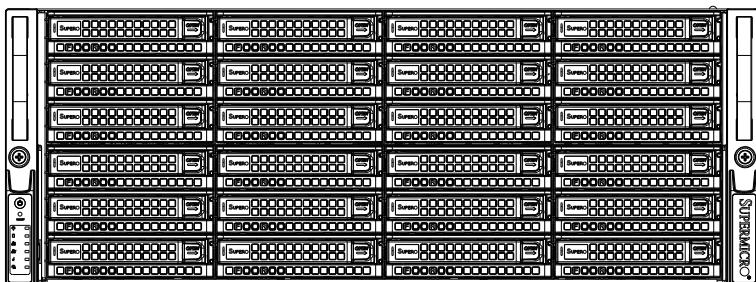


SUPERO[®]

DOUBLE-SIDED STORAGE SC847D CHASSIS SERIES



SC847DE16-R1K28LPB

SC847DE16-R2K02LPB

USER'S MANUAL

1.0

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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

About This Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the SC847D chassis. Installation and maintenance should be performed by experienced technicians only.

This manual lists compatible parts available when this document was published. Always refer to the our web site for updates on supported parts and configurations.

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 SC847D chassis. This chapter also includes contact information.

Chapter 2 Standardized Warning Statements for AC/DC Systems

This chapter lists warnings, precautions, and system safety. It is recommended that you thoroughly familiarize yourself with installing and servicing the chassis and all safety precautions.

Chapter 3 System Interface

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

Chapter 4 Chassis Setup and Maintenance

Follow the procedures given in this chapter when installing, removing, or reconfiguring components in your chassis.

Chapter 5 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.

This section lists compatible cables, power supply specifications, and compatible backplanes. Not all compatible backplanes are listed. Refer to our Web site for the latest compatible backplane information.

Appendix A Hardware

This section provides information on cabling, and other hardware which is compatible with your chassis. For complete information on supported cables and hardware, refer to the Supermicro Web site at www.supermicro.com.

Appendix B Power Supply Specifications

This chapter lists the specifications of the power supply provided with your chassis. For additional information, refer to the Supermicro website at www.supermicro.com.

Appendix C Backplane Specifications

This section contains detailed specifications on the BPN-SAS2-847DF front backplane, BPN-EXP-847DF3EL1 rear backplane, BPN-EXP-847DF2EL1 front expander card and BPN-EXP-847DF2EL1 rear expander card. Additional information can be found on the Supermicro web site at www.supermicro.com

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Appendix A SC847D Cables and Hardware

Appendix B SC847D Power Supply Specifications

Appendix C Backplane Specifications

Chapter 1

Introduction

1-1 Overview

Optimized for enterprise-level high-capacity storage applications, Supermicro's SC847D chassis features 72x 3.5" SAS2/SATA3 in 36x (24 front + 12 rear) 3.5" Hot-swap HDD bays (2x HDD per bay.)The SC847D design offers extra high-density of HDD per space ratio in a 4U form factor, high power efficiency, optimized HDD signal trace routing and improved HDD tray design to dampen HDD vibrations and maximize performance. Equipped with triple redundant 1280W high-efficiency power supplies or dual 2000W power supplies and seven hot-plug redundant cooling fans, the SC847D is a reliable and hassle-free maintenance storage system.

1-2 Shipping List

Please visit the Supermicro web site for the latest shipping lists and part numbers for your particular chassis model at www.supermicro.com.

SC847D Chassis			
Model	HDD	PCI Slots	Power Supply
SC847DE-R1K28LPB	72x SAS/SATA	7x LP	1280W
SC847DE-R2K02LPB	72x SAS/SATA	7x LP	2000W

1-3 Where to get Replacement Components

Though 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.

1-4 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)

Web Site: 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)

Web Site: 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

Web Site: www.supermicro.com.tw

1-5 Returning Merchandise for Service

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

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

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

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

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

Chapter 2

Standardized Warning Statements for AC/DC 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.

תקנון הצהרות אזהרה

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

יש לקרוא את הנספח במלוואו 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.

اقرأ إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

주의!

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: 60VDC, 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60VDC、20A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60VDC, 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60VDC, 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: 60VDC, 20A 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: 60VDC, 20A.

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 :60VDC, 20A.

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

경고!

이 제품은 전원의 단락(과전류)방지에 대해서 전적으로 건물의 관련 설비에 의존합니다. 보호장치의 정격이 반드시 60V(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 60V, 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 لتكوين 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 لتركيبها في مناطق محظورة .
يمكن الوصول إلى منطقة محظورة فقط من خلال استخدام أداة خاصة،
قفل ومفتاح أو أي وسيلة أخرى للأمان

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

Redundant Power Supplies



Warning!

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

冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。
ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告

此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung

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

¡Advertencia!

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

Attention

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

אם קיים יותר מספק אחד

אזהרה !

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

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة.
يجب إزالة كافة الاتصالات 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

当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告

當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

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

¡Advertencia!

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

Attention

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

מתח בפנל האחורי

אזהרה !

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

هناك خطر 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.

תאום חוקי החשמל הארצי

אזהרה !

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمثل 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!

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

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

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

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

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!

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

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 وغيرها من الأشياء بعيدا عن الفتحات في كتلة المروحة.

경고!

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

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.

DC Power Supply



Warning!

When stranded wiring is required, use approved wiring terminations, such as closedloop or spade-type with upturned lugs. These terminations should be the appropriate size for the wires and should clamp both the insulation and conductor.

警告

より線が必要な場合、承認済みのケーブル終端（上向きの端子を備えたクローズループ型またはU字型の終端など）を使用してください。使用するワイヤーに適したサイズで、絶縁体および導体が両方ともクランプされている終端でなければなりません。

警告

需要多股佈線時，請使用經核准的佈線終端，例如閉環或鏟型接線片。這些終端的大小應適合線路，並且可以同時夾住絕緣體和導體。

警告

需要使用绞线连接时，请使用经认可的连接端子，如闭环端子或具有接线柱的铲形端子。这些端子的大小应与线缆相吻合，并且可以将绝缘部分和导体夹紧固定。

Warnung

Wenn Litzenverdrahtung erforderlich ist, sind zugelassene Verdrahtungsabschlüsse, z.B. für einen geschlossenen Regelkreis oder gabelförmig, mit nach oben gerichteten Kabelschuhen zu verwenden. Diese Abschlüsse sollten die angemessene Größe für die Drähte haben und sowohl die Isolierung als auch den Leiter festklemmen.

¡Advertencia!

Quando se necesite hilo trenzado, utilizar terminales para cables homologados, tales como las de tipo "bucle cerrado" o "espada", con las lengüetas de conexión vueltas hacia arriba. Estos terminales deberán ser del tamaño apropiado para los cables que se utilicen, y tendrán que sujetar tanto el aislante como el conductor.

Attention

Quand des fils torsadés sont nécessaires, utiliser des douilles terminales homologuées telles que celles à circuit fermé ou du type à plage ouverte avec cosses rebroussées. Ces douilles terminales doivent être de la taille qui convient aux fils et doivent être refermées sur la gaine isolante et sur le conducteur.

תקנון הצהרות אזהרה

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

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

تحذير

كأس ألامادختس او: لبس ال مذهب تعطت ني ذل كأس ألامبولطم نو كي امدن عونل عيقي قحل اءامس أب عاي ش ألام أو قق لغم قق ل ح لشم: اءي لع قق ف او مل اءانل كأس ألام بس ان مل اءج ح ل نو كي تاء اءانل اء ذل عي غ بن ي و. قق بولقم تاور عل عم ل ص و مل ل ز عل اء نم لك حبك ب ج ي و

주의!

코인 배선이 요구 될 때에는 폐회로나 돌출부가 위로 튀어 나온 Spade 형태의 승인된 배선 터미네이션들을 사용하세요.

이 터미네이션들은 배선들을 위해 적절한 크기여야 하고, 절연체와 도체 모두를 고정시킬 수 있어야 합니다.

Waarschuwing

Wanneer geslagen bedrading vereist is, dient u bedrading te gebruiken die voorzien is van goedgekeurde aansluitingspunten, zoals het gesloten-lus type of het grijperschop type waarbij de aansluitpunten omhoog wijzen. Deze aansluitpunten dienen de juiste maat voor de draden te hebben en dienen zowel de isolatie als de geleider vast te klemmen.

DC Power Disconnection



Warning!

Before performing any of the following procedures, ensure that power is removed from the DC circuit.

警告

次の手順を開始する前に、DC回路から電源が切斷されていることを確認してください。

警告

進行以下任一操作程序前，請確保直流電路已斷電。

警告

请在进行以下任一操作程序前，确保直流电路的电源已经断开。

Warnung

Vor Ausführung der folgenden Vorgänge ist sicherzustellen, daß die Gleichstromschaltung keinen Strom erhält.

¡Advertencia!

Antes de proceder con los siguientes pasos, comprobar que la alimentación del circuito de corriente continua (CC) esté cortada (OFF).

Attention

Avant de pratiquer l'une quelconque des procédures ci-dessous, vérifier que le circuit en courant continu n'est plus sous tension.

אזהרה !

לפני ביצוע אחת הפעולות הבאות, ודא כי אספקת החשמל למעגל הזרם הישר DC הינה מנותקת.

تحذير

ءاهن ةكالسأل اءاءءءساو ،لبسلا مءب ءعءطء نءذلا ةكالسأل اءولطم نوكة اءءن عم عونلا ءيءيءءءل اءءامسأب ءاءشألا وأ ءقلغم ءقلءل ءشم ،اءءل ع ءءفاءوملا بعءو ةكالسألل بسانءلا مءءءل نوكة ءاءاءنلا هءهل ءءبن ءو .ءبولقم ءاورعلا لءصومو لءعلا نم لك ءبء

주의!

다음 절차를 수행하기 전에, 전원이 DC 회로로부터 제거되었는지를 확인해 주십시오.

Waarschuwing

Wanneer geslagen bedrading vereist is, dient u bedrading te gebruiken die voorzien is van goedgekeurde aansluitpunten, zoals het gesloten-lus type of het grijperschop type waarbij de aansluitpunten omhoog wijzen. Deze aansluitpunten dienen de juiste maat voor de draden te hebben en dienen zowel de isolatie als de geleider vast te klemmen.

Hazardous Voltage or Energy Present on DC Power Terminals



Warning!

Hazardous voltage or energy may be present on DC power terminals. Always replace cover when terminals are not in service. Be sure uninsulated conductors are not accessible when cover is in place.

警告

直接電力端子に危険な電圧やエネルギーが発生している可能性があります。使用していない端子には常にカバーをつけてください。カバーがついているときは非絶縁形コンダクターに接触していないことを確認してください。

警告

直流電源終端可能產生危險的電壓或能量。終端不使用時，請務必蓋上機蓋。當蓋上機蓋，確認不絕緣導體無法使用。

警告

直流电源终端可能会产生危险的电压或能量。终端不使用时，请务必盖上机盖。机盖盖上后，请确保导体未绝缘部分无法使用。

Warnung

In mit Gleichstrom betriebenen Terminals kann es zu gefährlicher Spannung kommen. Die Terminals müssen abgedeckt werden, wenn sie nicht in Betrieb sind. Stellen Sie bei Benutzung der Abdeckung sicher, dass alle nicht isolierten, stromführenden Kabel abgedeckt sind.

¡Advertencia!

Puede haber energía o voltaje peligrosos en los terminales eléctricos de CC. Reemplace siempre la cubierta cuando no estén utilizándose los terminales. Asegúrese de que no haya acceso a conductores descubiertos cuando la cubierta esté colocada.

Attention

Le voltage ou l'énergie électrique des terminaux à courant continu peuvent être dangereux. Veuillez à toujours replacer le couvercle lors les terminaux ne sont pas en service. Assurez-vous que les conducteurs non isolés ne sont pas accessibles lorsque le couvercle est en place.

אזהרה !

מקור מתח מסוכן עלול להיות נוכח על הקטבים של זרם ה-DC. החלף תמיד את המכסה כאשר הקטבים לא בשימוש. ודא כי המוליכים הלא מבודדים אינם נגישים כאשר המכסה נמצא במקומו.

تعليم

لادبتس. قمصاعل قاطلا تاطحم ىل ع قوجوم نوكت قاطلا وأ قرطخل دهجل دق ريغ تالصولا هيف لكش ال امم. قمدخل ي ف تسيل تاطحمل امدن ع امئاد عاطغ هنالكم ي ف عاطغل امدن ع اهيل لوصول نلكمي ال لوزعم

주의!

DC전원 단자들에 위험한 전압이나 에너지가 발생할 수 있습니다.

단말기들을 운영하지 않을 때에는 덮개로 다시 덮어 놓아 주십시오. 덮개가 제자리에 있어야만 절연되지 않은 도체들의 접근을 막을 수 있습니다.

Waarshuwing

Op DC-aansluitingspunten kunnen zich gevaarlijke voltages of energieën voordoen. Plaats altijd de afsluiting wanneer de aansluitingspunten niet worden gebruikt. Zorg ervoor dat blootliggende contactpunten niet toegankelijk zijn wanneer de afsluiting is geplaatst.

Chapter 3

System Interface

3-1 Overview

There are several LEDs on the control panel as well as others on the drive carriers to keep you constantly informed of the overall status of the system as well as the activity and health of specific components. Most SC847D models have two buttons on the chassis control panel: A reset button and a power on/off switch. This chapter explains the meanings of all LED indicators and the appropriate responses you may need to take.

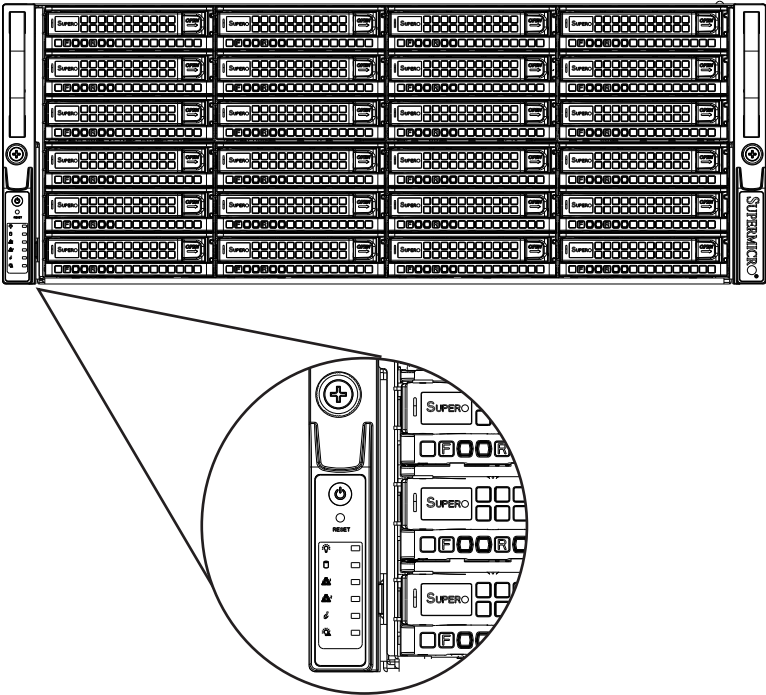


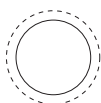
Figure 3-1. Control Panel

3-2 Control Panel Buttons

There are two push-buttons located on the left handle of the chassis. These are (in order from top to bottom) a power on/off button and a reset button.



Power: The main power button is used to apply or remove power from the power supply to the server system. Turning off system power with this button removes the main power but keeps standby power supplied to the system. Therefore, you must unplug system before servicing.



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

3-3 Control Panel LEDs

The control panel located on the left handle of the SC847D 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: Indicates power is being supplied to the system's power supply units. This LED should normally be illuminated when the system is operating.



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



NIC1: Indicates network activity on GLAN1 when flashing.



NIC2: Indicates network activity on GLAN2 when flashing.



Information LED:

Informational 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.



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

3-4 Drive Carrier LEDs

The SC847D chassis uses SAS or SATA drives.

SAS/SATA Drives

Each SAS/SATA drive carrier has two sets of LEDs, one set of blue and red LED indicators for each drive. These LEDs are distinguished with a letter F indicator for front drives and a letter R indicator for rear drives on the drive carrier bezel. The LEDs function as follows:

Blue Drive Carrier LED Indicator		
Color	Status	Description
Blue	Solid on	Indicates a SAS drive
Blue	Off	Indicates a SATA drive
Blue	Blinking	Drive is actively being accessed

Each drive carrier has a blue LED. When illuminated in a solid on state, this blue LED (on the front of the SAS/SATA drive carrier) indicates a SAS drive. A connection to the SAS/SATA backplane enables this LED to blink on and off when that particular drive is being accessed.

Red Drive Carrier LED Indicator		
Color	Status	Description
Red	Solid on	Drive failure
Red	Blinking	RAID activity

When the red LED is blinking, it indicates that the system is either building, initializing or rebuilding RAID.

SCSI Drives

This chassis does not support SCSI drives at this time.

Chapter 4

Chassis Setup and Maintenance

4-1 Overview

This chapter covers the steps required to install components and perform maintenance on the chassis. The only tool you will need to install components and perform maintenance is a Phillips screwdriver. Print this chapter to use as a reference while setting up your chassis.

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 warnings/precautions listed in the setup instructions.

Safety Warning: Before performing any chassis setup or maintenance, it is recommended that the chassis be removed from the rack and placed on a stable bench or table. For instructions on how to uninstall the chassis from the rack, refer to Chapter 5 Rack Installation in this manual.

4-2 Removing the Chassis Covers

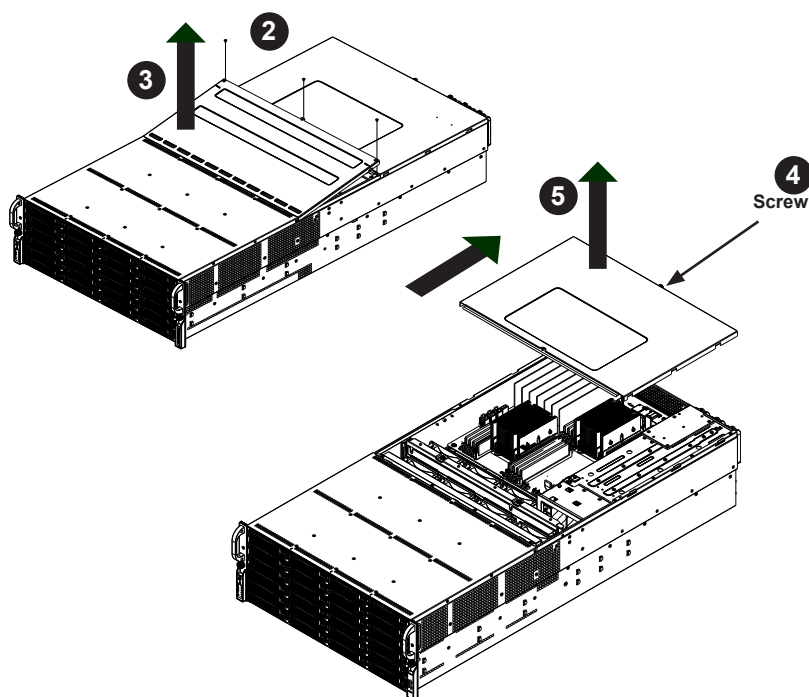


Figure 4-1. Removing the Chassis Cover

Removing the Chassis Cover

1. Power down the system and unplug the power cords from the rear of the power supplies.
2. Remove the three screws securing the middle cover.
3. Lift the middle top cover up and off the chassis.
4. Loosen the screw securing the rear top cover.
5. Slide the rear top cover back and lift it up and off the chassis.

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.

4-3 Hot-Swappable 3.5" Hard Drives

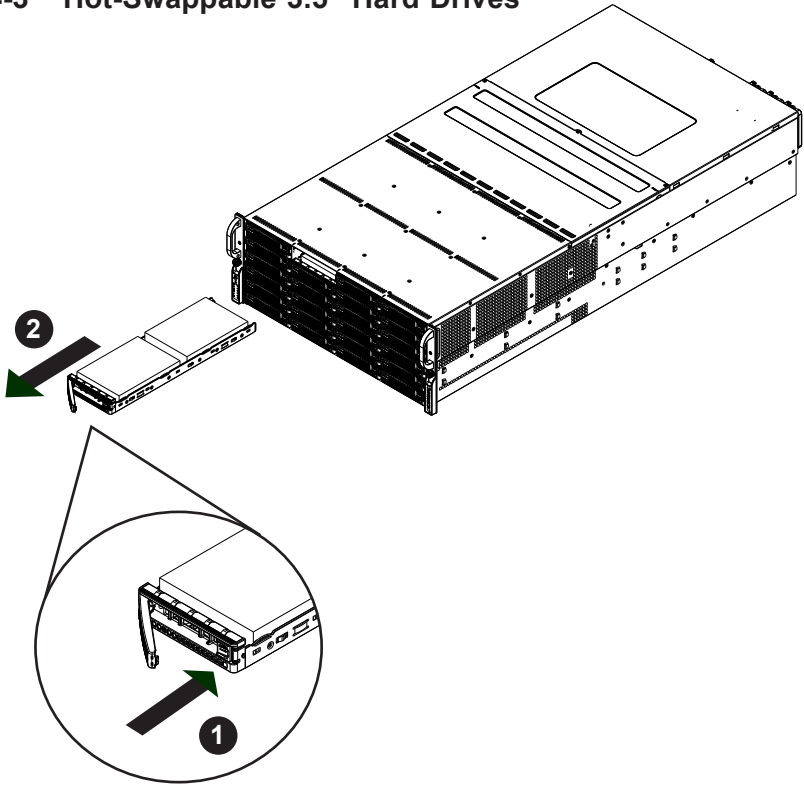


Figure 4-2. Removing Hard Drive

The SC847D chassis supports seventy-two hot-swappable 3.5" hard drives in double-depth hard drive carriers, with twenty-four double carriers in the front and twelve in the rear. The drives are mounted in drive carriers to simplify their installation and removal from the chassis. These carriers also help to promote proper airflow for the drive bays

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 carrier out of the chassis.

Warning: Except for short periods of time (while swapping hard drives), do not operate the server with the drives removed from the chassis drive bays.

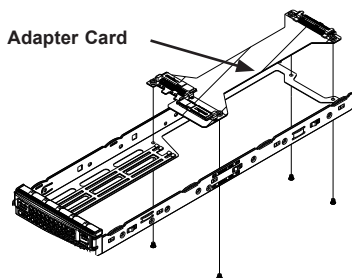


Figure 4-3. Installing the Adapter Board into the Hard Drive Carrier

Installing 3.5" Hard Drives to the Hard Drive Carrier

1. Place the adapter card into hard drive carrier as illustrated above.

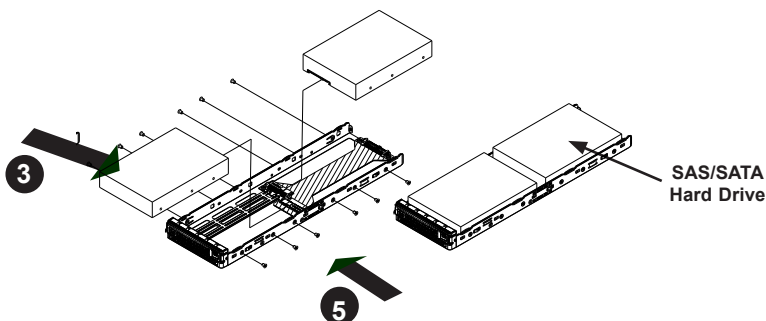


Figure 4-4. Installing 3.5" Hard Drives into the Hard Drive Carrier

2. Secure the adapter card to the hard drive carrier with four specially designed screws included in the adapter card packaging.
3. Insert the first of two 3.5" hard drives into the hard drive carrier at a slight angle on the HDD connector side, with the printed circuit board side facing down. Simultaneously plug the connector on the hard drive into the corresponding connector of the adapter card.
4. Align the mounting holes in the hard drive with those in the hard drive carrier.

Warning! Enterprise level hard disk drives are recommended for use in Supermicro chassis and servers. For information on recommended HDDs, visit the Supermicro web site at <http://www.supermicro.com/products/nfo/files/storage/SAS-1-ComplList-110909.pdf>

5. Secure the hard drive to the carrier using six screws.
6. Repeat steps 3 through 5 for the second of the two hard drives.

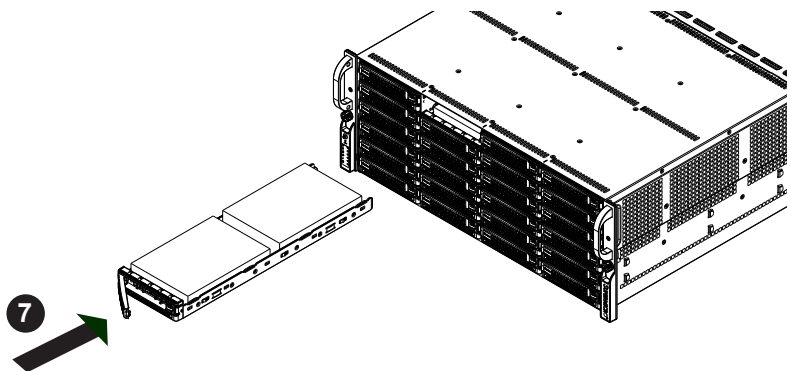


Figure 4-5. Installing the Hard Drives and Carrier into the Chassis

4-4 Hot-Swappable 2.5" Hard Drives

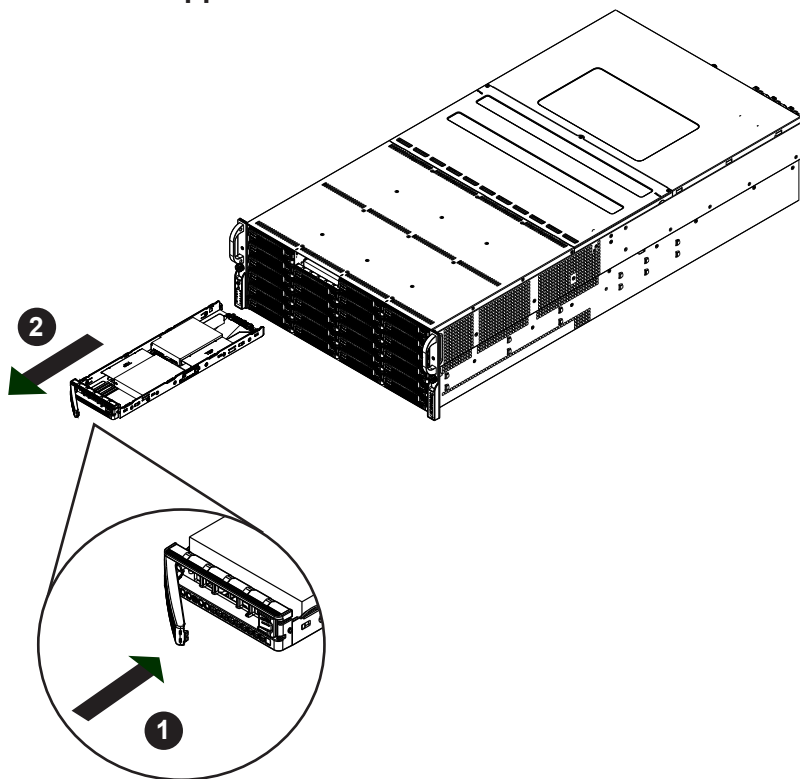


Figure 4-6. Removing Hard Drive Carriers

The SC847D chassis supports seventy-two hot-swappable 2.5" hard drives in double-depth hard drive carriers, with twenty-four double carriers in the front and twelve in the rear. The drives are mounted in drive carriers to simplify their installation and removal from the chassis. These carriers also help to promote proper airflow for the drive bays.

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 carrier out of the chassis.

Warning: Except for short periods of time (while swapping hard drives), do not operate the server with the drives removed from the chassis drive bays.

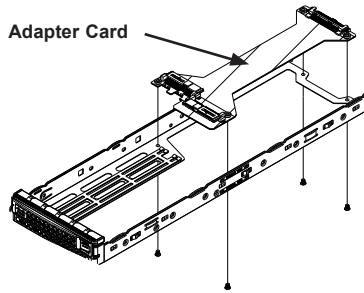


Figure 4-7. Installing the Adapter Board into the Hard Drive Carrier
Installing 2.5" Hard Drives to the Hard Drive Carrier

1. Place the adapter card into hard drive carrier as illustrated above.
2. Secure the adapter card to the hard drive carrier with four specially designed screws included in the adapter card packaging.

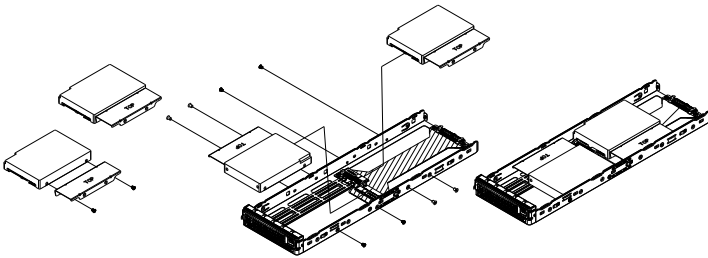


Figure 4-8. Installing 2.5" Hard Drives into the Hard Drive Carrier

3. Secure a spacer adapter to the first of two 2.5" hard drives using two screws.
4. Insert the 2.5" hard drive into the hard drive carrier at a slight angle on the HDD connector side, with the printed circuit board side facing down. Simultaneously plug the connector on the hard drive into the corresponding connector of the adapter card.
5. Align the mounting holes in the hard drive with those in the hard drive carrier.
6. Secure the hard drive to the carrier using four screws.
7. Repeat steps 3 through 5 for the second of the two hard drives.

Warning! Enterprise level hard disk drives are recommended for use in Supermicro chassis and servers. For information on recommended HDDs, visit the Supermicro web site at <http://www.supermicro.com/products/nfo/files/storage/SAS-1-CompList-110909.pdf>

8. Return the hard drive carrier to the hard drive bay in the chassis. Make sure to close the drive carrier handle to lock the drive carrier into place.

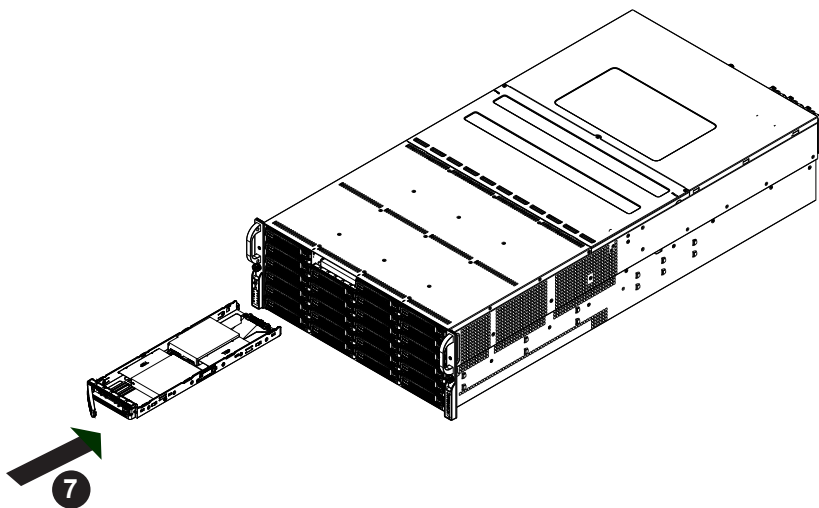


Figure 4-9. Installing the Hard Drives and Carrier into the Chassis

4-5 Internal Fixed 2.5" Hard Drives

The SC847D chassis includes a bracket for installing two 2.5" fixed hard drives within the chassis. Each chassis can accommodate up to two internal 2.5" hard drives.

Installing Fixed HDDs into the SC847D Chassis

1. Power down the system, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
2. Secure up to two 2.5" hard drives to the tray, each with four special screws included in the tray's packaging.
3. Slide the tray onto the bracket and secure it by tightening the thumb screws as illustrated below.
4. Secure the bracket to the chassis by placing the mounting holes in the end of the bracket over the corresponding pins in the chassis as shown below.
5. Align the thumb screw at the opposite end of the bracket with the threaded hole in the chassis wall and tighten the thumb screw to secure the bracket to the wall of the chassis.

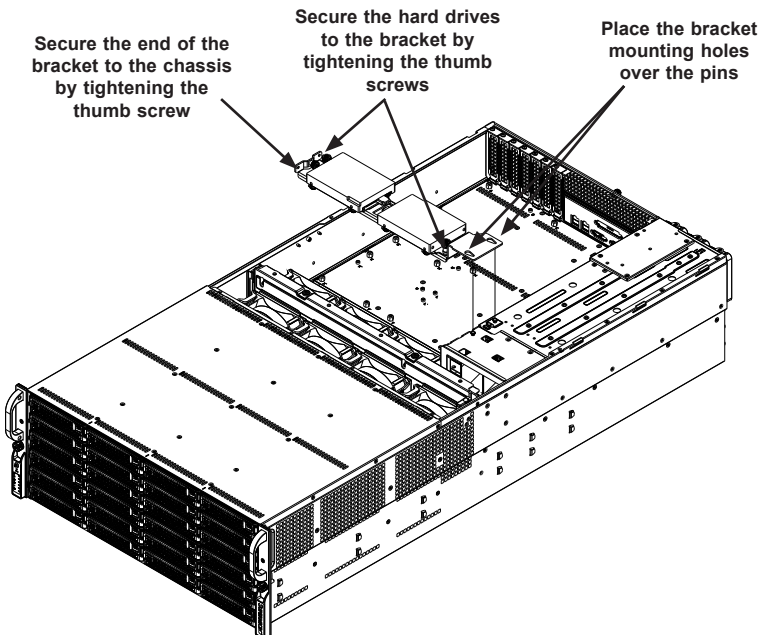


Figure 4-10. Installing 2.5" Internal Hard Drives

6. Connect the cabling to the hard drives through the opening in the bracket.
7. Replace the top covers on the chassis, plug the power cords into the rear of the power supplies and power up the system.

4-6 2.5" Rear Hard Drive Cage (Redundant 2000W Only)

The SC847D chassis with two 2000 Watt power supplies may use one optional rear hard drive cage which contains two 2.5" hot-swappable hard drive carriers. Once the cage has been installed in the chassis, the hot-swappable 2.5" hard drives may be removed without powering down the system. Your system may have arrived with the 2.5" rear hard drive cage already installed and this installation procedure may not be necessary for your system.

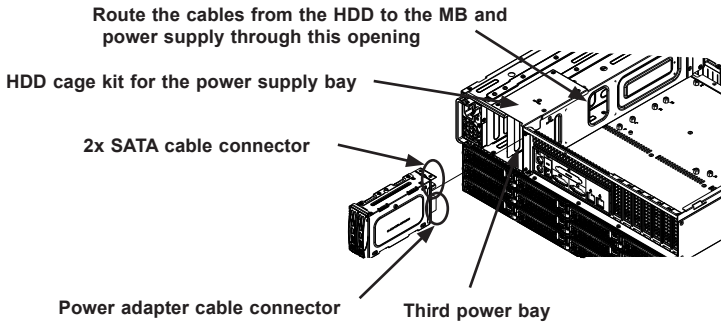


Figure 4-11. Installing the Hard Drive Cage

Installing Rear HDD Cages into the SC847D Chassis

1. Power down the system, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
2. If you are installing a hard drive cage for the first time, remove the dummy cover from the third power bay as illustrated above.
3. Remove the screws securing the power supply cover, then lift the cover up and out of the chassis.
4. Replace the cover with the 2.5" hard drive cage cover kit.
5. Connect the cables to the motherboard and the power supply by routing them through the opening in the power bay housing.
6. Insert the rear 2.5" hard drive cage into the housing and secure with screws.
7. Insert the two 2.5" hard drive carriers with hard drives installed in them into the hard drive cage.
8. Replace the top covers on the chassis, plug the power cords into the rear of the power supplies and power up the system.

4-7 Installing and Removing 2.5" Rear Hard Drives

The 2.5" rear hard drives are mounted in hard drive carriers. These drives are hot-swappable and may be removed without powering down the system.

Removing Hard Drives from the Chassis

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

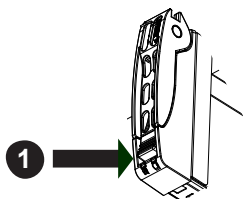


Figure 4-12. Releasing the Drive Carrier Handle

Installing 2.5" Hard Drives into Rear Hard Drive Carriers

1. Remove the four screws securing the dummy drive to the hard drive carrier and set them aside for later use. Lift the dummy drive out of the hard drive carrier.
2. Place a 2.5" hard drive into the hard drive carrier with the printed circuit board facing downward.
3. Secure the hard drive to the carrier using the four screws previously set aside.

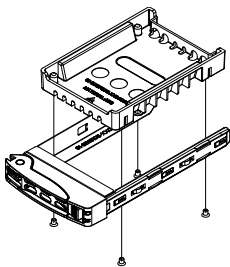


Figure 4-13: Removing the Dummy Drive

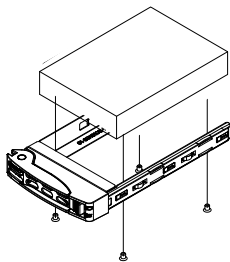


Figure 4-14: Installing a 2.5" Hard Drive

4. Use your thumb as illustrated below to push the hard drive carrier into the hard drive cage, which has been pre-installed in the rear chassis. Pushing in the drive carrier handle in this manner will lock the drive into the chassis.

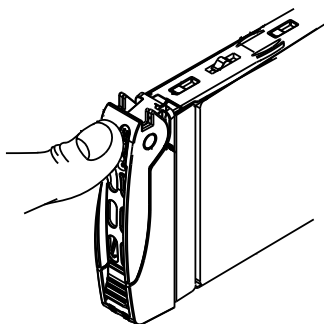


Figure 4-15. Pushing in the Hard Drive Carrier

4-8 Installing the Motherboard

Permanent and Optional Standoffs

Standoffs prevent short circuits by creating space between the motherboard and the chassis floor. The SC847D chassis includes optional standoffs that you may place in locations to accommodate most motherboards. These standoffs are the rounded Phillips head screws included in the SC847D accessories packaging.

Some motherboards require additional standoffs for heatsinks, general components and/or non-standard security. Optional standoffs are included for these motherboards. To use an optional standoff, you must place the hexagonal screw through the bottom the chassis and secure the screw with the hexagon nut (rounded side up).



M/B standoff
6-32 to 6-32

Figure 4-16. Chassis Standoffs

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, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
3. As required by your motherboard, install standoffs in any areas that do not have a permanent standoff. To do this:
 - A. Place a hexagonal standoff screw through the bottom the chassis.
 - B. Secure the screw with the hexagon nut, rounded side up.

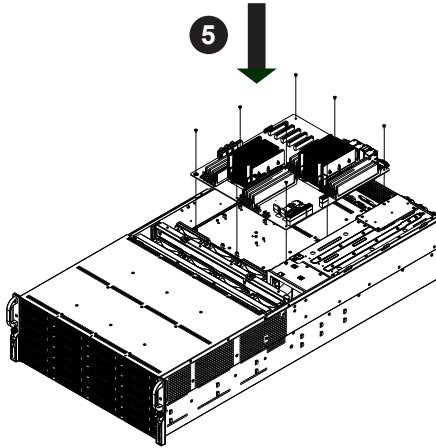


Figure 4-17. Motherboard Installation

4. Lay the motherboard in the chassis aligning the permanent and optional standoffs as needed.
5. Secure the motherboard to the chassis using the rounded, Phillips head screws. Do not exceed eight pounds of torque per square inch when tightening down the motherboard.
6. Secure the CPU(s), heatsinks, and other components to the motherboard as described in the motherboard documentation.
7. 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.

Installing Expansion Cards

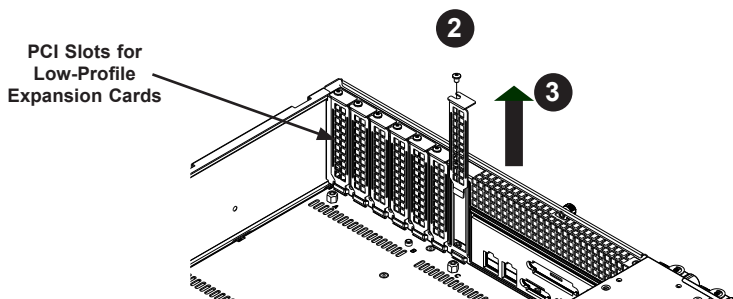


Figure 4-18. Removing the PCI Slot Cover

The SC847D chassis includes seven PCI slots for low-profile expansion cards.

Installing Low Profile Expansion Cards

1. Power down the system, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
2. Remove the screw securing the PCI slot cover in the slot you want to use. Keep this screw for later use.
3. Slide the PCI slot cover up and out of the PCI slot.
4. Simultaneously slide the expansion card's bracket into the PCI slot, while inserting the expansion card into the appropriate slot on the motherboard.
5. Secure each card to the chassis using the screw previously removed.
6. Plug the power cords back into the power supplies, replace the chassis top covers and power up the system.

4-9 Removing and Installing Backplane Assemblies

The SC847D includes two backplane assemblies which consist of front and rear backplanes contained in brackets, fitted with expander boards. The front backplane assembly is located directly in front of the fan bracket at the front of the chassis. The rear backplane assembly is located behind the fan bracket.

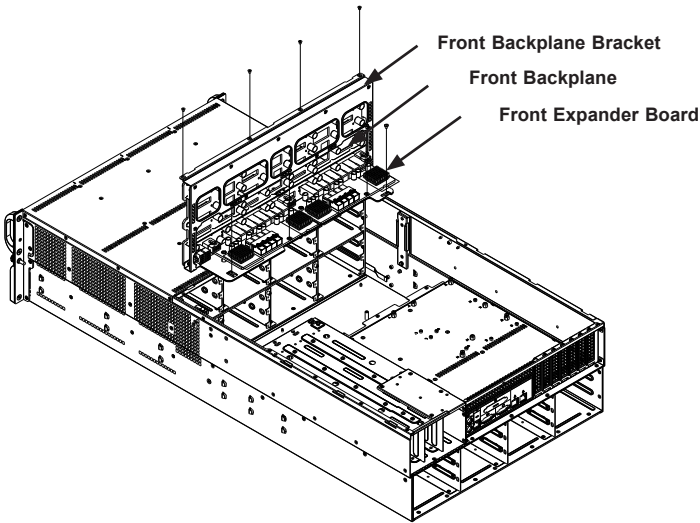


Figure 4-19. Components of the Front Backplane Assembly

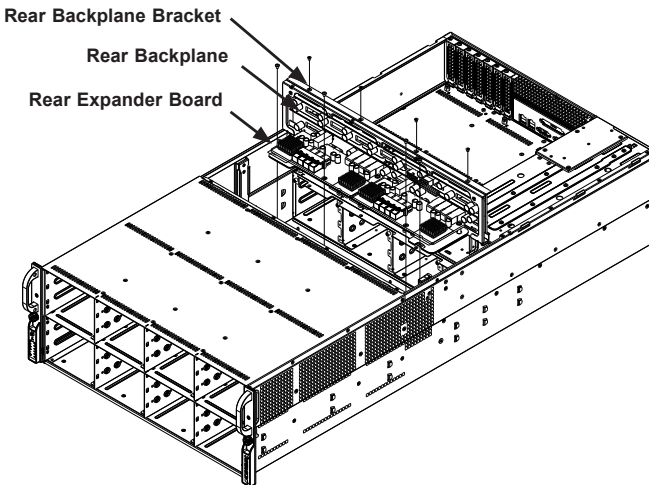


Figure 4-20. Components of the Rear Backplane Assembly

Removing and Installing the Front Backplane Assembly

1. Power down the system, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
2. Remove the four upper screws along the top of the front backplane bracket.
3. Remove the eight lower screws securing the front backplane assembly to the floor of the chassis through the expander board, and set them aside for later use.
4. Lift the front backplane assembly up and out of the chassis.
5. Remove the ten screws which fasten the two halves of the backplane bracket together and set these aside for later use.
6. Separate the backplane from the backplane bracket from each other and lift the front backplane out of its bracket.
7. Carefully pull the expander board out of its slot in the backplane.

Remove the four upper screws along the top of the front backplane bracket and two lower screws at the bottom of the bracket

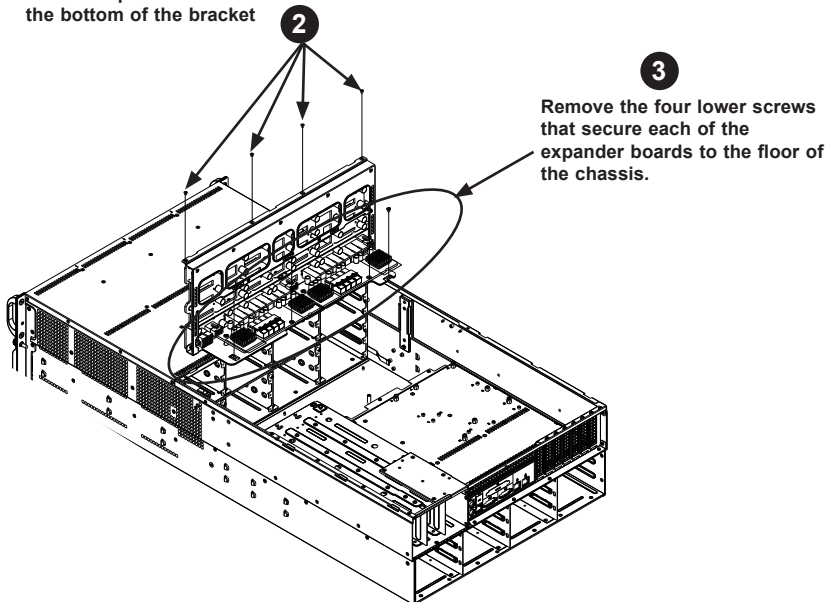


Figure 4-21. Removing the Front Backplane Assembly

8. Insert the replacement front expander board into the backplane.
9. Place the replacement front backplane in the front backplane bracket and secure the two halves of the bracket together with the ten screws previously set aside.
10. Place the front backplane, bracket and expander board assembly in the chassis.
11. Secure the assembly along the top of the backplane with the four upper screws previously set aside.
12. Secure the assembly to the floor of the chassis through the expander board with the lower screws previously set aside.
13. Connect the cables to the backplane.
14. Plug the power cords back into the power supplies, replace the chassis top covers and power up the system.

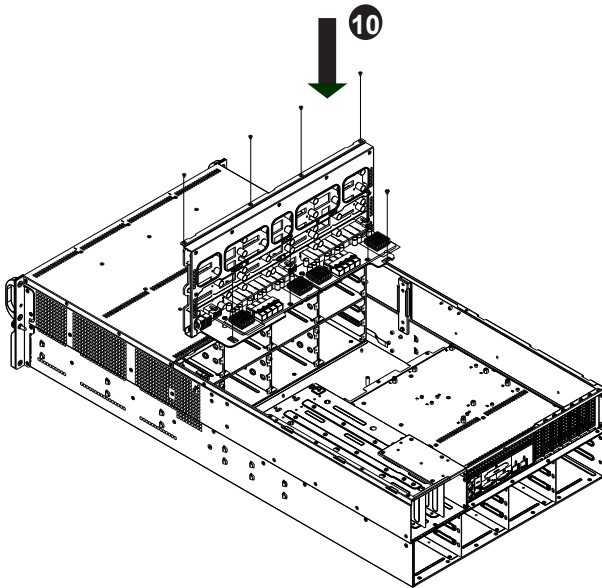


Figure 4-22. Installing the Front Backplane Assembly

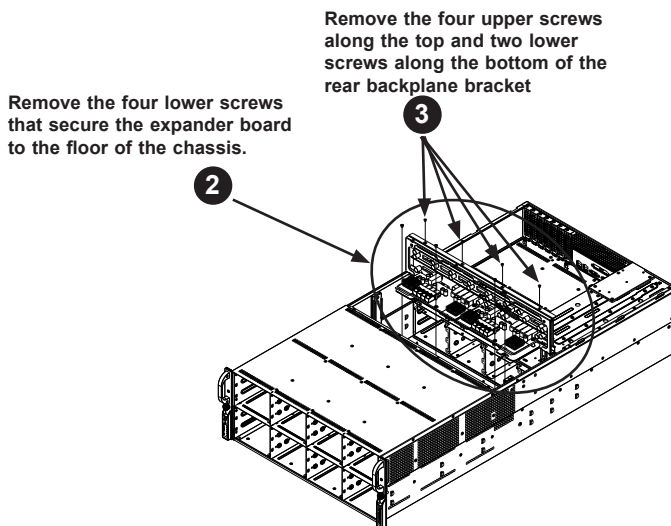


Figure 4-23. Installing the Rear Backplane Assembly

Removing and Installing the Rear Backplane Assembly

1. Power down the system, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
2. Remove the six screws securing the power distributor board and set them aside for later use. Lift the power distributor board up and out of the chassis.
3. Remove the four upper screws along the top of the rear backplane bracket.
4. Remove eight screws along the bottom of the backplane.
5. Lift the rear backplane assembly up and out of the chassis.

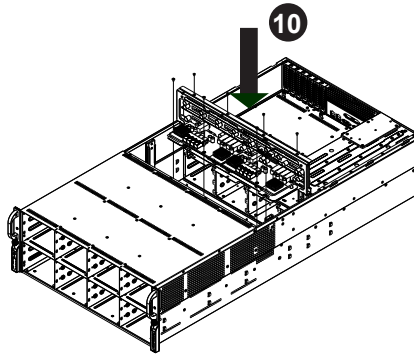


Figure 4-24. Installing the Rear Backplane Assembly

6. Remove the six screws which fasten the two halves of the backplane bracket together and set these aside for later use.
7. Separate the two halves of the backplane bracket from each other and lift the rear backplane out of its bracket.
8. Carefully pull the rear expander board out of its slot in the backplane.
9. Insert the replacement rear expander board into the backplane.
10. Place the replacement rear backplane in the rear backplane bracket and secure the two halves of the bracket together with the six screws previously set aside.
11. Place the rear backplane, bracket and expander board assembly in the chassis.
12. Secure the assembly along the top of the backplane with the four upper lower screws previously set aside.
13. Secure the assembly to the floor of the chassis through the expander board with the eight lower screws previously set aside.
14. Reinstall the power distributor board and secure it in the chassis using the six screws previously set aside.
15. Connect the cables to the backplane.
16. Plug the power cords back into the power supplies, replace the chassis top covers and power up the system.

4-10 Installing Air Shrouds

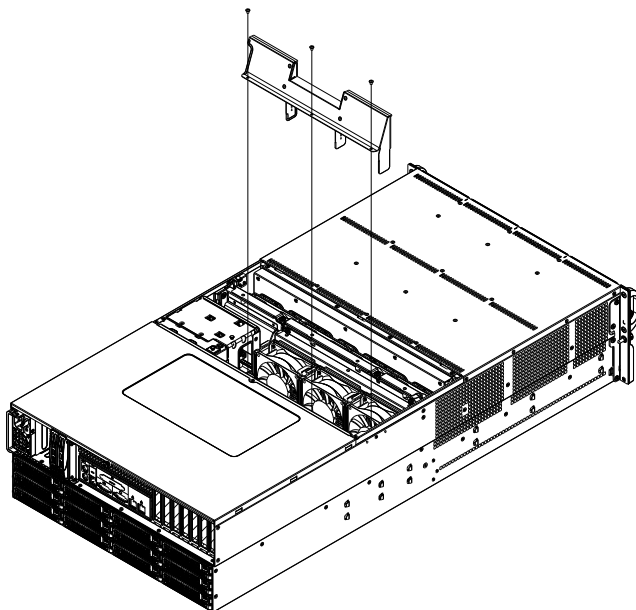


Figure 4-25. Installing the Fan Air Shroud

Air shrouds concentrate airflow to maximize fan efficiency. The SC847D uses three separate air shrouds to optimize cooling within the chassis. Two are removable.

Installing the Fan Air Shroud

1. Power down the system, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
2. Place the fan air shroud in the chassis as illustrated above. The fan air shroud fits between the fans and the motherboard.
3. Plug the power cords back into the power supplies, replace the chassis top covers and power up the system.

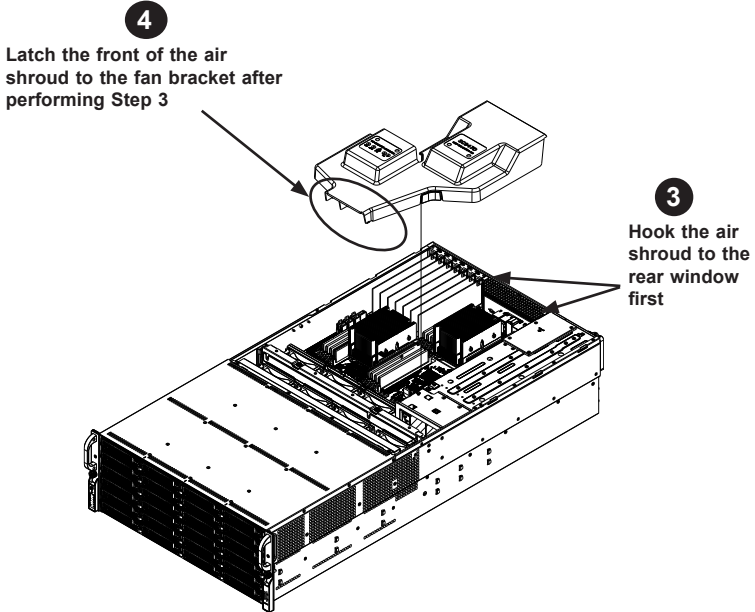


Figure 4-26. Installing the Main Air Shroud

Installing the Main Air Shroud

1. Power down the system, unplug the power cords from the rear of the power supplies and remove the chassis top covers as described on page 4-2.
2. Place the main air shroud in the chassis as illustrated above. The main air shroud fits behind the fans and sits over the motherboard.
3. Hook the rear of the shroud to the rear window of the chassis.
4. Latch the front of the air shroud onto the fan bracket.
5. Check that the front and rear of the air shroud are securely attached to the chassis.
6. Plug the power cords back into the power supplies, replace the chassis top covers and power up the system.

4-11 Checking the Server's Airflow

Checking the Airflow

1. Make sure there are no objects to obstruct airflow in and out of the server. In addition, if you are using a front bezel, make sure the bezel's filter is replaced periodically.
2. Do not operate the server without drives or drive trays in the drive bays. Use only recommended server parts.
3. 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 inform you of system status. See "Chapter 3: System Interface" for details on the LEDs and the control panel buttons.

In most cases, the chassis power supply and fans are pre-installed. If you need to install fans continue to the Systems Fan section of this chapter. If the chassis will be installed into a rack, continue to the next chapter for rack installation instructions

4-12 System Fans

Seven hot-swappable, heavy-duty fans provide cooling for the chassis. These fans circulate air through the chassis thereby lowering the chassis internal temperature. The SC847D chassis is designed with the option to remove individual fans or to remove the entire fan housing.

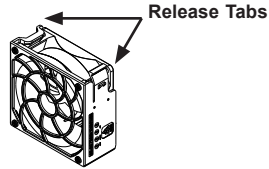


Figure 4-27. System Fan

Replacing an Individual System Fan (Hot Swap Method)

1. Remove the middle cover (page 4-2) while the power is running to determine which fan has failed. Never run the server for an extended period of time with the chassis top covers off.
2. Remove the failed fan from the housing by simultaneously pressing both of the fan's release tabs.
CAUTION: Fans will continue to rotate for a brief time after removing them from the chassis. To avoid injury, keep fingers clear of the rotating fan blades.
3. Lift the failed fan up and out of the fan housing.
4. Place the new fan into the vacant space in the housing while making sure the arrows on the top of the fan (indicating airflow direction) point in the same direction as the arrows on the other fans.
5. Check that the fan is working properly before replacing the chassis cover.

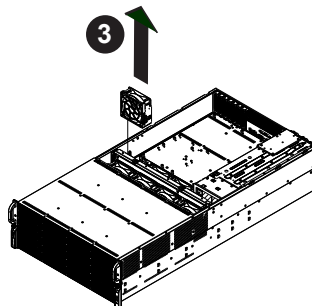
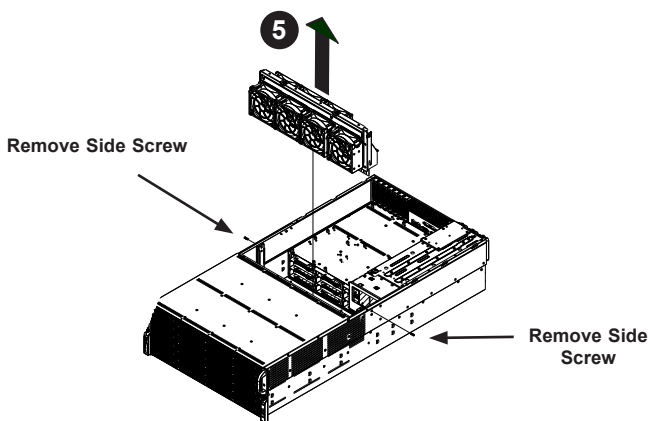


Figure 4-28. Removing an Individual Fan From the Housing (Standard Method)

Removing the Fan Housing (Optional Method)

1. Remove the middle cover (page 4-2) while the power is running to determine which fan has failed. Never run the server for an extended period of time with the chassis top covers off.
2. Power down the system and unplug the power cords from the rear of the power supplies.
3. Remove the two side screws as illustrated below.
4. Disconnect the wiring to the fans.
5. Lift the fan housing up and out of the chassis.
6. Simultaneously press the release tabs of the fan(s) you wish to remove from the housing as shown in Figure 4-27.
7. Replace any fan cables or wiring needed.
8. Place the new fan into the vacant space in the housing while making sure the arrows on the top of the fan (indicating airflow direction) point in the same direction as the arrows on the other fans.
9. Return the fan housing to its original position in the chassis and secure it with the two side screws previously set aside.

**Figure 4-29. Removing the Fan Housing (Optional Method)**

10. Reconnect the wiring to the fan.
11. Replace the middle chassis cover, reconnect the power cords to the rear of the power supplies and power up the system.

4-13 Power Supply

The SC847D chassis features triple redundant 1280 Watt high-efficiency power supplies or double redundant 2000 Watt power supplies. These power supplies are auto-switching capable. This enables them 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.

Redundant power supplies are hot-swappable, and can be changed without powering down the system. New units can be ordered directly from Supermicro (see contact information in the Preface).

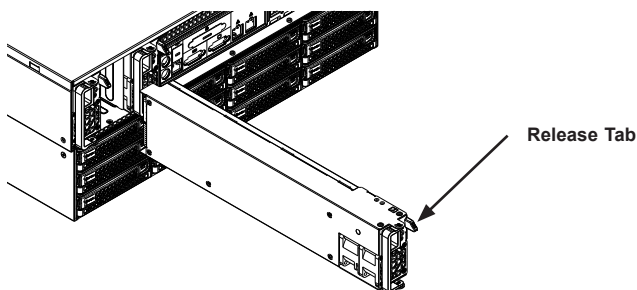


Figure 4-30. Installing the Power Supply

Changing the Power Supply:

1. If your chassis includes a redundant power supply (at least two power modules), you can leave the server running and remove only one power supply at a time. If your server has only one power supply, you must power down the server and unplug the power cord.
2. Remove the power cord from the rear of the power supply that you wish to remove from the chassis.
3. Press the release tab and pull the power supply out of the chassis using the handle provided.
4. Replace the failed power module with another of the same model.
5. Push the new power supply module into the power bay until it clicks into the locked position.
6. Plug the AC power cord back into the module and power up the server.

Chapter 5

Rack Installation

5-1 Overview

This chapter provides a quick setup checklist to get your chassis up and running. Following these steps in the order given should enable you to have the system operational within a minimal amount of time.

5-2 Unpacking the System

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

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. The system needs to be placed near a grounded power outlet. Be sure to read the Rack and Server Precautions in the next section.

5-3 Preparing for Setup

The box your chassis was shipped in should include two sets of rail assemblies and the mounting screws needed for installing the system into the rack. Also included is an optional square hole to round hole converter bracket, for use in racks with round mounting holes. *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).

5-4 Warnings and Cautions

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.
- You should extend only one component at a time - extending two or more 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 upwards.
- 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 plug 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.

5-5 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.

5-6 Rack Mounting Instructions

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.

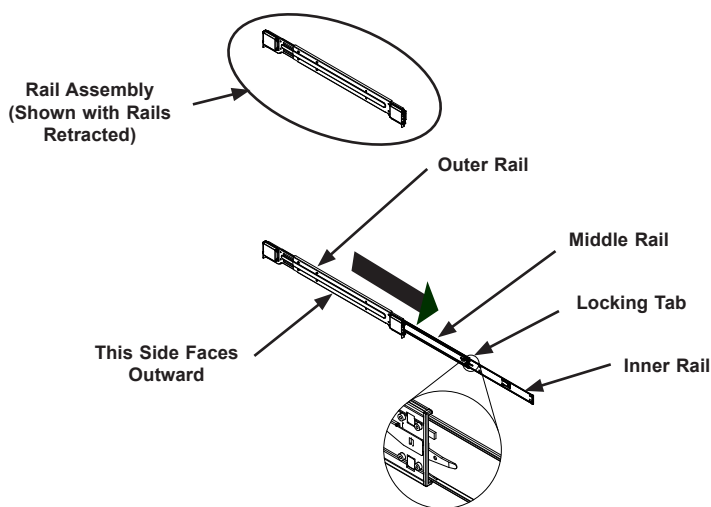


Figure 5-1. Identifying the Outer Rail, Middle Rail and Inner Rails
(Left Rail Assembly Shown)

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

Releasing Inner Rail from the Outer Rails

1. Identify the left and right outer rail assemblies as described on page 5-4.
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 steps 1-3 for the second outer rail.

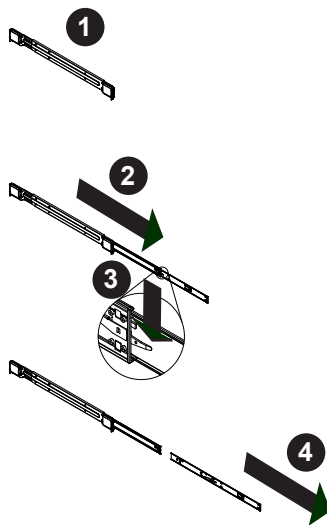


Figure 5-2. Extending and Releasing the Inner Rail

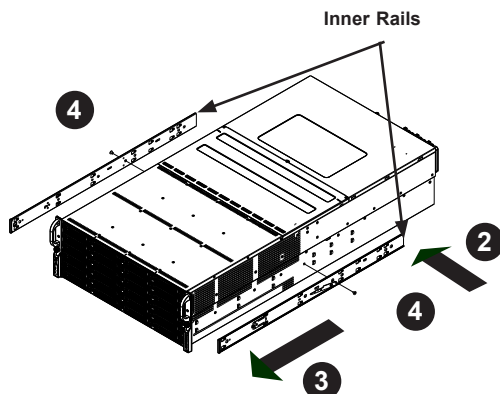


Figure 5-3. Installing the Inner Rails

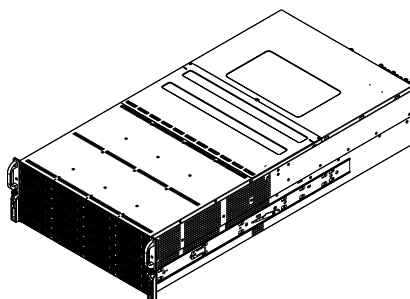


Figure 5-4. Inner Rails Installed on the Chassis

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 steps 1 through 4 above for the other inner rail.



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

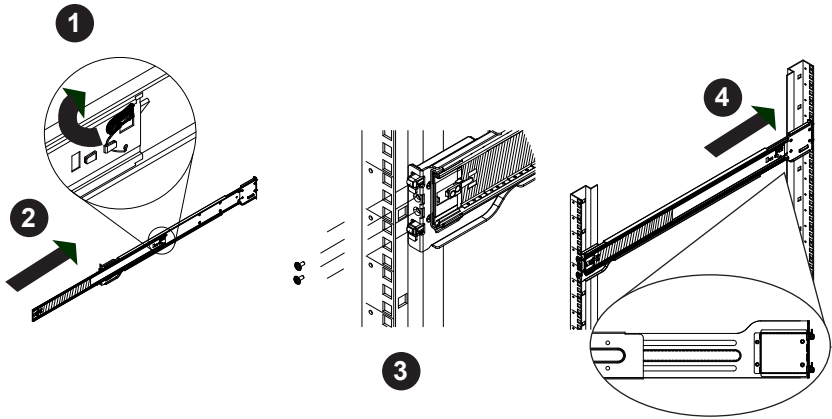


Figure 5-5. Extending and Releasing the Outer Rails

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 steps 1-5 for the remaining outer rail.

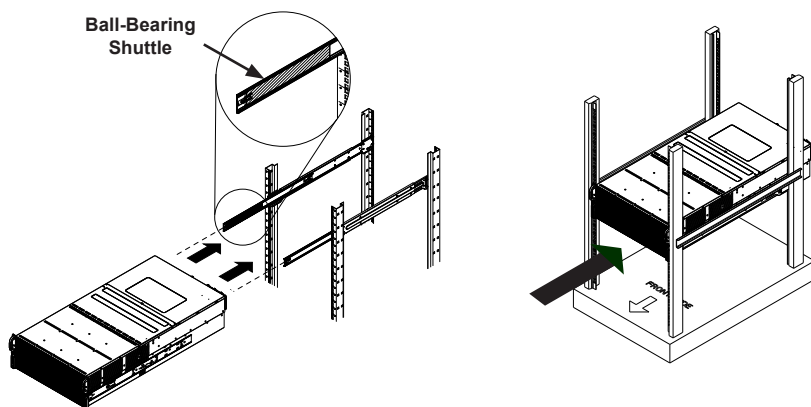


Figure 5-6. Installing into a Rack

Note: figures are for illustrative purposes only. Always install servers into racks from the bottom up.

Standard Chassis Installation

Installing the Chassis into a Rack

1. Confirm that the inner rails are properly installed on the chassis.
2. Confirm that the outer rails are correctly installed on the rack.
3. Remove all hard drives and power supplies.
4. Pull the middle rail out from the front of the outer rail and make sure that the ball-bearing shuttle is at the front locking position of the middle rail.
5. Align the chassis inner rails with the front of the middle rails.
6. Slide the inner rails on the chassis into the middle rails, keeping the pressure even on both sides, until the locking tab of the inner rail clicks into the front of the middle rail, locking the chassis into the fully extended position.
7. Depress the locking tabs of both sides at the same time and push the chassis all the way into the rear of the rack.



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

8. If needed, use screws to secure the chassis handles to the front of the rack.
9. Return the hard drives and power supplies to the chassis.

Optional Quick Installation Method

The following quick installation method may be used to install the chassis onto a rack.

Installing the Chassis into a Rack

1. Install the whole rail assembly onto the rack as described on page 5-7.
2. Release the inner rail without retracting the middle rail.
3. Install the inner rails on the chassis as previously described on page 5-6.
4. Install the chassis onto the middle rail as described in the previous section.

Adapters for Round and Threaded Hole Racks

The SC847 chassis includes adapter brackets for those customers using round hole racks or racks with threaded holes size M5 or larger.

Installing the Adapter Bracket

1. Place the hooks of the front of the outer rail into the square holes of one of the adapter brackets.
2. Place the hooks of the rear of the outer rail into the square holes of a second adapter bracket.
3. Adjust the length of the outer rail to fit within the rack uprights.
4. Secure the front adapter bracket to the front of the rack using the screws recommended by the rack manufacturer.
5. Secure the rear adapter bracket to the rear of the rack in the same manner.

Appendix A

SC847D Cables and Hardware

A-1 Overview

This appendix lists supported cables for your chassis system. It only includes the most commonly used components and configurations. For more compatible cables, refer to the manufacturer of the motherboard you are using and our Web site at: www.supermicro.com.

A-2 Cables Included with SC847D Chassis (SAS/SATA)

SC847			
Part #	Type	Length	Description
CBL-0071L	Ribbon, Round	30"	16-pin to 16-pin ribbon FP cable
CBL-0226L	Cable	17"	SATA round cable S-RA PBF 26 AWG
CBL-PWCD-0578	Cable	---	Power cord
CBL-0217L	Cable	8.625"	16-pin control panel converter cable

A-3 Compatible Cables

These cables are compatible with the SC847D chassis.

Alternate SAS/SATA Cables

Some compatible motherboards have different connectors. If your motherboard has only one SAS connector that the SAS/SATA cables must share, use one of the following cables. These cables must be purchased separately.

A-4 Chassis Screws

The accessory box includes all the screws needed to set up your chassis. This section lists and describes the most common screws used. Your chassis may not require all the parts listed.

M/B



Pan head
6-32 x 5 mm
[0.197]

HARD DRIVE



Flat head
6-32 x 5 mm
[0.197]

DVD-ROM, CD-ROM, and FLOPPY DRIVE



Pan head
6-32 x 5 mm
[0.197]



Flat head
6-32 x 5 mm
[0.197]



Round head
M3 x 5 mm
[0.197]



Round head
M2.6 x 5 mm
[0.197]

RAIL



Flat head
M4 x 4 mm
[0.157]



Round head
M4 x 4 mm
[0.157]



Flat head
M5 x 12 mm [0.472]
Washer for M5



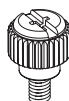
M/B STANDOFFS



M/B standoff
6-32 to 6-32



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



Thumb screw
6-32 x 5 mm
[0.197]



1/U M/B standoff
6-32 x 5 mm
[0.197]



Notes

Appendix B

SC847D Power Supply Specifications

This appendix lists power supply specifications for your chassis system.

SC847D	
	1280W
MFR Part #	PWS-1K28P-SQ
AC Input	1000W Output @ 100-140V, 12-8A, 50-60Hz 1280W Output @ 180-240V, 8-6A, 50-60Hz
DC Output	1000W: +12V/83A; +5Vsb/4A 1280W: +12V/106.7A, +5Vsb/4A

SC847D	
	2000W
MFR Part #	PWS-2K02P-1R
AC Input	1400W output @ 100-140Vac /13.5A-10.5A / 50-60Hz 2000W output @ 200-240Vac /10A-9.5A / 50-60Hz
DC Output	1400W with +12V/ 116.7A +5Vsb/4A 2000W with +12V/ 166.7A +5Vsb/4A



Notes

Appendix C

Backplane Specifications

C-1 Chassis Configuration

The SC847D chassis configuration consists of the following components:

- One front backplane, BPN-SAS2-847DF
- One or two front expander cards, BPN-EXP-847DF2EL1
- One rear backplane, BPN-SAS2-847DR
- One or two rear expander cards, BPN-EXP-847DR1EL1
- Thirty-six adapter cards, MCP-280-00024-0N, in double-depth hard drive carriers.

Refer to the chassis manual for removal and installation instructions.

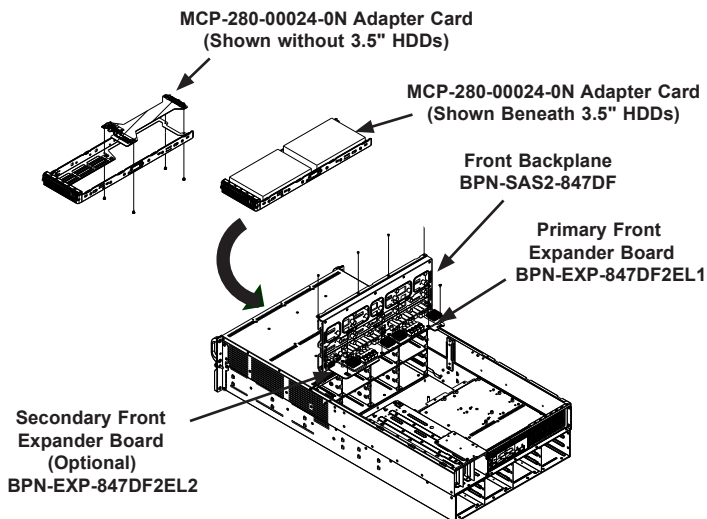


Figure C-1. BPN-SAS2-847DF Front Backplane Configuration

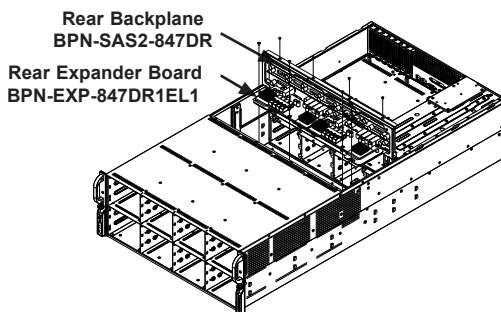


Figure C-2. BPN-SAS2-847DR Rear Backplane Configuration

C-2 Version at Time of Publication

The backplanes have been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

This manual reflects BPN-SAS2-847DF Revision 1.02, BPN-EXP-847DFEL1/EL2 Revision 1.02 and MCP0280-00024-0N Revision 1.02, the most current releases available at the time of publication. Always refer to the Supermicro web site at www.supermicro.com for the latest updates, compatible parts and supported configurations.

All images and layouts shown in this user's guide are based upon the latest PCB revision available at the time of publishing. The backplane you have received may or may not look exactly the same as the graphics shown in this manual.

C-3 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.

C-4 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 a power shortage.

C-5 BPN-SAS2-847DF Backplane

Front Connectors

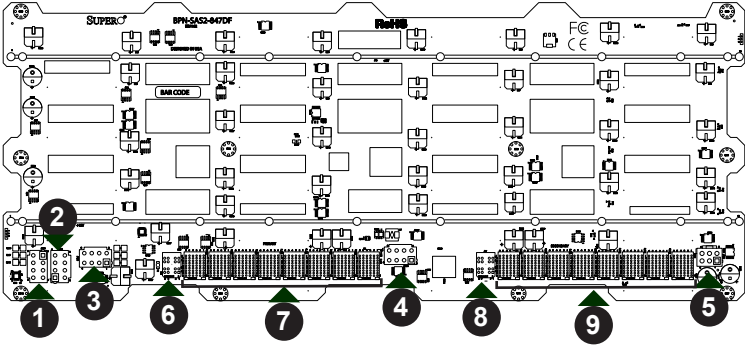


Figure C-3. BPN-SAS2-847DF Backplane Front Connectors

Front Connectors

- | | |
|-------------------------------|--|
| 1. Main Power Connector: JPW1 | 6. Primary Expander Power Connector: J26 |
| 2. Main Power Connector: JPW2 | 7. Primary Airmax Connectors: P_M1 to P_M8 |
| 3. Main Power Connector: JPW3 | 8. Secondary Expander Power Connector: J27 |
| 4. Main Power Connector: JPW4 | 9. Secondary Airmax Connectors: S_M1 to S_M8 |
| 5. Main Power Connector: JPW5 | |

1. - 3. Power Connectors

These connectors, designated JPW1, JPW2, JPW3, JPW4 and JPW5 supply power to the chassis.

4. Primary Expander Power Connector

Supplies power to the primary expander board. This connector is designated J26

5. Primary Airmax Connectors

These connectors are SAS2 signal connectors that connect the backplane and the primary expander board. These connectors are designated P-M1 through P_M8.

6. Secondary Expander Power Connector

Supplies power to the secondary expander board. This connector is designated J27

7. Secondary Airmax Connectors

These connectors are SAS2 signal connectors that connect the backplane and the secondary expander board. These connectors are designated S-M1 through S_M8.

Rear SAS2 Receptacles

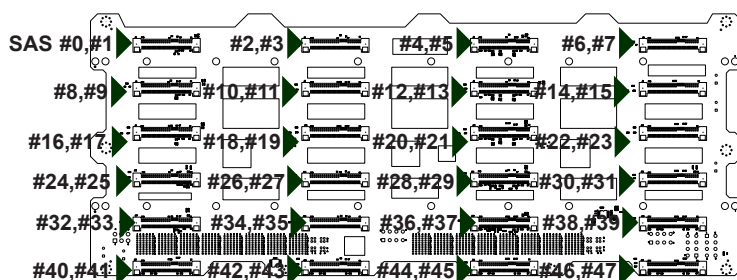
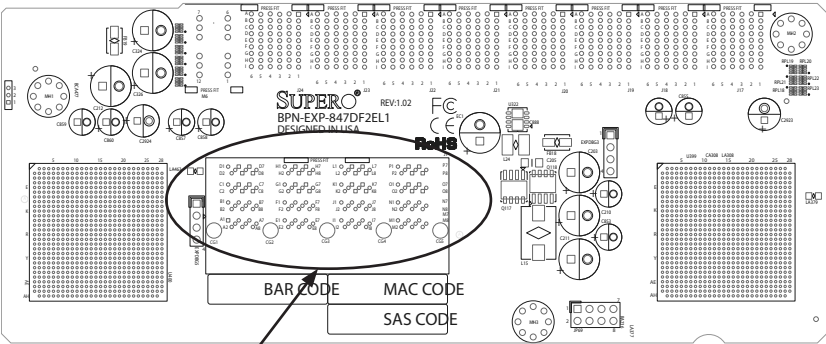


Figure C-4. BPN-SAS2-847DF Rear SAS2 Receptacles

Rear SAS2 Receptacles		
Rear Receptacle	SAS Drive Number	Reference
SAS #0, #1	HDD 0, 1	J1
SAS #2, #3	HDD 2, 3	J2
SAS #4, #5	HDD 4, 5	J3
SAS #6, #7	HDD 6, 7	J4
SAS #8, #9	HDD 8, 9	J5
SAS #10, #11	HDD 10, 11	J6
SAS #12, #13	HDD 12, 13	J7
SAS #14, #15	HDD 14, 15	J8
SAS #16, #17	HDD 16, 17	J9
SAS #18, #19	HDD 18, 19	J10
SAS #20, #21	HDD 20, 21	J11
SAS #22, #23	HDD 22, 23	J12
SAS #24, #25	HDD 24, 25	J13
SAS #26, #27	HDD 26, 27	J14
SAS #28, #29	HDD 28, 29	J15
SAS #30, #31	HDD 30, 31	J16
SAS #32, #33	HDD 32, 33	J17
SAS #34, #35	HDD 34, 35	J18
SAS #36, #37	HDD 36, 37	J19
SAS #38, #39	HDD 38, 39	J20
SAS #40, #41	HDD 40, 41	J21
SAS #42, #43	HDD 42, 43	J22
SAS #44, #45	HDD 44, 45	J23
SAS #46, 47	HDD 46, 47	J24

C-6 BPN-EXP-847DFEL1/EL2 Expander Boards

The BPN-EXP-847DFEL1 and EL2 expander boards plug into the BPN-SAS2-847DF backplane. One or two expander boards may be used.



Mini SAS HD Headers

Figure C-5. BPN-EXP-847DFEL1/EL2 SAS Mini Headers

BPN-EXP-847DFEL1/EL2 SAS Mini Headers	
Header	Pins
CGI1	A1-A8, B1-B8, C1-C8, D1-D8
CGI2	E1-E8, F1-F8, G1-G8, H1-H8
CGI3	I1-I8, J1-J8, K1-K8, L1-L8
CGI4	M1-M8, N1-N8, O1-O8, P1-P8

C-7 BPN-SAS2-847DR Backplane

Front Connectors

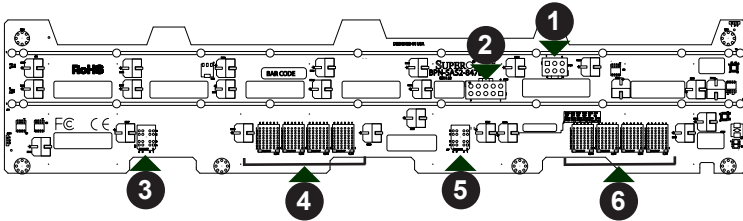


Figure C-7. BPN-SAS2-847DR Backplane Front Connectors

Front Connectors

- | | |
|---|---|
| 1. Main Power Connector: JPW1 | 4. Primary Airmax Connectors:
P_M1 to P_M4 |
| 2. Main Power Connector: JPW2 | 5. Secondary Expander Power
Connector: J27 |
| 3. Primary Expander Power
Connector: J26 | 6. Secondary Airmax Connectors:
S_M1 to S_M4 |

1. - 2. Power Connectors

These connectors, designated JPW1 and JPW2 supply power to the backplane.

3. Primary Expander Power Connector

Supplies power to the primary expander board. This connector is designated J26.

4. Primary Airmax Connectors

These connectors are SAS2 signal connectors that connect the backplane and the primary expander board. These connectors are designated P-M1 through P_M4.

5. Secondary Expander Power Connector

Supplies power to the secondary expander board. This connector is designated J27.

6. Secondary Airmax Connectors

These connectors are SAS2 signal connectors that connect the backplane and the secondary expander board. These connectors are designated S-M1 through S_M4.

Rear SAS2 Receptacles

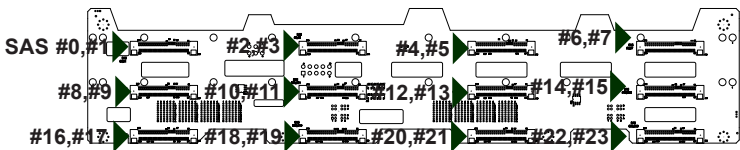


Figure C-8. BPN-SAS2-847DR Rear SAS2 Receptacles

Rear SAS2 Receptacles		
Rear Receptacle	SAS Drive Number	Reference
SAS #0, #1	HDD 0, 1	J13
SAS #2, #3	HDD 2, 3	J14
SAS #4, #5	HDD 4, 5	J15
SAS #6, #7	HDD 6, 7	J16
SAS #8, #9	HDD 8, 9	J17
SAS #10, #11	HDD 10, 11	J18
SAS #12, #13	HDD 12, 13	J19
SAS #14, #15	HDD 14, 15	J20
SAS #16, #17	HDD 16, 17	J21
SAS #18, #19	HDD 18, 19	J22
SAS #20, #21	HDD 20, 21	J23
SAS #22, #23	HDD 22, 23	J24

C-8 BPN-EXP-847DR1EL1/EL2 Expander Boards

The BPN-EXP-847DR1EL1 and EL2 expander boards plug into the BPN-SAS2-847DR backplane. One or two expander boards may be used. The BPN-EXP-847DREL1/EL2 features four connectors and two Mini-SAS headers.

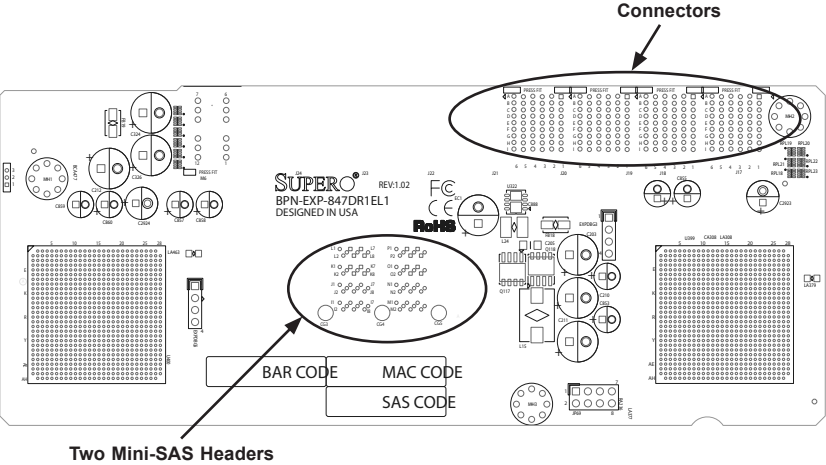


Figure C-9. BPN-EXP-847DR1EL1/EL2 Features

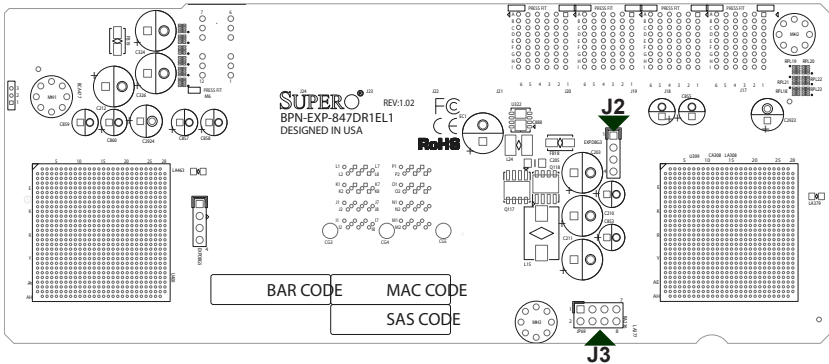


Figure C-10. BPN-EXP-847DR1EL1/EL2 Jumpers

BPN-EXP-847DR1EL1/EL2 Jumpers		
Jumper	Name	Function
J2	EXPDBG3	Debug jumper, for manufacturer use only
J3	JP69	Reserved for SMC CB3

Notes

Disclaimer (cont.)

The products sold by Supermicro are not intended for and will not be used in life support systems, medical equipment, nuclear facilities or systems, aircraft, aircraft devices, aircraft/emergency communication devices or other critical systems whose failure to perform be reasonably expected to result in significant injury or loss of life or catastrophic property damage. Accordingly, Supermicro disclaims any and all liability, and should buyer use or sell such products for use in such ultra-hazardous applications, it does so entirely at its own risk. Furthermore, buyer agrees to fully indemnify, defend and hold Supermicro harmless for and against any and all claims, demands, actions, litigation, and proceedings of any kind arising out of or related to such ultra-hazardous use or sale.