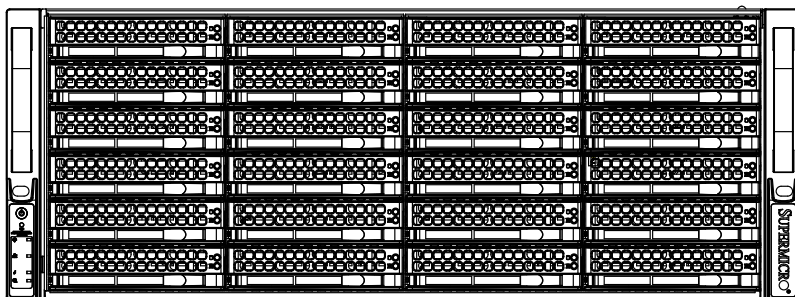


SUPERO[®]

SC847E1C/2C JBOD CHASSIS SERIES



SC847E1C-R1K28JBOD

SC847E2C-R1K28JBOD

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

About This Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the SC847EC1/C2 JBOD 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 website 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 SC847EC1/C2 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: Chassis Components

Refer here for details on this chassis components including the fans, hard drives, air shrouds, 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 chassis control panel, as well as other LEDs located throughout the system.

Chapter 5: Chassis Setup and Maintenance

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

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

Appendix A: Cables and 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 website 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: BPN-SAS3-846EL Backplane Specifications

This chapter contains information on the BPN-SAS3-846EL1 and BPN-SAS3-EL2 backplanes. Additional information can be found on the Supermicro website at www.supermicro.com.

Appendix D: BPN-SAS3-847EL Backplane Specifications

This section covers the BPN-SAS3-847EL1 and BPN-SAS3-847EL2 backplane specifications. Additional information can be found on the Supermicro website at www.supermicro.com

Appendix E: CSE-PTJBOD-CB3 Power Board Specifications

This chapter provides information on the CSE-PTJBOD-CB3 power board. Additional information can be found on the Supermicro website at www.supermicro.com.

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Appendix A SC847E1C/2C JBOD Cables and Hardware

Appendix B SC847E1C/2C JBOD Power Supply Specifications

Appendix C BPN-SAS3-846EL Backplane Specifications

Appendix D BPN-SAS3-847EL Backplane Specifications

Appendix E CSE-PTJBOD-CB3 Power Board Specifications

Chapter 1

Introduction

1-1 Overview

Optimized for enterprise-level heavy-capacity storage applications, Supermicro's SC847EC1/C2 JBOD chassis features up to 44x (24 front + 20 rear) 3.5" hot-swap HDD bays.

The SC847EC1/C2 JBOD design provides high-density storage in a 4U form factor, with high power efficiency, optimized HDD signal trace routing and improved HDD carrier design to dampen vibration and maximize performance. Equipped with a 1280W (Platinum Level) high-efficiency redundant power supply and seven hot-plug redundant cooling fans, the SC847EC1/C2 JBOD is a reliable, high-quality storage workhorse system.

1-2 Shipping List

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

SC847E1C/2C JBOD Chassis		
Model	HDD	Power Supply
SC847E1C-R1K28JBOD	44x (JBOD) SAS3/SAS2 or SATA3 support	1280W redundant (Platinum Level)
SC847E2C-R1K28JBOD	44x (JBOD) SAS3/SAS2 or SATA3 support	1280W redundant (Platinum Level)

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 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/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.

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 במלוואו לפני התקנת או הגדרת הרכיבים במארזי 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。

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.

電源切断の警告

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

警告

在你打开机箱并安装或移除内部器件前，必须将系统完全断电，并移除电源线。

警告

在您打開機殼安裝或移除內部元件前，必須將系統完全斷電，並移除電源線。

Warnung

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

¡Advertencia!

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

Attention

Le système doit être débranché de toutes les sources de puissance ainsi que de son cordon d'alimentation secteur avant d'accéder à l'intérieur du 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 للأمان

경고!

이 장치는 접근이 제한된 구역에 설치하도록 되어 있습니다. 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 فعليك 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!

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 retirez 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 تترال المراوح لا 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，例如閉環或鑷型接線片。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

كإل سال أمدختسو، لبسلا مهب تعطق تيذلا كالسال ابولطم نوكي امدنح عونلا ةيقي قحلا اءى امس أب اءى شال وأ قق لغم قق لشم، اءي لع قق ف او مل اءان! كالسال لبسان مل اءى قحلا نوكي تاءان إال هذهل يغبنني و. قبولقم تاورعال عم لوصومو لزعال نم لك حبك بجي و.

주의!

꼬인 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回路から電源が切断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

eahn | كالس أل امداختس او ،لبس لل مهب تعطقت ني ذل كالس أل ابولطم نو كى امدنع
عم عون لا ةيقي ي ق حل اءى ايس اب اءى ش أل و أ ق قل غم ق قل ح ل شم ،اهي لع ق ق فاوملا
بج و كالس أل لبس انملا م ج حل ا نو كى تاءاهن اإل ه ذهل يغبني و .قبولقم تاورعل ا
لصومو لزعل انم لك حبك

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 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.

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.

تحذير

لادبتسأ. ؤمصاعلا ؤق اظلا تااطحم ىلع ؤدوجوم نوكت ؤق اظلا وأ ؤرطظلا دهچلا دق ريغ تالصولا هيف لكش ال امم. ؤمدظلا يف تسيل تااطحملا امدنع امئاد اعاطغ هنالكم يف اعاطغلا امدنع اهيل لوصولا 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.

Waarschuwing

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. SC847EC1/C2 JBOD models have two buttons on the chassis control panel, a UID button and a power on/off button. This chapter explains the meanings of all of the chassis LED indicators and the appropriate responses you may need to take.

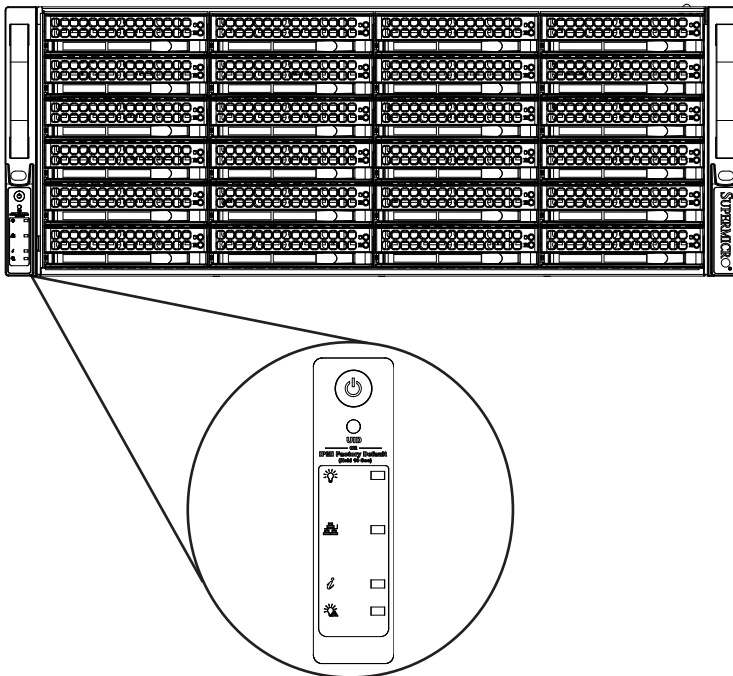


Figure 3-1: Control Panel

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.



UID: Press this button to toggle the UID function on and off. To activate the IPMI IP factory default, press and hold this button for ten seconds.

3-3 Control Panel LEDs

The control panel located on the left handle of the SC847EC1/C2 JBOD chassis has four 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.



NIC1: Indicates network activity on GLAN1 when flashing.



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.
Blinking blue (500 msec)	System is ready to power up. See Section 4-4 of this manual.



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

3-4 Drive Carrier LEDs

The SC847E1C/2C JBOD chassis uses SAS or SATA drives.

SAS/SATA Drives

Each SAS/SATA drive carrier has one set of LEDs, with one blue and red LED indicator for each drive. The LEDs function as follows:

Blue Drive Carrier LED Indicator		
Color	Status	Description
Blue	Steady 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 steady 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	Steady 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 Cover

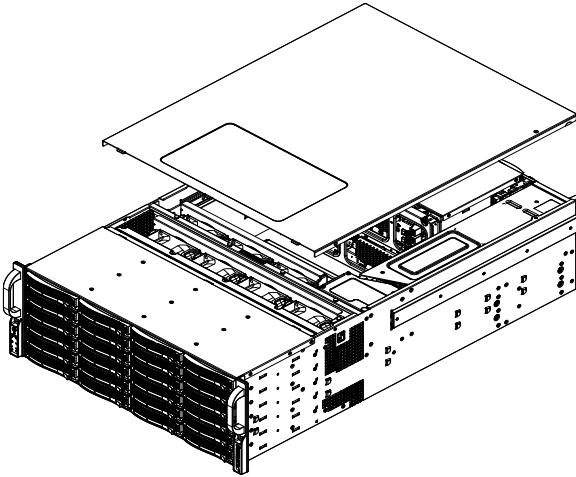


Figure 4-1: Removing the Chassis Cover

Removing the Chassis Cover

1. Power down the system and remove the power cords from the rear of the power supplies.
2. Remove the screws securing the cover to the chassis.
3. Lift the cover 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 Installing Removable Hard Drives

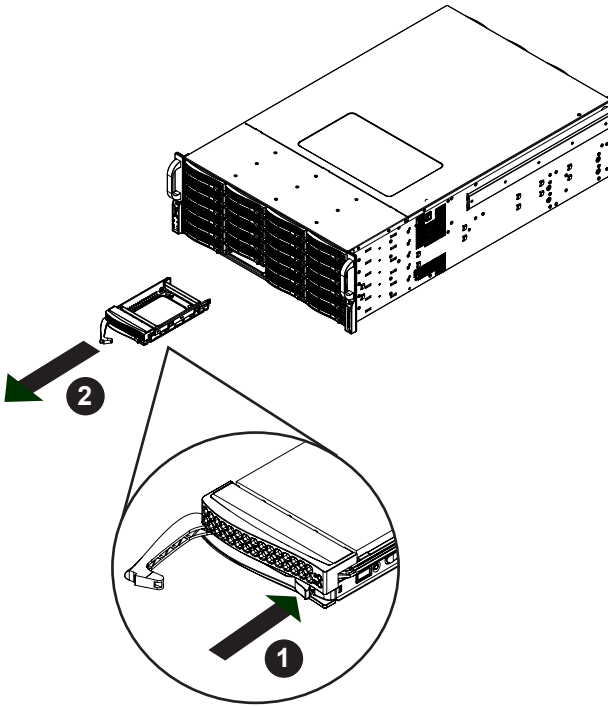


Figure 4-2: Removing a Hard Drive Carrier

The SC847EC1/C2 JBOD chassis has hot-swappable hard drives which may 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 carrier out of the chassis.

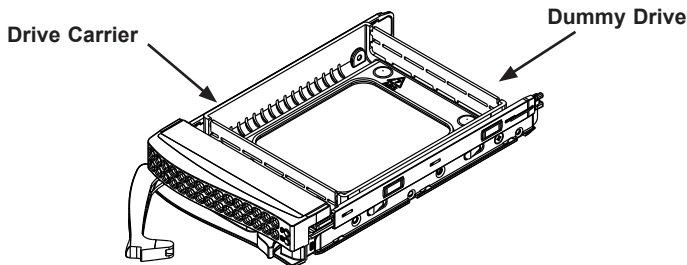


Figure 4-3: Chassis Drive Carrier

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.

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.

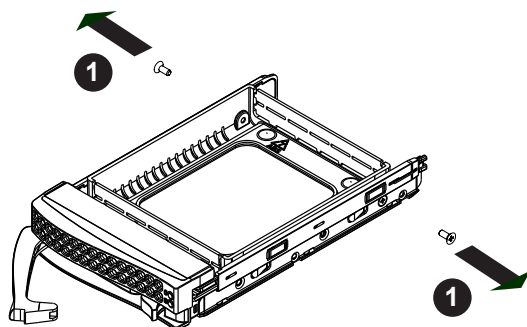


Figure 4-4: Removing the Dummy Drive from the Carrier

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/storage.cfm>

Installing a Hard Drive to the Hard Drive Carrier

1. Remove the two screws securing the dummy drive to the drive carrier and remove the dummy drive. Place the hard drive carrier on a flat surface such as a desk, table or work bench.

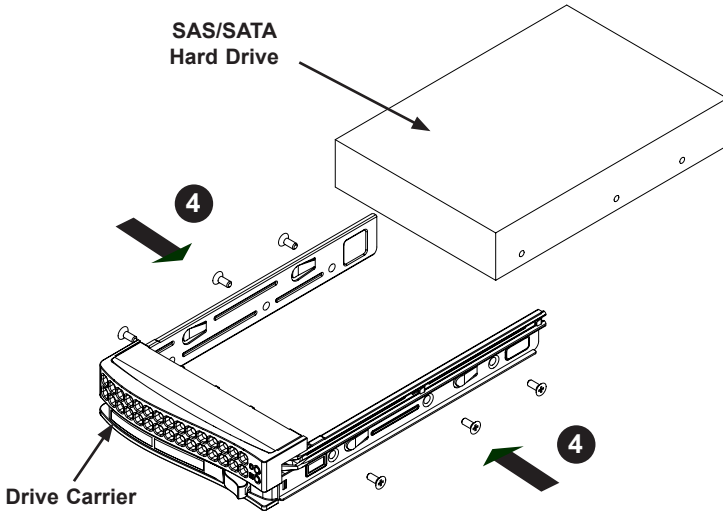


Figure 4-5: Installing the Hard Drive into the Carrier

2. Slide the hard drive into the carrier with the printed circuit board side facing down.
3. Carefully align the mounting holes in both the drive carrier and the hard drive.
4. Secure the hard drive to the carrier using six screws.
5. Replace the drive tray into the chassis. Make sure to close the drive carrier handle to lock the drive carrier into place.

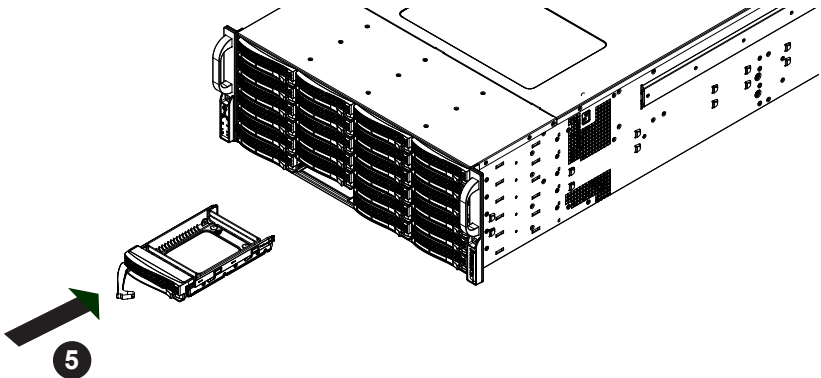


Figure 4-6: Installing the Hard Drive

4-4 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.

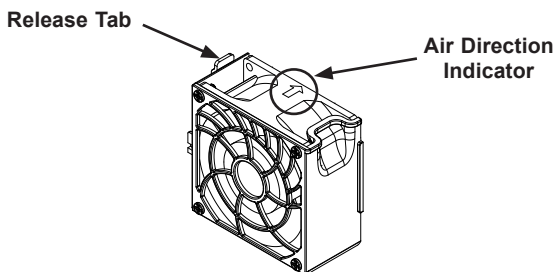


Figure 4-7: System Fan

Replacing a System Fan

1. Open the chassis while the power is running to determine which fan has failed. (Never run the server for an extended period of time with the chassis cover open.)
2. Remove the failed fan's power cord from the serverboard.
3. Press the fan release tab to lift the failed fan from the chassis and pull it completely out of the chassis.
4. 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.
5. Check that the fan is working properly before replacing the chassis cover.
6. Plug the power cords into the rear of the power supplies and power up the system.

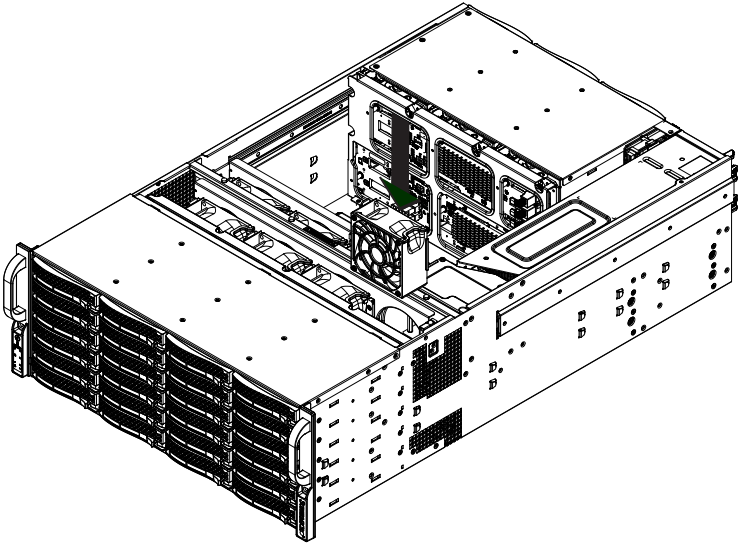


Figure 4-8: Placing a System Fan in the Chassis

4-5 Power Supply

The SC847EC1/C2 JBOD chassis has a 1280 Watt high-efficiency redundant 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.

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).

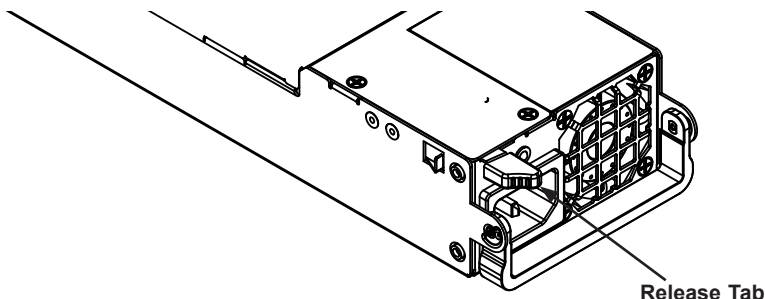


Figure 4-9: Power Supply Release Tab

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. If your server has only one power supply, you must power down the server and unplug the power cord.
2. Push the release tab (on the back of the power supply) as illustrated.
3. Pull the power supply out using the handle provided.

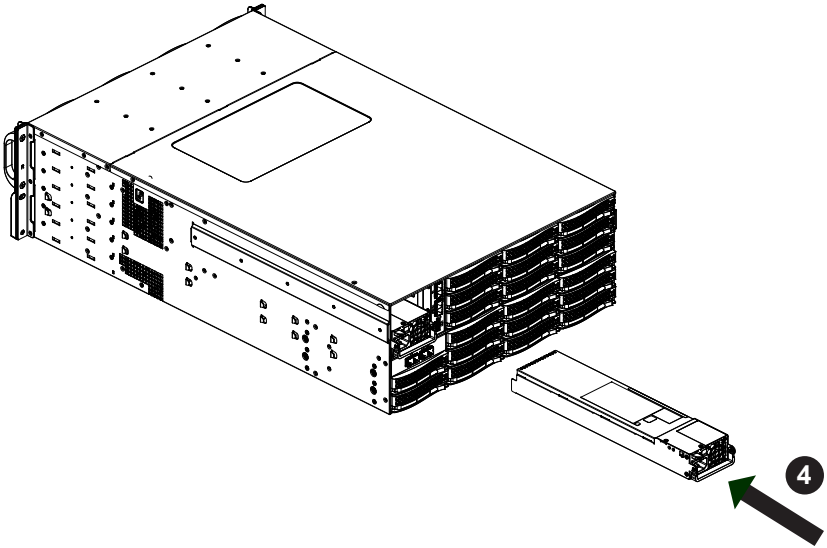


Figure 4-10: Power Supply Release Tab

4. Replace the failed power module with the same model.
5. Push the new power supply module into the power bay until you hear a click.
6. If using only one power supply, plug the AC power cord back into the module and power up the server.

4-6 Removing and Installing the Backplanes

The SC847E1C/2C chassis comes equipped with a BPN-SAS3-846EL1/EL2 front backplane and a BPN-SAS3-826EL1/EL2 rear backplane. For detailed information and instructions on how to change the backplane settings, see Appendices C and D of this manual.

Removing the Front Backplane

1. Power down the system and remove the power cords from the rear of the power supplies. Remove the chassis cover as described in Section 4-2.
2. Remove the two side screws securing the front backplane to the chassis.
3. Remove the four horizontal screws along the top of the front backplane.
4. Remove the five horizontal screws that go through the bottom of the backplane.

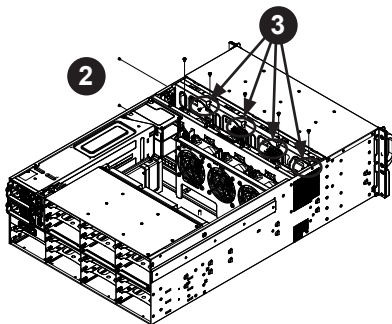


Figure 4-11: Removing the Screws Securing the Front Backplane

5. Lift the front backplane up and out of the chassis.

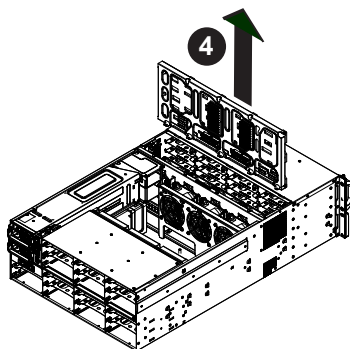


Figure 4-12: Removing the Front Backplane

Removing the Rear Backplane

1. Power down the system and remove the power cords from the rear of the power supplies. Remove the chassis cover as described in Section 4-2.
2. Remove the two side screws (one on each side of the chassis) which secure the rear tray to the chassis.
3. Pull the rear tray out of the back of the chassis as illustrated.

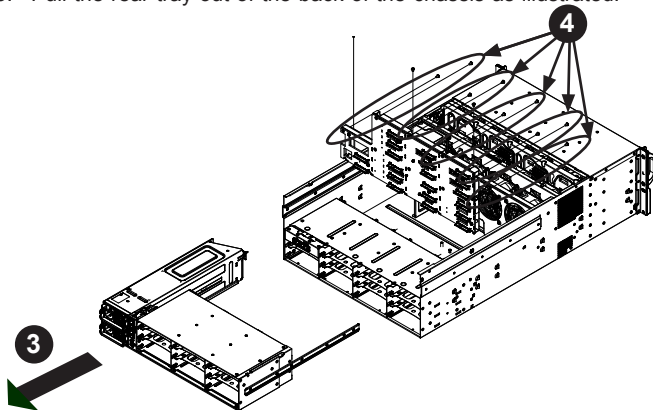


Figure 4-13: Removing the Screws Securing the Rear Backplane

4. Remove the nine horizontal screws going through the rear backplane.
5. Remove the three vertical screws securing the backplane to the chassis floor.
6. Lift the backplane up and out of the chassis.

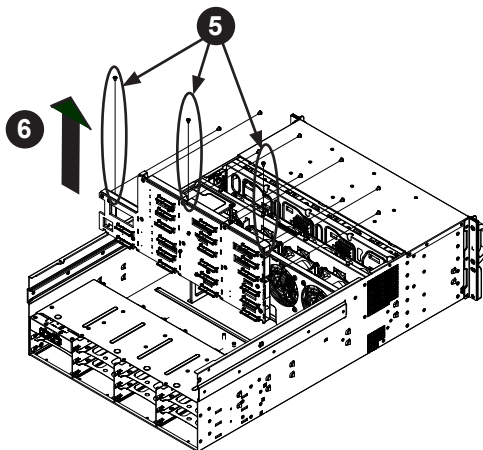


Figure 4-14: Removing the Three Screws Securing the Backplane

Installing the Front Backplane

1. Confirm that the power cords are still disconnected from the power supplies.
2. Place the front backplane in the chassis.

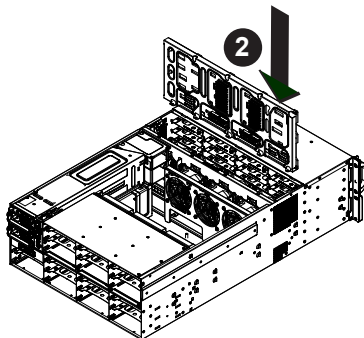


Figure 4-15: Installing the Front Backplane

3. Install the two side screws to secure the front backplane to the chassis.
4. Install the four horizontal screws along the top of the front backplane.
5. Install the five horizontal screws along the bottom of the front backplane.

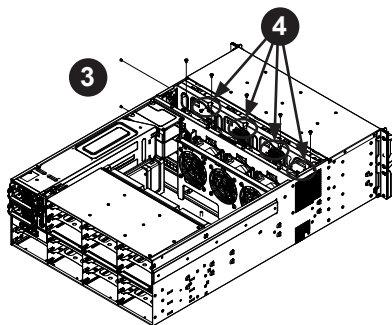


Figure 4-16: Installing the Screws Securing the Front Backplane

6. Plug the power cords into the rear of the power supply, replace the chassis cover and power up the system.

Installing the Rear Backplane

1. Confirm that the power cords are still disconnected from the power supplies.
2. Slide the rear tray out of the back of the chassis.

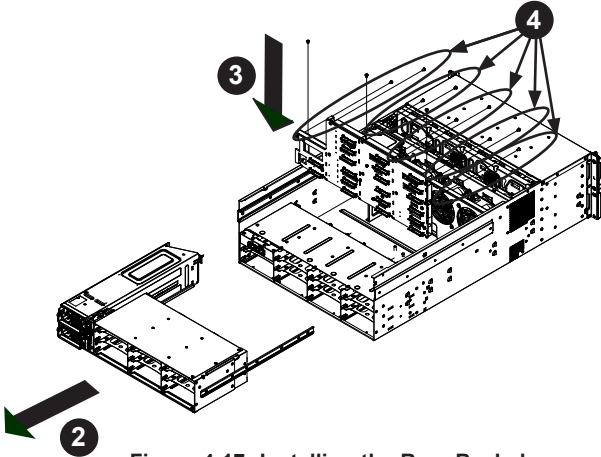


Figure 4-17: Installing the Rear Backplane

3. Place the rear backplane in the chassis and secure it with the three vertical screws along the top of the backplane.
4. Secure the backplane with nine horizontal screws through the backplane.
5. Plug the power cords into the rear of the power supply, replace the chassis cover and power up the system.

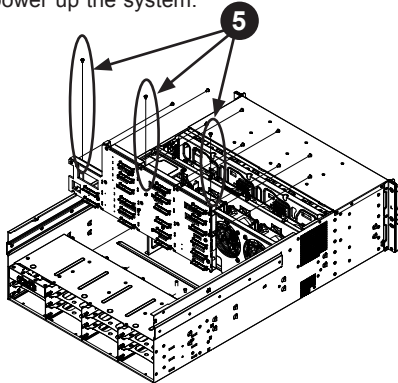


Figure 4-18: Installing the Screws Securing the Rear Backplane

4-7 Installing the Power Card

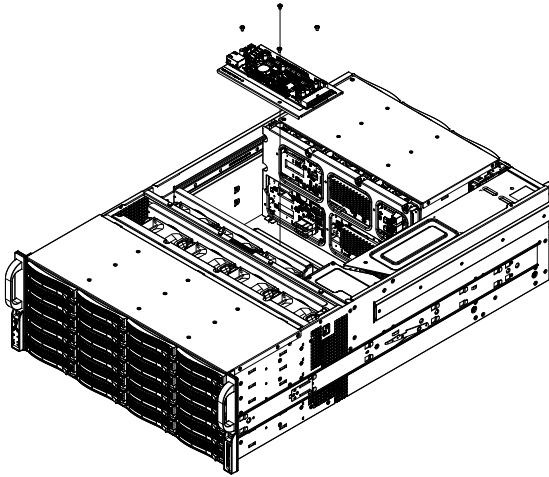


Figure 4-19: Installing the CSE-PTJBOD-CB3 Power Card into the Chassis

Removing the Power Card From the Chassis

1. Power down the system and remove the power cords from the rear of the power supplies. Remove the chassis cover as described in Section 4-2 of this manual.
2. Remove the four screws securing the power card to the chassis.
3. Lift the power card up and out of the chassis.

Installing the Power Card into the Chassis

4. Power down the system and remove the power cords from the rear of the power supplies. Remove the chassis cover as described in Section 4-2 of this manual.
5. Place the CSE-PTJBOD-CB3 power card into the chassis as illustrated above.
6. Secure the power card to the chassis using the four screws provided.
7. Plug the power cords into the rear of the power supply, replace the chassis cover and power up the system.

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 the like).

5-4 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.
- 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.

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.

5-5 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.

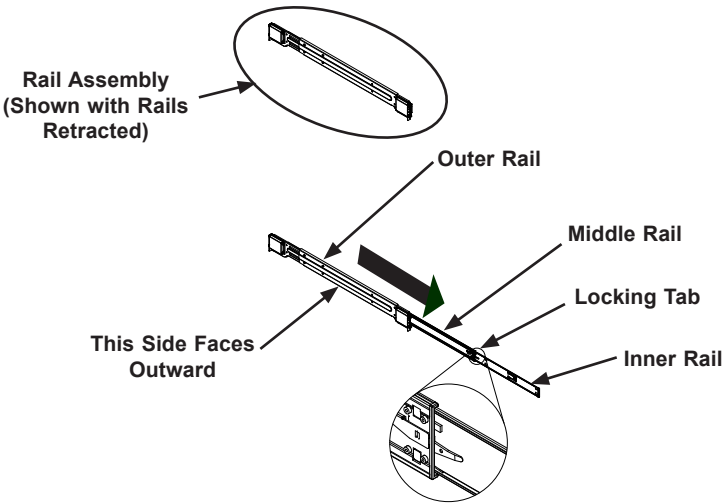


Figure 5-1: Identifying the Outer Rail, Middle Rail and Inner Rails (Left Rail Assembly Shown)

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.

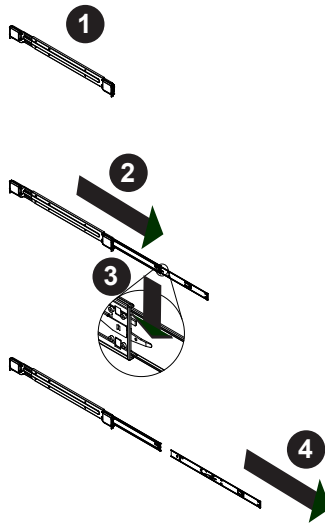


Figure 5-2: Extending and Releasing the Inner Rail

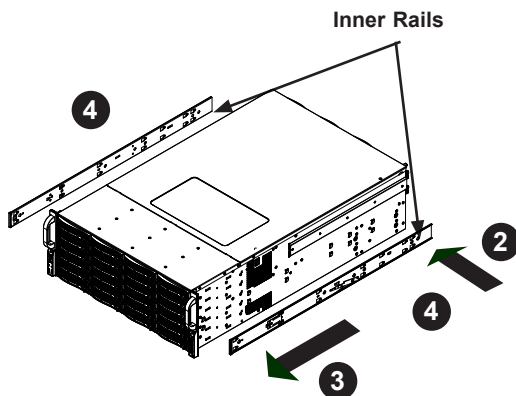


Figure 5-3: Installing the Inner Rails

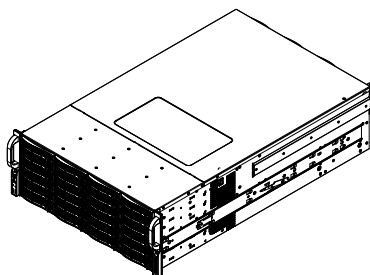


Figure 5-4: Inner Rails Installed on the Chassis

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.

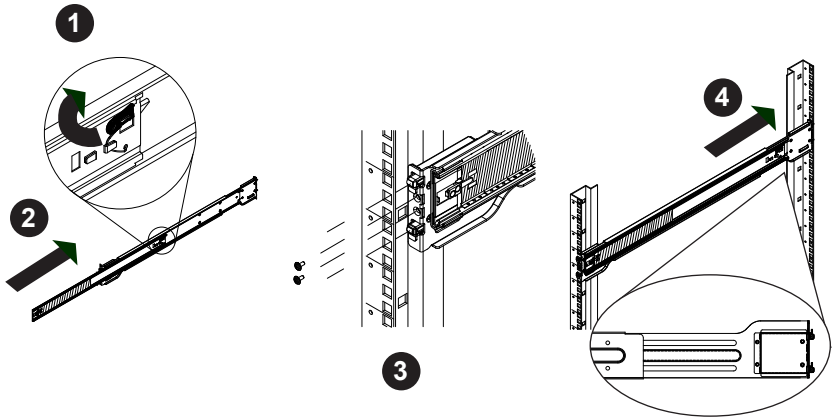


Figure 5-5: Extending and Releasing the Outer Rails

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.

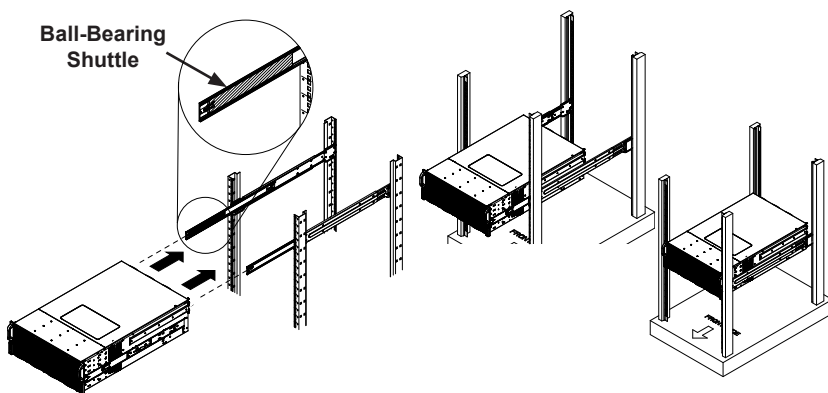


Figure 5-6: Installing into a Rack

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. 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.
4. Align the chassis inner rails with the front of the middle rails.
5. 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.
6. Depress the locking tabs of both sides at the same time and push the chassis all the way into the rear of the rack.
7. If necessary for security purposes, use screws to secure the chassis handles to the front 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.



Warning: When initially installing the server into a rack, test that the rail locking tabs engage to prevent the server from being overextended. Have a rack lift in place as a precaution in case the test fails.

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.

Notes

Appendix A

SC847E1C/2C JBOD 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 SC847E1C/2C JBOD Chassis

SC847E1C/2C-R1K28JBOD				
Part #	Type	Qty	Length	Description
CBL-CDAT-0601	Cable	2	50 cm	4-pin to 4-pin I ² C cable, 26 AWG.
CBL-NTWK-0587	Cable	1	---	CAT 5e RJ45 extension cable for SC847D JBOD internal male to female adapter with PCBA 500 mm, 24 AWG, HF.
CBL-SAST-0568	Cable	2	35 cm	Internal Mini-SAS HD to Mini-SAS HD, 12Gb/s, HF.
CBL-SAST-0593-01	Cable	4	60 cm	Internal Mini-SAS HD to Mini-SAS HD 60 cm, 30AWG, 12 Gb/s [FCI].
CBL-0160L	Cable	2	6'	NEMA5-15P to C13 US power cord 16 AW, PBF (default for high Watt)
CBL-0071L	Cable	1	---	Round 16-pin to 16-pin ribbon FP CABLE 30

Extending Power Cables

Although Supermicro chassis are designed with to be efficient and cost-effective, some compatible motherboards have power connectors located in different areas.

To use these motherboards you may have to extend the power cables to the motherboards. To do this, use the following chart as a guide.

Power Cable Extenders		
Number of Pins	Cable Part #	Length
24-pin	CBL-0042	7.9"(20 CM)
20-pin	CBL-0059	7.9"(20 CM)
8-pin	CBL-0062	7.9"(20 CM)
4-pin	CBL-0060	7.9"(20 CM)

Front Panel to the Motherboard

The SC847E1C/2C JBOD chassis includes a cable to connect the chassis front panel to the motherboard. If your motherboard uses a different connector, use the following list to find a compatible cable.

Front Panel to Motherboard Cable (Ribbon Cable)		
Number of Pins (Front Panel)	Number of Pins (Motherboard)	Cable Part #
16-pin	16-pin	CBL-0049
16-pin	20-pin	CBL-0048
20-pin	20-pin	CBL-0047
16-pin	various*	CBL-0068
20-pin	various*	CBL-0067

* Split cables: Use these cable if your motherboard requires several different connections from the front panel.

A-3**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]



1/2 M/B standoff
6-32 x 5 mm
[0.197]



Notes

Appendix B

SC847E1C/2C JBOD Power Supply Specifications

This appendix lists power supply specifications for your chassis system.

SC847E1C/2C-R1K28JBOD	
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

Notes

Appendix C

BPN-SAS3-846EL Backplane Specifications

To avoid personal injury and property damage, carefully follow all the safety steps listed below when accessing your system or handling the components.

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 BPN-SAS3-846EL series backplane.
- Make sure that the backplane is properly and securely on the motherboard to prevent damage to the system due to power outages.

C-3 An Important Note to Users

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

C-4 Introduction to the BPN-SAS3-846EL Backplane

The BPN-SAS3-846EL 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-SAS3-846EL Revision 1.01, the most current release 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.

C-5 Overview of the BPN-SAS3-846EL1/EL2 Backplanes

The BPN-SAS3-846EL1 and BPN-SAS3-846EL2 model backplanes are identical, except that the BPN-SAS3-846EL2 backplane has duplicate secondary components which are not found on the BPN-SAS3-846EL1. The BPN-SAS3-846EL2 is divided into a two sections, with the primary components on the right side of the board and the secondary components on the left. SAS3 backplanes are not compatible with legacy SAS (3 Gbps), SATA (1.5 Gbps) backplanes or lower.

C-6 Front Connectors

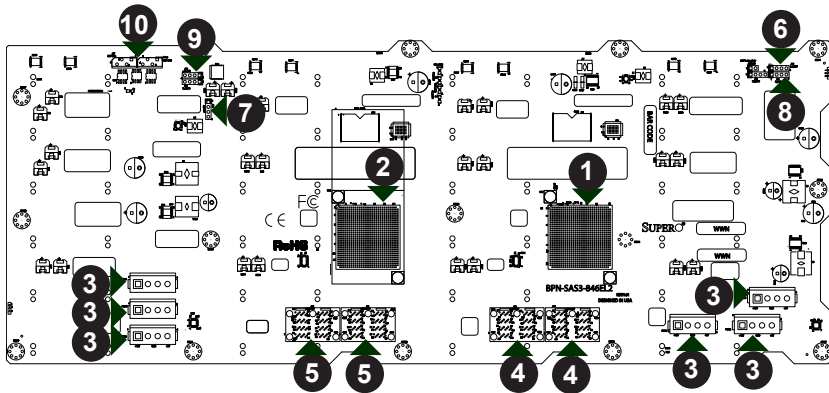


Figure C-1: BPN-SAS3-846EL1/EL2 Connectors and Components

- | | |
|---|---|
| <ul style="list-style-type: none"> 1. Primary Expander Chip. 2. Secondary Expander Chip (not present on EL1 single port backplanes). 3. Backplane Power Connectors: PWR1 through PWR6. 4. Primary SAS Ports: J49, J50. 5. Secondary SAS Ports: J51, J52. (not present on EL1 single port backplanes). 6. Primary UART Connector: PRI-
UART (J30) for manufacturer's use only. | <ul style="list-style-type: none"> 7. Secondary UART Connector: SEC-
UART(J24) for manufacturer's use only, not present on EL1 backplanes. 8. Primary SDB Connector: PRI-
SDB (J31), for manufacturer's use only. 9. Secondary SDB Connector: SEC-
SDB (J29), for manufacturer's use only, not present on EL1 backplanes. 10. I²C Connector, EXP I2C0 (J48). |
|---|---|

C-7 Front Connector and Pin Definitions

1. - 2. Primary and Secondary Expander Chips

The primary and secondary expander chips allow the backplane to support dual port, cascading, and failover configurations.

3. Backplane Power Connectors

The 4-pin connectors, designated PWR1 - PWR6 provide power to the backplane. See the table on the right for pin definitions.

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

4. - 5. Primary and Secondary SAS Ports

The primary SAS connectors are designated J49 and J50. The secondary SAS Ports are designated J51 through J52 and are not present on EL1 single port backplanes.

6. - 7. Primary and Secondary UART Connectors

The primary UART connector is designated PRI-UART and J30. The secondary UART connector is designated SEC-UART and J24 and is not present on BPN-SAS3-846EL1. UART connectors are used for manufacturer's diagnostic purposes only.

8. - 9. SDB Connectors

The Primary SDB connector is designated PRI-SDB and J31. The secondary SDB connector is designated SEC-SDB and J29. (Not present on BPN-SAS3-846EL1 backplanes) These are debug connectors used for the manufacturer's diagnostic purposes only.

10. I²C Connectors

The I²C connector. is designated EXP I2C0.

C-8 Front Jumper Location and Settings

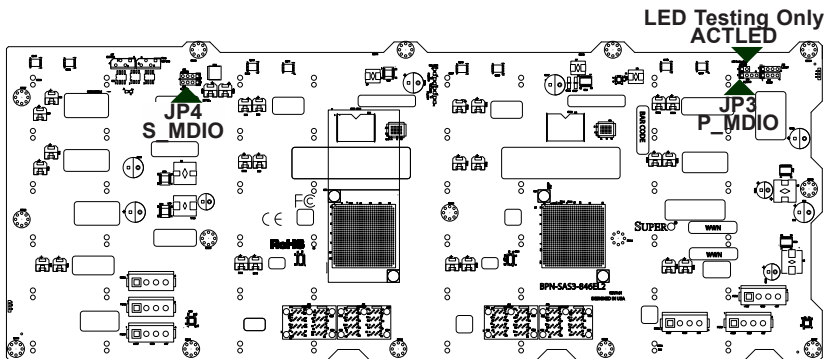
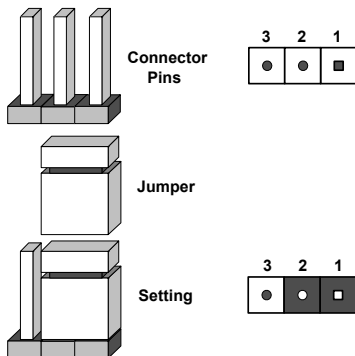


Figure C-2: Front Jumpers

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.



General Jumper Settings		
Jumper	Jumper Settings	Note
LED Testing Only ACTLED	Open: Disabled (Default) Closed: Enabled	Activity LED test.
JP3 P_MDIO	Open: Disabled (Default) Closed: Enabled	Primary management data in/out. For manufacturer's use only
JP4 S-MDIO	Open: Disabled (Default) Closed: Enabled	Secondary management data in/out. For manufacturer's use only

C-9 Front LED Indicators

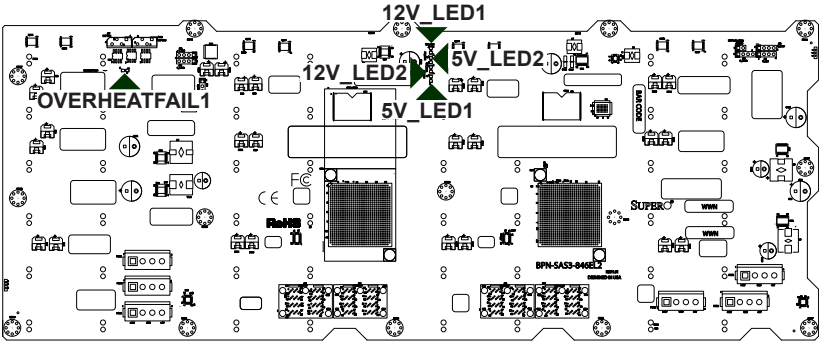


Figure C-3: Front LEDs

Backplane LEDs			
LED	Normal State	Abnormal State	Specification
12V_LED1	On	Off	12V power status
12V_LED2	Blinking	Steady on, or off	Primary expander heartbeat indicator
5V_LED1	On	Off	5V power status
5V_LED2	Blinking	Steady on, or off	Secondary expander heartbeat indicator (not present on BPN-SAS3-846EL1 backplanes).
OVERHEATFAIL1	Off	On	System overheat/failure LED

C-10 Rear Connectors and LED Indicators

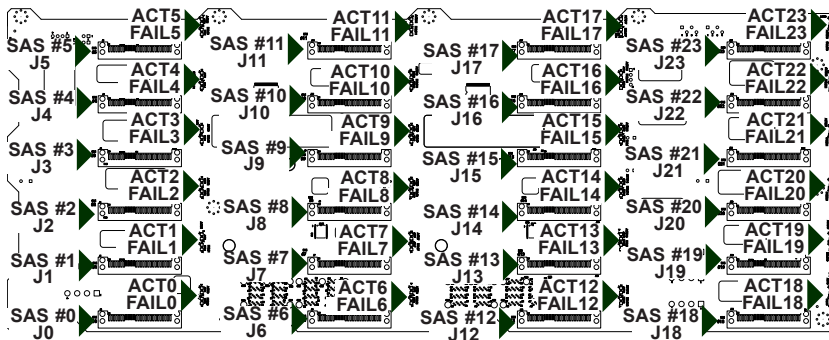


Figure C-4: Rear Connectors and LEDs

Rear SAS Connectors			
Rear Connector	SAS Drive Number	Rear Connector	SAS Drive Number
SAS #0	SAS HDD #0	SAS #12	SAS HDD #12
SAS #1	SAS HDD #1	SAS #13	SAS HDD #13
SAS #2	SAS HDD #2	SAS #14	SAS HDD #14
SAS #3	SAS HDD #3	SAS #15	SAS HDD #15
SAS #4	SAS HDD #4	SAS #16	SAS HDD #16
SAS #5	SAS HDD #5	SAS #17	SAS HDD #17
SAS #6	SAS HDD #6	SAS #18	SAS HDD #18
SAS #7	SAS HDD #7	SAS #19	SAS HDD #19
SAS #8	SAS HDD #8	SAS #20	SAS HDD #20
SAS #9	SAS HDD #9	SAS #21	SAS HDD #21
SAS #10	SAS HDD #10	SAS #22	SAS HDD #22
SAS #11	SAS HDD #11	SAS #23	SAS HDD #23

Rear LED Indicators		
Rear LED	Hard Drive Activity	Failure LED
SAS #0	ACT0	FAIL0
SAS #1	ACT1	FAIL1
SAS #2	ACT 2	FAIL2
SAS #3	ACT3	FAIL3
SAS #4	ACT4	FAIL4
SAS #5	ACT5	FAIL5
SAS #6	ACT6	FAIL6
SAS #7	ACT7	FAIL7
SAS #8	ACT8	FAIL8
SAS #9	ACT 9	FAIL9
SAS #10	ACT10	FAIL10
SAS #11	ACT11	FAIL11
SAS #12	ACT12	FAIL12
SAS #13	ACT13	FAIL13
SAS #14	ACT14	FAIL14
SAS #15	ACT15	FAIL15
SAS #16	ACT16	FAIL16
SAS #17	ACT17	FAIL17
SAS #18	ACT18	FAIL18
SAS #19	ACT19	FAIL19
SAS #20	ACT20	FAIL20
SAS #21	ACT21	FAIL21
SAS #22	ACT22	FAIL22
SAS #23	ACT23	FAIL23

C-11 Single and Dual Port Expanders

SAS primary connectors J49 to J50 and secondary connectors J51 to J52 are bidirectional and can be treated as input or output.

Single Ports

BPN-SAS3-846EL1 backplanes have a single port expander that accesses all of the drives and supports cascading.

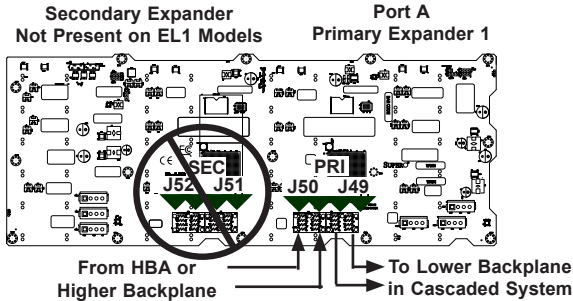


Figure E-5: BPN-SAS3-846EL1 Single Port Configuration

Dual Ports

BPN-SAS3-846EL2 model backplanes have dual-port expanders that access all of the hard drives. These dual-port expanders support cascading, failover, and recovery.

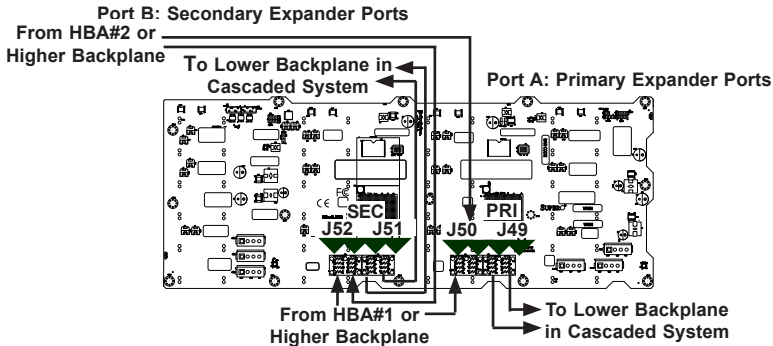


Figure C-6: BPN-SAS3-846EL2 Dual Port Configuration

C-12 Failover

The BPN-SAS3-846EL2 model backplane has two expanders which enable effective failover and recovery.

Single Host Bus Adapter

In a single host bus configuration, the backplane connects to one host bus adapter.

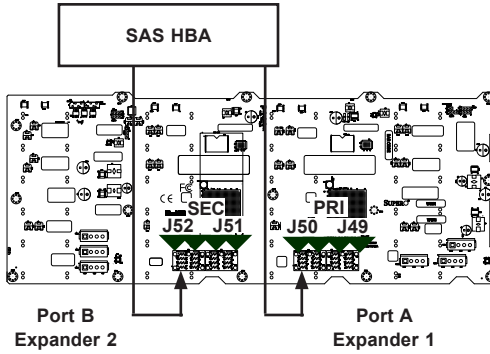


Figure C-7: Single HBA

Single Host Bus Adapter Failover

If the expander or data path in Port A fails, the system automatically switches to Port B with application software or failover support.

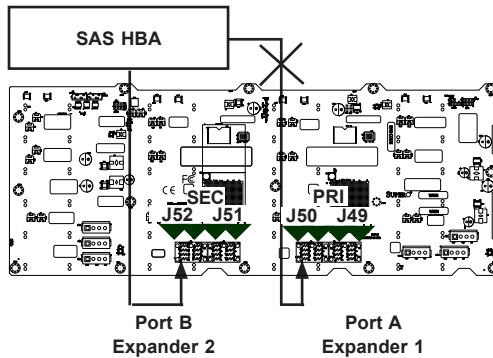


Figure C-8: Single HBA Failover

C-13 Failover with RAID Cards and Multiple HBAs

The BPN-SAS3-846EL backplane may be configured for failover with multiple HBAs using either RAID controllers or HBAs to achieve failover protection.

RAID Controllers: If RAID controllers are used, then the failover is accomplished through port failover on the same RAID card.

HBAs: If multiple HBAs are used to achieve failover protection and load balancing, **Linux MPIO software must be installed and correctly configured to perform the load balancing and failover tasks.**

Dual Host Bus Adapter

In a dual host bus configuration, the backplane connects to two HBA's.

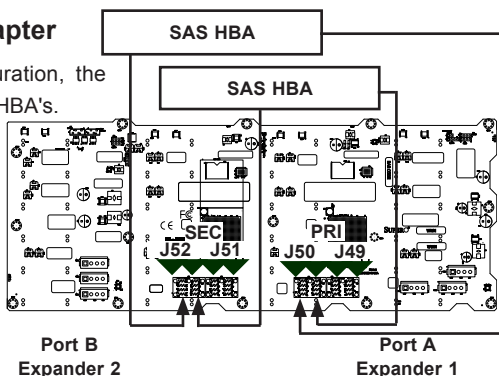


Figure C-9: Dual HBA

Dual Host Bus Adapter Failover

If the expander or data path in Port A fails, the system automatically switches to Port B. This maintains a full connection to all drives.

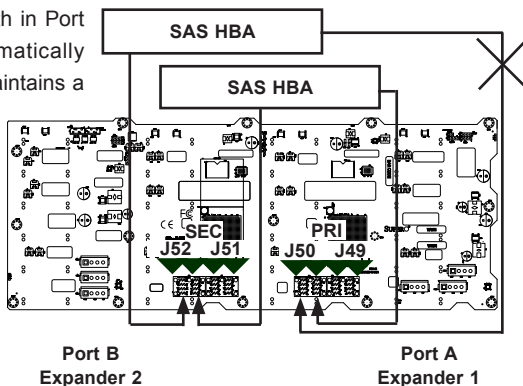


Figure C-10: Dual HBA Failover

IMPORTANT: For RAID controllers, redundancy is achieved through port failover. For multiple HBAs MPIO software is required to achieve failover protection.

C-14 Connecting HBAs to the Backplane

Connecting an Internal HBA to the Backplane

The following section lists the most common cables used to connect the HBA to the backplane.

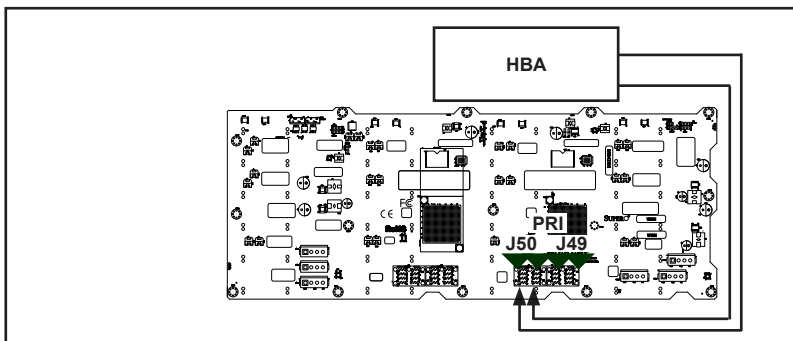


Figure C-11: Single Internal Host Bus Adapter

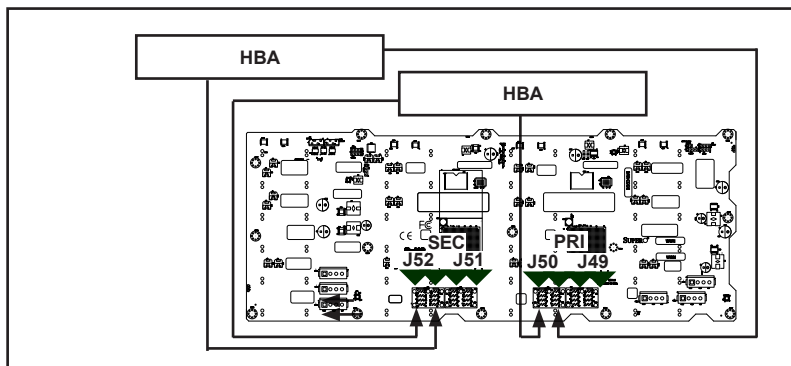


Figure C-12: Dual Internal Host Bus Adapter

Supported Internal HBA Cables

Use the following cables to create connections between the internal HBA and BPN-SAS3-846EL model backplane. The cables required depend upon the HBA connector.

IMPORTANT: See Section 3-3 of this manual, *Failover with RAID Cards and Multiple HBAs* for important information on supported configurations.

Cable Name: Internal iPass (Mini-SAS) to HD (Mini-SAS)

Part #: CBL-SAST-0508-01 **Length:** 50 cm (19 inches)

Part #: CBL-SAST-0507-01 **Length:** 80 cm (31 inches)

Description: This cable has an iPass (SFF-8087/Mini-SAS) connector (36-pin) at one end and a Mini-SAS HD (SFF-8643) connector at the other end. It connects from the SAS2 HBA to the BPN-SAS3-846EL model backplane.

Cable name: Internal HD (Mini-SAS) to HD (Mini-SAS)

Part #: CBL-SAST-0568 **Length:** 35 cm (13 inches)

Part #: CBL-SAST-0593-01 **Length:** 60 cm (23 inches)

Part #: CBL-SAST-0531 **Length:** 80 cm (31 inches)

Description: This cable has a Mini-SAS HD (SFF-8643) connector at both ends. It connects from the SAS3 HBA to the BPN-SAS3-846EL model backplane.

Connecting an External HBA to the Backplane

This backplane supports external host bus adapters. In this configuration, the HBA and the backplane are in different physical chassis. This allows a JBOD (Just a Bunch Of Drives) configuration from an existing system.

Single External Host Bus Adapter

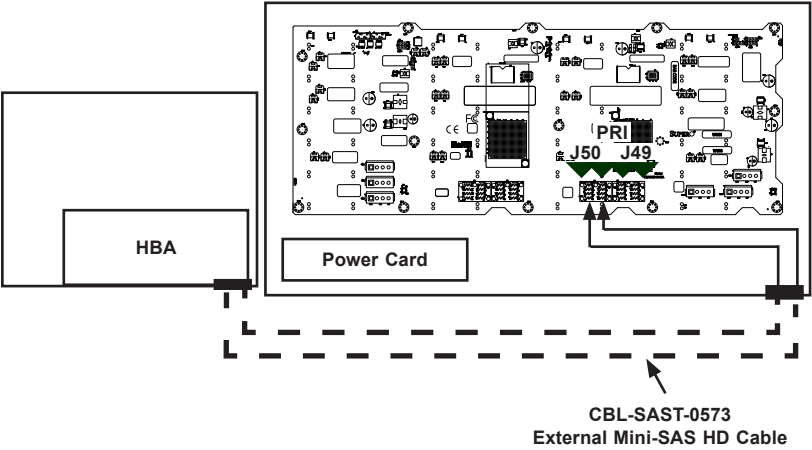


Figure C-9: Single External Host Adapter

Dual External Host Bus Adapter

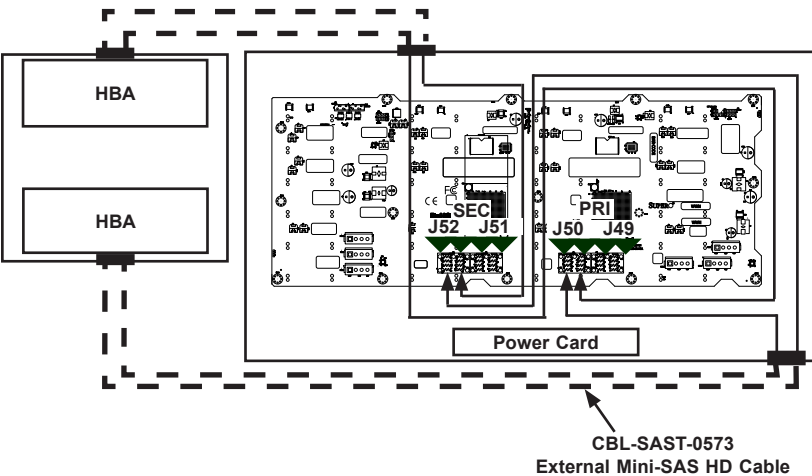


Figure C-13: Dual External Host Bus Adapter

IMPORTANT: See Section 3-3 of this manual, *Failover with RAID Cards and Multiple HBAs* for important information on supported configurations.

Connecting Multiple Backplanes in a Single Channel Environment

This section describes the cables used when cascading from a single HBA. These connections use CBL-SAST-0531 internal cables and CBL-SAST-0573 external cables.

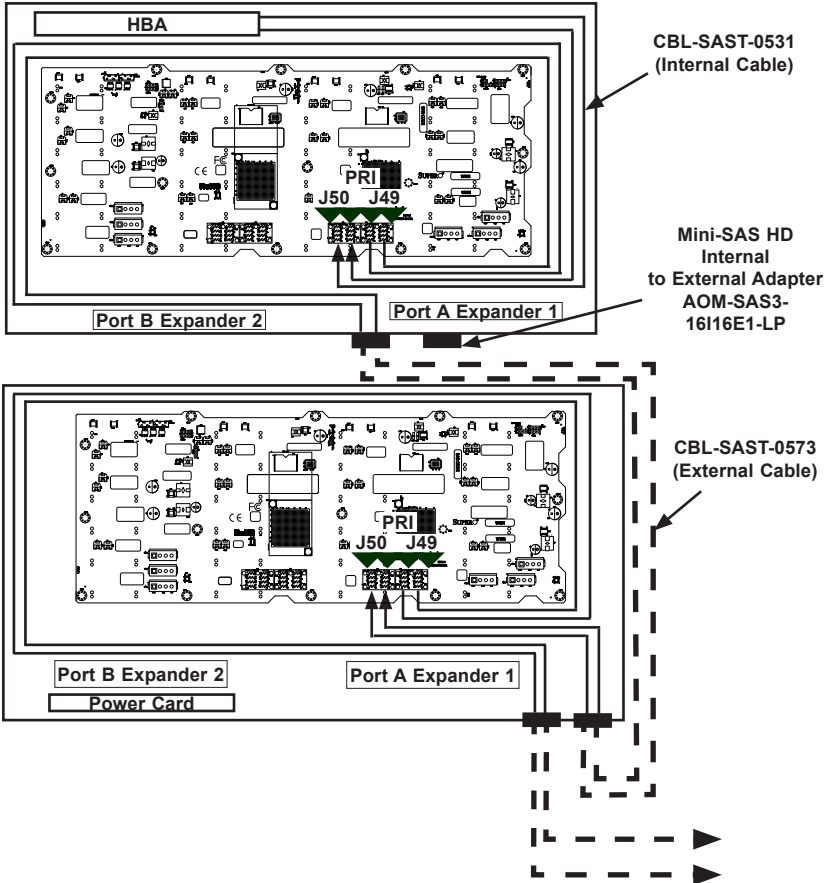


Figure C-14: Single HBA Configuration

Single HBA Configuration Cables



Figure C-15: External Mini-SAS HD to External Mini-SAS HD Cable

Cable Name: 1 Meter External Mini-SAS HD to External Mini-SAS HD Cable

Part #: CBL-SAST-0573

Ports: Single

Placement: External Cable

Description: External cascading cable, connects ports between servers and JBODs.

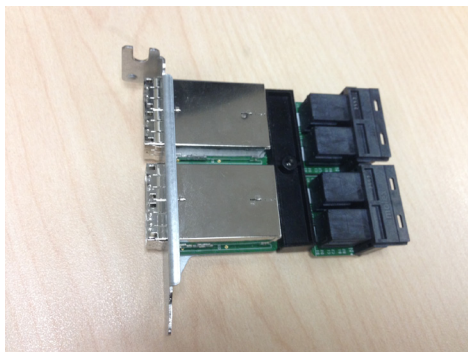


Figure C-16: Mini-SAS HD Internal to External Adapter

Cable Name: 16-port Mini-SAS HD Internal to External Cable Adapter with LP Bracket

Part #: AOM-SAS3-16I16E-LP

Ports: Four wide-ports (sixteen ports total)

Placement: Internal cable with adapter

Description: Internal cable, connects the SAS3 backplane to external ports.

Connecting Multiple Backplanes in a Dual Channel Environment

This section describes the cables used when cascading from dual HBAs. These connections use CBL-SAST-0531 internal cables and CBL-SAST-0573 external cables.

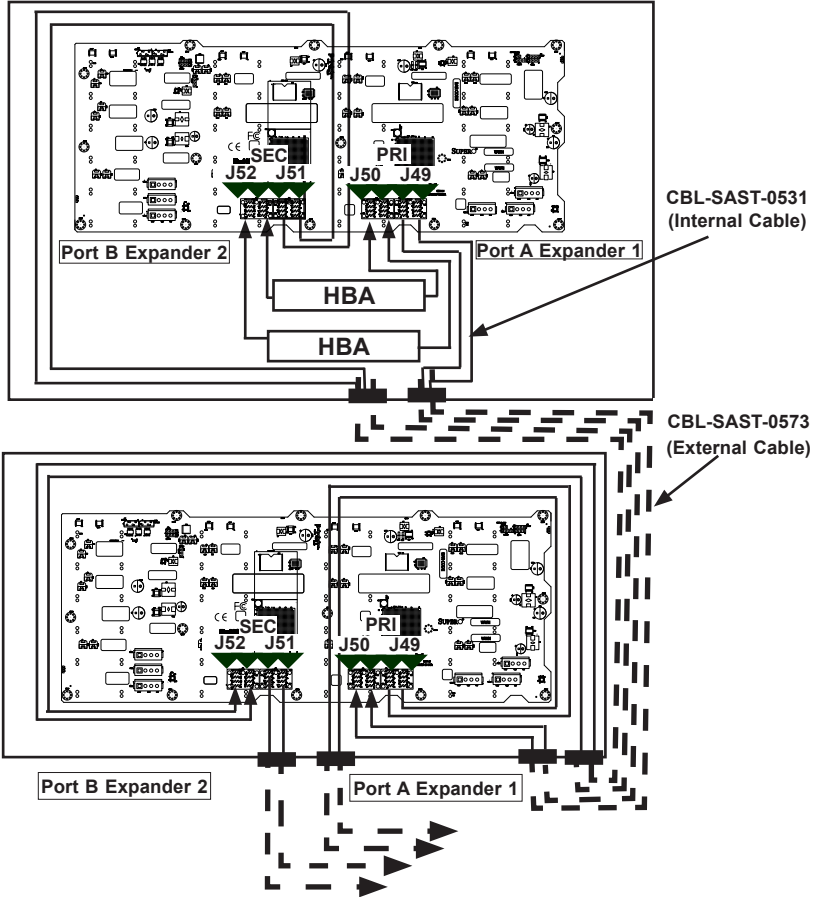


Figure C-17: Dual HBA Configuration

IMPORTANT: See Section 3-3 of this manual, *Failover with RAID Cards and Multiple HBAs* for important information on supported configurations.

Cascading BPN-SAS3-846EL and BPN-SAS3-847EL

This section describes the cables used when cascading with the BPN-SAS3-846EL and BPN-SAS3-847EL backplanes together.

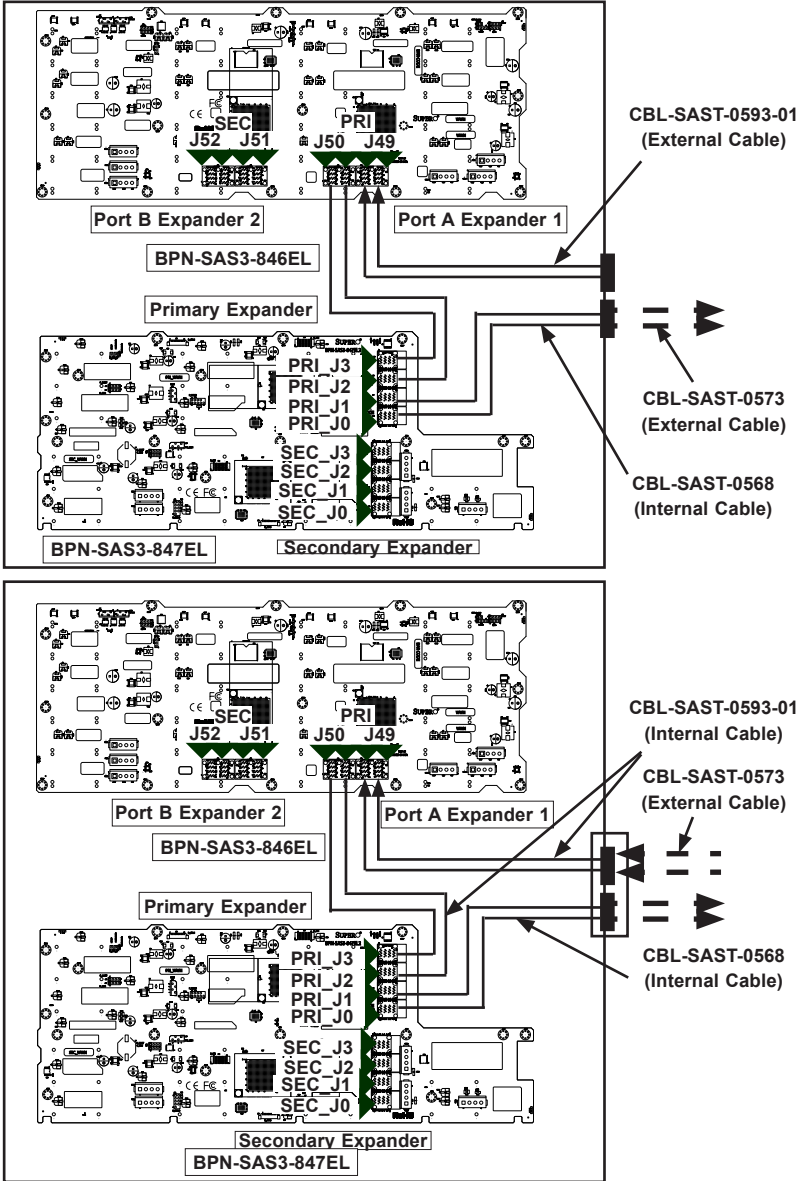


Figure C-18: BPN-SAS3-846EL and BPN-SAS3-847EL Cascading Configuration

Appendix D

BPN-SAS3-847EL Backplane Specifications

To avoid personal injury and property damage, carefully follow all the safety steps listed below when accessing your system or handling the components.

D-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.

D-2 General Safety Guidelines

- Always disconnect power cables before installing or removing any components from the computer, including the BPN-SAS3-847EL series backplane.
- Make sure that the backplane is properly and securely on the motherboard to prevent damage to the system due to power outages.

D-3 An Important Note to Users

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

D-4 Introduction to the BPN-SAS3-847EL Backplane

The BPN-SAS3-847EL 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-SAS3-847EL Revision 1.00, the most current release 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.

D-5 Overview of the BPN-SAS3-847EL1/EL2 Backplanes

The BPN-SAS3-847EL1 and BPN-SAS3-847EL2 model backplanes are identical, except that the BPN-SAS3-847EL2 backplane has duplicate secondary components which are not found on the BPN-SAS3-847EL1. The BPN-SAS3-847EL2 is divided into a two sections, with the primary components on the upper portion of the board and the secondary components on the lower portion. SAS3 backplanes are not compatible with legacy SAS (3 Gbps), SATA (1.5 Gbps) backplanes or lower.

D-6 Front Connectors

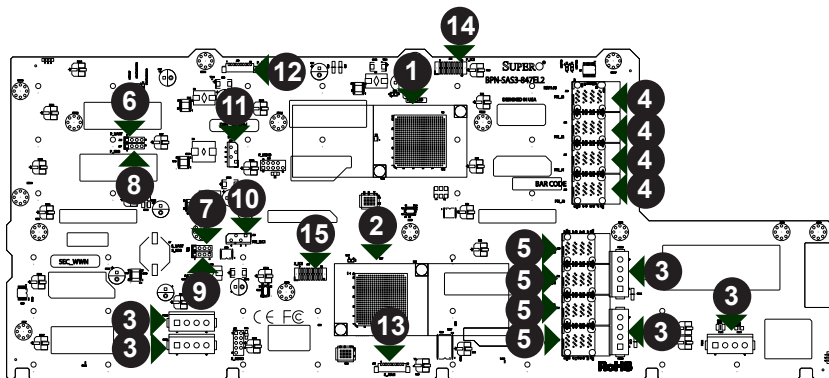


Figure D-1: BPN-SAS3-847EL1/EL2 Connectors and Components

1. Primary Expander Chip.
2. Secondary Expander Chip (not present on EL1 single port backplanes).
3. Backplane Power Connectors: PWR1 through PWR5.
4. Primary SAS Ports: PRI_J0 (J20), PRI_J1 (J21), PRI_J2 (J22) and PRI_J3 (J23)
5. Secondary SAS Ports: SEC_J0 (J30), SEC_J1 (J31), SEC_J2 (J32. (not present on EL1 single port backplanes).
6. Primary UART Connector: P_UART (J26) for manufacturer's use only.
7. Secondary UART Connector: S_UART(J36) for manufacturer's use, not present on EL1 backplanes.
8. Primary SDB Connector: P_SDB (J27), for manufacturer's use.
9. Secondary SDB Connector: S_SDB (J37), for manufacturer's use only, not present on EL1 backplanes.
10. I²C Connector: PRI_I2C1 (J29).
11. SMB Connector: SMB (J28).
12. Primary JTAG Connector: P_JTAG (J25), for manufacturer's use.
13. Secondary JTAG Connector: S_JTAG (J35), for manufacturer's use, (not present on EL1 single port backplanes).
14. Primary ICE connector: P_ICE (J24), for manufacturer's use.
15. Secondary ICE connector: S_ICE (J34), for manufacturer's use.

D-7 Front Connector and Pin Definitions

1. -2. Primary and Secondary Expander Chips

The primary and secondary expander chips allow the backplane to support dual port, cascading, and failover configurations.

3. Backplane Power Connectors

The 4-pin connectors, designated PWR1 - PWR5 provide power to the backplane. See the table on the right for pin definitions.

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

4. - 5. Primary and Secondary SAS Ports

The primary SAS connectors are designated PRI_J0 (J20), PRI_J1 (J21), PRI_J2 (J22) and PRI_J3 (J23). The secondary SAS Ports are designated SEC_J0 (J30), SEC_J1 (J31), SEC_J2 (J32). and are not present on EL1 single port backplanes.

6. - 7. Primary and Secondary UART Connectors

The primary UART connector is designated P_UART (J26). The secondary UART connector is designated S_UART(J36) and is not present on BPN-SAS3-847EL1. UART connectors are used for manufacturer's diagnostic purposes only.

8. - 9. SDB Connectors

The Primary SDB connector is designated P_SDB (J27). The secondary SDB connector is designated S_SDB (J37). (Not present on BPN-SAS3-847EL1 backplanes) These are debug connectors used for the manufacturer's diagnostic purposes only.

10. I²C Connector

The I²C connector. is designated PRI_I2C1 (J29). The secondary I²C connector is designated I2C4 and J47. (Not present on BPN-SAS3-847EL1 backplanes)

11. SMB Connector

The SMB connector. is designated SMB (J28).

12. - 13. JTAG Connectors

The Primary JTAG connector is designated P_JTAG (J25). The secondary JTAG connector is designated S_JTAG (J35) and is not present on BPN-SAS3-847EL1 backplanes. These are connectors for the manufacturer's test purposes only.

14. - 15. ICE Connectors

The Primary ICE connector is designated P_ICE (J26). The secondary ICE connector is designated S_ICE (J35) and is not present on BPN-SAS3-847EL1 backplanes. These are connectors for the manufacturer's test purposes only.

D-8 Front Jumper Location and Settings

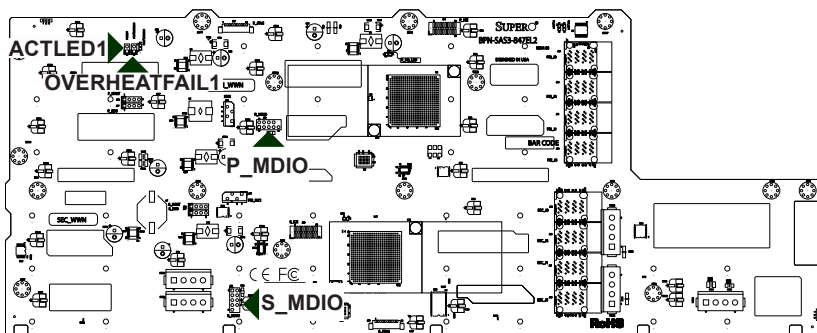
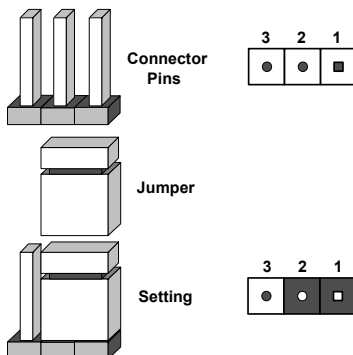


Figure D-2: Front Jumpers

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.



General Jumper Settings		
Jumper	Jumper Settings	Note
ACTLED1	Open: Disabled (Default) Closed: Enabled	Activity LED test.
OVERHEATFAIL1	Open: Disabled (Default) Closed: Enabled	Indicates an overheated condition (primary section)
P_MDIO	Open: Disabled (Default) Closed: Enabled	Primary management data in/out (.J38). For manufacturer's use only
S-MDIO	Open: Disabled (Default) Closed: Enabled	Secondary management data in/out. (.J39). For manufacturer's use only

D-9 Front LED Indicators

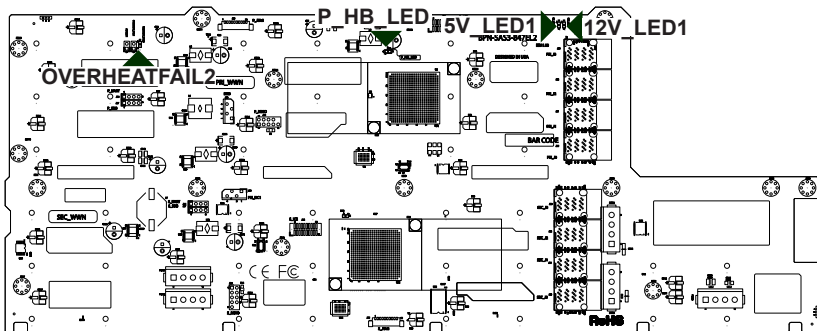


Figure D-3: Front LEDs

Backplane LEDs			
LED	Normal State	Abnormal State	Specification
12V_LED1	On	Off	12V power status
P_HB_LED	Blinking	Off	Primary expander heartbeat indicator
5V_LED1	Off	On	5V power status
OVERHEATFAIL2	Off	On	System overheat/failure LED

D-10 Rear Connectors and LED Indicators

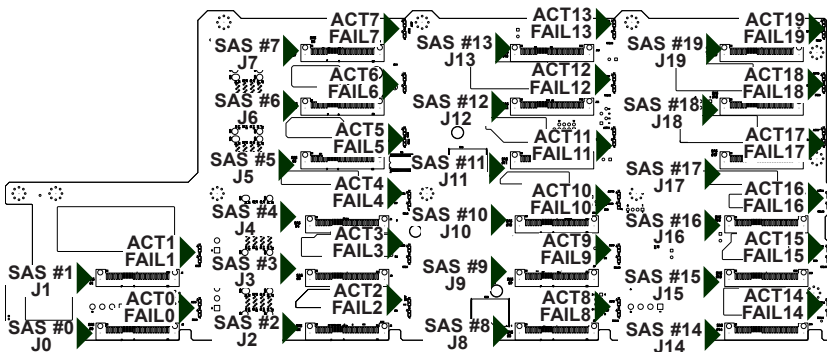


Figure D-4: Rear Connectors and LEDs

Rear SAS Connectors			
Rear Connector	SAS Drive Number	Rear Connector	SAS Drive Number
SAS #0	SAS HDD #0	SAS #10	SAS HDD #10
SAS #1	SAS HDD #1	SAS #11	SAS HDD #12
SAS #2	SAS HDD #2	SAS #12	SAS HDD #12
SAS #3	SAS HDD #3	SAS #13	SAS HDD #13
SAS #4	SAS HDD #4	SAS #14	SAS HDD #14
SAS #5	SAS HDD #5	SAS #15	SAS HDD #15
SAS #6	SAS HDD #6	SAS #16	SAS HDD #16
SAS #7	SAS HDD #7	SAS #17	SAS HDD #17
SAS #8	SAS HDD #8	SAS #18	SAS HDD #18
SAS #9	SAS HDD #9	SAS #19	SAS HDD #19

Rear LED Indicators		
Rear LED	Hard Drive Activity	Failure LED
SAS #0	ACT0	FAIL0
SAS #1	ACT1	FAIL1
SAS #2	ACT 2	FAIL2
SAS #3	ACT3	FAIL3
SAS #4	ACT4	FAIL4
SAS #5	ACT5	FAIL5
SAS #6	ACT6	FAIL6
SAS #7	ACT7	FAIL7
SAS #8	ACT8	FAIL8
SAS #9	ACT 9	FAIL9
SAS #10	ACT10	FAIL10
SAS #11	ACT11	FAIL11
SAS #12	ACT12	FAIL12
SAS #13	ACT13	FAIL13
SAS #14	ACT14	FAIL14
SAS #15	ACT15	FAIL15
SAS #16	ACT16	FAIL16
SAS #17	ACT17	FAIL17
SAS #18	ACT18	FAIL18
SAS #19	ACT19	FAIL19

Notes

D-11 Single and Dual Port Expanders

SAS connectors PRI-J1 to J4 and SEC-J1 to J4 are bidirectional and can be treated as input or output.

Single Ports

BPN-SAS3-847EL1 backplanes have a single port expander that accesses all of the drives and supports cascading.

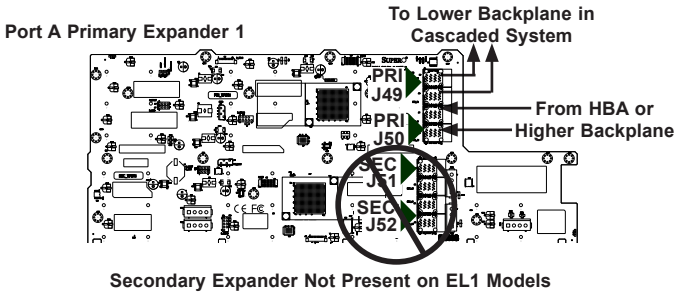


Figure D-5: BPN-SAS3-847EL1 Single Port Configuration

Dual Ports

BPN-SAS3-847EL2 model backplanes have dual-port expanders that access all of the hard drives. These dual-port expanders support cascading, failover, and recovery.

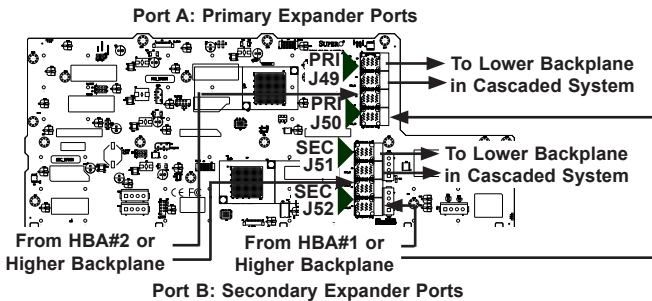


Figure D-6: BPN-SAS3-847EL2 Dual Port Configuration

D-12 Failover

The BPN-SAS3-847EL2 model backplane has two expanders which enable effective failover and recovery.

Single Host Bus Adapter

In a single host bus configuration, the backplane connects to one host bus adapter.

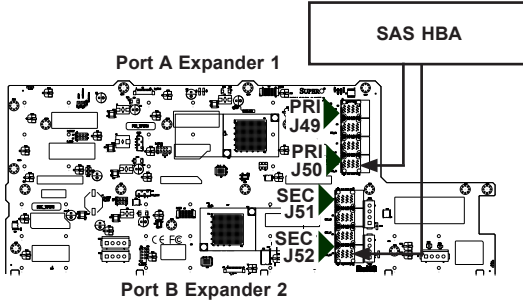


Figure D-7: Single HBA

Single Host Bus Adapter Failover

If the expander or data path in Port A fails, the system automatically switches to Port B with application software or failover support.

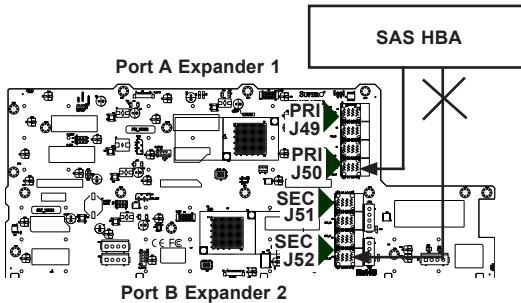


Figure D-8: Single HBA Failover

D-13 Failover with RAID Cards and Multiple HBAs

The BPN-SAS3-847EL backplane may be configured for failover with multiple HBAs using either RAID controllers or HBAs to achieve failover protection.

RAID Controllers: If RAID controllers are used, then the failover is accomplished through port failover on the same RAID card.

HBAs: If multiple HBAs are used to achieve failover protection and load balancing, **Linux MPIO software must be installed and correctly configured to perform the load balancing and failover tasks.**

Dual Host Bus Adapter

In a dual host bus configuration, the backplane connects to two HBA's.

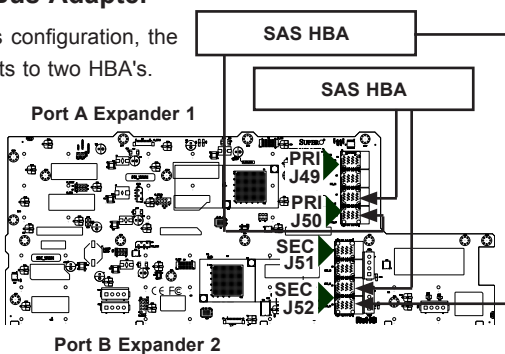
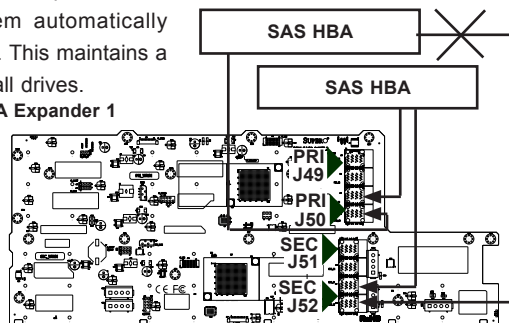


Figure D-9: Dual HBA

Dual Host Bus Adapter Failover

If the expander or data path in Port A fails, the system automatically switches to Port B. This maintains a full connection to all drives.

Port A Expander 1



Port B Expander 2

Figure D-10: Dual HBA Failover

IMPORTANT: For RAID controllers, redundancy is achieved through port failover. For multiple HBAs MPIO software is required to achieve failover protection.

D-14 Connecting HBAs to the Backplane

Connecting an Internal HBA to the Backplane

The following section lists the most common cables used to connect the HBA to the backplane.

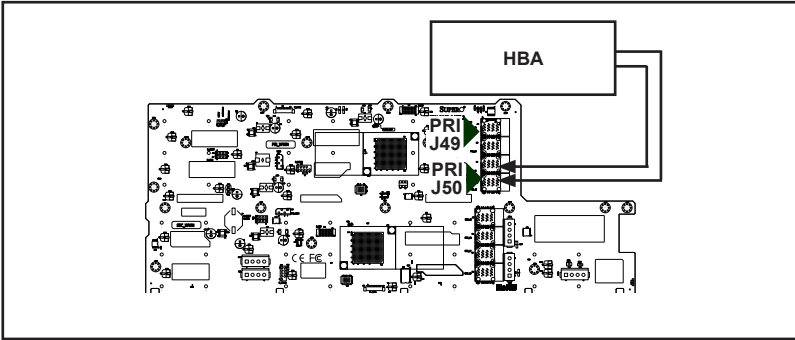


Figure D-11: Single Internal Host Bus Adapter

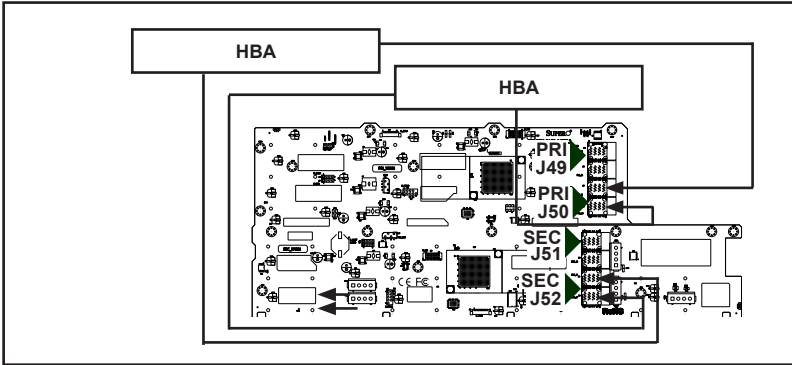


Figure D-12: Dual Internal Host Bus Adapter

Supported Internal HBA Cables

Use the following cables to create connections between the internal HBA and BPN-SAS3-847EL model backplane. The cables required depend upon the HBA connector.

IMPORTANT: See Section 3-3 of this manual, *Failover with RAID Cards and Multiple HBAs* for important information on supported configurations.

Cable Name: Internal iPass (Mini-SAS) to HD (Mini-SAS)

Part #: CBL-SAST-0508-01 **Length:** 50 cm (19 inches)

Part #: CBL-SAST-0507-01 **Length:** 80 cm (31 inches)

Description: This cable has an iPass (SFF-8087/Mini-SAS) connector (36-pin) at one end and a Mini-SAS HD (SFF-8643) connector at the other end. It connects from the SAS2 HBA to the BPN-SAS3-847EL model backplane.

Cable name: Internal HD (Mini-SAS) to HD (Mini-SAS)

Part #: CBL-SAST-0568 **Length:** 35 cm (13 inches)

Part #: CBL-SAST-0593-01 **Length:** 60 cm (23 inches)

Part #: CBL-SAST-0531 **Length:** 80 cm (31 inches)

Description: This cable has a Mini-SAS HD (SFF-8643) connector at both ends. It connects from the SAS3 HBA to the BPN-SAS3-847EL model backplane.

Connecting an External HBA to the Backplane

This backplane supports external host bus adapters. In this configuration, the HBA and the backplane are in different physical chassis. This allows a JBOD (Just a Bunch Of Drives) configuration from an existing system.

Single External Host Bus Adapter

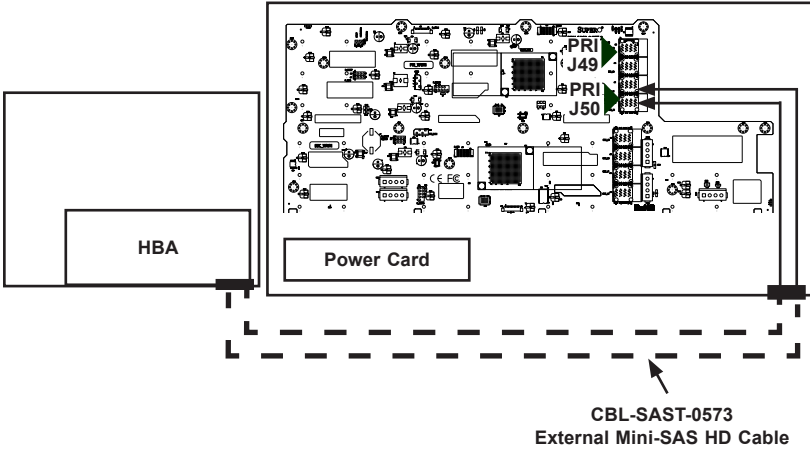


Figure D-13: Single External Host Adapter

Dual External Host Bus Adapter

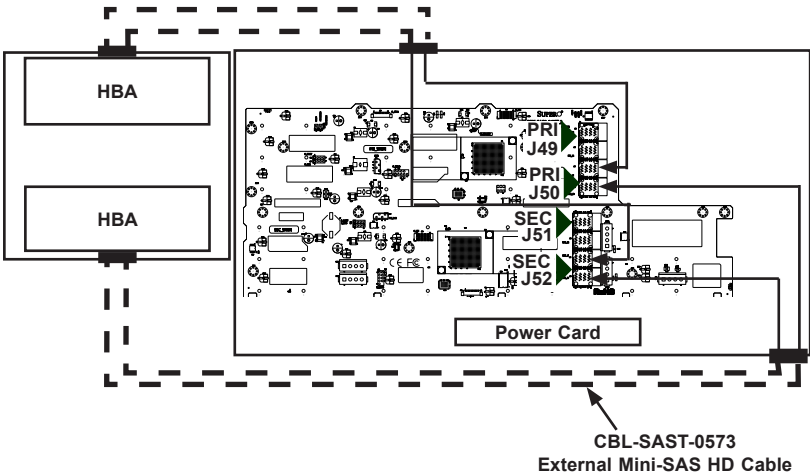


Figure D-14: Dual External Host Bus Adapter

IMPORTANT: See Section 3-3 of this manual, *Failover with RAID Cards and Multiple HBAs* for important information on supported configurations.

Connecting Multiple Backplanes in a Single Channel Environment

This section describes the cables used when cascading from a single HBA. These connections use CBL-SAST-0531 internal cables and CBL-SAST-0573 external cables.

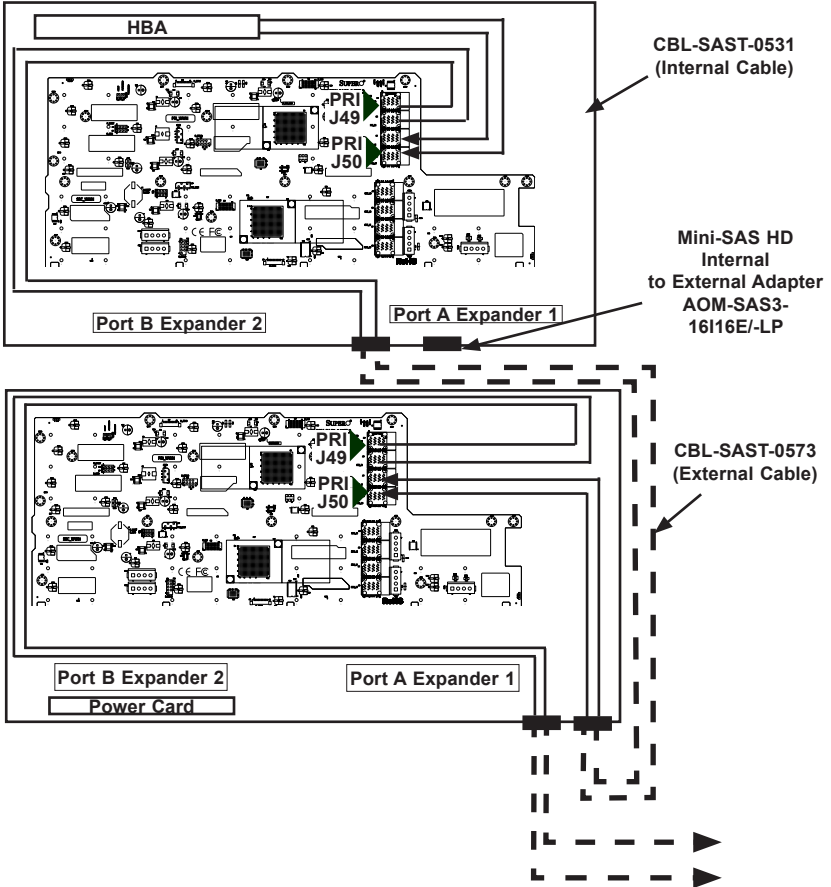


Figure D-15: Single HBA Configuration

Single HBA Configuration Cables



Figure D-16: External Mini-SAS HD to External Mini-SAS HD Cable

Cable Name: 1 Meter External Mini-SAS HD to External Mini-SAS HD Cable

Part #: CBL-SAST-0573

Ports: Single

Placement: External Cable

Description: External cascading cable, connects ports between servers and JBODs.

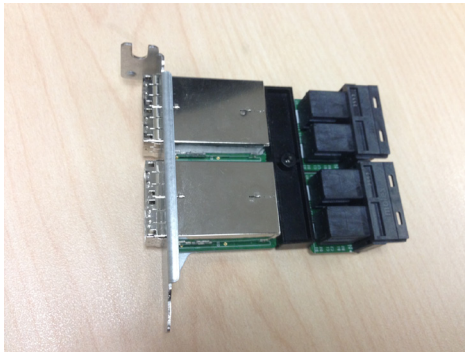


Figure D-17: Mini-SAS HD Internal to External Adapter

Cable Name: 16-port Mini-SAS HD Internal to External Cable Adapter with LP Bracket

Part #: AOM-SAS3-16I16E-LP

Ports: Four wide-ports (sixteen ports total)

Placement: Internal cable with adapter

Description: Internal cable, connects the SAS3 backplane to external ports. Also available without the LP bracket, part number AOM-SAS3-16I16E.

Connecting Multiple Backplanes in a Dual Channel Environment

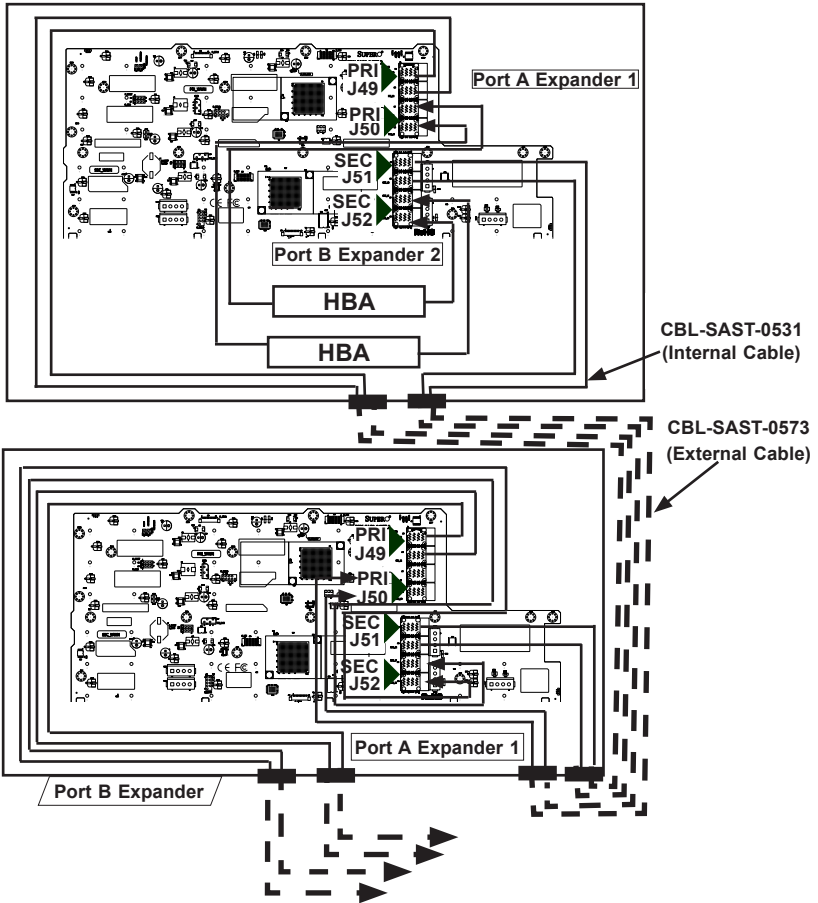


Figure D-18: Dual HBA Configuration

IMPORTANT: See Section 3-3 of this manual, *Failover with RAID Cards and Multiple HBAs* for important information on supported configurations.

Cascading BPN-SAS3-846EL and BPN-SAS3-847EL

For instructions on cascading BPN-SAS3-846EL and BPN-SAS3-847EL see page C-18 of this manual.

Appendix E

CSE-PTJBOD-CB3 Power Board Specifications

To avoid personal injury and property damage, carefully follow all the safety steps listed below when accessing your system or handling the components.

E-1 ESD Safety Guidelines

Electrostatic Discharge (ESD) can damage electronic components. To prevent damage to your system, it is important to handle the backplane 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 power board the edges only; do not touch the components, peripheral chips, memory modules or gold contacts.
- When handling chips or modules, avoid touching their pins.
- Put the power board and peripherals back into their antistatic bags when not in use.

E-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.

E-3 An Important Note to Users

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

E-4 Introduction to the CSE-PTJBOD-CB3 Power Board

The CSE-PTJBOD-CB3 model power board has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

The CSE-PTJBOD-CB3 allows the user to remotely control their jobs via IPMI, such as powering on/off the server, controlling fan speeds and reading temperature data from the backplane.

This manual reflects the CSE-PTJBOD-CB3 Revision 1.02 power board, the most current release 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.

E-5 Components and Connectors

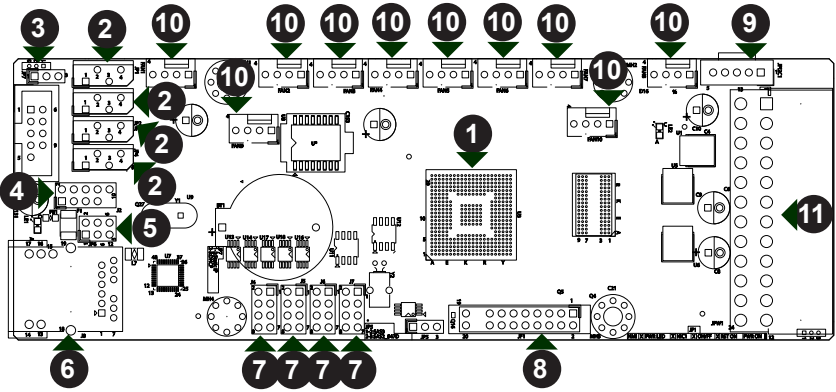


Figure E-1: Components and Connectors on the CSE-PTJBOD-CB3

Components and Connectors

- | | |
|--|---|
| 1. BMC Chip | 6. IPMI LAN Connector: J8 |
| 2. SAS2/SAS3 I ² C Connectors JP1-JP4 | 7. SC847D SAS2 I ² C Connectors: J4 - J7 |
| 3. Manufacturing Test Connector: J3 | 8. Control Panel Connector: JF1 |
| 4. Manufacturer's USB Test Connector: FB1 | 9. PMBus Connector: JPI ² C1 |
| 5. IPMI LAN LED Header: JP6 | 10. Fan Connectors: FAN1 - FAN10 |
| | 11. ATX Power Connector: JPW1 |

E-6 Component and Connector Definitions

1. BMC Chip

The Baseboard Management Controller (BMC) chip monitors the physical state of a system and provides communication with the system administrator through an independent connection.

2. SAS2/SAS3 I²C Connectors

These connectors are designated JP1-JP4 and allow the power board to be connected to up to four SAS2/SAS3 backplanes.

3. Manufacturing Test Connector

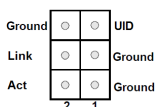
This connector is designated J3 and is for Supermicro manufacturing use only.

4. Manufacturer's USB Test Connector

This connector is designated FB1 and is for Supermicro manufacturing use only.

5. IPMI LAN LED Header

This connector is designated JP6 and is used to connect to the LED indicators on the chassis using cable CBL-NTWK-0584 or CBL-NTWK-0587.



6. IPMI LAN Connector

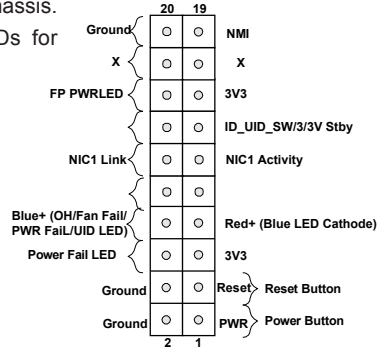
The Intelligent Platform Management Interface (IPMI) LAN connector is designated J8 and supports connectivity with a local network using cable CBL-NTWK-0584 or CBL-NTWK-0587.

7. SC847D SAS2 I2C Connectors

The backplane connectors are designated J4-J7 and allow the power board to be connected to up to four SC847D expanders.

8. Control Panel Connector

This connector is designated JF1 and connects to the control panel on the chassis. See Section 4-3 Control Panel LEDs for additional information



9. PMBus Connector

This connector is designated JPI2C1 and connects the power distributor to the Power Management Bus (PMBus).

10. Fan Connectors

The fan connectors supply power to the fans and are designated FAN1-FAN10.

11. ATX Power Connector

The ATX power connector is designated JPW1.

E-7 Connectors Jumpers and LED Indicators

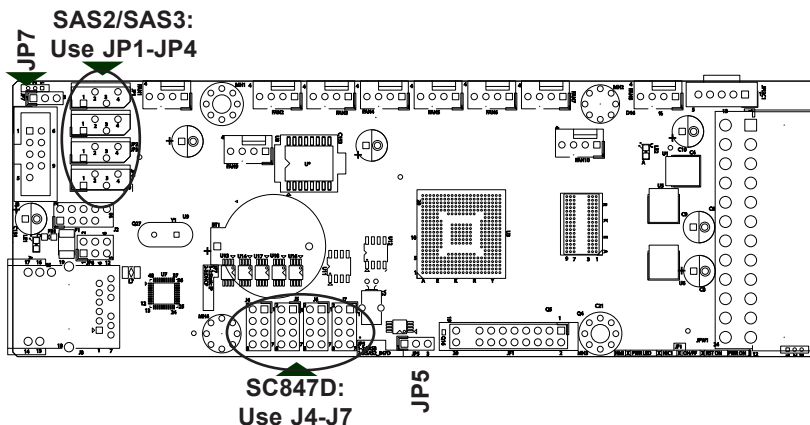


Figure E-2: CSE-PTJBOD-CB3 Connectors and Jumpers

Front SAS2/SAS3 and SC847D Jumpers	
Jumper	Description
JP7	Pins 1-2: IPMI factory mode, IP 192.168.1.99 Pins 2-3: User mode (static/DHCP)
JP5	Pins 1-2: SAS3 enabled Pins 2-3: SAS2 enabled and SC847D

When enabling SAS2/SAS3 functionality, use connectors JP1-JP4, and set the JP5 jumper to pins 1-2 (SAS3) or pins 3-4 (SAS2).

When an SC847D chassis is being used, use connectors J4-J7 and set the JP5 jumper to pins 2-3.

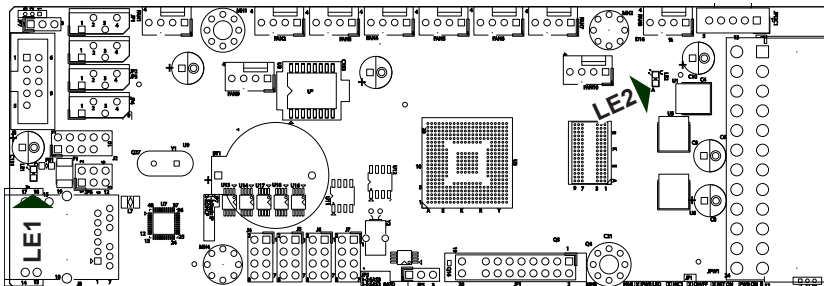


Figure E-3: CSE-PTJBOD-CB3 LED Indicators

LED Indicators	
LED	Description
LE1	Heartbeat LED: A blinking LED indicates BMC activity
LE2	Power LED: DC power indicator

Notes

E-8 SC847D JBOD Cabling

E16 I²C Cabling

Use the following diagram to connect the CSE-PTJBOD-CB3 to the front and rear backplanes in SC847D JBOD E16 model chassis.

Jumper Settings	
Jumper	Setting
JP5	Pins 1-2: SAS3 enabled Pins 2-3: SAS2 enabled and SC847

When enabling SAS2/SAS3 functionality, use connectors JP1-JP4, (see Page 2-4) and set the JP5 jumper to pins 1-2 (SAS3) or pins 3-4 (SAS2).

When an SC847D chassis is being used, use connectors J4-J7 (see Page 2-4) and set the JP5 jumper to pins 2-3.

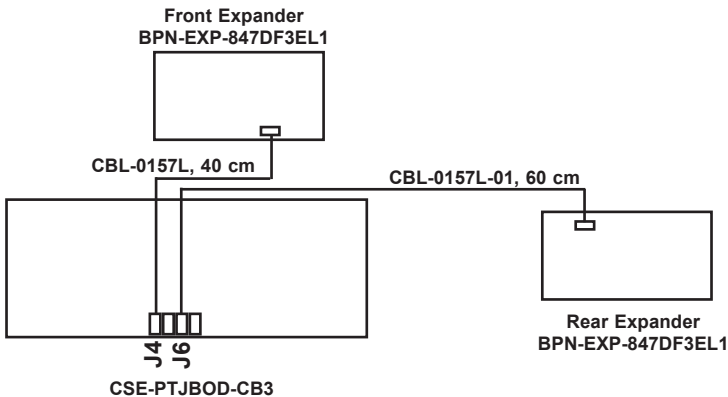


Figure E-4: E16 I²C Cabling

E26 I²C Cabling

Use the following diagram to connect the CSE-PTJBOD-CB3 to the front and rear backplanes in SC847D-JBOD-E26 model chassis.

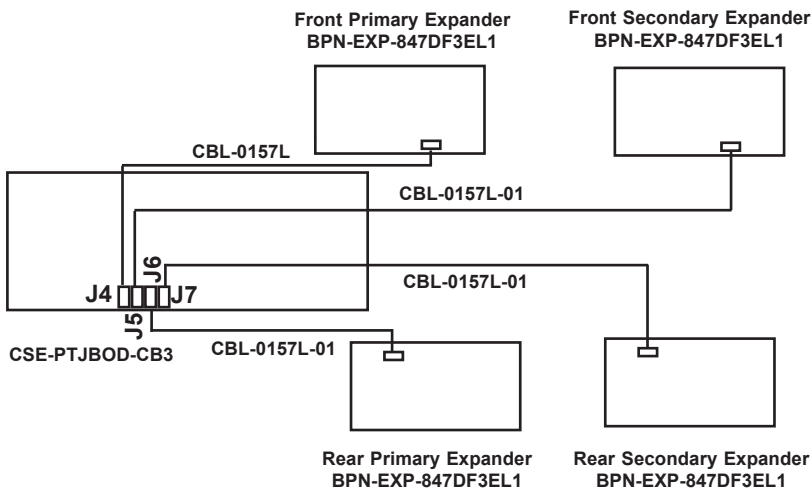


Figure E-5: E26 I²C Cabling

E-9 SC847 JBOD Cabling

SAS3 I²C Cabling in the SC847 JBOD Chassis

Use the diagram below to connect the CSE-PTJBOD-CB3 to the front and rear backplanes in the SC847 JBOD chassis.

Jumper Settings	
Jumper	Setting
JP5	Pins 1-2: SAS3 enabled Pins 2-3: SAS2 enabled and SC847D

When enabling SAS2/SAS3 functionality, use connectors JP1-JP4, (see Page 2-4) and set the JP5 jumper to pins 1-2 (SAS3) or pins 3-4 (SAS2).

When an SC847D chassis is being used, use connectors J4-J7 (see Page 2-4) and set the JP5 jumper to pins 2-3.

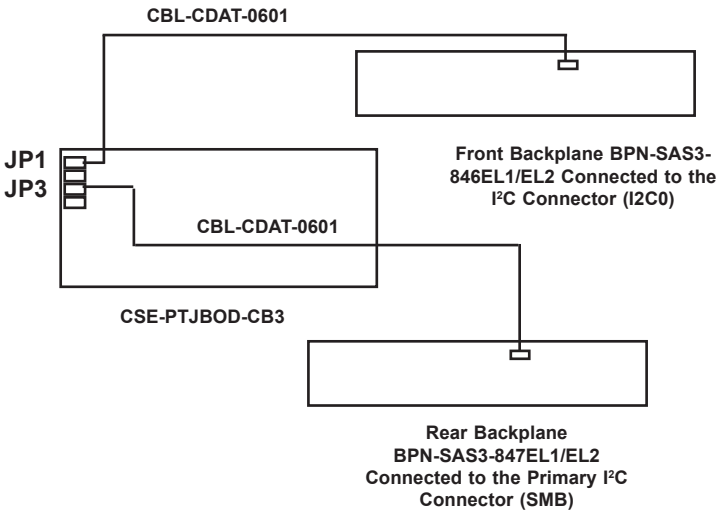


Figure E-6: SAS3 I²C Cabling in the SC847 JBOD Chassis

E-10 SC847 Cabling

SAS3 I²C Cabling in the SC847B Chassis

Use the diagram below to connect the I²C cabling. Ensure that the JP5 jumper on the CSE-PTJBOD-CB3 is cabled correctly according to the table below.

Jumper Settings	
Jumper	Setting
JP5	Pins 1-2: SAS3 setting (Default) Pins 2-3: SAS2 and SC847D setting

When enabling SAS2/SAS3 functionality, use the connectors on the upper left of the CSE-PTJBOD-CB3 power board (See Page 2-4) and set the JP5 jumper as shown in the chart above.

When an SC847D chassis is being used, use the connectors along the bottom edge of the power board (See Page 2-4) and set the JP5 jumper as shown in the chart above.

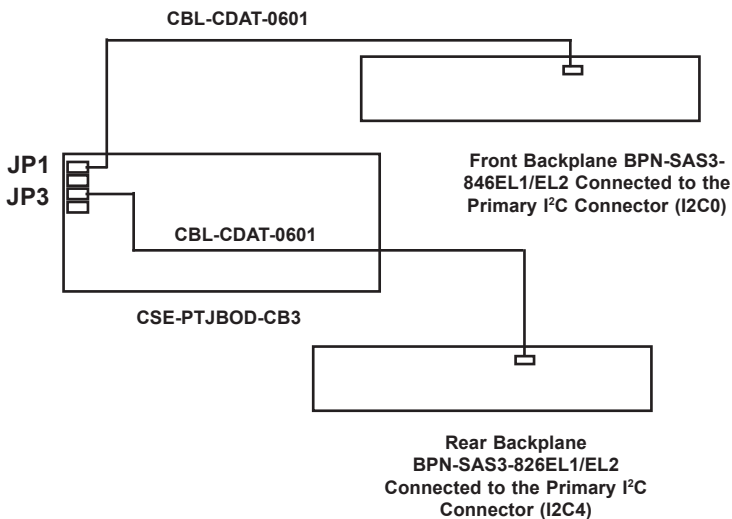


Figure E-7: SAS3 I²C Cabling in the SC847B Chassis

E-11 SC417B Cabling

SAS3 I²C Cabling in the SC417B Chassis

Use the diagram below to connect the I²C cabling. Ensure that the JP5 jumper on the CSE-PTJBOD-CB3 is cabled correctly according to the table below.

Jumper Settings	
Jumper	Setting
JP5	Pins 1-2: SAS3 setting (Default) Pins 2-3: SAS2 and SC847D setting

When enabling SAS2/SAS3 functionality, use the connectors on the upper left of the CSE-PTJBOD-CB3 power board (See Page 2-4) and set the JP5 jumper as shown in the chart above.

When an SC847D chassis is being used, use the connectors along the bottom edge of the power board (See Page 2-4) and set the JP5 jumper as shown in the chart above.

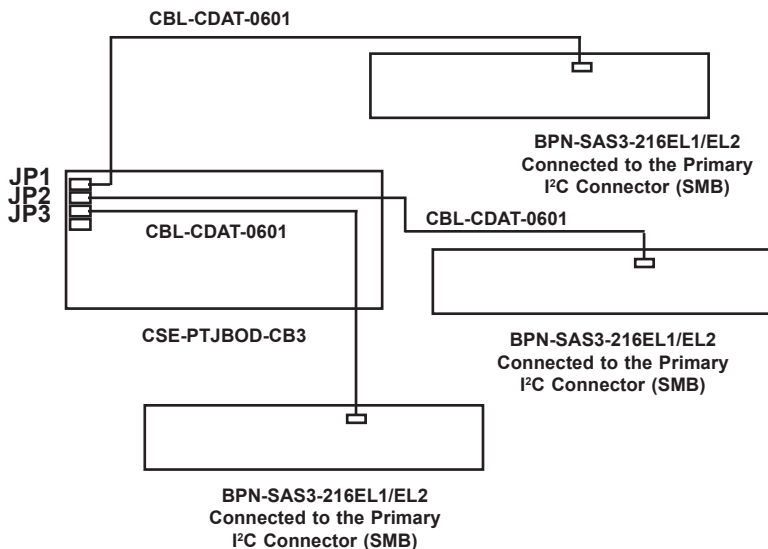


Figure E-8: SAS3 I²C Cabling in the SC417B Chassis

Notes

E-12 System Details Overview

This chapter provides information on system components which are directly affected by the CSE-PTJBOD-CB3 power board. Topics covered are the control panel, power up and power down sequences and IPMI.

E-13 Control Panel

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 UID/IP combination 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.



UID: Press to toggle the UID function on and off. IPMI IP factory default: Press and hold for ten seconds.

E-14 Control Panel LEDs

The control panel is located on the left handle of the SC847DJ chassis and has five 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.



NIC1: Indicates network activity on GLAN1 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.
Blinking blue (500 msec)	System is ready to power up. See Section 4-4 of this manual.



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

E-15 JBOD Power Up/Power Down Sequences

Power Up Sequences

First Use or Power Cord Plug-In

1. Plug the power cords into the rear of the power supplies
2. Wait until blue Information LED starts to blink
3. Press the power button once*
4. The CSE-PTJBOD-CB3 will initiate the power up sequence in three seconds

* If the CSE-PTJBOD-CB3 already has power, the user may power up the chassis without waiting for the Blue UID LED

After Normal Shutdown by IPMI or Power Button

1. Press the power button once
2. The CSE-PTJBOD-CB3 will initiate the power up sequence in three seconds

After a Power Loss

The system will power up automatically approximately fifteen seconds after the power returns

Power Down Sequence

1. Hold down the power button. The blue UID LED will begin blinking. Continue to hold the power button
2. Release power button after blue LED stops blinking and goes dark
3. The shutdown sequence will begin and shut down the system within ten seconds

E-16 CSE-PTJBOD-CB3 IPMI Static IP to DHCP Setting

IP Address to DHCP Setting

1. Download the utility from the Supermicro website or technical support
2. Extract the file to a known folder.
3. By default, the CSE-PTJBOD-CB3 will be configured in static IP 192.168.1.99
4. Change the host to static IP as 192.168.1.10
5. Go to the IPMI website and select the *Configuration* tab and then select the *Network* page
6. Change the setting from *Static* to *DHCP* mode
If default website is not responding, press the reset button for more than ten seconds to reset to default. You will observe that the fan speed will slow and then return to normal. Continue to change to DHCP mode when the fan reaches normal speed
7. Save the new setting
8. Change the host IP back to DHCP mode
9. Determine the DHCP IP address of the host, for example 10.1.1.50
10. Run the command prompt with administrative privileges
11. Go to the utility folder and type in:
findit 00-25-90-xx-xx-xx yy.zz.255.255
Where: xx-xx-xx is, enter the CSE-PTJBOD-CB3 MAC ID. yy.zz represents the first two octets of your host IP.
Example: findit 00-25-90-xx-xx-xx 10.1.255.255
12. The utility will return the IP address of the CSE-PTJBOD-CB3. Enter the IP in browser and access the IPMI web GUI



```
C:\Supermicro\Find_IPMI_IP>findit
CMD: findit.bat <IPMI MAC address> <Broadcast IP address>
Ex: findit.bat 00-25-90-88-99-66 10.133.255.255
----
Note: Start a Command Prompt as an Administrator
Note: Calculate broadcast IP address by using http://www.subnet-calculator.com

C:\Supermicro\Find_IPMI_IP>findit 00-25-90-8b-2f-d7 10.1.255.255
10.1.16.237 00-25-90-8b-2f-d7 dynamic
C:\Supermicro\Find_IPMI_IP>
```

E-18 CSE-PTJBOD-CB3 Power Card

For information on installing the CSE-PTJBOD-CB3 power card into the chassis, see Section 4-7 Installing the Power Card.

Notes

Disclaimer (cont.)

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