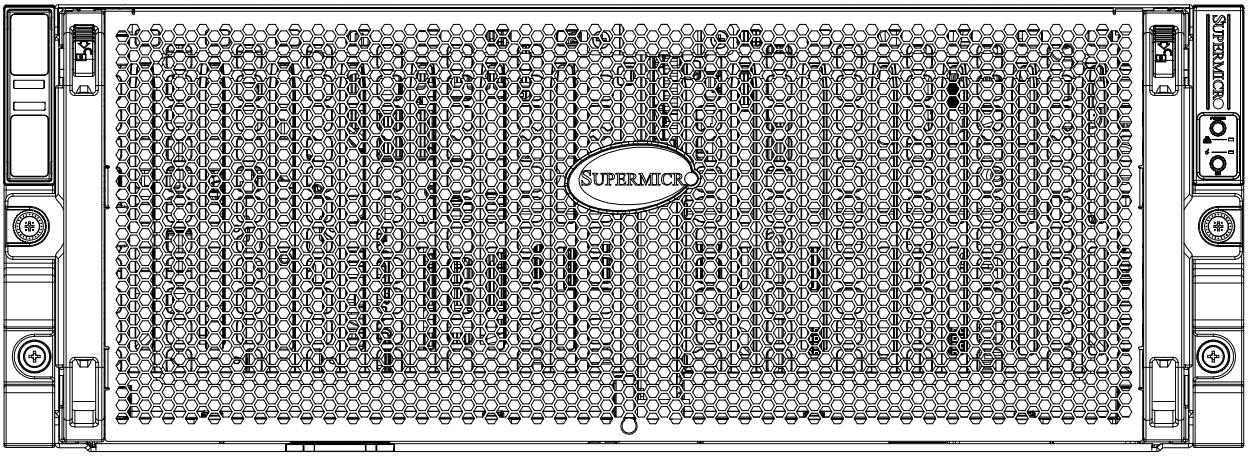
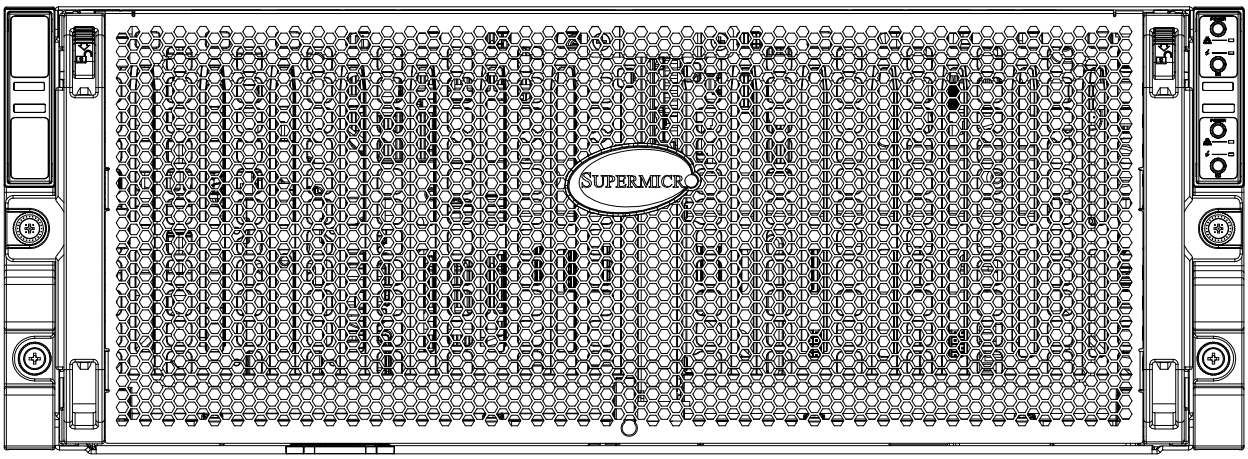
CSE-947H JBOD Chassis





CSE-947HE1C-R2K05JBOD CSE-947HE2C-R2K05JBOD

USER'S MANUAL

Revision 1.0

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Manual Revision 1.0

Release Date: February 23, 2021

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Preface

About this Manual

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

This document lists compatible parts available when this document was published. Refer to the Supermicro web site for updates on supported parts and configurations.

This manual may be periodically updated without notice. Please check the Supermicro Web site for possible updates.(http://www.supermicro.com).

Notes

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

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

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.

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Contacting Supermicro

Headquarters

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

Europe

Address:	Super Micro Computer B.V. Het Sterrenbeeld 28, 5215 ML 's-Hertogenbosch, The Netherlands
Tel:	+31 (0) 73-6400390
Fax:	+31 (0) 73-6416525
Email:	sales@supermicro.nl (General Information) support@supermicro.nl (Technical Support) rma@supermicro.nl (Customer Support)
Website:	www.supermicro.nl

Asia-Pacific

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

Chapter 1

Introduction

Optimized for enterprise-level high capacity storage applications, Supermicro's CSE-947H JBOD chassis features up to 90 hot-swap 3.5" SAS3 hard drives in top-loading drive bays. It is ideal for cloud backup, data replication, or high density archive storage applications.

This design offers extra high density of HDDs per space ratio in a 4U form factor. The chassis features high power efficiency, optimized HDD signal trace routing, and improved HDD carrier design to dampen HDD vibrations and maximize performance. Equipped with two redundant high-efficiency power supplies and three 80mm high-speed, low-vibration, hot-swappable cooling fans, the CSE-947H JBOD is a reliable maintenance storage server.

1.1 Models

CSE-947H JBOD Chassis Models			
Model	**Drives**	**SAS Expanders**	**Power Supply**
CSE-947HE1C-R2K05JBOD	90 SAS	1	2000W redundant (Platinum Level)
CSE-947HE2C-R2K05JBOD	90 SAS	2	2000W redundant (Platinum Level)

1.2 Unpacking the System

Inspect the box in which the chassis was shipped. If any equipment appears damaged, file a claim with the carrier who delivered it.

1.3 Chassis Features

Control Panel

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

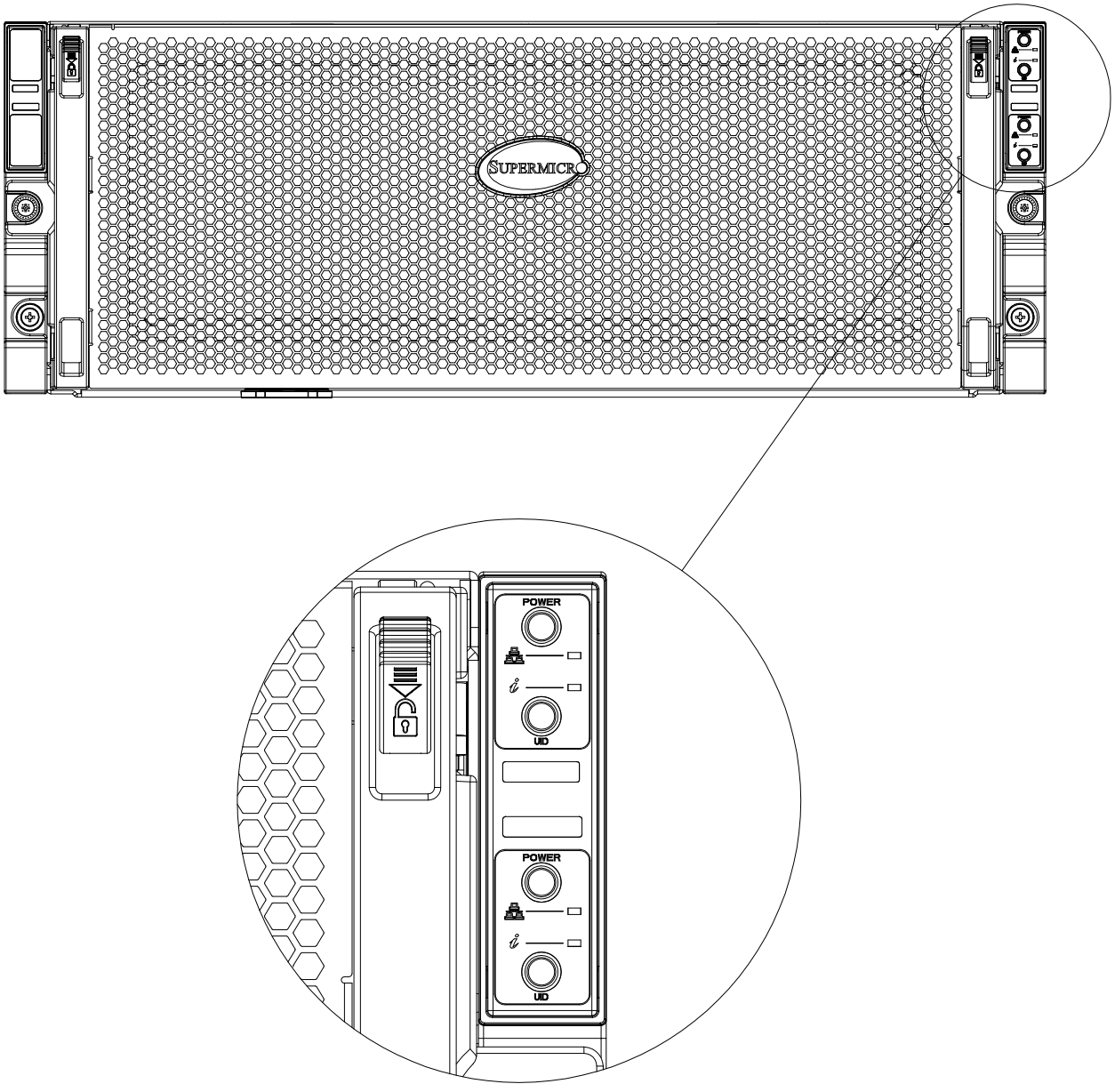


Figure 1-1. Control Panel Location

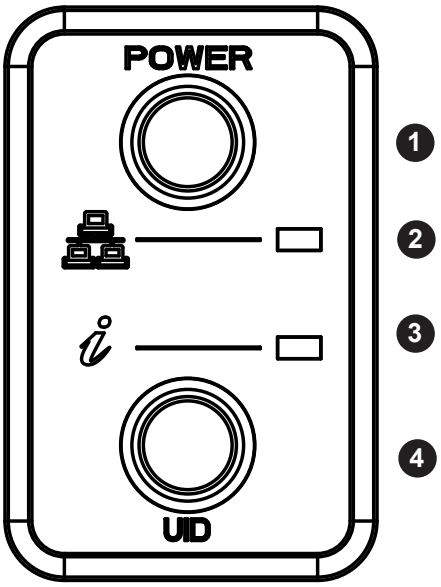


Figure 1-2. Control Panel

Control Panel Features		
Item	**Features**	**Description**
1	Power button/ LED	The main power switch applies or removes primary power from the power supply to the server but maintains standby power. To perform most maintenance tasks, unplug the system to remove all power.
2	NIC LED	Indicates network activity on the LAN when flashing.
3	Information LED	Alerts operator to several states, as noted in the following table.
4	UID button/LED	The unit identification (UID) button turns on or off the blue light function of the Information LED and a blue LED on the rear of the chassis. These are used to locate the server in large racks and server banks.

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	Local UID has been activated. Use this function to locate the server in a rack mount environment.
Blinking blue	Remote UID is on. Use this function to identify the server from a remote location.

Chassis Front

The illustrations below show the features included on the front of the chassis.

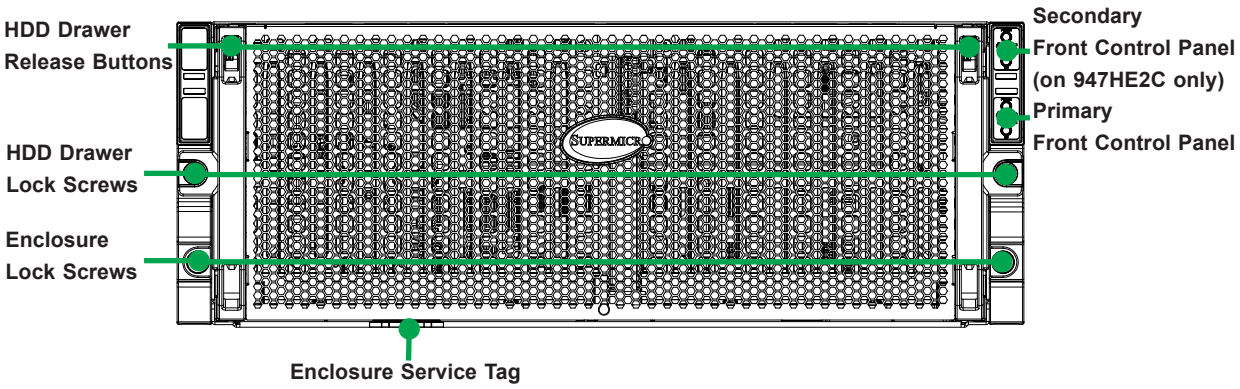


Figure 1-3. Front Features of JBOD

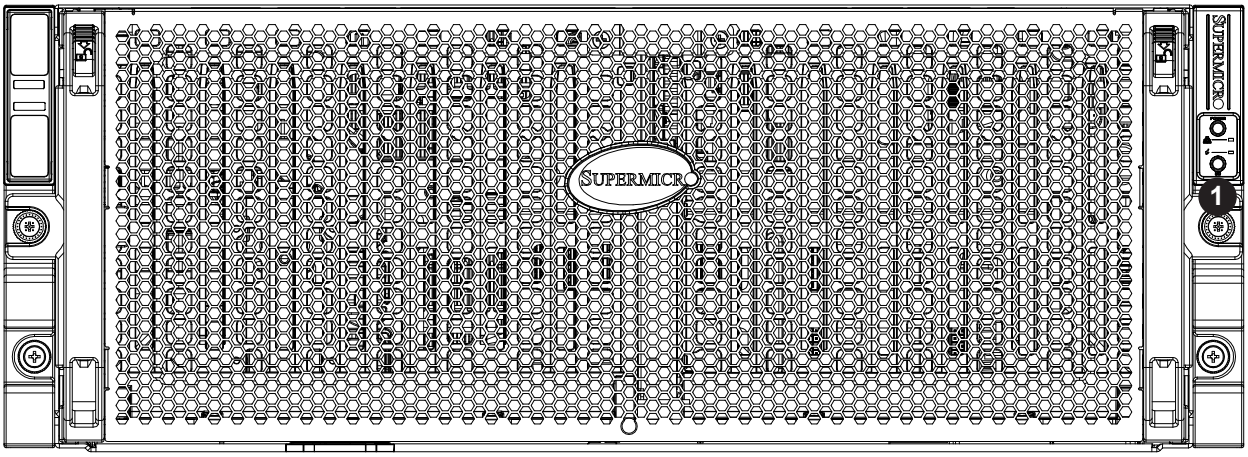


Figure 1-4. Single Expander JBOD Front View

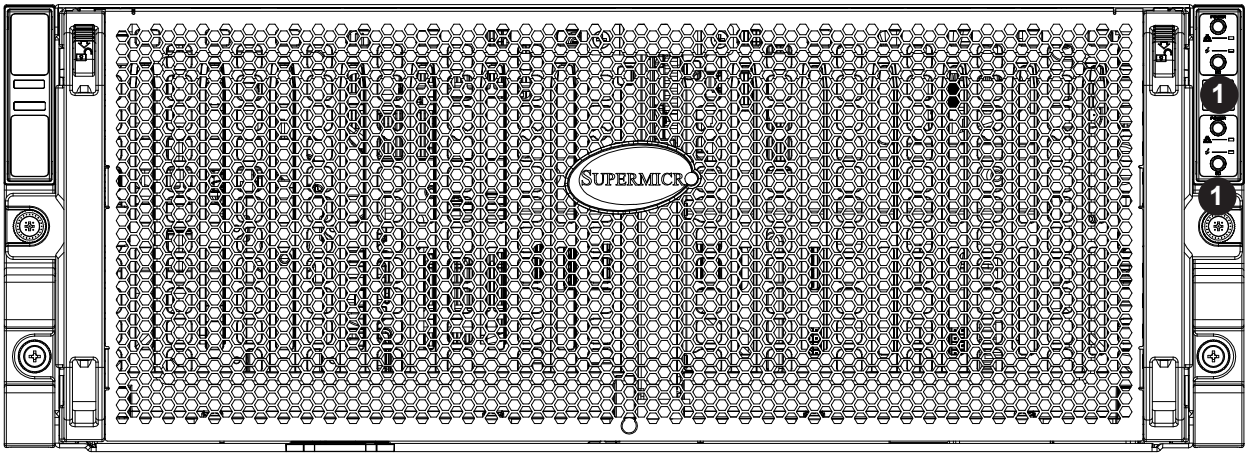


Figure 1-5. Dual Expander JBOD Front View

Front Chassis Features		
Item	**Feature**	**Description**
1	Control Panel	Power, UID, network, overheat

Chassis Rear

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

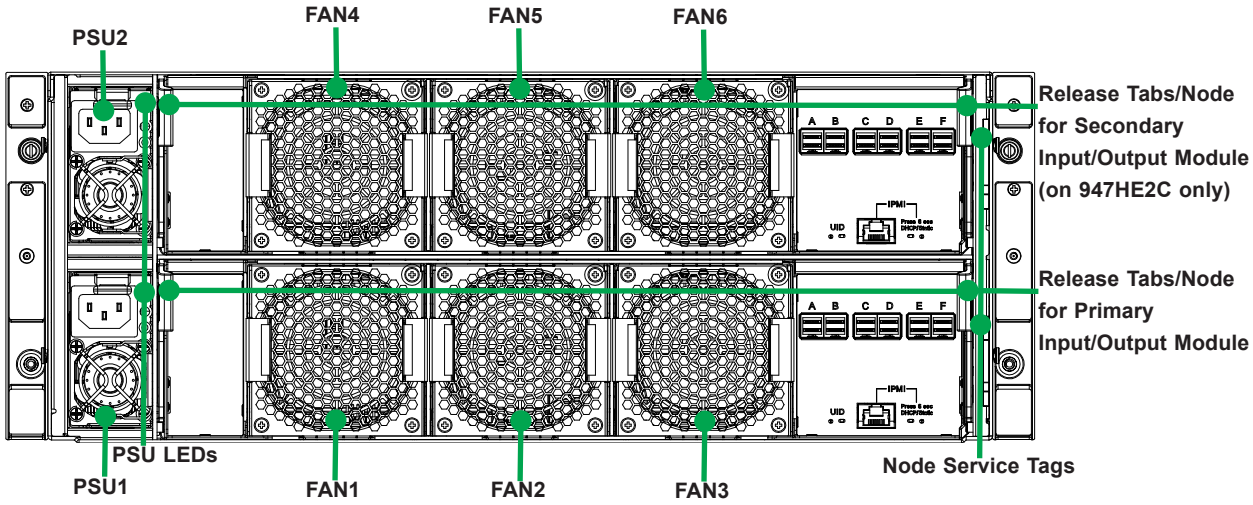


Figure 1-6. Rear Features of JBOD

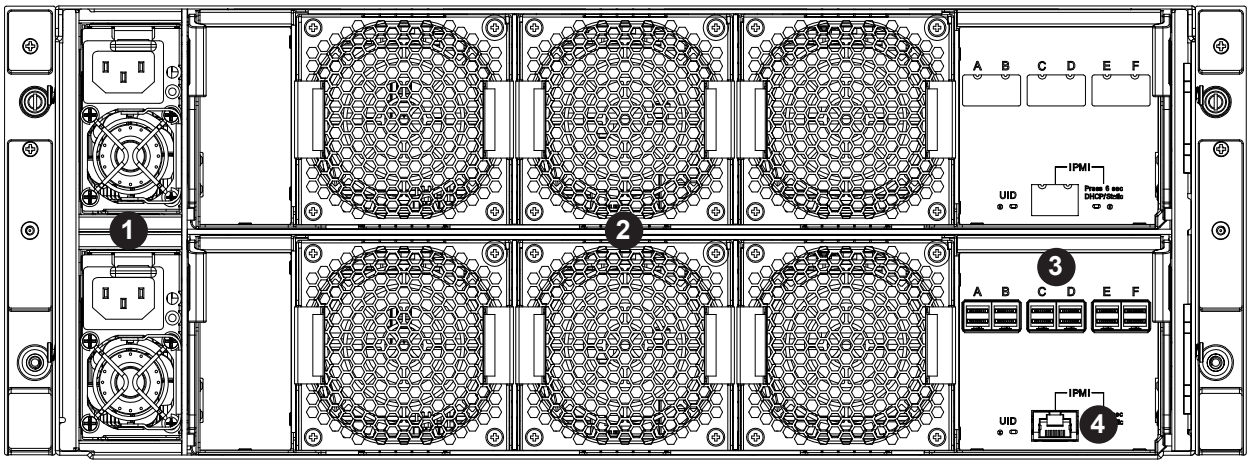


Figure 1-7. Single Expander JBOD Rear View

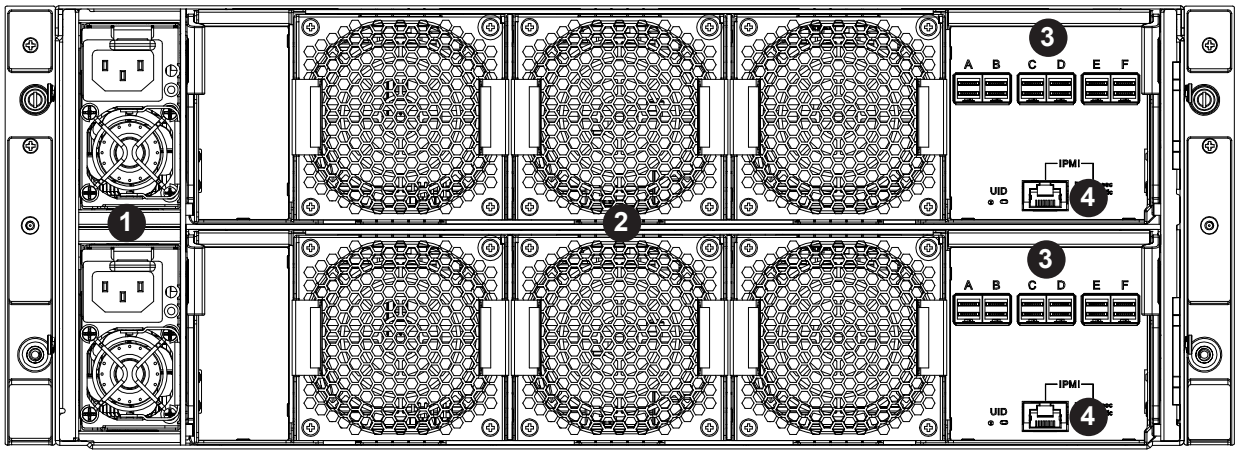


Figure 1-8. Dual Expander JBOD Rear View

Rear Chassis Features		
Item	**Feature**	**Description**
1	Power Supply modules	Two, redundant hot-swap
2	Fans	Six, hot-swap
3	Mini-SAS Ports	Mini-SAS HD ports for internal or external cascading expander combinations
4	IPMI Port	Networking port used for remote management

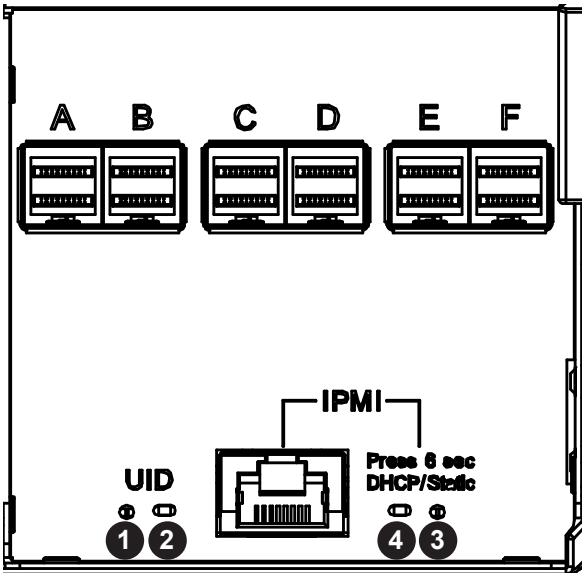


Figure 1-9. JBOD Rear Panel Components

Rear Panel Buttons/LEDs		
Item	**Features**	**Description**
1	UID LED	Turns on (blue) or off when the UID button is pressed. This is used for unit identification. A solid blue light locates the server in a rack mount environment, and a blinking blue light identifies the server from a remote location.
2	UID button	The unit identification (UID) button turns on or off the blue UID LED. This is used to locate the server in large racks and server banks.
3	IPMI LED	When the LED is illuminated, the setting is Static. When the LED is off, the setting is DHCP. The default setting is DHCP (off).
4	IPMI button	Press the IPMI button for at least 6 seconds to change to Static or DHCP.

1.4 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.

1.5 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

Installation in a Rack

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

2.1 Preparing for Setup

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

Choosing a Setup Location

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

Rack Precautions

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

- When initially installing the server to a rack, test that the rail locking tabs engage to prevent the server from being overextended. Have a rack lift in place as a precaution in case the test fails.
- In any instance of pulling the system from the rack, always use a rack lift and follow all associated safety precautions.

Server Precautions

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

Rack Mounting Considerations

Ambient Operating Temperature

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

Airflow

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

Mechanical Loading

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

Circuit Overloading

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

Reliable Ground

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



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

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

2.2 Installing the Rails

There are a variety of rack units on the market, which may require a slightly different assembly procedure. Do not use a two-post "telco" type rack. This rail set fits a rack between 26.5" and 36.4" deep.

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

Installing the Rails onto the Rack

The front and rear ends of each rail have a locking latch. This latch is used to attach the rails to the rack.

To mount the rails onto the rack, first extend them by releasing the inner rails from the outer rails.

1. Using a screwdriver, remove the screws holding the inner rail in place inside the outer rail.

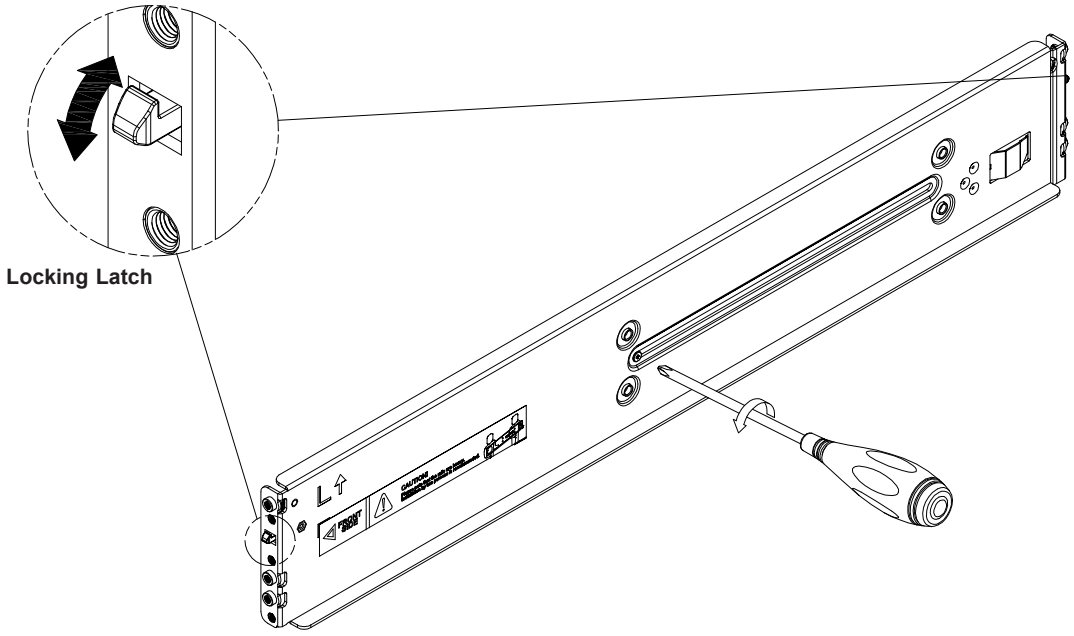


Figure 2-1. Releasing the Inner Rail

2. Mount the front end of the rail by pushing the outer rail latch through one of the square holes on the front of the rack.
3. Pull the inner rail out of the outer rail until it reaches the rear of the rack.
4. Mount the rear end of the rail by pushing the inner rail latch through one of the square holes on the rear of the rack. Take care to use the proper holes so that the rail is level.

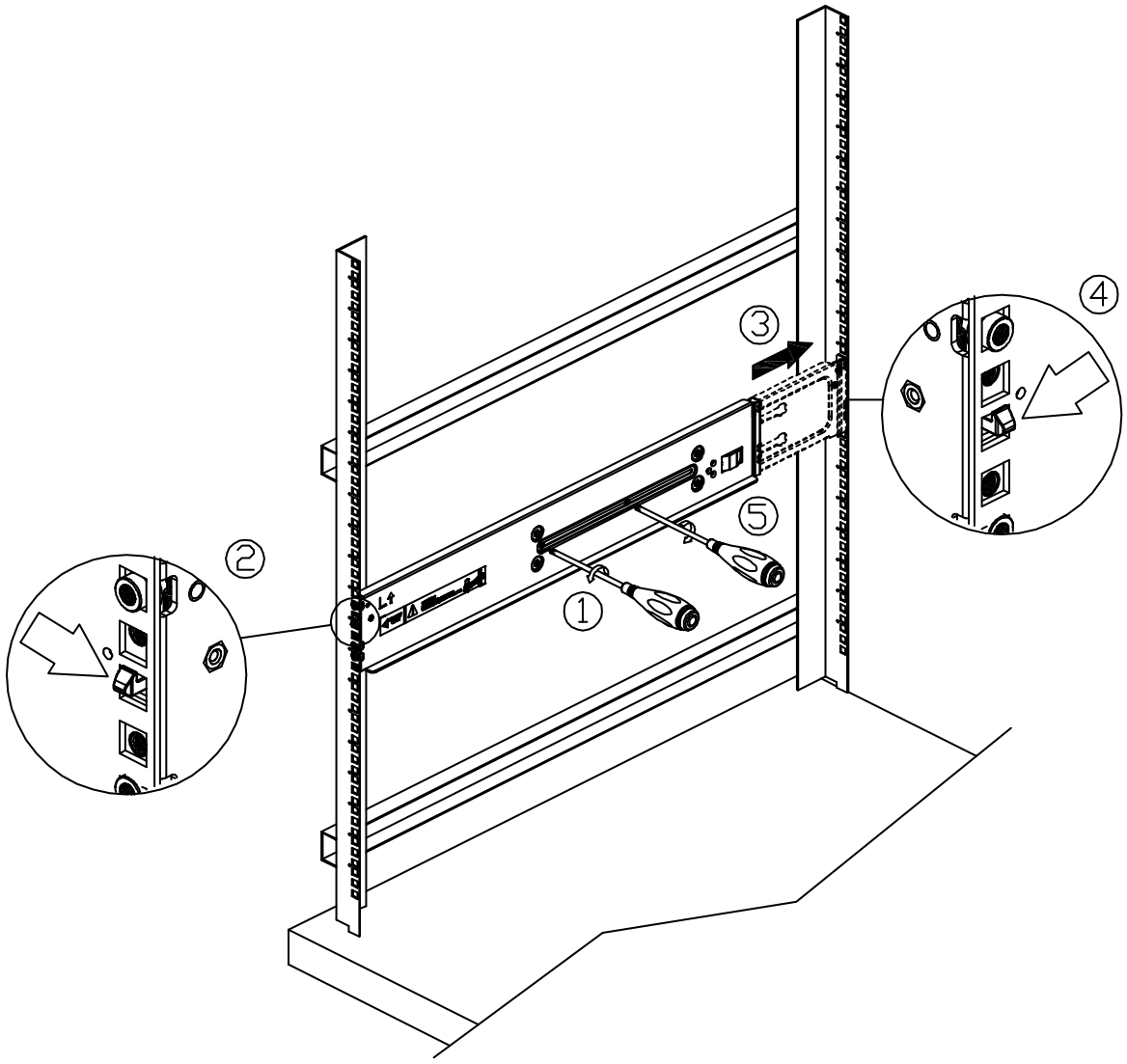


Figure 2-2. Extending and Mounting a Rail

5. Secure the length of the extended rail by tightening the screws into the holes closer to the inner rail.

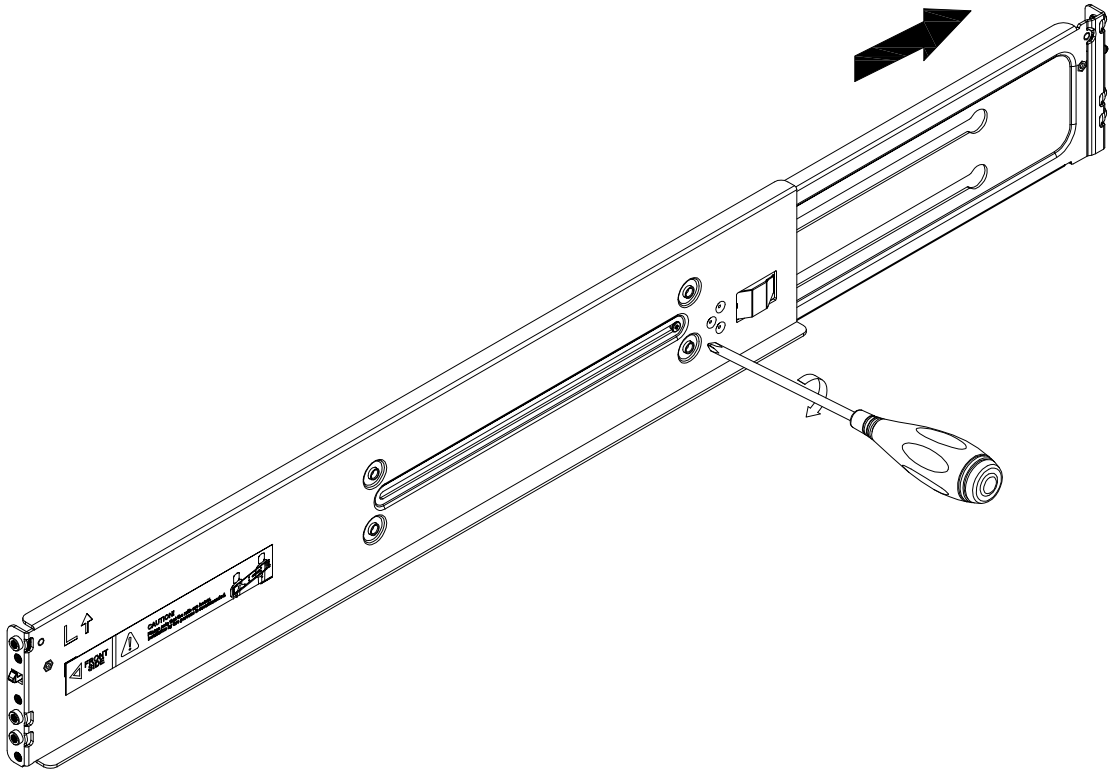


Figure 2-3. Extending the Rail

6. Repeat the preceding steps for the other rail, making sure it is mounted at the same height as the first installed rail so that they are parallel.

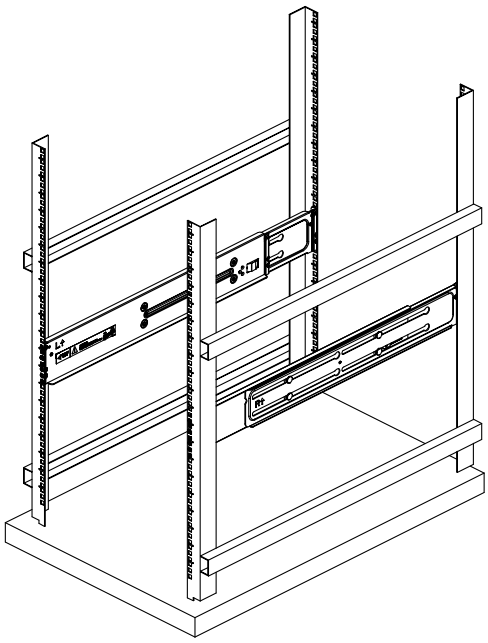


Figure 2-4. Rails Installed in a Rack

7. Secure the rails to the rack by installing screws into the square holes on the front and rear of the rack aligned with the rail holes.

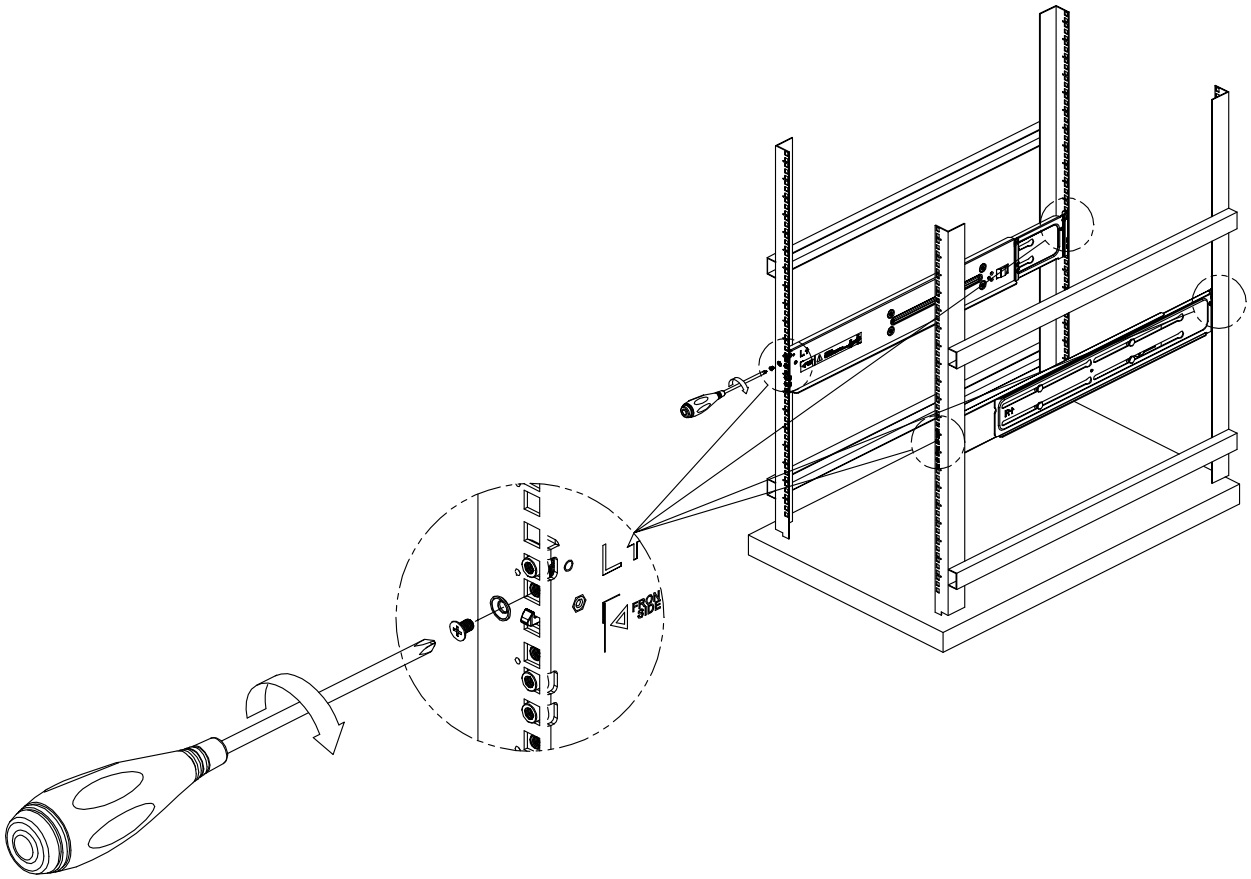


Figure 2-5. Securing Rails to a Rack

2.3 Installing the Chassis into the Rack

After the rails are installed on the rack, the chassis can be installed in the rack. It is heavy and requires two to three people or a lift.

Installing the Chassis into a Rack

1. Align the sides of the chassis with the front of the rails.
2. Slide the chassis into the rails, keeping the pressure even on both sides.

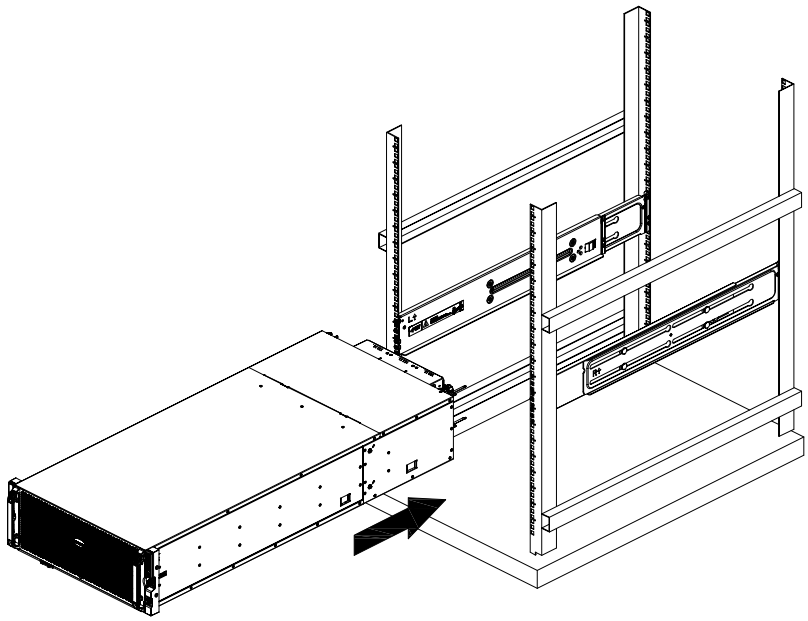


Figure 2-6. Installing the Chassis into the Rack

Note: Figures are for illustrative purposes only. Your actual chassis may differ. Always install servers into racks from the bottom up.

3. Push the chassis all the way into the rear of the rack until the side brackets on the front of the chassis touch the front of the rack.

4. Secure the front of the chassis to the front of the rack by tightening screws through the chassis bracket holes and the rack holes aligned with them.

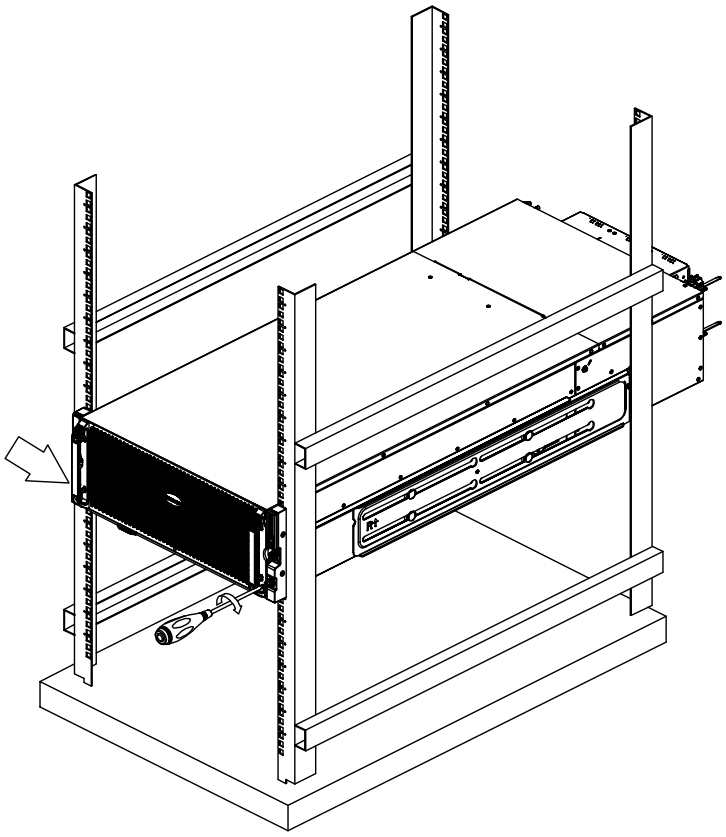


Figure 2-7. Securing the Chassis to the Rack

Loading HDDs into the Chassis on a Rack

1. Press the release buttons on both of the front handles downward simultaneously and pull the chassis handles forward from the rack.

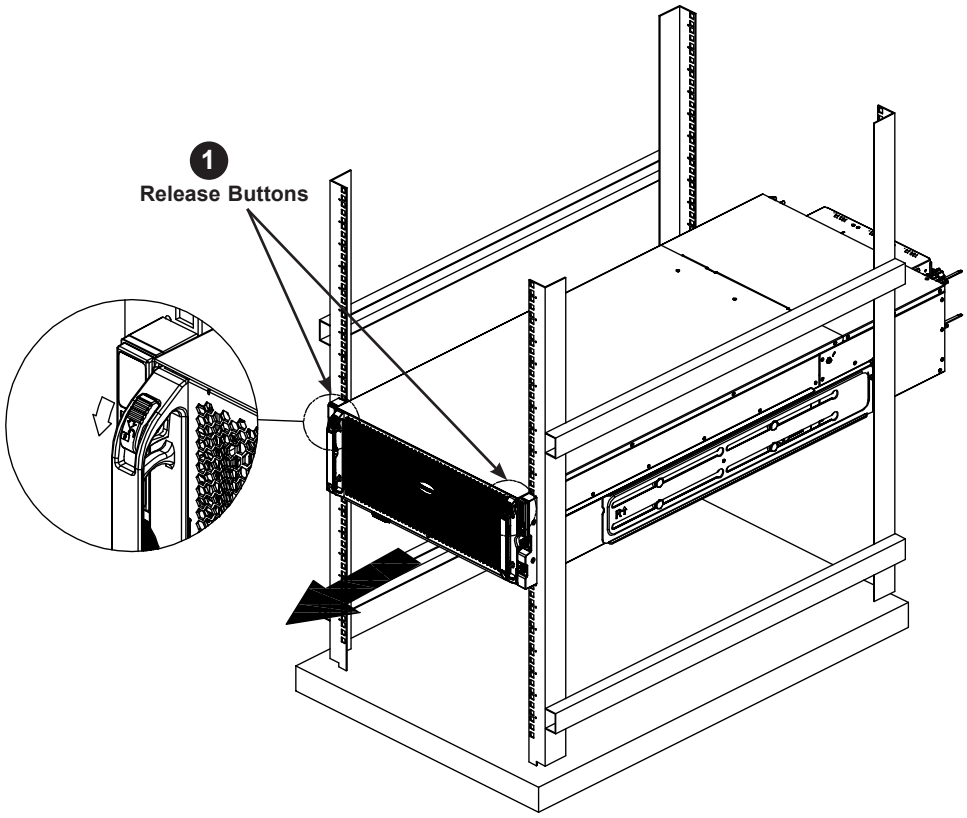


Figure 2-8. Opening the Chassis on a Rack

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

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

2. Pull open the chassis so that a locking lever on each side of the chassis aligns with the front of the chassis cover and front of the rack, then press the lever down on each side to lock the open part of the chassis in place.

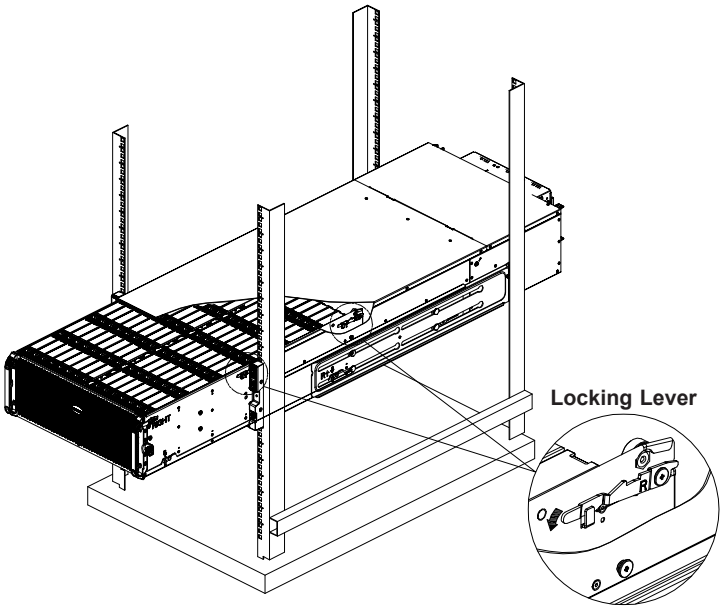


Figure 2-9. Locking in Place the Open Chassis on a Rack

3. HDDs and their carriers can be loaded into the chassis, or removed from the chassis by pressing their release buttons to eject their handles and then pulling the drives out by the handles.

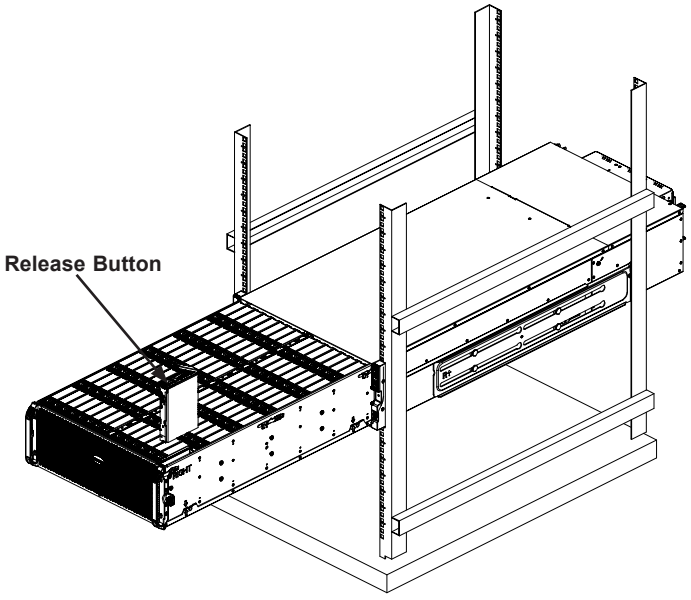


Figure 2-10. Loading HDDs in the Chassis in a Rack

Chapter 3

Maintenance and Component Installation

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

Installation or replacement of most components require that power first be removed from the system.

3.1 Power Up/Power Down Sequences

There are several procedures to turn on or off the system with the JBOD control board.

Power Up

First Use or Power Cord Plug-In

1. Plug the power cords into the rear of the power supplies.
2. Press the power button once. The JBOD control board will initiate the power up sequence.

After Normal Shutdown by IPMI or Power Button

Press the power button once. The JBOD control board will initiate the power up sequence.

After a Power Loss

The system will power up automatically after the power returns.

Power Down

Hold down the power button for at least 4 seconds. The JBOD will power down.

Removing Power from the System

Before performing most setup or maintenance tasks, use the following procedure to ensure that power has been removed from the system.

1. After the system has completely shut down, carefully grasp the head of the power cord and gently pull it out of the back of the power supply. If your system has dual power supplies, remove the cords from both power supplies.
2. Disconnect the cord from the power strip or wall outlet.

3.2 Cable Connections

IPMI

The CSE-947H JBOD chassis offers intelligent management with IPMI to provide hardware health monitoring and remote power control. To enable it, connect to the storage enclosure using the dedicated IPMI LAN connector (Figures 1-7 and 1-8).

The default IP address configuration mode is DHCP (Dynamic Host and Configuration Protocol). When connected to the network, you can find the IP address assigned to this system from the DHCP server. You can now connect using the unique User name and Password on the label, whose location is shown below.

Note: The IP configuration mode can be toggled between DHCP and Static IP. Press and hold the reset button on the rear panel for 6-8 seconds to change to static IP mode with the default IP address as shown below. Press and hold the reset button for 6-8 seconds to change the IP configuration mode back to DHCP.

Simple setup configuration:

IPMI default IP: 192.168.1.99

User name: unique User name

Password: unique Password

For details on configuring and using IPMI, refer to the Supermicro IPMI manual.

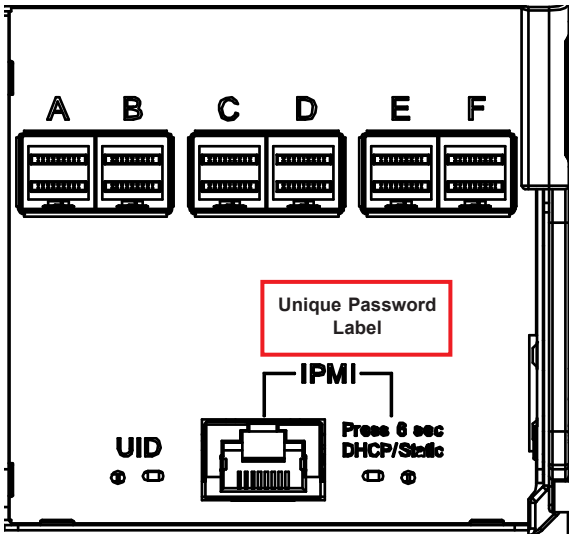


Figure 3-1. Unique Password Label Location

SAS Cables

This drawing shows connectors for SAS cabling for the JBOD. For primary and secondary, the connectors are marked **A**, **B**, **C**, **D**, **E**, and **F**. For the E1C model, SAS cables connect primary receptacles **A** to **F** to expander modules B (located between drives 15-29), D (located between drives 45-59), and F (located between drives 75-89). For the E2C model, SAS cables connect secondary receptacles **A** to **F** to expander modules A (located between drives 0-14), C (located between drives 30-44), and E (located between drives 60-74), and primary receptacles **A** to **F** to expander modules B (located between drives 15-29), D (located between drives 45-59), and F (located between drives 75-89).

Connect two mini-SAS HD cables (CBL-SAST-0690-1 and CBL-SAST-0677) from the head server node host bus adapter (HBA) card to the primary receptacles marked **A** and **B**. If using the E2C model for redundancy, connect two more mini-SAS HD cables to the secondary receptacles also marked **A** and **B**. Cables are described in Appendix B.

To cascade out, connect cables from the two receptacles marked **C** and **D** to the next JBOD storage enclosure (see Figures 3-3 and 3-4).

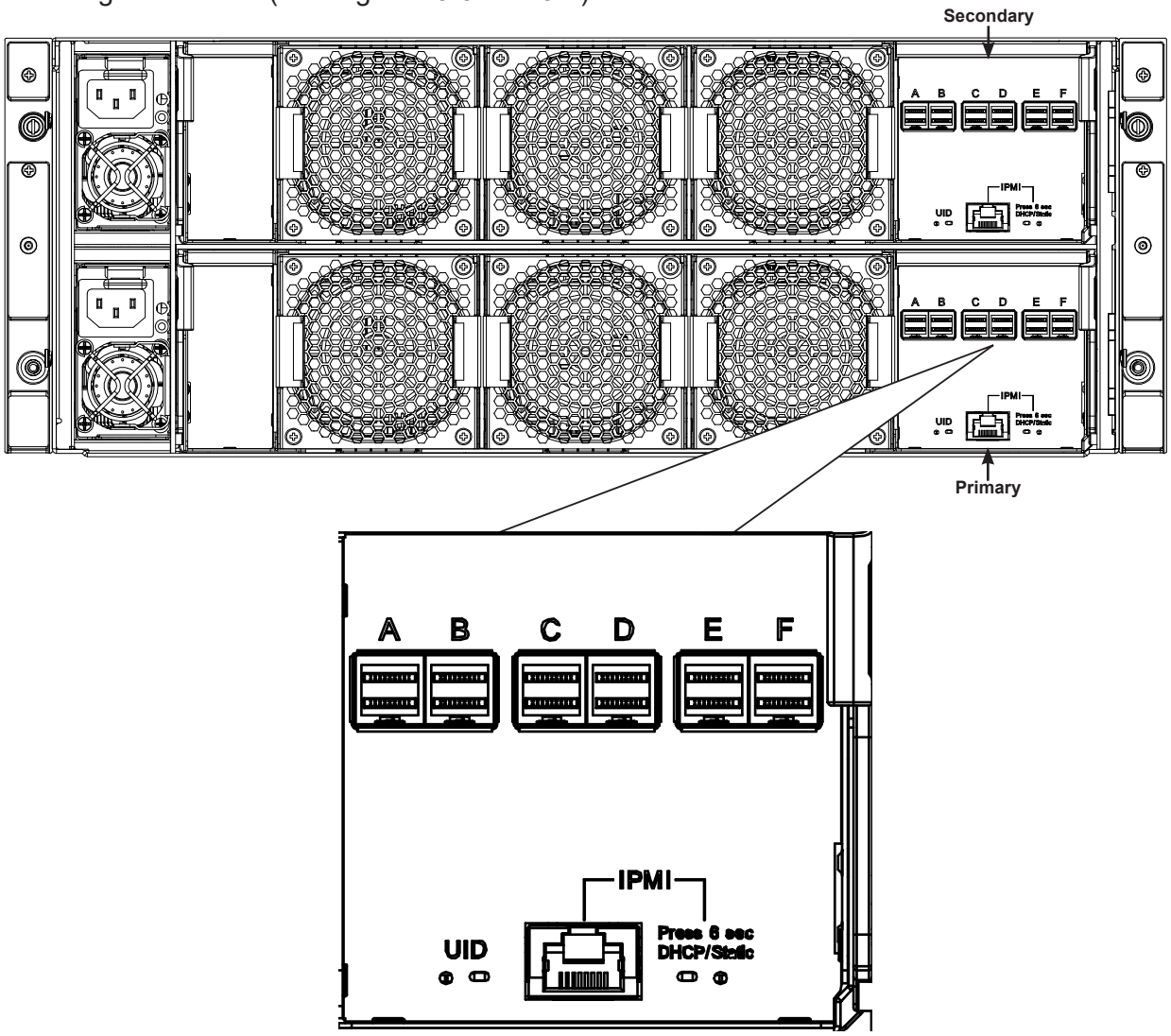


Figure 3-2. SAS and IPMI Cables

Cascading Storage

The following diagram shows a server with a single host bus adapter (HBA). The CSE-947H JBOD storage enclosure model E1C can accommodate this configuration.

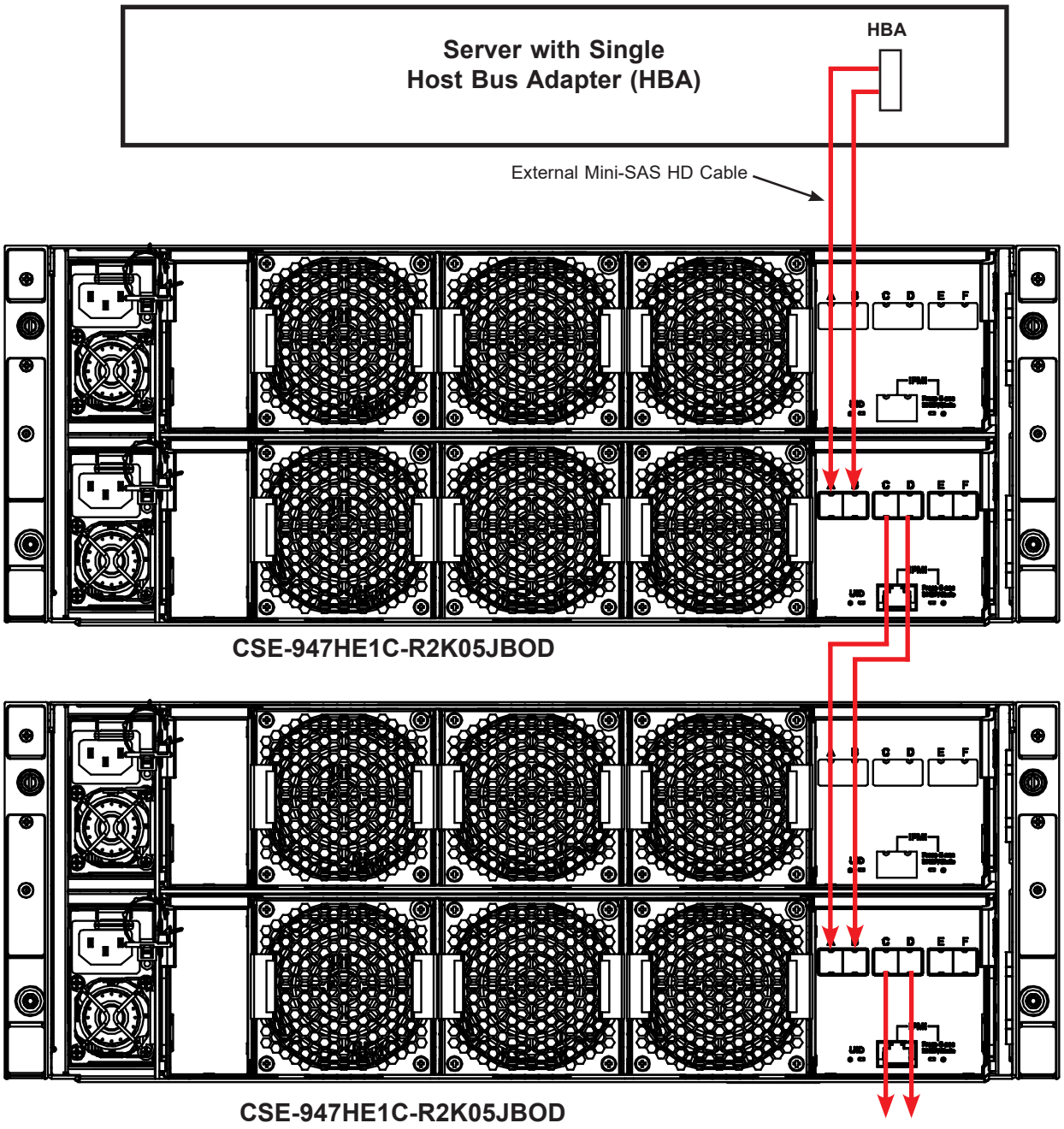


Figure 3-3. Sample Cascading Storage, Single HBA

The following diagram shows a server with two host bus adapters (HBAs). The CSE-947H JBOD storage enclosure model E2C can accommodate this configuration.

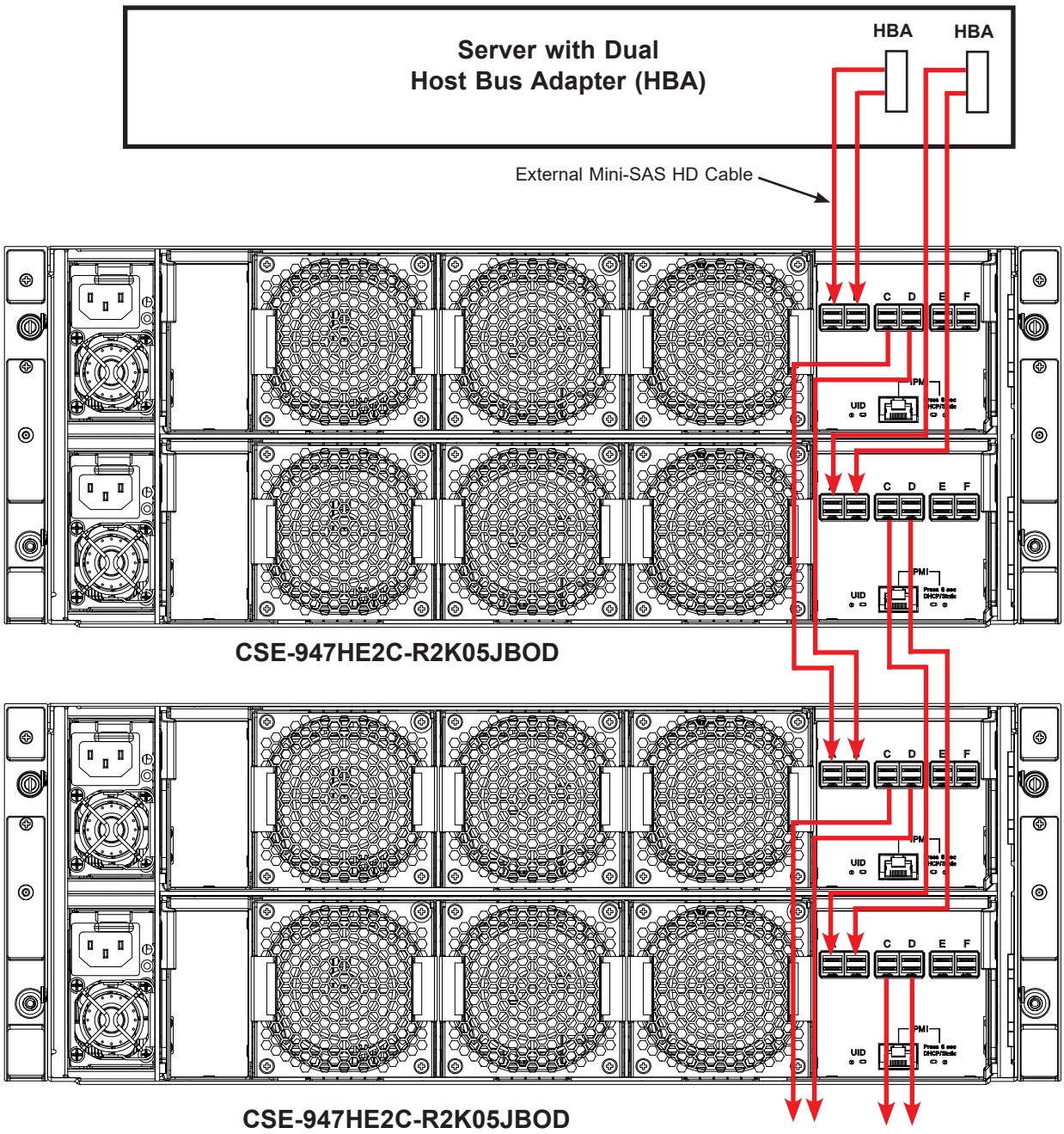


Figure 3-4. Sample Cascading Storage, Dual HBA

3.3 Accessing the Chassis

Drive bays can be accessed by pulling the HDD drawer forward out of the chassis. Other components can be accessed though the front or rear of the chassis.

Caution: Except for short periods of time, do not operate the server without the cover in place. It helps provide proper airflow and prevent overheating.

HDD Drawer Access

The drives of the CSE-947H can be accessed by opening the drawer that contains them.

Opening the HDD Drawer

1. A locking handle is on either side of the chassis front. To unlock the drawer, press the release buttons on the front handles down into the unlocked position.

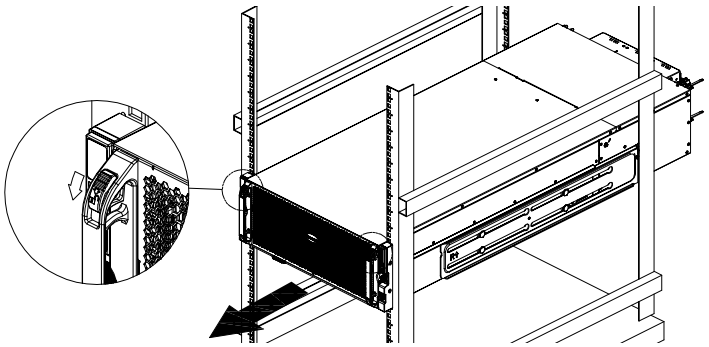


Figure 3-5. Unlocking the Drawer

2. Simultaneously pull both handles forward, sliding the HDD drawer out of the storage enclosure.

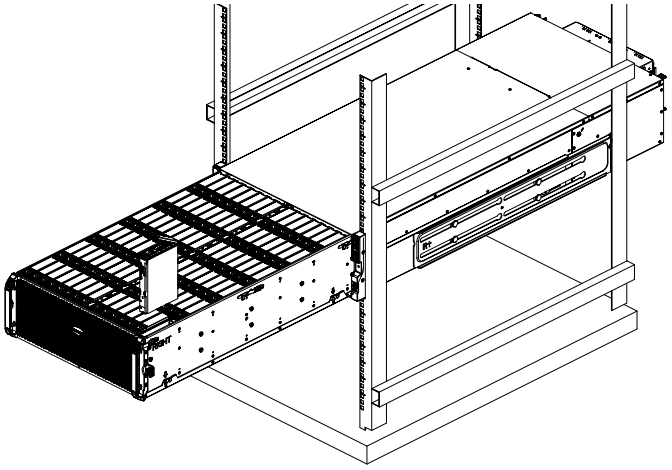


Figure 3-6. Opening the Drawer

3.4 Chassis Components

Hard Drives

The CSE-947H JBOD chassis supports 90 3.5" hard drives. They can be removed without powering down the system if your operating system supports RAID.

Hard Drive Carrier Indicators

Each hard drive carrier has two LED indicators: an activity indicator and a status indicator. The status indicator functions in RAID configurations. For non-RAID configurations, it remains off. See the table below for details.

Hard Drive Carrier LED Indicators			
	Color	**Blinking Pattern**	**Behavior for Device**
Activity LED	Blue	Solid on	Indicates a SAS drive
	Blue	Off	Indicates a SATA drive
	Blue	Blinking	Drive is actively being accessed
Status LED	Red	Solid on	Drive failed
	Red	Blinking at 1Hz	RAID is rebuilding
	Red	Blinking at 3Hz	Indicates a hot spare
	Red	Blinking at 4Hz	Locates a drive
	Red	Off	Idle

Note: Enterprise level hard disk drives are recommended for use in Supermicro chassis and servers. For information on recommended HDDs, visit the Supermicro website and check the "Drive Options" in the product webpage.

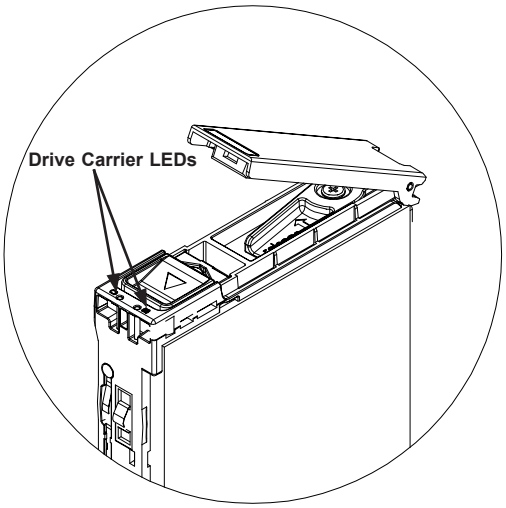


Figure 3-7. Hard Drive Carrier Indicators

Hard Drive Installation

The drives are mounted in drive carriers to simplify their installation and removal from the chassis. These carriers also help promote proper airflow through the drive bays.

Removing Hard Drive Carriers from the Chassis

1. Pull the storage enclosure forward out of the chassis.
2. Slide the release button on the drive carrier, which opens the carrier handle.



Figure 3-8. Sliding the Release Button on a Hard Drive Carrier

3. Use the drive carrier handle to pull the drive up out of the chassis.

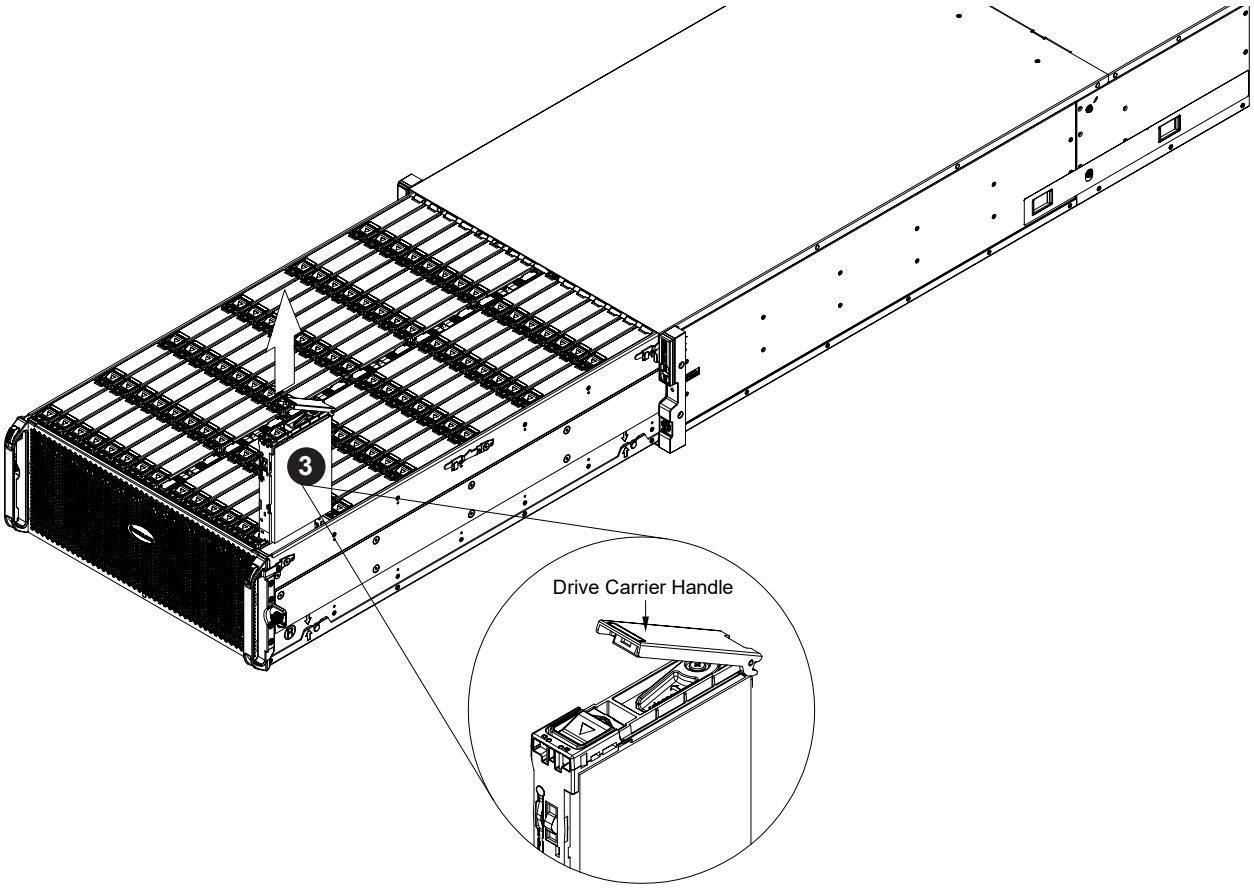


Figure 3-9. Removing a Hard Drive Carrier

Caution: Except for short periods of time, such as swapping hard drives, do not operate the server with the hard drive bays empty.

Installing a 3.5" Hard Disk Drive

With the drive carrier removed from the storage compartment:

1. Under the main the carrier handle, find and then lift the breakout lever and pull out the side of the carrier.

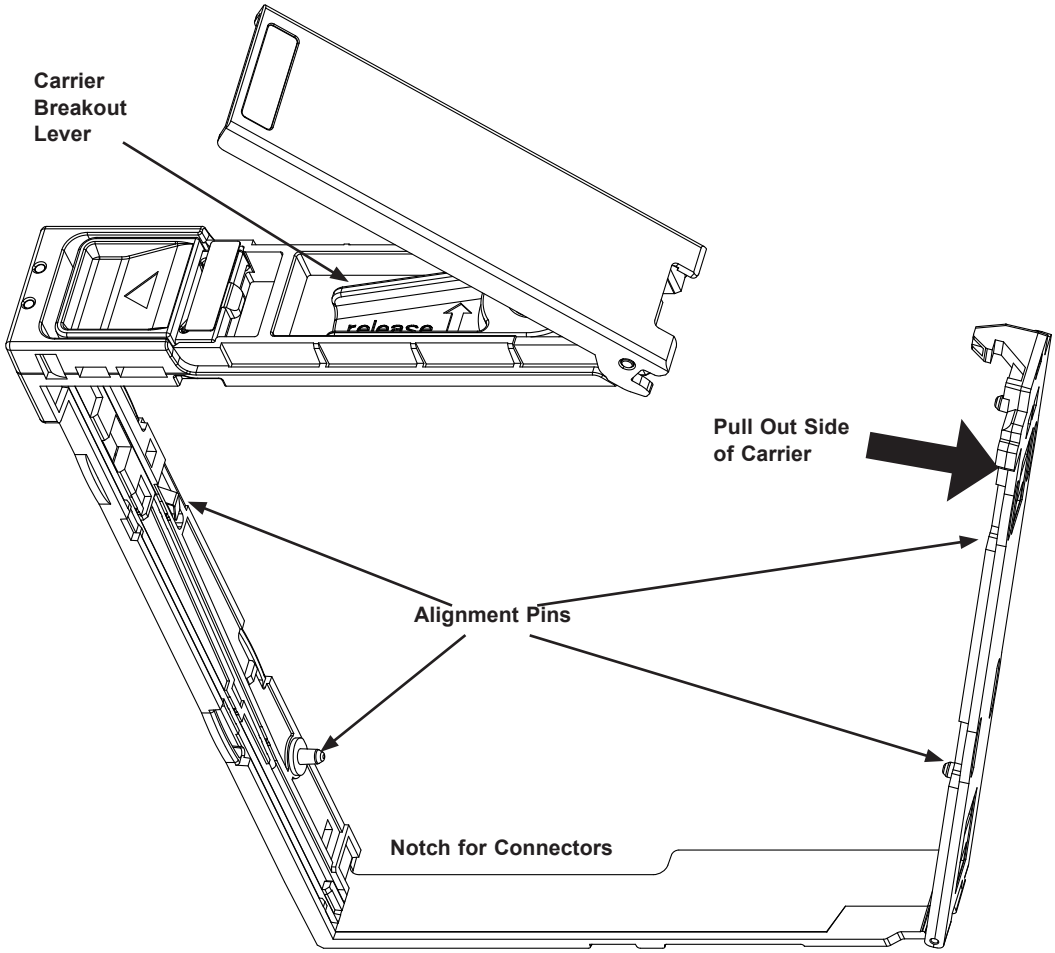


Figure 3-10. Drive Carrier Components

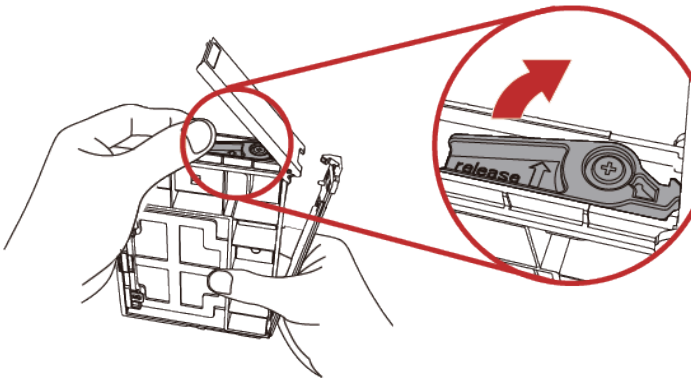


Figure 3-11. Opening the Drive Carrier

2. Remove the dummy drive from the carrier.

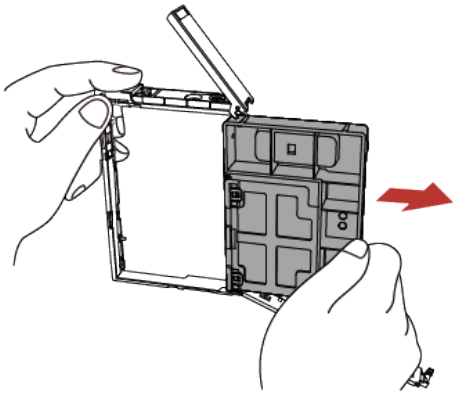


Figure 3-12. Removing the Drive

3. Insert the hard drive into the drive carrier. Orient the drive by matching the two alignment pins on the side and by noting the notch in the carrier for the HDD connectors. Close the side of the carrier until it snaps in place.

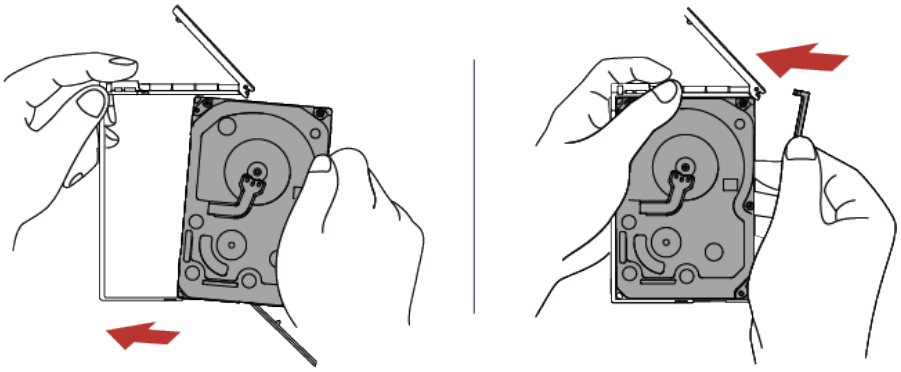


Figure 3-13. Inserting the Drive

4. Slide the carrier assembly into its spot in the chassis until it clicks into place. Then press the release button and push the drive carrier handle down into the locked position.

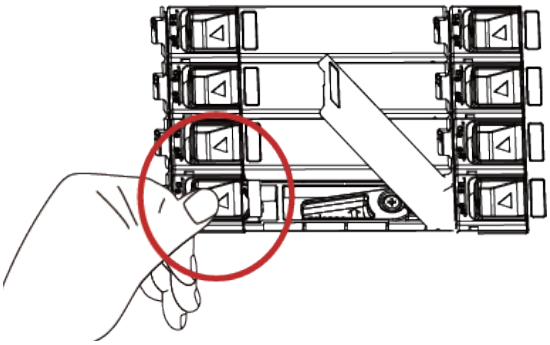


Figure 3-14. Pressing the Release Button

Installing a 2.5" Hard Disk Drive

With the drive carrier removed from the storage compartment:

1. Remove the pin from the carrier side and place it in the dummy tray for later use.

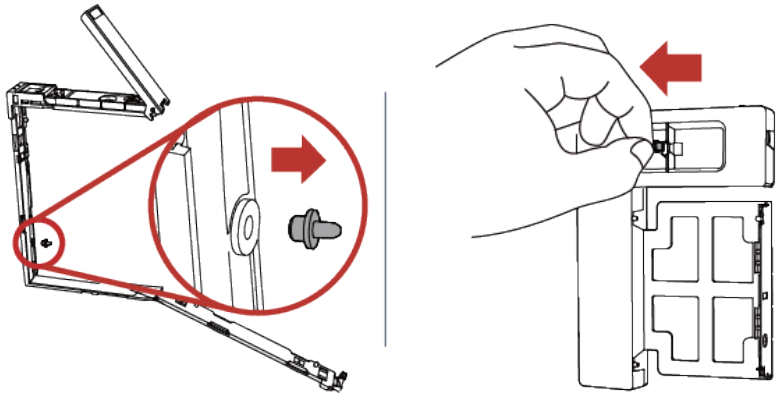


Figure 3-15. Removing the Carrier Pin

2. Insert the hard drive into the HDD dummy until it locks into place.

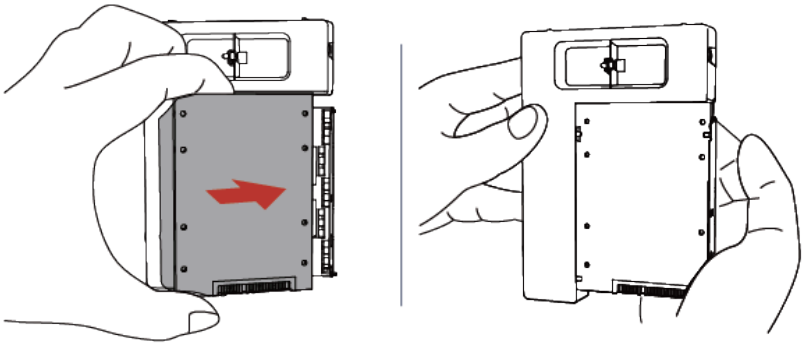


Figure 3-16. Inserting the Drive

3. Slide the carrier assembly into its spot in the chassis until it clicks into place. Then press the release button and push the drive carrier handle down into the locked position.

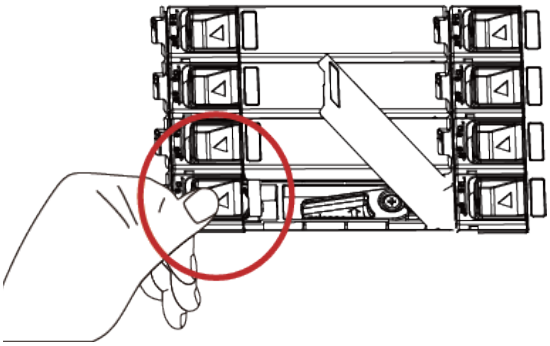


Figure 3-17. Pressing the Release Button

Expander Modules

The CSE-947HE1C-R2K05JBOD contains three BPN-SAS3-947EL expander modules, labelled B, D, and F. The CSE-947HE2C-R2K05JBOD contains six BPN-SAS3-947EL expander modules, labelled A, B, C, D, E, and F. Expander A is located between drives 0-14, expander B is located between drives 15-29, expander C is located between drives 30-44, expander D is located between drives 45-59, expander E is located between drives 60-74, and expander F is located between drives 75-89. Refer to Appendix C for more expander module information.

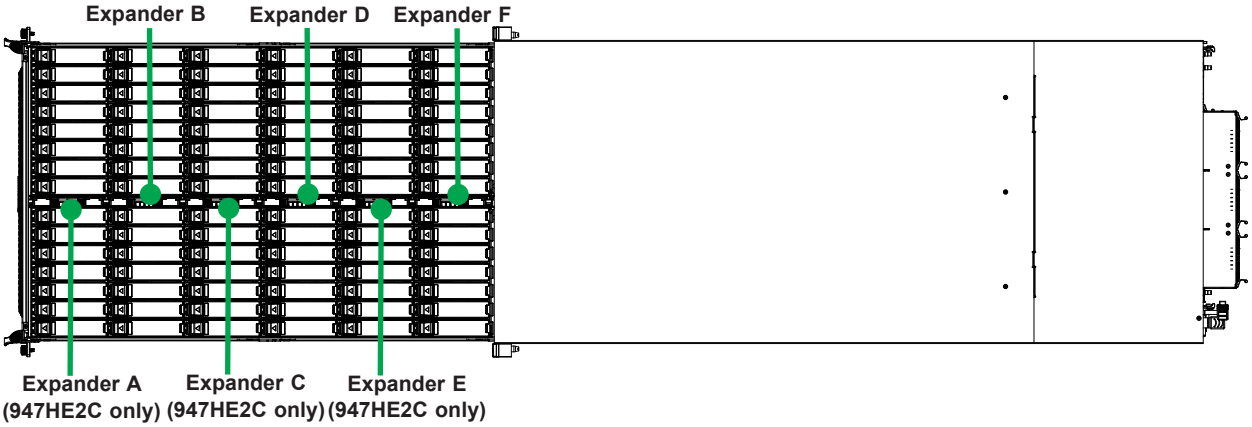


Figure 3-18. Top View of the Open Chassis

Removing an Expander Module from the Chassis

1. Each expander module has two latches on its top side, which lock the expander into place and must be opened to remove the expander from the chassis. Pull both latches up into the open position, as shown below.

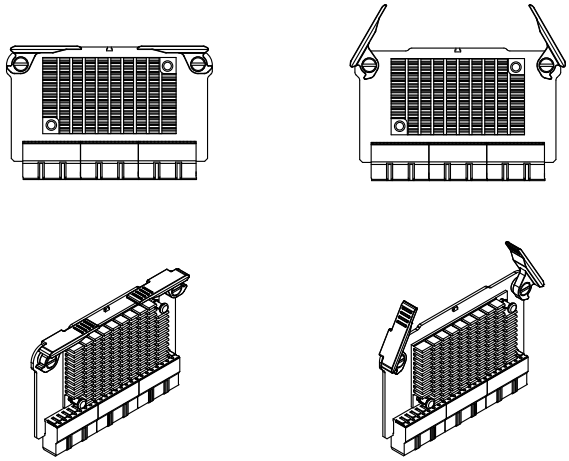


Figure 3-19. Expander Module Latches

2. Lift the unlocked expander module out of the chassis.

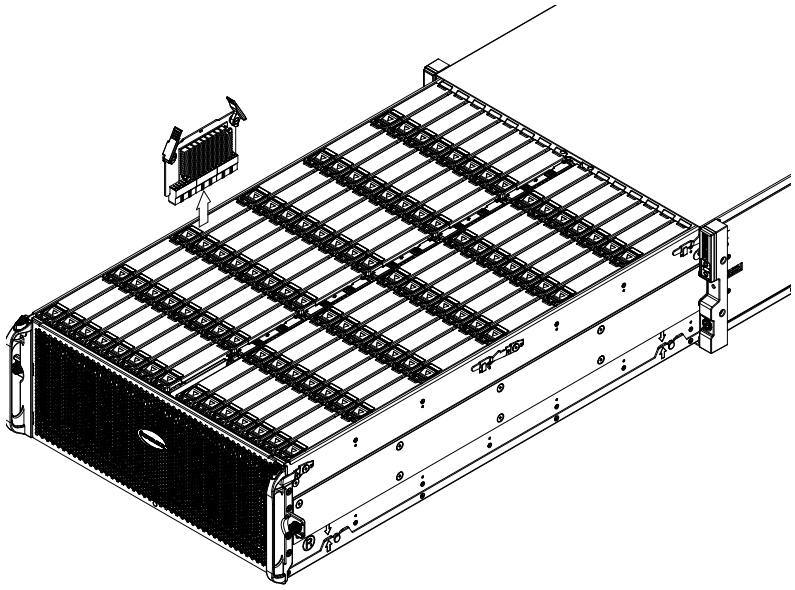


Figure 3-20. Removing an Expander Module

System Cooling

Six hot-swap, heavy-duty rear mounted fans provide cooling. They can be replaced without powering down the system.

Fan speed is controlled by a system temperature setting in IPMI. If a fan fails, the remaining fans will ramp up to full speed. Replace any failed fan at your earliest convenience with the same type and model. The system can continue to run with a failed fan.

Replacing a System Fan

1. While the power is running, examine the fans to determine which fan has failed.
2. On the failed fan, simultaneously squeeze the fan's side release tabs inward.

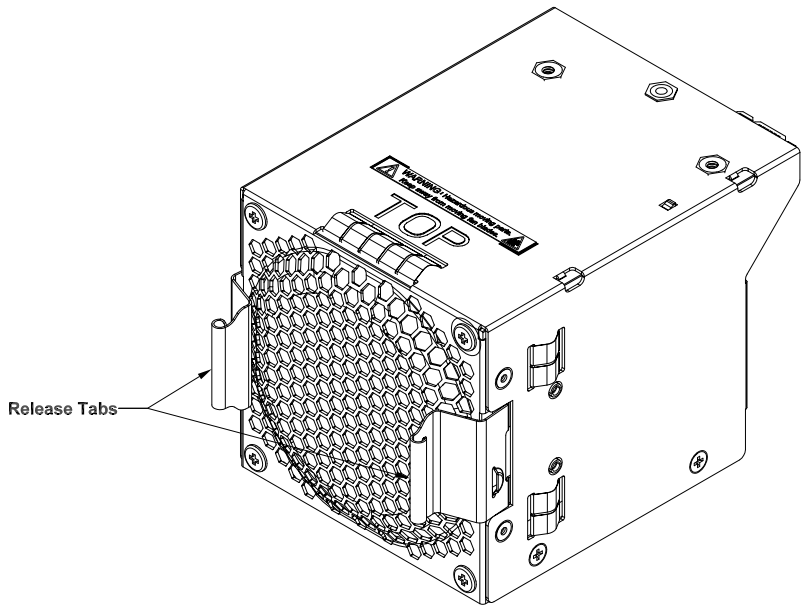


Figure 3-21. Fan Release Tabs

3. Pull the fan out of the motherboard sled using the tabs.

   Caution: Fans will continue to rotate for a brief time after removing them from the chassis. To avoid injury, keep fingers clear of the rotating fan blades.

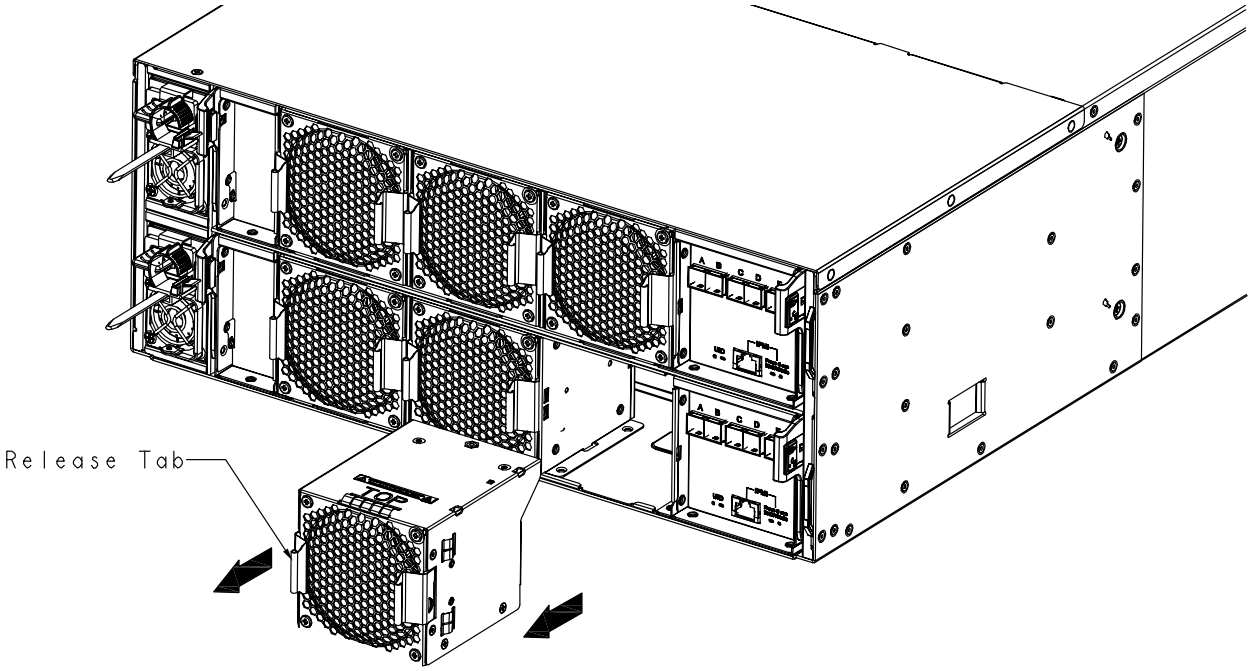


Figure 3-22. Removing a Fan or Drive from a Motherboard Sled

4. Place the new fan into the vacant fan bay and confirm that the fan is fully seated in the fan bay.

5. Make sure the new fan is functioning properly.

Checking the Server Air Flow

- Make sure there are no objects to obstruct airflow in and out of the server.
- If you are using a front bezel, make sure the bezel filter is replaced periodically.
- Do not operate the server without drives or drive trays in the drive bays.
- Use only recommended server parts.
- Make sure no wires or foreign objects obstruct air flow through the chassis. Pull all excess cabling out of the airflow path or use shorter cables.

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

Overheating

There are several possible responses if the system overheats.

Responses

If the enclosure overheats:

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

Power Supply

The chassis features redundant power supplies. The system will continue to operate if one module fails. It should be replaced as soon as is convenient. The power supply modules are hot-swappable, meaning they can be changed without powering down the system. New units can be ordered directly from Supermicro or authorized distributors.

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

Power Supply LEDs

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

- **Solid Green**: When illuminated, indicates that the power supply is on.
- **Solid Amber**: When illuminated, indicates the power supply is plugged in and turned off, or the system is off but in an abnormal state.
- **Blinking Amber**: When blinking, this system power supply temperature has reached 63C. The system will automatically power down when the power supply temperature reaches 70C and restart when the power supply temperature goes below 60C.

Changing the Power Supply Module:

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

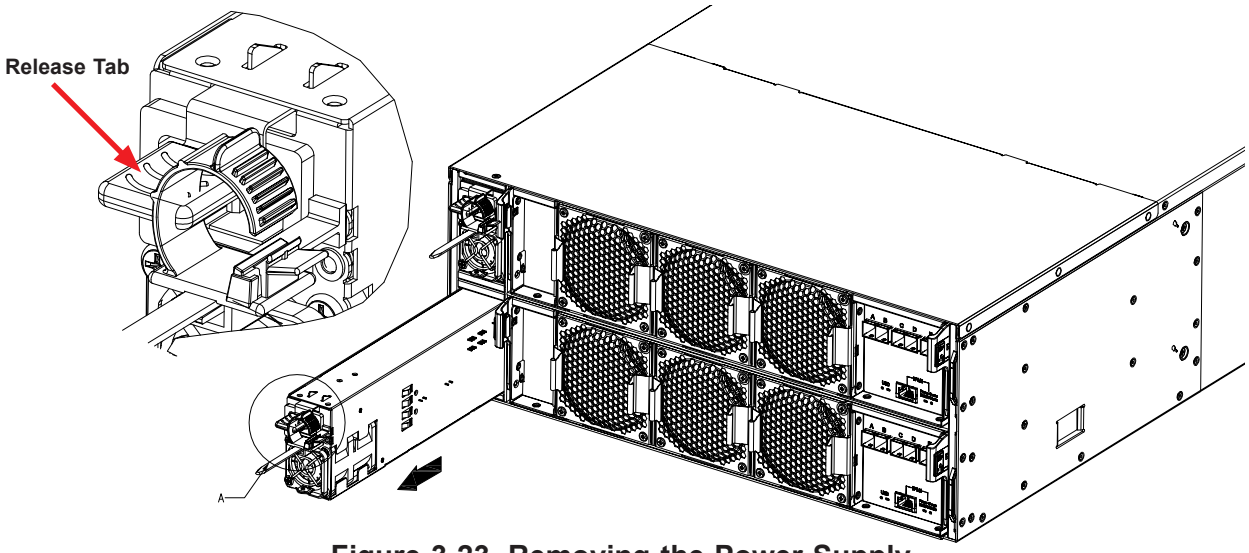


Figure 3-23. Removing the Power Supply

Removing the JBOD Control Board

The JBOD control board is mounted on a tray near the rear of the chassis. It should only be accessed in the rare event that a defective board must be serviced. If a replacement is necessary, the entire rear node should be replaced. **Note**: This procedure should only be performed by a qualified technician, in consultation with the Supermicro Technical Support team.

1. Power down the system as described in Section 3.1.
2. Remove the power supply modules.
3. On each side handle of the motherboard sled, slide the lock forward to unlock it.
4. Simultaneously press the release tabs on both handles and turn the handles forward and down, then pull the motherboard sled out of the chassis.

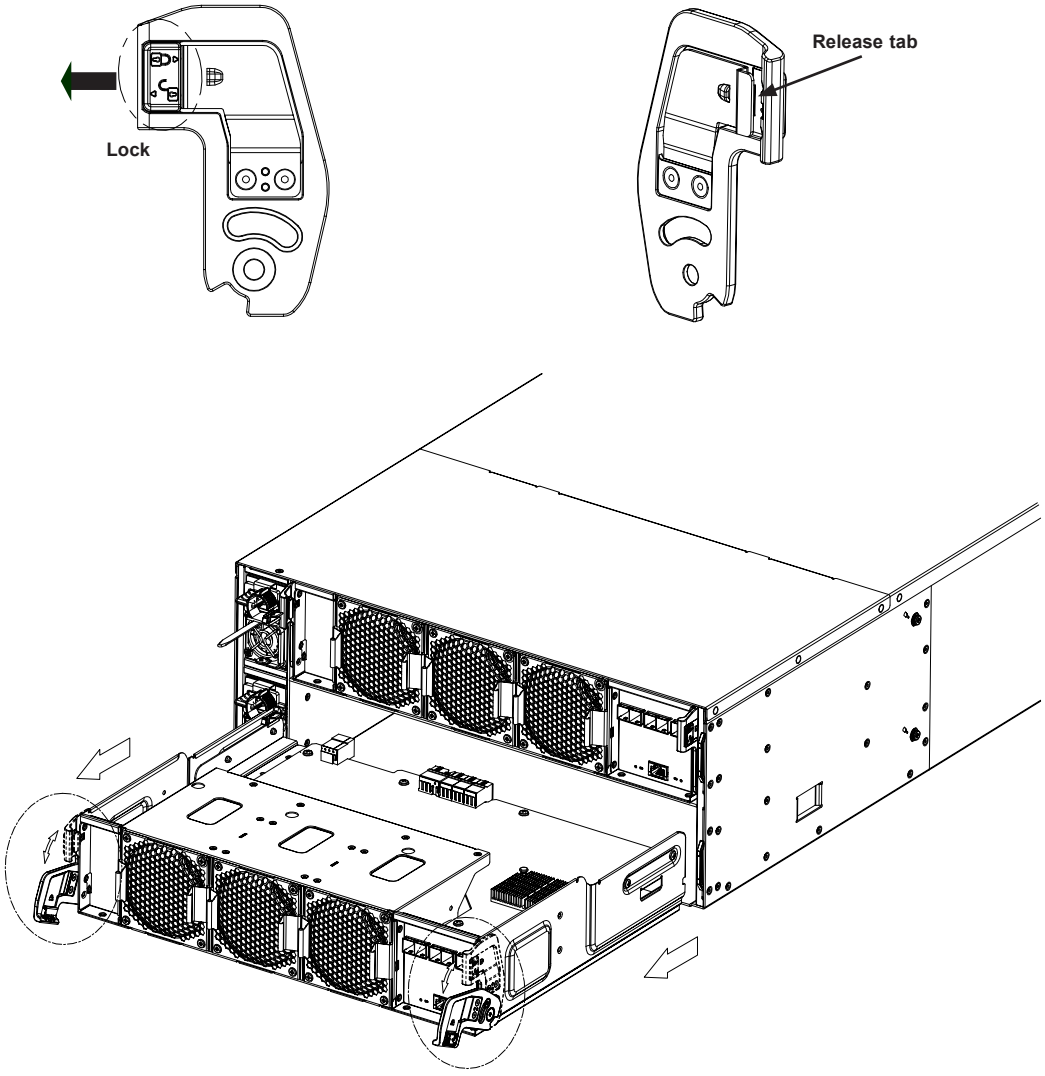


Figure 3-24. Removing a Motherboard Sled in a JBOD Chassis

5. Now the JBOD control board and I/O board are visible, installed in a motherboard tray. Disconnect all the cables connected on the boards, taking take note of the location for each connector, including the ATX power cable, FAN power cable, IPMI cable, I^2C cable, and control panel cable.

6. On both sides of the motherboard sled, remove the screws that secure the motherboard tray brackets to the motherboard sled.

7. Slide the motherboard tray out the motherboard sled away from the rear of the fans to unhook the tray from the screws on the floor of the sled, then lift the motherboard tray out.

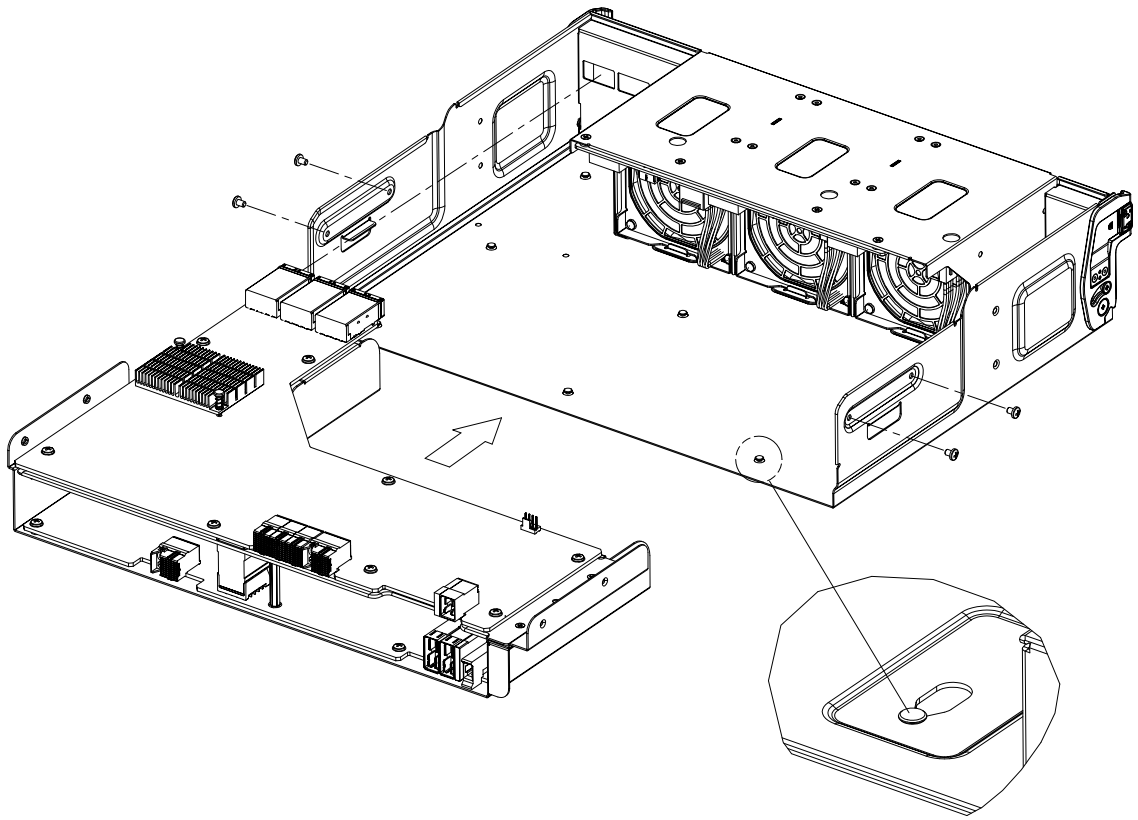


Figure 3-25. Removing the Motherboard Tray

8. Remove the screws securing the I/O board to the motherboard tray and lift it out of the tray, disconnecting it from the control board.

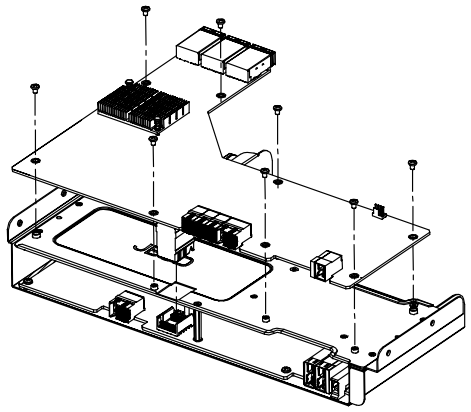


Figure 3-26. Removing the I/O Board

9. Remove the screws that hold the second tier of the motherboard tray in place and lift it off the tray brackets, as shown below.

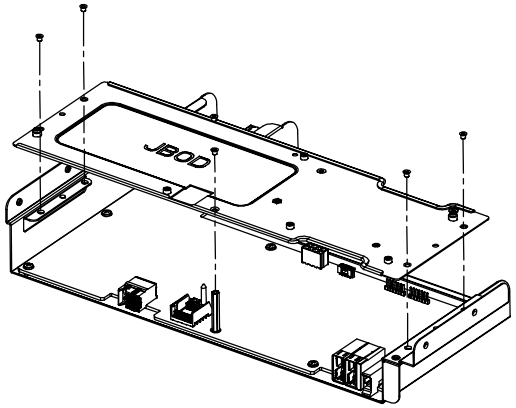


Figure 3-27. Removing the Second Tier of the Motherboard Tray

10. Remove the screws securing the control board to the motherboard tray, then lift the control board out.

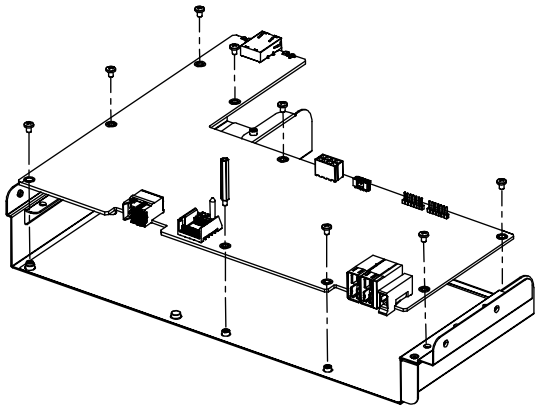


Figure 3-28. Removing the JBOD Control Board

Appendix A

Power Supply Specifications

This appendix lists power supply specifications for your chassis system.

2000W (Redundant)	
MFR Part #	PWS-2K05A-1R
AC Input	2000W Output @ 180-240V, 8-6A, 50-60Hz
DC Output	+12V/132A

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。

此警告符号代表危险。

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

此警告符號代表危險。

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

Warnung

WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

תקנון הצהרות אזהרה

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

יש לקרוא את הנספח במלואו לפני התקנת או הגדרת הרכיבים במארזי סופרמיקרו.

ا كً ف حالة وٌكي أى تتسبب ف اصابة جسد ةٌ هذا الزهز عٌ خطز !تحذ زٌ .
قبل أى تعول على أي هعذات،كي على علن بالوخاطز ال ٱجوة عي الذوائز
الكهزبائ ةٍ
وكي على درا ةٌ بالووارسات البقائ ةٍ لو عٌ وقع أي حادث
استخذم رقن الب إٍى الو صٌص ف هًا ةٌ كل تحذ زٌ للعشر تزجوتها

안전을 위한 주의사항

경고!

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

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

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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

BEWAAR DEZE INSTRUCTIES

Installation Instructions



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

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前,请先阅读安装说明。

警告

將系統與電源連接前，請先閱讀安裝說明。

Warnung

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

¡Advertencia!

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

Attention

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

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقر إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

Waarschuwing

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

Circuit Breaker



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

サーキット・ブレーカー

この製品は、短絡（過電流）保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

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

هذا المنتج يعتمد على معداث الحمايت مه الدوائرالقصيرة التي تم تثبيتها في
المبنى
تأكد من أن تقييم الجهاز الوقائي ليس أكثر من : 20A, 250V

경고!

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

Waarschuwing

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

Power Disconnection Warning

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



電源切断の警告

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

警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

警告

在您打開機殼安裝或移除內部元件前，必須將系統完全斷電，並移除電源線。

Warnung

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

¡Advertencia!

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

Attention

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

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

يجب فصم اننظاو من جميع مصادر انطاقت وإزانت سهك انكهرباء من وحدة امداد
انطاقت قبم
انصل إنى انمناطق انداخهيت نههيكم نتثبيج أو إزانت مكناث الجهاز

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

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

Equipment Installation



Warning! Only 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す。

警告
只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告
只有經過受訓且具資格人員才可安裝、更換與維修此設備。

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

¡Advertencia!

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

Attention

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

אזהרה!

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

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

경고!

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

Waarschuwing

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

Restricted Area



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

アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

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

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

אזור עם גישה מוגבלת

אזהרה!

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

تخصيص هذه انحذة نترك بُها ف مناطق محظورة تم .
،مَكن انصبل إن منطقت محظورة فقط من خلال استخذاو أداة خاصت
أو أ وس هُت أخري نلالأمما قفم ومفتاح

경고!

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

Waarschuwing

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

Battery Handling



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

電池の取り扱い

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

警告

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

警告

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

Warnung

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

Attention

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

¡Advertencia!

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

!אזהרה

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

هناك خطر من انفجار في حالة اسحبذال البطارية بطريقة غير صحيحة فعليل
اسحبذال البطارية
فقط بنفس النبع أو ما يعادلها مما أوصث به الشرمة المصنعة
جخلص من البطاريات المسحعملة وفقا لحعليمات الشرمة الصانعة

경고!

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

Waarschuwing

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

Redundant Power Supplies



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

冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

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

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

Warnung

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

¡Advertencia!

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

Attention

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

אם קיים יותר מספק אחד

אזהרה!

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

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة .

يجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

경고!

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

Waarschuwing

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

Backplane Voltage



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

バックプレーンの電圧

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

修理する際には注意ください。

警告

当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告

當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

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

¡Advertencia!

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

Attention

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

מתח בפנל האחורי

אזהרה!

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

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

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

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

Comply with Local and National Electrical Codes



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

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告
设备安装必须符合本地与本国电气法规。

警告
設備安裝必須符合本地與本國電氣法規。

Warnung
Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

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

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

תיאום חוקי החשמל הארצי

אזהרה!

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمتثل للقاويه المحلية 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 القانين واللائح البطنية عند

경고!

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

Waarschuwing

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

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

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

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה!

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

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

경고!

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

Waarschuwing

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

Power Cable and AC Adapter



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

電源コードとACアダプター

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

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

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

AC ימאתמו סיילמשח סילבכ

!הרהזא

ךרוצל ומאתוה וא ושכרנ רשא AC סימאתמו סיקפס ,סילבכב שמתשהל שי ,רצומה תא סיניקתמ רשאכ לכב שומיש . עקתהו לבכה לש הנוכנ הדימ ללוכ ,תוימוקמה תוחיטבה תושירדל ומאתוה רשאו ,הנקתהה למשחה יריש כמב שומישה יקוחל סאתהב .ילמשח רצק וא הלקתל סורגל לולע ,רחא גוסמ סאתמ וא לבכ לש דוק סהילע עיפומ רשאכ) CSA-ב וא UL -ב סיכמסומה סילבכב שמתשהל רוסיא סייק ,תוחיטבה יקוחו .דבלב Supermicro י"ע סאתוה רשא רצומב קר אלא ,רחא ילמשח רצומ לכ רובע UL/CSA)

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

전원 케이블 및 AC 어댑터

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

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

Stroomkabel en AC-Adapter

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

Appendix C

Backplane Specifications

This appendix provides details about the BPN-SAS3-947EB, BPN-SAS3-947EL, BPN-ADP-30SAS3-1/2, and BPN-SAS3-947SB backplanes.

C.1 Safety Guidelines

ESD Safety Guidelines

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

- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing a component from the antistatic bag.
- Handle the backplane by its edges only; do not touch its components, peripheral chips, memory modules or gold contacts.
- When handling chips or modules, avoid touching their pins.
- Put the backplane and peripherals back into their antistatic bags when not in use.

General Safety Guidelines

- Always disconnect power cables before installing or removing any components from the computer, including the backplane.
- Disconnect the power cable before installing or removing any cables from the backplane.
- Make sure that the backplane is securely and properly installed on the motherboard to prevent damage to the system due to power shortage.

C.2 Version Information

The BPN-SAS3-947EB, BPN-SAS3-947EL, BPN-ADP-30SAS3-1/2, and BPN-SAS3-947SB backplanes have been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

Always refer to the Supermicro website at www.supermicro.com for the latest updates, compatible parts and supported configurations.

C.3 Components and LEDs

Backplane Connectors and Jumpers

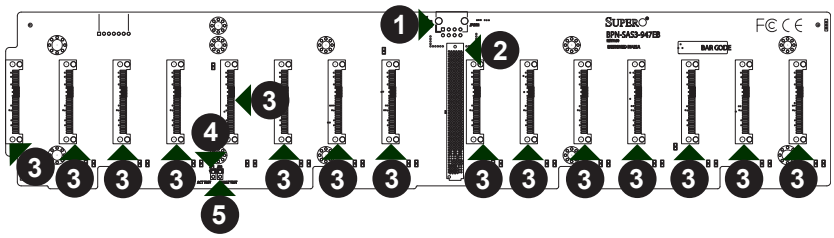


Figure C-1. Front Connectors of BPN-SAS3-947EB

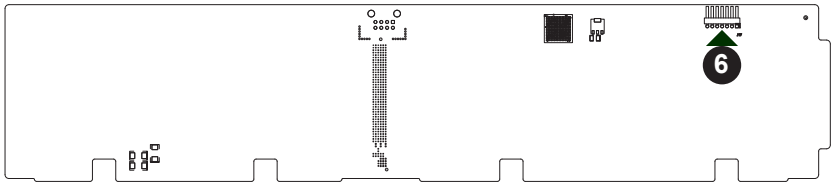


Figure C-2. Rear Connector of BPN-SAS3-947EB

1. Power Connector: JPWR1.
2. Adapter Board Connector: J16.
3. SAS/SATA Drive Connectors: J1-J15.
4. Activity Test Jumper: JP1 (for manufacturer's use only).
5. Fault Test Jumper: JP2 (for manufacturer's use only).
6. CPLD Programming Connector: J17 (for manufacturer's use only).

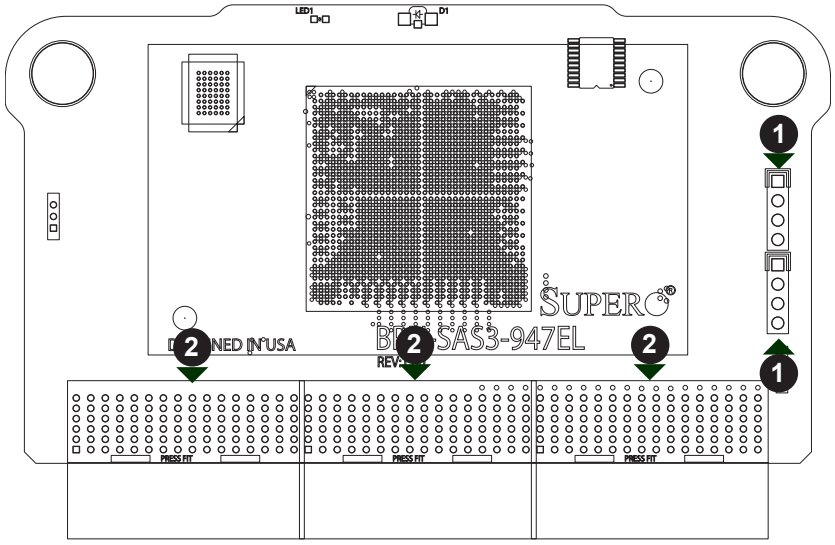


Figure C-3. Front Connectors & Jumpers of BPN-SAS3-947EL

1. Manufacturing Test Jumpers: JP1 and JP2 (for manufacturer's use only).
2. Adapter Board Connectors: J1, J2, and J3.

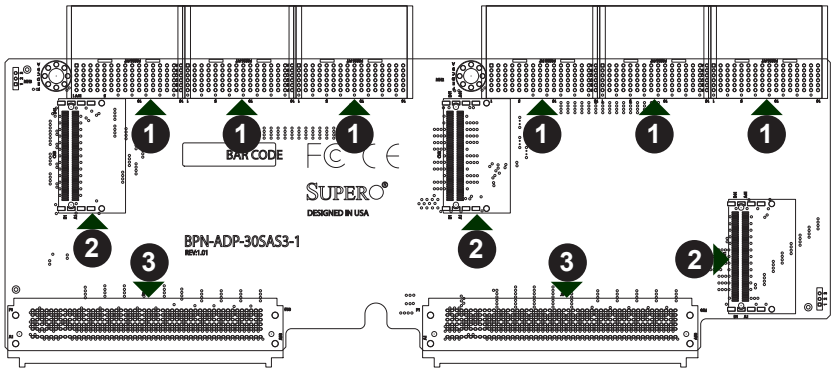


Figure C-4. Front Connectors of BPN-ADP-30SAS3-1

1. Expander Connectors: J1-J6.
2. SAS Signal Connectors to BPN-SAS3-947SB Midplane: CN1-CN3.
3. Backplane Connectors: J7 and J8.

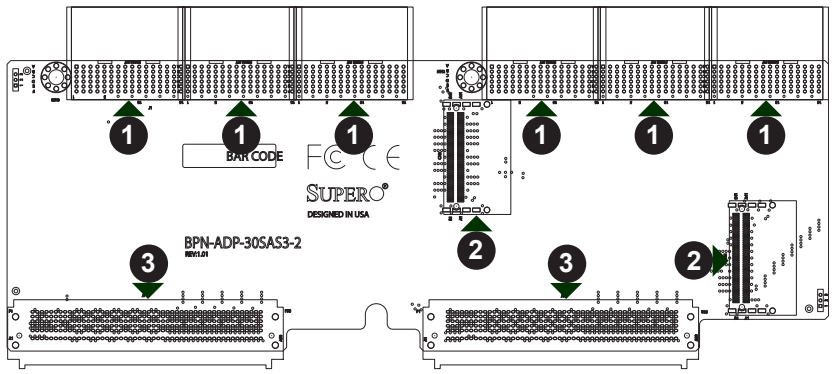


Figure C-5. Front Connectors of BPN-ADP-30SAS3-2

1. Expander Connectors: J1-J6.
2. SAS Signal Connectors to BPN-SAS3-947SB Midplane: CN1 and CN2.
3. Backplane Connectors: J7 and J8.

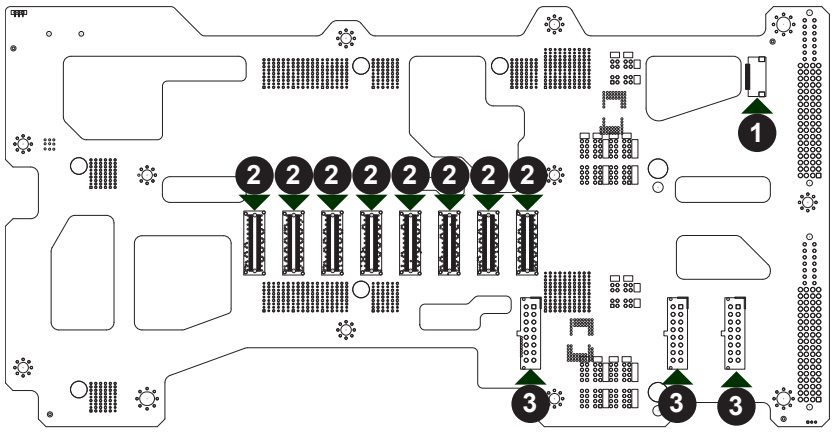


Figure C-6. Front Connectors of BPN-SAS3-947SB

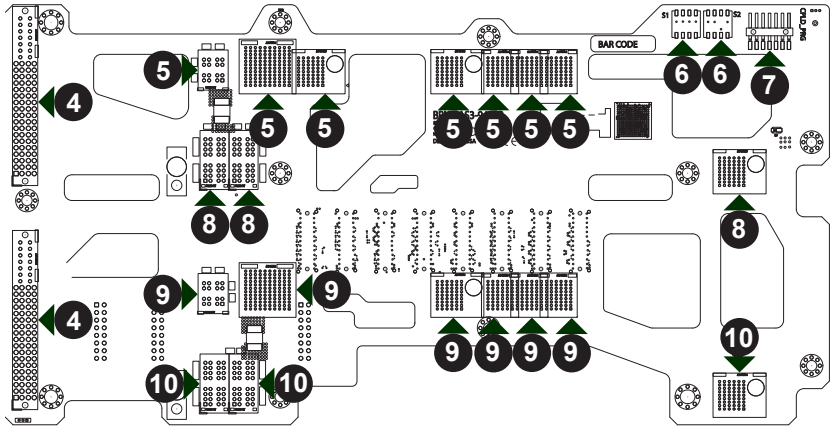


Figure C-7. Rear Connectors of BPN-SAS3-947SB

1. Front Panel Power Connector: J43.
2. SAS Signal Connectors to Adapter Board: CN1-CN8.
3. Power Connectors to BPN-SAS3-947EB HDD Backplane: JPWR1, JPWR2, and JPWR3.
4. System PSU Power Connectors: J31 and J30.
5. Secondary I/O Board Connectors: BBCN3-BBCN9.
6. DIP Switches for Configuring SKU Model: S1 and S2 (for manufacturer's use only).
7. CPLD Programming Jumper: JP1 (for manufacturer's use only).
8. Secondary Control Board Connectors: BBCN1 and BBCN21-BBCN22.
9. Primary I/O Board Connectors: ABCN3-ABCN6 and ABCN8-ABCN9.
10. Primary Control Board Connectors: ABCN1 and ABCN21-ABCN22.

Backplane LED Indicators

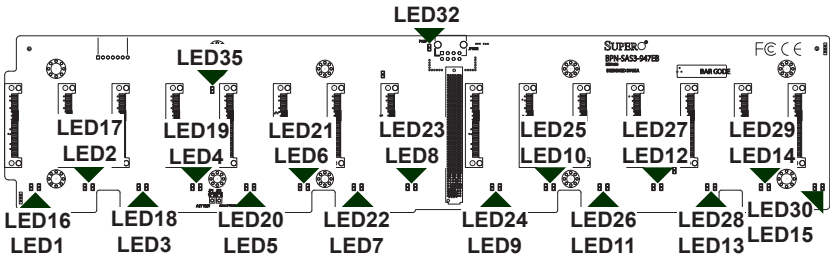


Figure C-8. Front LEDs of BPN-SAS3-947EB

Drive LED Indicators		
Drive Number	**HDD Activity LED (blue)**	**HDD Failure LED (red)**
SAS #1	LED1	LED16
SAS #2	LED2	LED17
SAS #3	LED3	LED18
SAS #4	LED4	LED19
SAS #5	LED5	LED20
SAS #6	LED6	LED21
SAS #7	LED7	LED22
SAS #8	LED8	LED23
SAS #9	LED9	LED24
SAS #10	LED10	LED25
SAS #11	LED11	LED26
SAS #12	LED12	LED27
SAS #13	LED13	LED28
SAS #14	LED14	LED29
SAS #15	LED15	LED30

Other BPN-SAS3-947EB LED Indicators	
LED	**Description**
LED32	P12V LED: An illuminated LED indicates P12V is present
LED35	P3V3 LED: An illuminated LED indicates P3.3V is present

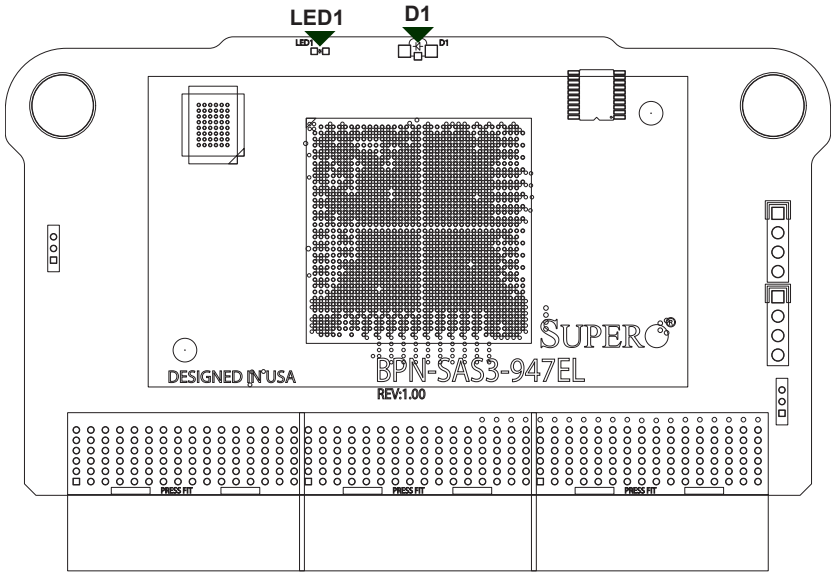


Figure C-9. Front LEDs of BPN-SAS3-947EL

BPN-SAS3-947EL LED Indicators	
LED	**Description**
LED1	Heartbeat LED: A green LED indicates that expander is functioning
D1	Status LED: A red LED indicates a fault

Expander LED Indicators			
	Color	**Blinking Pattern**	**Behavior for Device**
Activity LED	Blue	Solid On	SAS drive installed
	Blue	Blinking	I/O activity
Status LED	Red	Solid On	Failure of drive with RSTe support
	Red	Blinking at 1 Hz	Rebuild drive with RSTe support
	Red	Blinking with two blinks and one stop at 1 Hz	Hot spare for drive with RSTe support
	Red	On for five seconds, then off	Power on for drive with RSTe support
	Red	Blinking at 4 Hz	Identify drive with RSTe support

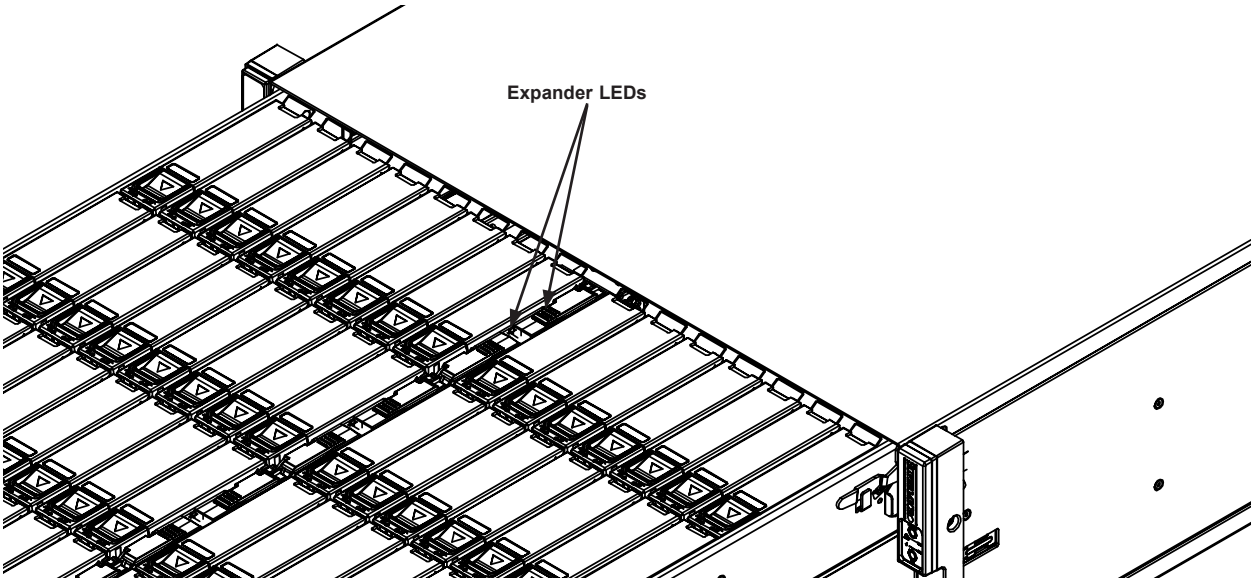


Figure C-10. Location of BPN-SAS3-947EL LEDs in the Chassis

Appendix D

JBOD Control Board

D.1 Overview

The JBOD motherboard tray contains I/O board BPN-SAS3-947HEL-JB and control board BPN-SAS3-947HCB-JB. The BPN-SAS3-947HCB-JB model JBOD control board allows the user to remotely control and monitor the chassis resources using IPMI, such as powering on or off, controlling fan speeds, and reading temperature data from the backplane. It has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

This manual reflects the most current release of the boards available at the time of publication. Refer to the Supermicro web site at www.supermicro.com for the latest updates, compatible parts, and supported configurations.

D.2 Safety Guidelines

ESD Safety Guidelines

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

- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing a component from the antistatic bag.
- Handle the control board by its edges only; do not touch its components, peripheral chips, memory modules, or gold contacts.
- When handling chips or modules, avoid touching their pins.
- Put the control board and peripherals back into their antistatic bags when not in use.

General Safety Guidelines

- Always disconnect power cables before installing or removing any components from the computer, including the control board.
- Disconnect the power cable before installing or removing any cables from the control board.
- Make sure that the control board is securely and properly installed in the chassis to prevent damage to the system due to power shortage.

D.3 Components, Connectors, and Jumpers

Component and Connector Locations

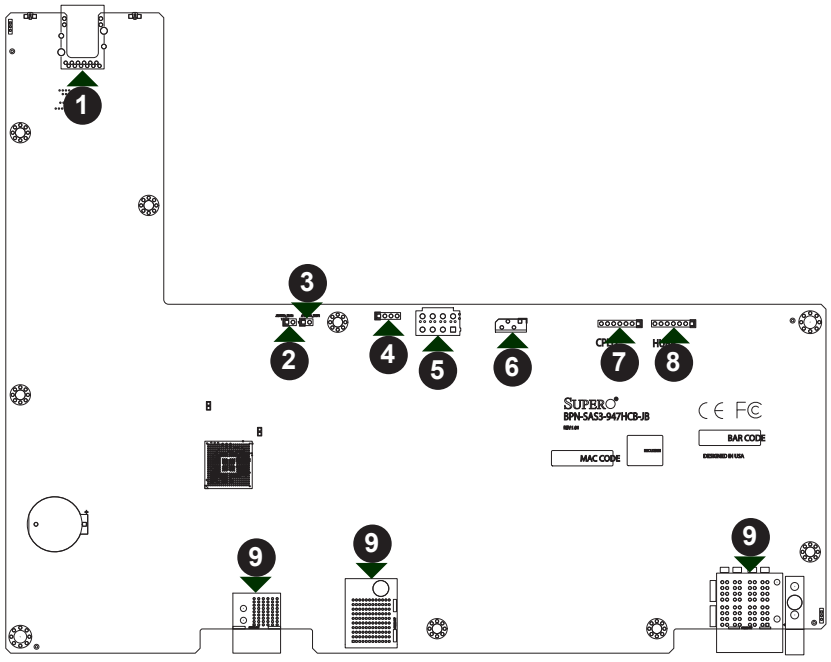


Figure D-1. Front Connectors & Jumpers of BPN-SAS3-947HCB-JB

1. IPMI Port: J2.
2. Reset Button Test Jumper: JRSTBTN_ TEST1 (for manufacturer's use only).
3. Power Button Test Jumper: JPWRBTN_ TEST1 (for manufacturer's use only).
4. Debug COM Port: JP2 (for manufacturer's use only).
5. Fan Power Connector: JFANPW1.
6. Fan Connector: JFAN1.
7. CPLD Programming Connector: JP1.
8. HUBA Programming Connector: JHUBA_ PRG1.
9. Midplane Connectors: BCN1, BCN2, and JMCN1.

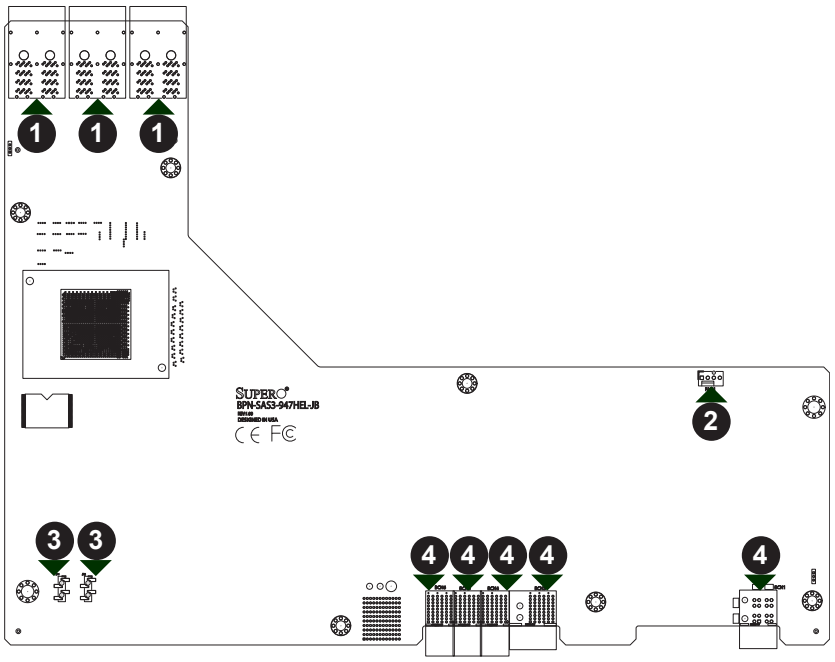


Figure D-2. Front Connectors of BPN-SAS3-947HEL-JB

1. Mini-SAS HD Ports: J1, J2, and J3.
2. Fan Connector: FAN1.
3. Manufacturing Test Jumpers: JP1 and JP2 (for manufacturer's use only).
4. Midplane Connectors: BCN1 and BCN3-BCN6.

D.4 JBOD Power Up/Power Down Sequences

There are several procedures to turn on or off the system with the JBOD control board.

Power Up

First Use or Power Cord Plug-In

1. Plug the power cords into the rear of the power supplies.
2. Press the power button once. The JBOD control board will initiate the power up sequence.

After Normal Shutdown by IPMI or Power Button

Press the power button once. The JBOD control board will initiate the power up sequence.

After a Power Loss

The system will power up automatically after the power returns.

Power Down

Hold down the power button for at least 4 seconds. The JBOD will power down.

D.5 Searching for JBOD IPMI IP Address (DHCP)

Using SAS in-band (Linux)

1. Identify the JBOD enclosure name, such as /dev/sg4.
2. Use the vpd command to view the JBOD IP address.

```
[root@hdmaster user]# sg_vpd -p 0x85 /dev/sg4
Management network addresses VPD page:
  Target device that contains addressed lu, Service type: unspecified
    172.31.40.150
[root@hdmaster user]#
```