

SSE-G3648B
SSE-G3648BR

Switch Installation Guide

Revision 1.0a

SSE-G3648B/BR Switch Installation Guide

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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.

Manual Revision 1.0a

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1. Introduction

1.1 Overview

The Supermicro SSE-G3648B and SSE-G3648BR are a new generation of 1/10G Ethernet aggregation switches. They offer 1G Ethernet connectivity for servers and end users as well as access to 10G backbone networks and/or servers with higher speed connectivity. The available redundant power supply option is but one of the many features making them attractive for use in the modern data center. They are ideal as a distribution layer switch for campus networks, enterprise networks and High Performance (HP) networks; as well as a core layer switch for small to medium-sized networks. Preloaded with Open Networking Installation Environment (ONIE) they are particularly suitable for use in an Open Networking environment.

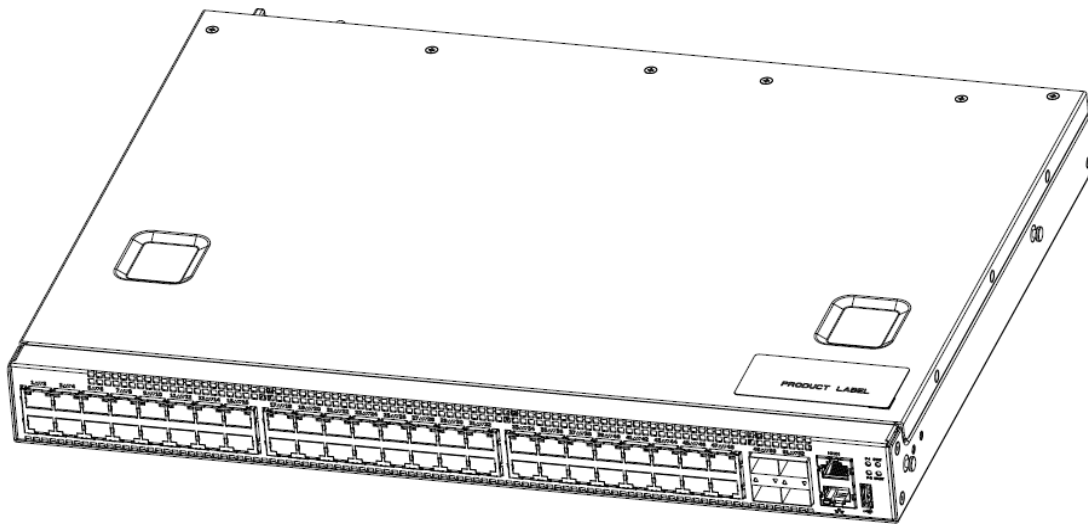


Figure 1-1 SSE-G3648B/BR Switches

1.2 Description of Hardware

Front Panel

1. Front Panel Diagram

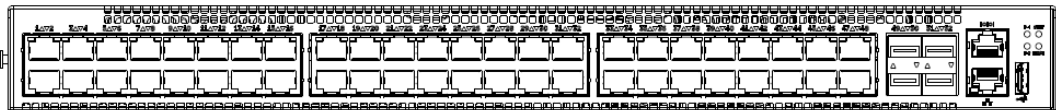
The front panel descriptions of the SSE-G3648B/BR switches are given in the following table:

Table 1-1: Front Panel Descriptions of SSE-G3648B/BR Switches

Type	RJ45 Port	SFP+ Port	10/100/1000Base-T ETHERNET Port	Console Port	USB 2.0 Interface
SSE-G3648B/BR	48	4	1	1	1

The front panel of SSE-G3648B/BR is shown below:

Figure 1-2: Front Panel of SSE-G3648B/BR Switches



2. Console description

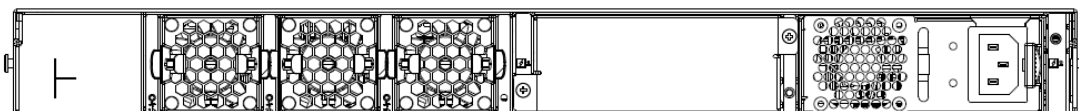
SSE-G3648B/BR switches provide an RJ-45 serial console port. Users can perform the local and telnet configuration through this port.

The console port supports asynchronous mode Set the data bit as 8, the stop bit as 1, the parity bit as none, and the default baud rate as 115200bps.

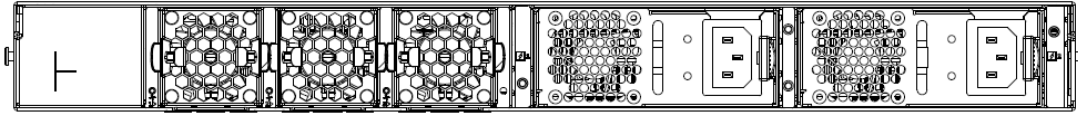
Back Panel

The back panel of SSE-G3648B/BR switches includes one 90~264VAC, 47Hz~63Hz power supply. An optional additional power supply provides redundancy. There are three fans.

Fig 1-3: Back Panel SSE-G3648B/BR (Standard Configuration)



**Fig 1-4: Back panel of SSE-G3648B/BR
(with Second Power Supply Installed)**



1.3 Status LEDs

The indicator light on front panel of the SSE-G3648B/BR has forty-eight RJ45 port indicator lights, four SFP+ port indicator lights, two power supply indicator lights and a system automatic diagnostics LED. They are shown below and described in the following table.

Table 1-2: Explanation of Indicator Light of SSE-G3648B/BR Switch

Indicator Light	Panel Sign	State	Meanings
Power Supply Indicator Light	P-1 / P-2	Green light always on	Power supply module move normally
		Amber light always on	Power fault
		No light	No power supply
System Automatic Diagnostic LED	STAT	Green light always on	System running normally
		Green light blinks	System booting
Work Mode Indicator Light	MAST	Green light always on	Master mode
		Amber light always on	Slave mode

Table 1-3: Explanation of the Port Indicator Light

Indicator Light	Panel Sign	State
ETHERNET Port Link Light (Right)	Green	The port is under the connection state of 10M, 100M or 1000M
	Blinking Green	The port is transmitting data
	No light	No connection or fail to connect
Indicator Light of SFP+ Port	Green	The port is under the connection state of 1G/10G
	Blinking Green	The port is transmitting data
	No light	No connection or fail to connect
Indicator Light of RJ45 Port	Green	The port is connected at 1G
	Amber	The port is connected at of 10M/100M
	Blinking Green	The 1G port is transmitting data
	Blinking Amber	The 10M/100M port transmitting data
	No light	No connection or fail to connect

1.4 Port Description

The SSE-G3648B/BR provide forty-eight RJ45 ports and four 10 Gb SFP+ ports.

SSE-G3648B/BR series switches support the following SFP transceivers:

- SFP-SX-L transceiver
- SFP-LX-L transceiver
- SFP-LX-20-L 20 km transceiver
- SFP-LX-40 40 km mid distance transceiver
- SFP-LH-70-L 70 km long distance transceiver
- SFP-LH-120-L 120 km long distance transceiver
- SFP-GT 1000 Base-T SFP interface cards module

Each port is described below:

Table 1-4: SSE-G3648B/BR Port Description

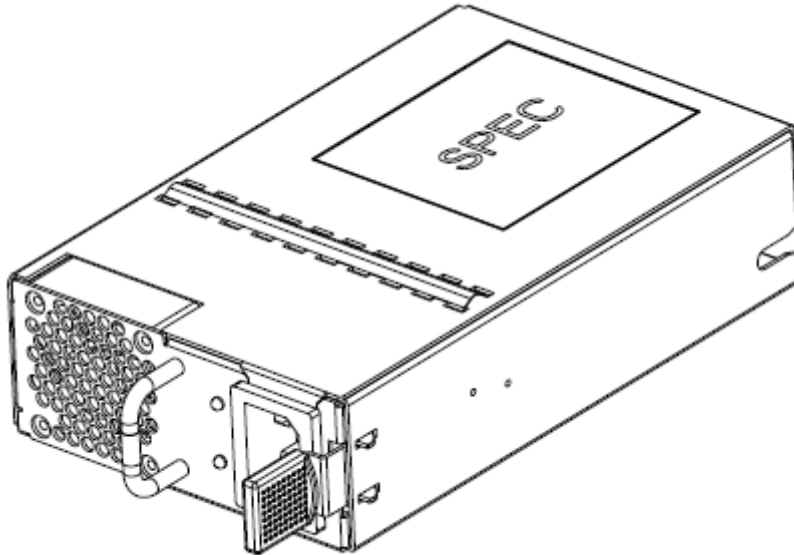
Port Mode	Spec
RJ-45 port	10/100/1000Mbps auto negotiation MDI/MDI-X cable mode auto negotiation 5 kinds of UTP: 100 m
SFP	SFP-SX-L transceiver 1000Base-SX SFP(850nm,MMF,550m) SFP-LX-L transceiver 1000Base-LX SFP(1310nm, SMF, 10km or MMF, 550m) SFP-LX-20-L transceiver 1310nm light wave, 9/125um single mode fiber: 20km SFP-LX-40 transceiver 9/125um single mode fiber: 40km SFP-LH-70-L transceiver 9/125um single mode fiber: 70km SFP-LH-120-L transceiver 9/125um single mode fiber: 120km

SSE-G3648B/BR switches provide 4 SFP+ ports. In addition to support of optical fiber connections through transceivers, they support SFP+ Direct Attach Copper (DAC) cables (0.5M-7M). This provides enhanced flexibility in network design and installation.

1.5 Power Supply Module

The following picture is the power supply module (PSM) of SSE-G3648B/BR.:

Fig 1-5: SSE-G3648B/BR PSM



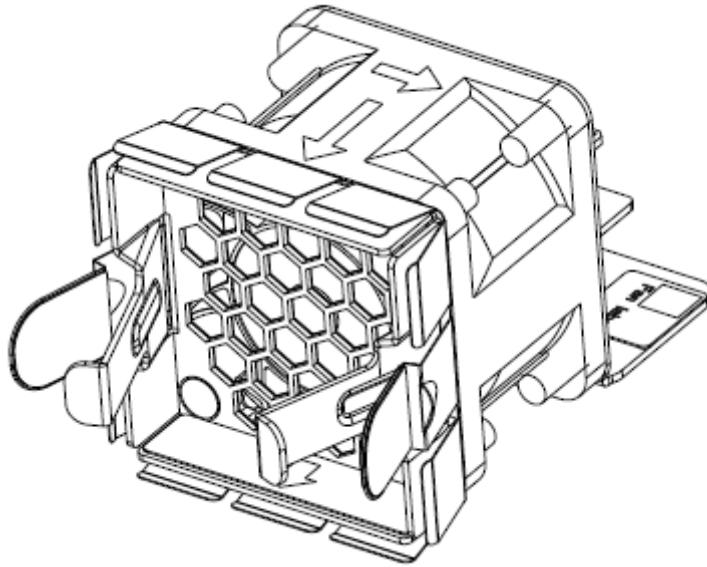
SSE-G3648B/BR switches have one PSM in the standard configuration. When two power supplies are installed, they give power redundancy.

The maximum input power is 200W @ 90VAC~264VAC/47HZ~63HZ. Output is 12V +/- 5%. There is a fan and a handle for inserting or removing the module on the back of the power supply. The power supply module supports hot plug.

1.6 Fan Module

The SSE-G3648B/BR series fan module is shown below:

Fig 1-6: Fan Module



SSE-G3648B/BR switches have three fan modules. The rotation speed of the fan is self-adjusting based upon system temperature. The fan modules are not field-replaceable.

1.7 System Specifications

Table 1-5: System Specifications of SSE-G3648B/BR Switches

Attribute \ Type	E1031
Dimension(W * H * D) (mm)	320×434×44
Weight	5.6 kg (standard: one power)
Fixed Port	48 RJ45 ports; 4 SFP+ ports
Management Port	1 RJ-45 serial console port 1 RJ-45 management Ethernet port
Power Input	90~264VAC(47~63Hz)
System Consumption	<100W
Operating Temperature	0°C~45°C
Storage Temperature	-40°C~70°C
Relative Humidity	5%~85%, no condensing

2. Standardized Warning Statements

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。

此警告符号代表危险。

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

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

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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.

시스템을 전원에 연결하기 전에 설치 안내를 읽어주시시오.

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.

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 chasis pour installer ou enlever des composants de système.

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.

경고!

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

Waarschuwing

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

Restricted Area



Warning!

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

アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

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

警告

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

警告

此装置仅限安装於進出管制區域，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.

경고!

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

Waarschuwing

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

Battery Handling



Warning!

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

電池の取り扱い

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

警告

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

警告

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

Warnung

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

Attention

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

¡Advertencia!

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

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.

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.

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.

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.

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

安裝此產品時,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.

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 CSA 에서 인증한 케이블(전선 위에 UL/CSA 가 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.

使用者：這是甲類資訊產品,在居住的環境中使用時,可能會造成射頻干擾.在這種情況下,使用者會被要求採取某些適當對策.

3. Installation Requirements

To ensure the proper operation of the SSE-G3648B/BR switch and your physical security, please read carefully the following installation guide.

3.1 Environmental Requirements

- The switch must be installed in a clean area. Otherwise, the switch may be damaged by electrostatic discharge.
- Maintain the temperature within 0 to 45 °C and the humidity within 5% to 85%, non-condensing.
- The switch must be put in a dry and cool place. Leave sufficient spacing around the switch for good air circulation.
- The switch must work in the range of AC power input: 90 ~ 264VAC (47/63Hz).
- The switch must be well grounded in order to avoid ESD damage and physical injury of people.
- The switch should avoid exposure to direct sunlight. Keep the switch away from heat sources and strong electromagnetic interference sources.
- The switch must be mounted to a standard 19" rack or placed on a clean level desktop.

Dust and Particles

Dust is harmful to the safe operation of SSE-G3648B/BR switches. Dust can lead to electrostatic adherence, especially likely under low relative humidity, causing poor contact of metal connectors or contacts. Electrostatic adherence will result in not only reduced product lifespan, but also increased chance of communication failures. The recommended value for dust content and particle diameter in the site is shown below:

Table 3-1: Environmental Requirements: Dust

Max Diameter (µm)	0.5	1	3	5
Max Density (particles/m ³)	1.4×10^5	7×10^5	2.4×10^5	1.3×10^5

In addition, salt, acid and sulfide in the air are also harmful to the switch. Such harmful gases will aggravate metal corrosion and the aging of some parts. The site should avoid harmful gases, such as SO₂, H₂S, NO₂, NH₃ and Cl₂, etc. The table below details the threshold value.

Table 3-2: Environmental Requirements: Particles

Gas	Average (mg/m ³)	Max (mg/m ³)
SO ₂	0.2	1.5
H ₂ S	0.006	0.03
NO ₂	0.04	0.15
NH ₃	0.05	0.15
Cl ₂	0.01	0.3

Temperature and Humidity

Although the switch is designed to use 3 fans, the site should still maintain a desirable temperature and humidity. High-humidity conditions can cause electrical resistance degradation or even electric leakage, degradation of mechanical properties and corrosion of internal components. Extreme low relative humidity may cause the insulation spacer to contract, making the fastening screw insecure. Furthermore, in dry environments, static electricity is liable to be produced and cause harm to internal circuits. Temperature extremes can cause reduced reliability and premature aging of insulation materials, thus reducing the switch's working lifespan. In the hot summer, it is recommended to use air-conditioners to cool down the site. And in cold weather, use of heaters is recommended.

The recommended temperature and humidity are shown below:

Table 3-3: Environmental Requirements: Temperature and Humidity

Temperature:		Relative Humidity	
Long Term Condition	Short Term Condition	Long Term Condition	Short Term Condition
15 ~ 30°C	0 ~ 45°C	40 ~ 65%	5 ~ 85%

Caution! A sample of ambient temperature and humidity should be taken at 1.5m above the floor and 0.4m in front of the switch rack, with no protective panel covering the front and rear of the rack. Short term working conditions refer to a maximum of 48 hours of continued operation and an annual cumulative total of less than 15 days. Excessive operating conditions refers to the ambient temperature and relative humidity value that may occur during an air-conditioning system failure - normal operating conditions should be recovered within 5 hours.

Power Supply

Before powering on the power supply, please check the power input to ensure proper grounding of the power supply system. The input source for the switch should be reliable and secure; a voltage adaptor can be used if necessary. The building's circuit protection system should include in the circuit a fuse or circuit-breaker of no greater than 240 V, 5A. It is recommended to use a UPS to supply more reliable power.

Caution!

1. Improper power supply system grounding, extreme fluctuation of the input source, and transients (or spikes) can result in larger error rate, or even hardware damage!
2. Disconnect power supply cords before servicing!

Preventing Electrostatic Discharge Damage

Electro Static Discharges (ESD) can cause damage to internal circuits, even the entire switch. Follow these guidelines for avoiding ESD damage:

- Ensure proper earth grounding of the device;
- Perform regular cleaning to reduce dust;
- Maintain proper temperature and humidity;
- Always wear an ESD wrist strap and antistatic uniform when in contact with circuit boards.

Anti-interference

All sources of interference, whether from the device/system itself or the outside environment, will affect operations in various ways, such as capacitive coupling, inductive coupling, electromagnetic radiation, common impedance (including the grounding system) and cables/lines (power cables, signal lines, and output lines). The following should be noted:

- Precautions should be taken to prevent power source interruptions;
- Provide the system with a dedicated grounding, rather than sharing the grounding with the electronic equipment or lightning protection devices;
- Keep away from high power radio transmitters, radar transmitters, and high frequency strong circuit devices;
- Provide electromagnetic shielding if necessary.
- Rack Configuration

The SSE-G3648B/BR switches are designed to be mounted on a standard 19" rack - please ensure good ventilation for the rack.

- Every device in the rack will generate heat during operation, therefore vent and fans must be provided for an enclosed rack, and devices should not be stacked closely.
- When mounting devices in an open rack, care should be taken to prevent the rack frame from obstructing the switch ventilation openings. Be sure to check the positioning of the switch after installation to avoid the aforementioned.

Caution ! If a standard 19" rack is not available, the SSE-G3648B/BR switches can be placed on a clean level desktop. Leave a clearance of 100mm around the switch for ventilation and do not place anything on top of the switch.

3.2 Installation Notice

When installing the SSE-G3648B/BR switches do the following:

- Read through the installation instructions carefully before operating the system. Make sure the installation materials and tools are prepared. And make sure the installation site is well prepared.
- During the installation, users must use the brackets and screws provided in the accessory kit. Users should use the proper tools to perform the installation. Users should always wear antistatic uniform and ESD wrist straps. Users should use standard cables and connectors.
- After the installation, users should clean the site. Before powering on the switch, users should ensure the switch is well grounded. Users should maintain the switch regularly to extend the lifespan of the switch.
- A statement indicating the location of a readily accessible disconnect device shall be incorporated in the building installation wiring.

3.3 Security Warnings

Read and follow these security warnings:

- When using an SFP/SFP+ transceiver, do not stare directly at the fiber bore when the switch is in operation. Otherwise the laser may severely damage your eyes.
- Do not attempt to conduct the operations which can damage the switch or which can cause physical injury.
- Do not install or move the switch and its modules when the switch is in operation.
- Do not open the switch shell.
- Do not drop metal into the switch. It can cause a short circuit.
- Do not touch the power plug and power socket.
- Do not place flammable materials near the switch.
- Do not configure the switch alone in a dangerous situation,
- Use standard power sockets which have overload and leakage protection.
- Inspect and maintain the site and the switch regularly.
- Have an emergency power switch on the site. In case of emergency, switch off the power immediately.

Caution! Potential risks include: Electric Leakage, Power Supply Arcing, Power Line Breakage, Faulty Ground, Circuit Overload and Electrical Short Circuit. If an electric shock, fire, or electrical short circuit occurs, please cut off the electricity supply and raise an alarm. Rescue any injured person, give the injured person proper first aid treatment according to the injury, and seek help from the Medical Emergency personnel.

4. Device Installation

4.1 Installation Preparation

In order to prepare for installation of the SSE-G3648B/BR switch, you must verify the package contents and use the required tools and utilities.

Verify the Package Contents

Please unpack the shipping package and verify carefully the contents inside.

Required Tools and Utilities

The required tools and utilities are shown below:

- Cross (Phillips head) screwdrivers
- Flat-blade screwdriver
- ESD wrist strap
- Antistatic uniform

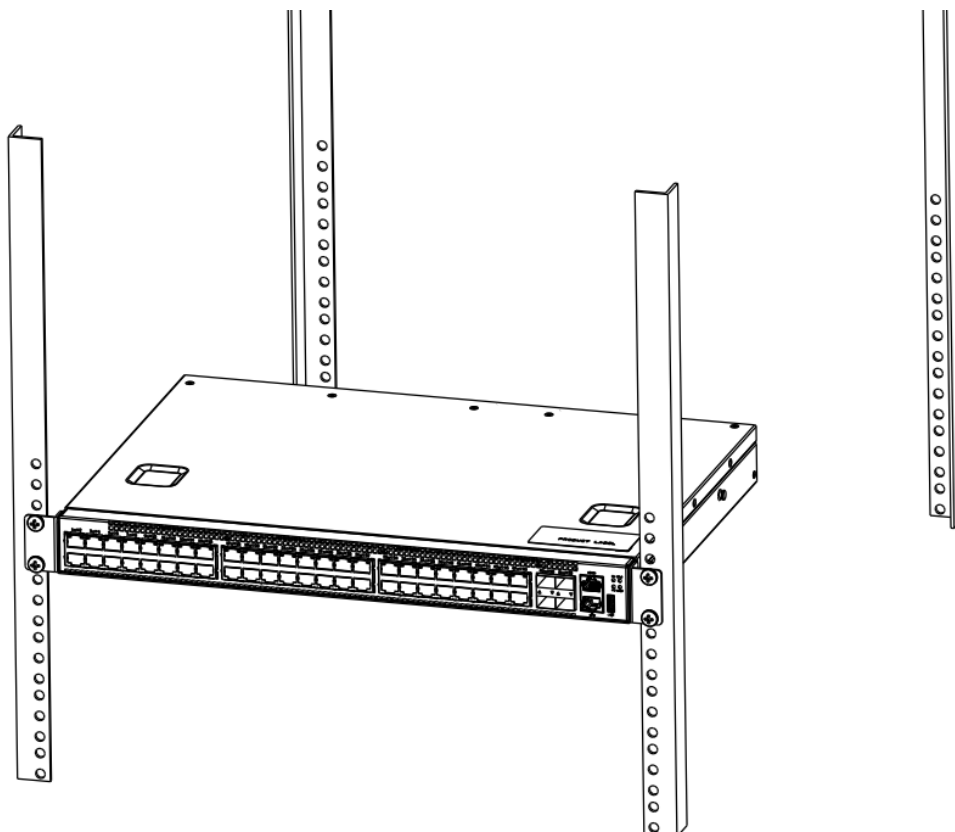
Caution! Users should prepare the required tools and utilities by themselves.

4.2 Device Installation

To install the SSE-G3648B/BR switch follow the instructions in the following sections.

Installing the Switch

Figure 4-1 SSE-G3648B/BR Switch Installed In A Rack



Please mount the SSE-G3648B/BR in the 19" rack as follows:

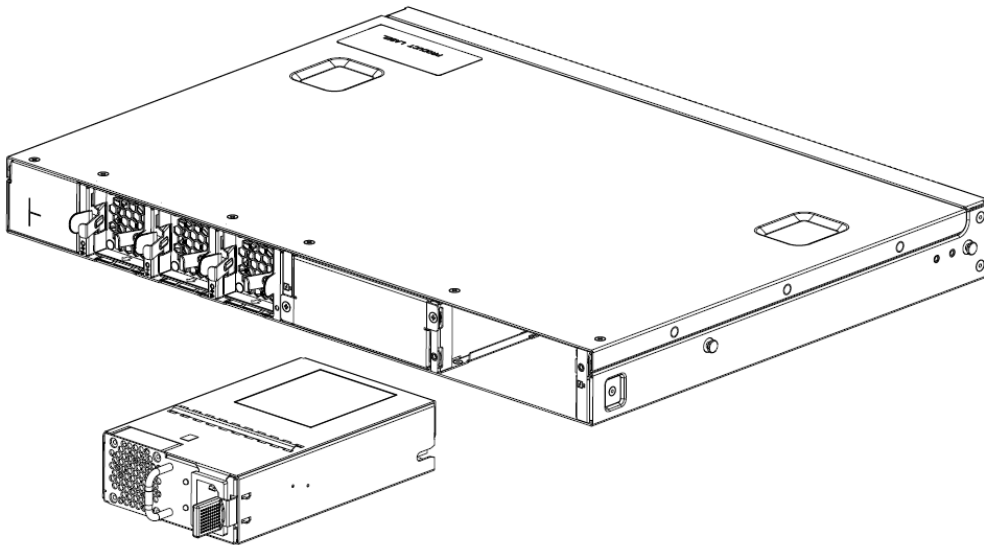
1. Attach the 2 brackets on the SSE-G3648B/BR with screws provided in the accessory kit.
2. Provide additional support (e.g., rack shelf) for the switch when installing because the machine is fairly heavy.
3. Put the bracket-mounted switch smoothly into a standard 19" rack. Fasten the SSE-G3648B/BR to the rack with the screws provided. Leave enough space around the switch for good air circulation.

Caution! Do not place anything on top of the switch. The brackets are used to fix the switch on the rack. They are not intended to be load bearing.

Installing the Main Power Supply Module

SSE-G3648B/BR switches support 2 power supplies (One power supply is provided in the standard configuration).

Figure 4-2a: SSE-G3648B/BR Switch Power Supply Installation – Single Power Supply



Please follow these instructions for installing and removing the main power supply module:

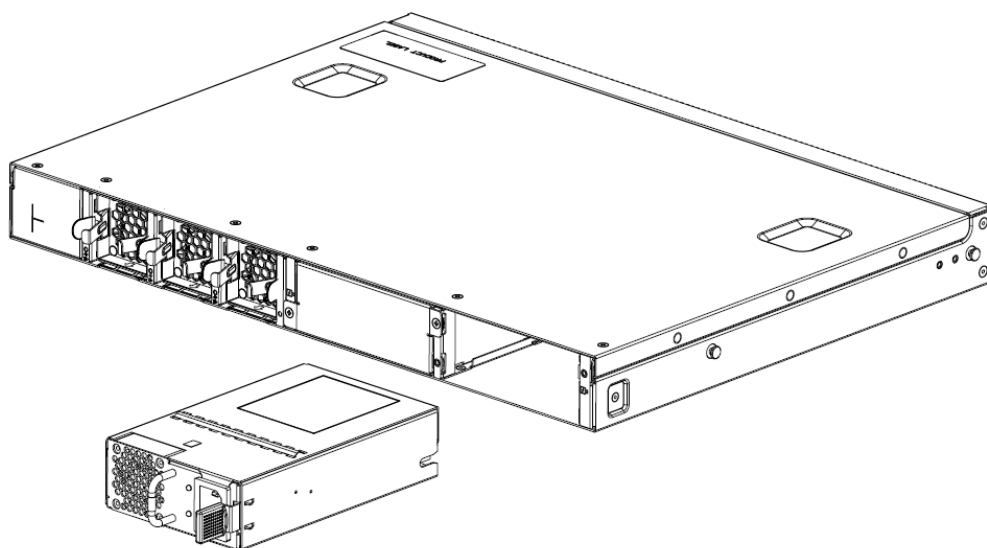
1. Insert the power supply into the opening as shown.
2. The golden finger of the power supply should be inserted end-downwards. Once secure, you can hear the lock sound “click”.
3. Force the lock on the side of AC cable socket in the direction of the fan when removing the power supply module. Then you can easily withdraw the power supply.

Installing the Second Power Supply Module

Ensure that you have the correct power supply when installing a second redundant power supply into the switch. The regular airflow SSE-G3648B requires a PWS-FRU-G3648-1F. For the SSE-G3648BR you will need the PWS-FRU-G3648-1R.

Note: The power supply has its own cooling fan. It is important to use the correct power supply module to ensure proper cooling of the switch.

**Figure 4-2b SSE-G3648B/BR Switch Power Supply Installation –
Second (Redundant Back-Up) Power Supply**



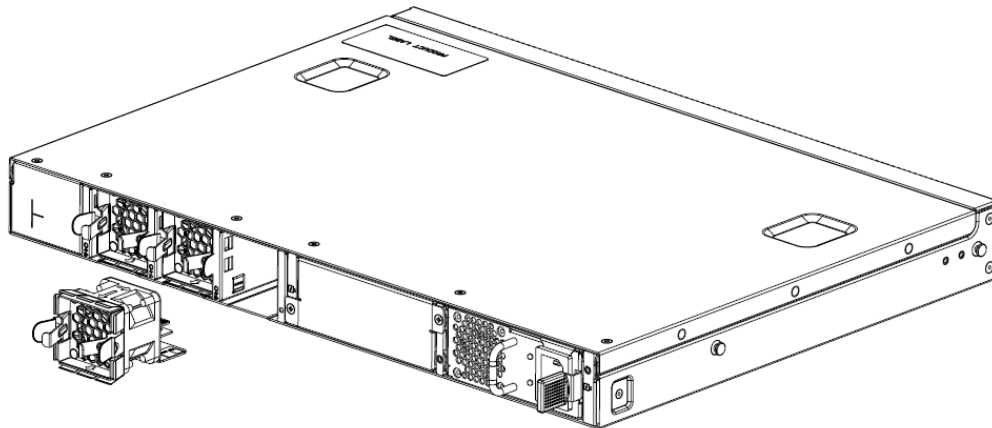
Please follow these instructions for installing and removing the second power supply module:

1. Remove the blanking plate (two screws) which covers the opening of the slot for the second power supply.
2. Remove the power supply module from its packing box.
3. Insert the power supply into the appropriate slot. The golden finger of the power supply should be inserted end-downwards. Once secure, you can hear the lock sound “click”.
4. Force the lock on the side of AC cable socket in the direction of the fan when removing the power supply module. Then you can easily withdraw the power supply.

Installing the Fan

The SSE-G3648B/BR switch has three fans in its standard configuration.

Figure 4-3: SSE-G3648B/BR Switch Fan Installation



Please install or remove the fan module as follows:

1. The golden fingers should be positioned inward and on the back of the switch. After proper insertion you can hear the lock sound of “click”.
2. To withdraw a fan, pinch the sheet metal inward – then the fan module can be pulled out.

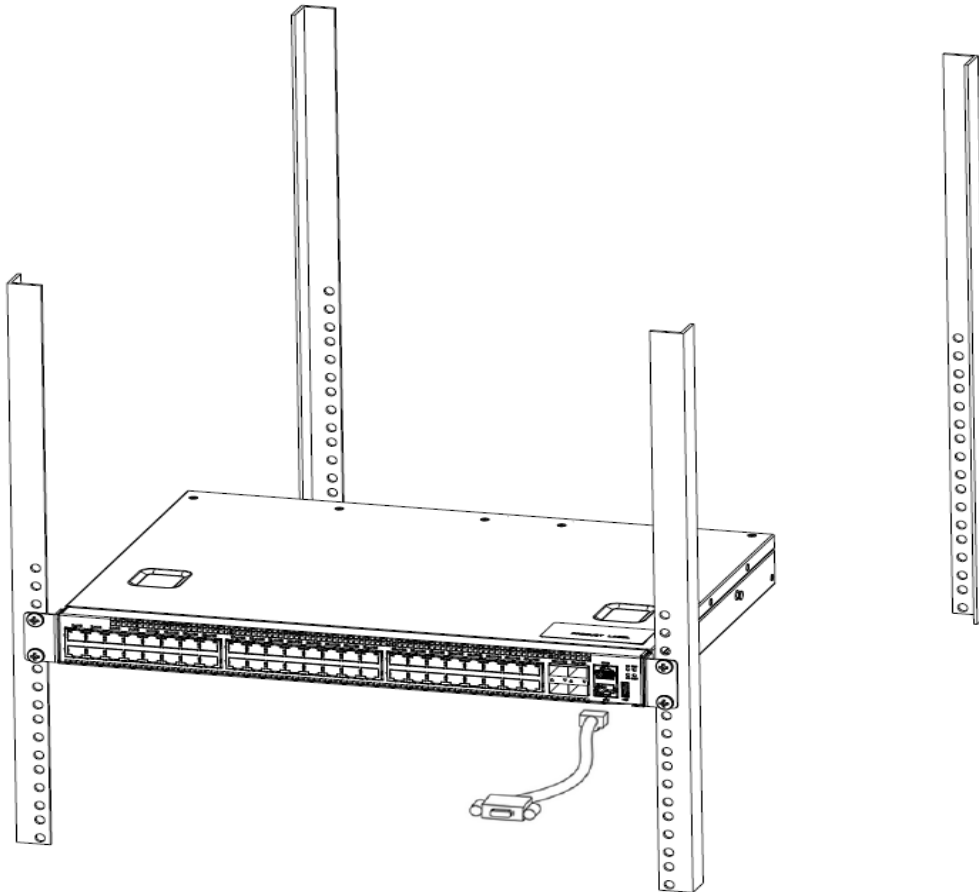
Caution! The sheet metal edge of fan is thin, please watch your fingers when you pinch, press, insert and pull it.

WARNING! - Hazardous moving parts. Keep away from moving fan blades.

Connecting the Console

SSE-G3648B/BR switches include a serial console port.

Figure 4-4: Connecting a Console to the SSE-G3648B/BR Switches



The connection procedure is listed below:

1. Find the console cable provided in the accessory kit. Attach the console cable end to the console port of the switch.
2. Connect the other side of the console cable to a character terminal (PC).
3. Power on the switch and the character terminal. Configure the switch through the character terminal.

SFP/SFP+ Transceiver Installation

SSE-G3648B/BR switches provide forty-eight RJ45 connector slots and four SFP+ ports.

The procedure for installing an SFP+ transceiver is shown below:

1. Put on a ESD wrist strap (or antistatic gloves)
2. Insert the SFP+ transceiver to the guide rail inside the SFP+ port. Do not insert the SFP+ transceiver upside-down.
3. Push the SFP+ transceiver along the guide rail gently until you feel the transceiver snap into place at the bottom of the SFP+ port.

Note: the SFP+ transceiver is hot swappable.

Caution! Do not stare directly at the 2 fiber bore in the SFP transceiver when the switch is in operation, otherwise the laser may damage your eyes.

Copper Cable/Fiber Cable Connection

Copper cables should be connected as below:

1. Insert one end of the Ethernet cable to the RJ-45 Ethernet port in the switch copper port;
2. Insert the other end of the Ethernet cable to the RJ-45 Ethernet port of other device;
3. Check all status indicators for the corresponding ports; a lighted LED indicates that the link has been established, otherwise the link is not ready and the cable should be examined.

Caution! Please verify the label above the port to ensure you are using the right port. Connecting to wrong ports might damage the switch.

Fiber cables should be connected as described below:

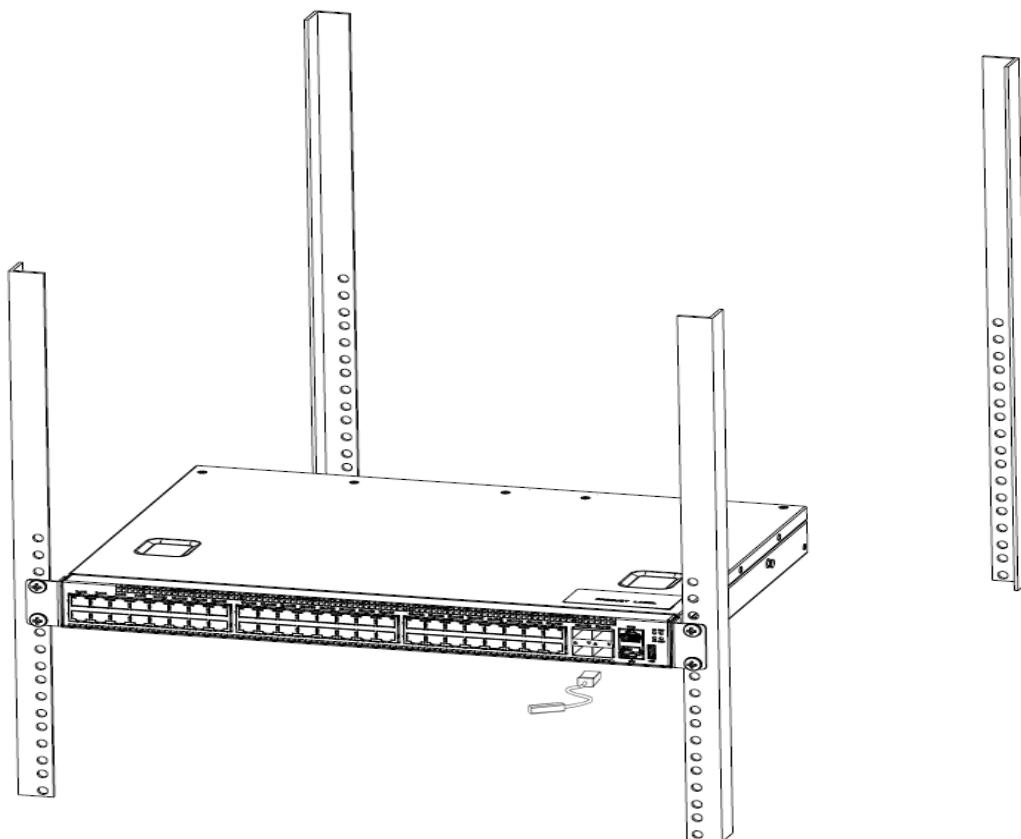
1. Remove the protective plug from the SFP+ fiber transceiver bore; Remove the protective cap from one end of the fiber cable. Keep the fiber end clean and neat.
2. Attach one end of the fiber cable to the SFP+ transceiver, and attach the other end to the transceiver of the corresponding devices.

Note: The SFP+ transceiver's TX port should be connected to the RX port of the corresponding device, and vice versa.

3. Check the fiber port status indicator, a lighted LED indicates that the link has been established; otherwise the link is not ready and should be examined.

Caution! Please verify the label above the port to ensure you are using the correct port. Connecting to wrong ports might damage the transceiver or the other ports. When connecting other devices through a fiber cable to the switch, the output power of the fiber cable must not exceed the maximum received power of the corresponding modules. Otherwise, it will damage the fiber transceiver. Do not stare at the fiber bore when the switch is in operation. That may damage your eyes.

Figure 4-5: Connect the DAC Cable to SSE-G3648B/BR Switch



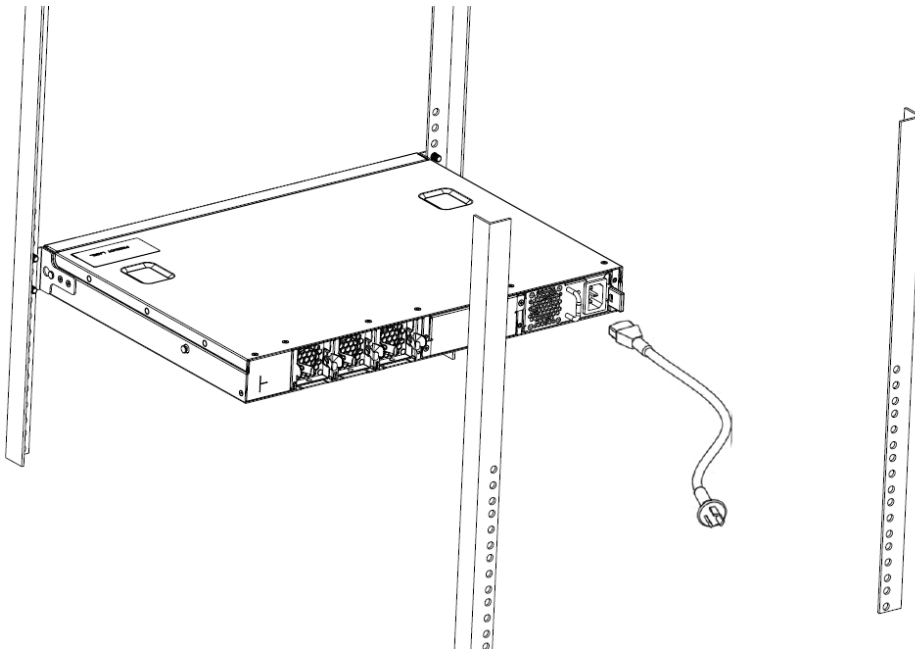
The connection approach of DAC cable is below:

1. Connect the end of the DAC cable into the SFP+ port of the SSE-G3648B/BR switch.
2. Check the indicator light state of the light port. If the LINK light is bright, it means the link is connected. If LINK light is out, it means the lines have a fault - please check the line connection.

AC Power Supply Connection

SSE-G3648B/BR series switches use 220/110VAC power supply by default. Please read the power input specification for detailed information.

Figure 4-6: Connecting the Power Supply Cable to the SSE-G3648B/BR Switch



The AC Power supply connection procedure is described as below:

1. Insert one end of the power cable provided in the accessory kit into the power source socket, and the other end to the power socket (with overload and leakage protection) in the switch power supply.
2. Check the power status indicator in the front panel of the switch. The corresponding PWR indicator should light. The SSE-G3648B/BR self-adjusts to the input voltage. As soon as the input voltage is in the range printed on the switch surface, the switch will
3. **When the switch is powered on, it executes a self-test procedure and starts up.**

Caution! The input voltage must be within the required range, otherwise the switch can be damaged or malfunction. Do not open the switch shell without permission. It can cause physical injury.

Disconnect all power supply cords before servicing.

Checking the Switch

- Does the power used correspond to the power on the label?
- Is the ground cable is connected?
- Is the Console cable connected to power cable correctly?
- If there are outside cables, please ensure they cable is well connected to lightning protection devices.