4-slot Layer 3 IPv6/IPv4 Routing Chassis Switch

XGS3-42000R

Quick Installation Guide

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1. Package Contents

Thank you for purchasing PLANET 4-slot Layer 3 IPv6/IPv4 Routing Chassis Switch, XGS3-42000R. **"Chassis Switch"** mentioned in this quick installation guide refers to the XGS3-42000R.

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

● The XGS3-42000R Chassis Switch x 1

● Quick Installation Guide x 1

● RJ45-to-DB9 Console 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, 6U Rack-mountable Chassis, with the standard dimensions of 445 (W) x 266 (H) x 421 mm (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 side of the board rack for filtering air circulation through the rack. The power block under 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.
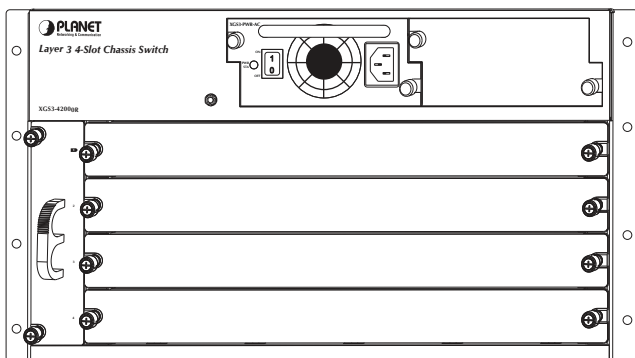

Figure 2-1 XGS3-42000R Front Panel

Power slots	Used for system power supply modules and supports up to two 500W AC modules (XGS3-PWR-AC).
Management slots	Slots 1 and 2 support management module like XGS3-M16C8S.
Standard slots	Slots 2 to 4 support standard modules like XGS3-S16C8S4X and XGS3-S48G
Fan tray slot	Supports one system fan assembly with each assembly consisting of four axial fans.
Dust gauze slot	Exterior air inlet for the ventilation subsystem.

Note	The Chassis Switch is equipped with only one Power Supply Module. The chassis will not include any Management/Standard Ethernet Module on shipment. **Slot 1** must be installed with Management Module before powering on the Chassis Switch; otherwise, the Chassis Switch will not operate normally.

3. Hardware Installation

During the installation and use of the XGS3-42000R Chassis Switch, please follow the steps 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 any weight on the XGS3-42000R. Maximum weight of various modules installed is 30kg and full configuration weight is 30kg.

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

Step 1　Choose a smooth level workbench.

Step 2　Verify that the workbench is strong enough to support the XGS3-42000R's fully configured weight.

Step 3　Plan a good position for your XGS3-42000R that is, to easily operate and have an appropriate power source and grounding point.

Step 4　Place the XGS3-42000R safely on the workbench; avoid obstructions on any side of the Chassis Switch.

3.2 Rack-mounting Installation

⚠	During the installation, please make sure the device does not slip from your grasp, or else it may cause damage to the device or may even hurt the installer. Please also note the hardware must be placed in the rack properly; if not, the hardware may fall off from the rack, causing harm to someone nearby. Double-check it after the installation.

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

Step 1 Place your XGS3-42000R on a hard flat surface, with the front panel positioned towards your front side.

Step 2 Attach a rack-mount bracket to each side of the XGS3-42000R with supplied screws found in the package. Figure 3-1 shows how to attach brackets to one side of the XGS3-42000R.
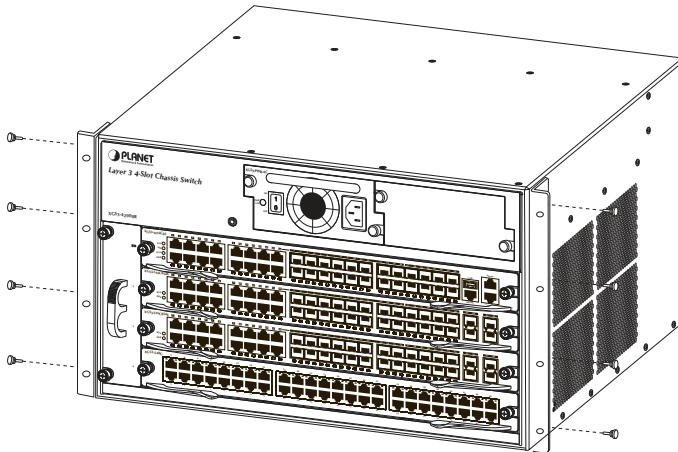

Figure 3-1 Installing XGS3-42000R Rack-mounting Brackets

⚠	You must use the screws supplied with the mounting brackets. Damage caused to the parts by using incorrect screws would invalidate your warranty.

Step 3 Secure the brackets tightly.

Step 4 Follow the same steps to attach the second bracket to the opposite side.

Step 5 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.

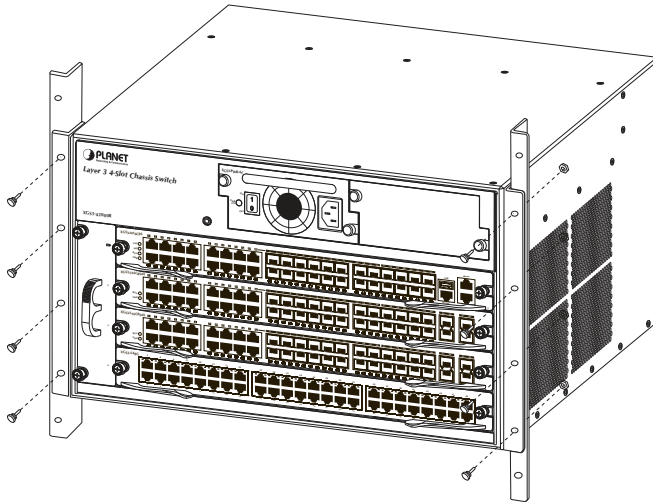|	
✎ Note	Please make sure the device does not slip through your grasp, or else it may cause damage to the device or may even hurt the installer. The handles are designed for sliding into cabinet only; please don't use handles to lift the Chassis Switch.

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 in compliance 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:

Step 1 Remove the nuts from the rear chassis grounding posts.

Step 2 Wrap one end of the green and yellow grounding cable to the grounding posts.

Step 3 Attach the grounding post nut and tighten well.

Step 4 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:

	Slot 1 should install with Management Module before powering on the Chassis Switch; otherwise, the Chassis Switch will not operate normally. The Chassis Switch supports maximum 2 Management modules for the purpose of management redundancy at Slot 1 and Slot 2.

Step 1 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).

Step 2 Ensure proper grounding of the XGS3-42000R.

Step 3 Put on an ESD wrist strap before making 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.

Step 4 Loosen the panel fasteners locking back plate counterclockwise and remove the back plate.

Step 5 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.
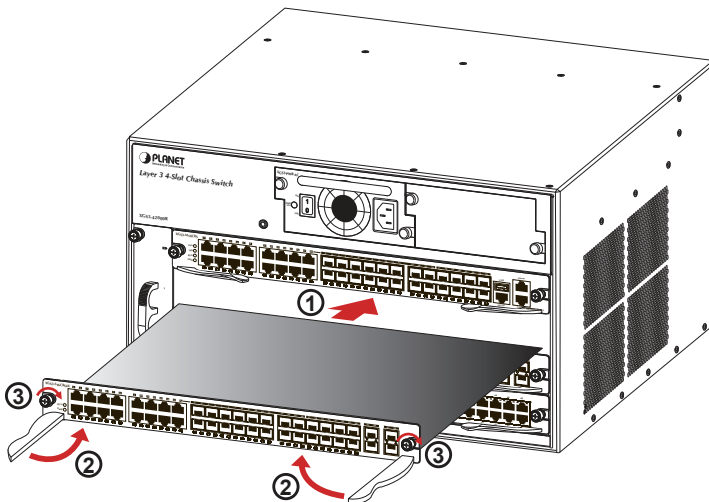

Figure 3-3 Inserting the optional module into the slot of XGS3-42000R

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.

Step 1   Loosen the 2 panel fasteners in the dust gauze.

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

Step 3   Clean the dust gauze with a brush (never wash with any liquid).

Step 4   Insert the gauze back to its original position in the Chassis Switch.

Step 5   Tighten the panel fasteners.

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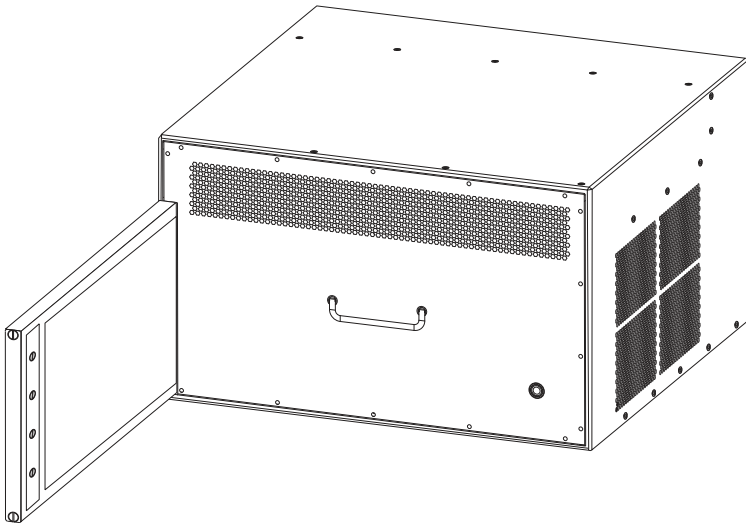
Figure 3-4 Installation and Removal of the XGS3-42000R Dust Gauze

3.6 Removing and Installing the Fan Tray

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

Installing the Fan Tray

Step 1 Just hold the fan tray in the correct direction, and align with the corresponding slot and push to secure.

Step 2 Tighten the panel fasteners on the font panel.

Removing the Fan Tray

Step 1 Loosen the 2 screws on the front panel of the fan tray.

Step 2 Hold the handle on the front panel of the 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:
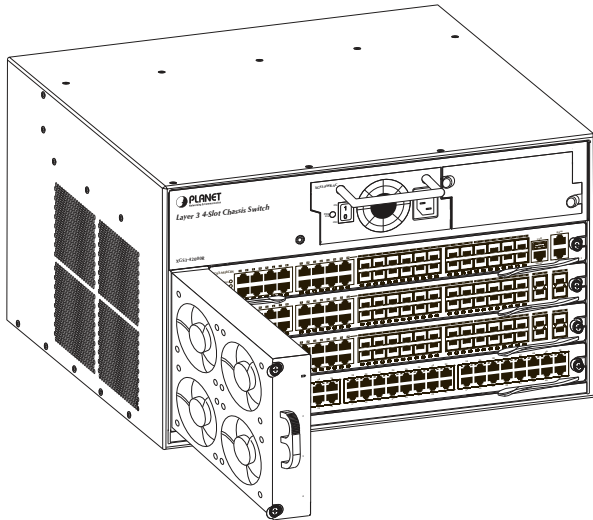
Figure 3-5 Installation and Removal of the Fan Tray

3.7 Installing and Removing the Power Supply Unit

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

To remove a power supply unit from the XGS3-42000R, please loosen the screw counterclockwise and pull out the power supply unit from the XGS3-42000R.
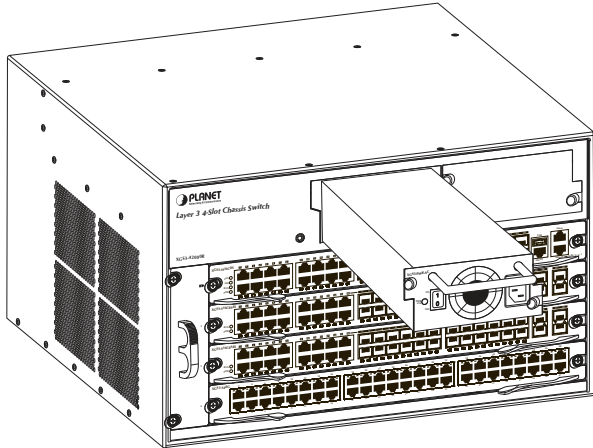

Figure 3-6 Installing and Removing the Power Supply Unit

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.

■ In-Band Management

In-band management refers to the management by logging to the Chassis Switch using Telnet, HTTP, or using SNMP management software to configure the Chassis Switch.

In 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

Workstations running Windows XP/2003/Vista/7/8/2008/10, MAC OS X or later, Linux, UNIX, or other platforms are compatible with TCP/IP protocols

● Workstations are installed with Ethernet NIC (Network Interface Card).

● **Serial Port Connection** (Terminal)

◆ The above Workstations come with COM Port (DB9) or USB-to-RS232 converter.

◆ The above Workstations have been installed with terminal emulator, such as Tera Term or PuTTY.

◆ Serial cable -- one end is attached to the RS232 serial port, while the other end to the console port of the Managed Switch.

● **Ethernet Port Connection**

◆ Network cables -- Use standard network (UTP) cables with RJ45 connectors.

◆ The above PC is installed with Web browser and JAVA runtime environment plug-in

Note	It is recommended to use Internet Explore 8.0 or above to access the Managed Switch. If the Web interface of the Managed Switch is not accessible, please turn off the anti-virus software or firewall and then try it 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.
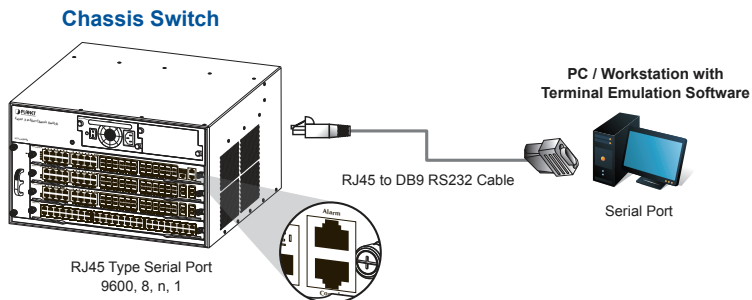
Figure 6-1 XGS3 Chassis Switch Console connection

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
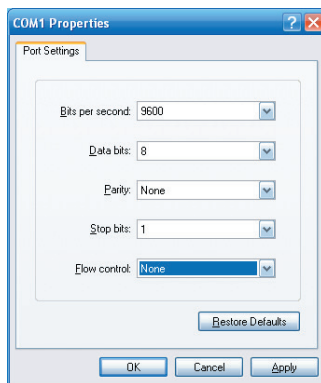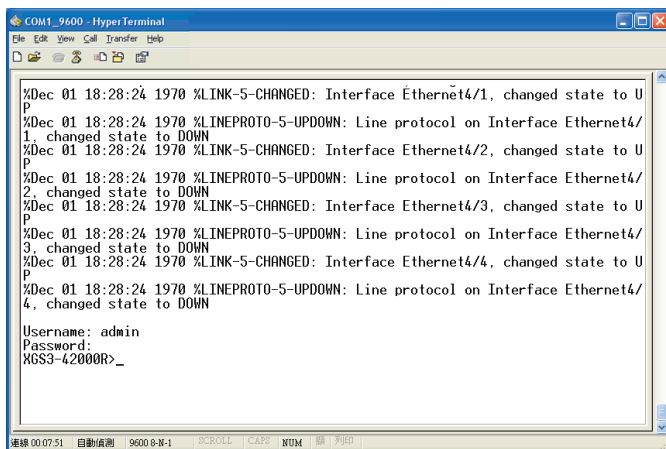
Figure 6-2 Hyper Terminal COM port configuration

7. Logging on the Console

Once the terminal is connected to the Chassis Switch, power on the XGS3 Chassis Switch, and the terminal will display "running testing procedures".

Then, the following message asks the login user name and password. The factory default user name and password are as follows 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. Configuring IP Address
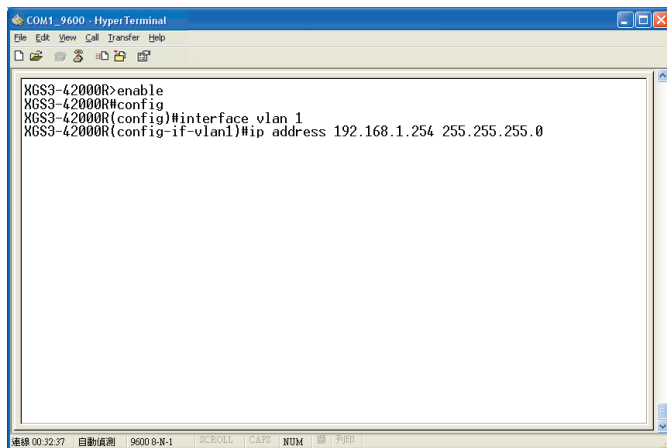
The IP address configuration commands for VLAN1 interface are listed below:

```
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
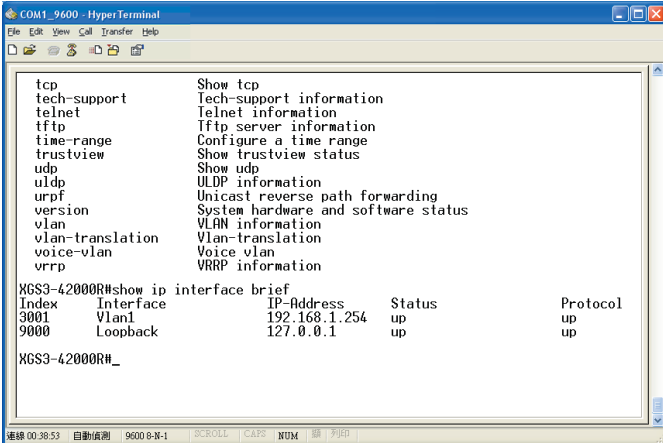**Subnet Mask: 255.255.255.0**

Figure 8-1 Configuring IPv4 address screen

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

■ 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 shown 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 the XGS3 Chassis Switch through the new IP address.

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

9. Telnet Management

Logging in to the Telnet configuration interface. The commands used in the Telnet CLI interface after login is the same as that in the Console interface.

Default IP Address: **192.168.0.254**
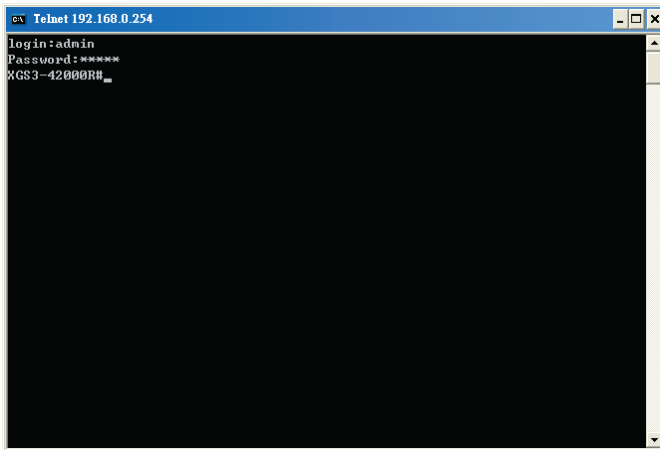Username: **admin**
Password: **admin**

Figure 9-1 Telnet Configuration Interface

10. Saving 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
```
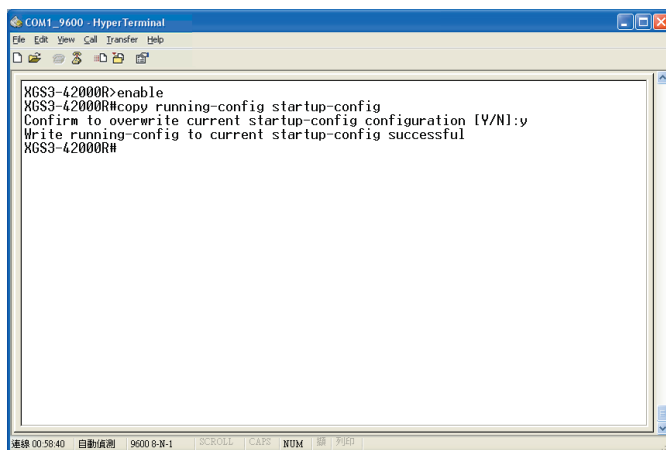

Figure 10-1 Copy running-config startup-config screen

11. Web Login the Chassis Switch

The following shows how to start up the **Web Management** of the Managed Switch. Note the Managed Switch is configured through an Ethernet connection. Please make sure the manager PC must be set to the same **IP subnet address**.

For example, the default IP address of the Managed Switch is *192.168.0.254*, then the manager PC should be set to **192.168.0.x** (where x is a number between 1 and 254, except 254), and the default subnet mask is 255.255.255.0
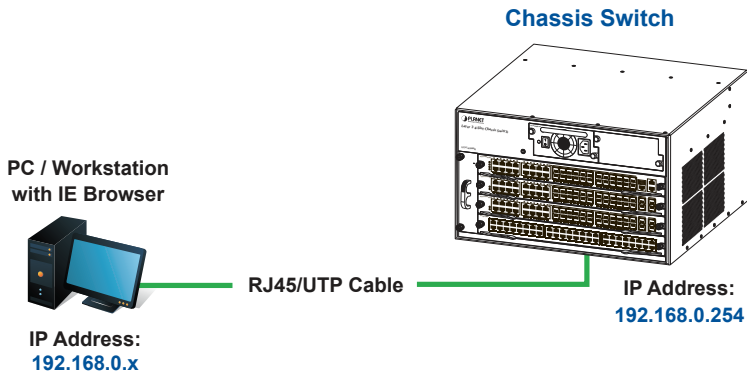

Figure 11-1 IP Management Diagram

1. Use Internet Explorer 8.0 or above Web browser, enter IP address ***http://192.168.0.254*** (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.

Default IP Address: **192.168.0.254**
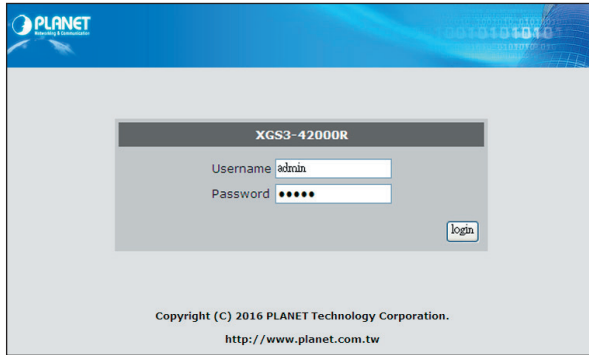Username: **admin**
Password: **admin**

Figure 12-1 Web Login screen

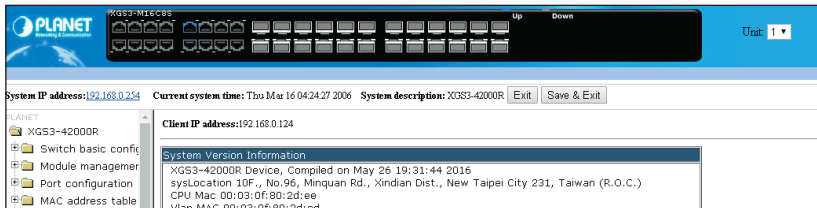3. After entering the password, the main screen appears as Figure 12-2.

Figure 12-2 Web Main Screen of XGS3 Chassis Switch

4. The Chassis Switch Menu on the left side of the Web page lets 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 detailed information.

12. Saving Configuration via the Web

In the Managed Switch, the running configuration file stores in the RAM. In the current version, the running configuration sequence of running-config can be saved from the RAM to FLASH by **"Save current running-configurations"** function, so that the running configuration sequence becomes the startup configuration file, which is called configuration save.

To save all applied changes and set the current configuration as a startup configuration, the startup-configuration file will be loaded automatically across a system reboot.

1. Click **"Switch basic configuration > Switch basic configuration > Save current running-configuration"** to login "Save current running-configuration" page.
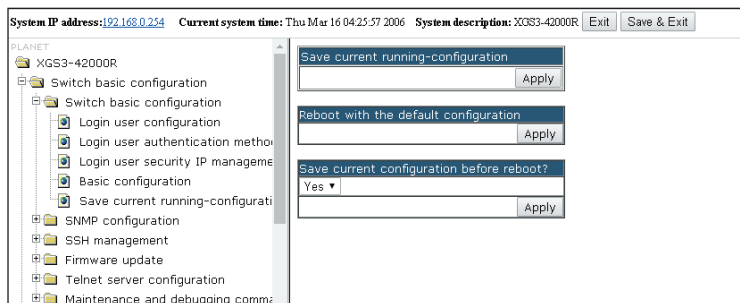
2. Press the **"Apply"** button to save the current running-configuration to the start-up configuration.

13. Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource at the PLANET Web site first to check if it could solve your 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

XGS3-42000R User's Manual
http://www.planet.com.tw/en/support/download.php?type1=1&model=&type=3

(Please select your switch model name from the Product Model drop-down menu)