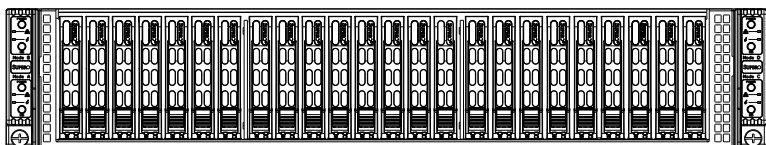


SUPERO[®]

SC217 Chassis Series



SC217HQ-R1620B

SC217HD-R1620B

SC217HQ-R1400B

USER'S MANUAL

1.0a

The information in this User's Manual has been carefully reviewed and is believed to be accurate. The vendor assumes no responsibility for any inaccuracies that may be contained in this document, makes no commitment to update or to keep current the information in this manual, or to notify any person or organization of the updates. **Please Note: For the most up-to-date version of this manual, please see our web site at www.supermicro.com.**

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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 server technicians. It provides information for the installation and use of the SC217 2U chassis. Installation and maintenance should be performed by experienced technicians only.

Supermicro's 2U Twin/Twin SC217 chassis is designed to optimize performance per watt and per dollar with two (SC217HD) or four (SC217HQ) independent hot-pluggable DP computing nodes efficiently organized into a 2U form factor. The chassis houses twenty-four 2.5" hard drives, contained in a convenient module to facilitate easy system upgrade, installation and maintenance. Equipped with Gold Level or Platinum Level (94%+) redundant power supplies, power-efficient server board and optimized cooling subsystems, the SC217 chassis series is the best choice for HPC, datacenter and cost-effective blade applications.

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

Manual Organization

Chapter 1 Introduction

The first chapter provides a checklist of the main components included with this chassis, and describes the main features of the SC217 chassis. This chapter also includes contact information.

Chapter 2 Warning Statements for AC Systems

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

Chapter 3 Chassis Components

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

Chapter 4 System Interface

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

Chapter 5 Chassis Setup and Maintenance

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

Compatible Backplanes

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

Appendix A Chassis Cables

Appendix B Power Supply Specifications

Appendix C BPN-SAS-217HQ Backplane Specifications

Appendix D BPN-SAS-217HD Backplane Specifications

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Chapter 1

Introduction

1-1 Overview

The Supermicro SC217 chassis is designed to optimize performance per watt and per dollar, efficiently organized into a 2U form factor. It can house either the **Twin** (HD models) with two independent hot-pluggable DP computing nodes, or the **Twin²** (HQ models) with four independent hot-pluggable DP computing nodes. It includes twenty-four 2.5" SAS/SATA hard drives with SESII divided among the controllers, and is contained in a convenient module to facilitate easy system upgrades, installation and maintenance. The SC217 chassis is equipped with high-efficiency optional 1 + 1 Platinum Level redundant power supplies (94%+), power-efficient server board and optimized cooling subsystems. It is the best choice for HPC, datacenter and cost-effective blade-type applications.

1-2 Shipping List

Part Numbers

Please visit the following link for the latest shipping lists and part numbers for your particular chassis model <http://www.supermicro.com/products/chassis/2U/?chs=217>

SC217 Chassis			
Model	HDD	I/O Slots	Power Supply
SC217HQ-R1620B	24x 2.5" hot swap SAS/SATA	1x LP (per node)	1620W Redundant (Platinum Level)
SC217HD-R1620B	24x 2.5" hot swap SAS/SATA	2x FHFL + 1x LP (per node)	1620W Redundant (Platinum Level)
SC217HQ-R1400B	24x 2.5" hot swap SAS/SATA	1x LP (per node)	1400W Redundant

LP = low profile

FHFL = full-height, full-width

1-3 Contacting Supermicro

Headquarters

Address: Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131 U.S.A.

Tel: +1 (408) 503-8000

Fax: +1 (408) 503-8008

Email: marketing@supermicro.com (General Information)
support@supermicro.com (Technical Support)

Web Site: www.supermicro.com

Europe

Address: Super Micro Computer B.V.
Het Sterrenbeeld 28, 5215 ML
's-Hertogenbosch, The Netherlands

Tel: +31 (0) 73-6400390

Fax: +31 (0) 73-6416525

Email: sales@supermicro.nl (General Information)
support@supermicro.nl (Technical Support)
rma@supermicro.nl (Customer Support)

Asia-Pacific

Address: Super Micro Computer, Inc.
3F, No. 150, Jian 1st Rd.
Zhonghe Dist., New Taipei City 23511
Taiwan (R.O.C)

Tel: +886-(2) 8226-3990

Fax: +886-(2) 8226-3992

Web Site: www.supermicro.com.tw

Technical Support:

Email: support@supermicro.com.tw

Tel: +886-(2)-8226-3990

1-4 Returning Merchandise for Service

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

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

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

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

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

Notes

Chapter 2

Standardized Warning Statements for AC Systems

2-1 About Standardized Warning Statements

The following statements are industry standard warnings, provided to warn the user of situations which have the potential for bodily injury. Should you have questions or experience difficulty, contact Supermicro's Technical Support department for assistance. Only certified technicians should attempt to install or configure components.

Read this appendix in its entirety before installing or configuring components in the Supermicro chassis.

These warnings may also be found on our web site at http://www.supermicro.com/about/policies/safety_information.cfm.

Warning Definition



Warning!

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

警告の定義

この警告サインは危険を意味します。

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

此警告符号代表危險。

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

此警告符號代表危險。

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

Warnung

WICHTIGE SICHERHEITSHINWEISE

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

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

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

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

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

CONSERVEZ CES INFORMATIONS.

תקנון הצהרות אזהרה

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

יש לקרוא את הנספח במלוואו לפני התקנת או הגדרת הרכיבים במארוזי סופרמיקרו.

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

안전을 위한 주의사항

경고!

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

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

BELANGRIJKE VEILIGHEIDSinSTRUCTIES

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

BEWAAR DEZE INSTRUCTIES

Installation Instructions



Warning!

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

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前，请先阅读安装说明。

警告

將系統與電源連接前，請先閱讀安裝說明。

Warnung

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

¡Advertencia!

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

Attention

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

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقرأ إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주시십시오.

Waarschuwing

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

Circuit Breaker



Warning!

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

サーキット・ブレーカー

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

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

هذا المنتج يعتمد على معدات الحماية من الدوائر القصيرة التي تم تثبيتها في المبنى

تأكد من أن تقييم الجهاز الوقائي ليس أكثر من: 250V, 20A

경고!

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

Waarschuwing

Dit product is afhankelijk van de kortsluitbeveiliging (overspanning) van uw elektrische installatie. Controleer of het beveiligde apparaat niet groter gedimensioneerd is dan 220V, 20A.

Power Disconnection Warning



Warning!

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

電源切斷の警告

システムコンポーネントの取り付けまたは取り外しのために、シャーシ内部にアクセスするには、

システムの電源はすべてのソースから切斷され、電源コードは電源モジュールから取り外す必要があります。

警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

警告

在您打開機殼安裝或移除內部元件前,必須將系統完全斷電,並移除電源線。

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה !

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

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

경고!

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

Waarschuwing

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

Equipment Installation



Warning!

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

機器の設置

トレーニングを受け認定された人だけがこの装置の設置、交換、またはサービスを許可されています。

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

只有經過受訓且具資格人員才可安裝、更換與維修此設備。

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה!

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

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

경고!

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

Waarschuwing

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

Restricted Area



Warning!

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

アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

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

警告

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

警告

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

Warnung

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

¡Advertencia!

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

Attention

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

אזור עם גישה מוגבלת

!אזהרה

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

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

경고!

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

Waarschuwing

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

Battery Handling



Warning!

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

電池の取り扱い

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

警告

電池更換不當會有爆炸危險。請只使用同類電池或製造商推薦的功能相當的電池更換原有電池。請按製造商的說明處理廢舊電池。

警告

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

Warnung

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

Attention

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

¡Advertencia!

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

אזהרה !

קיימת סכנת פיצוץ של הסוללה במידה והוחלפה בדרך לא תקינה. יש להחליף את הסוללה בסוג התואם מחברת יצרן מומלצת.

סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן.

هناك خطر من انفجار في حالة استبدال البطارية بطريقة غير صحيحة عليك استبدال البطارية فقط بنفس النوع أو ما يعادلها كما أوصت به الشركة المصنعة تخلص من البطاريات المستعملة وفقا لتعليمات الشركة الصانعة

경고!

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

Waarschuwing

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

Redundant Power Supplies



Warning!

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

冗長電源装置

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

警告

此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告

此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung

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

¡Advertencia!

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

Attention

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

אם קיים יותר מספק אחד

אזהרה !

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

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة.
يجب إزالة كافة الاتصالات لعزل الوحدة عن الكهرباء

경고!

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

Waarschuwing

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

Backplane Voltage



Warning!

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

バックプレーンの電圧

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

修理する際にはご注意ください。

警告

当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告

當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

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

¡Advertencia!

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

Attention

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

מתח בפנל האחורי

אזהרה !

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

هناك خطر من التيار الكهربائي أو الطاقة الموجودة على اللوحة عندما يكون النظام يعمل كن حذرا عند خدمة هذا الجهاز

경고!

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

Waarschuwing

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

Comply with Local and National Electrical Codes



Warning!

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

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

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

Attention

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

תאום חוקי החשמל הארצי

אזהרה !

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمثل للقوانين المحلية والوطنية المتعلقة
بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

Bij installatie van de apparatuur moet worden voldaan aan de lokale en nationale elektriciteitsvoorschriften.

Product Disposal



Warning!

Ultimate disposal of this product should be handled according to all national laws and regulations.

製品の廃棄

この製品を廃棄処分する場合、国の関係する全ての法律・条例に従い処理する必要があります。

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

Die Entsorgung dieses Produkts sollte gemäß allen Bestimmungen und Gesetzen des Landes erfolgen.

¡Advertencia!

Al deshacerse por completo de este producto debe seguir todas las leyes y reglamentos nacionales.

Attention

La mise au rebut ou le recyclage de ce produit sont généralement soumis à des lois et/ou directives de respect de l'environnement. Renseignez-vous auprès de l'organisme compétent.

סילוק המוצר

אזהרה !

סילוק סופי של מוצר זה חייב להיות בהתאם להנחיות וחוקי המדינה.

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

경고!

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

Waarschuwing

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

Hot Swap Fan Warning



Warning!

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

ファン・ホットスワップの警告

シャーシから冷却ファン装置を取り外した際、ファンがまだ回転している可能性があります。ファンの開口部に、指、ドライバー、およびその他のものを近づけないで下さい。

警告

当您从机架移除风扇装置，风扇可能仍在转动。小心不要将手指、螺丝起子和其他物品太靠近风扇

警告

當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇。

Warnung

Die Lüfter drehen sich u. U. noch, wenn die Lüfterbaugruppe aus dem Chassis genommen wird. Halten Sie Finger, Schraubendreher und andere Gegenstände von den Öffnungen des Lüftergehäuses entfernt.

¡Advertencia!

Los ventiladores podran dar vuelta cuando usted quite el montaje del ventilador del chasis. Mantenga los dedos, los destornilladores y todos los objetos lejos de las aberturas del ventilador

Attention

Il est possible que les ventilateurs soient toujours en rotation lorsque vous retirerez le bloc ventilateur du châssis. Prenez garde à ce que doigts, tournevis et autres objets soient éloignés du logement du bloc ventilateur.

אזהרה !

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

من الممكن أن المراوح لا تزال تدور عند إزالة كتلة المروحة من الهيكل يجب إبقاء الأصابع ومفكات البراغي وغيرها من الأشياء بعيدا عن الفتحات في كتلة المروحة.

경고!

새시로부터 팬 조립품을 제거할 때 팬은 여전히 회전하고 있을 수 있습니다. 팬 조립품 외관의 열려있는 부분들로부터 손가락 및 스크류드라이버, 다른 물체들이 가까이 하지 않도록 배치해 주십시오.

Waarschuwing

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

Power Cable and AC Adapter



Warning!

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

電源コードとACアダプター

製品を設置する場合、提供または指定された接続ケーブル、電源コードとACアダプターを使用下さい。他のケーブルやアダプタを使用すると故障や火災の原因になることがあります。電気用品安全法は、ULまたはCSA認定のケーブル(UL/CSEマークがコードに表記)をSupermicroが指定する製品以外に使用することを禁止しています。

警告

安装此产品时,请使用本身提供的或指定的连接线,电源线和电源适配器.使用其它线材或适配器可能会引起故障或火灾.除了Supermicro所指定的产品,电气用品和材料安全法律规定禁止使用未经UL或CSA认证的线材。(线材上会显示UL/CSA符号)。

警告

安装此產品時,請使用本身提供的或指定的連接線,電源線和電源適配器.使用其它線材或適配器可能會引起故障或火災.除了Supermicro所指定的產品,電氣用品和材料安全法律規定禁止使用未經UL或CSA認證的線材。(線材上會顯示UL/CSA符號)。

Warnung

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

¡Advertencia!

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

Attention

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

חשמליים ומתאמי AC**אזהרה!**

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

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

경고!

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

Waarschuwing

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

Notes

Chapter 3

Chassis Components

3-1 Overview

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

3-2 Component Descriptions

The SC217HD models house two separate computing nodes, each containing its own motherboard. The SC217HQ models house four computing nodes.

Drives

The SC217 chassis includes twenty-four hot-swappable hard drives which can be removed from the hard drive bays in the chassis without powering down the server. For the HD models, each node supports twelve drives, and for the HQ models, each node supports six drives.

Backplane

Each SC217 chassis comes equipped with a BPN-SAS-217HQ or BPN-SAS-217HD backplane. For more information regarding compatible backplanes, see the appendices at the end of this manual.

Fans

The SC217 chassis accepts four system fans powered from the motherboards through the backplane. On SC217HQ models, the two fans on each side are controlled by the two motherboards on that side, so that when one of the motherboard nodes is removed, the second motherboard will continue to control both fans.

On SC217HD models, the two fans on each side are controlled by the motherboard on that side, so when it is removed, the two fans stop.

Power Supply

Each SC217 chassis model includes two high-efficiency 80 Plus Platinum Level power supplies, rated at 1400 or 1620 watts depending on the chassis model. In the rare event that one fails, the other powers all nodes. Replacement is simple and can be accomplished without tools.

Air Shroud

Air shrouds are required for each node to direct the airflow where cooling is needed. The air shroud differs for different motherboards. If using a motherboard which is not the default in the chassis, refer to the optional parts in Appendix A of this manual, or the Supermicro Web site at www.supermicro.com to purchase the proper air shroud.

Mounting Rails

The SC217 includes a set of quick-release rails, and can be placed in a rack for secure storage and use. To setup your rack, follow the instructions included in this manual.

3-3 Where to get Replacement Components

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

Chapter 4

System Interface

4-1 Overview

There are LEDs on each control panel and on the drive carriers to keep you informed of the status of the system. The control panels are located on the front, outside edges of the chassis. The SC217HQ has four control panes; the SC217HD has two.

This chapter explains the meanings of the LED indicators and the appropriate responses.

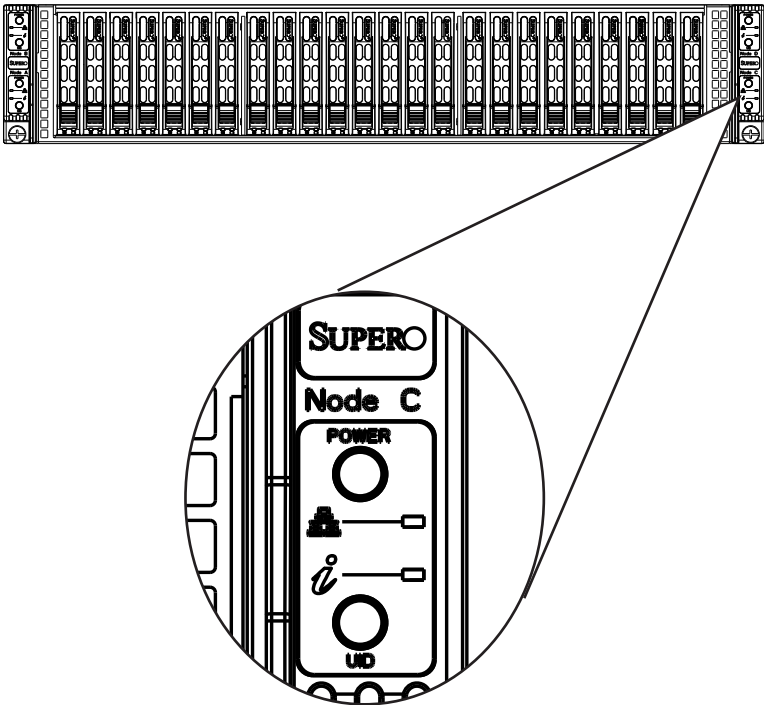


Figure 4-1: Chassis Control Panel (HQ model)

4-2 Control Panel Buttons

POWER



- **Power:** The main power button on each of the control panels is used to apply or remove power from the power supply to associated node. Turning power to the system off with this button removes the main power, but keeps standby power supplied to the system. The power button has a built-in LED which will turn green when the power is on.



- **UID:** When used with a UID compatible motherboard, the UID button is used to turn on or off the blue light function of the LED. This light is displayed in the front as part of the UID button and with a separate LED at the rear of the node. The light helps locate the node in large racks and server banks.

4-3 Control Panel LEDs

Each control panel has two LEDs that provide critical information about parts of the system.



- **NIC:** Indicates network activity on either LAN1 or LAN2 when flashing.



- Alert: This LED is illuminated when an alert condition occurs.

Informational LED	
Status	Description
Continuously on and red	An overheat condition has occurred. (This may be caused by cable congestion)
Blinking red (1Hz)	Fan failure, check for an inoperative fan.
Blinking red (0.25Hz)	Power failure, check for a non-operational power supply
Solid blue	Local UID has been activated. Use this function to locate the server in a rack mount environment.
Blinking blue	Remote UID is on. Use this function to identify the server from a remote location.

4-4 Drive Carrier LEDs

The SC217 chassis uses SAS/SATA drives.

SAS/SATA Drives

Each SAS/SATA drive carrier has two LEDs.

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

SCSI Drives

This chassis does not support SCSI drives at this time.

Notes

Chapter 5

Chassis Setup and Maintenance

5-1 Overview

This chapter covers the steps required to install components and perform maintenance on the chassis. The only tool you will need to install components and perform maintenance is a Phillips screwdriver.

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

5-2 Removing the Power Cord

1. Use the operating system to power down the node, following the on-screen prompts.
2. After the system has completely shut-down, carefully grasp the head of the power cord and gently pull it out of the back of the power supply.
3. If your system has dual power supplies, remove the cords from both power supplies.
4. Disconnect the cord from the power strip or wall outlet.

5-3 Chassis Cover

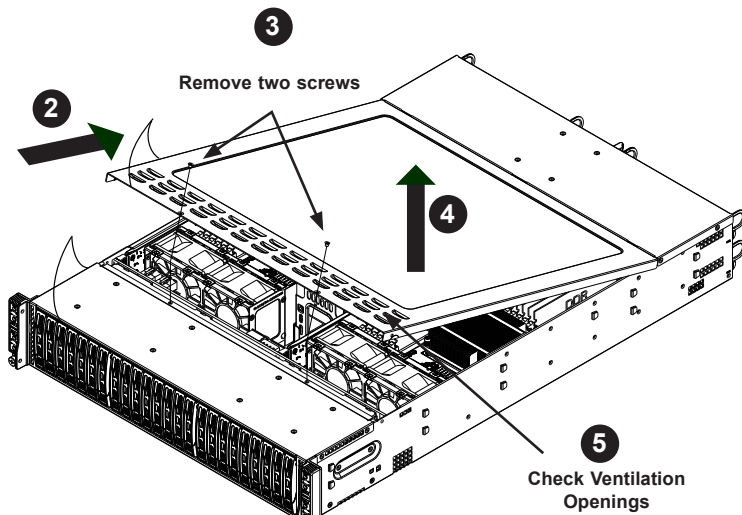


Figure 5-1. Removing the Chassis Cover

Before operating the SC217 chassis for the first time, it is important to remove the protective film over the cover of the chassis, in order to allow for proper ventilation and cooling.

Removing the Chassis Cover and Protective Film

1. Power down both power supplies as described in Section 5-2.
2. Peel off the protective film covering the top cover and the top of the chassis
3. Remove the two screws which secure the top cover onto the chassis as shown above.
4. Lift the top cover up and off the chassis.
5. Check that all ventilation openings on the top cover and the top of the chassis are clear and unobstructed.
6. Replace the chassis cover and reconnect the AC power cord.

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

5-4 Hard Drives

The SC217 features hot-swappable hard drives which can be removed from the chassis without powering down the server.

SC217HD Models

The SC217HD chassis contains two separate computing node drawers, each with its own motherboard. Each node controls a set of twelve hard drives. If a node drawer is pulled out of the chassis, the hard drives associated with that node will power down.

Motherboard Drawer Locations in the Chassis for HD Models	
Motherboard A controls HDDs A1 through A12	Motherboard B controls HDDs B1 through B12

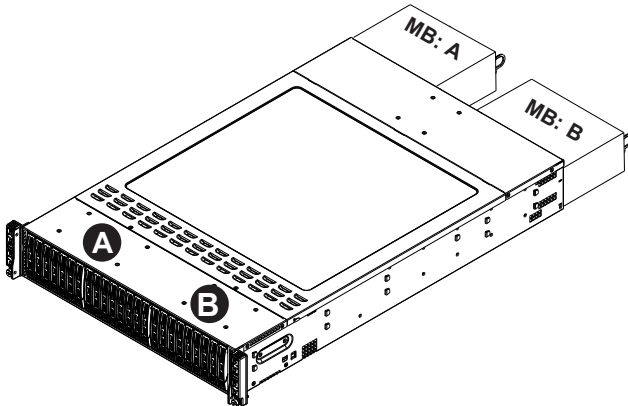


Figure 5-2. Hard Drives and the Corresponding Motherboards (HD Model)

SC217HQ Models

The SC217HQ chassis contains four separate computing node drawers, each with its own motherboard. Each node controls a set of six hard drives. If a node drawer is pulled out of the chassis, the hard drives associated with that node will power down.

Motherboard Drawer Locations in the Chassis for HQ Models	
Motherboard B controls HDDs B1, B2, B3, B4, B5 and B6	Motherboard D controls HDDs D1, D2, D3, D4, D5 and D6
Motherboard A controls HDDs A1, A2, A3, A4, A5 and A6	Motherboard C controls HDDs C1, C2, C3, C4, C5 and C6

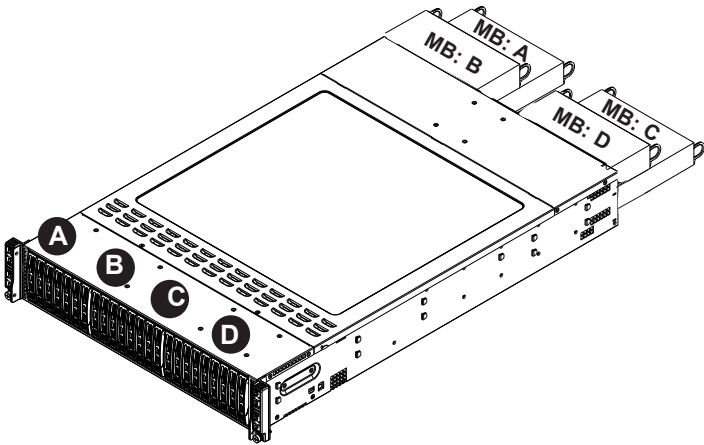


Figure 5-3. Hard Drives and the Corresponding Motherboards (HQ Model)

Installing and Removing Drives

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

Caution: Except for short periods of time while swapping hard drives, do not operate the server without hard drives in the hard drive bays.

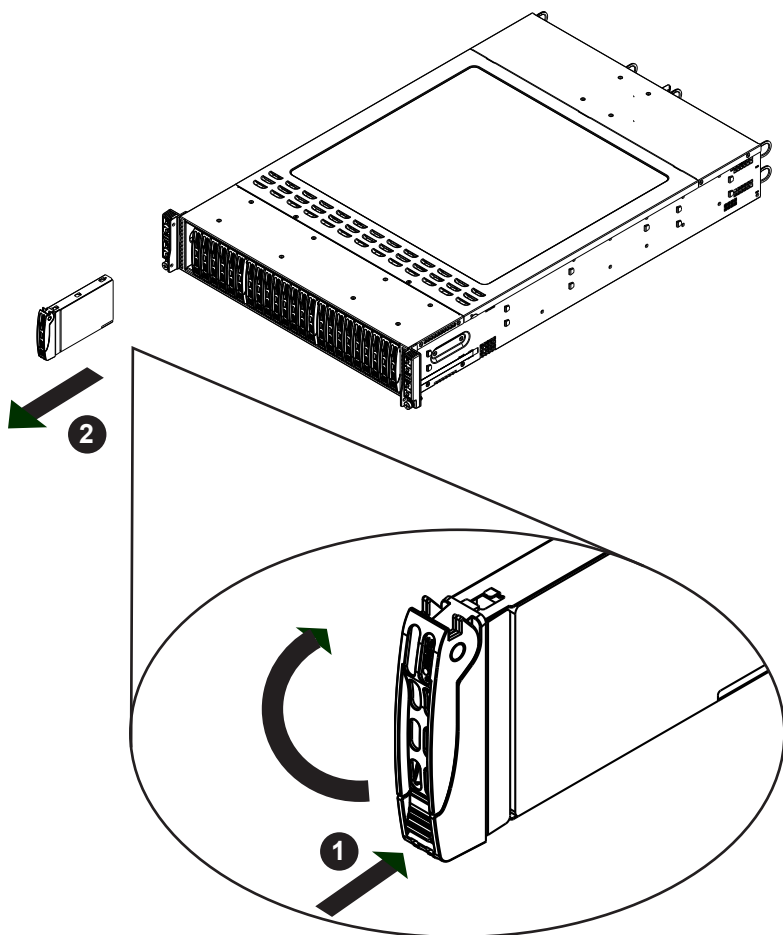


Figure 5-4. Removing a Hard Drive Carrier

Removing Hard Drive Carriers from the Chassis

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

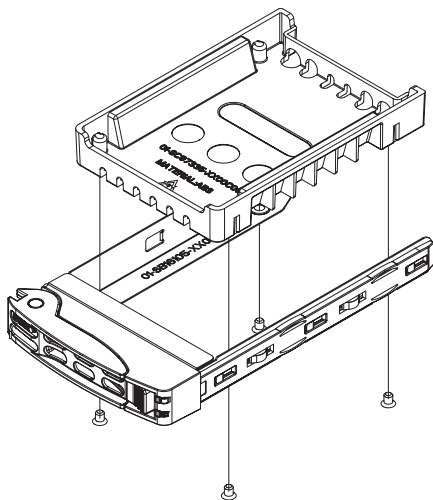


Figure 5-5. Removing Dummy Drive from Carrier

Installing a Drive into the Hard Drive Carrier

1. Remove the four screws securing the drive to the carrier.
2. Lift the drive up and out of the carrier.

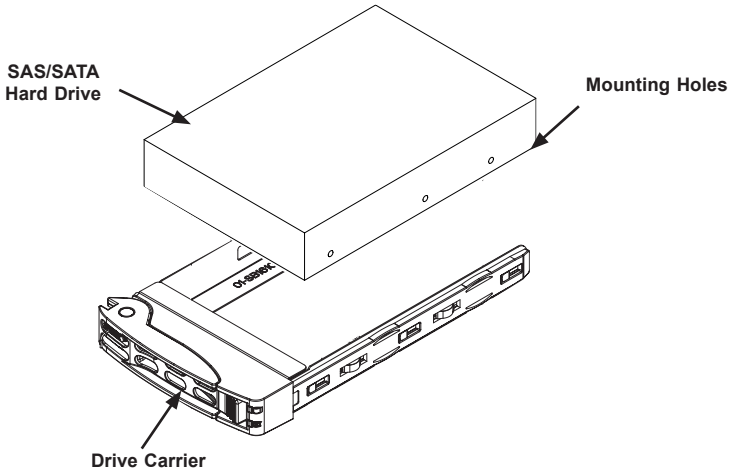


Figure 5-6. Installing the Hard Drive

3. Install a new drive into the carrier with the printed circuit board side facing down so that the mounting holes in the drive align with those in the carrier.
4. Secure the hard drive into the carrier with six screws.
5. Use the open handle to replace the drive carrier into the chassis.
6. Gently close the drive carrier handle to secure the drive and carrier into the chassis drive bay.

5-5 Removing and Installing the Backplane

The backplane is located behind the hard drives and in front of the front system fans. In the rare event of a backplane failure, follow the instructions below.

Removing the Backplane

Removing the Backplane from the Chassis

1. Power down both power supplies as described in Section 5-2, and remove the cover.
2. Disconnect the cabling to the backplane.
3. Remove all of the hard drive carriers from the front of the chassis.
4. Remove the two front panel cables from the backplane.
5. Remove the four upper screws at the top of the backplane.
6. Remove screw from the side of the chassis

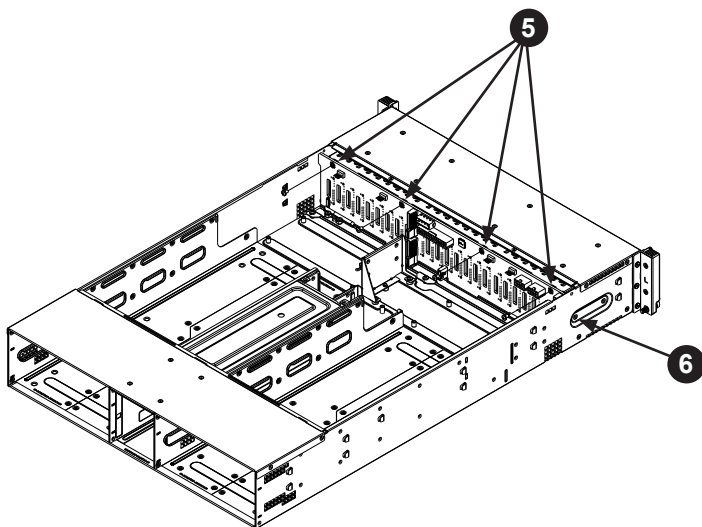


Figure 5-7. Removing the Screws at the Top and Side of the Backplane

7. Loosen the three screws in the spring bar, located on the floor of the chassis, indicated by the arrows below.

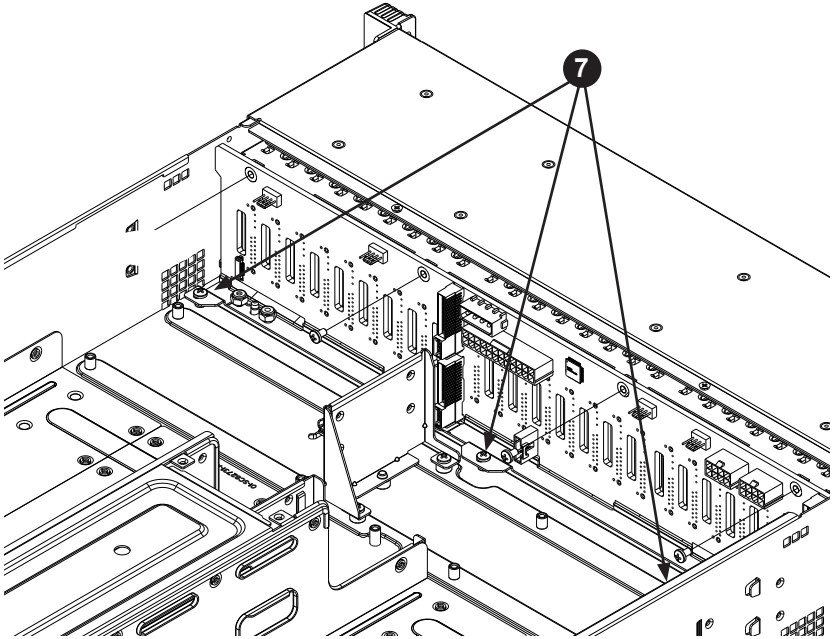


Figure 5-8. Loosening the Spring Bar Screws in the Floor of the Chassis

8. Gently ease the backplane up and out of the chassis at a slight angle.

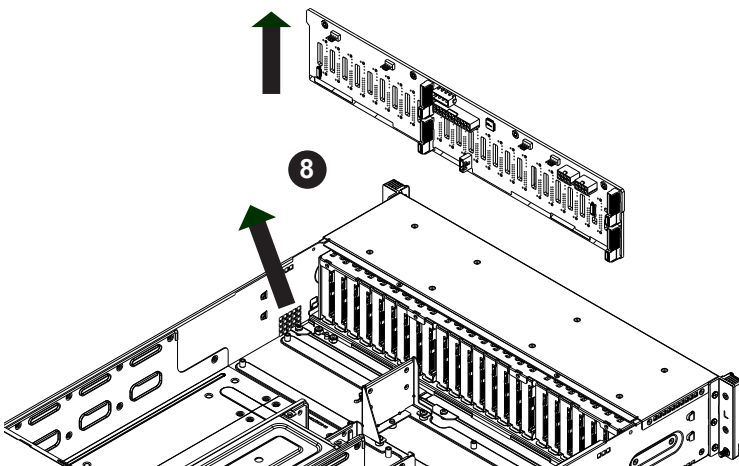


Figure 5-9. Removing the Backplane from the Chassis

Installing the Backplane

Installing the Backplane into the Chassis

1. Ensure that all of the hard drive carriers have been removed from the bays in the front of the chassis and that the spring bar has been loosened as directed in the previous section. Confirm that the power cord has been removed from the rear of the power supply.
2. Secure the side mounting bracket to the backplane with the two screws provided.
3. Slide the backplane into the chassis at a slight angle, pushing it up against the side of the chassis.
4. Ease the backplane forward, against the front of the chassis. This will aid in the alignment of the mounting holes.
5. Align the mounting holes in the backplane with the holes in the chassis. Replace the four screws at the top of the backplane and the screw on the side of the chassis.
6. Adjust the spring bar, then tighten the spring bar screws in the floor of the chassis.
7. Reconnect all cables and return the hard drive carriers to their bays in the front of the chassis.
8. Replace the chassis cover and power-up the system.

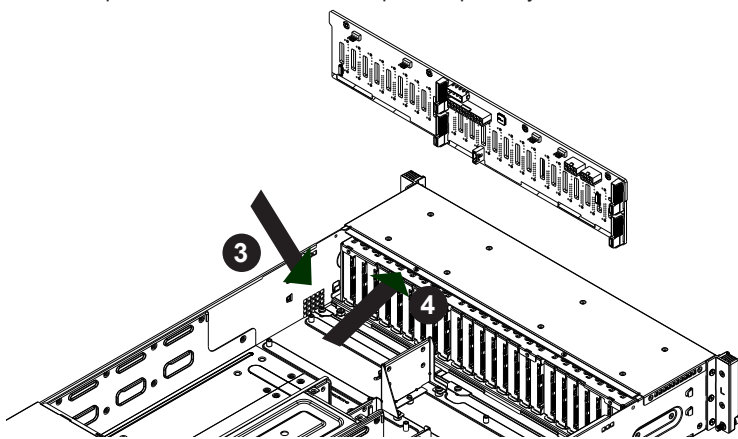


Figure 5-10. Installing the Backplane

5-6 Installing the Motherboard

Compatible Motherboards

Most Supermicro wirelessTwin series motherboards are compatible with the SC217 chassis. For the most up-to-date information on compatible motherboards and other parts, visit the Supermicro Web site at www.supermicro.com.

Hot-swappable motherboards feature different adapter cards, depending upon the motherboard. Adapter cards are optional and are not included with the chassis. For information on ordering adapter cards, see the appendix of this manual or visit the Supermicro Web site at www.supermicro.com.

Permanent and Optional Standoffs

Standoffs prevent short circuits by creating space between the motherboard and the chassis surface. The SC217 chassis includes permanent standoffs in locations used by the motherboards. These standoffs accept the rounded Phillips head screws included in the SC217 accessories packaging.

Some motherboards require additional screws for heatsinks, general components or non-standard security. Optional standoffs are used for these motherboards.

To use an optional standoff, you must place a hexagonal screw through the bottom the chassis and secure the screw with the hexagonal nut (rounded side up).

Depending upon the configuration of the motherboard being used, it is also possible that some of the optional standoffs which are pre-installed in the chassis, may need to be removed.

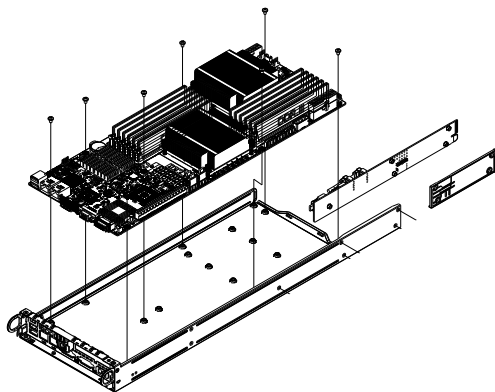


Figure 5-11. Installing the Motherboard in the Motherboard Node Drawer

Installing the Motherboard

1. Review the documentation that came with your motherboard. Become familiar with component placement, requirements, cautions, and cable connections.
2. Remove the motherboard node from the back of the chassis. It is not necessary to power down the entire system.
3. Remove the extension card riser card brackets:
 - 3a. Remove screw securing the bracket to the back of the node drawer.
 - 3b. Lift the bracket out of the node drawer.
4. Lay the motherboard in the node drawer aligning the standoffs with the motherboard.
5. Secure the motherboard to the node drawer using the rounded, Phillips head screws included for this purpose. Do not exceed eight inch-pounds of torque when tightening.
6. Install the adapter card associated with the motherboard if the chassis is a hot-swappable version. Refer to the next section for instructions on installing the adapter card
7. Secure the CPUs, heatsinks, and other components to the motherboard as described in the motherboard documentation.
8. Connect the cables between the motherboard, backplane, chassis, front panel, and power supply, as needed. Also, fans may be temporarily removed to allow access to the backplane ports.
9. Replace the riser card bracket and secure it with a screw.
10. Repeat for the remaining nodes.

Installing an Adapter Card

Adapter cards connect to the motherboard to the backplane and provide hot-swappable functionality to the node.

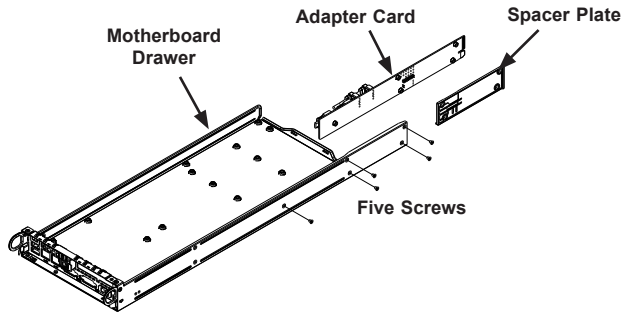


Figure 5-12. Adapter Card Installation

Removing the Adapter Card

1. Remove the node from the back of the chassis. It is not necessary to power down the system.
2. Disconnect the wiring, connecting the adapter card to the motherboard if any is present.
3. Remove the five screws securing the adapter card and the spacer plate to the drawer and set them aside for later use.
4. Remove the adapter card and spacer plate from the motherboard drawer.
5. Set the spacer plate aside for later use.

Installing the Adapter Card

1. Make sure the motherboard has been installed properly in the node drawer before installing the adapter card.
2. Place the adapter card and spacer plate in the node drawer, aligning the holes in the spacer and the adapter card with the holes in the drawer.
3. Secure the adapter card and spacer plate to the motherboard drawer, using the five M3 flathead screws which were previously set aside.
4. Reconnect the wiring from the motherboard to the adapter card if necessary.
5. Return the node drawer to the closed position in the chassis.

5-7 Adding an Expansion Card

The SC217 chassis supports expansion cards. Riser cards are used to mount the expansion cards.

- The SC217HQ models accommodate one low-profile card per node, for a total of four in the chassis.
- The SC217HD model accepts three expansion cards--two full height, full length cards and one low profile card per node, for a total of six in the chassis.

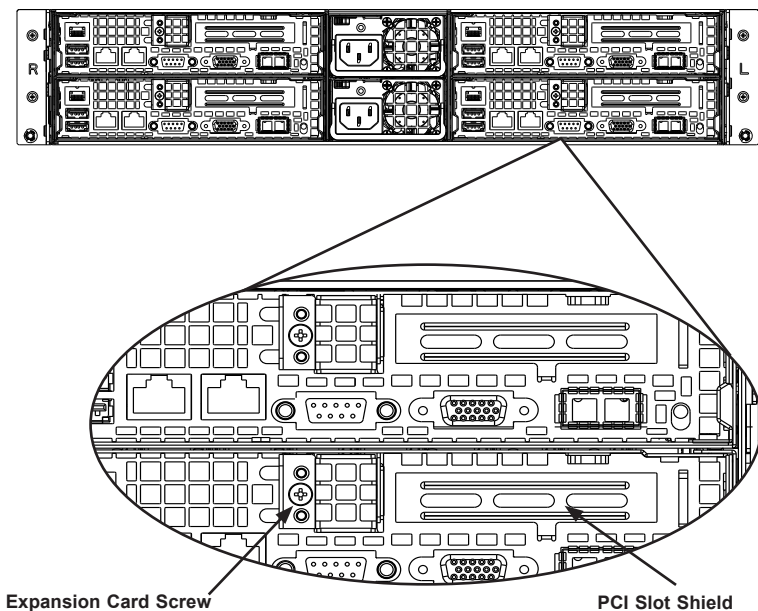


Figure 5-13. PCI Slot Configuration (HQ Model)

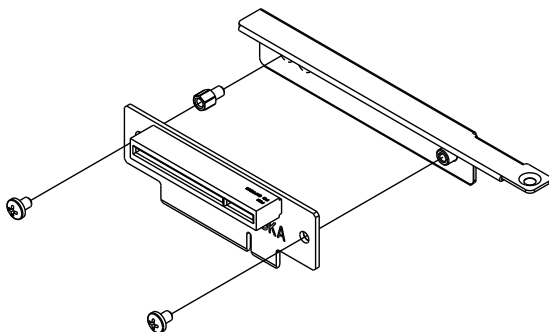


Figure 5-14. Installing the Riser Card (HQ model shown)

Installing the Riser Card

Installing the Riser Card

1. Use the control panel to power down the computing node, and pull the node drawer out of the chassis.
2. Remove the riser card bracket, removing the screw on the back of the drawer.
3. Align the riser card mounting hole to the bracket standoff and secure the riser card to the bracket using the two screws included in the accessory box.
4. Insert the riser card into the slot on the motherboard.
5. Secure the riser bracket to the rear of the node drawer.

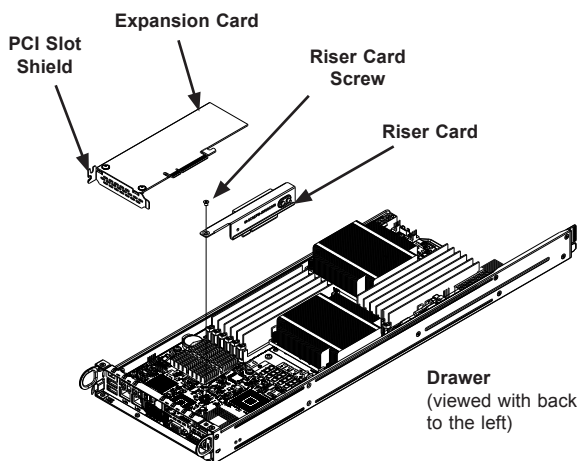


Figure 5-15a. Installing the Expansion Card (HQ Model)

Installing Expansion Cards

1. Use the control panel to power down the computing node, and pull the node drawer out of the chassis.
2. Open the PCI slot clip in the rear of the node drawer and remove the PCI slot shield.
3. If the riser card is not already installed, push it into the motherboard slot.
4. Slide the expansion card into the riser card slot and fit the expansion card shield into the opening in the rear of the node drawer.
5. Close the PCI slot clip to secure the expansion card shield.
6. Secure the riser card screw.
7. Return the node drawer and power-up.

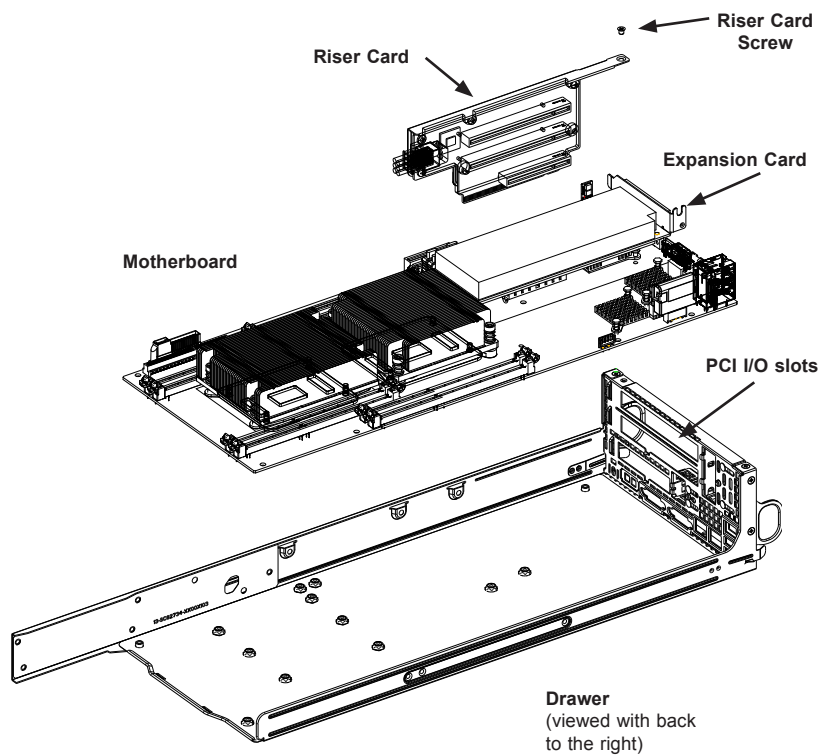


Figure 5-15b. Installing the Expansion Card (HD Model)

5-8 Installing the Air Shrouds

Air Shrouds

Air shrouds concentrate airflow to maximize fan efficiency. The SC217 chassis requires air shrouds for each motherboard node. Air shrouds vary depending upon the motherboard used. See the illustrations below.

Installing an Air Shroud

1. Make sure that the motherboard expansion card (if applicable) and all components are properly installed in each motherboard node.
2. Place the first air shroud over the motherboard, as shown below. The air shroud sits behind the system fans and goes over the top of the motherboard and its components.
3. Repeat the procedure for the remaining motherboard nodes.

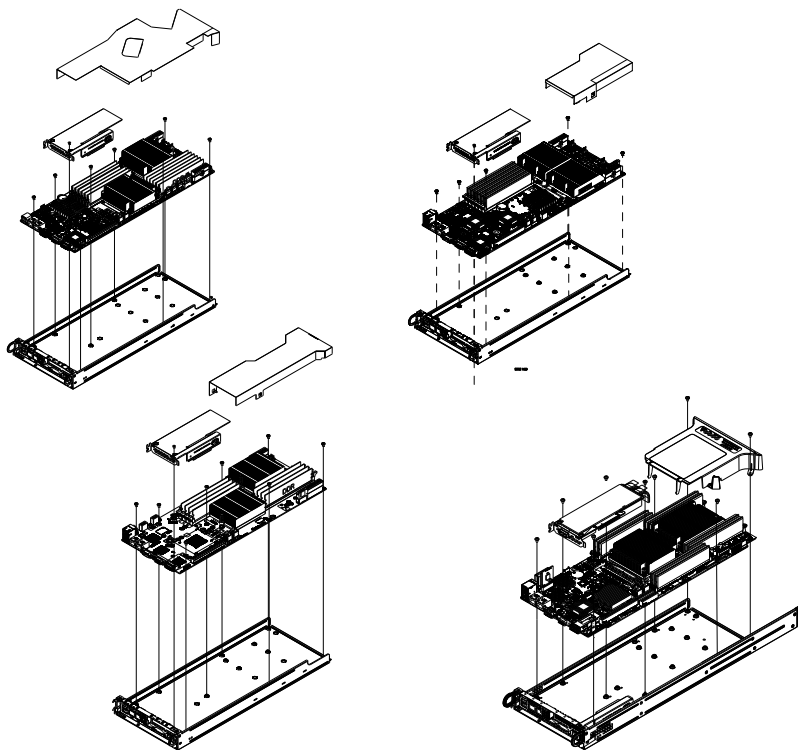


Figure 5-16. Installing the Air Shroud with Various Motherboards

Checking the Airflow

Checking Airflow

- Make sure there are no objects obstructing the airflow in and out of the chassis. In addition, if you are using a front bezel, make sure the bezel filter is replaced periodically.
- Except for brief periods while swapping hard drives, do not operate the server without drives or the drive carriers in the drive bays. Use only recommended server parts.
- Make sure no wires or foreign objects obstruct airflow through the chassis. Pull all excess cabling out of the airflow path or use shorter cables.
- The control panel LEDs inform you of system status. See “Chapter 3: System Interface” for details on the LEDs and the control panel buttons.

Installation Complete

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

5-9 System Fans

Four fans provide cooling for the chassis. These fans circulate air through the chassis as a means of lowering the chassis internal temperature. The SC217 system fans are easy-to-change modules. There is no need to uninstall any other parts inside the system when replacing fans, and no tools are required for installation.

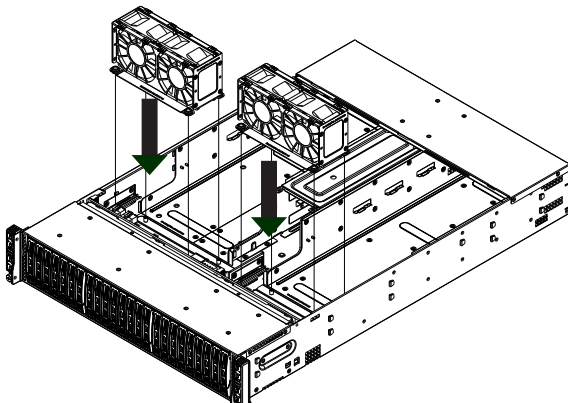


Figure 5-17. System Fan Placement

Changing a System Fan

1. If necessary, open the chassis while the system is running to determine which fan has failed. Never run the server for an extended period of time with the chassis cover open.
2. After determining which fan needs to be replaced, power down the associated node as described in Section 5-2.
3. Remove the node drawer from the chassis.
4. Remove the failed fan's power cable from the backplane.
5. Lift the fan housing up and out of the chassis.
6. Push the fan up from the bottom and out of the top of the housing.

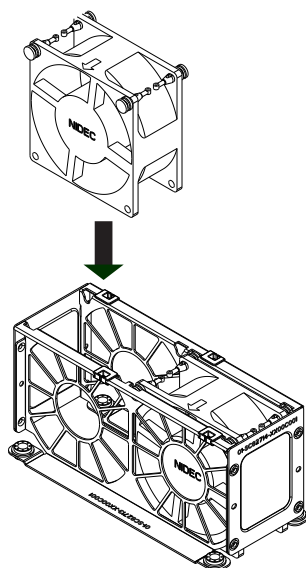


Figure 5-18. Replacing a System Fan in the Fan Housing

7. Place the replacement 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.
8. Put the fan housing back into the chassis and reconnect the cable.
9. Replace the drawer and confirm that the fan is working properly before replacing the chassis cover.

5-10 Power Supply

The SC217 chassis includes two redundant 1400W or 1620W power supplies. They are auto-switching, so they automatically sense and operate at the proper input voltage, 100v to 240v. An amber light is illuminated on the power supply when the power is turned off. An illuminated green light indicates that the power supply is operating.

Power Supply Replacement

In the unlikely event that one power supply unit needs to be replaced, it can be removed, without powering down the system. Replacement units can be ordered directly from Supermicro (See the contact information in the preface of this manual).

1. Push the release tab on the back of the power supply as illustrated.
2. Pull the power supply out using the handle provided.
3. Push the new power supply module into the power bay until it clicks into the locked position.

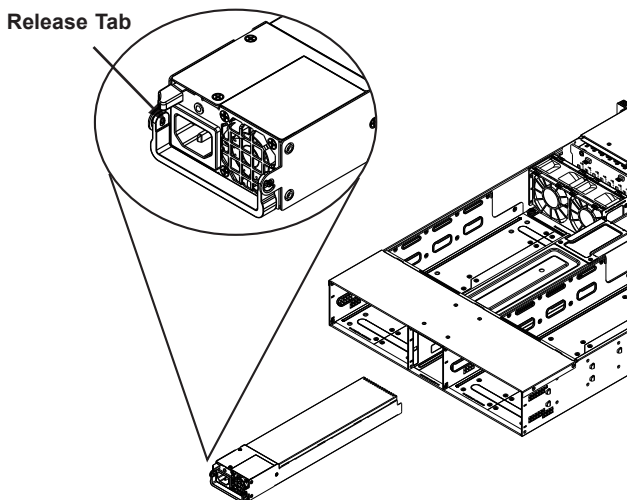


Figure 5-19. Changing the Power Supply

Chapter 6

Rack Installation

6-1 Overview

This chapter provides instructions to install the chassis into a rack environment. Following these steps in the order given should enable you to have the installation completed within a minimal amount of time.

Note: This chassis requires a standard four post rack and is not approved for use in a two-post "Telco" style rack.

6-2 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.

6-3 Preparing for Setup

Decide on a suitable location for the rack unit that will hold your chassis. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. The system needs to be placed near a grounded power outlet. Be sure to read the Rack and Server Precautions in the next section.

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).

6-4 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.

6-5 Rack Mounting Considerations

Ambient Operating Temperature

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

Reduced Airflow

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

Mechanical Loading

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

Circuit Overloading

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

Reliable Ground

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



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

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

6-6 Rack Mounting Instructions

This section provides information on installing the chassis into a rack unit with the rails provided. There are a variety of rack units on the market, which may mean that the assembly procedure will differ slightly from the instructions provided. You should also refer to the installation instructions that came with the rack unit you are using.

Note: This rail will fit a rack between 26.5" and 36.4" deep.

Identifying the Sections of the Rack Rails

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

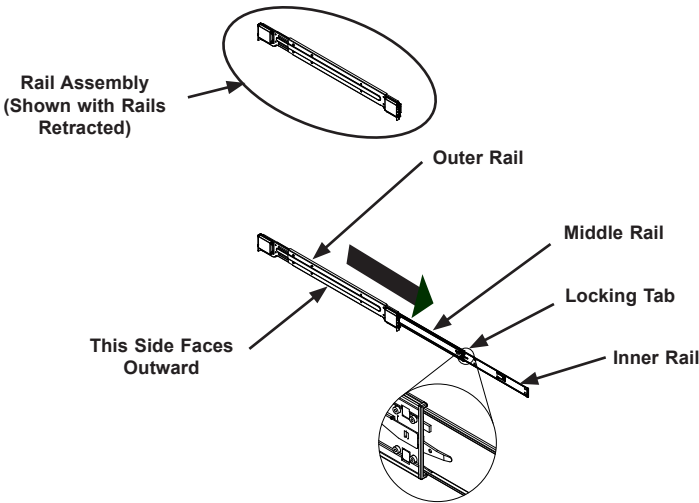


Figure 6-1. Identifying the Outer Rail, Middle Rail and Inner Rails (Left Rail Assembly Shown)

Locking Tabs

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

Releasing the Inner Rail

Releasing Inner Rail from the Outer Rails

1. Identify the left and right outer rail assemblies as described in Figure 6-1.
2. Pull the inner rail out of the outer rail until it is fully extended as illustrated below.
3. Press the locking tab down to release the inner rail.
4. Pull the inner rail all the way out.
5. Repeat for the second outer rail.

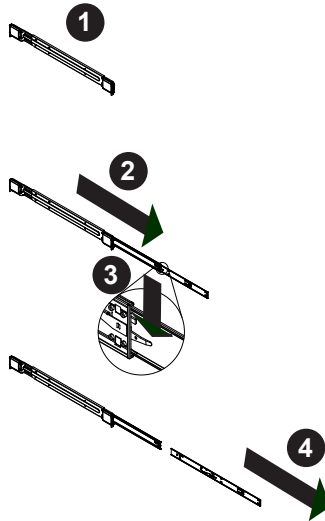


Figure 6-2. Extending and Releasing the Inner Rail

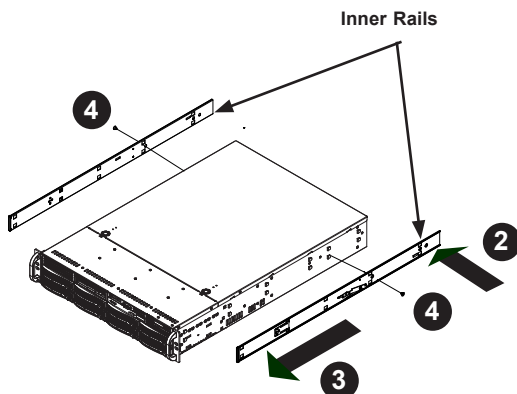


Figure 6-3. Installing the Inner Rails

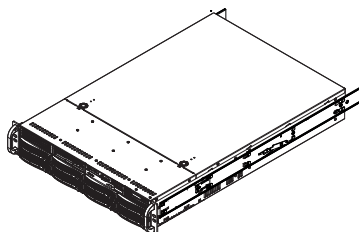


Figure 6-4. Inner Rails Installed on the Chassis
(The chassis pictured is a similar example.)

Installing The Inner Rails on the Chassis

Installing the Inner Rails

1. Identify the left and right inner rails as described in Figure 6-1..
2. Place the inner rail firmly against the side of the chassis, aligning the hooks on the side of the chassis with the holes in the inner rail.
3. Slide the inner rail forward toward the front of the chassis until the rail clicks into the locked position, which secures the inner rail to the chassis.
4. Secure the inner rail to the chassis with the screws provided.
5. Repeat for the other inner rail.

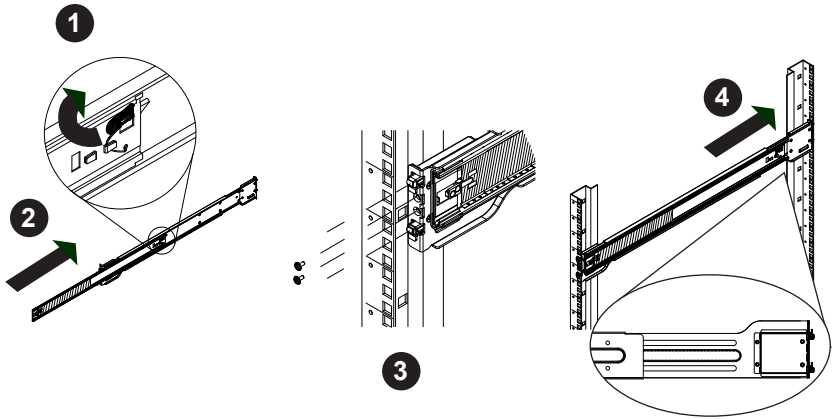


Figure 6-5. Extending and Releasing the Outer Rails



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

Installing the Outer Rails on the Rack

Installing the Outer Rails

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

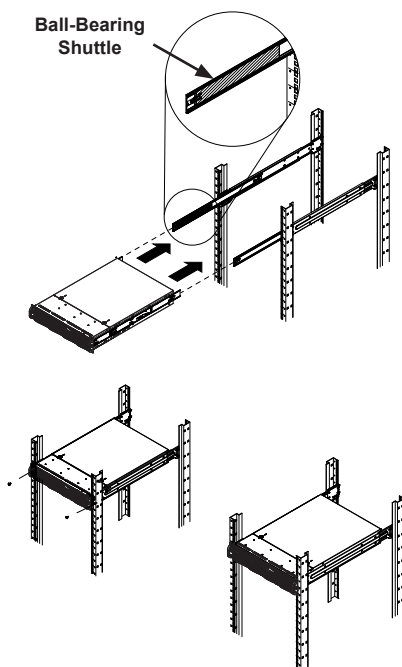


Figure 6-6. Installing into a Rack

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.



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

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

Notes

Appendix A

Cables, Screws, and other Accessories

A-1 Overview

This appendix lists optional parts which need to be ordered when the customer is assembling their own 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 Compatibility and Optional Accessories

Visit the Supermicro web site for an up-to-date list of optional accessories specific to each SC217 chassis model.

A-3 Chassis Screws

The chassis and accessory box includes all of the screws needed to setup your chassis. This section includes descriptions of the most common screws used. Your chassis may not require all of 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
3 x 5 mm
[0.197]



Round head
2.6 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



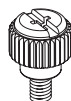
M/B STANDOFFS



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]

Appendix B

SC217 Power Supply Specifications

This appendix lists power supply specifications for your chassis system.

SC217HQ-R1400B	
	1400W
MFR Part #	PWS-1K41P-1R
AC Input	1100W: 100 - 140V, 50 - 60Hz, 9.5 - 13.5 Amp 1400W: 180 - 240V, 50 - 60Hz, 7.0 - 9.5 Amp
DC Output +5 Standby	4 Amp
DC Output +12V	91 Amp @ 100-140V 116 Amp @ 180-240V
With Distributor	+5V: 30 Amp +3.3V: 24 Amp -12V: 0.6 Amp



SC217HD-R1620B, SC217HQ-R1620B	
	1620W
MFR Part #	PWS-1K62P-1R
AC Input	1000W Output @ 100-120V, 12-10A, 50-60Hz 1200W Output @ 120-140V, 12-10A, 50-60Hz 1620W Output @ 180-240V, 10.5-8A, 50-60Hz
DC Output	1000W: +12V/84A; +5Vsb/4A 1200W: +12V/100A; +5Vsb/4A 1620W: +12V/150A; +5Vsb/4A



Notes

Appendix C

BPN-SAS-217HQ 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 backplane 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-SAS-217HQ backplane.
- Disconnect the power cable before installing or removing any cables from the BPN-SAS-217HQ backplane.

- Make sure that the BPN-SAS-217HQ backplane is securely and properly installed on the motherboard to prevent damage to the system due to power shortage.

C-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.

C-4 Introduction to the BPN-SAS-217HQ Backplane

The BPN-SAS-217HQ backplane has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

This manual reflects BPN-SAS-217HQ 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.

C-5 Front Connectors

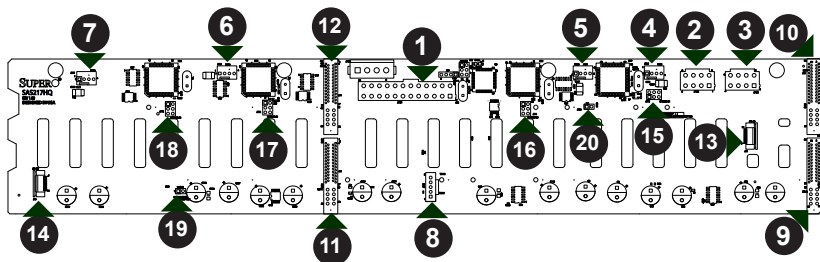


Figure C-1: Front Connectors

- | | |
|--|---|
| 1. Main Power Connector: JPW1 | 11. MB-C hot plug connector: JF3 |
| 2. Secondary Power Connector: JPW2 | 12. MB-D hot plug connector: JF4 |
| 3. Secondary Power Connector: JPW3 | 13. Backplane to front panel connector for MB-A,B: JF5 |
| 4. Chassis Fan Connector: Fan1 JP54 | 14. Backplane to front panel connector for MB--C,D: JF6 |
| 5. Chassis Fan Connector: Fan2 JP55 | 15. Upgrade #1 JP70 |
| 6. Chassis Fan Connector: Fan3 JP56 | 16. Upgrade #2 JP71 |
| 7. Chassis Fan Connector Fan4 JP57 | 17. Upgrade #3 JP72 |
| 8. Power Supply Connector: JPI ² C1 | 18. Upgrade #4 JP73 |
| 9. MB-A hot plug connector: JF1 | 19. LED test: JP35 |
| 10. MB-B hot plug connector: JF2 | 20. Power button settings: JP36 |

1. - 3. Motherboard Power Connectors

These connectors, designated JPW1, JPW2, and JPW3 supply power the four motherboard nodes in the chassis.

4. - 7. Chassis Fan Connectors

These connectors, designated JP54, JP55, JP56 and JP57 supply power to the chassis cooling fans.

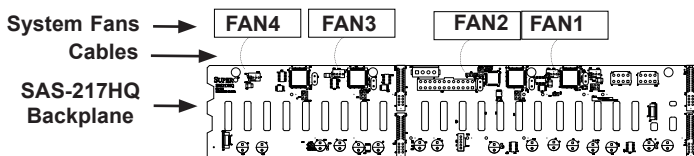


Figure C-2: Default Configuration - Fans Connected Directly to the Backplane

8. Power Supply Connector

The 5-pin connector, designated JPI²C1 provides power to the SMBUS and power control signals.

9. - 12. Motherboard to Backplane Connectors

These connectors, designated JF1, JF2, JF3 and JF4 connect the motherboards to the backplane on the chassis. JF1 connects to motherboard A. JF2 connects to motherboard B. JF3 connects to motherboard C and JF4 connects to motherboard D. See the table on the previous page to determine the locations of the motherboards within the chassis.

13. - 14. Backplane to Front Panel Headers

These connectors are designated JF5 and JF6. They connect the backplane to the front LED panels on the chassis. JF5 connects to the LED display panel for motherboards A and B. JF6 connects to the LED display panel for motherboards C and D.

C-6 Front Jumpers and Pin Definitions

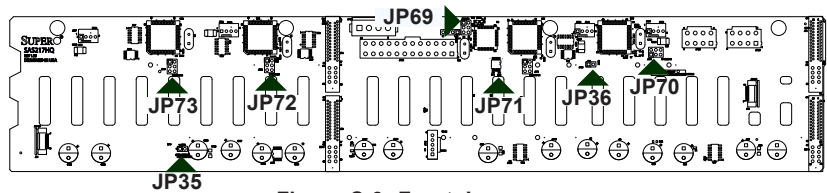
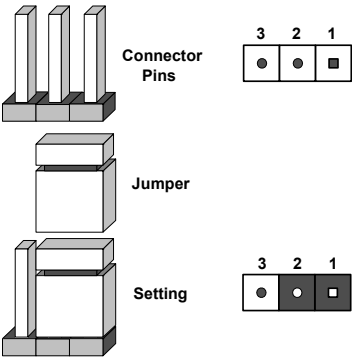


Figure C-3: Front Jumpers

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.



Jumper Settings		
Jumper	Jumper Settings	Notes
JP69	SPI	
JP35	Open: Default Closed: LED test	LED test
JP36	Open: Default, multiple power button functionality Closed: Single power button functionality	Any power button
JP70, JP71, JP72, JP73	For manufacturing purposes only	Upgrade connectors

C-7 Front LED Indicator

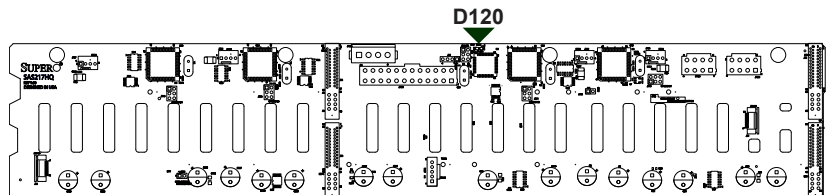


Figure C-4: Front LED

Front Panel LED		
LED	State	Specification
Heartbeat LED: D120	Blinking	Blinking heartbeat indicates backplane activity

C-8 Rear Connectors and LED Indicators

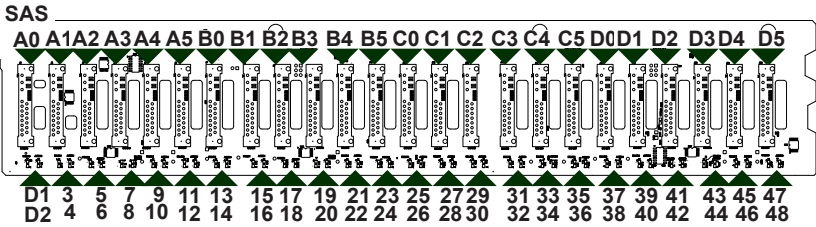


Figure C-5: Rear Connectors and LEDs

Rear SAS/SATA Connectors			
Rear Connector	SAS Drive Number	Rear Connector	SAS Drive Number
SAS-#A0	SAS/SATA-A0	SAS-#C0	SAS/SATA-C0
SAS-#A1	SAS/SATA-A1	SAS-#C1	SAS/SATA-C1
SAS-#A2	SAS/SATA-A2	SAS-#C2	SAS/SATA-C2
SAS-#A3	SAS/SATA-A3	SAS-#C3	SAS/SATA-C3
SAS-#A4	SAS/SATA-A4	SAS-#C4	SAS/SATA-C4
SAS-#A5	SAS/SATA-A5	SAS-#C5	SAS/SATA-C5
SAS-#B0	SAS/SATA-B0	SAS-#D0	SAS/SATA-D0
SAS-#B1	SAS/SATA-B1	SAS-#D1	SAS/SATA-D1
SAS-#B2	SAS/SATA-B2	SAS-#D2	SAS/SATA-D2
SAS-#B3	SAS/SATA-B3	SAS-#D3	SAS/SATA-D3
SAS-#B4	SAS/SATA-B4	SAS-#D4	SAS/SATA-D4
SAS-#B5	SAS/SATA-B5	SAS-#D5	SAS/SATA-D5

Rear LED Indicators					
Rear LED	FAIL	ACT	Rear LED	FAIL	ACT
SAS-#A0	D2	D1	SAS-#C0	D26	D25
SAS-#A1	D4	D3	SAS-#C1	D28	D27
SAS-#A2	D6	D5	SAS-#C2	D30	D29
SAS-#A3	D8	D7	SAS-#C3	D32	D31
SAS-#A4	D10	D9	SAS-#C4	D34	D33
SAS-#A5	D12	D11	SAS-#C5	D36	D35
SAS-#B0	D14	D13	SAS-#D0	D38	D37
SAS-#B1	D16	D15	SAS-#D1	D40	D39
SAS-#B2	D18	D17	SAS-#D2	D42	D41
SAS-#B3	D20	D19	SAS-#D3	D44	D43
SAS-#B4	D22	D21	SAS-#D4	D46	D45
SAS-#B5	D24	D23	SAS-#D5	D48	D47

SAS Ports

The SAS-217HQ backplane is designed with four separate nodes, which support from one to four motherboards independently of each other. The SAS ports are used to connect the SAS drive cables. The 24 ports are designated A0, A1, A2, A3, A4, A5, B0, B1, B2, B3, B4, B5, C0, C1, C2, C3, C4, C5, D0, D1, D2, D3, D4, and D5. Each port is also compatible with SATA drives. Use the table below to determine the SAS port to motherboard configuration that is appropriate for your system.

SAS Port to Motherboard Configurations		
Number of Motherboards	SAS Port Connectors	Connect to Motherboard
Using 1 MB	A0, A1, A2, A3, A4, A5	MB-A
Using 2 MBs	A0, A1, A2, A3, A4, A5	MB-A
	B0, B1, B2, B3, B4, B5	MB-B
Using 3 MBs	A0, A1, A2, A3, A4, A5	MB-A
	B0, B1, B2, B3, B4, B5	MB-B
	C0, C1, C2, C3, C4, C5	MB-C
Using 4 MBs	A0, A1, A2, A3, A4, A5	MB-A
	B0, B1, B2, B3, B4, B5	MB-B
	C0, C1, C2, C3, C4, C5	MB-C
	D0, D1, D2, D3, D4, D5	MB-D

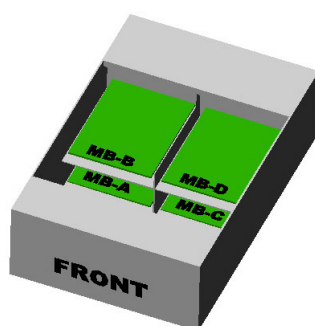


Figure C-6: Motherboard Locations In the Chassis

Appendix D

BPN-SAS-217HD 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 backplane 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-SAS-217HD backplane.
- Disconnect the power cable before installing or removing any cables from the BPN-SAS-217HD backplane.
- Make sure that the BPN-SAS-217HD backplane is securely and properly installed on the motherboard to prevent damage to the system due to power shortage.

D-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.

D-4 Introduction to the BPN-SAS-217HD Backplane

The BPN-SAS-217HD backplane has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

This manual reflects BPN-SAS-217HD 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.

D-5 Front Connectors

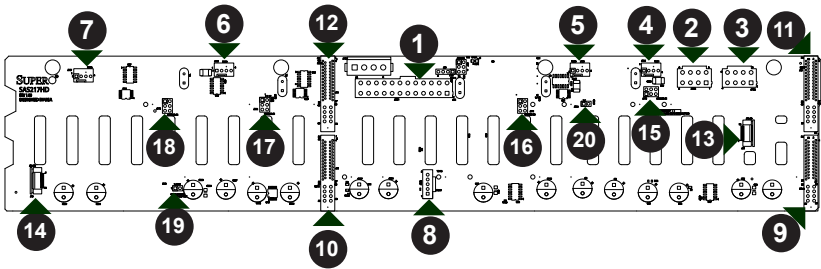


Figure D-1: Front Connectors

- | | |
|--|--|
| 1. Main Power Connector: JPW1 | 11. MB-C hot plug connector: JF2
(not used) |
| 2. Secondary Power Connector:
JPW2 | 12. MB-D hot plug connector: JF4
(not used) |
| 3. Secondary Power Connector:
JPW3 | 13. Backplane to front panel connector for MB-A,B: JF5 |
| 4. Chassis Fan Connector: Fan1
JP54 | 14. Backplane to front pannel connector for MB--C,D: JF6 |
| 5. Chassis Fan Connector: Fan2
JP55 | 15. Upgrade #1 JP70 |
| 6. Chassis Fan Connector: Fan3
JP56 | 16. Upgrade #2 JP71 |
| 7. Chassis Fan Connector Fan4
JP57 | 17. Upgrade #3 JP72 |
| 8. Power Supply Connector: JPI ² C1 | 18. Upgrade #4 JP73 |
| 9. MB-A hot plug connector: JF1 | 19. LED test: JP35 |
| 10. MB-B hot plug connector: JF3 | 20. Power button settings: JP36 |

1. - 3. Motherboard Power Connectors

These connectors, designated JPW1, JPW2, and JPW3 supply power the four motherboard nodes in the chassis.

4. - 7. Chassis Fan Connectors

These connectors, designated JP54, JP55, JP56 and JP57 supply power to the chassis cooling fans.

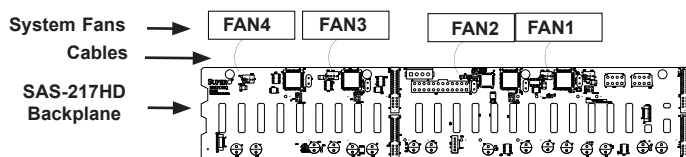


Figure D-2: Default Configuration - Fans Connected Directly to the Backplane

8. Power Supply Connector

The 5-pin connector, designated JPI²C1 provides power to the SMBUS and power control signals.

9. - 12. Motherboard to Backplane Connectors

These connectors, designated JF1 and JF3 connect the motherboards to the backplane on the chassis. (Note that JF2 and JF4 are present but not functional on this backplane. JF1 connects to motherboard A and JF3 connects to motherboard B.

13. - 14. Backplane to Front Panel Headers

These connectors are designated JF5 and JF6. They connect the backplane to the front LED panels on the chassis. JF5 connects to the LED display panel for motherboard A. JF6 connects to the LED display panel for motherboard B .

D-6 Front Jumpers and Pin Definitions

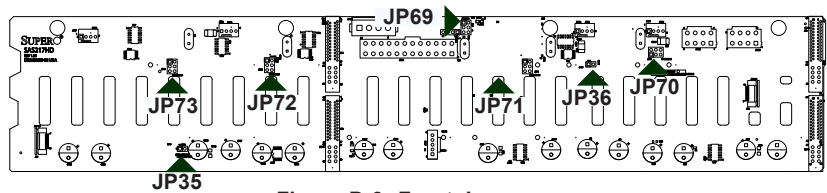
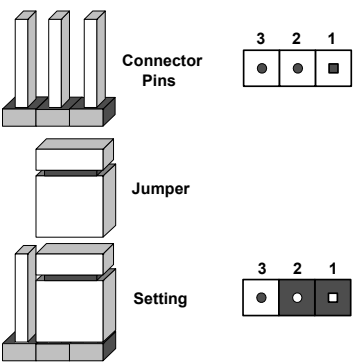


Figure D-3: Front Jumpers

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.



Jumper Settings		
Jumper	Jumper Settings	Notes
JP69	SPI	
JP35	Open: Default Closed: LED test	LED test
JP36	Open: Default, multiple power button functionality Closed: Single power button functionality	Any power button
JP70, JP71, JP72, JP73	For manufacturing purposes only	Upgrade connectors

D-7 Front LED Indicator

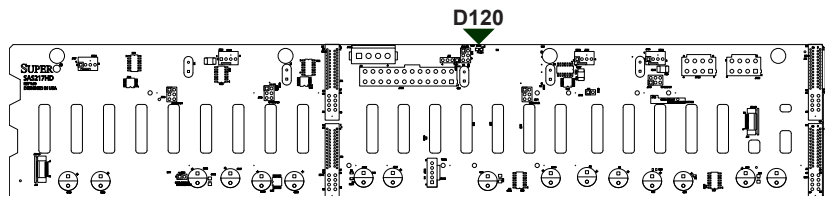


Figure D-4: Front LED

Front Panel LED		
LED	State	Specification
Heartbeat LED: D120	Blinking	Blinking heartbeat indicates backplane activity

D-8 Rear Connectors and LED Indicators

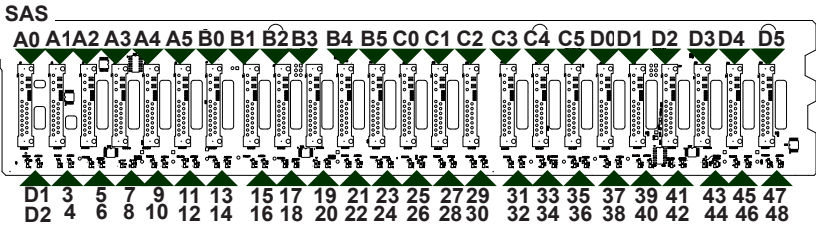


Figure D-5: Rear Connectors and LEDs

Rear SAS/SATA Connectors			
Rear Connector	SAS Drive Number	Rear Connector	SAS Drive Number
SAS-#A0	SAS/SATA-A0	SAS-#C0	SAS/SATA-C0
SAS-#A1	SAS/SATA-A1	SAS-#C1	SAS/SATA-C1
SAS-#A2	SAS/SATA-A2	SAS-#C2	SAS/SATA-C2
SAS-#A3	SAS/SATA-A3	SAS-#C3	SAS/SATA-C3
SAS-#A4	SAS/SATA-A4	SAS-#C4	SAS/SATA-C4
SAS-#A5	SAS/SATA-A5	SAS-#C5	SAS/SATA-C5
SAS-#B0	SAS/SATA-B0	SAS-#D0	SAS/SATA-D0
SAS-#B1	SAS/SATA-B1	SAS-#D1	SAS/SATA-D1
SAS-#B2	SAS/SATA-B2	SAS-#D2	SAS/SATA-D2
SAS-#B3	SAS/SATA-B3	SAS-#D3	SAS/SATA-D3
SAS-#B4	SAS/SATA-B4	SAS-#D4	SAS/SATA-D4
SAS-#B5	SAS/SATA-B5	SAS-#D5	SAS/SATA-D5

Rear LED Indicators					
Rear LED	FAIL	ACT	Rear LED	FAIL	ACT
SAS-#A0	D2	D1	SAS-#C0	D26	D25
SAS-#A1	D4	D3	SAS-#C1	D28	D27
SAS-#A2	D6	D5	SAS-#C2	D30	D29
SAS-#A3	D8	D7	SAS-#C3	D32	D31
SAS-#A4	D10	D9	SAS-#C4	D34	D33
SAS-#A5	D12	D11	SAS-#C5	D36	D35
SAS-#B0	D14	D13	SAS-#D0	D38	D37
SAS-#B1	D16	D15	SAS-#D1	D40	D39
SAS-#B2	D18	D17	SAS-#D2	D42	D41
SAS-#B3	D20	D19	SAS-#D3	D44	D43
SAS-#B4	D22	D21	SAS-#D4	D46	D45
SAS-#B5	D24	D23	SAS-#D5	D48	D47

D-9 SAS Ports

The SAS-217HD backplane is designed with two separate nodes, which support from one to two motherboards independently of each other. The SAS ports are used to connect the SAS drive cables. The twenty-four ports are designated A0, A1, A2, A3, A4, A5, B0, B1, B2, B3, B4, B5, C0, C1, C2, C3, C4, C5, D0, D1, D2, D3, D4, and D5. Each port is also compatible with SATA drives. Use the table below to determine the SAS port to motherboard configuration that is appropriate for your system.

SAS Port to Motherboard Configurations		
Number of Motherboards	SAS Port Connectors	Connect to Motherboard
Using 1 MB	A0, A1, A2, A3, A4, A5 B0, B1, B2, B3, B4, B5	MB-A
Using 2 MBs	C0, C1, C2, C3, C4, C5 D0, D1, D2, D3, D4, D5	MB-B

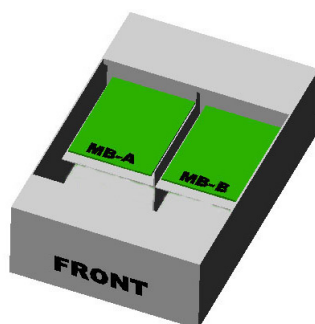


Figure D-6: Motherboard Locations In the Chassis

Notes

Disclaimer (cont.)

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