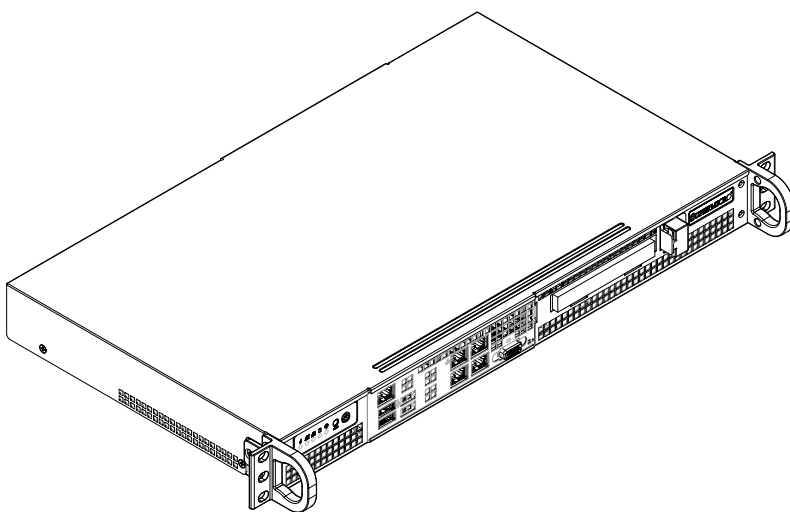




A+ SERVER AS -5019D-FTN4



USER'S MANUAL

Revision 1.0a

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Manual Revision 1.0a

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Preface

About this Manual

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

Please refer to the AS -5019D-FTN4 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/wftp>
- 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.

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.

Contents

Chapter 1 Introduction

1.1 Overview.....	7
1.2 Unpacking the System	7
1.3 System Features	8
1.4 Chassis Features	9
Control Panel	9
Front Features.....	10
Chassis Rear.....	11
1.5 Motherboard Layout	12
Quick Reference	13
Chipset Block Diagram.....	14
1.6 Where to Get Replacement Components	15
1.7 Returning Merchandise for Service.....	15

Chapter 2 Server Installation

2.1 Overview.....	16
2.2 Preparing for Setup	16
Choosing a Setup Location.....	16
Rack Precautions	16
Server Precautions.....	17
Rack Mounting Considerations	17
Ambient Operating Temperature.....	17
Airflow	17
Mechanical Loading.....	17
Circuit Overloading	17
Reliable Ground.....	18
2.3 Installing the System Into a Rack	19
Installing the Server into a Telco Rack	20

Chapter 3 Maintenance and Component Installation

3.1 Removing Power	21
3.2 Accessing the System.....	22
Memory	23
Memory Support	23
General Guidelines for Optimizing Memory Performance.....	23

DIMM Module Population Sequence	24
DIMM Installation	25
Motherboard Battery	26
3.4 Chassis Components	27
Storage Drives	27
PCI Expansion Cards	29
System Fans	30
Power Supply	32
Chapter 4 Motherboard Connections	
4.1 Power Connections	33
4.2 Headers and Connectors	34
Front Control Panel	37
4.3 Ports	40
4.4 Jumpers	41
Explanation of Jumpers	41
4.5 LED Indicators	43
Chapter 5 Software	
5.1 Microsoft Windows OS Installation	45
5.2 Driver Installation	47
5.3 SuperDoctor® 5	48
5.4 IPMI	48
Chapter 6 UEFI BIOS	
6.1 Introduction	49
Starting the Setup Utility	49
6.2 Main Setup	50
6.3 Advanced	52
6.4 IPMI	70
6.5 Event Logs	74
6.6 Security	76
6.7 Boot	80
6.8 Save & Exit	82
Appendix A BIOS Error Codes	
Appendix B Standardized Warning Statements for AC Systems	
Appendix C System Specifications	
Appendix D UEFI BIOS Recovery	

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Chapter 1

Introduction

1.1 Overview

This chapter provides a brief outline of the functions and features of the AS -5019D-FTN4 server, based on the M11SDV-8C-LN4F motherboard and the SC505-203B chassis. The AS -5019D-FTN4 server has input/output ports in the rear and in the front.

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
Power Supply Module	PWS-203-1H	1
Fans	FAN-0065L4	2
Heatsink	SNK-P0049P	1
Riser Card	RSC-RR1U-E16	1

1.2 Unpacking the System

Inspect the box the system 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 is an overview of the main features of the AS -5019D-FTN4 server.

System Features
Motherboard
M11SDV-8C-LN4F
Chassis
SC505-203B
CPU
AMD EPYC 3251 SoC
Memory
Up to 512GB of Registered ECC DDR4 with speeds up to 2666MHz in four DIMMs 4-channel memory bus.
Chipset
System on Chip
Expansion Slots
One PCI-E 3.0 x16 One M.2 M-Key (PCI-E x4 80mm length support NVMe SSD)
Storage Drives
Four 2.5" SATA3 Two front USB3
Power
200W AC-DC 80Plus Gold level module
Cooling
Two 40x28mm 4-pin PWM fan
Input/Output
Four SATA3 (6Gbps) ports Two USB 3.0 ports (front) One VGA port (front)
LAN ports
Four RJ45 Gigabit Ethernet LAN ports (front) One RJ45 Dedicated IPMI LAN port (front)
Form Factor
Mini-ITX form factor (6.75" x 6.75") (170mm x 170mm)

1.4 Chassis Features

Control Panel

Power switches and status LEDs are located on the control panel on the front of the chassis.

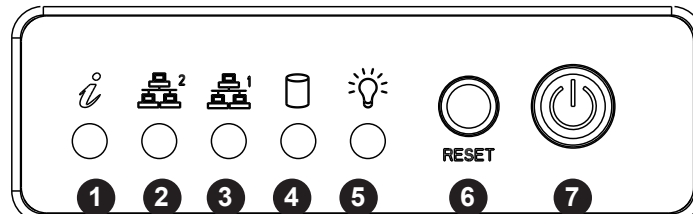


Figure 1-1. Control Panel

Control Panel Features		
Item	Features	Description
1	Information LED	Alerts operator to several states, as noted in the table below
2	NIC2 LED	Indicates network activity on LAN port 2 when flashing
3	NIC1 LED	Indicates network activity on LAN port 1 when flashing
4	HDD LED	Indicates hard drive activity when flashing
5	Power LED	Indicates power is being supplied to the system power supply; illuminated when the system is operating normally
6	Reset Button	Reboots the system
7	Power Button	Applies or removes power from the power supply to the server; standby power is maintained

Information LED	
Status	Description
Continuously on and red	An overheat condition has occurred. (This may be caused by cable congestion.)
Blinking red (1Hz)	Fan failure, check for an inoperative fan.
Blinking red (0.25Hz)	Power failure, check for a non-operational power supply.
Solid blue	UID has been activated locally to locate the server in a rack environment.
Blinking blue	UID has been activated using IPMI to locate the server in a rack environment.

Front Features

The illustration below shows the features included on the front of the chassis.

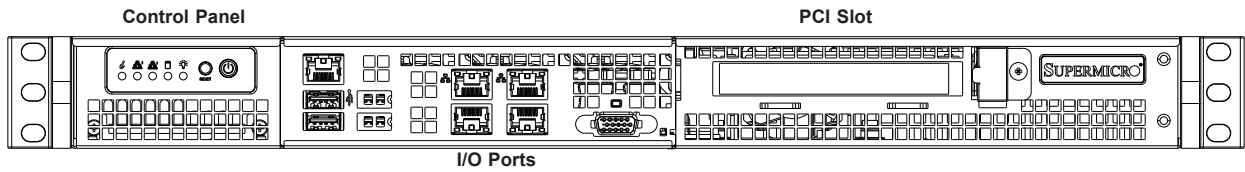


Figure 1-2. SC505-203B Chassis Front View

Front Chassis Features		
Item	Feature	Description
1	Control Panel	Front control panel with LEDs and buttons (see preceding page)
2	I/O Ports	Input/Output ports (see next page and Section 4.3 for details)
3	PCI Slot	Slot for an expansion card

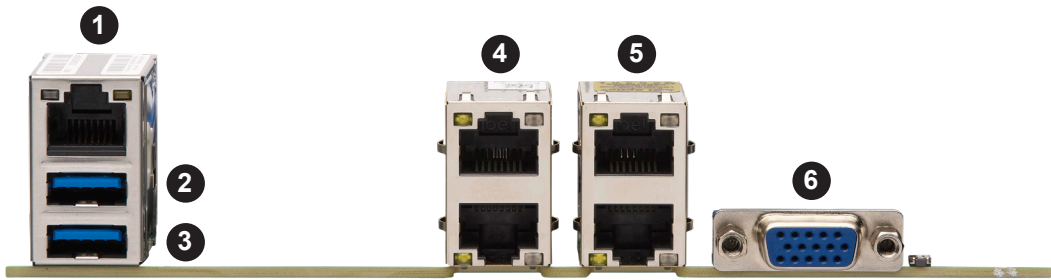


Figure 1-3. Front Input/Output Ports

Front Input/Output Ports			
Item	Description	Item	Description
1	IPMI_LAN	4	LAN1/2
2	USB7	5	LAN3/4
3	USB6	6	VGA

Chassis Rear

The illustration below shows the features included on the rear of the chassis. Power supply modules display status lights.



Figure 1-4. SC505-203B Rear View

Chassis Rear Features		
Item	Features	Description
1	Power Supply	Fixed internal module

1.5 Motherboard Layout

Below is a layout of the M11SDV-8C-LN4F motherboard with jumper, connector and LED locations shown. See the table on the following page for descriptions. For detailed descriptions, pinout information and jumper settings, refer to Chapter 4.

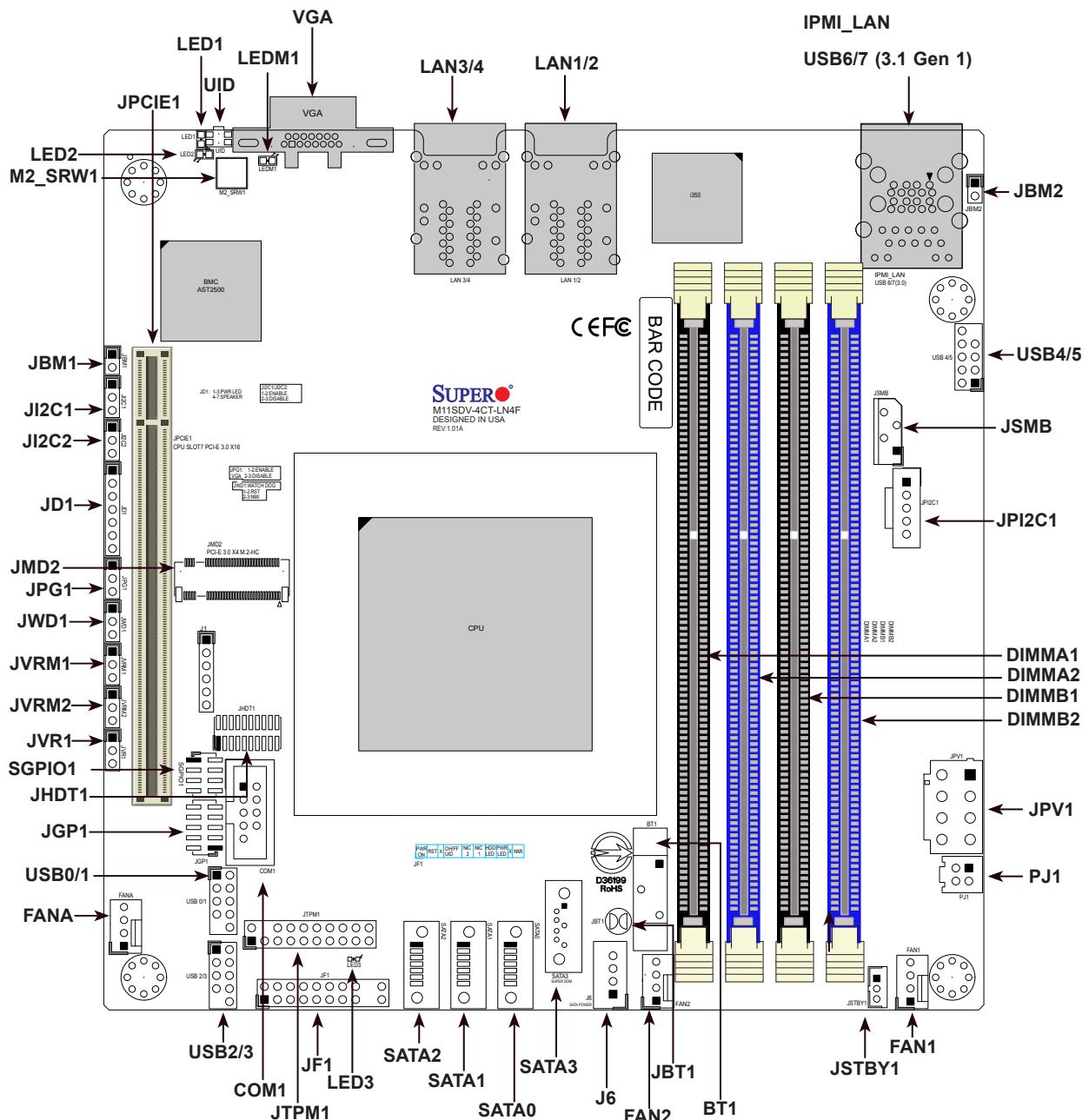


Figure 1-5. Motherboard Layout

Quick Reference

Jumper	Description	Default Setting
JBM1	Disable Share LAN	Pin 1-2 Open (Enable)
JBM2	Disable IPMI/Share LAN	Pin 1-2 Open (Enable)
JBT1	CMOS Clear	Open: Normal, Closed: Clear CMOS
JI ² C1, JI ² C2	SMB to PCI-E Slots Enable/Disable	Pins 2-3 (Disabled)
JPG1	Onboard VGA Enable/Disable	Pins 1-2 (Enabled)
JVRM1	VRM SMB Clock (to BMC or PCH)	Pins 1-2 (Normal)
JVRM2	VRM SMB Data (to BMC or PCH)	Pins 1-2 (Normal)
JWD1	Watch Dog Timer	Pins 1-2 (Reset)

LED	Description	Status
LED1	UID LED	Solid Blue: Unit Identified
LED2	Overheat (OH)/PWR Fail/Fan Fail LED	Solid Red: Overheat Blinking Red: PWR Fail or Fan Fail
LED3	Power LED	Solid Green: Power On
LEDM1	BMC Heartbeat	Blinking Green: BMC Normal

Connector	Description
BT1	Onboard Battery
COM1	RS232 COM Port Header
FAN1 - FAN2, FANA	CPU/System Fan Headers
IPMI_LAN	Dedicated IPMI LAN Port
JD1	Pins 1-2: PWR LED, Pin 4-7: Speaker
JF1	Front Control Panel Header
JGP1	8-bit General Purpose I/O Header
JMD2	M.2 Slot 2280 M-key (PCIe x 4/SATA 3.0)
JPCIE1	PCI-E 3.0 x 16 Slot
JPI ² C1	Power I ² C System Management Bus (Power SMB) Header
JPV1	8-pin 12V DC Power Input (Required for 12V only or 24-pin ATX power)
JSMB	System Management Bus Header
JSTBY1	Standby Power Connector
JTPM1	Trusted Platform Module (TPM)/Port 80 Connector
LAN1 - LAN4	1 GbE LAN (RJ45) Ports
PJ1	Header for ATX Power Signal 5VSTBY/Power ON/Power GOOD/Ground; 24pin ATX to 4pin power cable for PJ1 (Supermicro P/N: CBL-PWEX-1063)
SATA0 - SATA3	SATA 3.0 Ports
UID	Unit Identifier Switch
USB0-5	USB 2.0 Header
USB6/7	Back Panel USB 3.0 Ports
VGA	VGA Port (back panel)

Chipset Block Diagram

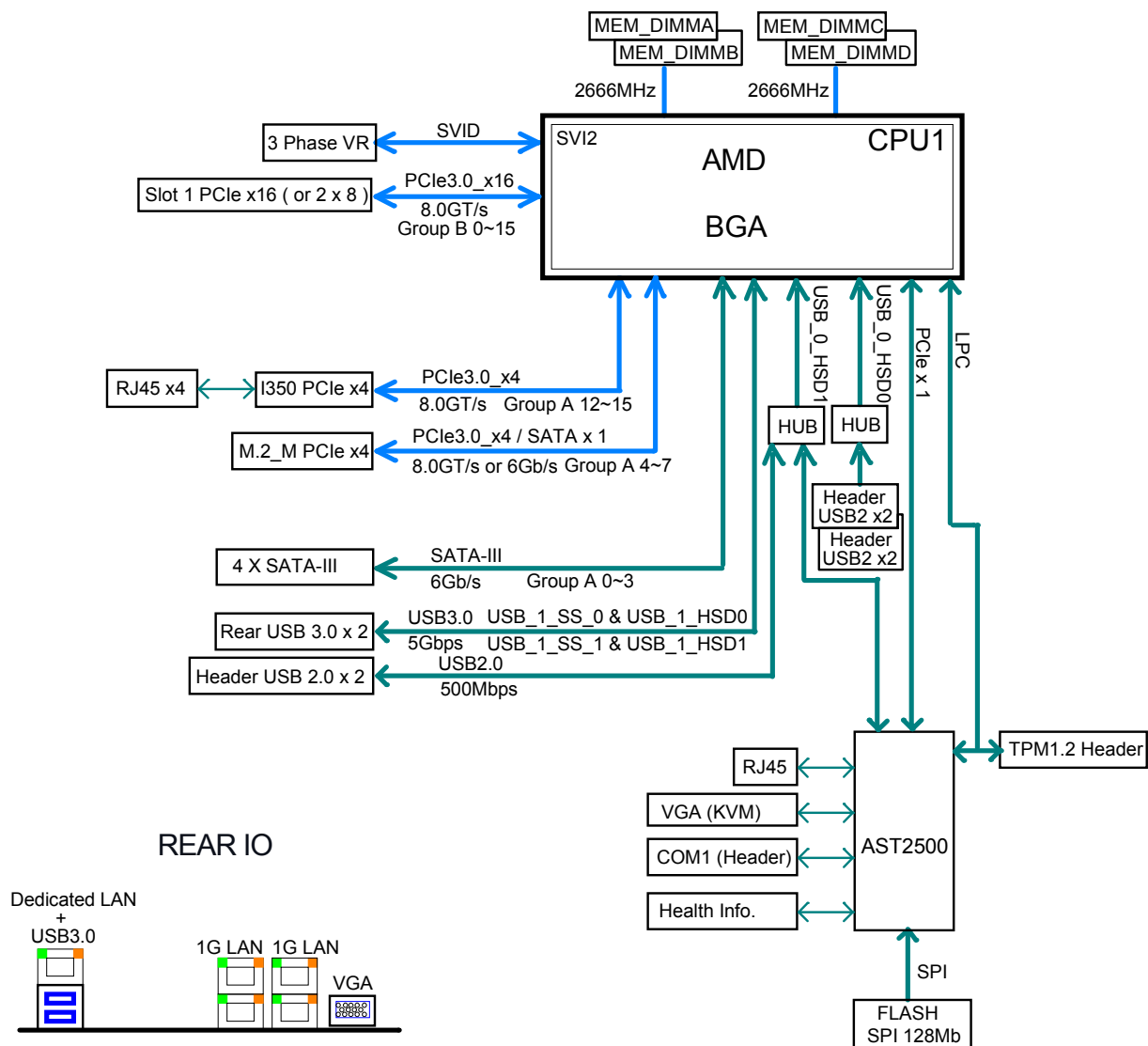


Figure 1-6. Chipset Block Diagram

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

1.6 Where to Get Replacement Components

If you need replacement parts for your system, to ensure the highest level of professional service and technical support, purchase exclusively from our Supermicro Authorized Distributors/System Integrators/Resellers. A list can be found at: <http://www.supermicro.com>. Click the "Where to Buy" link.

1.7 Returning Merchandise for Service

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

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

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

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

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

Chapter 2

Server Installation

2.1 Overview

This chapter provides advice and instructions for mounting your system in a server rack.

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.

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 (T_{mra}).

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 System Into a Rack

This section provides information on installing the AS -5019D-FTN4 system into a rack.

The chassis has two rack mounting "ear" brackets, which are located on each side of the front of the chassis. To mount the system into a rack, screw these brackets directly to the front of the rack, two screws for each bracket.

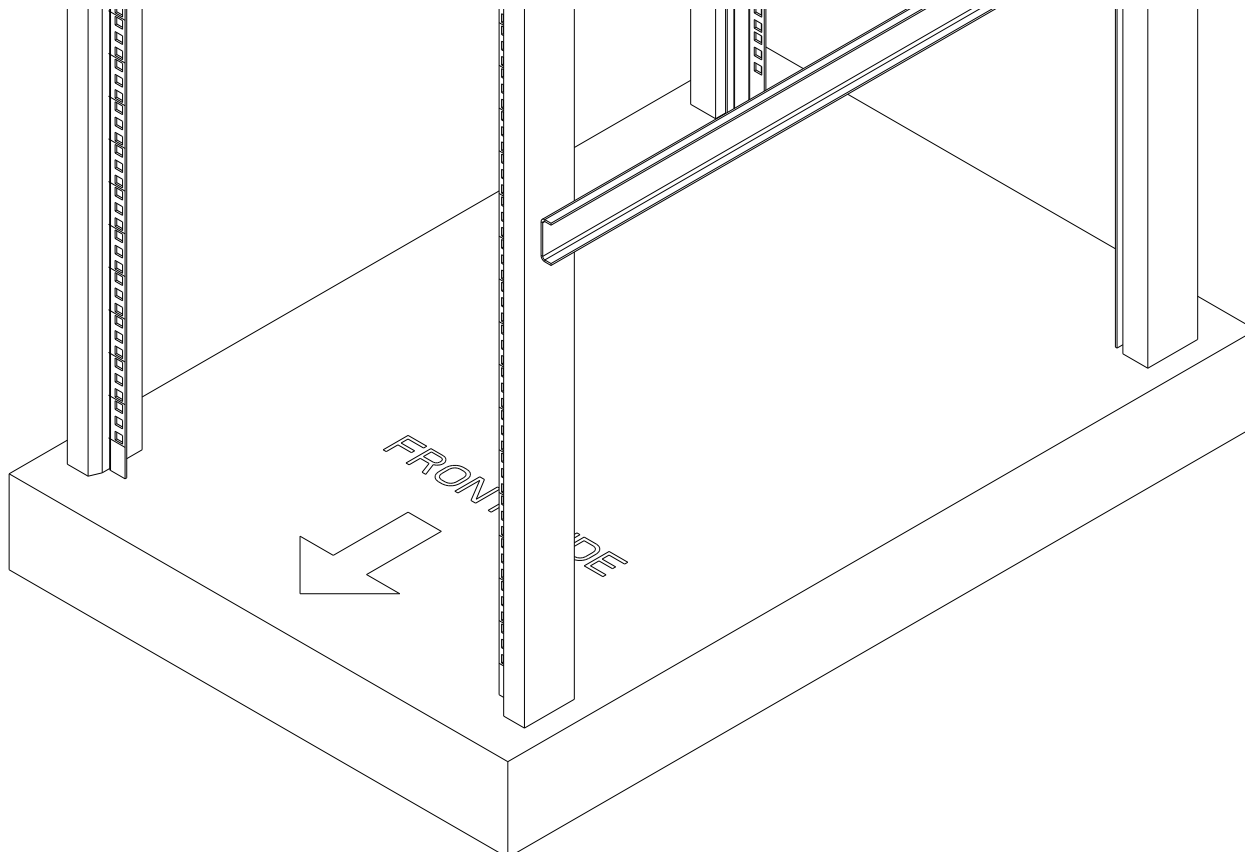


Figure 2-1. Installing the Server into a Rack

Note: Figures are for illustrative purposes only. Always install servers to the bottom of a rack first.

Installing the Server into a Telco Rack

If you are installing the system into a two post (Telco) rack, follow the directions given on the previous pages for rack installation. The only difference in the installation procedure will be the positioning of the rack brackets to the rack. They should be spaced apart just enough to accommodate the width of the telco rack.

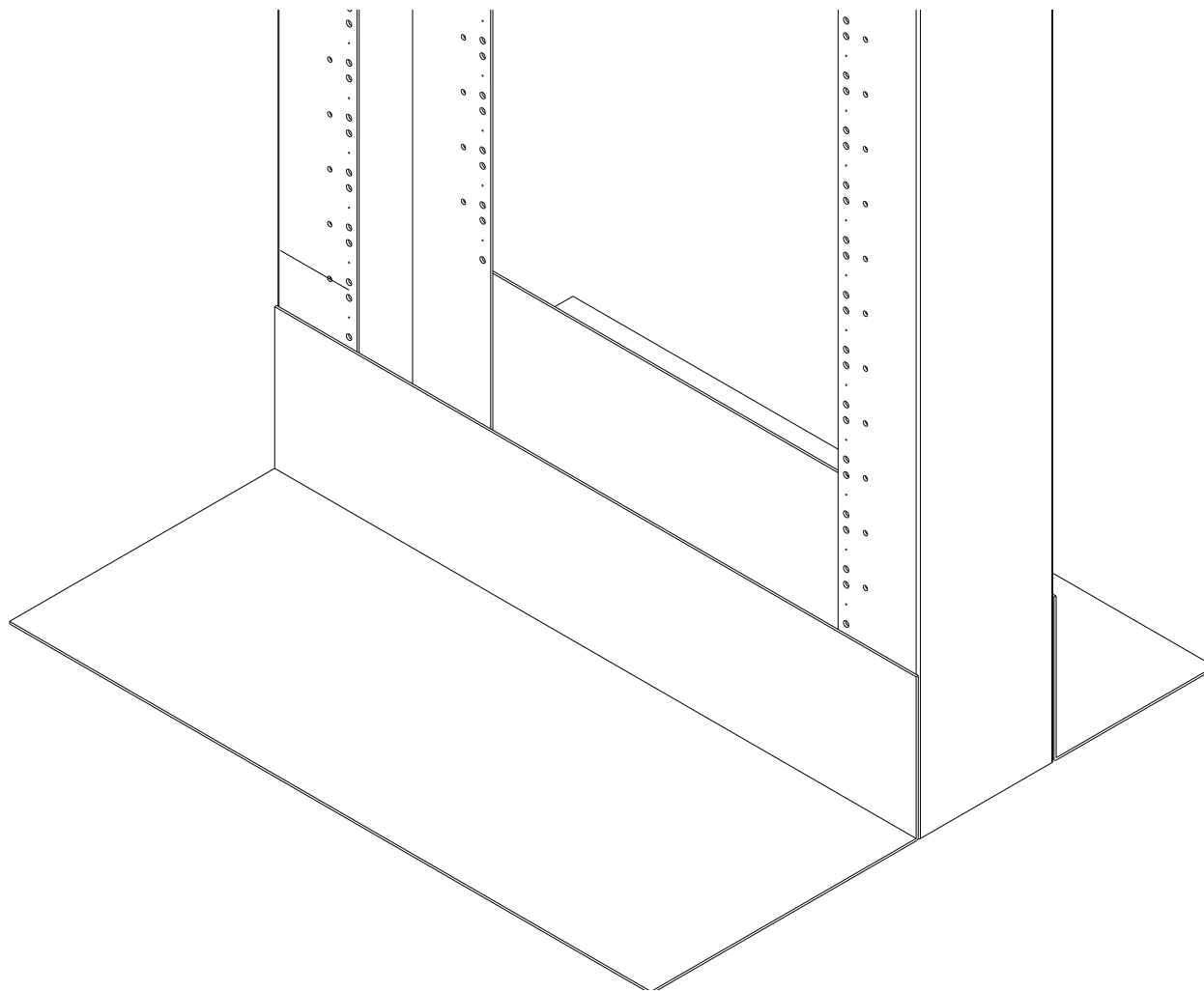


Figure 2-2. Installing the Server into a Telco Rack

Note: Figure is for illustrative purposes only. Always install servers to the bottom of a rack first.

Chapter 3

Maintenance and Component Installation

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

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

3.1 Removing Power

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

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

3.2 Accessing the System

The SC505 chassis features a removable top cover to allow access to components inside.

Removing the Top Cover

1. Remove the five screws that hold the chassis cover in place. There are two screws on each side of the chassis, and one screw on the back.
2. Slide the cover toward the rear and lift it off the chassis.

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

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

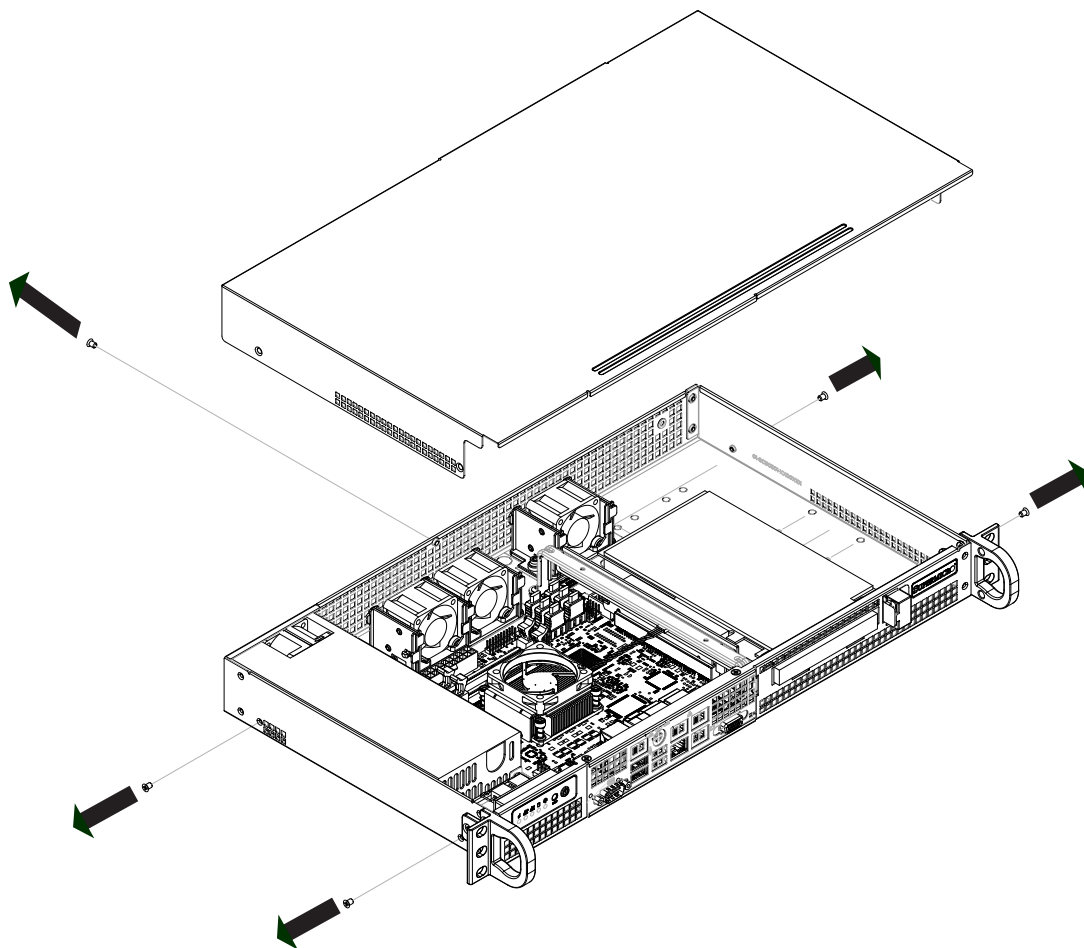


Figure 3-1. Removing the SC505 Chassis Cover

Memory

Note: Check the Supermicro website for recommended memory modules.

Memory Support

The M11SDV-8C-LN4F supports up to 512GB of Registered ECC DDR4 with speeds up to 2666MHz in four DIMMs 4-channel memory bus. Populating these DIMM slots with memory modules of the same type and size will result in interleaved memory, which will improve memory performance.

Memory Population (Balanced)				
DIMMA1	DIMMB1	DIMMA2	DIMMB2	Total System Memory
		4GB	4GB	8GB
		8GB		8GB
		8GB	8GB	16GB
4GB	4GB	4GB	4GB	16GB
8GB		8GB	8GB	24GB
8GB	8GB	8GB	8GB	32GB
		16GB	16GB	32GB
16GB		16GB	16GB	48GB
16GB	16GB	16GB	16GB	64GB
		32GB	32GB	64GB
32GB		32GB	32GB	96GB
32GB	32GB	32GB	32GB	128GB
		64GB	64GB	128GB
64GB		64GB	64GB	192GB
64GB	64GB	64GB	64GB	256GB
		126GB	126GB	256GB
128GB	128GB	128GB	128GB	512GB

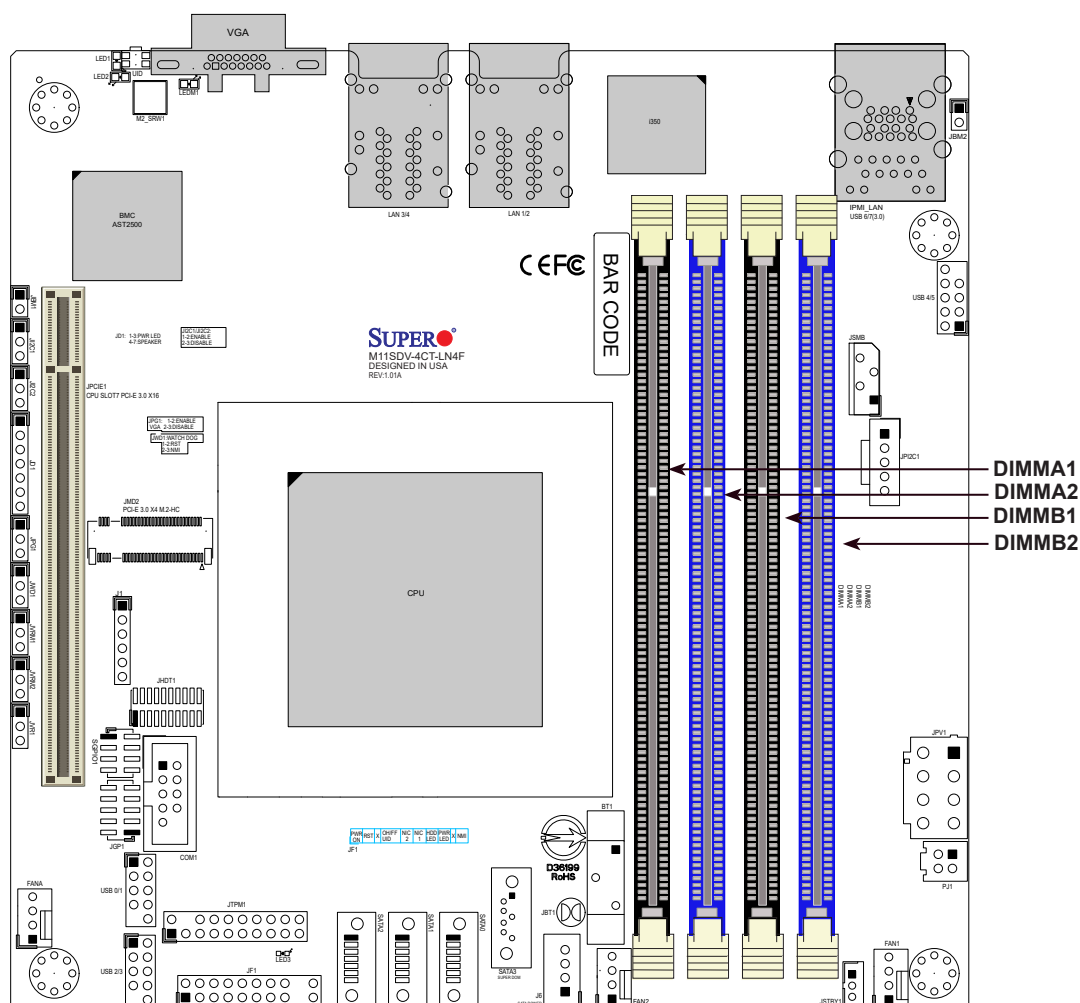
General Guidelines for Optimizing Memory Performance

- The blue slots must be populated first.
- Always use DDR4 memory of the same type, size, and speed.
- Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will support odd-numbered modules. However, to achieve the best memory performance, a balanced memory population is recommended.

DIMM Module Population Sequence

When installing memory modules, the DIMM slots should be populated in the following order: DIMMA2, then DIMMB2, DIMMA1, and then DIMMB1.

- Always use DDR4 DIMM modules of the same type and speed.
- Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will support odd-numbered modules (one or three modules installed). However, for best memory performance, install DIMM modules in pairs to activate memory interleaving.



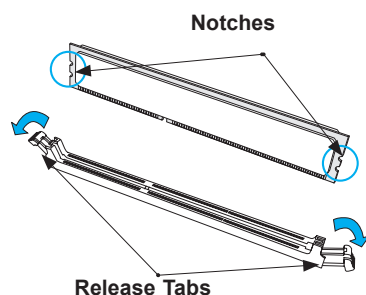
DIMM Installation

Insert the desired number of DIMMs into the memory slots based on the recommended population table on the previous page.

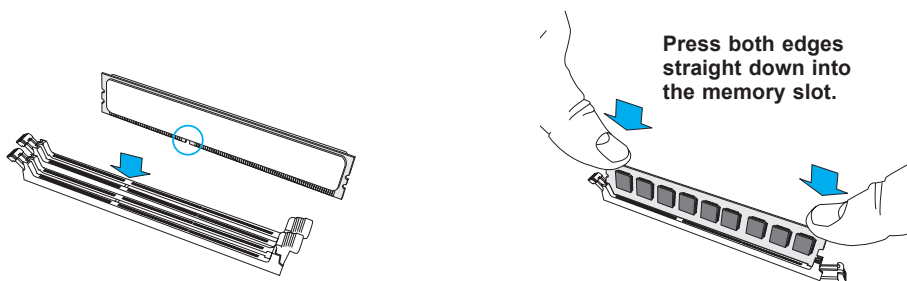
Installing Memory

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

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



2. Align the key of the DIMM with the receptive point on the memory slot and with your thumbs on both ends of the module, press it straight down into the slot until the module snaps into place.



3. Press the release tabs to the locked position to secure the DIMM module into the slot.

To remove a DIMM, unlock the release tabs then pull the DIMM from the memory slot.

Caution: Exercise extreme caution when installing or removing memory modules to prevent any possible damage to the DIMMs or slots.

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.

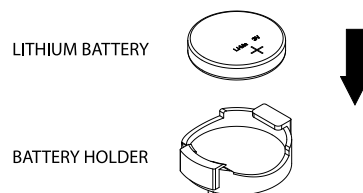


Figure 3-2. Installing the Onboard Battery

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 internal storage drives in several configurations (depicted on the following page). The number of drives you choose to install may affect the number of expansion cards possible.

Note: Enterprise level drives are recommended for use in Supermicro chassis and servers. For information on recommended HDDs, visit the Supermicro website product pages at <https://www.supermicro.com/products/nfo>.

Installing 2.5" Drives

1. Power down the server as described in Section 3.1 and remove the cover.
2. Install up to four 2.5" drive(s) into the drive bracket(s) and secure them to the bracket with the screws provided.
3. Place the drive and bracket into the chassis as illustrated in Figure 3-3. or Figure 3-5.
4. Secure the drive bracket(s) to the chassis floor by inserting the screws up through the underside of the chassis.
5. Connect the drive cables, reinstall the chassis cover and power cord, then power up the server.

Note: Double bracket part number MCP-220-000440N

Installing 3.5" Drives

1. Power down the server as described in Section 3.1 and remove the cover.
2. Place the drives onto the chassis floor as illustrated in Figure 3-4 or Figure 3-6.
3. Secure the drives to the chassis floor by inserting the screws up through the underside of the chassis.
4. Connect the drive cables, reinstall the chassis cover and power cord, then power up the server.

Figure 3-3. Four 2.5" HDDs in Two Brackets, No Expansion Card

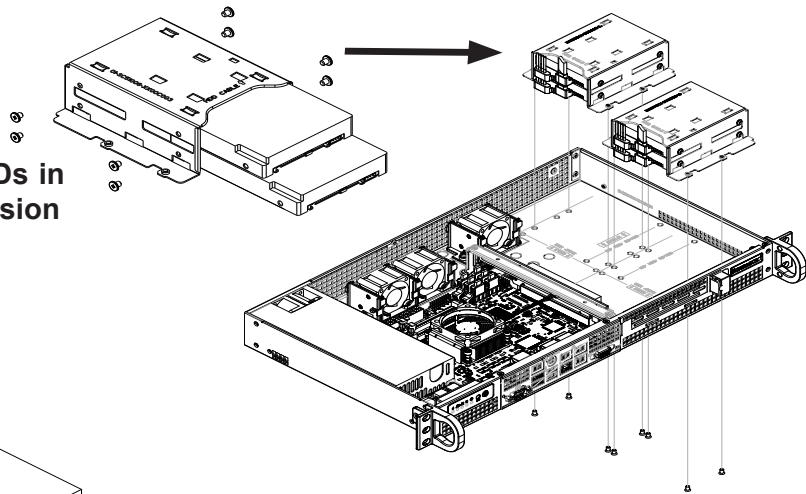


Figure 3-4. One 3.5" Hard Drive and One Low Profile Expansion Card

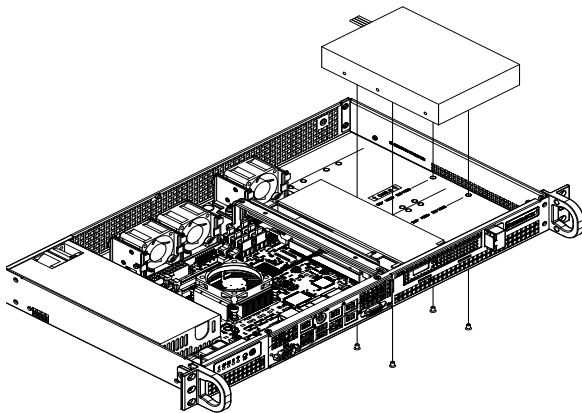


Figure 3-5. Two 2.5" Hard Drives and One Full-Height, Half-Length Expansion Card

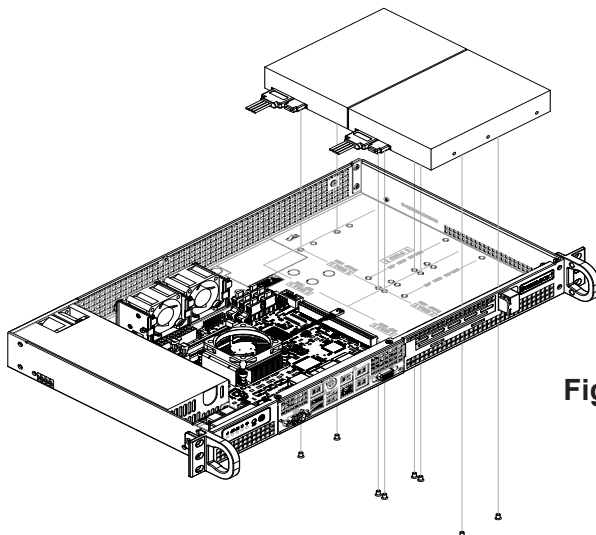
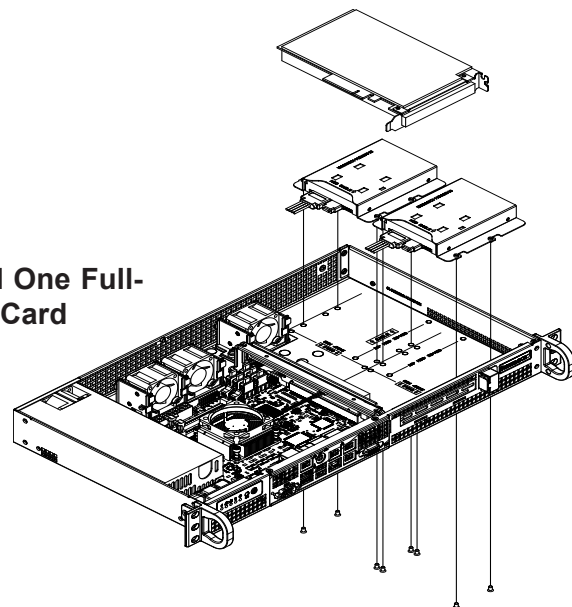


Figure 3-6. Two 3.5" Hard Drives and No Expansion Card



PCI Expansion Cards

The chassis includes a slot at the rear for an expansion card. The card is connected to the motherboard by means of a pre-installed riser card. Only certain storage drive configurations allow an expansion card: one 3.5" drive permits a low-profile card, two 2.5" drives allow a full-height, half-length card. (See also the Storage Drive section.)

Installing PCI Expansion Cards

Note: When installing with 2.5 storage drives, install the drives first.

1. Remove power as described in section 3.1 and remove the chassis cover.
2. Remove the PCI slot shield on the chassis by releasing the locking clip.
3. Insert the expansion card into the riser card slot while aligning the PCI rear shield in the chassis slot.
4. Secure the card with the locking tab.

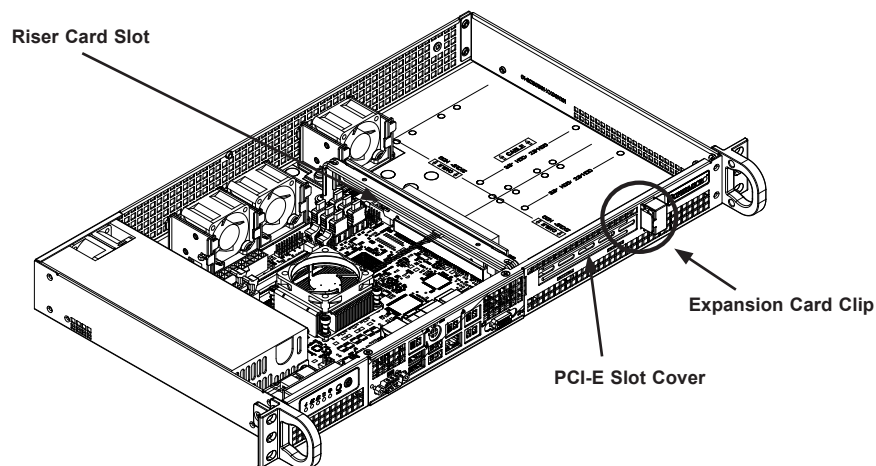


Figure 3-7. Installing an Expansion Card

System Fans

The system employs two fans in the default configuration. A third can be added using an optional kit. **Note:** A third fan is recommended if the system includes an M.2 card or other add-on card.

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

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

The chassis top cover must be installed during normal operation to insure proper airflow.

Replacing System Fans

1. Determine which fan has failed using IPMI, or if necessary, open the chassis while the system is running. Never run the server for long without the chassis cover.
2. Power remove power from the system as described in Section 3.1.
3. Detach the fan wiring then grasp the failed fan unit and lift it out of the chassis.
4. Replace the failed fan with an identical fan.
5. Push the new fan into the vacant space in the housing making sure the arrows on the top of the fan (indicating air direction) point in the same direction as the arrows on the other fans.
6. Reposition the fan housing back over the two mounting posts in the chassis, then reconnect the fan wires to the same chassis fan headers.
7. Power up the system and check that the fan is working properly and that the LED on the control panel has turned off. Finish by replacing the chassis cover.

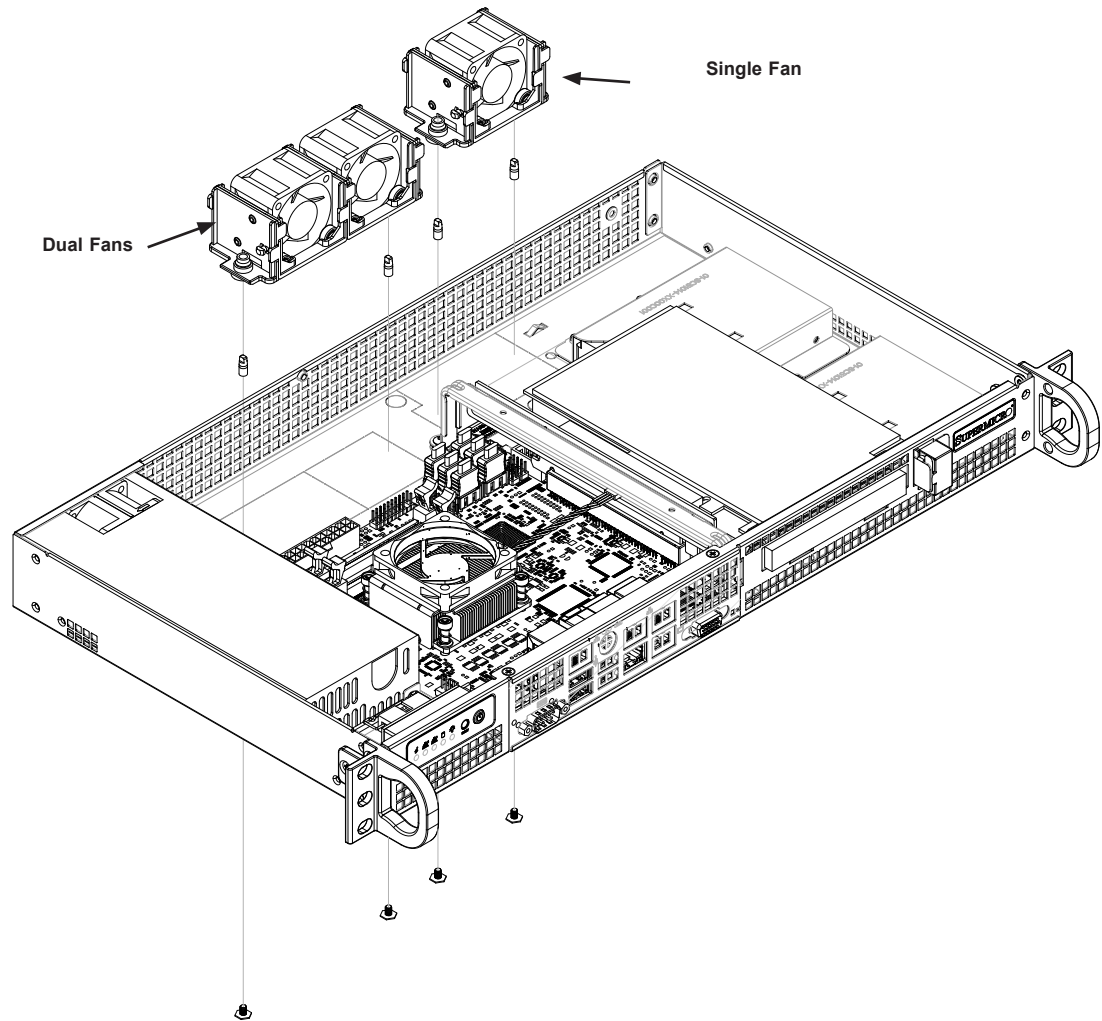


Figure 3-8. Installing System Fans

Power Supply

This power supply can operate at an input voltage from 100 to 240 volts. If replacing it, use the exact same model. New units can be ordered directly from Supermicro or authorized distributors.

Changing the Power Supply Module:

1. Power down the system and unplug the AC cord from the module.
2. Remove the power cables to internal components.
3. Remove the mounting screws: two on the chassis rear and two under the chassis floor. Lift the unit straight out of the chassis.
4. Carefully insert the new unit into position in the chassis and secure it with the screws.
5. Reconnect the internal power cables and the external power cord.
6. Replace the chassis top cover.

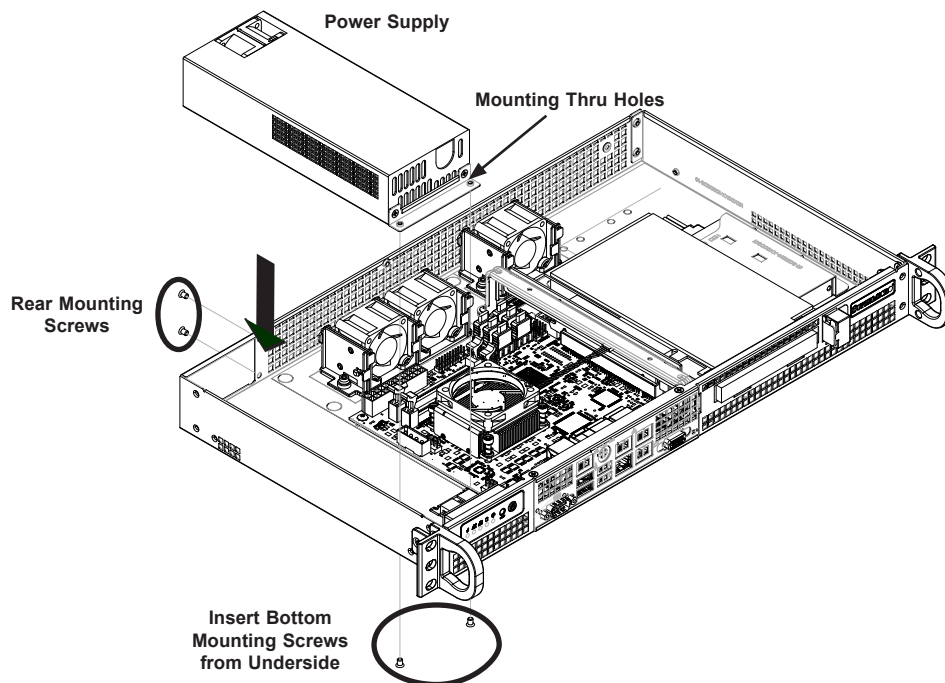


Figure 3-9. Replacing the Power Supply

Chapter 4

Motherboard Connections

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

Please review the Safety Precautions in Chapter 3 before installing or removing components.

4.1 Power Connections

Main ATX Power Supply Connector

JPV1 is the 12V DC power connector, a required input for either ATX or 12V DC power source. In addition, when using ATX power, PJ1 is a necessary connection to the 24-pin ATX power header from the PSU via PN: CBL-PWEX-1063.

8-pin 12V Power (JPV1) Pin Definitions	
Pins	Definition
1 - 4	Ground
5 - 8	+12V

4-pin to ATX Power Signal (PJ1) Pin Definitions	
Pin#	Definition
1	PWR_OK
2	GND
3	5VSB
4	PS_ON

HDD Power Connector

J6 is a 4-pin power connector for HDD use. It provides power from the motherboard to the onboard HDD.

4-pin HDD Power Pin Definitions	
Pin#	Definition
1	12V
2-3	GND
4	5V

4.2 Headers and Connectors

General Purpose I/O Header

The JGP1 (General Purpose Input/Output) header is a general purpose I/O expander on a pin header via the SMBus. Refer to the table below for pin definitions.

JGP1 Header Pin Definitions	
Pin#	Definition
1	3.3V Stdbdy
2	Ground
3	GP0
4	GP1
5	GP2
6	GP3
7	GP4
8	GP5
9	GP6
10	GP7

Standby Power

The Standby Power header is located at JSTBY1 on the motherboard. Refer to the table below for pin definitions.

Standby Power Pin Definitions	
Pin#	Definition
1	+5V Standby
2	Ground
3	No Connection

Fan Headers

The M11SDV-8C-LN4F has three 4-pin fan headers (FAN1, FAN2, FANA). These headers are backwards-compatible with the traditional 3-pin fans. This motherboard supports dual cooling zone. (Zone1:FAN1/2, Zone2:FANA). Fan speed control is available for 4-pin fans only by Thermal Management via the IPMI 2.0 interface. Refer to the table below for pin definitions.

Fan Header Pin Definitions	
Pin#	Definition
1	Ground (Black)
2	2.5A/+12V (Red)
3	Tachometer
4	PWM_Control

Speaker Header

On the JD1 header, pins 4-7 are for the external speaker.

Speaker Connector Pin Definitions	
Pin#	Definition
1	3.3V
2	PWR_LED_IN
3	PWR_LED_IN
4	+5V
5	NC
6	NC
7	SPK_IN

SATA Ports

Four SATA 3.0 connectors (SATA0-4), supported by the AMD EPYC™ 3000 chipset, are located on the M11SDV-8C-LN4F motherboard. Refer to the table below for pin definitions.

SATA 3.0 Port Pin Definitions	
Pin#	Signal
1	Ground
2	SATA_TXP
3	SATA_TXN
4	Ground
5	SATA_RXN
6	SATA_RXP
7	Ground

System Management Bus Header

A System Management Bus header for additional slave devices or sensors is located at JSMB. See the table below for pin definitions.

SMBus Header Pin Definitions	
Pin#	Definition
1	Data
2	Ground
3	Clock
4	NC

Power SMB (I²C) Header

The Power System Management Bus (I²C) connector (JPI²C1) monitors the power supply, fan, and system temperatures. Refer to the table below for pin definitions.

Power SMB Header Pin Definitions	
Pin#	Definition
1	Clock
2	Data
3	PWRFAIL_N
4	Ground
5	NC

M.2 Slot

M.2 is formerly known as Next Generation Form Factor (NGFF) and is designed for internal mounting devices. The M11SDV-8C-LN4F board has one M.2 connector at JMD2. Interfaces are PCIe x4 and SATA 3.0.

COM Header

The motherboard has one COM port header (COM1) to provide a serial connection.

COM Port Pin Definitions			
Pin#	Definition	Pin#	Definition
1	SP_DCDA	6	SP_DSRA
2	SP_RXDA	7	SP_RTSA
3	SP_TXDA	8	SP_CTSA
4	SP_DTRA	9	SP_RIA
5	GND	10	NC

TPM/Port 80 Header

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

Trusted Platform Module Header Pin Definitions			
Pin#	Definition	Pin#	Definition
1	LCLK	2	GND1
3	LFRAME#	4	No Pin
5	LRESET#	6	+5V/NC
7	LAD3	8	LAD2
9	+3.3V	10	LAD1
11	LAD0	12	GND2
13	SMB_CLK	14	SMB_DAT
15	+3.3V_DUAL	16	SERIRQ
17	GND3	18	CLKRUN#/NC
19	LPCPD#	20	LDRQ# (X)

Front Control Panel

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

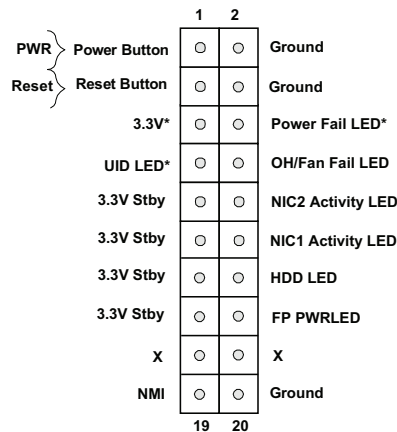


Figure 4-1. JF1: Control Panel Pins

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. To turn off the power when the system is in suspend mode, press the button for 4 seconds or longer. Refer to the table below for pin definitions.

Power Button Pin Definitions (JF1)	
Pins	Definition
1	Power On
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)	
Pins	Definition
3	Reset
4	Ground

Power Fail LED

Connect an LED cable to Power Fail connections on pins 5 and 6 of JF1 to provide warnings for a power failure. Refer to the table below for pin definitions.

OH/Fan Fail Indicator Status	
Pin #	Definition
5	3.3V
6	PWR Fail LED

Overheat (OH)/Fan Fail

Connect an LED cable to pins 7 and 8 to use the Overheat (OH)/Fan Fail connections. The LED on pin 8 provides warnings of overheat, fan failure, or power failure. Refer to the tables below for pin definitions.

OH/Fan Fail Indicator Status	
State	Definition
Off	Normal
On	Overheat
Flashing	Fan Fail/PWR Fail

OH/Fan Fail LED Pin Definitions (JF1)	
Pin#	Definition
7	Blue UID LED
8	OH/Fan Fail and PWR Fail LED

LAN1/LAN2 Activity LED

The LAN 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. Refer to the table below for pin definitions.

LAN1/LAN2 LED Pin Definitions (JF1)	
Pin#	Definition
9	+3.3 Stby
10	LAN2 Activity LED
11	+3.3 Stby
12	LAN1 Activity LED

HDD LED

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

HDD LED Pin Definitions (JF1)	
Pin#	Definition
13	3.3V Stdbby
14	HDD LED

Power LED

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

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

4.3 Ports

The following input/output ports are provided by the motherboard.

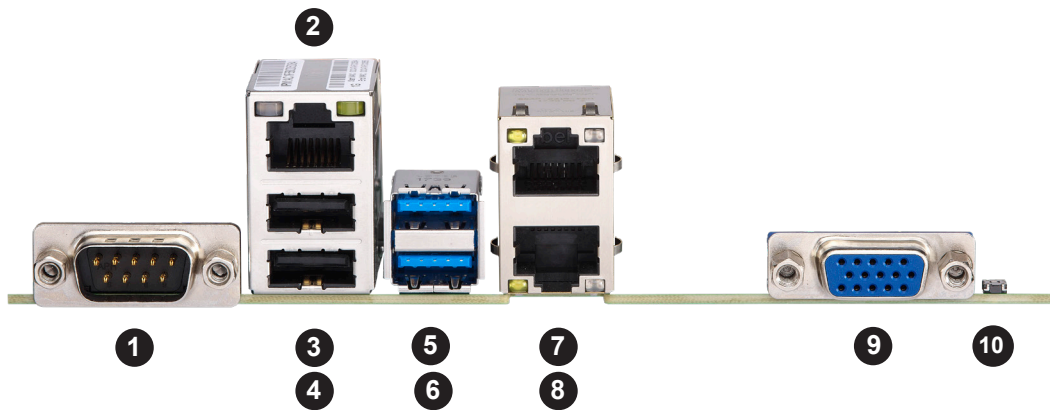


Figure 4-1. I/O Ports

I/O Ports			
Item	Description	Item	Description
1	COM1	6	USB4 (USB 3.1 Gen 1)
2	Dedicated IPMI LAN	7	LAN2
3	USB1	8	LAN1
4	USB0	9	VGA Port
5	USB5 (USB 3.1 Gen 1)	10	UID Switch

Ethernet Ports

Two Ethernet ports (LAN1, LAN2) are located on the I/O panel. These Ethernet ports are supported by the Aspeed AST2500 BMC (Baseboard Management Controller). In addition, a 1 GbE dedicated IPMI LAN is located above USB 0/1 ports on the backplane. All Ethernet ports accept RJ45 type cables. Please refer to the LED Indicator Section for LAN LED information.

Unit Identifier Switch/UID LED Indicator

A Unit Identifier (UID) switch and an LED indicator are located on the motherboard. The UID switch is located next to the VGA port on the back panel. The UID LED is located at LED1, next to the UID switch. When you press the UID switch, the UID LED will be turned on. Press the UID switch again to turn off the LED indicator. The LED indicator provides easy identification of a system unit that may be in need of service.

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

Universal Serial Bus (USB) Ports

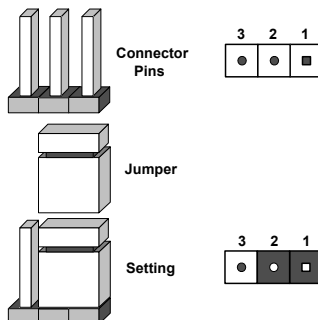
There are two (2) USB 3.0 ports (USB6/7) on the I/O back panel. The motherboard also has six (6) USB 2.0 headers that provides six (6) USB 2.0 ports (USB0/1, USB2/3, USB4/5). The onboard header can be used to provide front side USB access with a cable (not included).

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 also clears any passwords. Instead of pins, this jumper consists of contact pads to prevent accidentally clearing the contents of CMOS.

To Clear CMOS

1. 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.



SMBus to PCI-E Slots

Jumpers JI2C1 and JI2C2 allow you to connect the System Management Bus (I2C) to the PCI-E slots. Both jumpers must be set to the same setting (JI2C1 controls the clock and JI2C2 controls the data). The default setting is Disabled. Refer to the table below for more information.

SMBus to PCI-E Slots Jumper Settings	
Jumper Setting	Definition
Pins 1-2	Enabled
Pins 2-3	Disabled (Default)

VGA Enable/Disable

JPG1 allows the user to enable the VGA connector. The default setting is Enabled. Refer to the table below for more information.

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

Watch Dog

JWD1 controls the Watch Dog function. Watch Dog is a monitor that can reboot the system when a software application hangs. Jumping pins 1-2 will cause Watch Dog to reset the system if an application hangs. Jumping pins 2-3 will generate a non-maskable interrupt 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, users need 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

I²C Bus for VRM

Jumpers JVRM1 and JVRM2 allow the BMC or the PCH to access CPU and memory VRM controllers. Refer to the table below for jumper settings.

VRM Jumper Settings	
Jumper Setting	Definition
Pins 1-2	BMC (Normal)
Pins 2-3	PCH

Disable IPMI/Share LAN

Jumpers JBM1 and JBM2 allow Share LAN or IPMI/Share LAN ports to be disabled. Refer to the table below for jumper settings.

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

4.5 LED Indicators

LAN LEDs

Four LAN ports (LAN1 - LAN4) are located on the I/O back panel. Each Ethernet LAN port has two LEDs. One LED indicates activity when flashing, while the other Link LED may be green, amber, or off to indicate the speed of the connection. Refer to the tables below for more information.

LAN Activity LEDs (Left) LED State		
Color	Status	Definition
Yellow	Flashing	Active

LAN Link LEDs (Right) LED State	
LED Color	Definition
Off	No Connection
Amber	1 Gbps
Green	100 Mbps

Power LED

LED3 is an Onboard Power LED. When this LED is lit, it means power is present on the motherboard. In suspend mode, this LED will blink on and off. Be sure to turn off the system and unplug the power cord(s) before removing or installing components. Refer to the table below for the LED status

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

BMC Heartbeat LED

LEDM1 is the BMC heartbeat LED. When the LED is blinking green, BMC is working. Refer to the table below for the LED status.

BMC Heartbeat LED	
LED Color	Definition
Blinking Green	BMC Normal

Overheat/Power Fail/Fan Fail LED

An Overheat/PWR/Fail/Fan Fail LED is located at LED2. Refer to the table below for the LED status

Overheat/Power Fail/Fan Fail LED Indicator	
LED Color	Definition
Solid Red	Overheat
Blinking	PWR Fail or Fan Fail

Chapter 5

Software

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

5.1 Microsoft Windows OS Installation

Installing the OS

1. Create a method to access the MS Windows installation ISO file. That might be a DVD, perhaps using an external USB/SATA DVD drive, or a USB flash drive, or the IPMI K VM console.
2. Retrieve the proper RST/RSTe driver. Go to the Supermicro web page for your motherboard and click on "Download the Latest Drivers and Utilities", select the proper driver, and copy it to a USB flash drive.
3. Boot from a bootable device with Windows OS installation. You can see a bootable device list by pressing **F11** during the system startup.
4. During Windows Setup, continue to the dialog where you select the drives on which to install Windows. If the disk you want to use is not listed, click on "Load driver" link at the bottom left corner.

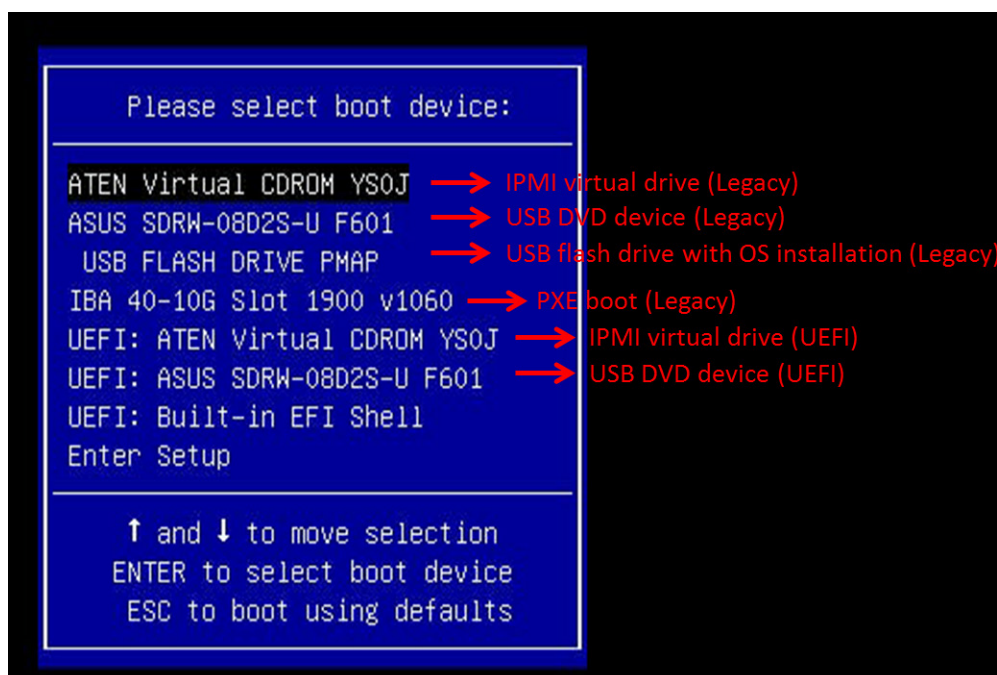


Figure 5-1. Select Boot Device

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

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

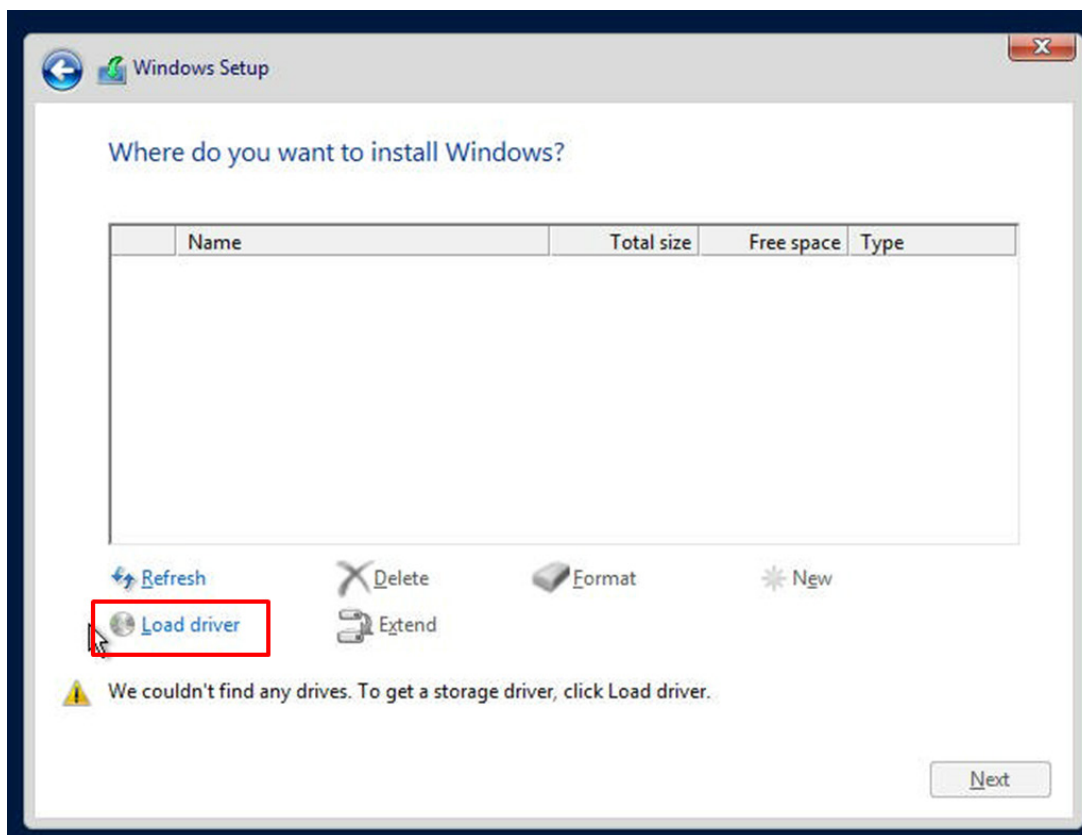


Figure 5-2. Load Driver Link

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

5.2 Driver Installation

The Supermicro website contains drivers and utilities for your system at <https://www.supermicro.com/wftp/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 to a USB flash drive or a DVD. (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.

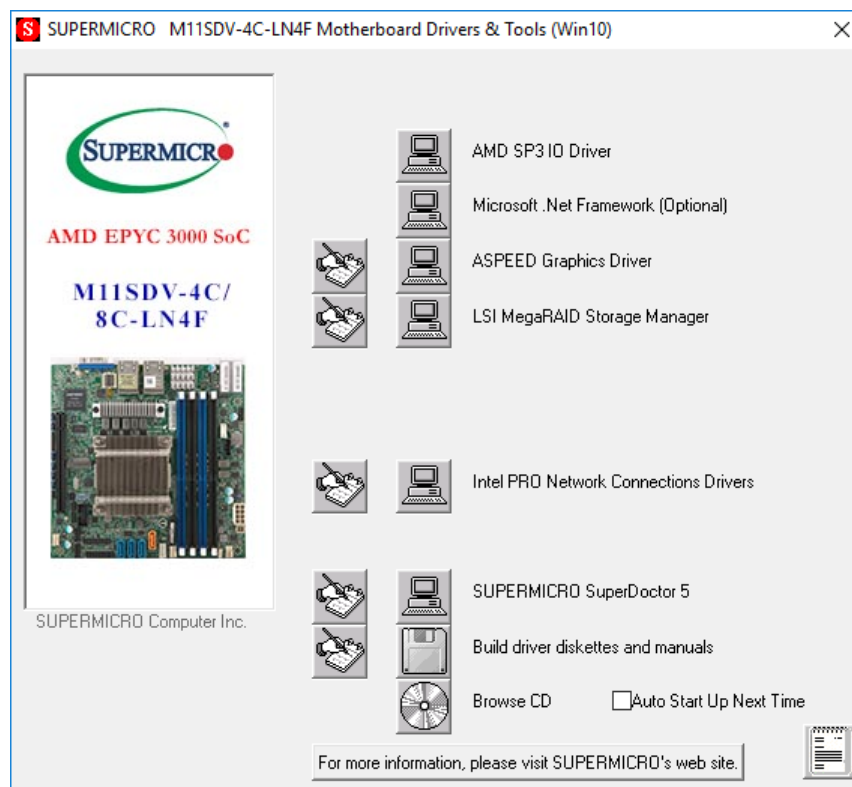


Figure 5-3. Driver/Tool Installation Display Screen

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.

Note: The default User Name and Password for SuperDoctor 5 is ADMIN / ADMIN.

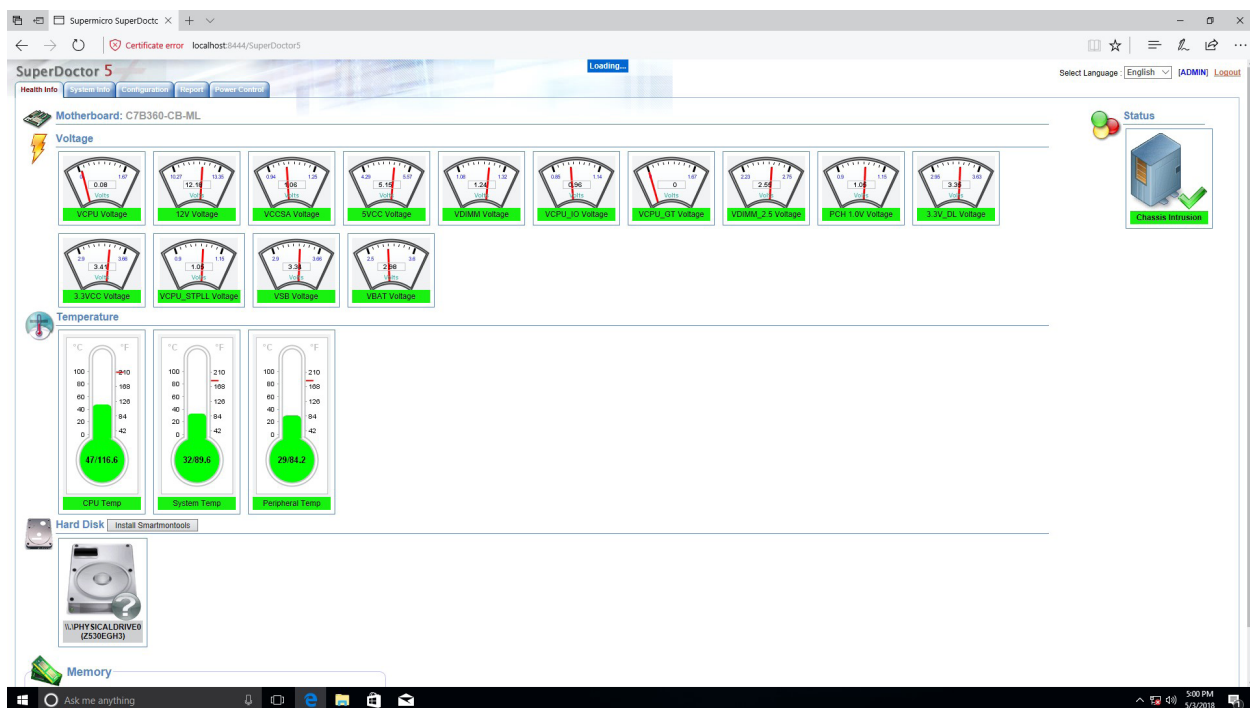


Figure 5-4. SuperDoctor 5 Interface Display Screen (Health Information)

5.4 IPMI

The M11SDV-8C-LN4F support the Intelligent Platform Management Interface (IPMI). IPMI is used to provide remote access, monitoring and management. There are several BIOS settings that are related to IPMI.

For general documentation and information on IPMI, please visit our website at: <http://www.supermicro.com/products/nfo/IPMI.cfm>.

Chapter 6

UEFI BIOS

6.1 Introduction

This chapter describes the AMIBIOS™ Setup utility for the M11SDV-8C-LN4F motherboard. 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.

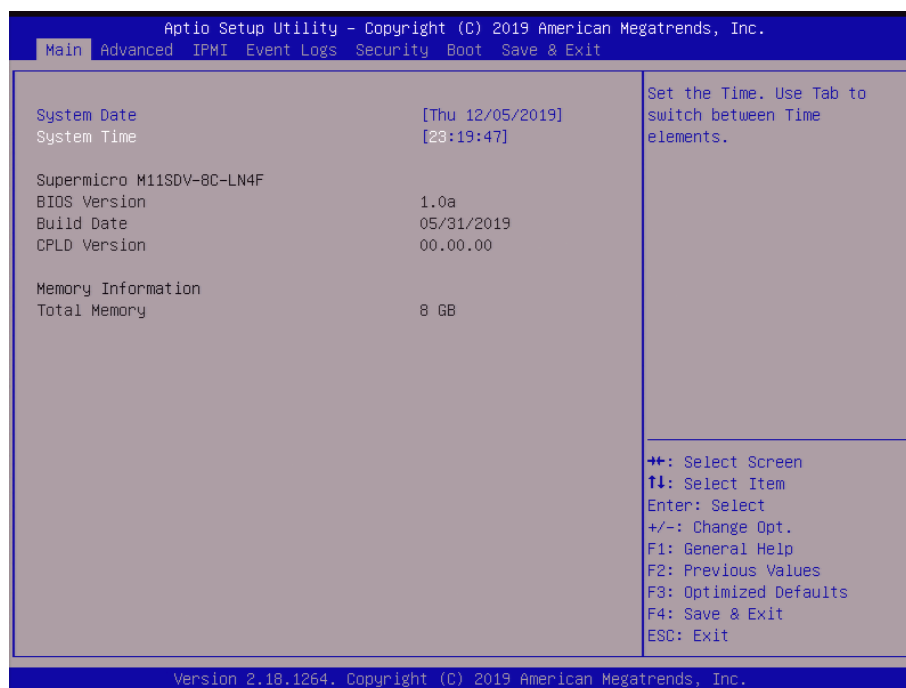
The Main BIOS screen has two main frames. The left frame displays all the options that can be configured. "Grayed-out" options cannot be configured. The right frame displays the key legend. Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is 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>, <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 and the following features 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 the BIOS build date after RTC reset.

Supermicro M11SDV-8C-LN4F

BIOS Version

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

Build Date

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

CPLD Version

This feature displays the CPLD version.

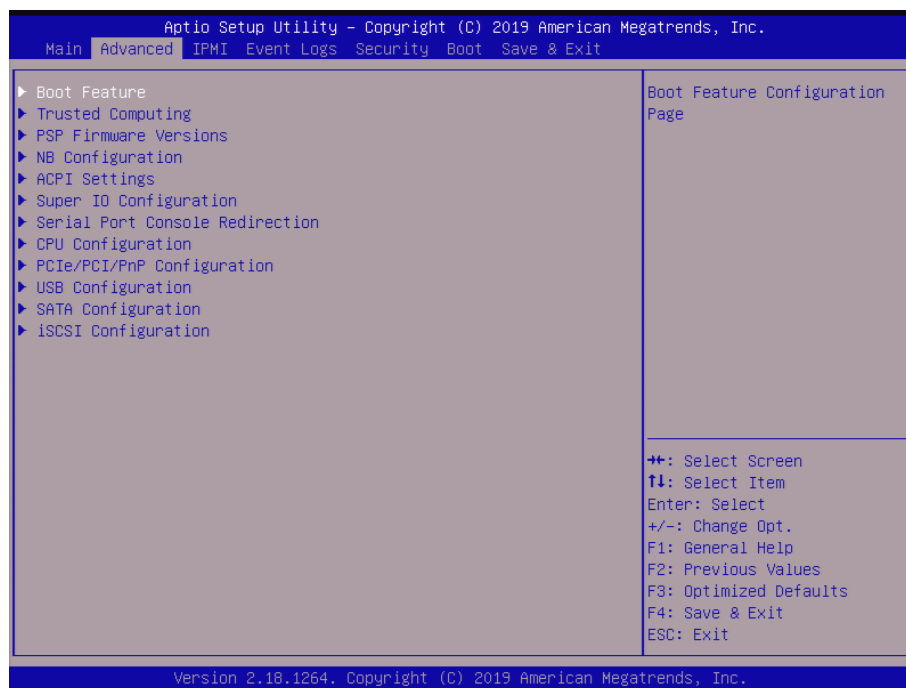
Memory Information

Total Memory

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

6.3 Advanced

Use this menu to configure advanced settings.



Warning: Take caution when changing the Advanced settings. An incorrect value, a very high DRAM frequency or an incorrect BIOS timing setting may cause the system to malfunction. When this occurs, restore to default manufacturer settings.

► Boot Feature

Quiet Boot

Use this feature to select the screen display between POST messages or the OEM logo at 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. 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 Off and **On**.

Wait For "F1" If Error

This feature forces the system to wait until the F1 key is pressed if an error occurs. The options are Disabled and **Enabled**.

INT19 Trap Response

Interrupt 19 is the software interrupt that handles the boot disk function. When this feature 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 feature 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 feature 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 reboot when it is inactive for more than five minutes. The options are **Disabled** and Enabled.

Restore on AC Power Loss

Use this feature to set the power state after a power outage. Select Power 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 four 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** or 4 Seconds Override.

RTC Wake system from S5

Use this feature to set a specified system wake time for an alarm event in HH:MM:SS format. If Enabled, Wake up hour/minute/second will appear. The system will wake on the specified time. The options are **Disabled** and Enabled.

►Trusted Computing

This motherboard supports TPM 1.2 and 2.0. The following TPM information will display if a TPM 2.0 module is detected:

- Firmware Version
- Vendor Name

Security Device Support

If this feature and the TPM jumper on the motherboard are both set to Enable, 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 Disable and **Enable**.

- Active PCR Bank
- Available PCR Bank

****If a TPM is installed and the feature above is set to Enable, "SHA-1 PCR Bank", "SHA256 PCR Bank", and additional settings will become available for configuration:***

SHA-1 PCR Bank

Use this feature to disable or enable the SHA-1 Platform Configuration Register (PCR) bank for the installed TPM device. The options are Disabled and **Enabled**.

SHA256 PCR Bank

Use this feature to disable or enable the SHA256 Platform Configuration Register (PCR) bank for the installed TPM device. The options are Disabled and **Enabled**.

Pending operation

Use this feature to schedule a TPM-related operation to be performed by a security device for system data integrity. Your system will reboot to carry out a pending TPM operation. The options are **None** and TPM Clear.

Platform Hierarchy

Use this feature to disable or enable platform hierarchy for platform protection. The options are Disabled and **Enabled**.

Storage Hierarchy

Use this feature to disable or enable storage hierarchy for cryptographic protection. The options are Disabled and **Enabled**.

Endorsement Hierarchy

Use this feature to disable or enable endorsement hierarchy for privacy control. The options are Disabled and **Enabled**.

Device Select

Use this feature to select the TPM version. TPM 1.2 will restrict support to TPM 1.2 devices. TPM 2.0 will restrict support for TPM 2.0 devices. Select Auto to enable support for both versions with the default setting set to TPM 2.0 devices, if not found TPM 1.2 devices will be enumerated. The options are TPM 1.2, TPM 2.0, and **Auto**.

►PSP Firmware Versions

The following PSP Firmware Versions will display:

- PSP Directory Level 1 (Fixed)
- PSP Recovery BL Ver: FF.7.0.67
- SMU FW Version: 4.25.113.0
- ABL Version: 18041810
- APCB Version: 0029
- APOB Version: 0011
- APPB Version: 0001
- PSP Direcotry Level 2 (Updateable)
- PSP Bootlander Version: 0.7.0.69
- SMU FW Version: 4.25.113.0
- ABL Version: 18041810
- APCB Verison: 0029
- APOB Verison: 0011
- APPB Version: 0001

►North Bridge Configuration

Determinism Slider

Use this feature to select the performance determinism settings. The options are **Auto**, Power, and Performance.

cTDP Control

Use this feature to set the TDP consumption. The options are **Auto** and Manual.

IOMMU

This feature allows the user to configure the I/O Memory Management Unit to enhance memory mapping capabilities. The options are **Disabled**, Enabled, and Auto.

ACS Enable

This setting controls the ACS Enable feature. The options are Enable, Disabled, and **Auto**.

►Memory Configuration

Memory Clock

Use this feature to select a different Memory Clock. The options are **Auto**, 1333MHz, 1600MHz, 1866MHz, 2133MHz, 2400MHz, and 2666MHz.

Memory Interleaving

Use this feature to control fabric level memory interleaving. If set to Channel, Die, or Socket, there will be requirements on memory populations and will be ignored if the memory does not support the selected option. The options are None, Channel, Die, Socket, and **Auto**.

Memory Interleaving Size

This feature controls the memory interleaving size. Select the appropriate value to determine the starting address of the interleave. The options are 256 Bytes, 512 Bytes, 1 KB, 2 KB, and **Auto**.

Chipselect Interleaving

Use this feature to interleave memory blocks across the DRAM chip selects for node 0. The options are Disabled and **Auto**.

BankGroupSwap

The BankGroupSwap feature helps to determine how applications are attributed physical locations. The options are Enabled, Disabled, and **Auto**.

►CPU1 Memory Information

The following CPU1 Memory Information will display:

- DIMMA1: Size 0 MB, Speed 0 MT/s
- DIMMA2: Size 0 MB, Speed 0 MT/s
- DIMMB1: Size 0 MB, Speed 0 MT/s
- DIMMB2: Size 8192 MB, Speed 2133 MT/s

►ACPI Settings

Use this feature to configure Advanced Configuration and Power Interface (ACPI) power management settings for your system.

High Precision Event Timer

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

►Super IO Configuration

Super IO Chip AST2500

►Serial Port 1 Configuration

Serial Port

Select Enabled to enable the onboard serial port specified by the user. The options are **Enabled** and Disabled. Enable this feature for the Device Settings and Change Settings options to display.

Device Settings

This feature displays the base I/O port address and the Interrupt Request address 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 Serial Port 1. Select **Auto** for the BIOS to automatically assign the base I/O and IRQ address to a serial port specified. 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

SOL (Serial Over LAN)

This feature will enable Serial Port 1 (COM1). The options are Disabled and **Enabled**.

Device Settings IO=2F8h; IRQ=3

Change SOL 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 COM Port 1 for Console Redirection, which will allow a client machine to be connected to a host machine at a remote site for networking. The options are **Disabled** and Enabled.

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

►Console Redirection Settings

Use this feature to specify how the host computer and remote computer exchange data. Both computers should contain the same or compatible settings to function.

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

SOL**Console Redirection**

Use this feature to enable or disable Console Redirection. This will allow a client machine to be connected to a host machine at a remote site for networking. The options are Disabled and **Enabled**.

►Console Redirection Settings

Use this feature to specify how the host computer and remote computer exchange data. Both computers should contain the same or compatible settings to function.

SOL 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.

SOL 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).

SOL Data Bits

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

SOL 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.

SOL 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**.

SOL 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.

SOL VT-UTF8 Combo Key Support

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

SOL 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.

SOL Resolution 100x31

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

SOL Putty KeyPad

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

Legacy Console Redirection

►Legacy Console Redirection Settings

Legacy Serial Redirection Port

Use this feature to select a COM port to display redirection of Legacy OS and Legacy OPRom Messages. The options are **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)

The submenu allows the user to configure Console Redirection settings to support Out-of-Band Serial Port management.

EMS (Emergency Management Services) Console Redirection

Select Enabled to use a COM port selected by the user for EMS Console Redirection. The options are **Disabled** and Enabled.

****If the feature above is set to Enabled, the following features are available for configuration:***

►Console Redirection Settings

This feature allows the user to specify how the host computer will exchange data with the client computer, which is the remote computer used by the user.

Out-of-Band Mgmt Port

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

Flow Control

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

Data Bits

Parity

Stop Bits

►CPU Configuration

SMT Mode

Select Auto to support simultaneous multithreading. The options are Off and **Auto**.

Cores Performance Boost

Use this feature to disable Core Performance Boost. The options are Disabled and **Auto**.

Global C-state Control

Enabling this setting allows the hardware to control the IO based C-state generation and DF c-states. The options are Disabled, Enabled, and **Auto**.

Downcore Control

Use this feature to enable or disable cores. Downcore control sets the number of cores to be used. Note that once this feature has been used to remove any number of cores, a POWER CYCLE is necessary for future selections to be valid. The options are TWO (1+1), TWO (2+0), THREE (3+0), FOUR (2+2), FOUR (4+0), SIX (3+3), and **AUTO**.

L1 Stream HW Prefetcher

This feature enables or disables the L1 Stream HW Prefetcher. The options are Disable, Enable, and **Auto**.

L2 Stream HW Prefetcher

Use this feature to enable or disable L2 Stream HW Prefetcher. The options are Disable, Enable, and **Auto**.

SVM Mode

This feature supports CPU virtualization through the AMD EPYC Secure Virtual Machine (SVM). The options are Disabled and **Enabled**.

►CPU Information

The following CPU Information will display:

- AMD EPYC 3251 8-Core Processor
- 8 Cores 16 Threads
- Running @ 2500 MHz, 1500 mV
- Processor Family: 17h
- Processor Model: 00h-0Fh
- Microcode Patch Level: 8001227

The following information will display below Cache per Core:

- L1 Instruction Cache: 64 KB/4-way
- L1 Data Cache: 32 KB/8-way
- L2 Cache: 512 KB/8-way
- L3 Cache per Socket: 16 MB/16-way

► PCIe/PCI/PnP Configuration

The following information will display:

- PCI Bus Driver Version
- PCI Devices Common Settings:

Above 4G Decoding (Available if the system supports 64-bit PCI decoding)

Select Enabled to decode a PCI device that supports 64-bit in the space above 4G Address. The options are Disabled and **Enabled**.

SR-IOV Support

Use this feature to enable or disable Single Root IO Virtualization Support. The options are **Disabled** and Enabled.

PCIe Spread Spectrum

Use this feature to vary the frequency of EMI. The options are Enable and **Disable**.

Target Link Speed

This feature allows the user, if set to (Force to X.X GT/s) for Downstream Ports, to establish an upper limit on Link operational speeds. This occurs by restricting the amount of values advertised by the Upstream component in training sequences. The options are **Auto**, (Force to 2.5 GT/s), (Force to 5.0 GT/s), (Force to 8.0 GT/s).

VGA Priority

Use this feature to select VGA priority when multiple VGA devices are detected. Select Onboard to give priority to your onboard video device. Select Offboard to give priority to your graphics card. The options are **Onboard** and Offboard.

Note: The default setting for VGA Priority is onboard display. If you want to select Offboard to give priority to your graphics card, please follow the steps below:

BIOS > Advanced > PCIe/PCI/PnP Configuration > VGA Priority > Offboard > CPU SLOT6 PCI-E 3.0 X16 or CPU SLOT6 PCI-E 3.0 X8.

NVMe Firmware Source

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

Note: If you are using a PCIe NVMe SSD as a boot device, configure the following BIOS steps below:

1. Enable AMI Native Support in the Advanced > NVME Firmware Source menu.
2. After the installation is complete, enable Boot Option 1 for the NVMe device. Go to Boot > UEFI Hard Disk Drive BBS Priorities > Boot Option # 1 > NVMe device.
3. Boot > Boot Option #1 > NVMe device.

M.2 (AHCI) Firmware Source

Use this feature to configure the M.2 (AHCI) Firmware Source. The options are **Vendor Defined Firmware** and AMI Native Support.

CPU SLOT7 PCI-E 3.0 X16 OPROM

Use this feature to select which option for the add-on card in this slot. The options are Disabled, **Legacy**, and EFI.

M.2 PCI-E 3.0 X4 OPROM

Use this feature to select which option for the add-on card in this slot. The options are Disabled, **Legacy**, and EFI.

Onboard LAN Option ROM Type

Use this feature to select which option for onboard LAN devices. The options are **Legacy** and EFI. Select Legacy to display and configure the Onboard LAN1 ~ LAN8 Option ROM features.

Onboard LAN1 Option ROM

Use this feature to select which option for LAN Port 1 used for system boot. The options are Disabled, **PXE**, and iSCSI.

Onboard LAN2 ~ LAN4 Option ROM

Use this feature to select which option for the specified LAN ports used for system boot. The options are **Disabled** and PXE.

Onboard Video Option ROM

Use this feature to select the Onboard Video Option ROM type. The options are Disabled, **Legacy**, and EFI.

CPU SLOT7 PCI-E 3.0 X16 Bifurcation

This feature is used to configure the PCIe slot bifurcation. The options are **Auto**, x8x8, and x4x4x4x4.

► Network Stack Configuration

Network Stack

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

****If the feature above is set to Enabled, the next six features will be available for configuration:***

IPv4 PXE Support

Select Enabled to enable IPv4 PXE boot support. The options are Disabled and **Enabled**.

IPv4 HTTP Support

Select Enabled to enable IPv4 HTTP boot support. The options are **Disabled** and Enabled.

IPv6 PXE Support

Select Enabled to enable IPv6 PXE boot support. The options are **Disabled** and Enabled.

IPv6 HTTP Support

Select Enabled to enable IPv6 HTTP boot support. The options are **Disabled** and Enabled.

PXE Boot Wait Time

Use this feature to specify the wait time to press the ESC key to abort the PXE boot. Press "+" or "-" on your keyboard to change the value. The default setting is **0**.

Media Detect Count

Use this feature to specify the number of times media will be checked. Press "+" or "-" on your keyboard to change the value. The default setting is **1**.

Consistent Device Name Support

Use this feature to enable device name support for onboard devices and slots. The options are **Disabled** and Enabled.

►USB Configuration

USB Configuration

USB Module Version: 20

USB Controllers: 1 XHCI

USB Devices: 2 Keyboards, 1 Mouse, 3 Hubs

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.

USB Mass Storage Driver Support

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

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 Disabled and **Enabled**.

►SATA Configuration

When this submenu is selected, the AMI BIOS automatically detects the presence of the SATA devices that are supported by the Intel PCH chip and displays the following features:

SATA Controller

This feature enables or disables the onboard SATA controller supported by the Intel PCH chip. The options are Disable, Enable, and **Auto**.

SATA Hotplug

This feature designates the port specified for hotplugging. Set this feature to Enabled for hotplugging support, which will allow the user to replace a SATA disk drive without shutting down the system. The options are Disabled or **Enabled**.

► SATA Information

Sata Controller (S:00 B:05 D:00 F:02)

The following information will display:

- SATA0: Not Present
- SATA1: Not Present
- SATA2: Not Present
- SATA3: Not Present
- SATA4: Not Present

► 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 features.

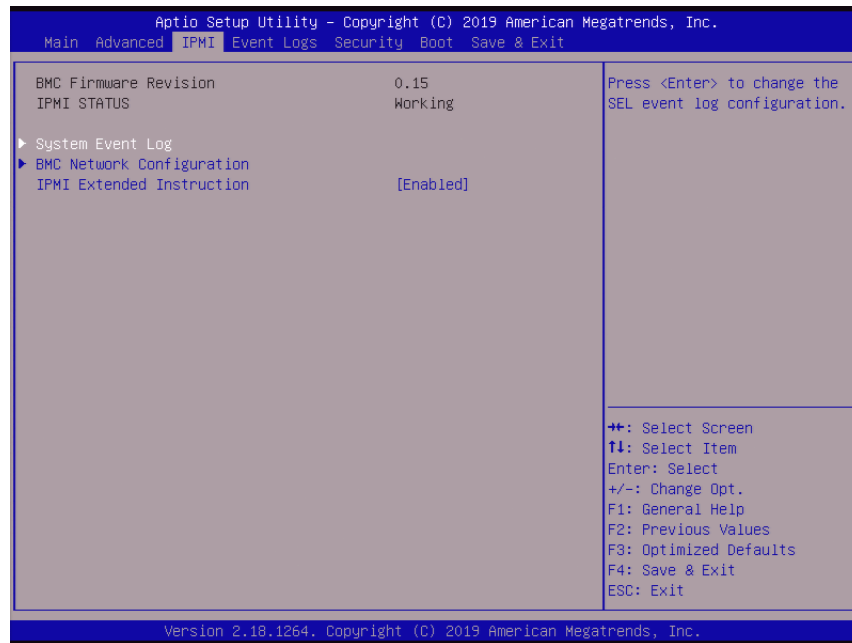
► Add an Attempt

► Delete Attempts

► Change Attempt Order

6.4 IPMI

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



BMC Firmware Revision

This feature displays the IPMI firmware revision used in your system.

IPMI STATUS

This feature displays 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 determine 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: Reboot the system for the changes to take effect.

► BMC Network Configuration

BMC network configuration

Update IPMI LAN Configuration

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

Configure IPV4 support

IPMI LAN Selection

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

IPMI Network Link Status

This feature displays the IPMI Network Link status. The default setting is **No Connect**.

****If the setting Update IPMI LAN Configuration above is set to Yes, the Configuration Address Source and VLAN features are available for configuration:***

Configuration Address Source

Use this feature 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 feature above is set to Static, the Station IP Address/Subnet Mask/Gateway IP Address features are available for configuration:***

Station IP Address

This feature displays the Station IP address for this computer. This should be in decimal and in dotted quad form (i.e., 192.168.10.253).

Subnet Mask

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

Gateway IP Address

This feature displays the Gateway IP address for this computer. This should be in decimal and in dotted quad form (i.e., 192.168.10.253).

VLAN

This feature is configurable if the Update IPMI LAN Configuration feature is set to Yes. Use this feature to enable or disable the IPMI VLAN function. The options are **Disable** and **Enable**.

****If the feature above is set to Enabled, the VLAN ID feature below is available for configuration:***

VLAN ID

Use this feature to select a value for VLAN ID. The default setting is **1**.

Configure IPV6 Support

IPV6 Address Status

IPV6 Support

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

Configuration Address Source

Use this feature 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 feature above is set to Static, the Station IP Address/Prefix Length/IPV6 Router1 IP Address features are available for configuration:***

Station IPV6 Address

Use this feature to enter the IPV6 address.

Prefix Length

Use this feature to change the prefix length.

IPV6 Router1 IP Address

Use this feature to change the IPV6 Router1 IP address.

IPMI Extended Instruction

The options of this feature are **Enabled** and Disabled. When this feature is Disabled, the system powers on quickly by removing BIOS support for IPMI extended instruction features. The boot up time is faster when the option is Disabled. When this feature is disabled, the user cannot use Supermicro Update Manager (SUM) OOB (out of band) to update the BIOS, nor utilize the extended IPMI features such as AOC and PCIe sensor readings, and the BMC network configuration in the BIOS setup is also disabled. The general BMC functions like fan control and motherboard health monitor that offer the basic sensor reading of the CPU, system memory, and some onboard devices still function. The user can use Supermicro IPMI utilities such as IPMICFG and IPMIVIEW for sensor readings and to know what the normal sensor output information is. The user needs to wait for one minute after the system powers on completely to obtain readings from those two sensors.

6.5 Event Logs

Use this menu to configure event log settings.



► Change SMBIOS Event Log Settings

Enabling/Disabling Options

SMBIOS Event Log

Change this feature to enable or disable all features of the SMBIOS Event Logging during system boot. The options are **Enabled** and Disabled.

Erasing Settings

Erase Event Log

Select Enabled 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 feature 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: Reboot the system for the changes to take effect.

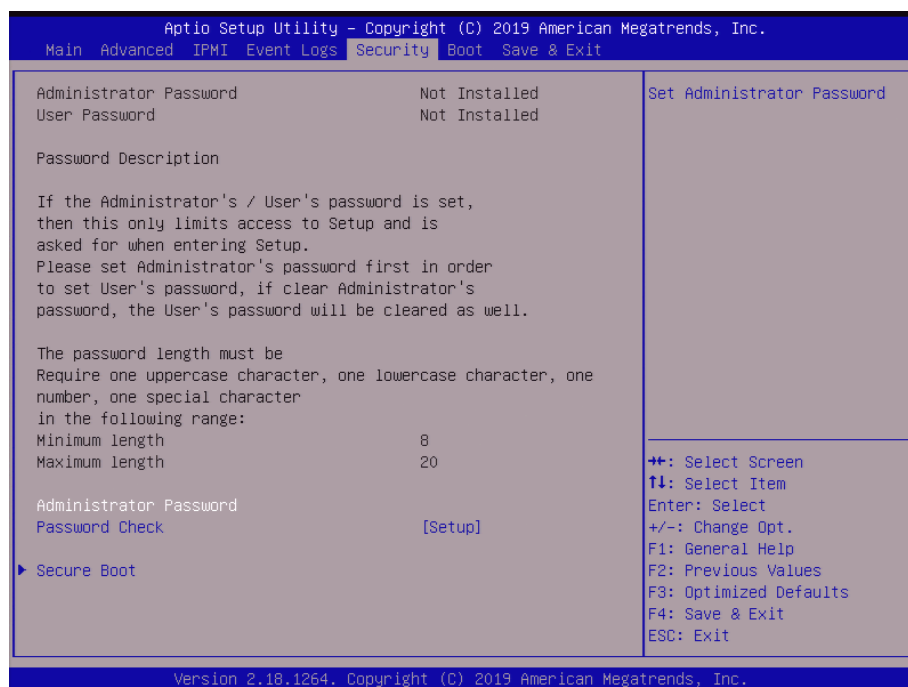
►View SMBIOS Event Log

This feature allows the user to view the event in the SMBIOS event log. The following categories are displayed:

DATE/TIME/ERROR CODE/SEVERITY

6.6 Security

Use this menu to configure the security settings.



Administrator Password

Use this feature to set the administrator password which is required to enter the BIOS setup utility. The length of the password should be from 8 to 20 characters long.

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.

► Secure Boot

System Mode

Secure Boot

Vendor Keys

Attempt Secure Boot

Select Enable for secure boot support to ensure system security at bootup. The options are **Disabled** and Enabled.

Secure Boot Mode

This feature allows the user to select the desired secure boot mode for the system. The options are Standard and **Custom**.

****If Secure Boot Mode is set to Custom, Key Management features are available for configuration:***

CSM Support

This feature is for manufacturing debugging purposes.

► Key Management

This submenu allows the user to configure the following Key Management settings.

Provision Factory Defaults

Select Enabled to install the default Secure Boot keys set by the manufacturer. The options are Disabled and **Enabled**.

****If the feature above is set to Enabled, the next three features are available for configuration:***

► Install Factory Default Keys

Select Yes to install all factory keys to the default settings. The options are Yes and No.

► Enroll Efi Image

This feature allows the image to run in Secure Boot mode.

► Save all Secure Boot variables

Use this feature to copy the NVRAM contents of the secure boot variables to a file.

Secure Boot variable

► Platform Key (PK)

Details

This feature allows the user to configure the settings of the platform keys.

Set New

Select Set New to load a factory default PK or No to load from a file on an external media.

► Key Exchange Keys (KEK)

Details

Select this feature to view the details of the KEK.

Set New

Select Yes to load a factory default KEK or No to load from a file on an external media.

Append

Select Yes to add the KEK from the manufacturer's defaults list to the existing KEK. Select No to load the KEK from a file. The options are Yes and No.

► Authorized Signatures

Details

Select this feature to view the details of the db.

Set New

Select Yes to load a factory default db or No to load from a file on an external media.

Append

Select Yes to add the db from the manufacturer's defaults list to the existing db. Select No to load the db from a file. The options are Yes and No.

► Forbidden Signatures (dbx)

Details

Select this feature to view the details of the dbx.

Set New

Select Yes to load a factory default dbx or No to load from a file on an external media.

Append

Select Yes to add the dbx from the manufacturer's defaults list to the existing dbx. Select No to load the dbx from a file. The options are Yes and No.

► Authorized TimeStamps**Details**

Select this feature to view the details of the dbt.

Set New

Select Yes to load a factory default dbt or No to load from a file on an external media.

Append

Select Yes to add the dbt from the manufacturer's defaults list to the existing dbt. Select No to load the dbt from a file. The options are Yes and No.

► OsRecovery Signatures (dbr)**Details**

Select this feature to view the details of the dbr.

Set New

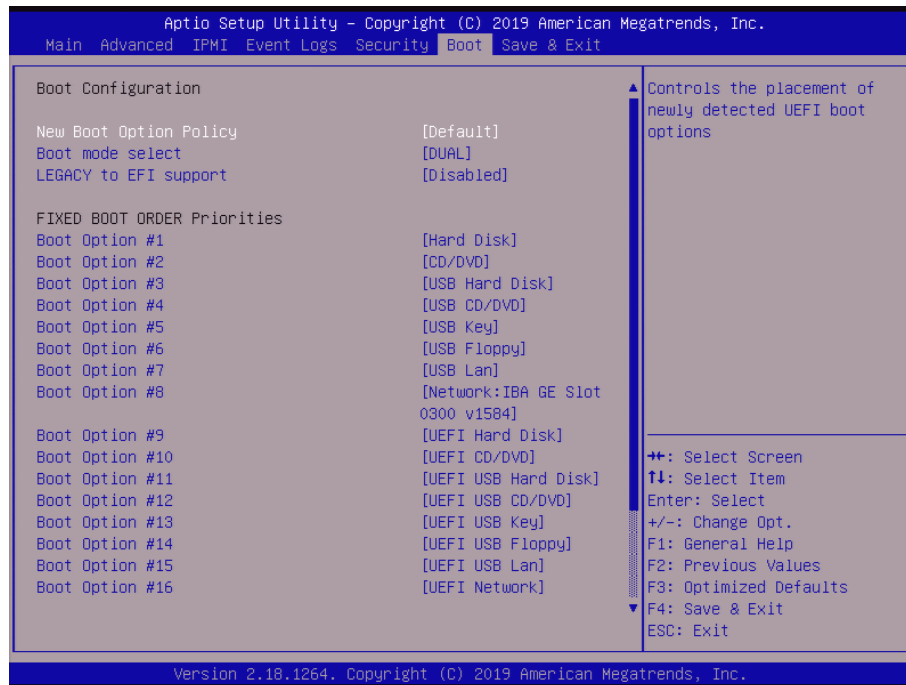
Select Yes to load a factory default dbr or No to load from a file on an external media.

Append

Select Yes to add the dbr from the manufacturer's defaults list to the existing dbr. Select No to load the dbr from a file. The options are Yes and No.

6.7 Boot

Use this menu to configure boot settings:



New Boot Option Policy

Use this feature to control the placement of newly detected UEFI boot options. The options are **Default**, Place First, and Place Last.

Boot mode select

Use this feature to select the boot mode. The options are LEGACY, UEFI, and **DUAL**.

LEGACY to EFI Support

Select Enabled to boot EFI OS support after Legacy boot order has failed. The options are **Disabled** and Enabled.

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.

- Boot Option #1
- Boot Option #2
- Boot Option #3

- Boot Option #4
- Boot Option #5
- Boot Option #6
- Boot Option #7
- Boot Option #8
- Boot Option #9
- Boot Option #10
- Boot Option #11
- Boot Option #12
- Boot Option #13
- Boot Option #14
- Boot Option #15
- Boot Option #16
- Boot Option #17

►Delete Boot Option

Delete Boot Option

Use this feature to remove an EFI boot option from the boot order. The options are **Select one to Delete** and UEFI: Built-in EFI Shell.

►UEFI Application Boot Priorities

Boot Option #1

This feature sets the system boot order of detected devices. The options are **UEFI: Built-in EFI Shell** and Disabled.

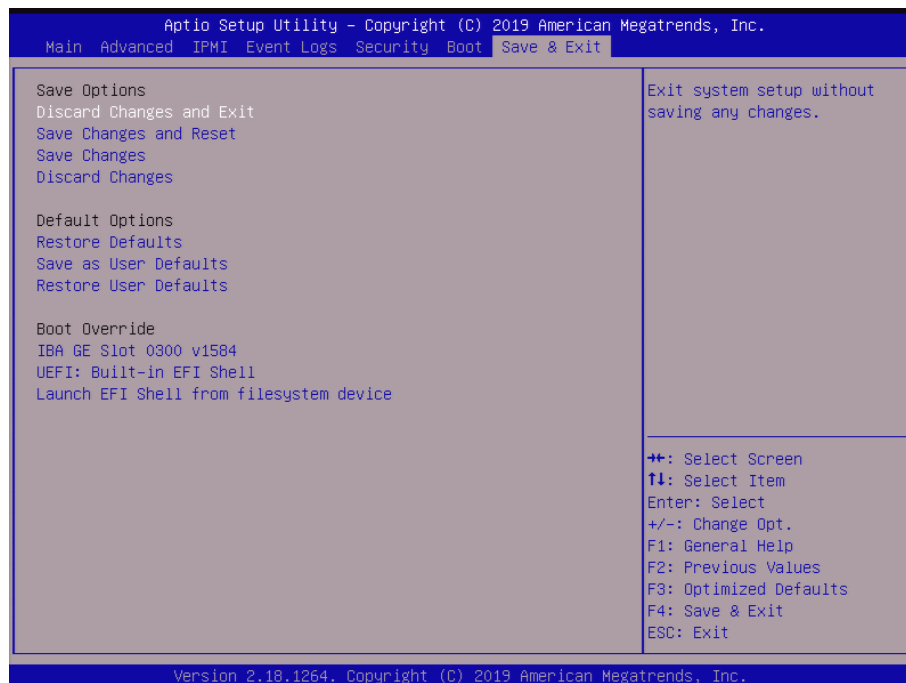
►NETWORK Drive BBS Priorities

Boot Option #1

This feature sets the system boot order of detected devices. The options are **IBA GE Slot 0300 v1584** and Disabled.

6.8 Save & Exit

Use this menu to configure save and exit settings.



Save Options

Discard Changes and Exit

Select this feature to quit the BIOS Setup without making any permanent changes to the system configuration and reboot the computer. Select Yes or No from the Exit menu and press <Enter>.

Save Changes and Reset

When you have completed the system configuration changes, select this option to save all changes made and reset the system.

Save Changes

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

Discard Changes

Select this feature and select Yes or No to discard all the changes and return to the AMI BIOS Utility Program.

Default Options

Restore Defaults

To set this feature, select Restore Optimized Defaults and select Yes or No. These are factory settings designed for maximum system performance but not for maximum stability.

Save as User Defaults

To set this feature, select Save as User Defaults from the Exit menu. 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. Use this feature to retrieve user-defined settings that were saved previously.

Boot Override

Other boot options are listed in this section. The system will boot to the selected boot option.

IBA GE Slot 0300 v1584

UEFI: Built-in EFI Shell

Launch EFI Shell from filesystem device

Appendix A

BIOS Error Codes

A.1 BIOS Error Beep (POST) Codes

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

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

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

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

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

A.2 Additional BIOS POST Codes

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

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

For information on AMI updates, please refer to <http://www.ami.com/products/>.

Appendix B

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 الزهرز عُ خطر! تحذُرُ .
 قبل اَي تعول على اَي هعدات، كي على علن بالوخاطز ال اُجوة عي الذوائر
 الكهزبائِة
 وكي على دراةُ بالووارسات النقاائِة لو عُ وقع اَي حادث
 استخدم رَقن الب اِي الو صُص ف هَّاةُ كل تحذُرُ للعشر تزجوتها

안전을 위한 주의사항

경고!

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

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

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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

BEWAAR DEZE INSTRUCTIES

Installation Instructions



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

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前,请先阅读安装说明。

警告

將系統與電源連接前，請先閱讀安裝說明。

Warnung

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

¡Advertencia!

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

Attention

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

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

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

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

انصل إلى امناطق انداخهيت نههيكم نتشيج أو إزانت 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 استخذاو أداة خاصت
أو أ وس هُت أخري نلاأمما ققم ومفتاح

경고!

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

Waarschuwing

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

Battery Handling



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 فعلى
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 يكون النظام يعمل كه حذرا عند خدمة هذا الجهاز

경고!

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

Waarschuwing

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

Comply with Local and National Electrical Codes



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

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

La 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/CSEマークがコードに表記)を Supermicro が指定する製品以外に使用することを禁止しています。

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

AC ימאתמו מילמשח מילבכ

!הרהזא

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

תאלבאלא אארשב מץ וא ענדחמל וא ערפוטמל תאליסוולא מודחטסאב מץ, גתנמל בייקרת דנע כלז יפ אב עילחמל עמאלסל תאבלטתמו נינאוץב מאזתלאל עמ דדרתמל ראיטל תאלוחמו עיזאברמלל קיירח וא לטע יפ בבסטטי דץ ירזא תאלוחמו תאלבאלא יא מודחטסא. מילסל סבאלאו לטוולא מץ ח CSA וא UL לבק נמ ענדחמל תאלבאלא מודחטסא תאדעמל עיזאברמלל עזחאל עמאלסל נונאק רזחי Supermicro לבק נמ ענדחמל עינעמל תאגתנמל ריז ירזא תאדעמ יא עמ (UL/CSA) עמאלע למחת יטלוא

전원 케이블 및 AC 어댑터

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

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

Stroomkabel en AC-Adapter

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

Appendix C

System Specifications

Processors

Supports an AMD EPYC 3251 SoC processor

Chipset

System on Chip

BIOS

128 Mb AMI BIOS SPI Flash BIOS

UEFI 2.6, ACPI 6.1, PCI FAV 3.0, SMBIOS 3.1, SPI dual/quad speed support, Real Time Clock (RTC) wakeup

Memory

Up to 512GB of Registered ECC DDR4 with speeds of up to 2666MHz in four DIMMs 4-channel memory bus.

Storage Drives

Up to four internal drives: two 3.5" drives or four 2.5" drives

One M.2 internal SSD, for PCI-Express 3.0 x4 (Supports M-Key 2280)

PCI Expansion Slots

One PCI-Express 3.0 x16 slot **Note:** Depends on the number of storage drives

Input/Output

SATA: Four SATA3 (6Gbps) ports

LAN: Four RJ45 Gigabit Ethernet LAN ports (front) and one RJ45 Dedicated IPMI LAN port (front)

USB: Two USB 3.0 ports (front)

VGA: One VGA port (front)

Other: One TPM header

Motherboard

M11SDV-8C-LN4F; dimensions: 6.75" (W) x 6.75" (L) (170mm x 170mm)

Chassis

SC505-203B 1U rackmount; (WxHxD) 17.2" (437mm) x 1.7" (43mm) 9.8" (249mm)

System Cooling

Two 40x28mm 4-pin fans

Power Supply

Model: PWS-203-1H module, 80Plus Gold level

AC Input 100 - 240V, 50-60Hz, 2.6 Amp Max

+5V: 8.0 Amp (max.)

+5V standby: 2.0 Amp (max.)

+12V: 16 Amp (max.)

-12V: 0.5 Amp (max.)

+3.3V: 8.0 Amp (max.)

Operating Environment

Operating Temperature: 0° to 40° C (32° to 104° F)

Non-operating Temperature: -40° to 70° C (-40° to 158° F)

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

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

Regulatory Compliance

Electromagnetic Emissions: FCC Class A, EN 55032 Class A, EN 61000-3-2/3-3, CISPR 32 Class A

Electromagnetic Immunity: EN 55024/CISPR 24, (EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11)

Other: VCCI-CISPR 32 and AS/NZS CISPR 32

Environmental: Directive 2011/65/EU, Delegated Directive (EU) 2015/863, and Directive 2012/19/EU

Safety: CSA/EN/IEC/UL 60950-1 Compliant, UL or CSA Listed (USA and Canada), CE Marking (Europe)

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"

Appendix D

UEFI BIOS Recovery

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

D.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 that will allow the UEFI OS loader stored in an add-on card to boot the system. The UEFI offers clean, hands-off management to a computer during system boot.

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

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

Note 2: When the BIOS recovery block crashes, you will need to follow the procedures to make a Returned Merchandise Authorization (RMA) request. (For a RMA request, please see section 3.5 for more information). Also, you may use the Supermicro Update Manager (SUM) Out-of-Band (OOB) (https://www.supermicro.com.tw/products/nfo/SMS_SUM.cfm) to reflash the BIOS.

D.3 Recovering the Main BIOS Block with a USB Device

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

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

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

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

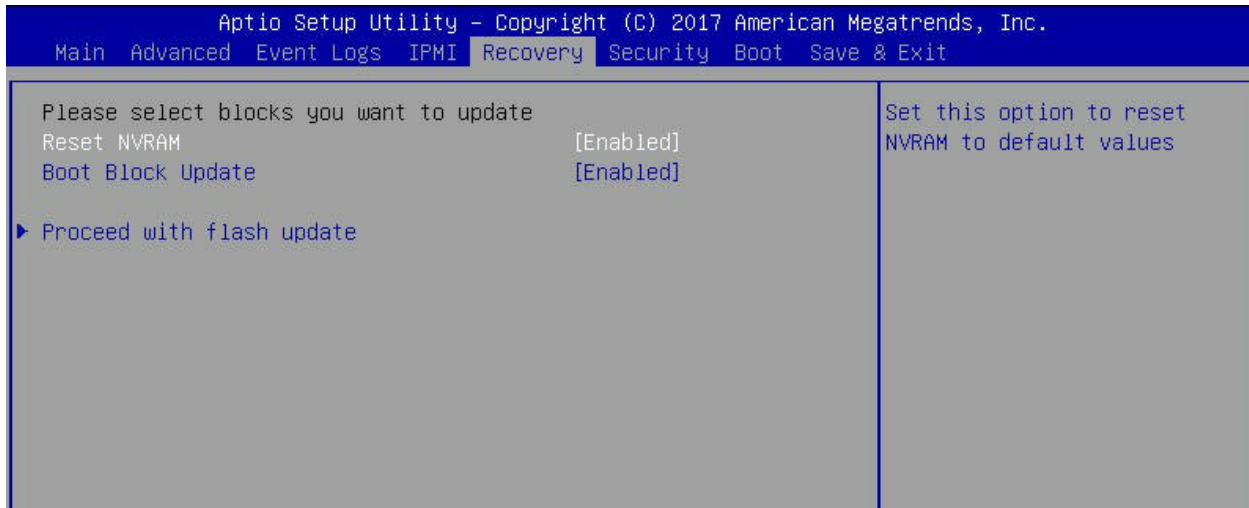
Note 1: If you cannot locate the "Super.ROM" file in your drive disk, visit our website at www.supermicro.com to download the BIOS package. Extract the BIOS binary image into a USB flash device and rename it "Super.ROM" for the BIOS recovery use.

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

2. Insert the USB device that contains the new BIOS image ("Super.ROM") into your USB drive and reset the system when the following screen appears.



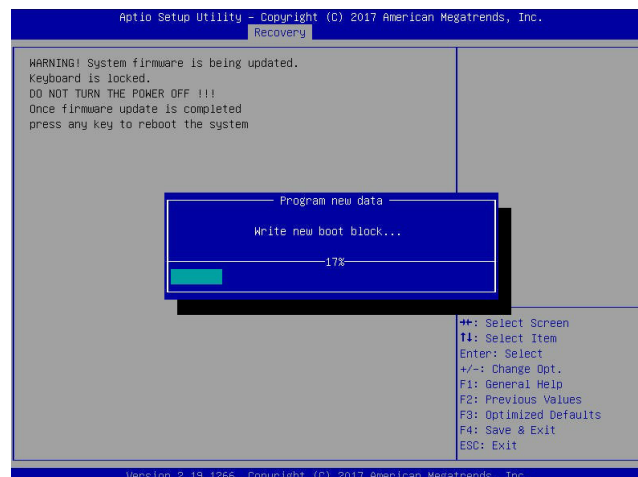
3. After locating the healthy BIOS binary image, the system will enter the BIOS Recovery menu as shown below.



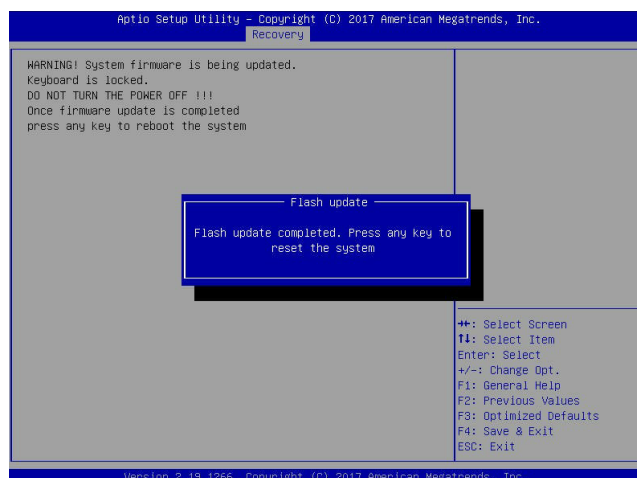
Note: At this point, you may decide if you want to start the BIOS recovery. If you decide to proceed with BIOS recovery, follow the procedures below.

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

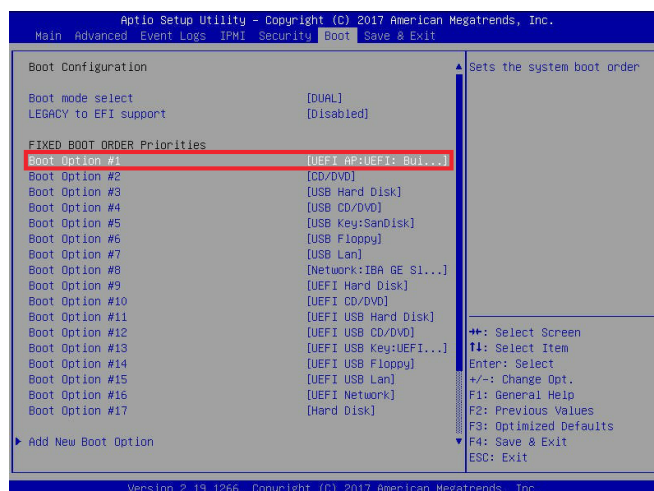
Note: Do not interrupt the BIOS flashing process until it has completed.



5. After the BIOS recovery process is complete, press any key to reboot the system.



6. Using a different system, extract the BIOS package into a USB flash drive.
7. Press continuously during system boot to enter the BIOS Setup utility. From the top of the tool bar, select Boot to enter the submenu. From the submenu list, select Boot Option #1 as shown below. Then, set Boot Option #1 to [UEFI AP:UEFI: Built-in EFI Shell]. Press <F4> to save the settings and exit the BIOS Setup utility.



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

```

UEFI Interactive Shell v2.1
EDK II
UEFI v2.50 (American Megatrends, 0x0005000C)
Mapping table
  FS0: Alias(s):HD(0)B:BLK1:
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x11,0x0)/HD(1,MBR,0x37901072,0x800,0x1
CR3592)
  BLK0: Alias(s):
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x11,0x0)
Press F8 in 1 seconds to skip startup.nsh or any other key to continue.
Shell> fs0:
FS0:\> cd AFUDOS
FS0:\AFUDOS> cd SKJPM2_03162017
FS0:\AFUDOS\SKJPM2_03162017> flash.nsh X10PU7.314

```

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

```

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

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

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

```

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

```

Verifying NDB Block ..... done
- Update success for FDR
- Update success for IE
- Successful Update Recovery Loader to OPRx!!
- Successful Update MFSB!!
- Successful Update FPR!!
- Successful Update MFS, IVB1 and IVB2!!
- Successful Update FLOG and UTDK!!
- ME Entire Image update success !!
WARNING : System must power-off to have the changes take effect!
Moving FS0:\AFUDOS\SKJPM2_03162017\rdtx64.efi -> FS0:\AFUDOS\SKJPM2_03162017\
dt.smc
- [ok]
Moving FS0:\AFUDOS\SKJPM2_03162017\afuef1x64.efi -> FS0:\AFUDOS\SKJPM2_0316201
7\afuef1.smc
- [ok]
*****
* Please ignore this 'Shell: Cannot read from file - Device Error'
* warning message due to it does not impact flashing process.
*****
Deleting "setup.com"
Delete successful.
FS0:\>

```

10. Press `` continuously to enter the BIOS Setup utility.
11. Press `<F3>` to load the default settings.
12. After loading the default settings, press `<F4>` to save the settings and exit the BIOS Setup utility.