4-Slot Layer 3 IPv6/IPv4 Routing Chassis Switch

XGS3-42000R

Quick Installation Guide

Table of Contents

1. Package Content

Thank you for purchasing PLANET 4-Slot Layer 3 IPv6/IPv4 Routing Chassis Switch, XGS3-42000R. Terms of **"Chassis Switch"** means the Switch mentioned titled in the cover page of this quick installation guide.

Open the box of the **Chassis Switch** and carefully unpack it. The box should contain the following items:

■ The XGS3 Chassis Switch x 1

■ This Quick Installation Guide x 1

■ User's Manual CD x 1

■ RJ-45-to-DB9 Console Cable x 1

■ USB-to-DB9 Console Cable x 1

■ UTP Straight Network Cable x 1

■ Power Cord x 1

■ Ground Cable x 1

■ Two Rack-mounting Brackets with Attachment Screws x 1

If any item is found missing or damaged, please contact your local reseller for replacement.

2. Physical Description

The XGS3-42000R is a 19-inch, 6 U height Rack Mountable Chassis, with the standard dimensions of 440mm (W) x 266mm (H) x 421mm (D), the chassis consists of module slot and power supply slot. The fan block is located on the left side of the board rack, allowing one fan tray (4 axial fans for each fan tray). Dust gauze is provided on the right of the board rack for filtering air circulation through the rack, the power block upper the dust gauze provides power to the system, supporting up to two power modules. The power modules insert into the power slots from the front, with the distribution box at the back of the rack for maintenance.
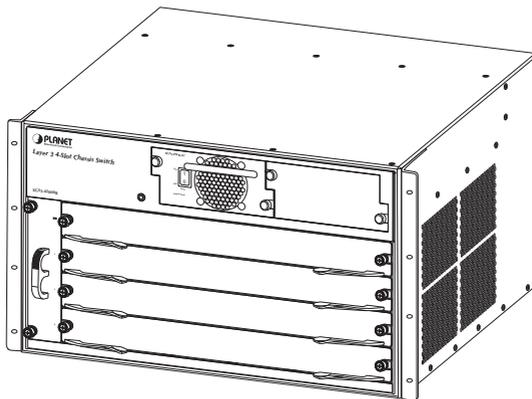

Figure 2-1 XGS3-42000R Front Panel

Power slots	Used for system power supply modules, support up to two 400W AC modules (XGS3-PWR-AC).
Management slots	Slot1 & 2 support management module like XGS3-M24GX & XGS3-M44G.
Standard slots	Slot2 ~ 4 support standard module like XGS3-S4XG, XGS3-S24G, XGS3-S48G & XGS3-S48GF.
Fan tray slot	Supports one system fan assembly, each assembly consists of four axial fans.
Dust gauze slot	Exterior air inlet for the ventilation subsystem.

Note	The Chassis Switch has a Power Supply Module, will not has any Management / Standard Ethernet Module on shipment. **Slot 1** should installed with Management Module before power on the Chassis Switch otherwise the Chassis Switch will not operates normally.

3. Hardware Installation

During the installation and use of the XGS3-42000R Chassis Switch, please follow step below:

- Chassis Switch mounting
    - ◆ Desktop installation
    - ◆ Rack-mounting installation
- Chassis Switch grounding
- Modules installation
- Removing and installing the dust gauze
- Removing and installing the fan tray
- Remover and installing the power supply

3.1 Desktop Installation

> ⚠ To avoid damage, do not place or make any weight on the XGS3-42000R.
> Maximum weight of various modue installed is 30KG.

To install a XGS3-42000R on a desktop or shelf, simply completed the following steps:

Step1   Choose a smooth level workbench.

Step2   Verify that the workbench is strong enough to support the XGS3-42000R's fully configured weight.

Step3   Plan a good position for your XGS3-42000R that is easy to operate and has an appropriate power source and grounding point.

Step4   Place the XGS3-42000R safely on the workbench; avoid obstructions on any side of the Chassis Switch.

3.2 Rack-mounting Installation

<table>
<tr>
<td>⚠️</td>
<td>During the installation, please take care and avoid crash, that may cause the device damage or any harm to the installer due to the device falling or drop.
Please make sure the hardware had been located on the rack properly. If the hardware drops down after the installation, it is possible make someone hurt. Please check the hardware again after the installation.</td>
</tr>
</table>

To install the XGS3-42000R in a **19-inch** standard rack, follow the instructions described below.

Step1   Place your XGS3-42000R on a hard flat surface, with the front panel positioned towards your front side.

Step2   Attach a rack-mount bracket to each side of the XGS3-42000R with supplied screws attached of the package. Figure 3-1 shows how to attach brackets to one side of the XGS3-42000R.
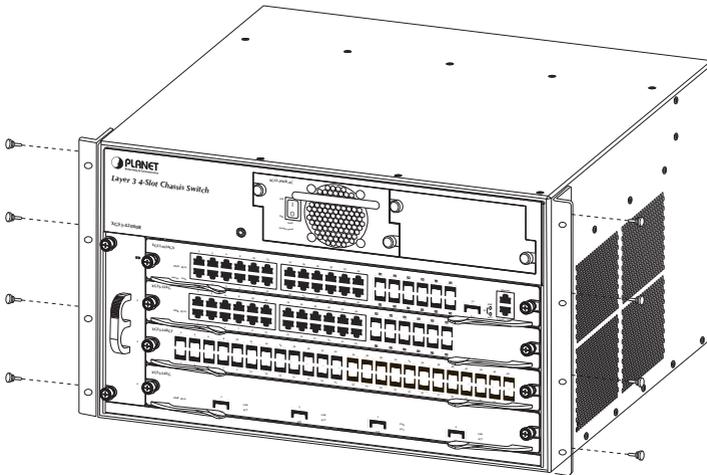

Figure 3-1 Installation XGS3-42000R Rack-mounting Brackets

<table>
<tr>
<td>⚠️</td>
<td>You must use the screws supplied with the mounting brackets. Damage caused to the parts by using incorrect screws would invalidate your warranty.</td>
</tr>
</table>

Step3 Secure the brackets tightly.

Step4 Follow the same steps to attach the second bracket to the opposite side.

Step5 After the brackets are attached to the XGS3-42000R, use suitable screws to securely attach the brackets to the rack, as shown in Figure 3-2.

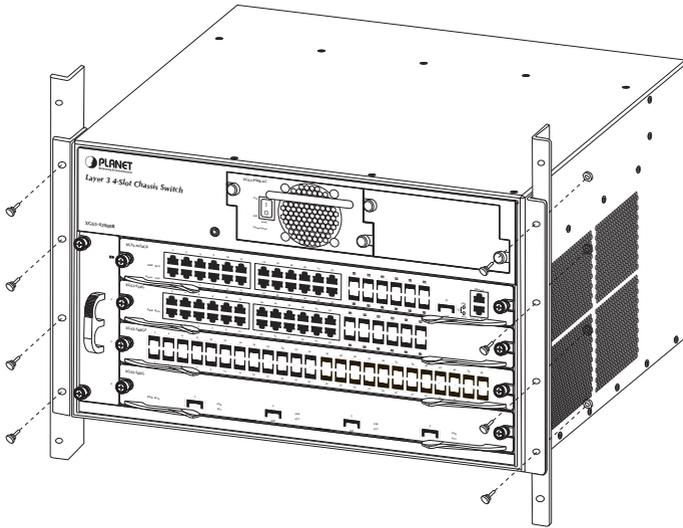|	
Note	Please take care and avoid crash, that may cause the device damage or any harm to the installer due to the device falling or drop. The handles are designed for sliding into cabinet only; please don't use handles to lift the Chassis Switch.

Figure 3-2 Mounting the XGS3-42000R in a Rack

3.3 Chassis Switch Grounding

A good grounding system is the groundwork for the smooth and safe operation of the XGS3-42000R, and an excellent way to prevent lightning strikes and resistance interference. Please follow the XGS3-42000R grounding specification instructions, verify the installation site's grounding condition and ensure proper grounding accordingly.

Proper grounding

When using an AC power source, the device must be grounded with the green and yellow ground cables; otherwise, shock hazards may occur when insulation resistance between the internal power supply and the chassis degrades.

Lightning protection grounding

The lightning protection system is an independent system consisting of a lightning rod, conductor and connection joint with the grounding system. The grounding system usually is shared with the power reference grounding and green and yellow ground cable grounding. Lightning protection grounding is a building requirement, not a specific requirement of the Chassis Switch.

Electromagnetic compliance grounding

This refers to the grounding to comply with XGS3-42000R electromagnetic compatibility requirements, including shielded grounding, filter grounds, noise, and interference control and level reference. The overall grounding requirements are the sum total of the above. Ground resistance value should be less than 1 ohm.

The XGS3-42000R provides chassis grounding post in the lower rear chassis, marked as "GND". Chassis protection grounding should be properly connected to the rack grounding connector

The ground cabling procedures are listed below:

Step1   Remove the nuts from the rear chassis grounding posts.

Step2   Wrap one end of the green and yellow grounding cable to the grounding posts.

Step3   Attach the grounding post nut and tighten well.

Step4   Attach the other end of the grounding cable to the rack grounding connector.

Note	The grounding cable should be made of a good conductor, and the diameter should be determined by the possible maximum current that may pass through. Bare conductor cabling is forbidden. Ground resistance value: the combined grounding resistance should be less than 1 ohm.

3.4 Module Installation

The installation procedure is the same for all cards, as shown below:

Note	Slot 1 should installed with Management Module before power on the Chassis Switch otherwise the Chassis Switch will not operates normally. The Chassis Switch supports maximum 2 Management module for purpose of management redundancy at slot 1 and slot 2.

Step1 Power down the XGS3-42000R (Hot-swapping is supported by optional cards for the XGS3-42000R. However, for better convenience, it is recommended to power down the XGS3-42000R before installing the cards, if no module in the Chassis Switch is running).

Step2 Ensure proper grounding of the XGS3-42000R.

Step3 Put on an ESD wrist strap before contact with the Chassis Switch circuit, and make sure the ESD wrist strap is connected securely to the ESD connector in the Chassis Switch's front panel.

Step4 Loosen the panel fasteners locking back plate counterclockwise and remove the back plate.

Step5 Insert the optional module into the slot; you can use the metal handle on the front plate of the module to ensure good contact. Then lock the module with panel fasteners in the front plate.
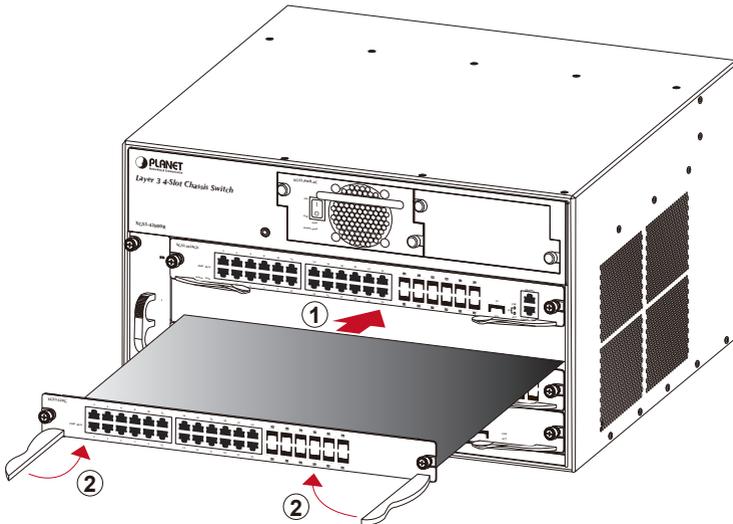
Figure 3-3 Insert the optional module into the slot of XGS3-42000R

3.5 Removing and Installing the Dust Gauze

Dust gauze is provided in the right section of the XGS3-42000R, which can be installed and removed from the back of the XGS3-42000R. The dust gauze is meant to prevent large debris or particles in the air from being ingested into the Chassis Switch. Please perform cleaning on a regular basis according to the site conditions.

Step1   Loosen the 2 panel fasteners in the dust gauze.

Step2   Draw the dust gauze out smoothly by holding the 2 screws.

Step3   Clean the dust gauze with a brush (never wash with any liquid).

Step4   Insert the gauze back to its original position in the Chassis Switch.

Step5   Tighten the panel fasteners.

The installation and removal of the dust gauze is shown below:
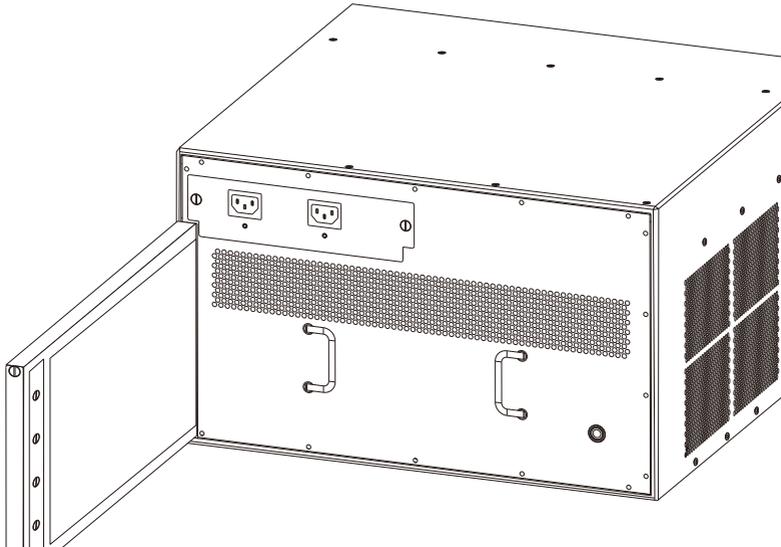
Figure 3-4 Installation and Removal of the XGS3-42000R Dust Gauze

3.6 Removing and Installing the Fan Tray

One fan tray in the left section of the XGS3-42000R and can be serviced from the front. The installation and removal of the fan tray is relatively simple, please refer to following procedure for reference.

Install the Fan Tray

Step1   Just hold the fan tray in the correct direction, align with the corresponding slot and push to secure.

Step2   Tighten the panel fasteners in the font panel.

Remove the Fan Tray

Step1   Loosen the 2 screws in the front panel of the fan tray.

Step2   Hold the handle in the front panel of fan tray with your middle and ring fingers, press the locker slightly down, and the fan tray can be drawn out smoothly.

The installation and removal of a fan tray is shown below:
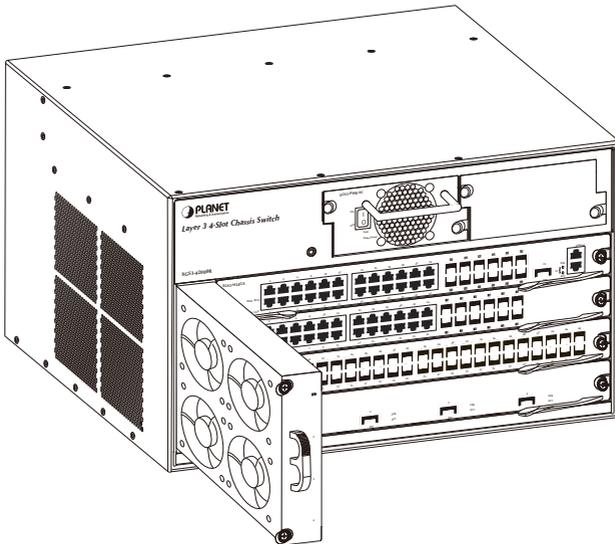
Figure 3-5 Installation and Removal the Fan Tray

3.7 Install and remove the Power Supply Unit

To install a power supply unit into XGS3-42000R, please fasten the hand screw clockwise and slide in the power supply unit into the XGS3-42000R.

To remove a power supply unit out the XGS3-42000R, please loose the hand screw counter clockwise and pull out the power supply unit from the XGS3-42000R.
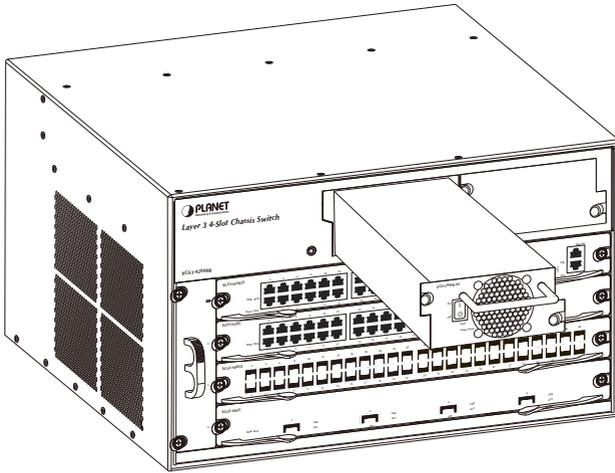

Figure 3-6 Install and Removal the Power Supply Unit

4. Chassis Switch Management

To setup the Chassis Switch, the user needs to configure the Chassis Switch for network management. The Chassis Switch provides two management options: **Out-of-Band management** and **In-Band management.**

■ Out-of-Band Management

Out-of-band management is the management through Console interface. **Generally, the user will use out-of-band management for the initial Chassis Switch configuration,** or when in-band management is not available.

IMPORTANT!	The Chassis Switch is shipped without IP address assigned by default. User must assign an IP address to the Chassis Switch via the Console interface to be able to remote access the Chassis Switch through Telnet or HTTP.

■ In-Band Management

In-band management refers to the management by login to the Chassis Switch using Telnet, HTTP, or using SNMP management software to configure the Chassis Switch. In-band management enables management of the Chassis Switch for some devices attached to the Chassis Switch. Following procedures are required to enable In-band management:

1. Logon Console

2. Assign / Configure IP Address

3. Create a remote login account

4. Enable HTTP or Telnet server on the Chassis Switch

In the case when in-band management fails, due to Chassis Switch configuration changes, out-of-band management can be used for configuring and managing the Chassis Switch.

5. Requirements

The Chassis Switch provide remote login interface for manage; the following equipments are necessary for further management.

■ **Workstation** running Windows XP/2003/Vista/Windows 7, MAC OS X, Linux, Fedora, Ubuntu or other platform.

■ **Serial Port connect** (Terminal)

◆ Above Workstation with COM Port (DB9) or USB-to-RS-232 converter.

◆ Above Workstation has installed with terminal emulator, such as Hyper Terminal included in Windows XP & 2003.

◆ Serial cable: One end attach to the RS-232 serial port, the other end to the Console port of the Chassis Switch.

■ **Ethernet Port connect**

◆ Above Workstation with running OS compatible with TCP/IP protocols.

◆ Above Workstation installed with Ethernet NIC (Network Card).

◆ Network cables - Use standard network (UTP) cables with RJ-45 connectors.

◆ Above Workstation has installed with WEB Browser and JAVA runtime environment Plug-in.

Note	It is recommended to use Internet Explore 7.0 or above to access the Chassis Switch. If the Web interface of the Chassis Switch is not accessible, please turn off the anti-virus software or firewall then try again.

6. Terminal Setup

To configure the system, connect a serial cable to a COM port on a PC or notebook computer and to serial (console) port of the XGS3 Chassis Switch. The console port of the Chassis Switch is DCE already, so that you can connect the console port directly through PC without the need of Null Modem.
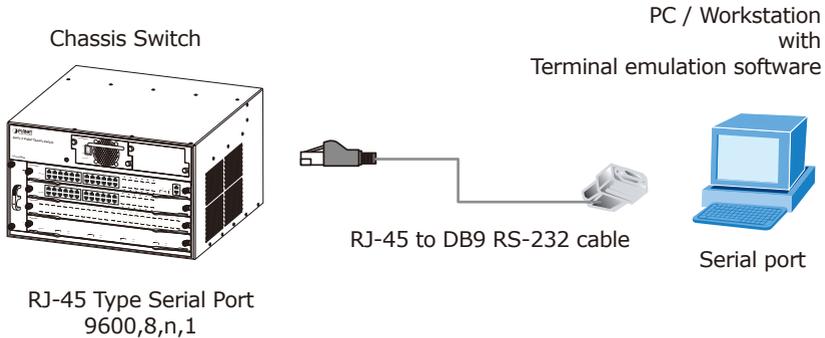
Chassis Switch

PC / Workstation
with
Terminal emulation software

RJ-45 to DB9 RS-232 cable

Serial port

RJ-45 Type Serial Port
9600,8,n,1

Figure 6-1 XGS3 Chassis Switch Console connection

A terminal program is required to make the software connection to the XGS3 Chassis Switch. Windows' **Hyper Terminal** program may be a good choice. The Hyper Terminal can be accessed from the **Start** menu.

1. Click **START** menu, then **Programs, Accessories** and then **Hyper Terminal**.

2. Type a name for opening Hyper Terminal, such as "COM1_9600".

3. When the following screen appears, make sure that the COM port should be configured as:

◆ Baud   : 9600

◆ Parity   : None

◆ Data bits   : 8

◆ Stop bits   : 1

◆ Flow Control   : None

Figure 6-2 Hyper Terminal COM port configuration

7. Logon on the Console

Once the terminal has connected to the Chassis Switch, power on the XGS3 Chassis Switch, the terminal will display that it is running testing procedures.

Then, the following message asks the login user name and password. The factory default user name and password as following and the login screen in Figure 7-1 appears.

Username: **admin**
Password: **admin**

Figure 7-1 XGS3 Chassis Switch Console Login screen

The user can now enter commands to manage the Chassis Switch. For a detailed description for the commands, please refer to the following chapters.

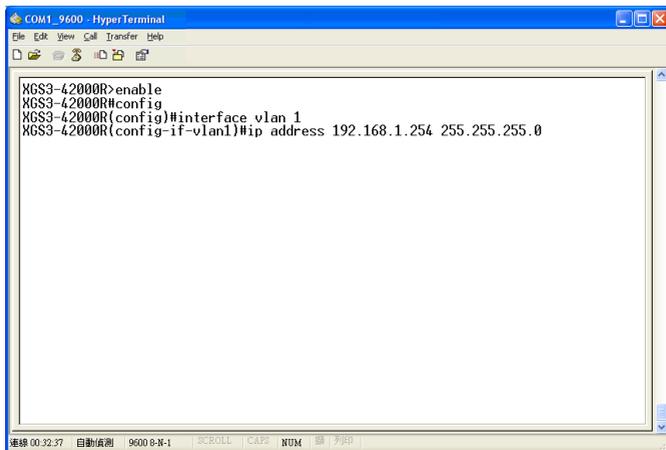| Note	1. For security reason, please change and memorize the new password after this first setup. 2. Only accept command in lowercase letter under console interface.

8. Configure IP Address

The IP address configuration commands for VLAN1 interface are listed below. Before in-band management, the Chassis Switch must be configured with an IP address by out-of-band management (i.e. Console mode), the configuration commands are as follows (All Chassis Switch configuration prompts are assumed to be "XGS3-42000R" hereafter if not otherwise specified):

```
XGS3-42000R>
XGS3-42000R> enable
XGS3-42000R# config
XGS3-42000R(config)# interface vlan 1
XGS3-42000R(Config-if-Vlan1)# ip address 192.168.1.254 255.255.255.0
```

The previous command would apply the follow settings for the Chassis Switch.

IPv4 Address: 192.168.1.254
Subnet Mask: 255.255.255.0

Figure 8-1 Configure IPv4 address screen

To check the current IP address or modify a new IP address for the Chassis Switch, please use the procedures as follow:

■ Show the current IP address

1. On **"XGS3-42000R#"** prompt, enter **"show ip interface brief"**.

2. The screen displays the current IP address, Subnet Mask and Gateway. As show in Figure 8-2

Figure 8-2 Show IP information screen

If the IP address is successfully configured, the Chassis Switch will apply the new IP address setting immediately. You can access the Web interface of XGS3 Chassis Switch through the new IP address.

Note	If you do not familiar with console command or the related parameter, enter "**help**" anytime in console to get the help description.

9. Telnet Management

Login to the Telnet configuration interface. Valid login name and password are required; otherwise the Chassis Switch will reject Telnet access. This is a method to protect the Chassis Switch from unauthorized access. As a result, when Telnet is enabled for configuring and managing the Chassis Switch, username and password for authorized Telnet users must be configured with the following command:

username <username> privilege <privilege> [password (0|7) <password>]

Privilege option must exist and just is 15. Assume an authorized user in the Chassis Switch has a username of "admin", and password of "admin", the configuration procedure should like the following:

```
XGS3-42000R> enable
XGS3-42000R# config
XGS3-42000R(config)# username admin privilege 15 password 0 admin
```

Enter valid login name and password in the Telnet configuration interface, Telnet user will be able to enter the Chassis Switch's CLI configuration interface. The commands used in the Telnet CLI interface after login is the same as that in the Console interface.
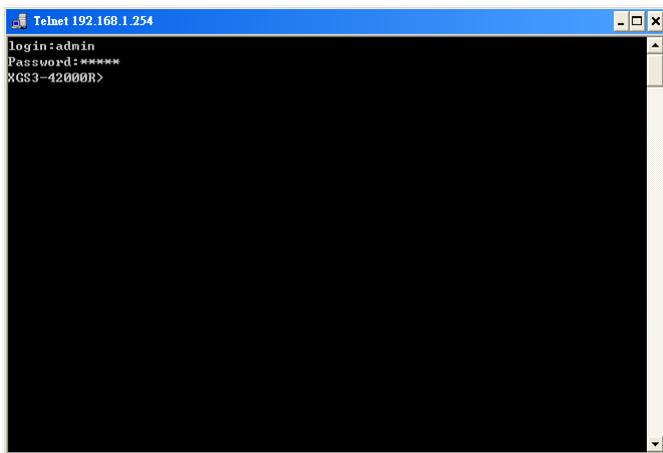

Figure 9-1 Telnet Configuration Interface

10. Start Web Management

For configuring the IP address on the Chassis Switch through out-of-band management, see the telnet management chapter.

To enable the Web configuration, users should type the CLI command IP http server in the global mode as below:

```
XGS3-42000R> enable
XGS3-42000R# config
XGS3-42000R(config)# ip http server
```

The Chassis Switch provides a built-in browser interface. You can manage it remotely by having a remote host with Web browser, such as Microsoft Internet Explorer, Mozilla Firefox, Google Chrome or Apple Safari.
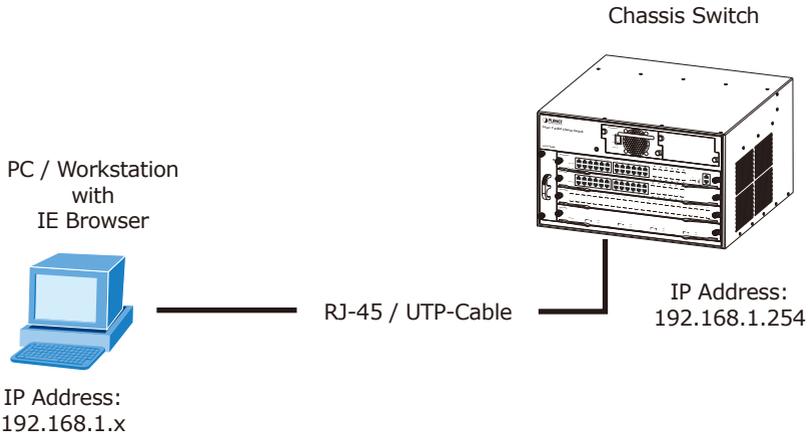
Chassis Switch

PC / Workstation
with
IE Browser

RJ-45 / UTP-Cable

IP Address:
192.168.1.254

IP Address:
192.168.1.x

Figure 10-1 IP Management Diagram

> **Note**
>
> Please refer to **Chapter 8 – CONFIGURE IP ADDRESS** for the IPv4 IP address setting on the Chassis Switch.
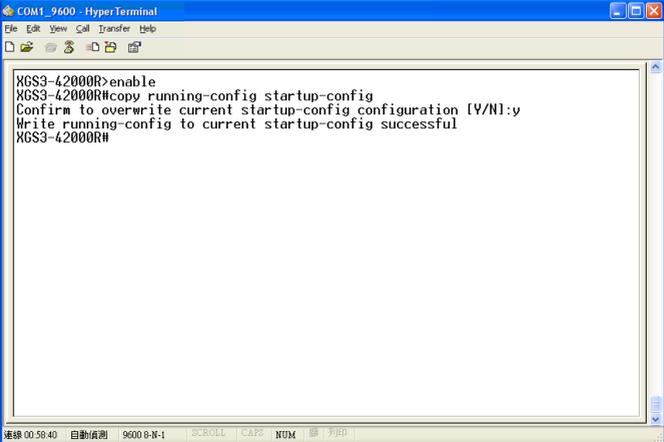
The following shows how to start up the **Web Management** of the Chassis Switch, please note the Chassis Switch is configured through an Ethernet connection, please make sure the manager PC must be set on the same **IP subnet address**.

For example, the IP address of the Chassis Switch is configured with **192.168.1.254**, then the manager PC should be set at **192.168.1.x** (where x is a number between 1 and 253, except 254), and the default subnet mask is 255.255.255.0.

11. Save the Configuration

In Chassis Switch, the running configuration file stores in the RAM. In the current version, the running configuration sequence running-config can be saved from the RAM to FLASH by **write** command or **copy running-config startup-config** command, so that the running configuration sequence becomes the start up configuration file, which is called configuration save.

XGS3-42000R> **enable**

XGS3-42000R# **copy running-config startup-config**

Confirm to overwrite current startup-config configuration [Y/N]: **Y**

Write running-config to current startup-config successful

Figure 11-1 Copy running-config startup-config screen

12. Login the Chassis Switch

1. Use Internet Explorer 7.0 or above Web browser, enter IP address **http://192.168.1.254** (that you have just set in console) to access the Web interface.

2. When the following dialog box appears, please enter the configured user name **"admin"** and password **"admin"** (or the username / password you have changed via console). The login screen in Figure 12-1 appears.

Figure 12-1 Web Login screen

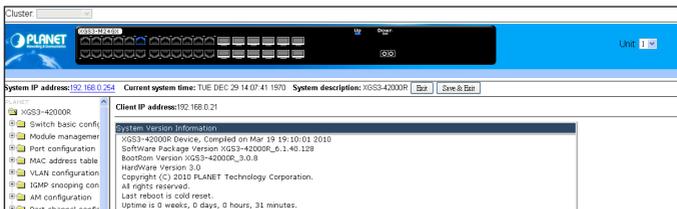3. After entering the password, the main screen appears as Figure 12-2.

Figure 12-2 Web Main Screen of XGS3 Chassis Switch

4. The Chassis Switch Menu on the left of the Web page let you access all the commands and statistics the Chassis Switch provides.

Now, you can use the Web management interface to continue the Chassis Switch management or manage the Chassis Switch by console interface. Please refer to the user manual for more detail information.

13. Customer Support

Thank you for purchase PLANET products. You can browse our online FAQ resource at the PLANET Web site first to check if it could solve you issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQ :

http://www.planet.com.tw/en/support/faq.php?type=1

Switch support team mail address :

support_switch@planet.com.tw

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