



3Com® Switch 4200G Family

Getting Started Guide

4200G 12-Port (3CR17660-91)

4200G 24-Port (3CR17661-91)

4200G 48-Port (3CR17662-91)

www.3Com.com

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REGULATORY NOTICES

ABOUT THIS GUIDE

This guide provides all the information you need to install and use the 3Com® Switch 4200G Family.

The guide is intended for use by network administrators who are responsible for installing and setting up network equipment; consequently, it assumes a basic working knowledge of LANs (Local Area Networks).

Before You Start

This section contains information about the documents and CD-ROM that accompany your Switch 4200G.

Release Notes

The Release Notes provide important information about the current software release, including new features, modifications, and known problems. You should read the Release Notes before installing the Switch in your network.



If the information in the Release Notes differ from the information in this guide, follow the instructions in the Release Notes.

About Your CD-ROM

The CD-ROM contains the following:

- Online documentation for the Switch 4200G—refer to Related Documentation on page 11 for details.
- A link to 3Com Network Director software.
- A number of other useful links.

Most user guides and Release Notes are available in Adobe Acrobat Reader Portable Document Format (PDF) or HTML on the 3Com World Wide Web site:

<http://www.3com.com/>

Conventions

Table 1 and Table 2 list conventions that are used throughout this guide.

Table 1 Notice Icons




Icon	Notice Type	Description
	Information note	Information that describes important features or instructions
	Caution	Information that alerts you to potential loss of data or potential damage to an application, system, or device
	Warning	Information that alerts you to potential personal injury

Table 2 Text Conventions

Convention	Description
Screen displays	This typeface represents information as it appears on the screen.
Syntax	The word “syntax” means that you must evaluate the syntax provided and then supply the appropriate values for the placeholders that appear in angle brackets. Example: To change your password, use the following syntax: <code>system password <password></code> In this example, you must supply a password for <password>.
Commands	The word “command” means that you must enter the command exactly as shown and then press Return or Enter. Commands appear in bold. Example: To display IP information, enter the following command: display ip interface br
The words “enter” and “type”	When you see the word “enter” in this guide, you must type something, and then press Return or Enter. Do not press Return or Enter when an instruction simply says “type.”
Keyboard key names	If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press Ctrl+Alt+Del
Words in <i>italics</i>	Italics are used to: <ul style="list-style-type: none"> ■ Emphasize a point. ■ Denote a new term at the place where it is defined in the text. ■ Identify menu names, menu commands, and software button names. Examples: From the <i>Help</i> menu, select <i>Contents</i>. Click <i>OK</i>.

Related Documentation

In addition to this guide, Switch 4200G documentation set includes the following:

- *Switch 4200G Configuration Guide*

This guide contains information on the features supported by your Switch and how they can be used to optimize your network. It is supplied in PDF format on the CD-ROM that accompanies the Switch.

- *Switch 4200G Quick Reference Guide*

This guide contains:

- a list of the features supported by the Switch.
- a summary of the command line interface commands for the Switch. This guide is also available under the *Help* button on the web interface.

- *Switch 4200G Command Reference Guide*

This guide provides detailed information about the web interface and command line interface that enable you to manage the Switch. It is supplied in PDF format on the CD-ROM that accompanies the Switch.

- *Release Notes*

These notes provide information about the current software release, including new features, modifications, and known problems. The Release Notes are supplied in hard copy with your Switch.

Accessing Online Documentation

To access the documentation on the CD-ROM supplied with your Switch, do the following:

- 1 Insert the CD-ROM into your CD-ROM drive. If your PC has auto-run enabled, a splash screen will be displayed automatically.
- 2 Select the Documentation section from the contents page.

If the online documentation is to be accessed from a local drive or server, you will need to access the CD-ROM contents using the root directory and copy the files from the CD-ROM to a suitable directory.

- The PDF Command Reference Guide is stored in the `Docs` directory on the CD-ROM.
- The PDF Configuration Guide is stored in the `Docs` directory of the CD-ROM.

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Please include the following information when commenting:

- Document title
- Document part number (on the title page)
- Page number (if appropriate)

Example:

Part Number 10014914AA

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Please note that we can only respond to comments and questions about 3Com product documentation at this e-mail address. Questions related to technical support or sales should be directed in the first instance to your network supplier.

1

INTRODUCING THE SWITCH 4200G FAMILY

This chapter contains introductory information about the Switch 4200G and how it can be used in your network. It covers summaries of hardware and software features and also the following topics:

- About the Switch 4200G
- Switch 4200G—Front View Detail
- Switch 4200G — Rear View Detail
- Default Settings

About the Switch 4200G

The Switch 4200G Family are mixed media devices which consist of:

- 12, 24 or 48 10/100/1000BASE-T ports
- Four 1000BASE-X SFP ports
- One option module slot for a 10 Gigabit Ethernet port module on the Switch 4200G 12-Port. Requires an optional XFP.
- Two option module slots for a 10 Gigabit Ethernet port module on the Switch 4200G 24-Port and the Switch 4200G 48-Port. Requires an optional XFP.
- One RJ-45 connector for serial management

The Switch 4200G Family provides high-performance workgroups with a backbone to server connection. You can also add the Switch 4200G Family to any SuperStack® system as your network grows.



For information about using the software features of the Switch, refer to the "Command Reference Guide" and the "Configuration Guide" on the CD-ROM that accompanies the Switch.

Summary of Hardware Features

Table 3 summarizes the hardware features that are supported by the Switch 4200G.

Table 3 Hardware Features

Feature	Switch 4200G
Addresses	Up to 8,000 supported
Auto-negotiation	Supported on all ports
Forwarding Modes	Store and Forward
Duplex Modes	Half and full duplex on all front panel ports
Auto MDI/MDIX	Supported on all ports. If fiber SFP transceivers are used, Auto MDIX is not supported.
Flow Control	In full duplex operation all ports are supported
Traffic Prioritization	Supported (using the IEEE Std 802.ID, 1998 Edition): Eight traffic queues per port
Ethernet, Fast Ethernet, and Gigabit Ethernet Ports	Auto-negotiating 10/100/1000BASE-T ports
SFP Ethernet Ports	Supports fiber Gigabit Ethernet long-wave (LX), long-haul (LH70) and copper (T) transceivers in any combination.

Table 3 Hardware Features (continued)

Feature	Switch 4200G
Mounting	19-inch rack or standalone mounting
Clustering	Up to 16 units can be linked together (15 members and 1 commander)

Switch 4200G—Front View Detail

Figure 1 Switch 4200G 12-Port—front view

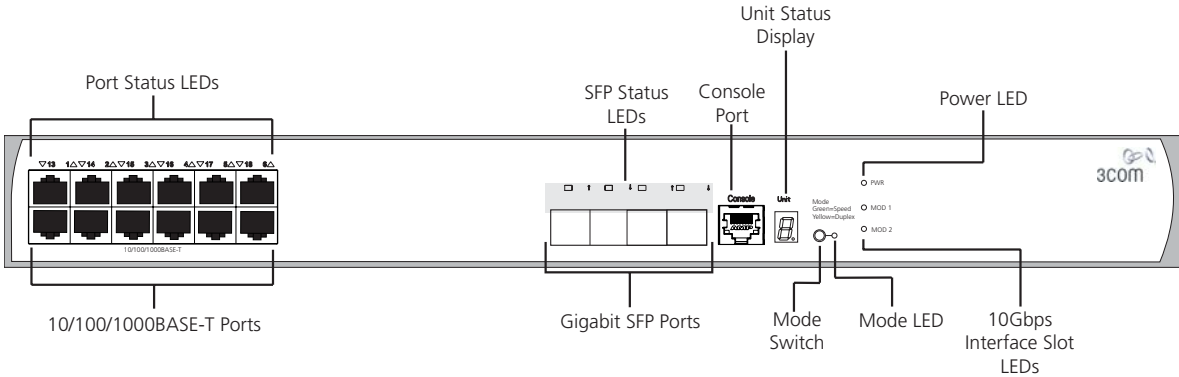


Figure 2 Switch 4200G 24-Port—front view

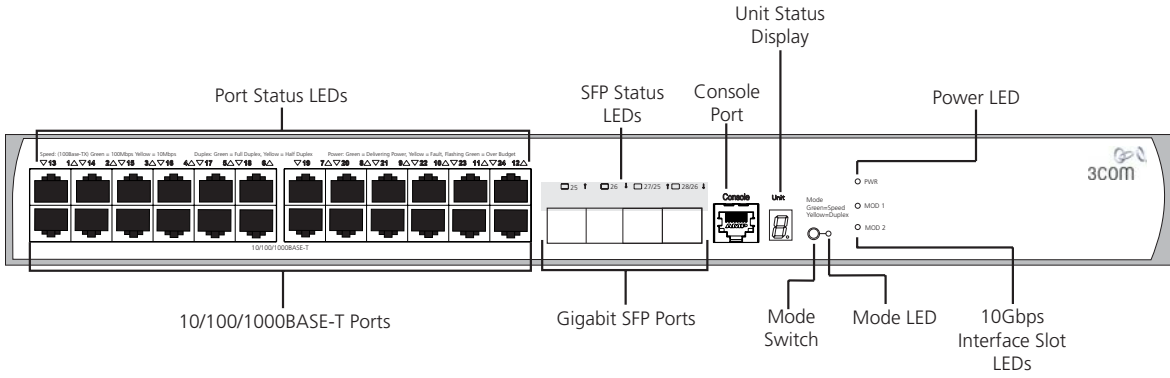
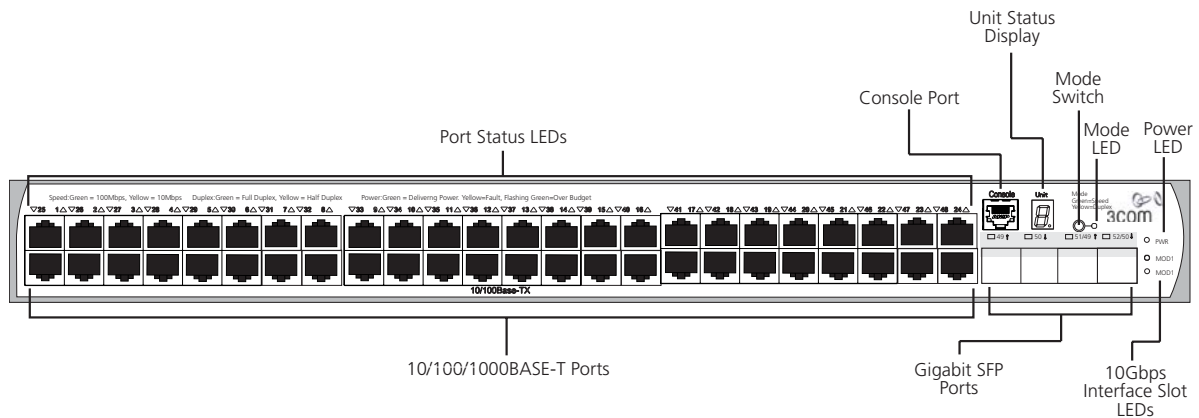


Figure 3 Switch 4200G 48-Port—front view

WARNING: RJ-45 Ports. These are shielded RJ-45 data sockets. They cannot be used as standard traditional telephone sockets, or to connect the unit to a traditional PBX or public telephone network. Only connect RJ-45 data connectors, network telephony systems, or network telephones to these sockets.

Either shielded or unshielded data cables with shielded or unshielded jacks can be connected to these data sockets.

10/100/1000BASE-T Ports

The Switch 4200G has 12, 24 or 48 auto-negotiating 10BASE-T/100BASE-TX ports configured as Auto MDIX (crossover). When auto-negotiation is enabled these ports automatically operate in MDI or MDIX mode as needed. These ports provide 10/100/1000 Mbps full-duplex connections to other Gigabit Ethernet devices. Full-duplex allows packets to be transmitted and received simultaneously which effectively doubles the potential throughput of a link.

These ports require either straight-through or cross-over Category 5 cables with RJ-45 connectors at each end. The maximum UTP cable length is 100 m (328 ft) over Category 5 cable.

The 10/100/1000BASE-T ports will auto-negotiate the appropriate speed.

1000BASE-X SFP Ports SFP (Small Form Factor Pluggable) ports support fiber Gigabit Ethernet long-wave (LX), long-haul (LH70) and copper (T) SFP Transceivers in any combination. This offers you the flexibility of using SFP transceivers to provide connectivity between the Switch and remote 1000 Mbps workgroups or to create a high capacity aggregated link backbone connection.

The default state for these ports is auto-negotiation enabled, where the speed, duplex and flow control modes are negotiated. As the speed and duplex modes are fixed by the media type, only the flow control is negotiated with the link partner. Alternatively, auto-negotiation can be disabled (except 1000BASE-T which auto-negotiation is mandatory) and the flow control setting can be manually configured.

Console Port The console port allows you to connect a terminal and perform remote or local out-of-band management. As the console port on the Switch is an RJ-45 port, you will need to connect an RJ-45 to DB9 converter cable to a standard null modem cable in order to connect a terminal.

Unit Status Display The Status Display is a seven segment display visible on the front of the Switch. The Status Display indicates switch status conditions such as the unit number, POST test ID, and software upgrade information. In the unlikely event of a hardware fault occurring, the Status Display may be used to help diagnose the problem. For information on using the Status Display for problem solving, see “Solving Problems Indicated by LEDs” on page 54.

Table 4 Status Display

Display	Mode LED Color	Description
Digit (1–9)	Mode LED flashing green	POST (power-on startup tests) running.
Digit (0–8)	Mode LED flashing red	POST failure. Digit indicates ID of failed test.
		0 POST test OK
		1 CPU error
		2 Switch chip error
		3 RAM error
		4 Flash error
		5 Port error
		6 PHY error
		7 Packet memory error
		8 CPLD error

Table 4 Status Display (continued)

Display	Mode LED Color	Description
Rotating bar segment	Mode LED flashing green	Software download in progress.
Flashing "F"	Mode LED steady red	Fan failure detected.
Flashing "t"	Mode LED flashing red	Switch is too hot; temperature is critical.
"C"	Mode LED green or yellow	Switch is clustered Commander unit.
"c"	Mode LED green or yellow	Switch is clustered Candidate unit.
"S"	Mode LED green or yellow	Switch is clustered Slave unit.
"1"	Mode LED green or yellow	Switch is un-clustered.

LEDs Table 5 lists LEDs visible on the front of the Switch, and how to read their status. For information on using the LEDs for problem solving, see "Solving Problems Indicated by LEDs" on page 54.

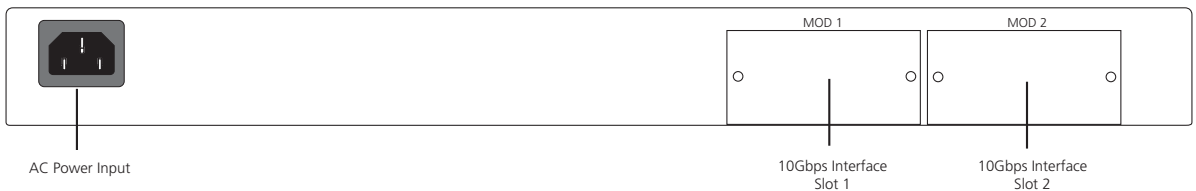
Table 5 LED Behavior

LED	Color	Indicates
PWR LED		
	Green	The Switch is powered-up and operating normally.
	Green flashing	Self Test (POST) or Software Download is in progress.
	Yellow flashing	One or more ports have failed POST.
	Red	The Switch has failed its Power On Self Test.
	Off	The Switch is not receiving power or there is a fault with the Power Supply Unit.
Mode LED		
Speed	Green	10/100 Port Speed and Activity, Gigabit SFP Status and Activity, or Stack Status and Activity.
Duplex	Yellow	10/100 Duplex and Activity, Gigabit SFP Duplex and Activity, or Stack Activity.
10/100/1000BASE-T Port LEDs		
Speed	Green	A high speed (1000 Mbps) link is present, blinking off for every packet received or transmitted.
	Yellow	A low speed link is present, blinking off for every packet received or transmitted.
	Yellow Flashing	The port has failed POST.
	Off	No link is present.

Table 5 LED Behavior (continued)

LED	Color	Indicates
Duplex	Green	Full duplex, blinking off for every packet received or transmitted.
	Yellow	Half duplex, blinking off for every packet received or transmitted.
	Yellow flashing	The port has failed POST.
	Off	No link is present.
1000BASE-X Port SFP Port LEDs		
Speed	Green	A high speed (1000 Mbps) link is present.
	Yellow Flashing	Port failed POST.
	Off	No link is present.
Duplex	Green	Full duplex packets are being transmitted/received on the port.
	Yellow	Half duplex packets are being transmitted/received on the port.
	Yellow flashing	Port failed POST.
	Off	No link is present.

Switch 4200G — Rear View Detail

Figure 4 Switch 4200G—rear view

Power Socket The Switch automatically adjusts its power setting to any supply voltage in the range 100–240 VAC.

10 Gbps Interface Slots The MOD 1 and MOD 2 interface slots accept the 10 Gbps SFP modules.

Default Settings

Table 6 shows the default settings for the Switch 4200G Family.

Table 6 Default Settings

Feature	Switch 4200G
Automatic IP Configuration	Enabled
Port Status	Enabled
Port Speed	Auto-negotiated
Duplex Mode	Auto-negotiated
Flow Control	Auto-negotiated
Broadcast Storm Control	Enabled
Virtual LANs (VLANs)	All ports belong to the untagged Default VLAN (VLAN 1) with IEEE Std 802.1Q-1998 learning operational
Management VLAN	Fixed as VLAN 1 on 4200G units. Can be any VLAN for 4200G units.
Link Aggregation Control Protocol (LACP)	Disabled per port
IP Multicast Filtering	Filtering enabled
Rapid Spanning Tree Protocol	Enabled
Fast Start	Enabled on front panel ports
RMON Alarm	Enabled
Traffic Prioritization	All ports prioritize NBX VoIP traffic (LAN and IP). All ports set to "best effort" for all other traffic.
Port Security	Disabled per port
Configuration Save and Restore	Disabled

2

INSTALLING THE SWITCH

This chapter contains the information you need to install and set up the Switch 4200G. It covers the following topics:

- Package Contents
- Choosing a Suitable Site
- Rack-mounting
- Placing Units On Top of Each Other
- The Power-up Sequence
- SFP Operation
- Choosing the Correct Cables



WARNING: Safety Information. Before installing or removing any components from the Switch 4200G or carrying out any maintenance procedures, you must read the safety information provided in Appendix A of this guide.



AVERTISSEMENT: Consignes de sécurité. Avant d'installer ou d'enlever tout composant du Switch 4200G ou d'entamer une procédure de maintenance, lisez les informations relatives à la sécurité qui se trouvent dans l'Appendice A de ce guide.



VORSICHT: Sicherheitsinformationen. Bevor Sie Komponenten aus dem Switch 4200G entfernen oder dem Switch 4200G hinzufuegen oder Instandhaltungsarbeiten verrichten, lesen Sie die Sicherheitsanweisungen, die in Appendix A (Anhang A) in diesem Handbuch aufgefuehrt sind.



ADVERTENCIA: Información de seguridad. Antes de instalar o extraer cualquier componente del Switch 4200G o de realizar tareas de mantenimiento, debe leer la información de seguridad facilitada en el Apéndice A de esta guía del usuario.



AVVERTENZA: Informazioni di sicurezza. Prima di installare o rimuovere qualsiasi componente dal Switch 4200G o di eseguire qualsiasi procedura di manutenzione, leggere le informazioni di sicurezza riportate nell'Appendice A della presente guida per l'utente.



OSTRZEŻENIE: Informacje o zabezpieczeniach. Przed instalacją lub usunięciem jakichkolwiek elementów z product lub przeprowadzeniem prac konserwacyjnych należy zapoznać się z informacjami o bezpieczeństwie zawartymi w Załączniku A niniejszego podręcznika.

Package Contents

- Switch unit
- CD-ROM (includes documentation related to your Switch)
- Getting Started Guide (this guide)
- Release Notes
- Unit Information Labels
- Warranty Information
- Power Cord
- Console Cable (RJ-45)
- 2 x Mounting brackets
- 4 x Screws
- 4 x Rubber feet

Choosing a Suitable Site

The Switch is suited for use either free standing on a desktop, or mounted in a standard 19-inch equipment rack (for example, in a wiring closet or equipment room). A rack-mounting kit containing two mounting brackets is supplied with the Switch.



CAUTION: Ensure that the ventilation holes are not obstructed.

When deciding where to position the Switch, ensure that:

- Cabling is located away from:
 - sources of electrical noise such as radios, transmitters and broadband amplifiers.
 - power lines and fluorescent lighting fixtures
- The Switch is accessible and cables can be connected easily.

- Water or moisture cannot enter the case of the Switch.
- Air flow is not restricted around the Switch or through the vents in the side of the Switch. 3Com recommends that you provide a minimum of 25mm (1in.) clearance.
- Air temperature around the Switch does not exceed 40 °C (104 °F).



If the Switch is installed in a 19-inch rack or closed assembly its local air temperature may be greater than room ambient temperature.

- The air is as free from dust as possible.
- The unit is installed in a clean, air conditioned environment.
- No more than four Switch units are placed on top of one another, if the units are free-standing.
- The Switch is situated away from sources of conductive (electrical) dust, for example laser printers.
- The AC supply used by the Switch is separate to that used by units that generate high levels of AC noise, for example air conditioning units and laser printers.

Rack-mounting

The Switch 4200G is 1 rack unit (1U) high and will fit in most standard 19-inch racks.



CAUTION: *Disconnect all cables from the Switch before continuing. Remove all self adhesive pads from the underside of the Switch if they have been fitted.*

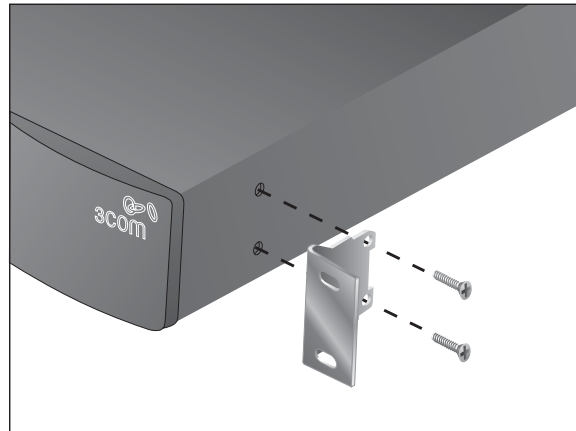
To rack-mount your Switch:

- 1 Place the Switch the right way up on a hard flat surface, with the front facing towards you.
- 2 Locate a mounting bracket over the mounting holes on one side of the front of the Switch, as shown in Figure 5.



You can also rack mount your Switch using the mounting holes at the rear of the Switch.

Figure 5 Fitting a Bracket for Rack-Mounting



3 Insert the two screws and tighten with a suitable screwdriver.



You must use the screws supplied with the mounting brackets. Damage caused to the unit by using incorrect screws invalidates your warranty.

4 Repeat step 2 and step 3 for the other side of the Switch.

5 Insert the Switch into the 19-inch rack and secure with suitable screws (not provided). Ensure that ventilation holes are not obstructed.

6 Connect network cabling.

7 Finally place a unit information label on the unit in an easily accessible position. The unit information label shows the following:

- 3Com product name of the Switch
- 3Com 3C number of the Switch
- Unique MAC address (Ethernet address) of the Switch
- Serial number of the Switch

You may need this information if you contact 3Com Technical Support.

Placing Units On Top of Each Other

If the Switch units are free-standing, up to four units can be placed one on top of the other. If you are mixing a variety of 3Com equipment, the smaller units must be positioned at the top.

If you are placing Switch units one on top of the other, you must use the self-adhesive rubber feet supplied. Apply the feet to the underside of each Switch, sticking one in the marked area at each corner. Place the Switch units on top of each other, ensuring that the feet of the upper unit sit fully on the lower unit.

The Power-up Sequence

The following sections describe how to get your Switch 4200G powered-up and ready for operation.

Powering-up the Switch 4200G

Use the following sequence of steps to power-up the Switch.

- 1 Plug the power cord into the power socket at the rear of the Switch.
- 2 Plug the other end of the power cord into your power outlet.

The Switch powers-up and runs through its Power On Self Test (POST), which takes approximately one minute.

Checking for Correct Operation of LEDs

During the Power On Self Test, all ports on the Switch are disabled and the LEDs light. The PWR LED will flash green during the POST.

When the POST has completed, check the PWR LED to make sure that your Switch is operating correctly. Table 7 shows possible colors for the LED.

Table 7 PWR LED Colors

Color	State
Green	The Switch is powered-up and operating normally.
Red	The Switch has failed its Power On Self Test (POST).
Yellow flashing	Some ports have failed POST*
Off	The Switch is not receiving power.

* In this event you can still use the Switch using the remaining ports that have passed the POST.

If there is evidence of a problem, see “Solving Problems Indicated by LEDs” on page 54 for a list of suggested solutions.



CAUTION: *The Switch has no ON/OFF switch; the only method of connecting or disconnecting mains power is by connecting or disconnecting the power cord.*

SFP Operation

The following section describes how to insert an SFP transceiver into an SFP port.



SFP transceivers are hot-insertable and hot-swappable. You can remove them from and insert them into any SFP port without having to power down the Switch.

Approved SFP Transceivers

The following list of approved Gigabit Ethernet SFP transceivers is correct at the time of publication.

- 3CSFP92 SFP (1000BASE-LX)
- 3CSFP97 SFP (1000BASE-LH70)
- 3CSFP93 SFP (1000BASE-T)

To access the latest list of approved SFP transceivers for the Switch on the 3Com Corporation World Wide Web site, enter this URL into your internet browser:

<http://www.3com.com>

Inserting an SFP Transceiver

To be recognized as valid, the SFP transceiver must have the following characteristics:

- 1000BASE-LX SFP transceiver

Use this transceiver to connect Gigabit Ethernet SFP ports on the Switch directly to a single-mode fiber-optic cable or to multimode fiber using a conditioned launch cable.
- 1000BASE-LH70 SFP transceiver

Use this transceiver to connect Gigabit Ethernet SFP ports on the Switch directly to a single-mode fiber-optic cable.

- 1000BASE-T SFP transceiver

This transceiver uses Category 5 copper cabling with RJ-45 connectors and supports segment lengths of up to 100 m (328 ft).



If the SFP transceiver is faulty, it will not operate within the Switch. See "Solving Hardware Problems" on page 55.

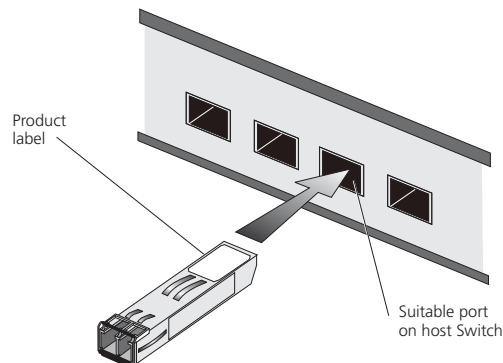


3Com recommends that you only use SFPs supplied by 3Com. If the SFP transceiver is invalid it will not be recognized by the Switch.

Use the following sequence of steps to activate the SFP ports:

- 1 The SFP transceiver is keyed and there is only one way in which it can be installed correctly. It is not necessary to power-down your Switch.
- 2 Hold the transceiver so that the connector is toward you and the product label is visible. Ensure the wire release lever is closed (in the upright position).
- 3 Gently slide the transceiver into the SFP port until it clicks. If the transceiver does not click into place, remove it, turn it over and re-insert.
- 4 Remove the plastic protective cover if fitted.

Figure 6 Inserting an SFP Transceiver



- 5 Use and appropriate cable to connect the transceiver to a suitable device.
- 6 Check the LEDs on the front of the Switch to ensure that it is operating correctly. Refer to "LEDs" on page 18 for more information.

Removing an SFP Transceiver

If you wish to remove the transceiver (it is not necessary to power-down your Switch):

- 1 Disconnect the cable from the transceiver.
- 2 Move the wire release lever downwards until it is pointing toward you.
- 3 Pull the wire release lever toward you to release the catch mechanism; the transceiver will then easily slide out.

Choosing the Correct Cables

All of the ports on the Switch are Auto-MDIX, that is they have a cross-over capability. These ports can automatically detect whether to operate in MDI or MDIX mode. Therefore you can make a connection to one of the ports with a straight-through (MDI) or a cross-over cable (MDIX).



The Auto-MDIX feature only operates when auto-negotiation is enabled.

If auto-negotiation is disabled, all the Switch ports are configured as MDIX (cross-over). If you want to make a connection to another MDIX port, you need a *cross-over* cable. Many ports on workstations and servers are configured as MDI (straight-through). If you want to make a connection to an MDI port, you need to use a standard *straight-through* cable. See Table 8.

3Com recommends that you use at least Category 5 twisted pair cable—the maximum segment length for this type of cable is 100 m (328 ft.).

Table 8 Cables required to connect the Switch to other devices if auto-negotiation is disabled

	Cross-over Cable	Straight-through Cable
Switch to Switch (MDIX to MDIX)	✓	✗
Switch to Hub (MDIX to MDIX)	✓	✗
Switch to PC (NIC) (MDIX to MDI)	✗	✓



CAUTION: *If you want to install the Switch using a Category 5E or Category 6 cable, 3Com recommends that you briefly connect the cable to a grounded port before connecting network equipment. If you do not, the cable's Electrostatic Discharge (ESD) may damage the Switch's port.*

You can create a grounded port by connecting all wires at one end of a UTP cable to an earth ground point, and the other end to a female RJ-45 connector located, for example, on a Switch rack or patch panel. The RJ-45 connector is now a grounded port.

3Com recommends that you use Category 5 twisted pair cable—the maximum segment length for this type of cable is 100 m (328 ft).

Choosing the Correct Cables for the Switch 4200G

All of the ports on the front of the Switch 4200G 28-Port are 100BASE-FX MT-RJ multi-mode ports. The MT-RJ port is a small form factor fiber-optic port with the transmit and receive fibers in the same cable. Unlike many fiber-optic systems, only one MT-RJ cable is needed to connect two MT-RJ ports together.

To connect a front panel port to another 100BASE-FX MT-RJ multi-mode port, or to a patch panel, a single MT-RJ multi-mode pinless jumper cable is required. Since standard MT-RJ cables are cross-over cables, no Auto-MDIX sensing is required. The maximum cable length is 2 kilometers (1.24 miles).



CAUTION: *Do not connect pinned MT-RJ connectors into any port on the Switch 4200G as this may damage the unit. The ports have locator pins fitted and are designed for standard (pinless) connectors.*

To connect a front panel port to a 100BASE-FX single mode port, or to a port that does not have an MT-RJ connector, an adaptor will be required. It is not possible to connect a front panel port to a 1000BASE-FX port.

3

SETTING UP FOR MANAGEMENT

To make full use of the features offered by your Switch, and to change and monitor the way it works, you have to access the management software that resides on the Switch. This is known as managing the Switch.

Managing the Switch can help you to improve the efficiency of the Switch and therefore the overall performance of your network.

This chapter explains the initial set up of the Switch and the different methods of accessing the management software to manage a Switch. It covers the following topics:

- Methods of Managing a Switch
- Setting Up Overview
- Manually Configuring IP Information
- Viewing Automatically Configured IP Information
- Setting Up Command Line Interface Management
- Setting Up Command Line Interface Management using SSH
- Setting Up Web Interface Management
- Setting Up SNMP Management V1 or V2
- Default Users and Passwords
- Configuration Conversion Utility

Methods of Managing a Switch

To manage your Switch you can use one of the following methods:

- Command line interface management
- Command line interface management using SSH
- Web interface management
- SNMP management

Command Line Interface Management

Each Switch has a command line interface (CLI) that allows you to manage the Switch from a workstation, either locally using a console port connection (see Figure 7), or remotely over the network (see Figure 8).

Figure 7 CLI Management using the Console Port

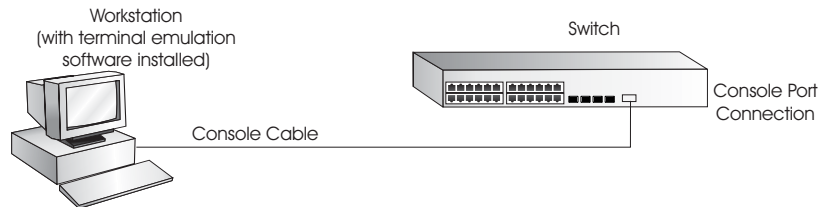
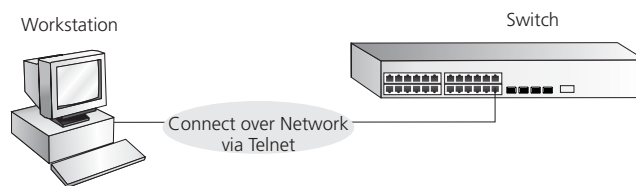


Figure 8 CLI Management over the Network



Refer to "Setting Up Command Line Interface Management" on page 46.

There are two main views in the CLI:

- **User View**

This view is shown when you first connect to the Switch and shows basic information about operation and statistics. The prompt for user view is `<S4200G>`.

- **System View**

This view enables you to configure the system parameters. To display this view, from user view enter `system-view`. The prompt for system view is `[S4200G]`.

Command Line Interface Management using SSH

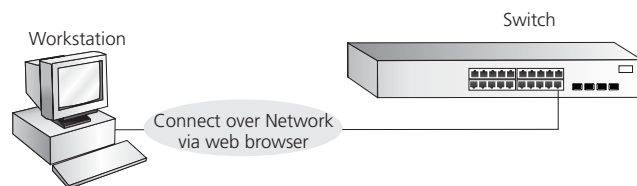
The Switch 4200G supports Secure Shell version 1.5 (SSHv1.5), allowing secure access to the Command Line Interface of the Switch.

If you use SSH to administer your Switch and the network traffic is intercepted, no passwords or configuration information will be visible in the data. To securely administer the Switch using the Command Line Interface you need a third party SSH client.

Web Interface Management

Each Switch has an internal set of web pages that allow you to manage the Switch using a Web browser remotely over an IP network (see Figure 9).

Figure 9 Web Interface Management over the Network

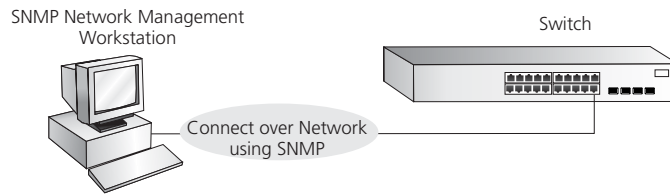


Refer to “Setting Up Web Interface Management” on page 48.

SNMP Management

You can manage a Switch using any network management workstation running the Simple Network Management Protocol (SNMP) as shown in Figure 10. For example, you can use the 3Com Network Director software, available from the 3Com website.

Figure 10 SNMP Management over the Network



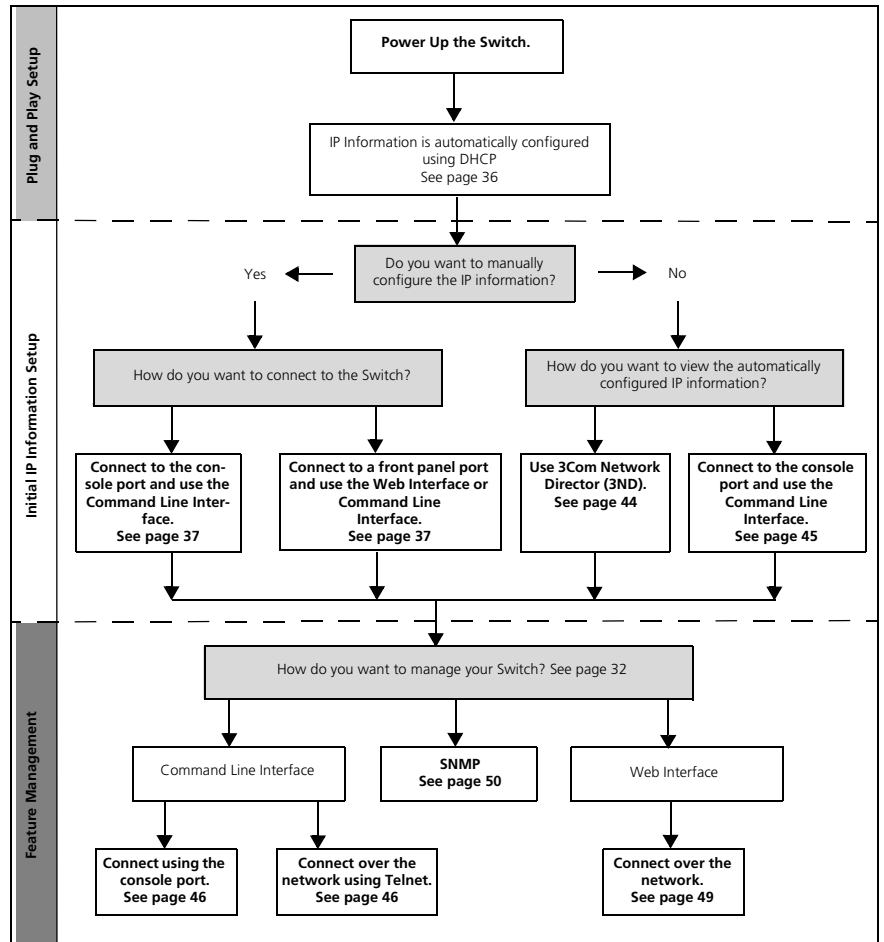
Refer to “Setting Up SNMP Management V1 or V2” on page 50.

Setting Up Overview

This section gives an overview of what you need to do to get your Switch set up and ready for management when it is in its default state. The whole setup process is summarized in Figure 11. Detailed procedural steps are contained in the sections that follow. In brief, you need to:

- Configure IP information manually for your Switch or view the automatically configured IP information
- Prepare for your chosen method of management

Figure 11 Initial Switch Setup and Management Flow Diagram



CAUTION: To protect your Switch from unauthorized access, you must change all three default passwords as soon as possible, even if you do not intend to actively manage your Switch. For more information on default users and changing default passwords, see "Default Users and Passwords" on page 50.

IP Configuration You can use one of the following methods to allocate IP information to your Switch (essential if you wish to manage your Switch across the network).

Manual IP Configuration

When you configure the IP information, the Switch remembers the information that you enter until you change it again.

You should use the Manual IP configuration method if:

- you do not have a DHCP or BootP server on your network, or
- you want to remove the risk of the IP address ever changing, or
- your DHCP or BootP server does not allow you to allocate static IP addresses. (Static IP addresses are necessary to ensure that the Switch is always allocated the same IP information.)



For most installations, 3Com recommends that you configure the Switch IP information manually. This makes management simpler and more reliable as it is not dependent on a DHCP or BootP server, and eliminates the risk of the IP address changing.

To manually enter IP information for your Switch, work through the “Manually Configuring IP Information” on page 37.

Automatic IP Configuration using DHCP

By default the Switch tries to configure itself with IP Information without requesting user intervention. It tries to obtain an IP address from a DHCP server on the network.

When using automatic IP configuration it is important that the IP address of the Switch is static, otherwise you will not know what the IP address is and it will be difficult to manage. Most DHCP servers allow static IP addresses to be configured so that you know what IP address will be allocated to the Switch. Refer to the documentation that accompanies your DHCP server.



For a detailed description of how automatic IP configuration operates, please refer to the Configuration Guide on the CD-ROM that accompanies your Switch or the 3Com Web Site.

You should use the automatic IP configuration method if:

- your network uses DHCP to allocate IP information, or
- flexibility is needed. If the Switch is deployed onto a different subnet, it will automatically reconfigure itself with an appropriate IP address, instead of you having to manually reconfigure the Switch.



If the Switch is not allocated with an automatic IP address, the IP configuration will be blank or shown as ' ' ' ' .

If you use the automatic IP configuration method, you need to discover the automatically allocated IP information before you can begin management. Work through the “Viewing Automatically Configured IP Information” on page 44.

Preparing for Management

Once your Switch’s initial set up is complete you can set up your chosen management method as described in “Methods of Managing a Switch” on page 32.



For detailed information about the specific web interface operations and command line interface commands and problem solving, refer to the “Switch 4200G Command Reference Guide” on the CD-ROM that is supplied with the Switch or on the 3Com Web site.

Manually Configuring IP Information

You can manually configure the Switch IP information in the following ways:

- Connecting to the console port

Connect a workstation using a console cable to the console port of the Switch. You can then manually enter IP information using the command line interface (CLI).
- Connecting to a front panel port

Connect a workstation using an Ethernet cable to a front panel port of the Switch. You can then manually enter IP information using the web interface or the command line interface (CLI).

Connecting to the Console Port

To set up your Switch manually you can make a connection to the console port, (this example describes a local connection to the console port, rather than one using a modem). You can do this whilst the Switch is offline, that is, before you connect the Switch to a network, or whilst the Switch is online, that is, connected to a network.

Prerequisites

- A workstation with terminal emulation software installed, such as Microsoft Hyperterminal. This software allows you to communicate with the Switch using the console port directly.
- Documentation supplied with the terminal emulation software.
- The console cable (RJ-45) supplied with your Switch.



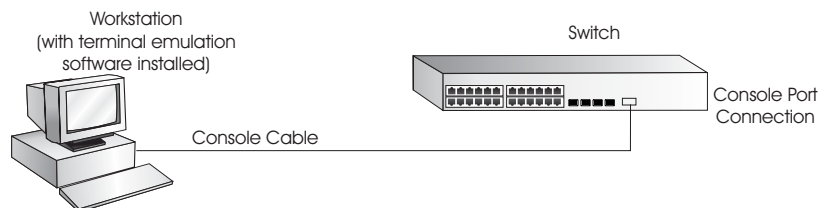
You can find pin-out diagrams for the cable in Appendix on page 89.

- You need to have the following so that you can manually set up the Switch with IP information:
 - IP address
 - subnet mask
 - default gateway
 - management VLAN ID, normally set to the default value (1)

Connecting the Workstation to the Switch

- 1 Connect the workstation to the console port using the console cable as shown in Figure 12.

Figure 12 Connecting a Workstation to the Switch using the Console Port



To connect the cable:

- a Attach the RJ-45 connector on the cable to the console port of the Switch.
- b Attach the other end of the cable to the workstation and tighten the retaining screws on the cable to prevent it from being loosened.

- 2 Open your terminal emulation software and configure the COM port settings to which you have connected the cable. The settings must be set to match the default settings for the Switch, which are:
 - 19,200 baud (bits per second)
 - 8 data bits
 - no parity
 - 1 stop bit
 - no hardware flow controlRefer to the documentation that accompanies the terminal emulation software for more information.
- 3 Power up the Switch. The Power on Self Test (POST) will now be performed.

Setting Up the Switch with IP Information

You are now ready to manually set up the Switch with IP information using the command line interface.

- 1 The command line interface login sequence begins as soon as the Switch detects a connection to its console port.



If the login prompt does not begin immediately, press Return a few times until it starts.

- 2 At the login and password prompts, enter **admin** as your user name and press *Return* and at the password prompt press *Return* again. If you have logged on correctly, <S4200G> should be displayed as shown in Figure 13.



Once you have logged in you will automatically be in User View.

Figure 13 User View Login

```

*****
* All rights reserved (1997-2005) *
* Without the owner's prior written consent, *
*no decompiling or reverse-engineering shall be allowed.*
*****

Login authentication

Username:admin
Password:
<4500>
^Apr 5 17:22:13:289 2000 4500 SHELL/5/LOGIN:- 1 - admin<161.71.164.118> in unit
1 login_

```

- 3 Enter the **system-view** command and *Enter*.



To confirm that you are in the System View, the following should be displayed:

```
[S4200G]
```

*Enter **interface vlan 1** and *Enter*.*

- 4 Enter the IP address and subnet mask for the Switch as follows:

```
ip address xxx.xxx.xxx.xxx mmm.mmm.mmm.mmm
```

and *Enter*.

(where xxx.xxx.xxx.xxx is the IP address and mmm.mmm.mmm.mmm is the subnet mask of the Switch)

- 5 Select the **quit** command and enter the default gateway for the Switch:

```
ip route-static 0.0.0.0 0.0.0.0 xxx.xxx.xxx.xxx
```

(where xxx.xxx.xxx.xxx is the IP address of the default gateway)

- 6 From the User View, enter the **save** command to save the configuration to your Switch as the configuration is not saved automatically when the Switch is powered down.

The initial set up of your Switch is now complete and the Switch is ready for you to set up your chosen management method. See “Methods of Managing a Switch” on page 32.

If you do not intend to use the command line interface using the console port to manage the Switch, you can disconnect the serial cable and close the terminal emulator software.

Connecting to a Front Panel Port

To set up your Switch manually you can, alternatively, make a connection to a front panel port. To do this you will need an IP address, refer to “Viewing Automatically Configured IP Information” on page 44 for more information.



The procedure described in this section assumes the unit has been powered up in standalone mode.

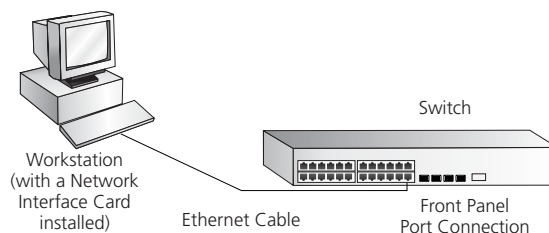
Prerequisites

- A workstation running a suitable operating system—refer to “Choosing a Browser” on page 48.
- A Network Interface Card (NIC).
- A Category 5 twisted pair Ethernet cable with RJ-45 connectors at both ends.
- A suitable Web browser—refer to “Choosing a Browser” on page 48.
- Existing IP address of the Switch.
- You need to have the following so that you can manually set up the Switch with IP information:
 - IP address
 - subnet mask
 - default gateway
 - management VLAN ID, normally set to the default value (1)

Connecting the Workstation to the Switch

- 1 Connect the workstation to a front panel port using an Ethernet cable as shown in Figure 14.

Figure 14 Connecting a Workstation to the Switch using a Front Panel Port



To connect the cable:

- a Attach an RJ-45 connector at one end of the Ethernet cable to the Network Interface Card (NIC) in the workstation.
- b Connect the RJ-45 connector at the other end of the cable to one of the front panel ports on the Switch.



Do not interconnect the Switch to any other unconfigured Switch.

Setting Up the Switch with IP Information

You are now ready to manually set up the Switch with IP information. You can do this using the Web interface or the command line interface (CLI) using telnet.

Using the Web Interface

- 1 Power-up the Switch. This takes approximately one minute.
- 2 Open a suitable Web browser and enter the IP address of your Switch in the *Address* field.



If there is no response, wait for one minute then re-enter the IP address.



If a pop up message appears displaying download and install simplified Chinese information, click Cancel.

- 3 At the login and password prompts, enter **admin** as your user name and press *Return* and at the password prompt (default user name and password) press *Return* again. If you have logged on correctly, the Device View of the Switch is displayed.
- 4 To enter basic setup information for the Switch, select *Administration > IP Setup* and then follow the wizard through various system screens to enter the IP address and subnet mask that you want the Switch to use when it is connected to the network. The final page displays a summary of the information entered.
- 5 Select *Save Configuration* to save the configuration to your Switch.

The initial set up of your Switch is now complete and the Switch is ready for you to set up your chosen management method. See “Methods of Managing a Switch” on page 32.

Using Command Line Interface using Telnet

- 1 To start a Telnet session to the unit, click *Start* in Microsoft Windows 95/98/2000/NT/XP.
 - a Click *Run*.
 - b In the dialogue box that appears type the IP address of the unit, that is: **Telnet xxx.xxx.xxx.xxx**
(where xxx.xxx.xxx.xxx is the IP address of the Switch)
 - c Click *OK*.
- 2 Press *Enter* to open a login prompt.



If the login prompt does not begin immediately, press Return a few times until it starts.

- 3 At the login and password prompts, enter **admin** as your user name and press *Return* at the password prompt. If you have logged on correctly, <S4200G> is displayed as shown in the example in Figure 15.

Figure 15 User View Login using Telnet

```

*****
*           All rights reserved (1997-2005)           *
*   Without the owner's prior written consent,       *
*no decompiling or reverse-engineering shall be allowed.*
*****

Login authentication

Username:admin
Password:
<4500>
%Apr  5 17:22:13:289 2000 4500 SHELL/5/LOGIN:- 1 - admin<161.71.164.118> in unit
1 login_
    
```

- 4 Enter the **system-view** command and *Enter*.
- 5 Enter **interface vlan 1** and *Enter*.
- 6 Enter the IP address and subnet mask for the Switch as follows:
ip address xxx.xxx.xxx.xxx mmm.mmm.mmm.mmm
(where xxx.xxx.xxx.xxx is the IP address and mmm.mmm.mmm.mmm is the subnet mask of the Switch)

7 Enter the default gateway for the Switch:

```
ip route-static 0.0.0.0 0.0.0.0 xxx.xxx.xxx.xxx
```

(where xxx.xxx.xxx.xxx is the IP address of the default gateway)

8 From the User View, enter the **save** command to save the configuration to your Switch as the configuration is not saved automatically when the Switch is powered down.

The initial set up of your Switch is now complete and the Switch is ready for you to set up your chosen management method. See “Methods of Managing a Switch” on page 32.

Viewing Automatically Configured IP Information

If you allow the Switch to automatically configure its own IP information you need to discover and view the IP information before you can begin to manage the Switch. You can discover the IP information in two ways:

- Using 3Com Network Director
 - This application will auto-discover the Switch and display the automatically allocated IP information assigned to the Switch.
- Connecting to the Console Port
 - Connect a workstation using a console cable to the console port of the Switch. You can then view the IP information automatically assigned to the Switch using the command line interface (CLI).

Using 3Com Network Director

You can use the 3Com Network Director application (available from the 3Com website) to discover the automatically allocated IP information.

- 1 Connect your Switch to the network.
- 2 Power-up the Switch and wait for two minutes.
- 3 Launch 3Com Network Director and run the Auto-discovery wizard.

3Com Network Director will auto-discover the new Switch and display the IP information that has been automatically allocated to the Switch.



Most DHCP and BootP servers allow static IP addresses to be configured so that you know what IP address the Switch will be given. Refer to the documentation that accompanies your DHCP or BootP server.



If your network does not have a DHCP or BootP server, the workstation running 3Com Network Director must be on the same subnet as the Switch, because Auto-IP addresses are non-routable.

Connecting to the Console Port

Alternatively, you can view the automatically configured IP information using the command line interface (CLI) through a connection to the console port. (This example describes a local connection to the console port, rather than a remote one using a modem.) For further information on connecting using the console port see "Connecting the Workstation to the Switch" on page 38.

Viewing IP Information using the Console Port

You are now ready to view the automatically allocated IP information using the command line interface.

- 1 Connect your Switch to the network using the Ethernet cable. As soon as a network connection is made the Switch begins the automatic IP configuration process.



The automatic IP configuration process usually completes within one minute.

- 2 The command line interface login sequence begins as soon as the Switch detects a connection to its console port.



If the login prompt does not begin immediately, press Return a few times until it starts.

- 3 At the login and password prompts, enter **admin** as your user name and press *Return* at the password prompt. If you have logged on correctly, <S4200G> is displayed as shown in the example in Figure 16.

Figure 16 User View Login

```

*****
*      All rights reserved (1997-2005)      *
*      Without the owner's prior written consent,      *
*no decompiling or reverse-engineering shall be allowed.*
*****

Login authentication

Username:admin
Password:
<4500>
%Apr  5 17:22:13:289 2000 4500 SHELL/5/LOGIN:- 1 - admin<161.71.164.118> in unit
1 login_

```

- 4 Enter **display ip interface br** to view a summary of allocated IP addresses.

The initial set up of your Switch is now complete and the Switch is ready for you to set up your chosen management method. See “Methods of Managing a Switch” on page 32.

If you do not intend to use the command line interface using the console port to manage the Switch, you can logout, disconnect the serial cable and close the terminal emulator software.

Setting Up Command Line Interface Management

This section describes how you can set up command line interface management using a local console port connection or over the network.

User Interface Overview

User interface configuration is provided by the Switch to configure and manage the port data. There are two types of user interfaces:

AUX User Interface—used to log in to your Switch using the console port.

VTY User Interface—used to Telnet to the Switch. The Switch can have up to five VTY user interfaces.

CLI Management using the Console Port

To manage a Switch using the command line interface using the local console port connection:

- 1 Ensure you have connected your workstation to the console port correctly as described in “Connecting to the Console Port” on page 38.
- 2 Your Switch is now ready to continue being managed and/or configured through the CLI using its console port.

CLI Management over the Network

To manage a Switch using the command line interface over a network using Telnet:

- 1 Ensure you have already set up the Switch with IP information as described in “Methods of Managing a Switch” on page 32.
- 2 Check that you have the IP protocol correctly installed on your management workstation. You can check this by trying to browse the World Wide Web. If you can browse, the IP protocol is installed.

- 3 Check you can communicate with the Switch by entering a **ping** command at the DOS prompt in the following format:

```
c:\ ping xxx.xxx.xxx.xxx
```

(where xxx.xxx.xxx.xxx is the IP address of the Switch)

If you get an error message, check that your IP information has been entered correctly and the Switch is powered up.

- 4 To open a Telnet session using the DOS prompt, enter the IP address of the Switch that you wish to manage in the following format:

```
>telnet xxx.xxx.xxx.xxx
```

(where xxx.xxx.xxx.xxx is the IP address of the Switch)



If opening a Telnet session using third party software you will need to enter the IP address in the format suitable for that software.

- 5 At the login and password prompts, enter **admin** as your user name and press Return at the password prompt (or the password of your choice if you have already modified the default passwords).



If the login prompt does not display immediately, press Return a few times until it starts.

- 6 If you have logged on correctly, the Switch you wish to manage is displayed as <S4200G>, as shown in Figure 13 on page 40.

Setting Up Command Line Interface Management using SSH

This section describes how you can set up Command Line Interface management using SSH over a network.

To manage a Switch using the command line interface over a network using SSH:

- 1 Ensure you have already set up the Switch with IP information as described in “Methods of Managing a Switch” on page 32.
- 2 Check that you have the IP protocol correctly installed on your management workstation. You can check this by trying to browse the World Wide Web. If you can browse, the IP protocol is installed.
- 3 Check you can communicate with the Switch by entering a **ping** command at the DOS prompt in the following format:

```
c:\ ping xxx.xxx.xxx.xxx
```

(where xxx.xxx.xxx.xxx is the IP address of the Switch)

If you get an error message, check that your IP information has been entered correctly and the Switch is powered up.



The switch automatically generates a host key pair when it is powered up for the first time, or after any reset to factory defaults. Host key generation may take a while, during which time SSH connections to the switch will be refused.

- 4 Install an SSH client application on the workstation you want to use to access the switch.



3Com recommends the following SSH clients; PuTTY, OpenSSH and SSH Communications Security Corp Secure Shell.

- 5 Open an SSH session and access the Switch using the Switch's IP address and port number.



The first time you connect to the switch the client will ask you to confirm that the host key is correct for the device.

- 6 The Switch and the SSH client will authenticate each other and a secure connection will be established.

- 7 Enter your usual username and password to access the CLI commands.



For increased security please change the default password when using SSH for the first time.



For further information on generating a host key on your switch and transferring keys to the Switch using TFTP server please refer to the Configuration Guide that is supplied with your Switch.

Setting Up Web Interface Management

This section describes how you can set up web interface management over the network.

Prerequisites

- Ensure you have already set up the Switch with IP information as described in "Methods of Managing a Switch" on page 32.
- Ensure that the Switch is connected to the network using a Category 5 twisted pair Ethernet cable with RJ-45 connectors.
- A suitable Web browser.

Choosing a Browser

To display the web interface correctly, use one of the following Web browser and platform combinations:

Table 9 Supported Web Browsers and Platforms

	Windows 2000	Windows XP	Windows Server 2003	Red Hat Linux 9	Solaris 7/9
Netscape 7.1	✓	✓	✗	✗	✓
Internet Explorer 5.5	✓	✓	✓	✗	✗
Internet Explorer 6.0	✓	✓	✓	✗	✗
Mozilla 1.4	✗	✗	✗	✓	✓

For the browser to operate the web interface correctly, JavaScript™ and Cascading Style Sheets must be enabled on your browser. These features are enabled on a browser by default. You will only need to enable them if you have changed your browser settings.

Web Management Over the Network

To manage a Switch using the web interface over an IP network:

- 1 Check that you have the IP protocol correctly installed on your management workstation. You can check this by trying to browse the World Wide Web. If you can browse, the IP protocol is installed.
- 2 Check you can communicate with the Switch by entering a **ping** command at the DOS prompt in the following format:


```
c:\ ping xxx.xxx.xxx.xxx
```

 (where xxx.xxx.xxx.xxx is the IP address of the Switch)

If you get an error message, check that your IP information has been entered correctly and the Switch is powered up.
- 3 Open your web browser and enter the IP address of the Switch that you wish to manage in the URL locator, for example, in the following format:


```
http://xxx.xxx.xxx.xxx
```
- 4 At the login and password prompts, enter **admin** as your user name and press Return at the password prompt (or the password of your choice if you have already modified the default passwords).
- 5 Click on the *Device View* button to display the web management options.

Setting Up SNMP Management V1 or V2

Any network management application running the Simple Network Management Protocol (SNMP) can manage a Switch if:

- The correct Management Information Bases (MIBs) are installed on the management workstation.
- The management workstation is connected to the Switch using a port in VLAN 1 (the Default VLAN). By default, all ports on the Switch are in VLAN 1.



You can use the 3Com Network Director application that is available from the 3Com website to provide SNMP management for your Switch. If you use 3Com Network Director it automatically loads the correct MIBs and necessary files onto your workstation.

Prerequisites

- Documentation supplied with the SNMP network management application software.

The default read community string is **public**. To change this setting in System View, enter **display snmp community**.

The default write community string is **private**. To change this setting in System View, enter **display snmp community**.



*To manage your Switch using an SNMP network management application, you need to specify SNMP community strings for the users defined on the Switch. You can do this using the command line interface **system management snmp community** command. Refer to the command line interface section of the “SuperStack 4 Switch Command Reference Guide” for more information.*



SNMP V3 is on as default. All commands are in snmp menu in System View.

Default Users and Passwords

If you intend to manage the Switch using the web interface or the command line interface, or to change the default passwords, you need to log in with a valid user name and password. The Switch has three default user names, and each user name has a different password and level of access. These default users are listed in Table 10.



CAUTION: To protect your Switch from unauthorized access, you must change all three default passwords as soon as possible, even if you do not intend to actively manage your Switch.

Table 10 Default Users

User Name	Default Password	Access Level
monitor	monitor	monitor The user can view all manageable parameters, except special/security features, but cannot change any manageable parameters
manager	manager	manager The user can access and change the operational parameters but not special/security features
admin	(no password)	security The user can access and change all manageable parameters



Use the admin default user name (no password) to login and carry out initial Switch setup.

To set a password for the admin user in the CLI, enter the following from system view:

```
[S4200G]local-user admin <cr>
[S4200G-luser-admin]password simple xxxxxxxx
```

(where **xxxxxxx** is your chosen password).

Save the configuration in the User View.



For information on the lost password procedure please refer to the Configuration Guide that is supplied with your Switch.

Configuration Conversion Utility

The 3Com Switch 4200G Configuration Conversion Utility (CCU) enables you to convert the key configuration parameters from a range of 3Com SuperStack II and SuperStack 3 devices to the configuration file format used by your Switch 4200G unit. The utility provides conversion for a number of Switch features

To download the CCU package, select the CCU link on the CD that accompanies your Switch 4200G. Alternatively, the CCU download and further information is available at:

<http://www.3com.com/switchmigration/>

4

PROBLEM SOLVING

This chapter helps you to diagnose and solve problems you may have with the operation of your Switch. There is also an explanation of IP addressing and upgrading software.

The topics covered are:

- Solving Problems Indicated by LEDs
- Solving Hardware Problems
- Solving Communication Problems
- Solving Fabric Formation Problems

If you experience a problem that is not listed here, it may be included in the Support section of the Switch 4200G Command Reference Guide on the CD-ROM that accompanies your Switch.

For Technical Support information, see Appendix D.

Solving Problems Indicated by LEDs

If the LEDs on the Switch indicate a problem, refer to the list of suggested solutions below.

The PWR LED does not light

Check that the power cable is firmly connected to the Switch and to the supply outlet. If the connection is secure and there is still no power, you may have a faulty power cord or an internal fault. Firstly, check the power cord by:

- testing it in another device.
- connecting a working power cord to the 'problem' device then contact your supplier for advice.

On powering-up, the PWR LED lights Red

The Switch unit has failed its Power On Self Test (POST) because of an internal problem. The fault type will be indicated on the unit LEDs. Contact your supplier for advice.

On powering-up, the PWR LED is flashing yellow

A port has failed and has been automatically disabled. You can verify this by checking that the Port LED is quickly flashing Yellow. If a port fails, the Switch passes its Power On Self Test and continues to operate normally.

A Port LED is flashing yellow

The port has failed and has been automatically disabled. The Switch passes its Power On Self Test and continues to operate normally, even if one or more ports are disabled.

A link is connected and yet the Port LED does not light

Check that:

- The Switch and the device at the other end of the link (or cable) are connected securely.
- The devices at both ends of the link are powered-up
- The quality of cable is satisfactory
- Auto-negotiation settings are the same at both ends.

Auto-negotiation problems will occur with 10BASE-T or 100BASE-T where auto-negotiation is disabled and incorrect cables are being used (cross-over or straight)

Auto-negotiation problems will occur with fiber if:

- The Receiver (RX) and Transceiver (TX) cable connectors are swapped
- Fibers are broken
- Auto-negotiation differs at either end (a link appears at the 'fixed' end and not at the auto-negotiation end)

Solving Hardware Problems

In the rare event of your Switch unit experiencing a hardware failure, refer to the list of suggested solutions below.

A fan failure warning message is received

Your Switch has a fan monitoring system that will generate fan failure warning messages. Fan failure could potentially reduce the lifetime of the Switch. The monitoring system polls the fan status at periodic intervals while the unit is powered up.

If one fan has failed in the Switch, a warning message will be generated in the following ways:

- **Unit LED**

The seven segment display will show a green flashing 'f'.

- **RMON Trap**

If configured, an RMON trap is generated and sent to the management workstation.

- **Command Line Interface**

An indication of a general hardware failure is provided through the Top level menu displayed when logging on to the CLI. For more detailed information about the failure select the **display logbuffer** command.

- **Web interface**

An indication of fan failure is provided through the Device Summary table for the specific unit. In addition all Summary tables turn red to indicate the fan failure.

If a fan failure warning message is generated:

- 1 Power off the unit.
- 2 Check that the air vents are not obstructed.
- 3 Power cycle the unit. To do this, remove and reconnect the AC mains supply. If another fan failure warning message is generated using the Command Line Interface or the Web interface, return the unit to 3Com.

Unit fails, no SNMP fan failure message is received

- 1 Power cycle the unit. To do this, remove and reconnect the AC mains supply.
- 2 Check the command line interface (**display logbuffer** command) to determine whether a thermal shutdown has occurred.
- 3 If no, return the unit:
If yes, check that:
 - The air vents are not obstructed.
 - The ambient temperatures and environmental conditions meet those specified in Appendix C.
- 4 Power cycle the unit. If a further thermal shutdown occurs, and all environmental conditions are satisfactory, return the unit to 3Com.

Error message indicating that the SFP transceiver is invalid

The Switch has identified that the SFP does not meet the minimum requirements for the Switch and has disabled the port. To correct this problem, completely remove the SFP and replace it with a 3Com approved SFP. See “Approved SFP Transceivers” on page 26.

Error message indicating that the SFP transceiver is faulty

To correct this problem, completely remove the SFP and then reinsert it. Alternatively, insert another identical SFP. If the problem persists, contact 3Com Technical Support.

Solving Communication Problems

If you experience communication problems with the Switch, ensure that:

- The Switch IP address and Management VLAN ID has been configured.
- If the Switch is separated from your management application by a router, ensure that the default gateway IP address within the Switch is the same as the IP address of the router.
- The Switch's IP address has been entered correctly in your network management application (such as 3Com Network Director).

The following is a brief overview of IP addressing, and how to obtain a registered IP address.

IP Addressing

To be managed correctly, each device on your network (for example a Switch or Hub) must have a unique IP address. IP addresses have the format $n.n.n.n$ where n is a decimal number between 0 and 255. An example IP address is 192.168.100.8.

The IP address is split into two parts:

- The first part ('192.168.100' in the example) identifies the network on which the device resides
- The second part ('.8' in the example) identifies the device within the network

The natural subnet mask for this example is 255.255.255.0.



If your network has a connection to the external IP network, that is, you access the Internet, you must apply for a registered IP address.

How do you obtain a registered IP Address?

The IP registration system ensures that every IP address used is unique; if you do not have a registered IP address, you may be using an identical address to someone else and your network will not operate correctly.

InterNIC Registration Services is the organization responsible for supplying registered IP addresses. The following contact information is correct at time of publication:

World Wide Web site: **<http://www.internic.net>**

If your IP network is internal to your organization only, that is, you do not access the Internet, you may use any arbitrary IP address as long as it is not being used by another device on your network. 3Com suggests you use addresses in the range 192.168.0.0 to 192.168.255.255 with a subnet mask of 255.255.255.0.



These suggested IP addresses are part of a group of IP addresses that have been set aside specially for use 'in house' only.

5

UPGRADING SOFTWARE

This chapter describes how to upgrade the software in your Switch 4200G. It covers the following topics:

- Upgrading from the Command Line Interface
- Upgrading from the Bootrom Interface
- Upgrading the Bootrom

Upgrade methods You can upgrade your Switch 4200G using several different methods:

- Using the Command Line Interface is an easy and quick way. Either an TFTP server or an FTP server can be used.
- Upgrades can also be done through the boot menu using either TFTP, FTP, or Xmodem. Xmodem is the slowest choice because it relies on the console's serial port.

Note: If you need a TFTP or FTP server, we offer TFTP/FTP servers on www.3Com.com. Search for "tftp server". The applications are located on the link to "3Com Software Library - Utilities for 32 bit Windows". These applications run on Windows platforms.

Upgrading from the Command Line Interface

This section describes how to upgrade files to your Switch from the Command Line Interface (CLI).

The basic procedure is to check that you have enough space available in flash memory, backup your existing Switch software, and then upgrade the Switch software. The following sections describe these steps in detail.

Check Flash Space Available

Before upgrading the software to your Switch from the CLI, it is important to check the contents of the flash to ensure that there is enough space to download the new files.



The flash space needed for the new files is approximately 5.5 MB.

- 1 To check the contents of the flash, logon to your Switch either using a telnet connection or directly using the console to display the User View in the CLI and enter the following:

```
<4200G> dir unit1>flash:
```

A file list similar to the following is displayed:

```
Directory of unit1>flash:/
```

```
 1 (*)  -rw- 4586799 Apr 06 2000 18:55:31 s3t03_01_00s56.app
 2 (*)  -rw-  890179 Apr 06 2000 18:56:51 s3v01_00.web
 3      -rw- 296336 Apr 06 2000 19:01:23 s3u01_00.btm
 4      -rw-   3333 Apr 02 2000 00:00:29 3comoscfg.def
```

```
15367 KB total (9582 KB free)
```

```
(*) -with main attribute   (b) -with backup attribute
(*b) -with both main and backup attribute
```

The file system listing may also contain files called topology.top and configuration files (file suffix .cfg).

- 2 Any additional files should be considered for deletion to allow maximum space for downloading the new files. To delete a file from the list enter:

```
<4200G> delete/unreserved unit1>flash:/filename
```



CAUTION: Do not delete the topology.top file, or any configuration files (file suffix .cfg).

- 3 The **/unreserved** option will cause the file to be deleted from both the flash and the recycle-bin. To check that deleted files have been removed from the recycle-bin enter the following:

```
<4200G> reset recycle-bin unit1>flash:/
```

If the recycle-bin is empty the following is displayed:

```
% Recycle bin in this directory is empty
```

Backup Switch Software

The following steps enable you to backup your Switch. (You can also backup these files to a TFTP or FTP server.)

- 1 To back up the default configuration file on your Switch, enter:

```
[4200G] copy unit1>flash:/3ComOScfg.def
unit1>flash:/030100cfg.def
```

- 2 To back up the active configuration file on your Switch, enter:

```
[4200G] copy unit1>flash:/3ComOScfg.cfg
unit1>flash:/030100cfg.cfg
```

- 3 To back up the Web user interface file on your Switch, enter:

```
[4200G] copy unit1>flash:/s3v01_00.web
unit1>flash:/030100http.web
```

- 4 To back up the application file on your Switch, enter:

```
[4200G] copy unit1>flash:/s3701_00.app
unit1>flash:/030100app.app
```

- 5 To back up the bootrom file on your Switch, enter:

```
[4200G] copy unit1>flash:/s3u01_00.btm
unit1>flash:/030100boot.btm
```

Upgrade Using TFTP

To upgrade software to your Switch using TFTP do the following:

- 1 To download the application file, enter:

```
[4200G] tftp aaa.aaa.aaa.aaa get s3t03_01_00s56.app
```

(where aaa.aaa.aaa.aaa is the IP address of the TFTP server)

s3t indicates the Switch filename, see Table 11 for further details:

Table 11 Switch 4200G Filenames

Filename Prefix/Suffix	Switch
s3t / .app	Switch 4200G software
s3u / .btm	Switch 4200G bootrom software
s3v / .web	Switch 4200G web management software

- 2 To download the Web user interface file, enter:
[4200G] **tftp aaa.aaa.aaa.aaa get http.web**
- 3 To download the default configuration file, enter:
[4200G] **tftp aaa.aaa.aaa.aaa get 3ComOScfg.def**
- 4 To download the bootrom file, enter:
[4200G] **tftp aaa.aaa.aaa.aaa get s3u01_00.btm**



The bootrom firmware may not require upgrading for every software upgrade, therefore there may not be a new bootrom (.btm) file to download.

Command Line Interface Switch Setup

- 1 To set the Switch to boot from the new software you have downloaded, enter the following:

```
[ 4200G] boot boot-loader
unit1>flash:/s3t03_01_00s56.app
```

- 2 To set the Switch to load the new bootrom firmware, enter:

```
[ 4200G] boot bootrom unit1>flash:/s3u01_00.btm
```

The following prompt is displayed:

```
This will update Bootrom on unit 1. Continue? [Y/N]
```

Type **Y** to update the bootrom.

- 3 To set the Switch to load the new web management file, enter:

```
[ 4200G] boot web-package s3v01_00.web main
```

- 4 You will now need to reboot the Switch. The Switch will upgrade the bootrom firmware and boot from the specified software .app file.

After the update is complete and you have verified that everything is working, the files that were saved in the backup phase can be deleted from the file system.

Upgrade Using FTP (via network port)

To upgrade your Switch's software using FTP do the following:

- 1 Backup the existing switch software files. See "Backup Switch Software".
- 2 Verify that the 4200G can contact the FTP server, use ping:

```
[4200G] ping aaa.aaa.aaa.aaa
```

(where aaa.aaa.aaa.aaa is the IP address of the FTP server)

- 3 Enter the following command from User View:

```
[4200G] ftp aaa.aaa.aaa.aaa
```

(where aaa.aaa.aaa.aaa is the IP address of the FTP server)

If the FTP server has been successfully located, the following information is displayed:

```
Trying...
Press CTRL+K to abort
Connected
```

Information on your FTP server is displayed, logon with your username and password.

- 4 Passive mode is the default mode for the FTP client on the Switch. To disable passive mode type:

```
[ftp] undo pas
```

The display will show % Passive is off

- 5 Type [ftp] bin and press Enter.
- 6 To download the application file, enter:

```
[ftp] get s3t03_01_00s168.app
```

The following information is displayed if the download has been successful:

```
200 PORT command successful.
150 Opening ASCII mode data connection for vrpcfg.def(10986
bytes).....226 Transfer complete.
FTP: 10986 byte(s) received in 8.046 second(s) 1000.00
byte(s)/sec.
```

7 To download the bootrom file, enter:

```
[ftp] get s3u01_00.btm
```

8 To download the web management file, enter:

```
[ftp] get s3v01_00.web
```

9 Exit FTP by typing: [ftp] **bye**.

10 To install the new bootrom code, enter:

```
[4200G] boot bootrom flash:/s3u01_00.btm
```

Type **y** when prompted:

```
This will update Bootrom on unit 1. Continue? [Y/N] y
Upgrading Bootrom, please wait...
Upgrade Bootrom succeeded!
```

11 To install the new application code, enter:

```
[4200G] boot boot-loader flash:/s3t03_01_00.app
```

12 To install the new web management code, enter:

```
[4200G] boot webpackage flash:/s3v01_00.web
```

13 Enter **quit** to exit.

XModem (using the console cable)

To upgrade software to your Switch using XModem do the following:

- 1 From the User View, enter:

```
xmodem get unit1>flash:/3ComOScfg.def
```

The following information is displayed:

```
**** WARNING ****
xmodem is a slow transfer protocol limited to the current
speed
settings of the auxiliary ports.
During the course of the download no exec input/output will
be available!
Proceed?[Y/N]y
Destination filename [unit1>flash:/vrpcfg.def]?
Before pressing ENTER you must choose 'YES' or 'NO'[Y/N]:
```

- 2 Enter **y** to display the following message:

```
Download with XMODEM protocol...
...C..
```

- 3 As the file is downloading, start the XModem send file process with terminal emulation software, such as Microsoft Hyperterminal.

When the file download is complete the message `Download successful!` is displayed.

- 4 Repeat step 1 to step 3 for each of the remaining files.

Upgrading from the Bootrom Interface

This section describes how to upgrade your Switch from the Bootrom Interface.

Introduction

When the Switch is running the initial boot phase using the console, the following prompt is displayed with a five second countdown timer:

```
Press CTRL-B to enter Boot Menu... 4
```

followed by a password prompt:

```
password:
```

- 1 Select *Enter* (the default is no password) to display the following boot menu:

```
BOOT MENU
```

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify bootrom password
6. Enter bootrom upgrade menu
7. Skip current configuration file
8. Set bootrom password recovery
9. Set switch startup mode
0. Reboot

```
Enter your choice(0-9):
```

- 2 Enter the appropriate menu number to select a specific option.

Before upgrading the software to your Switch from the Bootrom Interface it is important to check the contents of the flash to ensure that there is enough space to download the new files.

- 3** Select option 3 from the Boot Menu. A file list similar to the following is displayed:

```

Boot menu choice: 3
File Number      File Size(bytes) File Name
=====
1                4                snmpboots
2                151              private-data.txt
3(*)             4649088          s3t03_01_00s56.app
4                576218           s3t03_01_03_0024.zip
5                10301            3comoscfg.def
6                10369            3comoscfg.cfg
7                10369            [test.cfg]

```

```

Free Space: 10469376 bytes
The current application file is s3t03_01_00s56.app
(*)-with main attribute; (b)-with backup attribute
(*b)-with main and backup attribute

```

This option displays all the files in flash and also indicates the file that the Switch is currently set to boot from (marked with an asterisk). A 'b' by the file number indicates the file is a backup boot file.

The files which are required by the Switch are:

```

s3t03_01_0024.zip
3comoscfg.def
3comoscfg.cfg
s3t03_01_00s56.app

```



The s3t03_01_00s56.app file is the boot software. The name of this file will vary depending on the Switch type and the release version.



If the filename is in brackets, for example [test.cfg], this indicates that the file has been deleted from the CLI but is still present in the recycle-bin.

Any additional files should be considered for deletion to allow maximum space for downloading the new files.

- 4** To delete a file from the list select option 4 from the Boot Menu and select the file number you wish to delete.

TFTP To upgrade software to your Switch using TFTP, do the following:

- 1 From the Boot Menu, select option 1 (Download application file to flash) to display the following:

```
1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu
```

Enter your choice(0-3):

- 2 Select option 1 to display the following:

```
Load File name:
Switch IP address:
Server IP address:
```

- 3 Enter the file name, Switch IP address and Server IP address to display the following:

```
Are you sure to download file to flash? Yes or
No (Y/N)
```

- 4 Enter **y** and the following information is displayed to indicate the file is downloading:

```
Attached TCP/IP Interface to netdrv0
Attaching network interface lo0...done
Loading.....done
Free flash Space: 10456064 bytes
Writing flash....done!
```

```
Please input the file attribute (main/backup/none):none
done!
```

- 5 Repeat step 1 to step 4 for each of the remaining files.

FTP To upgrade software to your Switch using FTP, do the following:

- 1 From the Boot Menu, select option 1 (Download application file to flash) to display the following:

```
1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu
```

Enter your choice(0-3):

2 Select option 2 to display the following:

```
Load File name:
Switch IP address:
Server IP address:
FTP User Name:
FTP User Password:
```

3 Enter the file name, Switch IP address, Server IP address and FTP user name and password to display the following:

```
Are you sure to download file to flash? Yes or No(Y/N)
```

4 Enter **y** and the following information is displayed to indicate the file is downloading:

```
Loading.....done
Free flash Space: 10456064 bytes
Writing flash....done!
Please input the file attribute (main/backup/none):none
done!
```

5 Repeat step 1 to step 4 for each of the remaining files.

XModem To upgrade software to your Switch using XModem, do the following:

1 From the Boot Menu, select option 1 (Download application file to flash) to display the following:

```
1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu
Enter your choice(0-3):
```

2 Select option 3 to display the following:

```
Please select your download baudrate:
1. 9600
2.*19200
3. 38400
4. 57600
5. 115200
0. Return
```

```
Enter your choice(0-5):
```

3 Select option 2 to set the baudrate to 19200.

You will also need to change the baudrate on Hyperterminal to 19200 bps and select XModem protocol.

- 4 Press *Enter* to start the download. The following information is displayed:

```
Now please start transfer file with XMODEM protocol
If you want to exit, Press <Ctrl+X>
Loading...CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
```

- 5 As the file is downloading, start the XModem send file process with terminal emulation software, such as Microsoft Hyperterminal.

When the download is complete, the following information is displayed:

```
Please input the file attribute (main/backup/none):none
done!
```

- 6 Repeat step 1 to step 5 for each of the remaining files.

Upgrading the Bootrom

This section describes how to configure which file the Switch uses to boot from once the software has been loaded.

- 1 From the Boot menu, select option 2 to display the following:

```
Select application file to boot:
1. set application file to boot
2. set configuration files
3. set web files
0. return
```

Enter your choice (0-3):

- 2 Select option 2 to display a file list similar to the following:

```
Boot menu choice: 2
File Number      File Size(bytes) File Name
=====
1(*)              4649088           s3t03_01_00s56.app
```

```
Free Space: 10491904 bytes
The current application file is s3t03_01_00s56.app
```

```
(*)-with main attribute;(b)-with backup attribute
(*b)-with both main and backup attribute
```

Please input the file number to change:

An asterisk (*) indicates the current main boot file.

A similar screen will be displayed for the configuration files and the web files. In each case, the file is given the attribute "main" or "backup"

Bootrom Upgrade using TFTP

To upgrade the bootrom firmware from the Boot menu using TFTP do the following:

- 1 From the Boot menu, select option 6 to display the bootrom upgrade menu as shown:

Bootrom update menu:

1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu

Enter your choice(0-3):

- 2 Select option 1 to display the following:

Load File name:

Switch IP address:

Server IP address:

- 3 Enter the file name, Switch IP address and Server IP address to display the following:

Are you sure to update your bootrom? Yes or No(Y/N)

- 4 Enter **y** and the following information is displayed to indicate the file is downloading:

```
Attached TCP/IP interface to netdrv0
Attaching network interface Io0...done
Loading.....
.....done
Bootrom updating.....done!
```

Bootrom Upgrade using FTP

To upgrade the bootrom firmware from the Boot menu using FTP do the following:

- 1 From the Boot menu, select option 6 to display the bootrom upgrade menu as shown:

Bootrom update menu:

1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu

Enter your choice(0-3):

- 2 Select option 2 to display the following:

```
Load File name:
Switch IP address:
Server IP address:
FTP User Name:
FTP User Password:
```

- 3 Enter the file name, Switch IP address, Server IP address, FTP user name and password to display the following:

```
Are you sure to update your bootrom? Yes or No(Y/N)
```

- 4 Enter **y** and the following information is displayed to indicate the file is downloading:

```
Attached TCP/IP interface to netdrv0
Attaching network interface Io0...done
Loading.....
.....done
Bootrom updating.....done!
```

Bootrom Upgrade using XModem

To upgrade the bootrom firmware from the Boot menu using XModem do the following:

- 1 From the Boot Menu, select option 6 to display the following:

```
1. Set TFTP protocol parameter
2. Set FTP protocol parameter
3. Set XMODEM protocol parameter
0. Return to boot menu
```

Enter your choice(0-3):

- 2 Select option 3 to display the following:

```
Please select your download baudrate:
1. 9600
2.*19200
3. 38400
4. 57600
5. 115200
0. Return
```

Enter your choice(0-5):

- 3 Select option 2 to set the baudrate to 19200.

You will also need to change the baudrate on Hyperterminal to 19200 bps and select XModem protocol.

- 4 Press *Enter* to start the download. The following information is displayed:

```
Now please start transfer file with XMODEM protocol  
If you want to exit, Press <Ctrl+X>  
Loading  
...cccccccccccccccccccccccccccccccc
```

- 5 As the file is downloading, start the XModem send file process with terminal emulation software, such as Microsoft Hyperterminal.

When the download is complete, the following information is displayed:

```
ccccccccccccccccccccccccccccccccccccdone!  
Bootrom updating.....done!
```


A

SAFETY INFORMATION

You must read the following safety information before carrying out any installation or removal of components, or any maintenance procedures on the Switch 4200G.



WARNING: Warnings contain directions that you must follow for your personal safety. Follow all directions carefully.

You must read the following safety information carefully before you install or remove the unit.



AVERTISSEMENT: Les avertissements présentent des consignes que vous devez respecter pour garantir votre sécurité personnelle. Vous devez respecter attentivement toutes les consignes.

Nous vous demandons de lire attentivement les consignes suivantes de sécurité avant d'installer ou de retirer l'appareil.



VORSICHT: Warnhinweise enthalten Anweisungen, die Sie zu Ihrer eigenen Sicherheit befolgen müssen. Alle Anweisungen sind sorgfältig zu befolgen.

Sie müssen die folgenden Sicherheitsinformationen' sorgfältig durchlesen, bevor Sie das Gerät installieren oder ausbauen.



ADVERTENCIA: Las advertencias contienen indicaciones que debe respetar por su seguridad personal.

Siga las indicaciones con cuidado. Antes de instalar o extraer la unidad, debe leer detenidamente la siguiente información de seguridad.



AVVERTENZA: le avvertenze contengono istruzioni indispensabili per assicurare la sicurezza personale. Seguire attentamente tutte le indicazioni fornite. Prima di installare o rimuovere l'unità, leggere attentamente le seguenti informazioni di sicurezza.



OSTRZEŻENIE: Ostrzeżenia zawierają wskazówki, których należy przestrzegać dla własnego bezpieczeństwa. Należy uważnie przestrzegać wszystkich wskazówek. Przed instalacją lub demontażem

urządzenia należy uważnie przeczytać poniższe informacje o bezpieczeństwie.

Power Cord Set—Japan

電源コードを接続する場合は、アース接続がされていることを確認してから行なってください。
アース線をはさず場合は、電源コードが接続されていないことを確認してから行なってください。

Important Safety Information



WARNING: Installation and removal of the unit must be carried out by qualified personnel only.



WARNING: If installing the Switch 4200G together (one on top of the other) with SuperStack II or SuperStack 3 units that are shallower than the 4200G, the Switch 4200G unit must be installed below the shallower units.



WARNING: The unit must be earthed (grounded) or must be connected to an earthed power supply to ensure compliance with safety standards.



WARNING: Power Cord Set:
This must be approved for the country where it is used:

U.S.A. and
Canada

- The cord set must be UL-approved and CSA certified.
- The minimum specification for the flexible cord is:
No. 18 AWG
Type SV or SJ
3-conductor
- The cord set must have a rated current capacity of at least 10A.
- The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15A, 250V) configuration.

United
Kingdom only

- The supply plug must comply with BS1363 (3-pin 13 amp) and be fitted with a 5A fuse which complies with BS1362.
- The mains cord must be <HAR> or <BASEC> marked and be of type H03VVF3GO.75 (minimum).

- Europe only: ■ The supply plug must comply with CEE 7/7 ("SCHUKO").
 ■ The mains cord must be <HAR> or <BASEC> marked and be of type H03VVF3GO.75 (minimum).
- Denmark ■ The supply plug must comply with section 107-2-D1, standard DK2-1a or DK2-5a.
- Switzerland ■ The supply plug must comply with SEV/ASE 1011.



WARNING: The appliance coupler (the connector to the unit and not the wall plug) must have a configuration for mating with an EN60320/IEC320 appliance inlet.



WARNING: The socket outlet must be near to the unit and easily accessible.



WARNING: This unit operates under SELV (Safety Extra Low Voltage) conditions according to IEC 60950. The conditions are only maintained if the equipment to which it is connected also operates under SELV conditions.



WARNING: France and Peru only:
 This unit cannot be powered from IT[†] supplies. If your supplies are of IT type, this unit must be powered by 230V (2P+T) using an isolation transformer ratio 1:1, with the secondary connection point labelled Neutral, connected directly to earth (ground).
 †Impédance à la terre.



WARNING: U.K. only:
 If connecting a modem to the console port of the Switch 4200G, only use a modem which is suitable for connection to the telecommunications system.



WARNING: RJ-45 Ports. These are shielded RJ-45 data sockets. They cannot be used as standard traditional telephone sockets, or to connect the unit to a traditional PBX or public telephone network. Only connect RJ-45 data connectors, network telephony systems, or network telephones to these sockets.

Either shielded or unshielded data cables with shielded or unshielded jacks can be connected to these data sockets.



WARNING: Fiber Optic ports—Optical Safety



Never look at the transmit laser while it is powered on. Never look directly at the fiber TX port and fiber cable ends when they are powered on.

L'information de Sécurité Importante



AVERTISSEMENT: L'installation et la dépose de ce groupe doivent être confiés à un personnel qualifié.



AVERTISSEMENT: Si vous entassez l'unité Switch avec les unités SuperStack 4 Hub, l'unité Switch 4200G doit être installée en dessous des unités Hub plus étroites.



AVERTISSEMENT: Vous devez mettre l'appareil à la terre (à la masse) ce groupe.



AVERTISSEMENT: Brancher l'unité à une source de courant mise à la terre pour assurer la conformité aux normes de sécurité.



AVERTISSEMENT: Cordon électrique:
Il doit être agréé ans le pays d'utilisation:

- | | |
|----------------------|--|
| Etats-Unis et Canada | <ul style="list-style-type: none"> ■ Le cordon doit avoir reçu l'homologation des UL et un certificat de la CSA ■ Le cordon souple doit respecter, à titre minimum, les spécifications suivantes : <ul style="list-style-type: none"> ■ calibre 18 AWG ■ type SV ou SJ ■ à 3 conducteurs ■ Le cordon doit être en mesure d'acheminer un courant nominal d'au moins 10 A ■ La prise femelle de branchement doit être du type à mise à la terre (mise à la masse) et respecter la configuration NEMA 5-15P (15 A, 125 V) ou NEMA 6-15P (15 A, 250 V) |
|----------------------|--|

- | | |
|----------|--|
| Danemark | <ul style="list-style-type: none"> ■ La prise mâle d'alimentation doit respecter la section 107-2 D1 de la norme DK2 1a ou DK2 5a |
| Europe | <ul style="list-style-type: none"> ■ La prise secteur doit être conforme aux normes CEE 7/7 ("SCHKO") ■ LE cordon secteur doit porter la mention <HAR> ou <BASEC> et doit être de type HO3VVF3GO.75 (minimum). |
| Suisse | <ul style="list-style-type: none"> ■ La prise mâle d'alimentation doit respecter la norme SEV/ASE 1011 |



AVERTISSEMENT: Le coupleur d'appareil (le connecteur du groupe et non pas la prise murale) doit respecter une configuration qui permet un branchement sur une entrée d'appareil EN60320/CEI 320.



AVERTISSEMENT: La prise secteur doit se trouver à proximité de l'appareil et son accès doit être facile.



AVERTISSEMENT: L'appareil fonctionne à une tension extrêmement basse de sécurité qui est conforme à la norme CEI 60950. Ces conditions ne sont maintenues que si l'équipement auquel il est raccordé fonctionne dans les mêmes conditions.



AVERTISSEMENT: France et Pérou uniquement:
Ce groupe ne peut pas être alimenté par un dispositif à impédance à la terre. Si vos alimentations sont du type impédance à la terre, ce groupe doit être alimenté par une tension de 230 V (2 P+T) par le biais d'un transformateur d'isolement à rapport 1:1, avec un point secondaire de connexion portant l'appellation Neutre et avec raccordement direct à la terre (masse).



AVERTISSEMENT: Points d'accès RJ-45. Ceux-ci sont protégés par des prises de données. Ils ne peuvent pas être utilisés comme prises de téléphone conventionnelles standard, ni pour la connection de l'unité à un réseau téléphonique central privé ou public. Raccorder seulement connecteurs de données RJ-45, systèmes de réseaux de téléphonie ou téléphones de réseaux à ces prises.

Il est possible de raccorder des câbles protégés ou non protégés avec des jacks protégés ou non protégés à ces prises de données.



AVERTISSEMENT: Ports pour fibres optiques—sécurité sur le plan optique.



Ne regardez jamais le laser d'émission en utilisant un dispositif d'agrandissement, tant qu'il est sous tension. Ne regardez jamais directement le port TX à fibres optiques et les extrémités des câbles à fibres optiques tant qu'ils sont sous tension.

Wichtige Sicherheitsinformationen



VORSICHT: Alle Verfahren die in dieser Anleitung beschrieben werden gelten für alle Modelle, sofern nicht anders angegeben. Wo eine Vorgehensweise für die Schalter 5500-SI 24 und Schalter 5500-SI 52 gilt wird nur der Begriff Schalter verwendet.

Diese Anleitung ist für Netzwerkadministratoren vorgesehen, die für die Installation und das Einstellen von Netzwerkkomponenten verantwortlich sind; Erfahrung im Umgang mit LANs (Local Area Networks) wird



VORSICHT: Die Installation und der Ausbau des Geräts darf nur durch Fachpersonal erfolgen.



VORSICHT: Wenn die Switch 4200G Einheit in einer Stapel mit anderen SuperStack 4 Hub Einheiten eingebaut werden soll, muß die Switch 4200G Einheit unter die schmalere Hub Einheiten eingebaut werden.



VORSICHT: Das Gerät muß geerdet sein.



VORSICHT: Das Gerät muß an eine geerdete Steckdose angeschlossen werden, die europäischen Sicherheitsnormen erfüllt.



VORSICHT: Der Anschlußkabelsatz muß mit den Bestimmungen des Landes übereinstimmen, in dem er verwendet werden soll.



VORSICHT: Der Gerätestecker (der Anschluß an das Gerät, nicht der Wandsteckdosenstecker) muß eine passende Konfiguration für einen Geräteeingang gemäß EN60320/IEC320 haben.



VORSICHT: Die Netzsteckdose muß in der Nähe des Geräts und leicht zugänglich sein. Die Stromversorgung des Geräts kann nur durch Herausziehen des Gerätenetzkabels aus der Netzsteckdose unterbrochen werden.



VORSICHT: Europe

- Das Netzkabel muß vom Typ HO3VVF3GO.75 (Mindestanforderung) sein und die Aufschrift <HAR> oder <BASEC> tragen.
- Der Netzstecker muß die Norm CEE 7/7 erfüllen ("SCHUKO").



VORSICHT: Der Betrieb dieses Geräts erfolgt unter den SELV-Bedingungen (Sicherheitskleinstspannung) gemäß IEC 60950. Diese

Bedingungen sind nur gegeben, wenn auch die an das Gerät angeschlossenen Geräte unter SELV-Bedingungen betrieben werden.



VORSICHT: RJ-45-Porte. Diese Porte sind geschützte Datensteckdosen. Sie dürfen weder wie normale traditionelle Telefonsteckdosen noch für die Verbindung der Einheit mit einem traditionellem privatem oder öffentlichem Telefonnetzwerk gebraucht werden. Nur RJ-45-Datenanschlüsse, Telefonnetzsysteme or Netztelefone an diese Steckdosen anschließen.

Entweder geschützte oder ungeschützte Buchsen dürfen an diese Datensteckdosen angeschlossen werden.



VORSICHT: Faseroptikanschlüsse—Optische Sicherheit



Sie sollten die/den eingeschaltete(n) Übertragungs-Laser niemals durch eine Vergrößerungseinrichtung betrachten. Schauen Sie niemals direkt auf den Lichtwellen-Übertragungsanschluss und die Kabelenden des Lichtwellenleiterkabels, während Daten übertragen werden.

Información de Seguridad Importante



ADVERTENCIA: La instalación o la extracción de la unidad sólo debe llevarla a cabo personal cualificado.



ADVERTENCIA: Si instala el 4200G en una pila con unidades SuperStack II o SuperStack 3 que son más estrechas que el 4200G, la unidad 4200G debe instalarse debajo de las unidades más estrechas.



ADVERTENCIA: La unidad debe tener toma de tierra (conectado a tierra).



ADVERTENCIA: Conecte la unidad a una fuente de alimentación con toma de tierra para garantizar el cumplimiento de las normas de seguridad.



ADVERTENCIA: *Conjunto de cables eléctricos:
Debe estar homologado para el país donde se utilice:*

- | | |
|--------------------------|--|
| EE.UU. y Canadá | <ul style="list-style-type: none"> ■ El conjunto de cables debe estar homologado por UL y tener la certificación CSA. ■ La especificación mínima del cable flexible es: Nº 18 AWG Tipo SV o SJ Tres conductores ■ El conjunto de cables debe tener una capacidad de corriente nominal de al menos 10 A. ■ El enchufe de conexión debe ser de tipo de toma de tierra con una configuración NEMA 5-15P (15 A, 125 V) o NEMA 6-15P (15 A, 250 V). |
| Sólo para el Reino Unido | <ul style="list-style-type: none"> ■ La toma de alimentación debe cumplir la norma BS1363 (3 patillas, 13 A) e instalarse con un fusible de 5 A que cumpla BS1362. ■ El cable de alimentación de red debe tener la marca <HAR> o <BASEC> y ser de tipo H03VVF3GO.75 (mínimo). |
| Sólo para Europa: | <ul style="list-style-type: none"> ■ La toma de alimentación debe cumplir la norma CEE 7/7 ("SCHUKO"). ■ El cable de alimentación de red debe tener la marca <HAR> o <BASEC> y ser de tipo H03VVF3GO.75 (mínimo). |
| Dinamarca | <ul style="list-style-type: none"> ■ La toma de alimentación debe cumplir la sección 107-2-D1 de la norma DK2-1a o DK2-5a |
| Suiza | <ul style="list-style-type: none"> ■ La toma de alimentación debe cumplir la norma SEV/ASE 1011. |



ADVERTENCIA: *El acoplador del equipo (el conector para la unidad y no la toma de la pared) debe tener una configuración que se adapte a una entrada del equipo EN60320/IEC320.*



ADVERTENCIA: *El enchufe debe estar cerca de la unidad y ser de fácil acceso.*



ADVERTENCIA: *Esta unidad funciona en condiciones SELV (voltaje extrabajo de seguridad) de conformidad con la norma IEC 60950. Las condiciones sólo se mantienen si el equipo al que esté conectada la unidad también funciona en condiciones SELV.*



ADVERTENCIA: *Sólo para Francia y Perú: esta unidad no puede recibir corriente de fuentes IT+. Si las fuentes de suministro de corriente son de tipo IT, esta unidad debe recibir 230 V (2P+T) a través de un transformador aislador con relación 1:1, con el punto de conexión*

secundario etiquetado como neutro conectado directamente a tierra.
†Impédance à la terre.



ADVERTENCIA: Sólo para el Reino Unido: si conecta un módem al puerto de consola del 4200G, utilice sólo un módem que sea adecuado para la conexión con el sistema de telecomunicaciones.



ADVERTENCIA: Puertos RJ-45. Son conectores de datos RJ-45 blindados. No pueden utilizarse como tomas de teléfono tradicionales estándar ni para conectar la unidad a una central de conmutación PBX tradicional ni a una red telefónica pública. Conecte sólo conectores de datos RJ-45, sistemas de telefonía de red local o teléfonos de red local a estas tomas. Pueden conectarse cables de datos blindados o sin blindaje con clavijas blindadas o sin blindaje a estos conectores de datos.



ADVERTENCIA: Puertos de fibra óptica: seguridad óptica



Nunca mire el láser de transmisión a través de una lente de aumento mientras está encendido. No mire nunca directamente al puerto de transmisión de fibra óptica ni a los extremos del cable de fibra óptica mientras estén conectados.

Importanti Informazioni di Sicurezza



AVVERTENZA: Le operazioni di installazione e rimozione dell'unità devono essere eseguite esclusivamente da personale qualificato.



AVVERTENZA: Se si installa lo 4200G in uno stack con unità SuperStack II o SuperStack 3 più strette del modello 4200G, posizionare lo 4200G sotto tali unità.



AVVERTENZA: L'unità deve disporre di messa a terra.



AVVERTENZA: Per rispettare gli standard di sicurezza, è necessario collegare l'unità a una fonte di alimentazione dotata di messa a terra.



AVVERTENZA: *Set dei cavi di alimentazione*

Deve essere approvato per il paese in cui viene utilizzato.

- | | |
|----------------------|---|
| Stati Uniti e Canada | <ul style="list-style-type: none"> ■ Il cavo deve avere l'approvazione UL e la certificazione CSA ■ La specifica minima per il cavo flessibile è: N. 18 AWG Tipo SV o SJ 3 conduttori ■ Il set di cavi deve avere una capacità nominale di almeno 10 A. ■ La spina di collegamento deve essere dotata di messa a terra, con configurazione NEMA 5-15P (15 A, 125 V) o NEMA 6-15P (15 A, 250 V). |
| Solo Regno Unito | <ul style="list-style-type: none"> ■ La spina di alimentazione deve essere conforme BS1363 (3 pin 13 amp) e dotata di un fusibile da 5 A conforme BS1362. ■ Il cavo dell'alimentazione di rete deve essere contrassegnato dai marchi <HAR> o <BASEC> ed essere di tipo H03VVF3GO.75 (minimo). |
| Solo Europa | <ul style="list-style-type: none"> ■ La spina di alimentazione deve essere conforme CEE 7/7 (tipo "SCHUKO"). ■ Il cavo dell'alimentazione di rete deve essere contrassegnato dai marchi <HAR> o <BASEC> ed essere di tipo H03VVF3GO.75 (minimo). |
| Danimarca | <ul style="list-style-type: none"> ■ La spina di alimentazione deve essere conforme alla sezione 107-2-D1, standard DK2-1a o DK2 |
| Svizzera | <ul style="list-style-type: none"> ■ La spina di alimentazione deve essere conforme SEV/ASE 1011 |



AVVERTENZA: *L'accoppiatore (il connettore all'unità e non la spina a muro) deve avere una configurazione abbinabile a una presa EN60320/IEC320.*



AVVERTENZA: *La presa deve trovarsi vicino all'unità ed essere facilmente accessibile.*



AVVERTENZA: *Questa unità funziona alle condizioni SELV (Safety Extra Low Voltage) previste dalla norma IEC 60950. Tali condizioni sono mantenute solo se anche l'apparecchiatura a cui è collegata opera nelle stesse condizioni.*



AVVERTENZA: *Solo per Francia e Perù. Questa unità non può ricevere alimentazione di tipo ITt. Se l'alimentazione è di tipo IT, l'unità deve essere alimentata a 230 V (2P+T) tramite un trasformatore di isolamento con rapporto 1:1, con il punto di collegamento secondario*

contrassegnato come Neutro, collegato direttamente a terra.
†Impédance à la terre.



AVVERTENZA: Solo Regno Unito. Se si collega un modem alla porta Console dello 4200G, utilizzare solo un modem idoneo per il collegamento con il sistema di telecomunicazioni.



AVVERTENZA: Le porte RJ-45 sono prese dati RJ-45 schermate. Non è pertanto possibile utilizzarle come normali prese telefoniche né per collegare l'unità a un PBX (Private Branch Exchange, centralino telefonico privato) o a una rete telefonica pubblica. Collegare a queste porte solo prese dati RJ-45, sistemi di telefonia o telefoni di rete. A queste prese dati è possibile collegare cavi dati schermati o non schermati con prese dati schermate o non schermate.



AVVERTENZA: Porte a fibre ottiche—Protezione degli occhi



Ważne informacje o zabezpieczeniach



OSTRZEŻENIE: Instalacja i demontaż urządzenia mogą być wykonywane tylko przez wykwalifikowany personel.



OSTRZEŻENIE: Podczas instalacji Switch 4200G w stosie z urządzeniami SuperStack II lub SuperStack 3, które są węższe niż Switch 4200G, urządzenie Switch 4200G musi być zainstalowane pod węższym urządzeniem.



OSTRZEŻENIE: Urządzenie musi być uziemione lub musi być podłączone do uziemionego źródła zasilania w celu zapewnienia zgodności z wymogami bezpieczeństwa.



OSTRZEŻENIE: Zestaw przewodów zasilania:

Niezbędna jest zgodność z przepisami kraju, w którym jest stosowany:

- | | |
|----------------------------|--|
| Stany Zjednoczone i Kanada | <ul style="list-style-type: none"> ■ Zestaw przewodów musi posiadać zezwolenie UL oraz certyfikat CSA. ■ Minimalna specyfikacja przewodu giętkiego: Przewód typu SV lub SJ 3 o średnicy 18 wg specyfikacji AWG. ■ Zestaw przewodów musi posiadać pojemność prądu znamionowego przynajmniej 10A. ■ Wtyczka musi być uziemiająca z układem typu NEMA 5-15P (15A, 125V) lub NEMA 6-15P (15A, 250V). |
| Wielka Brytania | <ul style="list-style-type: none"> ■ Wtyczka musi być zgodna z normą BS1363 (3-pinowa 13 amperów) i musi być wyposażona w bezpiecznik 5A zgodny z normą BS1362. ■ Przewód sieci zasilającej musi być oznaczony <HAR> lub <BASEC> i musi być typu H03VVF3g0.75 (minimum). |
| Europa | <ul style="list-style-type: none"> ■ Wtyczka zasilająca musi być zgodna z normą CEE 7/7 („SCHUKO”). ■ Przewód sieci zasilającej musi być oznaczony <HAR> lub <BASEC> i musi być typu H03VVF3g0.75 (minimum). |
| Dania | <ul style="list-style-type: none"> ■ Wtyczka zasilająca musi być zgodna z sekcją 107-2-D1 normy DK2-1a lub DK2-5a. |
| Szwajcaria | <ul style="list-style-type: none"> ■ Wtyczka zasilająca musi być zgodna z normą SEV/ASE 1011. |



OSTRZEŻENIE: *Złączka urządzenia (podłączona do przełącznika, a nie do wtyczki ściennej) musi być odpowiednio dopasowana do normy EN60320/IEC320 otworu wlotowego.*



OSTRZEŻENIE: *Gniazdo zasilające musi być umieszczone w pobliżu urządzenia i musi być łatwo dostępne.*



OSTRZEŻENIE: *Urządzenie to pracuje w warunkach SELV (Safety Extra Low Voltage—Bezpieczne niskie napięcie) zgodnie z normą IEC 60950. Takie warunki są zachowane tylko, jeśli osprzęt, do którego jest podłączone, również pracuje w warunkach SELV.*



OSTRZEŻENIE: *Sólo para Francia y Perú: Esta unidad no puede recibir corriente de fuentes IT†. Si las fuentes de suministro de corriente son de tipo IT, esta unidad debe recibir 230V (2P+T) a través de un transformador aislador con relación 1:1, con el punto de conexión secundario etiquetado como neutro conectado directa-*

mente a tierra. †Impédance í la terre.



OSTRZEŻENIE: Tylko Wielka Brytania:

Podczas podłączania modemu do portu konsoli Switch 4200G należy stosować tylko modem odpowiedni do podłączenia do sieci telekomunikacyjnej.



OSTRZEŻENIE: Porty RJ-45. Są to ekranowane gniazda danych RJ-45. Nie mogą być używane jako tradycyjne gniazda telekomunikacyjne lub stosowane do podłączenia urządzenia do publicznej sieci telefonicznej lub centrali PBX. Do tych gniazd należy podłączać jedynie łącza danych RJ-45, sieciowe systemy telefoniczne lub telefony sieciowe. Zarówno osłonięte, jak i nieosłonięte przewody z danymi wraz z osłoniętymi lub nieosłoniętymi wtykami mogą być podłączone do tych gniazd.



OSTRZEŻENIE: Porty światłowodowe—bezpieczeństwo



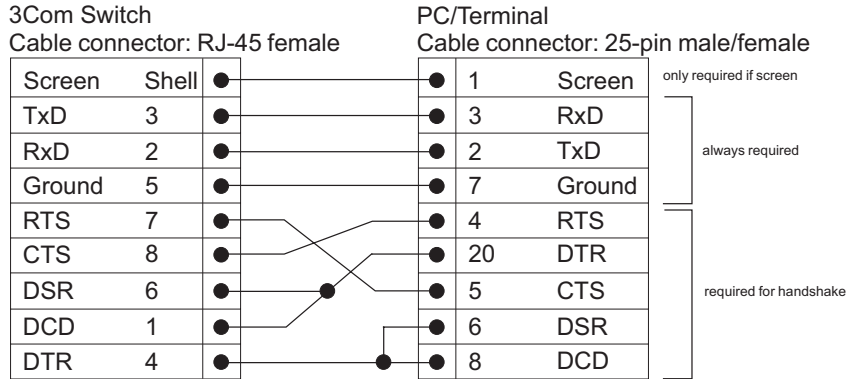
Nie wolno nigdy patrzeć na włączoną diodę laser transmisyjny przez urządzenie wzmacniające. Nie wolno nigdy patrzeć bezpośrednio na port włókna TX i końcówki światłowodów, jeśli są zasilane.

B

PIN-OUTS

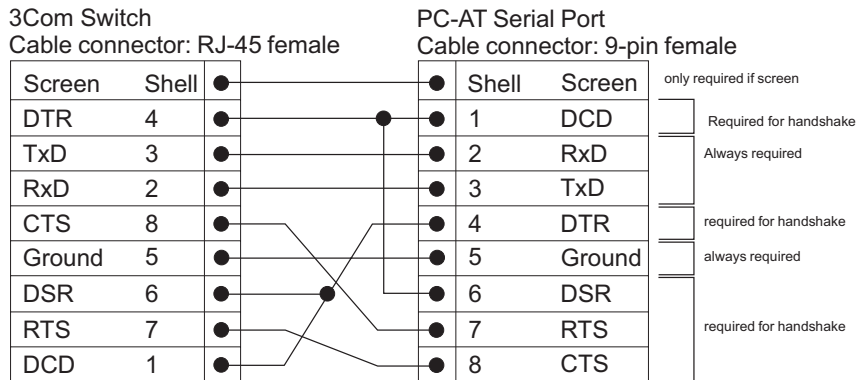
Null Modem Cable

RJ-45 to RS-232 25-pin



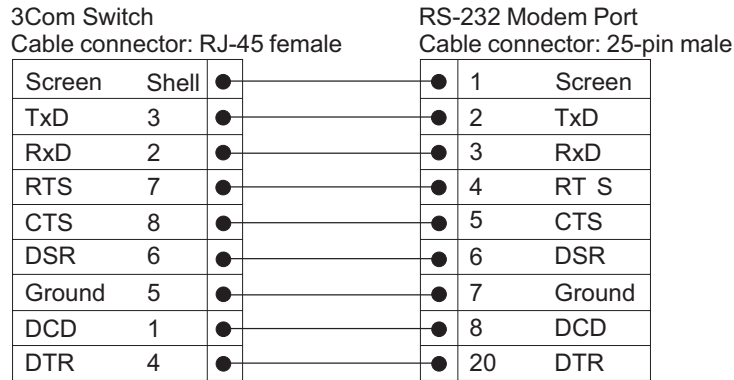
PC-AT Serial Cable

RJ-45 to 9-pin



Modem Cable

RJ-45 to RS-232 25-pin



Ethernet Port RJ-45 Pin Assignments

10/100 and 1000BASE-T RJ-45 connections.

Table 10 Pin assignments

Pin Number	10/100	1000
<i>Ports configured as MDI</i>		
1	Transmit Data +	Bidirectional Data A+
2	Transmit Data –	Bidirectional Data A-
3	Receive Data +	Bidirectional Data B+
4	Not assigned	Bidirectional Data C+
5	Not assigned	Bidirectional Data C-
6	Receive Data –	Bidirectional Data B-
7	Not assigned	Bidirectional Data D+
8	Not assigned	Bidirectional Data D-

Table 11 Pin assignments

Pin Number	10/100	1000
<i>Ports configured as MDIX</i>		
1	Receive Data +	Bidirectional Data B+
2	Receive Data -	Bidirectional Data B-

Pin Number	10/100	1000
3	Transmit Data +	Bidirectional Data A+
4	Not assigned	Bidirectional Data A-
5	Not assigned	Bidirectional Data D+
6	Transmit Data –	Bidirectional Data D-
7	Not assigned	Bidirectional Data C+
8	Not assigned	Bidirectional Data C-



TECHNICAL SPECIFICATIONS

Switch 4200G 12-Port

Physical Dimensions	Height: 44 mm (1.7 in.) x Width: 440 mm (17.3 in.) x Depth: 274 mm (10.8 in.) Weight: 4.4kg (9.72 lbs)
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Environmental Requirements

Operating Temperature	0 ° to 40 °C (32 ° to 104 °F)
Storage Temperature	-10 ° to +70 °C (14 ° to 158 °F)
Operating Humidity	95% non-condensing
Standards	EN60068 to 3Com schedule (Package testing: paras 2.1, 2.2, 2.30, and 2.32. Operational testing: paras 2.1, 2.2, 2.30 and 2.13).

Safety

Agency Certifications	UL 60950-1, EN 60950-1, CSA 22.2 No. 60950-1, IEC 60950-1.
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EMC

Emissions	CISPR 22 Class A, EN55022 Class A, FCC Part 15 Subpart B Class A, ICES-003 Class A, EN61000-3-2, EN61000-3-3
Immunity	EN 55024

Heat Dissipation	80 watts maximum (275 BTU/hour maximum)
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Power Supply

AC

Line Frequency	50/60Hz
Input Voltage	100–240 VAC
Current Rating	1.5A (amps) maximum

Switch 4200G 24-Port

Physical Dimensions	Height: 44 mm (1.7 in.) x Width: 440 mm (17.3 in.) x Depth: 274 mm (10.8 in.) Weight: 4.4kg (9.72 lbs)
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Environmental Requirements

Operating Temperature	0 ° to 40 °C (32 ° to 104 °F)
Storage Temperature	-10 ° to +70 °C (14 ° to 158 °F)
Operating Humidity	95% non-condensing
Standards	EN60068 to 3Com schedule (Package testing: paras 2.1, 2.2, 2.30, and 2.32. Operational testing: paras 2.1, 2.2, 2.30 and 2.13).

Safety

Agency Certifications	UL 60950-1, EN 60950-1, CSA 22.2 No. 60950-1, IEC 60950-1.
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EMC

Emissions	CISPR 22 Class A, EN55022 Class A, FCC Part 15 Subpart B Class A, ICES-003 Class A, EN61000-3-2, EN61000-3-3
Immunity	EN 55024

Heat Dissipation	80 watts maximum (275 BTU/hour maximum)
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Power Supply

AC

Line Frequency	50/60Hz
Input Voltage	100–240 VAC
Current Rating	1.5A (amps) maximum

Switch 4200G (48-Port)

Physical Dimensions Height: 44 mm (1.7 in.) x Width: 440 mm (17.3 in.) x Depth: 274 mm (10.8 in.)
Weight: 4.7kg (10.9 lbs)

Environmental Requirements

Operating Temperature 0 ° to 40 °C (32 ° to 104 °F)
Storage Temperature -10 ° to +70 °C (14 ° to 158 °F)
Operating Humidity 95% non-condensing
Standards EN60068 to 3Com schedule (Package testing: paras 2.1, 2.2, 2.30, and 2.32.
Operational testing: paras 2.1, 2.2, 2.30 and 2.13).

Safety

Agency Certifications UL 60950-1, EN 60950-1, CSA 22.2 No. 60950-1, IEC 60950-1.

EMC

Emissions CISPR 22 Class A, EN55022 Class A, FCC Part 15 Subpart B Class A,
ICES-003 Class A, EN61000-3-2, EN61000-3-3.
Immunity EN 55024

Heat Dissipation 80 watts maximum (275 BTU/hour maximum)

Power Supply

AC

Line Frequency 50/60Hz
Input Voltage 100–240 VAC
Current Rating 2.0A (amps) maximum

D

OBTAINING SUPPORT FOR YOUR PRODUCT

Register Your Product

Warranty and other service benefits start from the date of purchase, so it is important to register your product quickly to ensure you get full use of the warranty and other service benefits available to you.

Warranty and other service benefits are enabled through product registration. Register your product at <http://eSupport.3com.com/>. 3Com eSupport services are based on accounts that you create or have authorization to access. First time users must apply for a user name and password that provides access to a number of eSupport features including Product Registration, Repair Services, and Service Request. If you have trouble registering your product, please contact 3Com Global Services for assistance.

Purchase Value-Added Services

To enhance response times or extend warranty benefits, contact 3Com or your authorized 3Com reseller. Value-added services like 3Com ExpressSM and GuardianSM can include 24x7 telephone technical support, software upgrades, onsite assistance or advance hardware replacement.

Experienced engineers are available to manage your installation with minimal disruption to your network. Expert assessment and implementation services are offered to fill resource gaps and ensure the success of your networking projects. More information on 3Com maintenance and Professional Services is available at <http://www.3com.com/>

Contact your authorized 3Com reseller or 3Com for a complete list of the value-added services available in your area.

Troubleshoot Online

You will find support tools posted on the 3Com web site at <http://www.3com.com/>

3Com Knowledgebase helps you troubleshoot 3Com products. This query-based interactive tool is located at <http://knowledgebase.3com.com> and contains thousands of technical solutions written by 3Com support engineers.

Access Software Downloads

Software Updates are the bug fix / maintenance releases for the version of software initially purchased with the product. In order to access these Software Updates you must first register your product on the 3Com web site at <http://eSupport.3com.com/>

First time users will need to apply for a user name and password. A link to software downloads can be found at <http://eSupport.3com.com/>, or under the Product Support heading at <http://www.3com.com/>

Software Upgrades are the software releases that follow the software version included with your original product. In order to access upgrades and related documentation you must first purchase a service contract from 3Com or your reseller.

Telephone Technical Support and Repair

To enable telephone support and other service benefits, you must first register your product at <http://eSupport.3com.com/>

Warranty and other service benefits start from the date of purchase, so it is important to register your product quickly to ensure you get full use of the warranty and other service benefits available to you.

When you contact 3Com for assistance, please have the following information ready:

- Product model name, part number, and serial number
- Proof of purchase, if you have not pre-registered your product
- A list of system hardware and software, including revision level
- Diagnostic error messages
- Details about recent configuration changes, if applicable

To send a product directly to 3Com for repair, you must first obtain a return authorization number (RMA). Products sent to 3Com, without authorization numbers clearly marked on the outside of the package, will be returned to the sender unopened, at the sender's expense. If your product is registered and under warranty, you can obtain an RMA number online at <http://eSupport.3com.com/>. First time users will need to apply for a user name and password.

Contact Us

3Com offers telephone, e-mail and internet access to technical support and repair services. To access these services for your region, use the appropriate telephone number, URL or e-mail address from the list below.

Telephone numbers are correct at the time of publication. Find a current directory of contact information posted on the 3Com web site at <http://csoweb4.3com.com/contactus/>

Country	Telephone Number	Country	Telephone Number
Asia, Pacific Rim Telephone Technical Support and Repair			
Australia	1 800 678 515	Philippines	1235 61 266 2602 or
Hong Kong	800 933 486		1800 1 888 9469
India	+61 2 9424 5179 or	P.R. of China	800 810 3033
	000800 650 1111	Singapore	800 6161 463
Indonesia	001 803 61009	S. Korea	080 333 3308
Japan	00531 616 439 or	Taiwan	00801 611 261
	03 3507 5984	Thailand	001 800 611 2000
Malaysia	1800 801 777		
New Zealand	0800 446 398		
Pakistan	+61 2 9937 5083		
You can also obtain support in this region using the following e-mail: apr_technical_support@3com.com			
Or request a repair authorization number (RMA) by fax using this number:			+ 65 543 6348

Europe, Middle East, and Africa Telephone Technical Support and Repair

From anywhere in these regions, call: +44 (0)1442 435529

From the following countries, you may use the numbers shown:

Country	Telephone Number	Country	Telephone Number
Austria	01 7956 7124	Luxembourg	342 0808128
Belgium	070 700 770	Netherlands	0900 777 7737
Denmark	7010 7289	Norway	815 33 047
Finland	01080 2783	Poland	00800 441 1357
France	0825 809 622	Portugal	707 200 123
Germany	01805 404 747	South Africa	0800 995 014
Hungary	06800 12813	Spain	9 021 60455
Ireland	1407 3387	Sweden	07711 14453
Israel	1800 945 3794	Switzerland	08488 50112
Italy	199 161346	U.K.	0870 909 3266

You can also obtain support in this region using the following URL:

<http://emea.3com.com/support/email.html>

Latin America Telephone Technical Support and Repair

Antigua	1 800 988 2112	Guatemala	AT&T +800 998 2112
Argentina	0 810 444 3COM	Haiti	57 1 657 0888
Aruba	1 800 998 2112	Honduras	AT&T +800 998 2112
Bahamas	1 800 998 2112	Jamaica	1 800 998 2112
Barbados	1 800 998 2112	Martinique	571 657 0888
Belize	52 5 201 0010	Mexico	01 800 849CARE
Bermuda	1 800 998 2112	Nicaragua	AT&T +800 998 2112
Bonaire	1 800 998 2112	Panama	AT&T +800 998 2112
Brazil	0800 13 3COM	Paraguay	54 11 4894 1888
Cayman	1 800 998 2112	Peru	AT&T +800 998 2112
Chile	AT&T +800 998 2112	Puerto Rico	1 800 998 2112
Colombia	AT&T +800 998 2112	Salvador	AT&T +800 998 2112
Costa Rica	AT&T +800 998 2112	Trinidad and Tobago	1 800 998 2112
Curacao	1 800 998 2112	Uruguay	AT&T +800 998 2112
Ecuador	AT&T +800 998 2112	Venezuela	AT&T +800 998 2112
Dominican Republic	AT&T +800 998 2112	Virgin Islands	57 1 657 0888

You can also obtain support in this region using the following:

Spanish speakers, enter the URL:

<http://lat.3com.com/lat/support/form.html>

Portuguese speakers, enter the URL:

<http://lat.3com.com/br/support/form.html>

English speakers in Latin America should send e-mail to:

lat_support_anc@3com.com

US and Canada Telephone Technical Support and Repair

1 800 876 3266

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REGULATORY NOTICES

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference to radio communications, in which case the user will be required to correct the interference at their own expense.

INFORMATION TO THE USER

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

How to Identify and Resolve Radio-TV Interference Problems

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

In order to meet FCC emissions limits, this equipment must be used only with cables which comply with IEEE 802.3.

ICES STATEMENT

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.

CE STATEMENT (EUROPE)

This product complies with the European Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC as amended by European Directive 93/68/EEC.

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

A copy of the signed Declaration of Conformity can be downloaded from the Product Support web page for the Switch 4200G Family (3CR17660-91, 3CR17661-91, 3CR17662-91) at <http://www.3com.com>.

Also available at http://support.3com.com/doc/SWITCH_4200G_EU_DOC.pdf

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