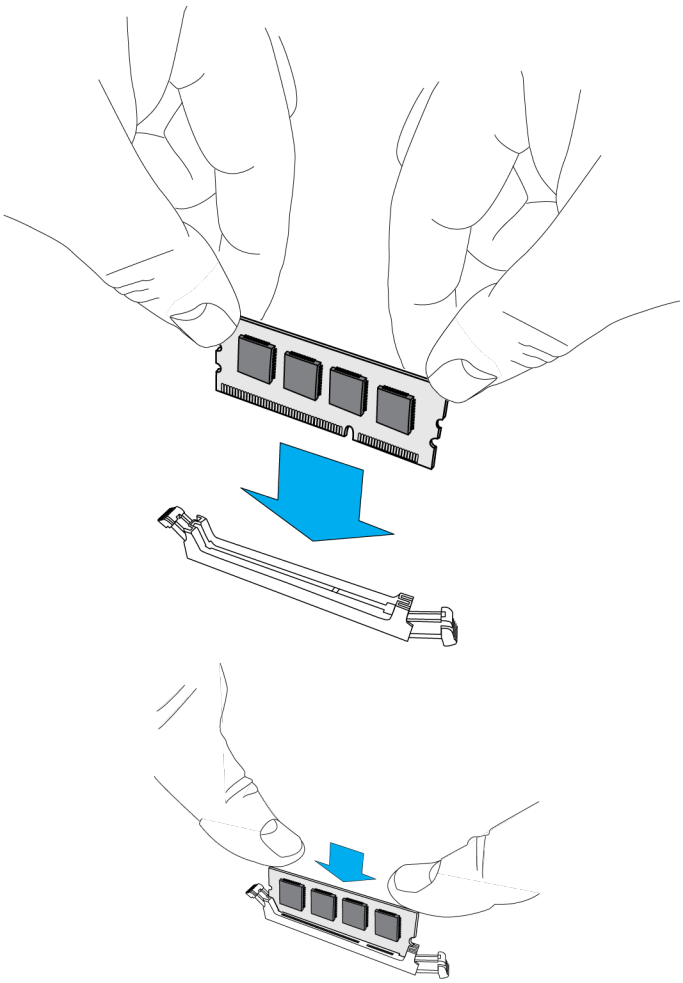


**Figure 3-14. Securing the SODIMM**

## SO-DIMM Removal

Push the side clips at the end of the slot to release the SO-DIMM module. Pull the SO-DIMM module up to remove it from the slot.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

## 3.6 Motherboard Battery Removal and Installation

### Battery Removal

To remove the battery, follow the steps below:

1. Power off your system and unplug your power cable.
2. Remove the battery cable at the BT1 connector on the board.
3. Remove the battery.

### Proper Battery Disposal

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

### Battery Installation

To install an battery, follow steps 1 and 2 above and continue below:

1. Connect the battery cable into the battery connector (BT1) and push it down until you hear a click to ensure that the cable is securely locked.
2. Use the foam tape on the back side of the battery to secure it to a flat surface on the bottom of the motherboard or a proper location in the system. Do not place the battery on the heatsink.

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


**Figure 3-15. CMOS Battery**

## 3.7 Storage Drives

The CSE-101iF can accommodate a single fixed 2.5" storage drive of up to a 15-mm thickness. It is installed to a mounting tray inside the chassis.

**Note:** Enterprise-level storage modules are recommended for use in Supermicro servers.

## Installing Storage Drives

The motherboard should be installed before installing the drive.

1. Make sure there is no power to the system as described in section 2.1 and remove the chassis cover.
2. Remove the screws securing the hard drive tray to the support bracket and set them aside for later use. Lift the tray out.

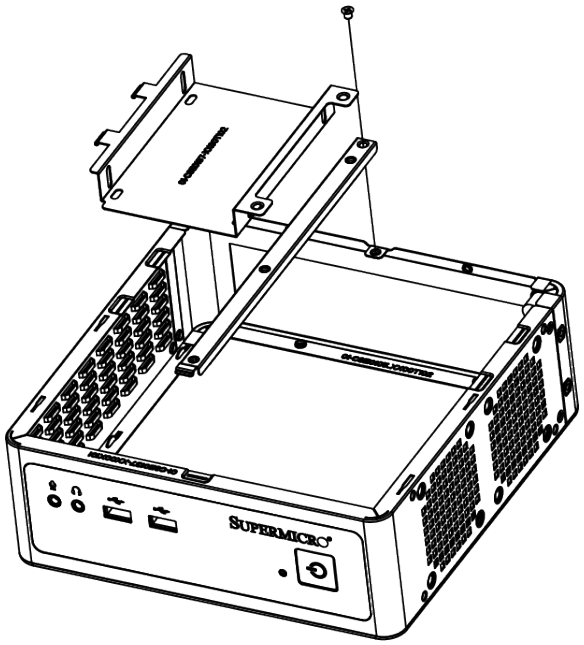


**Figure 3-16. Removing the Drive Tray**

3. Place the drive into the tray and secure it to the tray with the screws provided with drive.
4. Return the drive tray assembly into the chassis, aligning the tabs of the tray with the slots in the chassis. Secure the tray to the chassis support bracket with the screws previously set aside.
5. Attach the SATA cable to the motherboard connector. This cable carries both the SATA signal and the SATA power.
6. Reinstall the chassis cover and power up the system.

# 3.8 System Cooling

Refer to the following sections for information about the cooling capabilities of the SYS-E201-14AR server.

## Fans

The CSE-101iF includes two 6-cm fans.

### *Installing Fans*

1. Power down the system as described in section 2.1 and remove the AC power cord and the chassis cover.
2. Remove the power cable of the failed fan from motherboard.
3. Remove the screws securing the fan to the chassis wall and save them.
4. Lift the fan out of the chassis.
5. Align the replacement fan with the holes in the chassis.
6. Secure the fan to the chassis wall using the screws previously set aside.
7. Reconnect the fan cable to the motherboard.
8. Reinstall the chassis top cover, reconnect the AC power cord and power up the system.

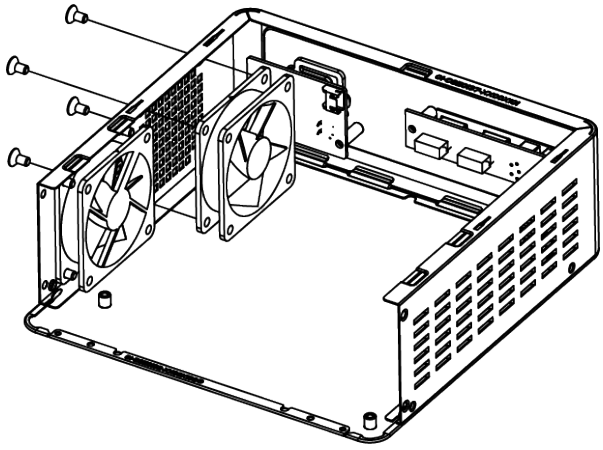


**Figure 3-17. System Fans**

## 3.9 Cable Routing Diagrams

The below diagrams indicate the cable routing for the fans. When disconnecting cables to add or replace components, refer to the diagrams so you can reroute them in the same manner. If cables are not connected or routed properly it may lead to device detection or performance issues.

### Cable Routing Diagram

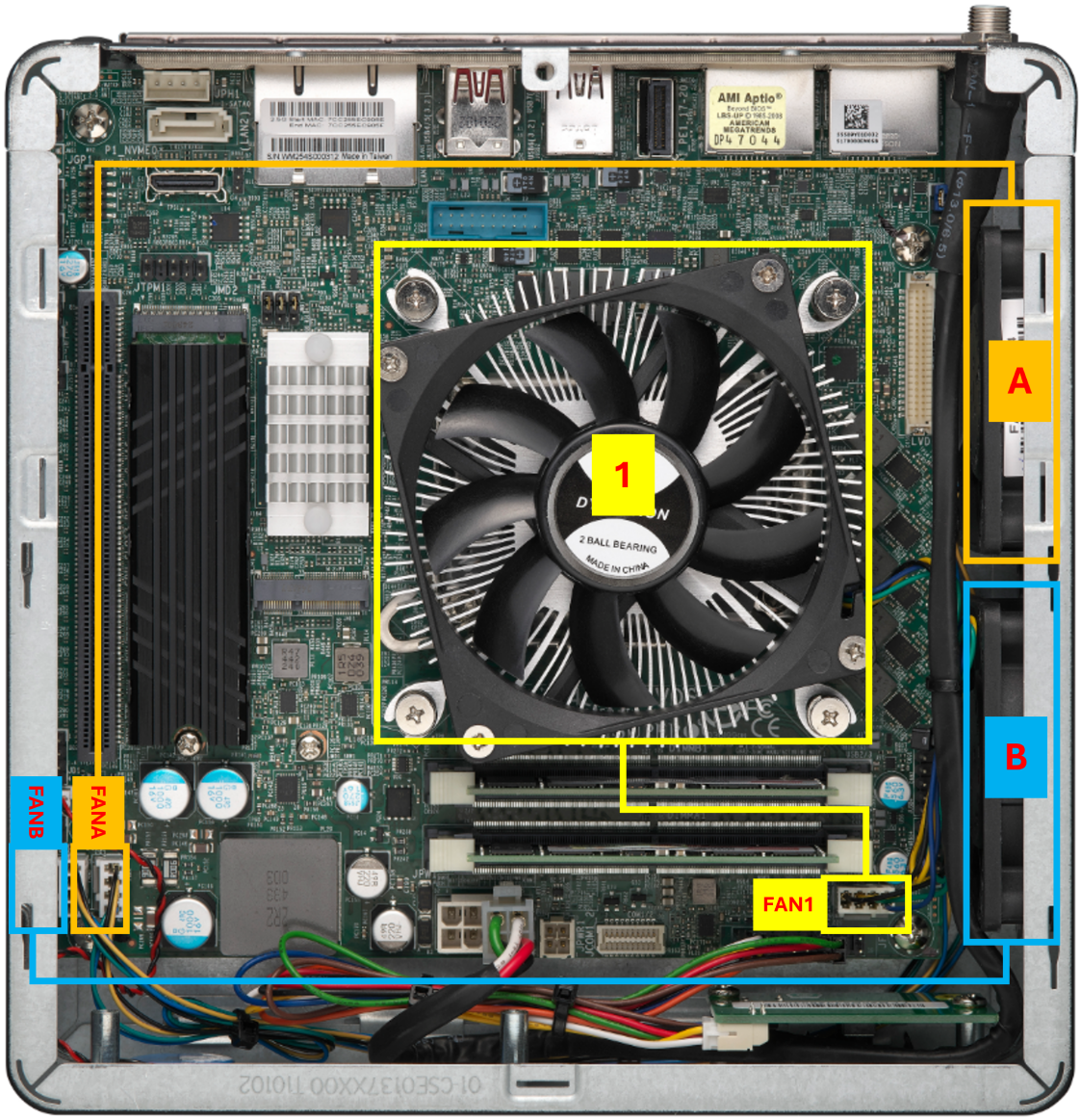



**Figure 3-18. Cable Routing Diagram**

# Chapter 4:

# Motherboard Connections, Jumpers, and LEDs

This section describes the connections on the motherboard and provides pinout definitions. Note that depending on how the system is configured, not all connections are required. The LEDs on the motherboard are also described here. A motherboard layout indicating component locations may be found in the "Introduction" on page 12. More detail can be found in the X14SAV-LVDS motherboard manual.

Review the "Standardized Warning Statements for AC Systems" on page 154 before installing or removing components.

# 4.1 Input/Output Ports

For information about input/output ports on the SYS-E201-14AR, refer to the following content.

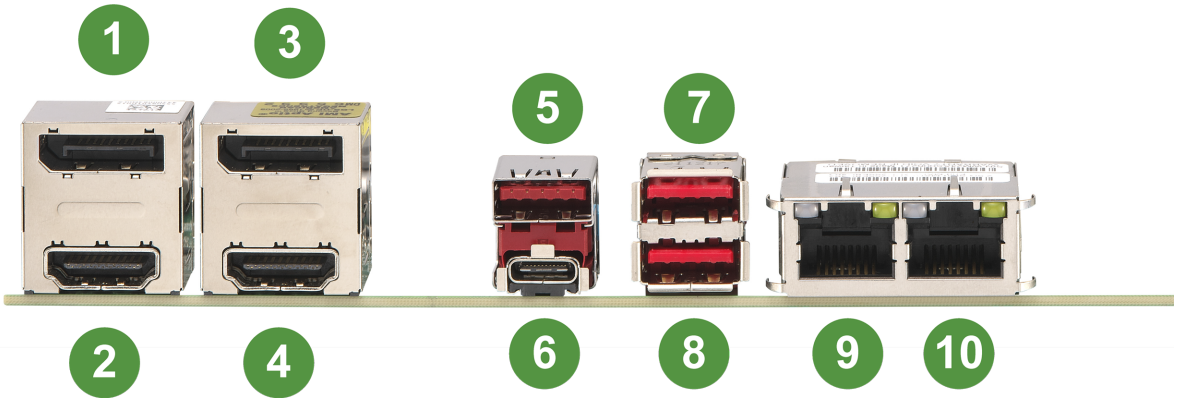



**Figure 4-1. X14SAV-LVDS I/O Ports**

| X14SAV-LVDS I/O Ports | | | |
|---|---|---|---|
| # | Description | # | Description |
| 1 | DisplayPort 2.1 | 6 | USB7 (USB Type-C) |
| 2 | HDMI 2.1 | 7 | USB4 (3.2) |
| 3 | DisplayPort 2.1 | 8 | USB5 (3.2) |
| 4 | HDMI 2.1 | 9 | LAN1 |
| 5 | USB6 (3.2) | 10 | LAN2 |

## HDMI and DP Ports

Two High Definition Multimedia Interface (HDMI) ports on the I/O panel. These ports are used to display both high definition video and digital sound through an HDMI-capable display. HDMI 2.1 allows faster frame rates and is backward compatible with previous HDMI versions. These ports provide Intel HD graphics digital output. There are also two DP ports on the I/O panel. These ports deliver digital display and fast refresh rate. They can connect to virtually any display device using a DisplayPort adapter for devices such as VGA, DVI, or HDMI.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

## LAN Ports

Two 2.5G LAN ports are located at LAN1 and LAN2 on the I/O panel. These ports accept RJ45 cables.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

## Unit Identifier Button

A Unit Identifier (UID) button and two LED indicators are located on the motherboard. The UID button is located near the I/O ports of the X14SAV-LVDS motherboard.

**Note:** After pushing and holding the UID button for 12 seconds, all BMC settings including username and password will revert back to the factory default. Only the network settings and FRU are retained.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Function | User Input | Behavior | LED Activity |
|---|---|---|---|
| UID LED Indicator | Push once<br>Push again | Turns on the UID LED<br>Turns off the UID LED | UID LED turns solid blue<br>UID LED turns off |
| BMC Reset | Push and hold for 6 seconds<br>Push and hold for 12 seconds | BMC will do a cold boot<br>BMC will reset to factory default | BMC Heartbeat LED turns solid green<br>BMC Heartbeat LED turns solid green |

| UID Button Pin Definitions: Four Total | |
|---|---|
| Pin# | Definition |
| 1 | Button In |
| 2 | GND |
| G1 | GND |
| G2 | GND |

| UID LED Pin Definitions: Four Total | |
|---|---|
| Color | Status |
| 1 | Button In |
| 2 | GND |
| G1 | GND |
| G2 | GND |

## USB Ports

The X14SAV-LVDS has three USB 3.2 ports (JUSB1, JUSB2, and JUSB3P1).

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Back Panel USB 3.2 Gen 2 x 1 Ports (JUSB1)<br>Pin Definitions: 22 Total | | | |
|---|---|---|---|
| **Pin#** | **Definition** | **Pin#** | **Definition** |
| G1 | GND | G3 | GND |
| A1 | VBUS1 | B1 | VBUS2 |
| A2 | USB2_CON_DN_P1 | B2 | USB2_CON_DN_P2 |
| A3 | USB2_CON_DP_P1 | B3 | USB2_CON_DP_P2 |
| A4 | GND | B4 | GND |
| A5 | USB32_RX_CON_DN_1 | B5 | USB32_RX_CON_DN_2 |
| A6 | USB32_RX_CON_DP_1 | B6 | USB32_RX_CON_DP_2 |
| A7 | GND | B7 | GND |
| A8 | USB32_TX_CON_DN_1 | B8 | USB32_TX_CON_DN_2 |
| A9 | USB32_TX_CON_DP_1 | B9 | USB32_TX_CON_DP_2 |
| G2 | GND | G4 | GND |

| Back Panel USB 3.2 Gen 2 x 1 Ports (JUSB2)<br>Pin Definitions: 13 Total | |
|---|---|
| **Pin#** | **Definition** |
| G1 | GND |
| G3 | GND |
| 1 | VBUS3 |
| 2 | USB2_CON_DN_P3 |
| 3 | USB2_CON_DP_P3 |
| 4 | GND |
| 5 | USB32_RX_CON_DN_5 |
| 6 | USB32_RX_CON_DP_5 |
| 7 | GND |
| 8 | USB32_TX_CON_DN_1 |

| Back Panel USB 3.2 Gen 2 x 1 Ports (JUSB2)<br><br>Pin Definitions: 13 Total | |
|---|---|
| **Pin#** | **Definition** |
| 9 | USB32_TX_CON_DP_1 |
| G2 | GND |
| G4 | GND |

| Back Panel USB 3.2 Gen 2 x 2 Ports (JUSB3P1)<br><br>Pin Definitions: 28 Total | | | |
|---|---|---|---|
| **Pin#** | **Definition** | **Pin#** | **Definition** |
| G1 | GND | G3 | GND |
| A1 | GND | B1 | GND |
| A2 | USB32_TX_DP_3_C | B2 | USB32_TX_DP_4_C |
| A3 | USB32_TX_DN_3_C | B3 | USB32_TX_DN_4_C |
| A4 | VBUS | B4 | VBUS |
| A5 | CC2 | B5 | CC1 |
| A6 | USB_2P0_TOP_BOT_P0_C | B6 | USB_2P0_TOP_BOT_P0_C |
| A7 | USB_2P0_TOP_BOT_N0_C | B7 | USB_2P0_TOP_BOT_N0_C |
| A8 | NC | B8 | NC |
| A9 | VBUS | B9 | VBUS |
| A10 | USB32_RX_DN_4_C | B10 | USB32_RX_DN_3_C |
| A11 | USB32_RX_DP_4_C | B11 | USB32_RX_DP_3_C |
| A12 | GND | B12 | GND |
| G2 | GND | G4 | GND |

# 4.2 Front Control Panel

JF1 on the X14SAV-LVDS motherboard 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.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

## Power Button

The Power Button connection is located on pins 1 and 2 of JF1 on the X14SAV-LVDS motherboard. Momentarily contacting both pins will power on/off the system. This button can also be configured to function as a suspend button (with a setting in the BIOS). To turn off the power when the system is in suspend mode, press the button for four seconds or longer.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

**Power Button**

**Pin Definitions (JF1)**

| Pin# | Definition |
|---|---|
| 1 | Signal |
| 2 | GND |

## Reset Button

The Reset Button connection is located on pins 3 and 4 of JF1 on the X14SAV-LVDS motherboard. Attach it to a hardware reset switch on the computer case to reset the system.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

**Reset Button**

**Pin Definitions (JF1)**

| Pin# | Definition |
|---|---|
| 3 | Reset |
| 4 | GND |

## Overheat/Fan Fail LED

Connect an LED cable to pins 7 and 8 of the Front Control Panel to use the Overheat/Fan Fail LED connections. The LED on pin 8 provides warnings of overheat or fan failure.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| OH/Fan Fail Indicator Status Pin Definitions (JF1) | |
|---|---|
| **State** | **Definition** |
| Off | Normal |
| On | Overheat |
| Flashing | Fan Fail |

| OH-FAN Fail LED Pin Definitions (JF1) | |
|---|---|
| **Pin#** | **Definition** |
| 7 | 3.3 V |
| 8 | OH-Fan Fail LED |

## NIC1/NIC2 (LAN1/LAN2)

The Network Interface Controller (NIC) LED connection for LAN port 1 is located on pins 11 and 12 of JF1 on the X14SAV-LVDS motherboard, and LAN port 2 is on pins 9 and 10. Attach the NIC LED cables here to display network activity.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| LAN1/LAN2 LED Pin Definitions (JF1) | |
|---|---|
| **Pin#** | **Definition** |
| 9 | 3.3 V Stby |
| 10 | NIC2 Link/Active LED |
| 11 | 3.3 V Stby |
| 12 | NIC1 Link/Active LED |

## HDD LED

The HDD LED connection is located on pins 13 and 14 of JF1 on the X14SAV-LVDS motherboard. Attach a cable to pin 14 to show storage drive activity status.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| HDD LED<br>Pin Definitions (JF1) | |
|---|---|
| **Pin#** | **Definition** |
| 13 | 3.3 V |
| 14 | HDD LED |

## Power LED

The Power LED connection is located on pins 15 and 16 of JF1 on the X14SAV-LVDS motherboard.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Power LED<br>Pin Definitions (JF1) | |
|---|---|
| **Pin#** | **Definition** |
| 15 | 3.3 V Stby |
| 16 | PWR LED |

## NMI Button

The non-maskable interrupt (NMI) button header is located on pins 19 and 20 of JF1 on the X14SAV-LVDS motherboard.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| NMI Button<br>Pin Definitions (JF1) | |
|---|---|
| **Pin#** | **Definition** |
| 19 | Control |
| 20 | GND |

# 4.3 Power Supply and Power Connections

For information about the power supply and power connections of the SYS-E201-14AR server, refer to the following content.

## 4-Pin HDD Power Connector

JPH1 is 4-pin power connector that provides power to onboard HDD devices.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| 4-pin HDD Power | |
|---|---|
| **Pin#** | **Definition** |
| 1 | +12 V |
| 2 | GND |
| 3 | GND |
| 4 | +5 V |

## 4-pin DC Power Source

JPWR1 is a necessary connection to the 24-pin ATX power header from the PSU via PN: CBL-PWEX-1066.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| 4-pin DC Power Source | |
|---|---|
| **Pin#** | **Definition** |
| 1 | P5VSB |
| 2 | GND |
| 3 | ATX_PWRGD |
| 4 | PSU_PSON_N |

## 8-pin DC Power Connector

JPV1 is an 8-pin 12 V DC power input for the processor that must be connected to the power supply.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| 8-pin DC Power<br><br>Pin Definitions: Eight Total | |
|---|---|
| **Pin#** | **Definition** |
| 1–4 | GND |
| 5–8 | +12 V (12 V Power) |

# 4.4 Headers and Connections

For information about the headers on the X14SAV-LVDS motherboard, refer to the following content.

## Chassis Intrusion

A Chassis Intrusion header is located at JL1 on the X14SAV-LVDS motherboard. Attach the appropriate cable from the chassis to inform you when the chassis is opened.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Chassis Intrusion<br>Pin Definitions: Two Total | |
|---|---|
| **Pin#** | **Definition** |
| 1 | Intrusion Input |
| 2 | GND |

## CMOS Battery

BT1 is a 2-pin connector for an external CMOS battery. This connector is also used to clear the CMOS. To clear the CMOS, remove the battery, short pins 1–2 for more than 10 seconds and then install the battery.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

## COM Header

There is one COM header at JCOM1_2 on the X14SAV-LVDS motherboard. Use a cable with the COM header to access the COM port. COM ports provide serial communication support.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| COM Header<br>Pin Definitions: 20 Total | | | |
|---|---|---|---|
| **Pin#** | **Definition** | **Pin#** | **Definition** |
| 1 | DCDA | 2 | DSRA |

| COM Header<br>Pin Definitions: 20 Total | | | |
|---|---|---|---|
| **Pin#** | **Definition** | **Pin#** | **Definition** |
| 3 | RXDA | 4 | RTSA |
| 5 | TXDA | 6 | CTSA |
| 7 | DTRA | 8 | RIA |
| 9 | GND | 10 | NC |
| 11 | DCDB | 12 | DSRB |
| 13 | RXDB | 14 | RTSB |
| 15 | TXDB | 16 | CTSB |
| 17 | DTRB | 18 | RIB |
| 19 | GND | 20 | NC |

## Fan Headers

There are three 4-pin fan headers (FAN1, FANA, FANB) on the X14SAV-LVDS motherboard. All the 4-pin fan headers are backwards compatible with the traditional 3-pin fans. It is recommended to use 4-pin fans to take advantage of the fan speed control via Pulse Width Modulation through the thermal management. This allows the fan speeds to be automatically adjusted based on the motherboard temperature.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| 4-pin Fan Header<br>Pin Definitions: Four Total | |
|---|---|
| **Pin#** | **Definition** |
| 1 | GND (Black) |
| 2 | +12 V (Red) |
| 3 | Tachometer |
| 4 | PWM Control |

## M.2 Slots

Two M.2 slots are located on the X14SAV-LVDS motherboard. M.2 was formerly known as Next Generation Form Factor (NGFF) and serves to replace mini PCIe. M.2 allows for a variety of card sizes, increased functionality, and spatial efficiency. The M.2 E-Key slot located at

JMD1 on the motherboard supports PCIe 4.0 x1 with USB 2.0 devices in the 2230 form factor. The M.2 M-Key slot located at JMD2 supports PCIe 5.0 x4 devices in the 2280 form factor.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

## MCIO PCIe 4.0 x4 Connector

One internal MCIO PCIe 4.0 x4 connector is located at JMCIO on the motherboard for high-performance storage connectivity through the NVMe interface.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| MCIO PCIe 4.0 x4<br>Pin Definitions: 38 Total | | | |
|---|---|---|---|
| **Pin#** | **Definition** | **Pin#** | **Definition** |
| A1 | GND | B1 | GND |
| A2 | PCIE_RX1+ | B2 | PCIE_TX1+ |
| A3 | PCIE_RX1- | B3 | PCIE_TX1- |
| A4 | GND | B4 | GND |
| A5 | PCIE_RX2+ | B5 | PCIE_TX2+ |
| A6 | PCIE_RX2- | B6 | PCIE_TX2- |
| -A7 | GND | B7 | GND |
| A8 | MCIO_CLKREQ_N | B8 | MCIO_CLK |
| A9 | WAKE_N | B9 | MCIO_DATA |
| A10 | GND | B10 | GND |
| A11 | CLK_100M_P | B11 | PLTRST_N |
| A12 | CLK_100M_N | B12 | NC |
| A13 | GND | B13 | GND |
| A14 | PCIE_RX3+ | B14 | PCIE_TX3+ |
| A15 | PCIE_RX3- | B15 | PCIE_TX3- |
| A16 | GND | B16 | GND |
| A17 | PCIE_RX4+ | B17 | PCIE_TX4+ |
| A18 | PCIE_RX4- | B18 | PCIE_TX4- |
| A19 | GND | B19 | GND |

## Speaker Header

On the JD1 header, close pins 3 and 4 with a cap to use the onboard buzzer. If you wish to use an external speaker, close pins 1-4 with a cable.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Buzzer/External Speaker<br>Pin Definitions: Four Total | |
|---|---|
| **Pin#** | **Definition** |
| Pins 1–4 | Speaker |

## TPM/Port 80 Header

The JTPM1 header on the X14SAV-LVDS motherboard is used to connect a Trusted Platform Module (TPM)/Port 80, which is available from Supermicro (optional). A TPM/Port 80 connector is a security device that supports encryption and authentication in hard drives. It allows the motherboard to deny access if the TPM associated with the hard drive is not installed in the system.

Go to the following link for more information on the TPM: https://www.supermicro.com/manuals/other/AOM-TPM-9670V_9670H__X12_H12.pdf.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Trusted Platform Module Header<br>Pin Definitions: 10 Total | | | |
|---|---|---|---|
| **Pin#** | **Definition** | **Pin#** | **Definition** |
| 1 | +3.3 V | 2 | SPI_CS# |
| 3 | RESET# | 4 | SPI_MISO |
| 5 | SPI_CLK | 6 | Ground |
| 7 | SPI_MOSI | 8 | No Connection |
| 9 | +3.3 V Stdby | 10 | SPI_IRQ# |

## USB Headers

The two USB 2.0 headers on the X14SAV-LVDS motherboard are at JUSB3 and JUSB4. There is also one USB 3.2 header at J4. The onboard headers can be used to provide front side USB access with a cable (not included).

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Front Panel USB 3.2 Gen 2 x1 Header (J4) Pin Definitions: 19 Total | | | |
|---|---|---|---|
| **Pin#** | **Definitions** | **Pin#** | **Definitions** |
| 1 | VBUS | 11 | USB2_CON_DN_P6 |
| 2 | USB32_RX_CON_DN_7 | 12 | USB2_CON_DP_P6 |
| 3 | USB32_RX_CON_DP_7 | 13 | GND |
| 4 | GND | 14 | USB32_TX_CON_DP_6 |
| 5 | USB32_TX_CON_DN_7 | 15 | USB32_TX_CON_DN_6 |
| 6 | USB32_TX_CON_DP_7 | 16 | GND |
| 7 | GND | 17 | USB32_RX_CON_DP_6 |
| 8 | USB2_CON_DN_P7 | 18 | USB32_RX_CON_DN_6 |
| 9 | USB2_CON_DP_P7 | 19 | GND |
| 10 | GND | | |

| USB 2.0 Headers (JUSB3, JUSB4) Pin Definitions: 12 Total | | | |
|---|---|---|---|
| **Pin#** | **Definitions** | **Pin#** | **Definitions** |
| G1 | GND | G3 | GND |
| A1 | VBUS1 | B1 | VBUS2 |
| A2 | USB2_CON_DN_P1 | B2 | USB2_CON_DN_P2 |
| A3 | USB2_CON_DP_P1 | B3 | USB2_CON_DP_P2 |
| A4 | GND | B4 | GND |
| A5 | | B5 | |

## 4.5 Jumper Settings

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.

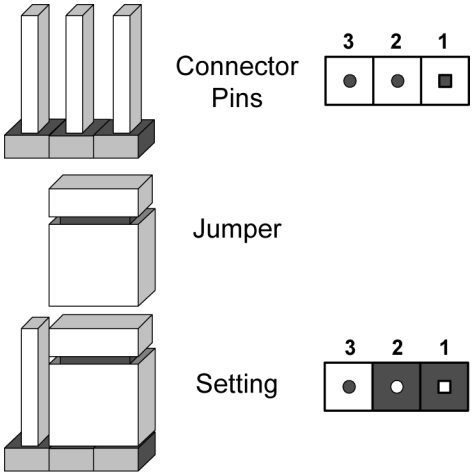



**Figure 4-2. Jumping Connector Pins**

### CMOS Clear

JBT1 on the X14SAV-LVDS motherboard 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.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.


1. First power down the system and unplug the power cord(s).
2. Remove the cover of the chassis to access the motherboard.
3. Remove the onboard battery from the motherboard.

4. Short the CMOS pads, JBT1, with a metal object such as a small screwdriver for at least four seconds.

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

5. Remove the screwdriver (or shorting device).
6. Replace the cover, reconnect the power cord(s), and power on the system.

## ME Manufacturing Mode

Close pins 2–3 of jumper JPME2_CPU1 and JPME_PCH1 to bypass SPI flash security and force the system to operate in the manufacturing mode, which will allow the user to flash the system firmware from a host server for system setting modifications. Refer to the table below for jumper settings. The default setting is Normal.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

**ME Manufacturing Mode Jumper Settings**

| Jumper Setting | Definition |
|---|---|
| Pins 1–2 | Normal (Default) |
| Pins 2–3 | Manufacturing Mode |

## PCIe Bifurcation

Use JRF1 and JRF2 to adjust the PCIe lane options on the PCIe slot. The options are x16 or x8x8.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

**PCIe Bifurcation Jumper Settings**

| JRF1 | JRF2 | PEG |
|---|---|---|
| Pins 2–3 | Pins 2–3 | x16 (PCIe)(Default) |
| Pins 2–3 | Pins 1–2 | 2x8 (PCIe) |
| Pins 1–2 | Pins 1–2 | 1x8, 2x4 (PCIe) |

## Onboard TPM Enable/Disable

Use JPT1 to enable or disable the onboard TPM.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| TPM Enable/Disable Jumper Settings | |
|---|---|
| **Jumper Setting** | **Definition** |
| Pins 1–2 | Enabled (Default) |
| Pins 2–3 | Disabled |

## VGA Enable/Disable

Jumper JPG1 allows you to enable the onboard VGA connector on the X14SAV-LVDS motherboard. The default setting is pins 1–2 to enable the connection.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| VGA Enable/Disable Jumper Settings | |
|---|---|
| **Jumper Setting** | **Definition** |
| Pins 1–2 | Enabled (Default) |
| Pins 2–3 | Disabled |

## Watchdog Timer

Watchdog (JWD1) is a system monitor that can reboot the system when a software application hangs. Close pins 1–2 to reset the system if an application hangs. Close pins 2–3 to generate a non-maskable interrupt (NMI) signal for the application that hangs. The Watchdog must also be enabled in the BIOS.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Watchdog Timer Jumper Settings | |
|---|---|
| **Jumper Setting** | **Definition** |
| Pins 1–2 | Reset (Default) |
| Pins 2–3 | NMI |
| Open | Disabled |

## 4.6 LED Indicators

For information about the LED indicators on the SYS-E201-14AR server, refer to the following content.

### Power LED

The Power LED is located on the X14SAV-LVDS motherboard. When this LED is on, power is present on the motherboard. In suspend mode, this LED will blink on and off. Be sure to turn off the system and unplug the power cord before removing or installing components.

For a detailed diagram of the X14SAV-LVDS motherboard, see the layout under "Motherboard Quick Reference" on page 18.

| Power LED Indicator | |
|---|---|
| **LED Color** | **Definition** |
| Blinking | S3 Status |
| Green | Power On |

# Chapter 5:

# Software

After the SYS-E201-14AR server 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 https://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. Retrieve the proper drivers. 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 bootup.

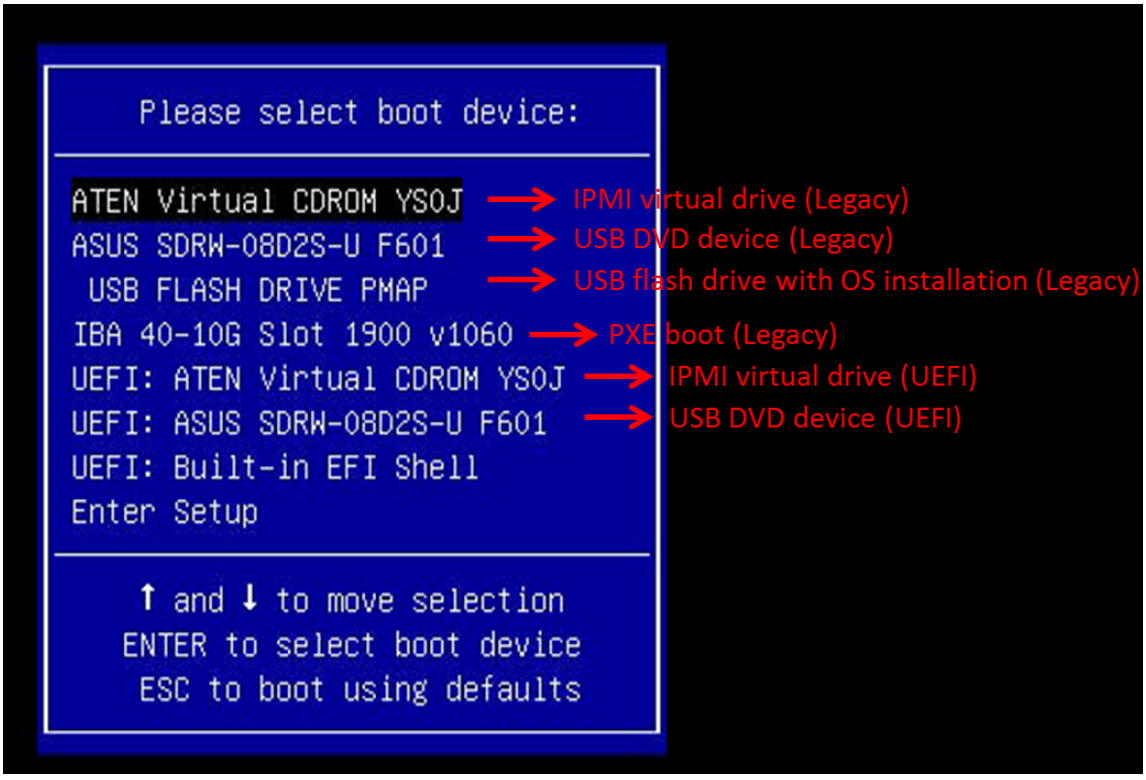



**Figure 5-1. Select Boot Device**

4. During Windows Setup, continue to the dialog box where you select the drives on which to install Windows. If the disk you want to use is not listed, click on the “Load driver” link at the bottom left corner.

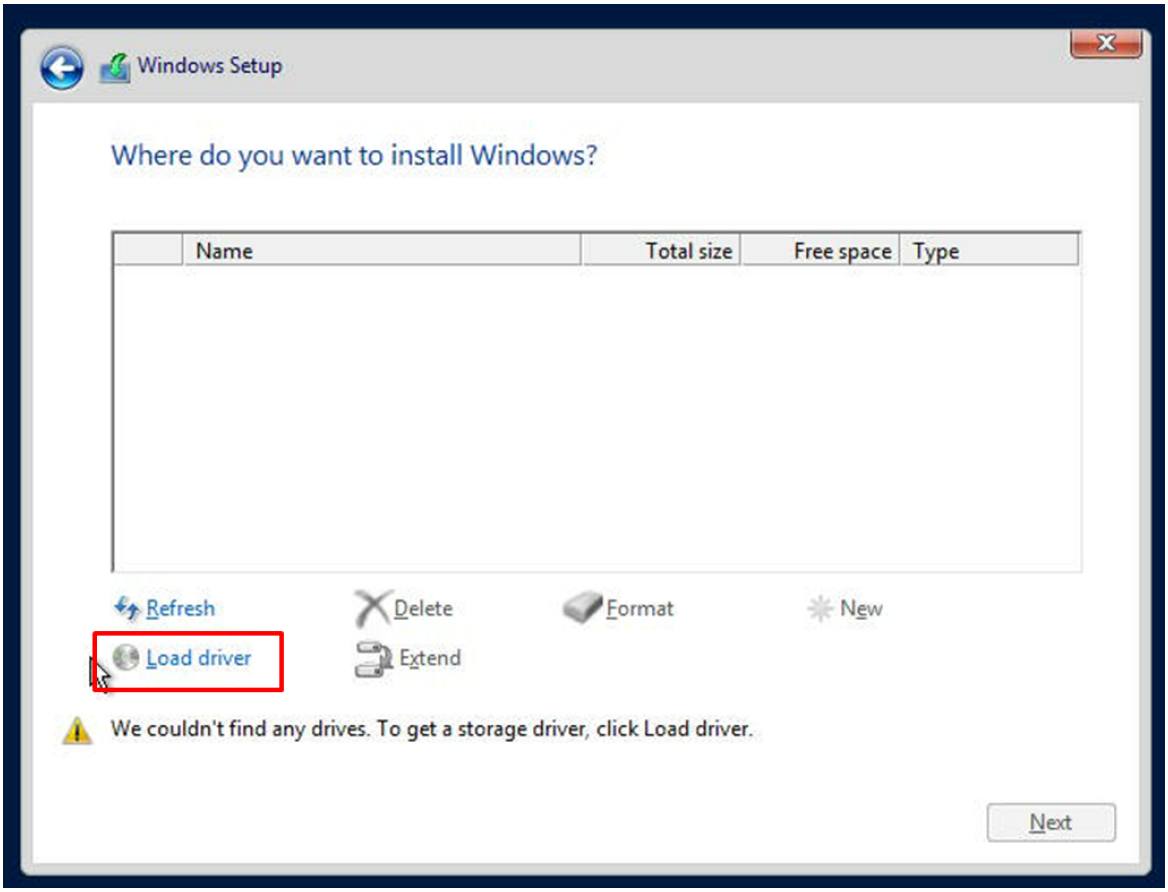



**Figure 5-2. Load Driver Link**

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

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

## Driver Installation

The Supermicro website contains drivers and utilities for your system at the following page:

https://www.supermicro.com/wdl.

Some of these drivers and utilities must be installed, such as the chipset driver. After accessing the website, go into the CDR_Images (in the parent directory of the above link) and locate the ISO file for your motherboard. Download this file to a USB flash or media drive. You may also use a utility to extract the ISO file if preferred.

Another option is to go to the Supermicro website at https://www.supermicro.com. 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.

**Note:** Click the icons showing a hand writing on paper to view the readme files for each item. Click the computer icons to the right of these items to install each item (from top to 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.

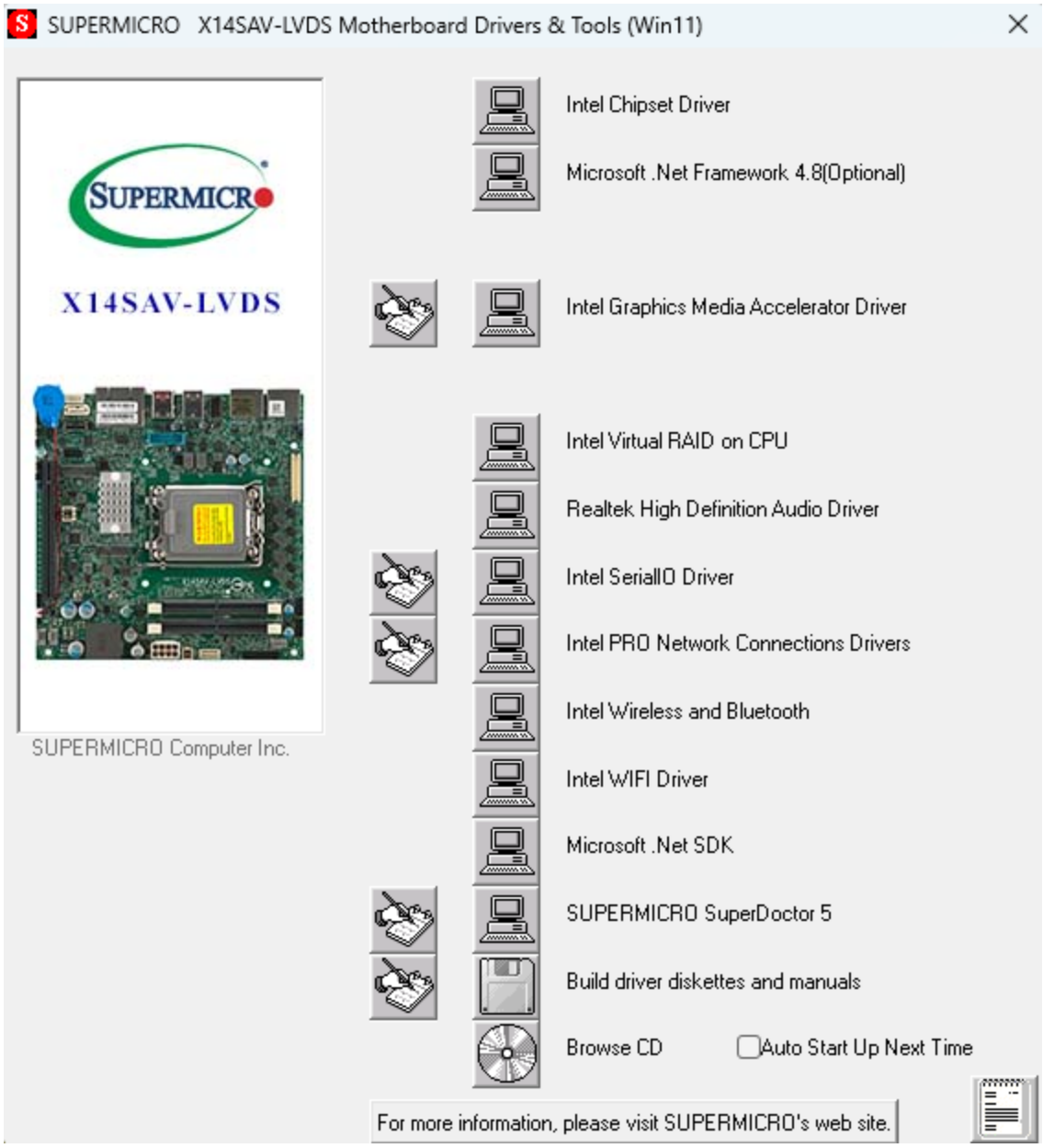



**Figure 5-3. Driver & Tools Installation Screenshot**

# Chapter 6:

# Optional Components

This chapter describes alternate configurations and optional system components for the SYS-E201-14AR server.

## 6.1 TPM Security Module

This is an SPI-capable TPM 2.0 with Infineon 9672 controller.

The JTPM1 header is used to connect a Trusted Platform Module (TPM). A TPM is a security device that supports encryption and authentication in storage drives. It enables the X14SAV-LVDS motherboard to deny access if the TPM associated with the storage drive is not installed in the SYS-E201-14AR server.

For details and installation procedures, refer to the following page:

https://www.supermicro.com/en/products/accessories/addon/AOM-TPM-9672V.php

- AOM-TPM-9672V (TCG 2.0)

# Chapter 7:

# Troubleshooting and Support

The following content contains information on common issues and how to resolve them.

## 7.1 Online Resources

A great deal of information is available on the Supermicro website. From the top menu of the Supermicro home page at https://www.supermicro.com:

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

### *Direct Links for the SYS-E201-14AR System*

- SYS-E201-14AR specifications page
- X14SAV-LVDS 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: https://www.supermicro.com/FAQ/index.php
- TPM User Guide: https://www.supermicro.com/manuals/other/AOM-TPM-9670V_9670H__X12_H12.pdf
- Product Resources page for validated memory details: https://www.supermicro.com/support/resources/mem.cfm
- Product Matrices page for links to tables summarizing specs for systems, motherboards, power supplies, riser cards, add-on cards, and more: https://www.supermicro.com/en/support/product-matrices
- Security Center for recent security notices: https://www.supermicro.com/en/support/security_center
- Supermicro Phone and Addresses: https://www.supermicro.com/en/about/contact

## 7.2 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" on page 85 section in this chapter. Always disconnect the AC power cord before adding, changing or installing any non hot-swap hardware components. If the below steps do not fix the setup configuration problem, contact your vendor for repairs.

### Before Power On

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

### No Power

1. Make sure that there are no short circuits between the motherboard and the chassis.
2. 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.

### No Video

1. If the power is on, but you do not have video, remove all add-on cards and cables.
2. Remove all memory modules and turn on the system (if the alarm is on, check the specs of memory modules, reset the memory, or try a different one).

### System Boot Failure

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

1. Remove all components from the motherboard, especially the DIMMs. Power on the system and check if the power-on LED and the BMC Heartbeat LED are on, and system fans are spinning.

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

## Memory Errors

When suspecting faulty memory is causing the system issue, check the following:

1. Make sure that the memory modules are compatible with the system and are properly installed. See "Maintenance and Component Installation" on page 28 for installation instructions. (For memory compatibility, refer to the "Tested Memory List" link on the motherboard's product page to see a list of supported memory.)
2. Check if different speeds of DIMMs have been installed. It is strongly recommended that you use the same RAM type and speed for all DIMMs in the system.
3. Make sure that you are using the correct type of DIMMs recommended by the manufacturer.
4. Check for bad DIMMs or slots by swapping a single module among all memory slots and check the results.

## Losing the System's 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 "Introduction" on page 12 for details on recommended 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.

## If the System Becomes Unstable

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

   1. Processor/BIOS support: Make sure that your processor is supported and that you have the latest BIOS installed in your system.
   2. Memory support: Make sure that the memory modules are supported. Refer to the product page on our website at https://www.supermicro.com. Test the modules using memtest86 or a similar utility.

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

3. Storage Drive support: Make sure that all storage drives work properly. Replace the failed storage drives with good ones.
4. System cooling: Check the system cooling to make sure that all heatsink fans and processor/system fans, etc., work properly. 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. 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 a CD/Media drive.
2. Cable connection: Check to make sure that all cables are connected and working properly.
3. Use the minimum configuration for troubleshooting: Remove all unnecessary components (starting with add-on cards first), and use the minimum configuration (but with the processor and a memory module installed) to identify the trouble areas. Refer to the steps listed above in this section for proper troubleshooting procedures.
4. Identify bad components by isolating them: If necessary, remove a component in question from the chassis, and test it in isolation to make sure that it works properly. Replace a bad component with a good one.
5. Check and change one component at a time instead of changing several items at the same time. This will help isolate and identify the problem.
6. To find out if a component is good, swap this component with a new one to see if the system will work properly. If so, then the old component is bad. You can also install the component in question in another system. If the new system works, the component is good and the old system has problems.

## 7.3 CMOS Clear

JBT1 on the X14SAV-LVDS motherboard is used to clear CMOS, which will also clear any passwords. For information on clearing CMOS, refer to "CMOS Clear" on page 66 earlier in this manual.

## 7.4 Motherboard Battery

For information on removing, disposing of, and replacing the motherboard battery of your system, refer to Motherboard Battery Removal and Installation.

## 7.5 Where to Get Replacement Components

If you need replacement parts for your SYS-E201-14AR server, to ensure the highest level of professional service and technical support, purchase exclusively from our Supermicro Authorized Distributors/System Integrators/Resellers. A list can be found on the Supermicro website:

https://www.supermicro.com

Under the "Buy" menu, click the "Where to Buy" link.

## 7.6 Technical Support Procedures

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

1. Refer to Troubleshooting Procedures or see the FAQs on our website (https://www.supermicro.com/FAQ/index.php) before contacting Technical Support.
2. BIOS upgrades can be downloaded from our website (https://www.supermicro.com/support/resources/bios_ipmi.php).
3. If you still cannot resolve the problem, include the following information when contacting Supermicro for technical support:
   - Motherboard model and PCB revision number
   - BIOS release date/version (This can be seen on the initial display when your system first boots up.)
   - System configuration
4. An example of a Technical Support form is on our website at https://webpr3.supermicro.com/SupportPortal.
5. Distributors: For immediate assistance, have your account number ready when placing a call to our Technical Support department. For Supermicro contact information, refer to "Contacting Supermicro" on page 11.

### Returning Merchandise for Service

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

For faster service, RMA authorizations can be requested online at the following page:

https://www.supermicro.com/RmaForm

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

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

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

## 7.7 Feedback

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

# Chapter 8:

# UEFI BIOS

The following content contains information on BIOS configuration with the SYS-E201-14AR server.

# 8.1 Introduction

This chapter describes the AMIBIOS™ Setup utility for the motherboard. The BIOS is stored on a chip and can be easily upgraded using the UEFI script (flash.nsh) or the SuperServer Automation Assistant (SAA) utility.

**Note:** Due to periodic changes to the BIOS, some settings may have been added or deleted and might not yet be recorded in this manual. Refer to the Manual Download area of our website for any changes to BIOS that may not be reflected in this manual.

## Updating BIOS

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 the following page:

https://www.supermicro.com/support/resources/bios_ipmi.php

Check our BIOS warning message and the information on how to update your BIOS on our website. Select your motherboard model and download the BIOS file to your computer. Also, check the current BIOS revision to make sure that it is newer than your BIOS before downloading.

**Important:** Do not shut down or reset the system while updating the BIOS to prevent possible system boot failure! Read the motherboard README file carefully before you perform the BIOS update.

Unzip the BIOS file onto a bootable USB device and then boot into the built-in UEFI Shell and type "flash.nsh <BIOS filename>" to start the BIOS update. The flash script will invoke the (EFI) tool automatically to perform the BIOS update. After uploading the firmware, the system will reboot to continue the process. The process will take 3–5 minutes.

## Starting the Setup Utility

To enter the BIOS Setup utility, press the <Delete> key while the system is booting-up. In most cases, the <Delete> key is used to invoke the BIOS Setup screen. There are a few cases when other hot keys are used, such as <F1>, <F2>, etc. Each main BIOS menu option is described in this manual.

The Main BIOS screen has two main frames. The left frame displays all the options that can be configured. “Grayed-out” options cannot be configured. The right frame displays the key legend. Above the key legend is an area reserved for a text message. When a BIOS submenu or item is selected in the left frame, it is highlighted in white. Often a text message will

accompany it. (Note that BIOS has default text messages built in. We retain the option to include, omit, or change any of these text messages.) Settings printed in Bold are the default values.

A "►" indicates a submenu. Highlighting such an item and pressing the <Enter> key open the list of settings within that submenu.

The BIOS Setup utility uses a key-based navigation system called hot keys. Most of these hot keys (<F1>, <F2>, <F3>, <F4>, <F5>, <F6>, <Enter>, <ESC>, the arrow keys, etc.) can be used at any time during the setup navigation process.

## 8.2 Main Setup

The Main setup screen appears when the AMI BIOS Setup utility is first entered. To return to the Main setup screen, select the Main tab at the top of the screen. The Main BIOS setup screen is shown below.


**Figure 8-1. Main Setup Screen**

### System Date/System Time

Use the two features to change the system date and time. Highlight **System Date** or **System Time** using the arrow keys. Enter new values using the keyboard. Press the <Tab> key or the arrow keys to move between fields. The date must be entered in MM/DD/YYYY format. The time is entered in HH:MM:SS format.

**Note:** The time is in the 24-hour format. For example, 5:30 P.M. appears as 17:30:00.

### Supermicro X14SAV-LVDS

### BIOS Version

This feature displays the version of the BIOS ROM used in the system.

**Build Date**

This feature displays the date when the version of the BIOS ROM used in the system was built.

**Memory Information**

**Total Memory**

This feature displays the total size of memory available in the system.

## 8.3 Advanced Setup Configurations

Use the arrow keys to select the Advanced submenu and press <Enter> to access the submenu items.

**Important:** Use caution when changing the Advanced settings. An incorrect value, an improper DRAM frequency, or a wrong BIOS timing setting may cause the system to malfunction. When this occurs, revert the settings to the default manufacturing settings.

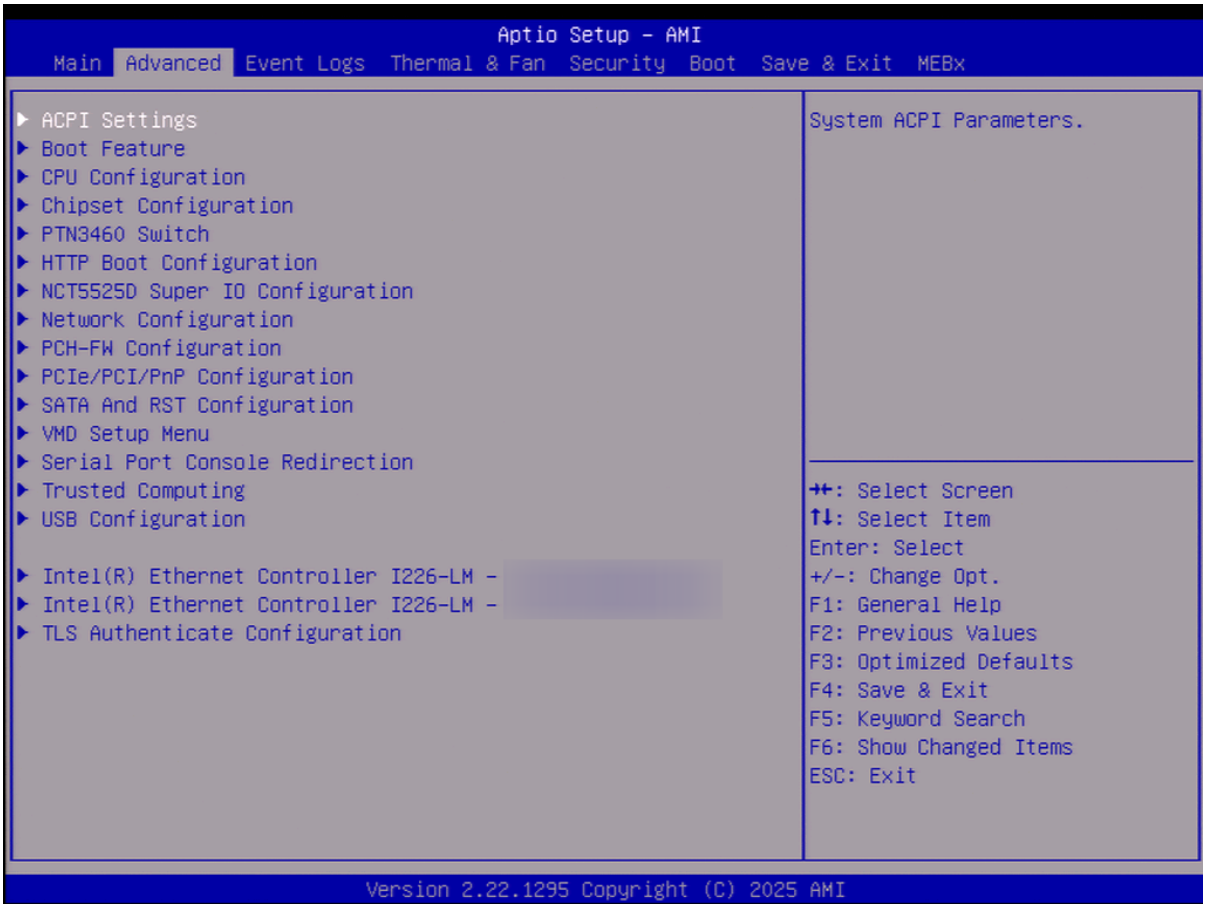



**Figure 8-2. Advanced Setup Screen**

### ACPI Settings Menu

#### ►ACPI Settings

**ACPI Sleep State**

Use this feature to select the ACPI Sleep State that the system will enter into when the suspend button is activated. The options are Suspend Disabled and **S3 (Suspend to RAM)**.

**WHEA Support**

Select Enabled to support the Windows Hardware Error Architecture (WHEA) platform and provide a common infrastructure for the system to handle hardware errors within the Windows OS environment to reduce system crashes and to enhance system recovery and health monitoring. The options are Disabled and **Enabled**.

**High Precision Event Timer**

Select Enabled to activate the High Precision Event Timer (HPET) that produces periodic interrupts at a much higher frequency than a Real-time Clock (RTC) does in synchronizing multimedia streams, providing smooth playback and reducing the dependency on other timestamp calculation devices, such as an x86 RDTSC Instruction embedded in the CPU. The High Performance Event Timer is used to replace the 8254 Programmable Interval Timer. The options are Disabled and **Enabled**.

**Native PCIe Enable**

Enable this feature to grant control of PCI Express Native hot plug, PCI Express Power Management Events, and PCI Express Capability Structure Control. The options are Disabled and **Enabled**.

**Native ASPM**

Select Enabled for the operating system to control the ASPM, or Disabled for the BIOS to control the ASPM. The options are Auto, Enabled, and **Disabled**.

## Boot Feature Menu

### ►Boot Feature

**Quiet Boot**

Use this feature to select the screen between displaying the Power-on Self Test (POST) messages or the OEM logo upon bootup. Select Disabled to display the POST messages. Select Enabled to display the OEM logo instead of the normal POST messages. The options are Disabled and **Enabled**.

**Note:** BIOS POST messages are always displayed regardless of the setting of this feature.

**Fast Boot**

This feature enables the system to boot with a minimal set of required devices to launch. This has no effect on BBS boot options. The options are **Disabled** and Enabled.

**Bootup NumLock State**

Use this feature to set the Power-on state for the <Numlock> key. The options are **On** and Off.

**Wait For "F1" If Error**

Select Enabled to force the system to wait until the <F1> key is pressed if an error occurs. The options are Disabled and **Enabled**.

**Re-try Boot**

If this feature is set to Enabled, the system BIOS will automatically reboot the system from an Extensible Firmware Interface (EFI) boot device after an initial boot failure. The options are **Disabled** and Enabled.

**Power Configuration**

**Watch Dog Function**

Select Enabled to allow the Watch Dog timer to reboot the system when it is inactive for more than five minutes. The options are **Disabled** and Enabled.

**Restore on AC Power Loss**

Use this feature to set the power state after a power outage. Select Stay Off for the system power to remain off after a power loss. Select Power On for the system power to be turned on after a power loss. Select Last State to allow the system to resume its last power state before a power loss. The options are Stay Off, Power On, and **Last State**.

**Power Button Function**

This feature controls how the system shuts down when the power button is pressed. Select 4 Seconds Override to power off the system after pressing and holding the power button for four seconds or longer. Select Instant Off to instantly power off the system as soon as you press the power button. The options are **Instant Off** and 4 Seconds Override.

**DeepSx Power Policies**

Use this feature to configure the Advanced Configuration and Power Interface (ACPI) settings for the system. Enable S4 to use Hibernation mode (Suspend to Disk) so that all data stored in the main memory can be saved in a non-volatile memory area such as in a hard drive and then power down the system. Enable S5 to power off the whole system except the power supply unit (PSU) and keep the power button alive so that you can wake up the system by using a USB keyboard or mouse. The options are **Disabled**, Enabled In S4-S5, and Enabled in S5.

**Delay Time Before PCI Enumeration**

Use this feature to set the amount of time the system waits before enumerating PCI devices during the boot process. The valid range is 0–30 with a step of 1 second. The default setting is **0** for off, meaning the system will skip the delay time and immediately begin enumerating PCI devices.

## CPU Configuration Menu

### ►CPU Configuration

The following processor information is displayed.

- Processor BSP Revision
- CPU Signature
- Microcode Patch
- Max CPU Speed
- Min CPU Speed
- Number of Performance-core(s)
- Number of Efficient-core(s)
- VMX
- SMX/TXT
- 64-bit
- EIST Technology
- CPU C3 state
- CPU C6 state
- CPU C7 state
- CPU C8 state
- CPU C9 state
- CPU C10 state
- Performance L1 Data Cache
- Performance L1 Instruction Cache
- Performance L2 Cache
- Performance L3 Cache
- Efficient L1 Data Cache
- Efficient L1 Instruction Cache
- Efficient L2 Cache
- Efficient L3 Cache

### Intel (VMX) Virtualization Technology

Select Enabled to enable the Intel Vanderpool Technology for Virtualization platform support, which allows multiple operating systems to run simultaneously on the same computer to maximize system resources for performance enhancement. The options are Disabled and **Enabled**. Changes take effect after you save settings and reboot the system.

**Notes:**

- This feature is NOT available when "TXT Support" is set to Enabled.
- This feature is NOT available when "Workload Profile" is set to Virtualization, Telco NFVI, Telco NFVI-FP, or Telco FlexRAN.

### Active Performance-cores

This feature determines how many performance cores will be activated for each processor package. When all is selected, all cores in the processor will be activated. The options are **All** 7, 6, 5, 4, 3, 2, and 1.

### Active Efficient-cores

This feature determines how many efficient cores will be activated for each processor package. When all is selected, all cores in the processor will be activated. The options are **All**, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, and 0.

### AES

Select Enabled to use the Intel Advanced Encryption Standard (AES) to ensure data security. The options are Disabled and **Enabled**.

### Boot Performance Mode

This feature allows you to select the performance state that the BIOS will set before the operating system handoff. The options are **Max Non-Turbo Performance** and Turbo Performance.

### Intel® SpeedStep™

Intel SpeedStep Technology allows the system to automatically adjust processor voltage and core frequency to reduce power consumption and heat dissipation. The options are Disabled and **Enabled**.

### Intel® Speed Shift Technology

Use this feature to enable or disable Intel Speed Shift Technology support. When this feature is enabled, the Collaborative Processor Performance Control (CPPC) version 2 interface will be available to control CPU P-States. The options are Disabled and **Enabled**.

**Turbo Mode (Available when "SpeedStep (P-States)" is set to Enabled and when "Workload Profile" is set to Disabled)**

Select Enabled to allow the CPU to operate at the manufacturer-defined turbo speed by increasing CPU clock frequency. This feature is available when it is supported by the processors used in the system. The options are Disabled and **Enabled**.

**Power Limit 1 Override**

Select Enabled to support average power limit (PL1) override. The options are **Disabled** and Enabled.

**Power Limit 2 Override**

Select Enabled to support rapid power limit (PL2) override. The options are Disabled and **Enabled**.

**Power Limit 2**

Use this feature to configure the value for Power Limit 2. The value is in milliwatts and the step size is 125 mW. Use the number keys on your keyboard to enter the value. Enter 0 to use the manufacture default setting. If the value is 0, the BIOS will set PL2 as 1.25* TDP.

**C-States**

Use this feature to enable the C-State of the CPU. The options are Disabled and **Enabled**.

**Enhanced C-States**

Use this feature to enable the enhanced C-State of the CPU. The options are Disabled and **Enabled**.

**C-State Auto Demotion**

Use this feature to prevent unnecessary excursions into the C-states to improve latency. The options are Disabled and **C1**.

**C-State Un-Demotion**

This feature allows you to enable or disable the un-demotion of C-State. The options are Disabled and **C1**.

**Package C-State Demotion**

Use this feature to enable or disable the Package C-State demotion. The options are Disabled and **Enabled**.

**Package C-State Un-Demotion**

Use this feature to enable or disable the Package C-State un-demotion. The options are Disabled and **Enabled**.

**C-State Pre-Wake**

This feature allows you to enable or disable the C-State Pre-Wake. The options are Disabled and **Enabled**.

**Package C-State Limit**

Use this feature to set the Package C-State limit. The options are C0/C1, C2, C3, C6, C7, C7s, C8, C9, C10, Cpu Default, and **Auto**.

**Monitor MWAIT**

Select Enabled to support MONITOR and MWAIT, which are two instructions in Streaming SIMD Extension 3 (SSE3) to improve synchronization between multiple threads for CPU performance enhancement. The options are Disabled and **Enabled**.

## Chipset Configuration Menu

### ►Chipset Configuration

**Important:** Setting the wrong values in this section may cause the system to malfunction.

**System Agent (SA) Configuration**

VT-d Supported

**VT-d**

Select Enabled to activate Intel Virtualization Technology support for Direct I/O VT-d by reporting the I/O device assignments to VMM through the DMAR ACPI Tables. This feature offers fully-protected I/O resource-sharing across the Intel platforms, providing the user with greater reliability, security and availability in networking and data-sharing. The options are **Enabled** and Disabled.

**X2APIC Enable**

Use this feature to enable or disable the Advanced Programmable Interrupt Controller (X2APIC) operating mode. The options are Disabled and **Enabled**.

**DMA Control Guarantee**

Use this feature to enable or disable DMA Control Guarantee bit. The options are **Enabled** and Disabled.

## *Memory Configuration Menu*

### ►Memory Configuration

This submenu is used to configure the Integrated Memory Controller (IMC) settings.

- Memory RC Version
- Memory Frequency
- Memory Timings (tCL-tRCD-tRP-tRAS)
- DIMMA1
- DIMMA2
- DIMMB1
- DIMMB2

**Maximum Memory Frequency**

Use this feature to set the maximum memory frequency for onboard memory modules. The options are **Auto**, 1600, 2400, 3200, 3600, 4000, 4200, 4400, 4600, 4800, 5000, 5200, 5400, 5600, 5800, 6000, 6200, and 6400.

**Max TOLUD**

This feature sets the maximum TOLUD value, which specifies the "Top of Low Usable DRAM" memory space to be used by internal graphics devices, GTT Stolen Memory, and TSEG, respectively, if these devices are enabled. The options are **Dynamic**, 1 GB, 1.25 GB, 1.5 GB, 1.75 GB, 2 GB, 2.25 GB, 2.5 GB, 2.75 GB, 3 GB, 3.25 GB, and 3.5 GB.

**Memory Scrambler**

Use this feature to enable or disable memory scrambler support. The options are Disabled and **Enabled**.

**Force ColdReset**

Use this feature to enable or disable a cold boot during a MRC execution. The options are Enabled and **Disabled**.

**Force Single Rank**

Select enabled to use only Rank 0 in each DIMM. The options are **Disabled** and Enabled.

**Memory Remap**

Use this feature to enable or disable memory remap above 4 GB. The options are **Enabled** and Disabled.

**MRC Fast Boot**

Use this feature to enable or disable fast path through the memory reference code. The options are Disabled and **Enabled**.

**Total Memory Encryption**

Use this feature to enable or disable Total Memory Encryption (TME). When enabled, Intel TME enhances memory data security. The options are **Disabled** and Enabled.

### *Graphics Configuration Menu*

#### ►Graphics Configuration

This submenu allows you to configure the graphics configuration settings.

**Graphics Configuration**

**IGFX GOP Version**

**Skip Scanning of External Gfx Card**

If this feature is enabled, the system will not scan for an external graphics card on PEG and PCIe slots. The options are **Disabled** and Enabled.

**Primary Display**

Use this feature to select the primary video display. The options are Auto and **IGFX**.

**Internal Graphics**

Select Auto to keep an internal graphics device installed on an expansion slot supported by the CPU to be automatically enabled. The options are Auto, Disabled, and **Enabled**.

**DVMT Pre-Allocated**

Dynamic Video Memory Technology (DVMT) allows dynamic allocation of system memory to be used for video devices to ensure best use of available system memory based on the DVMT 5.0 platform. The options are 0M, 32M, 64M, 96M, **128M**, 4M, 8M, 12M, 16M, 20M, 24M, 28M, 32M/F7, 36M, 40M, 44M, 48M, 52M, 56M, and 60M.

**Configure GT for use**

Use this feature to enable or disable GT configuration. The options are Disabled and **Enabled**.

**PAVP Enable**

Use this feature to enable or disable PAVP support. The options are Disabled and **Enabled**.

### *DMI Configuration Menu*

#### ►DMI Configuration

This submenu allows you to configure the DMI configuration settings.

**DMI ASPM**

Use this feature to set the Active State Power Management (ASPM) state on the System Agent (SA) side of the DMI Link. The options are Disabled, ASPM L1, and **Auto**.

## *PEG Port Configuration*

### ►PEG Port Configuration

**CPU SLOT7 PCIe 5.0 X16**

**Enable Root Port**

Use this feature to enable or disable the PCIe Graphics (PEG) device in the specified port . The options are Disabled and **Enabled**.

**Max Link Speed**

Use this feature to select PCIe support for the device installed in slot 7. The options are **Auto**, Gen1, Gen2, Gen3, Gen4, and Gen5.

**P1_PE1 17-20**

**Enable Root Port**

Use this feature to enable or disable the PCIe Graphics (PEG) device in the specified port . The options are Disabled and **Enabled**.

**Max Link Speed**

Use this feature to select PCIe support for the device installed P1_in . The options are **Auto**, Gen1, Gen2, Gen3, Gen4, and Gen5.

**M.2-C1**

**Enable Root Port**

Use this feature to enable or disable the PCIe Graphics (PEG) device in the specified port . The options are Disabled and **Enabled**.

**Max Link Speed**

Use this feature to select PCIe support for the device installed the P1_PE1. The options are **Auto**, Gen1, Gen2, Gen3, Gen4, and Gen5.

## *GT - Power Management Control*

**GT - Power Management Control**

**RC6 (Render Standby)**

Use this feature to enable render standby support. The options are Disabled and **Enabled**.

**Maximum GT Frequency**

Use this feature to define the Maximum GT frequency. Choose between 1650 MHz (RPN) and 6000 MHz (RP0). Any value beyond this range will be clipped to its min/max supported by the

CPU. The options are **Default Max Frequency**, 100Mhz, 150Mhz, 200Mhz, 250Mhz, 300Mhz, 350Mhz, 400Mhz, 450Mhz, 500Mhz, 550Mhz, 600Mhz, 650Mhz, 700Mhz, 750Mhz, 800Mhz, 850Mhz, 900Mhz, 950Mhz, 100Mhz, 1050Mhz, 1100Mhz, 1150Mhz, and 1200Mhz.

**Disable Turbo GT Frequency**

Use this feature to disable Turbo GT frequency. If set to Enabled, Turbo GT frequency becomes disabled. If set to Disabled, GT frequency limiters will be removed. The options are Enabled and **Disabled**.

### *PCH-IO Configuration*

**PCH SKU**

**Stepping**

#### *PCI Express Configuration*

**PCI Express Configuration**

##### *Onboard LAN1*

**ASPM**

Use this feature to activate the Active State Power Management (ASPM) level for a PCIe device. Select Auto for the system BIOS to automatically set the ASPM level based on the system configuration. Select Disabled to disable ASPM support. The options are Disabled, **L1**, and Auto.

**L1 Substates**

Use this feature to set the PCI Express L1 Substate. The options are Disabled, L1.1 and **L1.1 & L1.2**.

**PCIe Speed**

Use this feature to set the PCI Express port speed. The options are **Auto**, Gen1, Gen2, Gen3, and Gen4.

**Peer Memory Write Enable**

Use this feature to enable or disable Peer Memory Write. The options are **Disabled** and Enabled.

##### *Onboard LAN2*

**ASPM**

Use this feature to activate the Active State Power Management (ASPM) level for a PCIe device. Select Auto for the system BIOS to automatically set the ASPM level based on the system configuration. Select Disabled to disable ASPM support. The options are Disabled, **L1**,

and Auto.

**L1 Substates**

Use this feature to set the PCI Express L1 Substate. The options are Disabled, L1.1 and **L1.1 & L1.2**.

**PCIe Speed**

Use this feature to set the PCI Express port speed. The options are **Auto**, Gen1, Gen2, Gen3, and Gen4.

**Peer Memory Write Enable**

Use this feature to enable or disable Peer Memory Write. The options are **Disabled** and Enabled.

*MCIO-1*

**ASPM**

Use this feature to activate the Active State Power Management (ASPM) level for a PCIe device. Select Auto for the system BIOS to automatically set the ASPM level based on the system configuration. Select Disabled to disable ASPM support. The options are Disabled, **L1**, and Auto.

**L1 Substates**

Use this feature to set the PCI Express L1 Substate. The options are Disabled, L1.1 and **L1.1 & L1.2**.

**PCIe Speed**

Use this feature to set the PCI Express port speed. The options are **Auto**, Gen1, Gen2, Gen3, and Gen4.

**Peer Memory Write Enable**

Use this feature to enable or disable Peer Memory Write. The options are **Disabled** and Enabled.

*MCIO-2*

**ASPM**

Use this feature to activate the Active State Power Management (ASPM) level for a PCIe device. Select Auto for the system BIOS to automatically set the ASPM level based on the system configuration. Select Disabled to disable ASPM support. The options are Disabled, **L1**, and Auto.

**L1 Substates**

Use this feature to set the PCI Express L1 Substate. The options are Disabled, L1.1 and **L1.1 & L1.2**.

**PCIe Speed**

Use this feature to set the PCI Express port speed. The options are **Auto**, Gen1, Gen2, Gen3, and Gen4.

**Peer Memory Write Enable**

Use this feature to enable or disable Peer Memory Write. The options are **Disabled** and Enabled.

*M.2-P1*

**ASPM**

Use this feature to activate the Active State Power Management (ASPM) level for a PCIe device. Select Auto for the system BIOS to automatically set the ASPM level based on the system configuration. Select Disabled to disable ASPM support. The options are Disabled, **L1**, and Auto.

**L1 Substates**

Use this feature to set the PCI Express L1 Substate. The options are Disabled, L1.1 and **L1.1 & L1.2**.

**PCIe Speed**

Use this feature to set the PCI Express port speed. The options are **Auto**, Gen1, Gen2, Gen3, and Gen4.

**Peer Memory Write Enable**

Use this feature to enable or disable Peer Memory Write. The options are **Disabled** and Enabled.

## HTTP Boot Configuration Menu

### ►HTTP Boot Configuration

**HTTP Boot Policy**

Use this feature to set the HTTP boot policy. The options are Apply to all LANs, **Apply to each LAN**, and Boot Priority #1 instantly.

**HTTPS Boot Checks Hostname**

**Important:** Disabling "HTTPS Boot Checks Hostname" is a violation of RFC 6125 and may expose you to Man-in-the-Middle Attacks. Supermicro is not responsible for any and all security risks incurred by you disabling this feature.

Enable this feature for HTTPS boot to check the hostname of the TLS certificates to see if it matches the host name provided by the remote server. The options are **Enabled** and Disabled (WARNING: Security Risk!!).

**Priority of HTTP Boot**

**Instance of Priority 1: (Available when your motherboard supports this feature)**

This feature sets the rank target port. The default setting is **1**.

**Select IPv4 or IPv6**

This feature specifies which connection the target LAN port should boot from. The options are **IPv4** and IPv6.

**Boot Description**

Use this feature to enter a boot description, which cannot be longer than 75 characters. Please be sure to enter a boot description; otherwise, the boot option for the URI cannot be created.

**Boot URI**

Enter a Boot Uniform Research Identifier (URI) with 128 characters or shorter. This Boot URI determines how IPv4 Boot Option and IPv6 Boot Option will be created.

**Instance of Priority 2: (Available when your motherboard supports this feature)**

This feature sets the rank target port. The default setting is **0**.

## Super IO Configuration Menu

### ►Super IO Configuration

The following information is displayed.

- Super IO Chip

**Note:** This submenu is available when your system supports this feature.

### *Serial Port 1 Configuration Menu*

#### ►Serial Port 1 Configuration

**Serial Port 1**

Select Enabled to enable serial port 1. The options are Disabled and **Enabled**.

**Device Settings (Available when "Serial Port 1" above is set to Enabled)**

This feature displays the base I/O port address and the Interrupt Request address of serial port 1.

**Change Settings (Available when "Serial Port 1" above is set to Enabled)**

Use this feature to specify the base I/O port address and the Interrupt Request address of serial port 1. Select Auto for the BIOS to automatically assign the base I/O and IRQ address to serial port 1. The options are **Auto**, (IO=3F8h; IRQ=4;), (IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;), (IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;), (IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;), and (IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;).

### *Serial Port 2 Configuration Menu*

#### ►Serial Port 2 Configuration

**Serial Port 2**

Select Enabled to enable serial port 2. The options are Disabled and **Enabled**.

**Device Settings (Available when "Serial Port 2" above is set to Enabled)**

This feature displays the base I/O port address and the Interrupt Request address of serial port 2.

**Change Settings (Available when "Serial Port 2" above is set to Enabled)**

Use this feature to specify the base I/O port address and the Interrupt Request address of serial port 2 (or SOL). Select Auto for the BIOS to automatically assign the base I/O and IRQ address to serial port 2 (or SOL). The options are **Auto**, (IO=2F8h; IRQ=3;), (IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;), (IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;), (IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;), and (IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;).

## Network Stack Configuration Menu

#### ►Network Stack Configuration

**Network Stack**

Select Enabled to enable Preboot Execution Environment (PXE) or Unified Extensible Firmware Interface (UEFI) for network stack support. The options are Disabled and **Enabled**.

**IPv4 PXE Support (Available when "Network Stack" is set to Enabled)**

Select Enabled to enable IPv4 PXE boot support. If this feature is disabled, it will not create the IPv4 PXE boot option. The options are Disabled and **Enabled**.

**IPv4 HTTP Support (Available when "Network Stack" is set to Enabled)**

Select Enabled to enable IPv4 HTTP boot support. If this feature is disabled, it will not create the IPv4 HTTP boot option. The options are **Disabled** and Enabled.

**IPv6 PXE Support (Available when "Network Stack" is set to Enabled)**

Select Enabled to enable IPv6 PXE boot support. If this feature is disabled, it will not create the IPv6 PXE boot option. The options are Disabled and **Enabled**.

**IPv6 HTTP Support (Available when "Network Stack" is set to Enabled)**

Select Enabled to enable IPv6 HTTP boot support. If this feature is disabled, it will not create the IPv6 HTTP boot option. The options are **Disabled** and Enabled.

**PXE Boot Wait Time (Available when "Network Stack" is set to Enabled)**

Use this feature to set the wait time (in seconds) upon which the system BIOS will wait for you to press the <ESC> key to abort PXE boot instead of proceeding with PXE boot by connecting to a network server immediately. Press the <+> or <-> key on your keyboard to change the value. The default setting is **0**.

**Media Detect Count (Available when "Network Stack" is set to Enabled)**

Use this feature to set the wait time (in seconds) for the BIOS ROM to detect the presence of a LAN media either via the Internet connection or via a LAN port. Press the <+> or <-> key on your keyboard to change the value. The default setting is **1**.

## *MAC:(MAC address)-IPv4 Network Configuration Menu*

### ►MAC:(MAC address)-IPv4 Network Configuration

**Configured**

Enable this feature to configure network addresses for DHCP, local IP address, local netmask, local gateway, and local DNS server. The options are **Disabled** and Enabled.

**Enable DHCP (Available when "Configured" is set to Enabled)**

Select Enabled to support Dynamic Host Configuration Protocol (DHCP), which allows the BIOS to search for a DHCP server attached to the network and request the next available IP address for this computer. The options are **Disabled** and Enabled.

**Local IP Address (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to enter an IP address for the local machine.

**Local NetMask (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the netmask for the local machine.

**Local Gateway (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the gateway address for the local machine.

**Local DNS Servers (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the Domain Name System (DNS) server address for the local machine.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## *MAC:(MAC address)-IPv6 Network Configuration Menu*

### ►MAC:(MAC address)-IPv6 Network Configuration

#### ►Enter Configuration Menu

The following information is displayed.

- Interface Name
- Interface Type
- MAC address
- Host address
- Route Table
- Gateway addresses
- DNS addresses

**Interface ID**

Use this feature to change/enter the 64-bit alternative interface ID for the device. The string format is colon separated. The default setting is the MAC address above.

**DAD Transmit Count**

Use this feature to set the number of consecutive neighbor solicitation messages that have been sent while performing duplicate address detection on a tentative address. The default setting is **1**.

**Policy**

Use this feature to select how the policy is to be configured. The options are **automatic** and manual.

**►Advanced Configuration**

**Note:** This submenu is available when "Policy" is set to manual.

**New IPv6 address**: Use this feature to enter the IPv6 address for the local machine.

**New Gateway addresses**: Use this feature to set the gateway address for the local machine.

**New DNS addresses**: Use this feature to set the DNS server address for the local machine.

**Commit Changes and Exit**: Press <Enter> to save changes and exit.

**Discard Changes and Exit**: Press <Enter> to discard changes and exit.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## *MAC:(MAC address)-IPv4 Network Configuration Menu*

**►MAC:(MAC address)-IPv4 Network Configuration**

**Configured**

Enable this feature to configure network addresses for DHCP, local IP address, local netmask, local gateway, and local DNS server. The options are **Disabled** and Enabled.

**Enable DHCP (Available when "Configured" is set to Enabled)**

Select Enabled to support Dynamic Host Configuration Protocol (DHCP), which allows the BIOS to search for a DHCP server attached to the network and request the next available IP address for this computer. The options are **Disabled** and Enabled.

**Local IP Address (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to enter an IP address for the local machine.

**Local NetMask (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the netmask for the local machine.

**Local Gateway (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the gateway address for the local machine.

**Local DNS Servers (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the Domain Name System (DNS) server address for the local machine.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## *MAC:(MAC address)-IPv6 Network Configuration Menu*

### ►MAC:(MAC address)-IPv6 Network Configuration

#### ►Enter Configuration Menu

The following information is displayed.

- Interface Name
- Interface Type
- MAC address
- Host address
- Route Table
- Gateway addresses
- DNS addresses

**Interface ID**

Use this feature to change/enter the 64-bit alternative interface ID for the device. The string format is colon separated. The default setting is the MAC address above.

**DAD Transmit Count**

Use this feature to set the number of consecutive neighbor solicitation messages that have been sent while performing duplicate address detection on a tentative address. The default setting is **1**.

**Policy**

Use this feature to select how the policy is to be configured. The options are **automatic** and manual.

#### ►Advanced Configuration

**Note:** This submenu is available when "Policy" is set to manual.

**New IPv6 address**: Use this feature to enter the IPv6 address for the local machine.

**New Gateway addresses**: Use this feature to set the gateway address for the local machine.

**New DNS addresses**: Use this feature to set the DNS server address for the local machine.

**Commit Changes and Exit**: Press <Enter> to save changes and exit.

**Discard Changes and Exit**: Press <Enter> to discard changes and exit.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## *MAC:(MAC address)-IPv4 Network Configuration Menu*

### ►MAC:(MAC address)-IPv4 Network Configuration

**Configured**

Enable this feature to configure network addresses for DHCP, local IP address, local netmask, local gateway, and local DNS server. The options are **Disabled** and Enabled.

**Enable DHCP (Available when "Configured" is set to Enabled)**

Select Enabled to support Dynamic Host Configuration Protocol (DHCP), which allows the BIOS to search for a DHCP server attached to the network and request the next available IP address for this computer. The options are **Disabled** and Enabled.

**Local IP Address (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to enter an IP address for the local machine.

**Local NetMask (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the netmask for the local machine.

**Local Gateway (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the gateway address for the local machine.

**Local DNS Servers (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the Domain Name System (DNS) server address for the local machine.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## *MAC:(MAC address)-IPv6 Network Configuration Menu*

### ►MAC:(MAC address)-IPv6 Network Configuration

#### ►Enter Configuration Menu

The following information is displayed.

- Interface Name
- Interface Type
- MAC address
- Host address
- Route Table
- Gateway addresses
- DNS addresses

**Interface ID**

Use this feature to change/enter the 64-bit alternative interface ID for the device. The string format is colon separated. The default setting is the MAC address above.

**DAD Transmit Count**

Use this feature to set the number of consecutive neighbor solicitation messages that have been sent while performing duplicate address detection on a tentative address. The default setting is **1**.

**Policy**

Use this feature to select how the policy is to be configured. The options are **automatic** and manual.

#### ►Advanced Configuration

**Note:** This submenu is available when "Policy" is set to manual.

**New IPv6 address**: Use this feature to enter the IPv6 address for the local machine.

**New Gateway addresses**: Use this feature to set the gateway address for the local machine.

**New DNS addresses**: Use this feature to set the DNS server address for the local machine.

**Commit Changes and Exit**: Press <Enter> to save changes and exit.

**Discard Changes and Exit**: Press <Enter> to discard changes and exit.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## *MAC:(MAC address)-IPv4 Network Configuration Menu*

### ►MAC:(MAC address)-IPv4 Network Configuration

**Configured**

Enable this feature to configure network addresses for DHCP, local IP address, local netmask, local gateway, and local DNS server. The options are **Disabled** and Enabled.

**Enable DHCP (Available when "Configured" is set to Enabled)**

Select Enabled to support Dynamic Host Configuration Protocol (DHCP), which allows the BIOS to search for a DHCP server attached to the network and request the next available IP address for this computer. The options are **Disabled** and Enabled.

**Local IP Address (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to enter an IP address for the local machine.

**Local NetMask (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the netmask for the local machine.

**Local Gateway (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the gateway address for the local machine.

**Local DNS Servers (Available when "Configured" is set to Enabled and "Enable DHCP" is set to Disabled)**

Use this feature to set the Domain Name System (DNS) server address for the local machine.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## *MAC:(MAC address)-IPv6 Network Configuration Menu*

### ►MAC:(MAC address)-IPv6 Network Configuration

#### ►Enter Configuration Menu

The following information is displayed.

- Interface Name
- Interface Type
- MAC address
- Host address
- Route Table
- Gateway addresses
- DNS addresses

**Interface ID**

Use this feature to change/enter the 64-bit alternative interface ID for the device. The string format is colon separated. The default setting is the MAC address above.

**DAD Transmit Count**

Use this feature to set the number of consecutive neighbor solicitation messages that have been sent while performing duplicate address detection on a tentative address. The default setting is **1**.

**Policy**

Use this feature to select how the policy is to be configured. The options are **automatic** and manual.

#### ►Advanced Configuration

**Note:** This submenu is available when "Policy" is set to manual.

**New IPv6 address**: Use this feature to enter the IPv6 address for the local machine.

**New Gateway addresses**: Use this feature to set the gateway address for the local machine.

**New DNS addresses**: Use this feature to set the DNS server address for the local machine.

**Commit Changes and Exit**: Press <Enter> to save changes and exit.

**Discard Changes and Exit**: Press <Enter> to discard changes and exit.

**Save Changes and Exit**

Press <Enter> to save changes and exit.

## PCH-FW Configuration

**ME Firmware Version: 19.0.0.1797**

**ME Firmware Mode: Normal Mode**

**ME Firmware SKU: Corporate SKU**

**ME FW Image Re-Flash**

Use this feature to update the Management Engine firmware. The options are **Disabled** and Enabled.

**TPM Device Selection**

Use this feature to select dTPM or PTT for the TPM device. dTPM is discrete Trusted Platform Module and PTT is Platform Trusted Technology. The options are **dTPM** and PTT.

### *AMT Configuration*

**USB Provisioning of AMT**

Use this feature to enable or disable USB provisioning. The options are **Disabled** and Enabled.

**MAC Pass Through**

Use this feature to enable or disable the MAC Pass Through function. The options are **Disabled** and Enabled.

**Activate Remote Assistance Process**

Use this feature to activate Remote Assistance. Enabling this feature will also trigger the Client Initiated Remote Access (CIRA) boot. The options are **Disabled** and Enabled.

**Unconfigure ME**

Use this feature to unconfigure ME with resetting the MEBx password to default on next boot. The options are **Disabled** and Enabled.

### *ASF Configuration*

**PET Progress**

Use this feature to enable or disable PET Events Progress to receive PET Events alerts. The options are Disabled and **Enabled**.

**WatchDog**

Select Enabled to allow AMT to reset or power down the system if the operating system or BIOS hangs or crashes. The options are **Disabled** and Enabled.

**OS Timer / BIOS Timer**

These options appear if WatchDog (above) is enabled. This is a timed delay in seconds, before a system power down or reset after a BIOS or operating system failure is detected. Enter the value in seconds. The default setting is **0**.

**ASF Sensors Table**

Enable this feature for the ASF Sensor Table to be added into the ASF ACPI table. The options are **Disabled** and Enabled.

### *Secure Erase Configuration*

**Secure Erase mode**

Select Real to securely erase a solid state drive. The options are **Simulated** and Real.

**Force Secure Erase**

Select Enabled to force a secure erase of the solid state drive on the next boot. The options are **Disabled** and Enabled.

### *One Click Recovery (OCR) Configuration*

**OCR Https Boot**

Use this feature to enable or disable One Click Recovery Https Boot. One Click Recovery is a recovery process that lets you restore your computer to its last known good state with a single command. The options are Disabled and **Enabled**.

**OCR PBA Boot**

Use this feature to enable or disable One Click Recovery PBA Boot. The options are Disabled and **Enabled**.

**OCR Windows Recovery Boot**

Use this feature to enable or disable One Click Recovery Windows Boot. The options are Disabled and **Enabled**.

**OCR Disable Secure Boot**

Use this feature to allow CSME to request Secure Boot to be disabled for One Click Recovery. The options are Disabled and **Enabled**.

## PCIe/PCI/PnP Configuration Menu

**PCI PERR/SERR Support**

Use this feature to enable or disable the runtime event for PCI errors. The options are **Disabled** and Enabled.

**Re-Size BAR Support**

Use this feature to enable the Resizable BAR support. Resizable BAR is a PCIe interface technology that allows the CPU to access the entire frame buffer. With this technology, your system will be able to handle multiple CPU to GPU transfers simultaneously rather than queuing, which can improve the frame rate performance. The options are **Disabled** and Enabled.

**SR-IOV Support (Unavailable when "Workload Profile" is set to Virtualization)**

Select Enabled for Single-Root IO Virtualization support. The options are **Disabled** and Enabled.

**BME DMA Mitigation**

Enable this feature to help block DMA attacks. The options are **Disabled** and Enabled.

**NVMe Firmware Source**

Use this feature to select the NVMe firmware to support system boot. The options are **Vendor Defined Firmware** and AMI Native Support. The option of Vendor Defined Firmware is pre-installed on the drive and may resolve errata or enable innovative functions for the drive. The default option, AMI Native Support, is offered by the BIOS with a generic method.

**Consistent Device Name Support**

This feature controls the device naming for network devices and slots. The options are **Disabled** and Enabled.

**PCIe/PCI/PnP Configuration**

**CPU SLOT7 PCIe 5.0 x16 OPROM**

Use this feature to select which firmware type to be loaded for the add-on card in this slot. The options are Disabled and **EFI**.

**M.2-C1 OPROM**

Use this feature to select which firmware type to be loaded for the add-on card in this slot. The options are Disabled and **EFI**.

**P1_PE1 17-20 OPROM**

Use this feature to select which firmware type to be loaded for the add-on card in this slot. The options are Disabled and **EFI**.

**M.2 P1 OPROM**

Use this feature to select which firmware type to be loaded for the add-on card in this slot. The options are Disabled and **EFI**.

**Onboard LAN1 Support**

Use this feature to enable or disable LAN1. The options are Disabled and **Enabled**.

**Onboard LAN2 Support**

Use this feature to enable or disable LAN2. The options are Disabled and **Enabled**.

**Onboard LAN1 Option ROM**

Select EFI to boot the computer using the EFI device installed on LAN port 1. The options are Disabled and **EFI**.

**Note:** This feature is available when your motherboard supports onboard LAN ports.

## SATA and RST Configuration

**SATA And RST Configuration**

**SATA Controller(s)**

Use this feature to enable or disable the onboard SATA controller supported by the Intel PCH chip. The options are **Enabled** and Disabled.

**Support Aggressive Link Power Management**

When this feature is set to Enabled, the SATA AHCI controller manages the power usage of the SATA link. The controller will put the link in a low power mode during extended periods of I/O inactivity and will return the link to an active state when I/O activity resumes. The options are Disabled and **Enabled**.

**OCuLink SATA1 - OCuLink SATA4**

This feature displays the information detected on the installed SATA drive on the particular SATA port.

**Software Preserve Support**

**Hot Plug**

Set this feature to Enable for hot plug support, which allows you to replace a SATA drive without shutting down the system. The options are Disabled and **Enabled**.

**Spin Up Device**

Set this feature to enable or disable the PCH to initialize the device. The options are **Disabled** and Enabled.

**SATA Device Type**

Use this feature to specify if the SATA port is connected to a Solid State Drive or a Hard Disk Drive. The options are **Hard Disk Drive** and Solid State Drive.

## VMD Setup Menu

**VMD Configuration**

**Enable VMD Controller**

Use this feature to enable or disable the VMD controller. The options are **Disabled** and Enabled.

**Enable VMD Global Mapping (Available when Enable VMD Controller is set to "Enabled")**

Use this feature to enable or disable VMD global mapping. The options are **Disabled** and Enabled.

**Map PCH SATA Controller under VMD (Available when Enable VMD Controller is set to "Enabled")**

Use this feature to map or unmap the selected root port to VMD. The options are **Disabled** and Enabled.

## Serial Port Console Redirection Menu

### ►Serial Port Console Redirection

**COM1**

**Console Redirection**

Select Enabled to enable COM port 1 for Console Redirection, which allows a client machine to be connected to a host machine at a remote site for networking. The options are **Disabled** and Enabled.

**Note:** This feature will be set to Enabled if there is no BMC support.

**COM2**

**Console Redirection**

Select Enabled to use the COM port 2 for Console Redirection. The options are **Disabled** and Enabled.

### AMT SOL

#### AMT SOL Console Redirection

Select Enabled to enable console redirection support for the specified serial port. The options are **Disabled** and Enabled.

### ►Console Redirection Settings

**Note:** This submenu is available when "Console Redirection" for COM1, SOL/COM2, or AMT SOL is set to Enabled.

#### Terminal Type

Use this feature to select the target terminal emulation type for Console Redirection. Select VT100 to use the ASCII Character set. Select VT100+ to add color and function key support. Select ANSI to use the Extended ASCII Character Set. Select VT-UTF8 to use UTF8 encoding to map Unicode characters into one or more bytes. The options are VT100, **VT100+**, VT-UTF8, and ANSI.

#### Bits Per Second

Use this feature to set the transmission speed for a serial port used in Console Redirection. Make sure that the same speed is used in the host computer and the client computer. A lower transmission speed may be required for long and busy lines. The options are 9600, 19200, 38400, 57600, and **115200** (bits per second).

#### Data Bits

Use this feature to set the data transmission size for Console Redirection. The options are 7 and **8** (bits).

#### Parity

A parity bit can be sent along with regular data bits to detect data transmission errors. Select Even if the parity bit is set to 0 and the number of 1s in data bits is even. Select Odd if the parity bit is set to 0 and the number of 1s in data bits is odd. Select None if you do not want to send a parity bit with your data bits in transmission. Select Mark to add a mark as a parity bit to be sent along with the data bits. Select Space to add a space as a parity bit to be sent with your data bits. The options are **None**, Even, Odd, Mark, and Space.

#### Stop Bits

A stop bit indicates the end of a serial data packet. Select 1 (stop bit) for standard serial data communication. Select 2 (stop bits) if slower devices are used. The options are **1** and 2.

**Flow Control**

Use this feature to set the flow control for Console Redirection to prevent data loss caused by buffer overflow. Send a "Stop" signal to stop sending data when the receiving buffer is full. Send a "Start" signal to start sending data when the receiving buffer is empty. The options are **None** and Hardware RTS/CTS.

**VT-UTF8 Combo Key Support**

Select Enabled to enable VT-UTF8 Combination Key support for ANSI/VT100 terminals. The options are Disabled and **Enabled**.

**Recorder Mode**

Select Enabled to capture the data displayed on a terminal and send it as text messages to a remote server. The options are **Disabled** and Enabled.

**Resolution 100x31**

Select Enabled for extended-terminal resolution support. The options are Disabled and **Enabled**.

**Putty KeyPad**

Use this feature to select function key and keypad settings on Putty, which is a terminal emulator designed for the Windows OS. The options are **VT100**, LINUX, XTERMR6, SCO, ESCN, and VT400.

**Redirection After BIOS POST**

Use this feature to enable or disable legacy console redirection after BIOS POST. When set to Bootloader, legacy console redirection is disabled before booting the OS. When set to Always Enable, legacy console redirection remains enabled when booting the OS. The options are **Always Enable** and Bootloader.

**Serial Port for Out-of-Band Management/Windows Emergency Management Services (EMS)**

Use the features below to configure Console Redirection settings to support Out-of-Band Serial Port management.

**Console Redirection EMS**

Select Enabled to use the SOL port for Console Redirection. The options are **Disabled** and Enabled.

### ►Console Redirection Settings

**Note:** This submenu is available when "Console Redirection EMS" is set to Enabled.

**Out-of-Band Mgmt Port**

The feature selects a serial port in a client server to be used by the Microsoft Windows Emergency Management Services (EMS) to communicate with a remote host server. The options are **COM1** and SOL/COM2. Please note that the option of SOL/COM2 indicates a shared serial port. SOL is available with BMC support.

**Terminal Type EMS**

Use this feature to select the target terminal emulation type for Console Redirection. Select VT100 to use the ASCII character set. Select VT100+ to add color and function key support. Select ANSI to use the extended ASCII character set. Select VT-UTF8 to use UTF8 encoding to map Unicode characters into one or more bytes. The options are VT100, VT100+, **VT-UTF8**, and ANSI.

**Bits Per Second EMS**

This feature sets the transmission speed for a serial port used in Console Redirection. Make sure that the same speed is used in the host computer and the client computer. A lower transmission speed may be required for long and busy lines. The options are 9600, 19200, 57600, and **115200** (bits per second).

**Flow Control EMS**

Use this feature to set the flow control for Console Redirection to prevent data loss caused by buffer overflow. Send a "Stop" signal to stop sending data when the receiving buffer is full. Send a "Start" signal to start sending data when the receiving buffer is empty. The options are **None**, Hardware RTS/CTS, and Software Xon/Xoff.

The following information is displayed.

- **Data Bits EMS**
- **Parity EMS**
- **Stop Bits EMS**

## Trusted Computing Menu

### ►Trusted Computing

When the TPM 2.0 (either onboard or external) is detected by your system, the following information is displayed.

- TPM 2.0 Device Found
- Firmware Version:
- Vendor:

**Note:** This submenu is available when the TPM 2.0 (either onboard or external) is detected by the BIOS.

**Security Device Support**

Select Enabled to enable BIOS support for onboard security devices, which are not displayed in the OS. If this feature is set to Enabled, TCG EFI protocol and INT1A interface will not be available. The options are Disabled and **Enabled**.

When "Security Device Support" is set to Enabled and the TPM 2.0 (either onboard or external) is detected by the BIOS, the following information is displayed.

- Active PCR banks
- Available PCR banks

**Note:** The following features are available when the TPM 2.0 (either onboard or external) is detected by the BIOS.

**SHA256 PCR Bank (Available when "Security Device Support" is set to Enabled)**

Select Enabled to enable SHA256 PCR Bank support to enhance system integrity and data security. The options are Disabled and **Enabled**.

**SHA384 PCR Bank (Available when "Security Device Support" is set to Enabled)**

Select Enabled to enable SHA384 PCR Bank support to enhance system integrity and data security. The options are **Disabled** and Enabled.

**Pending Operation (Available when "Security Device Support" is set to Enabled)**

Use this feature to schedule a TPM-related operation to be performed by the security TPM (either onboard or external) at the next system boot to enhance system data integrity. The options are **None** and TPM Clear.

**Note:** If this feature is used, your system will reboot to carry out a pending TPM operation.

**Platform Hierarchy (Available when "Security Device Support" is set to Enabled)**

Select Enabled for TPM Platform Hierarchy support, which allows the manufacturer to utilize the cryptographic algorithm to define a constant key or a fixed set of keys to be used for initial system boot. These early boot codes are shipped with the platform and are included in the list of "public keys." During system boot, the platform firmware uses the trusted public keys to verify a digital signature in an attempt to manage and control the security of the platform firmware used in a host system via the TPM (either onboard or external). The options are Disabled and **Enabled**.

**Storage Hierarchy (Available when "Security Device Support" is set to Enabled)**

Select Enabled for TPM Storage Hierarchy support that is intended to be used for non-privacy-sensitive operations by a platform owner such as an IT professional or the end user. Storage Hierarchy has an owner policy and an authorization value, both of which can be set and are held constant (-rarely changed) through reboots. This hierarchy can be cleared or changed independently of the other hierarchies. The options are Disabled and **Enabled**.

**TPM 2.0 InterfaceType**

This feature displays the TPM interface type. The default option is **TIS**.

**Endorsement Hierarchy (Available when "Security Device Support" is set to Enabled)**

Select Enabled for Endorsement Hierarchy support, which contains separate controls to address the user's privacy concerns because the primary keys in the hierarchy are certified by the TPM key or by a manufacturer with restrictions on how an authentic TPM (either onboard or external) that is attached to an authentic platform can be accessed and used. A primary key can be encrypted and certified with a certificate created by using TPM2_ActivateCredential, which allows the user to independently enable "flag, policy, and authorization values" without involving other hierarchies. A user with privacy concerns can disable the endorsement hierarchy while still using the storage hierarchy for TPM applications, permitting the platform software to use the TPM. The options are Disabled and **Enabled**.

**PH Randomization**

Select Enabled for Platform Hierarchy (PH) Randomization support, which is used only during the platform developmental stage. This feature cannot be enabled in the production platforms. The options are **Disabled** and Enabled.

**Intel Trusted Execution Technology**

Intel Trusted Execution Technology (TXT) helps protect against software-based attacks and ensures protection, confidentiality, and integrity of data stored or created on the system. Use this feature to enable or disable TXT Support. The options are **Disabled** and Enabled.

## USB Configuration

**USB Configuration**

**USB Module Version**

**USB Controllers**

**USB Devices**

**XHCI Hand-off**

This is a work-around solution for operating systems that do not support Extensible Host Controller Interface (XHCI) hand-off. The XHCI ownership change should be claimed by the XHCI driver. The settings are **Enabled** and Disabled.

**USB Mass Storage Driver Support**

Select Enabled for USB mass storage device support. The options are Disabled and **Enabled**.

**USB S5 Wakeup Support**

Use this feature to enable or disable USB S5 Wakeup support. The options are Disabled and **Enabled**.

## Intel Ethernet Controller I226-LM - (MAC address) Menu

### ►Intel Ethernet Controller I226-LM - (MAC address)

The following LAN port information will be displayed:

- UEFI Driver
- PCI Device ID
- PCI Address
- MAC Address
- Link Status

**Link auto-negotiation Timeout**

This features controls how long the UEFI PXE driver should wait for link. The default is **8**.

## Intel Ethernet Controller X550

**Blink LEDs**

Use this feature to identify the physical network port by blinking the associated LED. The default setting is **0** (up to 15 seconds).

**UEFI Driver**

**Adapter PBA**

**Device Name**

**Chip Type**

**PCI Device ID**

**PCI Address**

**Link Status**

**MAC Address**

**Virtual MAC Address**

### *Firmware Image Properties*

**Option ROM version**

**Unique NVM/EEPROM ID**

**NVM Version**

### *NIC Configuration*

**Link Speed**

The feature displays the connection speed of a LAN port. The options are **Auto Negotiated**, 10 Mbps Half, 10 Mbps Full, 100 Mbps Half, and 100 Mbps Full.

**Wake On LAN**

If this feature is set to Enabled, the LAN port you specified will be enabled when the system is powered on. The options are Disabled and **Enabled**.

## Intel Ethernet Controller X550

**Blink LEDs**

Use this feature to identify the physical network port by blinking the associated LED. The default setting is **0** (up to 15 seconds).

**UEFI Driver**

**Adapter PBA**

**Device Name**

**Chip Type**

**PCI Device ID**

**PCI Address**

**Link Status**

**MAC Address**

**Virtual MAC Address**

### *Firmware Image Properties*

**Option ROM version**

**Unique NVM/EEPROM ID**

**NVM Version**

### *NIC Configuration*

**Link Speed**

The feature displays the connection speed of a LAN port. The options are **Auto Negotiated**, 10 Mbps Half, 10 Mbps Full, 100 Mbps Half, and 100 Mbps Full.

**Wake On LAN**

If this feature is set to Enabled, the LAN port you specified will be enabled when the system is powered on. The options are Disabled and **Enabled**.

## TLS Authenticate Configuration Menu

### ►TLS Authenticate Configuration

Use this submenu to configure Transport Layer Security (TLS) settings.

#### ►Server CA Configuration

Use this feature to configure the client certificate that is to be used by the server.

#### ►Enroll Certification

Use this feature to enroll the certificate in the system.

#### ►Enroll Certification Using File

Use this feature to enroll the security certificate in the system by using a file.

### ►Commit Changes and Exit

Use this feature to save all changes and exit TLS settings.

### ►Discard Changes and Exit

Use this feature to discard all changes and exit TLS settings.

### ►Delete Certification

Use this feature to delete the certificate if a certificate has been enrolled in the system.

### ►Client Certification Configuration

## Driver Health Menu

### ►Driver Health

This feature displays the health information of the drivers installed in your system, including LAN controllers, as detected by the BIOS. Select one and press <Enter> to see the details.

**Note:** This section is provided for reference only, for the driver health status will differ depending on the drivers installed in your system. It's also based on your system configuration and the environment that your system is operating in.

## 8.4 Event Logs

Use this menu to configure Event Logs settings.

**Note:** After making any changes in this section, please be sure to reboot the system for the changes to take effect.


**Figure 8-3. Event Logs Screen**

### ►Change SMBIOS Event Log Settings

**Note:** Reboot the system for the changes in this section to take effect.

#### Enabling/Disabling Options

#### SMBIOS Event Log

Select Enabled to enable System Management BIOS (SMBIOS) Event Logging during system boot. The options are Disabled and **Enabled**.

**Erasing Settings**

**Erase Event Log (Available when "SMBIOS Event Log" is set to Enabled)**

Select No to keep the event log without erasing it upon next system bootup. Select (Yes, Next reset) to erase the event log upon next system reboot. The options are **No**, (Yes, Next reset), and (Yes, Every reset).

**When Log is Full (Available when "SMBIOS Event Log" is set to Enabled)**

Select Erase Immediately to immediately erase all errors in the SMBIOS event log when the event log is full. Select Do Nothing for the system to do nothing when the SMBIOS event log is full. The options are **Do Nothing** and Erase Immediately.

**SMBIOS Event Log Standard Settings**

**Log System Boot Event (Available when "SMBIOS Event Log" is set to Enabled)**

Select Enabled to log system boot events. The options are Enabled and **Disabled**.

**MECI (Available when "SMBIOS Event Log" is set to Enabled)**

Enter the increment value for the multiple event counter. Enter a number between 1 and 255. The default setting is **1**. (MECI is the abbreviation for Multiple Event Count Increment.)

**METW (Available when "SMBIOS Event Log" is set to Enabled)**

Use this feature to determine how long (in minutes) should the multiple event counter wait before generating a new event log. Enter a number between 0 and 99. The default value is **60**. (METW is the abbreviation for Multiple Event Count Time Window.)

### ►View SMBIOS Event Log

Use this feature to view the event in the system event log. Select this feature and press <Enter> to view the status of an event in the log. The following information is displayed: DATE / TIME / ERROR CODE / SEVERITY.

## 8.5 BMC

Use this menu to configure Baseboard Management Console (BMC) settings.


**Figure 8-4. BMC Screen**

### BMC Firmware Revision

This feature indicates the BMC firmware revision used in this system.

### BMC STATUS

This feature indicates the status of the BMC firmware installed in this system.

### System Event Log Menu

#### ►System Event Log

**Note:** All values changed in this submenu do not take effect until computer is restarted.

**Enabling/Disabling Options**

**SEL Components**

Select Enabled to enable all system event logging upon system boot. The options are Disabled and **Enabled**.

**Erasing Settings**

**Erase SEL (Available when "SEL Components" is set to Enabled)**

Select (Yes, On next reset) to erase all system event logs upon next system boot. Select (Yes, On every reset) to erase all system event logs upon each system reboot. Select No to keep all system event logs after each system reboot. The options are **No**, (Yes, On next reset), and (Yes, On every reset).

**When SEL is Full (Available when "SEL Components" is set to Enabled)**

This feature defines what the BIOS should do when the system event log is full. Select Erase Immediately to erase all events in the log when the system event log is full. The options are **Do Nothing** and Erase Immediately.

## BMC Network Configuration Menu

### ►BMC Network Configuration

**Update BMC LAN Configuration**

Select Yes for the BIOS to implement all IP/MAC address changes upon next system boot. The options are **No** and Yes.

**********

**Configure IPv4 Support**

**********

**BMC LAN Selection**

This feature displays the type of the BMC LAN.

**BMC Network Link Status:**

This feature displays the status of the BMC network link for this system.

**Configuration Address Source (Available when "Update BMC LAN Configuration" is set to Yes)**

Use this feature to select the source of the IPv4 connection. If Static is selected, note the IP address of the IPv4 connection and enter it to the system manually in the field. If DHCP is

selected, the BIOS will search for a Dynamic Host Configuration Protocol (DHCP) server in the network that is attached to and request the next available IP address for this computer. The options are Static and **DHCP**.

**Station IP Address**

This feature displays the Station IP address in decimal and in dotted quad form (i.e., 172.29.176.131). It is available for configuration when "Configuration Address Source" above is set to Static.

**Subnet Mask**

This feature displays the sub- network that this computer belongs to. It is available for configuration when "Configuration Address Source" above is set to Static.

**Station MAC Address**

This feature displays the Station MAC address for this computer. MAC addresses are six two-digit hexadecimal numbers.

**Gateway IP Address**

This feature displays the Gateway IP address for this computer. This should be in decimal and in dotted quad form (i.e., 172.29.0.1). It is available for configuration when "Configuration Address Source" above is set to Static.

**********

**Configure IPv6 Support**

**********

**IPv6 Address Status**

This feature displays the status of the IPv6 address.

**IPv6 Support (Available when "Update BMC LAN Configuration" is set to Yes)**

Use this feature to enable IPv6 support. The options are **Enabled** and Disabled.

**Configuration Address Source (Available when "IPv6 Support" is set to Enabled)**

Use this feature to select the source of the IPv6 connection. If Static Configuration is selected, note the IP address of IPv6 connection and enter it to the system manually in the field. If the other two options are selected, the BIOS will search for a DHCP server in the network that is attached to and request the next available IP address for this computer. The options are Static Configuration, **DHCPv6 Stateless**, and DHCPv6 Stateful.

**IPv6 Address ("Static," "DHCPv6 Stateless," or "DHCPv6 Stateful," depending on the option you selected for "Configuration Address Source" above)**

This feature displays the station IPv6 address.

**Prefix Length**

This feature displays the prefix length. It is available for configuration when "Configuration Address Source" above is set to Static Configuration.

**Gateway IP**

This feature displays the IPv6 gateway IP address. It is available for configuration when "Configuration Address Source" above is set to Static Configuration.

**Advanced Settings (Available when "Configuration Address Source" is set to DHCPv6 Stateless)**

Use this feature to set the DNS server IP. The default setting allows this system to obtain the DNS server IP automatically. The options are **Auto obtain DNS server IP** and Manually obtain DNS server IP.

**Preferred DNS server IP (Available when "Advanced Settings" above is set to Manually obtain DNS server IP)**

This feature displays the preferred DNS server IP. It can be configured via Redfish.

**Alternative DNS server IP (Available when "Advanced Settings" above is set to Manually obtain DNS server IP)**

This feature displays the alternative DNS server IP. It can be configured via Redfish.

**********

**Configure VLAN Support**

**********

**VLAN Support (Available when "Update BMC LAN Configuration" is set to Yes)**

Use this feature to enable the virtual LAN (VLAN) support. The options are Enabled and **Disabled**.

**VLAN ID (Available when "VLAN Support" is set to Enabled)**

Use this feature to create a new VLAN ID. The valid range is 1–4094. The default setting is **1**.

## 8.6 Security

Use this menu to configure the following security settings for the system.

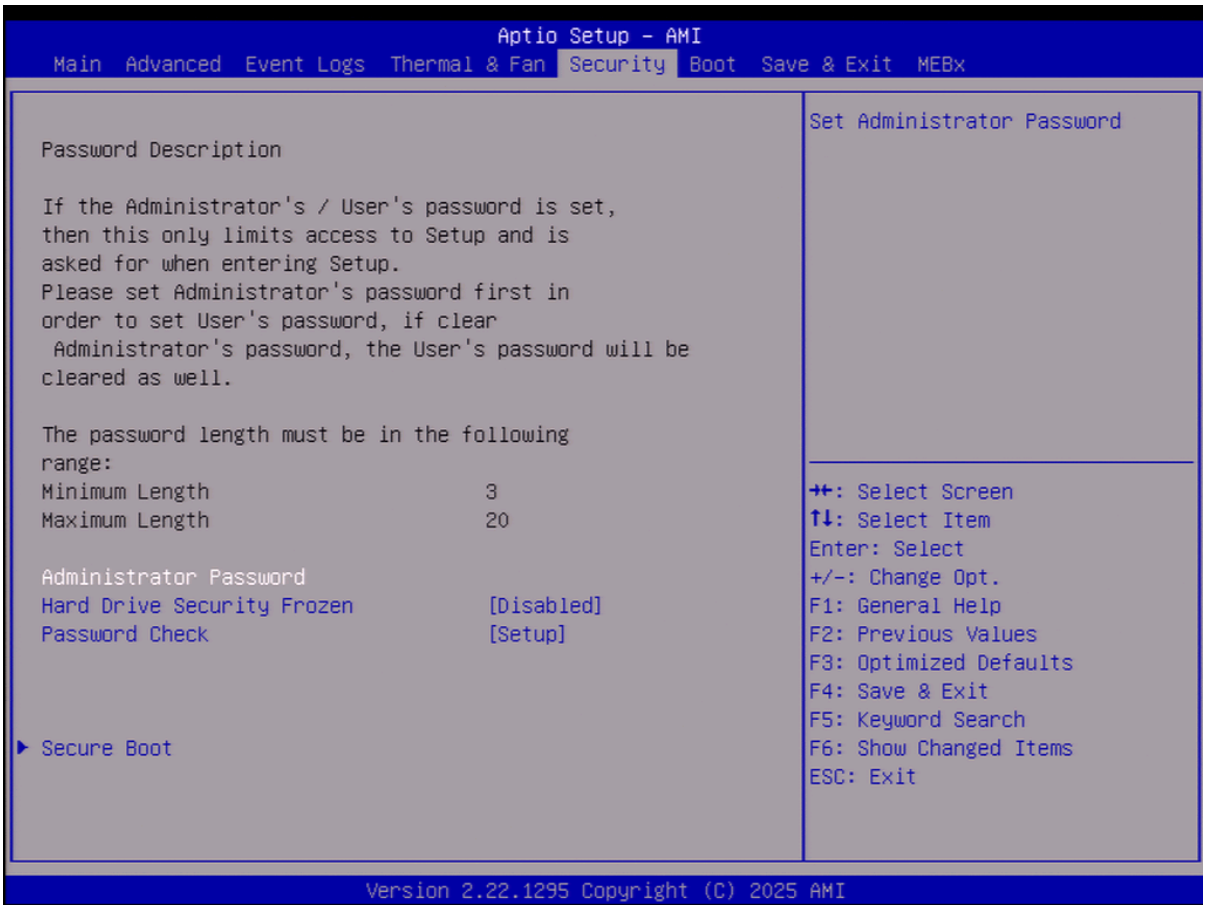



**Figure 8-5. Security Screen**

### Administrator Password

This feature indicates if an administrator password has been installed. Use this feature to set the administrator password, which is required to enter the BIOS Setup utility. The length of the password can be between three and 20 characters long.

### User Password (Available when "Administrator Password" has been set)

This feature indicates if a user password has been installed. Use this feature to set the user password which is required to enter the BIOS Setup utility. The length of the password can be between three and 20 characters long.

### Hard Drive Security Frozen

Select Enabled to freeze the Lock Security feature for HDD to protect key data in hard drives from being altered. The options are **Disabled** and Enabled.

**Password Check**

Select Setup for the system to check for a password upon entering the BIOS Setup utility. Select Always for the system to check for the passwords needed at bootup and upon entering the BIOS Setup utility. The options are **Setup** and Always.

**Lockdown Mode (Available when the DCMS key is activated)**

Select Enabled to support the Lockdown Mode, which prevents the existing data or keys stored in the system from being altered or changed in an effort to preserve system integrity and security. The options are **Disabled** and Enabled.

## Secure Boot Menu

### ►Secure Boot

The following information is displayed:

- System Mode
- Secure Boot

**Note:** For detailed instructions on configuring Security Boot settings, refer to the Security Boot Configuration User's Guide at https://www.supermicro.com/support/manuals.

**Secure Boot**

Select Enabled to configure Secure Boot settings. The options are **Disabled** and Enabled.

**Secure Boot Mode**

Use this feature to select the desired secure boot mode for the system. The options are Standard and **Custom**.

#### ►Enter Audit Mode

Select Ok to enter the Audit Mode workflow. It will result in erasing the Platform Key (PK) variables and resetting the system to the Setup/Audit Mode.

**Note:** This submenu is available when "Secure Boot Mode" is set to Custom.

#### ►Enter Deployed Mode / Exit Deployed Mode

Select Ok to reset system to the User Mode or to the Deployed Mode.

**Note:** This submenu is available when "Secure Boot Mode" is set to Custom.

### ►Key Management

The following information is displayed:

- Vendor Keys

**Note:** This submenu is available when "Secure Boot Mode" is set to Custom.

**Provision Factory Defaults**

Select Enabled to install the default secure boot keys when the system is in the Setup Mode. Changes take effect after you save settings and reboot the system. The options are **Disabled** and Enabled.

#### ►Restore Factory Keys

Select Yes to restore manufacturer default keys to ensure system security. The options are **Yes** and No. Selecting Yes will reset system to the User Mode.

**Note:** This submenu is available when any secure keys have been installed.

#### ►Reset To Setup Mode

This feature resets the system to the Setup Mode. The options are **Yes** and No.

**Note:** This submenu is available when any secure keys have been installed.

#### ►Enroll Efi Image

This feature allows the Efi image to run in the secure boot mode and enroll the SHA256 Hash certificate of a PE image into the Authorized Signature Database (DB).

#### ►Export Secure Boot Variables

This feature exports the NVRAM contents of secure boot variables to a storage device. The options are **Yes** and No.

**Note:** This submenu is available when any secure keys have been installed.

**Secure Boot variable / Size / Keys / Key Source**

### ►Platform Key (PK)

Use this feature to enter and configure a set of values to be used as platform firmware keys for the system. These values also indicate the sizes, key numbers, and the sources of the authorized signatures. Select Update to update the platform key.

### ►Key Exchange Keys (KEK)

Use this feature to enter and configure a set of values to be used as Key Exchange Keys for the system. These values also indicate the sizes, key numbers, and the sources of the authorized signatures. Select Update to update the Key Exchange Keys. Select Append to append the Key Exchange Keys.

### ►Authorized Signatures (db)

Use this feature to enter and configure a set of values to be used as Authorized Signatures for the system. These values also indicate the sizes, key numbers, and sources of the authorized signatures. Select Update to update the Authorized Signatures. Select Append to append the new Authorized Signatures.

### ►Forbidden Signatures (dbx)

Use this feature to enter and configure a set of values to be used as Forbidden Signatures for the system. These values also indicate sizes, key numbers, and key sources of the forbidden signatures. Select Update to update the Forbidden Signatures. Select Append to append the Forbidden Signature.

### ►Authorized TimeStamps (dbt)

Use this feature to set and save the timestamps for the Authorized Signatures, which will indicate the time when these signatures are entered into the system. These values also indicate sizes, keys, and key sources of the authorized timestamps. Select Update to update the Authorized TimeStamps. Select Append to append the Authorized TimeStamps.

### ►OsRecovery Signatures (dbr)

Use this feature to set and save the Authorized Signatures used for OS recovery. Select Update to update the OsRecovery Signatures. These values also indicate sizes, keys, and key sources of the OsRecovery Signatures. Select Append to append the OsRecovery Signatures.

## 8.7 Boot

Use this menu to configure Boot settings.

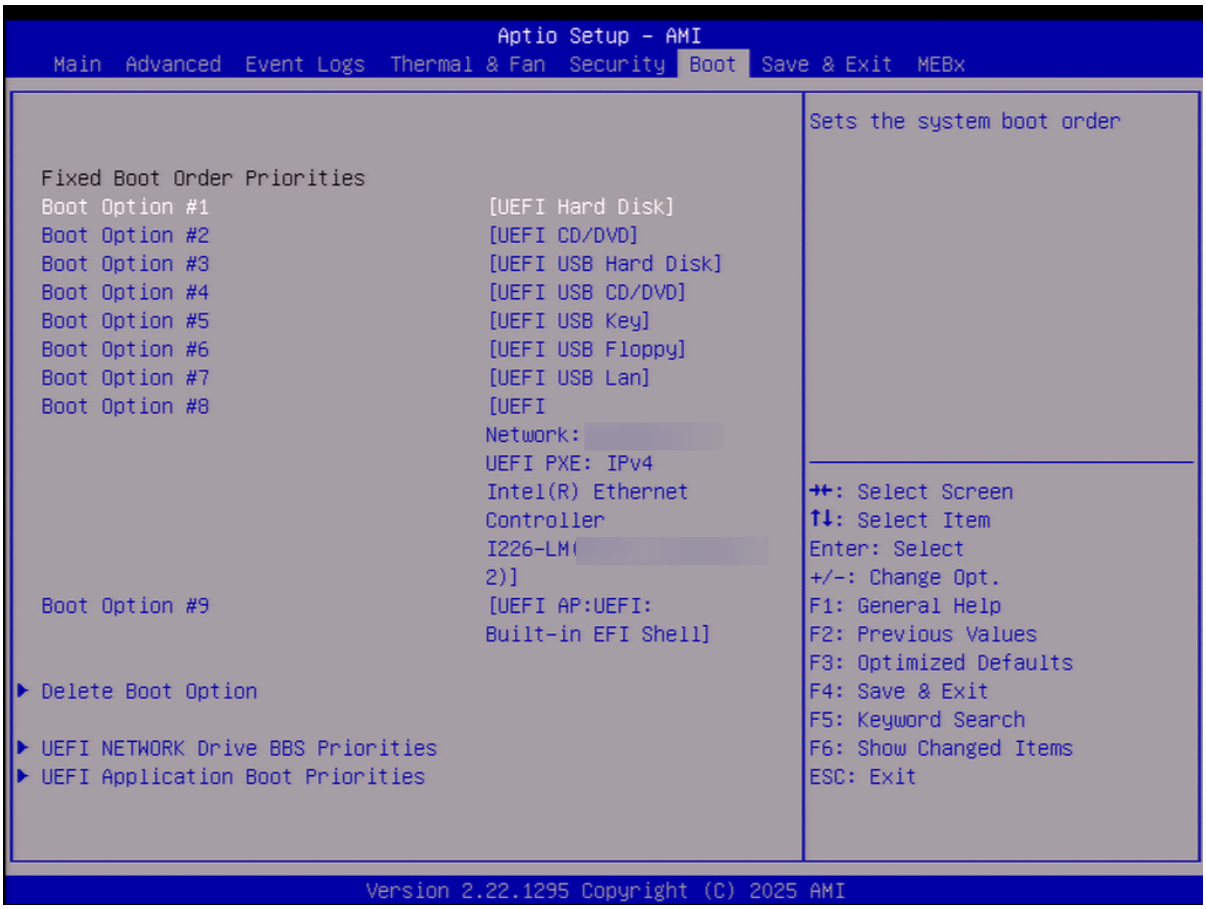



**Figure 8-6. Boot Screen**

### FIXED BOOT ORDER Priorities

Use this feature to prioritize the order of a bootable device from which the system will boot. Press <Enter> on each item sequentially to select the device.

- Boot Option #1 – Boot Option #9

### ►Add New Boot Option

Use this feature to add a new boot option to the boot priority features for system boot.

**Note:** This submenu is available when any storage device is detected by the BIOS.

#### Add boot option

Use this feature to specify the name for the new boot option.

**Path for boot option**

Use this feature to enter the path for the new boot option in the format fsx:\path\filename.efi.

**Boot option File Path**

Use this feature to specify the file path for the new boot option.

**Create**

After setting the name and the file path for the boot option, press <Enter> to create the new boot option in the boot priority list.

### ►Delete Boot Option

Use this feature to select a boot device to delete from the boot priority list.

**Delete Boot Option**

Use this feature to remove an EFI boot option from the boot priority list.

### ►UEFI NETWORK Drive BBS Priorities

Use this feature to set the system boot order of detected devices.

### ►UEFI Application Boot Priorities

Use this feature to set the system boot order of detected devices.

## 8.8 Save & Exit

Select Save & Exit from the BIOS Setup screen to configure the settings below.

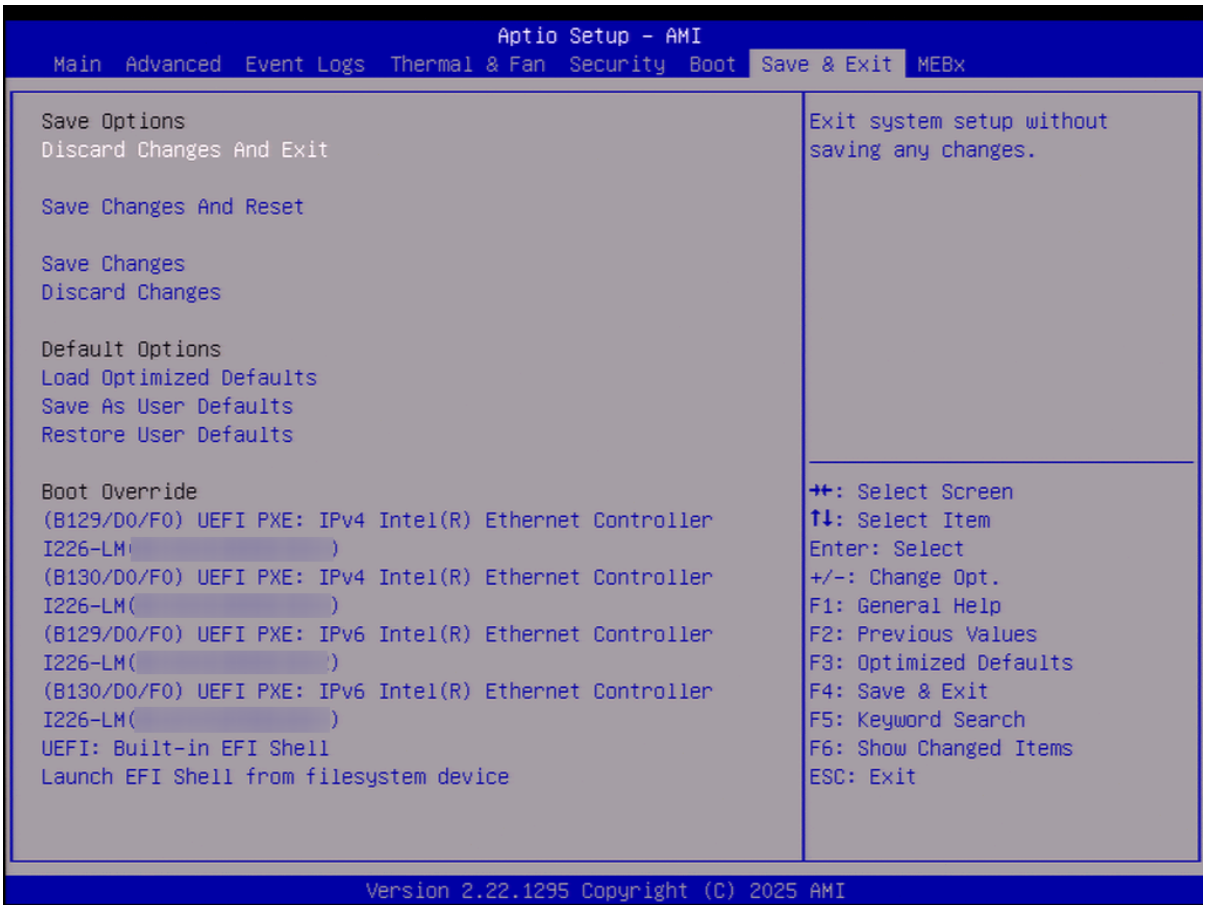



**Figure 8-7. Save & Exit Screen**

### Save Options

#### Discard Changes and Exit

Use this feature to exit from the BIOS Setup utility without making any permanent changes to the system configuration and reboot the computer.

#### Save Changes and Reset

On completing the system configuration changes, use this feature to exit the BIOS Setup utility and reboot the computer for the new system configuration parameters to take effect.

#### Save Changes

On completing the system configuration changes, use this feature to save all changes made. This will not reset (reboot) the system.

### Discard Changes

Select this feature and press <Enter> to discard all changes made and return to the BIOS Setup utility.

### Default Options

### Load Optimized Defaults

Select this feature and press <Enter> to load manufacturer optimized default settings, which are intended for maximum system performance but not for maximum stability.

**Note:** After pressing <Enter>, reboot the system for the changes to take effect, which ensures that this system has the optimized default settings.

### Save as User Defaults

Select this feature and press <Enter> to save all changes as the default values specified to the BIOS Setup utility for future use.

### Restore User Defaults

Select this feature and press <Enter> to retrieve user-defined default settings that have been saved previously.

### Boot Override

**Note:** Use this section to override the Boot priorities sequence in the Boot menu, and immediately boot the system with a device specified here instead of the one specified in the boot list. This is a one-time boot override.

### Launch EFI Shell from filesystem device

Use this feature to launch the EFI shell application (Shell.efi) from one of the available filesystem devices. A filesystem is a virtual, logical, or physical system for organizing, managing, and accessing the files and directories on devices such as SSDs, HDDs, or other storage devices.

## 8.9 MEBx

Use this menu to create a password for MEBx.


**Figure 8-8. MEBx Screen**

**Intel(R) ME Password**

Use this feature to create a password for the Intel Management Engine BIOS Extension.

**Intel(R) AMT (Available after entering a password for Intel(R) ME Password)**

Use this feature to enable or disable Active Management Technology (AMT). The options are Disabled, Partially Disabled, and **Enabled**.

**Change Password (Available after entering a password for Intel(R) ME Password)**

Press Enter and follow the prompt to change the password.

### ►Intel(R) AMT Configuration

#### ►Redirection features

**SOL**

Use this feature to enable the SOL firmware interface. The options are Disabled and **Enabled**.

**Storage Redirection**

Use this feature to enable the firmware remote storage redirection. The options are Disabled and **Enabled**.

**KVM Feature Selection**

Use this feature to enable the firmware KVM feature. The options are Disabled and **Enabled**.

#### ►User Consent

**User Opt-in**

Use this feature to configure when user consent is required. The options are None, **KVM**, and ALL.

**Opt-in Configurable from Remote IT**

Use this feature to enable or disable the remote change capability of the User Opt-in feature. The options are Disabled and **Enabled**.

**Password Policy**

Use this feature to set the password policy. The options are Default Password Only, During Setup And Configuration, and **Anytime**.

#### ►Network Setup

##### ►Intel(R) ME Network Name Settings

**FQDN**

Use this feature to specify the fully qualified domain name.

**Shared/Dedicated FQDN**

Use this feature to select dedicated or shared for the fully qualified domain name. The options are Dedicated and **Shared**.

##### ►TCP/IP Settings

###### ►Wired LAN IPv4 Configuration

**DHCP Mode**

Use this feature to enable or disable IPv4 DHCP mode. The options are Disable and **Enabled**.

**Network Access State**

Use this feature to change the state of the network state of ME. The options are Network Active, **Network Inactive**, Partial Unprovision, and Full Unprovision.

### ►Remote Setup And Configuration

**Provisioning Server address**

Use this feature to enter the provisioning server address. It's either a host name, IPv4, or IPv6.

**Provisioning server port number**

Use this feature to enter the provisioning server port number. The port numbers can range from 0 to 65535.

**Remote Configuration ****

Use this feature to enable or disable remote configuration. The options are Disabled and **Enabled**.

**PKI DNS Suffix**

Use this feature to enter the PKI DNS suffix.

**Activate Remote Configuration**

Use this feature to activate remote configuration.

### ►Manage Certificates

### ►Go Daddy Class 2 CA

This page displays information about the Go Daddy Root 2 CA certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Go Daddy Root 2 CA-G2

This page displays information about the Go Daddy Class 2 CA-G2 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Comodo AAA CA

This page displays information about the Comodo AAA CA certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Starfield Class 2 CA

This page displays information about the Starfield Class 2 CA certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Starfield Root CA-G2

This page displays information about the Starfield Root 2 CA-G2 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►VeriSign Class 3 Primary CA-G5

This page displays information about the VeriSign Class 3 Primary CA-G5 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Baltimore CyberTrust Root

This page displays information about the Baltimore CyberTrust Root certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►USERTrust RSA CA

This page displays information about the USERTrust RSA CA certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Verizon Global Root

This page displays information about the Verizon Global Root certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Entrust .net CA (2048)

This page displays information about the Entrust .net CA (2048) certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Entrust Root CA

This page displays information about the Entrust Root CA certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Entrust Root CA-G2

This page displays information about the Entrust Root CA-G2 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►VeriSign Universal Root CA

This page displays information about the VeriSign Universal Root CA certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Affirm Trust Premium

This page displays information about the Affirm Trust Premium certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►DigiCert Global Root CA

This page displays information about the DigiCert Global Root CA certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►DigiCert Global Root G2

This page displays information about the DigiCert Global Root G2 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►DigiCert Global Root G3

This page displays information about the DigiCert Global Root G3 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►DigiCert Trusted Root G4

This page displays information about the DigiCert Trusted Root G4 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►GlobalSign Root CA - R3

This page displays information about the GlobalSign Root CA - R3 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►GlobalSign ECC Root CA - R5

This page displays information about the GlobalSign ECC Root CA - R5 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►GlobalSign Root CA - R6

This page displays information about the GlobalSign Root CA - R6 certificates.

**Active**

Use this feature to set this certificate to active. The options are NO and **YES**.

**Default**

Shows this certificate as default. The option is **YES**.

**Hash type**

**Hash data**

### ►Power Control

**ME ON in Host Sleep States**

Use this feature to select the host sleep states. The options are Desktop: ON in S0 and **Desktop: ON in S0, ME Wake in S3, S4-5**.

**Idle Timeout**

Use this feature to enter the timeout value. The value can range from 1 to 65535.

# Appendix A:

# BIOS Codes

For information about BIOS codes for the SYS-E201-14AR server, refer to the following content.

## BIOS Error POST (Beep) Codes

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

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

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

These fatal errors are usually communicated through a series of audible beeps that can be heard on an external buzzer connected to JD1. The table shown below lists some common errors and their corresponding beep codes encountered by users.

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

## Additional BIOS POST Codes

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

For information on AMI updates, refer to https://www.ami.com/products.

# Appendix B:

# Standardized Warning Statements for AC Systems

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 section in its entirety before installing or configuring components in the Supermicro SYS-E201-14AR server.

These warnings may also be found on our website at the following page:

https://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.

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。

WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

תקנון הצהרות אזהרה

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

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

טכנית של סופרמיקרו. טכנאים מוסמכים בלבד רשאים להתקין או להגדיר את הרכיבים.

יש לקרוא את הנספח במלואו לפני התקנת או הגדרת הרכיבים במארזי סופרמיקרו.

ا كً ف حالة وٌكي أى تتسبب ف اصابة جسذ ةٌ هذا الز هز عٌ خطز !تحذ زٌ.

قبل أى تعول على أي هعذات،كي على علن بالوخاطز ال اجٌوة عي الذوائز

الكهزبائ ةٍ

وكي على درا ةٌ بالووارسات النقائ ةٍ لو عٌ وقنع أي حادث

استخذم رقن الب إى الو صٌنص ف هًا ةٌ كل تحذ زٌ للعثر تزجوتها

안전을 위한 주의사항

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

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

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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

BEWAAR DEZE INSTRUCTIES

## Installation Instructions

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

警告!

システムを電源に接続する前に、設置手順書をお読み下さい。

警告!

将此系统连接电源前、请先阅读安装说明。

警告!

將系統與電源連接前、請先閱讀安裝說明。

Warnung!

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

¡Advertencia!

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

Attention!

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

אַזהָרָה!

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

تحذير!

اقر إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

경고!

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

Waarschuwing!

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

## Circuit Breaker

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

警告!

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

警告!

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

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 250 V、20 A。

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.

אזהרה!

מוצר זה מסתמך על הגנה המותקנת במבנים למניעת קצר חשמלי. יש לוודא כי

המכשיר המגן מפני הקצר החשמלי הוא לא יותר מ-250 V, 20 A

تحذير!

هذا المنتج يعتمد على معداث الحمايت مه الدوائر القصيرة التي تم تثبيتها في

المبنى

تأكد من أن تقييم الجهاز الوقائي ليس أكثر من : 20 A, 250 V

경고!

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

## Power Disconnection Warning

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

警告!

システムコンポーネントの取り付けまたは取り外しのために、シャーシ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!

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

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

!تحذير

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

انطاقت قبم

انصسل إنى انمناطق انداخهيت نههيكم نتثبيج أو إزانت مكنناث 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.

警告!

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

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.

!تحذير

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.

## Rack Stability Hazard

**Warning!** Stability hazard. The rack may tip over causing serious personal injury. Before extending the rack to the installation position, read the installation instructions. Do not put any load on the slide-rail mounted equipment in the installation position. Do not leave the slide-rail mounted equipment in the installation position.

警告!

安定性に危険があります。ラックが転倒して、重大な人身事故を引き起こす可能性があります。ラックを設置位置まで伸ばす前に、設置手順をお読みください。設置位置にあるスライドレールに取り付けられた機器に負荷をかけないでください。スライドレールに取り付けられた機器を設置位置に放置しないでください。

警告!

稳定性危险。机架可能会翻倒、造成严重的人身伤害。在将机架延伸到安装位置之前、请阅读安装说明。请勿在安装位置对滑轨安装的设备施加任何负载。请勿将滑轨安装的设备留在安装位置。

警告!

穩定性危險。機架可能會翻倒、造成嚴重的人身傷害。將機架延伸至安裝位置前、請先閱讀安裝說明。請勿在安裝位置的滑軌安裝設備上放置任何負載。請勿將滑軌安裝設備留在安裝位置。

Warnung!

Gefahr der Instabilität. Das Rack kann umkippen und schwere Verletzungen verursachen. Lesen Sie die Installationsanweisungen, bevor Sie das Rack in die Einbauposition ausfahren. Belasten Sie die auf den Gleitschienen montierten Geräte nicht in der Einbauposition. Lassen Sie die auf den Gleitschienen montierten Geräte nicht in der Einbauposition.

¡Advertencia!

Peligro de inestabilidad. El rack podría volcarse y causar lesiones personales graves. Antes de extender el rack a la posición de instalación, lea las instrucciones de instalación. No coloque ninguna carga sobre el equipo montado sobre rieles deslizantes en la posición de instalación. No deje el equipo montado sobre rieles deslizantes en la posición de instalación.

Attention!

Danger d’instabilité. Le rack peut basculer et provoquer des blessures corporelles graves. Avant d’étendre le rack en position d’installation, lire les instructions d’installation. Ne pas charger l’équipement monté sur rail de glissière en position d’installation. Ne pas laisser l’équipement monté sur rail de glissière en position d’installation.

אזהרה!

סכנת חוסר יציבות

המתלה עלול להתהפך ולגרום לפציעה חמורה

לפני הארכת המתלה למצב ההתקנה, קרא את הוראות ההתקנה

אין להעמיס כל עומס על הציוד המותקן על מסילת ההחלקה במצב ההתקנה

אל תשאיר את הציוד המותקן על מסילת ההחלקה במצב ההתקנה

!تحذير

خطر عدم الاستقرار.

قد ينقلب الرف مسبباً إصابات جسدية خطيرة.

قبل تمديد الرف إلى موضع التركيب، اقرأ تعليمات التركيب.

لا تضع أي حمولة على الجهاز المثبت على سكة الانزلاق في موضع التركيب.

لا تترك الجهاز المثبت على سكة الانزلاق في موضع التركيب.

경고!

안정성 위험. 랙이 넘어져 심각한 개인 부상을 입을 수 있습니다. 랙을 설치 위치까지 확장하기 전에 설치 지침을 읽으십시오. 설치 위치에서 슬라이드 레일 장착 장비에 하중을 가하지 마십시오. 슬라이드 레일 장착 장비를 설치 위치에 두지 마십시오.

Waarschuwing!

Gevaar voor instabiliteit. Het rek kan kantelen en ernstig persoonlijk letsel veroorzaken. Lees de installatie-instructies voordat u het rek uitschuift naar de installatiepositie. Plaats geen last op de op de glijrail gemonteerde apparatuur in de installatiepositie. Laat de op de glijrail gemonteerde apparatuur niet in de installatiepositie staan.

## Restricted Area

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

警告!

このユニットは、アクセス制限区域に設置されることを想定しています。

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

警告!

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

警告!

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

Warnung!

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

¡Advertencia!

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

Attention!

Cet appareil doit être 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.

אזהרה!

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

'כלי אבטחה בלבד (מפתח, מנעול וכד.)

!تحذير

اتخصيص هذه انحذة نترك بُها ف مناطق محظورة تم .

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

أو أ وس هُت أخري نلاأمما 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

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

警告!

バッテリーを間違ったタイプに交換すると爆発の危険があります。交換する電池はメーカーが推奨する型、または同等のものを使用下さい。使用済電池は製造元の指示に従って処分して下さい。

警告!

如果更换的电池类型不正确。请只使用同类电池或制造商推荐的功能相当的电池更换原有电池。请按制造商的说明处理废旧电池。

警告!

如果更換的電池類型不正確。請使用製造商建議之相同或功能相當的電池更換原有電池。請按照製造商的說明指示處理廢棄舊電池。

WARNUNG!

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

¡ADVERTENCIA!

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

ATTENTION!

Il existe un risque d'explosion si la batterie est remplacée par un type incorrect. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

אזהרה!

קיימת סכנת פיצוץ אם הסוללה תוחלף בסוג שגוי. יש להחליף

את הסוללה בסוג התואם מחברת יצרן מומלצת.

סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן.

!تحذير

.هناك خطر الانفجار إذا تم استبدال البطارية بنوع غير صحيح

اسحبذال البطارية

فقط بنفس النبع أو ما يعادلها مما أوصث به الشرمة المصنعة

جخلص من البطاريات المسحعملة وفقا لحعليمات الشرمة الصانعة

경고!

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

WAARSCHUWING!

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

## Redundant Power Supplies

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

警告!

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告!

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告!

此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung!

Dieses Gerät kann mehr als eine Stromzufuhr haben. Um sicherzustellen, dass der Einheit kein 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.

אזהרה!

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

את היחידה.

!تحذير

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة .

يجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

경고!

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

Waarschuwing!

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

## Backplane Voltage

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

警告!

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

修理する際には注意ください。

警告!

当系统正在进行时、背板上有很危险的电压或能量、进行维修时务必小心。

警告!

當系統正在進行時、背板上有危險的電壓或能量、進行維修時務必小心。

Warnung!

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

¡Advertencia!

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

Attention!

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

אזהרה!

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

העבודה.

!تحذير

هناك خطز مه التيار الكهزبائي أوالطاقة المىجىدة على اللىحة

عندما يكىن 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.

警告!

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告!

设备安装必须符合本地与本国电气法规。

警告!

設備安裝必須符合本地與本國電氣法規。

Warnung!

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

La 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.

אזהרה!

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

!تحذير

تركيب المعدات الكهربائية يجب أن يمتثل للقناويه المحلية والبطنية المتعلقة

بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing!

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

## Product Disposal

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

警告!

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

警告!

本产品的废弃处理应根据所有国家的法律和规章进行。

警告!

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung!

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

¡Advertencia!

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

Attention!

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

אזהרה!

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

تحذير!

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

경고!

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

Waarschuwing!

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

## Fan Warning

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


警告!

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

警告!

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

警告!

危險的可移動性零件。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

تحذير! أجزاء متحركة خطرة. ابتعد عن شفرات المروحة المتحركة.من الممكن أن

المراوح لا تزال تدور عند إزالة كتلة المروحة من الهيكل يجب إبقاء الأصابع

ومفكات البراغي وغيرها من الأشياء بعيدا عن الفتحات في كتلة المروحة.

경고!

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

Waarschuwing!

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

## Power Cable and AC Adapter

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

警告!

製品を設置する場合、提供または指定および購入された接続ケーブル、電源コードとACアダプターを該当する地域の条例や安全基準に適合するコードサイズやプラグと共に使用下さい。他のケーブルやアダプタを使用すると故障や火災の原因になることがあります。電気用品安全法は、ULまたはCSA認定のケーブル( UL/CSAマークがコードに表記) をSupermicro が指定する製品以外に使用することを禁止しています。

警告!

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

警告!

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

Warnung!

Nutzen Sie beim Installieren des Produkts ausschließlich die von uns zur Verfügung gestellten Verbindungskabeln, Stromkabeln und/oder 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.

אזהרה!

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

!تحذير

تالباكلا ءارشب مق وأ ةددحملا وأ ةرفوتملا تاليصوتلا مادختساب مق ،جتنملا بيكرت دنع

كلذ يف امب ةيلحملا ةمالسلا تابلطتمو نيناوقب مازتلالا عم ددرتملا رايتلا تالوحمو ةيئابر هكلا

قيرح وأ لطع يف ببستي دق برخأ تالوحمو تالباك يأ مادختسا .ميلسلا سباقلاو لصوملا مجح.

CSA وأ UL لبق نم ةدمتعملا تالباكلا مادختسا تادعملاو ةيئابر هكلا تز هجألل ةمالسلا نوناق رظحي

Supermicro لبق نم ةددحملاو ةينعملا تاجتنملا ريغ برخأ تادعم يأ عم (UL/CSA) ةمالع لمحت يتلاو.

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.

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 C:

# System Specifications

| |
|---|
| **Processors** |
| Single Intel® Core™ Ultra 9/7/5 (Series 2) processor (in a Socket LGA-1851), supports up to 65 W TDP CPUs (air cooled) |
| **BIOS** |
| AMI 32 MB UEFI |
| ACPI 6.5, SMBIOS 3.7 or later, UEFI 2.9 |
| **Memory** |
| Two DIMM slots support up to 96 GB 6400 MT/s ECC/non-ECC DDR5 SO-DIMM (1DPC) |
| **Storage Drives** |
| One M.2 PCIe 5.0 x4 NVMe slot (M-key 2280) |
| One internal fixed 2.5" SATA drive bay |
| **PCI Expansion Slots** |
| One M.2 PCIe 4.0 x1 slot (E-key 2230) |
| **Input/Output** |
| Two RJ45 2.5 GbE LAN ports (Intel® I226-LM) |
| Three USB 3.2 Gen2 (type-A) ports |
| One USB 3.2 Gen2 (type-c) port |
| Two DisplayPort ports |
| Two HDMI ports |
| One TPM Onboard/port 80 |
| **Motherboard** |
| X14SAV-LVDS: 6.7" x 6.7" (17.02 cm x 17.02 cm) |
| **Chassis** |
| CSE-101iF: 1.5U rackmount 7.68" x 2.68" x 7.68" (195 x 68 x 195 mm) (WxHxD) |
| **System Cooling** |
| One CPU heatsink with 80 x15 mm (active cooler) fan |
| Two 4-pin PWM 60 x 60 x 15 mm fans |
| **Power Supply** |
| One 180 W power adapter |
| Model: MCP-250-10133-0N |
| AC Input Voltages: 100-240 V, 2.4 A |
| Rated Input Frequency: 50-60 Hz |
| Rated Output Power: 180 W |
| Rated DC Output Voltages: 12 V, 15 A |

| |
|---|
| **Operating Environment** |
| Operating Temperature: 0°C to 40°C (32°F to 104°F) with 0.7 m/s airflow |
| Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) |
| Operating Relative Humidity: 8% to 90% (non-condensing) |
| Non-operating Relative Humidity: 5% to 95% (non-condensing) |
| **Regulatory Compliance** |
| FCC, ICES, CE, VCCI, RCM, UKCA, NRTL, CB, BSMI |
| **Certified Safety Models** |
| Compliant with UL or CSA: 01iF-18, 101iF-A18X14. |
| **Applied Directives, Standards** |
| EMC/EMI: 2014/30/EU (EMC Directive) |
| Electromagnetic Compatibility Regulations 2016 |
| FCC Part 15 |
| ICES-003 |
| VCCI-CISPR 32 |
| AS/NZS CISPR 32 |
| BS/EN55032 |
| BS/EN55035 |
| CISPR 32 |
| CISPR 35 |
| BS/EN 61000-3-2 |
| BS/EN 61000-3-3 |
| BS/EN 61000-4-2 |
| BS/EN 61000-4-3 |
| BS/EN 61000-4-4 |
| BS/EN 61000-4-5 |
| BS/EN 61000-4-6 |
| BS/EN 61000-4-8 |
| BS/EN 61000-4-11 |
| Environment: |
| 2011/65/EU (RoHS Directive) |
| EC 1907/2006 (REACH) |
| 2012/19/EU (WEEE Directive) |
| California Proposition 65 |
| Product Safety: 2014/35/EU (LVD Directive) |
| UL/CSA 62368-1 (USA and Canada) |
| Electrical Equipment (Safety) Regulations 2016 |
| IEC/BS/EN 62368-1 |

**Perchlorate Warning**

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