Catalyst 3550 Multilayer Switch Hardware Installation Guide

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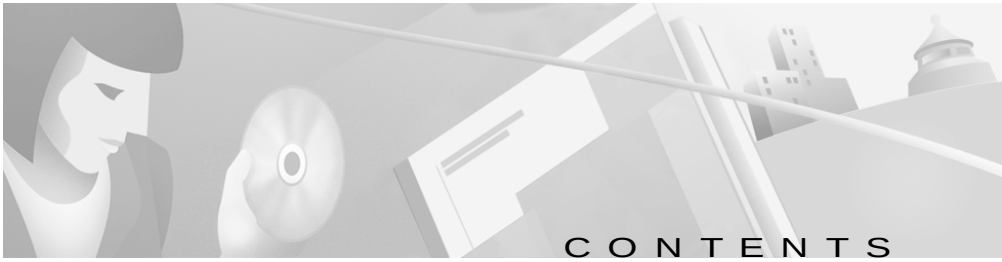
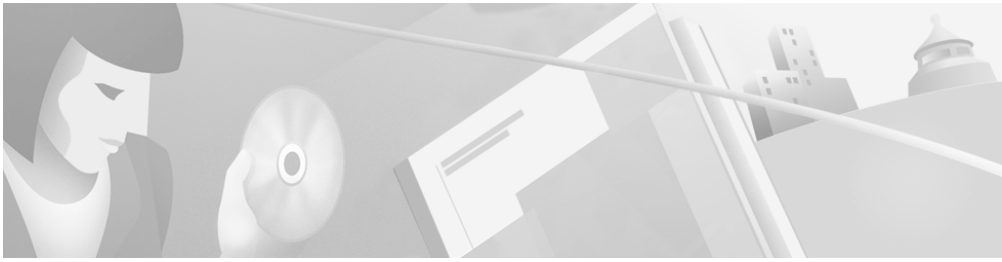


APPENDIX C



Preface

Audience

This guide is for the networking or computer technician responsible for installing a Catalyst 3550 multilayer switch. We assume that you are familiar with the concepts and terminology of Ethernet and local area networking.

Purpose

This guide documents the hardware features of the Catalyst 3550 multilayer switch. It describes the physical and performance characteristics of the switch, explains how to install a switch, and provides troubleshooting information.

This guide does not describe system messages you might encounter or how to configure your switch. For more information, refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide*, the *Catalyst 3550 Multilayer Switch Command Reference*, and the *Catalyst 3550 Multilayer Switch System Message Guide*. For information about the standard IOS Release 12.1 commands, refer to the IOS documentation set available from the Cisco.com home page at **Service and Support > Technical Documents > Documentation Home Page > Cisco IOS Software Configuration > Cisco IOS Release 12.1**.

Organization

This guide is organized into these chapters:

Chapter 1, "Product Overview," is a physical and functional overview of the switch. It describes the switch ports, the standards they support, and the switch LEDs.

Chapter 2, "Installing and Starting the Switch," contains the procedures for installing a switch in a rack, on a table, or shelf. It also describes installing Gigabit Interface Converter (GBIC) modules, how to power the switch, and how to make port connections.

Chapter 3, "Troubleshooting," describes how to identify and resolve some of the problems that might arise when installing the switch.

Appendix A, "Technical Specifications," lists the physical and environmental specifications for the switch and the regulatory agency approvals.

Appendix B, "Connector and Cable Specifications," describes the connectors, cables, and adapters that can be used to connect to the switch.

Appendix C, "Translated Safety Warnings," contains translations in various languages of the warnings in this guide.

Conventions

This document uses these conventions and symbols for notes, cautions, and warnings:

Note Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

Caution Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

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. To see translations of the warnings that appear in this publication, refer to Appendix C, "Translated Safety Warnings."**

Waarschuwing **Dit waarschuwingssymbool 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 elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van standaard maatregelen om ongelukken te voorkomen. (Voor vertalingen van de waarschuwingen die in deze publicatie verschijnen, kunt u het aanhangsel C "Translated Safety Warnings" (Vertalingen van veiligheidsvoorschriften) raadplegen.)**

Varoitus **Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista. (Tässä julkaisussa esiintyvien varoitusten käännökset löydät liitteestä C "Translated Safety Warnings" (käännetyt turvallisuutta koskevat varoitukset).**

Attention **Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures. Avant d'accéder à cet équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures courantes de prévention des accidents. Pour obtenir les traductions des mises en garde figurant dans cette publication, veuillez consulter l'annexe intitulée C « Translated Safety Warnings » (Traduction des avis de sécurité).**

Warnung **Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt. (Übersetzungen der in dieser Veröffentlichung enthaltenen Warnhinweise finden Sie im Anhang mit dem Titel C “Translated Safety Warnings” (Übersetzung der Warnhinweise).)**

Avvertenza **Questo simbolo di avvertenza indica un pericolo. Si è in una situazione che può causare infortuni. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti. La traduzione delle avvertenze riportate in questa pubblicazione si trova nell’appendice C, “Translated Safety Warnings” (Traduzione delle avvertenze di sicurezza).**

Advarsel **Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du være oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker. (Hvis du vil se oversettelser av de advarslene som finnes i denne publikasjonen, kan du se i vedlegget C "Translated Safety Warnings" [Oversatte sikkerhetsadvarsler].)**

Aviso **Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos fisicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes. (Para ver as traduções dos avisos que constam desta publicação, consulte o apêndice C “Translated Safety Warnings” - “Traduções dos Avisos de Segurança”).**

¡Advertencia! **Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes. (Para ver traducciones de las advertencias que aparecen en esta publicación, consultar el apéndice titulado C "Translated Safety Warnings.")**

Varning! **Denna varningssymbol signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanligt förfarande för att förebygga skador. (Se förklaringar av de varningar som förekommer i denna publikation i appendix C "Translated Safety Warnings" [Översatta säkerhetsvarningar].)**

Related Publications

You can order printed copies of documents with a DOC-xxxxxx= number. For more information, see the "Ordering Documentation" section on page xv.

These publications provide more information about the switch:

- Catalyst 3550 Multilayer Switch Software Documentation CD.

  This CD is shipped with the switch and contains these documents:

  - *Catalyst 3550 Multilayer Switch Software Configuration Guide*, (order number DOC-7811194=).
  - *Catalyst 3550 Multilayer Switch Command Reference*, (order number DOC-7811195=).
  - *Catalyst 3550 Multilayer Switch System Message Guide*, (order number DOC-7811196=).
  - *Catalyst 3550 Multilayer Switch Hardware Installation Guide*, (order number DOC-7811358=).

- Cluster Management Suite online help, embedded within the switch flash memory, provides detailed procedures for using a web browser to change the configuration settings and to display switch information. Online help also provides detailed information about the fields on each window.
- *Release Notes for the Catalyst 3550 Multilayer Switch, Cisco IOS Release 12.1(4)EA1*.

Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- http://www.cisco.com
- http://www-china.cisco.com
- http://www-europe.cisco.com

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Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

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Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:

  http://www.cisco.com/cgi-bin/order/order_root.pl

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

  http://www.cisco.com/go/subscription

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

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You can e-mail your comments to bug-doc@cisco.com.

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Obtaining Technical Assistance

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To access Cisco.com, go to the following website:

http://www.cisco.com

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

http://www.cisco.com/register/

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1(P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

Product Overview

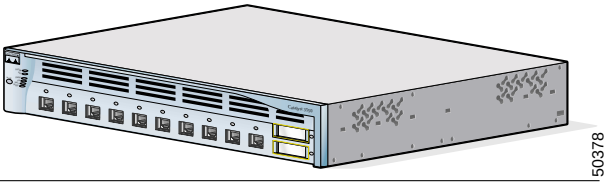
The Catalyst 3550 multilayer switch—also referred to as a Catalyst 3550 switch—is a stackable Ethernet switch to which you can connect workstations, Cisco IP Phones, and other network devices such as servers, routers, and other switches. This switch also can be deployed as a backbone switch, aggregating Gigabit Ethernet traffic from other network devices.

This chapter provides a functional overview of the Catalyst 3550 switch. These topics are included:

Features

Figure 1-1 shows the Catalyst 3550 switch, and Table 1-1 lists the switch features.

Figure 1-1 Catalyst 3550 Switch

Switch	Description	
WS-C3550-12T	10 autosensing 10/100/1000 Ethernet ports 2 GBIC[1]-based Gigabit module slots	 50378

1. GBIC = Gigabit Interface Converter

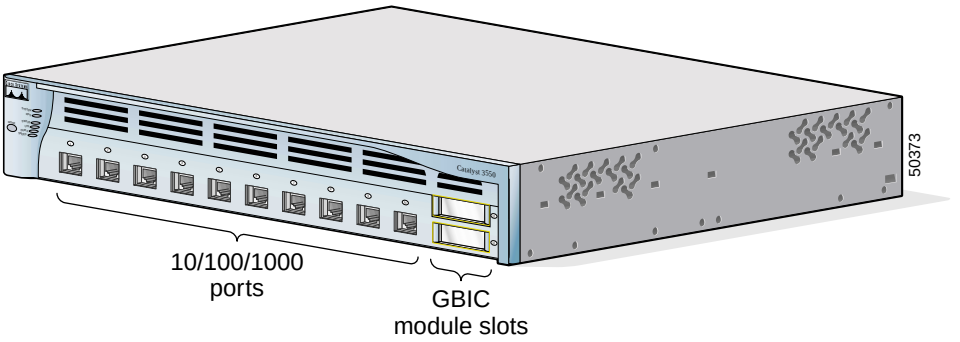
Table 1-1 Catalyst 3550 Features

Feature	Description
Hardware	• 10 Gigabit Ethernet 10/100/1000BASE-T ports and 2 GBIC-based Gigabit Ethernet slots • Support for GBIC modules – 1000BASE-SX GBIC – 1000BASE-LX/LH GBIC – 1000BASE-ZX GBIC – 1000BASE-T GBIC – GigaStack GBIC
Configuration	• Support for Layer 3 features • Autonegotiation of speed and duplex operation on 10/100/1000 Ethernet ports • Support for up to 12,000 MAC addresses • Checks for errors on a received packet, determines the destination port, stores the packet in shared memory, and then forwards the packet to the destination port
Power Redundancy	• Connection for optional Cisco RPS 300 Redundant Power System that operates on AC input and supplies backup DC output to the switch

Front-Panel Description

The front panel of the Catalyst 3550 switch has ten 10/100/1000 RJ-45 ports, two GBIC module slots, a set of LEDs, and a Mode button. (See Figure 1-2 and Figure 1-3). The 10/100/1000 ports are numbered 1 through 10 (port 1 is on the far left), and the GBIC slot numbers are 11 (top) and 12 (bottom).

Figure 1-2 Catalyst 3550 Front Panel



10/100/1000 Ports

The 10/100/1000 switch ports on the Catalyst 3550 can be explicitly set to operate in any combination of half duplex, full duplex, 10 Mbps, 100 Mbps, or 1000 Mbps. These ports also can be set for speed and duplex autonegotiation, compliant with IEEE 802.3ab. (The default setting is autonegotiate.) When set for autonegotiation, the port senses the speed and duplex settings of the attached device and advertises its own capabilities. If the connected device also supports autonegotiation, the switch port negotiates the best connection (that is, the fastest line speed that both devices support and full-duplex transmission if the attached device supports it) and configures itself accordingly. In all cases, the attached device must be within 100 meters.

Note 100BASE-TX and 1000BASE-T traffic requires Category 5 cable. 10BASE-T traffic can use Category 3 or 4 cables.

When connecting the switch to workstations, servers, routers, and Cisco IP Phones, be sure that the cable is a straight-through, twisted-pair cable. When connecting the switch to switches or hubs, use a crossover cable. Pinouts for the cables are described in Appendix B, "Connector and Cable Specifications."

GBIC Module Slots

The GBIC module slots support these modules to provide flexibility in media and distance options:

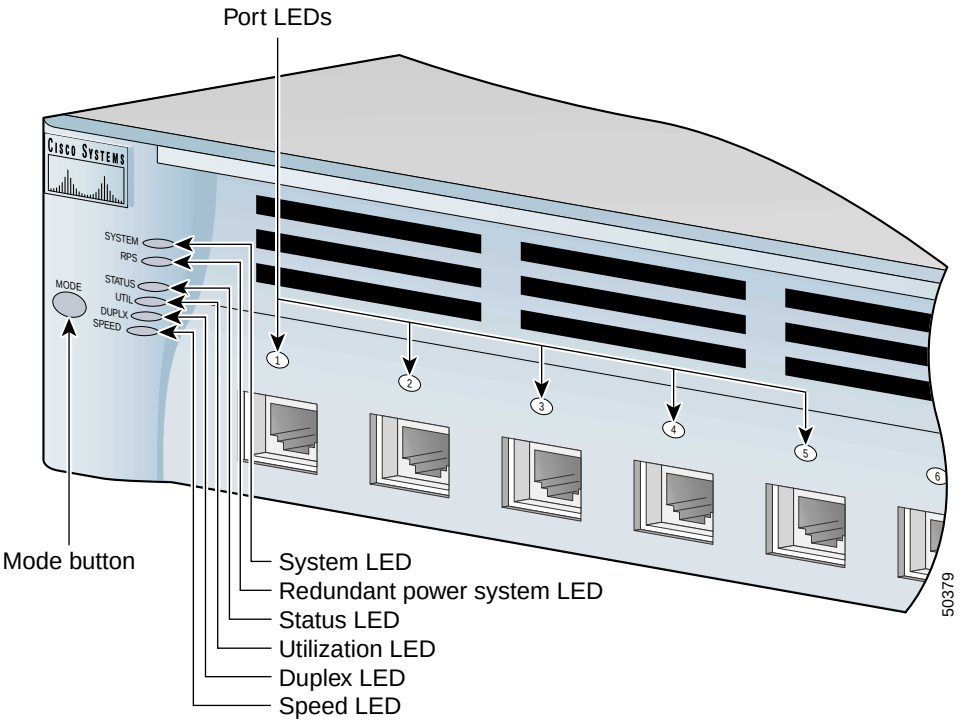
- 1000BASE-SX GBIC module for fiber-optic connections of up to 550 meters.
- 1000BASE-LX/LH GBIC module for fiber-optic connections of up to 10 kilometers.
- 1000BASE-ZX GBIC module for fiber-optic connections of up to 100 kilometers.
- 1000BASE-T GBIC module for copper connections of up to 100 meters.
- GigaStack GBIC module for creating a 1-Gbps stack configuration of up to nine supported switches. The GigaStack GBIC supports one full-duplex link (in a point-to-point configuration) or up to nine half-duplex links (in a stack configuration) to other Gigabit Ethernet devices. Using the required Cisco proprietary signaling and cabling, the maximum distance for a GigaStack GBIC-to-GigaStack GBIC connection is 1 meter. Refer to your GigaStack GBIC documentation for more information on supported switches.

LEDs

You can use the switch LEDs described in this section to monitor switch activity and its performance. Figure 1-3 shows the location of the LEDs and the Mode button that you use to select one of the port modes.

All of the LEDs described in this section except the utilization meter (UTL) are visible on the Cluster Management Suite (CMS) home page. The *Catalyst 3550 Multilayer Switch Software Configuration Guide* describes how to use CMS to monitor and configure individual switches and switch clusters.

Figure 1-3 Catalyst 3550 LEDs



System LED

The System LED shows whether the system is receiving power and is functioning properly. Table 1-2 lists the LED colors and their meanings.

Table 1-2 System LED

Color	System Status
Off	System is not powered on.
Green	System is operating normally.
Amber	System is receiving power but is not functioning properly.

For information on the System LED colors during POST, see the "Powering On the Switch and Running POST" section on page 2-17.

RPS LED

The RPS LED shows the RPS status. Table 1-3 lists the LED colors and their meanings.

Table 1-3 RPS LED

Color	RPS Status
Off	RPS is off or not properly connected.
Solid green	RPS is connected and ready to provide back-up power, if required.
Flashing green	RPS is connected but is unavailable because it is providing power to another device (redundancy has been allocated to a neighboring device).
Solid amber	The RPS is in standby mode or in a fault condition. Press the Standby/Active button on the RPS, and the LED should turn green. If it does not, one of these two conditions could exist: • One of the RPS power supplies could be down. Contact Cisco Systems. • The RPS fan could have failed. Contact Cisco Systems.
Flashing amber	The internal power supply in a switch has failed, and the RPS is providing power to the switch (redundancy has been allocated to this device).

For more information about the Cisco RPS 300, refer to the *Cisco RPS 300 Redundant Power System Hardware Installation Guide*.

Port LEDs and Modes

Each 10/100/1000 port and GBIC module slot has a port LED. These port LEDs, as a group or individually, display information about the switch and about the individual ports. The port modes determine the type of information displayed through the port LEDs. Table 1-4 lists the mode LEDs and their associated port mode and meaning.

To select or change a mode, press the Mode button until the desired mode is highlighted. When you change port modes, the meaning of the port LED colors also change. Table 1-5 explains how to interpret the port LED colors in different port modes.

Table 1-4 Port Mode LEDs

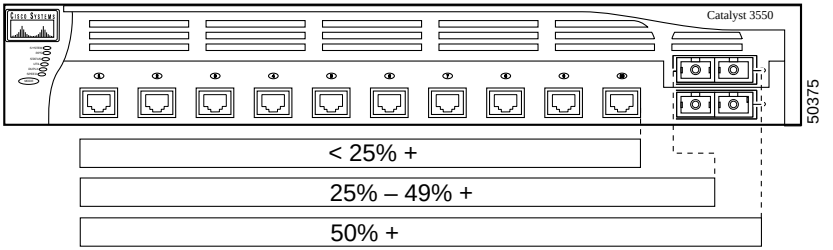
Mode LED	Port Mode	Description
STAT	Port status	The port status. This is the default mode.
UTL	Switch utilization	The current bandwidth in use by the switch.
DUPLX	Port duplex mode	The port duplex mode: full duplex or half duplex.
SPEED	Port speed	The port operating speed: 10, 100, or 1000 Mbps.

Table 1-5 Meaning of LED Colors in Different Modes on the Catalyst 3550 Switch

Port Mode	LED Color	Meaning
STAT (port status)	Off	No link.
	Solid green	Link present.
	Flashing green	Activity. Port is transmitting or receiving data.
	Alternating green-amber	Link fault. Error frames can affect connectivity, and errors such as excessive collisions, CRC errors, and alignment and jabber errors are monitored for a link-fault indication.
	Solid amber	Port is not forwarding. Port was disabled by management or an address violation or was blocked by Spanning Tree Protocol (STP). **Note** After a port is reconfigured, the port LED can remain amber for up to 30 seconds as STP checks the switch for possible loops.
UTL (utilization)	Green	The port LEDs display backplane utilization on a logarithmic scale. See Figure 1-4 for details.
	Amber	The peak total backplane utilization over the last 24 hours.
DUPLX (duplex)	Off	Port is operating in half duplex.
	Green	Port is operating in full duplex.
SPEED	**10/100/1000 ports**	
	Off	Port is operating at 10 Mbps.
	Green	Port is operating at 100 Mbps.
	Flashing green	Port is operating at 1000 Mbps.
	GBIC ports	
	Off	Port is not operating.
	Flashing green	Port is operating at 1000 Mbps.

Figure 1-4 shows the bandwidth utilization percentages displayed by the right-most LEDs.

Figure 1-4 Bandwidth Utilization for the Catalyst 3550 Switch

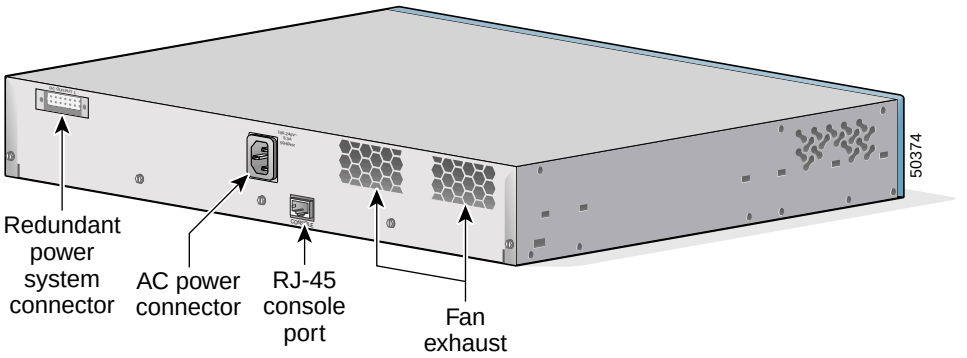


If all port LEDs on the switch are green, the switch is using 50 percent or more of its total bandwidth. If port LEDs 1 through 11 are green, the switch is using between 25 and 50 percent of its total bandwidth. If port LEDs 1 through 10 are green, the switch is using 12.5 to 25 percent of its total bandwidth capacity, and so on. Amber LEDs provide an indication of peak total bandwidth of the switch over the last 24 hours.

Rear-Panel Description

Switch rear panels have an AC power connector, an RPS connector, and an RJ-45 console port, which are described in this section. (See Figure 1-5.)

Figure 1-5 Catalyst 3550 Rear Panel



Power Connectors

The switch is powered through the internal power supply. You can also connect the Cisco RPS 300 Redundant Power System to provide backup power if the switch internal power supply should fail.

Note The Catalyst 3550 switch and the Cisco RPS 300 should be connected to the same AC power source.

Internal Power Supply Connector

The internal power supply is an autoranging unit that supports input voltages between 100 and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet.

Cisco RPS Connector

The Cisco RPS 300 (model PWR300-AC-RPS) supports the Catalyst 3550 switch. The Cisco RPS 300 has two output levels: –48V and 12V with a total maximum output power of 300W. Use the supplied RPS connector cable to connect the RPS to the switch.

Warning **Attach only the Cisco RPS 300 (model PWR300-AC-RPS) to the RPS receptacle.**

The RPS is a redundant power system that can support six external network devices and provides power to one failed device at a time. It automatically senses when the internal power supply of a connected device fails and provides power to the failed device, preventing loss of network traffic. For more information on the Cisco RPS 300, refer to the *Cisco RPS 300 Redundant Power System Hardware Installation Guide*.

Console Port

You can connect a Catalyst 3550 switch to a PC by means of the console port and the supplied rollover cable and DB-9 adapter. If you want to connect the switch console port to a terminal, you need to provide a RJ-45-to-DB-25 female DTE adapter. You can order a kit (part number ACS-DSBUASYN=) containing that adapter from Cisco. For console port and adapter pinout information, see the "Cable and Adapter Specifications" section on page B-4.

Management Options

The Catalyst 3550 switch offers several management options:

- Cluster Management Suite

  CMS is a graphical user interface that can be launched from anywhere in your network through a web browser such as Netscape Communicator or Microsoft Internet Explorer. CMS is already installed on the switch, and no additional installation is required. From CMS, you can fully configure and monitor a switch or switch clusters, display network topologies to gather link information, and display switch images to modify switch- and port-level settings. For more information, refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide*, the *Release Notes for the Catalyst 3550 Multilayer Switch, Cisco IOS Release 12.1(4)EA1*, and the online help for this application.

- Cisco IOS command-line interface (CLI)

  The switch CLI is based on Cisco IOS software and is enhanced to support desktop-switching features. You can fully configure and monitor the switch and switch cluster members from the CLI. You can access the CLI either by connecting your management station directly to the switch console port or by using Telnet from a remote management station. Connect a PC or terminal directly to the console port, located on the rear panel of the switch, to access the CLI. If the switch is connected to your network, you can use a Telnet connection to manage the switch from a remote location. Refer to the *Catalyst 3550 Multilayer Switch Command Reference* for more information.

- CiscoView application

  The CiscoView device-management application displays the switch image that you can use to set configuration parameters and to view switch status and performance information. The CiscoView application, which you purchase separately, can be a standalone application or part of a Simple Network Management Protocol (SNMP) platform. Refer to the CiscoView documentation for more information.

- SNMP network management

  You can manage switches from a SNMP-compatible management station that is running platforms such as HP OpenView or SunNet Manager. The switch supports a comprehensive set of Management Information Base (MIB) extensions and four Remote Monitoring (RMON) groups. Refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide*, and the documentation that came with your SNMP application for more information.

Network Configurations

Refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide* for network configuration concepts and examples of using the switch to create dedicated network segments and interconnecting the segments through Gigabit Ethernet connections.

CHAPTER 2

Installing and Starting the Switch

This chapter describes how to install and start your Catalyst 3550 switch, make connections to the switch, and how to interpret the power-on self-test (POST) that ensures proper operation. Read the topics and perform the procedures in the order that they are presented:

Preparing for Installation

Warnings

These warnings are translated into several languages in Appendix C, "Translated Safety Warnings."

Warning **This equipment is to be installed and maintained by service personnel only as defined by AS/NZS 3260 Clause 1.2.14.3 Service Personnel.**

Warning **Only trained and qualified personnel should be allowed to install or replace this equipment.**

Warning **Read the installation instructions before you connect the system to its power source.**

Warning **Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.**

Warning **Do not stack the chassis on any other equipment. If the chassis falls, it can cause severe bodily injury and equipment damage.**

Warning **The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.**

Warning **To prevent the switch from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 113°F (45°C). To prevent airflow restriction, allow at least 3 inches (7.6 cm) of clearance around the ventilation openings.**

Warning **The device is designed to work with TN power systems.**

Warning **When installing the unit, the ground connection must always be made first and disconnected last.**

Warning **This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 16A international) is used on the phase conductors (all current-carrying conductors).**

Warning **This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.**

Warning **Care must be given to connecting units to the supply circuit so that wiring is not overloaded.**

Warning **Unplug the power cord before you work on a system that does not have an on/off switch.**

Warning **Do not touch the power supply when the power cord is connected. For systems with a power switch, line voltages are present within the power supply even when the power switch is off and the power cord is connected. For systems without a power switch, line voltages are present within the power supply when the power cord is connected.**

Warning **Do not work on the system or connect or disconnect cables during periods of lightning activity.**

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

Warning **Attach only the Cisco RPS (model PWR300-AC-RPS) to the RPS receptacle.**

EMC Regulatory Statements

U.S.A.

U.S. regulatory information for this product is in the front matter of this manual.

Taiwan

警告使用者：
這是甲類的資訊產品，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的對策。

15456

Hungary

This equipment is a class A product and should be used and installed properly according to the Hungarian EMC Class A requirements (MSZEN55022). Class A equipment is designed for typical commercial establishments for which special conditions of installation and protection distance are used.

Figyelmeztetés a felhasználói kézikönyv számára:
Ez a berendezés “A” osztályú termék, felhasználására és üzembe helyezésére a magyar EMC “A” osztályú követelményeknek (MSZ EN 55022) megfeleloen kerülhet sor, illetve ezen “A” osztályú berendezések csak megfelelo kereskedelmi forrásból származhatnak, amelyek biztosítják a megfelelo speciális üzembe helyezési körülményeket és biztonságos üzemelési távolságok alkalmazását.

Site Requirements

When determining where to place the switch, be sure to observe these requirements:

- For 10/100/1000 ports, cable lengths from the switch to connected devices are up to 100 meters.
- For 1000BASE-X GBIC ports, cable lengths from the switch to the connected devices are up to 100 kilometers. For specific cable lengths, refer to the GBIC documentation.
- For 1000BASE-T GBIC ports, cable lengths from the switch to the connected devices are up to 100 meters. For specific cable lengths, refer to the GBIC documentation.
- For GigaStack GBIC ports, cable lengths from the switch to the connected devices are up to 1 meter. For specific cable lengths, refer to the GigaStack GBIC documentation.
- Operating environment is within the ranges listed in Appendix A, “Technical Specifications.”

- Clearance to front and rear panels is such that
  - Front-panel indicators can be easily read.
  - Access to ports is sufficient for unrestricted cabling.
  - Rear-panel power connector is within reach of an AC power receptacle.
- Airflow around the switch and through the vents is unrestricted.
- Temperature around the unit does not exceed 113°F (45°C).

Note If the switch is installed in a closed or multirack assembly, the temperature around it might be greater than normal room temperature.

- Cabling is away from sources of electrical noise, such as radios, power lines, and fluorescent lighting fixtures.

Verifying Package Contents

Note Carefully remove the contents from the shipping container, and check each item for damage. If any item is missing or damaged, contact your Cisco representative or reseller for support. Return all packing materials to the shipping container, and save it.

The switch is shipped with these items:

- This *Catalyst 3550 Multilayer Switch Hardware Installation Guide*
- *Release Notes for the Catalyst 3550 Multilayer Switch, Cisco IOS Release 12.1(4)EA1*
- Catalyst 3550 Multilayer Switch Documentation CD-ROM
- Cisco Documentation CD-ROM
- AC power cord
- Mounting kit containing:
  - Four rubber feet for mounting the switch on a table
  - Two 19-inch mounting brackets
  - Four Phillips flat-head screws for attaching the brackets to the switch
  - Four Phillips machine screws for attaching the brackets to a rack
  - One cable guide and one black Phillips machine screw for attaching the cable guide to one of the mounting brackets
- One RJ-45-to-RJ-45 rollover cable
- One RJ-45-to-DB-9 female adapter
- Cisco Information Packet, containing warranty, safety, and support information

Installing the Switch

These sections describe the steps required to install the switch in a rack or on a table or shelf.

Rack Mounting

Warning **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.

To install the switch in a 19-inch or a 24-inch standard rack, follow the instructions described in these procedures:

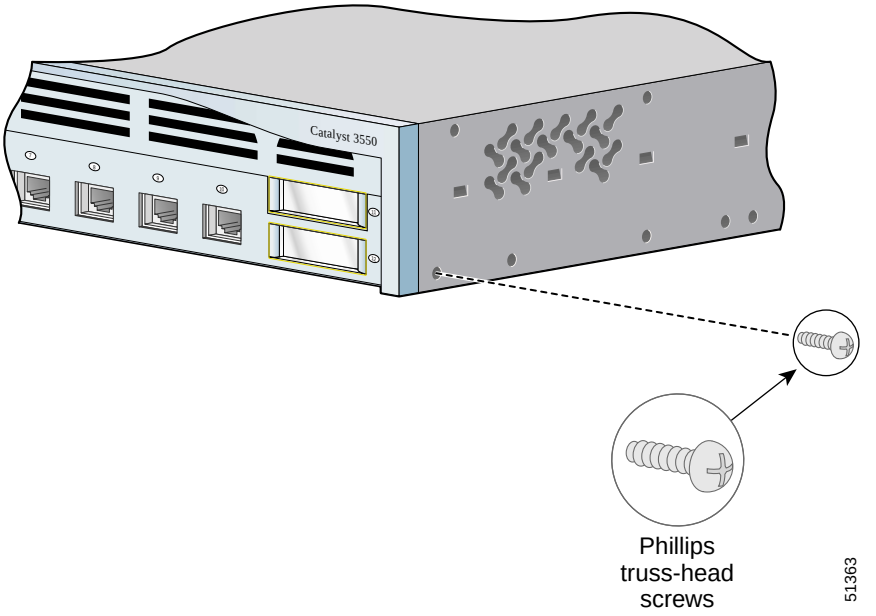
- Removing the Screws from the Switch, page 2-9
- Attaching the Brackets to the Switch, page 2-9
- Mounting the Switch in a Rack, page 2-13
- Attaching the Optional Cable Guide, page 2-14

Note Installing the Catalyst 3550 switch in a 24-inch rack requires an optional bracket kit not included with the switch. You can order a kit (part number RCKMNT-3550-1.5RU=) containing the optional brackets and hardware from Cisco.

Removing the Screws from the Switch

If you plan to install the switch in a rack, you must first remove the front side screws in the switch chassis so that the mounting brackets can be attached. Figure 2-1 shows how to remove a chassis screw from a Catalyst 3550 switch.

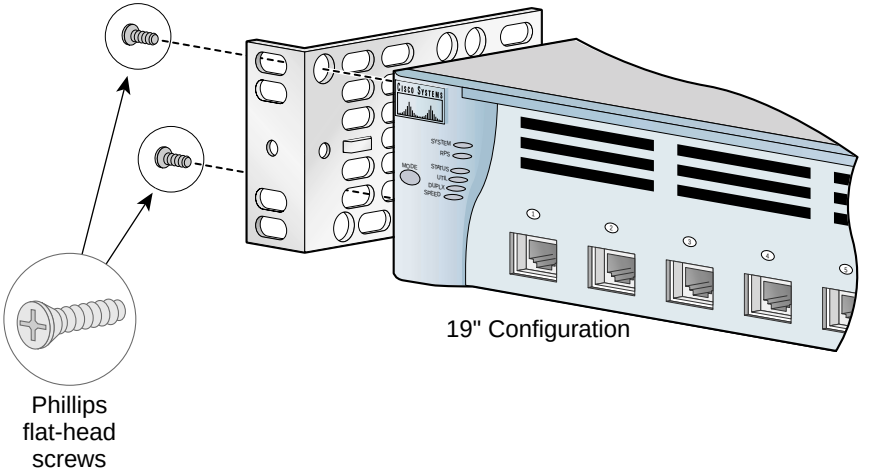
Figure 2-1 Removing Screws from the Catalyst 3550 Switch



Attaching the Brackets to the Switch

The bracket orientation and the brackets you use depend on whether you are attaching the brackets for a 19-inch or a 24-inch rack. For 19-inch racks, use bracket part number 700-11523-01; for 24-inch racks, use bracket part number 700-12398-01. Figure 2-2, Figure 2-3, and Figure 2-4 show how to attach each type bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side.

Figure 2-2 Attaching Brackets for 19- and 24-Inch Racks (Front Panel Forward)



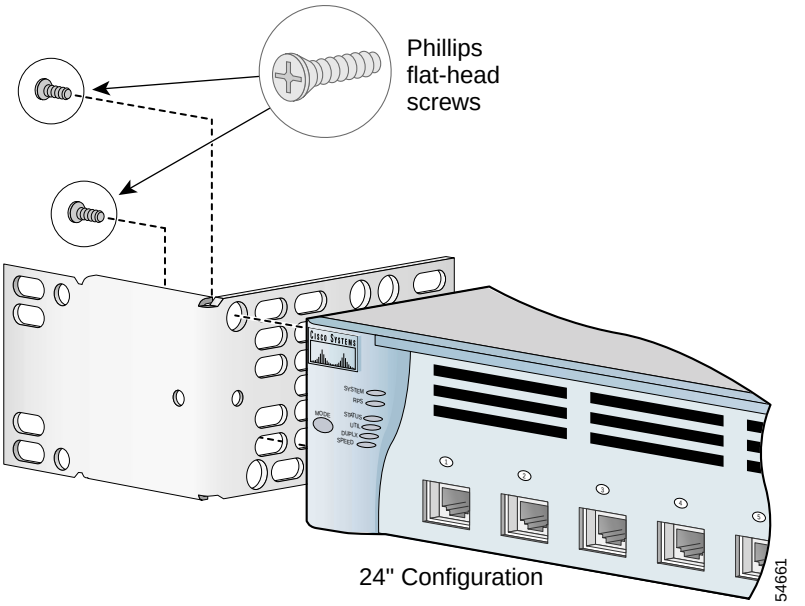


Figure 2-3 Attaching Brackets for 19- and 24-Inch Racks (Rear Panel Forward)

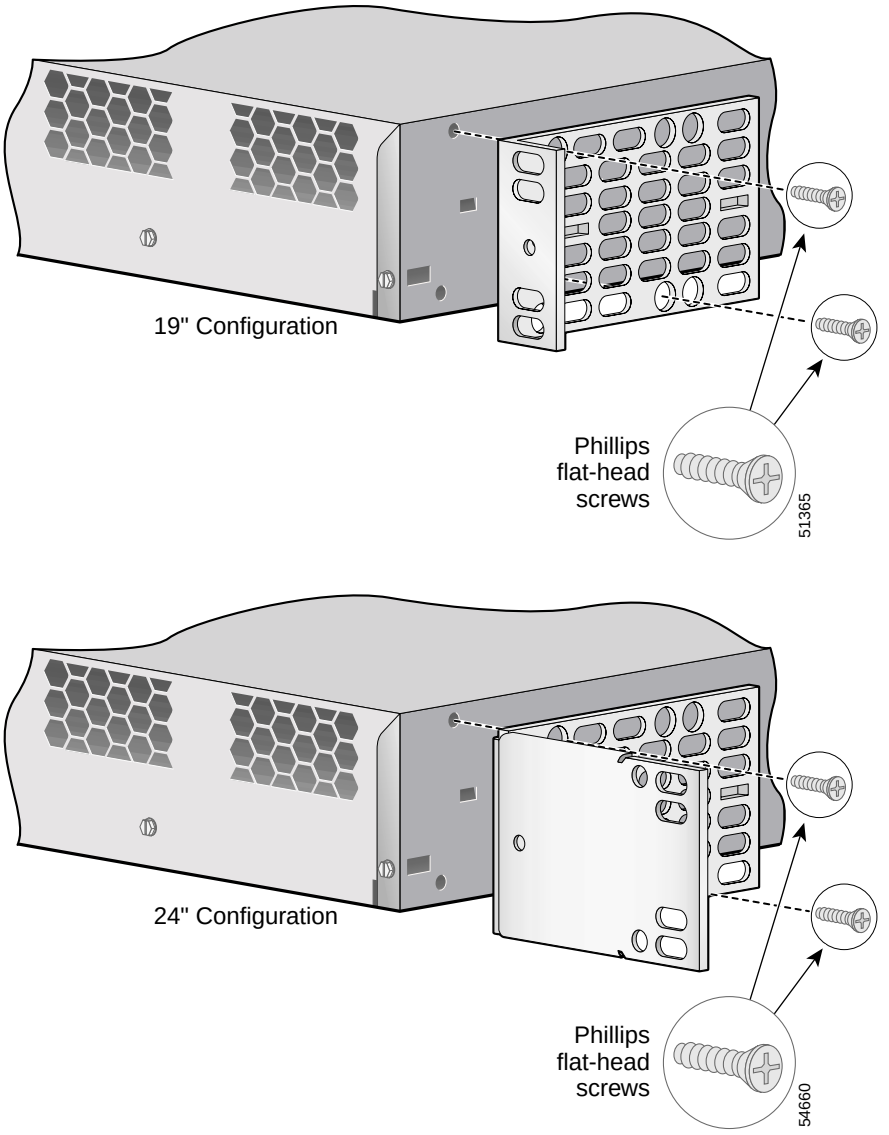
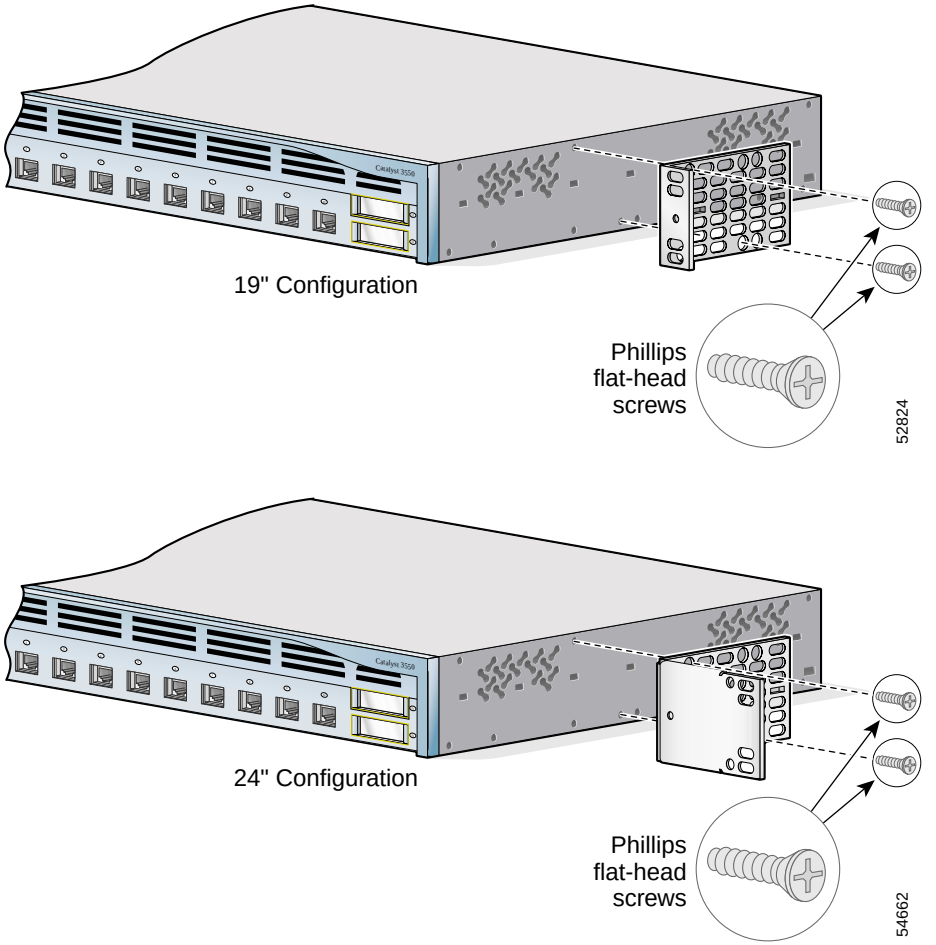


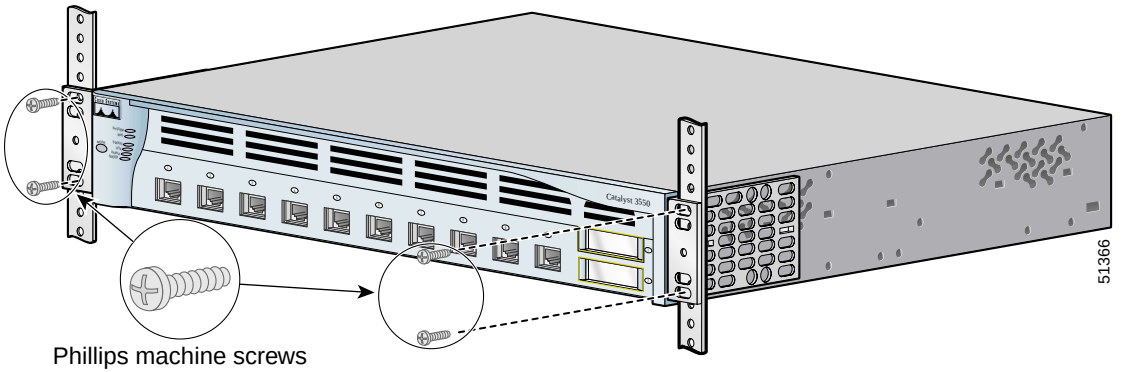
Figure 2-4 Attaching Brackets for 19- and 24-Inch Telco Racks



Mounting the Switch in a Rack

After the brackets are attached to the switch, use the four supplied number-12 Phillips machine screws to securely attach the brackets to the rack, as shown in Figure 2-5.

Figure 2-5 Mounting the Switch in a Rack



After the switch is mounted in the rack, see the "Attaching the Optional Cable Guide" section on page 2-14 and the "Powering On the Switch and Running POST" section on page 2-17 to complete the installation.

Attaching the Optional Cable Guide

We recommend attaching the cable guide to prevent the cables from obscuring the front panel of the switch and the other devices installed in the rack. If the switch is in a 19-inch or 24-inch rack, use the supplied black screw, as shown in Figure 2-6, to attach the cable guide to the left or right bracket.

Figure 2-6 Attaching the Cable Guide

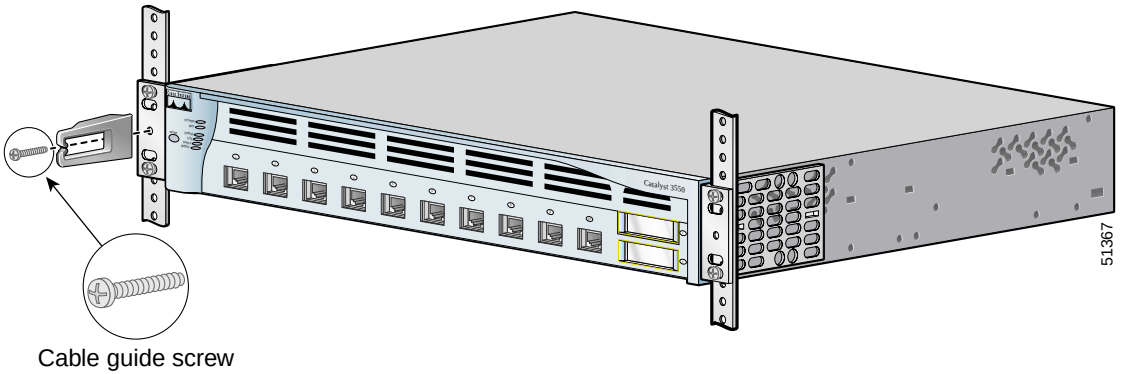


Table or Shelf Mounting

Follow these steps to install the switch on a table or shelf:

Step 1 Locate the adhesive strip with the rubber feet in the mounting-kit envelope. Attach the four rubber feet to the recessed areas on the bottom of the unit.

Step 2 Place the switch on the table or shelf near an AC power source.

After the switch is mounted on the table or shelf, see "Powering On the Switch and Running POST" section on page 2-17 to complete the installation.

Installing the GBIC Modules

Figure 2-7, Figure 2-8, and Figure 2-9 show how a GBIC module is inserted into a GBIC module slot on the switch. For detailed instructions on installing, removing, and cabling the GBICs (1000BASE-X module, 1000BASE-T module, or the GigaStack module), refer to your GBIC documentation.

Note GBIC modules are not factory-installed on this switch, but you can order GBIC modules separately.

Figure 2-7 Installing a 1000BASE-X GBIC Module in the Switch

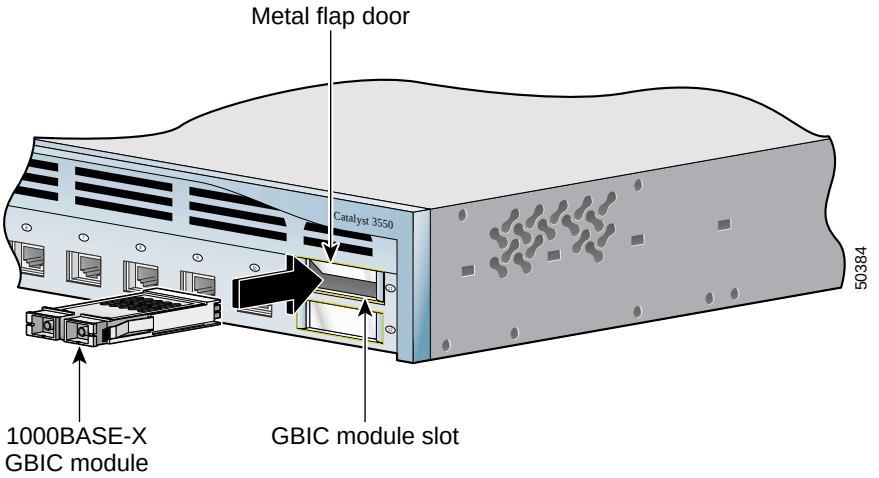


Figure 2-8 Installing a 1000BASE-T GBIC Module in the Switch

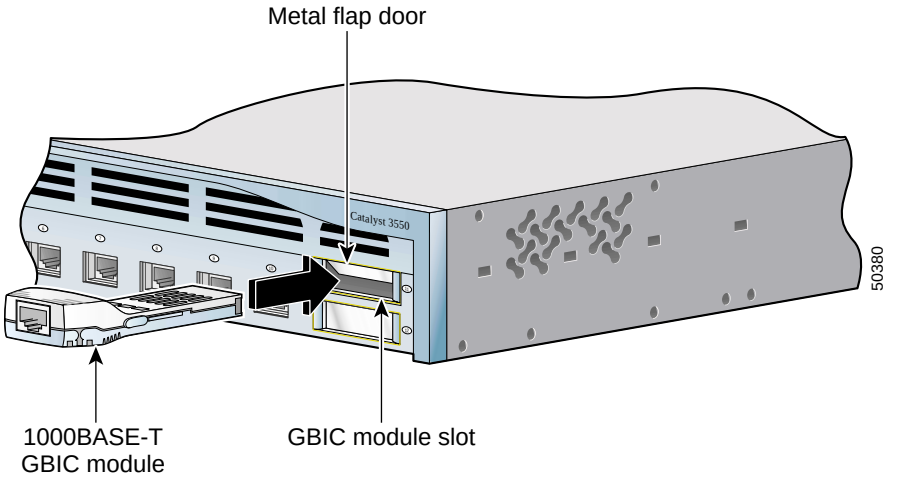
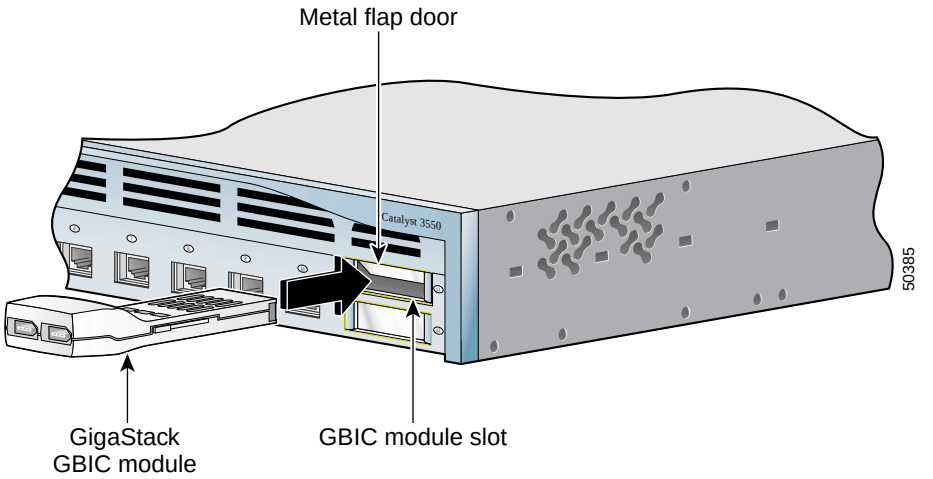


Figure 2-9 Installing a GigaStack GBIC Module in the Switch



Powering On the Switch and Running POST

If your configuration has an RPS, connect the switch and the RPS to the same AC power source. Also, see the "Power Connectors" section on page 1-10, and refer to the Cisco RPS documentation for more information.

Note Always put the RPS in standby mode when you are connecting devices to it and in active mode during normal operation.

To power on the switch, follow these steps:

Step 1 Make sure that you have started the terminal emulation software program (such as ProComm, HyperTerminal, tip, or minicom) from your management station.

Step 2 Connect one end of the AC power cord to the AC power connector on the switch.

Step 3 Connect the other end of the power cord to an AC power outlet.

As the switch powers on, it begins POST, a series of eight tests that run automatically to ensure that the switch functions properly. When the switch begins POST, the port LEDs turn amber for 2 seconds, and then they turn green. The System LED flashes green, and the RPS LED turns off. As each test runs, the port LEDs, starting with number 1, turn off. The remaining port LEDs each turn off in sequence as the system completes a test.

When POST completes successfully, the port LEDs return to the status mode display, indicating that the switch is operational. If a test fails, the port LED associated with the test turns amber, and the system LED turns amber. If POST fails, see Chapter 3, "Troubleshooting," to determine a course of action.

Connecting to the 10/100/1000 Ports

The switch 10/100/1000 Ethernet ports configure themselves to operate at the speed of attached devices. If the attached ports do not support autonegotiation, you can explicitly set the speed and duplex parameters.

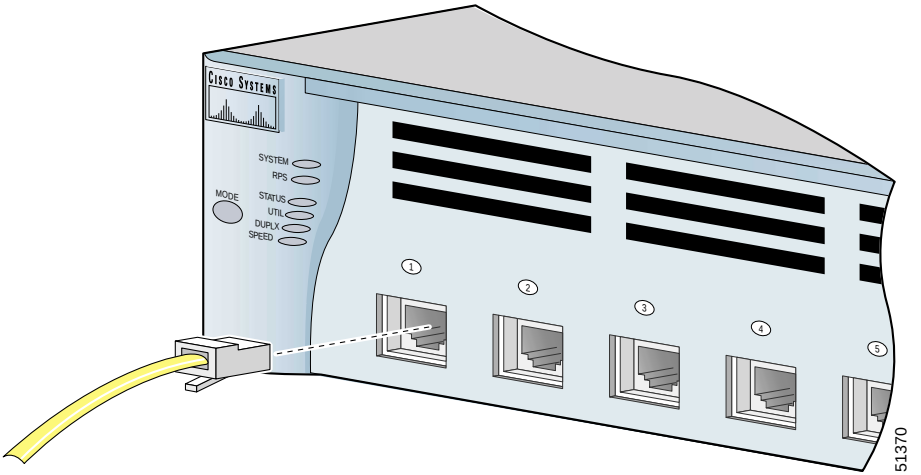
Connecting devices that do not autonegotiate or that have their speed and duplex parameters manually set can reduce performance or result in no linkage. To maximize performance, choose one of these methods for configuring the Ethernet ports:

- Let the ports autonegotiate both speed and duplex.
- Set the port speed and duplex parameters on both ends of the connection.

Follow these steps to connect to 10BASE-T, 100BASE-TX or 1000BASE-T devices:

Step 1 When connecting to workstations, servers, routers, and Cisco IP Phones, connect a straight-through Category 5 cable to an RJ-45 connector on the front panel. (See Figure 2-10.) When connecting to switches or repeaters, use a crossover Category 5 cable. Pinouts for the cables are described in the "Crossover and Straight-Through Cable Pinouts" section on page B-4.

Figure 2-10 Connecting to a 10/100/1000 Switch Port



Step 2 Connect the other end of the cable to an RJ-45 connector on the other device. The port LED comes on when both the switch and the connected device have established link.

The port LED is amber while Spanning Tree Protocol (STP) discovers the topology and searches for loops. This takes about 30 seconds, and then the port LED turns green.

If the port LED does not come on, the device at the other end might not be turned on, or there might be a cable problem or a problem with the adapter installed in the attached device. See Chapter 3, "Troubleshooting," for solutions to cabling problems.

Step 3 Reconfigure and reboot the connected device if necessary.

Step 4 Repeat Steps 1 through 3 to connect each device.

Connecting to the GBIC Module Ports

This section describes how to connect to a GBIC module port. For detailed instructions on installing, removing, and cabling a GBIC (1000BASE-X module, 1000BASE-T module, or the GigaStack module), refer to your GBIC documentation.

Connecting to a 1000BASE-X GBIC Module Port

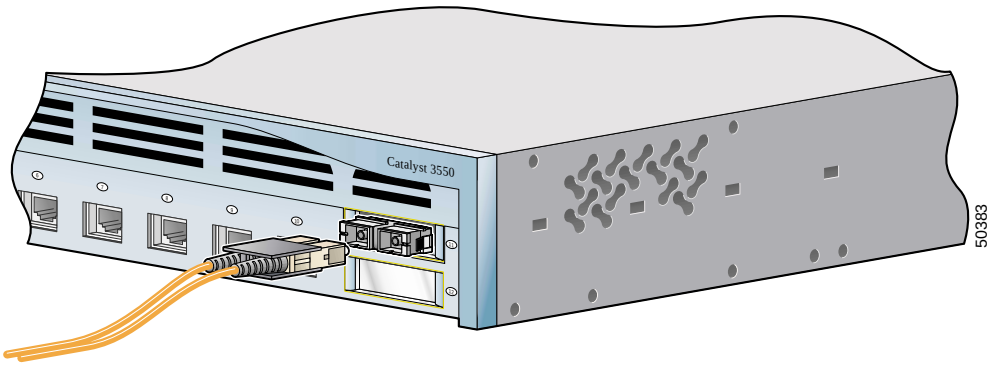
Caution Do not remove the rubber plugs from the fiber-optic port or the rubber caps from the fiber-optic cable until you are ready to connect the cable. The plugs and caps protect the fiber-optic port and cable from contamination and ambient light.

Follow these steps to connect to the 1000BASE-X GBIC port:

Step 1 Remove the rubber plugs from the fiber-optic port on the module, and store them for future use.

Step 2 Insert the SC connector in the fiber-optic receptacle, as shown in Figure 2-11.

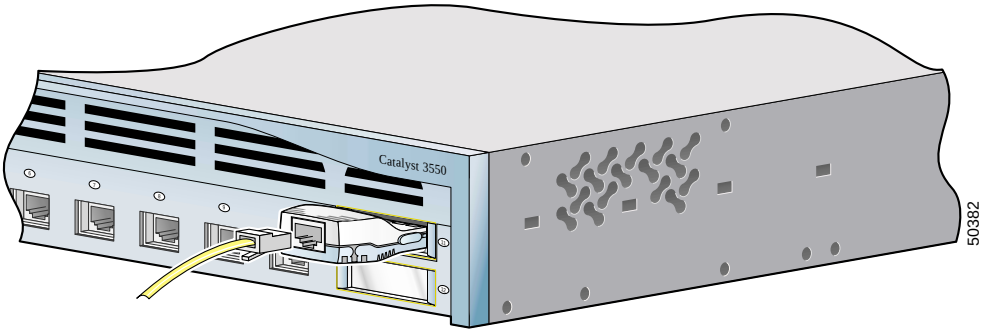
Figure 2-11 Connecting to a 1000BASE-X Port



Connecting to a 1000BASE-T GBIC Module Port

Connect the 1000BASE-T connector to the GBIC port as shown in Figure 2-12.

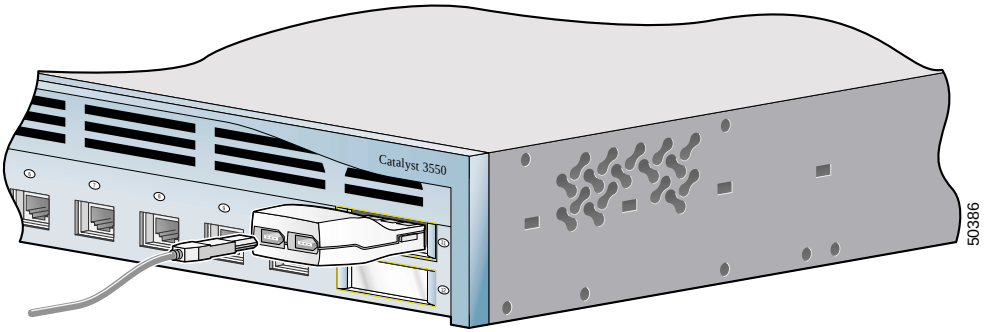
Figure 2-12 Connecting to a 1000BASE-T Port



Connecting to a GigaStack GBIC Module Port

Connect the GigaStack cable connector to the GigaStack GBIC port as shown in Figure 2-13.

Figure 2-13 Connecting to a GigaStack Port



Connecting a PC or Terminal to the Console Port

Use the supplied rollover cable and DB-9 adapter to connect a PC to the switch console port. If you want to connect the switch console port to a terminal, you need to provide a RJ-45-to-DB-25 female DTE adapter. You can order a kit (part number ACS-DSBUASYN=) containing that adapter from Cisco. For console port and adapter pinout information, see the "Cable and Adapter Specifications" section on page B-4.

The PC or terminal must support VT100 terminal emulation. The terminal-emulation software—frequently a PC application such as Hyperterminal or Procomm Plus—makes communication between the switch and your PC or terminal possible during the setup program.

Follow these steps to connect the PC or terminal to the switch:

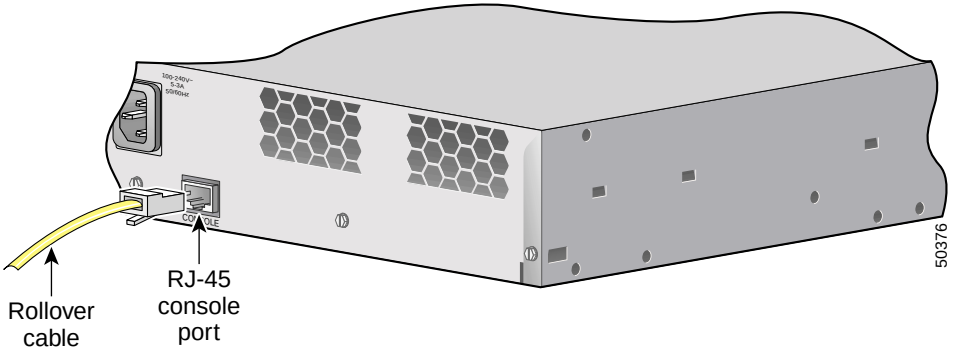
Step 1 Configure the baud rate and character format of the PC or terminal to match these console port default characteristics:

- 9600 baud
- 8 data bits
- 1 stop bit
- No parity

After you have gained access to the switch, you can change the console baud rate through the **Administration > Console Baud Rate** menu in the Cluster Management Suite (CMS).

Step 2 Using the supplied rollover cable, insert the RJ-45 connector into the console port, as shown in Figure 2-14. See the "Identifying a Rollover Cable" section on page B-5 for a description of the pinout.

Figure 2-14 Connecting to the Console Port



Step 3 Attach the supplied RJ-45-to-DB-9 female DTE adapter to a PC, or attach an appropriate adapter to the terminal.

Step 4 Insert the other end of the supplied rollover cable in the attached adapter.

Step 5 Boot the terminal-emulation program if you are using a PC or terminal.

Where to Go Next

If the default configuration is satisfactory, the switch does not need further configuration. You can use any of these management options to change the default configuration:

- Start the Cluster Management Suite, as described in the *Catalyst 3550 Multilayer Switch Software Configuration Guide*, and configure the switch as a member of a cluster or as an individual switch. Refer to the release notes on Cisco.com for the most current browser requirements.
- Use the CLI to configure the switch from the console. Refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide* and the *Catalyst 3550 Multilayer Switch Command Reference* for information on using the CLI with a Catalyst 3550 switch.
- Start an SNMP application such as the CiscoView application.

CHAPTER 3

Troubleshooting

The LEDs on the front panel provide troubleshooting information about the switch. They show failures in the power-on self-test (POST), port-connectivity problems, and overall switch performance. For a full description of the switch LEDs, see the "LEDs" section on page 1-5.

You can also get statistics from the browser interface, from the command-line interface (CLI), or from a Simple Network Management Protocol (SNMP) workstation. Refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide*, the *Catalyst 3550 Multilayer Switch Command Reference*, or the documentation that came with your SNMP application for details.

This chapter describes these topics for troubleshooting problems:

Understanding POST Results

Table 3-1 lists the eight POST tests and their associated LEDs.

POST tests run automatically each time the switch is powered on. When the switch begins POST, the port LEDs turn amber for 2 seconds, and then they turn green. The System LED flashes green, and the RPS LED turns off. As each test runs, the port LEDs, starting with number 1, turn off. The remaining port LEDs each turn off in sequence as the system completes a test.

When POST completes successfully, the port LEDs return to the status mode display, indicating that the switch is operational. If a test fails, the port LED associated with the test turns amber, and the system LED turns amber.

Note POST failures are usually fatal. Call Cisco Systems if your switch does not pass POST.

Table 3-1 POST Test Descriptions

Switch LED	Component Tested
LED 1	DRAM
LED 2	Flash memory
LED 3	CPU interface buffer
LED 4	CPU interface ASIC
LED 5	Switch core ASIC
LED 6	TCAM
LED 7	Ethernet controller ASIC
LED 8	Ethernet interfaces

Diagnosing Problems

Common switch problems fall into these categories:

- Poor performance
- No connectivity
- Corrupted software

Table 3-2 describes how to detect and resolve these problems.

Table 3-2 Common Problems and Their Solutions

Symptom	Possible Cause	Resolution
Poor performance or excessive errors.	Duplex autonegotiation mismatch.	Refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide* for information on identifying autonegotiation mismatches.
	Cabling distance exceeded.	
	• Port statistics show excessive frame check sequence (FCS), late-collision, or alignment errors.	• Refer to the *Catalyst 3550 Multilayer Switch Software Configuration Guide* for information on displaying port statistics.
	• For 10/100/1000BASE-T connections:	
	– The distance between the port and the attached device exceeds 100 meters.	• Reduce the cable length to within the recommended distances.
	– If the switch is attached to a repeater, the total distance between the two end stations exceeds the cabling guidelines.	• Refer to your repeater documentation for cabling guidelines.
	• For GBIC port connections:	
	– The distance between the GBIC port and the attached device exceeds the GBIC cabling guidelines.	• Refer to your GBIC documentation for cabling guidelines.
	Bad adapter in attached device.	
	• Excessive errors found in port statistics.	• Run adapter card diagnostic utility.
	• STP checking for possible loops.	• Wait 30 seconds for the port LED to turn green.

Table 3-2 Common Problems and Their Solutions (continued)

Symptom	Possible Cause	Resolution
No connectivity.	**Incorrect or bad cable.** The following are results of no link at both ends: • A crossover cable was used when a straight-through was required, or vice-versa.	• For the correct pinouts and the proper application of crossover vs. straight-through cables, see the "Crossover and Straight-Through Cable Pinouts" section on page B-4.
	• The cable is wired incorrectly.	• Replace with a tested good cable.
	• STP checking for possible loops.	• Wait 30 seconds for the port LED to turn green.
	Switch not recognizing a GBIC module.	Refer to the your GBIC documentation for more information.
Unreadable characters on the management console.	Incorrect baud rate.	Reset the emulation software to 9600 baud.
System LED is amber on the switch.	Nonfatal or fatal POST error detected.	Use the CLI **show POST** command to see which POST test failed.

Technical Specifications

This appendix lists the technical specifications in Table A-1 and the regulatory agency approvals in Table A-2.

Table A-1 Technical Specifications for the Catalyst 3550 Switch

Environmental Ranges	
Operating temperature	32 to 113°F (0 to 45°C)
Storage temperature	–13 to 158°F (–25 to 70°C)
Relative humidity	10 to 85% (noncondensing)
Operating altitude	Up to 10,000 ft (3000 m)
Storage altitude	15,000 ft (4570 m)
Power Requirements	
AC input voltage	100 to 127/200 to 240 VAC (autoranging) 50 to 60 Hz
DC input voltages	⎓+12V⎓@13A
Power consumption	190W, 650 Btus per hour
Physical Dimensions	
Weight	16 lb (7.26 kg)
Dimensions (H x D x W)	2.63 x 15.9 x 17.5 in. (6.68 x 40.39 x 44.45 cm)

Table A-2 Catalyst 3550 Switch Agency Approvals

Safety	EMC
UL to UL 1950, Third Edition	FCC Part 15 Class A
c-UL to CAN/CSA 22.2 No. 950-95, Third Edition	EN 55022 Class A (CISPR 22 Class A)
TUV/GS to EN 60950 with Amendment A1-A4 and A11	VCCI Class A
CB to IEC 60950 with all country deviations	AS/NZS 3548 Class A
NOM to NOM-019-SCFI	BSMI
CE Marking	CE Marking

Connector and Cable Specifications

This appendix describes the Catalyst 3550 switch ports and the cables and adapters that you use to connect the switch to other devices.

Connector Specifications

This section describes the connectors used with the Catalyst 3550 switch.

10/100/1000 Ports

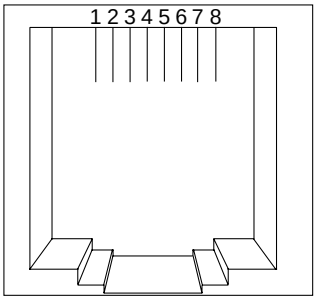
The10/100/1000 Ethernet ports use RJ-45 connectors and Ethernet pinouts with internal crossovers, as indicated by an X in the port name. These ports have their transmit (TD) and receive (RD) signals internally crossed so that a straight-through cable and adapter can be attached to the port. Figure B-1 shows the pinout.

When connecting the 10/100/1000 ports to compatible workstations, servers, routers, and Cisco IP Phones, you must use a straight-through cable wired for 10BASE-T, 100BASE-TX or 1000BASE-T. Figure B-6 illustrates the straight-through cable schematic. When connecting to other switches or repeaters, ensure that you use a crossover cable. Figure B-5 illustrates the crossover cable schematics.

Note Use a straight-through cable to connect two ports when one of the ports is designated with an **X**. Use a crossover cable to connect two ports when both ports are designated with an **X** or when both ports do not have an **X**.

Figure B-1 10/100/1000 Port Pinouts

Pin	Label
1	TP0+
2	TP0-
3	TP1+
4	TP2+
5	TP2-
6	TP1-
7	TP3+
8	TP3-



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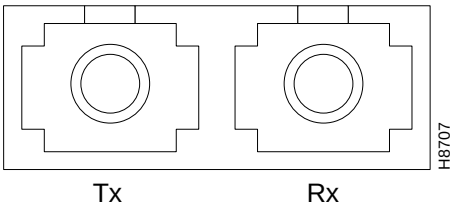
1000BASE-X GBIC Module Ports

1000BASE-X Gigabit Interface Converter (GBIC) module ports use duplex SC connectors, as shown in Figure B-2.

Figure B-2 1000BASE-X SC Connector



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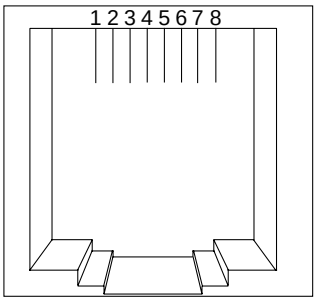
1000BASE-T GBIC Module Port

The 1000BASE-T GBIC module port uses one RJ-45 connector, as shown in Figure B-3.

Figure B-3 1000BASE-T Connector

Pin	Label
1	TP0+
2	TP0-
3	TP1+
4	TP2+
5	TP2-
6	TP1-
7	TP3+
8	TP3-



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GigaStack GBIC Module Ports

The GigaStack GBIC module ports use proprietary connectors, as shown in Figure B-4. The GigaStack GBIC cables are proprietary, high-data-rate cables with enhanced signal integrity and EMI performance.

Caution Do not use standard IEEE 1394 cables with the GigaStack GBIC.

Figure B-4 GigaStack Connector

22084

Console Port

The console port uses an 8-pin RJ-45 connector, described in Table B-1 and Table B-2. The supplied RJ-45-to-RJ-45 rollover cable and DB-9 adapter are used to connect the console port of the switch to a console PC. You need to provide a RJ-45-to-DB-25 female DTE adapter if you want to connect the switch console port to a terminal. You can order a kit (part number ACS-DSBUASYN=) containing that adapter from Cisco. For console port and adapter pinout information, see Table B-1 and Table B-2.

Cable and Adapter Specifications

This section describes the cables and adapters used with Catalyst 3550 switches.

Crossover and Straight-Through Cable Pinouts

The schematics of crossover and straight-through cables are shown in Figure B-5 and Figure B-6.

Figure B-5 Crossover Cable Schematic

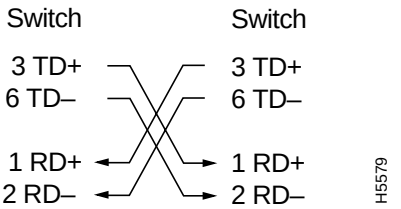
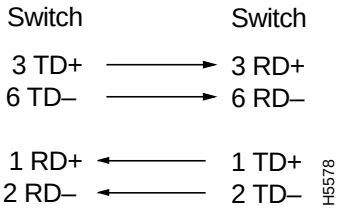


Figure B-6 Straight-Through Cable Schematic



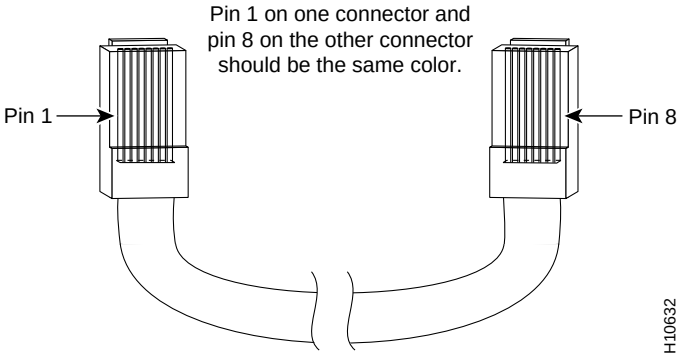
Rollover Cable and Adapter Pinouts

This section describes how to identify a rollover cable and also describes the adapter pinouts.

Identifying a Rollover Cable

To identify a rollover cable, compare the two modular ends of the cable. Hold the cable ends side-by-side, with the tab at the back. The wire connected to the pin on the outside of the left plug should be the same color as the wire connected to the pin on the outside of the right plug. (See Figure B-7.)

Figure B-7 Identifying a Rollover Cable



Adapter Pinouts

Table B-1 lists the pinouts for the console port, the RJ-45-to-RJ-45 rollover cable, and the RJ-45-to-DB-9 female DTE adapter.

Table B-1 Console Port Signaling and Cabling Using a DB-9 Adapter

Switch Console Port (DTE)	RJ-45-to-RJ-45 Rollover Cable		RJ-45-to-DB-9 Terminal Adapter	Console Device
Signal	**RJ-45 Pin**	**RJ-45 Pin**	**DB-9 Pin**	**Signal**
RTS	1	8	8	CTS
DTR	2	7	6	DSR
TxD	3	6	2	RxD
GND	4	5	5	GND
GND	5	4	5	GND
RxD	6	3	3	TxD
DSR	7	2	4	DTR
CTS	8	1	7	RTS

Table B-2 lists the pinouts for the console port, the RJ-45-to-RJ-45 rollover cable, and the RJ-45-to-DB-25 female DTE adapter.

Note The RJ-45-to-DB-25 female DTE adapter is not supplied with the switch. You can order a kit (part number ACS-DSBUASYN=) containing this adapter from Cisco.

Table B-2 Console Port Signaling and Cabling Using a DB-25 Adapter

Switch Console Port (DTE)	RJ-45-to-RJ-45 Rollover Cable		RJ-45-to-DB-25 Terminal Adapter	Console Device
Signal	**RJ-45 Pin**	**RJ-45 Pin**	**DB-25 Pin**	**Signal**
RTS	1	8	5	CTS
DTR	2	7	6	DSR
TxD	3	6	3	RxD
GND	4	5	7	GND
GND	5	4	7	GND
RxD	6	3	2	TxD
DSR	7	2	20	DTR
CTS	8	1	4	RTS

Translated Safety Warnings

This appendix repeats in multiple languages the warnings in this guide. These translated warnings can be used with other documents related to this guide.

Attaching the Cisco RPS 300 (model PWR300-AC-RPS)

Warning	**Attach only the Cisco RPS 300 (model PWR300-AC-RPS) to the RPS receptacle.**
Waarschuwing:	**Slechts de Cisco RPS 300 (model PWR300-AC-RPS) aan de RPS contactdoos verbinden.**
Varoitus	**Kiinnitä RPS-vastakappaleeseen vain Cisco RPS 300 (malli PWR300-AC-RPS).**
Avertissement :	**Raccordez le bloc d'alimentation Cisco RPS 300 (modèle PWR300-AC-RPS) uniquement au connecteur RPS.**
Warnung:	**An die RPS-Steckhülse darf nur das Cisco RPS 300 (Modell PWR300-AC-RPS) angeschlossen werden.**
Avvertenza.	**Collegare soltanto il Cisco RPS 300 (modello PWR300-AC-RPS) alla presa RPS.**
Advarsel!	**Koble bare Cisco RPS 300 (modell PWR300-AC-RPS) til RPS-stikkontakten.**
Aviso	**Anexe o RPS 300 Cisco (modelo PWR300-AC-RPS) apenas ao receptáculo RPS.**
Aviso:	**Sólo conecte el Cisco RPS 300 (modelo PWR300-AC-RPS) al receptáculo RPS.**
Varning!	**Koppla endast Ciscos RPS 300 (modell PWR300-AC-RPS) till RPS-uttaget.**

Service Personnel Warning

Warning **This equipment is to be installed and maintained by service personnel only as defined by AS/NZS 3260 Clause 1.2.14.3 Service Personnel.**

Waarschuwing **Deze apparatuur mag slechts geïnstalleerd en onderhouden worden door servicepersoneel conform de definitie van AS/NZS 3260 Clausule 1.2.14.3 Service Personnel.**

Varoitus **Tämän laitteen saa asentaa tai huoltaa ainoastaan Australiassa ja Uudessa Seelannissa sovellettavan AS/NZS 3260 -standardin kohdan 1.2.14.3 Service Personnel määrittelemä huoltohenkilöstö.**

Attention **Cet équipement ne doit être installé et entretenu que par du personnel d'entretien comme défini par la réglementation AS/NZS 3260 Clause 1.2.14.3 Service Personnel.**

Warnung **Dieses Gerät darf nur von Wartungspersonal gemäß AS/NZS-Definition 3260, Paragraph 1.2.14.3, "Service Personnel", installiert und gewartet werden.**

Avvertenza **Questo apparecchio deve essere installato e mantenuto in efficienza esclusivamente da personale tecnico che soddisfi i requisiti specificati nella sezione 1.2.14.3 sul 'Service Personnel' contenuta nelle norme AS/NZS 3260.**

Advarsel **Installasjon og vedlikehold av dette utstyret skal kun foretas av vedlikeholdspersonell som definert i AS/NZS 3260, klausul 1.2.14.3 Service Personnel.**

Aviso **Este equipamento deverá ser instalado e reparado apenas por pessoal de manutenção qualificado, conforme estipulado em AS/NZS 3260 Cláusula 1.2.14.3 Service Personnel.**

Advertencia **Este equipo se debe instalar y mantener solamente por personal de servicio, según definido por AS/NZS 3260 Cláusula 1.2.14.3 Service Personnel.**

Varning! **Installation och underhåll av denna utrustning får endast utföras av servicepersonal enligt definition i AS/NZS 3260 klausul 1.2.14.3 Service Personnel.**

Qualified Personnel Warning

Warning	**Only trained and qualified personnel should be allowed to install or replace this equipment**
Waarschuwing	**Installatie en reparaties mogen uitsluitend door getraind en bevoegd personeel uitgevoerd worden.**
Varoitus	**Ainoastaan koulutettu ja pätevä henkilökunta saa asentaa tai vaihtaa tämän laitteen.**
Avertissement	**Tout installation ou remplacement de l'appareil doit être réalisé par du personnel qualifié et compétent.**
Achtung	**Gerät nur von geschultem, qualifiziertem Personal installieren oder auswechseln lassen.**
Avvertenza	**Solo personale addestrato e qualificato deve essere autorizzato ad installare o sostituire questo apparecchio.**
Advarsel	**Kun kvalifisert personell med riktig opplæring bør montere eller bytte ut dette utstyret.**
Aviso	**Este equipamento deverá ser instalado ou substituído apenas por pessoal devidamente treinado e qualificado.**
¡Atención!	**Estos equipos deben ser instalados y reemplazados exclusivamente por personal técnico adecuadamente preparado y capacitado.**
Varning	**Denna utrustning ska endast installeras och bytas ut av utbildad och kvalificerad personal.**

Installation Warning

Warning	**Read the installation instructions before you connect the system to its power source.**
Waarschuwing	**Raadpleeg de installatie-aanwijzingen voordat u het systeem met de voeding verbindt.**
Varoitus	**Lue asennusohjeet ennen järjestelmän yhdistämistä virtalähteeseen.**
Attention	**Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.**
Warnung	**Lesen Sie die Installationsanweisungen, bevor Sie das System an die Stromquelle anschließen.**
Avvertenza	**Consultare le istruzioni di installazione prima di collegare il sistema all'alimentatore.**
Advarsel	**Les installasjonsinstruksjonene før systemet kobles til strømkilden.**
Aviso	**Leia as instruções de instalação antes de ligar o sistema à sua fonte de energia.**
¡Advertencia!	**Ver las instrucciones de instalación antes de conectar el sistema a la red de alimentación.**
Varning!	**Läs installationsanvisningarna innan du kopplar systemet till dess strömförsörjningsenhet.**

警告　システムを電源に接続する前に、インストレーションについての説明書を必ずお読みください。

Jewelry Removal Warning

Warning **Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.**

Waarschuwing **Alvorens aan apparatuur te werken die met elektrische leidingen is verbonden, sieraden (inclusief ringen, kettingen en horloges) verwijderen. Metalen voorwerpen worden warm wanneer ze met stroom en aarde zijn verbonden, en kunnen ernstige brandwonden veroorzaken of het metalen voorwerp aan de aansluitklemmen lassen.**

Varoitus **Ennen kuin työskentelet voimavirtajohtoihin kytkettyjen laitteiden parissa, ota pois kaikki korut (sormukset, kaulakorut ja kellot mukaan lukien). Metalliesineet kuumenevat, kun ne ovat yhteydessä sähkövirran ja maan kanssa, ja ne voivat aiheuttaa vakavia palovammoja tai hitsata metalliesineet kiinni liitäntänapoihin.**

Attention **Avant d'accéder à cet équipement connecté aux lignes électriques, ôter tout bijou (anneaux, colliers et montres compris). Lorsqu'ils sont branchés à l'alimentation et reliés à la terre, les objets métalliques chauffent, ce qui peut provoquer des blessures graves ou souder l'objet métallique aux bornes.**

Warnung **Vor der Arbeit an Geräten, die an das Netz angeschlossen sind, jeglichen Schmuck (einschließlich Ringe, Ketten und Uhren) abnehmen. Metallgegenstände erhitzen sich, wenn sie an das Netz und die Erde angeschlossen werden, und können schwere Verbrennungen verursachen oder an die Anschlußklemmen angeschweißt werden.**

Avvertenza **Prima di intervenire su apparecchiature collegate alle linee di alimentazione, togliersi qualsiasi monile (inclusi anelli, collane, braccialetti ed orologi). Gli oggetti metallici si riscaldano quando sono collegati tra punti di alimentazione e massa: possono causare ustioni gravi oppure il metallo può saldarsi ai terminali.**

Advarsel **Fjern alle smykker (inkludert ringer, halskjeder og klokker) før du skal arbeide på utstyr som er koblet til kraftledninger. Metallgjenstander som er koblet til kraftledninger og jord blir svært varme og kan forårsake alvorlige brannskader eller smelte fast til polene.**

Aviso **Antes de trabalhar em equipamento que esteja ligado a linhas de corrente, retire todas as jóias que estiver a usar (incluindo anéis, fios e relógios). Os objectos metálicos aquecerão em contacto com a corrente e em contacto com a ligação à terra, podendo causar queimaduras graves ou ficarem soldados aos terminais.**

¡Advertencia! **Antes de operar sobre equipos conectados a líneas de alimentación, quitarse las joyas (incluidos anillos, collares y relojes). Los objetos de metal se calientan cuando se conectan a la alimentación y a tierra, lo que puede ocasionar quemaduras graves o que los objetos metálicos queden soldados a los bornes.**

Varning! **Tag av alla smycken (inklusive ringar, halsband och armbandsur) innan du arbetar på utrustning som är kopplad till kraftledningar. Metallobjekt hettas upp när de kopplas ihop med ström och jord och kan förorsaka allvarliga brännskador; metallobjekt kan också sammansvetsas med kontakterna.**

Stacking the Chassis Warning

Warning **Do not stack the chassis on any other equipment. If the chassis falls, it can cause severe bodily injury and equipment damage.**

Waarschuwing **Het chassis mag niet op andere apparatuur gestapeld te worden. Als het chassis mocht vallen, kan dit ernstig lichamelijk letsel en beschadiging van de apparatuur veroorzaken.**

Varoitus **Älä aseta asennuspohjaa minkään muun laitteen päälle. Asennuspohja voi pudotessaan aiheuttaa vaikean ruumiinvamman tai laitevaurion.**

Avertissement **Ne placez pas ce châssis sur un autre appareil. En cas de chute, il pourrait provoquer de graves blessures corporelles et d'importants dommages.**

Achtung **Das Gehäuse nicht auf andere Geräte stellen. Wenn das Gehäuse herunterfällt, besteht Gefahr schwerer Personenverletzungen und Geräteschäden.**

Avvertenza **Non collocare lo chassis su nessun altro apparecchio. Se lo chassis cade, può causare lesioni gravi e danni alle apparecchiature.**

Advarsel **Stable ikke kabinettet oppå annet utstyr. Hvis kabinettet faller, kan det forårsake alvorlig skade på mennesker og utstyr.**

Aviso **Não coloque o chassis em cima de qualquer outro equipamento. Se o chassis cair, poderá causar ferimentos graves e danos no equipamento.**

¡Atención! **No apilar los chasis sobre ningún otro equipo. Si el chasis se cae al suelo puede causar graves lesiones físicas y daños al equipo.**

Varning **Placera inte chassit ovanpå annan utrustning. Om chassit faller kan allvarlig kroppsskada såväl som skada på utrustningen uppstå.**

Main Disconnecting Device

Warning	The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.
Waarschuwing	De combinatie van de stekker en het elektrisch contactpunt moet te allen tijde toegankelijk zijn omdat deze het hoofdmechanisme vormt voor verbreking van de aansluiting.
Varoitus	Pistoke/liitinkohta toimii pääkatkaisumekanismina. Pääsy siihen on pidettävä aina esteettömänä.
Attention	La combinaison de prise de courant doit être accessible à tout moment parce qu'elle fait office de système principal de déconnexion.
Warnung	Der Netzkabelanschluß am Gerät muß jederzeit zugänglich sein, weil er als primäre Ausschaltvorrichtung dient.
Avvertenza	Il gruppo spina-presa deve essere sempre accessibile, poiché viene utilizzato come dispositivo di scollegamento principale.
Advarsel	Kombinasjonen støpsel/uttak må alltid være tilgjengelig ettersom den fungerer som hovedfrakoplingsenhet.
Aviso	A combinação ficha-tomada deverá ser sempre acessível, porque funciona como interruptor principal.
¡Advertencia!	El conjunto de clavija y toma ha de encontrarse siempre accesible ya que hace las veces de dispositivo de desconexión principal.
Varning!	Man måste alltid kunna komma åt stickproppen i uttaget, eftersom denna koppling utgör den huvudsakliga frånkopplingsanordningen.

Overtemperature Warning

Warning **To prevent the switch from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 113°F (45°C). To prevent airflow restriction, allow at least 3 inches (7.6 cm) of clearance around the ventilation openings.**

Waarschuwing **Om oververhitting van de schakelaar te voorkomen, mag u die niet bedienen in een ruimte die de maximale aanbevolen omgevingstemperatuur van 113 F (45°C) overschrijdt. Om beperking van de luchtstroom te voorkomen, dient u ten minste 3 inch (7,6 cm) speling te laten rondom de ventilatie-openingen.**

Varoitus **Estääksesi kytkimen ylikuumenemisen älä käytä sitä sellaisissa paikoissa, joiden lämpötila ylittää ympäristön enimmäislämpötilaksi suositellun 45°C. Jätä vähintään 7,6 cm:n vapaa tila tuuletusaukkojen ympärille, jotta ilma pääsee vapaasti virtaamaan.**

Attention **Pour éviter une surchauffe du commutateur, ne pas le faire fonctionner dans un local dont la température ambiante dépasse le maximum recommandé de 45°C (113 F). Pour faciliter la circulation d'air, aménager un dégagement d'au moins 7,6 cm (3 pouces) autour des bouches d'aération.**

Warnung **Um eine Überhitzung des Schalters zu vermeiden, ist das System nicht in einem Bereich zu betreiben, in dem die empfohlene Höchsttemperatur von 45°C überschritten wird. Damit der Luftfluß nicht behindert wird, ist ein Freiraum von mindestens 7,6 cm um die Belüftungsöffnungen herum einzuhalten.**

Avvertenza **Per evitare il surriscaldamento dell'interruttore, non usare l'apparecchiatura in un'area che supera la temperatura ambientale minima consigliata di 45°C. Per evitare una limitazione del flusso dell'aria, lasciare come minimo uno spazio libero di 7,6 cm intorno alle aperture di ventilazione.**

Advarsel **For å unngå at bryteren overopphetes skal utstyret ikke brukes på steder hvor anbefalt maks omgivelsestemperatur overstiger 113 grader Farenheit (45°C). La det være minst 3 tommer (7,6 cm) klaring rundt ventilasjonsåpningene for at luftsirkulasjonen skal være uhindret.**

Aviso **Para evitar sobreaquecimento do interruptor, não utilize o equipamento numa àrea que exceda uma temperatura máxima de 45°C. Para evitar o bloqueamento da circulação de ar, deixe pelo menos um espaço de 7.6 cm em volta das aberturas de ventilação.**

¡Advertencia! **Para evitar que el interruptor se recaliente, no se debe usar en áreas cuya temperatura ambiente exceda la máxima recomendada, esto es, 45°C (113°F). Para no entorpecer la corriente de aire, dejar por lo menos 7,6 cm (3 pulgadas) de espacio muerto alrededor de la rejilla de ventilación.**

Varning! **För att undvika överhettning av strömbrytaren skall den inte användas i utrymme vars temperatur överskrider den maximalt rekommenderade omgivningstemperaturen 45°C. Kontrollera att det finns minst 7,6 cm fritt utrymme runt ventilationsöppningarna så att luftflödet inte begränsas.**

TN Power Warning

Warning The device is designed to work with TN power systems.

Waarschuwing Het apparaat is ontworpen om te functioneren met TN energiesystemen.

Varoitus Koje on suunniteltu toimimaan TN-sähkövoimajärjestelmien yhteydessä.

Attention Ce dispositif a été conçu pour fonctionner avec des systèmes d'alimentation TN.

Warnung Das Gerät ist für die Verwendung mit TN-Stromsystemen ausgelegt.

Avvertenza Il dispositivo è stato progettato per l'uso con sistemi di alimentazione TN.

Advarsel Utstyret er utfomet til bruk med TN-strømsystemer.

Aviso O dispositivo foi criado para operar com sistemas de corrente TN.

¡Advertencia! El equipo está diseñado para trabajar con sistemas de alimentación tipo TN.

Varning! Enheten är konstruerad för användning tillsammans med elkraftssystem av TN-typ.

Ground Connection Warning

Warning	When installing the unit, the ground connection must always be made first and disconnected last.
Waarschuwing	Bij de installatie van het toestel moet de aardverbinding altijd het eerste worden gemaakt en het laatste worden losgemaakt.
Varoitus	Laitetta asennettaessa on maahan yhdistäminen aina tehtävä ensiksi ja maadoituksen irti kytkeminen viimeiseksi.
Attention	Lors de l'installation de l'appareil, la mise à la terre doit toujours être connectée en premier et déconnectée en dernier.
Warnung	Der Erdanschluß muß bei der Installation der Einheit immer zuerst hergestellt und zuletzt abgetrennt werden.
Avvertenza	In fase di installazione dell'unità, eseguire sempre per primo il collegamento a massa e disconnetterlo per ultimo.
Advarsel	Når enheten installeres, må jordledningen alltid tilkobles først og frakobles sist.
Aviso	Ao instalar a unidade, a ligação à terra deverá ser sempre a primeira a ser ligada, e a última a ser desligada.
¡Advertencia!	Al instalar el equipo, conectar la tierra la primera y desconectarla la última.
Varning!	Vid installation av enheten måste jordledningen alltid anslutas först och kopplas bort sist.

Circuit Breaker (15A) Warning

Warning **This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 16A international) is used on the phase conductors (all current-carrying conductors).**

Waarschuwing **Dit produkt is afhankelijk van de installatie van het gebouw voor kortsluit- (overstroom)beveiliging. Controleer of er een zekering of stroomverbreker van niet meer dan 120 Volt wisselstroom, 15 A voor de V.S. (240 Volt wisselstroom, 16 A internationaal) gebruikt wordt op de fasegeleiders (alle geleiders die stroom voeren).**

Varoitus **Tämä tuote on riippuvainen rakennukseen asennetusta oikosulkusuojauksesta (ylivirtasuojauksesta). Varmista, että vaihevirtajohtimissa (kaikissa virroitetuissa johtimissa) käytetään Yhdysvalloissa alle 120 voltin, 15 ampeerin ja monissa muissa maissa 240 voltin, 16 ampeerin sulaketta tai suojakytkintä.**

Attention **Pour ce qui est de la protection contre les courts-circuits (surtension), ce produit dépend de l'installation électrique du local. Vérifier qu'un fusible ou qu'un disjoncteur de 120 V alt., 15 A U.S. maximum (240 V alt., 16 A international) est utilisé sur les conducteurs de phase (conducteurs de charge).**

Warnung **Dieses Produkt ist darauf angewiesen, daß im Gebäude ein Kurzschluß- bzw. Überstromschutz installiert ist. Stellen Sie sicher, daß eine Sicherung oder ein Unterbrecher von nicht mehr als 240 V Wechselstrom, 16 A (bzw. in den USA 120 V Wechselstrom, 15 A) an den Phasenleitern (allen stromführenden Leitern) verwendet wird.**

Avvertenza **Questo prodotto dipende dall'installazione dell'edificio per quanto riguarda la protezione contro cortocircuiti (sovracorrente). Verificare che un fusibile o interruttore automatico, non superiore a 120 VCA, 15 A U.S. (240 VCA, 16 A internazionale) sia stato usato nei fili di fase (tutti i conduttori portatori di corrente).**

Advarsel **Dette produktet er avhengig av bygningens installasjoner av kortslutningsbeskyttelse (overstrøm). Kontroller at det brukes en sikring eller strømbryter som ikke er større enn 120 VAC, 15 A (USA) (240 VAC, 16 A internasjonalt) på faselederne (alle strømførende ledere).**

Aviso **Este produto depende das instalações existentes para protecção contra curto-circuito (sobrecarga). Assegure-se de que um fusível ou disjuntor não superior a 240 VAC, 16A é utilizado nos condutores de fase (todos os condutores de transporte de corrente).**

¡Advertencia! **Este equipo utiliza el sistema de protección contra cortocircuitos (o sobrecorrientes) deló propio edificio. Asegurarse de que se utiliza un fusible o interruptor automático de no más de 240 voltios en corriente alterna (VAC), 16 amperios del estándar internacional (120 VAC, 15 amperios del estándar USA) en los hilos de fase (todos aquéllos portadores de corriente).**

Varning! **Denna produkt är beroende av i byggnaden installerat kortslutningsskydd (överströmsskydd). Kontrollera att säkring eller överspänningsskydd används på fasledarna (samtliga strömförande ledare) för internationellt bruk max. 240 V växelström, 16 A (i USA max. 120 V växelström, 15 A).**

Grounded Equipment Warning

Warning	**This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.**
Waarschuwing	**Deze apparatuur hoort geaard te worden Zorg dat de host-computer tijdens normaal gebruik met aarde is verbonden.**
Varoitus	**Tämä laitteisto on tarkoitettu maadoitettavaksi. Varmista, että isäntälaite on yhdistetty maahan normaalikäytön aikana.**
Attention	**Cet équipement doit être relié à la terre. S'assurer que l'appareil hôte est relié à la terre lors de l'utilisation normale.**
Warnung	**Dieses Gerät muß geerdet werden. Stellen Sie sicher, daß das Host-Gerät während des normalen Betriebs an Erde gelegt ist.**
Avvertenza	**Questa apparecchiatura deve essere collegata a massa. Accertarsi che il dispositivo host sia collegato alla massa di terra durante il normale utilizzo.**
Advarsel	**Dette utstyret skal jordes. Forviss deg om vertsterminalen er jordet ved normalt bruk.**
Aviso	**Este equipamento deverá estar ligado à terra. Certifique-se que o host se encontra ligado à terra durante a sua utilização normal.**
¡Advertencia!	**Este equipo debe conectarse a tierra. Asegurarse de que el equipo principal esté conectado a tierra durante el uso normal.**
Varning!	**Denna utrustning är avsedd att jordas. Se till att värdenheten är jordad vid normal användning.**

警告 この装置はアースを必要とするものです。通常動作時は、ホストがアースされていることを確認してください。

Supply Circuit Warning

Warning	**Care must be given to connecting units to the supply circuit so that wiring is not overloaded.**
Waarschuwing	**Let erop dat de toestellen op voedingscircuits worden aangesloten zonder het vermogen van de bedrading te overschrijden.**
Varoitus	**Laiteyksiköt on yhdistettävä huolellisesti syöttöpiiriin niin, että johdot eivät ole ylikuormitettuja.**
Avertissement	**Veillez à bien connecter les unités au circuit d'alimentation afin de ne pas surcharger les connections.**
Achtung	**Beim Anschließen der Geräte an das Stromnetz ist darauf zu achten, daß die Schaltverbindungen nicht überlastet werden.**
Avvertenza	**Fare attenzione quando si collegano le unità al circuito di alimentazione, per non sovraccaricare i cablaggi.**
Advarsel	**Vær nøye med å koble enheter til strømforsyningskretsen slik at ledningene ikke overbelastes.**
Aviso	**Deverá ter precaução ao ligar unidades ao circuito de fornecimento de energia, para não sobrecarregar a instalação.**

¡Atención! **Poner mucho cuidado al conectar los equipos al circuito de alimentación a fin de no sobrecargar el cableado.**

Varning **Var noga vid anslutning av enheter till matarströmkretsen så att ledningarna inte överbelastas.**

No On/Off Switch Warning

Warning **Unplug the power cord before you work on a system that does not have an on/off switch.**

Waarschuwing **Voordat u aan een systeem werkt dat geen aan/uit schakelaar heeft, dient u de stekker van het netsnoer uit het stopcontact te halen.**

Varoitus **Ennen kuin teet mitään sellaiselle järjestelmälle, jossa ei ole kaksiasentokytkintä, kytke irti virtajohto.**

Attention **Avant de travailler sur un système non équipé d'un commutateur marche-arrêt, débrancher le cordon d'alimentation.**

Warnung **Bevor Sie an einem System ohne Ein/Aus-Schalter arbeiten, ziehen Sie das Netzkabel heraus.**

Avvertenza **Prima di lavorare su un sistema che non è dotato di un interruttore on/off, scollegare il cavo di alimentazione.**

Advarsel **Før det skal utføres arbeid på et system som ikke har en av/på-bryter, skal strømledningen trekkes ut.**

Aviso **Antes de começar a trabalhar num sistema que não possua um interruptor ON/OFF, desligue o cabo de alimentação.**

¡Advertencia! **Antes de trabajar sobre cualquier sistema que carezca de interruptor de Encendido/Apagado (ON/OFF), desenchufar el cable de alimentación.**

Varning! **Dra ur nätsladden innan du utför arbete på ett system utan strömbrytare.**

警告 オン/オフスイッチのない装置を扱う前には、必ず電源コードを抜いてください。

Power Supply Warning

Warning **Do not touch the power supply when the power cord is connected. For systems with a power switch, line voltages are present within the power supply even when the power switch is off and the power cord is connected. For systems without a power switch, line voltages are present within the power supply when the power cord is connected.**

Waarschuwing **U dient de voeding niet aan te raken zolang het netsnoer aangesloten is. Bij systemen met een stroomschakelaar zijn er lijnspanningen aanwezig in de voeding, zelfs wanneer de stroomschakelaar uitgeschakeld is en het netsnoer aangesloten is. Bij systemen zonder een stroomschakelaar zijn er lijnspanningen aanwezig in de voeding wanneer het netsnoer aangesloten is.**

Varoitus **Älä kosketa virtalähdettä virtajohdon ollessa kytkettynä. Virrankatkaisimella varustetuissa järjestelmissä on virtalähteen sisällä jäljellä verkkojännite, vaikka virrankatkaisin on katkaistu-asennossa virtajohdon ollessa kytkettynä. Järjestelmissä, joissa ei ole virrankatkaisinta, on virtalähteen sisällä verkkojännite, kun virtajohto on kytkettynä.**

Attention **Ne pas toucher le bloc d'alimentation quand le cordon d'alimentation est branché. Avec les systèmes munis d'un commutateur marche-arrêt, des tensions de ligne sont présentes dans l'alimentation quand le cordon est branché, même si le commutateur est à l'arrêt. Avec les systèmes sans commutateur marche-arrêt, l'alimentation est sous tension quand le cordon d'alimentation est branché.**

Warnung **Berühren Sie das Netzgerät nicht, wenn das Netzkabel angeschlossen ist. Bei Systemen mit Netzschalter liegen Leitungsspannungen im Netzgerät vor, wenn das Netzkabel angeschlossen ist, auch wenn das System ausgeschaltet ist. Bei Systemen ohne Netzschalter liegen Leitungsspannungen im Netzgerät vor, wenn das Netzkabel angeschlossen ist.**

Avvertenza **Non toccare l'alimentatore se il cavo dell'alimentazione è collegato. Per i sistemi con un interruttore di alimentazione, tensioni di linea sono presenti all'interno dell'alimentatore anche quando l'interruttore di alimentazione è en posizione di disattivazione (off), se il cavo dell'alimentazione è collegato. Per i sistemi senza un interruttore, tensioni di linea sono presenti all'interno dell'alimentatore quando il cavo di alimentazione è collegato.**

Advarsel **Berør ikke strømforsyningsenheten når strømledningen er tilkoblet. I systemer som har en strømbryter, er det spenning i strømforsyningsenheten selv om strømbryteren er slått av og strømledningen er tilkoblet. Når det gjelder systemer uten en strømbryter, er det spenning i strømforsyningsenheten når strømledingen er tilkoblet.**

Aviso **Não toque na unidade abastecedora de energia quando o cabo de alimentação estiver ligado. Em sistemas com interruptor, a corrente eléctrica estará presente na unidade abastecedora, sempre que o cabo de alimentação de energia estiver ligado, mesmo quando o interruptor se encontrar desligado. Para sistemas sem interruptor, a tensão eléctrica dentro da unidade abastecedora só estará presente quando o cabo de alimentação estiver ligado.**

¡Advertencia! **No tocar la fuente de alimentación mientras el cable esté enchufado. En sistemas con interruptor de alimentación, hay voltajes de línea dentro de la fuente, incluso cuando el interruptor esté en Apagado (OFF) y el cable de alimentación enchufado. En sistemas sin interruptor de alimentación, hay voltajes de línea en la fuente cuando el cable está enchufado.**

Varning! **Vidrör inte strömförsörjningsenheten när nätsladden är ansluten. För system med strömbrytare finns det nätspänning i strömförsörjningsenheten även när strömmen har slagits av men nätsladden är ansluten. För system utan strömbrytare finns det nätspänning i strömförsörjningsenheten när nätsladden är ansluten.**

警告 電源コードが接続されているときは電源に触れないでください。電源スイッチの付いた装置で電源コードが接続されているときは、電源スイッチがオフでもライン電圧が電源内に存在します。電源スイッチのないシステムで電源コードが接続されているときは、ライン電圧が電源内に存在します。

Lightning Activity Warning

Warning	**Do not work on the system or connect or disconnect cables during periods of lightning activity.**
Waarschuwing	**Tijdens onweer dat gepaard gaat met bliksem, dient u niet aan het systeem te werken of kabels aan te sluiten of te ontkoppelen.**
Varoitus	**Älä työskentele järjestelmän parissa äläkä yhdistä tai irrota kaapeleita ukkosilmalla.**
Attention	**Ne pas travailler sur le système ni brancher ou débrancher les câbles pendant un orage.**
Warnung	**Arbeiten Sie nicht am System und schließen Sie keine Kabel an bzw. trennen Sie keine ab, wenn es gewittert.**
Avvertenza	**Non lavorare sul sistema o collegare oppure scollegare i cavi durante un temporale con fulmini.**
Advarsel	**Utfør aldri arbeid på systemet, eller koble kabler til eller fra systemet når det tordner eller lyner.**
Aviso	**Não trabalhe no sistema ou ligue e desligue cabos durante períodos de mau tempo (trovoada).**
¡Advertencia!	**No operar el sistema ni conectar o desconectar cables durante el transcurso de descargas eléctricas en la atmósfera.**
Varning!	**Vid åska skall du aldrig utföra arbete på systemet eller ansluta eller koppla loss kablar.**

警告　雷電時には装置の取り扱い、またはケーブルの接続/切り離しを行わないでください。

Product Disposal Warning

Warning	**Ultimate disposal of this product should be handled according to all national laws and regulations.**
Waarschuwing	**Het uiteindelijke wegruimen van dit product dient te geschieden in overeenstemming met alle nationale wetten en reglementen.**
Varoitus	**Tämä tuote on hävitettävä kansallisten lakien ja määräysten mukaisesti.**
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.**
Warnung	**Die Entsorgung dieses Produkts sollte gemäß allen Bestimmungen und Gesetzen des Landes erfolgen.**
Avvertenza	**Lo smaltimento di questo prodotto deve essere eseguito secondo le leggi e regolazioni locali.**
Advarsel	**Endelig kassering av dette produktet skal være i henhold til alle relevante nasjonale lover og bestemmelser.**
Aviso	**Deitar fora este produto em conformidade com todas as leis e regulamentos nacionais.**
¡Advertencia!	**Al deshacerse por completo de este producto debe seguir todas las leyes y reglamentos nacionales.**
Varning!	**Vid deponering hanteras produkten enligt gällande lagar och bestämmelser.**

Chassis Warning—Rack-Mounting and Servicing

Warning **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.

Waarschuwing **Om lichamelijk letsel te voorkomen wanneer u dit toestel in een rek monteert of het daar een servicebeurt geeft, moet u speciale voorzorgsmaatregelen nemen om ervoor te zorgen dat het toestel stabiel blijft. De onderstaande richtlijnen worden verstrekt om uw veiligheid te verzekeren:**

- Dit toestel dient onderaan in het rek gemonteerd te worden als het toestel het enige in het rek is.
- Wanneer u dit toestel in een gedeeltelijk gevuld rek monteert, dient u het rek van onderen naar boven te laden met het zwaarste onderdeel onderaan in het rek.
- Als het rek voorzien is van stabiliseringshulpmiddelen, dient u de stabilisatoren te monteren voordat u het toestel in het rek monteert of het daar een servicebeurt geeft.

Varoitus **Kun laite asetetaan telineeseen tai huolletaan sen ollessa telineessä, on noudatettava erityisiä varotoimia järjestelmän vakavuuden säilyttämiseksi, jotta vältytään loukkaantumiselta. Noudata seuraavia turvallisuusohjeita:**

- Jos telineessä ei ole muita laitteita, aseta laite telineen alaosaan.
- Jos laite asetetaan osaksi täytettyyn telineeseen, aloita kuormittaminen sen alaosasta kaikkein raskaimmalla esineellä ja siirry sitten sen yläosaan.
- Jos telinettä varten on vakaimet, asenna ne ennen laitteen asettamista telineeseen tai sen huoltamista siinä.

Attention **Pour éviter toute blessure corporelle pendant les opérations de montage ou de réparation de cette unité en casier, il convient de prendre des précautions spéciales afin de maintenir la stabilité du système. Les directives ci-dessous sont destinées à assurer la protection du personnel :**

- Si cette unité constitue la seule unité montée en casier, elle doit être placée dans le bas.
- Si cette unité est montée dans un casier partiellement rempli, charger le casier de bas en haut en plaçant l'élément le plus lourd dans le bas.
- Si le casier est équipé de dispositifs stabilisateurs, installer les stabilisateurs avant de monter ou de réparer l'unité en casier.

Warnung **Zur Vermeidung von Körperverletzung beim Anbringen oder Warten dieser Einheit in einem Gestell müssen Sie besondere Vorkehrungen treffen, um sicherzustellen, daß das System stabil bleibt. Die folgenden Richtlinien sollen zur Gewährleistung Ihrer Sicherheit dienen:**

- Wenn diese Einheit die einzige im Gestell ist, sollte sie unten im Gestell angebracht werden.
- Bei Anbringung dieser Einheit in einem zum Teil gefüllten Gestell ist das Gestell von unten nach oben zu laden, wobei das schwerste Bauteil unten im Gestell anzubringen ist.
- Wird das Gestell mit Stabilisierungszubehör geliefert, sind zuerst die Stabilisatoren zu installieren, bevor Sie die Einheit im Gestell anbringen oder sie warten.

Avvertenza **Per evitare infortuni fisici durante il montaggio o la manutenzione di questa unità in un supporto, occorre osservare speciali precauzioni per garantire che il sistema rimanga stabile. Le seguenti direttive vengono fornite per garantire la sicurezza personale:**

- Questa unità deve venire montata sul fondo del supporto, se si tratta dell'unica unità da montare nel supporto.
- Quando questa unità viene montata in un supporto parzialmente pieno, caricare il supporto dal basso all'alto, con il componente più pesante sistemato sul fondo del supporto.
- Se il supporto è dotato di dispositivi stabilizzanti, installare tali dispositivi prima di montare o di procedere alla manutenzione dell'unità nel supporto.

Advarsel **Unngå fysiske skader under montering eller reparasjonsarbeid på denne enheten når den befinner seg i et kabinett. Vær nøye med at systemet er stabilt. Følgende retningslinjer er gitt for å verne om sikkerheten:**

- Denne enheten bør monteres nederst i kabinettet hvis dette er den eneste enheten i kabinettet.
- Ved montering av denne enheten i et kabinett som er delvis fylt, skal kabinettet lastes fra bunnen og opp med den tyngste komponenten nederst i kabinettet.
- Hvis kabinettet er utstyrt med stabiliseringsutstyr, skal stabilisatorene installeres før montering eller utføring av reparasjonsarbeid på enheten i kabinettet.

Aviso **Para se prevenir contra danos corporais ao montar ou reparar esta unidade numa estante, deverá tomar precauções especiais para se certificar de que o sistema possui um suporte estável. As seguintes directrizes ajudá-lo-ão a efectuar o seu trabalho com segurança:**

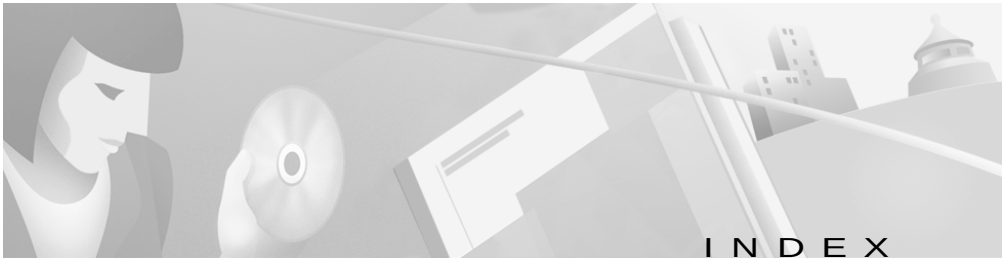
- Esta unidade deverá ser montada na parte inferior da estante, caso seja esta a única unidade a ser montada.
- Ao montar esta unidade numa estante parcialmente ocupada, coloque os itens mais pesados na parte inferior da estante, arrumando-os de baixo para cima.
- Se a estante possuir um dispositivo de estabilização, instale-o antes de montar ou reparar a unidade.

¡Advertencia! **Para evitar lesiones durante el montaje de este equipo sobre un bastidor, o posteriormente durante su mantenimiento, se debe poner mucho cuidado en que el sistema quede bien estable. Para garantizar su seguridad, proceda según las siguientes instrucciones:**

- Colocar el equipo en la parte inferior del bastidor, cuando sea la única unidad en el mismo.
- Cuando este equipo se vaya a instalar en un bastidor parcialmente ocupado, comenzar la instalación desde la parte inferior hacia la superior colocando el equipo más pesado en la parte inferior.
- Si el bastidor dispone de dispositivos estabilizadores, instalar éstos antes de montar o proceder al mantenimiento del equipo instalado en el bastidor.

Varning! **För att undvika kroppsskada när du installerar eller utför underhållsarbete på denna enhet på en ställning måste du vidta särskilda försiktighetsåtgärder för att försäkra dig om att systemet står stadigt. Följande riktlinjer ges för att trygga din säkerhet:**

- Om denna enhet är den enda enheten på ställningen skall den installeras längst ned på ställningen.
- Om denna enhet installeras på en delvis fylld ställning skall ställningen fyllas nedifrån och upp, med de tyngsta enheterna längst ned på ställningen.
- Om ställningen är försedd med stabiliseringsdon skall dessa monteras fast innan enheten installeras eller underhålls på ställningen.



Numerics

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