



A+ Server AS -2024S-TR



USER'S MANUAL

Revision 1.0a

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Preface

About this Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the A+ Server AS -2024S-TR. Installation and maintenance should be performed by experienced technicians only.

Please refer to the AS -2024S-TR server specifications page on our website for updates on supported memory, processors and operating systems (<http://www.supermicro.com>).

Notes

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

- Supermicro product manuals: <http://www.supermicro.com/support/manuals/>
- Product drivers and utilities: <https://www.supermicro.com/wdl/driver>
- Product safety info: http://www.supermicro.com/about/policies/safety_information.cfm

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

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

Secure Data Deletion

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

Warnings

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



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



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

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Chapter 1

Introduction

1.1 Overview

This chapter provides a brief outline of the functions and features of the AS -2024S-TR. The AS -2024S-TR is based on the H12DSi-N6 motherboard and the CSE-LA26TS-R920LPP1 chassis.

In addition to the motherboard and chassis, several important parts that are included with the system are listed below.

Main Parts List		
Description	Part Number	Quantity
2U passive CPU heatsink	SNK-P0063P	2
HDD backplane	BPN-SAS3-LA26A-N12	1
Tool-less 3.5" HDD tray/2.5" drive support with screws	MCP-220-00184-0B	12
8-cm cooling fans	FAN-0181L4	3
Air shroud	MCP-310-29001-0N	1
2U fixed rail set with quick release	MCP-290-00053-0N	1
920W power supply	PWS-920P-1R2	2

Notes: A Quick Reference Guide can be found on the product page of the Supermicro website.

The following safety models associated with the AS -2024S-TR have been certified as compliant with UL or CSA: LA29-9, LA26-R9H12.

1.2 Unpacking the System

Inspect the box the SuperServer AS -2024S-TR was shipped in and note if it was damaged in any way. If any equipment appears damaged, please file a damage claim with the carrier who delivered it.

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

1.3 System Features

The following table provides you with an overview of the main features of the AS -2024S-TR. Please refer to Appendix C for additional specifications.

System Features
Motherboard
H12DSi-N6
Chassis
CSE-LA26TS-R920LPP1
CPU
Dual AMD EPYC™ 7002/7003 Series Processors
Socket Type
SP3
Memory
16 DIMM slots to support up to 4TB of registered ECC DDR4-3200 SDRAM
Chipset
System on Chip
Expansion Slots
Three PCIe 4.0 x16 slots Three PCIe 4.0 x8 slots One M.2 Interface: PCIe 4.0 x4
Hard Drives
Twelve hot-swap 3.5" (tool-less) or 2.5" (screw) drive bays (Default configuration is eight SATA + four NVMe, other configurations requires additional optional parts)
Power
Redundant 920W hot-swap power supply modules
Form Factor
2U rackmount
Dimensions
(WxHxD) 17.2 x 3.5 x 25.5 in. (437 x 89 x 648 mm)

1.4 Server Chassis Features

Control Panel

Power buttons and status LEDs are located on the control panel at the front of the chassis. The locations and descriptions of these buttons and LEDs are provided below. See Chapter 4 for details on the control panel connections.

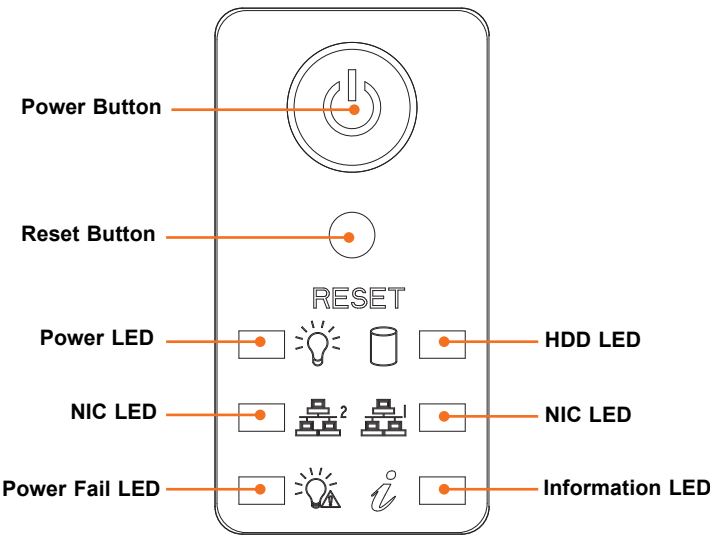


Figure 1-1. Control Panel

Control Panel Features	
Features	Description
Power Button	The main power switch applies or removes primary power from the power supply to the server but maintains standby power.
Reset Button	Reboots the system.
Power LED	Steady on – Power on Blinking at 4Hz – Checking BIOS/BMC integrity Blinking at 4Hz and "i" LED is blue – BIOS firmware updating Two blinks at 4Hz, one pause 2hz and "i" LED blue – BMC firmware updating Blinking at 1Hz and "i" LED red – Fault detected
NIC LEDs	Indicates network activity on a LAN when flashing.
Power Fail LED	Indicates a power supply module has failed.
HDD LED	Indicates activity on the hard drive when flashing.
Information LED	Alerts operator to several states (noted in the table below).

Information LED	
Color, Status	Description
Red, solid	An overheat condition has occurred.
Red, blinking at 1Hz	Fan failure, check for an inoperative fan.
Red, blinking at 0.25Hz	Power failure, check for a non-operational power supply.
Red, solid, with Power LED blinking green	Fault detected
Blue and red, blinking at 10 Hz	Recovery mode
Blue, solid	UID has been activated locally to locate the server in a rack environment.
Blue, blinking at 1Hz	UID has been activated using the BMC to locate the server in a rack environment.
Blue, blinking at 2Hz	BMC is resetting
Blue, blinking at 4Hz	BMC is setting factory defaults
Blue, blinking at 10Hz with Power LED blinking green	BMC/BIOS firmware is updating

Front Features

The CSE-LA26TS-R920LPP1 is a 2U chassis. See the illustration below for the features included on the front of the chassis.



Figure 1-2. System Front View

Logical Storage Drive Numbers	
Item	Description
0-11	Twelve hot-swap 3.5" (tool-less) or 2.5" (screw) drive bays (default configuration is eight SATA + four NVMe, other configurations requires additional optional parts)

Drive Carrier Indicators

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

Drive Carrier LED Indicators			
	Color	Blinking Pattern	Behavior for Device
Activity LED	Blue	Solid On	Idle SAS/NVMe drive installed
	Blue	Blinking	I/O activity
	Blue	Off	Idle SATA drive installed
Status LED	Green	Solid Green LED	Safe to remove NVMe device
	Amber	Blinking at 1Hz	Do not remove NVMe device

Rear Features

The illustration below shows the features included on the rear of the chassis. The power supply modules also have status LEDs (see Chapter 3 for details).

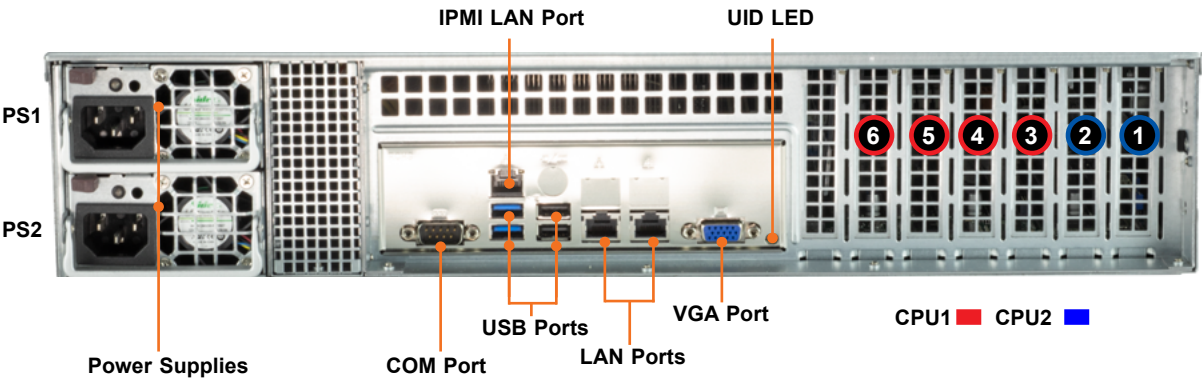


Figure 1-3. System Rear View

Chassis Rear Features	
Feature	Description
Power Supplies	Two 920W redundant power supply modules
COM Port	Serial port
IPMI LAN Port	Dedicated IPMI port; for indicator details, see IPMI LAN LEDs
USB Ports	Four USB 3.0 ports
LAN Ports	Two RJ45 GbE LAN ports
VGA Port	Video port: when the UID LED is on, the rear VGA may be disabled to enable the front VGA port, if available.
UID LED	The unit identifier (UID) indicator light

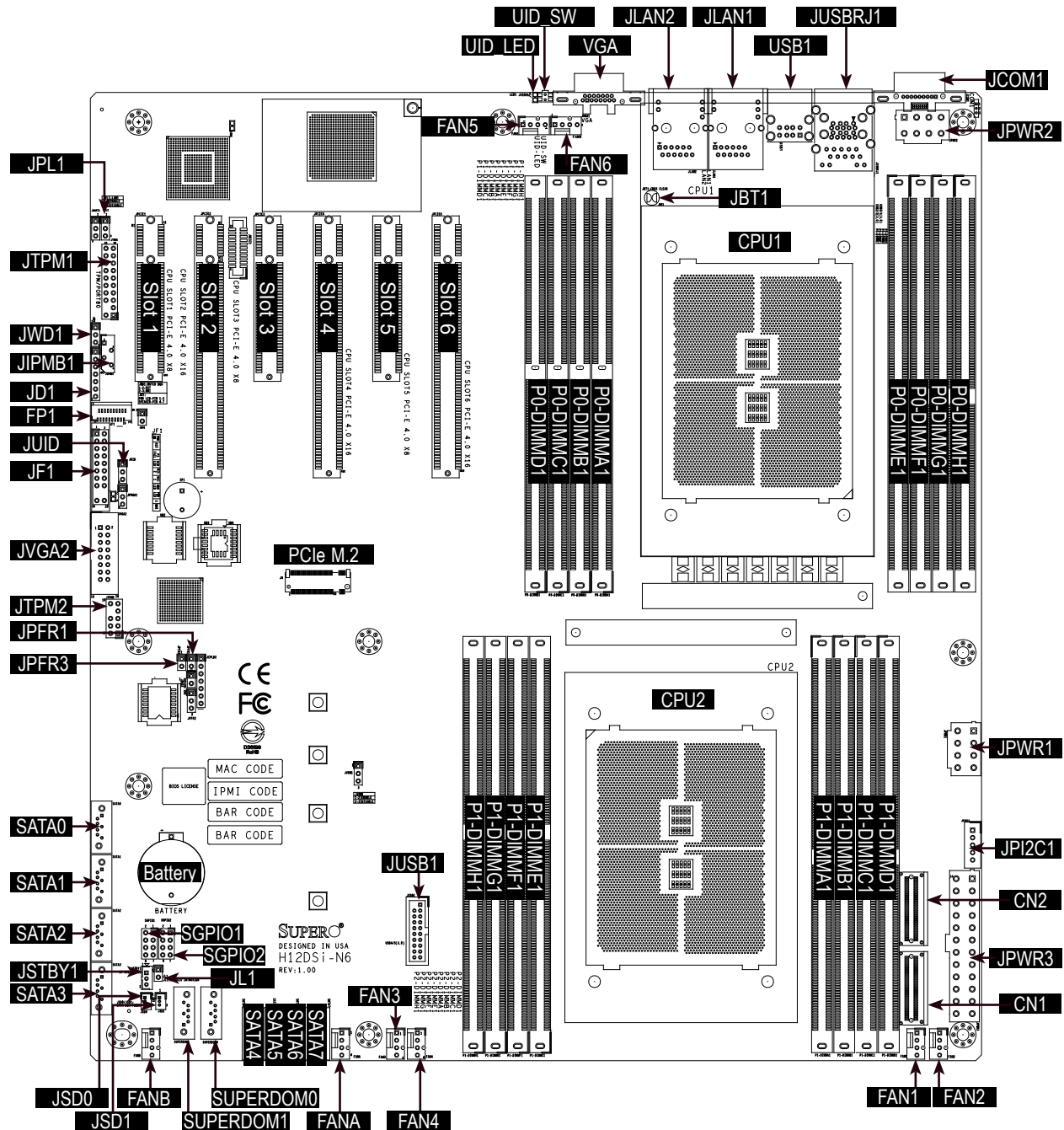
Expansion Slot Descriptions	
Item	Description
1	PCIe 4.0 x8 (low-profile)
2	PCIe 4.0 x16 (low-profile)
3	PCIe 4.0 x8 (low-profile)
4	PCIe 4.0 x16 (low-profile)
5	PCIe 4.0 x8 (low-profile)
6	PCIe 4.0 x16 (low-profile)

Power Supply Indicators

Power Supply Indicator	
LED Color and State	Power Supply Condition
Solid Green	Indicates that the power supply is on
Blinking Green	Indicates that the power supply is plugged in and turned off by the system.
Blinking Amber	Indicates that the power supply has a warning condition and continues to operate.
Solid Amber	Indicates that the power supply is plugged in, and is in an abnormal state. The system might need service. Please contact Supermicro technical support.
Off	No AC power to modules

1.5 Motherboard Layout

Below is a layout of the H12DSi-N6 with jumper, connector and LED locations shown. See the table on the following pages for descriptions. For detailed descriptions, pinout information, and jumper settings, refer to Chapter 4.



Notes:

- "■" indicates the location of pin 1.
- Jumpers/LED indicators not indicated are used for testing only and are not covered in this manual.

Quick Reference Table

Jumper	Description	Default Setting
JBT1	Clear CMOS	Open (Normal)
JD1	Power LED and Speaker/Buzzer	Pins 4-7
JPFR1	Manufacturer Mode	Open (Normal)
JPFR3	PFR Function	Open (Normal)
JPL1	Onboard LAN Enable/Disable	Pins 1-2 (Enabled)
JPVGA1	VGA I/O Enable/Disable	Pins 1-2 (Enabled, rear VGA output)
JUID	FP1 Switch	Pins 1-2
JWD1	Watch Dog	Pins 1-2 (Reset)

LED	Description	Status
LED2	Overheat/Fan Failure LED	Green: Blinking (BMC normal) Green: Fast blinking (BMC initializing)
LED3	Onboard Power LED	Off: System Off Solid Green: System On
LEDM1	BMC Heartbeat LED	Blinking Green: Normal
UID LED1	Unit ID LED	Solid Blue: UID switched to ON

Connector	Description
Battery	Onboard CMOS Battery
CN1/CN2	NVMe Ports
FAN1 - FAN6, FANA, FANB	System Fan Headers
FP1	Supermicro Front Control Panel Connector for FPB-FP826-T
JCOM1	COM Port
JF1	Front Control Panel Header
JIPMB1	4-pin BMC External I ² C Header
JL1	Chassis Intrusion Header
JLAN1/2	1Gbe LAN Ports
JPWR1/2	8-pin Auxilliary Power Connectors (+12V)
JPWR3	24-pin Main Power Connector
JSD0/1	SATA3 DOM (Device on Module) Power Connectors
JSTBY1	Standby Power Connector (+5V)
JTPM1/2	Trusted Platform Module (TPM)/Port 80 Connectors
JUSB1	USB 3.0 Header (USB4/USB5 for front access)
JUSB RJ1	Rear USB 3.0 Ports (USB3/4) / IPMI LAN Port
JVGA2	Front VGA Connector
P0-DIMMA1 - P1-DIMMH1	DIMM (memory) Slots (P0 slots: CPU1, P1 slots: CPU2)
PCIe M.2	M.2 Connector

Connector	Description
SATA0-7	Onboard SATA3 Ports
SGPIO1/2	Serial General Purpose I/O Ports 1/2
Slot1- Slot6	PCIe Expansion Card Slots
SUPERDOM1/2	Supermicro SATA3 DOM Ports
UID_SW	UID Switch (push-button to toggle UID on/off)
USB1	Rear USB 2.0 Ports (USB1/USB2)
VGA	VGA Port

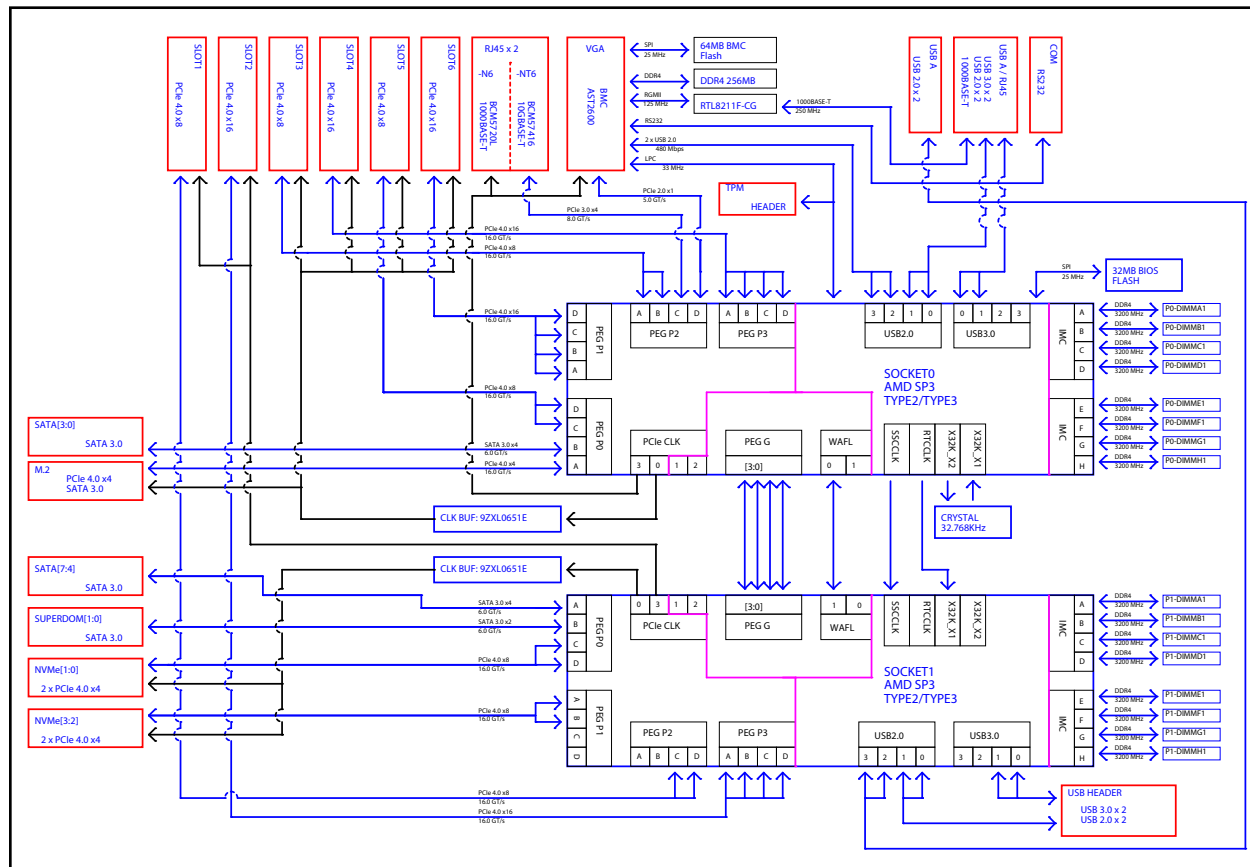


Figure 1-6. System Block Diagram

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

Chapter 2

Server Installation

2.1 Overview

This chapter provides advice and instructions for mounting your system in a server rack. If your system is not already fully integrated with processors, system memory etc., refer to Chapter 4 for details on installing those specific components.

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

2.2 Preparing for Setup

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

Choosing a Setup Location

- The system should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated.
- Leave enough clearance in front of the rack so that you can open the front door completely (~25 inches) and approximately 30 inches of clearance in the back of the rack to allow sufficient space for airflow and access when servicing.
- This product should be installed only in a Restricted Access Location (dedicated equipment rooms, service closets, etc.).
- This product is not suitable for use with visual display workplace devices according to §2 of the German Ordinance for Work with Visual Display Units.

Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are extended to the floor so that the full weight of the rack rests on them.
- In single rack installations, stabilizers should be attached to the rack. In multiple rack installations, the racks should be coupled together.
- Always make sure the rack is stable before extending a server or other component from the rack.
- You should extend only one server or component at a time - extending two or more simultaneously may cause the rack to become unstable.

Server Precautions

- Review the electrical and general safety precautions in Appendix B.
- Determine the placement of each component in the rack *before* you install the rails.
- Install the heaviest server components at the bottom of the rack first and then work your way up.
- Use a regulating uninterruptible power supply (UPS) to protect the server from power surges and voltage spikes and to keep your system operating in case of a power failure.
- Allow any drives and power supply modules to cool before touching them.
- When not servicing, always keep the front door of the rack and all covers/panels on the servers closed to maintain proper cooling.

Rack Mounting Considerations

Ambient Operating Temperature

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

Airflow

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

Mechanical Loading

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

Circuit Overloading

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

Reliable Ground

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



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

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

2.3 Installing the Rails

There are a variety of rack units on the market, which may require a slightly different assembly procedure. This rail set fits a rack between 26.8" and 36.4" deep.

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

Identifying the Rails

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

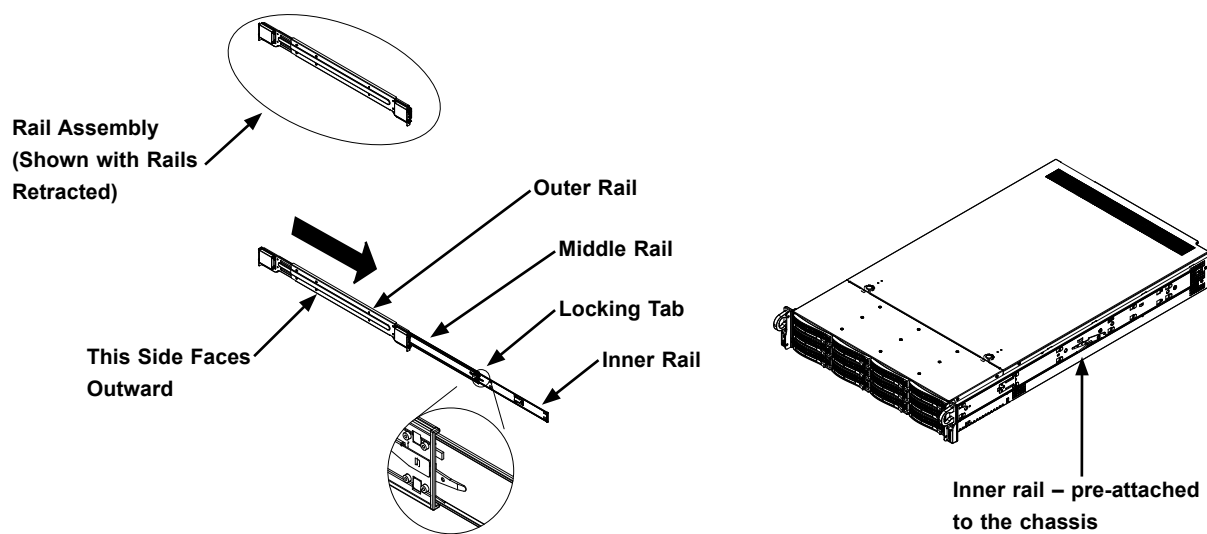


Figure 2-1. Identifying the Sections of the Rack Rails
(Figure on Left is Left Rail Assembly Shown)

Note: The front chassis rails and the rack rails both have a locking tab. The locking tabs hold the server in place when fully installed and pushed into the rack (its normal operating position). The tabs also lock the server in place when extended from the rack to prevent the server from completely coming out of the rack when pulled out for servicing.

Releasing the Inner Rail

Each inner rail has a locking latch. This latch prevents the server from coming completely out of the rack when the chassis is pulled out for servicing.

To mount the rail onto the chassis, first release the inner rail from the outer rails.

Releasing Inner Rail from the Outer Rails

1. Pull the inner rail out of the outer rail until it is fully extended as illustrated below.
2. Press the locking tab down to release the inner rail.
3. Pull the inner rail all the way out.

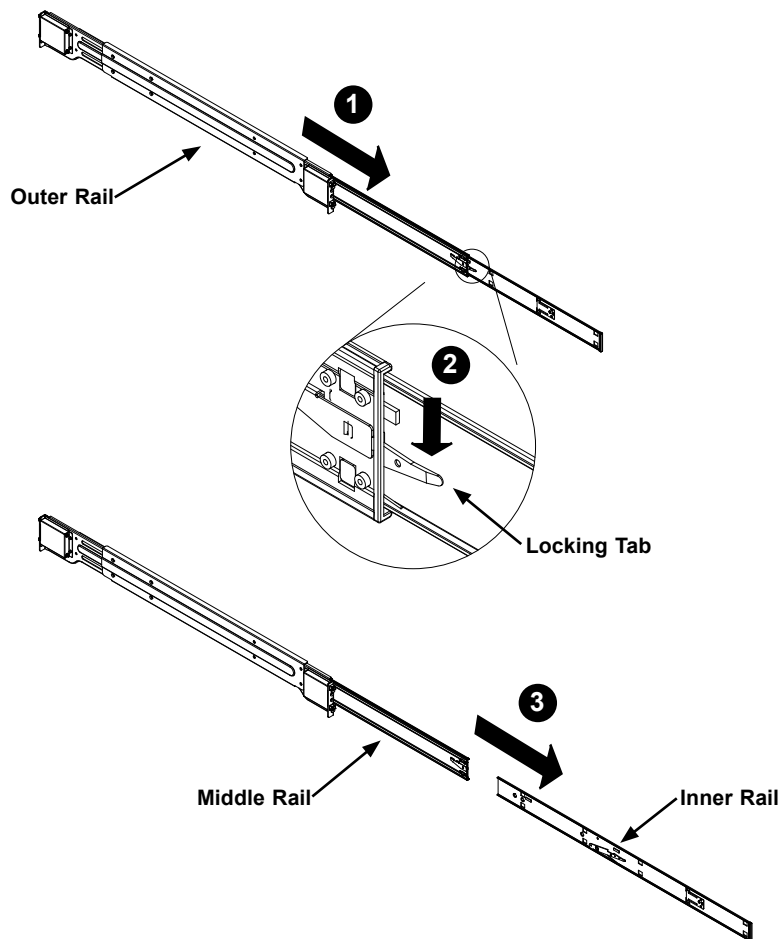


Figure 2-2. Extending and Releasing the Inner Rail

Installing the Inner Rails on the Chassis

Installing the Inner Rails

1. Identify the left and right inner rails. They are labeled.
2. Place the inner rail firmly against the side of the chassis, aligning the hooks on the side of the chassis with the holes in the inner rail.
3. Slide the inner rail forward toward the front of the chassis until the quick release bracket snaps into place, securing the rail to the chassis.
4. Optionally, you can further secure the inner rail to the chassis with a screw.
5. Repeat for the other inner rail.

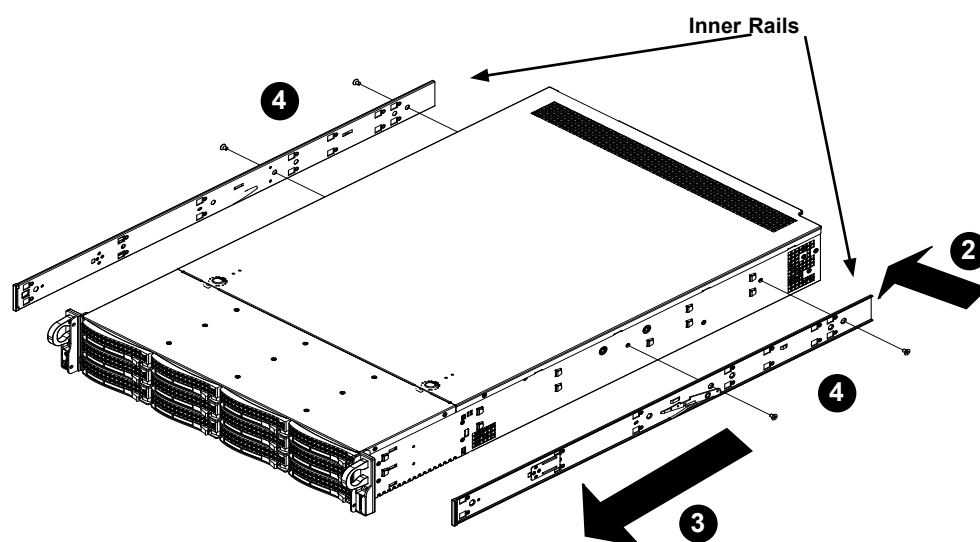


Figure 2-3. Installing the Inner Rails

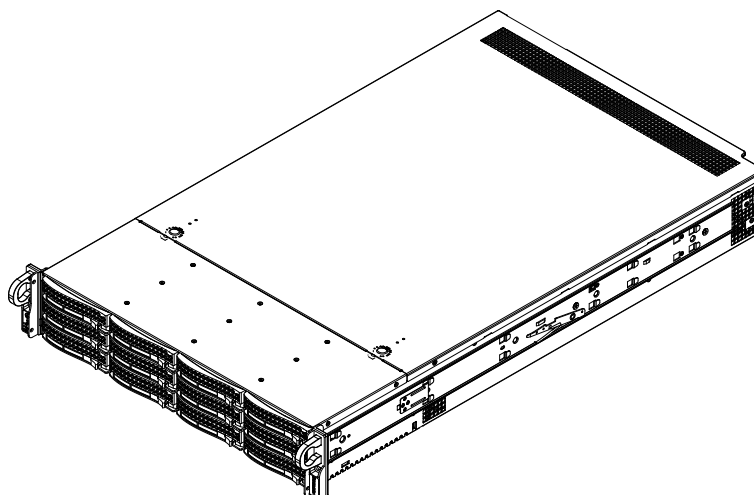


Figure 2-4. Inner Rails Installed on the Chassis

Installing the Outer Rails onto the Rack

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

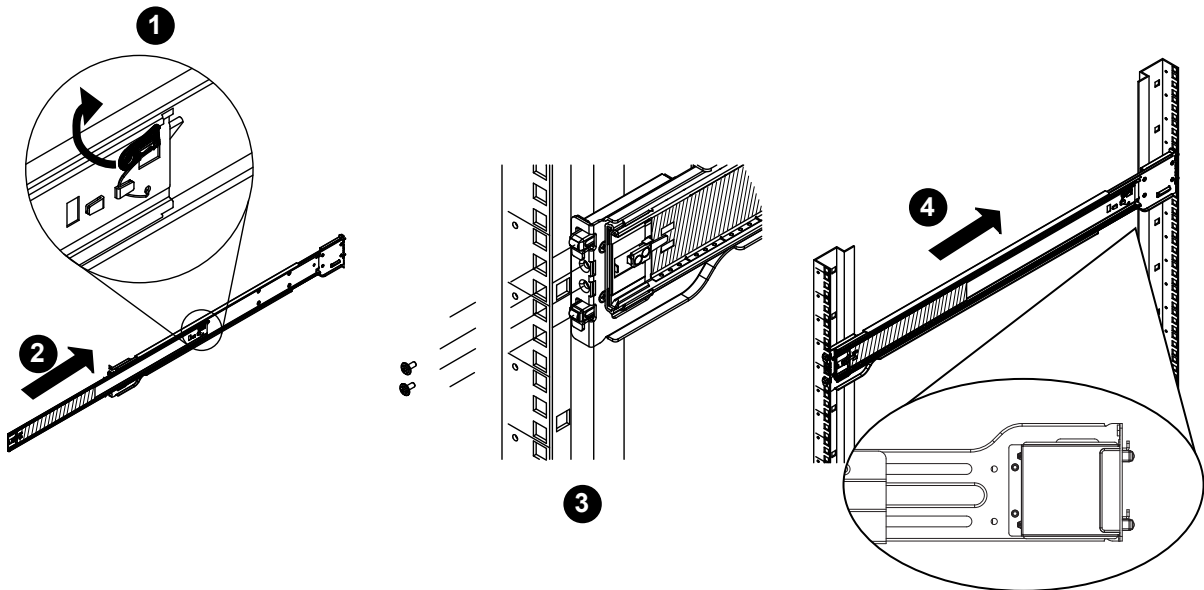


Figure 2-5. Extending and Mounting the Outer Rails

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



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

Do not use a two post "telco" type rack.

2.4 Installing the Server into the Rack

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

1. Pull the middle rail out of the front of the outer rail and make sure that the ball bearing shuttle is locked at the front of the middle rail.
2. Align the rear of the chassis rails with the middle rails and then push evenly on both sides of the chassis until it clicks into the fully extended position.
3. Depress the locking tabs on both sides of the chassis and push the it fully into the rack. The locking tabs should "click".
4. Optional screws may be used to hold the front of the chassis to the rack.

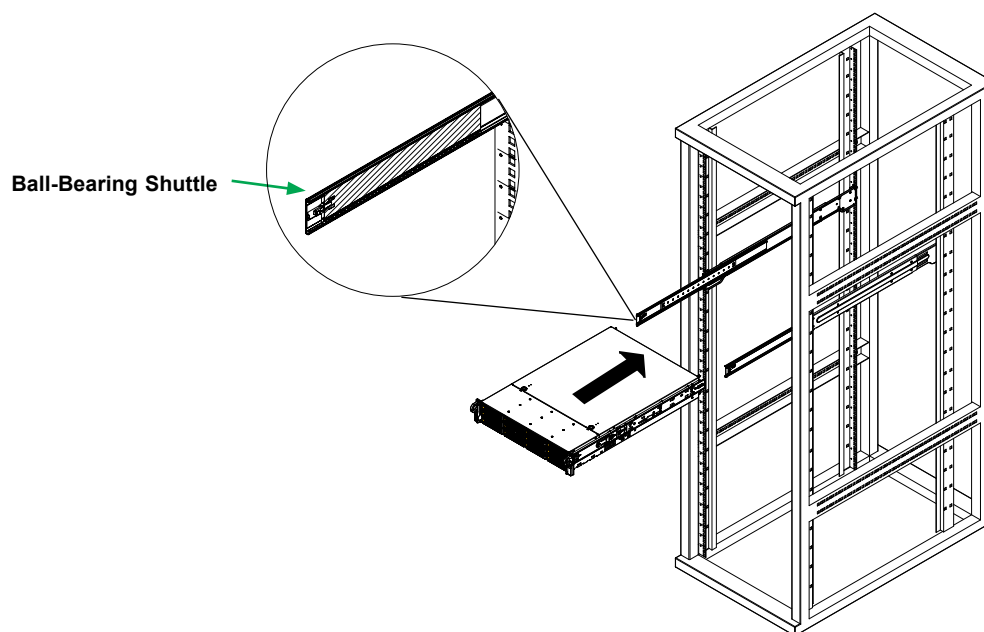


Figure 2-6. Installing into a Rack

Notes: Keep the ball bearing shuttle locked at the front of the middle rail during installation. Figure is for illustrative purposes only. Always install servers to the bottom of a rack first.



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



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

Removing the Chassis from the Rack

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

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

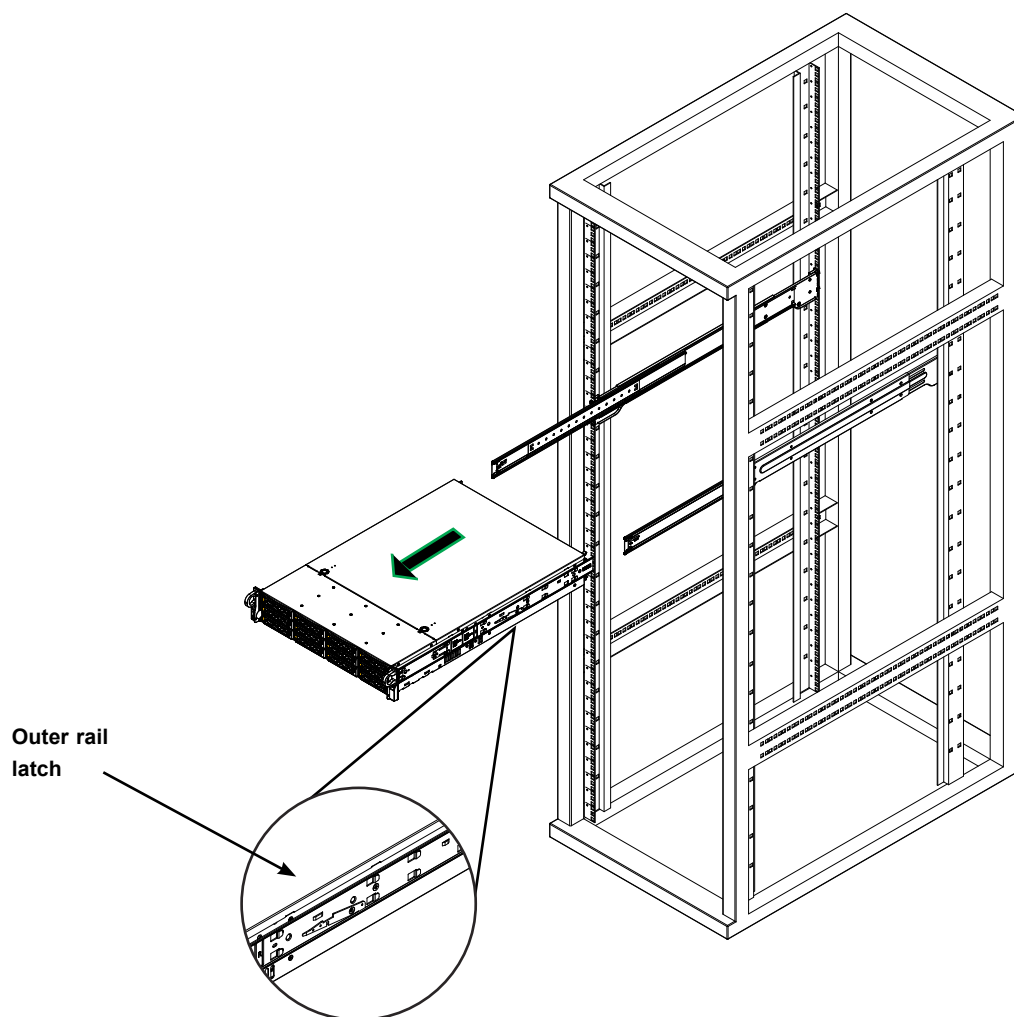


Figure 2-7. Removing the Chassis From the Rack

Chapter 3

Maintenance and Component Installation

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

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

3.1 Removing Power

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

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

3.2 Accessing the System

The system features a removable top cover, which allows access to the inside of the system.

Removing the Top Cover

1. Press the two release buttons and slide the cover toward the rear.
2. Lift the top cover up.

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

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

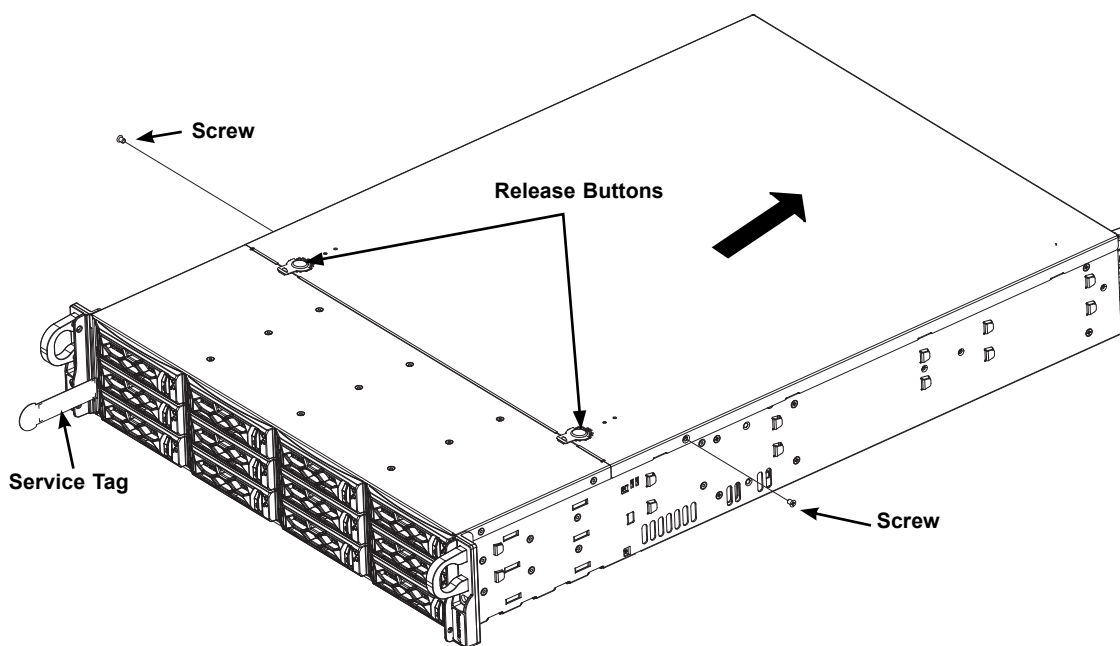


Figure 3-1. Removing the Top Cover

3.3 Motherboard Components

Processor and Heatsink Installation

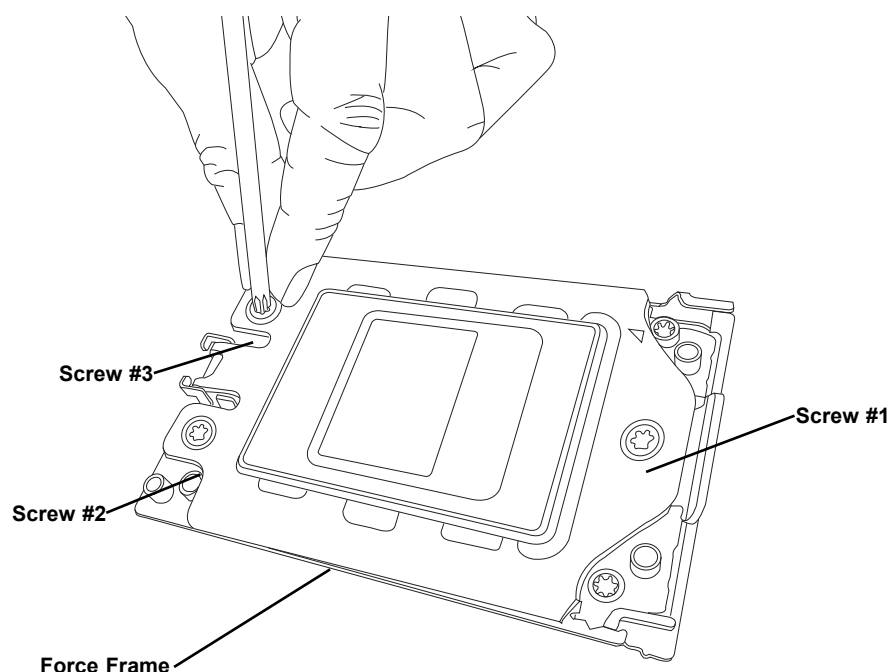
Warning: When handling the processor package, avoid placing direct pressure on the label area of the fan.

Important:

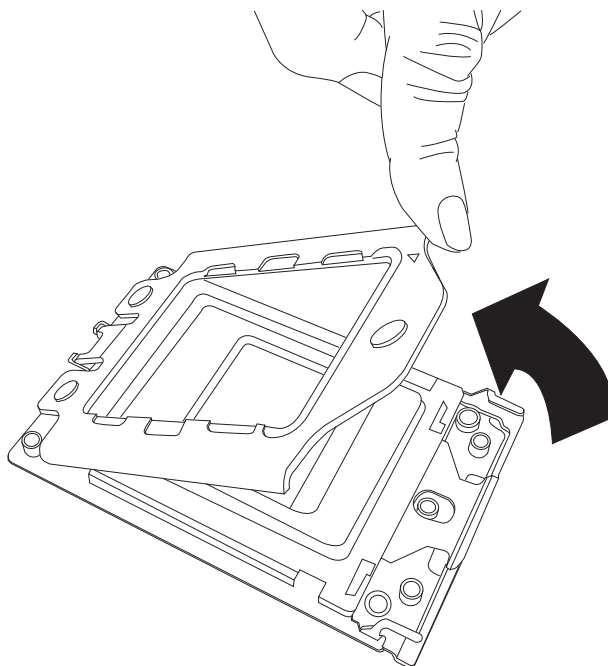
- A T20 screwdriver is needed for opening/closing the CPU socket.
- Always connect the power cord last, and always remove it before adding, removing or changing any hardware components. Make sure that you install the processor into the CPU socket before you install the CPU heatsink.
- If you buy a CPU separately, make sure that you use an AMD-certified heatsink only. Make sure to install the motherboard into the chassis before you install the CPU heatsink.
- When receiving a motherboard without a processor pre-installed, make sure that the plastic CPU socket cap is in place and none of the socket pins are bent; otherwise, contact your retailer immediately.
- Refer to the Supermicro website for updates on CPU support.

Installing the Processor and Heatsink

1. Unscrew the screws holding down Force Frame in the sequence of 3-2-1. The screws are numbered on the force frame next to each screw hole.

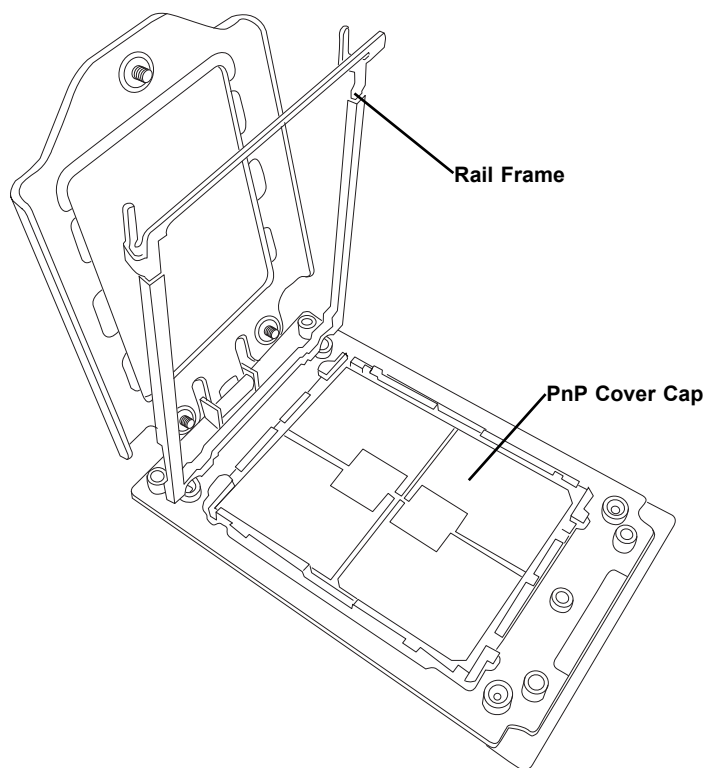


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2. The spring-loaded force frame will raise up after the last screw securing it (#1) is removed. Gently allow it to lift up to its stopping position.

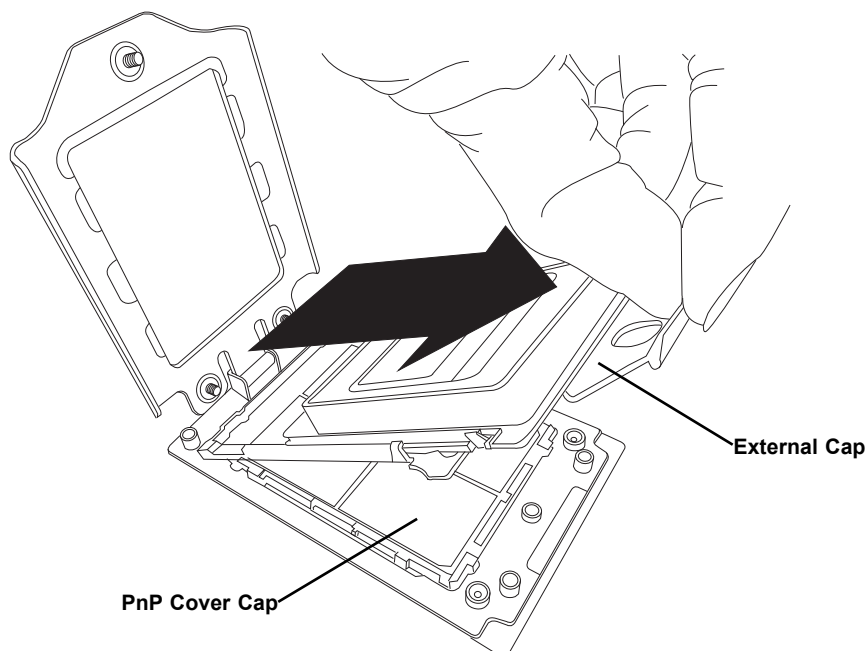


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3. Lift the rail frame up by gripping the lift tabs near the front end of the rail frame. While keeping a secure grip of the rail frame, lift it to a position so you can do the next step of removing the external cap.

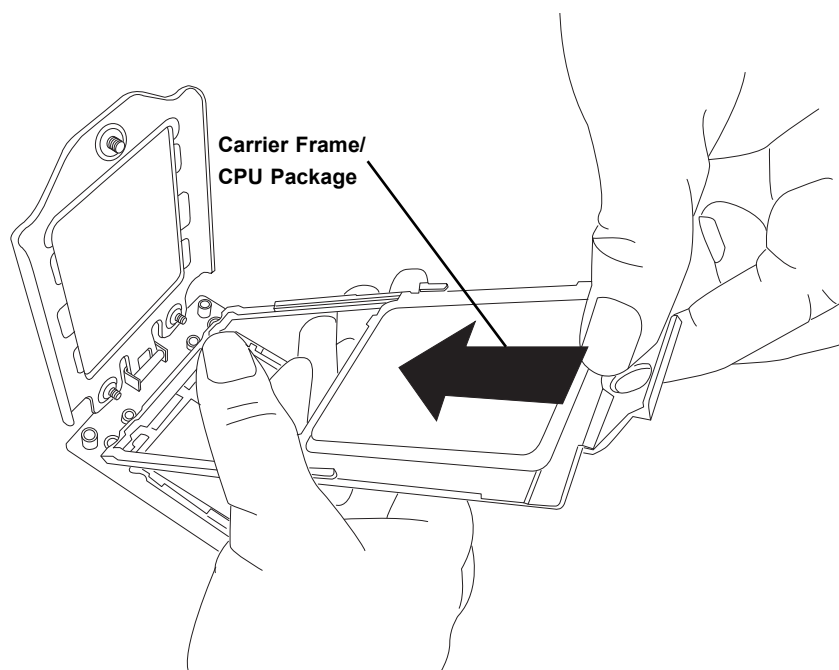
Note: The rail frame is spring loaded, so keep a secure grip on it as you lift it so it does not snap up.



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



5. The CPU package is shipped from the factory with the blue carrier frame pre-assembled. Grip the handle of the carrier frame/CPU package assembly from its shipping tray, and while gripping the handle, align the flanges of the carrier frame onto the rails of the rail frame so its pins will be at the bottom when the rail frame is lowered later.
6. Slide the carrier frame/CPU package downwards to the bottom of the rail frame. Ensure the flanges are secure on the rails as you lower it downwards.

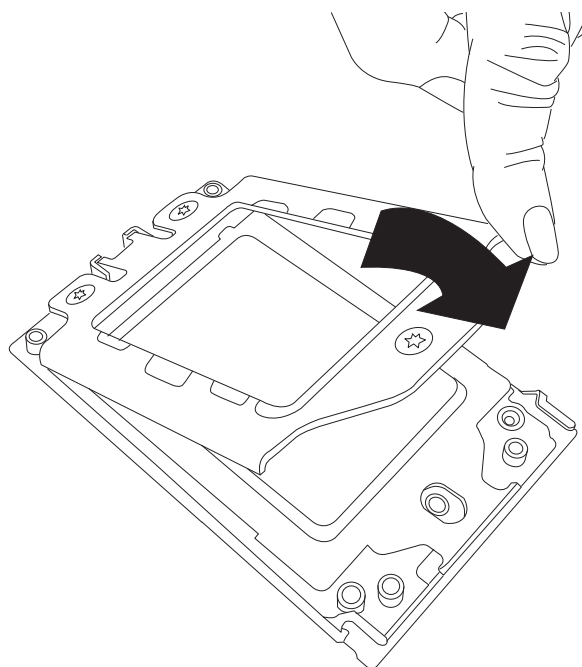


Note: You can only install the CPU inside the socket in one direction with the handle at the top. Make sure that it is properly inserted into the CPU socket before closing the rail frame plate. If it doesn't close properly, do not force it as it may damage your CPU. Instead, open the rail frame plate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

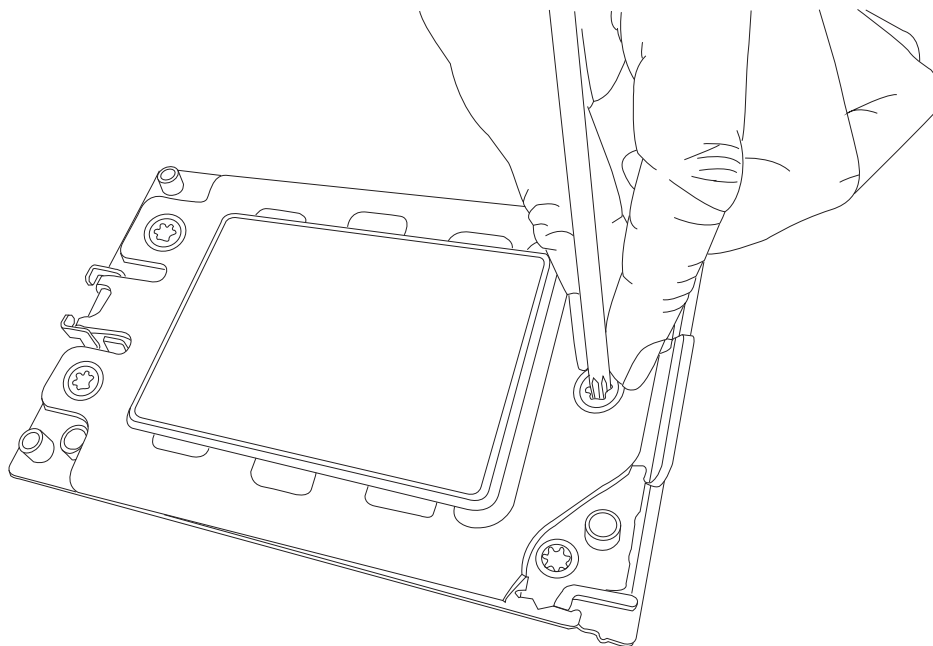
7. Lift up the rail frame till it securely rests in upright position. Then remove the PnP cover cap from the CPU socket below. Grip the two lift tabs marked "Remove" at the middle of the cap and pull vertically upwards to remove the PnP cover cap.

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

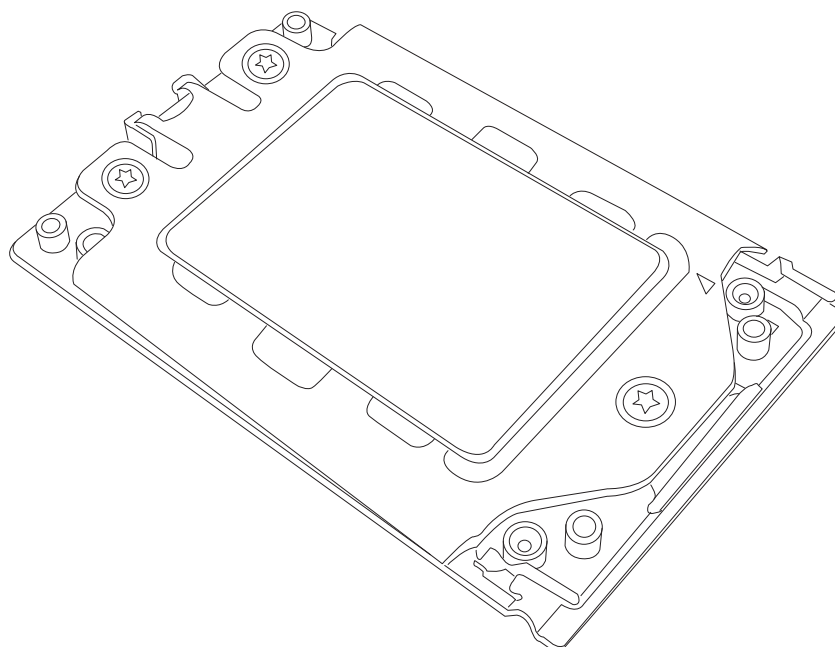
8. Gently lower the rail frame down onto the socket until the latches on the rail frame engage with the socket housing and it rests in place. **DO NOT** force it into place!



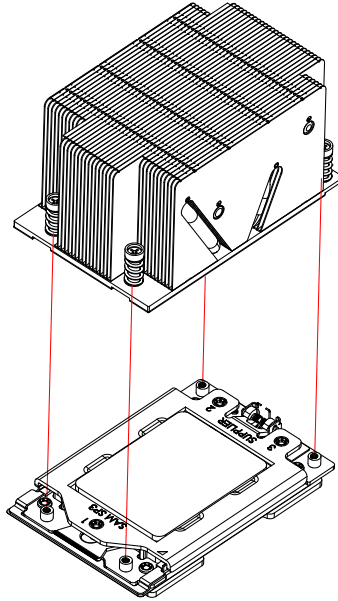
9. Gently lower the force frame down onto the rail frame and hold it in place until it is seated in the Socket housing. Note that the force frame is spring loaded and has to be held in place before it is secured. **Important: Use a torque screwdriver, set it at 16.1 kgf-cm (14.0 lbf-in) with a Torx T20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



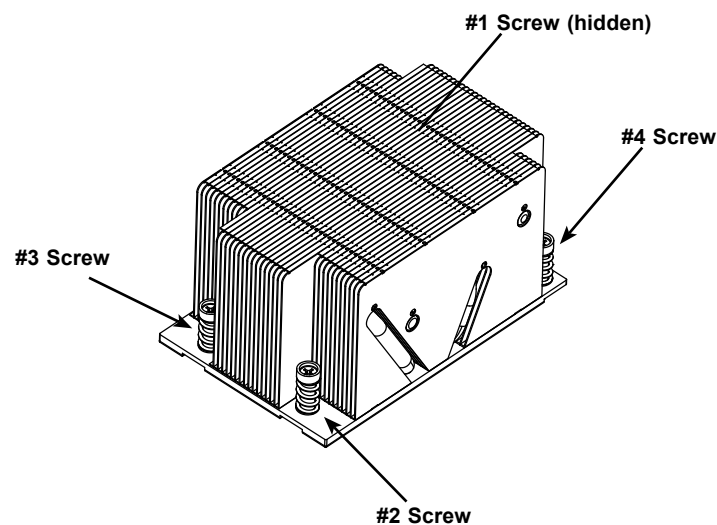
10. Place and re-screw the screws in the reverse order to the way you removed them (holes 1-2-3 in order). When finished, the force frame will be secure over both the rail frame and CPU package.



11. After the force frame is secured and the CPU package is in place, now you must install the heatsink to the frame. Lower the heatsink down till it rests securely over the four screw holes on CPU package on the socket frame.



12. Using a diagonal pattern, tighten the four screws down on the heatsink in a clockwise fashion till it is secure. The heatsink will now be secured and you have finished installing the processor and heatsink onto the motherboard. Repeat this procedure for any remaining CPU sockets on the motherboard.



Un-installing the Processor and Heatsink

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

Memory Support

Note: Check the Supermicro website for recommended memory modules.

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

Memory Support

The H12DSi-N6 supports up to 4TB of registered ECC DDR4-3200 SDRAM in 16 DIMM slots. Refer to the table below for additional memory information.

Processors and their Corresponding Memory Modules									
Channel									
CPU#	D1	C1	B1	A1	CPU	E1	F1	G1	H1
2 DIMMs (Not Recommended)									
CPU1		V							
CPU2		V							
4 DIMMs (Not Recommended)									
CPU1	V	V							
CPU2	V	V							
8 DIMMs									
CPU1	V	V						V	V
CPU2	V	V						V	V
12 DIMMs (for 7003 CPU only)									
CPU1	V	V		V		V		V	V
CPU2	V	V		V		V		V	V
16 DIMMs									
CPU1	V	V	V	V		V	V	V	V
CPU2	V	V	V	V		V	V	V	V

DIMM Module Population

When installing memory, please keep the following in mind:

- It is recommended that DDR4 DIMM modules of the same type, size and speed should be installed.
- Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will support an odd number of modules installed. However, to achieve the best memory performance, a balanced memory population is recommended.

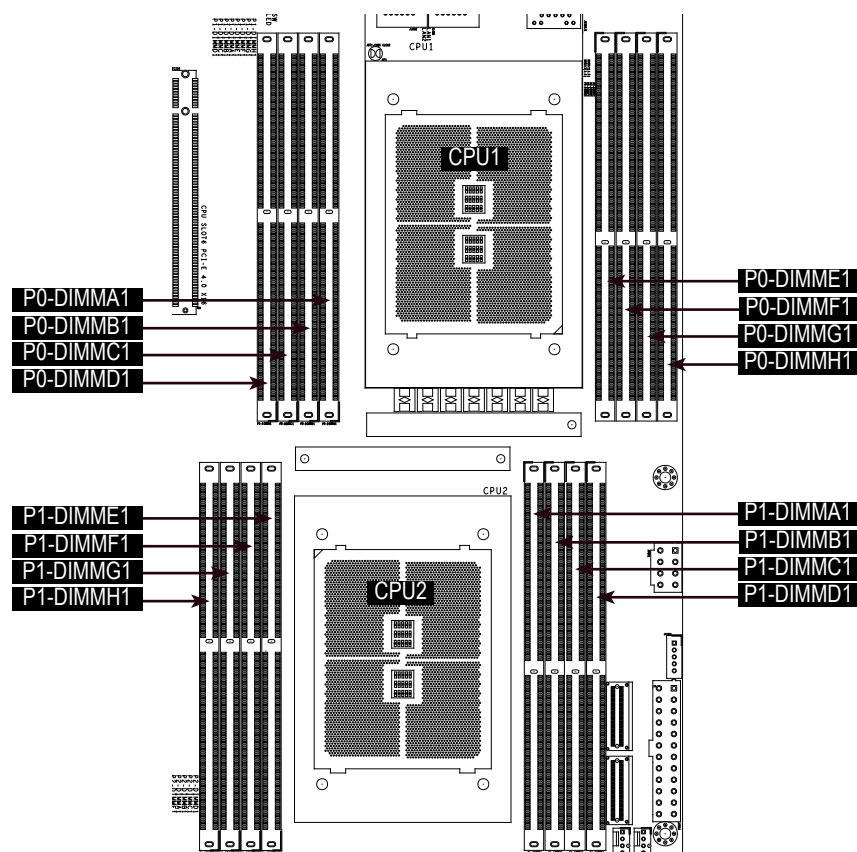
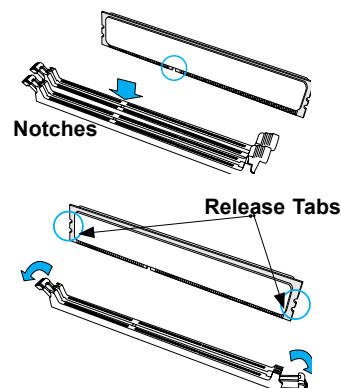
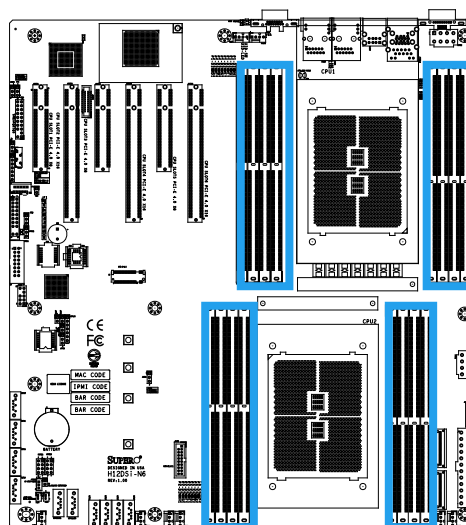


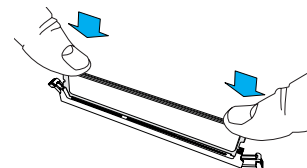
Figure 3-2. DIMM Numbering

DIMM Installation

1. Follow the instructions given in the memory population guidelines listed in the previous sections to install memory modules on your motherboard. For the system to work properly, please use memory modules of the same type and speed on the motherboard. (See warnings below.)
2. Push the release tabs outwards on both ends of the DIMM slot to unlock it.
3. Align the key of the DIMM with the receptive point on the memory slot.
4. Align both ends of the module with the receptive points on the ends of the slot.
5. Use two thumbs together to press the DIMM straight down into the slot until it snaps into place.
6. Press the release tabs to the lock positions to secure the DIMM into the slot.

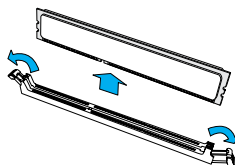


Insert the DIMM module into the memory slot.



DIMM Module Removal

Press the release tabs on both ends of the DIMM socket to release the DIMM module from the socket as shown in the drawing below.



Warnings: 1. To avoid damage to the DIMM module or the DIMM socket, do not use excessive force when pressing the release tabs on the ends of the DIMM socket. 2. Handle DIMM modules with care. Carefully follow all the instructions given in Section 1 of this user guide to avoid ESD-related damage to your components or system. 3. All graphics, including the layout drawing above, are for reference only. Your system components may or may not look the same as shown in this user guide.

PCI Expansion Cards

The system can accommodate six PCIe 4.0 expansion cards as noted below.



Figure 3-3. Expansion Card Slots

Expansion Slot Descriptions	
Item	Description
1	PCIe 4.0 x8 (low-profile)
2	PCIe 4.0 x16 (low-profile)
3	PCIe 4.0 x8 (low-profile)
4	PCIe 4.0 x16 (low-profile)
5	PCIe 4.0 x8 (low-profile)
6	PCIe 4.0 x16 (low-profile)

Installing Expansion Cards

1. Power down the system and remove the cover.
2. In the rear of the chassis, remove the blank PCI shields that covers the chassis slot.
3. Mount the riser card onto the bracket (if not already mounted) using four screws.
4. Slide the expansion card into the expansion slot on the motherboard.

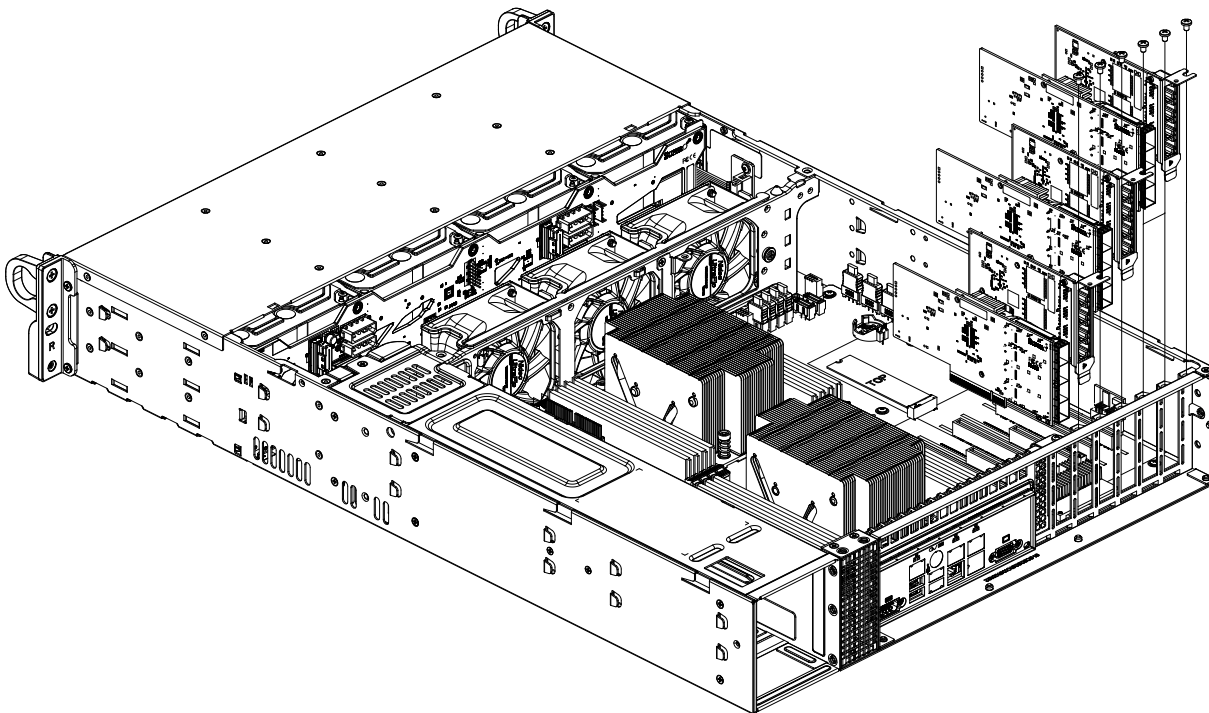


Figure 3-4. Installing Expansion Cards

Motherboard Battery

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

Replacing the Battery

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

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

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

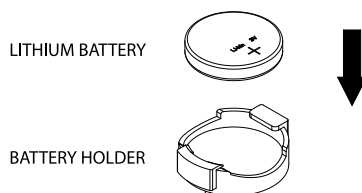


Figure 3-5. Installing the Onboard Battery

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

3.4 Chassis Components

This section provides instructions on installing and replacing system components. To assure compatibility, only use components that match the specifications or part numbers given.

Storage Drives

The system supports up to twelve 3.5" (tool-less) or 2.5" (screw) hot-swap drives in front drive bays. The default configuration is with eight SATA drives (bays 4-11) and four NVMe drives (bays 0-3). An optional SAS controller card kit is required to support SAS and an optional NVMe controller card kit is required to support more than four NVMe drives.

The drives are mounted in tool-less drive carriers that simplify their removal from the chassis. These carriers also help promote proper airflow. Each carrier has a small space on the front to place an orange or purple label to help distinguish between NVMe or SAS/SATA drives. Drive carrier status indicators are described in Section 1.2

Note: Enterprise level hard disk drives are recommended for use in Supermicro servers. For compatible storage drives, see the AS -2024S-TR server web page.

Installing Drives

The system supports twelve hot-swap drive bays.



Figure 3-6. Logical Drive Numbers

Removing a Hot-Swap Drive Carrier from the System

1. Press the release button on the drive carrier, which will extend the drive carrier handle.
2. Use the drive carrier handle to pull the drive out of the chassis.

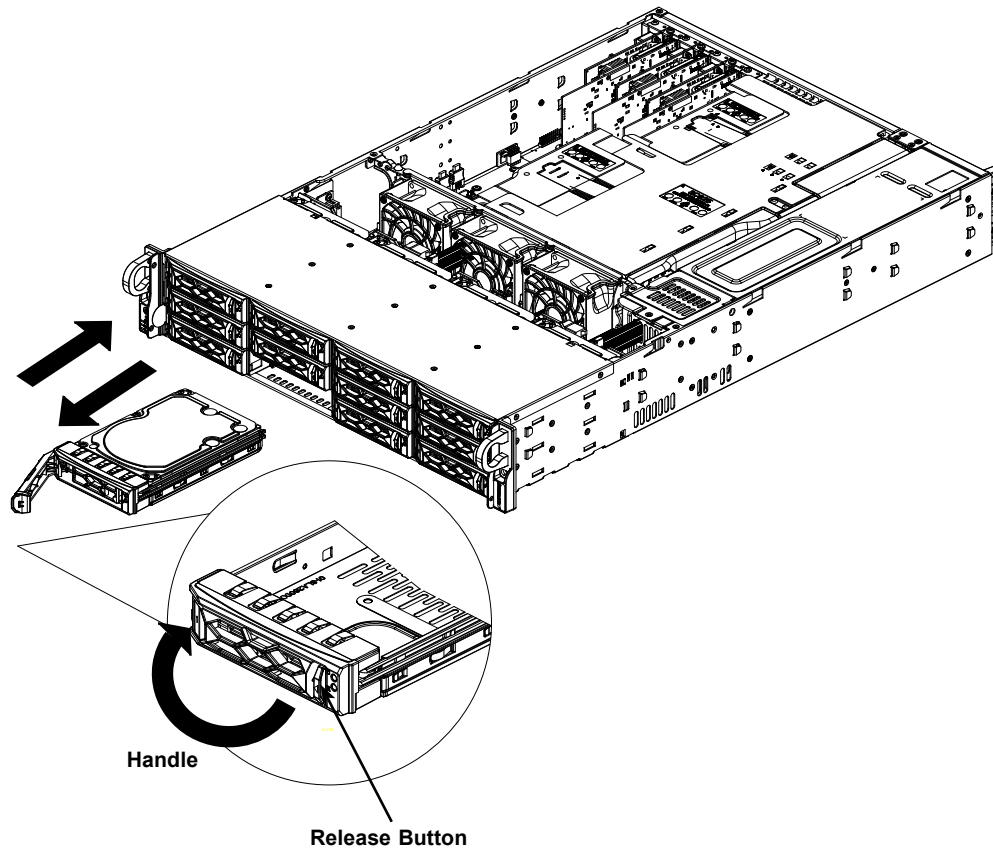


Figure 3-7. Removing a Drive Carrier

Installing a 3.5" Drive

1. Position the drive above the carrier with the PCB side facing down and the connector end toward the rear of the carrier.
2. Tilt the drive to insert it onto the two posts on the left inside of the carrier.

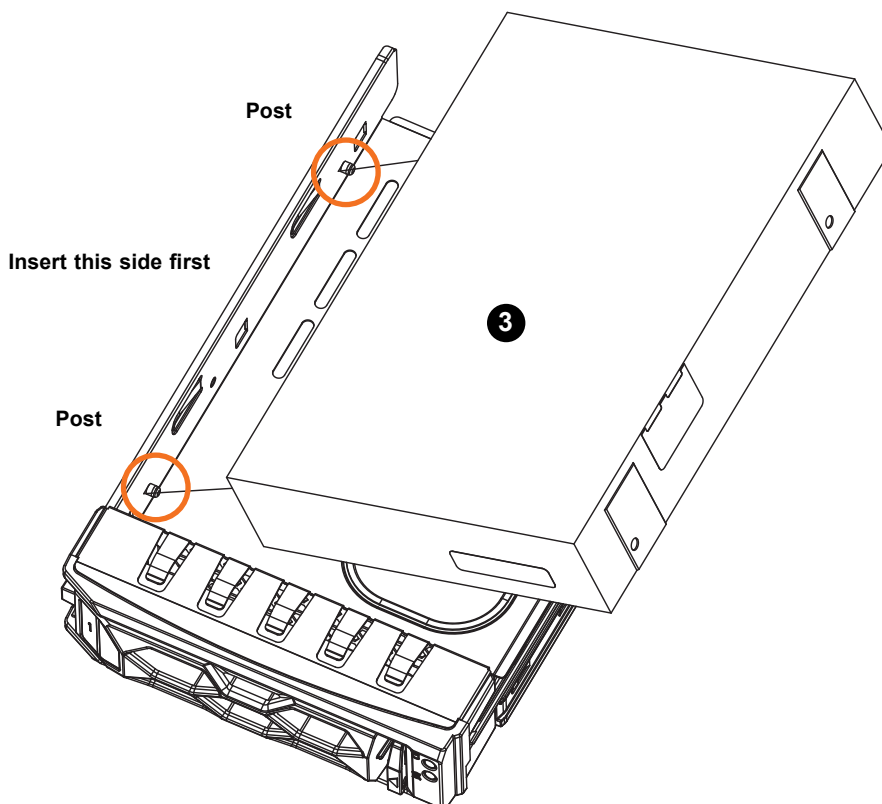


Figure 3-8. Installing a 3.5" Drive into a Carrier

3. Push the right side of the drive fully into the carrier and allow the two spring locking clasps to secure the drive.
4. Insert the drive carrier into its bay, keeping the release button on the right. When the carrier reaches the rear of the bay, the release handle will retract.
5. Push the handle in until it clicks into its locked position

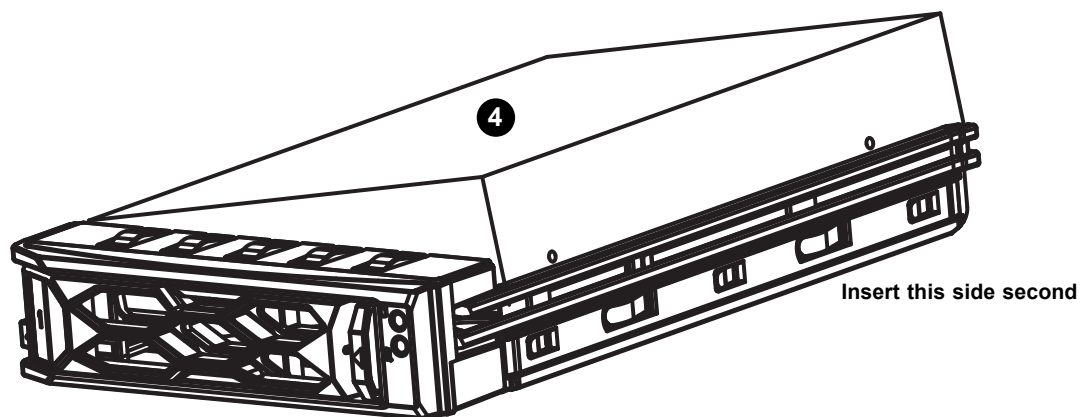


Figure 3-9. Installing a 3.5" Drive into a Carrier

Installing a 2.5" Drive

1. Install the drive directly into the tray with four screws underneath.
2. Insert the drive carrier into its bay, keeping the release button on the right. When the carrier reaches the rear of the bay, the release handle will retract.
3. Push the handle in until it clicks into its locked position

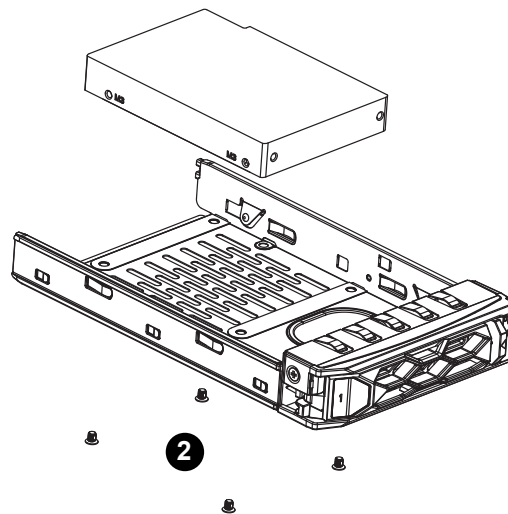


Figure 3-10. Installing a 2.5" Drive into a Carrier

Hot-Swap for NVMe Drives

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

Ejecting a Drive

1. IPMI > Storage > Physical View

2. Select Device and click Eject. After ejecting, the drive Status LED indicator turns green.
3. Remove the drive.

Slot is the slot number on which the NVMe drives are mounted.

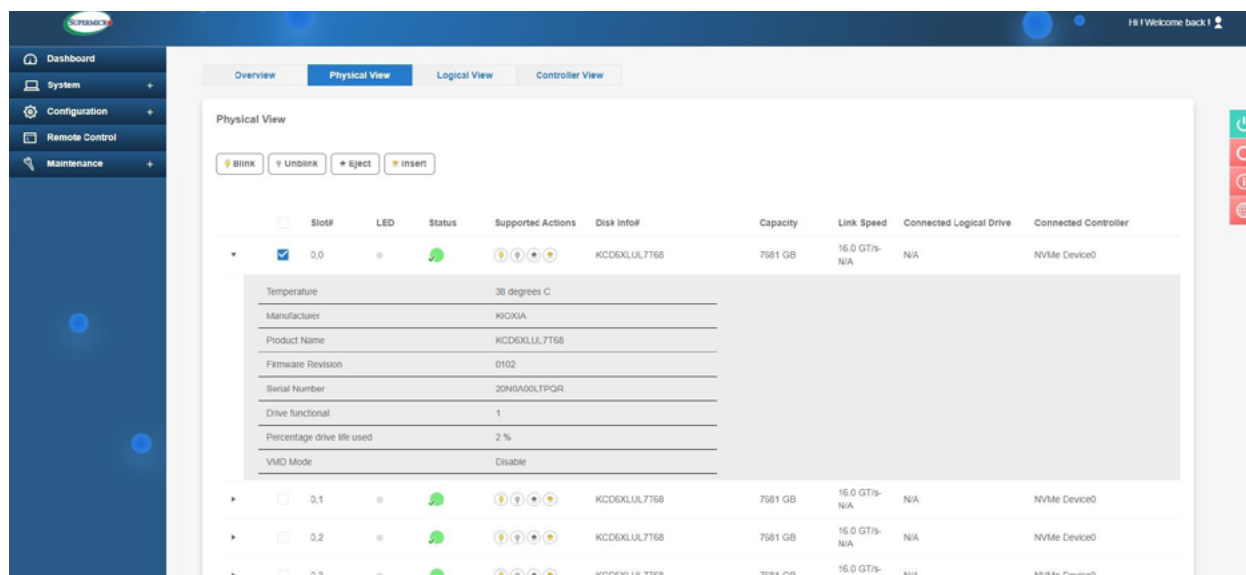


Figure 3-11. IPMI Screenshot

Replacing the Drive

1. Insert the replacement drive.
2. IPMI > Storage > Physical View
3. Select Device and click Insert. The drive Status LED indicator flashes red, then turns off. The Activity LED turns blue.

System Cooling

Three 8-cm fans provide the cooling for the system. Make sure the chassis top cover makes a good seal so the cooling air circulates properly through the chassis.

Fan speed is controlled by system temperature via BMC. If a fan fails, the remaining fans will ramp up to full speed and the overheat/fan fail LED on the control panel will turn on. Replace any failed fan at your earliest convenience with the same type and model (the system can continue to run with a failed fan).

Changing a System Fan

1. Determine which fan is failing. If possible, use the BMC. Remove the chassis lid to examine the fans.
2. Push the release latch, and lift the fan up from the housing and out of the chassis.
3. Push the fan up from the bottom and out of the top of the housing.
4. Place the replacement fan into the vacant space in the housing while checking the proper orientation. Push the until the latch clicks and the fan is secure.
5. Confirm the fans are working properly before closing the chassis lid.

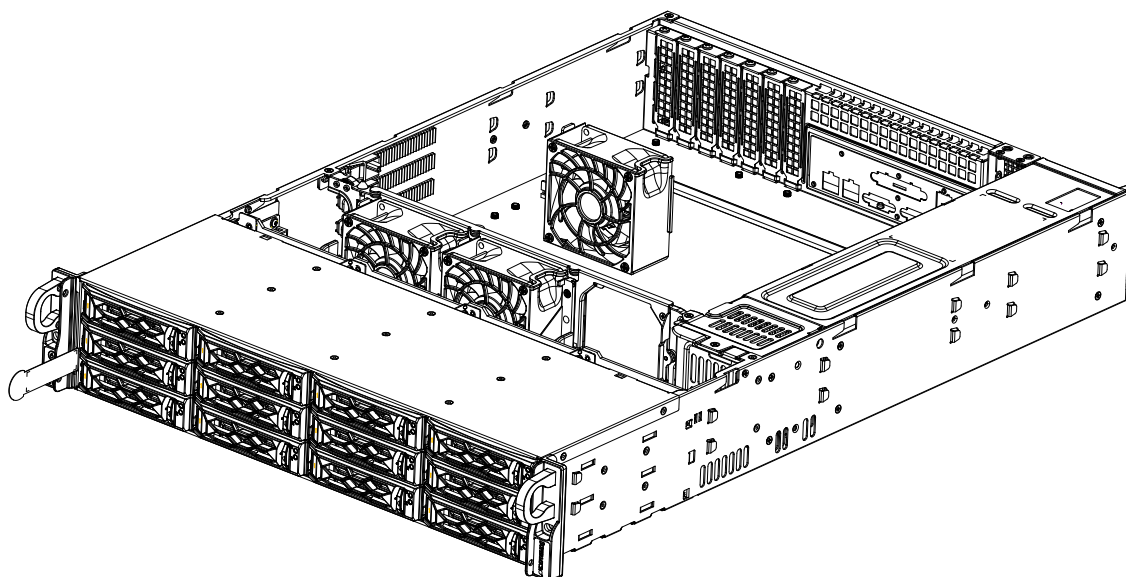


Figure 3-12. Replacing a Fan

Air Shroud

Air shrouds concentrate airflow to maximize fan efficiency. The AS -2024S-TR includes a single air shroud, which covers the CPU and memory area of the motherboard.

Installing the Air Shroud

1. Power down the system as described in Section 3.1.
2. Extend the server from the rack (or remove it and place it on a bench), then remove the cover as described previously.
3. Place the air shroud over the DIMM slots and CPUs as illustrated below. The small tabs on the air shroud fit into corresponding reception points in the horizontal frames behind the fans and at the rear of the chassis.
4. Once installed, replace the cover and push the system back into the rack before restoring power.

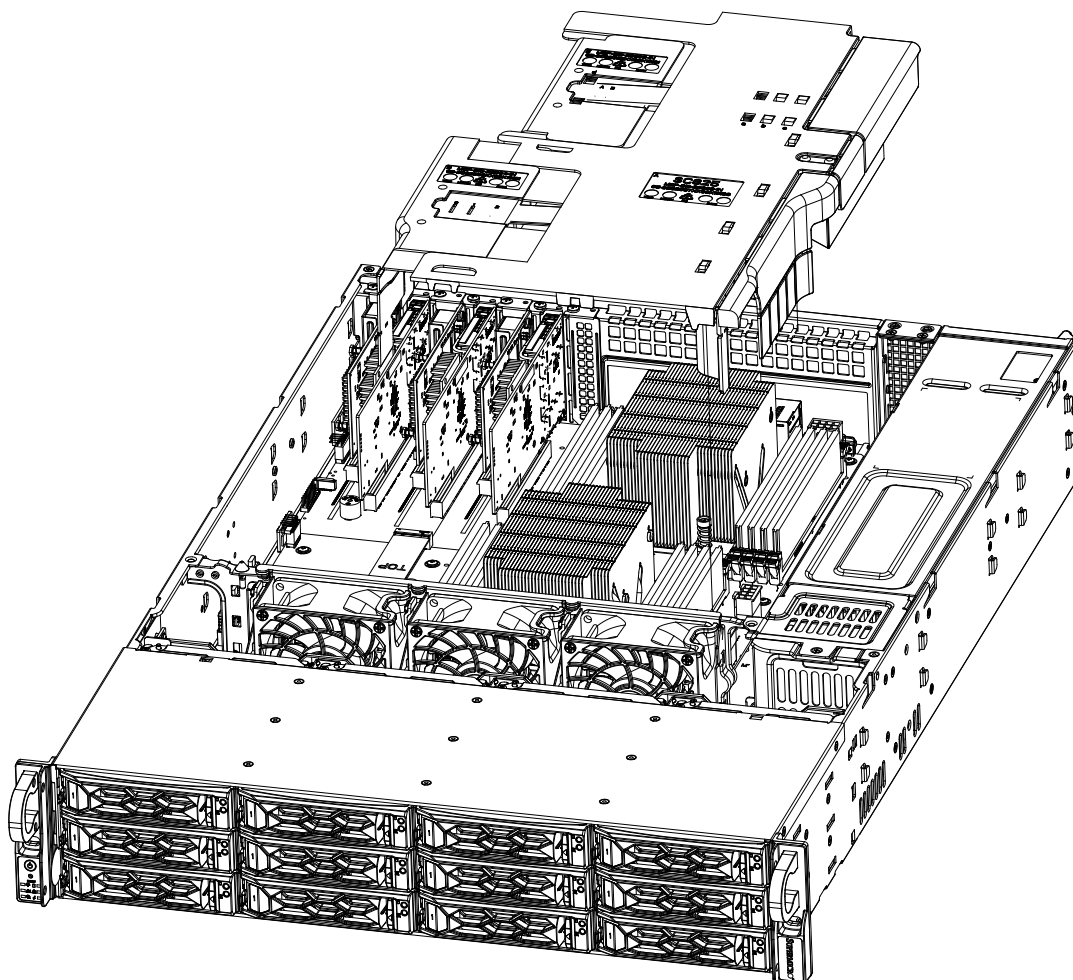


Figure 3-13. Installing the Air Shroud

Checking the Server Air Flow

- Make sure there are no objects to obstruct airflow in and out of the server.
- Do not operate the server without drives or drive trays in the drive bays.
- Use only recommended server parts.
- Make sure no wires or foreign objects obstruct air flow through the chassis. Pull all excess cabling out of the airflow path or use shorter cables.

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

Overheating

There are several possible responses if the system overheats.

Overheat Temperature Setting

Some backplanes allow the overheat temperature to be set at 45, 50, or 55 degrees by changing a jumper setting. For more information, consult the backplane user manual at www.supermicro.com. (Click Support, then the Manuals link.)

Responses

If the server overheats:

1. Use the LEDs to determine the nature of the overheating condition.
2. Confirm that the chassis covers are installed properly.
3. Make sure all fans are present and operating normally.
4. Check the routing of the cables.
5. Verify that the heatsinks are installed properly.

Power Supply

The chassis features redundant power supplies. The power modules can be changed without powering down the system. New units can be ordered directly from Supermicro or authorized distributors.

These power supplies are auto-switching capable. This feature enables them to automatically sense the input voltage and operate at a 100-120v or 180-240v.

Power Supply LEDs

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

- **Solid Green:** When illuminated, indicates that the power supply is on.
- **Blinking Green:** When blinking, indicates that the power supply is plugged in and turned off by the system.
- **Blinking Amber:** When blinking, indicates that the power supply has a warning condition and continues to operate.
- **Solid Amber:** When illuminated, indicates that the power supply is plugged in, and is in an abnormal state. The system might need service. Please contact Supermicro technical support.

Replacing the Power Supply

1. Unplug the AC cord from the module to be replaced.
2. Push the release tab on the back of the power supply as illustrated.
3. Pull the power supply out using the handle.
4. Replace the failed power module with the same model.
5. Push the new power supply module into the power bay until it clicks.
6. Plug the AC power cord back into the module.

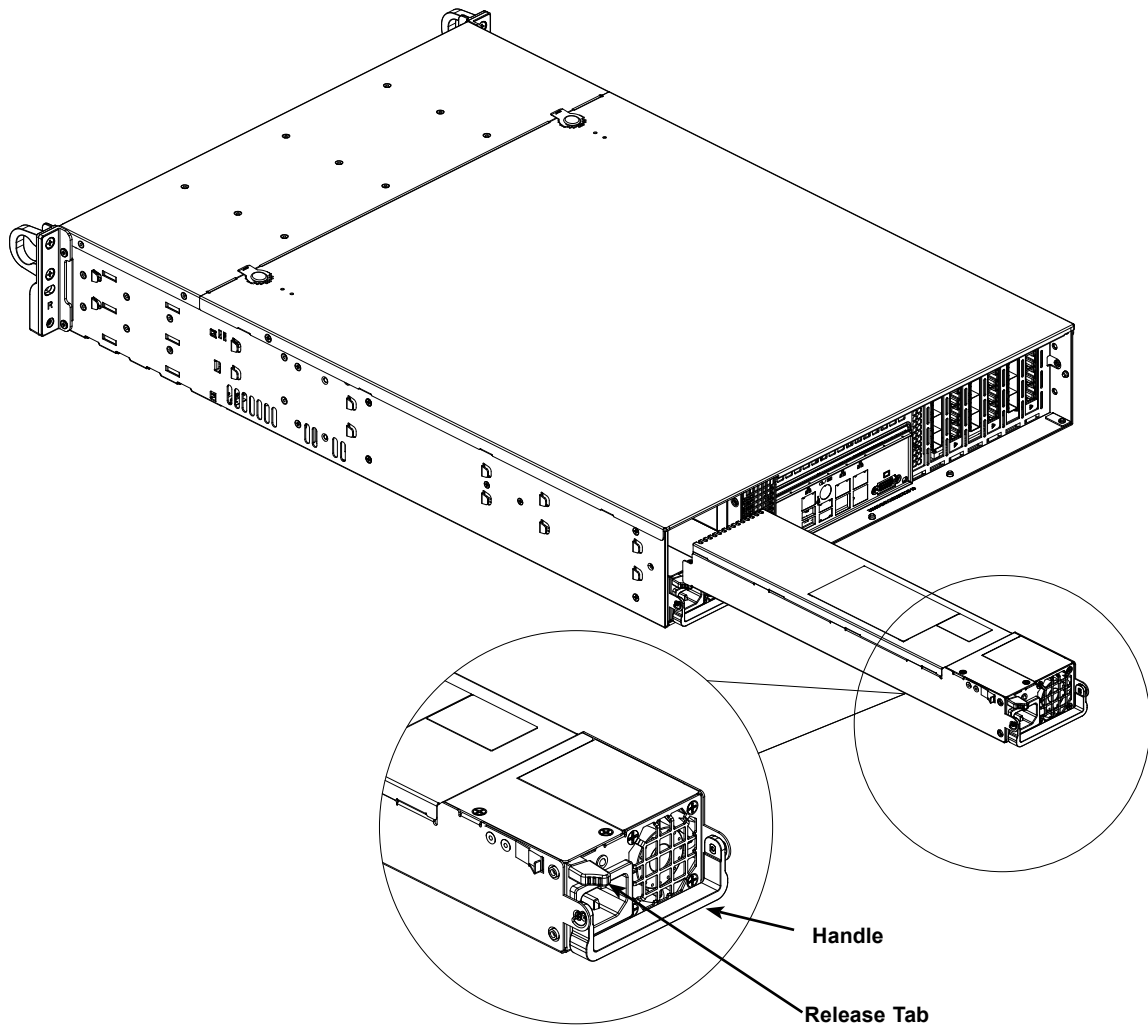


Figure 3-14. Installing a Power Supply Module

Chapter 4

Motherboard Connections

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

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

4.1 Power Connections

Two power connections on the H12DSi-N6 must be connected to the power supply.

- 24-pin Primary ATX Power (JPWR3)
- 8-pin Auxilliary Power (JPWR1/JPWR2)

Main Power Supply Connector

The primary power supply connector (JPWR3) is an ATX power connector that the power supply plugs into directly.

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

+12V 8-pin Auxilliary Power Connectors

JPWR1 and JPWR2 are 8-pin ATX power inputs to provide auxiliary power to the processors that are installed in the system. Refer to the table below for pin definitions.

12V 8-pin Auxilliary Power Connectors	
Pins	Definition
1 through 4	Ground
5 through 8	+12V

Standby Power Connector

JSTBY is a power connection to supply +5V standby power. Refer to the table below for pin definitions.

4.2 Headers and Connectors

Onboard Fan Headers

There are eight fan headers on the motherboard (FAN1-6 and FANA-B). These are 4-pin fan headers; pins 1-3 are backward compatible with traditional 3-pin fans. The onboard fan speeds are controlled by Thermal Management (via Hardware Monitoring) in the BMC. When using Thermal Management setting, please use all 4-pin fans.

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

Disk-On-Module Power Connector

The Disk-On-Module (DOM) power connectors at JSD0 and JSD1 provide 5V power to a solid-state DOM storage device connected to one of the SATA ports. See the table below for pin definitions.

DOM Power Pin Definitions	
Pin#	Definition
1	5V
2	Ground
3	Ground

SATA Ports

The H12DSi-N6/H12DSi-NT6 has eight standard onboard SATA3 ports (SATA0 through SATA7) on two iPASS connectors that are supported by CPU1 and CPU2. (CPU1: SATA0~3, CPU2: SATA4~7.)

M.2 Connectors

The M.2 connector (PCIe M.2) supports M.2 devices such as memory cards, wireless adapters, etc. These devices must conform to the PCIe M.2 specifications (formerly known as NGFF). This particular PCIe M.2 supports M-Key (PCIe x4) storage cards. Form factors 2280 and 22110 are supported.

SuperDOM

The SUPERDOM1 and SUPERDOM2 ports are Supermicro SATA DOM (Disk on Module) ports. SuperDOM, is a small SATA3 (6Gb/s) flash memory module that conveniently inserts directly into the motherboard.

Battery

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

TPM Header/Port 80 Connector (TPM Port)

The JTPM1 and JTPM2 headers are used to connect a Trusted Platform Module (TPM), which is available from a third-party vendor. A TPM is a security device that supports encryption and authentication in hard drives. It enables the motherboard to deny access if the TPM associated with the hard drive is not installed in the system.

Please go to the following link for more information on TPM: <http://www.supermicro.com/manuals/other/TPM.pdf>.

Trusted Platform Module Header Pin Definitions			
Pin#	Definition	Pin#	Definition
1	LCLK	2	GND
3	LFRAME#	4	Key
5	LRESET#	6	N/C
7	LAD3	8	LAD2
9	3.3V	10	LAD1
11	LAD0	12	GND
13	SMB_CLK (optional)	14	SMB_DAT (optional)
15	P3V3_STBY	16	SERIRQ
17	GND	18	LP_CLKRUN (optional)
19	LPC_PD (optional)	20	LPC_DRQ (optional)

Expansion Slots

The motherboard includes six expansion slots (Slot1 through Slot6). Slots 1, 3 and 5 are PCIe 4.0 x4 slots and Slots 2, 4 and 6 are PCIe 4.0 x16 slots.

UID Switch and LED Indicator

A Unit Identifier switch (UID_SW) and a UID LED (UID LED1) are located on the I/O backpanel, to the right of the VGA port. A front UID LED is also provided on pins 7 & 8 of JF1 (front control panel header). When you press the UID switch, both rear and front UID LED indicators will turn on. Press the UID switch again to turn off the LED indicators. Use this UID Indicator system to allow for easy identification of a system in a rack.

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

SGPIO Headers

The SGPIO1 and SGPIO2 (Serial General Purpose Input/Output) headers are used to communicate with the enclosure management chip on the backplane.

SGPIO Headers Pin Definitions			
Pin#	Definition	Pin#	Definition
1	Ground	2	DATA IN
3	Ground	4	DATA Out
5	Load	6	Ground
7	Clock	8	NC

NC = No Connection

4-pin BMC External I²C Header

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

External I ² C Header Pin Definitions	
Pin#	Definition
1	Data
2	Ground
3	Clock
4	No Connection

Chassis Intrusion

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

Chassis Intrusion Pin Definitions	
Pins	Definition
1	Ground
2	Intrusion Input

Control Panel

JF1 contains header pins for various control panel connections. See the figure below for the pin locations and definitions of the control panel buttons and LED indicators.

All JF1 wires have been bundled into a single cable to simplify this connection. Make sure the red wire plugs into pin 1 as marked on the motherboard. The other end connects to the control panel PCB board.

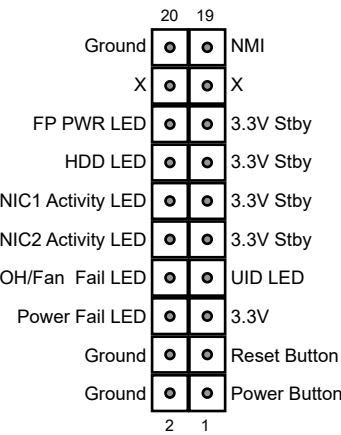


Figure 4-1. JF1 Header Pins

Power Button

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

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

Reset Button

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

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

Power Fail LED

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

Power Fail LED Pin Definitions (JF1)	
Pin#	Definition
5	3.3V
6	PWR Supply Fail

OH/Fan Fail LED

The Overheat (OH) / Fan Fail LED is located on pin 8 of JF1. When this is on, it indicates that there is a system overheat or the internal fan(s) have failed.

The front UID LED is located on pin 7 of JF1.

OH/Fan Fail/UID Pin Definitions (JF1)	
Pin#	Definition
7	UID Signal
8	OH/Fan Fail

NIC1/NIC2 (LAN1/LAN2)

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

Note: the H12DSi-NT6 features 10Gbe ports and the H12DSi-N6 features 1Gbe ports.

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

HDD LED

The HDD LED connection is located on pins 13 and 14 of JF1.

Power LED Pin Definitions (JF1)	
Pin#	Definition
15	3.3V
16	Power LED

Power LED

The Power LED connection is located on pins 15 and 16 of JF1.

Power LED Pin Definitions (JF1)	
Pin#	Definition
15	3.3V
16	Power LED

NMI Button

The non-maskable interrupt button header is located on pins 19 and 20 of JF1.

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

4.3 Ports

Rear I/O Ports

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

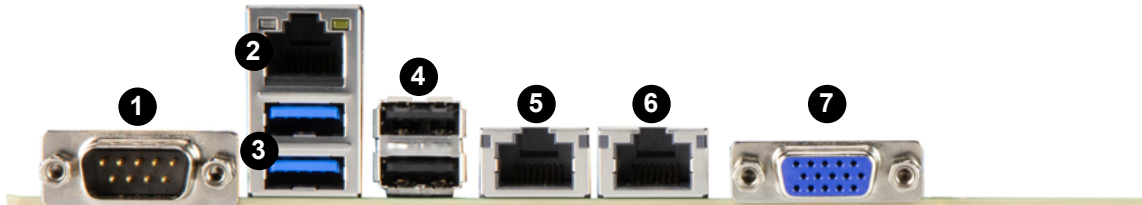


Figure 4-2. Rear I/O Ports

Rear I/O Ports			
#	Description	#	Description
1	COM Port	5	LAN1 Port*
2	IPMI LAN Port	6	LAN2 Port*
3	USB2/3 Ports (USB 3.0)	7	VGA Port
4	USB0/1 Ports (USB 2.0)		

COM Port

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

IPMI LAN Port

There is one gigabit LAN port located on the I/O panel. This is a dedicated IPMI port and accepts an RJ45 type cable.

Universal Serial Bus (USB) Ports

There are two USB 2.0 ports (USB0/1) and two USB 3.0 ports (USB2/3) on the I/O panel.

LAN Ports

Two LAN ports (LAN1 and LAN2) are included on the rear I/O panel. These Ethernet ports accept RJ45 type cables.

VGA Port

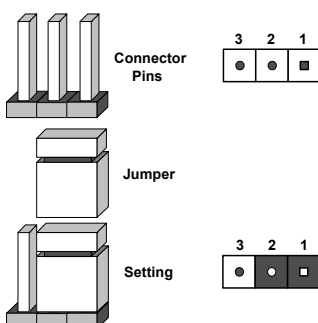
There is one VGA port on the rear I/O panel.

4.4 Jumpers

Explanation of Jumpers

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

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



CMOS Clear

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

To Clear CMOS

1. First power down the system and unplug the power cord(s).
2. Remove the cover of the chassis to access the motherboard.
3. Remove the onboard battery from the motherboard.
4. Short the CMOS pads with a metal object such as a small screwdriver for at least four seconds.
5. Remove the screwdriver (or shorting device).
6. Replace the cover, reconnect the power cord(s) and power on the system.

Notes: Clearing CMOS will also clear all passwords.

Do not use the PW_ON connector to clear CMOS.



JBT1 contact pads

Watch Dog (JWD1)

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

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

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

VGA Enable/Disable

JPVGA1 allows you to enable or disable the VGA port. The default position is on pins 1 and 2 to enable VGA. See the table below for jumper settings.

VGA Enable/Disable Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Enabled
Pins 2-3	Disabled

LAN Enable/Disable

Jumper JPL1 will enable or disable the LAN ports on the motherboard. See the table below for jumper settings. The default setting is enabled.

JLAN Enable/Disable Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Enabled
Pins 2-3	Disabled

4.5 LED Indicators

LAN Port LEDs

The LAN ports have two LED indicators. The Activity LED is yellow and the Link LED may be green, amber, or off to indicate the speed of the connection. Refer to the tables below for more information.

LAN1/2 LED (Connection Speed Indicator)	
LED Color	Definition
Off	10 Mb/s
Green	100 Mb/s or 10Gb/s (X550)
Amber	1 Gb/s

Activity Indicator		
Color	Status	Definition
Off	No Connection	
Yellow	Flashing	Active

Onboard Overheat and Fan Failure LED

LED2 is an onboard overheat and fan failure indicator. When this LED is lit, and is solid red, it means that a system overheat condition has been detected. When the indicator is red and blinking, this means that a system fan failure has occurred.

Onboard Overheat / Fan Failure LED Indicator	
LED Color	Definition
Solid Red	Overheat
Blinking	Fan Failure

Onboard Power LED

LED3 is an onboard power LED. When this LED is lit, it means power is present on the motherboard. Turn off the system and unplug the power cord before removing or installing components.

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

BMC Heartbeat LED

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

BMC Heartbeat LED State	
LED Color	Definition
Green: Blinking	BMC: Normal

UID LED

A UID LED (UID LED1) is located on the I/O backpanel, to the right of the VGA port. This LED turns on when initiated via the UID Switch or IPMI to easily identify a system in a rack.

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

Chapter 5

Software

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

5.1 Microsoft Windows OS Installation

If you will be using RAID, you must configure RAID settings before installing the Windows OS and the RAID driver. Refer to the RAID Configuration User Guides posted on our website at www.supermicro.com/support/manuals. Please note that RAID is not natively supported, a RAID controller card is required.

Installing the OS

1. Create a method to access the MS Windows installation ISO file. That might be a DVD, perhaps using an external USB/SATA DVD drive, or a USB flash or media drive, or the IPMI KVM console.
2. Boot from a bootable device with Windows OS installation. You can see a bootable device list by pressing **F11** during the system startup.

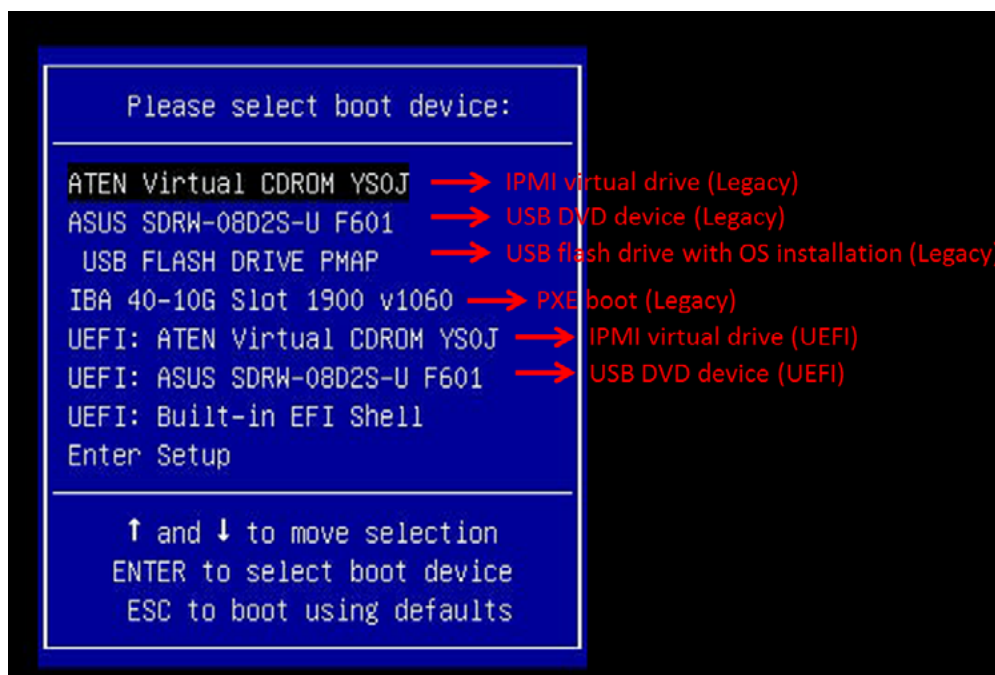


Figure 5-1. Select Boot Device

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

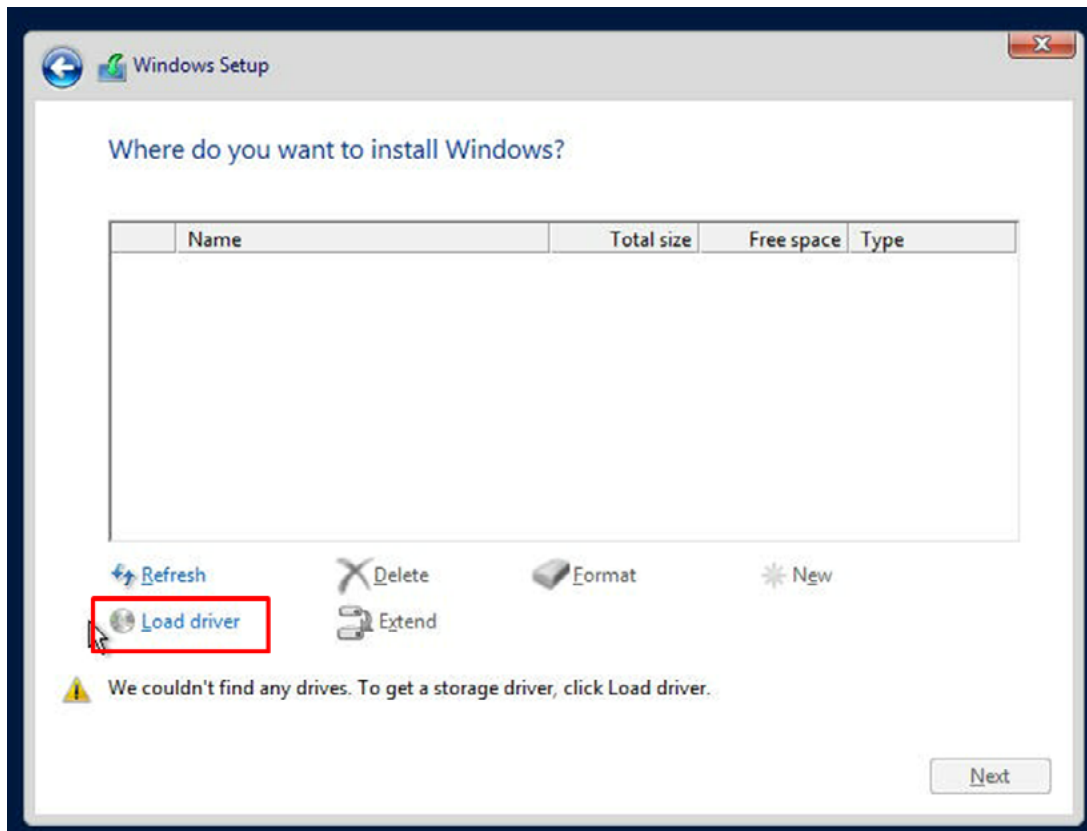


Figure 5-2. Load Driver Link

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

- For RAID, choose the SATA/sSATA RAID driver indicated then choose the storage drive on which you want to install it.
 - For non-RAID, choose the SATA/sSATA AHCI driver indicated then choose the storage drive on which you want to install it.
4. Once all devices are specified, continue with the installation.
 5. After the Windows OS installation has completed, the system will automatically reboot multiple times.

5.2 Driver Installation

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

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

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

Insert the flash drive or disk and the screenshot shown below should appear.

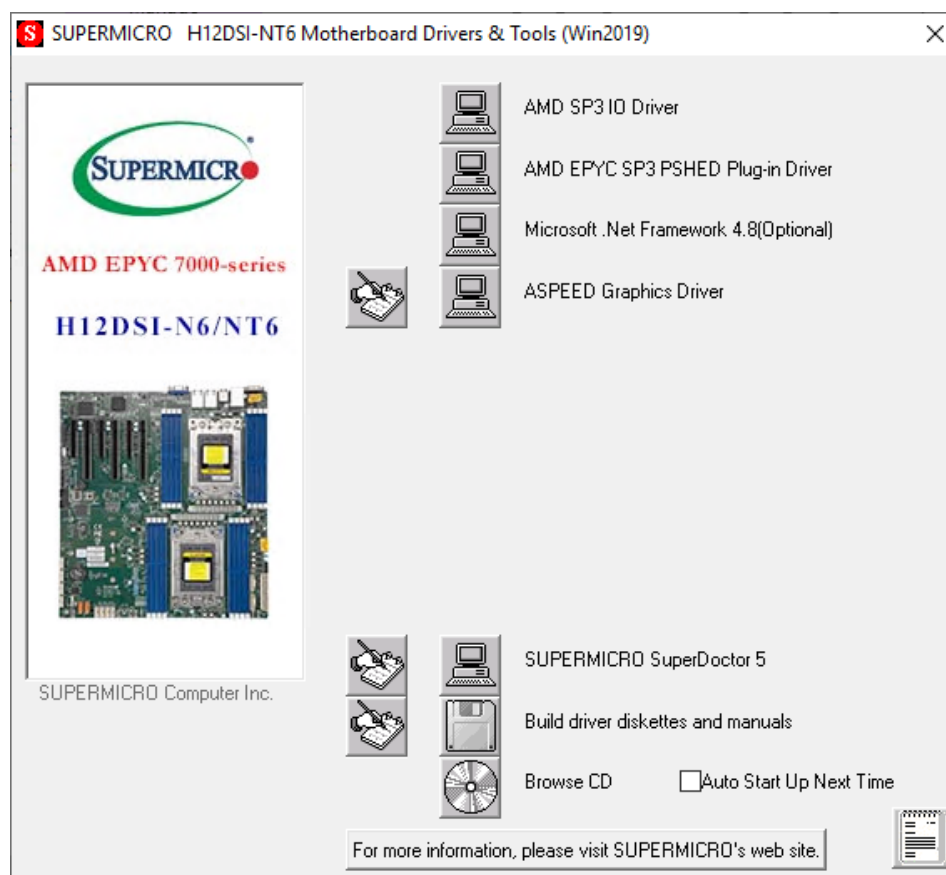


Figure 5-3. Driver & Tool Installation Screen

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

5.3 SuperDoctor® 5

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

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

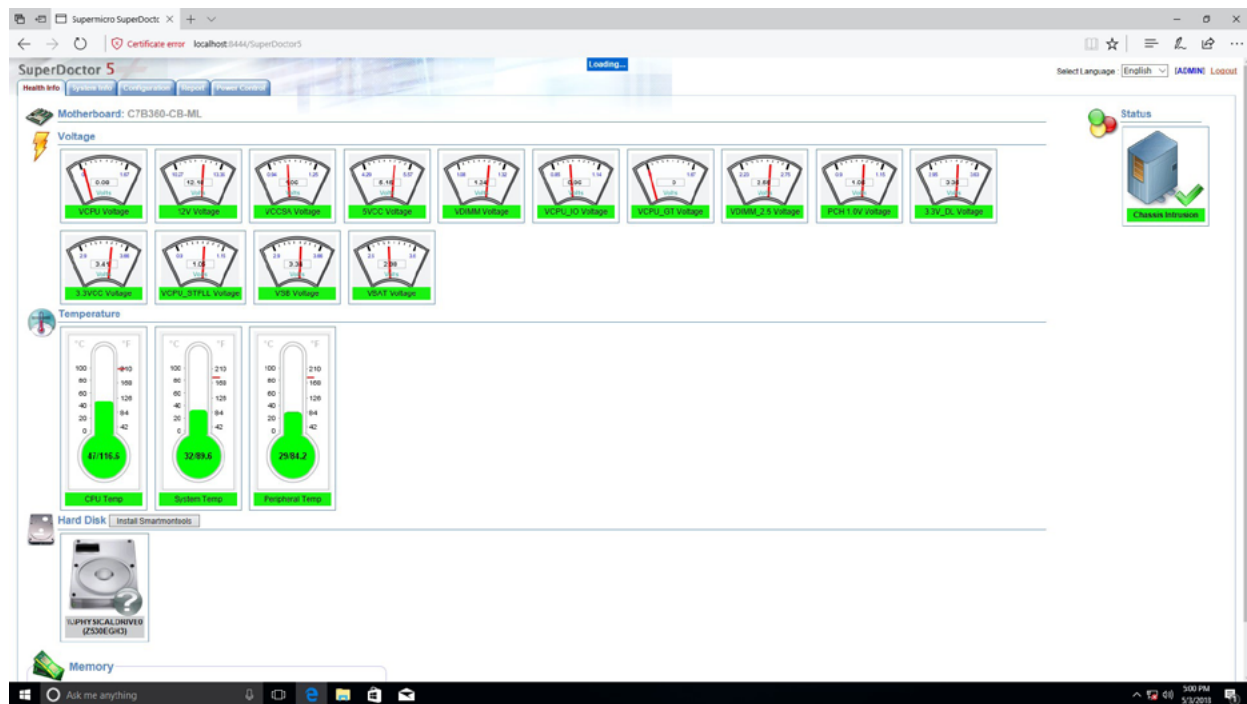


Figure 5-4. SuperDoctor 5 Interface Display Screen (Health Information)

5.4 BMC

The motherboard provides remote access, monitoring and management through the baseboard management controller (BMC) and other management controllers distributed among different system modules. There are several BIOS settings that are related to BMC. For general documentation and information on BMC, visit our website at:

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

BMC ADMIN User Password

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



Figure 5-5. BMC Password Label

Chapter 6

UEFI BIOS

6.1 Introduction

This chapter describes the AMIBIOS™ Setup utility for H12DSi-N6 motherboards that are equipped with the AMD EPYC™ 7003/7002 Series processor. The BIOS is stored on a chip and can be easily upgraded using a flash program.

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. Please refer to the Manual Download area of our website for any changes to BIOS that may not be reflected in this manual.

Starting the Setup Utility

To enter the BIOS Setup Utility, hit 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 keys are used, such as <F1>, <F2>, etc.) Each main BIOS menu option is described in this manual.

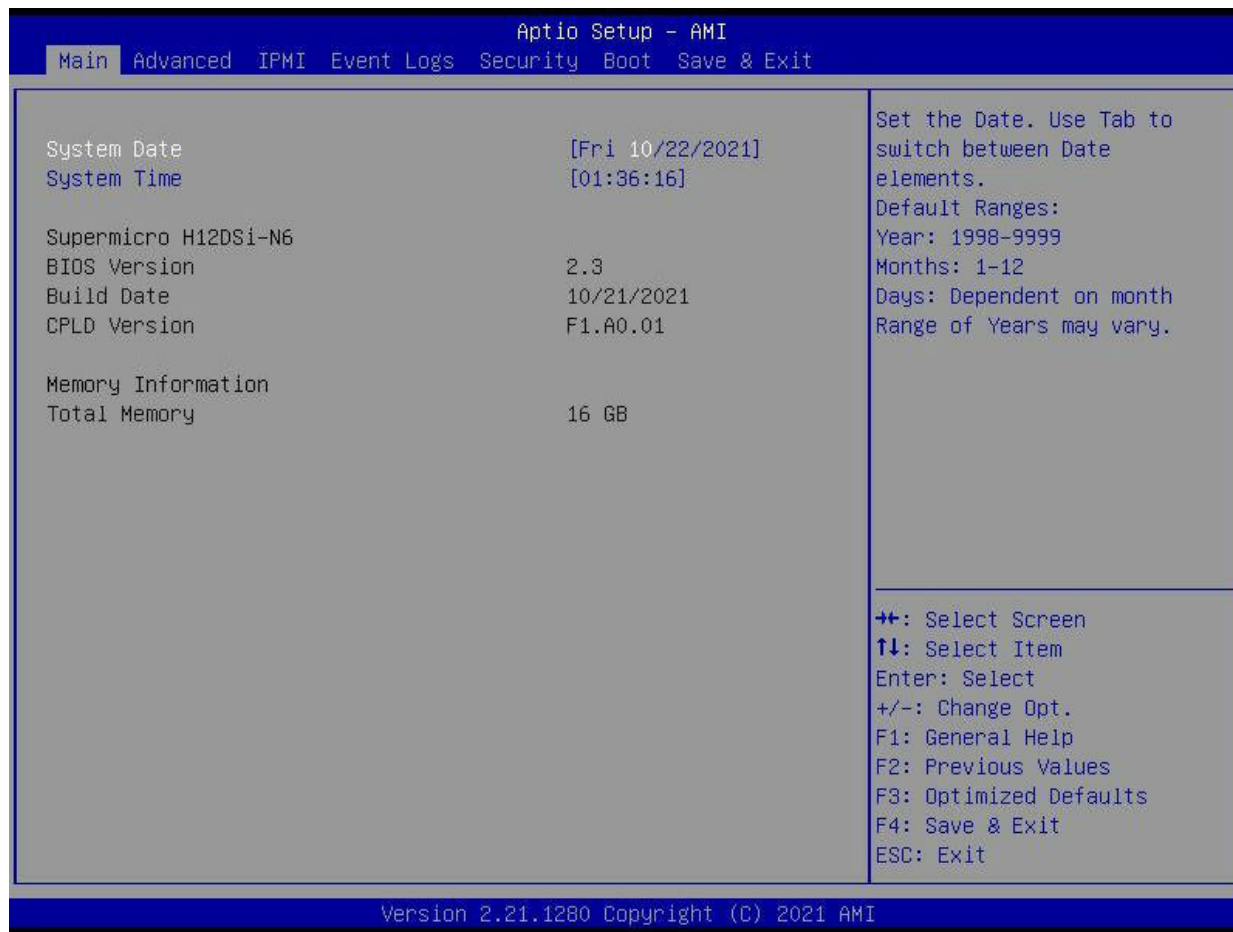
The Main BIOS screen has two main frames. The left frame displays all the options that can be configured. "Grayed-out" options cannot be configured. The right frame displays the key legend. Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is 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 will 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>, <Enter>, <ESC>, <Arrow> keys, etc.) can be used at any time during the setup navigation process.

6.2 Main Setup

When you first enter the AMI BIOS setup utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab on the top of the screen. The Main BIOS setup screen is shown below. The following Main menu items will be displayed:



System Date/System Time

Use this option 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. The date's default value is 01/01/2015 after RTC reset.

Supermicro H12DSi-N6

BIOS Version

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

Build Date

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

CPLD Version

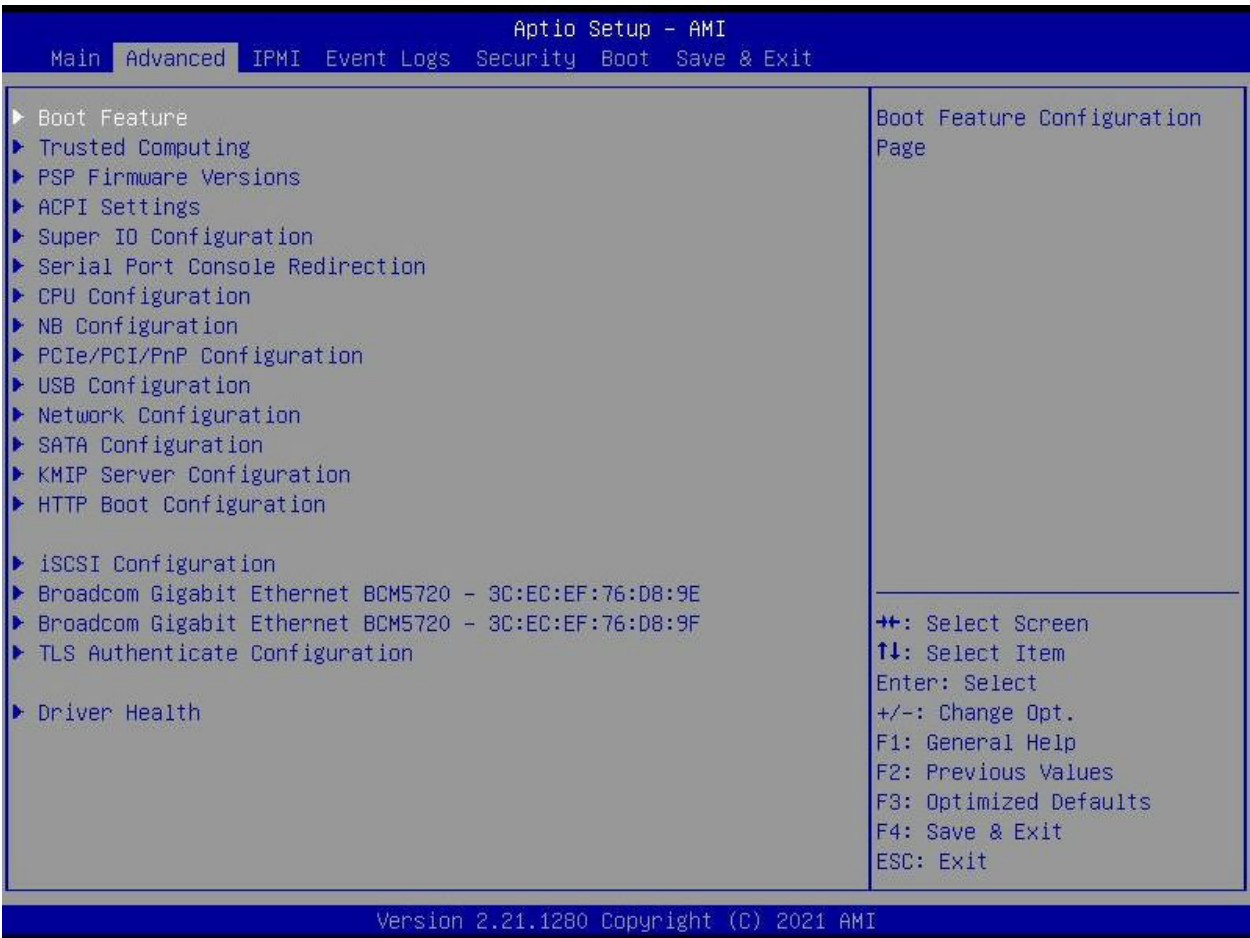
This item displays the CPLD version of the BIOS ROM used in the system.

Memory Information**Total Memory**

This feature displays the total system memory detected.

6.3 Advanced

Use the arrow keys to select a top item and press <Enter> to access the submenu items.



Warning: Take caution when changing the Advanced settings. An incorrect value, a very high DRAM frequency, or an incorrect DRAM timing setting may make the system unstable. When this occurs, revert to the default to the manufacture default settings.

▶ Boot Feature

Quiet Boot

Use this feature to select the screen display between the POST messages and 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**.

Option ROM Messages

Use this feature to set the display mode for the Option ROM. Select Keep Current to display the current AddOn ROM setting. Select Force BIOS to use the Option ROM display set by the system BIOS. The options are **Force BIOS** and Keep Current.

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

Use this feature to force the system to wait until the 'F1' key is pressed if an error occurs. The options are Disabled and **Enabled**.

INT19 (Interrupt 19) Trap Response

Interrupt 19 is the software interrupt that handles the boot disk function. When this item is set to Immediate, the ROM BIOS of the host adaptors will "capture" Interrupt 19 at bootup immediately and allow the drives that are attached to these host adaptors to function as bootable disks. If this item is set to Postponed, the ROM BIOS of the host adaptors will not capture Interrupt 19 immediately and allow the drives attached to these adaptors to function as bootable devices at bootup. The options are **Immediate** and Postponed.

Re-try Boot

If this item is enabled, the BIOS will automatically reboot the system from a specified boot device after its initial boot failure. The options are **Disabled**, Legacy Boot, and EFI Boot.

Power Configuration**Watch Dog Function**

If enabled, the Watch Dog Timer will allow the system to reset or generate NMI based on jumper settings when it is expired for more than 5 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 for the user to power off the system after pressing and holding the power button for 4 seconds or longer. Select Instant Off to instantly power off the system as soon as the user presses the power button. The options are **Instant Off** and 4 Seconds Override.

►Trusted Computing

Security Device Support

If this feature and the TPM jumper on the motherboard are both set to Enabled, onboard security devices will be enabled for TPM (Trusted Platform Module) support to enhance data integrity and network security. Please reboot the system for a change on this setting to take effect. The options are Disabled and **Enabled**.

►PSP Firmware Versions

This section displays the Platform Security Processor (PSP) firmware versions.

PSP Directory Level 1 (Fixed)

- PSP Recovery BL Ver
- SMU FW Version
- ABL Version

PSP Directory Level 2 (Updateable)

- PSP Bootloader Version
- SMU FW Version
- ABL Version

►ACPI Settings

PCI AER Support

The options are **Disabled** and Enabled.

High Precision Event Timer

The High Precision Event Timer (HPET) can produce periodic interrupts and is used to synchronize multimedia streams, providing smooth playback and reducing the need to use other timestamp calculations. The options are Disabled and **Enabled**.

NUMA Nodes Per Socket

This feature specifies the number of desired Non-Uniform Memory Access (NUMA) nodes per socket. Setting this to zero will attempt to interleave the two sockets together. The options are NPS0, NPS1, NPS2, NPS4 and **Auto**.

ACPI SRAT L3 Cache As NUMA Domain

Use this setting to enable/disable ACPI SRAT L3 Cache As NUMA Domain. The options are Disabled, Enabled, and **Auto**.

► Super IO Configuration

The following Super IO information will display:

- Super IO Chip AST2600

► Serial Port 1 Configuration

Serial Port

Select Enabled to enable the selected onboard serial port. The options are Disabled and **Enabled**.

Device Settings

This item displays the status of a serial port specified by the user.

Change Settings

This feature specifies the base I/O port address and the Interrupt Request address of a serial port specified by the user. Select Auto to allow the BIOS to automatically assign the base I/O and IRQ address. 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;).

► SOL Configuration

Serial Port

Select Enabled to enable the selected onboard serial port. The options are Disabled and **Enabled**.

Change Settings

This feature specifies the base I/O port address and the Interrupt Request address of a serial port specified by the user. Select Auto to allow the BIOS to automatically assign the base I/O and IRQ address. 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;).

► Serial Port Console Redirection

COM1

Console Redirection

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

****If the item above set to Enabled, the following items will become available for user's configuration:***

► Console Redirection Settings

Terminal Type

This feature allows the user 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**.

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 1's in data bits is even. Select Odd if the parity bit is set to 0, and the number of 1's 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

This feature selects the settings for Function Keys and KeyPad used for Putty, which is a terminal emulator designed for the Windows OS. The options are **VT100**, LINUX, XTERMR6, SC0, ESCN, and VT400.

SOL**Console Redirection**

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

****If the item above set to Enabled, the following items will become available for user's configuration:***

► Legacy Console Redirection Settings**Legacy Serial Redirection Port**

For this setting, select a COM port to display redirection of Legacy OS and Legacy OPRM messages. The options include **COM1** and SOL.

Legacy OS Redirection Resolution

Use this feature to select the number of rows and columns used in Console Redirection for legacy OS support. The options are 80x24 and **80x25**.

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)

Console Redirection

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

****If the item above set to Enabled, the following items will become available for user's configuration:***

► Console Redirection Settings

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.

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

This item 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 item 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.

Data Bits EMS

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

Parity EMS

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 1's in data bits is even. Select Odd if the parity bit is set to 0, and the number of 1's 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 EMS

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.

►CPU Configuration**SMT Control**

Use this setting to specify Simultaneous Multithreading. The options are Disabled and **Auto**.

Core Performance Boost

This setting is used to configure for Core Performance Boost. Options include Disabled and **Auto**.

Global C-state Control

This setting is used to configure for Global C-state Control. Options include Disabled, Enabled, and **Auto**.

Local APIC Mode

This setting is used for Local APIC Mode. The options include xAPIC, x2APIC, and **Auto**.

CCD Control

This setting sets the number of CCDs to be used. The options include **Auto**, 2 CCDs, 3 CCDs, 4 CCDs, and 6 CCDs.

Core Control

This sets the number of cores to be used by your system. Once this option has been used to remove any cores, a power cycle is required in order for the future selections to take effect. Options include **Auto**, TWO (1+1), Four (2 + 2), Four (4+0), and Six (3 + 3). If unsure, leave this to Auto.

L1 Stream HW Prefetcher / L2 Stream HW Prefetcher

This setting is used to enable or disable the L1/L2 Stream Hardware Prefetcher. The options are Disabled, Enabled, and **Auto**.

SMEE

This feature sets the option to enable or disable Secure Memory Encryption. The options are **Disabled** and Enabled.

SEV ASID Count

The Secure Encrypted Virtualization Address Space ID (ASID) Count specifies the maximum value of ASID, which affects the maximum physical address space available for systems that support 253 ASIDs, while 8TB of physical address space is available for systems that support 509 ASIDs. The options are 253 ASIDs, 509 ASIDs, and **Auto**.

SEV-ES ASID Space Limit Control

Choose **Auto** or Manual to control the SEV-ES ASID Space Limit.

SVM Mode

Use to **Enable** or Disable CPU Virtualization.

CPU 1/2 Information

View information related to CPU1 or CPU2.

►NB Configuration**Determinism Control**

Use this setting to configure the Determinism Slider. Options include Manual and **Auto**.

cTDP Control

Use this setting to configure the cTDP Control. Options include Manual and **Auto**.

IOMMU

Use this setting to enable/disable IOMMU. Options include Disabled, Enabled, and **Auto**.

Package Power Limit Control

Options include Manual and **Auto**.

APBDIS

Options include 0, 1, and **Auto**.

DF Cstates

Options include Disabled, Enabled and **Auto**.

Preferred IO

Options include Manual and **Auto**.

EDC Control

Electrical Design Current (EDC) is the total current capacity in amps that can be supplied to the socket. **Auto** = use the fused VDDCR_CPU EDC limit. Manual = user can set a customized VDDCR_CPU EDC limit.

►xGMI Configuration

xGMI Link Width Control

Auto = use the default xGMI link width modulator settings. Manual = user can set the GMI link width modulator settings.

xGMI Link Max Speed

Select the xGMI link max speed. Settings are 10.667Gbps, 11Gbps, 12Gbps, 13Gbps, 14Gbps, 15Gbps, 16Gbps, 17Gbps, 18Gbps, 19Gbps, 20Gbps, 21Gbps, 22Gbps and **Auto**.

►Memory Configuration

Memory Clock

This setting allows you to select different memory clock speed. Options include **Auto** and supported frequencies.

Memory Interleaving

This setting controls fabric level memory interleaving. Note that the channel, die and socket have requirements on memory populations and it will be ignored if the memory doesn't support the selected option. The options are Disabled and **Auto**.

Memory Interleaving Size

This setting controls the memory interleaving size. This determines the starting address of the interleave (bit 8, 9, 10 or 11). The options are 256 Bytes, 512 Bytes, 1 KB, 2 KB or **Auto**.

Chipset Interleaving

This setting controls interleave memory blocks across the DRAM chip for node 0. The options are Disabled and **Auto**.

BankGroupSwap

This setting controls the Bank Group Swap. The options are Enabled, Disabled and **Auto**.

DRAM Scrub Time

This provides a value that is the number of hours to scrub memory. The options are Disabled, 1 hour, 4 hours, 8 hours, 16 hours, 24 hours, 48 hours, and **Auto**.

► CPU1/2 Memory Information

These sections are for informational purposes. They will display details about the detected memory according to the CPU, such as:

- Detected Size (per slot, in MB)
- Current Speed (MT/s)

► PCIe/PCI/PnP Configuration

This menu provides PCIe/PCI/PnP configuration settings and information.

PCI Bus Driver Version

PCI Devices Common Settings:

Above 4G Decoding

This setting Disables or **Enables** 64-bit capable devices ability to be decoded in above 4G address space (only if the system supports 64-bit PCI decoding).

SR-IOV Support

If the system has SR-IOV capable PCI-E devices, this setting will **Disable** or Enable the Single Root IO Virtualization Support for the system.

BME DMA Mitigation

Use this setting to re-enable the Bus Master Attribute that was disabled during PCI enumeration for PCI bridges after SMM is locked. The options are **Disabled** and Enabled.

PCIe ARI Support

The options are Disabled, Enabled, and **Auto**.

PCIe ARI Enumeration

ARI forwarding enable for downstream port. The options are Disabled, Enabled, and **Auto**.

PCIe Ten Bit Tag Support

Enables PCIe ten bit tags for supported devices. The options are Disabled, Enabled, and **Auto**.

PCIe Spread Spectrum

Use this setting to **Disable** or Enable PCIe Spread Spectrum for your system.

Relaxed Ordering

Enables or disables PCIe device relaxed ordering. The options are Disabled and **Enabled**.

No Snoop

Enables or disables the PCIe device no snoop option. The options are Disabled and **Enabled**..

VGA Priority

Use this setting to select between onboard or offboard VGA support. The options are **Onboard** and **Offboard**

NVMe Firmware Source

Use this setting to select between the AMI Native firmware support or the device vendor-defined firmware support. The options are **Vendor Defined Firmware** and **AMI Native Support**.

CPU Slot1 PCI-E 4.0 x8 OPROM

This setting enables or disables the listed OPROM option. The options are **Disabled** and **EFI**.

CPU Slot2 PCI-E 4.0 x8 OPROM

This setting enables or disables the listed OPROM option. The options are **Disabled** and **EFI**.

CPU Slot3 PCI-E 4.0 x8 OPROM

This setting enables or disables the listed OPROM option. The options are **Disabled** and **EFI**.

CPU Slot4 PCI-E 4.0 x8 OPROM

This setting enables or disables the listed OPROM option. The options are **Disabled** and **EFI**.

CPU Slot5 PCI-E 4.0 x8 OPROM

This setting enables or disables the listed OPROM option. The options are **Disabled** and **EFI**.

CPU Slot6 PCI-E 4.0 x8 OPROM

This setting enables or disables the listed OPROM option. The options are **Disabled** and **EFI**.

PCI-E M.2 OPROM

This setting enables or disables the PCIe M.2 OPROM. The options are **Disabled** and **EFI**.

Onboard LAN1 Option ROM

This setting selects which firmware function to be loaded for the onboard LAN1. The options are **Disabled** and **EFI**.

Onboard NVMe1 Option ROM

Select which firmware function is to be loaded for onboard NVMe1. The options include **Disabled** and **EFI**.

Onboard NVMe2 Option ROM

Select which firmware function is to be loaded for onboard NVMe2. The options include **Disabled** and **EFI**.

Onboard NVMe3 Option ROM

Select which firmware function is to be loaded for onboard NVMe3. The options include **Disabled** and **EFI**.

Onboard NVMe4 Option ROM

Select which firmware function is to be loaded for onboard NVMe4. The options include Disabled and **EFI**.

Onboard Video Option ROM

Select Legacy to boot the system using a legacy video device installed on the motherboard. The options include Disabled and **EFI**

CPU Slot1 PCI-E 4.0 x8 Bifurcation

This setting selects the PCIe slot bifurcation for the stated slot number. The options include **Auto** and x4x4.

CPU Slot2 PCI-E 4.0 x8 Bifurcation

This setting selects the PCIe slot bifurcation for the stated slot number. The options include **Auto** x16, x8x8, x4x4x8, x4x4x4x4.

CPU Slot3 PCI-E 4.0 x8 Bifurcation

This setting selects the PCIe slot bifurcation for the stated slot number. The options include **Auto** and x4x4.

CPU Slot4 PCI-E 4.0 x8 Bifurcation

This setting selects the PCIe slot bifurcation for the stated slot number. The options include **Auto** x16, x8x8, x4x4x8, x4x4x4x4.

CPU Slot5 PCI-E 4.0 x8 Bifurcation

This setting selects the PCIe slot bifurcation for the stated slot number. The options include **Auto** and x4x4.

CPU Slot6 PCI-E 4.0 x8 Bifurcation

This setting selects the PCIe slot bifurcation for the stated slot number. The options include **Auto** x16, x8x8, x4x4x8, x4x4x4x4.

►USB Configuration**Legacy USB Support**

Select Enabled to support onboard legacy USB devices. Select Auto to disable legacy support if there are no legacy USB devices present. Select Disable to have all USB devices available for EFI applications only. The options are **Enabled**, Disabled and Auto.

XHCI Hand-Off

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

Port 60/64 Emulation

Select Enabled for I/O port 60h/64h emulation support, which in turn, will provide complete legacy USB keyboard support for the operating systems that do not support legacy USB devices. The options are **Enabled**, and Disabled.

► Network Configuration

Network Stack

This setting allows you to Disable or **Enable** the UEFI Network Stack.

IPv4 PXE Support

This setting allows you to Disable or **Enable** IPv4 PXE boot support. If disabled, IPv4 PXE boot support will not be available.

IPv4 HTTP Support

This setting allows you to **Disable** or Enable IPv4 HTTP boot support. If disabled, IPv4 HTTP boot support will not be available.

IPv6 PXE Support

This setting allows you to Disable or **Enable** IPv6 PXE boot support. If disabled, IPv6 PXE boot support will not be available.

IPv6 HTTP Support

This setting allows you to **Disable** or Enable IPv6 HTTP boot support. If disabled, IPv6 HTTP boot support will not be available.

PXE Boot Wait Time

This setting allows you to set in a number field the wait time to press the ESC key to abort the PXE boot. The default value is **0**.

Media Detect Count

This setting allows you set in a number field the number of times presence of media will be checked. The default value is **1**.

► MAC:3CDCEF76D89E-IPv6 Network Configuration

This setting allows you configure the network parameters for the listed MAC address.

► MAC:3CDCEF76D89E-IPv4 Network Configuration

This setting allows you configure the network parameters for the listed MAC address.

► MAC:3CDCEF76D89F-IPv4 Network Configuration

This setting allows you configure the network parameters for the listed MAC address.

► **MAC:3CDCEF76D89F-IPv6 Network Configuration**

This setting allows you configure the network parameters for the listed MAC address.

► **SATA Configuration**

This section displays the detected SATA devices installed on the system.

SATA Information

SATA Enable

This item enables or disables the onboard SATA controller supported by the Intel PCH chip. The options are Disabled, Enabled, and **Auto**.

SATA Hotplug

This item enables or disables the onboard SATA controller's hot plug feature (PCH). The options are Disabled and **Enabled**.

► **SATA Information**

This section displays information on the detected SATA devices:

- I-SATA0~1
- SATA0~13

► **KMIP Server Configuration**

This feature allows the user to adjust KMIP Server network parameters.

KMIP Server IP address

KMIP TCP Port number

TimeZone

TCG Nvme KMS Policy

TCG Nvme KMS Status Retry Time

Client UserName

Client Password

KMS TLS Certificate

► **CA Certificate**

► **Client Certificate**

► **Client Private Key**

► HTTP Boot Configuration

HTTP Boot Policy

Sets the HTTP boot policy to Apply to all LANs, **Apply to each LAN**, or Boot Priority #1 instantly.

Instance of Priority 1

Default to 1.

Select IPv4 or IPv6

Choose to set the targeted LAN port to boot from **IPv4** or IPv6.

Boot Description

Must be filled out, otherwise the boot option for the URI will not be created. Length of description cannot exceed 75 characters.

Boot URI

This option is an input field used to enter a web or network address to point to the HTTP boot files. This supports the HTTP or HTTPS protocols only.

Instance of Priority 2

Default to 0.

► iSCSI Configuration

iSCSI Initiator Name

This feature allows the user to enter the unique name of the iSCSI Initiator in IQN format. Once the name of the iSCSI Initiator is entered into the system, configure the proper settings for the following items.

► Add an Attempt

► Delete Attempts

► Change Attempt Order

► Broadcom Gigabit Ethernet BCM5720 - 3C:EC:EF:76:D8:9E /9F

► Firmware Image Menu

This section displays the bootcode, MBA, EFI, iSCSI Boot, NC-SI, and CCM information on the listed Ethernet device:

► MBA Configuration Menu

Legacy Boot Protocol

Selects the non-UEFI boot protocol. Options are **PXE**, iSCSI, and None.

Boot Strap Type

Selects the boot strap type. Options are **Auto Detect**, BBS, Int 18h, and Int 19h.

Hide Setup Prompt

Selects whether the setup prompt is displayed during ROM initialization. Options are **Disabled** and Enabled.

Setup Key Stroke

Configures the keystrokes to invoke the configuration menu. Options are **Ctrl-S** and Ctrl-B.

Banner Message Timeout

Selects the timeout value Options are seconds chosen.

Link Speed

Selects the link speed. Options are **AutoNeg**, 10Mbps Half, 10Mbps Full , 100Mbps Half, and 100Mbps Full.

Pre-boot Wake On LAN

Configures the pre-boot wake on LAN (WOL). Options are **Disabled** and Enabled.\

VLAN Mode

Configures virtual LAN mode. Options are **Disabled** and Enabled.

VLAN ID

Displays the VLAN ID.

► iSCSI Boot Configuration Menu

► iSCSI General Parameters

TCP/IP Parameters via DHCP

Acquire TCP/IP configuration via DHCP. Options are Disabled and **Enabled**.

iSCSI Parameters via DHCP

Enables or Disables CHAP authentication. Options are **Disabled** and Enabled.

Boot to iSCSI Target

Enables or Disables booting to iSCSI target after login. Options are **Enabled**, Disabled, and One Time Disabled.

DHCP Vendor ID

Configures DHCP vendor ID (up to 32 bytes long).

Link Up Delay Time

Configures link up delay time in seconds (0 to 255).

Use TCP Timestamp

Enables or Disables TCP timestamp. Options are **Disabled** and Enabled.

Target as First HDD

Enables or Disables target appearing as first HDD in the system. Options are **Disabled** and Enabled.

LUN Bust Retry Type

Configures the number of retries in 2 second intervals ((0 to 60) when LUN is busy.

IP Version

IP version support. Modifying this parameter will reset all IP-related fields.

► iSCSI Initiator Parameters

Displays the IP address, subnet mask, subnet mask prefix, default gateway, primary DNS, secondary DNS, iSCSI name, CHAP ID, and CHAP secret.

► iSCSI First/Second Target Parameters**Connect**

Enables or Disables target establishment. Options are **Disabled** and Enabled.

This submenu also displays the IP address, TCP port, boot LUN, iSCSI name, CHAP ID, and CHAP secret.

► Secondary Device**Secondary Device**

Input the secondary device MAC address here.

Use Independent Target Portal

Use the independent target portal when multipath I/O is enabled. Options are **Disabled** and Enabled.

Use Independent Target Name

Use the independent target name when multipath I/O is enabled. Options are **Disabled** and Enabled.

The iSCSI Boot Configuration Menu also displays the blink LEDs, chip type, PCI device ID, Bus:Device:Function, link status, permanent MAC address and virtual MAC address.

► TLS Authenticate Configuration

This submenu allows the user to configure Transport Layer Security (TLS) settings.

► Server CA Configuration

► Enroll Certification

► Enroll Certification using File

Use this feature to enroll certification from a file.

Certification GUID

Use this feature to input the certification GUID.

► 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

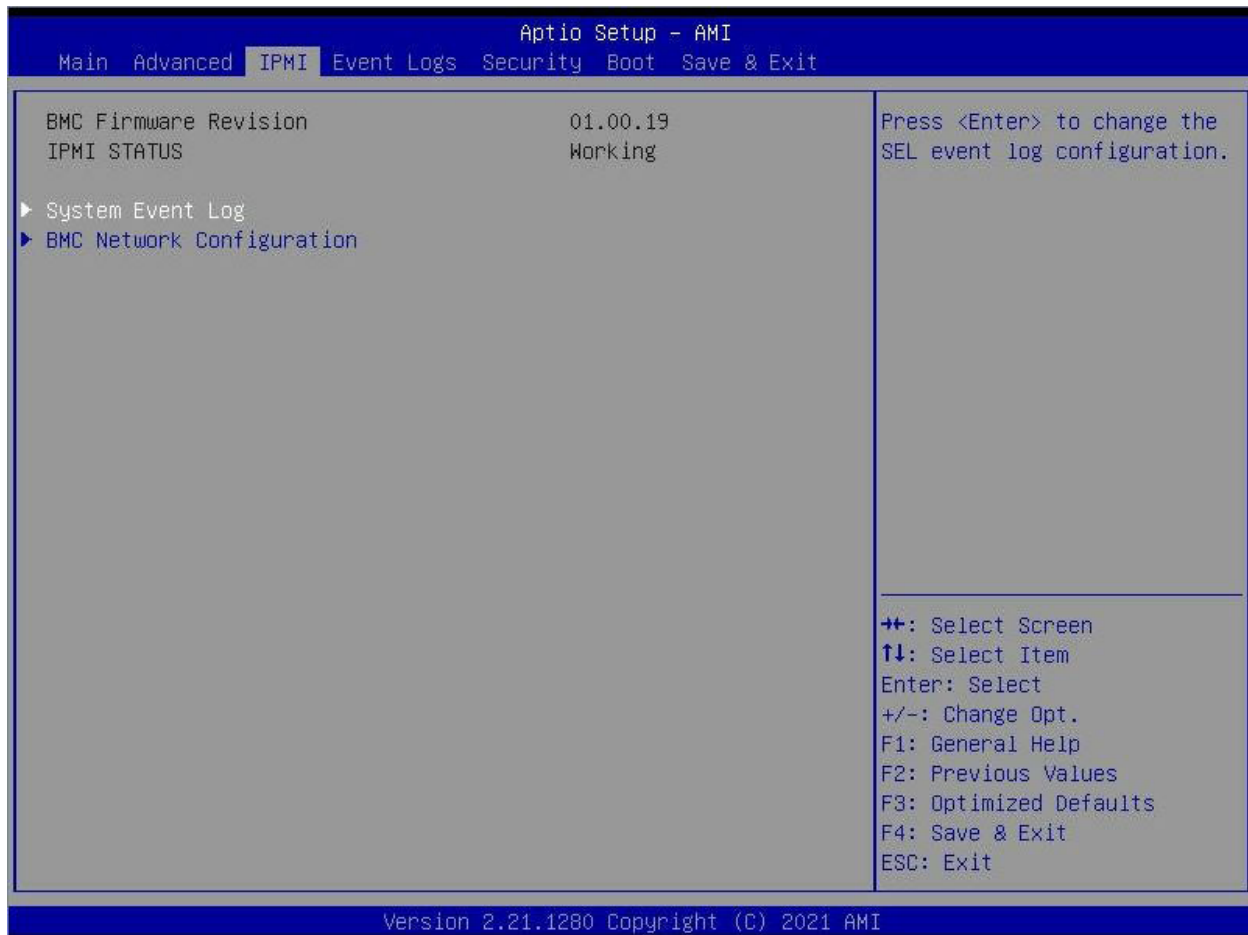
Use this feature to delete certification. The options include **Disabled** and Enabled.

► Driver Health

This submenu provides driver health status for the drivers and controllers.

6.4 IPMI

This tab allows you to configure the following IPMI settings for the system.



Use this feature to configure Intelligent Platform Management Interface (IPMI) settings.

BMC Firmware Revision

This item indicates the IPMI firmware revision used in your system.

IPMI STATUS

This item indicates the status of the IPMI firmware installed in your system.

► System Event Log

Enabling/Disabling Options

SEL Components

Select Enabled for all system event logging at bootup. The options are Disabled and Enabled.

Erasing Settings

Erase SEL

Select Yes, On next reset to erase all system event logs upon next system reboot. 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

This feature allows the user to decide 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.

Note: After making changes on a setting, be sure to reboot the system for the changes to take effect.

► BMC Network Configuration

BMC Network Configuration

Update IPMI LAN Configuration

Select Yes to enable BMC Network Configuration.

IPMI LAN Selection

This item displays the IPMI LAN setting. The default setting is **Failover**.

IPMI Network Link Status

This item displays the IPMI Network Link status. The default setting is **Shared LAN**.

Configuration Address Source

This feature allows the user to select the source of the IP address for this computer. If Static is selected, you will need to know the IP address of this computer and enter it to the system manually in the field. If DHCP is selected, the BIOS will search for a DHCP (Dynamic Host Configuration Protocol) server in the network that is attached to and request the next available IP address for this computer. The options are Static and **DHCP**.

****If the item above is set to Static, the following items will become available for configuration:***

Station IP Address

This item displays the Station IP address for this computer. This should be in decimal and in dotted quad form.

Subnet Mask

This item displays the sub-network that this computer belongs to. The value of each three-digit number separated by dots should not exceed 255.

Station MAC Address

This item displays the Station MAC address for this computer. Mac addresses are 6 two-digit hexadecimal numbers.

Gateway IP Address

This item displays the Gateway IP address for this computer. This should be in decimal and in dotted quad form (i.e., 172.31.0.1).

VLAN

This item displays the virtual LAN settings. The options are Disable and Enable.

Configure IPv6 Support

This section displays configuration features for IPv6 support.

IPv6 Support

Use this feature to enable IPV6 support. The options are **Enabled** and Disabled.

****If the item above is set to Enabled, the following items will become available for configuration:***

Configuration Address Source

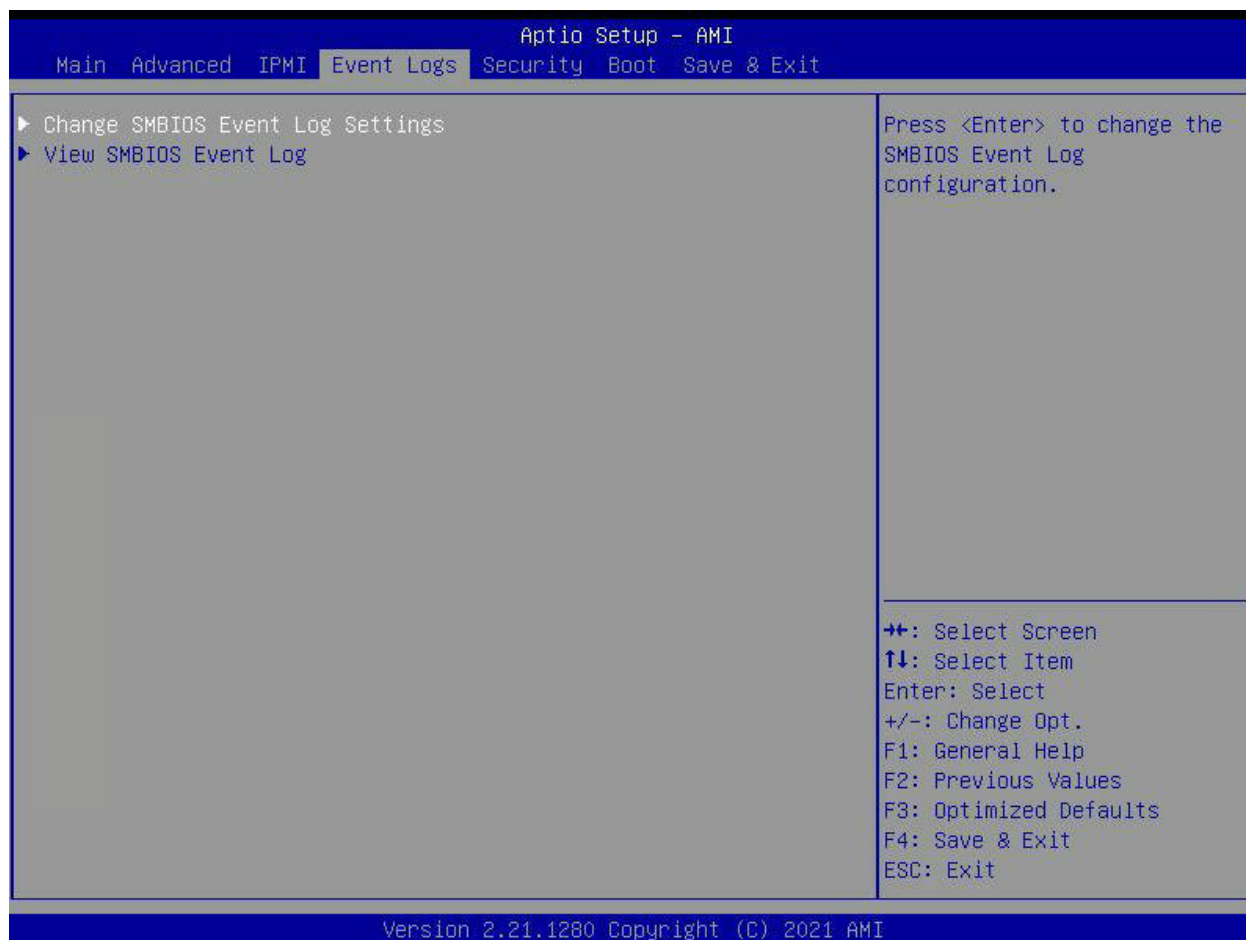
This feature allows the user to select the source of the IP address for this computer. If Static is selected, you will need to know the IP address of this computer and enter it to the system manually in the field. If DHCP is selected, the BIOS will search for a DHCP (Dynamic Host Configuration Protocol) server in the network that is attached to and request the next available IP address for this computer. The options are **DHCP** and Static.

****If the item "Configuration Address Source" above is set to Static, the following items will become available for configuration:***

- Station IPv6 Address
- Prefix Length
- IPv6 Router1 IP Address

6.5 Event Logs

This tab allows the user to configure the following event logs settings for the system.



Enabling/Disabling Options

Change SMBIOS Event Log Settings

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

Erasing Settings

Erase Event Log

Select Yes to erase all error events in the SMBIOS (System Management BIOS) log before an event logging is initialized at bootup. The options are **No**, Yes, Next reset, and Yes, Every reset.

When Log is Full

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**

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

MECI (Multiple Event Count Increment)

Enter the increment value for the multiple event counter. Enter a number between 1 to 255. The default setting is **1**.

METW (Multiple Event Count Time Window)

This item is used to determine how long (in minutes) the multiple event counter should wait before generating a new event log. Enter a number between 0 to 99. The default setting is **60**.

Note: Please reboot the system for these changes to take effect.

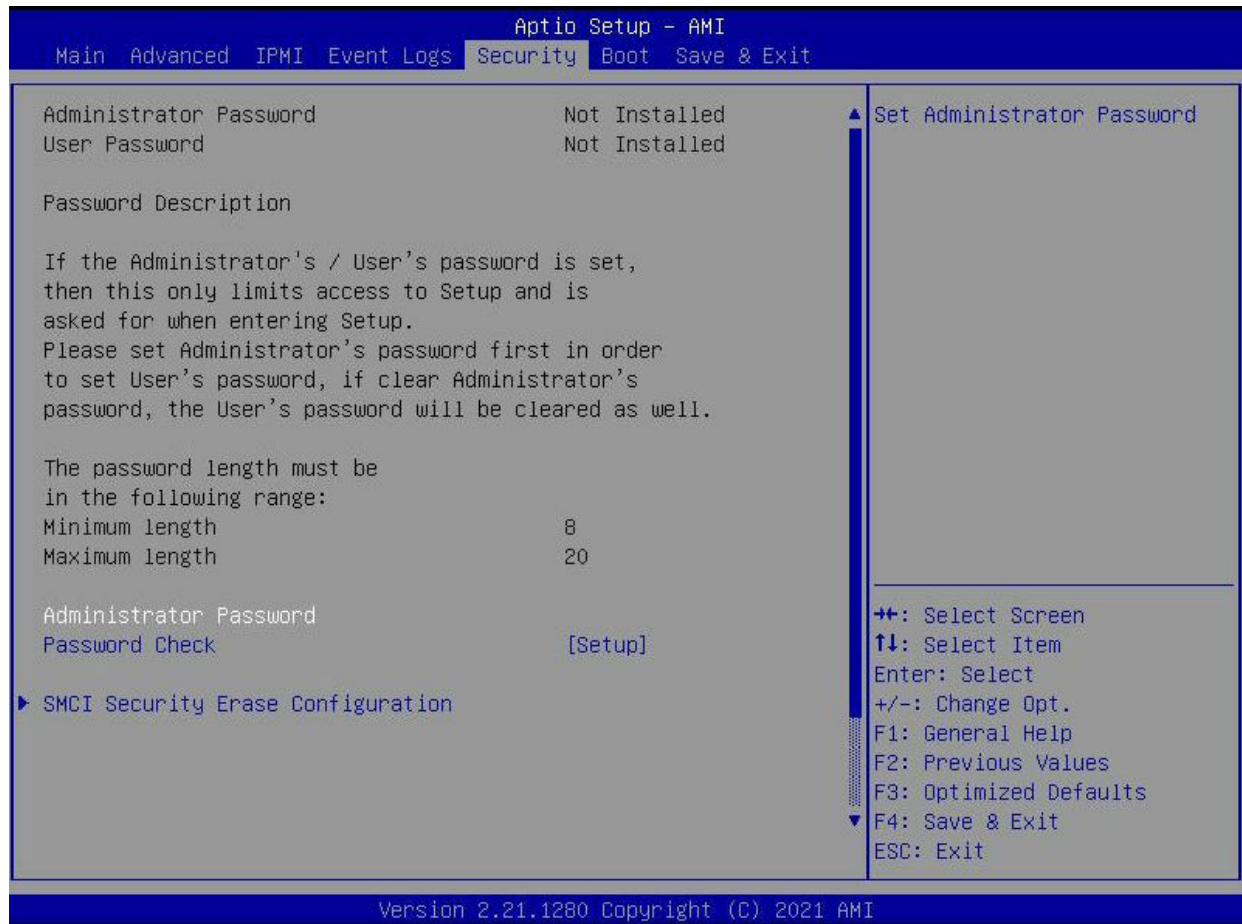
►View SMBIOS Event Log

When Event Logging is on, this item allows the user to view the entries in the SMBIOS event log. The following categories are displayed:

Date/Time/Error Code/Severity

6.6 Security

This tab allows you to configure the following security settings for the system.



Administrator Password

Press Enter to create a new, or change an existing Administrator password. Note that if the Administrator Password is erased, the User Password will be cleared as well.

Password Check

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

► VSMCI Security Erase Configuration

Displays the HDD name, HDD serial number, security mode, estimated time, and HDD user password status.

► Security Function

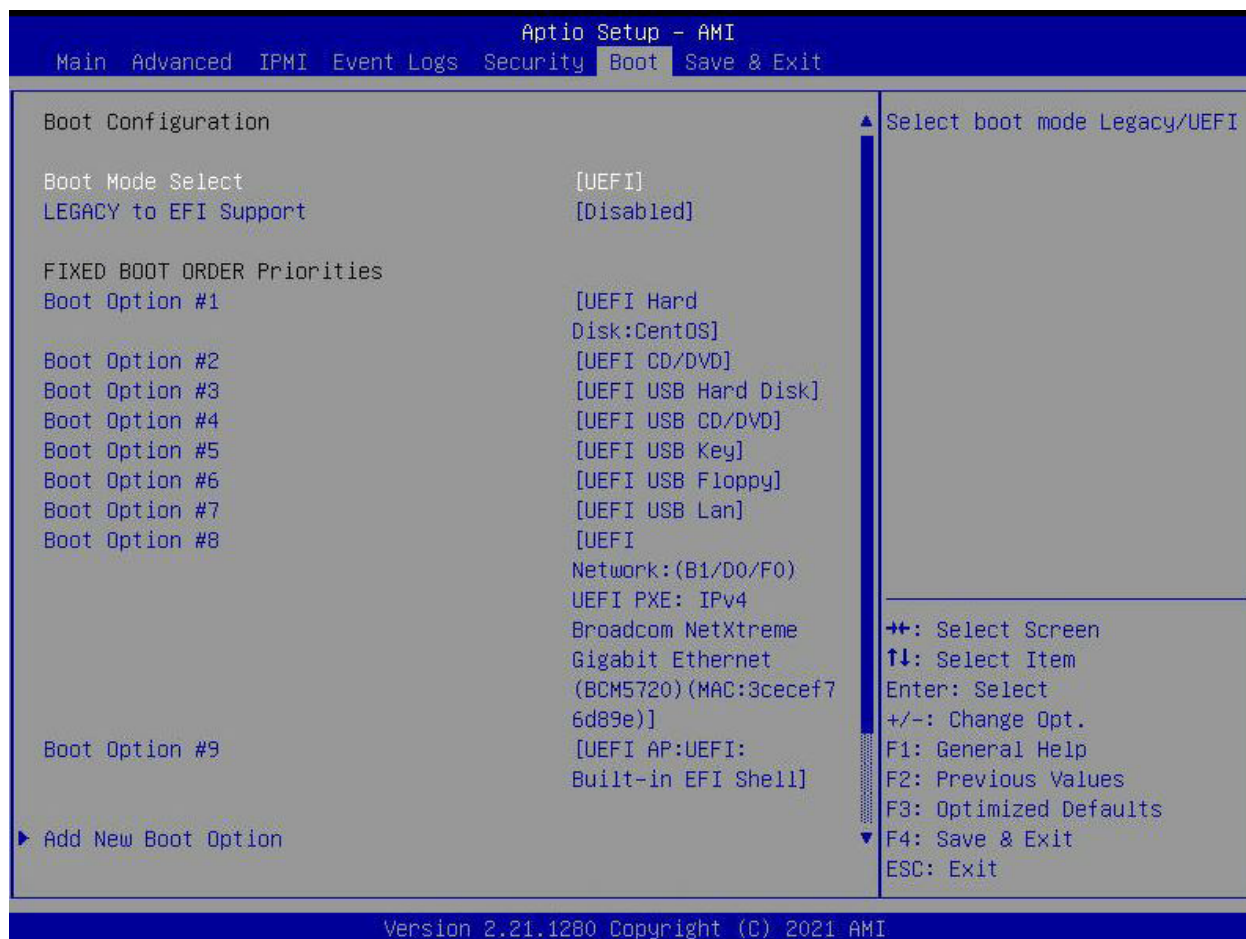
Options are **Disabled**, Set Password, Security erase - Password, and Security Erase -0 Without Password. .

Password

Set the password here.

6.7 Boot

Use this tab to configure Boot Settings:



Boot Mode Select

Use this item to select the type of device that the system is going to boot from. The options are Legacy, UEFI, and **Dual**.

LEGACY to EFI Support

This option **Disables** or Enables the system to boot to an EFI OS after the boot failed from the legacy boot order.

FIXED BOOT ORDER Priorities

This option prioritizes the order of bootable devices that the system to boot from. Press <Enter> on each entry from top to bottom to select devices.

►Add New Boot Option

Use this feature to add a pre-defined boot device from which the system will boot during startup.

►Delete Boot Option

Use this feature to remove a pre-defined boot device from which the system will boot during startup.

►NETWORK Drive BBS Priorities

This feature allows the user to specify which UEFI network drive devices are boot devices.

►NETWORK Network Drive BBS Priorities

This feature allows the user to specify which UEFI network drive devices are boot devices.

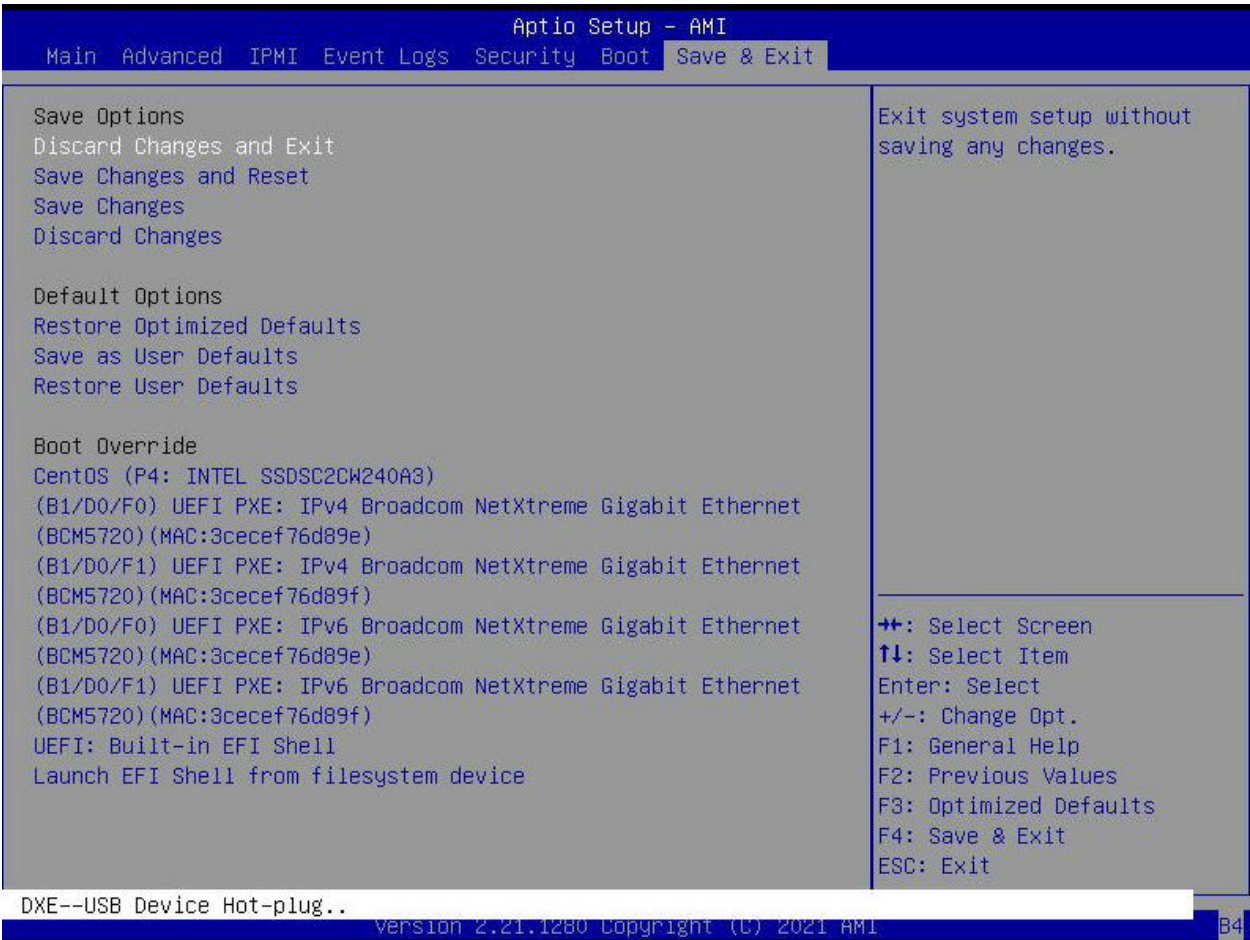
►UEFI Application Boot Priorities

This feature allows the user to specify which UEFI devices are boot devices.

- UEFI Boot Order #1

6.8 Save & Exit

Select the Save & Exit tab to enter the Save & Exit BIOS Setup screen.



Save Options

Discard Changes and Exit

Select this option to quit the BIOS Setup without making any permanent changes to the system configuration, and reboot the computer. Select Discard Changes and Exit from the Exit menu and press <Enter>.

Save Changes and Reset

Select this option to reset the system after saving the changes.

Save Changes

After completing the system configuration changes, select this option to save the changes you have made. This will not reset (reboot) the system.

Discard Changes

Select this option and press <Enter> to discard all the changes and return to the AMI BIOS utility Program.

Default Options**Restore Optimized Defaults**

To set this feature, select Restore Optimized Defaults from the Save & Exit menu and press <Enter>. These are factory settings designed for maximum system stability, but not for maximum performance.

Save as User Defaults

To set this feature, select Save as User Defaults from the Exit menu and press <Enter>. This enables the user to save any changes to the BIOS setup for future use.

Restore User Defaults

To set this feature, select Restore User Defaults from the Exit menu and press <Enter>. Use this feature to retrieve user-defined settings that were saved previously.

Boot Override Section

Listed on this section are other boot options for the system (i.e., Built-in EFI shell). Select an option and press <Enter>. Your system will boot to the selected boot option.

Appendix A

Standardized Warning Statements for AC Systems

About Standardized Warning Statements

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

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

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

Warning Definition



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

警告の定義

この警告サインは危険を意味します。

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

此警告符号代表危險。

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

此警告符號代表危險。

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

Warnung

WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

תקנון הזהרות אזהרה

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

اَكْ ف حالة وُكِي اَي تتسبب ف اصابة جسدهُ هذا الزهر عُ خطر! تحذُرُ .
 قبل اَي تعول على اَي هعدات، كي على علن بالوخاظر ال اُجوة عي الذوائر
 الكهزبائِة
 وكي على دراهُ بالووارسات النقاائِة لو عُ وقع اَي حادث
 استخدم رَقن البِ اِي الو صُص ف هَاهُ كل تحذُر للعشر تزجوتها

안전을 위한 주의사항

경고!

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

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

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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

BEWAAR DEZE INSTRUCTIES

Installation Instructions



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

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前,请先阅读安装说明。

警告

將系統與電源連接前，請先閱讀安裝說明。

Warnung

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

¡Advertencia!

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

Attention

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

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقرأ إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

Waarschuwing

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

Circuit Breaker

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

サーキット・ブレーカー

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

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

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

경고!

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

Waarschuwing

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

Power Disconnection Warning



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



電源切断の警告

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

警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

警告

在您打開機殼安裝或移除內部元件前，必須將系統完全斷電，並移除電源線。

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה מפני ניתוק חשמלי

אזהרה!

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

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

انصل إلى امناطق انداخهيت نههيكم نتشيج أو إزانت مكنناث الجهاز

경고!

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

Waarschuwing

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

Equipment Installation



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

機器の設置

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

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

只有經過受訓且具資格人員才可安裝、更換與維修此設備。

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה!

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

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

경고!

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

Waarschuwing

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

Restricted Area

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

アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

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

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

אזור עם גישה מוגבלת

אזהרה!

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

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

경고!

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

Waarschuwing

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

Battery Handling



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

電池の取り扱い

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

警告

電池更換不當會有爆炸危險。請只使用同類電池或制造商推荐的功能相当的電池更換原有電池。請按制造商的說明處理廢舊電池。

警告

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

Warnung

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

Attention

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

¡Advertencia!

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

אזהרה!

קיימת סכנת פיצוץ של הסוללה במידה והוחלפה בדרך לא תקינה. יש להחליף את הסוללה בסוג התואם מחברת יצרן מומלצת. סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן.

هناك خطر من انفجار في حالة اسحبذال البطارية بطريقة غير صحيحة فعليل
اسحبذال البطارية
فقط بنفس النوع أو ما يعادلها مما أوصت به الشركة المصنعة
جخلص من البطاريات المسحمة وفقا لعمليات الشركة الصانعة

경고!

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

Waarschuwing

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

Redundant Power Supplies



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

冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告

此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung

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

¡Advertencia!

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

Attention

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

אם קיים יותר מספק אחד

אזהרה!

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

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة .

يجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

경고!

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

Waarschuwing

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

Backplane Voltage



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

バックプレーンの電圧

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

修理する際には注意ください。

警告

当システム正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告

當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

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

¡Advertencia!

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

Attention

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

מתח בפנל האחורי

אזהרה!

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

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

경고!

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

Waarschuwing

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

Comply with Local and National Electrical Codes



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

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

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

Attention

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

תיאום חוקי החשמל הארצי

אזהרה!

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمثل للقوايه المحلية والبطية المتعلقة
بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

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

Product Disposal



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

製品の廃棄

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

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

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

¡Advertencia!

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

Attention

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

סילוק המוצר

אזהרה!

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

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

경고!

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

Waarschuwing

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

Hot Swap Fan Warning



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

ファン・ホットスワップの警告

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

警告!

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה!

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

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

경고!

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

Waarschuwing

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

Power Cable and AC Adapter



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

電源コードとACアダプター

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

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

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

AC ימאתמו מילמשח מילבכ**!הרהזא**

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

תאלבאלא אארשב מץ וא ענדחמל וא ערפוטמל תאליסוולא מאדחטסאב מץ, ענתנמל בייקרת דנע לכלז יפ אמב עילחמל עמאלסל תאבלטתמו נינאוץב מאזתלאל עמ דדרתמל ראיטל תאלוחמו עיזאברמלל קיירח וא לטע יפ בבסטטי דץ ירזא תאלוחמו תאלבאלא יא מאדחטסא. מילסל סבאלאו לסוולא מץ ח CSA וא UL לבק נמ ענדחמל תאלבאלא מאדחטסא תאדעמל עיזאברמלל עזחאלל עמאלסל נונאק רזחי Supermicro לבק נמ ענדחמל עינעמל תאנתנמל ריז ירזא תאדעמ יא עמ (UL/CSA) עמאלע למחתיטל או

전원 케이블 및 AC 어댑터

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

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

Stroomkabel en AC-Adapter

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

Appendix B

UEFI BIOS Recovery

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

B.1 Overview

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

B.2 Recovering the UEFI BIOS Image

A UEFI BIOS flash chip consists of a recovery BIOS block and a main BIOS block (a main BIOS image). The boot block contains critical BIOS codes, including memory detection and recovery codes for the user to flash a new BIOS image if the original main BIOS image is corrupted. When the system power is on, the boot block codes execute first. Once it is completed, the main BIOS code will continue with system initialization and bootup.

B.3 Recovering the BIOS Block with a USB Device

This feature allows the user to recover a BIOS image using a USB-attached device without the need for additional utilities. A USB flash device such as a USB flash drive or a USB CD/DVD device can be used for this purpose. A USB hard disk drive cannot be used for BIOS recovery at this time.

The file system supported by UEFI is FAT (including FAT12, FAT16, and FAT32) installed on a bootable or non-bootable USB-attached device. Note that the BIOS might need several minutes to locate the SUPER.ROM file if the media size becomes too large because it contains too many folders and files.

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

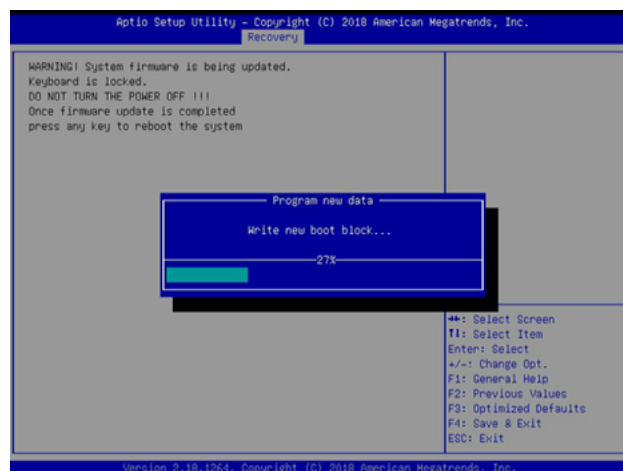
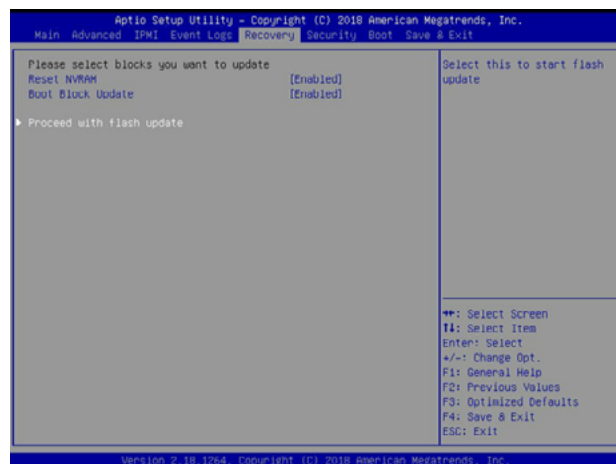
1. Using a different system, copy the "Super.ROM" binary image file into the disc Root "\" Directory of a USB device or a writeable CD/DVD.

Note: If you cannot locate the "Super.ROM" file in your driver disk, visit our website at www.supermicro.com to download the BIOS image into a USB flash device and rename it "Super.ROM".

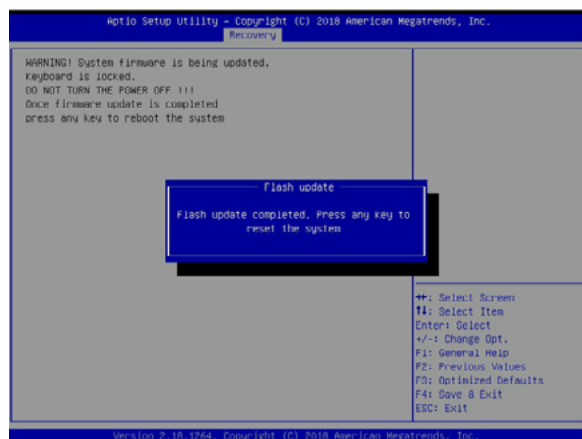
2. While the system is turned off, insert the USB device that contains the new BIOS binary image (SUPER.ROM).
3. Power on the system.



4. After the system is turned on, the system will enter the BIOS Recovery menu. Select "Proceed with flash update" to start the BIOS recovery process. **DO NOT INTERRUPT THIS PROCESS UNTIL IT IS FINISHED!**



5. After the Boot Sector Recovery Process is complete, press any key to reboot the system.

**Notes:**

- The BIOS recovery (SUPER.ROM) will not work if BIOS has a multi-block crash.
- If you have purchased an OOB license, you can do a BIOS flash again through BMC WebGUI or SUM. Please refer to these SUPERMICRO software-related videos:
 - Activate OOB license: https://www.youtube.com/watch?v=V4spX_DOV7I
 - SUPERMICO BIOS Update: <https://www.youtube.com/watch?v=S8z6iOEHGwY>
- If the BIOS flash recovery fails, contact our RMA Department to have the BIOS chip reprogrammed. This will require shipping the board to Supermicro for repair.
 - Submit your RMA request at <https://www.supermicro.com/support/rma>
- Please make sure to follow all instructions when returning the motherboard.

Appendix C

System Specifications

Processor Support

Dual AMD EPYC™ 7002/7003 Series Processors in SP3 type sockets

Notes: Please refer to the motherboard specifications pages on our website for updates to supported processors.

Chipset

System on Chip

BIOS

256Mb SPI AMI BIOS®

Memory Support

16 DIMM slots to support up to 4TB of registered ECC DDR4-3200 SDRAM

SATA Controller

On-chip (System on Chip) controller

Drive Bays

Twelve hot-swap 3.5" (tool-less) or 2.5" (screw) drive bays

(Default configuration is eight SATA + four NVMe, other configurations requires additional optional parts)

PCI Expansion Slots

Three PCIe 4.0 x16 slots

Three PCIe 4.0 x8 slots

One M.2 Interface: PCIe 4.0 x4

Motherboard

H12DSi-N6: 12" x 13.05" (305 x 332mm)

Chassis

CSE-LA26TS-R920LPP1; 2U rackmount, (WxHxD) 17.2 x 3.5 x 25.5 in. (437 x 89 x 648 mm)

System Cooling

Three 8-cm hot-swap PWM fans

Power Supply

Model: PWS-920P-1R2, 80+ Platinum Level (two power modules for redundancy)*

AC Input Voltages: 100-240 VAC

Rated Input Frequency: 50-60 Hz

Rated Output Power: 920W

Rated Output Voltages: +12V: Max: 75A/Min: 0.5A (100Vac-240Vac)

+5Vsb: Max: 4A/Min: 0A

Operating Environment

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

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

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

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

Regulatory Compliance

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

Applied Directives, Standards

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

Electromagnetic Compatibility Regulations 2016

FCC Part 15 Subpart B

ICES-003

VCCI-CISPR 32

AS/NZS CISPR 32

BS/EN 55032

BS/EN 55035

CISPR 32

CISPR 24/CISPR 35

BS/EN 61000-3-2

BS/EN 61000-3-3

BS/EN 61000-4-2

BS/EN 61000-4-3

BS/EN 61000-4-4

BS/EN 61000-4-5

BS/EN 61000-4-6

BS/EN 61000-4-8

BS/EN 61000-4-11

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

UL/CSA 62368-1 (USA and Canada)

Electrical Equipment (Safety) Regulations 2016

IEC/BS/EN 62368-1

Environment:

2011/65/EU (RoHS Directive)

EC 1907/2006 (REACH)

2012/19/EU (WEEE Directive)

California Proposition 65

Perchlorate Warning

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

C.1 BSMI

限用物質含有情況標示聲明書

Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱：伺服器 / Server Equipment name 型號（型式）：LA26- R9H12 （系列型號：AS -2024S-TR） Type designation (Type)						
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁺⁶)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
機殼 (Chassis)	○	○	○	○	○	○
機殼風扇 (Chassis Fan)	-	○	○	○	○	○
線材 (Cable)	○	○	○	○	○	○
主機板 (Motherboard)	-	○	○	○	○	○
電源供應器 (Power Supply)	-	○	○	○	○	○
硬碟 (HDD, SSD)	-	○	○	○	○	○
電源背板 (PDB)	-	○	○	○	○	○
附加卡 (Add-on card)	-	○	○	○	○	○
備考1. “超出0.1 wt %” 及 “超出0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。 Note 1 : “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition. 備考2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2 : “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence. 備考3. “-” 係指該項限用物質為排除項目。 Note 3 : The “-” indicates that the restricted substance corresponds to the exemption.						

警告：為避免電磁干擾，本產品不應安裝或使用於住宅環境。

輸入額定：

100-127V ~, 60-50Hz, 11-8.5 A (x2)

200-240V ~, 60-50Hz, 5.5-4.5 A (x2)

*使用者不能任意拆除或替換內部配備

*報驗義務人之姓名或名稱：美超微電腦股份有限公司

*報驗義務人之地址：新北市中和區建一路 150 號 3 樓