LINKSYS®
A Division of Cisco

ADMIN GUIDE

BUSINESS SERIES

48-port 10/100 Ethernet Switch

Model: SFE2010/SFE2010P

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Introduction

Welcome

Thank you for choosing a Linksys Switch. This Switch will allow you to quickly and economically expand your Linksys system.

This new Linksys rack mount Switch delivers non-blocking, wire speed switching for your network clients, plus multiple options for connecting to your network backbone. Forty eight ports wire up your workstations or connect to other Linksys switches or devices.

The Switch features monitoring and configuration via your web browser, making it easy to manage your Switch. Or if you prefer, you can use the console interface to configure the Switch.

Use the instructions in this guide to help you connect the switch, set it up, and configure it to bridge your different networks. These instructions should be all you need to get the most out of the Switch.

What's in this User Guide?

This user guide covers the steps for setting up and using the Switch.

- Chapter 2, "Getting to Know the SFE2010/SFE2010P"
  This chapter describes the ports, LEDs, and other features on the front and back panels of the switch.

- Chapter 3, "Connecting Devices "
  This chapter explains how to physically connect your network devices to the switch.

- Chapter 4, "Web Utility Configuration "
  This chapter provides an introduction to the features of the web-based configuration utility.

- Chapter 5, "Using the Console"
  This chapter describes the use of the switch console, which allows you to perform basic configuration of the switch.

- Appendix A, "Contacts"

- Appendix B, "Customer Site Survey"

- Appendix C, "Warranty Information"

- Appendix D, "Federal Communication Commission Interference Statement"

- Appendix E, "Specifications"

Getting to Know the SFE2010/SFE2010P

This chapter describes the ports, LEDs, and other features on the front and back panels of the switch.

The SFE2010 and SFE2010P are 48-port, layer-2 Ethernet switches that affordably expand the capability of the Linksys system. These two versions are functionally identical except the SFE2010P model offers Power-over-Ethernet (PoE) which can be used to supply power to various Linksys products over Ethernet cable.

SFE2010/P Front Panel

Feature	Description
Reset	The Switch can be reset by inserting a pin or paper clip into the RESET opening. **CAUTION:** If the RESET switch is pressed for more than 10 seconds, the Switch will reset to its default settings. All customized user settings will be lost.
LEDs	The Switch uses Light Emitting Diodes (LEDs) to indicate the status of numerous functions. These functions are listed below.
PWR	A green PWR LED lights up to indicate that the Switch is powered on.
FAN	A green FAN LED lights up to indicate that the cooling fan is operating properly. A blinking red FAN LED indicates that the cooling fan has failed.
RPS	A green RPS LED lights up to indicate that RPS is connected and operating properly. A blinking red RPS LED indicates an RPS fault.
MST	A green MST LED indicates that this Switch is a stack master.
Stack ID	A green Stack ID LED indicates that this Switch is stacked and the corresponding number indicates its stack ID.
Act/Link	The green Act/Link LEDs light up to indicate a functional network link through the corresponding port with an attached device. The Act (Activity) LEDs flash to indicate that the Switch is actively sending or receiving data over that port.
Speed	On the SFE2010, a green Speed LED indicates that the port is linked to a 100Mbps device.
PoE	On the SFE2010P, a green PoE LED indicates that PoE is active on that port.
Gigabit	The Gigabit LED lights up to indicate a Gigabit connection on the corresponding port.

Feature	Description
1-48	The Switch is equipped with 48 auto-sensing, Ethernet (802.3) network ports, which use RJ-45 connectors. The Fast Ethernet ports support network speeds of 10Mbps or 100Mbps. They can operate in half and full-duplex modes. Auto-sensing technology enables each port to automatically detect the speed of the device connected to it, and adjust its speed and duplex accordingly. The switch can deliver a maximum of 15.4W to a PoE port. With regular AC power supply, there is 360W available to all PoE ports, and 280W available with redundant power supply.
G1-G2	Ports G1-G2 are Ethernet (802.3ab) uplink ports which support network speeds of 10Mbps, 100Mbps, and 1000Mbps. NOTE: A switch is in stacking mode by default. In stacking mode, ports G1 and G2 are reserved for use as stacking ports.
miniGBIC1/2	The Switch provides two mini-GBIC ports. The mini-GBIC (gigabit interface converter) port is a connection point for a mini-GBIC expansion module, so the Switch can be uplinked via fiber to another switch. Each mini-GBIC port provides a link to a high-speed network segment or individual workstation at speeds of up to 1000Mbps. Use the Linksys MGBT1, MGBSX1, or MGBLH1 mini-GBIC modules with the Switch. The MGBSX1 and the MGBLH1 require fiber cabling with LC connectors, while the MGBT1 requires a Category 5e Ethernet cable with an RJ-45 connector.

SFE2010/P Back Panel

Feature	Description
Power	The Power port is where you will connect the power cord.
Console	The Console port is where you can connect a serial cable to a PC's serial port for configuration using your PC's HyperTerminal program. Refer to Chapter 4: Using the Console Interface for Configuration for more information.
RPS	Redundant Power Supply (Linksys RPS1000)

Connecting Devices

This chapter explains how to physically connect your network devices to the switch.

Sample Network Configuration

For an example of a possible network configuration, see the application diagrams shown below.

Maximum Cabling Distances

When you connect your network devices, make sure you don't exceed the maximum cabling distances, which are listed in the following table:

From	To	Maximum Distance
Switch	Switch or Hub*	100 meters (328 feet)
Hub	Hub	5 meters (16.4 feet)
Switch or Hub	Computer	100 meters (328 feet)

*A hub refers to any type of 100Mbps hub, including regular hubs and stackable hubs. A 10Mbps hub connected to another 10Mbps hub can span up to 100 meters (328 feet).

Before You Install the Switch...

When you choose a location for the switch, observe the following guidelines:

*   Make sure that the switch will be accessible and that the cables can be easily connected.

*   Keep cabling away from sources of electrical noise, power lines, and fluorescent lighting fixtures.

*   Position the switch away from water and moisture sources.

*   To ensure adequate air flow around the switch, be sure to provide a minimum clearance of two inches (50 mm).

*   Connect the supplied power cord to the switch's power port, and plug the other end into an electrical outlet.

    CAUTION: Make sure you use the power cord that is supplied with the switch. Use of a different power cord could damage the switch.

Placement Options

Before connecting cables to the Ethernet switch, first you will physically install the Ethernet switch. Either set the Ethernet switch on its four rubber feet for desktop placement, mount it in a standard-sized, 19-inch wide for rack-mount placement, or mount it on a wall with the wall-mount brackets provided.

> **NOTE:** The four supplied mounting brackets can be used for either wall mount or rack mount installations.

Desktop Placement

1. Attach the rubber feet to the recessed areas on the bottom of the Ethernet switch.

2. Place the Ethernet switch on a desktop near an AC power source.

CAUTION: Keep enough ventilation space for the Ethernet switch so it does not exceed the environmental restrictions mentioned in the specifications.

Rack-Mount Placement

To mount the Ethernet switch in any standard-sized, 19-inch wide, (each Ethernet switch requires 1RU of space in the rack), follow these instructions:

1. Remove the four front screws on one side of the Ethernet switch. Retain the screws for re-installation.

2. Place one of the supplied spacers on the side of the Ethernet switch so the four holes align to the screw holes.
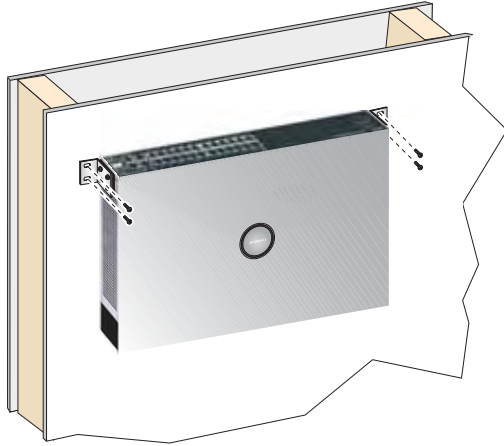

3. Place a rack mount bracket next to the spacer and reinstall the four screws (removed in step 1).

4. Repeat steps 2 through 3 for the other side of the Ethernet switch.

5. Attach the Ethernet switch to the rack using the supplied screws.

Wall-Mount Placement

1. On one of the side corners, remove the four front screws on of the Ethernet switch. Retain the screws for re-installation.

NOTE: The Ethernet switch, shown below, is mounted with the ports located on top. When the switch is mounted to a wall, the ports can be oriented in any direction.

2. Place one of the supplied spacers on the side of the Ethernet switch so the four holes align to the screw holes.

3. Place a rack mount bracket next to the spacer and reinstall the four screws (removed in step 1). The wall mount brackets should point towards the bottom of the Ethernet switch.

4. Repeat steps 1 through 3 for the other corners of the Ethernet switch.

5. Attach the Ethernet switch to a wall with appropriate screws (not supplied).

   CAUTION: Ensure that the Ethernet switch is securely attached to the wall.

Connecting the Cables

To connect network devices to the Ethernet switch, follow these instructions:

1. For 10/100Mbps devices, connect a Category 5 Ethernet network cable to one of the numbered ports on the Ethernet switch. For a 1000Mbps device, connect a Category 5e Ethernet network cable to one of the uplink ports on the Ethernet switch.

   NOTE: If connecting an Ethernet switch to an SVR3000 router, connect it to a Cascade port on the SVR3000.

2. Connect the other end to a PC or other network device.

3. Repeat steps 2 and 3 to connect additional devices.

4. If you are using the mini-GBIC port, then insert the mini-GBIC module to the mini-GBIC port. For detailed instructions, refer to the documentation supplied with the mini-GBIC module.

CAUTION: Observe the orientation of the mini-GBIC module before inserting it into a mini-GBIC port. The bottom mini-GBIC ports are upside down in relation to the top mini-GBIC ports.

5. If you use the console interface to configure the Ethernet switch, then connect the supplied serial cable to the console port (located on the back of the Ethernet switch), and tighten the captive retaining screws. Connect the other end to your PC's serial port. (The PC must be running VT100 terminal emulation software, such as HyperTerminal.)

6. Connect the supplied power cord to the power port, and plug the other end into an electrical outlet.

    CAUTION: Make sure you use the power cord that is supplied with the Ethernet switch. Use of a different power cord could damage the Ethernet switch.

7. Power on the network devices connected to the Ethernet switch. Each active port's corresponding Act/Link LED will light up on the Ethernet switch. If a port has an active Gigabit connection, then its corresponding Gigabit LED will also light up.

8. Proceed as needed:

    •   If you will use the console interface to configure the Ethernet switch, proceed to "Console Configuration" section on page 33 for directions.

    •   If you use the Web-based Utility to configure the Ethernet switch, proceed to "Web Utility Configuration" section on page 50.

Web Utility Configuration

This chapter provides an introduction to the features of the web-based configuration utility.

Linksys switch provides a complete web-based utility to configure the switch. This utility is accessed through your web browser.

Connecting to the Switch with the Web-Based Utility

You can connect to the switch using a standard web browser on a computer that is connected to the same network as the switch.

To access the web-based utility, enter the IP address of the switch to the address field of your web browser. The default IP address is 192.168.1.254.

Using Menus in the Web-Based Utility

Use the left navigation panel to choose options in the web-based utility.
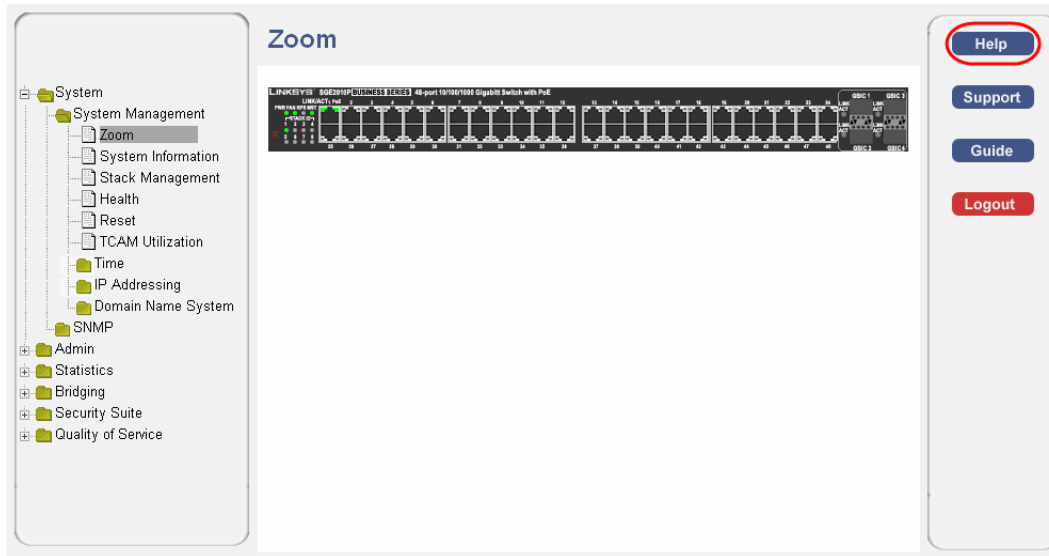
Viewing On-line Help

The Web Utility has on-line Help including field definitions for each screen. To access the on-line help for a particular screen, click the **Help** button on the right side of the screen.

Using the Console

This chapter describes the use of the switch console, which allows you to perform basic configuration of the switch.

The switch features a menu-driven console interface for basic configuration of the switch and management of your network.This chapter describes console interface configuration. Configuration can also be performed through the web utility, which is covered in the next chapter.

- ”Connecting to Your Switch with HyperTerminal,” on page 12

- ”Connecting to the Switch with Telnet,” on page 15

- Logging On to the Console (see page 15)

- Selecting Menu Options and Actions (see page 15)

- Using the Switch Main Menu (see page 16)

- System Configuration (see page 16)

- Port Status (see page 47)

- Port Configuration (see page 49)

- System Mode (Layer 2 / Layer 3) Selection (see page 51)

- Help (see page 52)

- Logout (see page 53)

Connecting to Your Switch with HyperTerminal

You can use the HyperTerminal to connect to your switch.

NOTE: The switch also can be configured through a telnet connection. Telnet to the switch IP address 192.168.1.254. Then, press the **Enter** key. The default logon ID is **admin** with a blank password.

Before you use HyperTerminal to connect to your switch for the first time, you must configure the application on your PC. You can save the settings to use each time you connect to your switch.

1. Click the **Start** button. Choose **Programs > Accessories > Communications > HyperTerminal**.
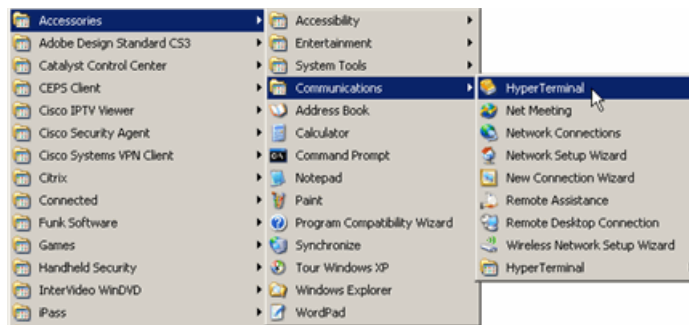
2. On the Connection Description screen, type a name for this connection, select an icon, and then click **OK**.
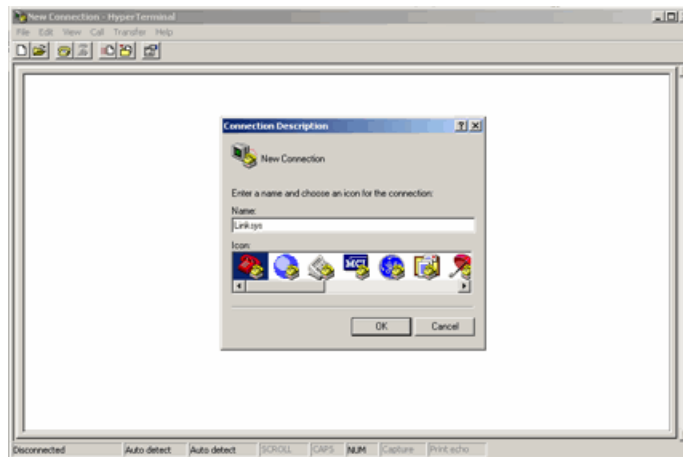
3. On the *Connect To* screen, use the *Connect using* drop-down list to select a port to communicate with the switch: COM*n*, or TCP/ IP.

4. Set the serial port settings as follows:
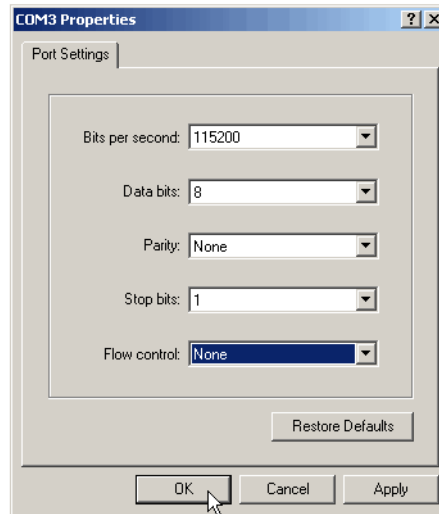
- **Bits per second:** 115200

- **Data bits:** 8

- **Parity:** None

- **Stop bits:** 1

- **Flow control:** None

5. Then, click the **OK** button.

6. Optionally, on the **File** menu, click **Save** to save these settings. The next time that you need to connect to the console, you can open this saved connection.

Connecting to the Switch with Telnet

You can connect to the switch with telnet.

1. Open a command line editor and enter **telnet** *<switch ip address>*. Then, press the **Enter** key.

2. When the *Login* screen appears, select **Edit** and enter **admin** in the *User Name* field. Leave the *Password* field blank.

3. Press **the Esc** key to return to the *Login* screen.

4. Select **Enter** to enter the CLI interface.

NOTE: The *Username & Password Settings* screen can also be used to set passwords for other users.

Logging On to the Console

1. Start HyperTerminal and open the connection that you configured previously.

2. When the blinking cursor appears, press the **Enter** key.

3. When prompted to login, enter the default login and password: **admin**

   The *Switch Main Menu* appears.

Selecting Menu Options and Actions

Within the Console Interface, menus list options in numeric order. Actions appear at the end of the screen. To select menu options and actions, use the following keys on your keyboard:

Key	Function
Arrow keys	Move the cursor up, down, left, or right.
Number key	Press the menu number and then press Enter key to select a menu option.
Tab	Move the cursor from one field to the next on an editing screen.
Enter	Select an option that is highlighted by the cursor.
Esc	Return to the previous menu or screen, or move cursor from editable fields to *Action* list.

Using the Switch Main Menu

The *Switch Main Menu* provides access to screens that you can use to configure your system, view or modify port and PoE settings, and view or modify system and stacking mode.
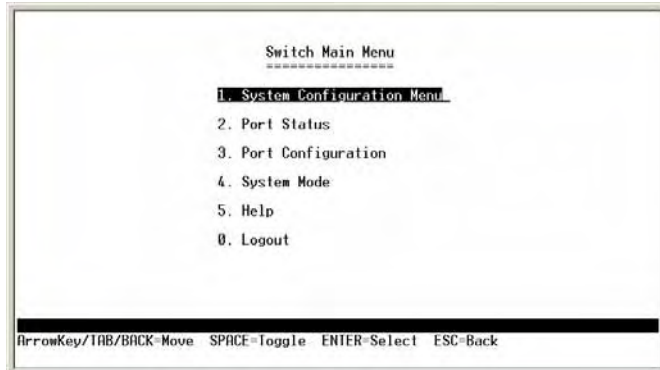
1. System Configuration (see page 16)

2. Port Status (see page 47)

3. Port Configuration (see page 49)

4. System Mode (Layer 2 / Layer 3) Selection (see page 51)

5. Help (see page 52)

0. Logout (see page 53)

System Configuration

The *System Configuration Menu* provides access to screens where you can manage system information, view or modify management settings, set up user accounts, and manage security settings. It also provides access to screens where you can manage VLAN IDs, IPv4 and IPv6 settings, and download upgrade files. You also will use this menu if you need to restore default settings, reset the switch to the factory default configuration, or reboot the system.

1. System Information (see page 17)

2. Management Settings (see page 19)

3. Username & Password Settings (see page 24)

4. Security Settings (see page 25)

5. VLAN Management (see page 28)

6. IP Configuration (see page 29)

7. File Management (see page 43)

8. Restore System Default Settings (see page 46)

9. Reset to Factory Settings (see page 46)

10. Reboot System (see page 46)

11. Stack Configuration (see page 47)

0.Back (Select return to the previous menu.)

To open this screen:

From the *Switch Main Menu*, select **1. System Configuration Menu**.

System Information

The *System Information* menu provides access to screens where you can view firmware version information and general system information.
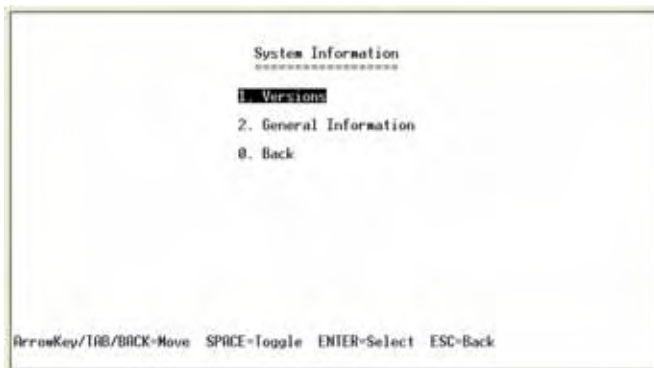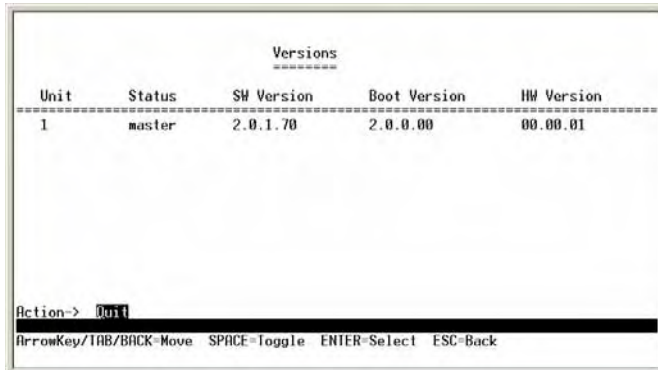
1. Versions (see page 18)

2. General Information (see page 18)

0.Back (Select to return to the previous menu.)

To open this menu:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **1. System Information**.

3. When you are finished using this screen, select **0. Back**.

Versions

Use the Versions screen to display the boot, software, and hardware firmware versions of the Ethernet switch. In stacking mode, this information is displayed for the stack master.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **1. System Information**.

3. From the *System Information Menu*, select **1. Versions**.

General Information

Use the *General System Information* screen to view the system description, system up time, and system MAC address. You also can enter a system contact, system name, and system location.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **1. System Information**.

3. From the *System Information Menu*, select **2. General System Information**.

To change the system contact, system name, and location:

1. Select **Edit**, and then make your changes. Press the **Tab** key to move the cursor from one field to the next.

2. Press the **Esc** key to return to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Management Settings

The *Management Settings* screen provides access to screens where you can change the settings for serial port, telnet, and secure telnet (SSH).

1. Serial Port Configuration (see page 20)

2. Telnet Configuration (see page 20)

3. SSH Configuration (see page 21)

0.Back (Select to return to the previous menu.)

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

Serial Port Configuration

Use the *Serial Port Configuration* screen to view or change the baud rate of the Ethernet switch.

```
             Serial Port Configuration
             ***************************

        Baud rate:              115200      bps




Action-> Quit  Edit  Save
ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

3. From the *Management Settings Menu*, choose **1. Serial Port Configuration.**

To change the baud rate of the serial port:

1. Select **Edit**, and then make changes.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Telnet Configuration

Use the *Telnet Configuration* screen to view or change the time-out settings.

```
             Telnet Configuration
             *********************

        Time out:              600      sec




Action-> Quit  Edit  Save
ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

3. From the *Management Settings Menu*, choose **2. Telnet Configuration**.

To change the time-out setting:

1. Select **Edit**, and then make your changes.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

SSH Configuration

The *SSH Configuration* menu provides access to screens where you can configure SSH server settings, generate crypto keys, and generate keys fingerprints.

1. SSH Server Configuration (see page 22)

2. SSH Status (see page 22)

3. SSH Crypto Key Generation (see page 23)

4. SSH Keys Fingerprints (see page 24)
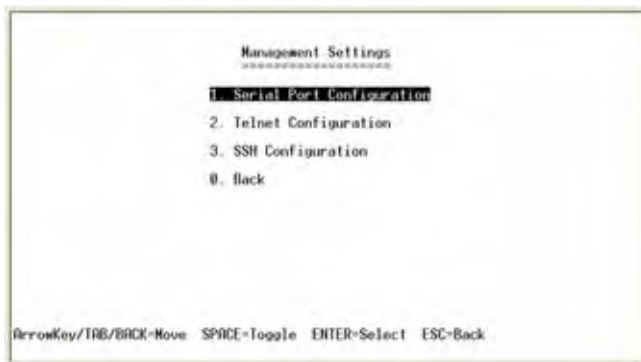
0.Back (Select to return to the previous menu.)

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

3. From the *Management Settings Menu*, choose **3. SSH Configuration**.

SSH Server Configuration

Use the *SSH Server Configuration* screen to view or edit the status of the SSH server. You can enable or disable the server and configure the SSH server port

```
                    SSH Server Configuration
                    ==============================

                    SSH Server:          DISABLE
                    SSH Server Port:     22




Action-> Quit  Edit  Save
ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

3. From the *Management Settings Menu*, choose **3. SSH Configuration**.

4. From the *SSH Configuration Menu*, select **1. SSH Server Configuration**.

To change SSH Server settings:

1. Select **Edit**, and then make your changes.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

SSH Status

Use the SSH Status screen to view information about SSH sessions.

```
                        SSH Status
                        ==========

     SSH Server is disabled
     RSA key was not generated. DSA key was not generated
     No open SSH sessions




Action-> Quit  Refresh
ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```
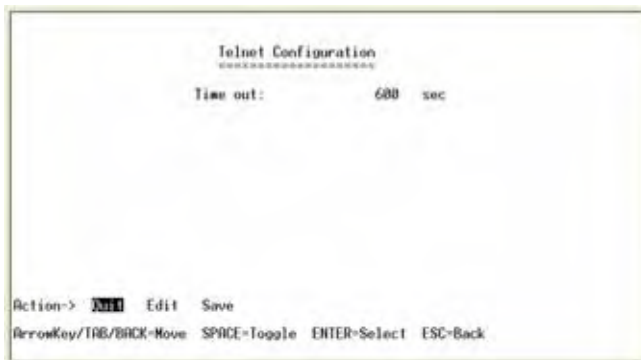
To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

3. From the *Management Settings Menu*, choose **3. SSH Configuration**.

4. From the *SSH Configuration Menu*, select **2. SSH Status**.

5. When you finish using this screen, select **Quit**.

SSH Crypto Key Generation

Use the SSH Crypto Key Generation screen to generate an SSH RSA or DSA key.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

3. From the *Management Settings Menu*, choose **3. SSH Configuration**.

4. From the *SSH Configuration Menu*, select **3. SSH Crypto Key Generation**.

5. When you finish using this screen, select **Quit**.

To change SSH Crypto Key Generation settings:

NOTE: Only the public key algorithm can be changed.

1. Select **Edit**, and then make your changes.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

To generate the crypto key:

1. Verify that the information is correct.

2. Select **Execute**.

3. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

SSH Keys Fingerprints

Use the *SSH Keys Fingerprints* screen to view the RSA and DSA fingerprints.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration Menu**.

2. From the *System Configuration Menu*, select **2. Management Settings**.

3. From the *Management Settings Menu*, choose **3. SSH Configuration**.

4. From the *SSH Configuration Menu*, select **4. SSH Keys Fingerprints**.

5. When you finish using this screen, select **Quit**.

Username & Password Settings

You can use the *Username & Password Settings* screen to view, add, or modify the user accounts for the switch. Up to five users can be assigned.

NOTE: The default user is "admin" with no password.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **3. Username & Password Settings**.

To change User & Password settings:

1. Select **Edit**, and then make your changes. Press the **Tab** key to move from one field to the next.

    NOTE: The username and password can be 20 characters in length. You must enter the same password in the *Password* field and the *Password Again* field.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Security Settings

The *Security Settings* screen provides access to screens where you can generate SSL certificates and view the SSL certificate listings. You also can use this module to disable the active management access profile.

1. SSL Generate Certificate (see page 26)

2. Show Certificate (see page 27)

3. Disable Active Management Access Profile (see page 27)

0.Back (Select to return to the previous menu.)

To open this screen:

1. From the *Switch Main Menu,* select **1. System Configuration**.

2. From the *System Configuration Menu*, select **4. Security Settings**.

SSL Generate Certificate

Use the *SSL Certificate Generation* screen to view, edit, and execute device-generated certificates.
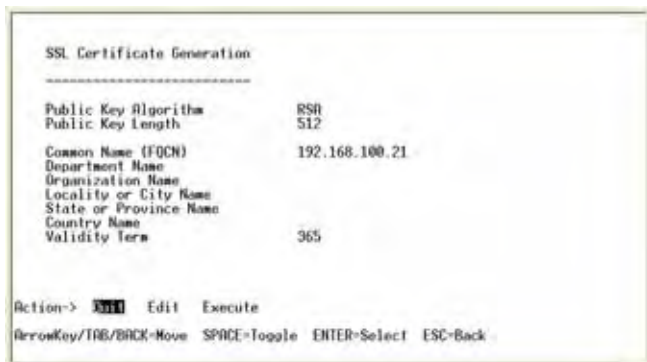
```
SSL Certificate Generation
--------------------------------
Public Key Algorithm        RSA
Public Key Length           512

Common Name (FQCN)          192.168.100.21
Department Name
Organization Name
Locality or City Name
State or Province Name
Country Name
Validity Term                365


Action->  Quit  Edit   Execute
ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

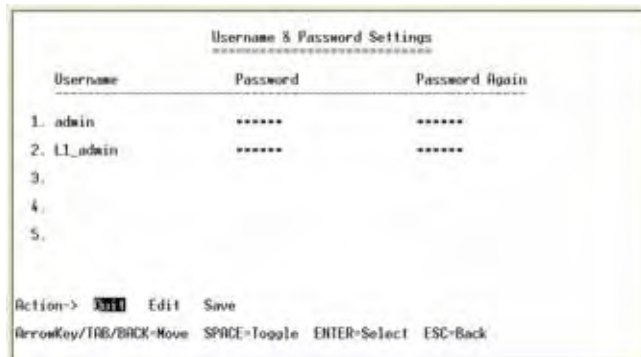***To open this screen:***

1. From the *Switch Main Menu,* select **1. System Configuration**.

2. From the *System Configuration* menu, select **4. Security Settings**.

3. From the *Security Settings Menu*, select **1. SSL Generate Certificate**.

To edit and execute a certificate:

1. Select **Edit**, and then make your changes. Press the **Tab** key to move the cursor from field to field.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Execute** to generate the certificate with the new parameters.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

The following fields are specified:

Public Key Algorithm	Specifies the SSL type
Public Key Length	Specifies the SSL RSA key length. (Range: 512 to 2048)
Common Name (FQCN)	IP address of the Ethernet switch
Department Name	Specifies the department name. (Range: 1 to 32 characters)
Organization Name	Specifies the organization name. (Range: 1 to 32 characters)
Locality or City Name	Specifies the location or city name. (Range: 1 to 32 characters)
State or Province Name	Specifies the state or province name. (Range: 1 to 32 characters)

Country Name	Specifies the country name. (Range: 2 to 2)
Validity Term	Specifies number of days certification is valid. (Range: 30 to 3650)

Show Certificate

Use the *Show Certificate* screen to display the internal certificate.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **4. Security Settings**.

3. From the *Security Settings Menu*, select **2. SSL Show Certificate**.

4. When you finish using this screen, select **Quit**.

Disable Active Management Access Profile

You can use select option 3 on the Security Settings menu to disable the active management access profile.

To disable the active management access profile:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration* menu, select **4. Security Settings**.

3. From the *Security Settings Menu*, select **3. Disable Active Management Access Profile**.

4. When the confirmation message appears, press **Y** to confirm, or press **N** to cancel.

VLAN Management

The *VLAN Management* menu provides access to a screen where you can view or modify the default VLAN ID.
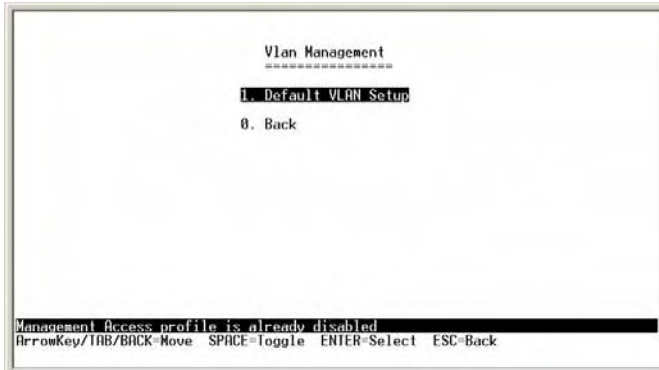
1. Default VLAN Setup (see page 28)

0.Back (Select to return to the previous menu.)

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **5. Vlan Management**.

Default VLAN Setup

You can use the *Default VLAN Setup* screen to view and change the VLAN ID.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **5. Vlan Management**.

3. From the *VLAN Management* menu, press **1. Default VLAN Setup**.

To edit the VLAN ID:

1. Select **Edit**.

2. Type the VLAN ID.

3. Press the **Esc** key to move the cursor to the *Action* list.

4. Select **Execute**.

5. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

IP Configuration

The *IP Configuration* menu provides access to screens where you can manage IPv4 and IPv6 address configuration, HTTP and HTTPS configuration, and network configuration.

1. IPv4 Address Configuration (see page 30)

2. IPv6 Address Configuration (see page 31)

3. HTTP Configuration (see page 37)

4. HTTPS Configuration (see page 37)

5. Network Configuration (see page 38)

0.Back (Select to return to the previous menu.)

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

IPv4 Address Configuration

The *IPv4 Configuration* menu provides access to the IPv4 address settings and DHCP renew.
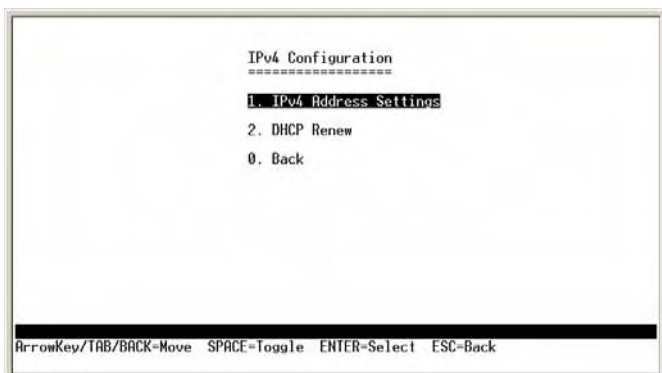
```
              IPv4 Configuration
              ==================
          1.  IPv4 Address Settings
          2.  DHCP Renew
          0.  Back




ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```
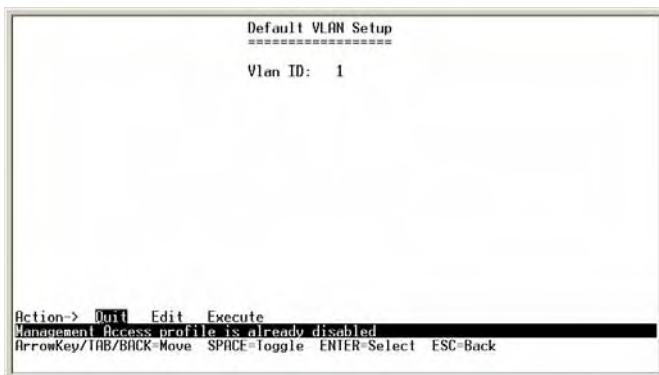
0.Back (Select to return to the previous menu.)

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **1. IPv4 Address Configuration**.

IPv4 Address Settings

You can use this screen to view or editing the IPv4 address settings.
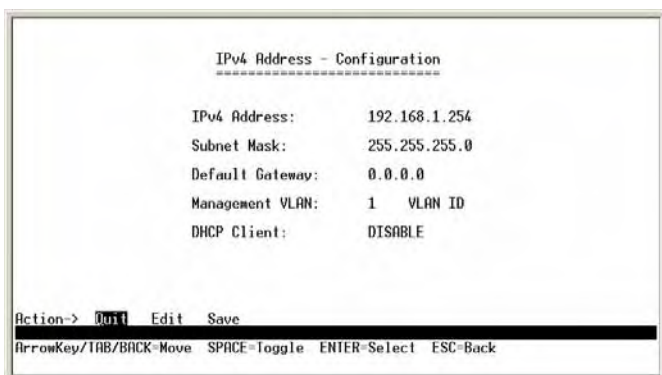
```
              IPv4 Address - Configuration
              ============================

          IPv4 Address:      192.168.1.254
          Subnet Mask:       255.255.255.0
          Default Gateway:   0.0.0.0
          Management VLAN:    1    VLAN ID
          DHCP Client:       DISABLE



Action->  Quit   Edit   Save
ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```
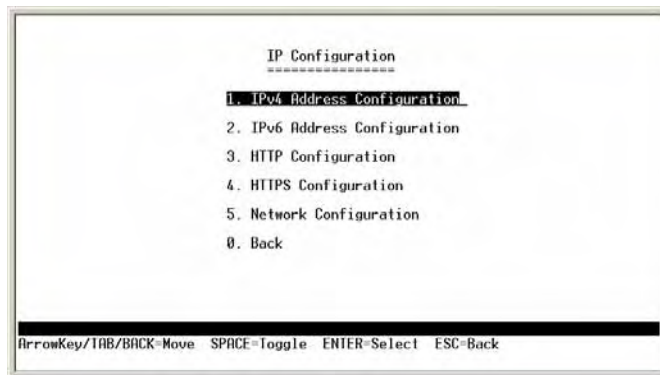
To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **1. IPv4 Address Configuration**.

4. From the *IPv4 Address Configuration* menu, select **1. IPv4 Address Settings**.

To edit the IPv4 address settings:

1. Select **Edit**., and then make the changes. Press the **Tab** key to move the cursor from one field to the next.

    NOTE: To enable or disable the DHCP client, move the cursor to the field, and then press the **Space Bar** to toggle between ENABLE and DISABLE.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your settings

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

DHCP Renew

You can select this option to renew DHCP.

NOTE: This option is available only if the interface is configured as a DHCP interface, through IPv4 Address Settings.

To renew DHCP:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **1. IPv4 Address Configuration**.

4. From the *IPv4 Address Configuration* menu, select **2. DHCP Renew**. The *Operation Complete* message appears.

IPv6 Address Configuration

The *IPv6 Configuration* menu provides access to screens where you can manage the settings for IPv6 and ISATAP.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **2. IPv6 Address Configuration**.

IPv6 Interface Enable

You can use the *IPv6 Interface Enable* screen to enable or disable the IPv6 interface.

To open this screen:

1. On the *Switch Main Menu*, select **6. IP Configuration**.

2. On the *IP Configuration* menu, select **2. IPv6 Address Configuration**.

3. On the *IPv6 Address Configuration* menu, select **1. IPv6 Interface Enable**.

To edit the IPv6 interface settings:

1. When you finish using this Select **Edit**., and then make the changes. Press the **Tab** key to move the cursor from one field to the next.

    NOTE: To enable or disable the interface, move the cursor to the field, and then press the **Space Bar** to toggle between ENABLE and DISABLE. If you select ENABLE, a warning appears. Press the **Enter** key to acknowledge the warning.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your settings

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

5. When you are finished working on this screen, select **Quit**.

IPv6 Address Settings

You can use the *IPv6 Address - Configuration* screen to edit the IPv6 address settings.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **2. IPv6 Address Configuration**.

4. From the *IPv6 Address Configuration* menu, select **2. IPv6 Address Settings**.

To edit the IPv6 address settings:

1. Select **Edit**., and then make the changes. Press the **Tab** key to move the cursor from one field to the next.

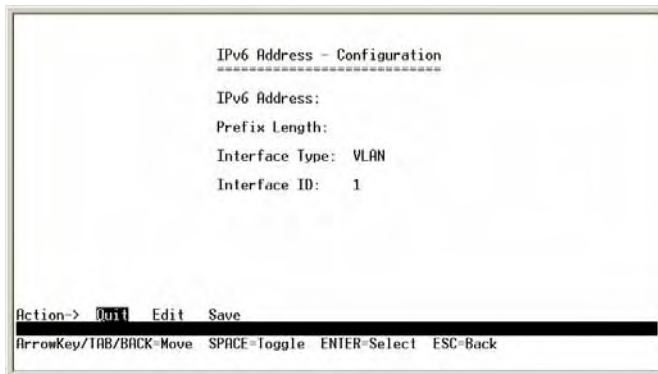   **NOTE:** To enable or disable the DHCP client, move the cursor to the field, and then press the **Space Bar** to toggle between ENABLE and DISABLE.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your settings

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

IPv6 Address Table

The IPv6 Address Table lists the IPv6 addresses that are configured.

```
                       IPv6 Address Table
                       ===================
    Interface   IPv6 Type   IPv6 Address
    ---------   ---------   ------------------------------------------




    Action->  Quit   Refresh
    ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **2. IPv6 Address Configuration**.

4. From the *IPv6 Address Configuration* menu, select **3. IPv6 Address Table**.

IPv6 ISATAP Enable

You can use the *IPv6 ISATAP Enable* screen to configure the ISATAP tunnel.

```
                       ISATAP Tunnel
                       =============
    Status:                        DISABLE
    Tunnel Router's Domain Name:   ISATAP
    Query Interval:                10
    ISATAP Solicitation Interval:  10
    ISATAP Robustness:             3



    Action->  Quit   Edit   Save
    ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **2. IPv6 Address Configuration**.

4. From the *IPv6 Address Configuration* menu, select **4. IPv6 ISATAP Enable**.

To edit the ISATAP tunnel settings

1. Select **Edit**., and then make the changes. Press the **Tab** key to move the cursor from one field to the next.

   NOTE: To enable or disable the ISATAP tunnel, move the cursor to the *Status* field, and then press the **Space Bar** to toggle between ENABLE and DISABLE.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your settings

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

IPv6 ISATAP Interface Show

You can use the **ISATAP Interface Show** screen to view the interface type and address.
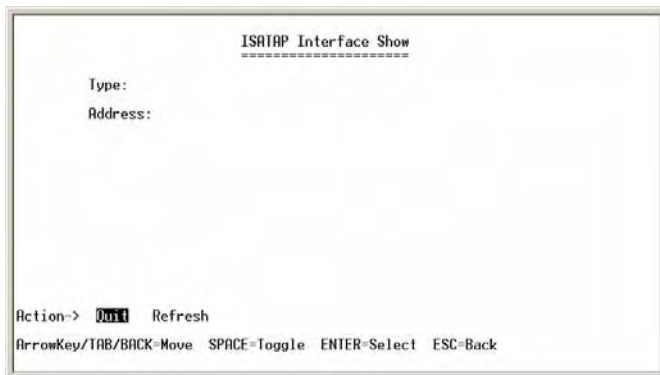
To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **2. IPv6 Address Configuration**.

4. From the *IPv6 Address Configuration* menu, select **5. ISATAP Interface Show**.

IPv6 Default Gateway

You can use the *IPv6 Default Gateway* screen to view or edit information about the IPv6 Default Gateway.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **2. IPv6 Address Configuration**.

4. From the *IPv6 Address Configuration* menu, select **6. IPv6 Default Gateway**.

To edit the IPv6 default gateway settings:

1. Select **Edit**., and then make the changes. Press the **Tab** key to move the cursor from one field to the next.

   NOTE: To change the state of the gateway, move the cursor to the *State* field, and then press the **Space Bar** to toggle between ENABLE and DISABLE.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Execute** to save your settings

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

HTTP Configuration

You can use the *HTTP screen* to view and edit the HTTP settings. You can enable or disable the HTTP server and configure the port on which the session is enabled.
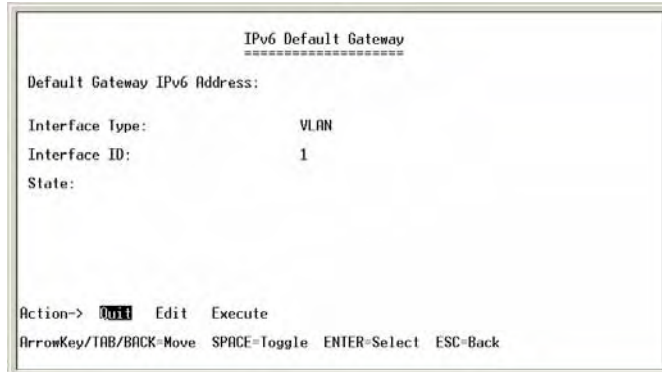

To open the screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **3. HTTP Configuration**.

To change the HTTP settings:

1. Select **Edit**, and then make your changes.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

HTTPS Configuration

Use the HTTPS Configuration screen to configure HTTPS settings. You can enable or disable the HTTPS server and configure the port on which the session is enabled.

To open the screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **4. HTTPS Configuration**.

To change HTTPS settings:

1. Select **Edit**, and then make your changes.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Network Configuration

The Network Configuration screen provides access to screens where you can execute ping tests and traceroute tests for IPv4 and IPv6 addresses.

1. Ping IPv4 (see page 39)

2. Ping IPv6 (see page 40)

3. TraceRoute IPv4 (see page 41)

4. TraceRoute IPv6 (see page 42)

0.Back (Select to return to the previous menu.)

To open the screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **5. Network Configuration**.

Ping IPv4

You can use the *Ping IPv4* screen to ping an IPv4 address.

To open the screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **5. Network Configuration**.

4. From the *Network Configuration* menu, select **1. IPv4 Ping**.

To change the IP address:

1. Select **Edit**, and then enter the IP address.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

To begin the ping test:

1. Select **Execute** to begin the ping test.

2. After the ping test is complete, the results of the test appear on the screen.

3. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Ping IPv6

You can use the *Ping IPv6* screen to ping an IPv6 address.

To open the screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **5. Network Configuration**.

4. From the *Network Configuration* menu, select **2. IPv6 Ping**.
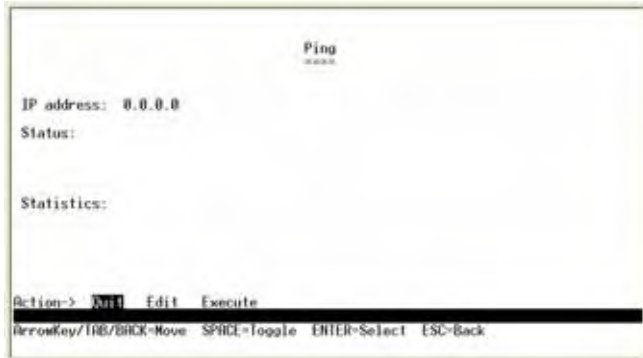
To change the IP address:

1. Select **Edit**, and then enter the IPv6 address.

2. Press the **Esc** key to move the cursor to the *Action* list.

3. Select **Save** to save your changes.

4. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

To begin the ping test:

1. Select **Execute** to begin the ping test.

2. After the ping test is complete, the results of the test appear on the screen.

3. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

TraceRoute IPv4

You can use the *TraceRoute IPv4* screen to run a trace route test for an IPv4 address

To open the screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **5. Network Configuration**.

4. From the *Network Configuration* menu, select **3. Trace Router IPv4**.

To change the IP address:

1. Select **Edit**, and then enter the IPv4 address.

2. Press the **Esc** key to move the cursor to the *Action* list.

To begin the trace route test:

1. Select **Execute** to begin the test.

2. After the test is complete, the results of the test appear on the screen.

3. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

TraceRoute IPv6

You can use the *TraceRoute IPv6* screen to run a trace route test for an IPv6 address.

To open the screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **6. IP Configuration**.

3. From the *IP Configuration* menu, select **5. Network Configuration**.

4. From the *Network Configuration* menu, select **4. Trace Router IPv6**.
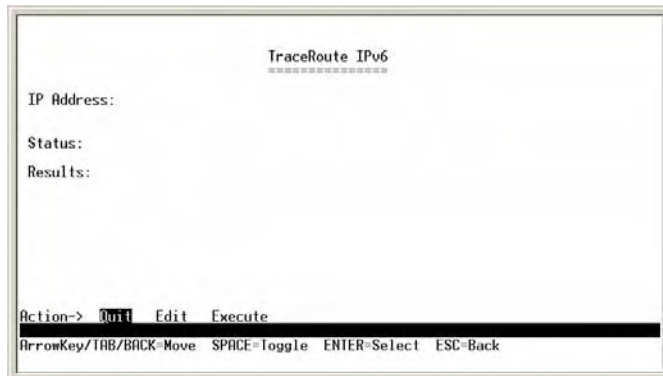
To change the IP address:
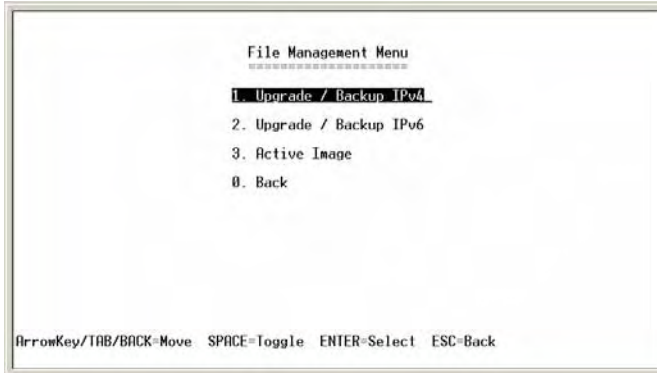
1. Select **Edit**, and then enter the IPv6 address.

2. Press the **Esc** key to move the cursor to the *Action* list.

To begin the trace route test:

1. Select **Execute** to begin the test.

2. After the test is complete, the results of the test appear on the screen.

3. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

File Management

The *File Management Menu* provides access to screens where you can download upgrade files from an IPv4 or IPv6 address.
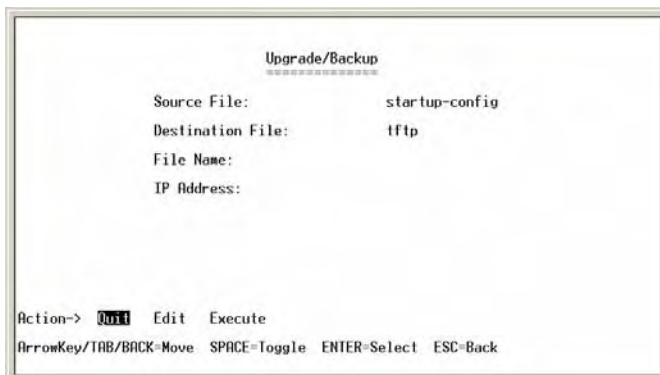
```
                    File Management Menu
                    ====================

              1. Upgrade / Backup IPv4

              2. Upgrade / Backup IPv6

              3. Active Image

              0. Back

ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

1. Upgrade / Backup IPv4 (see page 43)

2. Upgrade / Backup IPv6 (see page 44)

3. Active Image (see page 45)

0. Back (Select to return to the previous menu.)

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **7. File Management**.

Upgrade / Backup IPv4

You can use the *Upgrade/Backup IPv4* screen to download files from an IPv4 address.

```
                    Upgrade/Backup
                    ===============

        Source File:           startup-config
        Destination File:      tftp
        File Name:
        IP Address:




Action->  Quit   Edit   Execute
ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **7. File Management**.

3. From the *File Management Menu*, select **1. IPv4 Upgrade/Backup**.

To enter the IPv4 Upgrade/Backup file name and location:

1. Select **Edit**, and then make the changes. Press the **Tab** key to move the cursor from one field to the next.

    NOTE: Specify the source and destination of the file, the file name, and the IPv4 address of the file server where the upgrade file is stored,

2. Press the **Esc** key to move the cursor to the *Action* list.

To download a file from the specified location:

3. Verify that the file name and location are correct.

4. Select **Execute**.

5. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Upgrade / Backup IPv6

You can use the *Upgrade/Backup IPv6* screen to download files from an IPv6 address.
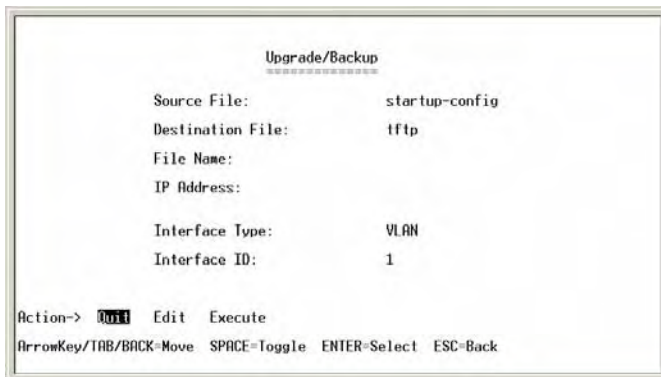
To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **7. File Management**.

3. From the *File Management Menu*, select **2. IPv6 Upgrade/Backup**.

To enter the IPv6 Upgrade/Backup file name and location:

1. Select **Edit**, and then make the changes. Press the **Tab** key to move the cursor from one field to the next.

    NOTE: Specify the source and destination of the file, the file name, and the IPv6 address of the file server where the upgrade file is stored. For an IPv6 address, you also must specify the interface type and ID.

2. Press the **Esc** key to move the cursor to the *Action* list.

To download a file from the specified location:

3. Verify that the file name and location are correct.

4. Select **Execute**.

5. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Active Image

There are two software images on the Ethernet switch: Image 1 and Image 2. When you copy an image to the switch via TFTP, the inactive image is replaced. When you copy an image to the switch via the console port, the active image is replaced.You can use the *Active Image* screen to specify which image is the active image on the switch.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **7. File Management**.

3. From the *File Management Menu*, select **3. Active Image**.

To enter the active image settings

1. Select **Edit**. The cursor moves to the *Active Image after Reset* field.

2. Press the **Space Bar** to change the image setting.

3. When the correct image setting appears in the field, press the **Esc** key to move the cursor to the *Action* list.

4. Select **Execute** to save your settings. The selected image will be active after reset.

5. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

Restore System Default Settings

You can restore the switch to the system default settings.

To restore system default settings

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **8. Restore System Default Settings**.

3. When the confirmation message appears, press **y** to restore the default settings, or press **n** to cancel.

NOTE: Restoring default settings from the console or web resets all values except stacking configuration (stacking mode, stacking ports, and auto-numbering settings are not reset). To reset stacking configuration, use the hardware reset button on the front of the Ethernet switch.

Reset to Factory Settings

You can restore the switch to the factory default settings.

To restore factory default settings

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **9. Restore Factory Settings**.

3. When the confirmation message appears, press **y** to restore the default settings, or press **n** to cancel.

NOTE: Restoring factory settings from the console or web resets all values except stacking configuration (stacking mode, stacking ports, and auto-numbering settings *are not* reset). To reset stacking configuration, use the hardware reset button on the front of the Ethernet switch.
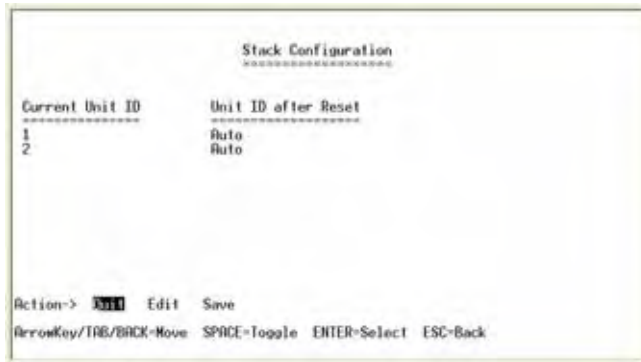
Reboot System

You can restart the Ethernet switch.

To restore system default settings

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **10. Reboot System**.

3. When the confirmation message appears, press **y** to restore the default settings, or press **n** to cancel.

Stack Configuration

You can use the *Stack Configuration* screen to specify the Stack ID for the Ethernet switch. By default, ID numbers are automatically assigned to each device.

To open this screen:

1. From the *Switch Main Menu*, select **1. System Configuration**.

2. From the *System Configuration Menu*, select **11. Stack Configuration**.

Port Status

The *Port Status* menu provides access to screens where you can view the port status and the PoE status for each port on the switch.
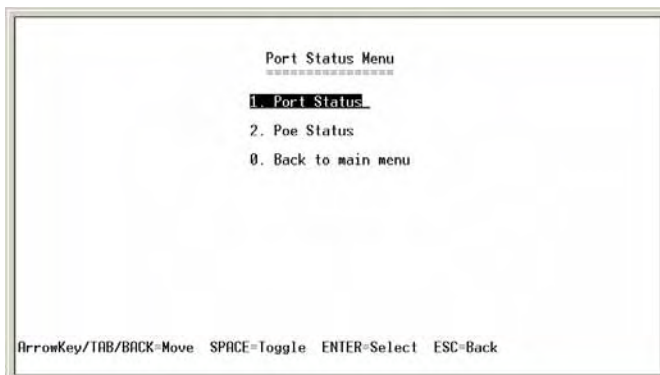
1. Port Status (see page 48)

2. PoE Status (see page 48)

0.Back (Select to return to the previous screen.)

To open this screen:

From the *Switch Main Menu*, press **2. Port Status**.

Port Status

You can use the *Port Status* screen to view the port connection status. You can use the **up** or **down** arrow keys to scroll through all the ports on the switch.

NOTE: To configure ports, use the *Port Configuration* screen. See .

To open this screen:

1. From the *Switch Main Menu*, press **2. Port Status**.

2. From the *Port Status Men*u, press **1. Port Status**.

PoE Status

You can use the PoE Status screen to view the PoE status of the ports.

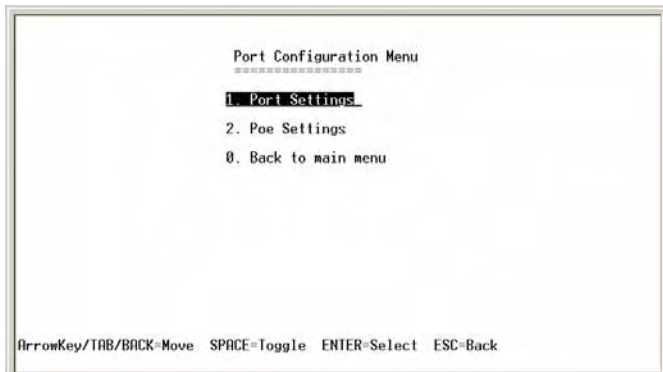**NOTE:** To configure PoE, use the *PoE Configuration* screen. See .

To open this screen:

1. From the *Switch Main Menu*, press **2. Port Status**.

2. From the *Port Status Men*u, press **2. Poe Status**.

Port Configuration

The *Port Configuration Menu* provides access to screens where you can view or modify port settings and PoE settings.

```
                    Port Configuration Menu
                    ===================
            1. Port Settings_
            2. Poe Settings
            0. Back to main menu




ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

1. Port Settings (see page 49)

2. PoE Settings (see page 50)

0.Back (Select to return to the previous screen.)

From the *Switch Main Menu*, press **3. Port Configuration**.

Port Settings

You can use the *Port Settings* screen to specify the auto negotiation status, port speed, duplex mode, and flow control settings. You can use the up or down arrow keys to scroll through all the ports on the Ethernet switch.
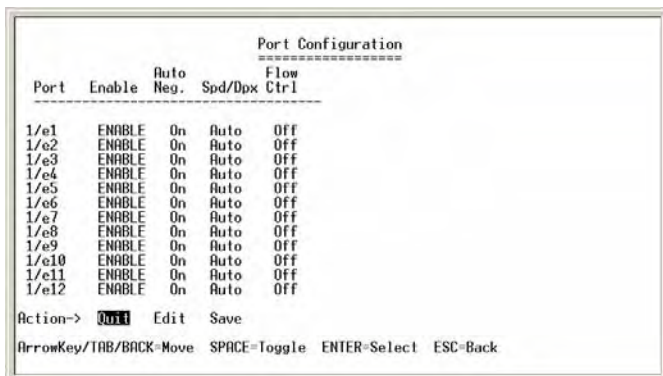
```
                        Port Configuration
                        ===================
                 Auto              Flow
    Port  Enable  Neg.  Spd/Dpx  Ctrl
    -----------------------------------
    1/e1    ENABLE   On    Auto     Off
    1/e2    ENABLE   On    Auto     Off
    1/e3    ENABLE   On    Auto     Off
    1/e4    ENABLE   On    Auto     Off
    1/e5    ENABLE   On    Auto     Off
    1/e6    ENABLE   On    Auto     Off
    1/e7    ENABLE   On    Auto     Off
    1/e8    ENABLE   On    Auto     Off
    1/e9    ENABLE   On    Auto     Off
    1/e10   ENABLE   On    Auto     Off
    1/e11   ENABLE   On    Auto     Off
    1/e12   ENABLE   On    Auto     Off

    Action->  Quit   Edit    Save

    ArrowKey/TAB/BACK=Move  SPACE=Toggle  ENTER=Select  ESC=Back
```

To open this screen:

1. From the *Switch Main Menu*, press **3. Port Configuration**.

2. From the *Port Status Men*u, press **2. Poe Status**.

To configure the ports:

1. Select **Edit**.

2. Proceed as needed:

    a. Press the **down** arrow key to scroll down through the list of ports.

    b. Press the **right arrow** key to move the cursor from one field to the next within a row.

    c. To change a setting, move the cursor to the field, and then press the **Space Bar** until the desired setting appears.

Field	Settings
Enable	Enable or Disable
Auto Neg.	On or Off
Spd/Dpx	Auto, 10H, 100H, 10F, 100F, 1000F
Flow Ctrl	Auto, On or Off

3. Press the **Esc** key to move the cursor to the *Action* list.

4. Select **Save** to save your settings

5. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

PoE Settings

You can use the *PoE Settings* screen to specify the priority and PoE settings for each port. You can use the up or down arrow keys to scroll through all the ports on the Ethernet switch.

To open this screen:

1. From the *Switch Main Menu*, press **3. Port Configuration**.

2. From the *Port Status Men*u, press **2. Poe Settings**.

To configure the PoE settings:

1. Select **Edit**.

2. Proceed as needed:

    a. Press the **down** arrow key to scroll down through the list of ports.

    b. Press the **right arrow** key to move the cursor from one field to the next within a row.

    c. To change a setting, move the cursor to the field, and then press the **Space Bar** until the desired setting appears.

Field	Settings
Priority	Low, High, or Critical
Enable	Enable or Disable

3. Press the **Esc** key to move the cursor to the *Action* list.

4. Select **Save** to save your settings

5. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

System Mode (Layer 2 / Layer 3) Selection

You can use the *System Mode Selection* screen to specify whether the Ethernet switch is operating in Layer 2 or Layer 3 mode. You can also configure stacking mode from this screen.

To open this screen:

From the *Switch Main Menu*, press **4. System Mode**.

To edit the system mode or stacking mode:
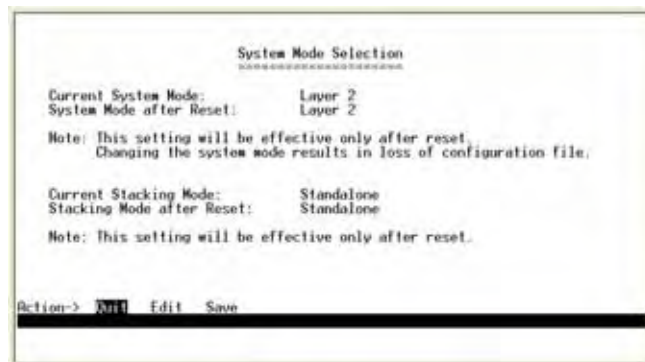
1. Select **Edit**.

2. Proceed as needed:

    a. Press the **down** arrow key to scroll down through the list of ports.

    b. Press the **Tab** key to move the cursor from one field to the next.

    c. To change a setting, move the cursor to the field, and then press the **Space Bar** until the desired setting appears.

Field	Settings
System Mode after Reset	Layer 2 or Layer 3
Stacking Mode after Reset	Stack or Standalone

3. Press the **Esc** key to move the cursor to the *Action* list.

4. Select **Save** to save your settings

5. When the *Operation complete* message appears, press the **Esc** key to move the cursor to the *Action* list.

6. Reboot the Ethernet switch. Your new settings will take effect after reboot.

Help

You can use the *Help* screen to view information about the console menus and options.

To open this screen:

From the *Switch Main Menu*, press **5. Help**.

Logout

The Logout command lets you logout from the Ethernet switch.

NOTE: When you issue this command, you are immediately logged off the Ethernet switch.

Contacts

For additional information or troubleshooting help, refer to the User Guide on the CD-ROM. Additional support is also available by phone or online.

US/Canada Contacts

- 24-Hour Technical Support: 800-326-7114

- RMA (Return Merchandise Authorization): http://www.linksys.com/warranty

- Website: http://www.linksys.com

- FTP Site: ftp://ftp.linksys.com

- Support: http://www.linksys.com/support

- Sales Information: 800-546-5797 (800-LINKSYS)

EU Contacts

- Website: http://www.linksys.com/international

- Product Registration: http://www.linksys.com/registration

Customer Site Survey

Use this Customer Site Survey to gather customer contact information and other information about the customer site that will be needed for the implementation and installation of the Linksys Solution.

Site Business Address	
Business Name	
Street Address	
City	
State	
Zip Code	
Shipping Address (if different from above)	
Street Address	
City	
State	
Zip Code	
Site Contact	
Contact Name	
Title	
Phone	
Mobile	
Fax	
Pager #	
E-mail	
After Hours Contact Phone Number	
Is this Site owned and maintained by the customer?	☐ Yes ☐ No
If this site is not customer-owned, who is the owner and maintainer of the site?	
Is this a manned site?	☐ Yes ☐ No
Specify the hours of operation (for example, Monday through Friday, 8am to 5pm, Saturday 9 am to 12 Noon).	

How many users are at your site?	
Phone number and location of the telephone nearest to the Linksys equipment	
Access Procedures	
Specify room access procedures (for example, must visiting personnel be escorted by customer personnel?).	
Security/Safety Procedures	
Specify any special security/safety procedures, such as the need for safety glasses, safety shoes, and the location(s) of hardhat areas.	
Site Coordinator	
Specify the name and phone number of the site coordinator responsible for ensuring that the site is adequately prepared for the installation of the Cisco equipment.	
Name:	
Phone:	
Network/Bandwidth	
What is the downlink and uplink speed of your broadband connection?	
Uplink speed (must be greater than 768 Kbps):	
Downlink speed (must be greater than 768 Kbps):	
Does your network use a firewall?	☐ Yes ☐ No

Warranty Information

Limited Warranty

Linksys warrants this Linksys hardware product against defects in materials and workmanship under normal use for the Warranty Period, which begins on the date of purchase by the original end-user purchaser and lasts for the period specified for this product at www.linksys.com/ warranty. The internet URL address and the web pages referred to herein may be updated by Linksys from time to time; the version in effect at the date of purchase shall apply.

This limited warranty is non-transferable and extends only to the original end-user purchaser. Your exclusive remedy and Linksysf entire liability under this limited warranty will be for Linksys, at its option, to (a) repair the product with new or refurbished parts, (b) replace the product with a reasonably available equivalent new or refurbished Linksys product, or (c) refund the purchase price of the product less any rebates. Any repaired or replacement products will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer. All products and parts that are replaced become the property of Linksys.

Exclusions and Limitations

This limited warranty does not apply if: (a) the product assembly seal has been removed or damaged, (b) the product has been altered or modified, except by Linksys, (c) the product damage was caused by use with non.Linksys products, (d) the product has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, (e) the product has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, (f) the serial number on the Product has been altered, defaced, or removed, or (g) the product is supplied or licensed for beta, evaluation, testing or demonstration purposes for which Linksys does not charge a purchase price or license fee.

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Obtaining Warranty Service

If you have a question about your product or experience a problem with it, please go to www.linksys.com/support where you will find a variety of online support tools and information to assist you with your product. If the product proves defective during the Warranty Period, contact the Value Added Reseller (VAR) from whom you purchased the product or Linksys Technical Support for instructions on how to obtain warranty service. The telephone number for Linksys Technical Support in your area can be found in the product User Guide and at www.linksys.com. Have your product serial number and proof of purchase on hand when calling. A DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO PROCESS WARRANTY CLAIMS. If you are requested to return your product, you will be given a Return Materials Authorization (RMA) number. You are responsible for properly packaging and shipping your product to Linksys at your cost and risk. You must include the RMA number and a copy of your dated proof of original purchase when returning your product. Products received without a RMA number and dated proof of original purchase will be rejected. Do not include any other items with the product you are returning to Linksys. Defective product covered by this limited warranty will be repaired or replaced and returned to you without charge. Customers outside of the United States of America and Canada are responsible for all shipping and handling charges, custom duties, VAT and other associated taxes and charges. Repairs or replacements not covered under this limited warranty will be subject to charge at Linksys' then-current rates.

Technical Support

This limited warranty is neither a service nor a support contract. Information about Linksys' current technical support offerings and policies (including any fees for support services) can be found at: www.linksys.com/support. This limited warranty is governed by the laws of the jurisdiction in which the Product was purchased by you. Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine, CA 92623

D

Federal Communication Commission Interference Statement

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

> **WARNING:** You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Industry Canada Statement

The Class [A] digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation. Cet appareil numerique de la class [A] respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

EC Declaration of Conformity (Europe)

In compliance with the EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC, and Amendment Directive 93/68/EEC, this product meets the requirements of the following standards:

- EN55022 Emission

- EN55024 Immunity

E

Specifications

Model	• SFE2010 48-port 10/100 Ethernet Switch
	• SFE2010P 48-port 10/ 100 Ethernet Switch with PoE
	    • IEEE 802.3af PoE on delivered over any of the 48 10/100 ports
	    • Power budget allows for max power of 15.4W to a FE port, with 360W available to all FE ports on regular AC, and 280W available on redundant power supply

Ports	48 RJ-45 connectors for 10BASE-T/100BASE-TX + 2 10BASE-T/100BASE-TX/1000Base-T + 2 mini-GBIC ports Console port Auto MDI/MDI-X Autonegotiate/Manual setting RPS port for connecting to Redundant Power Supply unit
Cabling Type	UTP CAT 5 or better for 10BASE-T/100BASE-TX, UTP CAT 5e or better for 1000BASE-T
Switching Capacity	17.6 Gig non-blocking
Forwarding Capacity	13M packets per second (64-byte packet)
LEDs	Power, Fan, Link/Act, PoE, Speed, RPS, Master, Stack ID 1 - 8
Stack Operation	• Up to 192 ports in a stack • Hot Insertion and removal • Ring and Chain stacking options • Master and Backup master for resilient stack control • Auto-numbering or manual configuration of units in stack
Buttons	Reset Button
Layer 2 options	8K 256 active VLANs (4096 range) Port-based and 802.1Q Tag-based VLANs Protocol-based VLAN Management VLAN Multicast TV VLAN Private VLAN Edge (PVE) GVRP Head of line blocking prevention
Layer 3 options	Static Routing CIDR (Classless Interdomain Routing) 60 Static Routes IPv4 and IPv6 Forwarding in silicon - Wirespeed forwarding of layer 3 traffic

Environment	Operating Temp: Operating Temp. 0ºC to 40ºC (32ºF to 104ºF)
	Storage Temp: Storage Temp. -20ºC to 70ºC
	Operating Humidity: Operating Humidity 10% to 90% relative humidity, Non-Condensing
	Storage Humidity: Storage Humidity 10% to 95% relative humidity, Non-Condensing
Web User Interface	Built-in Web UI for easy browser-based configuration (HTTP/HTTPS)
SNMP	SNMP version 1, 2c, 3 with support for traps
SNMP MIBs	SNMP version 1, 2c, 3 with support for traps
	RFC1213 MIB-2, RFC2863 Interface MIB, RFC2665 Ether-like MIB, RFC1493 Bridge MIB, RFC2674 Extended Bridge MIB (P-bridge, Q-bridge), RFC2819 RMON MIB (groups 1,2,3,9 only), RFC2737 Entity MIB, RFC 2618 RADIUS Client MIB RFC 1215 Traps
RMON	Embedded Remote Monitoring (RMON) software agent supports four RMON groups (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis.
Firmware Upgrade	Web Browser upgrade (HTTP) and TFTP
	Dual images for resilient firmware upgrades
Port Mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe
Other Management	Traceroute
	Single IP Management
	Secure Socket Layer (SSL) security for Web UI
	Secure Shell (SSH)
	RADIUS
	Port Mirroring
	TFTP upgrade
	DHCP Client
	BootP
	SNTP
	Xmodem upgrade
	Cable Diagnostics
	PING
	Syslog
	Telnet Client (SSH secure support)
IEEE 802.1x	802.1x - RADIUS Authentication. MD5 Hash
	Guest VLAN
	Single/Multiple Host mode

Access Control	ACLs - Drop or Rate Limit based on:
	Source and Destination MAC-based
	Source and Destination IP address
	Protocol
	Port
	VLAN
	DSCP/IP Precedence
	TCP/UDP Source and Destination ports
	802.1p priority
	Ethernet Type
	ICMP packets
	IGMP packets
	DHCP Snooping
	ARP Inspection
	IP Source Address Guard
	Up to 1018 rules
Link Aggregation	Link Aggregation using IEEE 802.3ad LACP
	Up to 8 ports in up to 8 groups
Storm Control	Broadcast, Multicast and Unknown Unicast
DOS prevention	DOS Attack prevention
Spanning Tree	IEEE 802.1D Spanning Tree, IEEE 802.1w Rapid Spanning Tree, IEEE 802.1s Multiple Spanning Tree, Fast Linkover
IGMP Snooping	IGMP (v1/v2) snooping limits bandwidth-intensive video traffic to only the requestors. Support 256 multicast groups.
Power Redundancy	Connection to RPSU for power redundancy
QoS	Priority levels: 4 Hardware queues
	Scheduling: Priority Queuing and Weighted Round Robin (WRR)
	Class of Service:
	• Port-based
	• 802.1p VLAN priority based
	• IPv4/v6 IP Precedence/TOS/DSCP based
	• Diffserv
	• Classification and Remarking ACLs
	Rate Limiting:
	• Ingress policer
	• Egress rate control
	• Per VLAN
	Statistics: 16 meters
Standards	802.3 10BASE-T Ethernet, 802.3u 100BASE-TX Fast Ethernet, 802.3ab 1000BASE-T Gigabit Ethernet, 802.3z Gigabit Ethernet, 802.3x Flow Control, 802.3 ad LACP, 802.1d STP, 802.1Q/p VLAN, 802.1w Rapid STP, 802.1s Multiple STP, 802.1x Port Access Authentication
Certifications	UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A
Regulatory Compliance	Products with the CE Marking indicate compliance with the 89/336/EEC and 73/23/EEC directives, which include the safety and EMC standards listed below.

Safety	UL 60950-1
	IEC60950-1 CB / TUV/Rh
	CSA-C22.2 No. 60950
	EN 60950
	AS/NZS 60950-1
	C-Tick
EMC	FCC Part 15 (CFR 47) Class A
	ICES-003 Class A
	EN 55022 Class A
	CISPR22 Class A
	EN 55024, EN 50082-1, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1
Dimensions	Metric: 440 mm (W) x 375 mm (H) x 44 mm (D)
	English: 17.32 in. (W) x 14.70 in. (H) x 1.73 in. (D)
Unit Weight	SFE2010 —4.94kg, or10.89 lbs. (174.25 oz.)
	SFE2010P — 4.94kg, or10.89 lbs. (174.25 oz.)
Power	SFE2010 — 100-240V 47-63Hz, Internal, Universal; Also equipped with external redundant power supply connector for external power supply, -48VDC
	SFE2010P — 100-240V 47-63Hz, Internal, Universal; Also equipped with external redundant power supply connector for external power supply, -48VDC

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