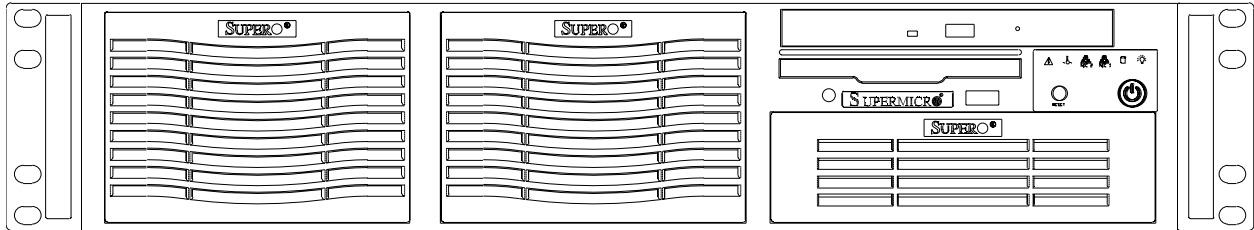
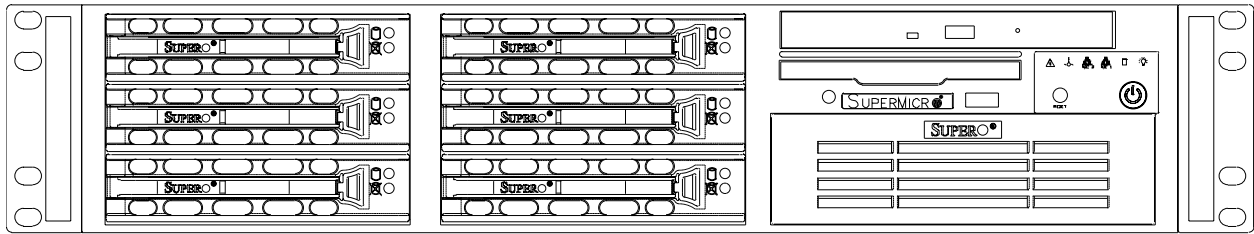




# SC822 Chassis



SC822T-333LPB

SC822i-333LPB

## USER'S MANUAL

Revision 2.0

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Manual Revision 2.0

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# Preface

## About this Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the chassis. 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. Check the Supermicro website for possible updates.(<http://www.supermicro.com>).

## Notes

Information on this and other chassis is available on the Supermicro website.

- Supermicro product manuals: <http://www.supermicro.com/support/manuals/>
- Product safety info: [http://www.supermicro.com/about/policies/safety\\_information.cfm](http://www.supermicro.com/about/policies/safety_information.cfm)

If you have any questions, please contact our support team at:  
[support@supermicro.com](mailto:support@supermicro.com).

## Warnings

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



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



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

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# Chapter 1

## Introduction

Supermicro's award-winning SC822 2U chassis offers superb benchmark performance, available in two configurations.

### 1.1 Overview

This chapter provides a brief outline of the functions and features of the SC822.

Models of this chassis are listed below.

<b>SC822 Chassis Models</b>			
<b>Model</b>	<b>Drives</b>	<b>PCI slots</b>	<b>Power Supply</b>
SC822T-333LPB	6 hot-swap	7 low-profile	330 W, 80 Plus Gold level
SC822i-333LPB	6 fixed	7 low-profile	330 W, 80 Plus Gold level

### 1.2 Unpacking the System

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



## 1.3 System Features

The following table provides an overview of the main features of the SC822.

<b>System Features</b>
<b>Drives Bays</b>
Six 3.5" fixed or hot-swap drives; (SC822T includes a SAS backplane BPN-SAS-823T) One slim DVD bay One floppy-size bay One 5.25" bay
<b>Power</b>
330/380 W DC output, 80 Plus Gold level, PWS-333-1H
<b>Cooling</b>
Four 8-cm, 4-pin PWM mid-chassis fans
<b>Expansion Slots</b>
Seven PCIe low profile slots
<b>Form Factor</b>
2U rackmount; dimensions (WxHxD): 16.8 x 3.5 x 25.6 in. (426 x 89 x 650 mm)
<b>Motherboard Support</b>
Maximum motherboard sizes: E-ATX 12" x 13", ATX 12" x 10"; single or dual Intel or AMD processors

## 1.4 Chassis Features

### Control Panel

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

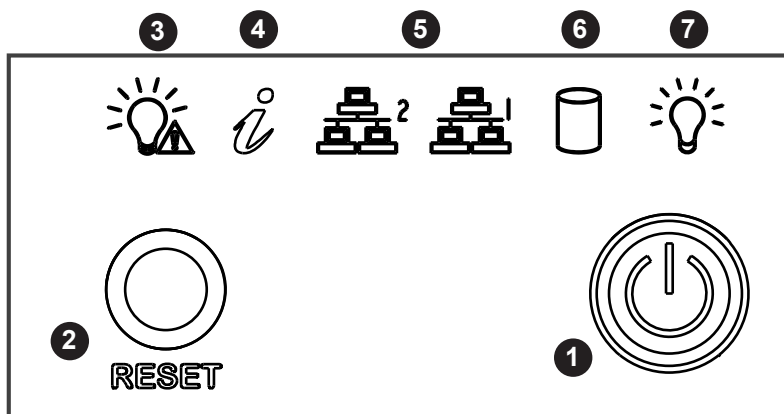


Figure 1-1. Control Panel

Control Panel Features		
Item	Features	Description
1	Power button	The main power switch applies or removes primary power from the power supply to the server but maintains standby power.
2	Reset button	Reboots the system
3	Power Fail LED	Indicates a power supply module has failed.
4	Information LED	Alerts operator to several states, as noted in the table below.
5	NIC LEDs (2)	Two LEDs indicates network activity on the LAN when flashing.
6	HDD LED	Indicates activity on the storage drive when flashing.
7	Power LED	Indicates power is being supplied to the system power supply units. This LED is illuminated when the system is operating normally.

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 illustration below shows the features included on the front of the chassis. Externally accessible hard drive carriers display status lights.

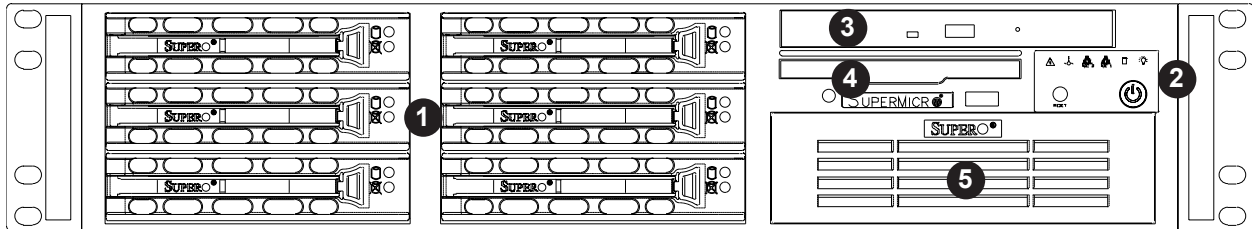


Figure 1-2. Front View, Hot-swap Drives (SC822T)

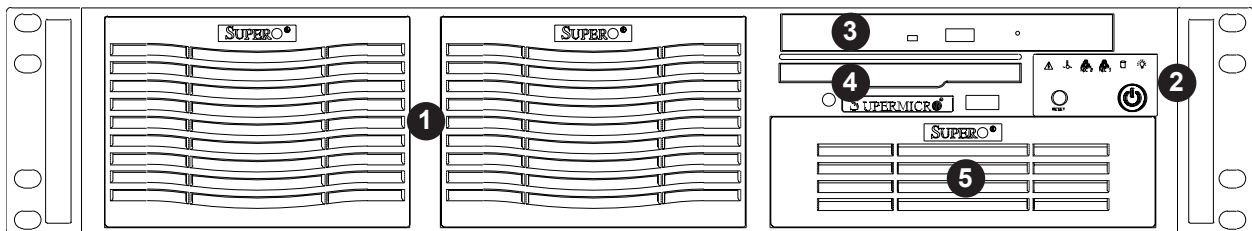


Figure 1-3. Front View, Fixed Drives (SC822i)

Chassis Front Features		
Item	Features	Description
1	Storage Drives	Six storage drives, hot-swap or internal
2	Control Panel	Power control and status indicators
3	Peripheral Bay	Slim DVD drive or other I/O device kit such as USB or HDD
4	Peripheral Bay	Floppy or other I/O device such as USB or HDD
5	Peripheral Bay	5.25" bay, for I/O device such as USB or HDD

## Chassis Rear

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

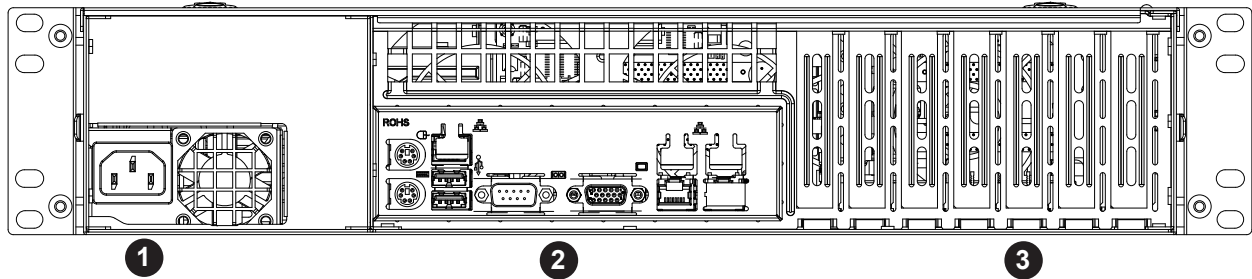


Figure 1-4. Rear View

Chassis Rear Features		
Item	Features	Description
1	Power supply	Fixed; cooling fan and AC cord input
2	I/O ports	Input/output ports
3	PCI	Seven low-profile slots

## 1.5 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.

## 1.6 Returning Merchandise for Service

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

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

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

# Rack Installation

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.

## **Server Precautions**

- Review the electrical and general safety precautions in the appendix, "Standardized Safety Warnings" in this manual.
- 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.
- 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 racks on the market, that may require a slightly different assembly procedure. The following is a basic guideline for installing the system into a rack with the hardware provided. You should also refer to the installation instructions that came with the specific rack you are using.

Do not use a two post "telco" type rack. This rail set fits a rack between 28" and 33" deep.

### Identifying the Rails

The chassis package includes two rail assemblies. Each assembly consists of three sections: An inner rail that secures directly to the chassis, an outer rail that secures to the rack, and a middle rail which extends from the outer rail.

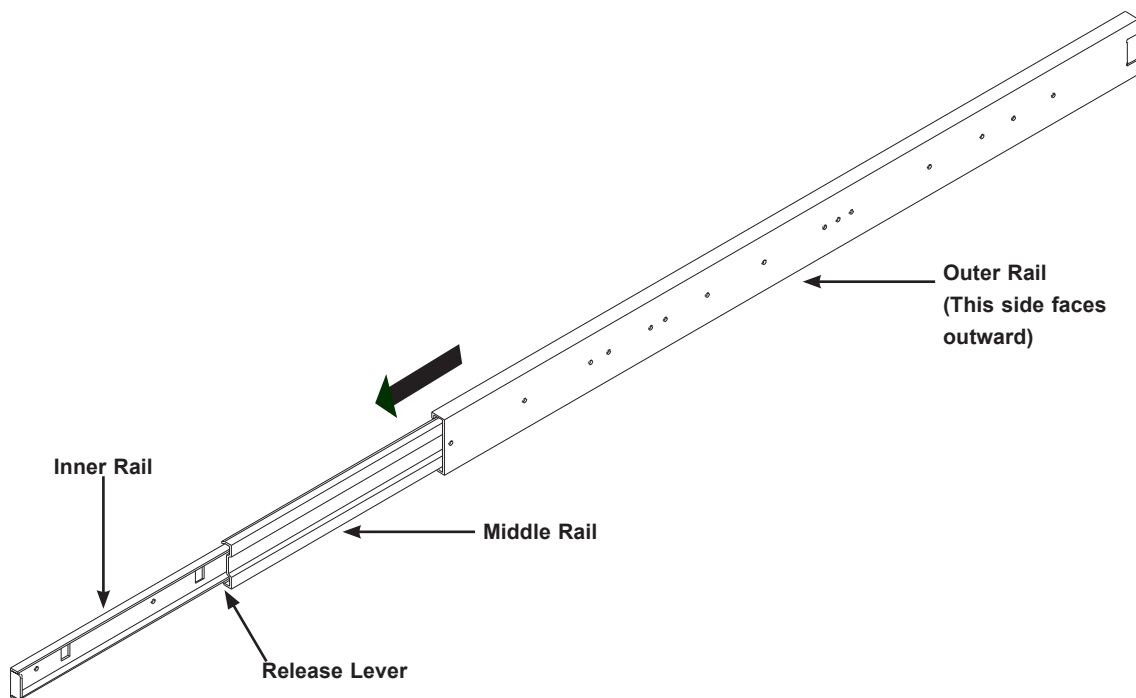


Figure 2-1. Identifying the Outer Rail, Middle Rail and Inner Rail

## Releasing the Inner Rail

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

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

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

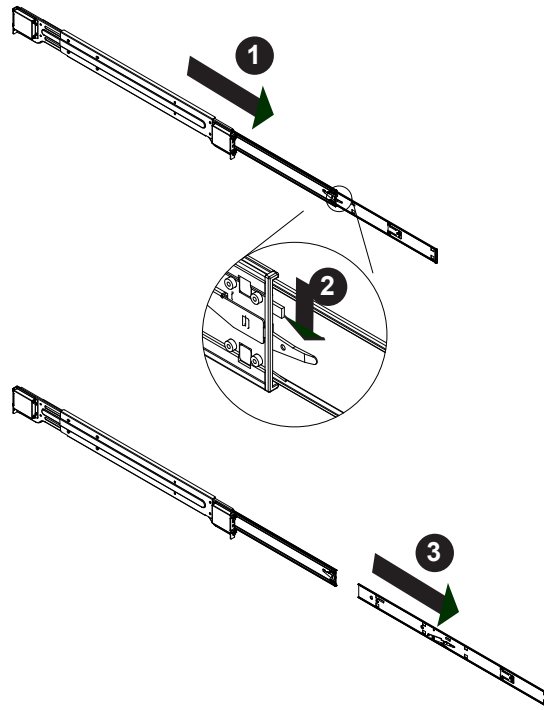


Figure 2-2. Extending and Releasing the Inner Rail

## Installing the Inner Rails

Begin the rack mounting procedure by installing the inner rails to the chassis.

1. Place the inner rail firmly against the side of the chassis, aligning the hooks on the side of the chassis with the holes in the inner rail.
2. Slide the inner rail forward toward the front of the chassis and under the hooks until the rail is secure to the chassis.
3. Further secure the rail to the chassis with a screw.

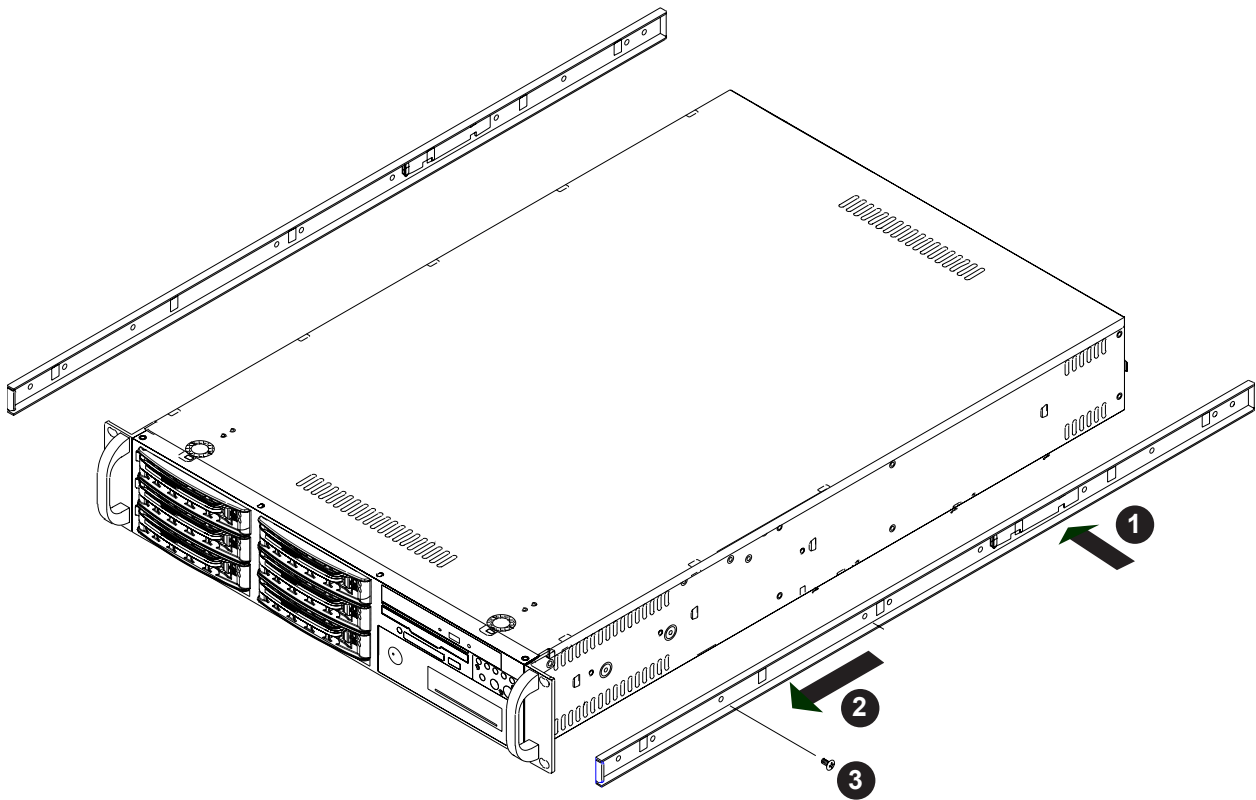


Figure 2-3. Installing the Inner Rails



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

## Assembling and Installing the Outer Rails

Each outer rail comes in three sections that require assembly before mounting onto the rack.

1. Find the outer rail mounting brackets in the chassis accessory box.

- A pair of long brackets for the rear of each rail
- A pair of short brackets for the front with a threaded mounting hole
- A pair of short brackets for the front with a larger, non-threaded mounting hole (These can be used in a square hole rack with screws and nuts from your rack accessory bag.)

Only one type of short front brackets is needed. Use the type that best fits your needs.

Note that the brackets are labeled as to front, rear, and up. They are specific for the left and right rails.

2. Secure the front (short) bracket onto the outer rail with two type I screws.

3. Mount the rear (long) bracket onto the outer rail at the approximate position to fit your rack. Use two or three type I screws into holes that are convenient. Leave the screws just loose enough that the bracket can slide.

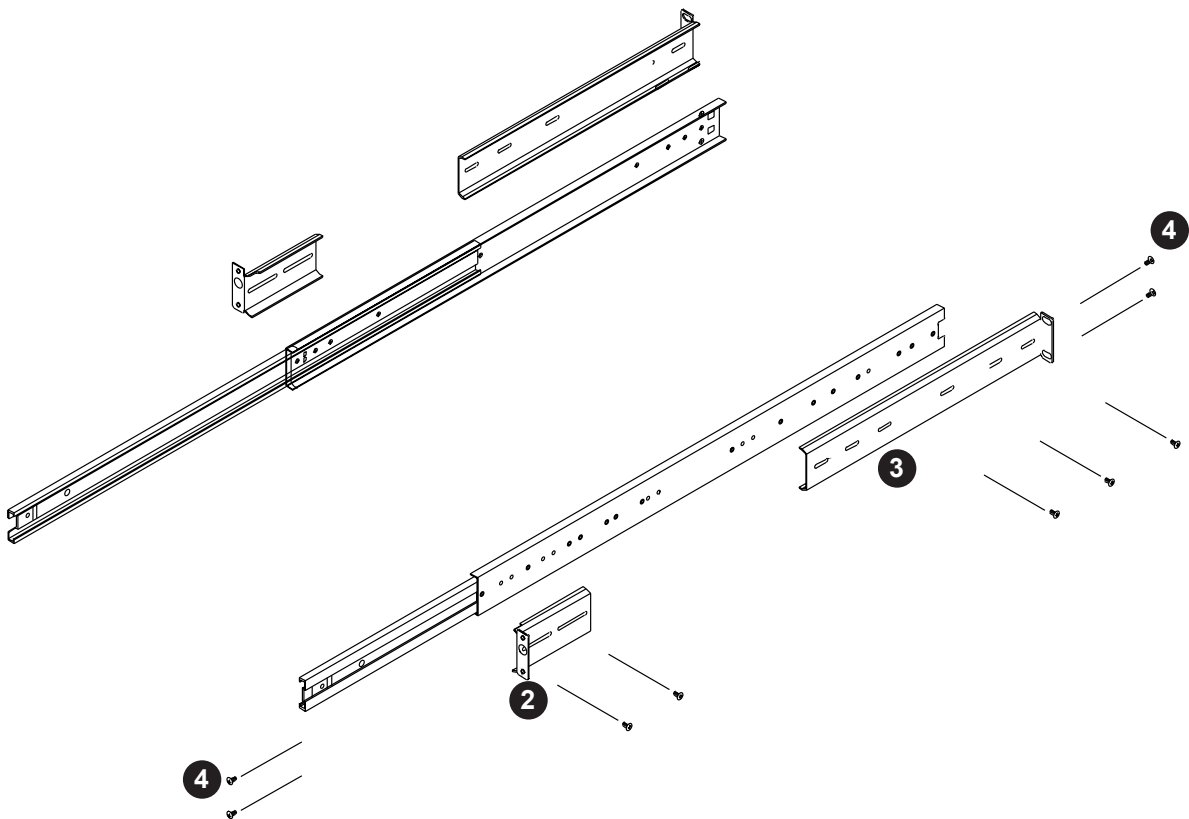


Figure 2-4. Assembling the Outer Rails

4. Install the outer rail assembly onto your rack. Adjust the outer rail to the exact depth of the rack by sliding the rear bracket. Then use screws and fasteners to secure the outer rail to the front and rear rack posts. If desired, you can further tighten the screws holding the outer rail rear bracket to the rail.

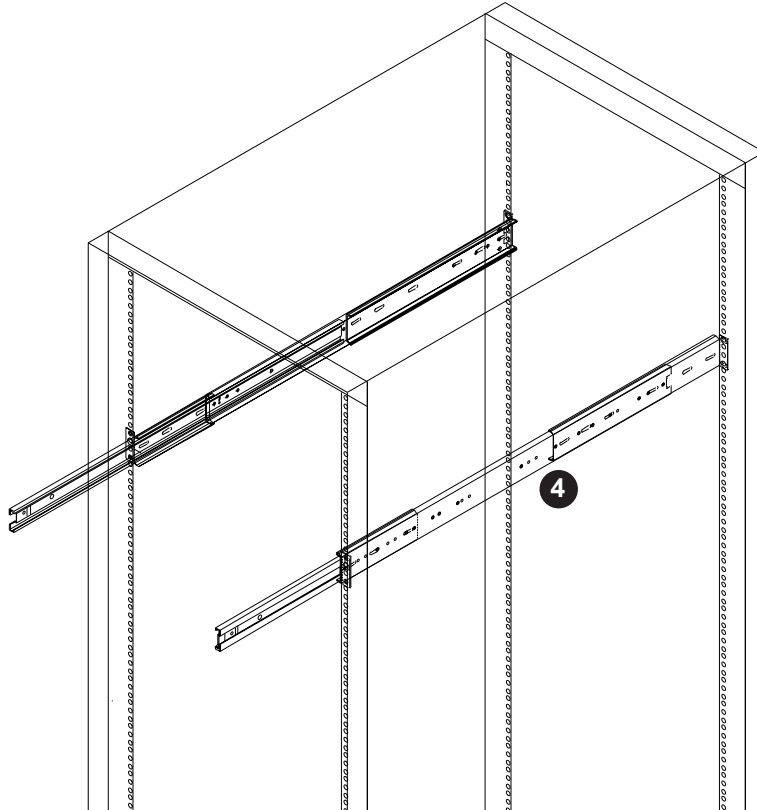


Figure 2-5. Installing the Outer Rails to the Rack

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

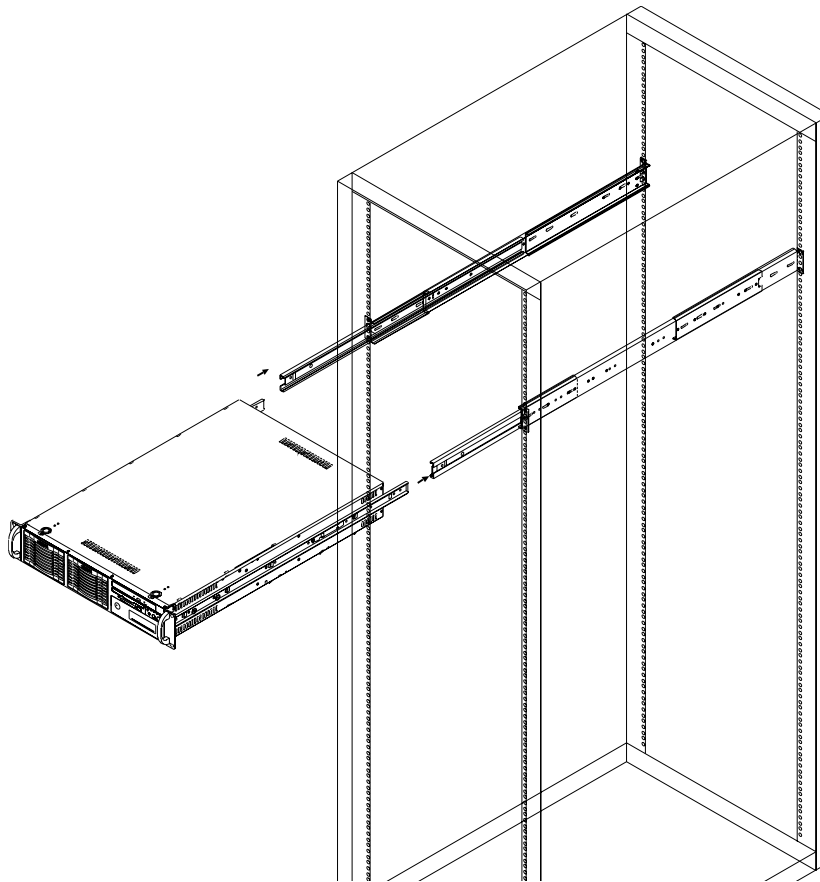


**Stability hazard.** The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.

## 2.3 Installing the Chassis into a Rack

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

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



**Figure 2-7. Installing the Server into the Rack**

**Note:** Keep the ball bearing shuttle locked at the front of the middle rail during installation.

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

## Removing the Chassis from the Rack

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

1. Pull the chassis forward out the front of the rack until it stops.
2. Find the release lever (Figure 2-1) on each side of the chassis on the inner rails. Release the chassis by simultaneously and lifting the left lever and pushing down the right lever. Continue to pull the chassis out of the 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 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, carefully remove the end of the AC power cord that is plugged into the power outlet.
3. Disconnect the cords from the power supply modules. If your system has redundant power supplies, remove the cords from all power supply modules.



## 3.2 Accessing the System

### Top Cover

The SC822 features a removable top cover, which allows easy access to the inside of the chassis.

#### *Removing the Top Cover*

1. Remove power from the system as described in Section 3.1.
2. Press the release buttons.
3. Slide the cover toward the rear of the chassis and lift off.

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

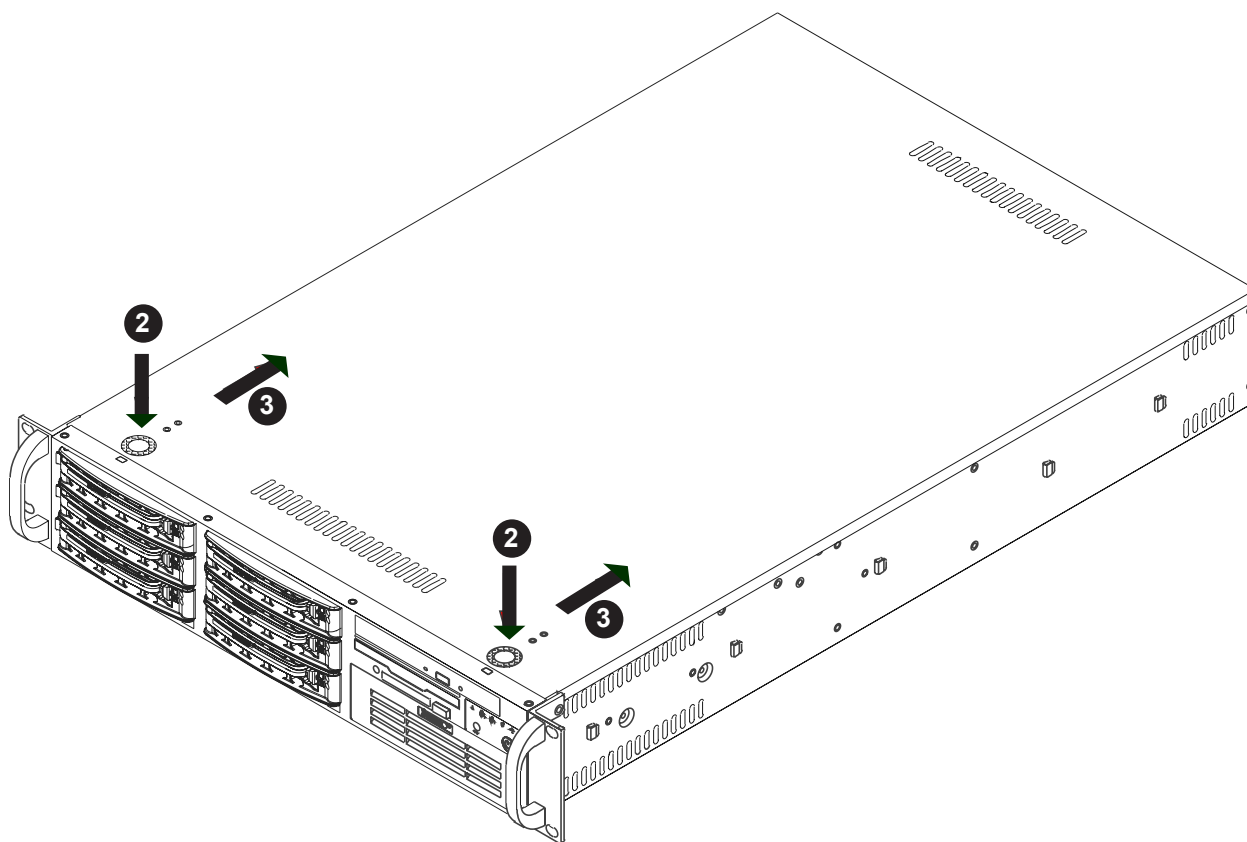


Figure 3-1. Removing the Chassis Cover

### 3.3 Chassis Components

Several components are accessible in the chassis. The following sections describe the method for each.

#### Storage Drives for SC822T Chassis

The SC822T chassis supports six 3.5" storage drives in drive carriers to simplify their removal from the chassis. These carriers also help promote proper airflow.

#### *Drive Carrier Indicators* (SC822T model only)

Each drive carrier has two LED indicators: an activity indicator and a status indicator. In RAID configurations, the status indicator provides information. In non-RAID configurations, the status indicator remains off. See the table below for details.

Drive Carrier LED Indicators			
	Color	Blinking Pattern	Behavior for Device
<b>Activity LED</b>	Blue	Solid On	SAS drive installed
	Blue	Blinking	I/O activity
<b>Status LED</b>	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
	Green	Solid On	Safe to remove NVMe device
	Amber	Blinking at 1 Hz	Attention state—do not remove NVMe device

**Note:** Enterprise level hard disk drives are recommended for use in Supermicro chassis and servers. For information on recommended HDDs, visit the Supermicro website at <http://www.supermicro.com/products/nfo/files/storage/SBB-HDDCompList.pdf>.

## Installing Hot-Swap Storage Drives

### Removing Drive Carriers from the Chassis (SC822T models)

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

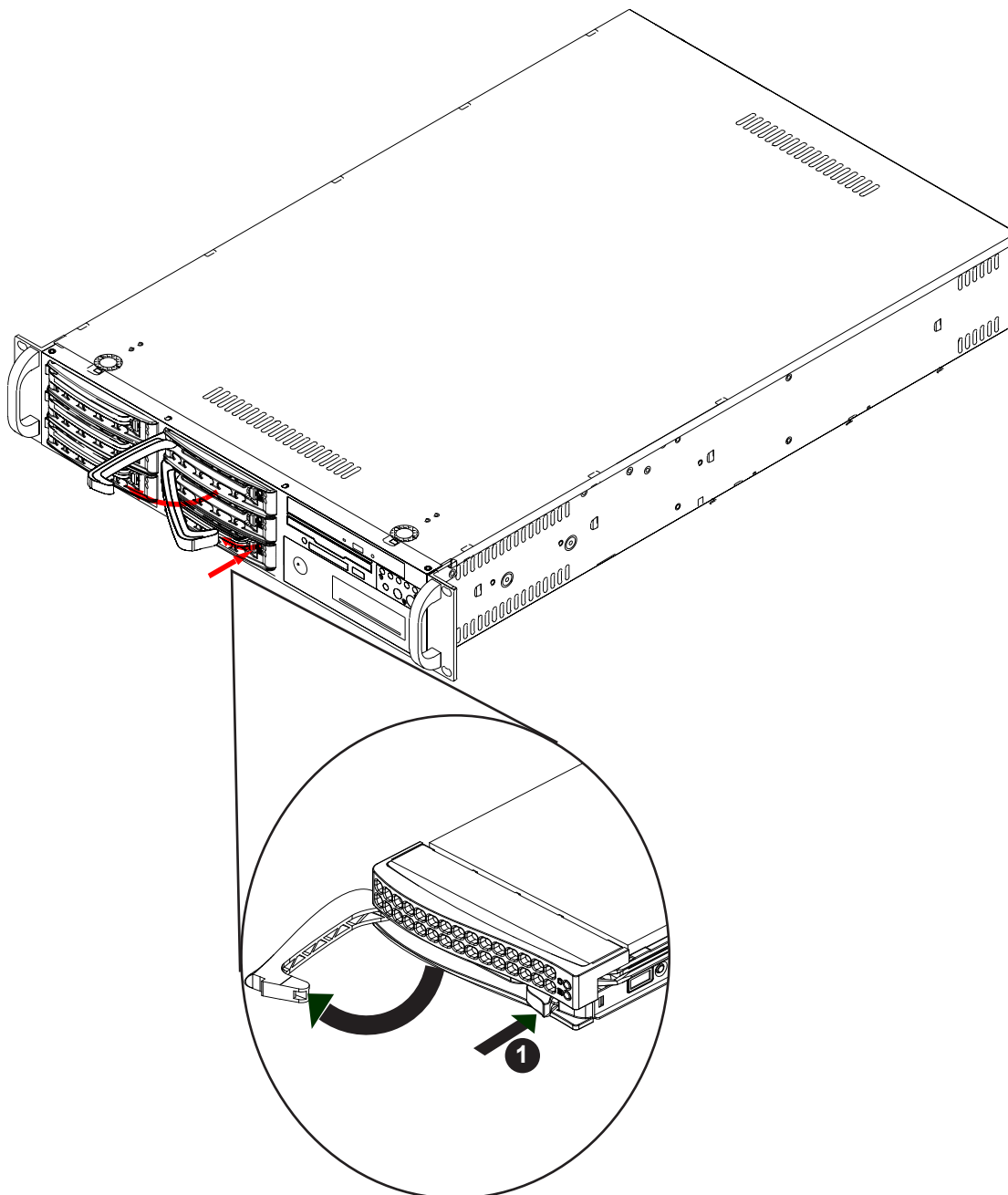
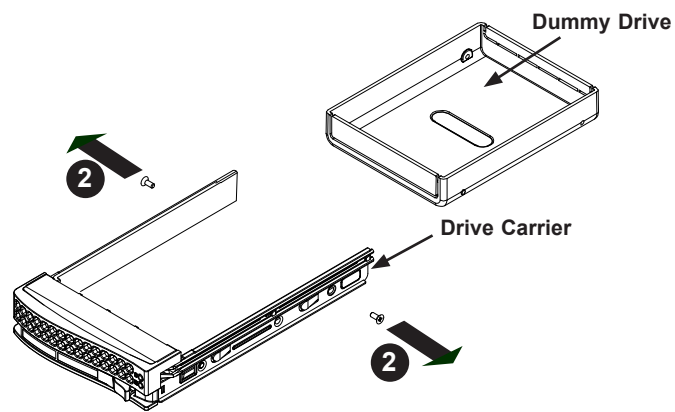


Figure 3-2. Removing a Hard Drive

### ***Removing the Dummy Drive from the Drive Carrier***

1. Remove the drive carrier from the chassis as described in the previous section and lay it on a flat surface.
2. Remove the two screws securing the dummy drive to the drive carrier.
3. Lift the dummy drive from the drive carrier.

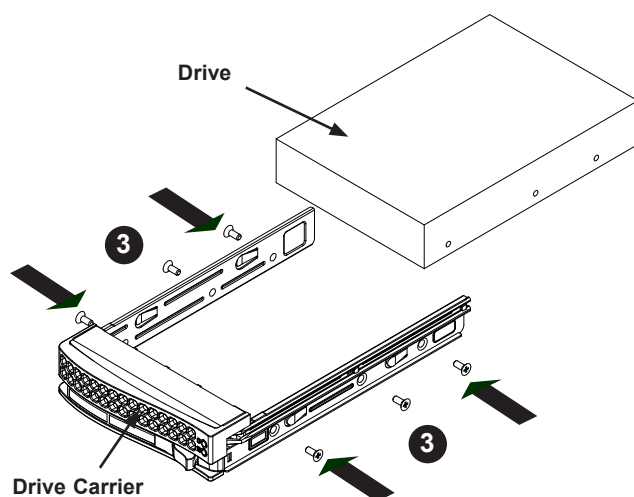
**Caution:** Except for short periods of time (swapping hard drives), do not operate the server with the drive carriers removed from the bays, regardless of how many drives are installed, for proper airflow.



**Figure 3-3. Removing a Dummy Drive from the Drive Carrier**

### ***Installing a Drive***

1. Place the drive carrier on a flat surface.
2. Insert the drive into the carrier with the printed circuit board side facing downward and so that the mounting holes in the drive align with those in the carrier.
3. Secure the drive to the carrier with the four screws included with the drive.
4. Use the open handle of the drive carrier to insert it into the open drive bay.
5. Secure the drive carrier into the drive bay by closing the drive carrier handle



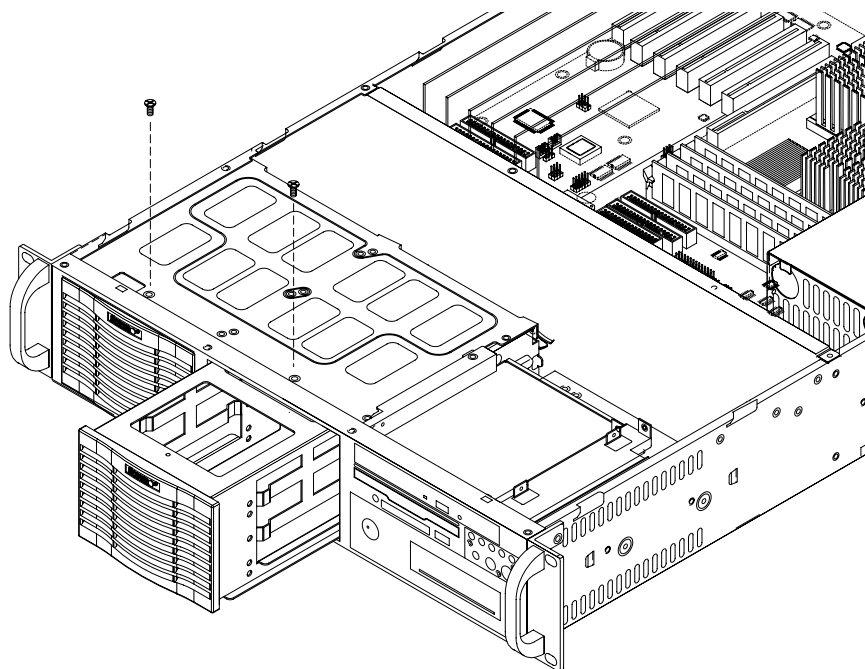
**Figure 3-4. Installing a Drive**

## Storage Drives for the SC822i Chassis

The SC822i chassis supports six 3.5" storage drives in two housings.

### *Installing Fixed Drives* (SC822i models)

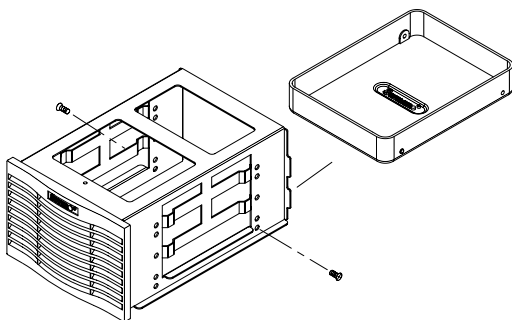
1. Power down the system as described in Section 3.1 and remove the chassis cover.
2. Remove the locking screw as shown.



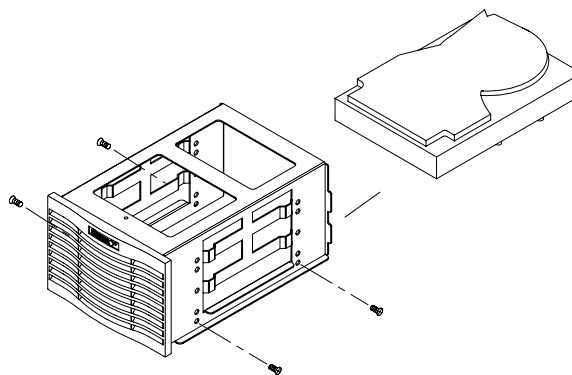
**Figure 3-5. Removing the Locking Screw for a Drive Housing**

3. From inside the chassis, push the drive housing out the front.

4. Remove the screws that secure the dummy drive and pull it from the housing.



**Figure 3-6. Removing a Dummy Drive from the Housing**



**Figure 3-7. Installing a Drive in the Housing**

5. Mount up to three storage drives in the housing and secure them with screws.
6. Push the housing back into the chassis and secure it with the locking screw.
7. Connect the drive cables to the motherboard.
8. Replace the chassis cover.

### **Peripheral Input/Output Devices (Options)**

The chassis front offers three bays that can house various input/output devices, such as a slim CVD drive, internal fixed HDDs, USB ports, or a floppy drive. Each of these are sold with installation hardware in a kit.

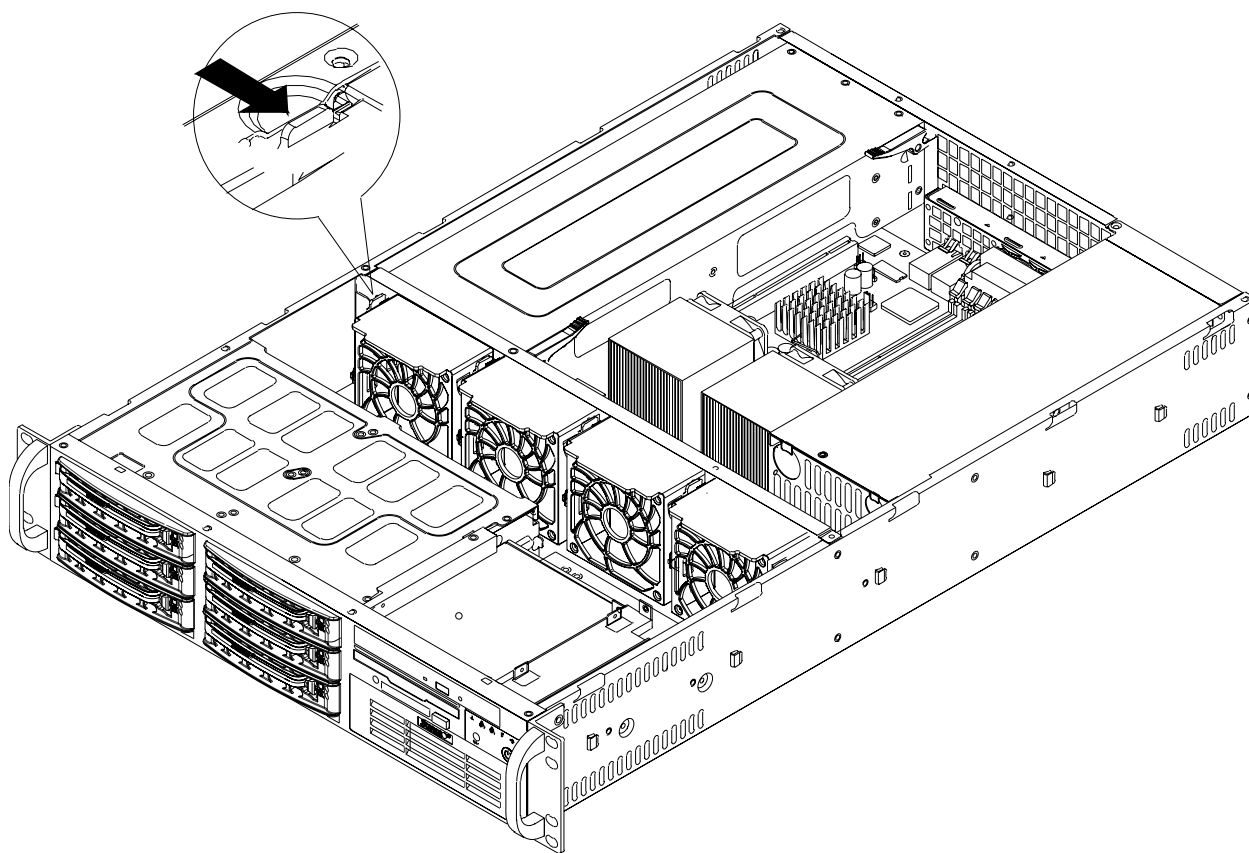
## Fans

Four hot-swap, heavy-duty 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. The system can continue to run with a failed fan. Replace any failed fan at your earliest convenience with the same type and model.

### **Replacing a System Fan**

1. Determine which fan is failing. If possible, use IPMI. If not, remove the chassis cover while the power is running, and examine the fans to determine which one has failed.
2. Press the release tab located on the left side of the fan (viewed from the chassis front) to release the fan lock, as shown below.



**Figure 3-8. Releasing the Fan Lock**

3. Pull the fan up and out.

**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.

4. Place the new fan into the fan bay until it clicks into place. Confirm that the fan is facing the correct direction, fully seated in the fan bay and 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.

#### ***Overheat Temperature Setting***

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

#### ***Responses***

##### ***If the server overheats:***

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

## **Power Supply**

The chassis features high efficiency power supply module. New units can be ordered directly from Supermicro or authorized distributors.

This power supply is auto-switching capable. This feature enables it to automatically sense the input voltage and operate at a 100-120v or 180-240v.

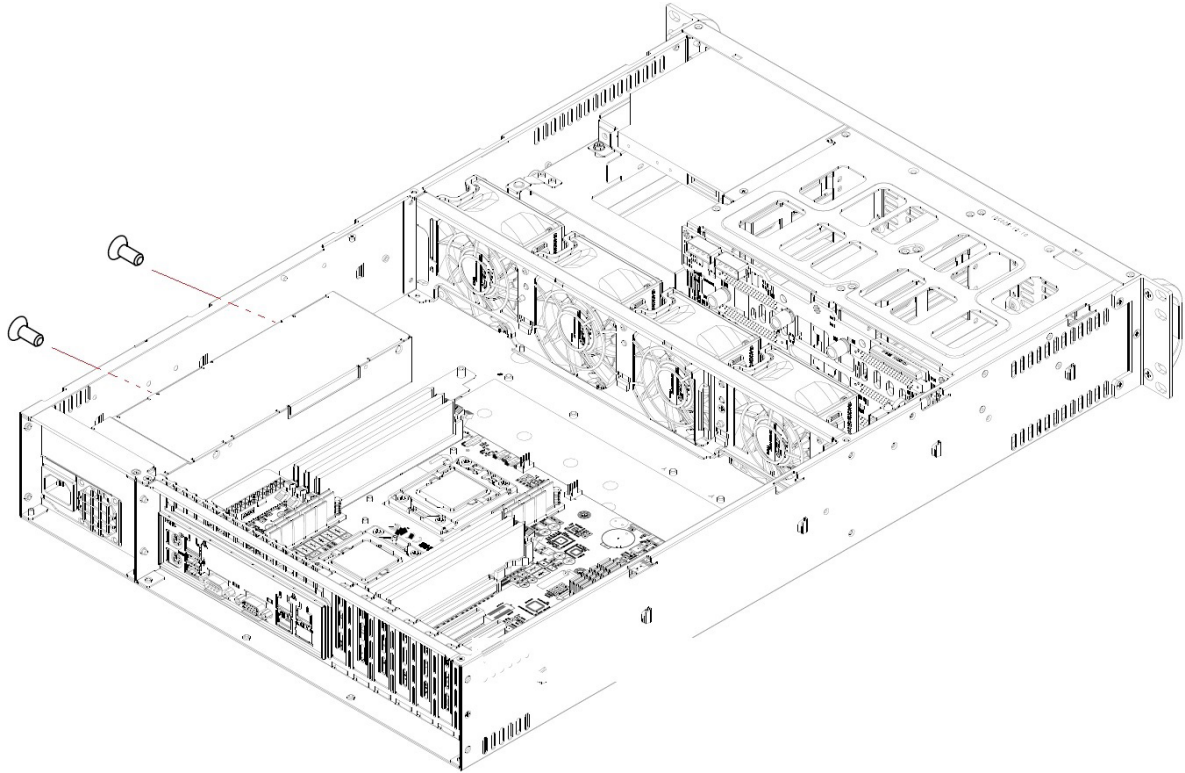
### ***Power Supply LEDs***

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

- **Solid Green:** When illuminated, indicates that the power supply is on.
- **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.

### ***Replacing the Power Supply Module***

1. Unplug the AC cord from the power supply module.
2. Open the top cover of chassis.
3. Disconnect all the cables between power supply, and the motherboard and backplane, noting where they go.
4. Unscrew two screws on the right side of chassis.
5. Remove the power supply from chassis carefully.
6. Put the power supply replacement into the same place.
7. Tighten two screw on the right side of chassis.
8. Reconnect all the cables from the power supply to the motherboard and backplane.
9. Close the top cover and replace the AC cord.



**Figure 3-9. Replacing the Power Supply**

## **Installing the Motherboard**

Review the documentation that came with your motherboard. Become familiar with component placement, requirements, precautions, and cable connections. The motherboard should come with an I/O shield, holding the input and output ports.

### ***Permanent and Optional Standoffs***

Standoffs prevent short circuits by creating space between the motherboard and the chassis surface. The chassis includes permanent standoffs in locations used by most motherboards. These standoffs accept the rounded Phillips head screws included in the accessories package. Some motherboards require additional screws for heatsinks, general components or non-standard security. Optional standoffs are included for these motherboards. To use an optional standoff, place the hexagonal nut with the rounded side up, in the holes provided on the floor of the chassis.

### ***Installing the Motherboard***

1. Be sure the power cord is removed.
2. Install the I/O shield into the space provided at the rear of the chassis.
3. If necessary, remove the riser card bracket.
4. As required by your motherboard, install standoffs in any areas that do not have a permanent standoff and remove any standoffs that are not required by the motherboard.
5. Lay the motherboard on the chassis aligning the permanent and optional standoffs.
6. Secure the motherboard to the chassis using the rounded, Phillips head screws which are included in the motherboard bag of the accessory box. Do not exceed eight inch-pounds of torque when securing the motherboard.
7. Secure the CPUs, heatsinks, and other components to the motherboard as described in the motherboard documentation.
8. Connect the cables between the motherboard, backplane, chassis, front panel, and power supply, as needed. The fans may be temporarily removed to allow access to the backplane ports and to allow for ease of installation.

## Appendix A

### Power Supply Specifications

This appendix lists power supply specifications for your chassis system.

<b>330 W</b>	
<b>MFR Part #</b>	PWS-333-1H
<b>AC Input</b>	100-240 V, 50-60 Hz
<b>DC Output</b>	330/380 W +12 V - 27 A /31 A +5 V - 18 A +3.3 V - 15 A +5 V sby - 3 A

## 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](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 الزهز 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 رِقن الب اِي الو صُص ف هاةُ 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.

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-60VDC, 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.

### 電源切斷の警告

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斷され、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 chasis 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 مكناث 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 الجهاز 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**

此装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 انحدة نترك بها ف مناطق محظورة تم .  
ممكن اننصل إن منطقت محظورة فقط من خلال استخذاو أداة خاصت  
أو أ وس هت أكري نلالأمما 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薦的功能相當的電池更換原有電池。請按製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 اسبدال البطارية بطريقة غير صحيحة فعلى  
اسبدال البطارية  
فقط بنفس النوع أو ما يعادلها مما أوصت به الشركة المصنعة  
جخلص من البطاريات المسحومة 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

此装置连接的电源可能不只一个，必须切断所有电源才能停止对该装置的供电。

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時、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 المتجددة على اللوحة  
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 instalación 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 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! 危險的可移動性零件。請務必與轉動的风扇叶片保持距離。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

警告

危險的可移動性零件。請務必與轉動的风扇叶片保持距離。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 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 מיילמשח מילבכ

!הרהזא

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

תאלבאלא אארשב מק וא ענדדחמלא וא ערפוטמלא תאלויסוטלא מאדחטסאב מק, עגתנמלא בייקרת דנע לכלז יפ אמב עילחמלא עמאלסלא תאבלטתמו נינאווקב מאזתלאל עמ דדרתמלא ראיטלא תאלוחמו עיזאברמלא קיירח וא לטע יפ בבסטטי דק ירזא תאלוחמו תאלבאלא יא מאדחטסא. מילסלא סבאלאו ולסומלא מנגח CSA וא UL לביק נמ ענדמטעמלא תאלבאלא מאדחטסא תאדעמלאו עיזאברמלא עזגאלל עמאלסלא נונאק רזחגי Supermicro לביק נמ ענדדחמלאו עינעמלא תאגתנמלא ריג ירזא תאדעמ יא עמ (UL/CSA) עמאלע למחתיטלאו



#### 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

### Backplane Specifications

This appendix provides details about the BPN-SAS-823T(Q) backplane.

#### 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

This manual reflects BPN-SAS-823T(Q), Revision 1.00A, the most current release available at the time of publication. Refer to the Supermicro Web site at [www.supermicro.com](http://www.supermicro.com) for the latest updates, compatible parts and supported configurations.

All images and layouts shown in this guide are based upon the latest PCB revision available at the time of publishing. Your backplane may or may not look exactly the same.

## C-3 Connectors, Jumpers, and Status Indicators

The BPN-SAS-823T backplane is identical to the BPN-SAS-823TQ backplane except that the I<sup>2</sup>C connectors, sideband headers and the MG9072 chip are not populated on the BPN-SAS-823T backplane.

### Rear Connectors

The following connectors are on the side of the backplane that faces the rear of the chassis. They are identified by silkscreen labels.

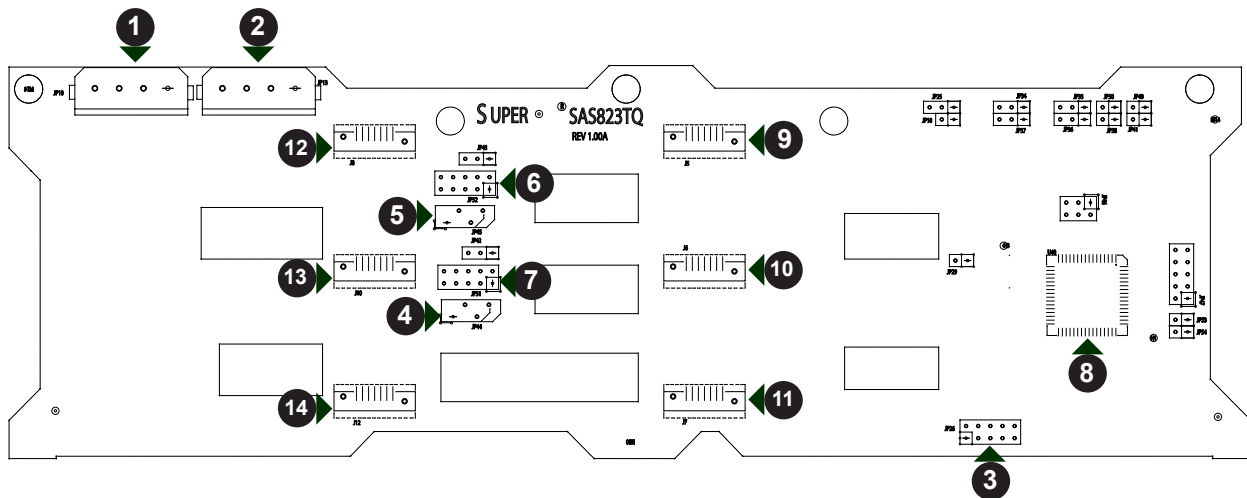


Figure C-1. Rear Connectors

- |   |                 |
|---|-----------------|
| 1. JP10: 4-Pin Power Connector                              | 9. SAS Port #0  |
| 2. JP13: 4-Pin Power Connector                              | 10. SAS Port #1 |
| 3. JP26: ACT_IN (Activity In LED header)                    | 11. SAS Port #2 |
| 4. JP44: I <sup>2</sup> C Connector#1 ( <i>823TQ only</i> ) | 12. SAS Port #3 |
| 5. JP45: I <sup>2</sup> C Connector#2 ( <i>823TQ only</i> ) | 13. SAS Port #4 |
| 6. JP51: SideBand #1 ( <i>823TQ only</i> )                  | 14. SAS Port #5 |
| 7. JP52: SideBand #2 ( <i>823TQ only</i> )                  |                 |
| 8. MG 9072 Chip ( <i>823TQ only</i> )                       |                 |

## Rear Connector Pin Definitions

### 1, 2. Backplane Power Connectors

These 4-pin connectors, designated JP10 and JP13, supply power to the backplane.

### 3. Activity LED Header

The activity LED header, designated JP26, is used to indicate the activity status of each SATA drive. The Activity LED Header is located on the rear of the backplane. For the Activity LED Header to work properly, connect using a 10-pin LED cable.

SATA Activity LED Header Pin Definitions			
Pin	Definition	Pin	Definition
1	ACT IN#0	6	ACT IN#4
2	ACT IN#1	7	ACT IN#5
3	ACT IN#2	8	ACT IN#6
4	ACT IN#3	9	ACT IN#7
5	Ground	10	Empty

### 4, 5. I<sup>2</sup>C Connectors (*BPN-SAS-823TQ only*)

The I<sup>2</sup>C Connectors, designated JP44 and JP45, are used to monitor HDD activity and status.

I <sup>2</sup> C Connector Pin Definitions	
Pin	Definition
1	Data
2	Ground
3	Clock
4	No Connection

### 6, 7. Sideband Headers (*BPN-SAS-823TQ only*)

The sideband headers are designated JP51 and JP52. For SES-2 to work properly, you must connect an 8-pin sideband cable to JP51 and JP52.

Sideband Headers Pin Definitions			
Pin	Definition	Pin	Definition
2	Backplane Addressing (SB5)	1	Controller ID (SB6)
4	Reset (SB4)	3	GND (SB2)
6	GND (SB3)	5	SDA (SB1)
8	Backplane ID (SB7)	7	SCL (SB0)
10	No Connection	9	No Connection

### 8. MG9072 Chip (*BPN-SAS-823TQ only*)

The MG9072 is an enclosure management chip that supports the SES-2 controller and SES-2 protocols.

## 9 - 14. SAS Ports

The SAS/SATA ports are used to connect the SAS/SATA drive cables. The six ports are designated #0 - #5.

### Rear Jumpers and Pin Definitions

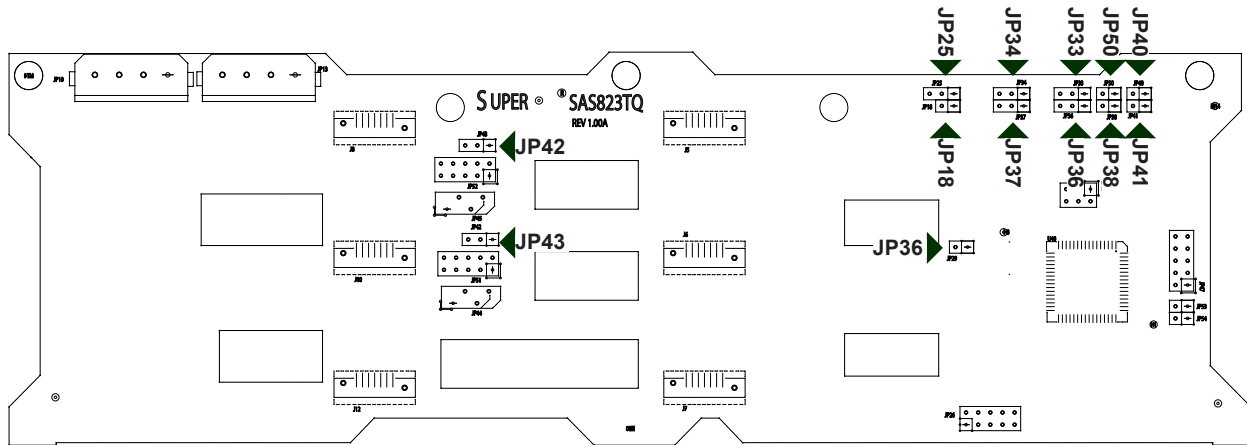
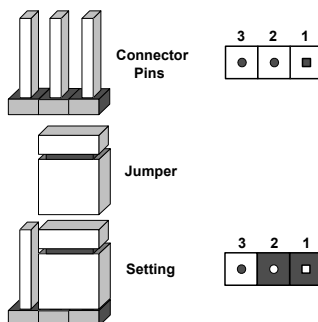


Figure C-1. Rear Jumpers

### 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.



## I<sup>2</sup>C and SGPIO Modes and Jumper Settings

The BPN-SAS-823TQ backplane can utilize I<sup>2</sup>C or SGPIO. I<sup>2</sup>C is the default mode and can be used without making changes to your jumpers. The following information details which jumpers must be configured to use SGPIO mode or restore your backplane to I<sup>2</sup>C mode.

<b>I<sup>2</sup>C Mode (Default)</b>		
<b>Jumper</b>	<b>Jumper Setting</b>	<b>Note</b>
JP18	Open	Closed: Buzzer Reset (Default)
JP29	Open	Closed: Chip Reset (Default)
JP33	Pins 2-3	Controller ID #1
JP34	Pins 1-2	Backplane ID #1 1-2: ID#0 2-3: ID#1
JP36	Pins 2-3	Controller ID #2
JP37	Pins 2-3	Backplane ID #2 1-2: ID#0 2-3: ID#1
JP38	Closed	I <sup>2</sup> C Reset #2
JP40	Open	I <sup>2</sup> C Reset _SDOUT#1
JP41	Open	I <sup>2</sup> C Reset _SDOUT#2
JP42	Pins 2-3	I <sup>2</sup> C Backplane ID _SDIN#1
JP43	Pins 2-3	I <sup>2</sup> C Backplane ID _SDIN#2
JP50	Closed	I <sup>2</sup> C Reset #1

<b>SGPIO Mode (Only)</b>		
<b>Jumper</b>	<b>Jumper Setting</b>	<b>Note</b>
JP18	Open	Closed: Buzzer Reset (Default)
JP29	Open	Closed: MG9072 Reset (Default)
JP33	Pins 1-2	Controller ID #1
JP34	Pins 1-2	Backplane ID #1 1-2: ID#0 2-3: ID#1
JP36	Pins 1-2	Controller ID #2
JP37	Pins 1-2	Backplane ID #2 1-2: ID#0 2-3: ID#1
JP38	Open	I <sup>2</sup> C Reset #2
JP40	Closed	I <sup>2</sup> C Reset _SDOUT#1
JP41	Closed	I <sup>2</sup> C Reset _SDOUT#2
JP42	Pins 1-2	I <sup>2</sup> C Backplane ID _SDIN#1
JP43	Pins 1-2	I <sup>2</sup> C Backplane ID _SDIN#2
JP50	Open	I <sup>2</sup> C Reset #1

## SAS Port Connections in I<sup>2</sup>C and SGPIO Modes

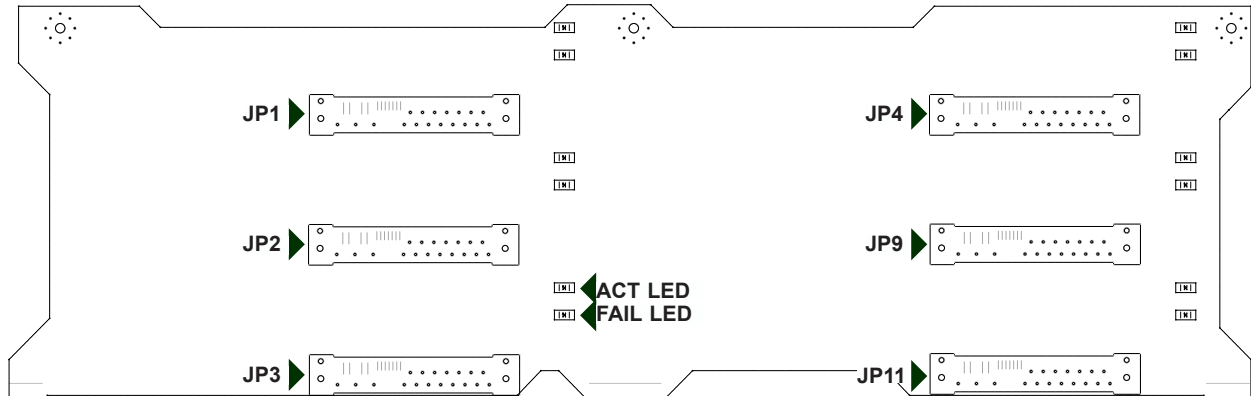
Remember the following when connecting this backplane:

- In I<sup>2</sup>C mode, I<sup>2</sup>C #1 (JP44) corresponds with SAS ports #0, #1, #2, and #3. I<sup>2</sup>C #2 (JP45) corresponds with SAS ports 4 and 5. If you connect the SAS ports out of order, you will not be able to easily identify drives using the LED function.
- In SGPIO mode, Sideband #1 (JP51) corresponds with SAS ports 0, 1, 2, and 3. Sideband #2 (JP52) corresponds with SAS ports #4 and #5. If you connect the SAS ports out of order, you will not be able to easily identify drives using the LED function.

<b>Jumper Settings for SAS-823T</b>		
<b>Jumper</b>	<b>Settings</b>	<b>Description</b>
JP18	Open/Closed	Closed: Buzzer reset (default)
JP25	Open Pins 1-2 Pins 2-3	Overheat temperature settings: Buzzer activates at 45° C Buzzer activates at 50° C Buzzer activates at 55° C

## Front Connectors and LEDs

The following connectors are on the side of the backplane that faces the front of the chassis. They are identified by silkscreen labels.



**Figure C-3. Front Connectors**

The backplane holds connectors for the SAS hard disk drives. It also contains two LED status indicators for each drive.

Drive Connectors and LED Indicators			
Drive Number	Label	HDD Activity LED (blue)	HDD Failure LED (red) (823TQ only)
SAS #0	J1	D12	D5
SAS #1	J2	D13	D6
SAS #2	J3	D14	D7
SAS #3	J4	D15	D8
SAS #4	J9	D18	D19
SAS #5	J11	D21	D20