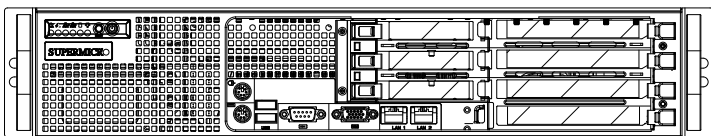
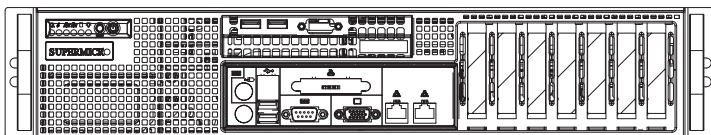




SC823M Chassis Series



SC823MTQ-R700LPB

SC823MTQ-R700UB

SC823MTQC-R802LPB

SC823MTQC-R802WB

USER'S MANUAL

1.0a

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WARNING: Handling of lead solder materials used in this product may expose you to lead, a chemical known to the State of California to cause birth defects and other reproductive harm.

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Preface

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the SC823M 2U chassis. Installation and maintenance should be performed by experienced technicians only.

Supermicro's SC823M 2U chassis is a short-depth chassis with a unique and highly-optimized design. The chassis is equipped with three 3.5" hot-swappable hard drives and a redundant 700W or 800W high-efficiency power supply for superb power savings. High-performance fans provide ample optimized cooling for the chassis.

This document lists compatible parts available when this document was published. Always refer to our website for updates on supported parts and configurations at www.supermicro.com.

Manual Organization

Chapter 1: Introduction

The first chapter provides a checklist of the main components included with this chassis and describes the main features of the SC823M chassis. This chapter also includes contact information.

Chapter 2: System Safety

This chapter lists warnings, precautions, and system safety. You should thoroughly familiarize yourself with this chapter for a general overview of safety precautions that should be followed before installing and servicing this chassis.

Chapter 3: Chassis Components

Refer here for details on this chassis model including the fans, bays, airflow shields, and other components.

Chapter 4: System Interface

Refer to this chapter for details on the system interface, which includes the functions and information provided by the control panel on the chassis as well as other LEDs located throughout the system.

Chapter 5: Chassis Setup and Maintenance

Follow the procedures given in this chapter when setting up or maintaining your chassis.

Chapter 6: Rack Installation

Refer to this chapter for detailed information on chassis rack installation. You should follow the procedures given in this chapter when installing, removing or reconfiguring your chassis into a rack environment.

Appendix A Power Supply Specifications

Appendix B BPN-SAS-825MTQ Backplane Specifications

Appendix C BPN-SAS3-825MTQ Backplane Specifications

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Appendix A SC823M Power Supply Specifications

Appendix B BPN-SAS-825MTQ Backplane Specifications

Appendix C BPN-SAS3-825MTQ Backplane Specifications

Chapter 1

Introduction

1-1 Overview

Supermicro's SC823M chassis series offers a 17.7" short-depth 2U foot-print with advanced airflow thermal control. These chassis are designed for front-end servers, database applications, Internet, e-business, server clustering and other server applications. The SC823M supports a wide range of dual/single processor-based motherboards (up to E.E.ATX 13.68" x 13"), 700 or 800 Watt high-efficiency (1+1) redundant power supplies, seven low-profile or three full-height and four low-profile expansion cards, with three rear hot-swappable drive bays.

1-2 Chassis Features

Please visit the following link for the latest shipping lists and part numbers for your particular chassis model <http://www.supermicro.com>.

SC823M Chassis				
Model	HDD	PCI Slots	Power Supply	Description
SC823MTQ-R700LPB	3x SAS / SATA (Rear)	7 x LP	700W Redundant	Standard DVD and USB COM port
SC823MTQ-R700UB*	3x SAS / SATA (Rear)	4x FH 3x LP	700W Redundant	Not configured for DVD or USB COM port
SC823MTQC-R802LPB	3x SAS3 / SATA (Rear)	7 x LP	800W Redundant	Optional DVD and USB COM port (Includes dummy cover)
SC823MTQC-R802WB	3x SAS3 / SATA (Rear)	4x FH 3x LP	800W Redundant	Not configured for DVD or USB COM port

***Note:** The SC823MTQ-R700UB chassis has been discontinued. Please contact Supermicro's technical support team for questions not covered in this manual.

1-3 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

1-4 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.

Notes

Chapter 2

Standardized Warning Statements for AC Systems

2-1 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 web site at http://www.supermicro.com/about/policies/safety_information.cfm.

Warning Definition



Warning!

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

警告の定義

この警告サインは危険を意味します。

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

此警告符号代表危險。

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

此警告符號代表危險。

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

Warnung

WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

תקנת 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 במארוזי סופרמיקרו.

تحذير! هذا الرمز يعني خطر انك في حالة يمكن أن تتسبب في اصابة جسدية .
قبل أن تعمل على أي معدات، كن على علم بالمخاطر الناجمة عن الدوائر
الكهربائية
وكن على دراية بالممارسات الوقائية لمنع وقوع أي حوادث
استخدم رقم البيان المنصوص في نهاية كل تحذير للعثور ترجمتها

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。

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-250 V, 20 A

هذا المنتج يعتمد على معدات الحماية من 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 220V, 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 châssis pour installer ou enlever des composants de système.

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 النظام من جميع مصادر الطاقة وإزالة سلك الكهرباء من وحدة امداد الطاقة قبل الوصول إلى المناطق الداخلية للهيكल لتثبيت أو إزالة مكونات 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.

يجب أن يسمح فقط للموظفين المؤهلين والمدربين لتثبيت واستبدال أو خدمة هذا الجهاز

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').

تم تخصيص هذه الوحدة لت تركيبها في مناطق محظورة .
يمكن الوصول إلى منطقة محظورة فقط من خلال استخدام أداة خاصة،
قفل ومفتاح أو أي وسيلة أخرى للالأمان

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製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 استبدال البطارية بطريقة غير صحيحة عليك استبدال البطارية فقط بنفس النوع أو ما يعادلها كما أوصت به الشركة المصنعة تخلص من البطاريات المستعملة وفقا لتعليمات 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 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 لعزل 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。

修理する際にはご注意ください。

警告

当系統正在进行时，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，背板上有很危險的電壓或能量，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 الموجودة على اللوحة
عندما يكون النظام يعمل كن 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 للقوانين المحلية والوطنية 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.

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

경고!

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

Waarschuwing

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

Hot Swap Fan Warning



Warning!



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

ファン・ホットスワップの警告

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

警告!

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

警告

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

Warnung

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

¡Advertencia!

Riesgo de piezas móviles. Mantener alejado de las aspas del ventilador. Los ventiladores podran dar vuelta cuando usted quite el montaje del ventilador del chasis. 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!

כאשר מסירים את חלקי המאוורר מהמארז, יתכן והמאווררים עדיין עובדים. יש להרחיק למרחק בטוח את האצבעות וכלי עבודה שונים מהפתחים בתוך המאוורר

من الممكن أن المراوح لا تزال تدور عند إزالة كتلة المروحة من الهيكل يجب إبقاء الأصابع ومفكات البراغي

경고!

움직이는 위험한 부품. 회전하는 송풍 날개에 접근하지 마세요. 채시로부터 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 code) 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、提供または指定された接続ケーブル、電源コードとACアダプターを使用下さい。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连接线,电源线和电源适配器.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

安装此產品時,請使用本身提供的或指定的連接線,電源線和電源適配器.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

Bei der Installation des Produkts, die zur Verfügung gestellten oder benannt Anschlusskabel, Stromkabel und Netzteile. Verwendung anderer Kabel und Adapter kann zu einer Fehlfunktion oder ein Brand entstehen. Elektrische Geräte und Material Safety Law verbietet die Verwendung von UL-oder CSA-zertifizierte Kabel, UL oder CSA auf der Code für alle anderen elektrischen Geräte als Produkte von Supermicro nur bezeichnet gezeigt haben.

¡Advertencia!

Al instalar el producto, utilice los cables de conexión previstos o designados, los cables y adaptadores de CA. La utilización de otros cables y adaptadores podría ocasionar un mal funcionamiento o un incendio. Aparatos Eléctricos y la Ley de Seguridad del Material prohíbe el uso de UL o CSA cables certificados que tienen UL o CSA se muestra en el código de otros dispositivos eléctricos que los productos designados por Supermicro solamente.

Attention

Lors de l'installation du produit, utilisez les bables de connection fournis ou désigné. L'utilisation d'autres cables et adaptateurs peut provoquer un dysfonctionnement ou un incendie. Appareils électroménagers et de loi sur la sécurité Matériel interdit l'utilisation de UL ou CSA cables certifiés qui ont UL ou CSA indiqué sur le code pour tous les autres appareils électriques que les produits désignés par Supermicro seulement.

חשמליים ומתאמי AC

!אזהרה

כאשר מתקינים את המוצר, יש להשתמש בכבלים, ספקים ומתאמים AC אשר נועדו וסופקו לשם כך. שימוש בכל כבל או מתאם אחר יכול לגרום לתקלה או קצר חשמלי. על פי חוקי שימוש במכשירי חשמל וחוקי בטיחות, קיים איסור להשתמש בכבלים המוסמכים ב- UL או ב- CSA (כשאר מופיע עליהם קוד של UL/CSA) עבור כל מוצר חשמלי אחר שלא צויין על ידי סופרמיקרו בלבד.

عند تركيب الجهاز يجب استخدام كابلات التوصيل، والكابلات الكهربائية ومحولات التيار المتردد التي . أن استخدام أي كابلات ومحولات أخرى يتسبب في حدوث عطل أو حريق. تم توفيرها لك مع المنتج الأجهزة الكهربائية ومواد قانون السلامة يحظر استخدام الكابلات CSA أو UL معتمدة من قبل لأي أجهزة كهربائية أخرى غير المنتجات المعينة من قبل Supermicro (التي تحمل علامة UL/CSA)

경고!

제품을 설치할 때에는 제공되거나 지정된 연결케이블과 전원케이블, AC 어댑터를 사용해야 합니다. 그 밖의 다른 케이블들이나 어댑터들은 고장 또는 화재의 원인이 될 수 있습니다. 전기용품안전법 (Electrical Appliance and Material Safety Law)은 슈퍼마이크로에서 지정한 제품들 외에는 그 밖의 다른 전기 장치들을 위한 UL 또는 CSA에서 인증한 케이블(전선 위에 UL/CSA가 표시)들의 사용을 금지합니다.

Waarschuwing

Bij het installeren van het product, gebruik de meegeleverde of aangewezen kabels, stroomkabels en adapters. Het gebruik van andere kabels en adapters kan leiden tot een storing of een brand. Elektrisch apparaat en veiligheidsinformatiebladen wet verbiedt het gebruik van UL of CSA gecertificeerde kabels die UL of CSA die op de code voor andere elektrische apparaten dan de producten die door Supermicro alleen.

Notes

Chapter 3

Chassis Components

3-1 Overview

This chapter describes the most common components included with your chassis. Some components listed may not be included or compatible with your particular chassis model. For more information, see the installation instructions detailed later in this manual.

3-2 Components

Chassis

The SC823M chassis includes three hard drive bays and depending upon specific models, your chassis may include one slim DVD-ROM and one slim COM port/USB tray. For the latest chassis components, visit our website at: <http://www.supermicro.com>.

Backplane

Each SC823M chassis comes with a SAS(3)/SATA backplane. For more information regarding compatible backplanes, view the appendices found at the end of this manual. In addition, visit our website for the latest information: <http://www.supermicro.com>.

Fans

The SC823M chassis accepts four system fans with an option for two additional fans. System fans for the SC823M chassis are powered from the serverboard. These fans are 1U in height and are powered by 4-pin connectors.

Mounting Rails

The SC823M can be placed in a rack for secure storage and use. To setup your rack, follow the step-by-step instructions included in this manual.

Power Supply

Each SC823M chassis model includes high-efficiency redundant power supplies rated at 700 or 800 Watts. In the unlikely event that your power supply fails, replacement is simple and can be done without tools. The power supplies are redundant and hot-swappable.

Air Shroud

Air shrouds are shields, usually plastic, that funnel air directly to where it is needed. Always use the air shroud included with your chassis.

3-3 Where to get Replacement Components

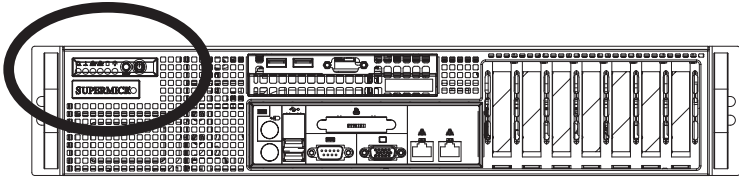
Although not frequently, you may need replacement parts for your system. To ensure the highest level of professional service and technical support, we strongly recommend purchasing exclusively from our Supermicro Authorized Distributors / System Integrators / Resellers. A list of Supermicro Authorized Distributors / System Integrators / Resellers can be found at: <http://www.supermicro.com>. Click the Where to Buy link.

Chapter 4

System Interface

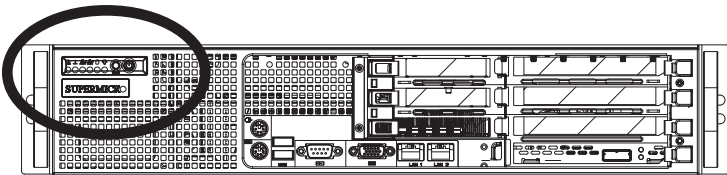
4-1 Overview

This chassis includes LEDs on the control panel and drive carriers that indicate the activity and health of specific components. The control panel is located on the front of the chassis in the upper left hand corner. The illustrations below are for reference only and do not indicate specific component placement.



SC823MTQ-R700LPB, SC823MTQC-R802LPB

For illustrative purposes only, does not reflect component placement



SC823MTQC-R802WB, SC823MTQ-R700UB (Discontinued)

For illustrative purposes only, does not reflect component placement

Figure 4-1. Control Panel Buttons and LED Display

4-2 Control Panel Buttons

There are two buttons located on the front of the chassis: a reset button and a power on/off button, located on the front of the chassis.



Reset: The reset button is used to reboot the system.



Power: The main power switch is used to activate or deactivate power to the server system. Turning off system power with this button removes the main power but keeps the standby power. Therefore, you must unplug system before servicing.

4-3 Control Panel LEDs

The control panel located on the front of the SC823M chassis has six LEDs. These LEDs provide you with critical information related to different parts of the system. This section explains what each LED indicates when illuminated and any corrective action you may need to take.



Power Failure: When this LED flashes, it indicates a power failure in the power supply.



Information LED	
Status	Description
Solid 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 (300 msec)	Remote UID is on. Use this function to identify the server from a remote location.



NIC2: Indicates network activity on GLAN2 when flashing.



NIC1: Indicates network activity on GLAN1 when flashing.



HDD: Indicates SAS/SATA drive, and/or DVD-ROM drive activity when flashing.



Power: Indicates power is being supplied to the system's power supply units. This LED should normally be illuminated when the system is operating.

4-4 Drive Carrier LEDs

Your chassis uses SAS(3)/SATA drives.

SAS(3)/SATA Drives

Each SAS(3)/SATA drive carrier has two LEDs.

- **Green:** Each SAS(3)/SATA drive carrier has a green LED. When illuminated, this green LED (on the front of the SAS(3)/SATA drive carrier) indicates drive activity. A connection to the SAS(3)/SATA backplane enables this LED to blink on and off when that particular drive is being accessed.
- **Red:** The red LED indicates a SAS(3)/SATA drive failure. If one of the SAS(3)/SATA drives fail, you should be notified by your system management software.

Chapter 5

Chassis Setup and Maintenance

5-1 Overview

This chapter covers the steps required to install components and perform maintenance on the chassis. The only tools you will need to install components and perform maintenance is a Phillips screwdriver and under certain circumstances, a hex wrench. Print this page to use as a reference while setting up your chassis.

5-2 Removing Power from the System

Removing Power

1. Power down the system by using the operating system and following the on-screen prompts.
2. After the system has shut down, grasp the head of the power cord and gently remove it from the back of the power supply.
3. Repeat Step 2 and remove the power cord from the rear of the redundant power supply.

Note: Review the warnings and precautions listed in the manual before setting up or servicing this chassis. These include information in Chapter 2: System Safety and the warning/precautions listed in the setup instructions.

5-3 Removing the Chassis Cover

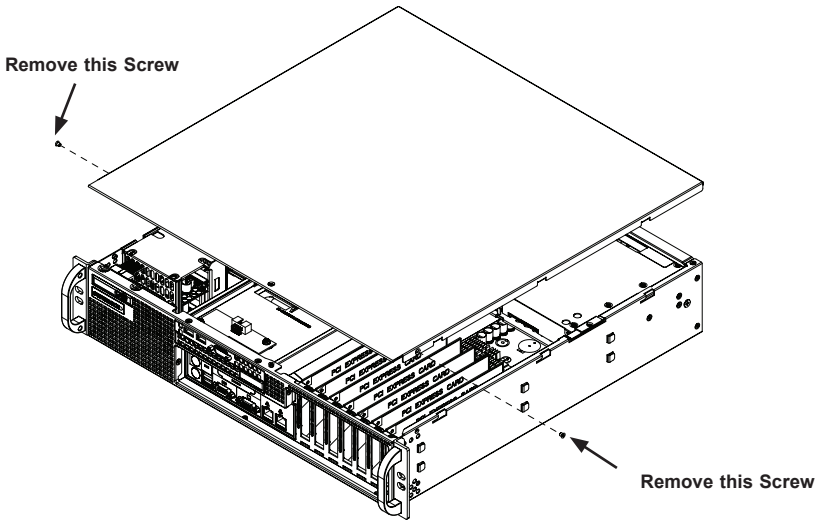


Figure 5-1. Removing the Chassis Cover

Removing the Chassis Cover

1. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2.
2. Remove the two screws holding the chassis in place.
3. Slide the cover toward the rear of the chassis and lift the cover from the unit.

Warning: 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 proper airflow and prevent overheating.

5-4 Removing and Installing the Hard Drives

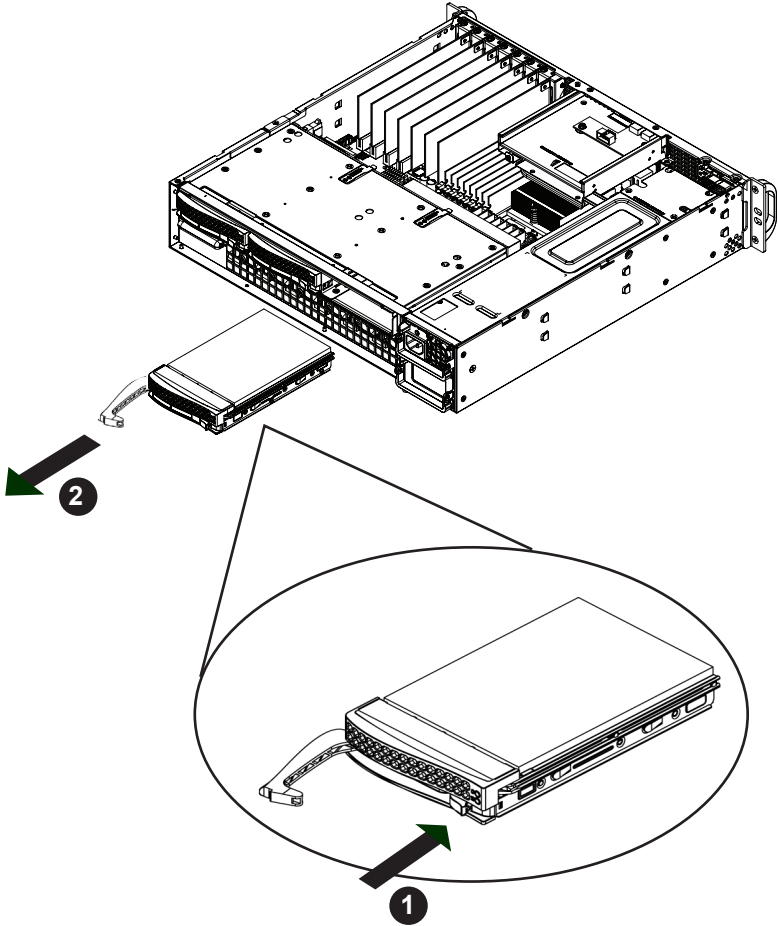


Figure 5-2. Removing a Hard Drive Carrier

The SC823M chassis features hard drives which are hot-swappable and can be removed from the chassis without powering down the system.

Removing Hard Drive Carriers from the Chassis

1. Press the release button on the drive carrier. This extends the drive carrier handle.
2. Use the handle to pull the drive out of the chassis.

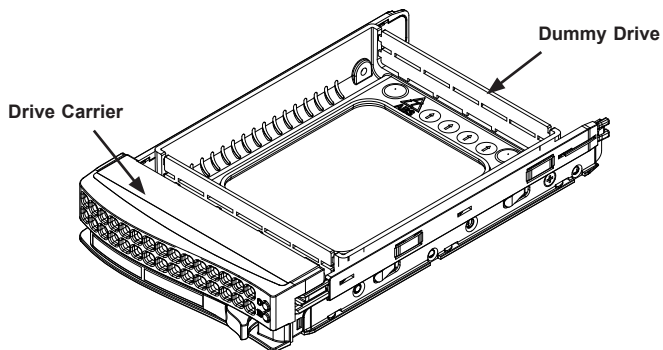


Figure 5-3. Hard Drive Carrier

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

Warning: Except for short periods of time (while swapping hard drives), do not operate the server with the hard drives empty. The hard drive carrier must have a hard drive or dummy drive installed.

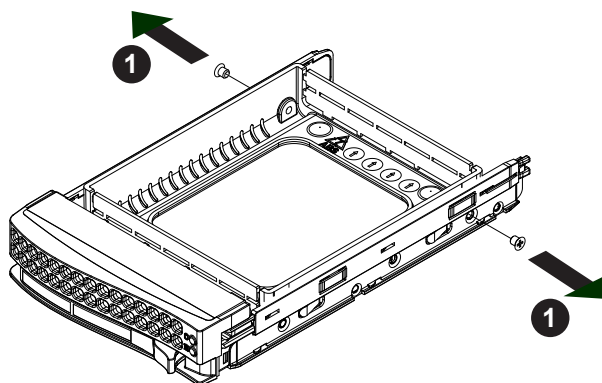


Figure 5-4. Removing a Dummy Drive from the Drive Carrier

Installing a Hard Drive to the Hard Drive Carrier

1. Remove the screws securing the dummy drive to the carrier.
2. Remove the dummy drive from the carrier.

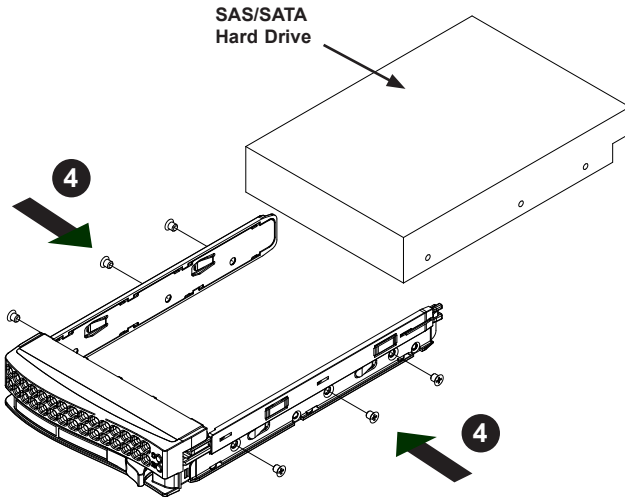


Figure 5-5. Installing a Hard Drive

3. Install a new drive into the carrier with the printed circuit board side facing down so that the mounting holes in the drive align with those in the carrier.
4. Secure the hard drive to the carrier by tightening all six screws.
5. Place the drive carrier into the drive bay of the chassis. Make sure to close the drive carrier handle.
6. Repeat these steps for each hard drive you want to install.

5-5 Installing the Motherboard

This section describes how to install the motherboard into the chassis. Only the SC823MTQ-R700LPB model requires that you first remove the DVD-ROM drive and USB COM port unit. With all SC823 models, it is required that you first remove the hard drive tray.

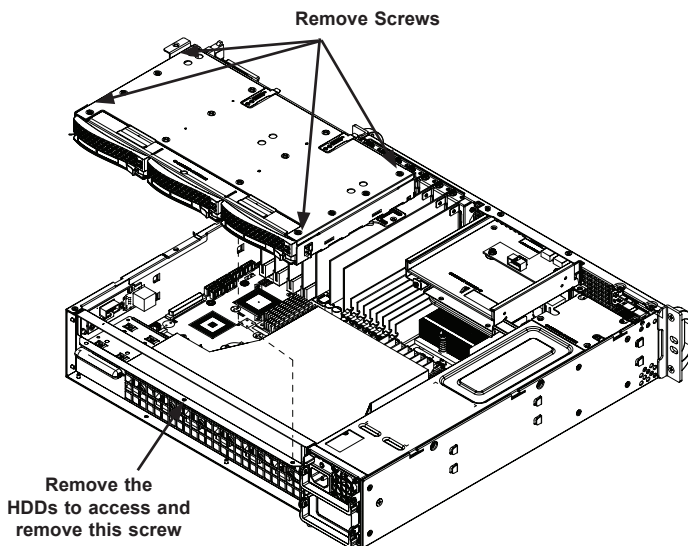


Figure 5-6. Hard Drive Tray Screws

Component Removal

Before installing the motherboard into the SC823MTQ-R700LPB model only, you must remove the hard drive tray, DVD-ROM drive and USB COM port unit.

Removing the Hard Drive Tray

1. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
2. Pull all three hard drives out of the hard drive tray as described in Section 5-4.
3. Remove each of the four exterior hard drive tray screws and then center screw, which must be removed through the inside of the middle drive tray compartment. For screw locations, see illustration above.

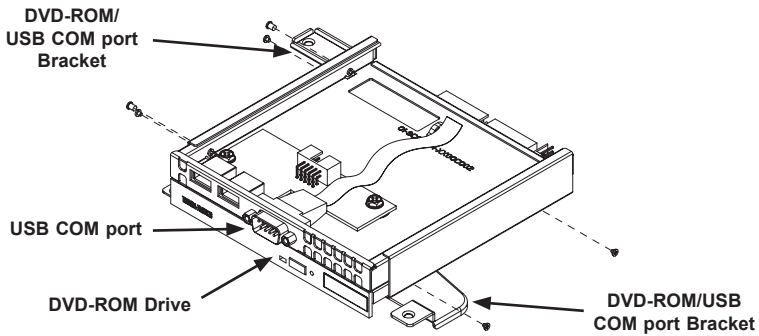


Figure 5-7. DVD-ROM Drive and USB/COM Port (SC823MTQ-R700LPB only)

The DVD-ROM is connected to a USB COM port tray. Both must be removed as a unit when installing the motherboard.

Removing the DVD-ROM Drive/USB COM Port Unit (SC823MTQ-R700LPB only)

1. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
2. Locate and remove the screws holding the DVD-ROM/USB COM port unit in place.
3. If necessary, disconnect any cables to the DVD-ROM/USB COM port unit.
4. Lift the unit up and out of the chassis.

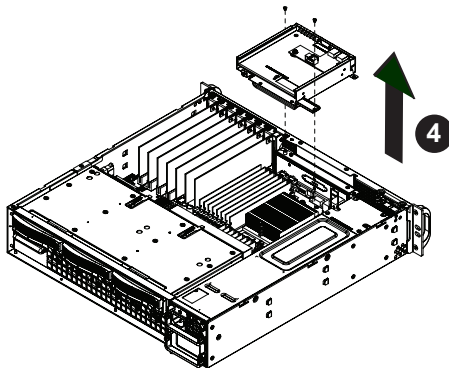


Figure 5-8. DVD-ROM Drive/USB COM port Removal

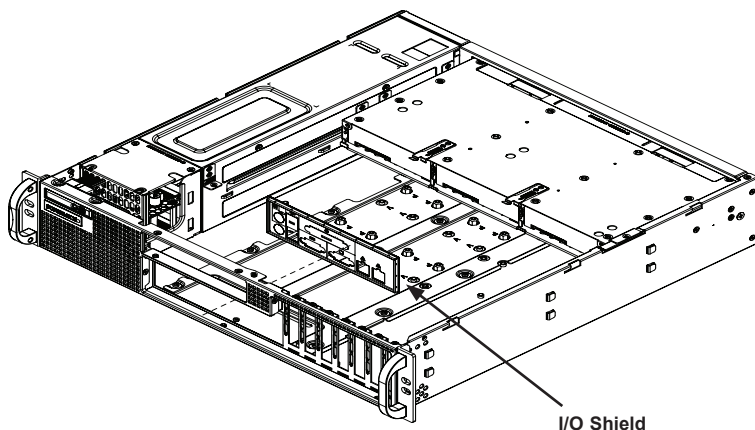


Figure 5-9. I/O Shield Placement

I/O Shield Installation (SC823MTQ-R700LPB and SC823MTQC-R802LPB)

The I/O shield holds the motherboard ports in place. Install the I/O shield before installing the motherboard. For WIO chassis, the I/O location is a fixed design (part of the chassis) and does not need to be installed separately.

Installing the I/O shield

1. Review the documentation that came with your motherboard. Become familiar with component placement, requirements, and precautions.
2. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
3. Make sure the I/O shield matches the motherboard ports. You may need to punch out the printer port.
4. With the illustrations facing the outside of the chassis, place the I/O shield into the opening from the inside of the chassis as illustrated above.

Permanent and Optional Standoffs

Standoffs prevent short circuits by securing space between the motherboard and the chassis surface. The SC823M chassis includes permanent standoffs in locations used by most motherboards.

Some motherboards require additional screws for certain CPUs, heatsinks, and other components. Optional standoffs are included for these motherboards. To use an optional standoff, screw the standoff into the chassis and use it in the same manner as the permanent standoffs.



M/B standoff
6-32 to 6-32



M/B (CPU) standoff
M5 to 6-32



Pan head
6-32 x 5 mm
[0.197]

Figure 5-10. Motherboard Standoffs and Motherboard Pan Head Screw

Installing the Motherboard

1. Review the documentation that came with your motherboard. Become familiar with component placement, requirements, precautions, and cable connections.
2. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
3. As required by your motherboard, install standoffs in any areas that do not have a permanent standoff. All motherboard mounting holes should have matching chassis standoffs. If there are additional standoffs in the chassis that are not used by the motherboard, remove them. Do not allow extra standoffs to remain in the chassis if they are not being used by the motherboard.
4. Lay the motherboard on the chassis aligning the permanent and optional standoffs. In addition, make sure the motherboard aligns with the I/O shield.
5. Secure the motherboard to the chassis using the rounded, Phillips head screws.
6. Secure the CPU(s), heatsinks, and other components to the motherboard as described in the motherboard documentation.

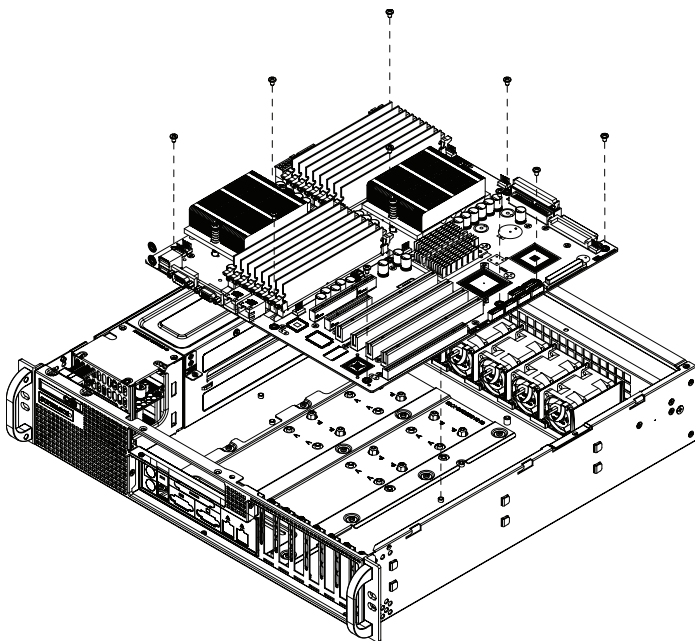


Figure 5-10. Installing the Motherboard

7. Connect the cables between the motherboard, backplane, chassis, front panel, and power supply, as needed. Also, the fans may be temporarily removed to allow access to the backplane ports.

5-6 Removing and Reinstalling the Backplane

The backplane is located on the rear of the hard drive tray. To remove and reinstall the backplane, follow the instructions below.

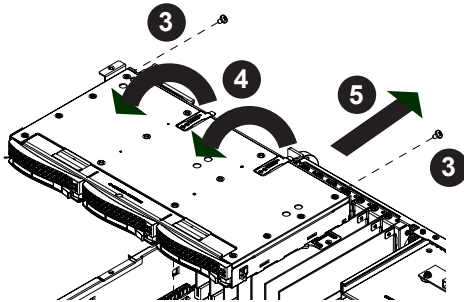


Figure 5-11. Removing the Backplane

Removing the Backplane

1. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
2. Remove the hard drives and drive tray as described in Section 5-5.
3. Remove the two screws securing the backplane to the rear of the hard drive tray and set them aside for later use.
4. Lift the two latches securing the backplane.
5. Pull the top of the backplane away from the hard drive tray at a slight angle, then lift the backplane up and off the hard drive tray.

Reinstalling the Backplane

1. Place the bottom edge of the backplane against the rear of the hard drive tray, then push it flush against the hard drive tray, aligning the mounting holes in the backplane with those in the hard drive tray.
2. Close the two latches over the top of the backplane.
3. Secure the backplane with the two screws previously set aside.
4. Return the hard drive tray to the chassis, replace the chassis cover, plug the power cords into the rear of the power supply and power up the system.

Expansion Card Setup

SC823M chassis include slots for expansion cards. The number of slots varies depending upon the chassis model and the configuration of the system. See below for information specific to each chassis model.

Expansion Card Setup in Low-Profile Model Chassis

In SC823M low-profile chassis models, up to seven expansion cards may be used.

Installing Expansion Cards in a Low Profile Chassis

1. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
2. Confirm that each expansion card you are installing includes a standard "L" bracket.
3. Disconnect the power supply and lay the chassis on a flat surface.
4. Remove the screw holding the PCI slot cover in place on each card slot to be used. Remove the PCI slot cover and keep the screw for later use.
5. Slide the expansion card's L-bracket into the PCI slot as illustrated below, simultaneously connecting the expansion card to the mother board. Follow any additional card manufacturer's instructions.
6. Secure each L-bracket using the screw that was previously removed.
7. Plug the power cords into the rear of the power supplies, replace the chassis cover and power up the system.

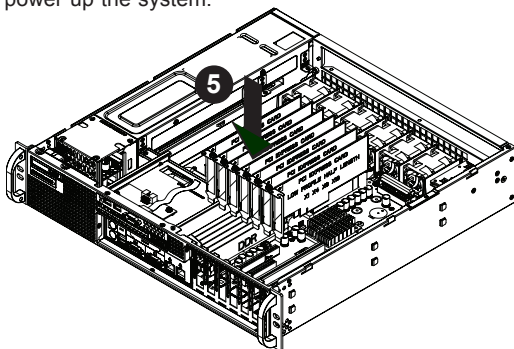


Figure 5-12. Installing Expansion Cards - Low-Profile Chassis

Expansion Card Setup in UIO/WIO Model Chassis

The configuration of the expansion cards in UIO/WIO models will vary, depending upon if a Universal I/O card or WIO card is used:

With a UIO card:

Up to three full-height, half-length I/O may be used

Up to three low-profile PCI slots may be used.

With a WIO card:

Up to four full-height, half-length PCI slots may be used

Up to three low-profile PCI slots may be used.

Installing an Expansion Card in a UIO/WIO Model Chassis

1. Confirm that each add on card you are installing includes a standard "L" bracket. If this is the first expansion card, start by locating the riser card bracket in your chassis accessory bag and one or two riser cards, which are purchased separately. One riser card accommodates the full-height expansion cards and the other accommodates the three low profile expansion cards.
2. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
3. Attach the riser card(s) to the riser card bracket using screws. Note that there are different cards for the right and left side of the bracket.
4. Insert the riser card(s) into the motherboard expansion slot(s) while aligning the riser card bracket with the front of the chassis. Secure the bracket with screws (Figure 5-13).
5. Rotate the latch on the left side of the PCI slot (A) to remove the PCI slot cover.
6. Remove the two screws and the retention bracket securing the right side of the PCI slot covers (B) and remove the "L" bracket for WIO chassis. For UIO chassis, rotate the latch to remove the chassis "L" bracket.
7. Insert each expansion card into the PCI slot using the card's L bracket.
8. Secure each expansion card in its PCI slot by closing the PCI slot latch, or reinstall the retention bracket.

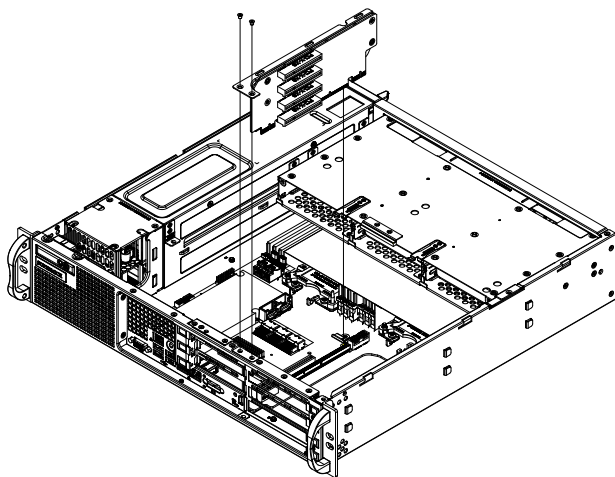


Figure 5-13. Installing Riser Cards - UIO/WIO Chassis

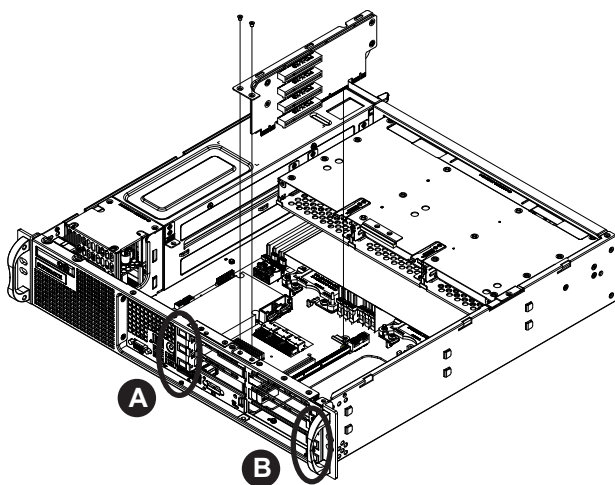


Figure 5-14. Installing Expansion Cards in a UIO/WIO Chassis

9. Secure the riser card bracket using the two screws previously set aside.
10. Plug the power cords into the rear of the power supplies, replace the chassis cover and power up the system.

5-7 Installing the Air Shroud

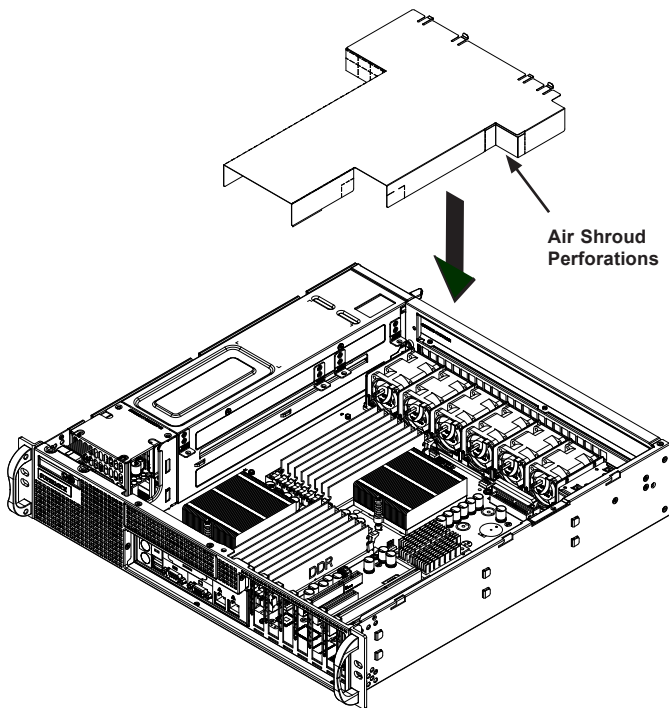


Figure 5-15. Air Shroud for SC823M Chassis

The air shroud concentrates airflow to maximize fan efficiency. The SC823M chassis air shroud does not require screws to set up.

Installing the Air Shroud

1. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
2. Each air shroud includes perforations that can be removed to accommodate motherboard components. To ensure maximum cooling, remove only the perforations that are required.
3. Place the air shroud in the chassis. The air shroud covers the four fan slots nearest to the DVD-ROM drive.

5-8 Checking the System Airflow

Proper airflow allows the chassis to keep the server components cooled and prevent damage. Use the following steps to check the airflow after setup and in the unlikely event the chassis needs to be serviced.

Checking the Server's Airflow

1. Make sure no cables or foreign objects are obstructing the airflow through the chassis. Pull all excess cabling out of the airflow path or use shorter cables. For the SC823M chassis it is recommended that cables run beside the power supply as much as possible.
2. Make sure there are no objects to obstruct airflow in and out of the server.
3. Do not operate the server without hard drives or dummy drives in the hard drive trays.
4. Use recommended server parts only.
5. The control panel LEDs inform you of system status. See "Chapter 3: System Interface" for details on the LEDs and the control panel buttons.

5-9 Completing the Installation

Once the air shroud is properly installed, do the following to complete the installation procedure.

Completing the Installation

1. If your chassis is equipped with a DVD-ROM drive, install the DVD-ROM drive unit and connect the DVD-ROM drive to the motherboard.
2. Install the hard drive tray. The hard drive tray includes a SAS/SATA backplane. Connect the backplane to the motherboard.
3. Securely close the chassis cover.

If the chassis will be installed into a rack, continue to the next chapter for rack installation instructions.

5-10 System Fans

The SC823M chassis includes four fans for cooling and air circulation. Two dummy fans are included as a place holder.

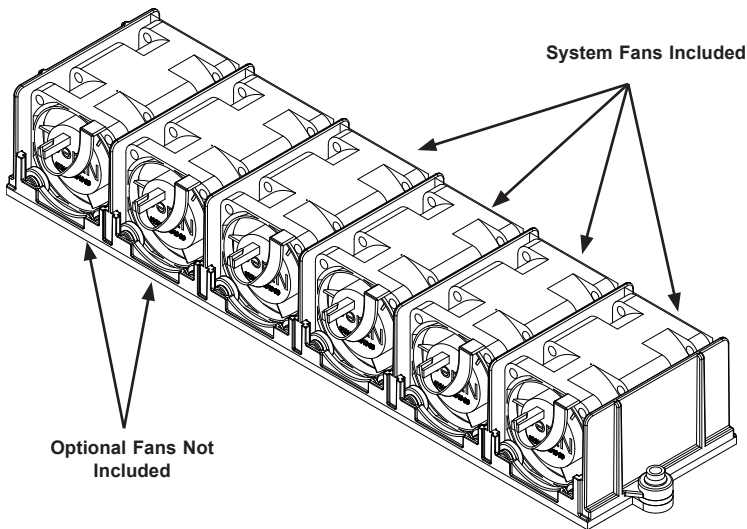


Figure 5-16. System Fans and Optional Fans in Fan Tray

Replacing a System Fan

1. If necessary, open the chassis while the power is running to determine which fan needs replacing. (Never run the server for an extended period of time with the chassis open.)
2. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2.
3. Remove the hard drive tray. For instructions on doing this, see the Installing the Motherboard section of this chapter.
4. Disconnect the system fan from the motherboard and lift the fan from the fan tray.

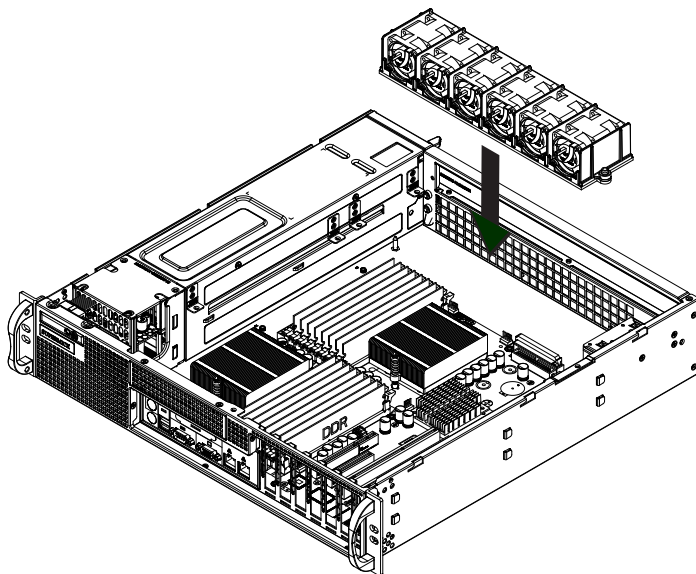


Figure 5-17. Placing the System Fan

Note: The SC823M chassis includes four pre-installed fans. Two extra slots are included for an optional fifth and sixth fan.

5. Place the new fan into the vacant space in the housing while making sure the arrows on the top of the fan (indicating air direction) point in the same direction as the arrows on the other fans. Each fan includes rubber feet to reduce vibrations. Always use all four feet when placing a system fan.
6. Connect the new fan to the motherboard.
7. Replace the DVD-ROM drive unit and hard drive fan tray.
8. Plug the power cords into the rear of the power supplies, and power up the system to check the new fan performance.
9. Replace the chassis cover.

5-11 Power Supply

The SC823M chassis has a 700 or 800 Watt power supply. This power supply is auto-switching capable. This enables it to automatically sense and operate at a 100v to 240v input voltage. An amber light will be illuminated on the power supply when the power is off. An illuminated green light indicates that the power supply is operating.

Power Supply Replacement

The SC823M chassis models include a redundant power supply. Power supplies can be replaced without powering down the system. Replacement units can be ordered directly from Supermicro at <http://www.supermicro.com>.

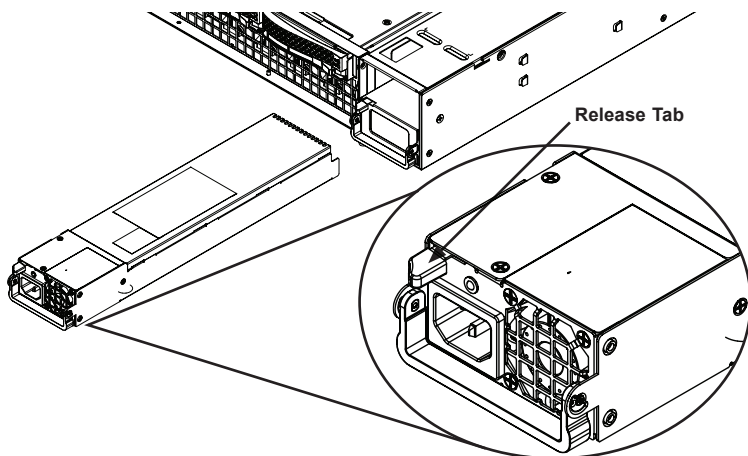


Figure 5-18. Removing the Power Supply

The SC823M chassis includes a redundant power supply. It is not necessary to power down the server to replace a power supply.

Replacing the Power Supply

1. Push the release tab (on the back of the power supply) as illustrated.
2. Pull the power supply out using the handle provided.
3. Replace the failed power module with a new unit. To do this, push the new power supply module into the power bay until you hear a click.
4. Plug the AC power cord back into the module and power up the server.

5-12 Power Distributor

Replacing the Power Distributor

The power distributor provides failover and power supply redundancy. In the unlikely event you must replace the power distributor, do following

Replacing the Power Distributor

1. Power down the system and remove the power cords from the rear of the power supplies as described in Section 5-2. Remove the chassis cover as described in Section 5-3.
2. Remove all cable connections to the power supply from the motherboard, backplane, and other components. Also, remove both power supplies.
3. Locate the power distributor between the power supply and the fan row.
4. Remove the two screws securing the power distributor to the chassis.
5. Pull the power distributor from the chassis. Gently guide all the cables through the power distributor housing.
6. Slide the new power distributor module into the power distributor housing. Make sure that you slide the cables through the bottom of the housing.
7. Reconnect all the power cables, return the power supplies to the power supply bays, replace the chassis cover, plug the power cords into the rear of the power supplies and power up the system.

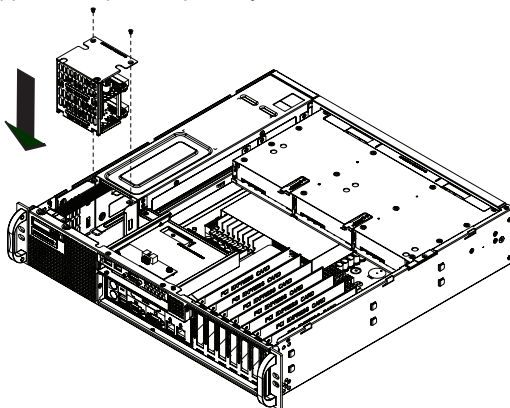


Figure 5-19. Replacing the Power Distributor

Notes

Chapter 6

Rack Installation

This chapter provides instructions for preparing and mounting your chassis in a rack.

6-1 Unpacking the System

You should inspect the box the chassis was shipped in and note if it was damaged in any way. If the chassis itself shows damage, file a damage claim with the carrier who delivered it.

6-2 Preparing for Setup

Decide on a suitable location for the rack unit that will hold your chassis. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. You will also need it placed near a grounded power outlet.

The box your chassis was shipped in should include two sets of rail assemblies, two rail mounting brackets and the mounting screws you will need to install the system into the rack. Please read this section in its entirety before you begin the installation procedure outlined in the sections that follow.

Choosing a Setup Location

- Leave enough clearance in front of the rack to enable you to open the front door completely (25 inches).
- Leave approximately 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing.
- This product is for installation only in a Restricted Access Location (dedicated equipment rooms, service closets and similar environments).

6-3 Warnings and Precautions

Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting 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 that the rack is stable before extending a component from the rack.
- Only one chassis should be extended from the rack at a time. Extending two or more chassis simultaneously may cause the rack to become unstable.

General Server Precautions

- Review the electrical and general safety precautions that came with the components you are adding to your chassis.
- Determine the placement of each component in the rack *before* you install the rails.
- Install the heaviest server components on the bottom of the rack first, and then work upward.
- Use a regulating uninterruptible power supply (UPS) to protect the server from power surges, voltage spikes and to keep your system operating in case of a power failure.
- Allow the hot-swappable hard drives and power supply modules to cool before touching them.
- Always keep the rack's front door and all panels and components on the servers closed when not servicing 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 ambient temperature of the room. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (TMRA).

Reduced 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.

6-4 Installing the System into a Rack

This section provides information on installing the chassis into a rack unit with the rails provided. There are a variety of rack units on the market, which may mean that the assembly procedure will differ slightly from the instructions provided. You should also refer to the installation instructions that came with the rack unit you are using. **Note:** This rail will fit a rack between 26.5" and 36.4" deep.

Identifying the Sections of the Rack Rails

The chassis package includes two rail assemblies in the rack mounting kit. Each assembly consists of three sections: An inner chassis rail which secures directly to the chassis, an outer rail that secures to the rack, and a middle rail which extends from the outer rail. These assemblies are specifically designed for the left and right side of the chassis.

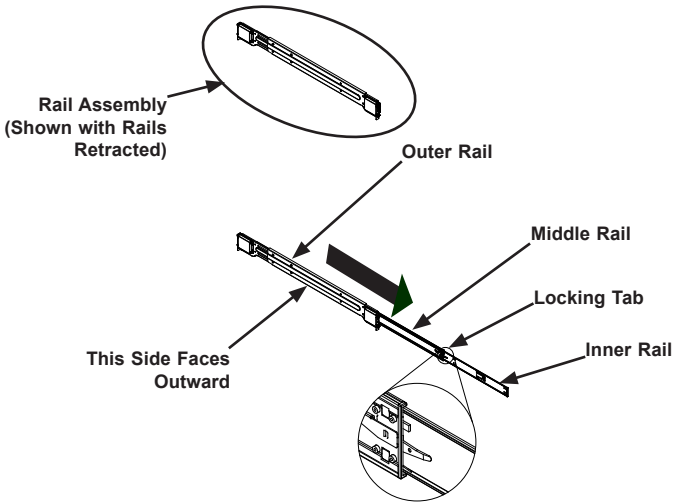


Figure 6-1. Identifying the Outer Rail, Middle Rail and Inner Rails
(Left Rail Assembly Shown)

Locking Tabs

Each inner rail has a locking tab. This tab locks the chassis into place when installed and pushed fully into the rack. These tabs also lock the chassis in place when fully extended from the rack. This prevents the server from coming completely out of the rack when the chassis is pulled out for servicing.

Releasing the Inner Rail

Use the procedure below to release the inner rails from the outer rails.

Releasing Inner Rail from the Outer Rails

1. Identify the left and right outer rail assemblies as described previously.
2. Pull the inner rail out of the outer rail until it is fully extended as illustrated below.
3. Press the locking tab down to release the inner rail.
4. Pull the inner rail all the way out.
5. Repeat for the other outer rail.

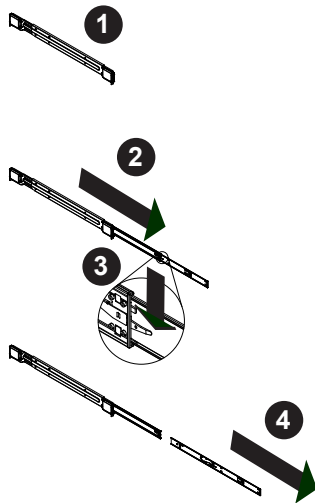


Figure 6-2. Extending and Releasing the Inner Rail

Installing The Inner Rails on the Chassis

Installing the Inner Rails

1. Confirm that the left and right inner rails have been correctly identified.
2. Place the inner rail firmly against the side of the chassis, aligning the hooks on the side of the chassis with the holes in the inner rail.
3. Slide the inner rail forward toward the front of the chassis until the rail clicks into the locked position, which secures the inner rail to the chassis.
4. Secure the inner rail to the chassis with the screws provided.
5. Repeat for the other inner rail.

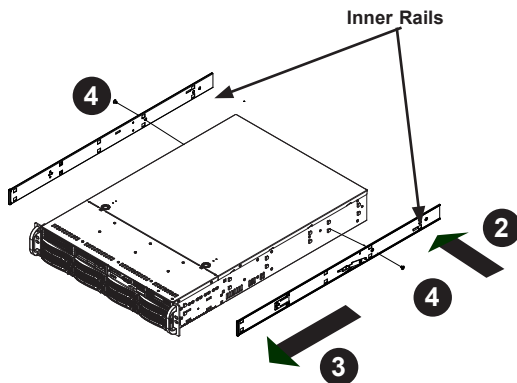


Figure 6-3. Installing the Inner Rails

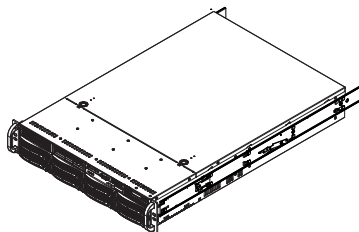


Figure 6-4. Inner Rails Installed on the Chassis

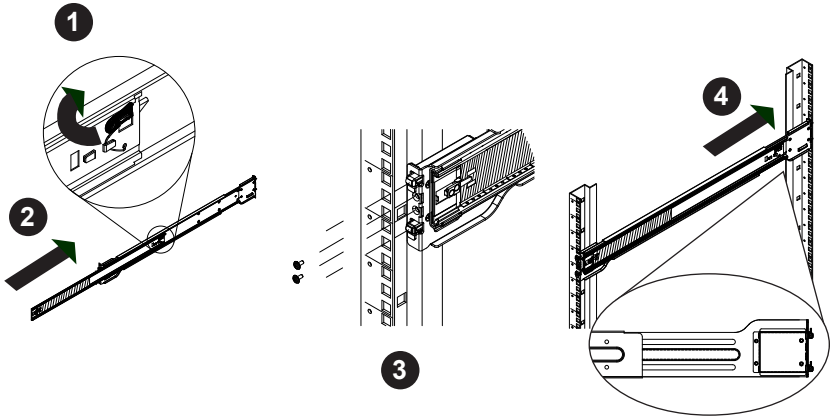


Figure 6-5. Extending and Releasing the Outer Rails

Installing the Outer Rails on the Rack

Installing the Outer Rails

1. Press upward on the locking tab at the rear end of the middle rail.
2. Push the middle rail back into the outer rail.
3. Hang the hooks of the front of the outer rail onto the slots on the front of the rack. If necessary, use screws to secure the outer rails to the rack, as illustrated above.
4. Pull out the rear of the outer rail, adjusting the length until it fits within the posts of the rack.
5. Hang the hooks of the rear portion of the outer rail onto the slots on the rear of the rack. If necessary, use screws to secure the rear of the outer rail to the rear of the rack.
6. Repeat for the other outer rail.

Standard Chassis Installation



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.

Installing the Chassis into a Rack

1. Extend the outer rails as illustrated above.
2. Align the inner rails of the chassis with the outer rails on the rack.
3. Slide the inner rails into the outer rails, keeping the pressure even on both sides. When the chassis has been pushed completely into the rack, it should click into the locked position.
4. Optional screws may be used to hold the front of the chassis to the rack

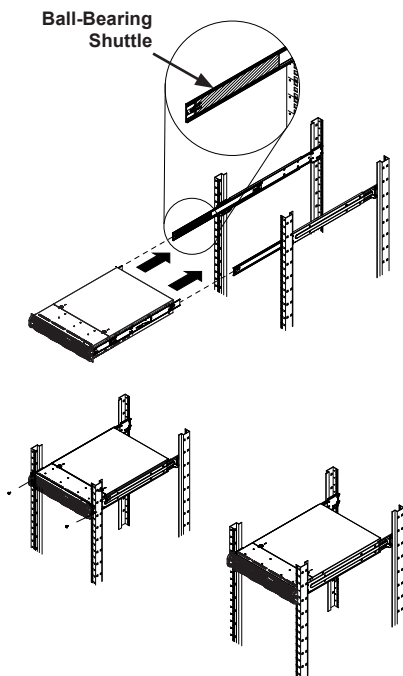


Figure 6-6. Installing into a Rack

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



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

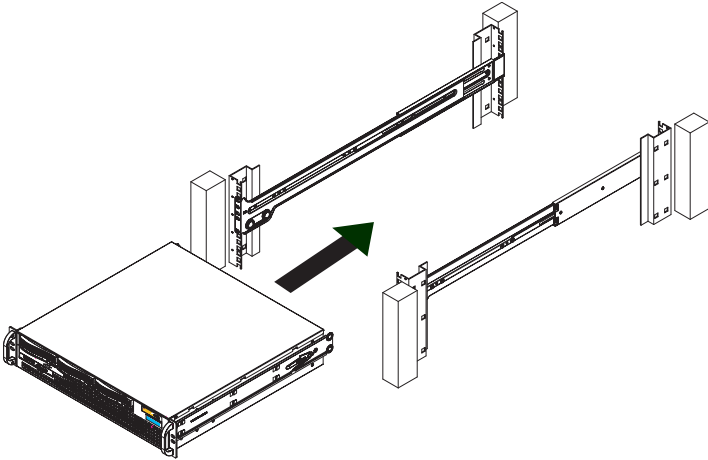


Figure 6-7. Installing the Chassis into a Rack

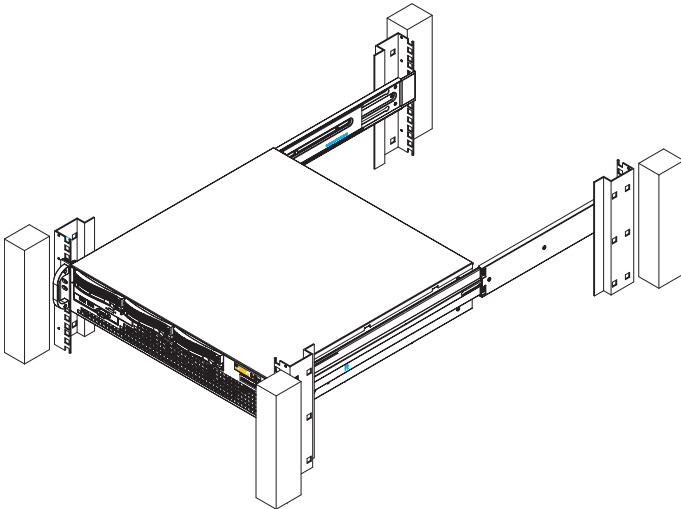


Figure 6-8. Completed Chassis Installation

Notes

Appendix A

SC823M Power Supply Specifications

This appendix lists power supply specifications for your chassis system.

SC823MTQ-R700LPB and SC823MTQ-R700UB	
	700W (Redundant)
MFR Part #	PWS-702A-1R
Rated AC Voltage	100 - 240 Vac 50 - 60 Hz 10 - 4 Amp
+5 V Standby Current	4 A
+12 V Current	57 A

SC823MTQC-R802LPB and SC823MTQC-R802WB	
	800W (Redundant)
MFR Part #	PWS-802A-1R
Rated AC Voltage	100 - 240 Vac 50 - 60 Hz 10 - 5 Amp
+5 V Standby Current	4 A
+12 V Current	66 A

Notes

Appendix B

BPN-SAS-825MTQ Backplane Specifications

B-1 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 card and peripherals back into their antistatic bags when not in use.

B-2 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.

B-3 Version Information

The BPN-SAS-825MTQ backplane has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

This manual reflects BPN-SAS-825MTQ revision 1.10, the most current release available at the time of publication. Refer to www.supermicro.com for the latest updates, compatible parts and supported configurations.

B-4 Rear Connector Locations

The following connectors are on the side of the backplane that faces the rear of the chassis. They are marked by silk screen labels.

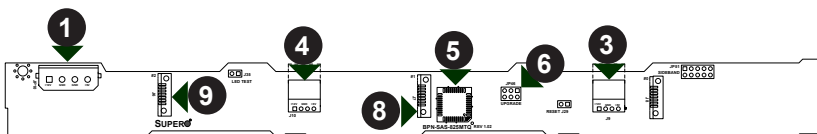


Figure B-1. BPN-SAS-825MTQ Rear View

Rear Connectors

1. Main Power Connector: JP10
2. Sideband (SGPIO) Connector: JP51
3. DVD-ROM Drive Power Connector: J9
4. DVD-ROM Drive Power Connector: J10
5. MG9071 Chip
6. Upgrade Connector: JP46
7. J8: SAS Port #0
8. J7: SAS Port #1
9. J6: SAS Port #2

B-5 Rear Connector and Pin Definitions

1. Main Power Connector

The 4-pin connector, designated JP10, provides power to the backplane.

Backplane Main Power 4-Pin Connector	
Pin#	Definition
1	+12V
2 and 3	Ground
4	+5V

2. Sideband Connector

The sideband connector is designated JP51. For SES-2 to work properly, you must connect an 8-pin sideband cable to JP51.

Sideband Connector			
Pin #	Definition	Pin #	Definition
2	SDataIn (SGPIO Data In)	1	N/C
4	SDataIn (SGPIO Data Out)	3	GND
6	GND	5	SLoad (SGPIO Load)
8	N/C	7	SClock (SGPIO Clock)

3. - 4. DVD-ROM 4-Pin Connectors

The 4-pin connectors, designated J9 and J10, provide power to the DVD-ROM drive.

CD-ROM/ FDD Power 4-Pin Connector	
Pin#	Definition
1	+12V
2 and 3	Ground
4	+5V

5. MG9071 Chip

The MG9071 is an enclosure management chip.

6. MG9071 Upgrade Header

The upgrade header, designated JP46, is used for manufacturing purposes only.

7. - 9. SAS Ports

The SAS ports are used to connect the drive cables. The three ports are designated #0 - #2 and are compatible with SAS/SATA drives.

B-6 Rear Jumper Locations and Pin Definitions

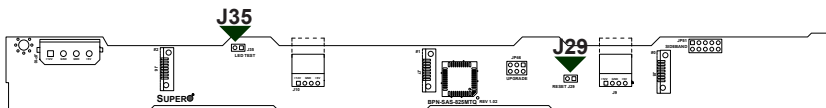
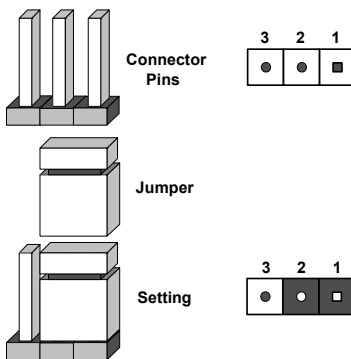


Figure B-2. BPN-SAS-825MTQ Rear Jumpers

Explanation of Jumpers

To modify the operation of the backplane, jumpers can be used to choose between optional settings. Jumpers create shorts between two pins to change the function of the connector. Pin 1 is identified with a square solder pad on the printed circuit board.



Note: On two pin jumpers, "Closed" means the jumper is on and "Open" means the jumper is off the pins.

Jumper Settings		
Jumper	Jumper Settings	Note
J35	Open = Default Closed = Enabled	Activity LED Test
J29	Open = Default Closed = Reset	Chip Reset

B-7 Front Connectors and LED Indicators

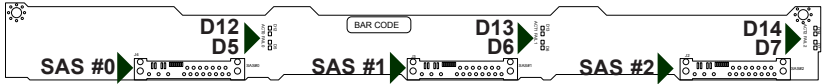


Figure B-3. BPN-SAS-825MTQ Front View

Front Connector/LED Indicator Descriptions

Front SAS Connectors	
Rear Connector	SAS Drive Number
SAS#0	SAS/SATA HDD #0
SAS#1	SAS/SATA HDD #1
SAS#2	SAS/SATA HDD #2

Front LED Indicators	
Rear LED Indicator	Hard Drive Activity and Failure LEDs
D12	SCA#0 Activity LED (Connected to HDD)
D13	SCA#1 Activity LED (Connected to HDD)
D14	SCA#2 Activity LED (Connected to HDD)
D5	SAS#0 Failure LED (Connected to HDD)
D6	SAS#1 Failure LED (Connected to HDD)
D7	SAS#2 Failure LED (Connected to HDD)

Notes

Appendix C

BPN-SAS3-825MTQ Backplane Specifications

C-1 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 card and peripherals back into their antistatic bags when not in use.

C-2 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.

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The BPN-SAS3-825MTQ has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

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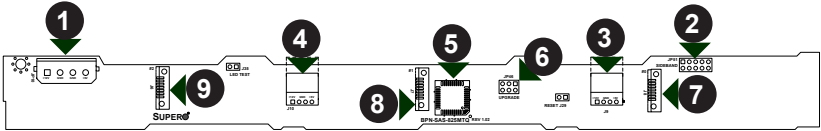


Figure D-1. BPN-SAS3-825MTQ Rear View

Rear Connectors

1. Main Power Connector: JP10
2. Sideband (SGPIO) Connector: JP51
3. DVD-ROM Drive Power Connector: J9
4. DVD-ROM Drive Power Connector: J10
5. MG9071 Chip
6. Upgrade Connector: JP46
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8. J7: SAS Port #1
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Backplane Main Power 4-Pin Connector	
Pin#	Definition
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2 and 3	Ground
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The sideband connector is designated JP51. For SES-2 to work properly, you must connect an 8-pin sideband cable to JP51.

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4	SDataIn (SGPIO Data Out)	3	GND
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8	N/C	7	SClock (SGPIO Clock)

3. - 4. DVD-ROM 4-Pin Connectors

The 4-pin connectors, designated J9 and J10, provide power to the DVD-ROM drive.

CD-ROM/ FDD Power 4-Pin Connector	
Pin#	Definition
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5. MG9071 Chip

The MG9071 is an enclosure management chip.

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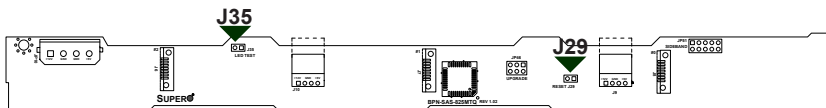
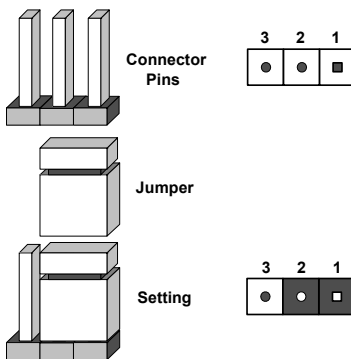


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J29	Open = Default Closed = Reset	Chip Reset

C-7 Front Connectors and LED Indicators

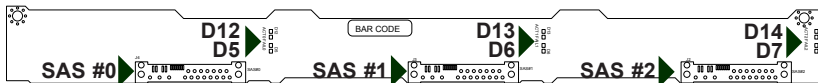


Figure C-3. BPN-SAS3-825MTQ Front View

Front Connector/LED Indicator Descriptions

Front SAS Connectors	
Rear Connector	SAS Drive Number
SAS#0	SAS/SATA HDD #0
SAS#1	SAS/SATA HDD #1
SAS#2	SAS/SATA HDD #2

Front LED Indicators	
Rear LED Indicator	Hard Drive Activity and Failure LEDs
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D13	SCA#1 Activity LED (Connected to HDD)
D14	SCA#2 Activity LED (Connected to HDD)
D5	SAS#0 Failure LED (Connected to HDD)
D6	SAS#1 Failure LED (Connected to HDD)
D7	SAS#2 Failure LED (Connected to HDD)

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