24-port 10/100Mbps + 2 Gigabit

Ethernet Stackable Switch

SGSW-2620

User's Manual

Trademarks

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Revision

PLANET 24-port 10/100Mbps + 2 Gigabit Ethernet Stackable Switch User's Manual

FOR MODEL: SGSW-2620

REVISION: 1.0

Part No.: EM-SGSW2620V1

TABLE OF CONTENTS

1.1 Checklist

Check the contents of your package for following parts:

- SGSW-2620.
- Quick Installation Guide.
- User's manual CD.
- RS-232 cable.
- Power cord.
- 19" rack mounting kit.

If any of these pieces are missing or damaged, please contact your dealer immediately, if possible, retain the carton including the original packing material, and use them against to repack the product in case there is a need to return it to us for repair.

1.2 About the Switch

The SGSW-2620 is equipped with unshielded twisted-pair (UTP) cable ports providing dedicated 10 or 100Mbps bandwidth. The SGSW-2620 supports MDI/ MDI-X convertible on 24-10/100Mbps ports, also provide 2 Gigabit Switch port and 2-SFP Mini-GBIC interfaces on port 25,26. That can be used for up-linking to another switch or server, the dual speed ports use standard twisted-pair cabling and are ideal for segmenting networks into small, connected sub-networks. Each 100M port can support up to 200Mbps of throughput in full-duplex mode. Each 1000M port can support up to 2Gbps in Full-duplex mode.

In addition, the SGSW-2620 is also providing 2 Ethernet Gigabit ports and 2-SFP Mini-GBIC interfaces on port 25,26. To uplink to a server or network backbone, the SGSW-2620 is designed for Plug and Play installation, allows the network administrator to simply connect the network and power cables and the Switching/bridging functions begin automatically.

The front panel of SGSW-2620 provides LEDs for easy recognition of the switch operation status and for troubleshooting. These LED indicators display the power status for the system and LNK/ACT, FDX LED for each10/100M port. 1000,100. LNK/ACT. FDX/COL LED for 2 Gigabit ports and 2-SFP Mini-GBIC interfaces

The SGSW-2620 provide high effective Layer 2 management functions, such as per port speed, duplex, flow-control settings, Bandwidth control, priority and security settings, port Trunking, port mirroring, port-based and IEEE802.1Q VLAN function. These features provide a cost-effective method to manage the devices from Internet whenever you are at work or at home.

From cabinet management to port-level control and monitoring, you can visually configure and manage your network via Web Browser, just click your mouse instead of typing cryptic command strings. However, the SGSW-2620 can also be managed via Console or telnet, or third-party SNMP Management.

The SGSW-2620 removes the restrictions and limitations of standalone switches by using stacking technology to increase the available port count up to 192 ports. It's a high flexible switch meting networking needs both today and in the future, and also supports the IEEE802.1x user authentication with RADIUS client functionality, preventing unauthorized clients from gaining access to the network.

1.3 Features

- Complies with the IEEE802.3 Ethernet, IEEE802.3u Fast Ethernet and IEEE802.3ab, IEEE802.3z Gigabit Ethernet standard.

- 24-port 10/100Mbps Ethernet ports

- 2 10/100/1000Mbps ports and 2-SFP mini-GBIC interfaces

- Featured Store-and-Forward mode at wire-speed filtering and forwarding rates

- Hardware based 10/100Mbps, half / full-duplex and 1000Mbps full duplex mode, flow control and auto-negotiation

- IEEE802.3x flow control for full duplex operation and back pressure for half duplex operation

- Integrated address look-up engine, support 8K absolute MAC addresses

- Configurable through console, Telnet and Web and SNMP

- Up to 255 groups port-based VLAN, IEEE802.1Q VLAN

- IEEE802.3ad Port trunk with LACP support

- IEEE802.1p priority, spanning tree, port security support

- IEEE802.1x user authentication with RADIUS client function

- Port mirroring, IGMP, GVRP support

- Bandwidth control on each port

- Up to 8 units can be stacked by Ethernet connection and managed by single IP

- Broadcast storm control support

- Automatic address learning and address aging

- Supports Auto MDI/MDI-X function

- Supports CSMA/CD protocol

- 100~240VAC, 0.8A, 50~60Hz universal Power input

- FCC, CE class A compliant

1.4 Specification

Product	SGSW-2620
Hardware Specification	
10/100/Base-TX Ports	24
10/100/1000Base-T Ports	2
SFP Mini-GBIC interfaces	2
Switch Processing Scheme	Store-and-Forward
Switch fabric	8.8Gbps
Throughput (packet per second)	6.547Mpps
Address Table	8K entries
Share data Buffer	3Mbits
Flow Control	Back pressure for half duplex, IEEE 802.3x Pause Frame for full duplex
Dimensions	440 x 160 x 44 mm (1U height)
Weight	2.2 kg
Power Requirement	100~240 VAC, 0.8A, 50-60 Hz
Power Consumption / Dissipation	34 Watts, 116 BTU/hr
Temperature	Operating: 0~50 degree C, Storage -40~70 degree
Humidity Operating:	5% to 90%, Storage: 5% to 90% (Non-condensing)
Standards Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 (Ethernet) IEEE 802.3u (Fast Ethernet) IEEE 802.3ab(Gigabit Ethernet) IEEE 802.3 z (Gigabit Ethernet) IEEE 802.3.x (Full-duplex flow control) IEEE 802.3ad Link Aggregation IEEE 802.1D Spanning tree IEEE 802.1p(QoS) IEEE 802.1Q VLAN IEEE 802.x user authentication

2. HARDWARE DESCRIPTION

This product provides three different running speeds – 10Mbps, 100Mbps, and 1000Mbps in the same switch and automatically distinguish the speed of incoming connection.

This section describes the hardware features of SGSW-2620. For easier management and control of the Switch, familiarize yourself with its display indicators, and ports. Front panel illustrations in this chapter display the unit LED indicators. Before connecting any network device to the SGSW-2620, read this chapter carefully

There are following option module for expansion:

● SFP-port 1000Base-SX Mini-GBIC module
● SFP-port 1000Base-LX Mini-GBIC module

2.1 Front Panel

The Front Panel of the SGSW-2620 Ethernet stackable Switch consists of 24x auto-sensing 10/100Mbps Ethernet RJ-45 Ports, two Gigabit Switch ports and 2-SFP Mini-GBIC interfaces and one console port. The LED Indicators are also located on the front panel of the SGSW-2620.
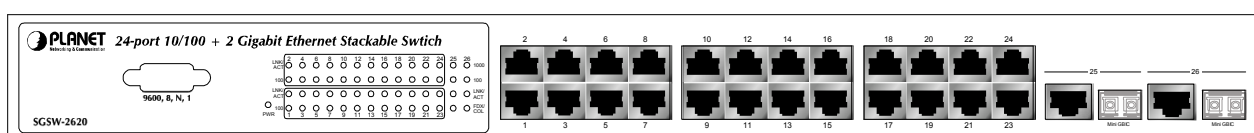
Figure 2-1: SGSW-2620 Switch front panel

2.1.1 LED indicators

System

LED	Color	Function
PWR	Green	Lights to indicate that the Switch has power.

Per 10/100Mbps port

LED	Color	Function
LNK/ACT	Green	Lit: indicate the link through that port is successfully established. Blink: indicate that the switch is actively sending or receiving data over that port.
FDX	Orange	Lit: indicate that the connection made through the corresponding port is running in Full Duplex mode. Off: indicate that the connection made through the corresponding port is running in half duplex mode.

Per 1000Base-T port and SFP-Mini-GBIC interface

LED	Color	Function
1000	Green	Lit: indicate that the port is operating at 1000Mbps. Off: indicate that the port is operating at 10Mbps or 100Mbps.
100	Orange	Lit: indicate that the port is operating at 100Mbps. Off: indicate that the port is operating at 10Mbps or 1000Mbps.
LNK/ACT	Green	Lit: indicate the link through that port is successfully established. Blink: indicate that the switch is actively sending or receiving data over that port.
FDX/COL	Orange	Lit: indicate that the connection made through the corresponding port is running in Full Duplex mode. Blink: indicate that the connection is experiencing collisions

2.2 Rear Panel

The rear panel of the SGSW-2620 indicates an AC inlet power socket, which accepts input power from 100 to 240VAC, 50-60Hz.

Figure 2-2: SGSW-2620 Switch rear panel

Power Notice:

1. The device is a power-required device, it means, it will not work till it is powered. If your networks should active all the time, please consider using UPS (Uninterrupted Power Supply) for your device. It will prevent you from network data loss or network downtime.

2. In some area, installing a surge suppression device may also help to protect your SGSW-2620 from being damaged by unregulated surge or current to the SGSW-2620 or the power adapter.

2.3 Hardware Installation

2.3.1 Before start up

Before your installation, please refer to the followings for your cabling:

100Base-TX

All 100Base-TX ports come with auto-negotiation capability. They automatically support 100Base-TX and 10Base-T networks. Users only need to plug a working network device into one of the 100Base-TX ports, and then turn on the SGSW-2620. The port will automatically runs in 10Mbps, 20Mbps, 100Mbps or 200Mbps after the negotiation with the connected device.

1000Base-T

The SGSW-2620 is with two Gigabit port. This two ports support 10Mbps, 100Mbps and 1000Mbps speed and also are full duplex supported.

1000Base-SX/LX

The SGSW-2620 is with two SFP mini-GBIC interfaces. This two SFP mini-GBIC interfaces support full duplex 1000Mbps speed.

Cabling

Each 10/100/1000Base-T ports use RJ-45 sockets -- similar to phone jacks -- for connection of unshielded twisted-pair cable (UTP). The IEEE802.3ab Gigabit Ethernet standard requires 4-pair Category 5/5e UTP cable; IEEE 802.3u Fast Ethernet standard requires Category 5 UTP for 100Mbps 100Base-TX. 10Base-T networks can use Cat.3, 4, or 5 UTP (see table below). Maximum distance is 100meters (328 feet).

Port Type	Cable Type	Connector
10Base-T	Cat 3, 4, 5, 2-pair	RJ-45
100Base-TX	Cat.5 UTP, 2-pair	RJ-45
1000Base-T	Cat. 5/5e UTP, 4-pair	RJ-45

Any Ethernet devices like hubs/ PCs can connect to the SGSW-2620 by using straight-through wires. The twenty-four-10/100Mbps ports and two Gigabit Switch ports are auto-MDI/MDI-X can be used on straight-through or crossover cable.

2.3.2 Connecting end node or hub or switch

1. Place the SGSW-2620 on a smooth surface or fasten the mounting brackets purchased separately with the provided screws in a standard 19" rack.

2. Connect the power cord to the power inlet socket of SGSW-2620 and the other end into the local power source outlet.

3. Connect other switch or PC to one port of the SGSW-2620 using Category 3/4/5 UTP/STP cabling.

4. Connect another switch or PC to the other port of SGSW-2620 by following the same process as described in Step3.

✍ *Notice:*

Cable distance for Switch

The cable distance between the SGSW-2620 and hub/PC should not exceed 100 meter for UTP/STP cable, 220m(721 feet) for 62.5/125μm fiber cable and 500m(1800 feet) for 50/125μm fiber cable on mini-GBIC 1000Base-SX module, 550m(1800 feet) for 62.5/125μm and 50/125μm fiber cable and 10/50/70km for 9/125μm fiber cable on mini-GBIC 1000Base-LX module.

Make sure the wiring is correct

It can be used Category 3/4/5 cable in 10 Mbps operation. To reliably operate your network at 100Mbps and 1000Mbps, you must use an Unshielded Twisted-Pair (UTP) Category 5 cable, or better Data Grade cabling. While a Category 3 or 4 cables may initially seem to work, it will soon cause data loss.

2.3.3 Connecting to Network Backbone or Server

Connect to the Gigabit Ethernet ports with Category 5 copper cable or for uplinking to a network backbone or network server. These ports operate at 1000Mbps in full-duplex mode. A valid connection is indicated when the Link LED is light.

3. SWITCH MANAGEMENT

This chapter describes how to manage the SGSW-2620. Topics include:

- Overview

- Management methods

- Assigning an IP address to the SGSW-2620

- Logging on to the SGSW-2620

3.1 Overview

The SGSW-2620 provides a user-friendly, menu driven console interface. Using this interface, you can perform various switch configuration and management activities, including:

- Assigning an IP address

- Configuring Switch settings

- Display console port information

- Configuring each port status

- Configuring Port Trunking

- Setting up packet filters

- Setting up VLAN policy

- Configuring STP and port sniffer

- Configure IP stacking function

- Configure IEEE 802.1x function

- Configuring SNMP parameters

- TFTP Upgrading software

- Backup Switch configuration

Please refer to the following or Chapter 4 for the details.

3.2 Management Methods

There are three ways to manage the SGSW-2620:

- Local Console Management via the Switch serial port.

- Remote Console Management via a network or dial-up connection.

- Web Management via a network or dial-up connection.

- Using an SNMP Network Management Station.

3.2.1 Local Console Management

You can manage the SGSW-2620 locally by connecting a VT100 terminal, or a personal computer or workstation with terminal emulation software, to the Switch serial port. The terminal or workstation connects to the Switch serial port using a null modem cable that has the appropriate connectors on each end.

This management method is ideal when:

- The network is unreliable

- The Network Manager does not have direct network connection

- A Network Manager does not support SNMP

The serial port of the Switch default setting is set to **9600** baud using a character format of **8** data bits, **no** parity, and **1** stop bit.

Therefore, configure the terminal or workstation to use these settings before you log on to the SGSW-2620. You can change this default setting, if desired, after you log on.

3.2.2 Remote Console Management

You can manage the SGSW-2620 remotely by having a remote host establish a Telnet connection to the SGSW-2620 via an Ethernet or modem link.

Using this management method:

The SGSW-2620 must have an Internet Protocol (IP) address

The Remote Console Management interface is identical in appearance and functionality to the Local Console Management interface described in the previous section.

3.2.3 Web Management

You can manage the SGSW-2620 remotely by having a remote host with web browser, such as Microsoft Internet Explorer or Netscape Navigator.

Using this management method:

The SGSW-2620 must have an Internet Protocol (IP) address accessible for the remote host

3.2.4 SNMP Management

You can manage the SGSW-2620 across a LAN using an SNMP Network Management Station with a graphical user interface.

This management method lets you monitor statistical counters and set switch parameters from the remote Network Management Station.

Using this management method:

- The network must run the IP protocol.

- The SGSW-2620 must have an IP address

3.3 Assigning an IP Address to the Switch

To manage the SGSW-2620 remotely through the console port or with an SNMP Management Station, you must assign an IP address to the SGSW-2620.

You assign IP address through the IP Settings screen. This procedure is described in Chapter 4, Section IP Networking. It is strongly recommends you assign an IP address to the default VLAN (VLAN ID = 1) for Remote Console Management and SNMP Network Management.

3.4 Logging on to the SGSW-2620

When you log on to the SGSW-2620 console port for the first time, a sign-on string appears and you are prompted for a console login name and password.

```
Welcome to PLANET SGSW-2620

24-port 10/100 + 2 Gigabit Ethernet Stackable Switch


              User Name: admin
              Password:  *****


Copyright 2002 (c) PLANET Technology Corp.
```

The factory default login username and password is **admin**.

✎*Notice:* For security reason, please change and memorize the new username and password after this

first setup.

4. CONSOLE INTERFACE

4.1 CONNECT TO PC

RS-232 serial cable

Use the bundled RS-232 serial cable and attach the 9-pin female connector to the male connector on the SGSW-2620. Plug the other side of this cable to your PC.

Hyper Terminal

In Windows 98/2000/ME/XP, launch "HyperTerminal", create a new connection, and adjust settings as below:

- Emulation: VT-100 compatible
- Baud per second: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow Control: None

To gain a demo, please see the Figure 4-1.
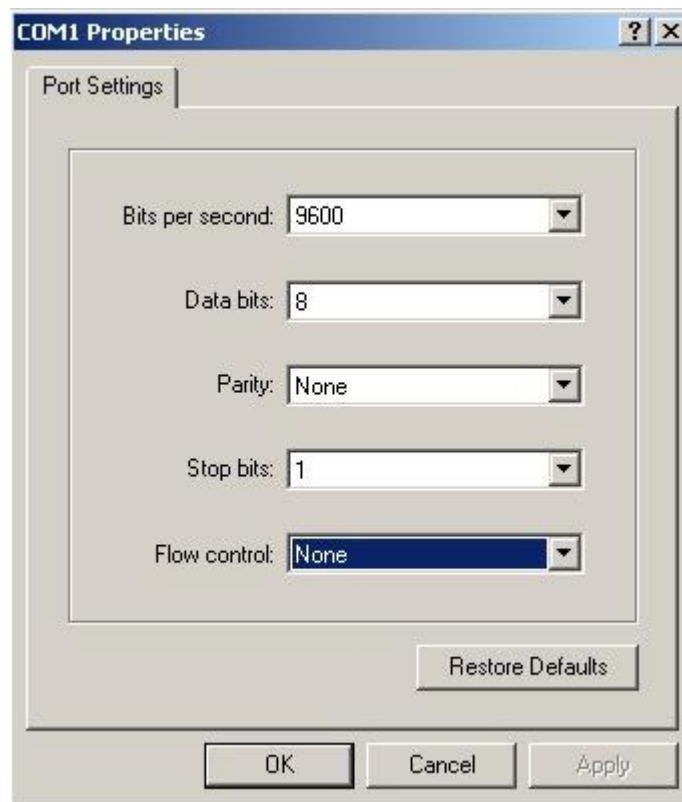
Figure 4-1 Port Settings for console interface

4.2 Login in

Login is required to access the command console after the self-test completes successfully. The factory default user name and password is "**admin**". You may change it in the System Menu. To access to the Main Menu, please always enter the correct user name. (See Figure 4-2)

Figure 4-2 SGSW-2620 login screen

4.3 Main screen

After login the SGSW-2620, the main screen shows as below.

Figure 4-3 SGSW-2620 Main Menu screen

4.3.1 Status and Counters

From the Switch main menu screen (see Figure 4-3), highlight Status and counters and press enter. The Status and Counters sub-screen in Figure 4-4 appears.

Figure 4-4 Status and Counters sub-screen
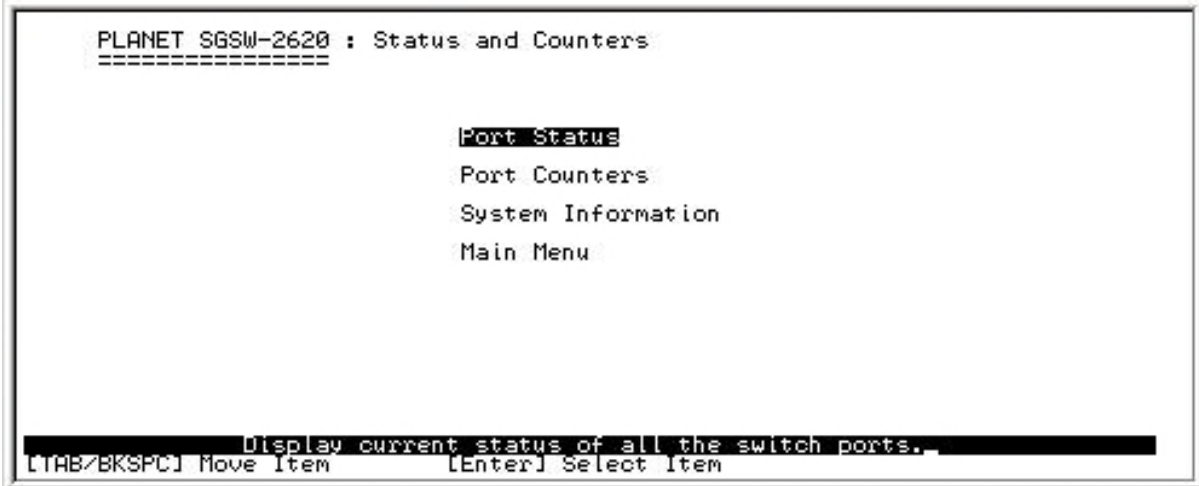
This sub-menu contains four items:

Port Status: Please refer to chapter 4.3.1.1.

Port Counters: Please refer to chapter 4.3.1.2

System Information: Please refer to chapter 4.3.1.3

Main Menu: return to main menu.

4.3.1.1 Port Status

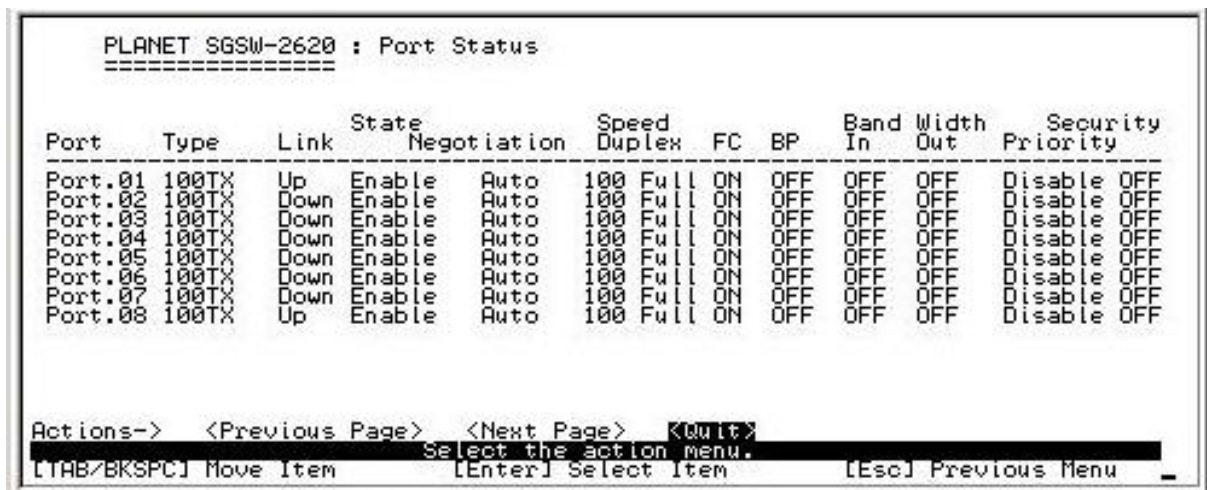Display the status of each port on SGSW-2620.

Figure 4-5 Port Status screen

4.3.1.2 Port Counters

Display the traffic counters of each port on SGSW-2620.

```
   PLANET SGSW-2620 : Port Counters
   ================

                Tx Good   Tx Bad    Rx Good   Rx Bad    Tx Abort  Packet
   Port   Type  Packet    Packet    Packet    Packet    Packet    Collision
   -----------------------------------------------------------------------------
   Port.01 100TX 0         0         0         0         0         0
   Port.02 100TX 0         0         0         0         0         0
   Port.03 100TX 0         0         0         0         0         0
   Port.04 100TX 0         0         0         0         0         0
   Port.05 100TX 0         0         0         0         0         0
   Port.06 100TX 0         0         0         0         0         0
   Port.07 100TX 0         0         0         0         0         0
   Port.08 100TX 0         0         0         0         0         0_



Actions->   <Refresh>   <Clear>   <Previous Page>   <Next Page>   <Quit>
                        Configure the action menu.
[TAB/BKSPC] Move Item        [Enter] Select Item        [Esc] Previous Menu
```

Figure 4-6 Port Counters screen

4.3.1.3 System Information

Display the Switch information.

```
   PLANET SGSW-2620 : System Information
   ================

System Name       :
System Location   :
System Description : 24-port 10/100 + 2 Gigabit Ethernet Stackable Switch

Firmware Version : v1.02
Kernel Version   : v6.00
Hardware Version : A7.00
MAC Address      : 00001C000008

Module    Type    Description
--------------------------------------------------------------------
Port 25   Auto    1000TX Copper/1000FX MiniGBIC
Port 26   Auto    1000TX Copper/1000FX MiniGBIC



Actions->   <Quit>
                 Display the switch system information.
[TAB/BKSPC] Move Item        [Enter] Select Item        [Esc] Previous Menu
```

Figure 4-7 System Information screen

4.3.2 Switch Configuration

From the Switch Configuration screen (see Figure 4-8), highlight Switch Configuration and press Enter. The Switch Configuration sub-screen in Figure 4-9 appears.

Figure 4-8 Switch Configuration screen

Figure 4-9 Switch Configuration sub-screen

This sub-menu contains eight items:

Administration Configuration: please refer to chapter 4.3.2.1.

Port Configuration: please refer to chapter 4.3.2.2.

Trunk Configuration: please refer to chapter 4.3.2.3.

Port Mirroring Configuration: please refer to chapter 4.3.2.4.

VLAN Configuration: please refer to chapter 4.3.2.5.

Priority Configuration: please refer to chapter 4.3.2.6

MAC Address Configuration: please refer to chapter 4.3.2.7.

Misc Configuration: please refer to chapter 4.3.2.8

Main Menu: please refer to chapter 4.3.2.9.

4.3.2.1 Administration Configuration

Figure 4-10 Administrator Configuration screen

This sub-menu contains five items:

Device Information: please refer to chapter 4.3.2.1.1

IP Configuration: please refer to chapter 4.3.2.1.2

Username Configuration: please refer to chapter 4.3.2.1.3

Password Configuration: please refer to chapter 4.3.2.1.4

Previous Menu: return to previous menu

4.3.2.1.1 Device Information

Display the Device information.

Figure 4-11 Device Information screen

4.3.2.1.2 IP Configuration

Press, **"Edit"** to disable or enable the DHCP Client function and modify the IP address, Subnet Mask, Gateway.

Figure 4-12 IP Configuration screen

Press **"Tab"** to move the cursor to IP Address, Subnet Mask and Gateway to input new value.

After setup completed, presses **"ESC"** to save the current configuration. The following screen in Figure 4-13 appears.

Figure 4-13 IP Configuration save successful screen

You need to reboot the SGSW-2620 to take effect of your IP configuration.

4.3.2.1.3 User Name Configuration

Press, **"Edit"** to input the new user name and choose **"Save"** to save the current configuration. The following screen in Figure 4-14 & 4-15 appears.

Figure 4-14 Edit User Name Configuration screen

Figure 4-15 User Name Configuration save successfully screen

✎ *Notice: Up to 10 characters is allowed for the User Name.*

4.3.2.1.4 Password Configuration

Allow user to modify the password.

Figure 4-16 Password Configuration screen

Modify the password procedure:

1. Enter old password: empty (Default is admin)

2. Enter new password: * * * * * (New password)

3. Enter again: * * * * * (New password)

4. Press **"Enter"** to apply the new password. (See the Figure 4-16)

✎*Notice: Up to 10 characters is allowed for the password.*

4.3.2.2 Port Configuration

From the Switch Configuration sub-screen (see Figure 4-9), highlight Port Configuration and press enter. The Port Configuration screen in Figure 4-17 appears.

```
        PLANET SGSW-2620 : Port Configuration
        =================

                        Negotiation  Speed                    Band Width      Security
        Port     Type   State        Duplex    FC    BP      In     Out       Priority
        ---------------------------------------------------------------------------------
        Port.01  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.02  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.03  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.04  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.05  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.06  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.07  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.08  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF


        Actions->   <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                            Select the Action menu.
        [TAB/BKSPC] Move Item        [Enter] Select Item        [Esc] Previous Menu
```

Figure 4-17 Port Configuration screen

Press **" Edit"** to configure each port. After setup completed, presses **"ESC"** to save the current configuration. The following screen in Figure 4-18 and 4-19 appears.

```
        PLANET SGSW-2620 : Port Configuration
        =================

                        Negotiation  Speed                    Band Width      Security
        Port     Type   State        Duplex    FC    BP      In     Out       Priority
        ---------------------------------------------------------------------------------
        Port.01  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.02  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.03  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.04  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.05  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.06  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.07  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.08  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF


        Actions->   <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                            Data saving, please wait .....
        [TAB/BKSPC] Move Item        [Enter] Select Item        [Esc] Previous Menu
```

Figure 4-18 Save Port Configuration process screen

```
        PLANET SGSW-2620 : Port Configuration
        =================

                        Negotiation  Speed                    Band Width      Security
        Port     Type   State        Duplex    FC    BP      In     Out       Priority
        ---------------------------------------------------------------------------------
        Port.01  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.02  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.03  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.04  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.05  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.06  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.07  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF
        Port.08  100TX  Enable  Auto  100 Full  ON    OFF     0      0        Disable  OFF


        Actions->   <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                            Save successfully! press any key to return!
        [TAB/BKSPC] Move Item        [Enter] Select Item        [Esc] Previous Menu
```

Figure 4-19 Port Configuration save successfully screen

4.3.2.3 Trunk Configuration

From the Switch Configuration sub-screen (see Figure 4-9), highlight Port Configuration and press enter. The Trunk Configuration screen in Figure 4-20 appears.

Figure 4-20 Trunk Configuration screen

Press **" Edit"** to configure the trunk group. After setup completed, presses **"ESC"** to save the current configuration. The following screen in Figure 4-21 and 4-22 appears.

Figure 4-21 Save Trunk Configuration process screen

Figure 4-22 Trunk Configuration save successfully screen

4.3.2.4 Port Mirroring Configuration

From the Switch Configuration sub-screen (see Figure 4-9), highlight Port Mirroring
Configuration and press enter. The Port Mirroring Configuration screen in Figure 4-23 appears.

```
   PLANET SGSW-2620 : Port Mirroring
   ================

   Mirroring State : Both
   Analysis Port : Port.01

   Port  State      Port  State      Port  State      Port  State
   ----------       ----------       ----------       ----------
   Port.01  -       Port.09  -       Port.17  -       Port.25  -
   Port.02  *       Port.10  *       Port.18  *       Port.26  *_
   Port.03  -       Port.11  -       Port.19  -
   Port.04  *       Port.12  *       Port.20  *
   Port.05  -       Port.13  -       Port.21  -
   Port.06  *       Port.14  *       Port.22  *
   Port.07  -       Port.15  -       Port.23  -
   Port.08  *       Port.16  *       Port.24  *



Actions->   <Edit>   <Save>   <Quit>
                      Select the action menu.
[TAB/BKSPC] Move Item         [Space] Toggle        [Esc] Previous Menu
```

Figure 4-23 Port Mirroring Configuration screen

Press **"Edit"** to configure the Port Mirroring function.

Mirroring State: provide **RX,TX** and **Both** 3 different Mirroring modes for port Mirroring function.

Analysis Port: allow seeing all monitor port traffic; you can connect sniffer port to LAN Explorer,
Session Wall, Sniffer Pro or Netxray.

Monitor port: choose one specific port for monitor the traffic of RX and TX or both (RX and TX) of
Analysis port

After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration.

4.3.2.5 VLAN Configuration

From the Switch Configuration sub-screen (see Figure 4-9), highlight VLAN Configuration
and press enter. The VLAN Configuration screen in Figure 4-24 appears.

```
   PLANET SGSW-2620 : VLAN Configuration
   ================


                      VLAN Configure

                      Create VLAN Group

                      Edit/Delete VLAN Group

                      Group Sorted Mode

                      Previous Menu




                Configure VLAN mode and ingress, egress rule.
[TAB/BKSPC] Move Item         [Enter] Select Item        [Esc] Previous Menu
```

Figure 4-24 VLAN Configuration screen

This sub-menu contains four items:

VLAN Configure: please refer to chapter 4.3.2.5.1

Create a VLAN Group: please refer to chapter 4.3.2.5.2

Edit/ Delete a VLAN Group: please refer to chapter 4.3.2.5.3

Group Sorted Mode: please refer to chapter 4.3.2.5.4

Previous Menu: return to previous menu

4.3.2.5.1 VLAN Configure

From the VLAN Configuration sub-screen (see Figure 4-24), highlight VLAN Configure
and press enter. The VLAN Configuration screen in Figure 4-25 appears. This function provides
disable and enable VLAN function that include 2 VLAN mode selections.

Figure 4-25 VLAN Configure screen

Press **"Edit"** for enable VLAN function and select the 2 VLAN modes through the space bar. The IEEE
802.1Q VLAN screen in Figure 4-26 appears. The maximum PVID is 4094.

Figure 4-26 IEEE 802.1Q VLAN Configure screen

Press space bar switch to various VLAN ID Range in VLAN ID Range. The available VLAN ID Range are
shown as below:

1. **1~255**.

2. **256~511**.

3. **512~767**.

4. **768~1023**.

5. **1024~1079**.

6. **1280~1535**.

7. **1536~1791**.

8. **1792~2047**.

9. **2048~2303**.

10. **2304~2559**.

11. **2560~2815**.

12. **2816~3071**.

13. **3072~3327**.

14. **3328~3583**.

15. **3584~3839**.

16. **3840-4094**.

The description of other items from the 802.1Q VLAN configure are shown as below:

VLAN ID: input the PVID based on the current VLAN ID Range and VLAN setting.

Ingress Filter: it matches that Ingress Filtering Rule 1, only forward packets with VLAN ID matching this port's configured VLAN ID. Press "**Space**" key to choose forward **(disable)** or drop **(enable)** the frame when the VLAN ID not matching this port's configured VLAN ID.

Acceptable Frame type: It matches that Ingress Filtering Rule 2. Drop the untagged frame. Press "**Space**" key to select drop or forward the untagged frame.

After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The following screen in **Figure 4-27** and **4-28** appears.


```
      PLANET SGSW-2620 : VLAN Configure
      =================

           VLAN Mode : 802.1Q
           VLAN ID Range : 1~255

                            Ingress           Acceptable
           Port     VLAN ID  Filter            Frame Type
           ----------------------------------------------
           Port.01  1        Enable            All
           Port.02  1        Enable            All
           Port.03  1        Enable            All
           Port.04  1        Enable            All
           Port.05  1        Enable            All
           Port.06  1        Enable            All
           Port.07  1        Enable            All
           Port.08  1        Enable            All


Actions->  <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                         Data saving, Please wait...
[TAB/BKSPC] Move Item        [Enter] Select Item      [Esc] Previous Menu
```

Figure 4-27 Save 802.1Q VLAN Configure process screen

Figure 4-28 802.1Q VLAN Configure save successfully screen

Press space bar switch to **Port-based VLAN** in VLAN mode. The screen in Figure4-29 appears.

After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The following screen in **Figure 4-30** and **4-31** appears.

Figure 4-29 Port-based VLAN screen

Figure 4-30 Save Port Based VLAN Configure process screen

Figure 4-31 Port Based VLAN Configure save successfully screen

4.3.2.5.2 Create a VLAN Group

To add an IEEE 802.Q VLAN group, the VLAN ID range is 1-4094. The screen in **Figure 4-32** appears.

Figure 4-32 Add an IEEE 802.1Q VLAN Group screen

Create an IEEE 802.1Q VLAN group procedure:

1. **Security VLAN setting:** allow user to disable or enable the security VLAN group. When enable the security VLAN group function, only the member ports in this VLAN group can access to the SGSW-2620. After configured the security VLAN group and still can continue to create other IEEE 802.1Q VLAN groups.

2. Press **"Edit"** to input the VLAN name and VLAN ID.

3. Choose the different VLAN protocol through the space bar.

4. Under IEEE 8021.Q VLAN mode. Assign Untagged, Tagged or no (not belong to any VLAN group) on each port.

5. After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The following screen in **Figure 4-33** appears.

✍*Notice: Up to one security VLAN group can be added.*

```
       PLANET SGSW-2620 : Create VLAN Group
       =================

              VLAN Name : Test              VLAN ID : 2

              Protocol VLAN : None

              Port            Member
              --------------------------
              Port.01         UnTagged
              Port.02         Tagged
              Port.03         UnTagged
              Port.04         Tagged
              Port.05         UnTagged
              Port.06         Tagged
              Port.07         UnTagged
              Port.08         Tagged


Actions->   <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
              Save successfully! press any key to return!
[TAB/BKSPC] Move Item          [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-33 IEEE 802.1Q VLAN Configuration save successfully screen

To add a port-based VLAN group, the Group ID range is 1-4094. The screen in **Figure 4-34** appears.

```
       PLANET SGSW-2620 : Create VLAN Group
       =================

              VLAN Name :                   Group ID :


              Port            Member
              --------------------------
              Port.01         No
              Port.02         No
              Port.03         No
              Port.04         No
              Port.05         No
              Port.06         No
              Port.07         No
              Port.08         No


Actions->   <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                   Select the Action menu.
[TAB/BKSPC] Move Item          [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-34 Add a Port-based VLAN Group screen

Create a port-based VLAN group procedure:

1. Press **"Edit"** to input the VLAN name and Group ID.

2. Under Port-based VLAN mode. Set Member or no (not belong to any VLAN group) of each port.

3. After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The following screen in **Figure 4-35** appears.

```
       PLANET SGSW-2620 : Create VLAN Group
       =================

              VLAN Name : Test              Group ID : 2


              Port            Member
              --------------------------
              Port.01         Member
              Port.02         No
              Port.03         Member
              Port.04         No
              Port.05         Member
              Port.06         No
              Port.07         Member
              Port.08         No


Actions->   <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
              Save successfully! press any key to return!
[TAB/BKSPC] Move Item          [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-35 Port-based VLAN Configure save successfully screen

✎*Notice: If need to enable the VLAN trunk function, please configure the trunk ports in the same VLAN group.*

4.3.2.5.3 Edit / Delete VLAN Group

Allow editing and deleting the existence VLAN group. The screen in **Figure 4-36** appears.

Edit and delete existence VLAN group procedure:

1. Press **"Edit" or "Delete"** to edit or delete the existence VLAN group.

2. Choose the VLAN group that want to edit or delete, then press **"enter"**.

3. In **"Edit"** function, it allow to change or remove the member port from existence port-based / IEEE 802.1Q VLAN group. The screen in **Figure 4-37** appears.

4. In **"Delete"** function, it allow to delete the existence port-based / IEEE 802.1Q VLAN group

5. After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The following screen in **Figure 4-38& 4-39 & 4-40** appears.
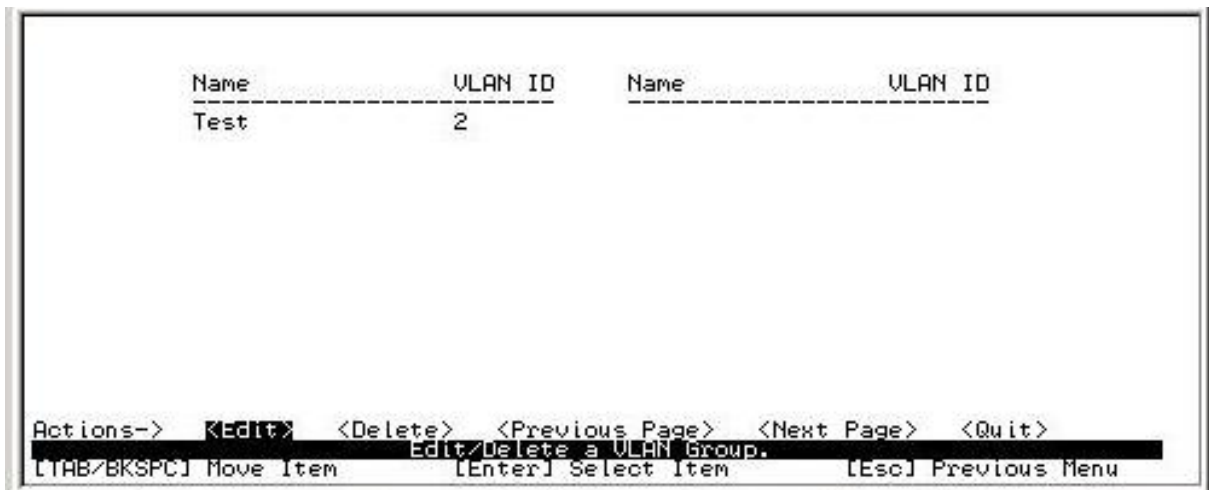
Figure 4-36 Edit an existence VLAN Group screen
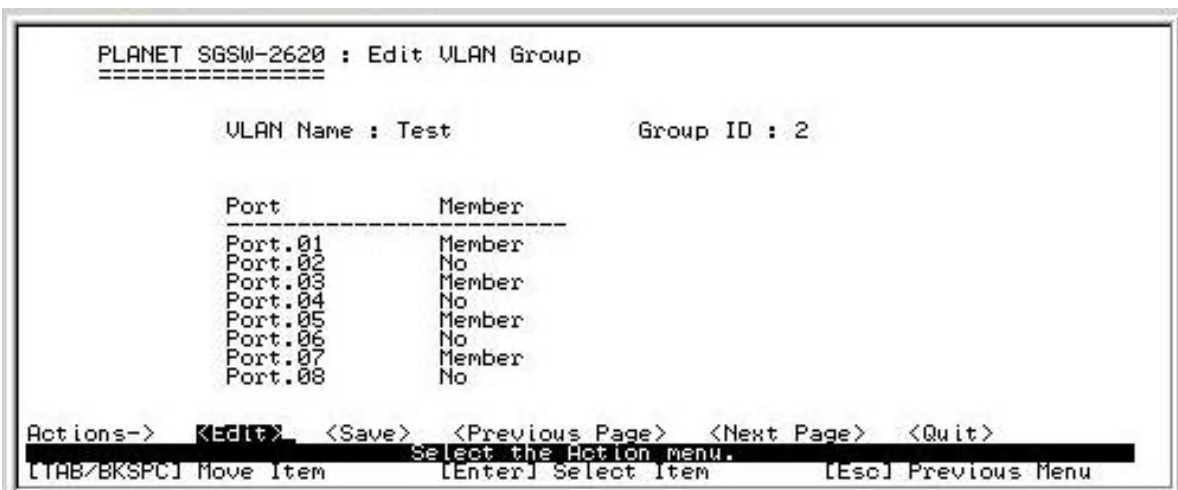
Figure 4-37 Edit an existence VLAN Group screen

```
    PLANET SGSW-2620 : Edit VLAN Group
    ==================

          VLAN Name : Test          Group ID : 2


          Port          Member
          -------------------------
          Port.01       Member
          Port.02       Member
          Port.03       Member
          Port.04       No
          Port.05       Member
          Port.06       No
          Port.07       Member
          Port.08       No


Actions->   <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                 Save successfully! press any key to return!
[TAB/BKSPC] Move Item          [Enter] Select Item          [Esc] Previous Menu
```

Figure 4-38 Edit an existence VLAN Group completed and save successfully screen

```
          Name          VLAN ID     Name          VLAN ID
          -------------------------  -------------------------
          Test          2












Actions->   <Edit>   <Delete>   <Previous Page>   <Next Page>   <Quit>
                      Edit/Delete a VLAN Group.
[TAB/BKSPC] Move Item          [Enter] Select Item          [Esc] Previous Menu
```

Figure 4-39 Delete an existence VLAN Group screen

```
          Name          VLAN ID     Name          VLAN ID
          -------------------------  -------------------------












Actions->   <Edit>   <Delete>   <Previous Page>   <Next Page>   <Quit>
                   Delete operation save successfully!
[TAB/BKSPC] Move Item          [Enter] Select Item          [Esc] Previous Menu
```

Figure 4-40 Delete an existence VLAN Group successfully screen

Press any key return to the previous menu.

4.3.2.5.4 Group Sorted Mode

Allow choosing existence VLAN groups sorted mode by name or VLAN ID. The screen in **Figure 4-41** appears.

Figure 4-41 Group Sorted Mode screen

Group Sorted Mode setting procedure:

1. Press **"Edit"** to choose the Name or VLAN ID through the space bar.

2. After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The following screen in Figure 4-42 appears.

**Figure 4-42** Group Sorted Mode save successfully screen

3. Press any key return to the previous menu.

4.3.2.6 Priority Configuration

Displays the options available for assigning **High** and **Low** priority to each port.

From the Switch Configuration sub-screen (see Figure 4-9), highlight Priority

Configuration and press enter. The Priority Configuration screen in Figure 4-43 appears

The description of available items from Qos mode are shown as below:

Qos Mode: select the mode to process incoming packets.

First Come First Service: process the packet that is coming first.

All High Before low: the packet priority is high will be process before the packet priority is low.

Weight Round Ration 2:1: process 2 high priority packet first, the process 1 low priority packet.

Weight Round Ration 3:1: process 3 high priority packet first, the process 1 low priority packet.

Weight Round Ration 4:1: process 4 high priority packet first, the process 1 low priority packet.

Weight Round Ration 5:1: process 5 high priority packet first, the process 1 low priority packet.

Weight Round Ration 6:1: process 6 high priority packet first, the process 1 low priority packet.

Weight Round Ration 7:1: process 7 high priority packet first, the process 1 low priority packet.

Figure 4-43 Priority Configuration screen

Press, **" Edit"** to assigning high or Low priority of each port and choose different item from Qos Mode. After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The screen in Figure 4-44 appears.

Figure 4-44 Priority Configuration save successfully screen

Press any key return to the previous menu.

4.3.2.7 MAC Address Configuration

Provide static MAC address and Filtering MAC address and previous Menu. From the Switch Configuration sub-screen (see Figure 4-9), highlight MAC address Configuration and press enter. The MAC address Configuration screen in Figure 4-45 appears.

Figure 4-45 MAC Address Configuration screen

This sub-menu contains 3 items.

Static MAC Address: please refer to chapter 4.3.2.7.1.

Filtering MAC Address: please refer to chapter 4.3.2.7.2.

Previous Menu: return to previous menu.

4.3.2.7.1 Static MAC Address
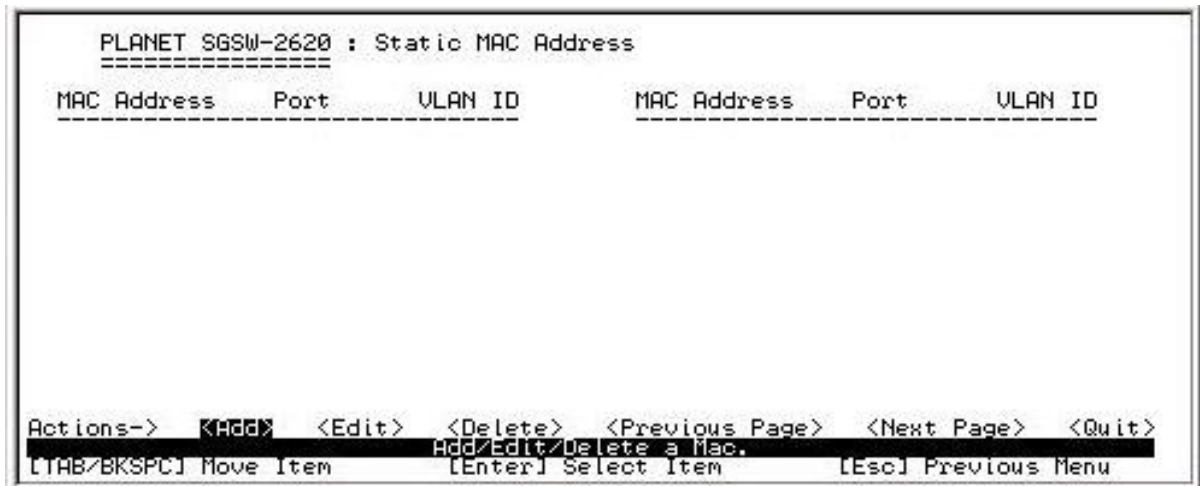
Figure 4-46 Static MAC Address Configuration screen

Press, **"Add"** to add a static MAC address, after setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The screen in Figure 4-47 appears

```
    PLANET SGSW-2620 : Add Static MAC Address
    ==================


                  MAC Address : 000000011001
                  Port No.    : Port.02
                  VLAN ID     : 1




Actions->   <Edit>   <Save>   <Quit>
                 Save successfully! press any key to return!
[TAB/BKSPC] Move Item         [Enter] Select Item         [Esc] Previous Menu
```

Figure 4-47 Static MAC Address Configuration save successfully screen

Press any key return to the previous menu.

Edit Static Mac address procedure:

1.Press **"Edit"**.

2.Choose the MAC address that want to edit and press **"Enter"**.

3.Press **"Edit"** to edit the existence MAC address.

4.After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration.

Delete Static MAC address procedure:

1.Press **"Delete"**.

2.Choose the MAC address that want to edit and press **"Enter"**.

3.After setup completed, press **"Save"** to save the current configuration.

4.3.2.6.2 Filtering MAC Address

```
    PLANET SGSW-2620 : Filtering MAC Address
    ==================
MAC Address   VLAN ID                      MAC Address   VLAN ID
------------------------------             ------------------------------








Actions->  <Add>   <Edit>   <Delete>  <Previous Page>   <Next Page>   <Quit>
                 Add/Edit/Delete a Mac.
[TAB/BKSPC] Move Item         [Enter] Select Item         [Esc] Previous Menu
```

Figure 4-48 Filter MAC Address Configuration screen

Press **"Add"** to add a Filter MAC address, after setup completed, press **"ESC"** and choose **"Save"** to save the current configuration. The screen in Figure 4-49 appears

```
    PLANET SGSW-2620 : Add Filter MAC Address
    =================

                    MAC Address : 000000011011
                    VLAN ID     : 2




Actions->  <Edit>   <Save>   <Quit>
             Save successfully! press any key to return!
[TAB/BKSPC] Move Item       [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-49 Filter MAC Address Configuration save successfully screen

Press any key return to the previous menu.

Edit Filter Mac address procedure:

1.Press **"Edit"**.

2.Choose the MAC address that want to edit and press **"Enter"**.

3.Press **"Edit"** to edit the existence MAC address.

4.After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration.

Delete Filter MAC address procedure:

1.Press **"Delete"**.

2.Choose the MAC address that want to edit and press **"Enter"**.

3.After setup completed, press **"Save"** to save the current configuration.

4.3.2.8 Misc Configuration

From the Switch Configuration sub-screen (see Figure 4-9), highlight Misc Configuration
and press enter. The Misc Configuration sub-screen in Figure 4-50 appears.

```
PLANET SGSW-2620 : Misc Configuration
=================

        MAC Address Ageing Time (0, 300..765) : 300

        Broadcast Storm Filter Mode           :  5%

        Max Bridge Transmit Delay Bound       : OFF
        Low Queue Delay Bound                 : Disable
        Low Queue Max Delay Time (1..255)     : 255

        Collisions Retry Forever              : Enable

        Hash Algorithm                        : CRC Hash

        IFG Compensation                      : Enable

        IP Stacking Group ID (0..65535)       : 0
        IP Stacking Mode                      : Disable

Actions->  <Edit>   <Save>   <Quit>
                    Select the action menu.
[TAB/BKSPC] Move Item      [Enter] Select Item      [Esc] Previous Menu
```

Figure 4-50 Misc Configuration screen

This sub-menu contains ten items:

MAC Address Ageing Time:

MAC address table refresh time setting. Input the number of seconds that an inactive MAC address
remains in the SGSW-2620's MAC address table. The available range is 0, 300~765 seconds. Default mode is 300 seconds.

Broadcast Storm Filter mode:

Configure the broadcast storm filter mode. The available threshold values are 5%, 10%, 15%, 20%,
25%, and N/A. The port will be block cause of broadcast packet is over the percentage of traffic.

Max Bridge Transmit Delay Bound:

Limit the packets queuing time in switch. If enable, the packets queued exceed will be drop. Press
"Space" key to set the time. This valid value are 1sec, 2sec, 4sec and off. Default mode is off.

Low Queue Delay Bound:

Limit the low priority packets queuing time in switch. If enable, the low priority packet stays in switch
exceed Low Queue Max Delay Time, it will be sent. Press **"Space"** key to disable or enable this
function.

Low Queue Max Delay Time:

To set the time that low priority packets queuing on SGSW-2620. Default Max Delay Time is 255ms.
The valid range is 1~255 ms.

Collisions Retry Forever:

Disable – In half duplex, if happens collision, the SGSW-2620 will retry 48 times and then drop frame.
Enable – In half duplex, if happens collision, the SGSW-2620 will retry forever.

Hash Algorithm:

This Hash Algorithm is for hardware maintain on MAC table calculation. Provide CRC or Direct Map

IFG compensation: Disable or enable this function.

IP Stacking Group ID (0…65535):

Assign the stacking group ID. The switches must assign the same stacking group ID and can stack
together as a group.

IP Stacking Mode:

Disable or enable the stacking function. There are three stacking modes. Any port on the switch can be used to stack. To configure the switch in stacking group, please use the Web interface of SGSW-2620

Disable: The stack function is not working.

Master:

There must have a leader switch to control all other switches in stacking group. You can only assign one switch to be the master switch in one stacking group. When the stacking group is set up, the master switch will control all switches in the stacking group.

Slave:

Besides the master switch, rest of the switches are called slave switch in stacking group. When the stacking group is set up, only can configure the slave switches through the master switch.

After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration.

4.3.3.2.9 Main Menu
Return to the main menu.

4.3.3 Protocol Related Configuration

From the Switch main menu screen (see Figure 4-3), highlight Protocol Related Configuration and press enter. The Status and Counters screen in Figure 4-51 appears.
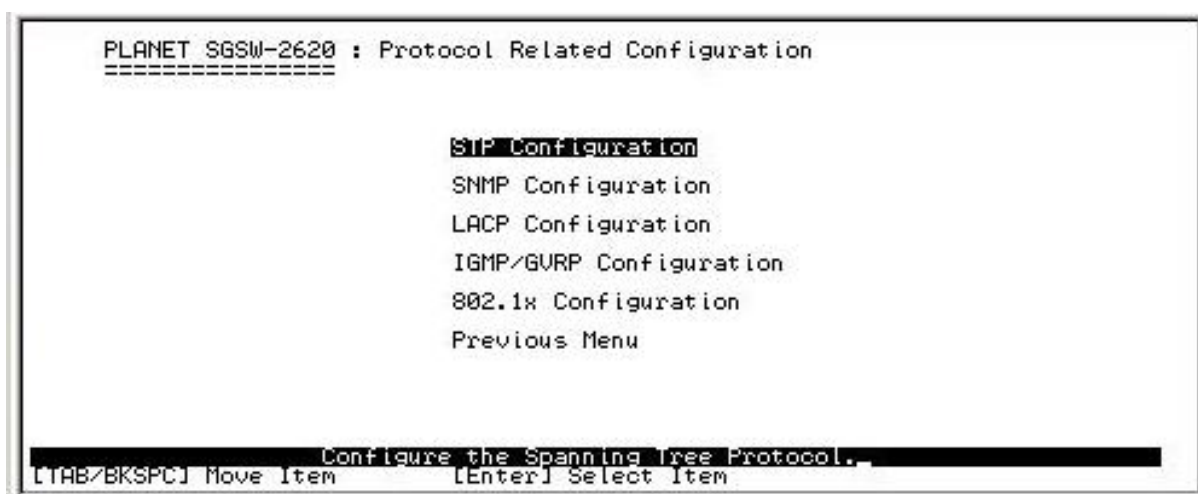
Figure 4-51 The Protocol Related Configuration screen

This subnet menu contains six items:

STP Configuration: please refer to chapter 4.3.3.1.

SNMP Configuration: please refer to chapter 4.3.3.2.

LACP Configuration: please refer to chapter 4.3.3.3.

IGMP/GVRP Configuration: please refer to chapter 4.3.3.4.

802.1x Configuration: please refer to chapter 4.3.3.5.

Previous Menu: please refer to chapter 4.3.3.6.

4.3.3.1 STP Configuration

Provide Spanning Tree configuration. The STP Configuration sub-screen in Figure 4-52 appears.
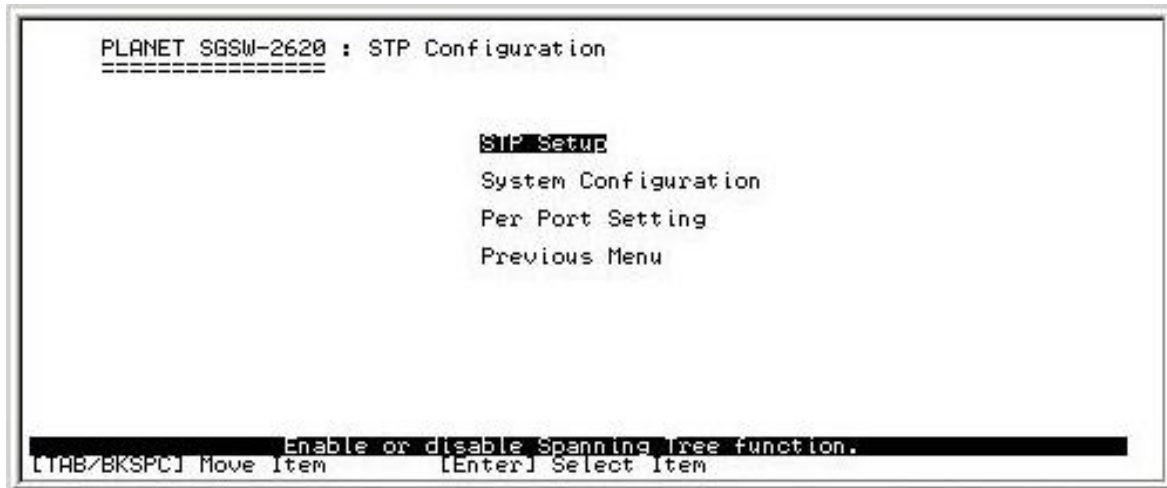
Figure 4-52 Spanning Configuration screen

This sub-menu contains four items:

STP Setup: please refer to chapter 4.3.3.1.1

System Configuration: please refer to chapter 4.3.3.1.2

Per port Configuration: please refer to chapter 4.3.3.1.3

Previous Menu: return to previous menu.

4.3.3.1.1 STP Setup

Provide disable or enable STP function. The STP Setup screen in Figure 4-53 appears.

Figure 4-53 STP enable /disable screen

Setup procedure:

1. Press **" Edit"** to disable or enable STP function.

2. After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-54 appears.

```
      PLANET SGSW-2620 : STP Setup
      ================


                    STP : Enable








Actions->   <Edit>   <Save>   <Quit>
              Save successfully! press any key to return!
[TAB/BKSPC] Move Item       [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-54 STP Setup save successfully screen

3. Press any key for return to the previous menu.

4.3.3.1.2 System Configuration

Allow modify the STP system configuration. The System Configuration screen in Figure 4-55 appears.

```
      PLANET SGSW-2620 : STP System Configuration
      ================


      Root Bridge Information         Configure Spanning Tree Parameters
      -----------------------         ----------------------------------
      Priority      : 32768           Priority (0-65535)      : 32768
      Mac Address   : 00001C000008
      Root Path Cost : 0              Max Age (6-40)          : 20
      Root Port     : Root
      Max Age       : 20              Hello Time (1-10)       : 2
      Hello Time    : 2
      Forward Delay : 15              Forward Delay Time (4-30) : 15




Actions->   <Edit>   <Save>   <Quit>
              Select the action menu.
[TAB/BKSPC] Move Item       [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-55 STP system configuration screen

Setup procedure:

1. Press **" Edit"** to modify the Spanning Tree Parameters.

2. After modify completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-56 appears.

```
      PLANET SGSW-2620 : STP System Configuration
      ================


      Root Bridge Information         Configure Spanning Tree Parameters
      -----------------------         ----------------------------------
      Priority      : 32768           Priority (0-65535)      : 32768
      Mac Address   : 00001C000008
      Root Path Cost : 0              Max Age (6-40)          : 20
      Root Port     : Root
      Max Age       : 20              Hello Time (1-10)       : 2
      Hello Time    : 2
      Forward Delay : 15              Forward Delay Time (4-30) : 15




Actions->   <Edit>   <Save>   <Quit>
              Save successfully! press any key to return!
[TAB/BKSPC] Move Item       [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-56 STP system configuration save successfully screen

3. Press any key for return to the previous menu.

4.3.3.1.3 Per Port Configuration

Allow edit per port STP configuration. The STP Per Port Setting screen in Figure 4-57 appears.


```
   PLANET SGSW-2620 : STP Per Port Setting
   =================

Port          State          Path Cost        Priority
------------------------------------------------------------
Port.01       Disconnect     100              255
Port.02       Disconnect     10               128
Port.03       Disconnect     10               128
Port.04       Disconnect     10               128
Port.05       Disconnect     10               128
Port.06       Disconnect     10               128
Port.07       Disconnect     10               128
Port.08       Disconnect     10               128




Actions->  <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                      Select the Action menu.
[TAB/BKSPC] Move Item        [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-57 STP Per Port Setting screen

Setup procedure:

1. Press **" Edit"** to modify the path cost and priority of each port.

2. After setup completed, press **" ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-58 appears.


```
   PLANET SGSW-2620 : STP Per Port Setting
   =================

Port          State          Path Cost        Priority
------------------------------------------------------------
Port.01       Disconnect     100              255
Port.02       Disconnect     10               128
Port.03       Disconnect     10               128
Port.04       Disconnect     10               128
Port.05       Disconnect     10               128
Port.06       Disconnect     10               128
Port.07       Disconnect     10               128
Port.08       Disconnect     10               128




Actions->  <Edit>   <Save>   <Previous Page>   <Next Page>   <Quit>
                   Save successfully! press any key to return!
[TAB/BKSPC] Move Item        [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-58 STP Per Port Setting save successfully screen

3. Press any key for return to the previous menu.

4.3.3.2 SNMP

Provide SNMP configuration. The SNMP Configuration screen in Figure 4-59 appears.

Figure 4-59 SNMP configuration screen

This subnet menu contains four items:
System Options: please refer to chapter 4.3.3.2.1
Community Strings: please refer to chapter 4.3.3.2.2
Trap Managers: please refer to chapter 4.3.3.2.3
Previous Menu: please refer to chapter 4.3.3.2.4

4.3.3.2.1 System Options

Allow inputting the system name, system contact and system location. The SNMP Configuration screen in Figure 4-60 appears.
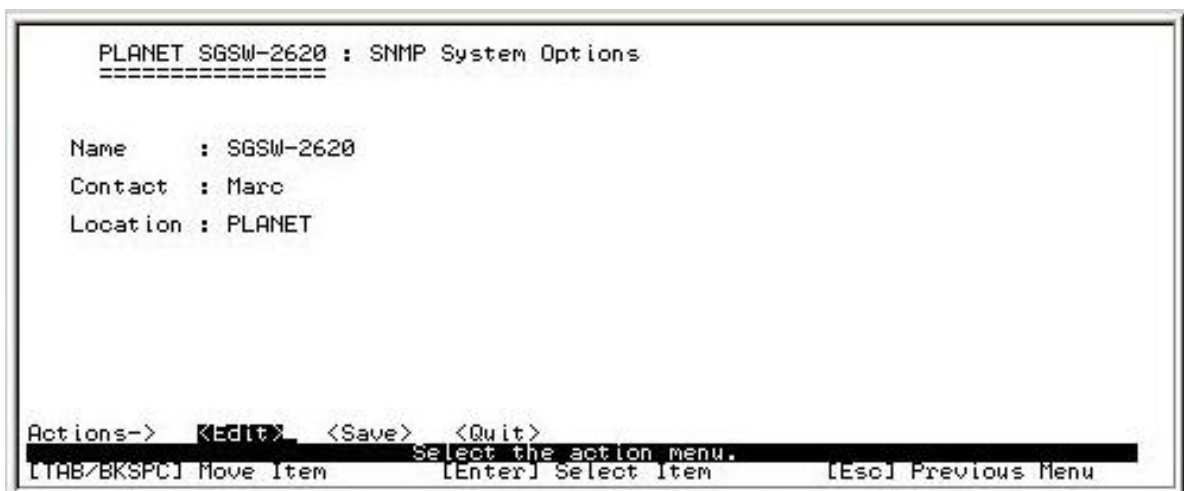

Figure 4-60 SNMP System Options configuration screen

Setup procedure:

1. Press **" Edit"** to input the system name, system contact, system location.

2. After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current con-figure. The screen in Figure 4-61 appears.

```
      PLANET SGSW-2620 : SNMP System Options
      ================


   Name      : SGSW-2620

   Contact   : Marc

   Location  : PLANET








Actions->   <Edit>   <Save>   <Quit>
                  Save successfully! press any key to return!
[TAB/BKSPC] Move Item          [Enter] Select Item          [Esc] Previous Menu
```

Figure 4-61 SNMP System Options configuration save successfully screen

3. Press any key for return to the previous menu.

4.3.3.2.2 Community Strings

Allow adding SNMP community name. The SNMP Community Strings screen in Figure 4-62 appears.

```
      PLANET SGSW-2620 : SNMP Community Strings
      ================

Community Name                     Write Access
-----------------------------------------------------
public                             Read Only
private                            Read Write








Actions->   <Add>   <Edit>   <Delete>   <Quit>
                  Add/Edit/Delete community strings.
[TAB/BKSPC] Move Item          [Enter] Select Item          [Esc] Previous Menu
```

Figure 4-62 SNMP Community Strings configuration screen

Setup procedure:

1. Press **"Add"** to enter into **"Add SNMP community"** screen, then press **"Edit"** a new community name and adjust the write access mode.
2. After setup completed, press **"ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-63 & 4-64 appears.

Figure 4-63 Save Add SNMP Community process screen

Figure 4-64 Add SNMP Community name save successfully screen

3. Press any key for return to the previous menu.

Edit Community Name procedure:

1.Press **"Edit"**.

2.Choose the Community Name that want to edit and press **"Enter"**.

3.Press **"Edit"** to edit the existence Community Name and press **"Space"** key to change the access

right from Write Access function.

4.After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration.

Delete Community Name procedure:

1.Press **"Delete"**.

2.Choose the MAC address that want to edit and press **"Enter"**.

4.3.3.2.3 Trap Managers

Allow adding Trap Managers. The SNMP Configuration screen in Figure 4-65 appears.
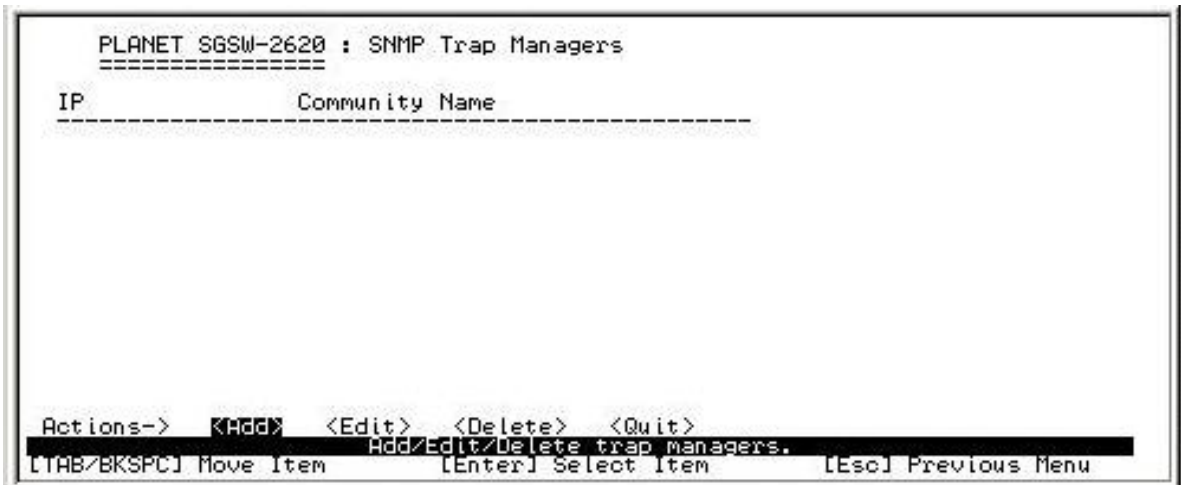

Figure 4-65 SNMP Trap Managers screen

Setup procedure:

1. Press **"Add"** to enter into **"Trap Managers"** screen, then press **"Edit"** for input IP address and Community name.

2. After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-66 & 4-67 appears.

Figure 4-66 Save SNMP Trap managers process screen

```
  PLANET SGSW-2620 : Edit Trap Managers
  ================


              IP : 192.168.0.188

              Community Name : Test




Actions->  <Edit>  <Save>  <Quit>
            Save successfully! press any key to return!
[TAB/BKSPC] Move Item       [Enter] Select Item       [Esc] Previous Menu
```

Figure 4-67 SNMP Trap managers save successfully screen

3. Press any key for return to the previous menu.

Edit Trap Managers procedure:

1.Press **"Edit"**.

2.Choose the Community Name that want to edit and press **"Enter"**.

3.Press **"Edit"** to edit the existence IP address and Community Name.

4.After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration.

Delete Trap Managers procedure:

1.Press **"Delete"**.

2.Choose the Community Name that want to edit and press **"Enter"**.

4.3.3.2.4 Previous Menu
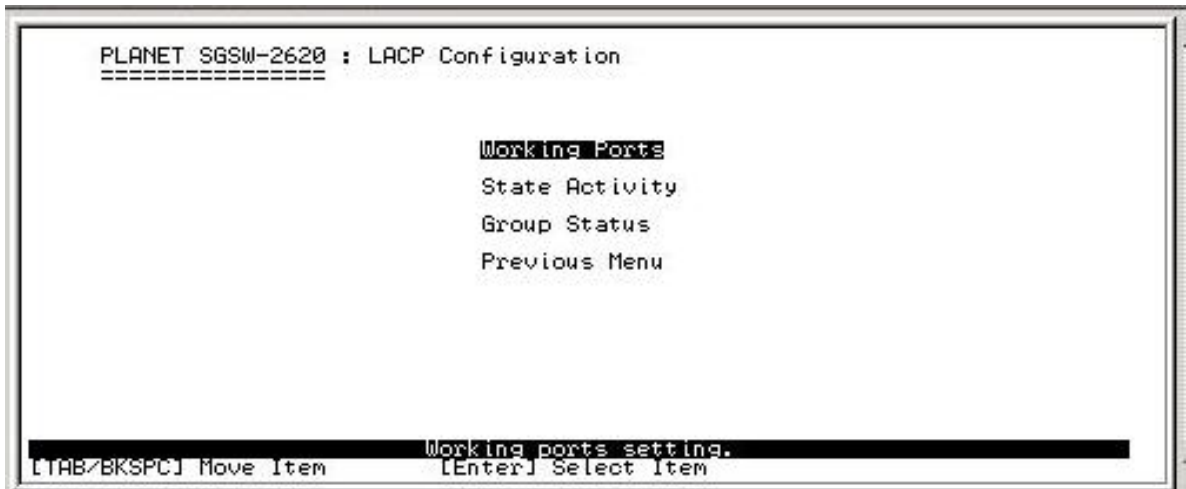Return to the previous menu.

4.3.3.3 LACP Configuration

Figure 4-68 LACP Configuration screen

This subnet menu contains four items:

Working Ports: please refer to chapter 4.3.3.3.1.

State Activity: please refer to chapter 4.3.3.3.2

Group Status: please refer to chapter 4.3.3.3.3

Previous Menu: please refer to chapter 4.3.3.3.4

4.3.3.3.1 Working Ports

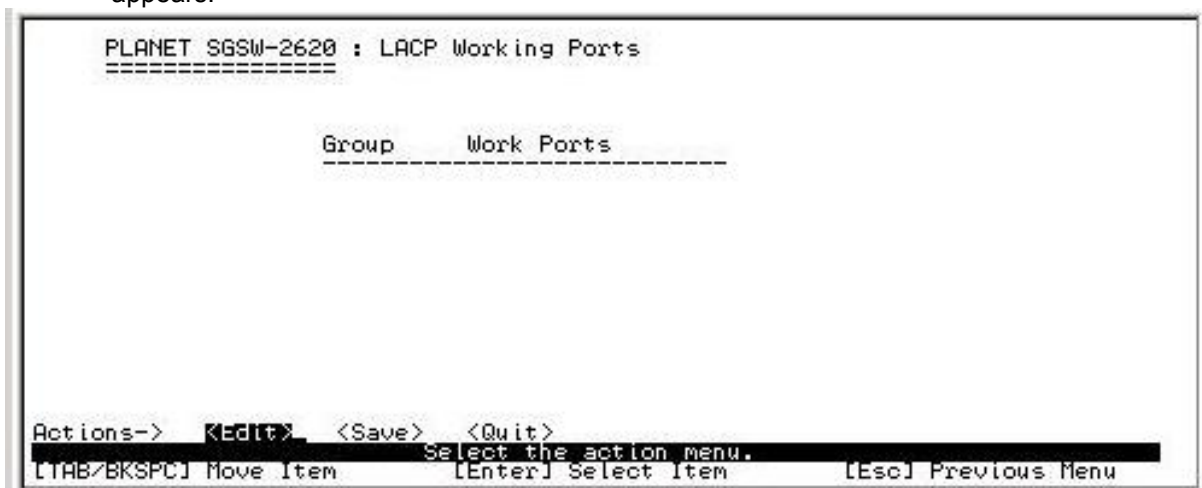Allow editing the LACP working ports configuration. The working ports screen in Figure 4-69 appears.

Figure 4-69 LACP Working Ports screen

Edit LACP Working Ports procedure:

1.Press **"Edit"**.

2.The Group display the Trunk group ID

3.The Working Ports display the maximum number of ports can be aggregated at the same time, in the LACP trunk group, the exceed ports is standby and able to aggregate if work ports is fail. If it's local static trunk group and the number must be the same as group ports.

4.After setup completed, press **"ESC"** and choose **"Save"** to save the current configuration.

✎ *Notice: before to enable the LACP support, please assure and add a trunk group from Trunk function.*

4.3.3.3.2 State Activity

Allow to set LACP port state activity of each port. The working ports screen in Figure 4-70 appears.

Figure 4-70 LACP port state Active configuration screen

Setup procedure:

1. Press **"Edit"**

2. Use **"Space"** key to choose "**Passive**" or **"Active"** selection of each port. The descriptions of **Passive** and **Active** are shown as below:
   Active: The port sends LACP protocol packets automatically.

   Passive: The port does not send LACP protocol packets automatically and responds only when it receives LACP protocol packets from the opposite device.

3. After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current configure.

4. Press any key for return to the previous menu.

4.3.3.3.3 LACP Group Status

Display the LACP groups status. The LACP Group Status screen in Figure 4-71 appears.

Figure 4-71 LACP Group Status screen

4.3.3.3.4 Previous Menu

Return to the previous menu.

4.3.3.4 IGMP/GVRP Configuration

Provide disable or enable the IGMP and GVRP function. The IGMP/GVRP Configuration screen in Figure 4-72 appears.

Figure 4-72 IGMP/GVRP Configuration screen

Setup procedure:

1. Press **"Edit"** and use **"Space"** key to disable or enable the IGMP/GVRP function and Query mode.

2. After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-73 appears.

Figure 4-73 IGMP/GVRP Configuration save successfully screen

3. Press any key for return to the previous menu.

4.3.3.5 802.1x Configuration

Provide 802.1x configuration. The 802.1x Configuration sub-screen in Figure 4-74 appears.

Figure 4-74 802.1x Configuration screen

This subnet menu contains five items:

802.1x Setup: please refer to chapter 4.3.3.5.1.
System Configuration: please refer to chapter 4.3.3.5.2
Per Port Setting: please refer to chapter 4.3.3.5.3
Misc Configuration: please refer to chapter 4.3.3.5.4
Previous Menu: please refer to chapter 4.3.3.5.5

4.3.3.5.1 802.1x Setup

Provide disable or enable the IEEE 802.1x function. The screen in Figure 4-75 appears.

Figure 4-75 802.1x Setup screen

802.1x Setup procedure:

1. Press **"Edit"** and use **"Space"** key to disable or enable the 802.1x function.
2. After setup completed, press**" ESC"** to "Action menu" and choose **"Save"** to save the current configure. The screen in Figure 4-76 appears.
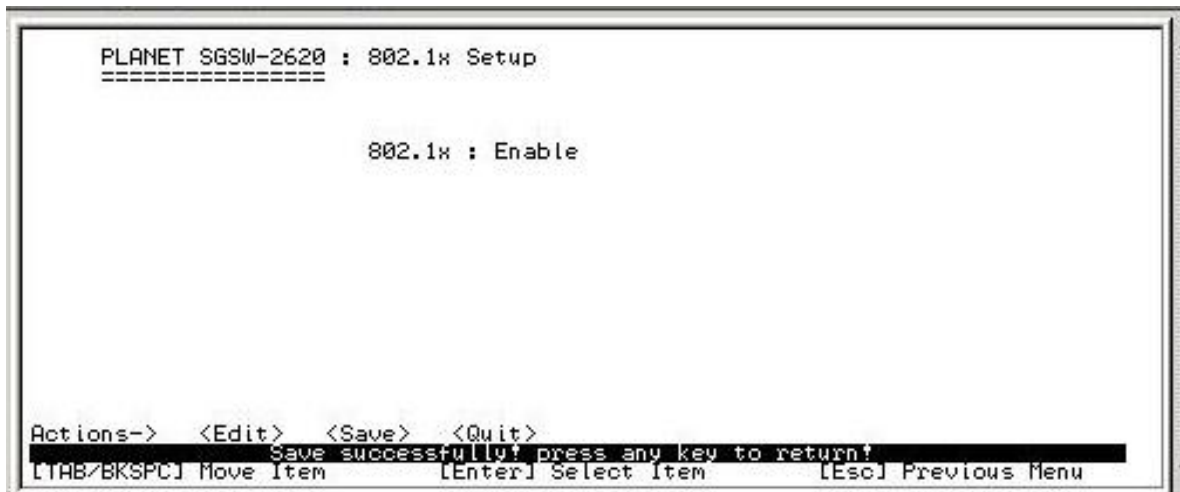

Figure 4-76 802.1x Setup save successfully screen

4.3.3.5.2 System Configuration

Allow modify the 802.1x system configuration. The screen in Figure 4-77 appears.

Figure 4-77 802.1x System Configuration screen

Setup procedure:

1. Press **"Edit"**

2. **Radius Server IP:** input the Radius Server IP address.

3. **Shared Key:** set an encryption key for using during authentication sessions with the specified radius server. This key must match the encryption key used on the Radius Server.

4. **NAS, Identifier:** set the identifier for the radius client.

5. **Server Port:** set the UDP destination port for authentication requests to the specified Radius Server.

6. **Accounting Port:** set the UDP destination port for accounting requests to the specified Radius Server.

7. After setup completed, press" **ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-78 appears.

Figure 4-78 802.1x System Configuration save successfully screen

Press any key for return to the previous menu.

4.3.3.5.3 Per Port Setting

Allow modify the 802.1x Per Port Setting, the State provides Disable, Accept, Reject and Authorize. Use **"Space"** key change the state mode. The screen in Figure 4-79 appears.

Figure 4-79 802.1x Per Port Setting screen

After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-80 appears.

Figure 4-80 802.1x Per Port Setting save successfully screen

Press any key for return to the previous menu.

4.3.3.5.4 Misc Configuration

Allow modify the 802.1x Misc configuration. The screen in Figure 4-81 appears.

Figure 4-81 802.1x Misc Configuration screen

Setup procedure:

1. Press **"Edit"**.

2. **Quiet Period:** set the period during which the port doesn't try to acquire a supplicant. The available ranges are 0-65535 and default mode is 60.

3. **TX Period:** set the period the port wait for retransmit next EAPOL PDU during an authentication session. The available ranges are 0-65535 and default mode is 30.

4. **Supplicant Timeout:** set the period of time the switch wait for a supplicant response to an EAP request. The available ranges are 1-300 and default mode is 30.

5. **Server Timeout:** set the period of time the switch wait for a server response to an authentication request. The available ranges are 1-300 and default mode is 30.

6. **Reauthorize Maximum:** set the number of authentication that must time-out before authentication fails and the authentication session ends. The available ranges are 1-10 and default mode is 2.

7. **Reauthorize period:** set the period of time after which clients connected must be re-authenticated. The available ranges are 1-9999999 and default mode is 3600.

8. After setup completed, press" **ESC"** to **"Action menu"** and choose **"Save"** to save the current configure. The screen in Figure 4-82 appears.

Figure 4-82 802.1x Misc Configuration save successfully screen

Press any key for return to the previous menu.

4.3.3.5.5 Previous Menu

      Return to the previous menu.

4.3.3.6 Previous Menu

      Return to the main menu.

4.3.4 System Reset Configuration

Provide reset to switch to default mode, reboot the Switch and firmware upgrade through TFTP. The screen in Figure 4-83 appears.
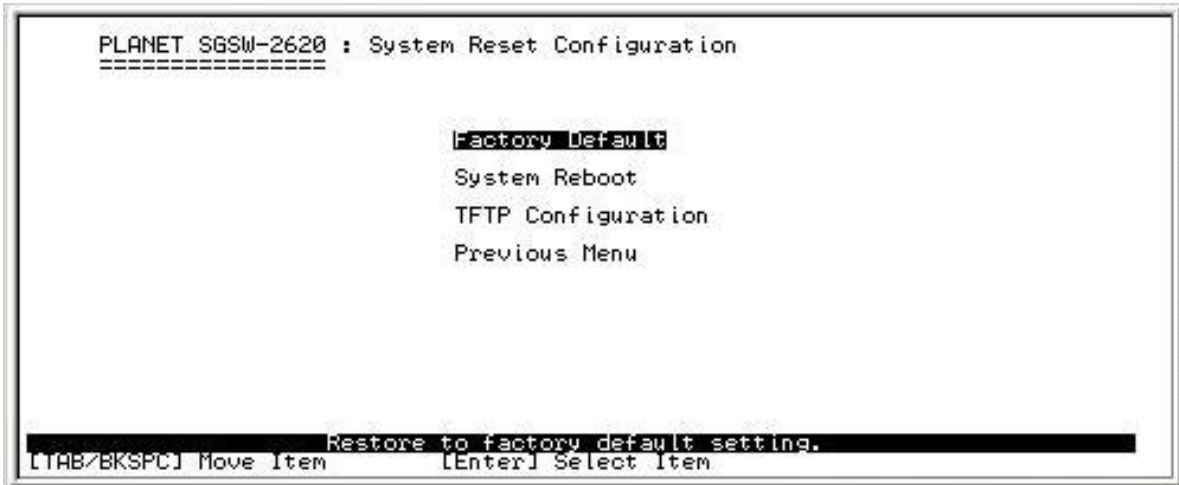
Figure 4-83 System Reset Configuration screen

This subnet menu contains four items:

Factory Default: please refer to chapter 4.3.4.1.

System Reboot: please refer to chapter 4.3.4.2.

TFTP Configuration: please refer to chapter 4.3.4.3.

Previous Menu: refer to chapter 4.3.4.4.

4.3.4.1 Factory Default

Reset the Switch to the factory default mode. The screen in Figure 4-84 appears.
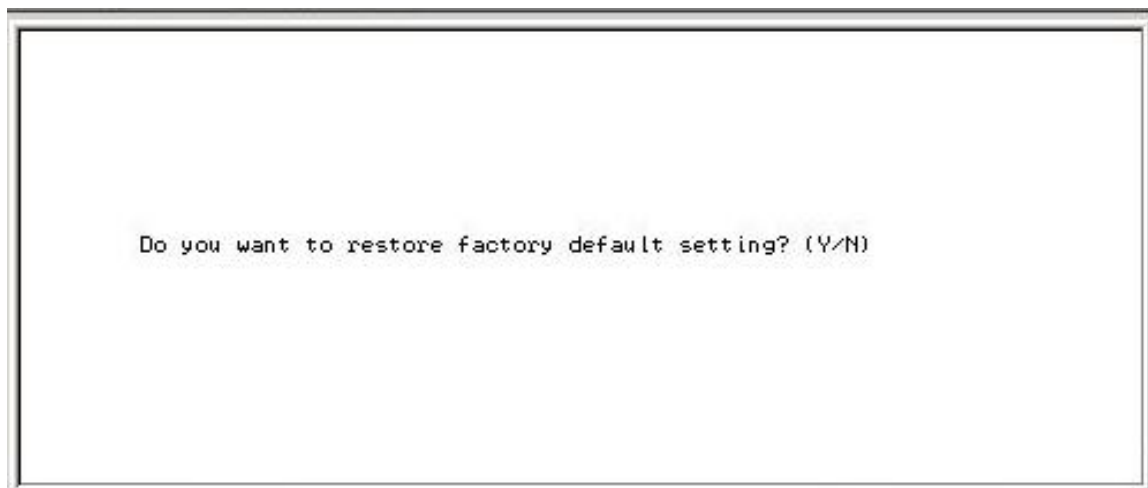
Figure 4-84 Reset Switch screen

Press **"Y"** for reboots the switch to default mode. The following screen appears in Figure 4-85 & 4-86.

```
Restore to Factory Default Setting ..._
```
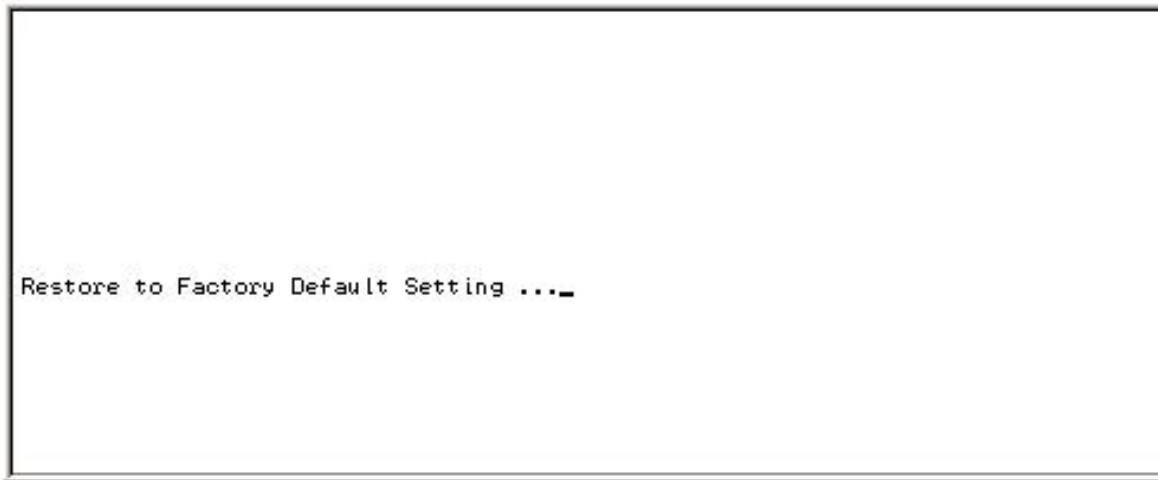
Figure 4-85 Resetting Switch screen

```
                     Restore to factory default setting.
$$$ Switch LOADER Checksum O.K !!!] Select Item
$$$ Press X key to   start Xmodem receiver:
$$$ Switch IMAGE Checksum ...... O.K !!!
$$$ Loading IMAGE ........................................
$$$ Switch Power On Self Test...
$$$ CPU(arm7) Sdram Test Start..
++   Memory Test (Long) ....     O.K !!!
++   Memory Test (Short) ...     O.K !!!
++   Memory Test (Byte) ....     O.K !!!
$$$ CPU(arm7) Sdram Test O.K !!!
$$$ Switch Register R/W Test ...O.K !!!
$$$ Phy Register R/W Test ...O.K !!!
$$$ Embedded Sram Built In Self Test ...O.K !!!
$$$ Switch Data Area Checksum ...O.K !!!
$$$ Detect Module Card... O.K !!!
$$$ Switch Engine Initialize...O.K !!!
$$$ Trunk Initialize...O.K !!!
$$$ Port Initialize...O.K !!!
$$$ BwCtrl Initialize...O.K !!!
$$$ Forwarding Initialize...O.K !!!
$$$ Vlan Initialize...O.K !!!_
```

Figure 4-86 Resetting Switch screen

4.3.4.2 System Reboot

Provide restart the Switch. The screen in Figure 4-87 appears.

```
                 Restore factory default setting or system reboot.
$$$ Switch LOADER Checksum O.K !!!] Select Item
$$$ Press X key to   start Xmodem receiver:
$$$ Switch IMAGE Checksum ...... O.K !!!
$$$ Loading IMAGE ........................................
$$$ Switch Power On Self Test...
$$$ CPU(arm7) Sdram Test Start..
++   Memory Test (Long) ....     O.K !!!
++   Memory Test (Short) ...     O.K !!!
++   Memory Test (Byte) ....     O.K !!!
$$$ CPU(arm7) Sdram Test O.K !!!
$$$ Switch Register R/W Test ...O.K !!!
$$$ Phy Register R/W Test ...O.K !!!
$$$ Embedded Sram Built In Self Test ...O.K !!!
$$$ Switch Data Area Checksum ...O.K !!!
$$$ Detect Module Card... O.K !!!
$$$ Switch Engine Initialize...O.K !!!
$$$ Trunk Initialize...O.K !!!
$$$ Port Initialize...O.K !!!
$$$ BwCtrl Initialize...O.K !!!
$$$ Forwarding Initialize...O.K !!!
$$$ Vlan Initialize...O.K !!!
```

Figure 4-87 System Reboot screen

4.3.4.3 TFTP Configuration

Provide firmware upgrade through the TFTP method. The screen in Figure 4-88 appears.

Figure 4-88 TFTP Configuration screen

This subnet menu contains four items:

Update Firmware: please refer to chapter 4.3.4.3.1.

Restore Configuration: please refer to chapter 4.3.4.3.2.

Backup Configuration: please refer to chapter 4.3.4.3.3.

Previous Menu: please refer to chapter 4.3.4.3.4.

4.3.4.3.1 Update Firmware

Provide firmware upgrade through TFTP sever method, the screen in Figure 4-89 appears.
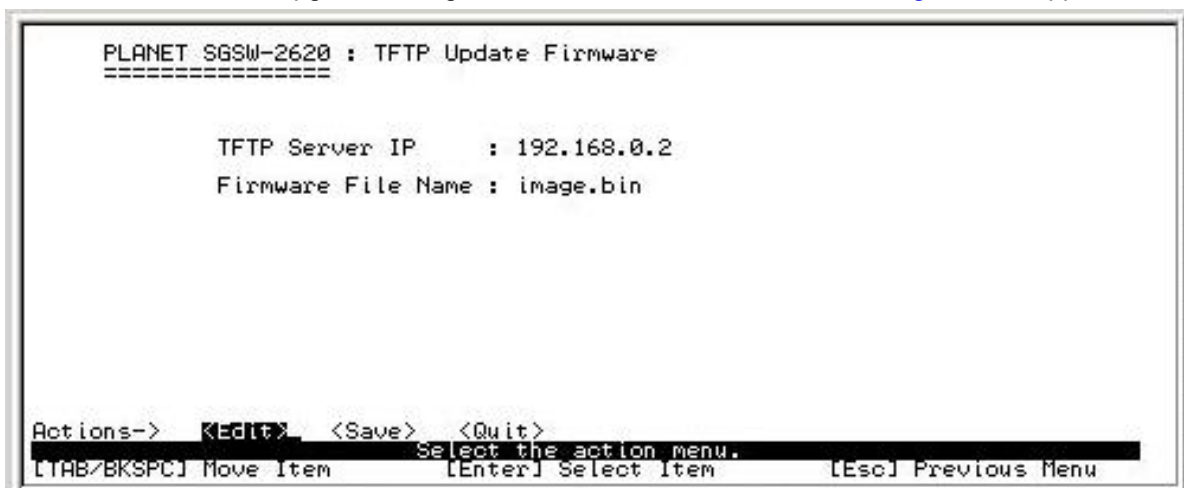
Figure 4-89 TFTP Update Firmware screen

Setup procedure:

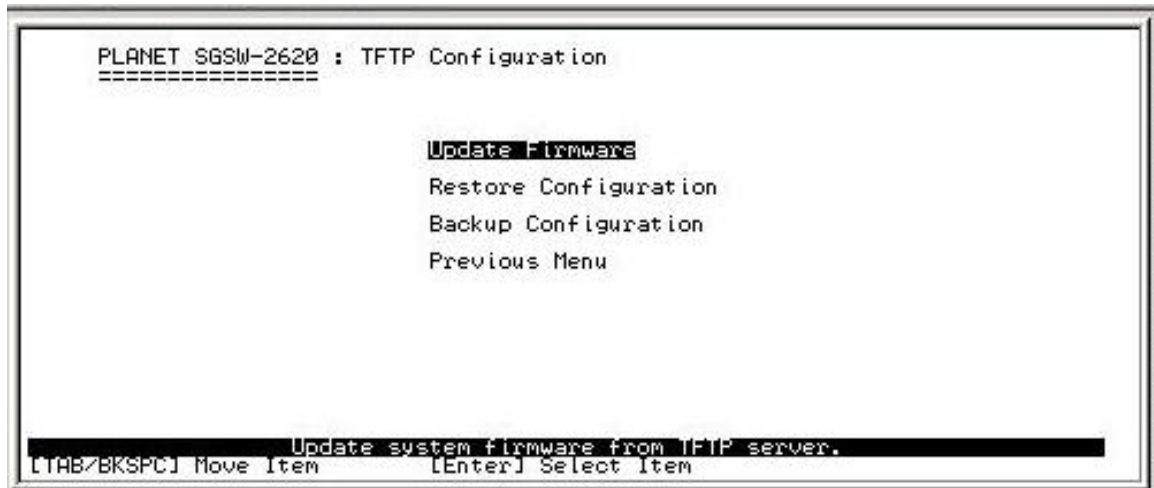1. Download the latest firmware from Planet website, and copy the firmware version image file to the TFTP server.

2. Press **"Edit"**

3. **TFTP Server IP**: input the IP address of the workstation that install TFTP server.

4. **Firmware File Name:** input the image file name.

5. After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current con-figure, the system will start to download the image file. The screen in Figure 4-90 appears.

6. When the image file download completed, Restart switch, please reboot the Switch for new firmware.

```
 PLANET SGSW-2620 : TFTP Update Firmware
 ================


          TFTP Server IP    : 192.168.0.2
          Firmware File Name : image.bin




 Actions->  <Edit>   <Save>   <Quit>
            Update firmware from TFTP server ...
 [TAB/BKSPC] Move Item        [Enter] Select Item      [Esc] Previous Menu
```

Figure 4-90 TFTP Update Firmware process screen

4.3.4.3.2 Restore Configuration

Provide restore the configuration through the TFTP server method, the screen in Figure 4-91 appears.

```
 PLANET SGSW-2620 : TFTP Restore Configuration
 ================


          TFTP Server IP    : 192.168.0.2
          Restore File Name : data.dat






 Actions->  <Edit>   <Save>   <Quit>
            Select the action menu.
 [TAB/BKSPC] Move Item        [Enter] Select Item      [Esc] Previous Menu
```

Figure 4-91 TFTP Restore Configuration screen

Setup procedure:

1. Press **"Edit"**

2. **TFTP Server IP**: input the IP address of the workstation that install TFTP server.

3. **Restore File Name:** input the restore file name.

4. After setup completed, press**" ESC"** to **"Action menu"** and choose **"Save"** to save the current con-figure, the system will start to download the image file. The screen in Figure 4-92 appears.

Figure 4-92 TFTP Restore Configuration process screen

5. When the image file download completed, Restart switch, please reboot the Switch for new configuration.

4.3.4.3.3 Backup Configuration

Provide backup the configuration through the TFTP server method, the screen in appears.

Figure 4-93 TFTP Backup Configuration screen

Setup procedure:

1. Press **"Edit"**

2. **TFTP Server IP**: input the IP address of the workstation that install TFTP server.

3. **Backup File Name:** input the backup file name.

4. After setup completed, press **" ESC"** to "Action menu" and choose **"Save"** to save the current configure, the system will start to download the image file. The screen in Figure 4-94 appears.
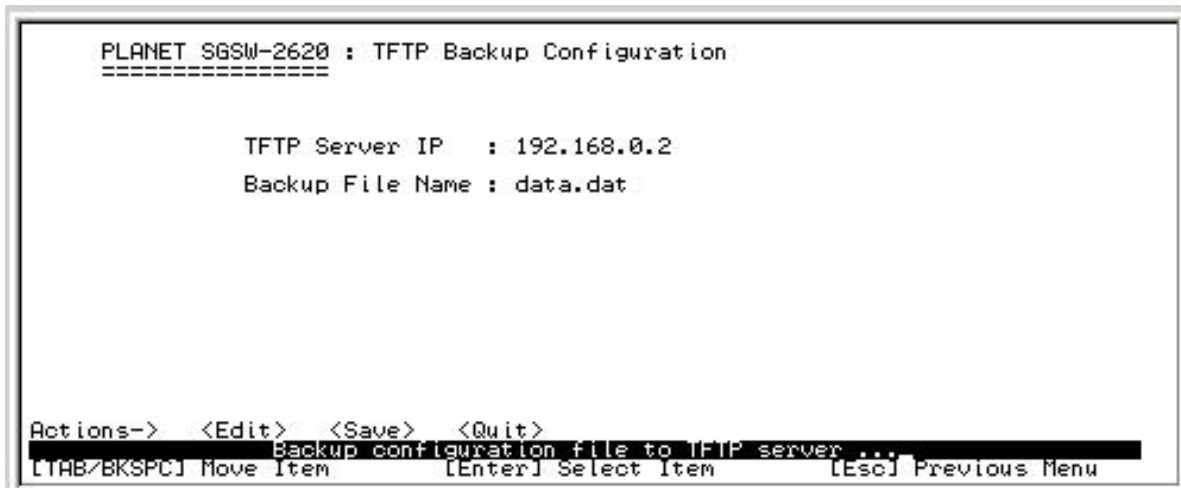

Figure 4-94 TFTP Backup Configuration process screen

5. When the image file download completed, Restart switch, please reboot the Switch for new configuration.

4.3.4.4 Previous Menu

Return to the main menu.

4.3.5 Logout

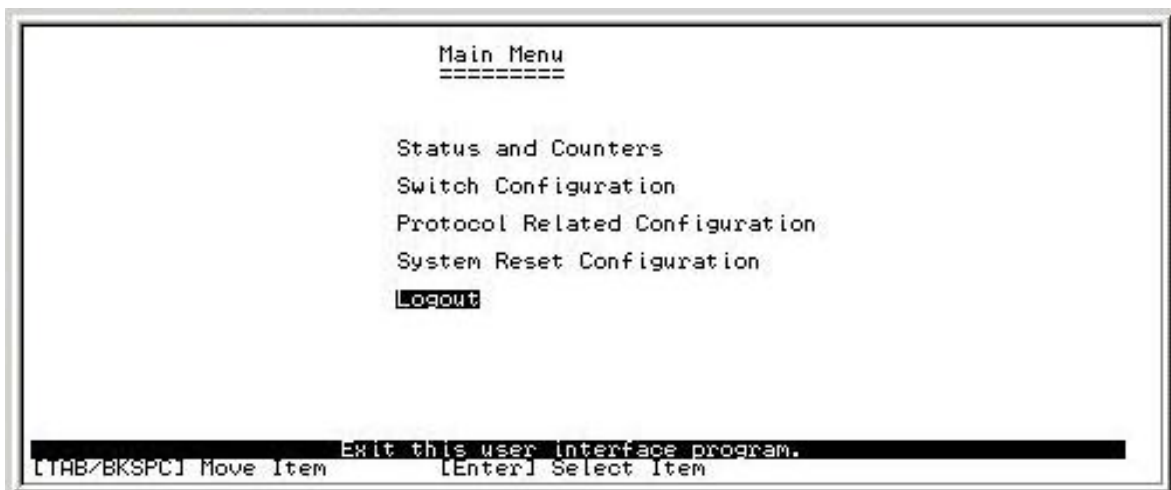Provide logout the Switch. The screen in Figure 4-95 appears.

Figure 4-95 SGSW-2620 Logout screen

5.1 Address Table

The Giga Switch is implemented with an address table. This address table composed of many entries. Each entry is used to store the address information of some node in network, including MAC address, port no, etc. This information comes from the learning process of Ethernet Switch.

5.2 Learning

When one packet comes in from any port. The Giga Switch will record the source address, port no. and the other related information in address table. This information will be used to decide either forwarding or filtering for future packets.

5.3 Forwarding & Filtering

When one packet comes from some port of the Ethernet Switching, it will also check the destination address besides the source address learning. The Ethernet Switching will lookup the address-table for the destination address. If not found, this packet will be forwarded to all the other ports except the port which this packet comes in. And these ports will transmit this packet to the network it connected. If found, and the destination address is located at different port from this packet comes in, the Ethernet Switching will forward this packet to the port where this destination address is located according to the information from address table. But, if the destination address is located at the same port with this packet comes in, then this packet will be filtered. Thereby increasing the network throughput and availability

5.4 Store-and-Forward

Store-and-Forward is one type of packet-forwarding techniques. A Store-and Forward Ethernet Switching stores the incoming frame in an internal buffer, do the complete error checking before transmission. Therefore, no error packets occurrence, it is the best choice when a network needs efficiency and stability.

The Ethernet Switch scans the destination address from the packet-header, searches the routing table provided for the incoming port and forwards the packet, only if required. The fast forwarding makes the switch attractive for connecting servers directly to the network, thereby increasing throughput and availability. However, the switch is most commonly used to segment existing hubs, which nearly always improves overall performance. A Ethernet Switching can be easily configured in any Ethernet network environment to significantly boost bandwidth using conventional cabling and adapters.

Due to the learning function of the Ethernet switching, the source address and corresponding port number of each incoming and outgoing packet are stored in a routing table. This information is subsequently used to filter packets whose destination address is on the same segment as the source address. This confines network traffic to its respective domain, reducing the overall load on the network.

The Giga Switch performs "Store and forward" therefore, no error packets occur. More reliably, it reduces the re-transmission rate. No packet loss will occur.

5.5 Auto-Negotiation

The STP ports on the SGSW-2620 switch have built-in "Auto-negotiation". This technology automatically sets the best possible bandwidth when a connection is established with another network device (usually at Power On or Reset). This is done by detecting the modes and speeds at the second of both device is connected and capable of, Both 10Base-T and 100Base-TX devices can connect with the port in either Half- or Full-duplex mode. 1000Base-T can only be connected in Full-duplex mode.

6.TROUBLESHOOTING

This chapter contains information to help you solve problems. If Giga Switch is not functioning properly, make sure the Ethernet Switch was set up according to instructions in this manual.

The Link LED is not lit
  Solution:
    Check the cable connection and remove duplex mode of the Switch

Some stations can not talk to other stations located on the other port

  Solution:
    Please check the VLAN, port trunking and Port Sniffer function which may introduce this kind of problem..

Performance is bad

Solution:
    Check the full duplex status of the Ethernet Switch. If the Ethernet Switch is set to full duplex and the partner is set to half duplex, then the performance will be poor.

APPENDIX A NETWORKING CONNECTION

A.1 Switch's RJ-45 Pin Assignments

1000Mbps,1000Base T

Contact	MDI	MDI-X
1	BI_DA+	BI_DB+
2	BI_DA-	BI_DB-
3	BI_DB+	BI_DA+
4	BI_DC+	BI_DD+
5	BI_DC-	BI_DD-
6	BI_DB-	BI_DA-
7	BI_DD+	BI_DC+
8	BI_DD-	BI_DC-

Implicit implementation of the crossover function within a twisted-pair cable, or at a wiring panel, while not expressly forbidden, is beyond the scope of this standard.

A.2 10/100Mbps, 10/100Base-TX

Contact	MDI	MDI-X
1	1	3
2	2	6
3	3	1
6	6	2

A.3 RJ-45 cable pin assignment
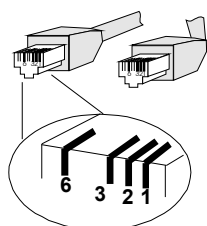
There are 8 wires on a standard UTP/STP cable and each wire is color-coded. The following shows the pin allocation and color of straight cable and crossover cable connection:

Straight Cable

```
1 2 3 4 5 6 7 8  SIDE 1
| | | | | | | |
1 2 3 4 5 6 7 8  SIDE 2
```

SIDE 1	SIDE 2
1 = White/Orange	1 = White/Orange
2 = Orange	2 = Orange
3 = White/Green	3 = White/Green
4 = Blue	4 = Blue
5 = White/Blue	5 = White/Blue
6 = Green	6 = Green
7 = White/Brown	7 = White/Brown
8 = Brown	8 = Brown

Cross Over Cable

```
1 2 3 4 5 6 7 8  SIDE 1

1 2 3 4 5 6 7 8  SIDE 2
```

SIDE 1	SIDE 2
1 = White/Orange	1 = White/Green
2 = Orange	2 = Green
3 = White/Green	3 = White/Orange
4 = Blue	4 = Blue
5 = White/Blue	5 = White/Blue
6 = Green	6 = Orange
7 = White/Brown	7 = White/Brown
8 = Brown	8 = Brown

Figure A-1: Straight-Through and Crossover Cable

Please make sure your connected cables are with same pin assignment and color as above picture before deploying the cables into your network.

EM-SGSW2620v1

$C\epsilon$