24-Port Gigabit Ethernet Web Managed Switch LCS-GS8424

User Manual

FCC Certifications

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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE Mark Warning

This equipment complies with the requirements relating to the EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and the RoHS Directive 2011/65/EU.

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Chapter 1 Introduction to the Web Smart Switch

1.1 General Description

High Performance

The device is a powerful, high-performance Gigabit Ethernet switch with 24 10/100/1000 Mbps ports, providing you a cost-effective, space-saving solution for expanding your network. The gigabit ports can lead you to a real gigabit connection, making you be able to transfer high bandwidth-needed files higher and faster in an easy way.

This device provides the easy management function through the Ethernet Web. The network administrator can configure the status and the port function setting of the device through the Web-Based UI. When installing the auto-discovery management tool helps network managers to search and access those switches on LAN easily. Therefore, network managers can access switches that support auto-discovery on LAN without memorizing IP address.

Smart Features

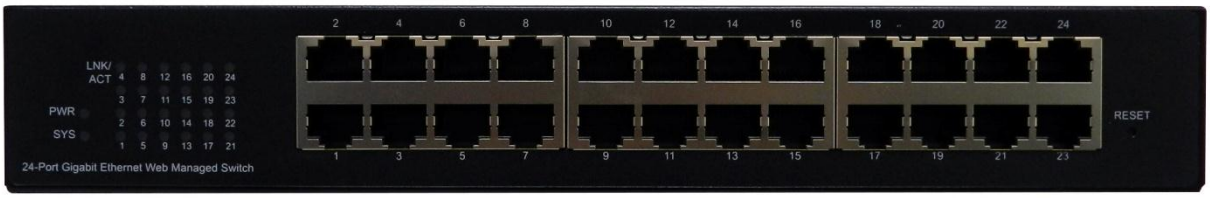
The device provides rich features including Link Aggregation, VLANs, IGMP Snooping, Port Trunking, Spanning Tree, Security and other network management to meet the requirements evolving medium and small-sized enterprises. QoS secures the bandwidth for some bandwidth-demanded applications including VoIP or video conference. Additionally, IEEE 802.3az Energy Efficient Ethernet ability is supported to promise operation in Low Power Idle Mode and save power consumption.

Easy Installation and Management

This switch is plug & play and hassle-free in installation. Auto-MDI/MDI-X crossover on all ports eliminates the need for crossover cables for connection to another switch or hub. Auto-Negotiation on each port senses the link speed of a network device and intelligently adjusts for compatibility and optimal performance. This switch also features diagnostic LEDs, which display the status and activities of the network.

1.2 The Front Panel

The following figure shows the front panel of the switch.



The following table describes the port labels on the front panel.

LABEL	DESCRIPTON
24 10/100/1000 RJ-45 Ethernet Ports	Connect these ports to a computer, a hub, an Ethernet switch or router

1.3 LEDs Definition

This device provides extensive leds to show the activities on power, system and ports.
See the following description for your reference:

LED	Status	Operation
PWR	Steady Green	The switch is powered on.
	Off	The switch is powered off.
SYS	Steady Green	The switch is on and functioning properly.
	Blinking Green	The switch is rebooting and performing self-diagnostic tests.
	Off	The power is off or the system is not ready/malfunctioning.
Link/ACT	Steady Green	The link to a 1000 Mbps Ethernet network is up.
	Blinking Green	The system is transmitting/receiving to/from a 1000 Mbps Ethernet network.
	Off	Port disconnected.

The RESET Button

Reset the switch to its factory default configuration via the RESET button. Press the RESET button for three seconds and release. The switch automatically reboots and reloads its factory configuration file. The RESET button is on the front panel of the switch.

1.4 The Rear Panel

The following figure shows the rear panel of the switch:



Power Receptacle

To be compatible with the electric service standards around the world, the switch is designed to afford the power supply in the range from 100 to 240 VAC, 50/60 Hz. Please make sure that your outlet standard to be within this range.

To power on the switch, please plug the female end of the power cord firmly into the receptacle of the switch, the other end into an electric service outlet, and use the **POWER ON/OFF** switch to have the Switch power on or off. After the switch powered on, please check if the power LED is lit for a normal power status.

1.5 Installation

This switch can be placed on your desktop directly, or mounted in a rack. Please refer to the instructions for installation.

Before installing the switch, we recommend:

1. The switch is placed with appropriate ventilation environment. A minimum 25 mm space around the unit is recommended.
2. The switch and the relevant components are away from sources of electrical noise such as radios, transmitters and broadband amplifiers
3. The switch is away from environments beyond recommend moisture

Desktop Installation

1. Install the switch on a level surface that can support the weight of the unit and the relevant components.
2. Plug the switch with the female end of the provided power cord and plug the male end to the power outlet.

Rack-mount Installation

The switch may be standalone, or mounted in a rack. Rack mounting facilitate to an orderly installation when you are going to install series of networking devices.

Procedures to Rack-mount the switch:

1. Disconnect all the cables from the switch before continuing.
2. Place the unit the right way up on a hard, flat surface with the front facing you.
3. Locate a mounting bracket over the mounting holes on one side of the unit.
4. Insert the screws and fully tighten with a suitable screwdriver.
5. Repeat the two previous steps for the other side of the unit.
6. Insert the unit into the rack and secure with suitable screws.
7. Reconnect all the cables.

Installing Network Cables

1. Crossover or straight-through cable: All the ports on the switch support Auto-MDI/MDI-X functionality. Both straight-through or crossover cables can be used as the media to connect the switch with PCs as well as other devices like switches, hubs or router.

2. Category 3, 4, 5 or 5e, 6 UTP/STP cable: To make a valid connection and obtain the optimal performance, an appropriate cable that corresponds to different transmitting/receiving speed is required. To choose a suitable cable, please refer to the following table.

Media	Speed	Wiring
10/100/1000 Mbps copper	10 Mbps	Category 3,4,5 UTP/STP
	100 Mbps	Category 5 UTP/STP
	1000 Mbps	Category 5e, 6 UTP/STP

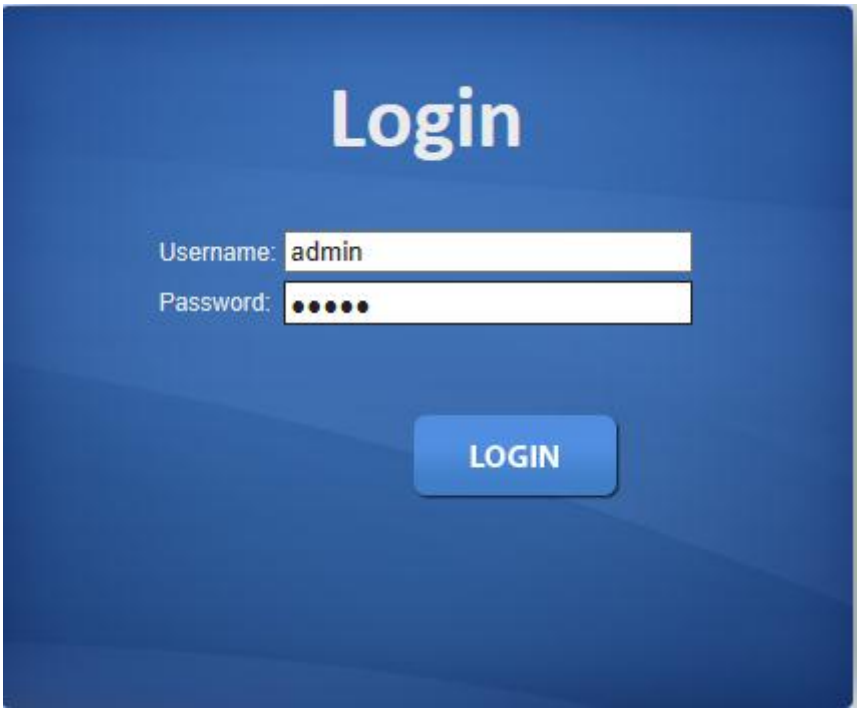
Chapter 2 Basic Web Management Information

2.1 System login

1. Start your web browser.
2. Type “http://”and the IP address of the switch (for example, the default management IP address is 192.168.1.1) in the Location or Address field. Press **[ENTER]**.

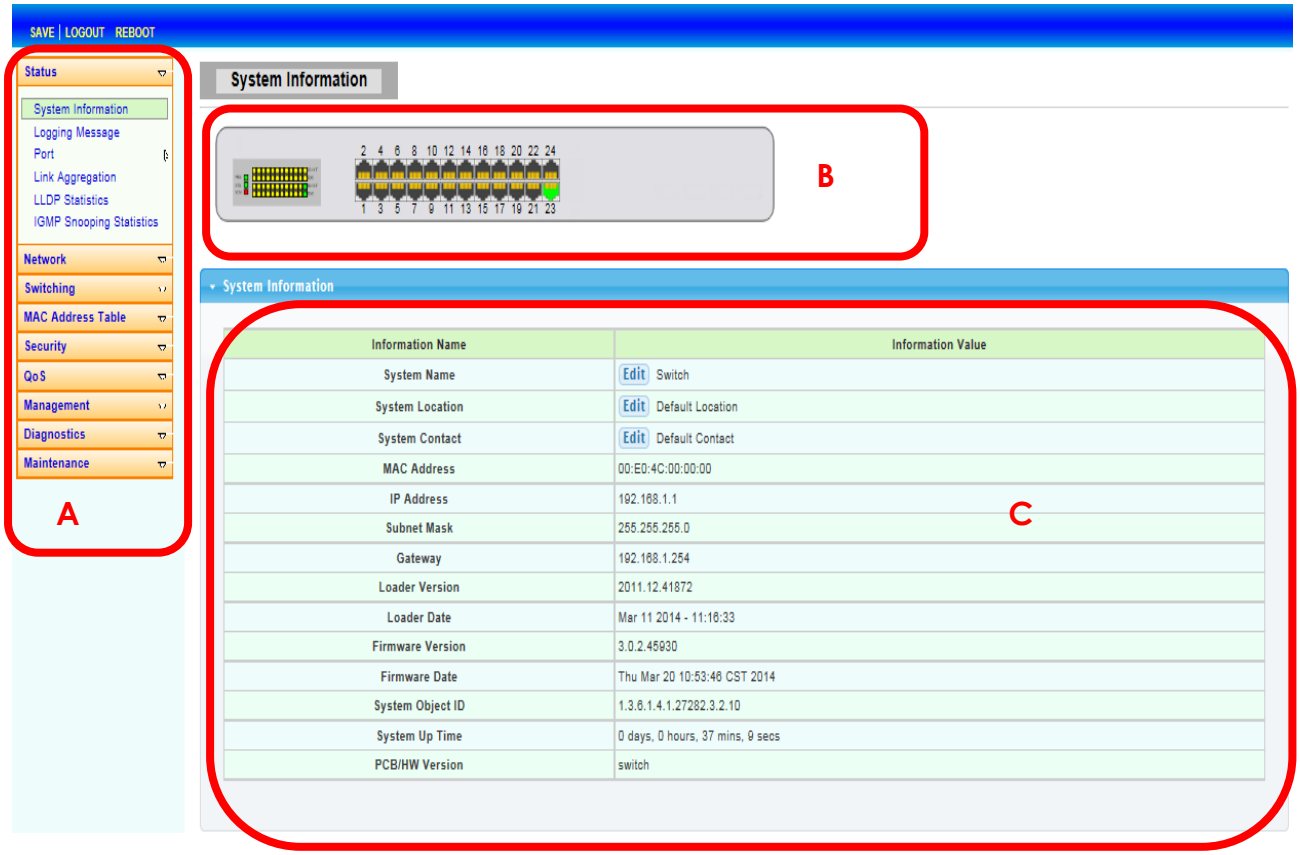


3. The login screen appears. The default username and password are “**admin**”, so you can click **OK** and go to the web configuration screen directly.



2.2 The Graphic User Interface

After the password authorization, the information page shows up. You may click on each folder on the left column of each page to get access to each configuration page. The Graphic User Interface is as follows:

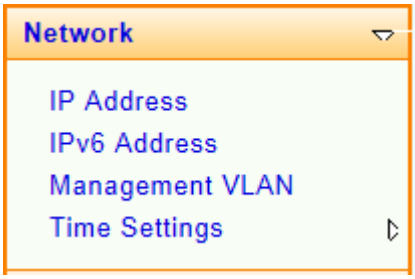
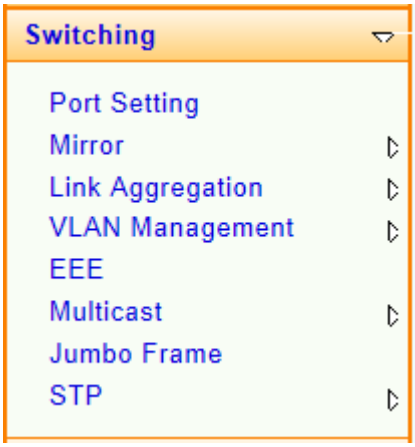
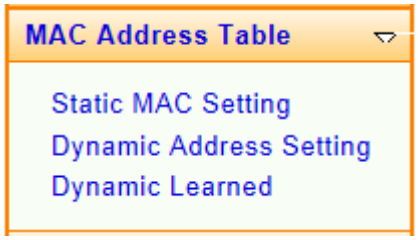
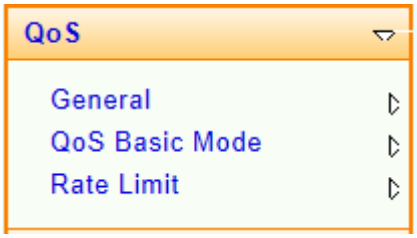
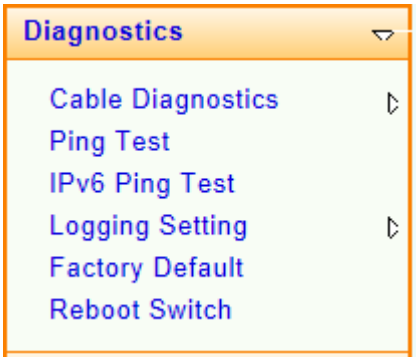
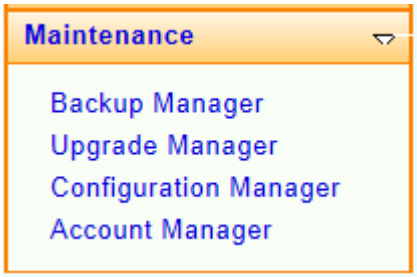


A –Click the menu items to open submenu links, and then click on a submenu link to open the screen in the main window.

B –It shows the switch's current link status. Green squares indicate the port link is up, while black squares indicate the port link is down.

C –Displays system information such as MAC address and firmware version.

In the navigation panel, click a main link to reveal a list of submenu links shown as the following:

Status	Network	Switching
		
MAC Address Table	**Security**	**QoS**
		
Management	**Diagnostics**	**Maintenance**
		

The following table describes the links in the navigation panel.

LINKS	DESCRIPTION
Status	
System Information	This link takes you to a screen that displays general system information.
Logging Message	This sub-menu takes you to screens where you can view and setup system logs.
Port	This link takes you to a screen where you can configure the port information.
Link Aggregation	This link takes you to a screen where you review the LAG Status and the LACP Information.

LLDP Statistics	This link takes you to view the summary and per-port information for LLDP frames transmitted and received on the switch.
IGMP Snooping Statistics	This link takes you to see the statistics information of IGMP.
Network	
IP Address	This link takes you to a screen where you can configure the IP information.
IPv6 Address	This link takes you to a screen where you can configure the IPv6 information.
Management VLAN	This link takes you to view the entry of a VLAN from which a management station will be allowed to manage the device using TCP/IP (in-band via web manager or Telnet).
Time Settings	This link takes you to a screen where you can configure the switch's time settings.
Switching	
Port Setting	This link takes you to a screen where you can configure settings for individual switch ports.
Mirror	This sub-menu takes you to screens where you can copy traffic from one port or ports to another port in order that you can examine the traffic from the first port without interference.
Link Aggregation	This link takes you to a screen where you can configure the trunk settings on a port.
VLAN Management	This link takes you to a screen where you can configure the VLAN (IEEE 802.1Q) settings on a port.
EEE	This link takes you to enable or disable port EEE(Energy Efficient Ethernet) function.
Multicast	This link takes you to set multicast filtering and unknown multicast action.
Jumbo Frame	This link takes you to a screen where you can configure the Jumbo Frame size.
STP	This sub-menu takes you to screens where you can configure the STP to prevent network loops.
MAC Address Table	
Static MAC Setting	This link takes you to display and configure the Static MAC settings.
Dynamic Address Setting	This link takes you to configure the Dynamic Address settings.
Dynamic Learned	This link takes you to a screen where you can to view the Dynamic Address settings information.
Security	
Storm Control	This link takes you to a screen where you can limit the number of broadcast, multicast and unknown unicast and multicast packets the Switch receives per second on the ports.
Protected Ports	This link takes you to a screen to setting and revising the protected ports.

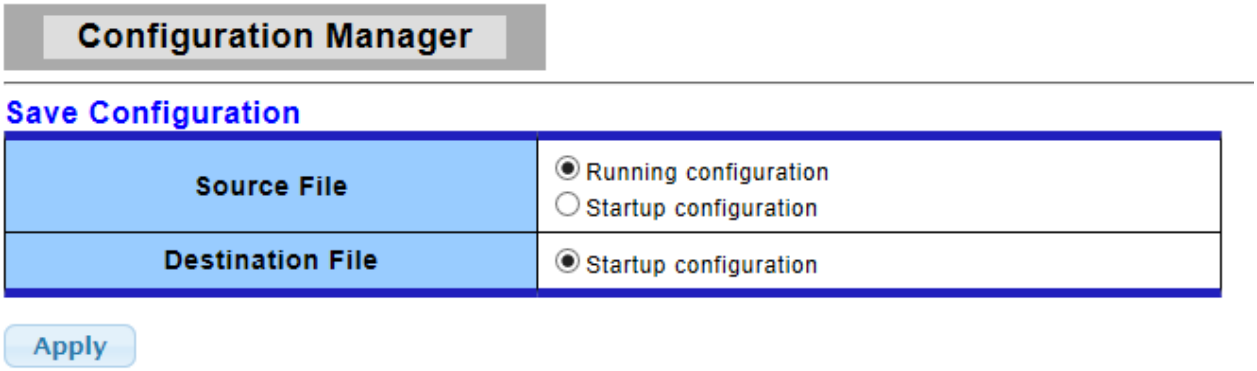
DoS	This link takes you to configure DoS setting to enable/disable DoS function and all others related in the sub-menu.
Access	This link takes you a way to access the switch.
QoS	
General	This link takes you to a screen where you can configure QoS through the sub-menu, including QoS Priorities, Port Settings, Queue Settings, CoS Mapping, DSCP Mapping, and IP Precedence Mapping.
QoS Basic Mode	This link takes you to a screen where you can configure the QoS Basic Mode through the sub-menu, including the Global Settings and the Port Settings.
Rate Limit	This link takes you to a screen where you can configure the QoS Rate Limit through the sub-menu, including Ingress Bandwidth Control, Egress Bandwidth Control, and Egress Queue.
Management	
LLDP	This link takes you to a screen where you can set and revise the LLDP.
SNMP	This link takes you to a screen where you can set and revise the SNMP.
Diagnostics	
Cable Diagnostics	This link takes you to a screen where you can do Copper test on each port.
Ping Test	This link takes you to a screen where you can do Ping test.
Ping6 Test	This link takes you to a screen where you can do Ping6 test.
Logging Setting	This link takes you to a screen where you can configure log settings.
Factory Default	This link takes you back to the factory default configuration.
Reboot Switch	This link takes you to a screen where you can reboot the switch.
Maintenance	
Backup Manager	This link takes you to a screen where you can backup the settings you have made.
Upgrade Manager	This link takes you to a screen where you can upgrade the switch settings.
Configuration Manager	This link takes you to a screen where you can save all the configurations you have made to the switch.
Account Manager	This link takes you to a screen where you can change the web configuration login account.

2.3 SAVE LOGOUT REBOOT

2.3.1 SAVE

2.3.1.1Saving running configurations

Click **SAVE**-> **Save Configuration to FLASH** to view the screen as shown next. This page allow user to copy running configuration, startup configuration or backup configuration to startup configuration or backup configuration.



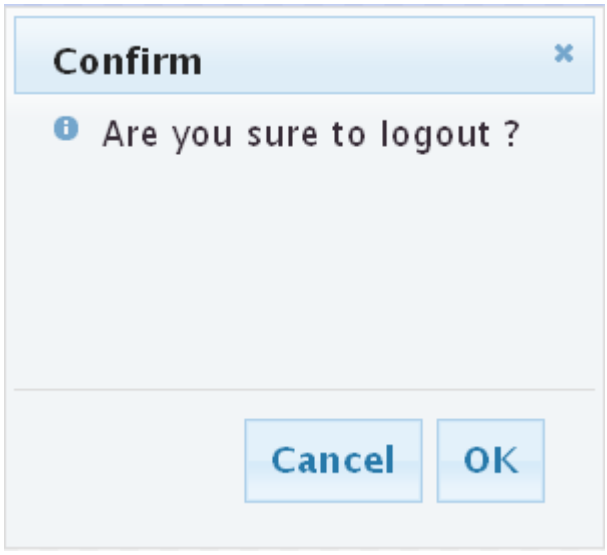
Configuration Manager Page

Configuration Manager Fields

LABEL	DESCRIPTION
Source File	Select upgrade method ■ Running configuration: Running configuration file ■ Startup configuration: Startup configuration file
Destination File	Select Upgrade Type ■ Startup Configuration: Startup configuration file

2.3.2 LOGOUT

Click **Logout** to exit the web configurator. You have to log in with your password again after you log out, if there is any. This is recommended after you finish a management session for security reasons.



2.3.3 REBOOT

Reboot allows you to restart the switch without physically turning the power off.

Follow the steps below to reboot the switch.

1. Click **REBOOT** to view the screen as shown next.



2. Click **Reboot** button, then the following interface pops up.



3. When it finished, the switch has been restarted.

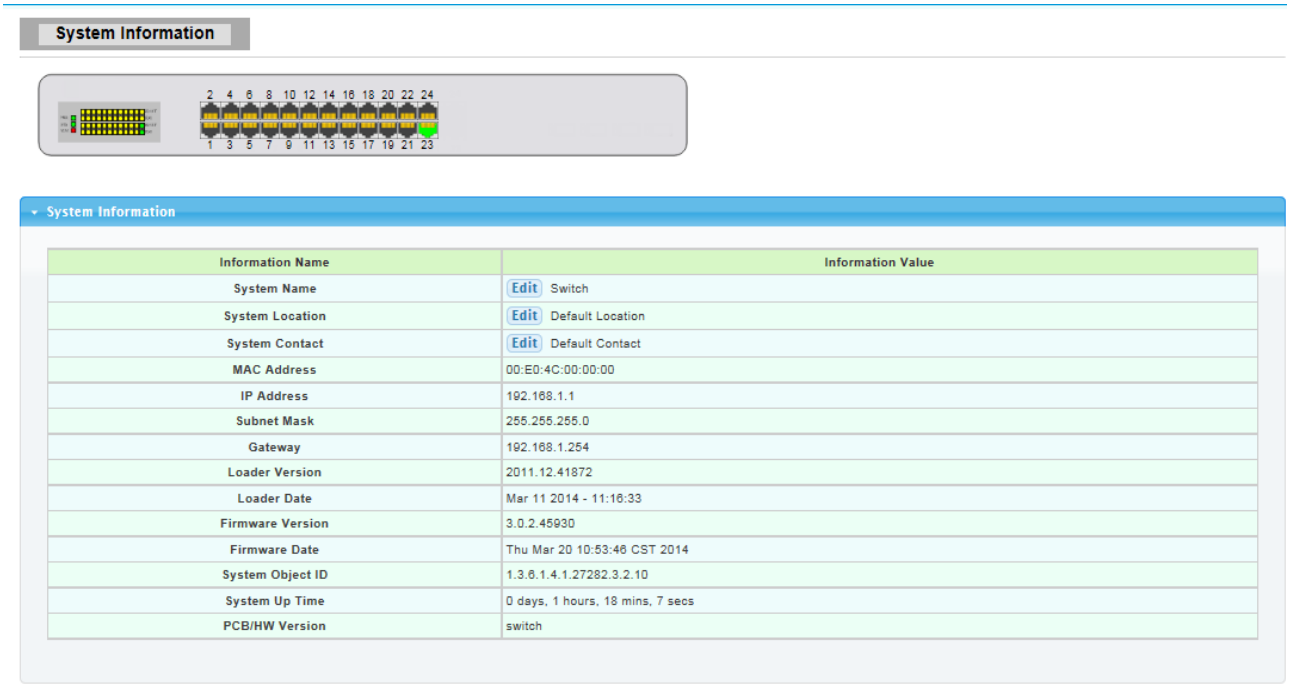
Chapter 3 Web Management Configuration

3.1 Status

Use the Status pages to view system information and status.

3.1.1 System Information

In the navigation panel, click **Status** > **System Information** to display the screen as shown below. This page allow user to configure and browse some system information such as MAC address, IP address, loader version and firmware version and so on.

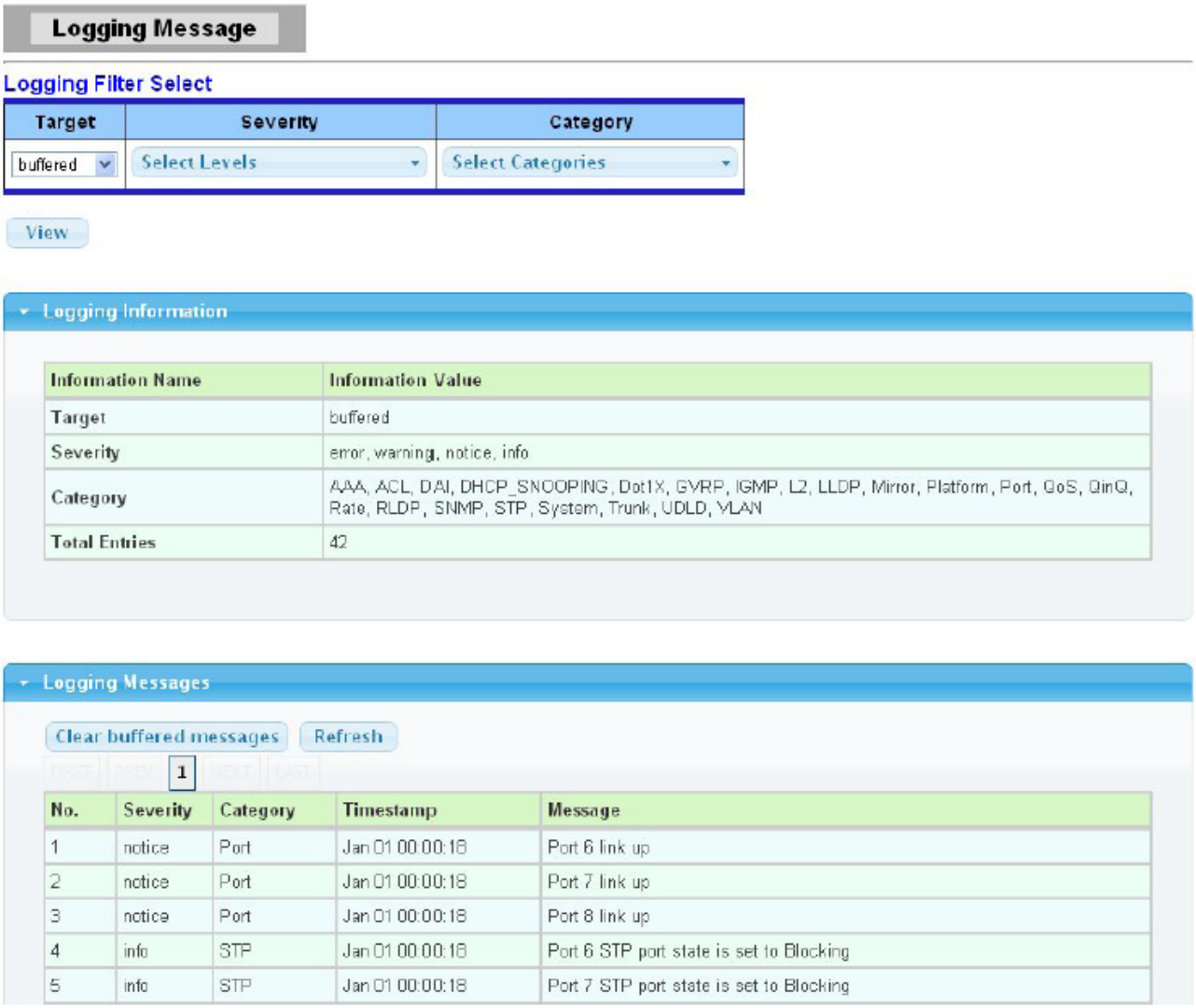


With “Edit” button in the table，user could configure the field value.

LABEL	DESCRIPTION
System Name	System name of the switch. This name will also use as CLI prefix of each line. (“Switch>” or “Switch#”)
System Location	System location of the switch.
System Contact	System contact of the switch.

3.1.2 Logging Message

Use this screen to display the switch logs. Click **Status** > **Logging Message** in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

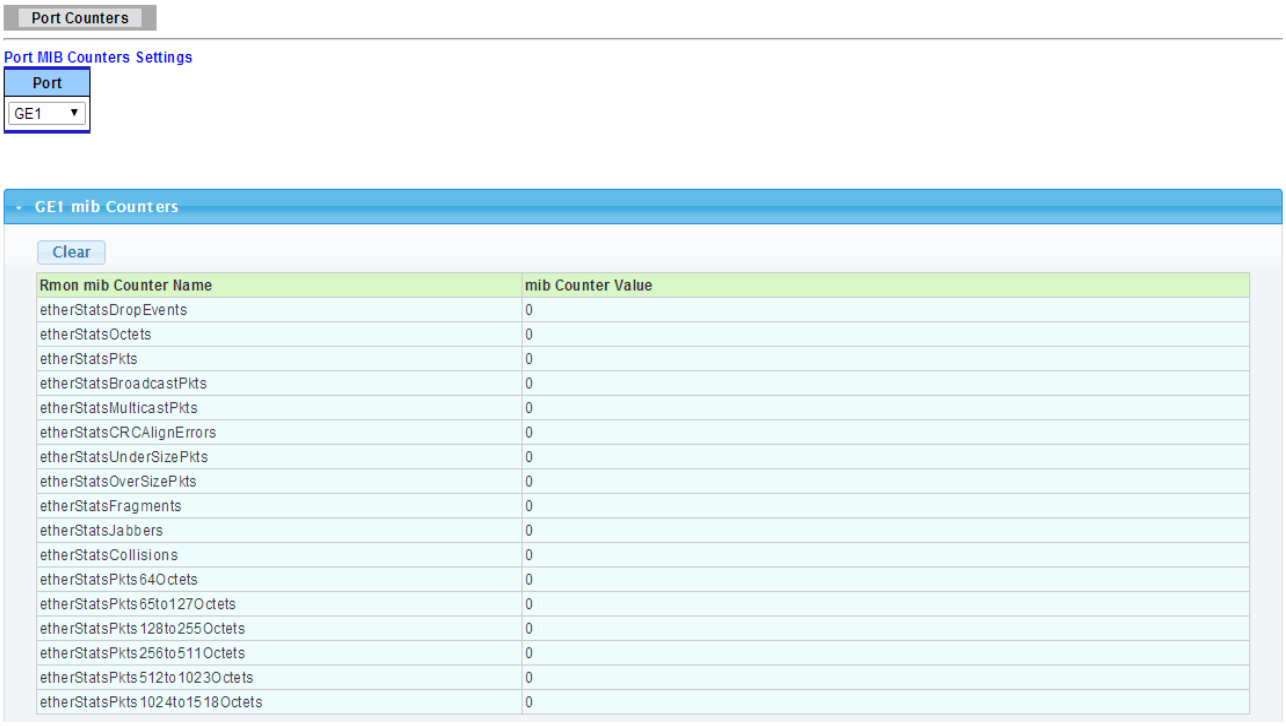
LABEL	DESCRIPTION
Target	Select the log message source to show on the table ■ Buffered: Logs store in the device buffer. ■ FLASH: Logs store in the device flash.
Severity	Select severity to filter log messages.
Category	Select category to filter log messages.

3.1.3 Port

The Port configuration page displays port summary and status information.

3.1.3.1 Port Counters

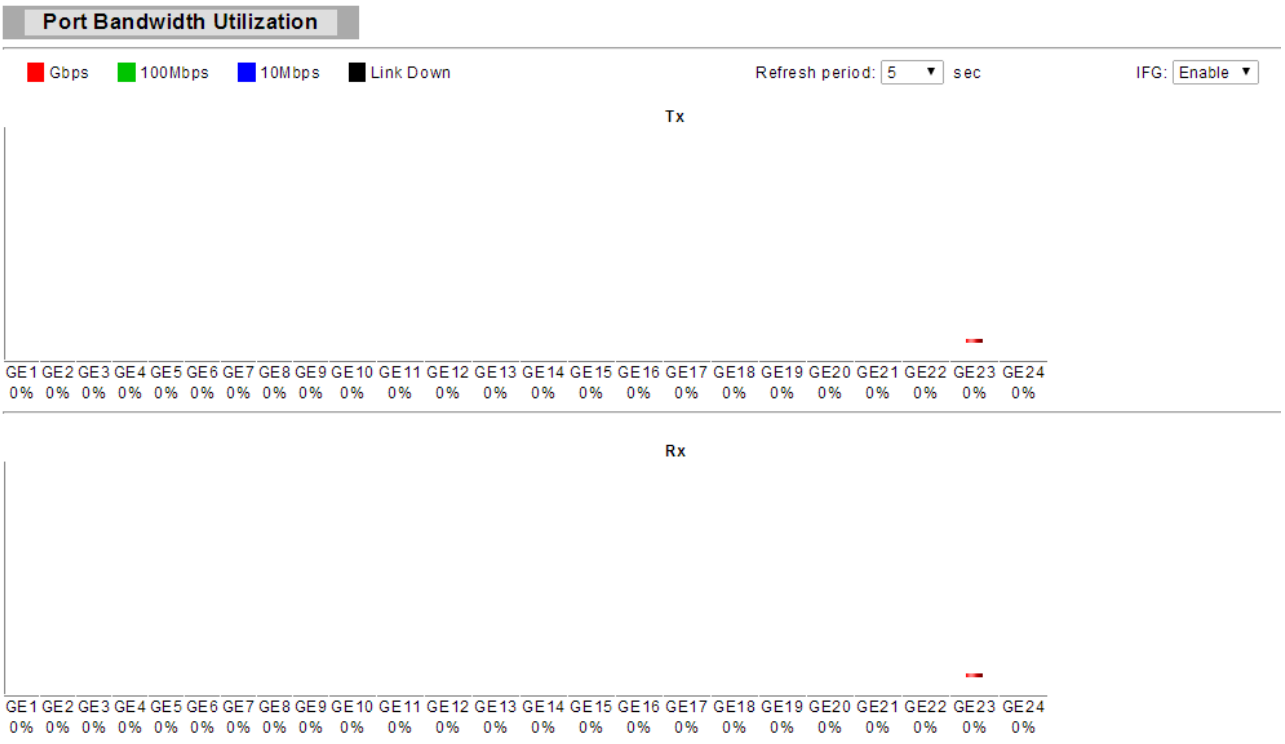
Use this screen to display the Switch port statistics. Click **Status**->**Port** > **Port Counters** to view the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	This identifies the Ethernet port.

3.1.3.2 Bandwidth Utilization



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Refresh Period	Refresh the web page every period of seconds
IFG	Inter frame gap in bandwidth calculation ■ **Enable:** Add inter frame gap to bandwidth calculation ■ **Disable:** Remove inter frame gap to bandwidth calculation

3.1.4 Link Aggregation

Click **Status** > **Link Aggregation** in the navigation panel to view the screen as shown below.



The following table describes the labels in this screen.

LAG Status Field:

LABEL	DESCRIPTION
LAG	LAG Name
Name	LAG port description
Type	The type of the LAG ■ **Static:** The groups of ports assigned to a static LAG are always active members. ■ **LACP:** The groups of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.
Link State	LAG port link status
Active Member	Active member ports of the LAG

Standby Member	Inactive or candidate member ports of the LAG

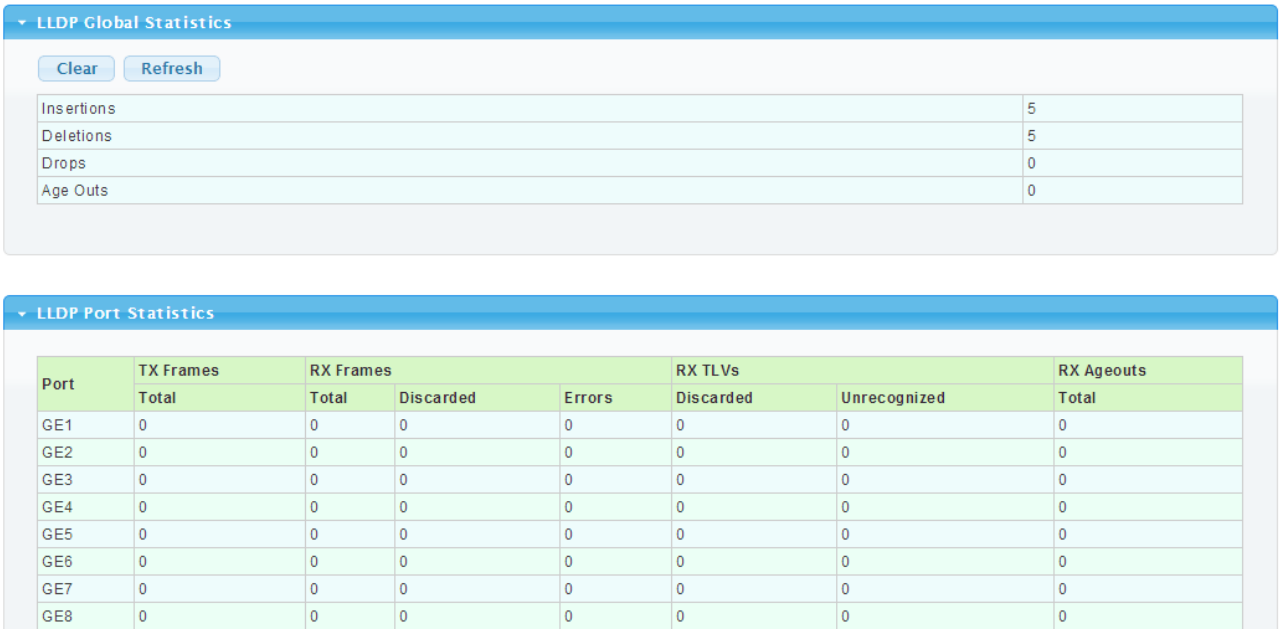
LACP Status Field:

LABEL	DESCRIPTION
LAG	LAG Name
Port	Member port name.
PartnerSysId	The system ID of link partner. This field would be updated when the port receives LACP PDU from link partner.
PnKey	Port key of partner. This field would be updated when the port receives LACP PDU from link partner.
AtKey	Port key of actor. The key is designed to be the same as trunk ID.
Sel	LACP selection logic status of the port. “S” means selected, “U” means unselected, and “D” means standby.
Mux	LACP mux state machine status of the port. “DETACH” means the port is in detach state, “WAIT” means waiting state, “ATTACH” means attach state, “CLLCT”
Receiv	LACP receive state machine status of the port. “INIT” means the port is in initialize state, “PORTds” means port disabled state, “EXPR” means expired state, “LACPds” means LACP disabled state, “DFLT” means defaulted state, “CRRNT” means current state.
PrdTx	LACP periodic transmission state machine status of the port. “no PRD” means the port is in no periodic state, “FstPRD” means fast periodic state, “SlwPRD” means slow periodic state, “PrdTX” means periodic TX state.
AtState	The actor state field of LACP PDU description. The field from left to right describes: “LACP_Activity”, “LACP_Timeout”, “Aggregation”, “Synchronization”, “Collecting”, “Distributing”, “Defaulted”, and “Expired”. The contents could be true or false. If the contents are false, the web shows “_”; if the contents are true, the web shows “A”, “T”, “G”, “S”, “C”, “D”, “F” and “E” for each content respectively.
PnState	The partner state field of LACP PDU description. The field from left to right describes: “LACP_Activity”, “LACP_Timeout”, “Aggregation”, “Synchronization”, “Collecting”, “Distributing”, “Defaulted”, and “Expired”. The contents could be true or false. If the contents are false, the web shows “_”; if the contents are true, the web shows “A”, “T”, “G”, “S”, “C”, “D”, “F” and “E” for each content respectively.

3.1.5 LLCP Statistics

Click **Status > LLDP Statistics.** The Link Layer Discovery Protocol (LLDP) Statistics page displays summary and per-port information for LLDP frames transmitted and received on the switch.

LLDP Statistics

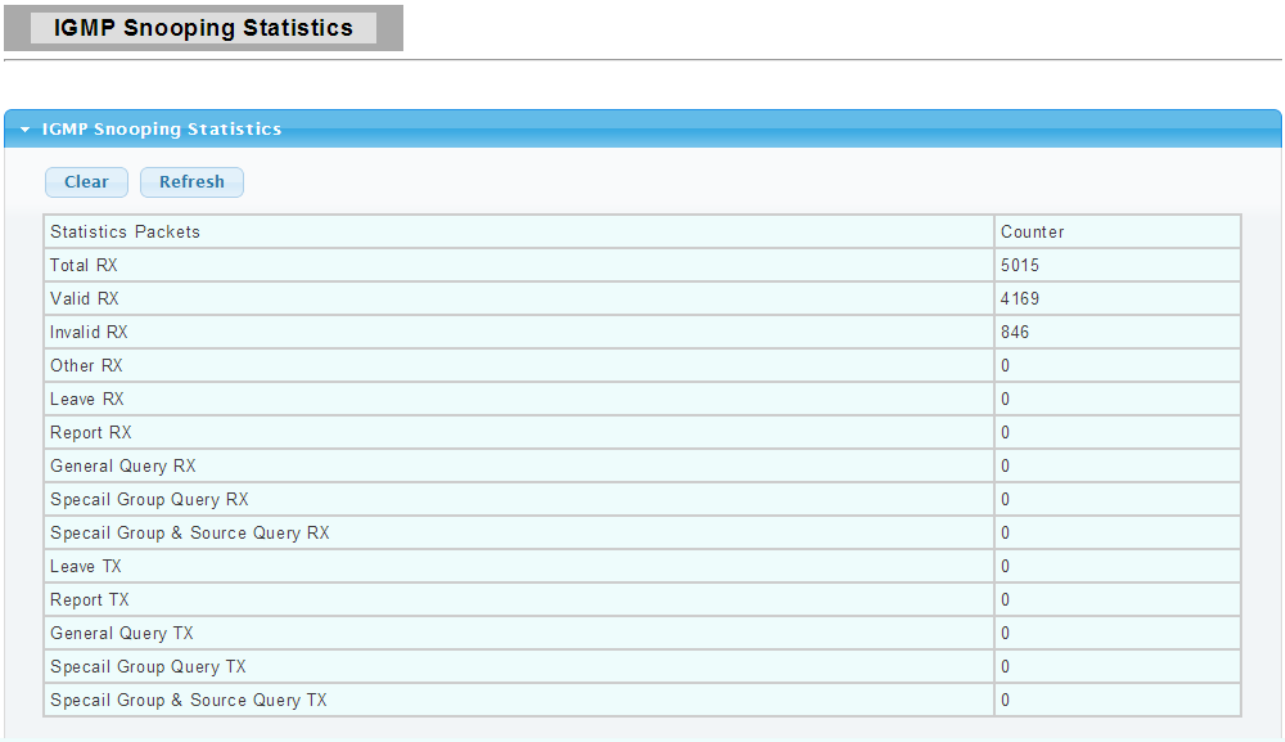


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Insertions	The number of times the complete set of information advertised by a particular MAC Service Access Point (MSAP) has been inserted into tables associated with the remote systems.
Deletions	The number of times the complete set of information advertised by MSAP has been deleted from tables associated with the remote systems.
Drops	The number of times the complete set of information advertised by MSAP could not be entered into tables associated with the remote systems because of insufficient resources.
Age Outs	The number of times the complete set of information advertised by MSAP has been deleted from tables associated with the remote systems because the information timeliness interval has expired.
Port	Interface or port number.
TX Frames Total	Number of LLDP frames transmitted on the corresponding port.
RX Frames Total	Number of LLDP frames received by this LLDP agent on the corresponding port, while the LLDP agent is enabled.
RX Frames Discarded	Number of LLDP frames discarded for any reason by the LLDP agent on the corresponding port.
RX Frames Errors	Number of invalid LLDP frames received by the LLDP agent on the corresponding port, while the LLDP agent is enabled.
RX TLVs Discarded	Number of TLVs of LLDP frames discarded for any reason by the LLDP agent on the corresponding port.
RX TLVs Unrecognized	Number of TLVs of LLDP frames that are unrecognized while the LLDP agent is enabled
RX Ageouts Total	Number of age out LLDP frames.

3.1.6 IGMP Snooping Statistics

Click **Status** > **IGMP Snooping Statistics** in the navigation panel to view the screen as shown below.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Total RX	This field displays the total amount of RX
Valid RX	This field displays the total amount of valid RX.
Invalid RX	This field displays the total amount of invalid RX.
Other RX	This field displays the total amount of other RX.
Leave RX	This field displays the total amount of leave RX.
Report RX	This field displays the total amount of report RX.
General Query RX	This field displays the total amount of general query RX.
Special Group Query RX	This field displays the total amount of Special Group query RX.
Special Group & Source Query RX	This field displays the total amount of Special Group & Source query RX.
Leave TX	This field displays the total amount of leave TX.
Report TX	This field displays the total amount of report TX.
General Query TX	This field displays the total amount of general query TX.
Special Group Query TX	This field displays the total amount of Special Group query TX.
Special Group & Source Query TX	This field displays the total amount of Special Group & Source query TX.

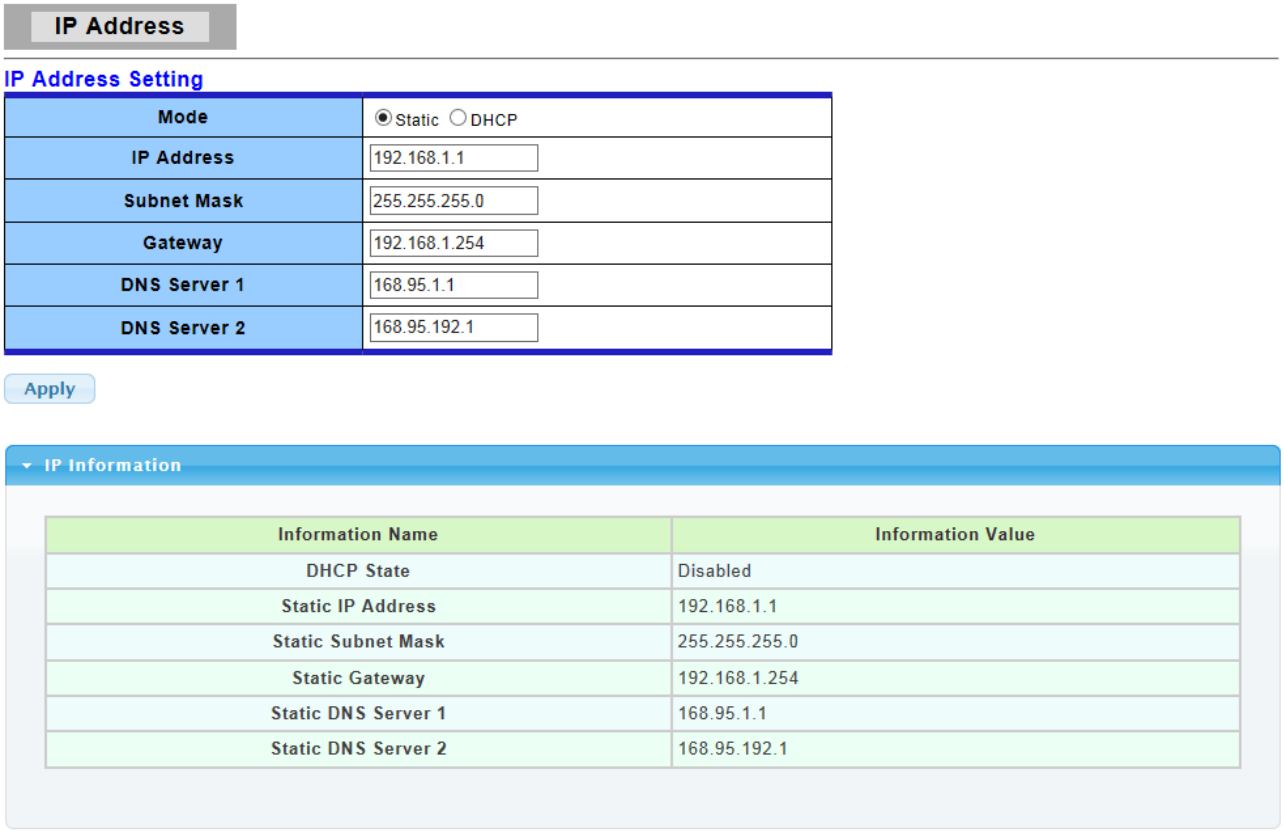
3.2 Network

Use the Network pages to configure settings for the switch network interface and how the switch connects to a remote server to get services.

3.2.1 IP Address

Use the IP Setting screen to configure the switch IP address and the default gateway device. The gateway field specifies the IP address of the gateway (next hop) for outgoing traffic.
The switch needs an IP address for it to be managed over the network. The factory default IP address is 192.168.1.1. The subnet mask specifies the network number portion of an IP address. The factory default subnet mask is 255.255.255.0.

Click Network > IP Address in the navigation panel to display the screen as shown below.



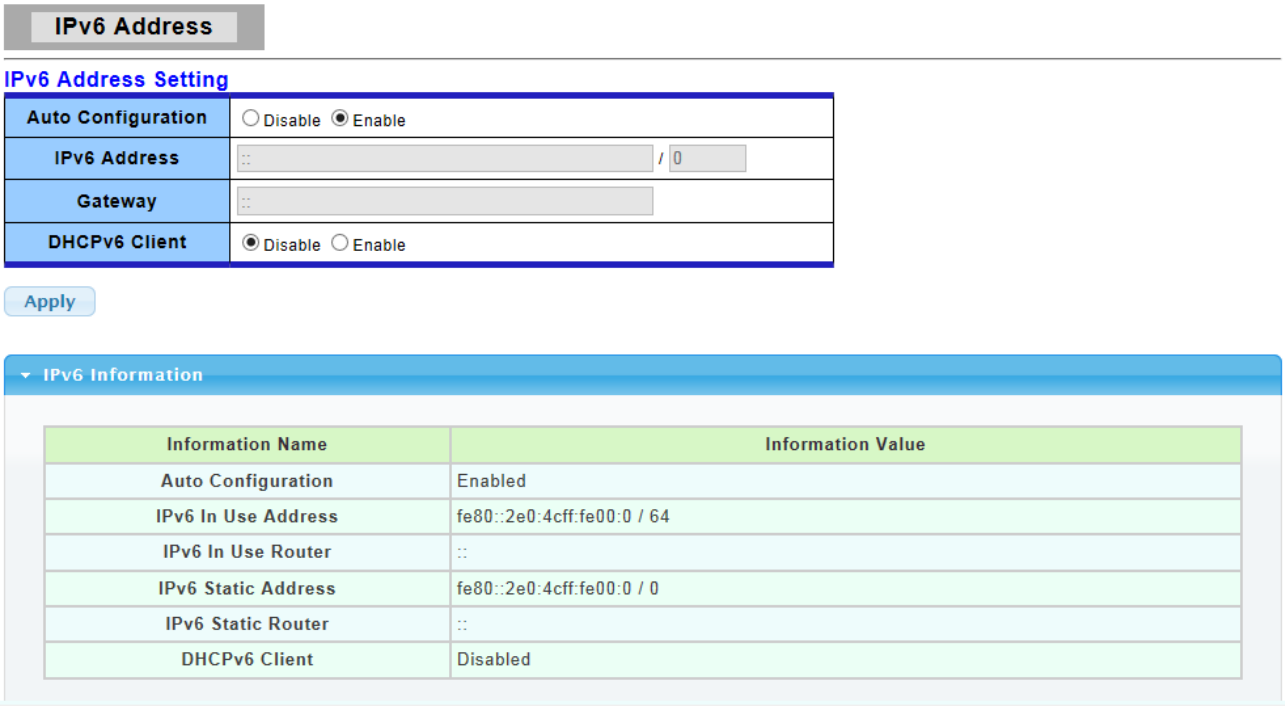
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Mode	Select the mode of network connection ■ **Static**: Enable static IP address. ■ **DHCP**: Enable DHCP to obtain IP information from a DHCP server on the network.

IP Address	Enter the IP address of your switch in dotted decimal notation for example 192.168.1.1. If static mode is enabled, enter IP address in this field.
Subnet Mask	Enter the IP subnet mask of your switch in dotted decimal notation for example 255.255.255.0. If static mode is enabled, enter subnet mask in this field.
Gateway	Enter the IP address of the gateway in dotted decimal notation. If static mode is enabled, enter gateway address in this field.
DNS Server 1	If static mode is enabled, enter primary DNS server address in this field.
DNS Server 2	If static mode is enabled, enter secondary DNS server address in this field.
Apply	Click **Apply** to save your changes to the switch.

3.2.2 IPv6 Address

Click Network> IPv6 Address in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

IPv6 Information Filed:

LABEL	DESCRIPTION
Auto Configuration	Select **Enable** or **Disable** this function.
IPv6 Address	Enter the IPv6 address of your switch. If auto configuration mode is disabled, enter IPv6 address in this field.
Gateway	Enter the IP address of the gateway in dotted decimal notation. If auto configuration mode is disabled, enter IPv6 gateway address in this field.
DHCPv6	DHCPv6 client state.

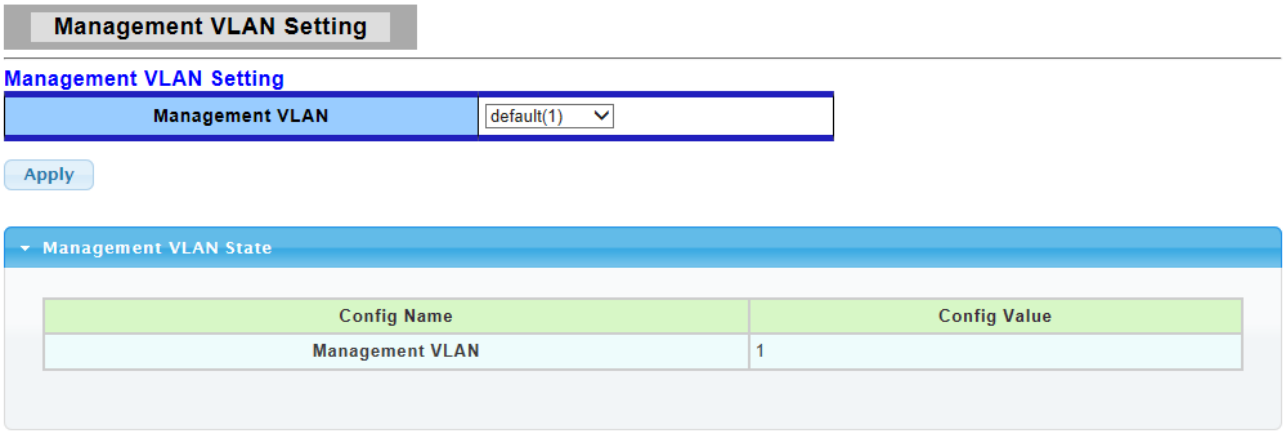
Client	■ **Enable**: Enable DHCPv6 client function. ■ **Disable**: Disable DHCPv6 client function
Apply	Click **Apply** to save your changes to the switch.

IPv6 Address Setting Filed:

LABEL	DESCRIPTION
Auto Configuration	It displays whether the auto configuration function is opened or not.
IPv6 In Use Address	It displays the in use address information of IPv6.
IPv6 In Use Router	It displays the in use router information of IPv6.
IPv6 Static Address	It displays the static address of IPv6.
IPv6 Static router	It displays the static router of IPv6.
DHCPv6 Client	It displays the DHCPv6 Client Status.

3.2.3 Management VLAN

Click **Network**> **Management VLAN** in the navigation panel to display the screen as shown below.

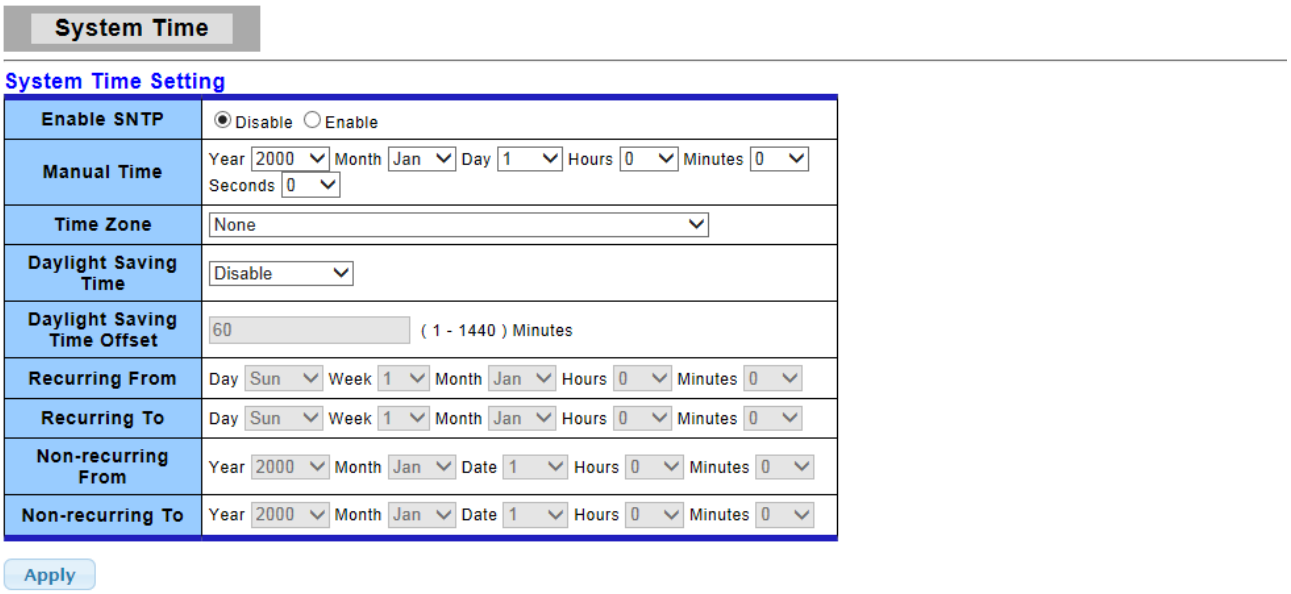


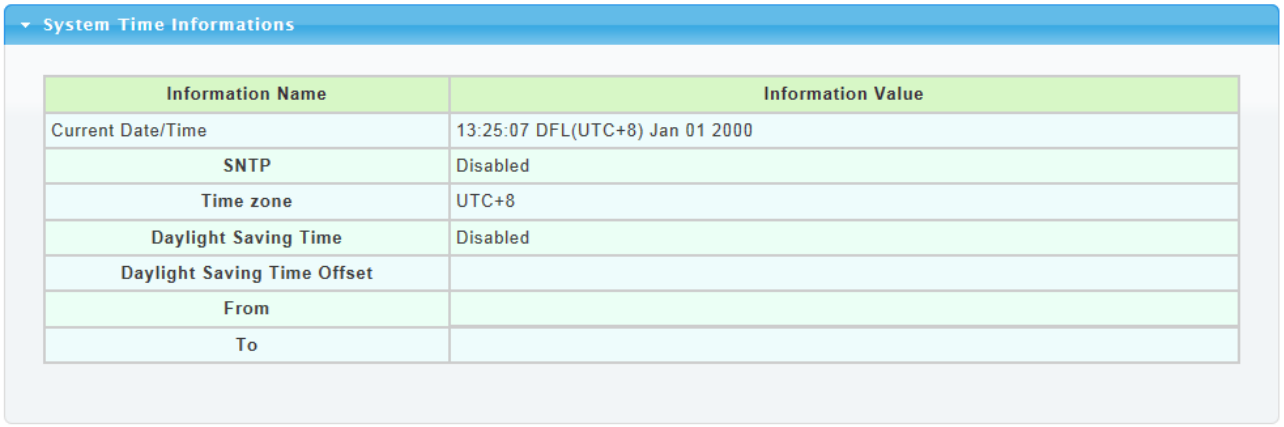
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Management VLAN	This allows the entry of a VLAN from which a management station will be allowed to manage the device using TCP/IP (in-band via web manager or Telnet). Management stations that are on VLANs other than the one selected here will not be able to manage the Switch. The default management VLAN is VLAN 1.

3.2.4 Time Settings

Click **Network**> **Time Settings** in the navigation panel to display the screen as shown below.





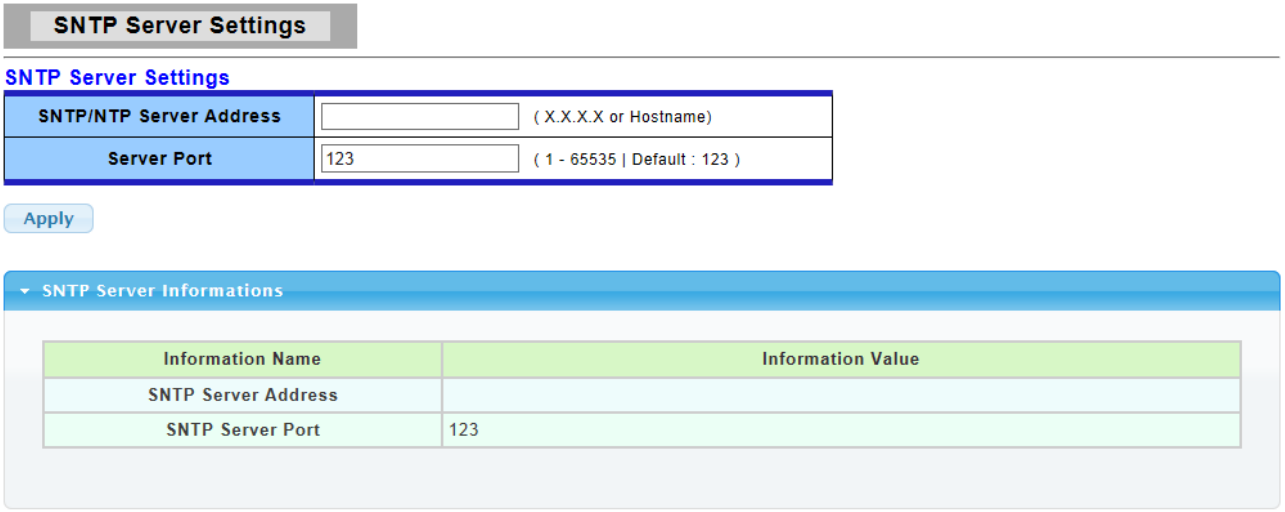
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Enable SNTP	Select the radio button to enable or disable using SNTP server.
Manual Time	Specify static time.
Time Zone	Select a time zone
Daylight Saving Time	Select the mode of daylight saving time. ■ **Disable**: Disable daylight saving time. ■ **Recurring**: Using recurring mode of daylight saving time. ■ **Non-Recurring**: Using non-recurring mode of daylight saving time. ■ **USA**: Using daylight saving time in the United States that starts on the second Sunday of March and ends on the first Sunday of November ■ **European**: Using daylight saving time in the Europe that starts on the last Sunday
Daylight Saving Time Offset	Specify the adjust offset of daylight saving time.
Recurring From	Specify the starting time of recurring daylight saving time. This field available when selecting “Recurring” mode.
Recurring To	Specify the ending time of recurring daylight saving time. This field available when selecting “Recurring” mode.

Non-recurring From	Specify the starting time of non-recurring daylight saving time. This field available when selecting “Non-Recurring” mode.
Non recurring To	Specify the ending time of recurring daylight saving time. This field available when selecting “Non-Recurring” mode.
Apply	Click **Apply** to save your changes to the switch.

3.2.5 SNTP Settings

Click **Network**> **Time Settings** in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

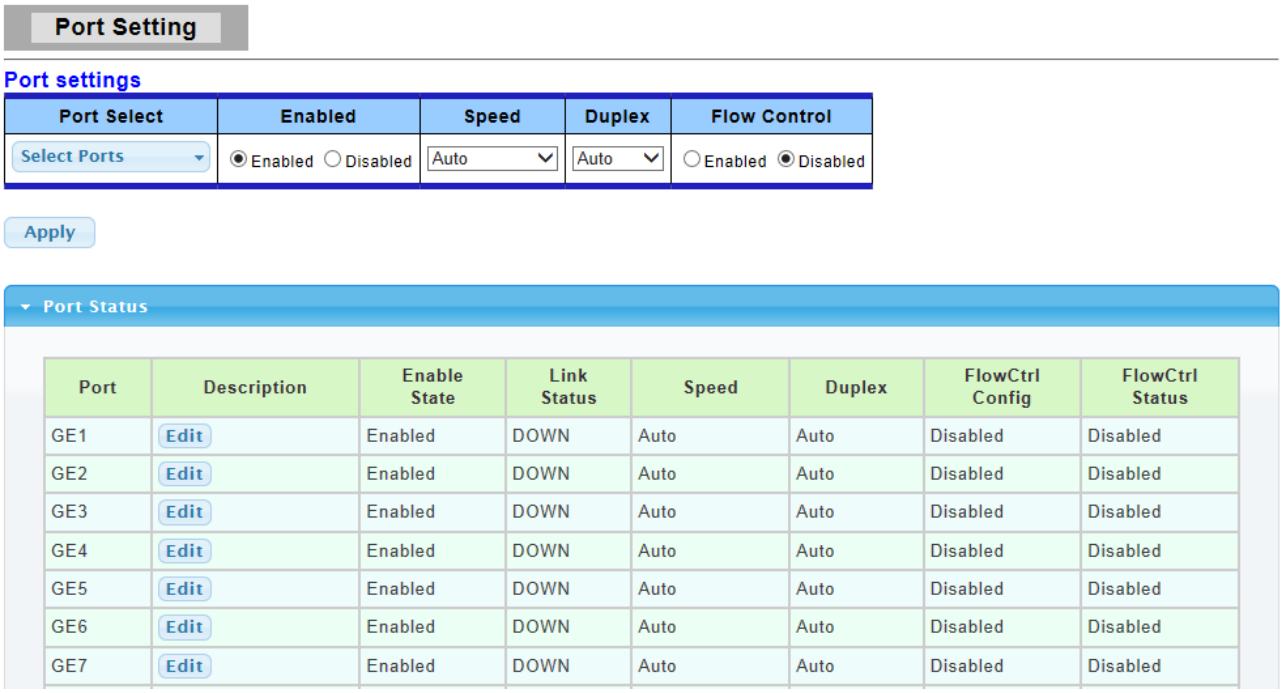
LABEL	DESCRIPTION
SNTP/NTP Server Address	Input IP address or hostname of time server.
Server port	Input time server port number. Default is 123.

3.3 Switching

Use the Switching pages to configure settings for the switch ports, trunk, Layer 2 protocols and other switch features.

3.3.1 Port Setting

This page allow user to configure switch port settings and show port current status.
Click **Switching** > **Port Setting** in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port Select	Select the port(s) from the list box that you will change the port settings for.
Enabled	Select **Enable** from the drop-down box to enable a port. The factory default for all ports is enabled. A port must be enabled for data transmission to occur. Select **Disable** to not use a port.
Speed	Port speed capabilities: · **Auto:** Auto speed with all capabilities. · **Auto-10M:** Auto speed with 10M ability only. · **Auto-100M:** Auto speed with 100M ability only. · **Auto-1000M:** Auto speed with 1000M ability only. · **Auto-10/100M:** Auto speed with 10/100M ability. · **10M:** Force speed with 10M ability. · **100M:** Force speed with 100M ability. · **1000M:** Force speed with 1000M ability. Selecting Auto (auto-negotiation) allows one port to negotiate with a peer port automatically to obtain the connection speed and duplex mode that both ends support. When auto-negotiation is turned on, a port on the switch negotiates with the peer automatically to determine the connection speed and duplex mode. If the peer port does not support auto-negotiation or turns off this feature, the switch determines the connection speed by detecting the signal on the cable and using half duplex mode. When the switch's auto-negotiation is turned off, a port uses the pre-configured speed and duplex mode when making a connection, thus requiring you to make sure that the settings of the peer port are the same in order to connect.
Duplex	Port duplex capabilities: · **Auto:** Auto duplex with all capabilities. · **Half:** Auto speed with 10/100M ability only. · **Full:** Auto speed with 10/100/1000M ability only.

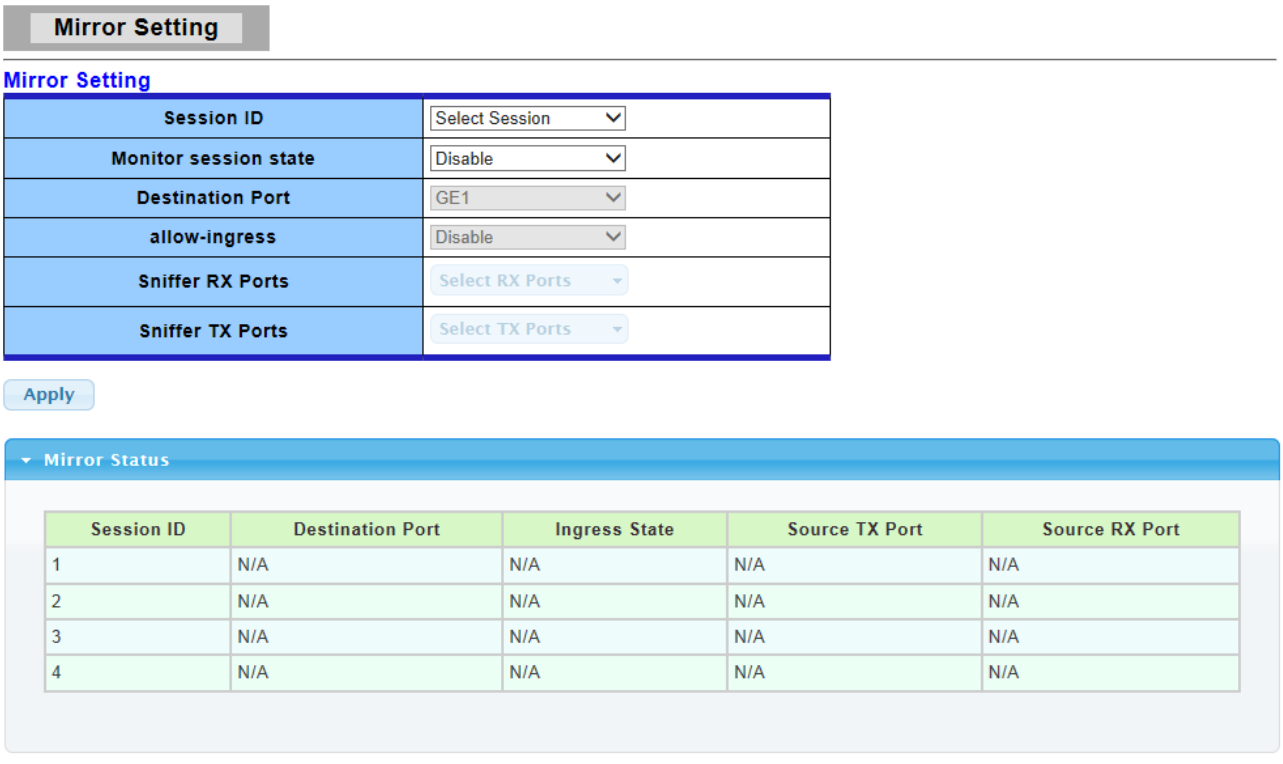
Flow Control	A concentration of traffic on a port decreases port bandwidth and overflows buffer memory causing packet discards and frame losses. Flow Control is used to regulate transmission of signals to match the bandwidth of the receiving port. The switch uses IEEE802.3x flow control in full duplex mode and backpressure flow control in half duplex mode. IEEE802.3x flow control is used in full duplex mode to send a pause signal to the sending port, causing it to temporarily stop sending signals when the receiving port memory buffers fill. Back Pressure flow control is typically used in half duplex mode to send a "collision" signal to the sending port (mimicking a state of packet collision) causing the sending port to temporarily stop sending signals and resend later. Select "**Enabled**" to enable it. Or select "**Disabled**" to disable it.
Apply	Click **Apply** to save your changes to the switch.
Flow Control Config	The Config column displays if Flow Control has been configured to be turned On or Off for the port.
Flow Control Status	The column displays the port's current Flow Control status.

3.3.2 Port Mirroring

The Mirror function copies all the packets that are transmitted by the source port to the destination port. It allows administrators to analyze and monitor the traffic of the monitored ports.

The Mirror Configuration steps are as follows:

Click **Switching > Mirror > Local Mirror Setting** in the navigation panel to display the screen as shown below.



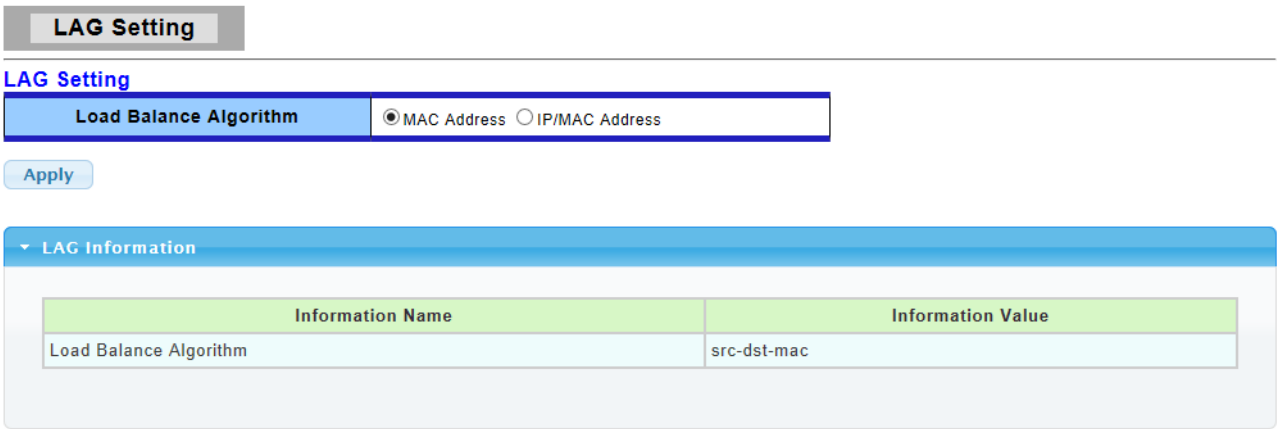
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Session ID	Select mirror session ID
Monitor session state	Select mirror session state : port-base mirror or disable
Destination Port	Select mirror session destination port
Allow-ingress	Select destination port ingress state.
Sniffer Rx ports	Select mirror session source rx ports only select portbased-enabled state, this field is valid only when "**Monitor session state**" is port-base mirror
Sniffer Tx ports	Select mirror session source tx ports only select portbased-enabled state, this field is valid only when "**Monitor session state**" is port-base mirror
Apply	Click **Apply** to save your changes to the switch.

3.3.3 Link Aggregation

3.3.3.1 LAG Setting

Click **Switching**> **Link Aggregation** > **LAG Setting** in the navigation panel to view the screen as shown below.

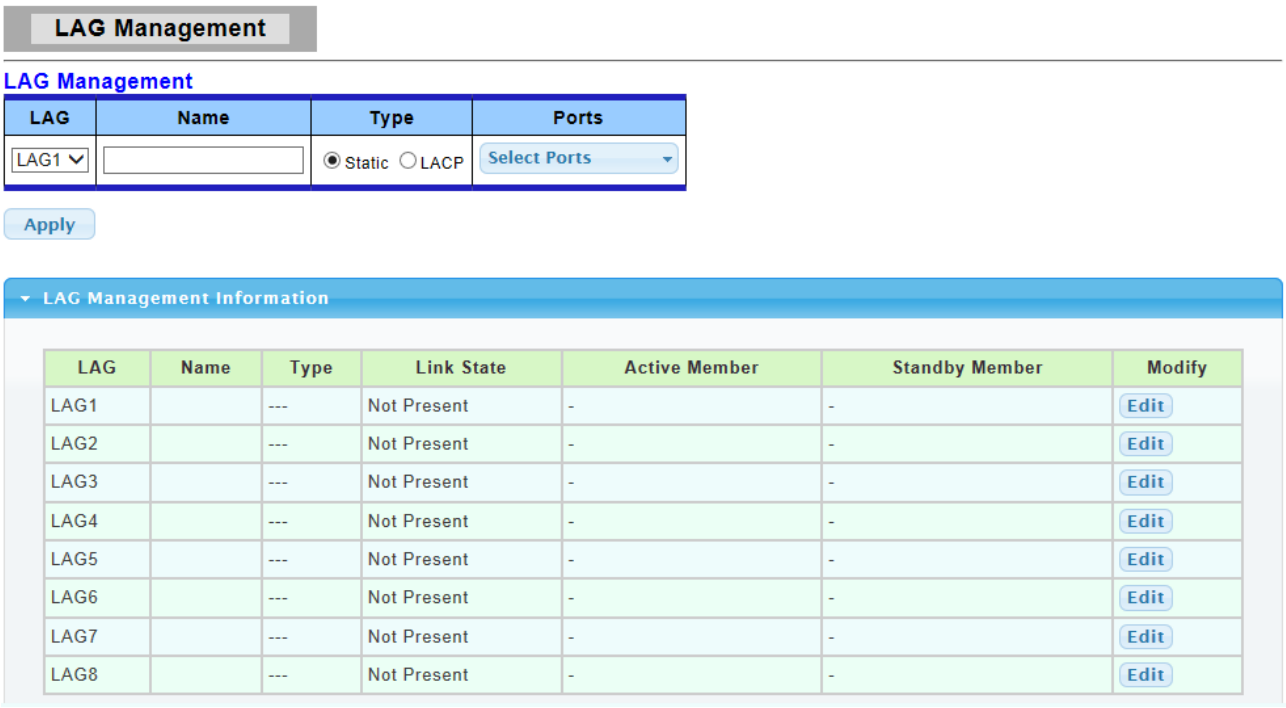


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Load Balance Algorithm	Select the LAG load balance distribution algorithm ■ **MAC Address**: Based on source and destination MAC address for all packets ■ I**P/MAC Address**: Based on source and destination IP addresses for IP packet, and source and destination MAC address for non-IP packets.
Apply	Click **Apply** to save your changes to the switch.

3.3.3.2 LAG Management

Click **Switching**> **Link Aggregation** > **LAG Management** in the navigation panel to view the screen as shown below.



The following table describes the labels in this screen.

LAG Management Setting Field:

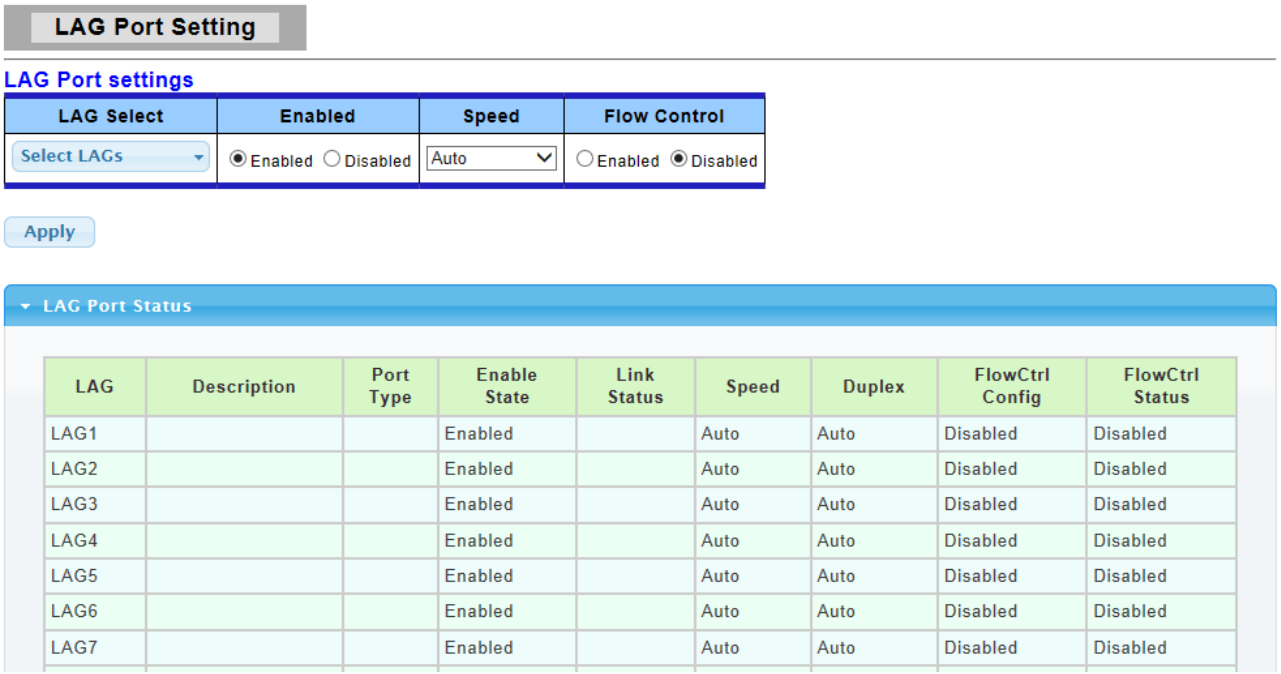
LABEL	DESCRIPTION
LAG	Select the LAG to be configured.
Name	LAG port description
Type	Select the type of the LAG ■ **Static**: The group of ports assigned to a static LAG are always active members. ■ **LACP**: The group of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.
Ports	Select the trunk member ports in this field. There are the following limitations for choosing the member ports: ■ All ports in a LAG must be of the same media type. ■ To add a port to the LAG, it cannot belong to any VLAN except the default VLAN. ■ Ports in a LAG must not be assigned to another LAG. ■ Ports in a LAG must not be a mirroring port. ■ No more than eight ports are assigned to a LAG. ■ When a port is added to a LAG, the configuration of the LAG is applied to the port. When the port is removed from the LAG, its original configuration is reapplied. ■ There could be at most 8 member ports in a trunk.
Apply	Click **Apply** to save your changes to the switch.

LAG Management Information Field:

LABEL	DESCRIPTION
LAG	LAG Name
Name	LAG port description
Type	Select the type of the LAG ■ **Static**: The group of ports assigned to a static LAG are always active members. ■ **LACP**: The group of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.
Link State	LAG port link status
Active Member	Active member ports of the LAG
Standby Member	Inactive or candidate member ports of the LAG
Modify	Click “Edit” button to edit LAG.

3.3.3.3 LAG Port Settings

Click **Switching**> **Link Aggregation** > **LAG Port settings** in the navigation panel to view the screen as shown below.



The following table describes the labels in this screen.

LAG Port Setting Field:

LABEL	DESCRIPTION
LAG	Select the LAG to be configured.
Name	LAG port description
Enabled	Port admin state. ■ Enabled: Enable the port.

	■ Disabled: Disable the port.
Speed	Port speed capabilities. ■ **Auto**: Auto speed with all capabilities ■ **Auto-10M**: Auto speed with 10M ability only ■ **Auto-100M**: Auto speed with 100M ability only ■ **Auto-1000M**: Auto speed with 1000M ability only ■ **Auto-10M/100M**: Auto speed with 10M/100M ■ abilities ■ **10M**: Force speed with 10M ability ■ **100M**: Force speed with 100M ability ■ **1000M**: Force speed with 1000M ability
Flow Control	Port flow control. ■ **Enabled**: Enable flow control ability. ■ **Disabled**: Disable flow control ability.
Apply	Click **Apply** to save your changes to the switch.

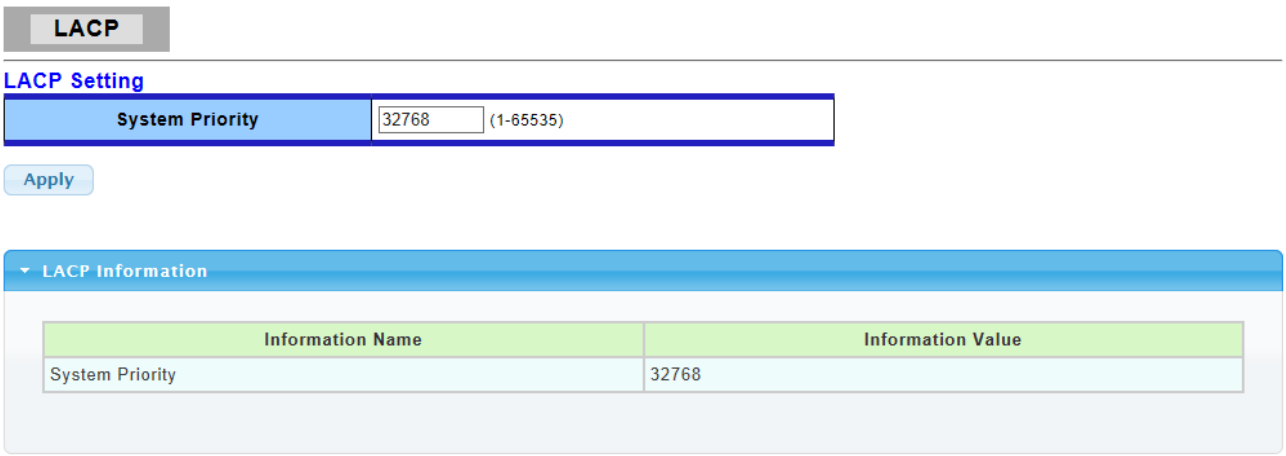
LAG Port Status Field:

LABEL	DESCRIPTION
LAG	LAG Name
Description	LAG port description
Port Type	Member port media type
Enable	LAG port admin state
Link Status	LAG port link status
Speed	Current LAG port speed
Duplex	Current LAG port duplex
Flow Control Config	LAG port flow control configuration
Flow Control Status	Current LAG port flow control state

3.3.3.4 LACP Setting

Click **Switching** > **Link Aggregation** > **LACP Setting** to display the screen shown next.

LACP: Link Aggregation Control Protocol.



The following table describes the labels in this screen.

LAG Setting Field:

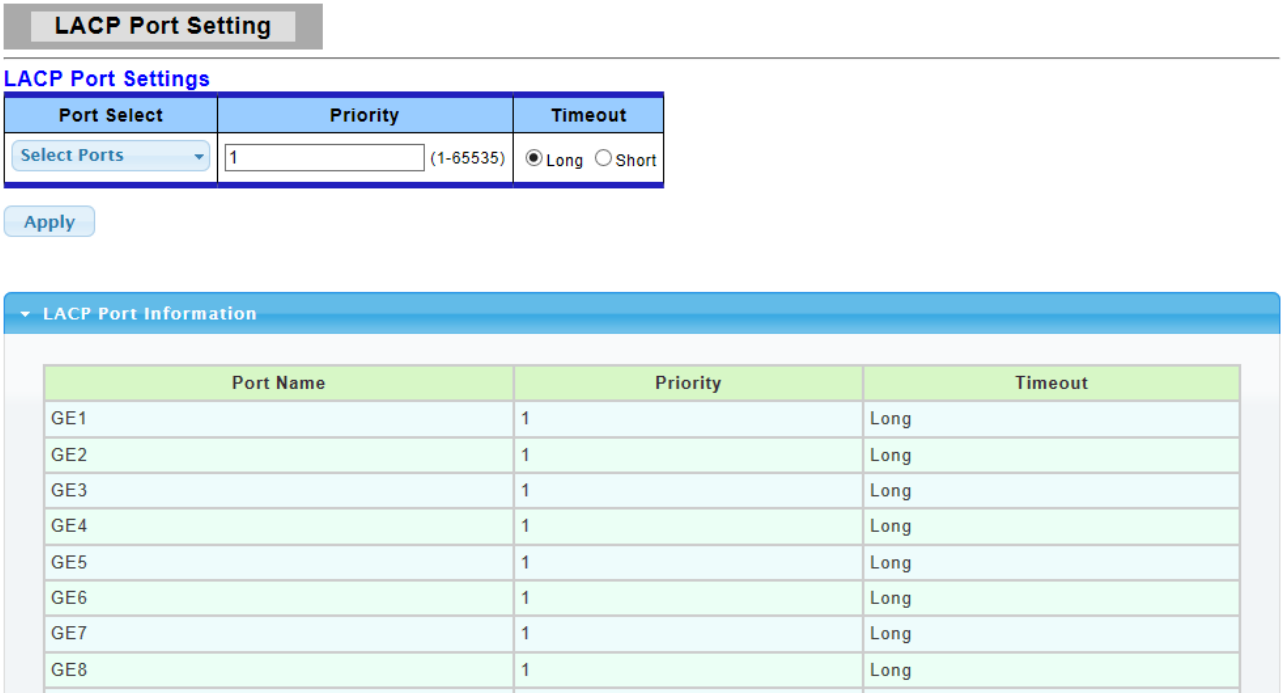
LABEL	DESCRIPTION
System Priority	Configure the system priority of LACP. This decides the system priority field in LACP PDU.
Apply	Click **Apply** to save your changes to the Switch.

LAG Information Field:

LABEL	DESCRIPTION
System Priority	LACP system priority value

3.3.3.5 LACP Port Setting

Click **Switching** > **Link Aggregation** > **LACP Port Setting** to display the screen shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port Select	Select one or multiple ports to configure
Priority	Enter the LACP priority value of the port
Timeout	Select the periodic transmissions of LACP PDUs. ■ **Long**: Transmit LACP PDU with slow periodic (30s). ■ **Short**: Transmit LACPP DU with fast periodic (1s).
Apply	Click **Apply** to save your changes to the Switch.

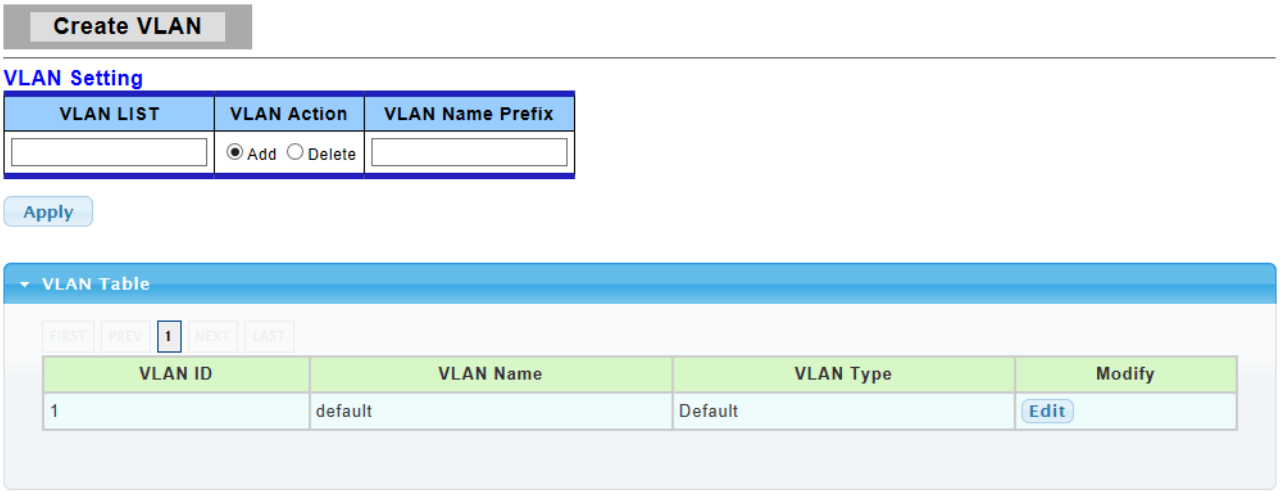
3.3.4 VLAN Management

A virtual local area network, virtual LAN or VLAN, is a group of hosts with a common set of requirements that communicate as if they were attached to the same broadcast domain, regardless of their physical location. A VLAN has the same attributes as a physical local area network (LAN), but it allows for end stations to be grouped together even if they are not located on the same network switch. VLAN membership can be configured through software instead of physically relocating devices or connections.

3.3.4.1 Create VLAN

This page allow user to add, edit or delete VLAN settings.

Click **Switching** > **VLAN Management** > **Create VLAN** to access this screen below to configure and view VLAN parameters for the switch**.**



The following table describes the related labels in this screen.

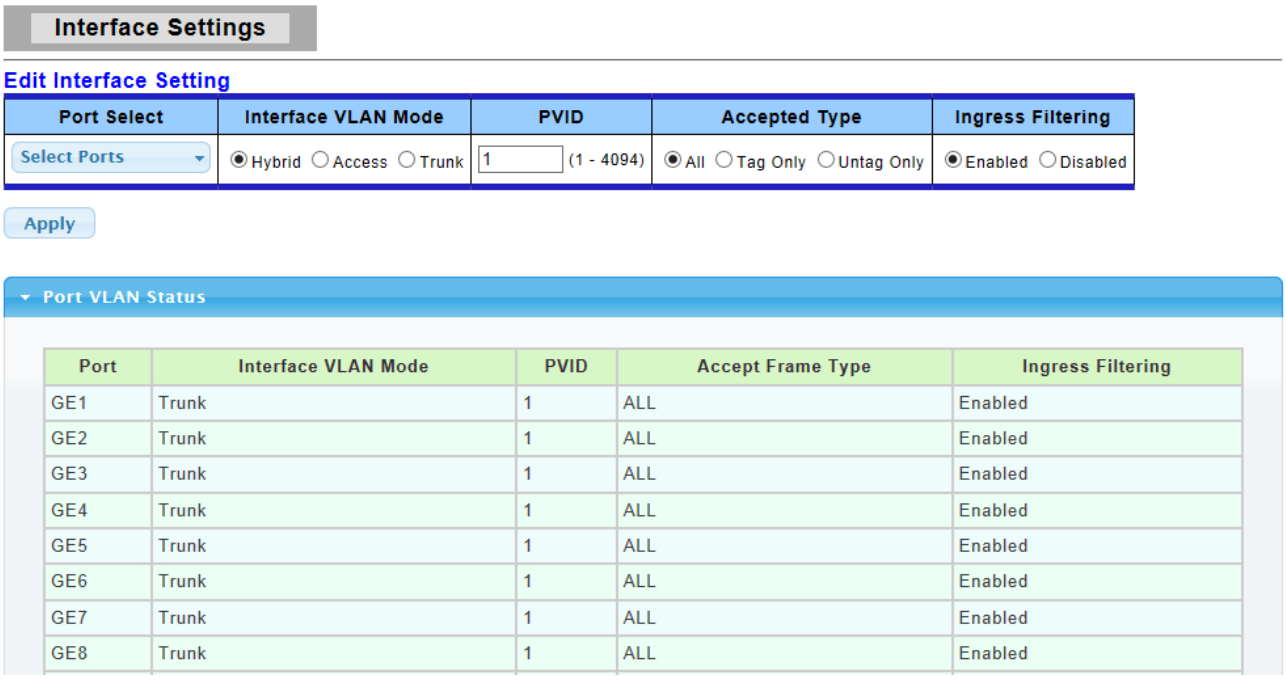
LABEL	DESCRIPTION
VLAN LIST	Specify the VLAN list to apply the operation (add/delete/edit).
VLAN Action	Select the action of operation, To add/delete/edit the VLANs
VLAN Name Prefix	Specify the prefix string of the VLAN name for new created VLANs. This field is only available with add action.
Apply	Click **Apply** to save your changes to the Switch.

3.3.4.2 Interface Settings

This page allow user to configure VLAN Interface related settings.

Click **Switching** > **VLAN Management** > **Interface Settings** to access the screen below.

A PVID (Port VLAN ID) is a tag that adds to incoming untagged frames received on a port so that the frames are forwarded to the VLAN group that the tag defines.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port Select	Select specified port or all ports to configure Interface Settings.
Interface VLAN Mode	Select the VLAN mode of the interface. ■ **Hybrid**: Support all functions as defined in IEEE 802.1Q specification. ■ **Access**: Accepts only untagged frames and join an untagged VLAN. ■ **Trunk**: An untagged member of one VLAN at most, and is a tagged member of zero or more VLANs.
PVID	Specify the port-based VLAN ID (1-4094). It's only available with Hybrid and Trunk mode.
Accepted Type	Specify the acceptable-frame-type of the specified interfaces. It's only available with Hybrid mode.
Ingress Filtering	Specify the status of ingress filtering. It's only available with Hybrid mode.
Apply	Click **Apply** to save your changes to the Switch.

3.3.4.3 Port to VLAN

This page allow user to configure VLAN port setting.

Click **Switching** > **VLAN Management** > **Port to VLAN** to access the screen below.

Port to VLAN



The following table describes the labels in this screen.

LABEL	DESCRIPTION
VLAN ID	Select specified VLAN ID to configure Port to VLAN Settings.
Interface VLAN Mode	Display the interface VLAN mode of this port.
Membership	Select the membership for this port with the specified VLAN ID. ■ **Forbidden**: Specify the port is forbidden in the VLAN. ■ **Excluded**: Specify the port is excluded in the VLAN. ■ **Tagged**: Specify the port is tagged in the VLAN. ■ **Untagged**: Specify the port is untagged in the VLAN.
PVID	Check this checkbox to select the VLAN ID to be the port-based VLAN ID for this port.

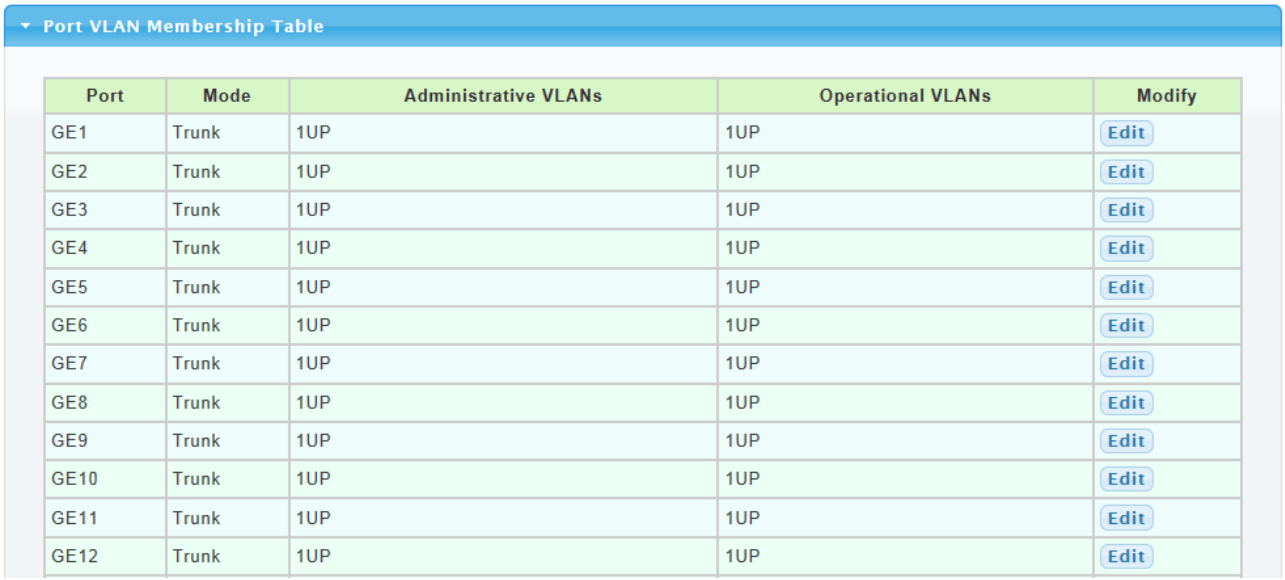
3.3.4.4 Port VLAN Membership

This page allow user to configure Port VLAN Membership setting.

Click **Switching** > **VLAN Management** > **Port VLAN Membership** to access the screen below.

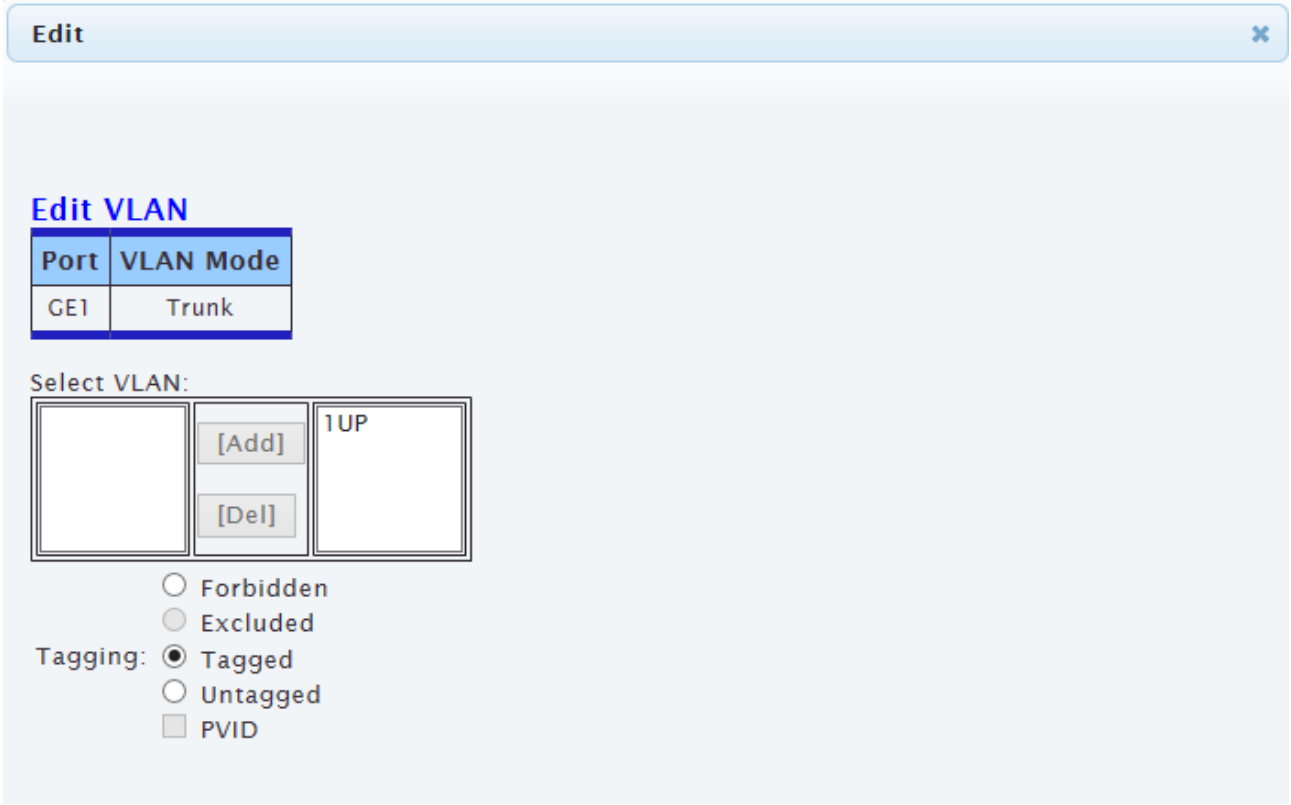
Use the Port VLAN Membership page to view membership information. Click “**Edit**” to edit selected port to modify the membership.

Port VLAN Membership



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Display the interface of this port entry.
Mode	Display the interface VLAN mode of this port.
Administrative VLANs	Display the administrative VLAN list of this port.
Operational VLANs	Display the operational VLAN list of this port.
Modify	Click the `Edit` Button to edit the VLAN membership of this port.



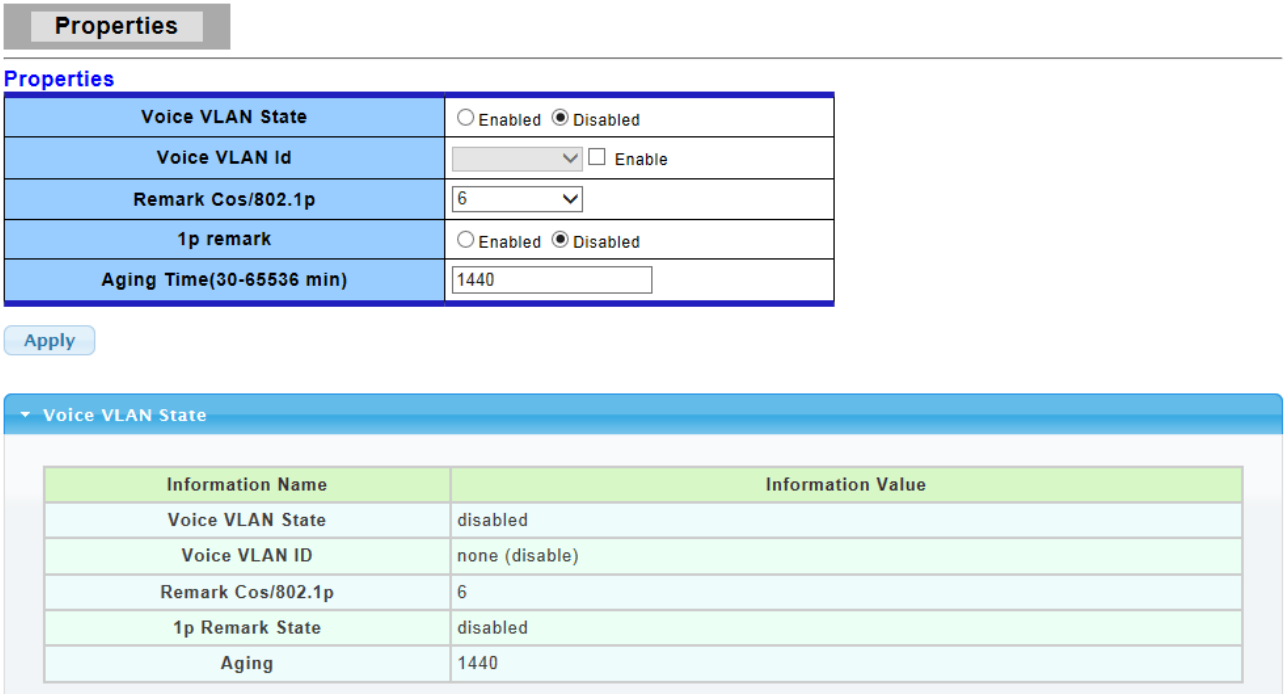
The following table describes the labels in "**Edit**" screen.

LABEL	DESCRIPTION
Select VLAN	Select the left available VLANs to add or the right used VLANs to delete for this port.
Tagging	Select the VLAN membership of the specified left VLANs for this port.
PVID	Check this checkbox to select the VLAN ID to be the port-based VLAN ID for this port.

3.3.4.5 Voice VLAN

This page allow user to configure Voice VLAN Properties setting.

Click **Switching** > **VLAN Management** > **Voice VLAN** > **Properties** to access the screen below.



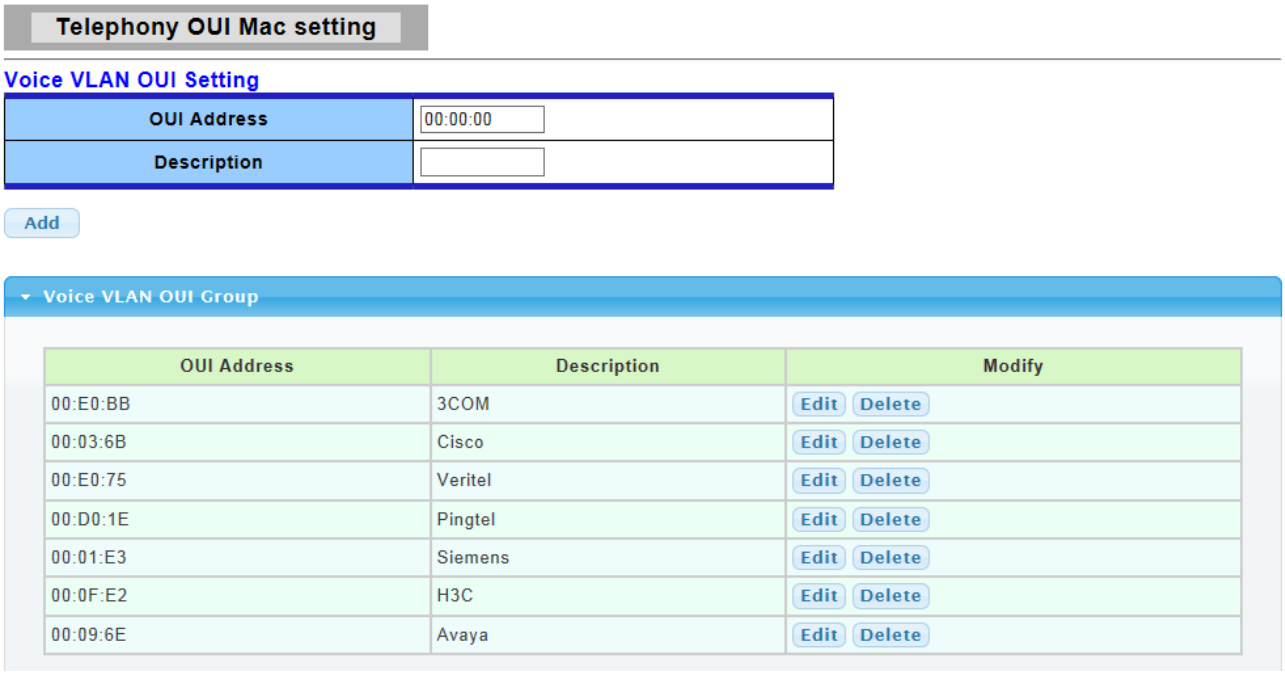
The following table describes the labels in this screen.

LABEL	DESCRIPTION
State	Select Voice VLAN state Enable –Voice VLAN is enabled Disable –Voice VLAN is disabled
Voice VLAN ID	Select Voice VLAN ID
Cos/802.1p	Select a value of vpt that will be advertised by LLDP-MED
1p remark	Select 1p remark state
Aging Time	Select value of aging time

3.3.4.6 Telephony OUI Mac setting

This page allow user to configure Voice VLAN Properties setting.

Click **Switching** > **VLAN Management** > **Voice VLAN** > **Telephony OUI Mac setting** to access the screen below.



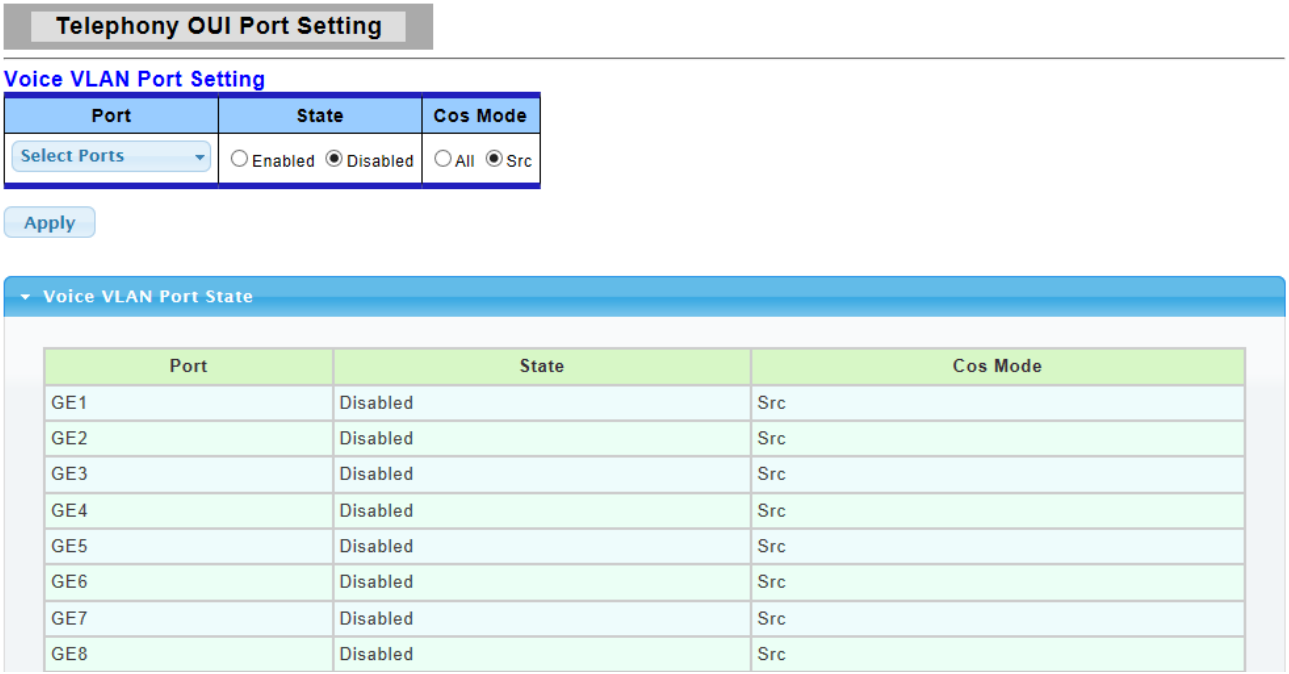
The following table describes the labels in this screen.

LABEL	DESCRIPTION
OUI Address	Select oui address
Description	description of the specified MAC address to the voice VLAN OUI table

3.3.4.7 Telephony OUI Port Setting

This page allow user to configure Voice VLAN Properties setting.

Click **Switching** > **VLAN Management** > **Voice VLAN** > **Telephony OUI Port Setting** to access the screen below.



The following table describes the labels in this screen.

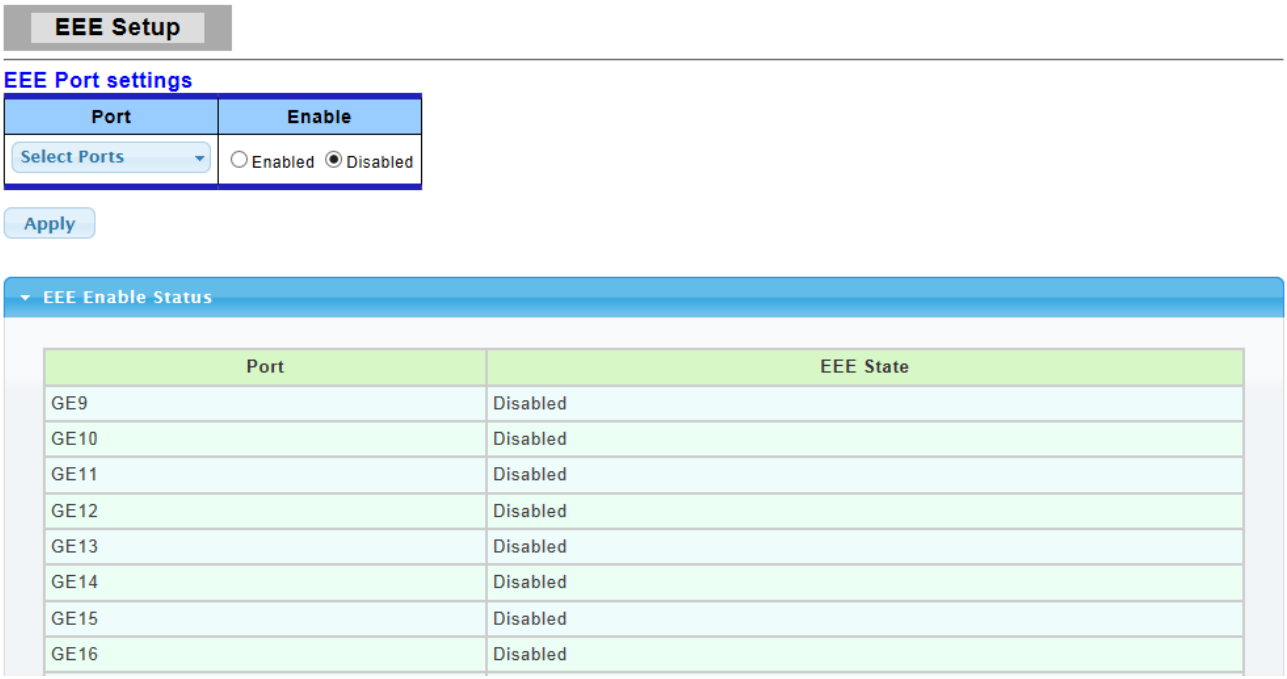
LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	Ingress/Egress type value
Cos Mode	Select port cos mode Src QoS attributes are applied to packets with OUIs in the source MAC address. All QoS attributes are applied to packets that are classified to the Voice VLAN.

3.3.5 EEE

3.3.5.1 SVLAN Setting

This page allow user to enable or disable port EEE (Energy Efficient Ethernet) function.

Click **Switching** > **EEE** to access the screen below.



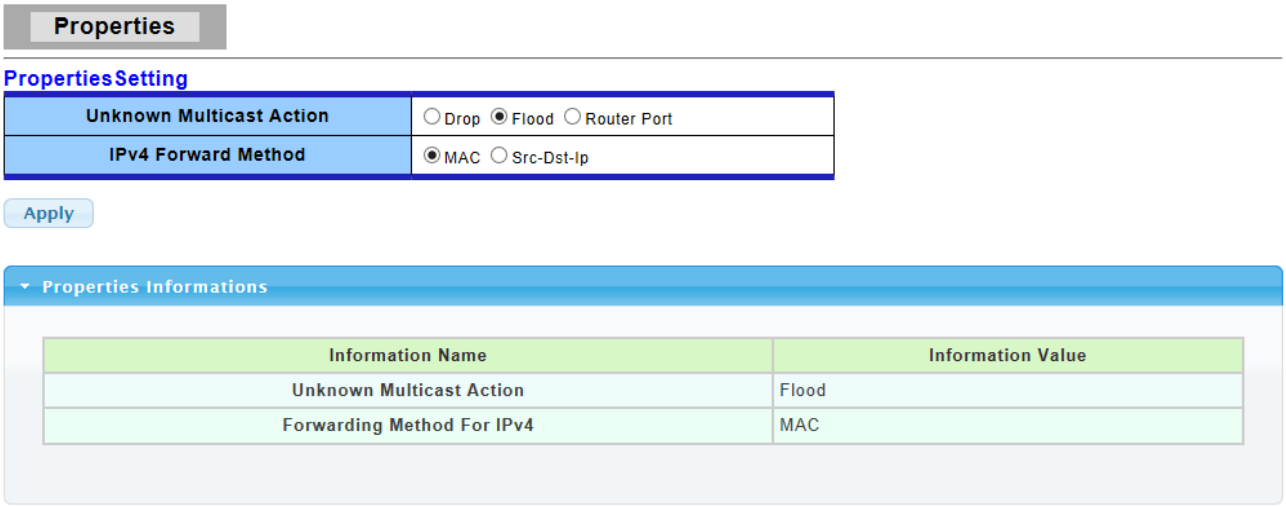
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	Port EEE function. ■ **Enabled**: Enable EEE function ■ **Disabled**: Disable EEE function
Apply	Click **Apply** to save your changes to the switch.

3.3.6 Multicast

3.3.6.1 Properties

Click **Switching** > **Multicast** > **Properties** in the navigation panel to bring up the screen as shown next.



The following table describes the labels in this screen.

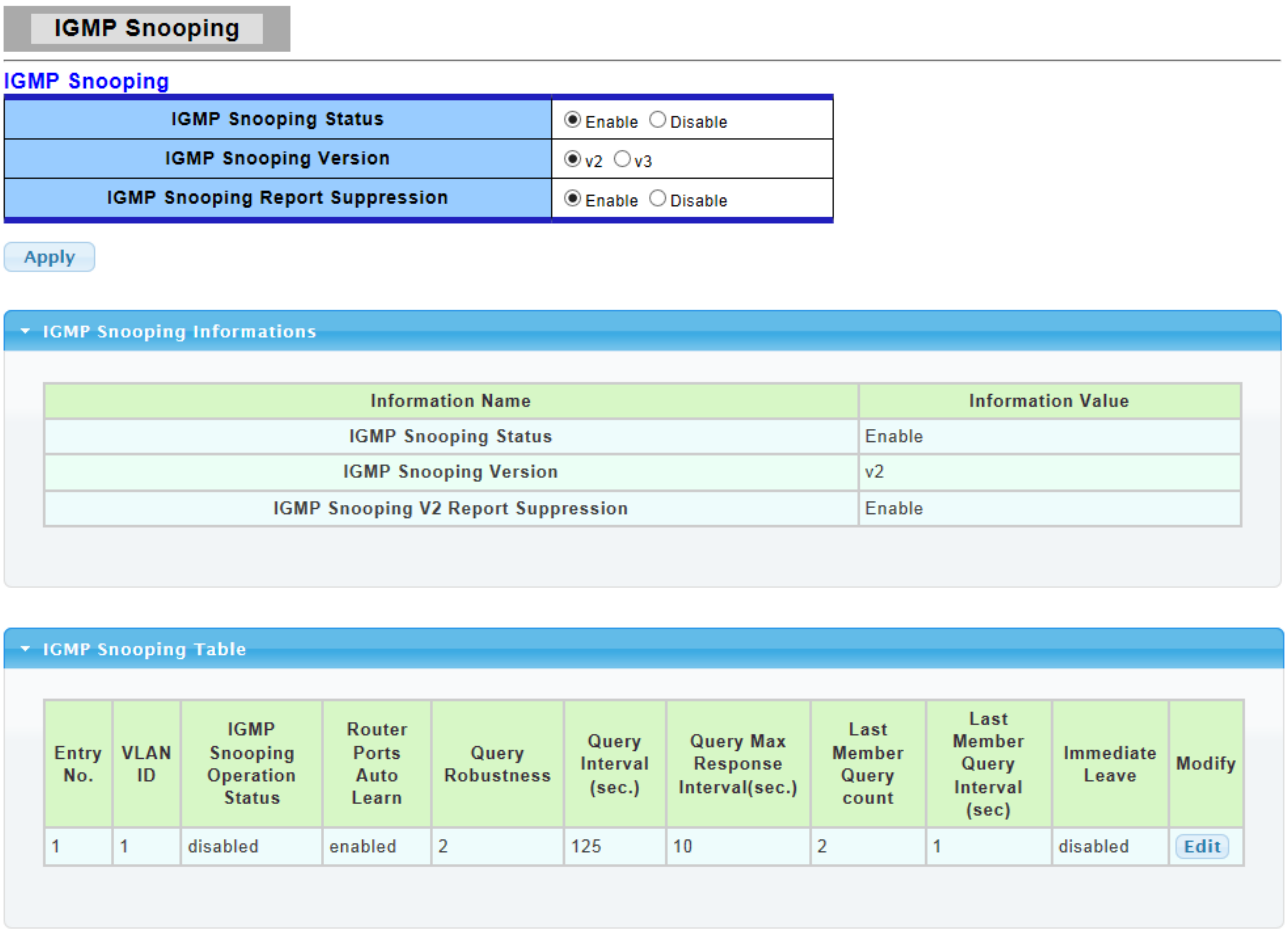
LABEL	DESCRIPTION
Unknown Multicast Action	Set the unknown multicast action ■ **Drop**: drop the unknown multicast data. ■ **Flood**: flood the unknown multicast data. ■ **Router port**: forward the unknown multicast data to router port.
IPv4 Forward Method	Set the ipv4 multicast forward method. ■ **MAC**: forward method dmac+vid. ■ **Src-Dst-Ip**: forward method dip+sip.
Apply	Click **Apply** to save your changes to the switch.

3.3.6.2 IGMP Snooping

Use the Switching pages to configure settings for the switch network interface and how the switch connects to a remote server to get services.

3.3.6.2.1 IGMP Setting

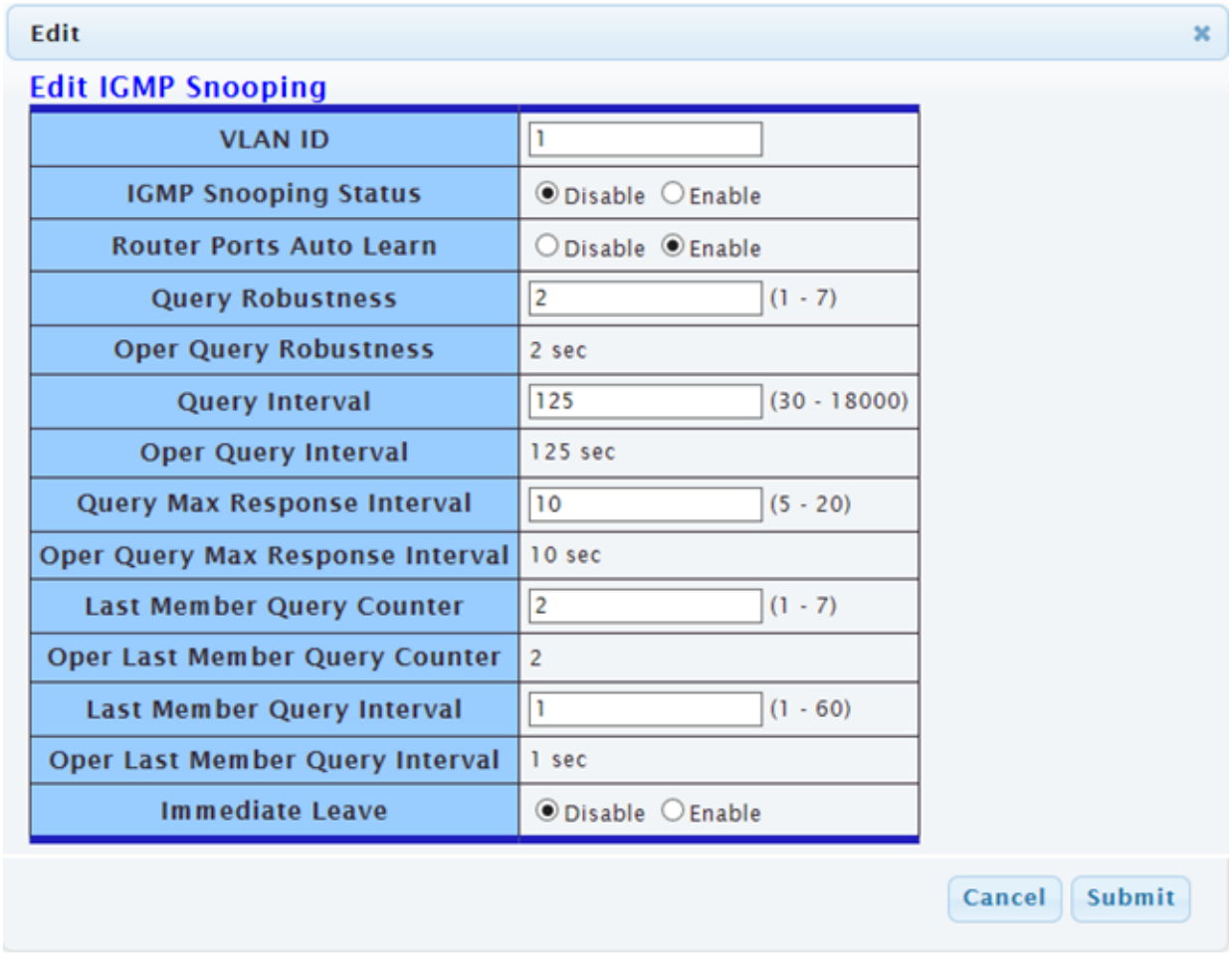
Click **Switching** > **Multicast** > **IGMP Snooping** > **IGMP Setting** to access the screen below.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
IGMP Snooping Status	Set the enabling status of IGMP functionality ■ **Enable**: Enable IGMP Snooping. ■ **Disable**: Disable IGMP Snooping.
IGMP Snooping Version	Set the igmp snooping version ■ **v2**: Only support process igmp v2 packet. ■ **v3**: Support v3 basic and v2.
IGMP Snooping Report Suppression	Set the enabling status of IGMP v2 report suppression ■ **Enable**: Enable IGMP Snooping v2 report suppression. ■ **Disable**: Disable IGMP Snooping v2 report suppression.
Apply	Click **Apply** to save your changes to the switch.
Entry No	The IGMP entry number.
VLAN ID	The IGMP entry VLAN ID
IGMP Snooping Operation Status	The enable status of IGMP VLAN functionality ■ **Enabled**: when IGMP Snooping enable and IGMP VLAN enable and multicast filtering enable. ■ **Disabled**: when IGMP Snooping disable or IGMP VLAN disable or multicast filtering disable.
Router Ports Auto Learn	Set the enabling status of IGMP router port learning ■ **Enable**: Enable learning router port by query and PIM, DVRMP.

	■ **Disable**: Disable learning dynamic router port.
Robustness Variable	The Robustness Variable allows tuning for the expected packet loss on a subnet.
Query Interval	The interval of querier send general query
Query Max Response Interval	In Membership Query Messages, it specifies the maximum allowed time before sending a responding report in units of 1/10 second.
Last Member Query count	The count that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.
Last Member Query Interval	The interval that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.
Immediate leave	Leave the group when receive IGMP Leave message. ■ **Enable**: Enable Fastleave. ■ **Disable**: Disable Fastleave.
Edit	Click **Edit** to edit the IGMP Snooping Table.



The following table describes the labels in "**Edit**" screen.

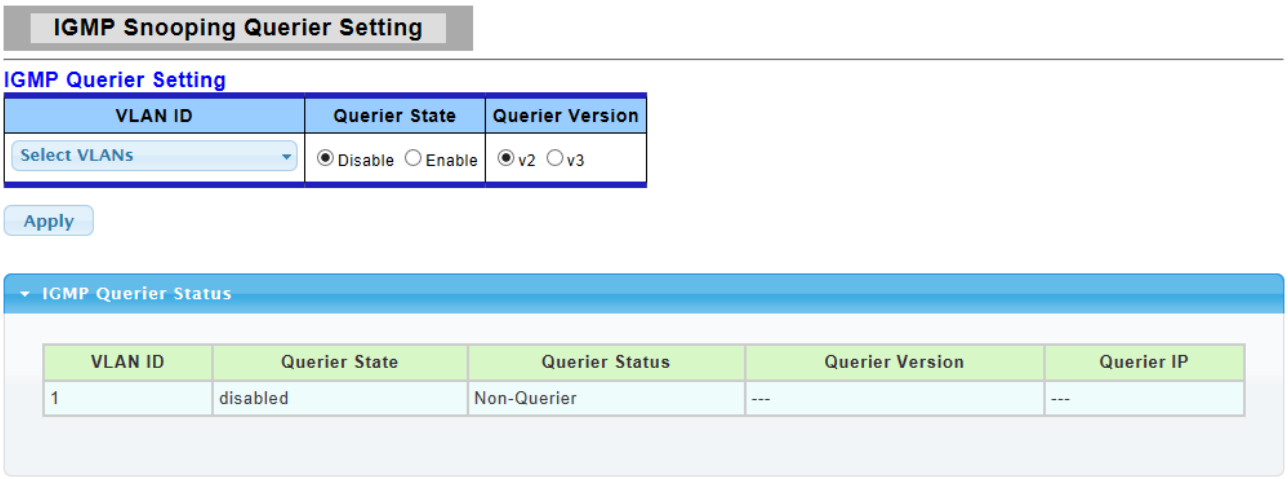
LABEL	DESCRIPTION
VLAN ID	The IGMP VLAN ID

IGMP Snooping Status	The admin enable status of IGMP VLAN functionality ■ **Enable**: IGMP VLAN enable. ■ **Disable**: IGMP VLAN disable.
Router Ports Auto Learn	Set the enabling status of IGMP router port learning ■ **Enable**: Enable learning router port by query and PIM, DVRMP. ■ **Disable**: Disable learning dynamic router port.
Robustness Variable	The Robustness Variable allows tuning for the expected packet loss on a subnet.
Query Interval	The admin query interval
Oper Query Interval	The operation query interval
Query Max Response Interval	The admin query max response interval
Oper Query Max Response Interval	The operating query max response interval
Last Member Query count	The admin last member query count
Oper Last Member Query count	The operating last member query count
Last Member Query Interval	The admin last member query interval.
Oper Last Member Query Interval	The operation last member query interval.
Immediate leave	Leave the group when receive IGMP Leave message. ■ **Enable**: Enable Fastleave. ■ **Disable**: Disable Fastleave.
Cancel	Click **Cancel** to cancel the change to switch.
Submit	Click **Submit** to submit the change to switch.

3.3.6.2.2 IGMP Querier Setting

This page allow user to configure querier settings on specific VLAN of IGMP Snooping.

Click **Switching** > **Multicast** > **IGMP Snooping** > **IGMP Querier Setting** to access the screen below.



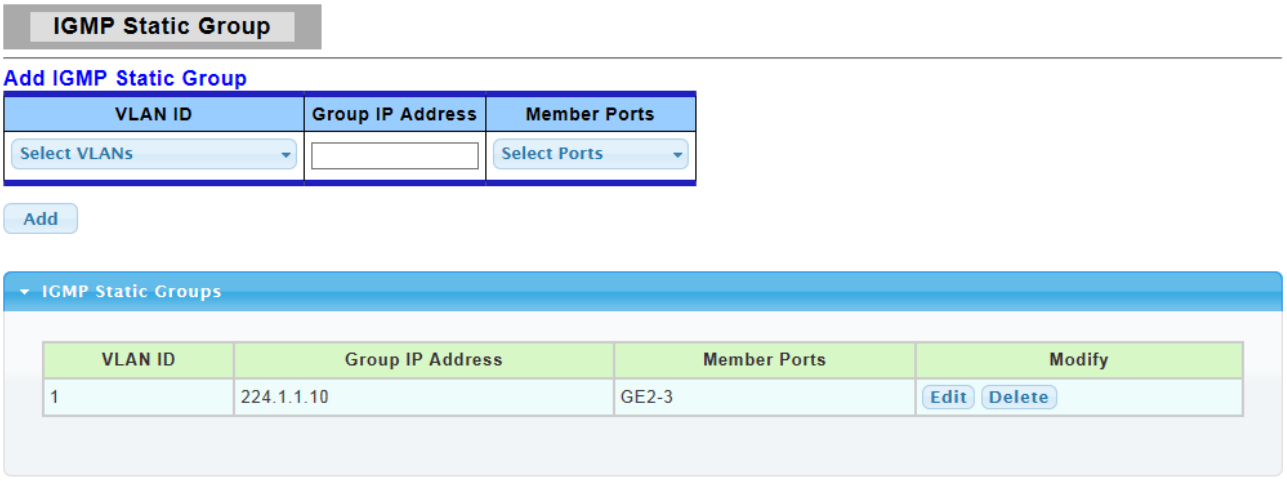
The following table describes the labels in this screen.

LABEL	DESCRIPTION
VLAN ID	Select the VLANs to configure.
Querier State	Set the enabling status of IGMP Querier Election on the chose VLANs ■ **Enable**: Enable IGMP Querier. ■ **Disable**: Disable IGMP Querier.
Snooping State	Set the query version of IGMP Querier Election on the chose VLANs ■ **v2**: Querier version 2. ■ **v3**: Querier version 3.
Apply	Click **Apply** to save your changes to the switch.

3.3.6.2.3 IGMP Static Group

This page allow user to set static group for IGMP.

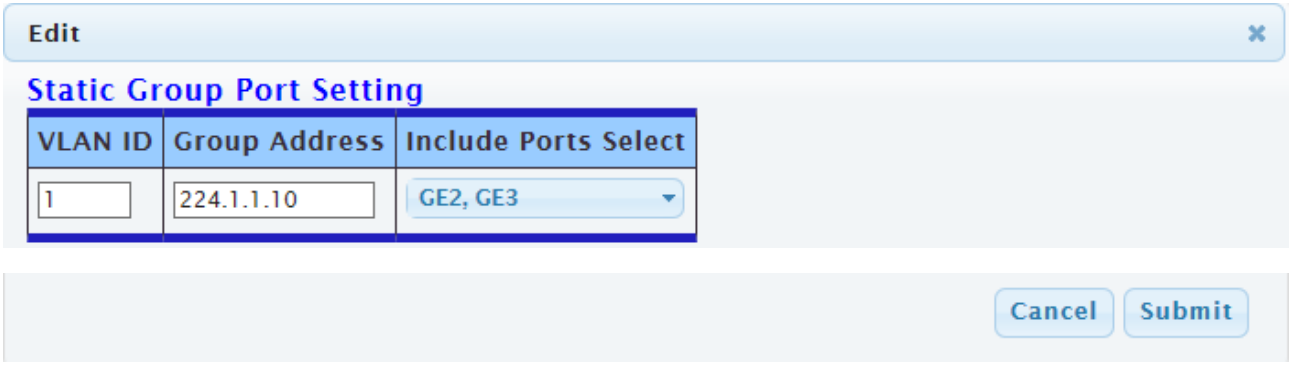
Click **Switching** > **Multicast** > **IGMP Snooping** > **IGMP Static Group** to access the screen below.



The following table describes the labels in this screen.

LABEL	DESCRIPTION

VLAN ID	Select the VLANs to configure.
Group IP Address	The IP address of this group.
Member Ports	The member ports of this group.
Add	Click **Add** to add IGMP Group to the switch.
Edit	Click **Edit** to edit the IGMP Static Group.
Delete	Click **Delete** to edit the IGMP Static Group.



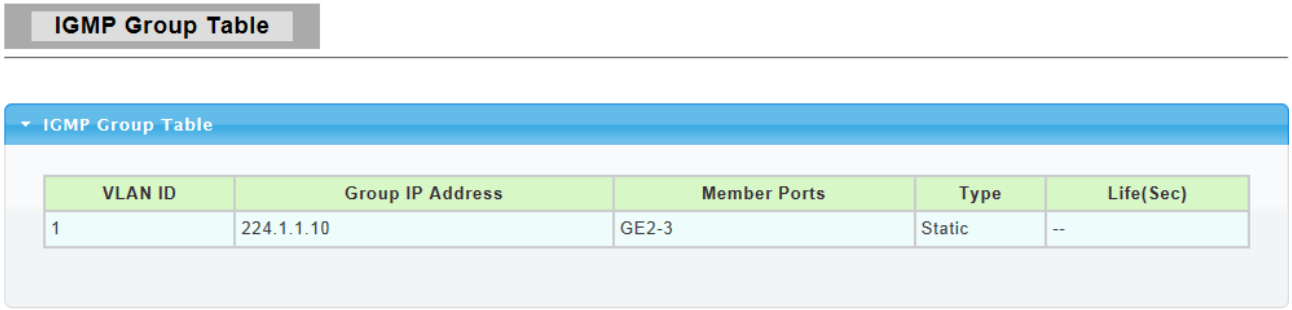
The following table describes the labels in "**Edit**" screen.

LABEL	DESCRIPTION
VLAN ID	The VLAN ID of static group.
Group Address	The group address
Include Ports Select	The static member ports
Cancel	Click Cancel to cancel the change to switch.
Submit	Click Submit to submit the change to switch.

3.3.6.2.4 IGMP Group Table

This page allow user to browse IGMP group information of IGMP Snooping.

Click **Switching** > **Multicast** > **IGMP Snooping** > **IGMP Group Table** to access the screen below.



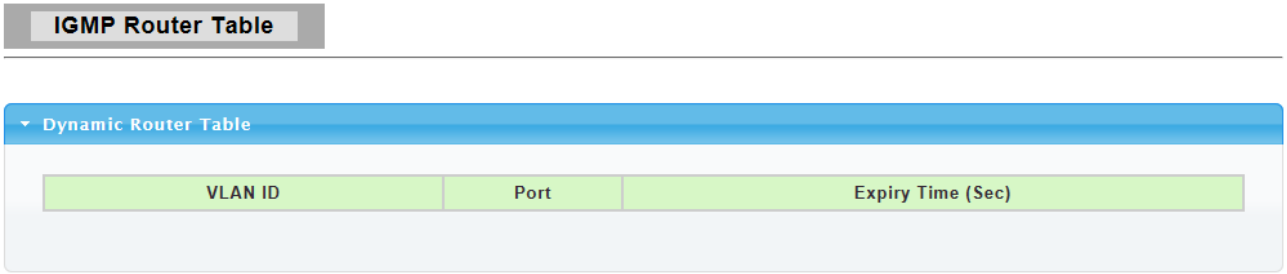
The following table describes the labels in this screen.

LABEL	DESCRIPTION
VLAN ID	The VLAN ID of this group.
Group IP Address	The group IP address of this group.
Member Port	The member ports of this group.
Type	The type of this group. Static or Dynamic.
Life(Sec)	The life time of this group.

3.3.6.2.4 IGMP Router Table

This page allow user to browse IGMP group information of IGMP Snooping.

Click **Switching** > **Multicast** > **IGMP Snooping** > **IGMP Router Table** to access the screen below.



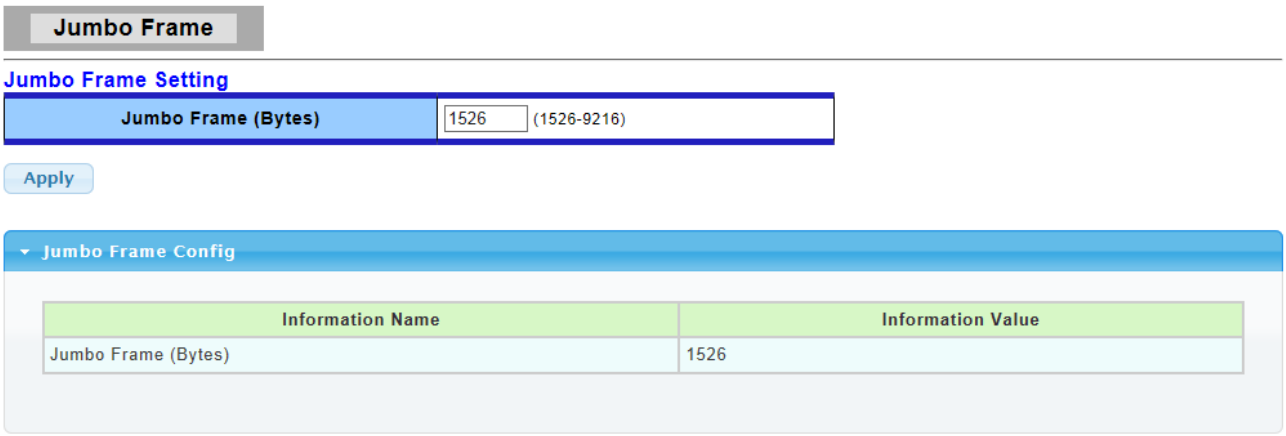
The following table describes the labels in this screen.

LABEL	DESCRIPTION
VLAN ID	The VLAN ID of this group.
Port	The member ports of this group.
Expiry Time(Sec)	The expiry time of this group.

3.3.7 Jumbo Frame

This page allow user to configure switch port jumbo frame settings.

Click **Switching** > **Jumbo Frame** in the navigation panel to bring up the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Jumbo Frame (Bytes)	Jumbo frame size. The valid range is 1526 bytes – 9216 bytes.
Apply	Click **Apply** to save any changes to the switch.

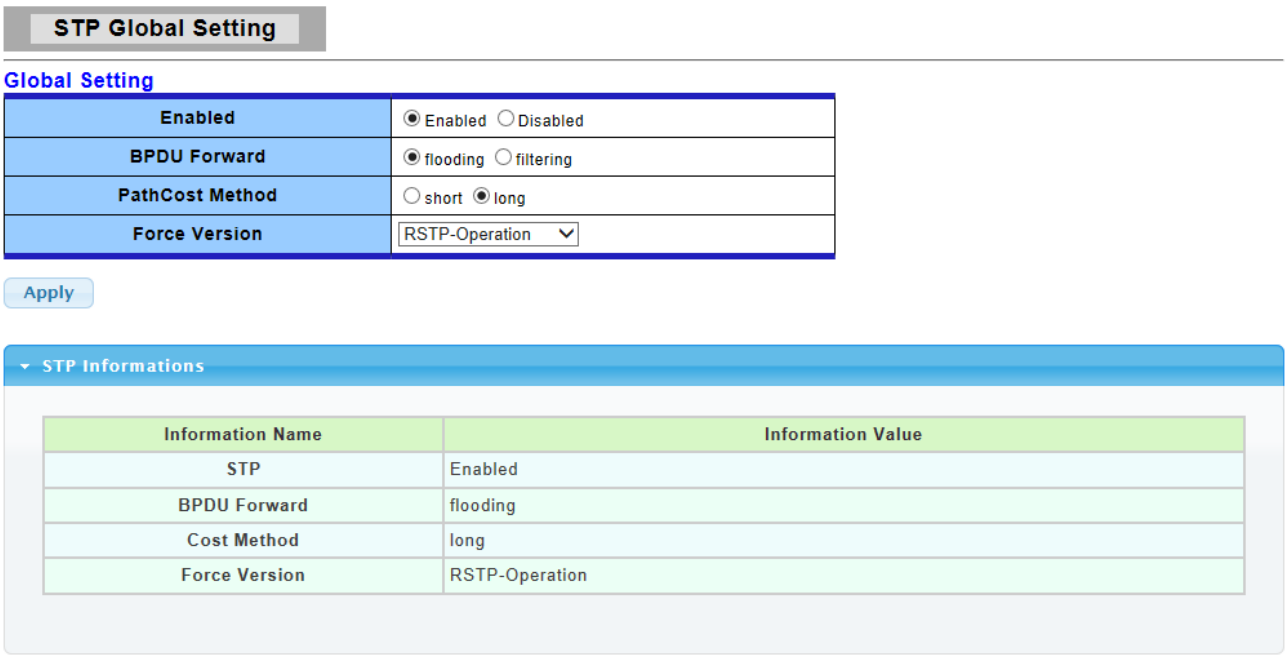
3.3.8 STP

The Spanning Tree Protocol (STP) is a network protocol that ensures a loop-free topology for any bridged Ethernet local area network.

3.3.8.1 STP Global Setting

Use the **SPT Global Setting** screen to activate one of the STP modes on the switch.

Click **Switching** > **STP** > **STP Global Setting**.



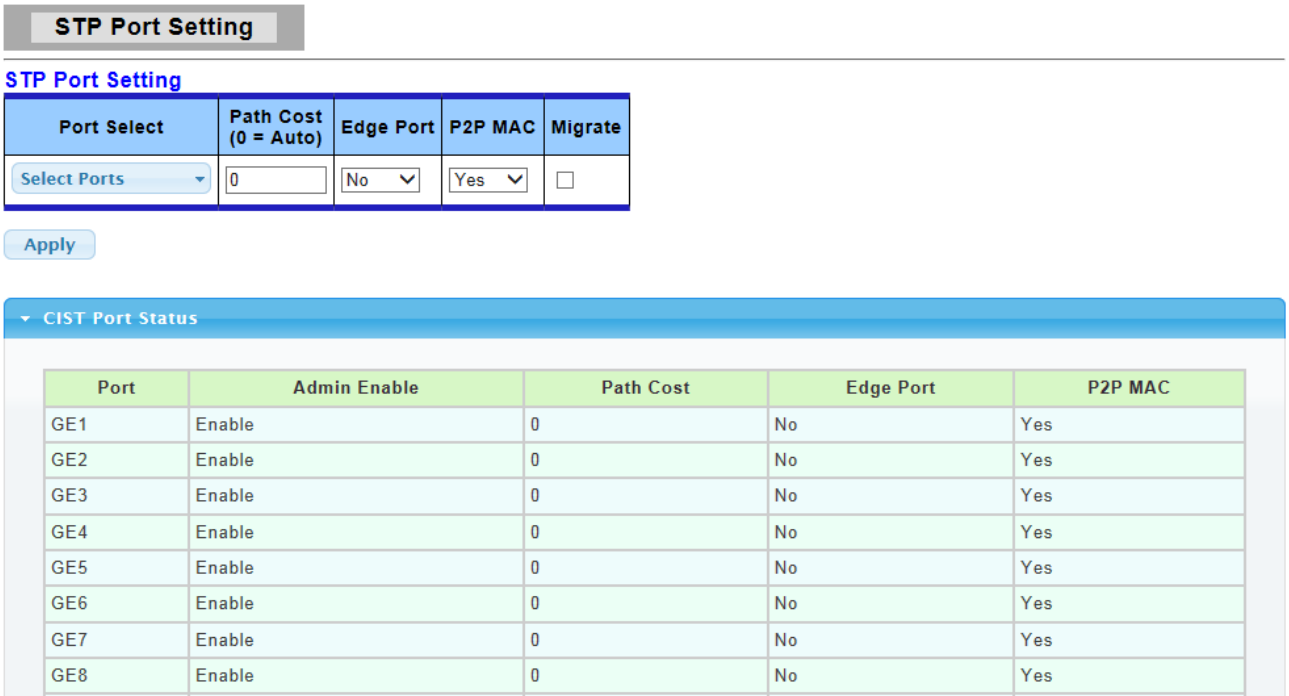
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Enabled	Specify the STP status to be enabled/disabled on the switch.
BPDU Forward	Specify the BPDU forwarding action when the global STP is disabled.
Path Cost Method	Specify the Cost Method of STP.
Force Version	Set the operating mode of STP: ■ **STP**-Compatible: IEEE 802.1D STP operation. ■ **RSTP**-Operation: IEEE 802.1w operation.
Apply	Click **Apply** to save your changes to the switch.

3.3.8.2 STP Port Setting

This page allow user to configure general setting of STP port and browser CIST port status.

Click **Switching** > **STP** > **STP Port Setting**.



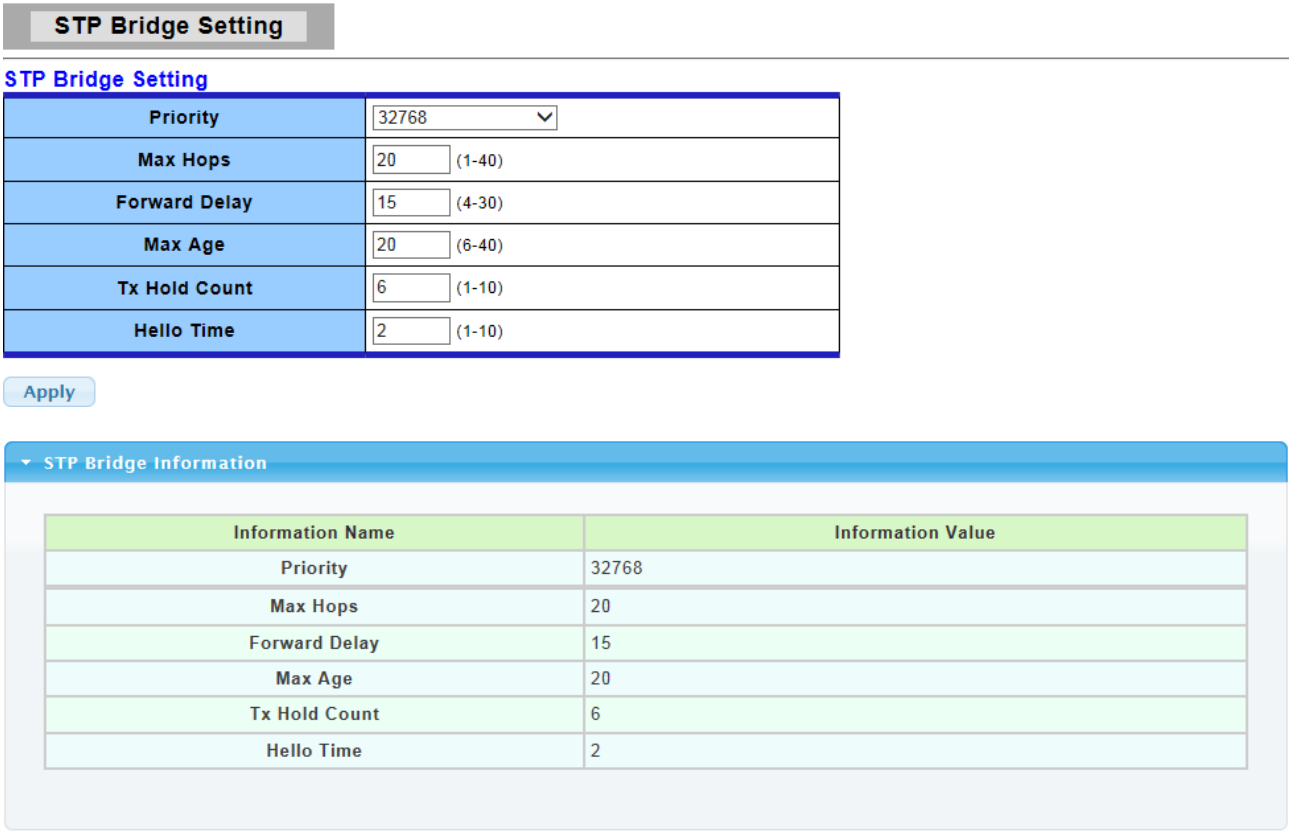
The following table describes the labels in this screen.

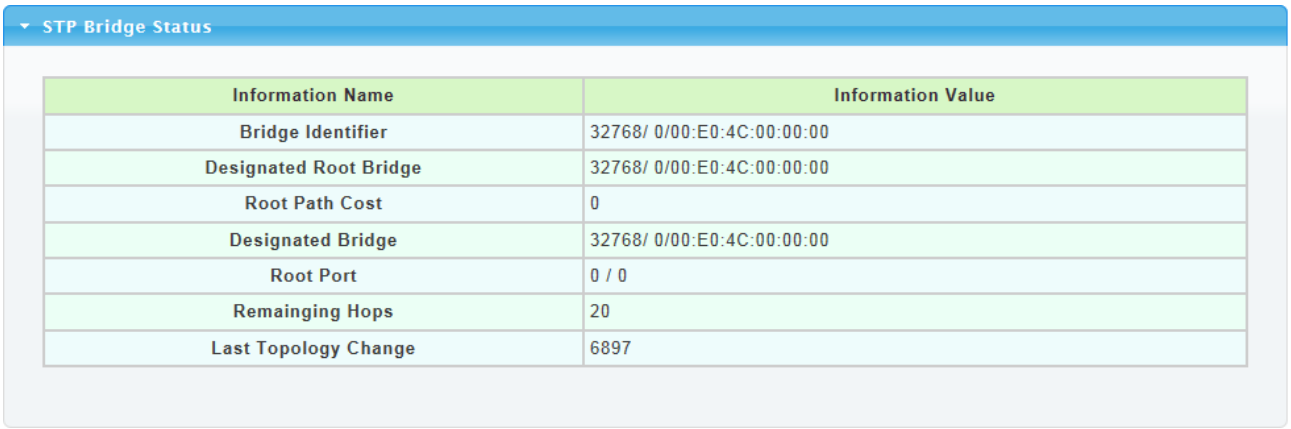
LABEL	DESCRIPTION
Port Select	Select the port(s) to change spanning tree protocol settings for.
Path Cost	Path cost is the cost of transmitting a frame on to a LAN through that port. It is recommended to assign this value according to the speed of the bridge. The slower the media, the higher the cost. Entering 0 means the switch will

	automatically assign a value.
Edge Port	Set the edge port configuration: ■ **No:** Force to false state (as link to a bridge). ■ **Yes:** Force to true state (as link to a host).
P2P MAC	Set the Point-to-Point port configuration: ■ **No:** Force to false state. ■ **Yes:** Force to true state.
Migrate	Force to try to use the new MST/RST BPDUs, and hence to test the hypothesis that all legacy systems that do not understand the new BPDU formats have been removed from the LAN segment on the port(s).
Apply	Click **Apply** to save your changes to the switch.

3.3.8.3 STP Bridge Setting

Click **Switching** > **STP** > **STP Bridge Setting**.





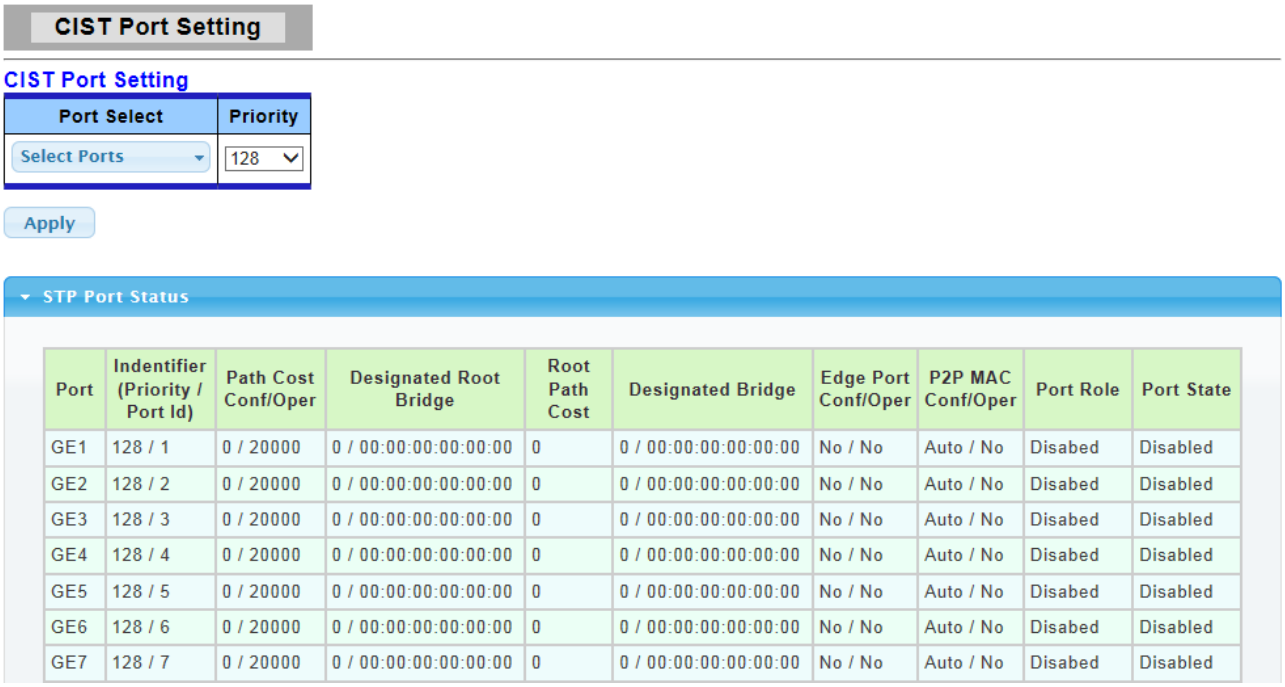
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Priority	Set the STP Bridge Priority in the instance.
Max Hops	Set the value of the maximum number of hops in the region.
Forward Delay	Set the delay time an interface takes to converge from blocking state to forwarding state.
Max Age	Set the time any switch should wait before trying to change the STP topology after unhearing Hello BPUD.
Tx Hold Count	Set the Transmit Hold Count used to limit BPDU transmission rate.
Hello Time	Set the interval between periodic transmissions of BPDU by Designated Ports.
Apply	Click Apply to save your changes to the switch.

3.3.8.4 STP Port Advanced (CIST Port) Setting

This page allow user to configure gener setting of STP CIST port and browser CIST port status.

Click **Switching** > **STP** > **STP Port Advanced Setting**.



The following table describes the labels in this screen.

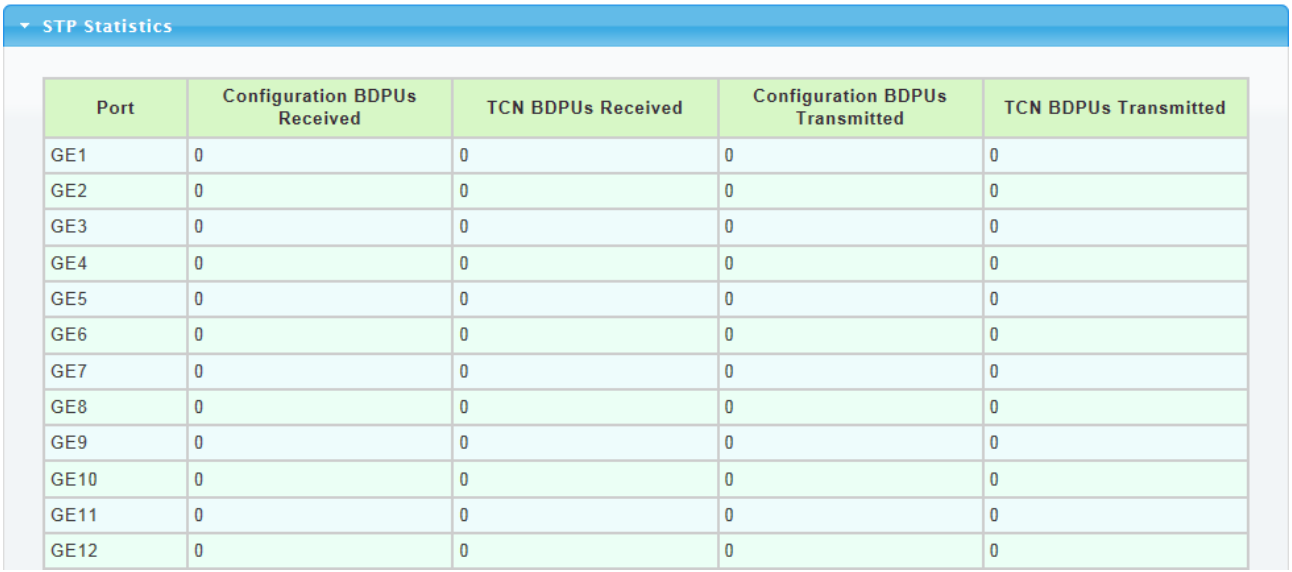
LABEL	DESCRIPTION
Port Select	Select the port list to specify which ports should apply this setting.
Priority	Set the Port Priority to the selected ports in the CIST instance.
Apply	Click Apply to save your changes to the switch.

3.3.8.5 STP Statistics

This page allow user to browser general statistics of STP.

Click **Switching** > **STP** > **STP Statistics.**

STP Statistics



The following table describes the labels in this screen.

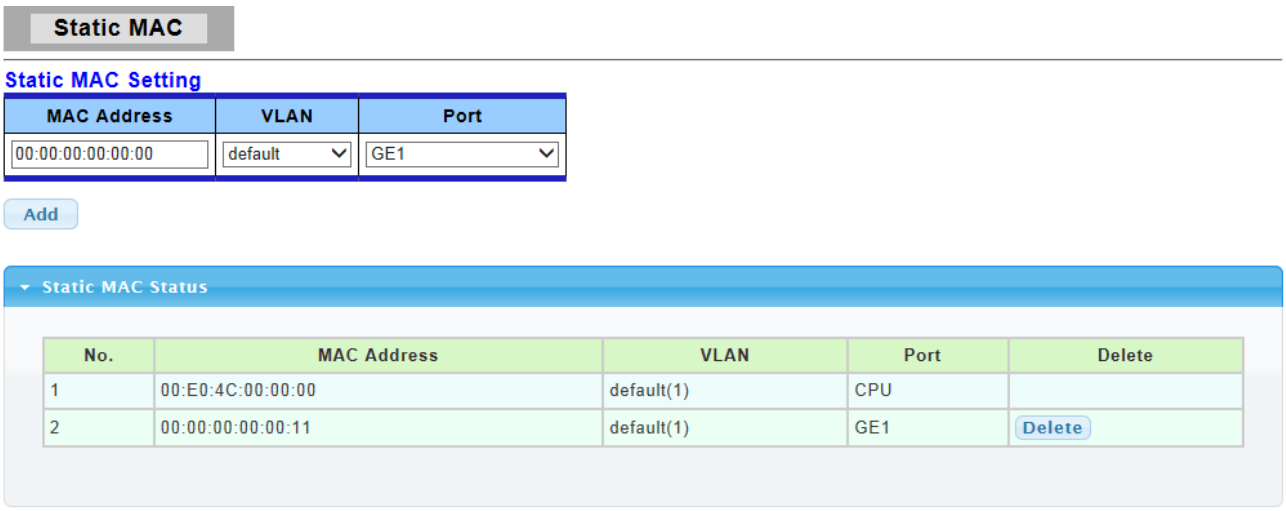
LABEL	DESCRIPTION
Port	It displays the port number.
Configuration BDPUs Received	It displays the configuration BDPUs received.
TCN BDPUs Received	It displays the TCN BDPUs received.
Configuration BDPUs Transmitted	It displays the configuration BDPUs transmitted.
TCN BDPUs Transmitted	It displays the Multiple Spanning Tree Protocol (MSTP) BDPUs transmitted.

3.4 MAC Address Table

Use the MAC Address Table pages to show dynamic MAC table and configure settings for static MAC entries.

3.4.1 Static MAC Setting

Click **Status > MAC Address Table > Static MAC Setting** in the navigation panel to bring up the screen as shown next.

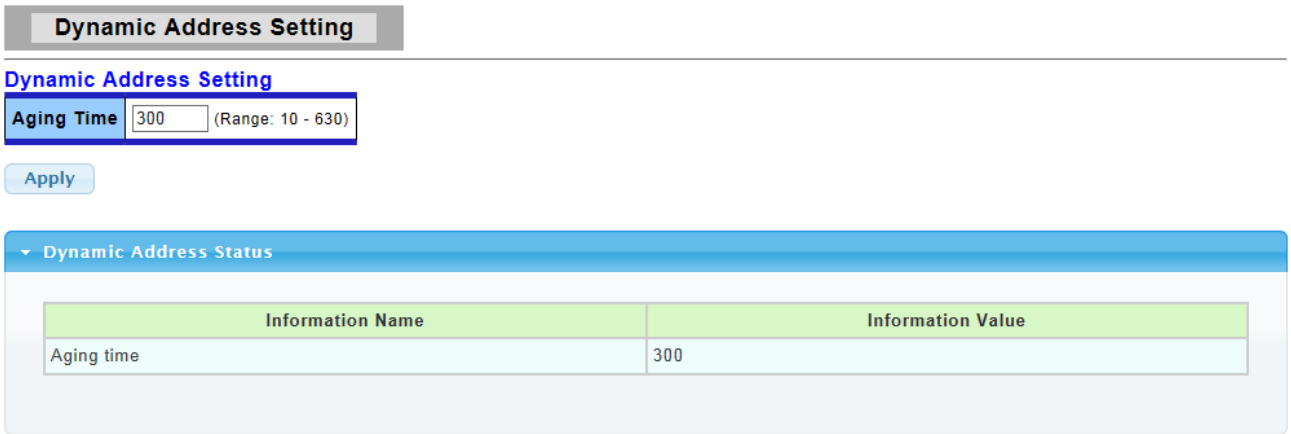


The following table describes the labels in this screen.

LABEL	DESCRIPTION
MAC Address	Enter the MAC address in valid MAC address format, that is, six hexadecimal character pairs. Static MAC addresses do not age out.
VLAN	Enter the VLAN identification number the MAC address belongs to.
Type	There are two types of MAC entry: ■ **Unicast:** add a unicast MAC entry. ■ **Multicast:** add a multicast MAC entry.
Port	If Type is unicast, select the port number of the MAC entry; If Type is multicast, select the port list of the MAC entry.
Add	Click **Add** to add any port into the static MAC address table.
No.	This is the index number for the MAC address forwarding entries.
Delete	To delete any selected MAC address entries.

3.4.2 Dynamic Address Setting

Click **Status > MAC Address Table > Dynamic Address Setting** in the navigation panel to bring up the screen as shown next.

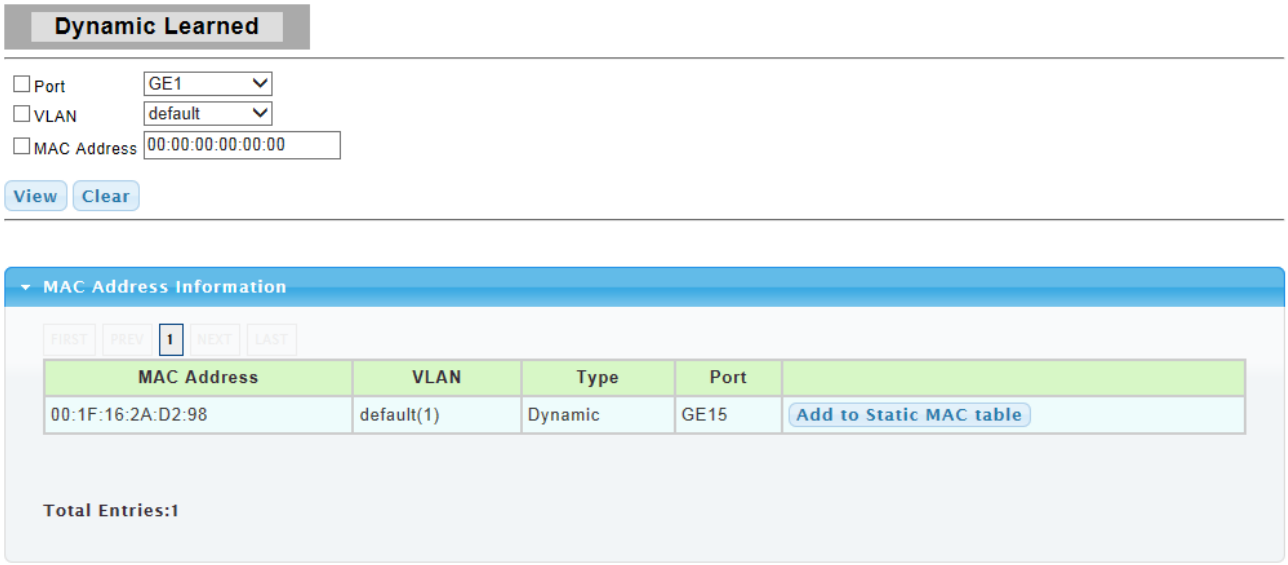


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Aging Time	<10-630> The Dynamic MAC address aging out value
Apply	Click Apply to save your changes to the switch.

3.4.3 Dynamic Learned

Click **Status > MAC Address Table > Dynamic Learned** in the navigation panel to bring up the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select the port number to show or clear dynamic MAC entries. If not select any port, VLAN and MAC address, the whole dynamic MAC table will be displayed or cleared.
VLAN	This is the VLAN group to which the MAC address belongs. Select the VLAN to show or clear dynamic MAC entries. If not select any port, VLAN and MAC address, the whole dynamic MAC table will be displayed or cleared.
MAC Address	This field displays the MAC address that will be forwarded. Select the MAC address to show or clear dynamic MAC entries. If not select any port, VLAN and MAC address, the whole dynamic MAC table will be displayed or cleared.
View	Click the View button to display the logs according the criteria specified in the fields above.
Clear	Click this button to remove any dynamically learned MAC address forwarding entries.
Type	This shows whether the MAC address is **Dynamic** (learned by the Switch) or **Static Unicast** (manually entered in the **Static MAC Forwarding** screen).
Port	This field displays the port where the MAC address will be forwarded.
Add to Static MAC table	Click this button to add any port into the static MAC table.

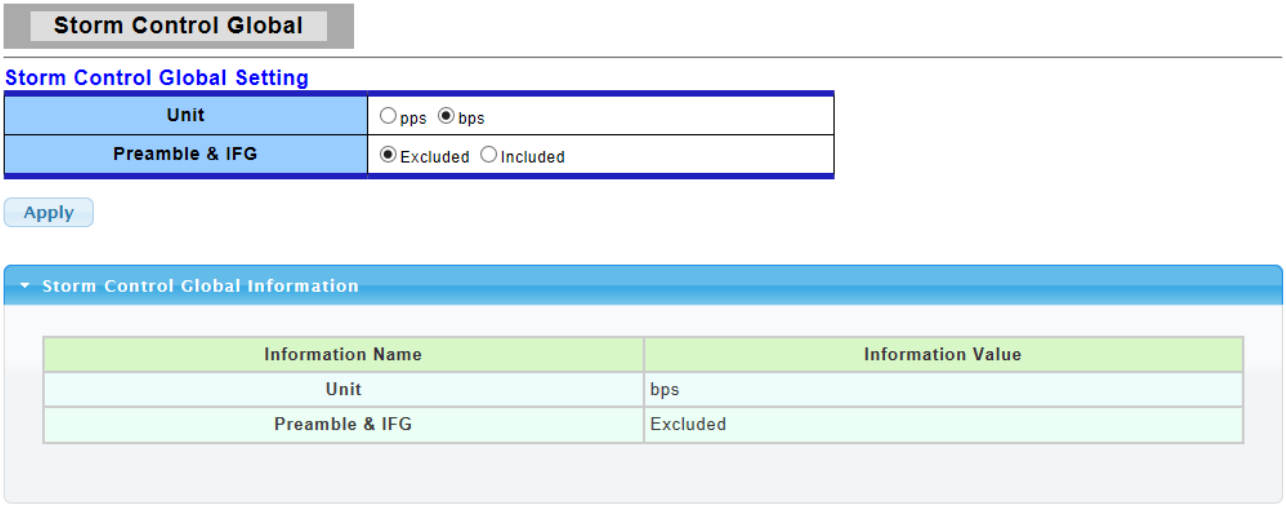
3.5 Security

Use the Security pages to configure settings for the switch security features.

3.5.1 Storm Control

3.5.1.1 Global Setting

Click **Security** > **Storm Control** > **Global Setting** to display the configuration screen as shown.

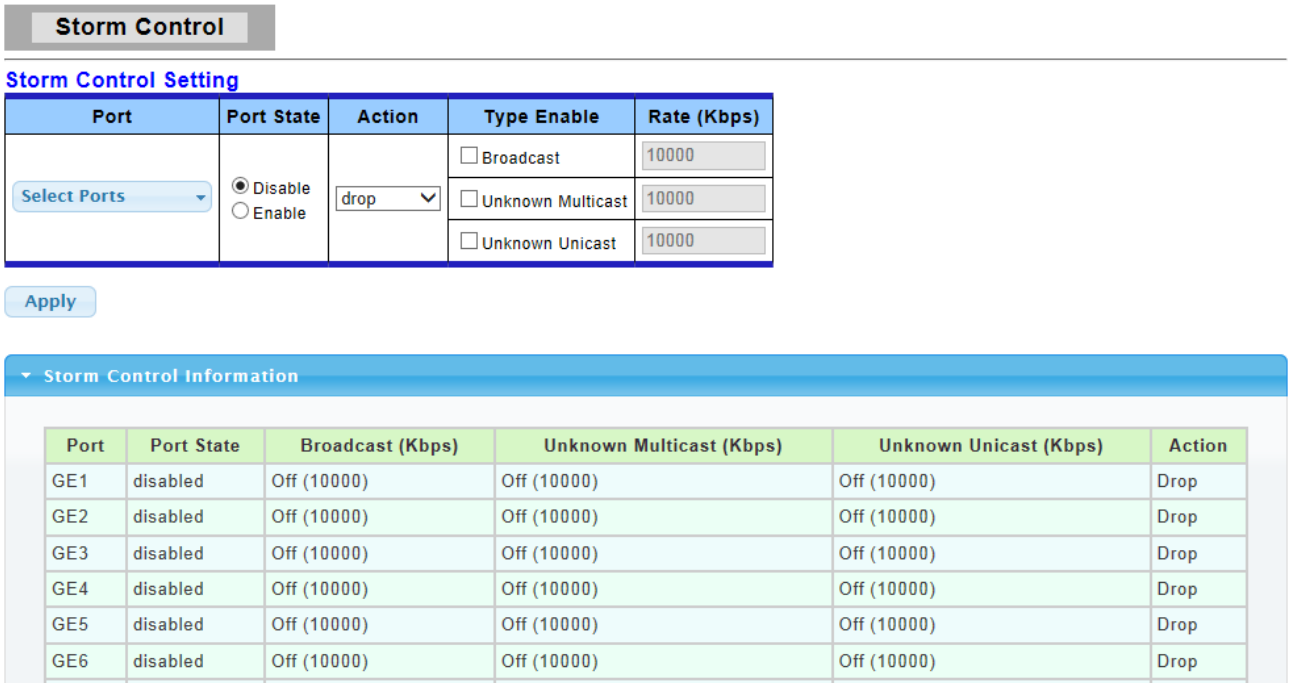


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Mode	Select the mode of storm control ■ pps: storm control rate calculates by packet-based ■ bps: storm control rate calculates by octet-based
Preamble & IFG	Select the rate calculates w/o preamble & IFG (20 bytes) ■ Excluded: exclude preamble & IFG (20 bytes) when count ingress storm control rate. ■ Included: include preamble & IFG (20 bytes) when count ingress storm control rate.
Apply	Click **Apply** to save your changes to the Switch.

3.5.1.2 Port Setting

Click **Security** > **Storm Control** > **Port Setting** to display the configuration screen as shown.



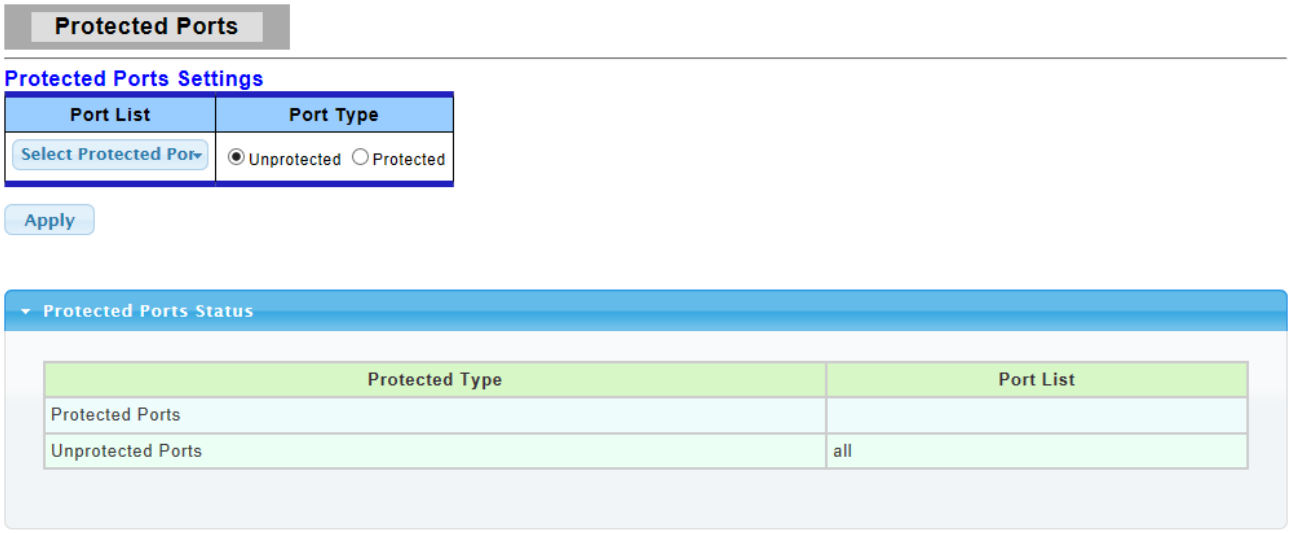
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select the setting ports
State	Select the state of setting ■ **Disable**: Disable the storm control function. ■ **Enable**: Enable the storm control function.
Action	Select the state of setting ■ **Drop**: Packets exceed storm control rate will be dropped. ■ **Shutdown**: Port exceed storm control rate will be shutdown.
Storm Type	Select the type of storm control **Broadcast**: Broadcast packet ■ **Unknown Unicast**: Unknown unicast packet ■ **Unknown Multicast**: Unknown multicast packet
Rate	Value of storm control rate, Unit: pps (packet per-second) or Kbps (Kbits per-second) depends on global mode setting. The range is from 0 to 1000000.
Apply	Click Apply to save your changes to the Switch.

3.5.2 Protected Ports

This page allow user to configure protected port setting to prevent the selected ports from communicate with each other.

Click **Security** > **Protected Ports** to display the configuration screen as shown.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port List	To select the port to be protected.
Port Type	Configure port protect type: ■ **Unprotected:** Unprotected port can communicate with all ports. ■ **Protected:** Prevent protected ports from communicate with each other.
Apply	Click **Apply** to save your changes to the Switch.

3.5.3 DoS

3.5.3.1 DoS Global Setting

This page allow user to configure DoS setting to enable/disable DoS function for Global Setting.

Click **Security** > **DoS** > **DoS Global Setting** to display the configuration screen as shown.



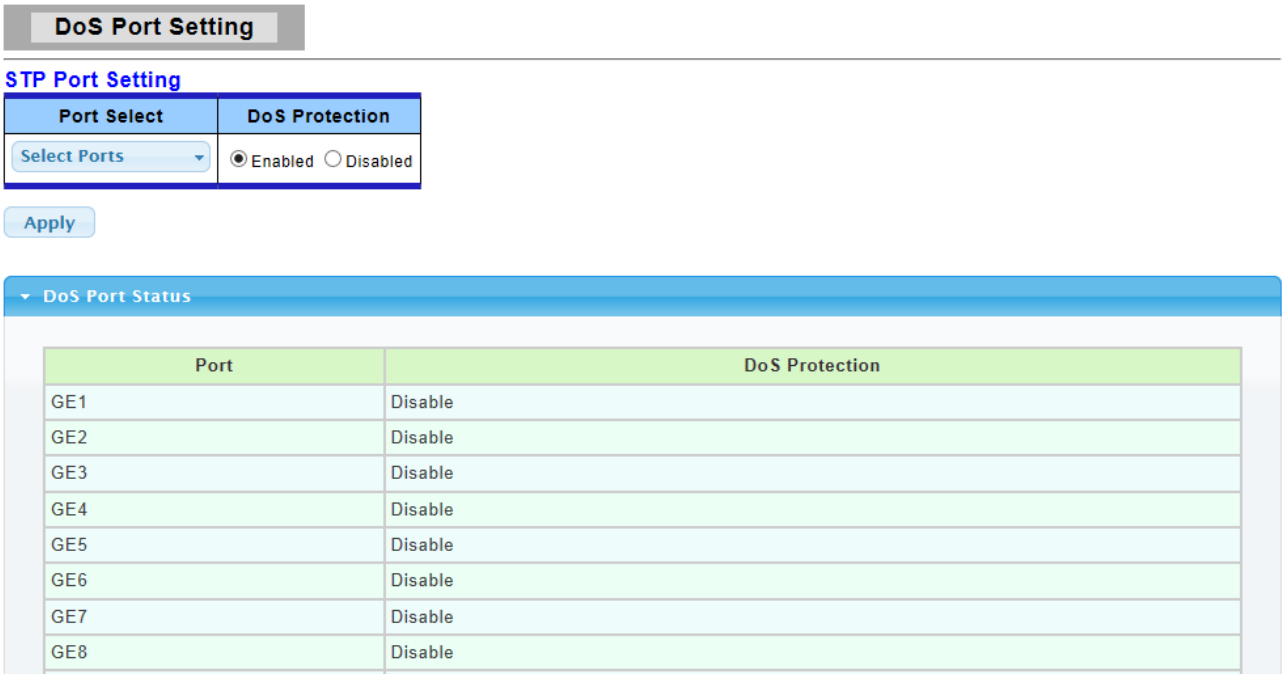
The following table describes the labels in this screen.

LABEL	DESCRIPTION
DMAC = SMAC	Both the source and the destination MAC addresses are the same. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
Land	Both the source and the destination IPv4/IPv6 addresses are the same. ■ **Disabled**: Disable the item DoS setting.

	■ **Enabled**: Enable the item DoS setting.
UDP Blat	Both the source and the destination UDP port are the same. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
TCP Blat	Both the source and the destination TCP port are the same. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
POD	Ping packets that length are larger than 65535 bytes. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
IPv6 Min Fragment	IPv6 fragmented packets (not including the last one) that payload length less than 1240 bytes, and the Min length can be configured if needed. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
ICMP Fragments	Fragmented ICMP packets. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
IPv4 Ping Max Size	IPv4 PING packet with the length. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
Ipv6 Ping Max Size	IPv6 PING packet with the length. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
Ping Max Size Setting	Ping packet Max Size Setting. The default value is 512 Bytes, it can be configured if needed.
Smurf Attack	ICMP echo request packet that destination IPv4 address is broadcast address. The default Netmask length is 0, and it can be configured if needed. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
TCP Min Hdr Size	TCP packet that header length is less than the configured value. The default TCP Min Hdr Size is 20, it can be configured if needed. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
TCPSYN(SPORT <1024)	TCP SYN packets with source port less than 1024. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
Null Scan Attack	TCP sequence number is zero, and all control flags are zeroes. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
X-Mas Scan Attack	TCP sequence number is zero, and the FIN/URG/PSH flags are set. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
TCP SYN-FIN Attack	A TCP packet with the SYN and FIN flags set. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
TCP SYN-RST Attack	A TCP packet with the SYN and RST flags set. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
TCP Fragment(Offset= 1)	Fragmented TCP packets. ■ **Disabled**: Disable the item DoS setting. ■ **Enabled**: Enable the item DoS setting.
Apply	Click **Apply** to save your changes to the Switch.

3.5.3.2 DoS Port Setting

Click **Security** > **DoS** > **DoS Port Setting** to display the configuration screen as shown.



The following table describes the labels in this screen.

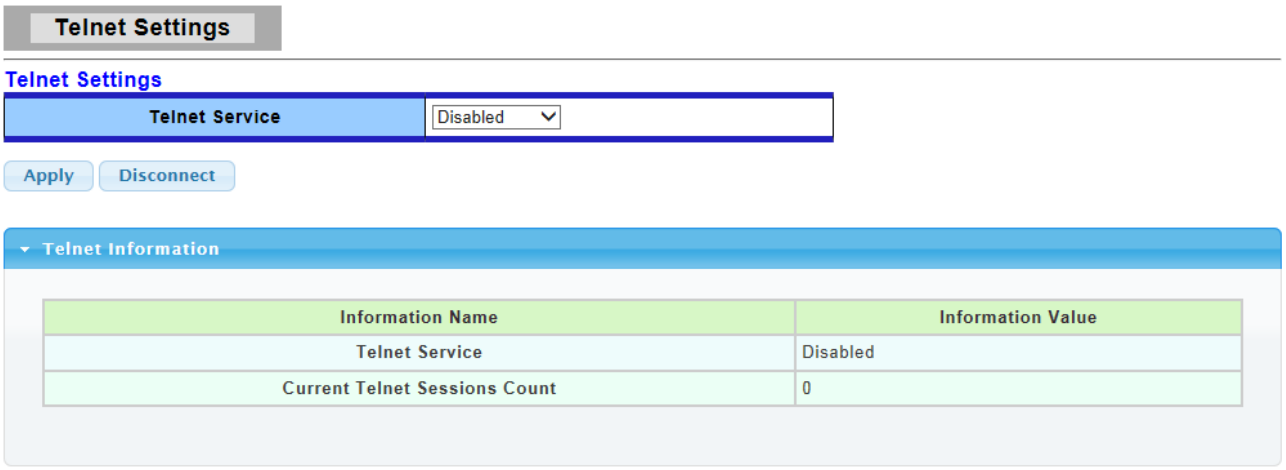
LABEL	DESCRIPTION
Port Select	Select one or multiple ports to configure.
DoS Protection	Configure port protect state ■ **Disabled**: Disable port DoS Protection function. ■ **Enabled**: Enable port DoS Protection function.
Apply	Click **Apply** to save your changes to the Switch.

3.5.4 Access

3.5.4.1 Telnet

Telnet is the TCP/IP standard protocol for remote terminal service. TELNET allows a user at one site to interact with a remote timesharing system at another site as if the user's keyboard and display connected directly to the remote machine.

To display Telnet web page, click **Security** > **Access** > **Telnet**



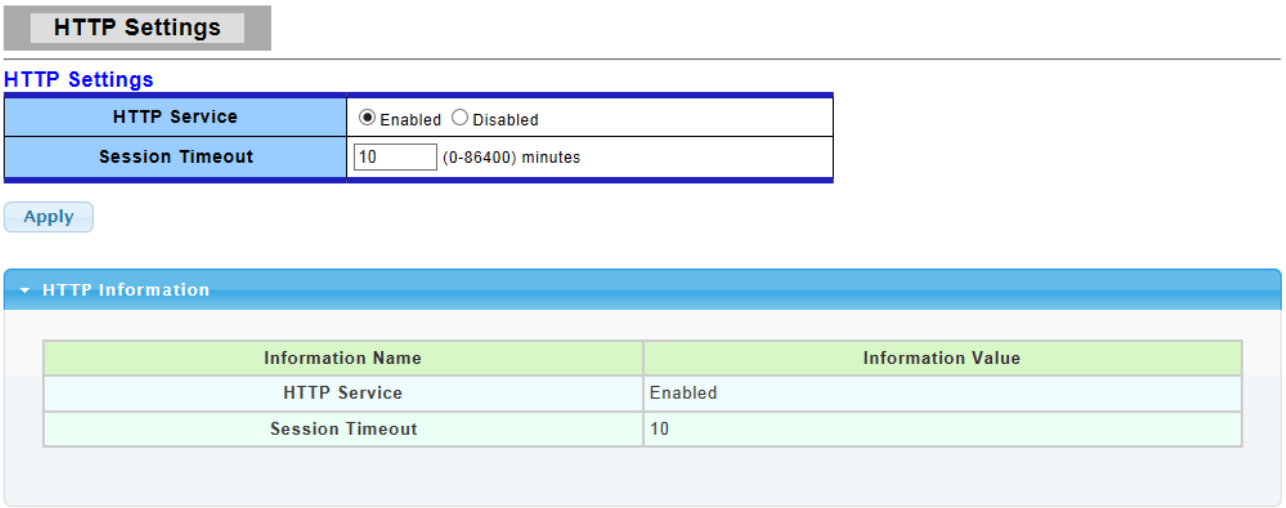
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Telnet Service	Set Enabled to access telnet service or Disabled not to access telnet service.
Disconnect	Click **Disconnect** to disconnect Telnet connection.
Apply	Click **Apply** to save your changes to the Switch.

3.5.4.2 HTTP

HTTP is the acronym of Hyper Text Transfer Protocol.

To display HTTP web page, click **Security** > **Access** > **HTTP**



The following table describes the labels in this screen.

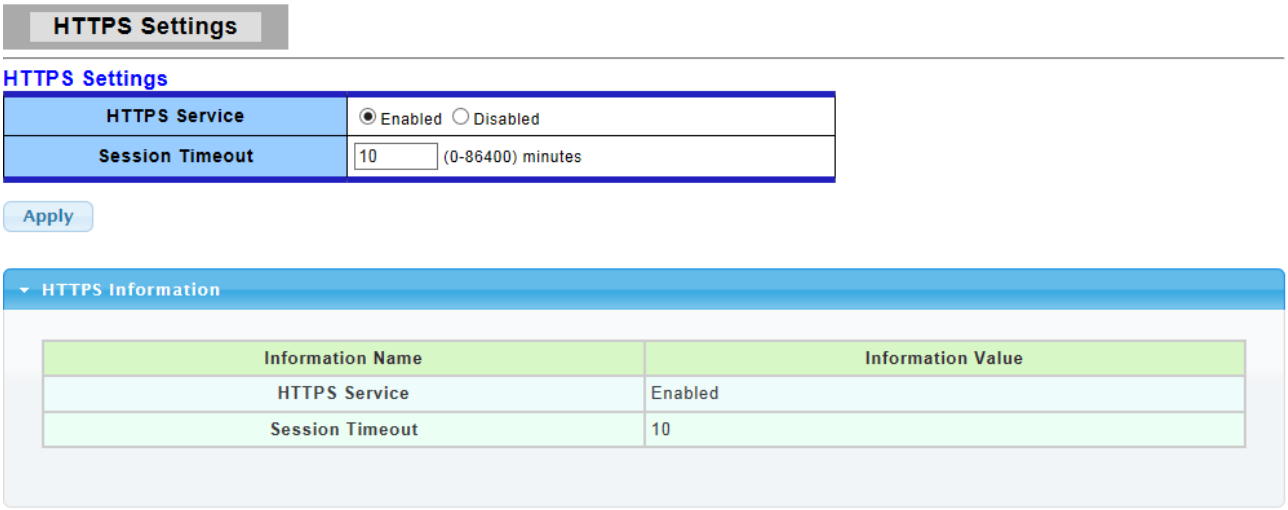
LABEL	DESCRIPTION
HTTP Service	Support HTTP service **Enable**: Enable HTTP service.

	Disable: Disable HTTP service.
Session Timeout	Set session timeout minutes for user access WEB from HTTP protocol. If user does not response after session timeout minute, WEBUI will logout automatically. 0 minutes means never timeout.
Apply	Click **Apply** to save your changes to the Switch.

3.5.4.3 HTTPS

HTTPS is the acronym of Hypertext Transfer Protocol over Secure Socket Layer.

To display HTTPS web page, click **Security** > **Access** > **HTTPS**



The following table describes the labels in this screen.

LABEL	DESCRIPTION
HTTPS Service	Support HTTPS service **Enable**: Enable HTTPS service. **Disable**: Disable HTTPS service.
Session Timeout	Set session timeout minutes for user access WEB from HTTPS protocol. If user does not response after session timeout minute, WEBUI will logout automatically. 0 minutes means never timeout.
Apply	Click **Apply** to save your changes to the Switch.

3.6 QoS

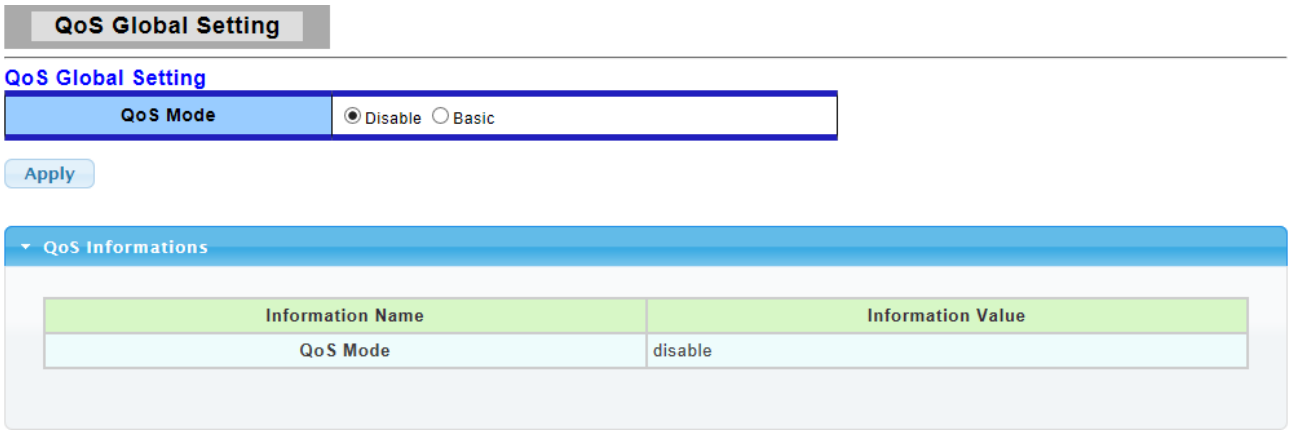
Use the QoS pages to configure settings for the switch QoS interface and how the switch connects to a remote server to get services.

3.6.1 General

3.6.1.1 QoS Properties

Use the QoS general pages to configure settings for both basic and advanced modes.

Click **QoS** > **General** > **QoS Properties** in the navigation panel to display the screen as shown below.

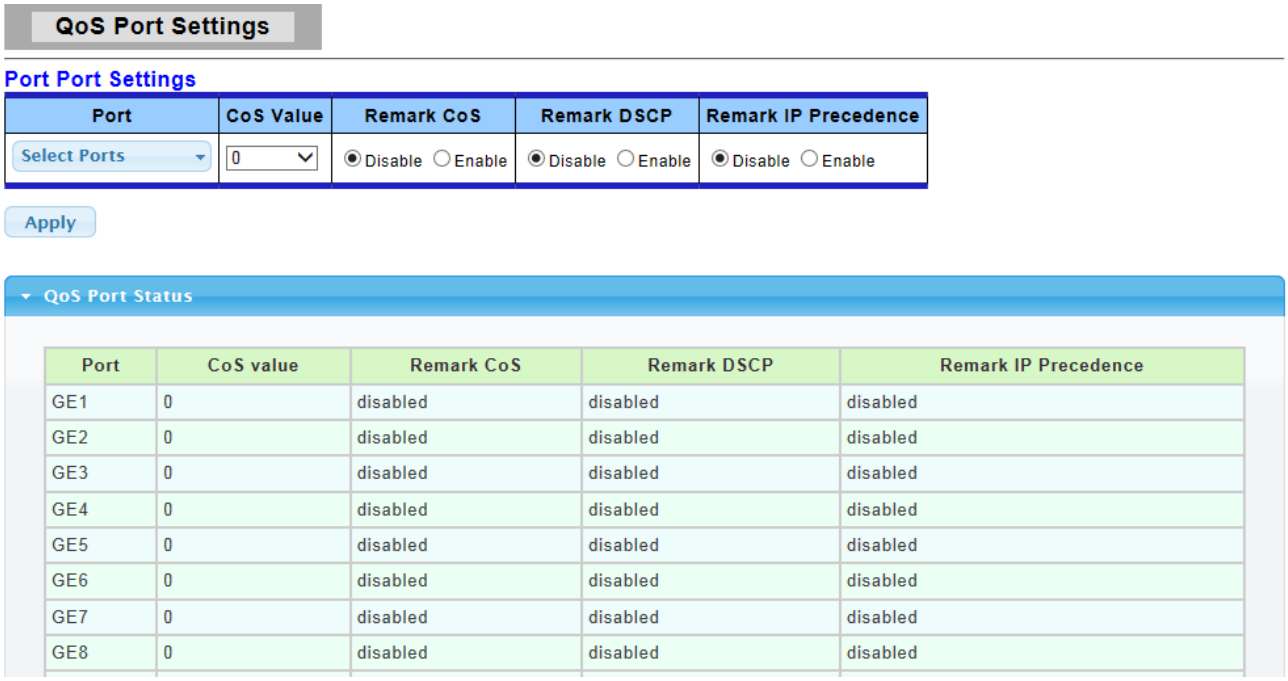


The following table describes the labels in this screen.

LABEL	DESCRIPTION
QoS Mode	Select the QoS operation mode. ■ **Disable**: Disable QoS ■ **Basic**: Set QoS to basic mode
Apply	Click **Apply** to save your changes to the switch.

3.6.1.2 Port Settings

Click **QoS** > **General** > **Port Settings** in the navigation panel to display the screen as shown below.

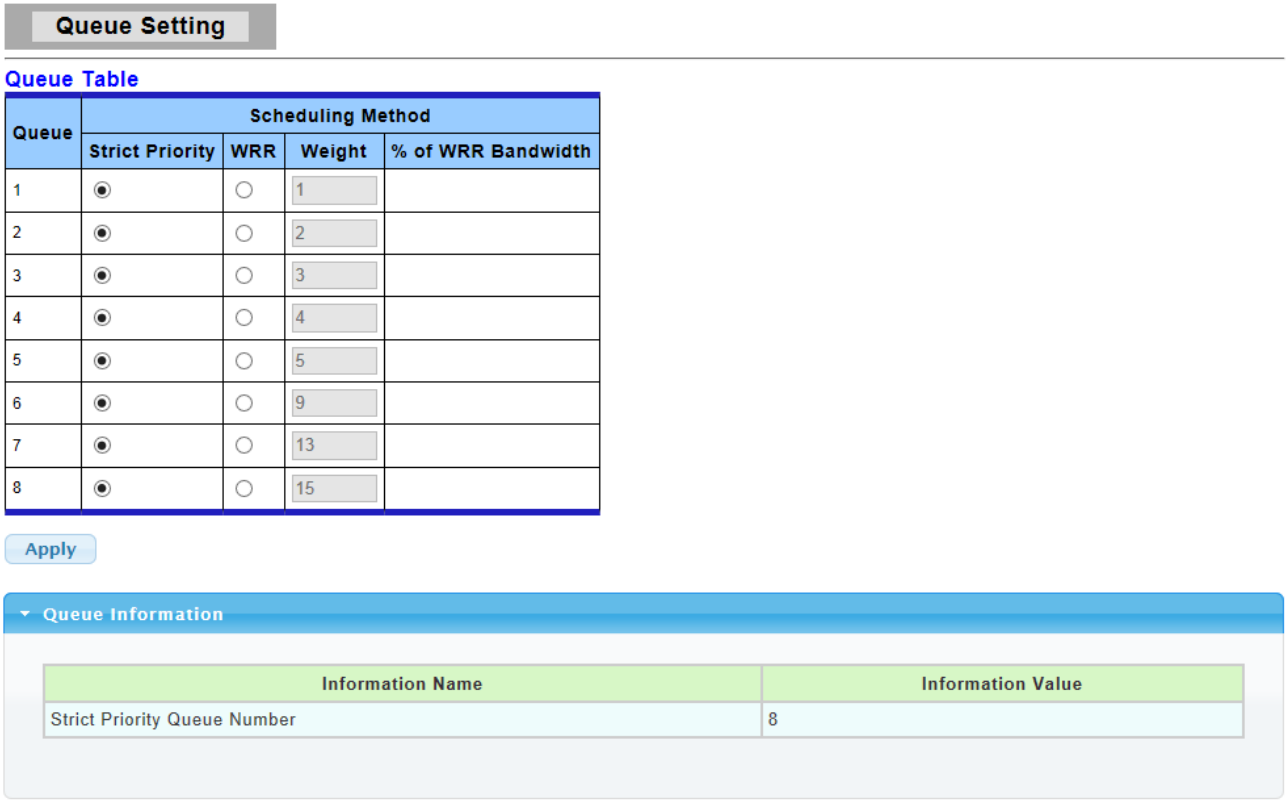


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
CoS Value	Set default CoS/802.1p priority value for the selected ports
Remark CoS	Enable/Disable CoS remark
Remark DSCP	Enable/Disable DSCP remark
Remark IP Precedence	Enable/Disable IP Precedence remark
Apply	Click **Apply** to save your changes to the switch.

3.6.1.3 Queue Settings

Click **QoS** > **General** > **Queue Settings** in the navigation panel to display the screen as shown below.

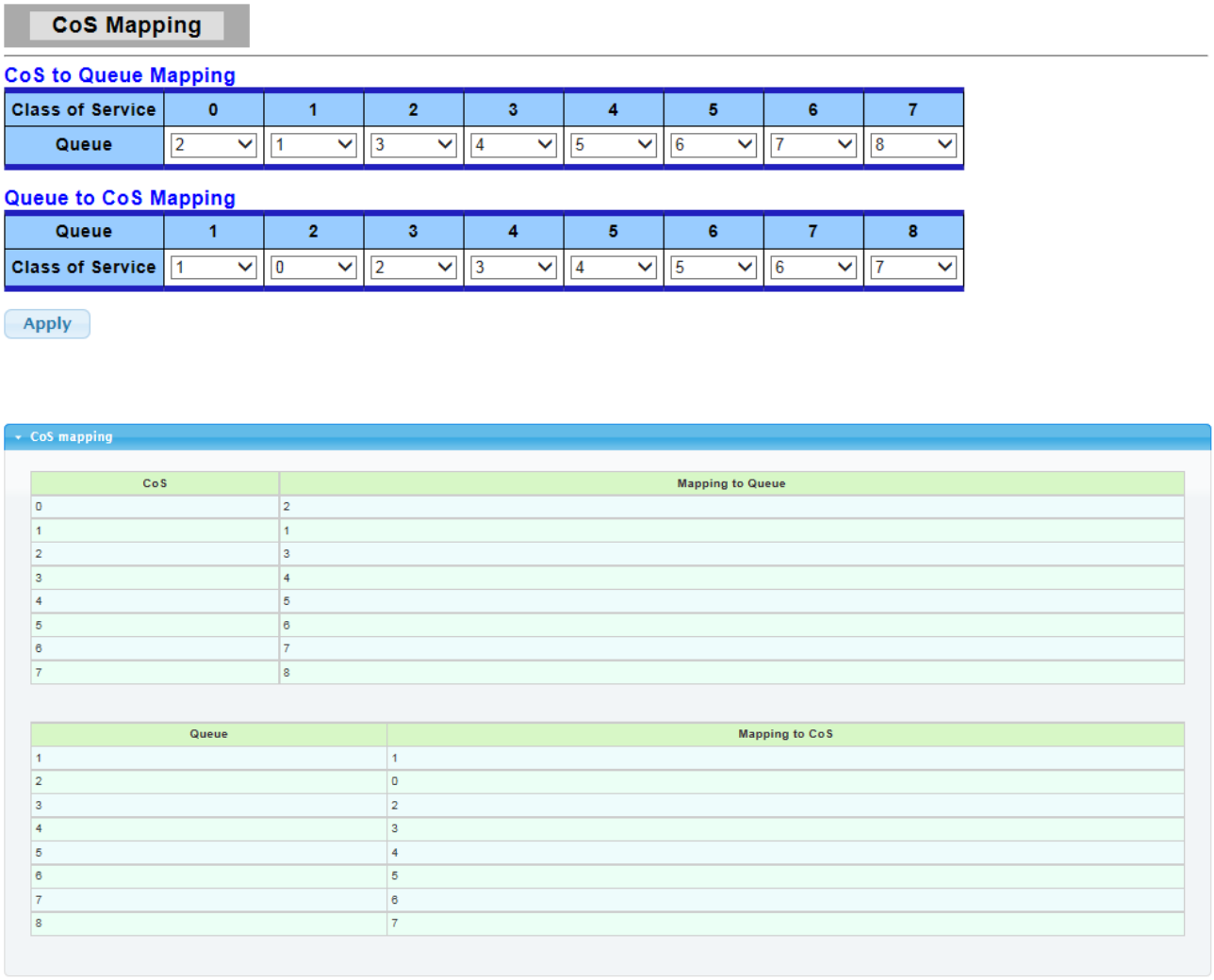


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Queue	Queue ID to configure
Strict Priority	Set queue to strict priority type
WRR	Set queue to Weight round robin type
Weight	If the queue type is WRR, set the queue weight for the queue.
Apply	Click **Apply** to save your changes to the switch.

3.6.1.4 CoS Mapping

Click **QoS** > **General** > **CoS Mapping** in the navigation panel to display the screen as shown below.

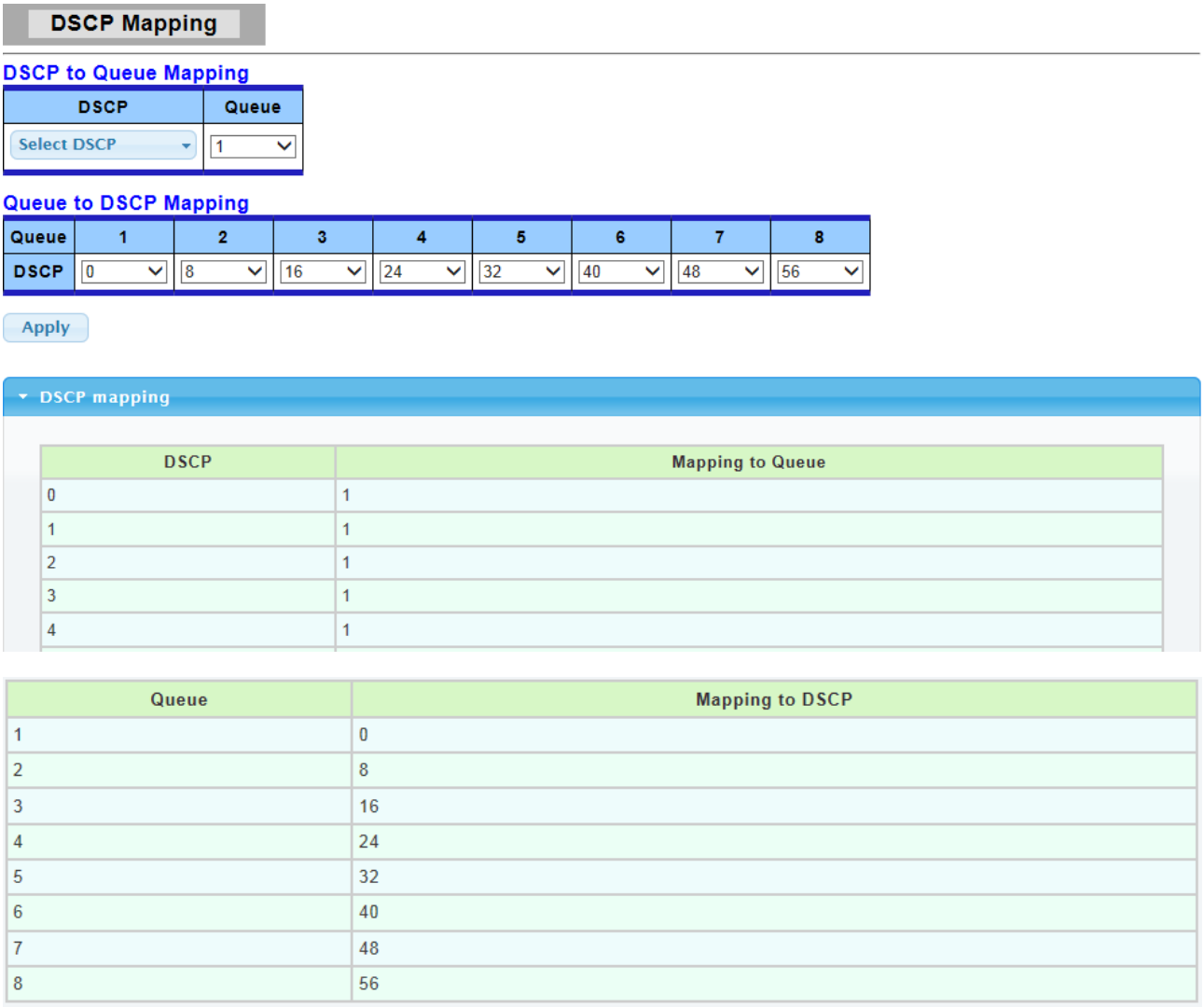


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Class of service	Class of service value
Queue	Select queue ID for the CoS value
Apply	Click **Apply** to save your changes to the switch.
Queue	Queue ID
Class of service	Select CoS Value for the Queue ID

3.6.1.5 DSCP Mapping

Click **QoS** > **General** > **DSCP Mapping** in the navigation panel to display the screen as shown below.

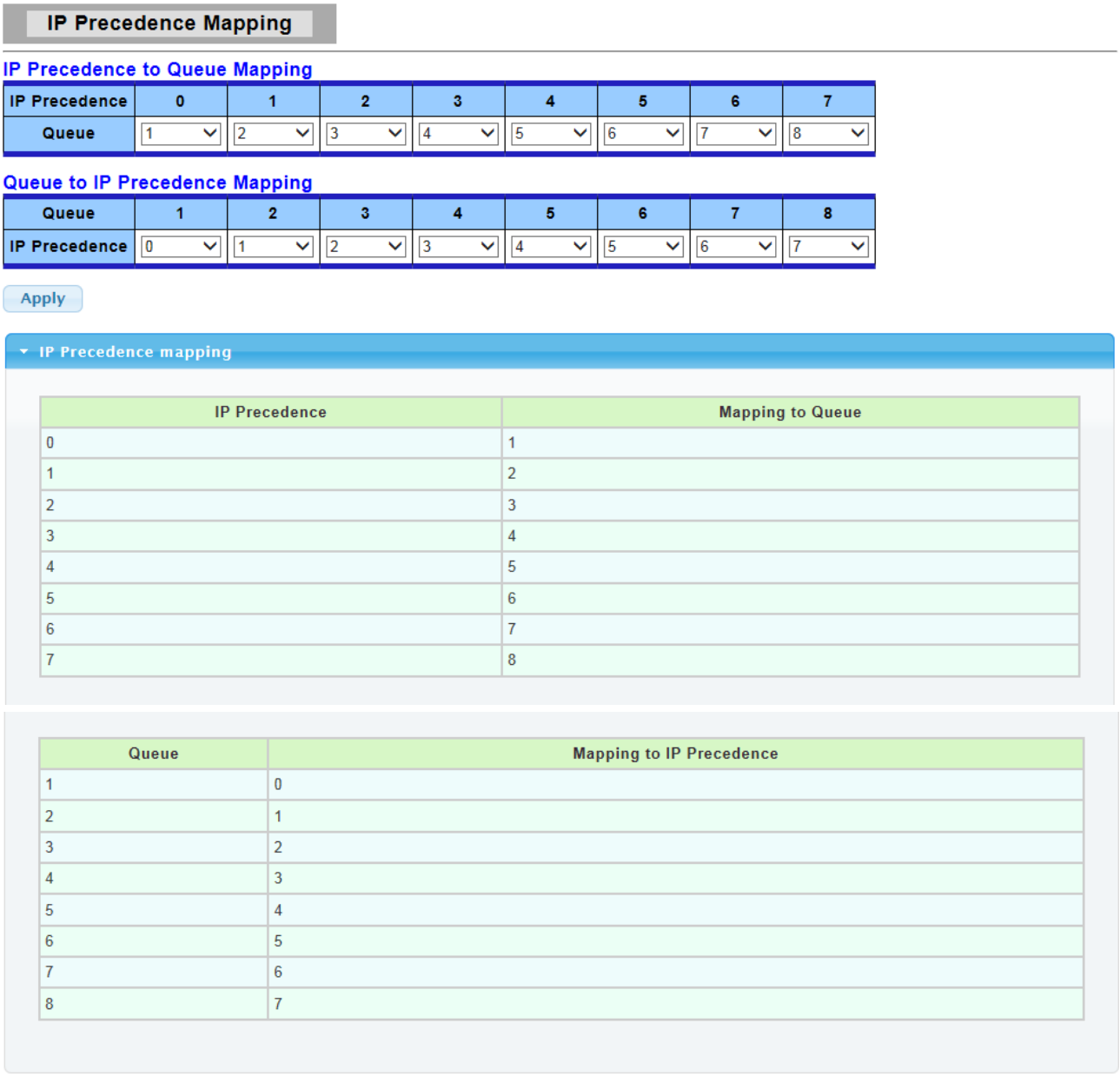


The following table describes the labels in this screen.

LABEL	DESCRIPTION
DSCP	Select the DSCP value to mapping to the priority and drop precedence. The DSCP range is 0 to 63.
Queue	Select queue ID for the DSCP value
Apply	Click **Apply** to save your changes to the switch.
Queue	Queue ID
DSCP	Select DSCP Value for the Queue ID

3.6.1.6 IP Precedence Mapping

Click **QoS** > **General** > **IP Precedence Mapping** in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

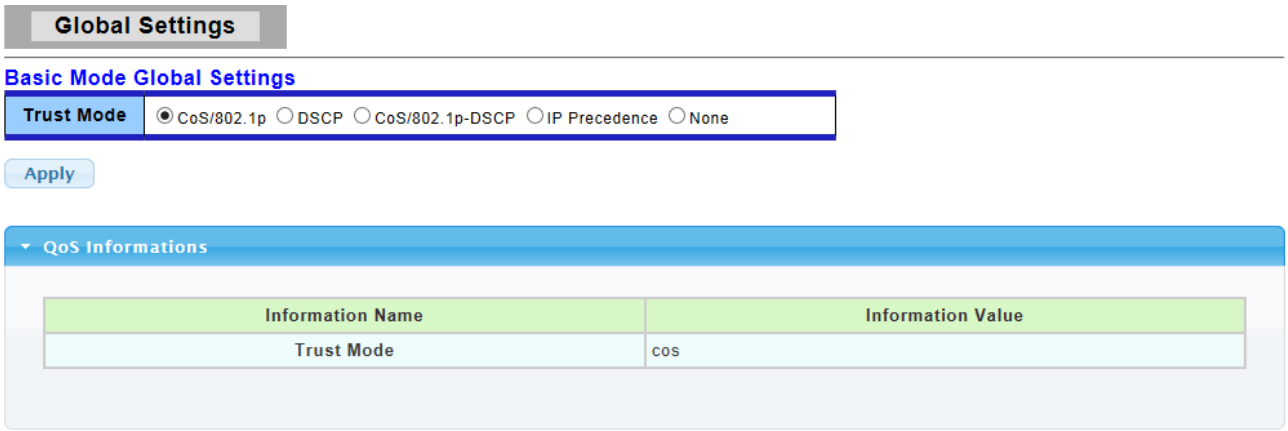
LABEL	DESCRIPTION
IP Precedence	IP Precedence value
Queue	Select queue ID for the IP Precedence value
Apply	Click **Apply** to save your changes to the switch.
Queue	Queue ID
IP Precedence	Select IP Precedence value for the queue ID

3.6.2 QoS Basic Mode

Use the QoS basic mode pages to configure settings for basic mode.

3.6.2.1 Global Settings

Click **QoS** > **QoS Basic Mode** > **Global settings** in the navigation panel to display the screen as shown below.

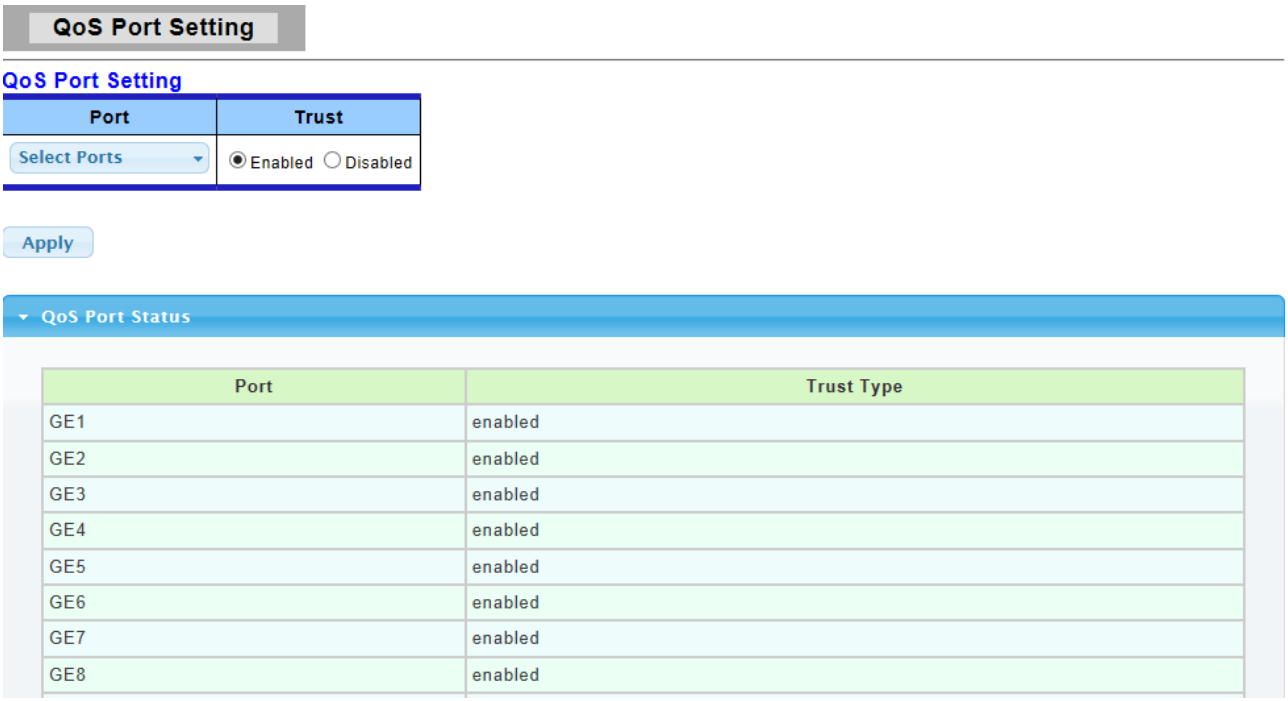


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Trust Mode	Select the QoS operation mode. ■ **CoS/802.1p**: Traffic is mapped to queues based on the CoS field in the VLAN tag, or based on the per-port default CoS value if there is no VLAN tag on the incoming packet. ■ **DSCP**: All IP traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP traffic, it is mapped to the lowest priority queue. ■ **CoS/802.1p-DSCP**: All IP traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP but has VLAN tag, mapped to queues based on the CoS value in the VLAN tag. ■ **IP Precedence**: All IP traffic is mapped to queues based on the IP Precedence field in the IP header. If traffic is not IP traffic, it is mapped to the lowest priority queue. ■ **None**: All traffic is mapped to the lowest priority queue.
Apply	Click **Apply** to save your changes to the switch.

3.6.2.2 Port Settings

Click **QoS** > **QoS Basic Mode** > **Port settings** in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

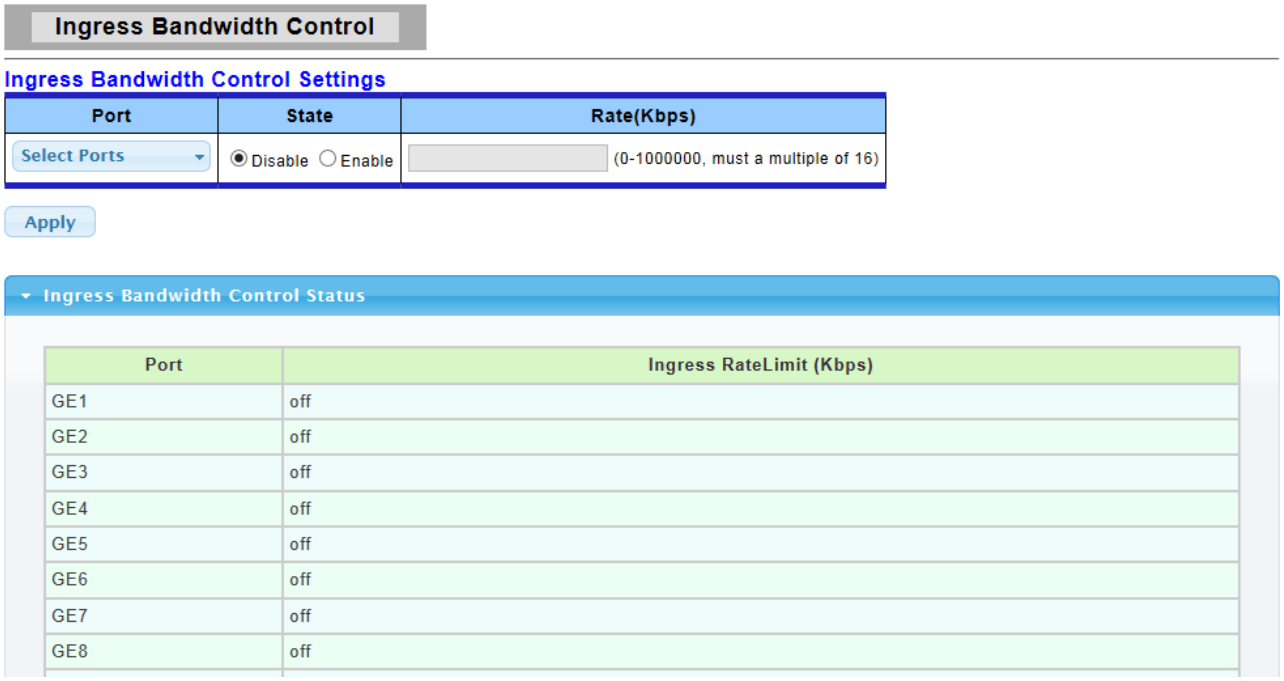
LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
Apply	Click Apply to save your changes to the switch.
Trust	Select the port trust state. **Enabled**: Traffic from this port will follow the global trust type. **Disabled**: Traffic will always go to the lowest priority queue.

3.6.3 Rate Limit

Use the QoS basic mode pages to configure settings for basic mode.

3.6.3.1 Ingress Bandwidth Control Settings

Click **QoS** > **Rate Limit** > **Ingress Bandwidth Control Settings** in the navigation panel to display the screen as shown below.

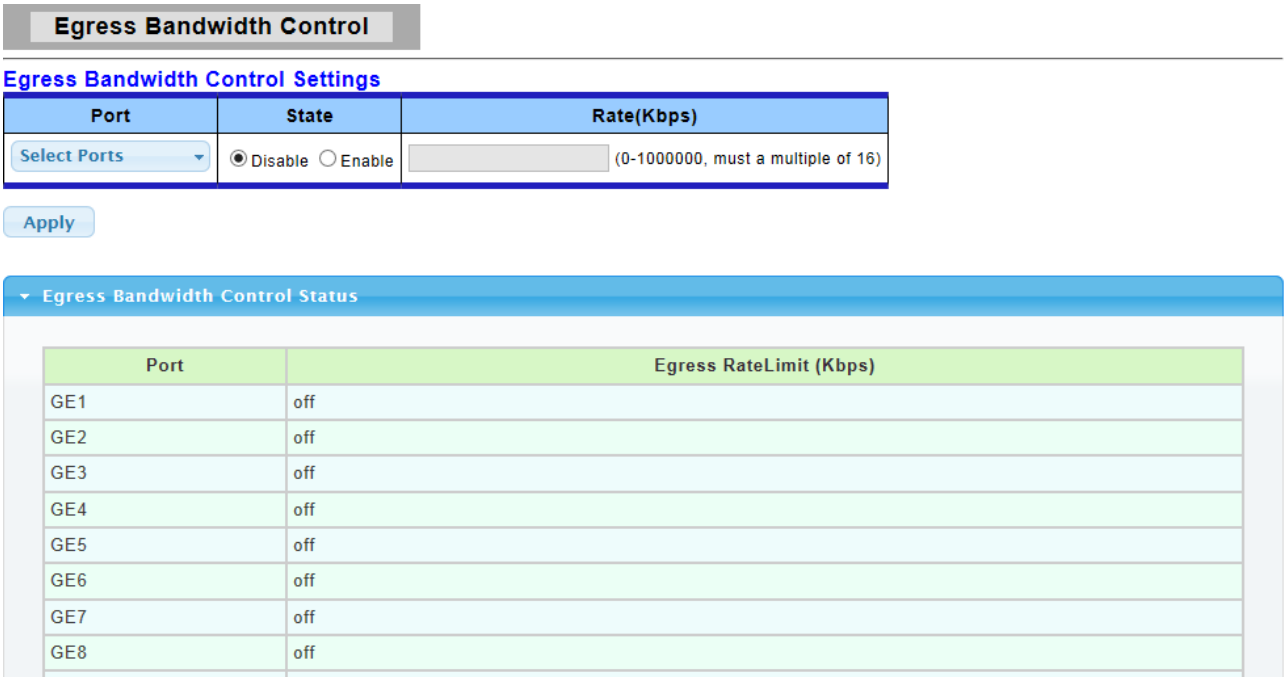


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	Enable/Disable ingress bandwidth control
Rate	Rate value,<0-1000000>,unit:16 Kbps
Apply	Click **Apply** to save your changes to the switch.

3.6.3.2 Egress Bandwidth Control Settings

Click **QoS** > **Rate Limit** > **Egress Bandwidth Control Settings** in the navigation panel to display the screen as shown below.

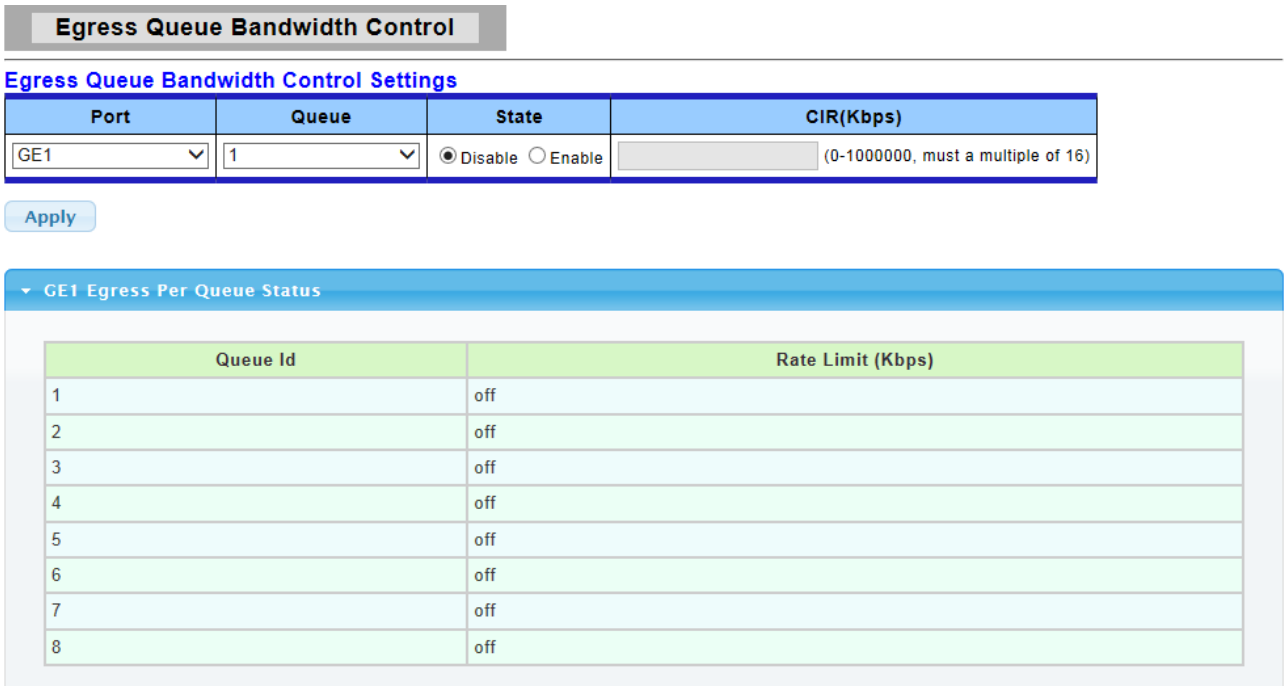


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	Enable/Disable ingress bandwidth control
Rate	Rate value,<0-1000000>,unit:16 Kbps
Apply	Click **Apply** to save your changes to the switch.

3.6.3.3 Egress Queue

Click **QoS** > **Rate Limit** > **Egress Queue** in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
Queue	Select one queue to configure
State	Enable/Disable ingress bandwidth control
Rate	Rate value,<0-1000000>,unit:16 Kbps
Apply	Click **Apply** to save your changes to the switch.

3.7 Management

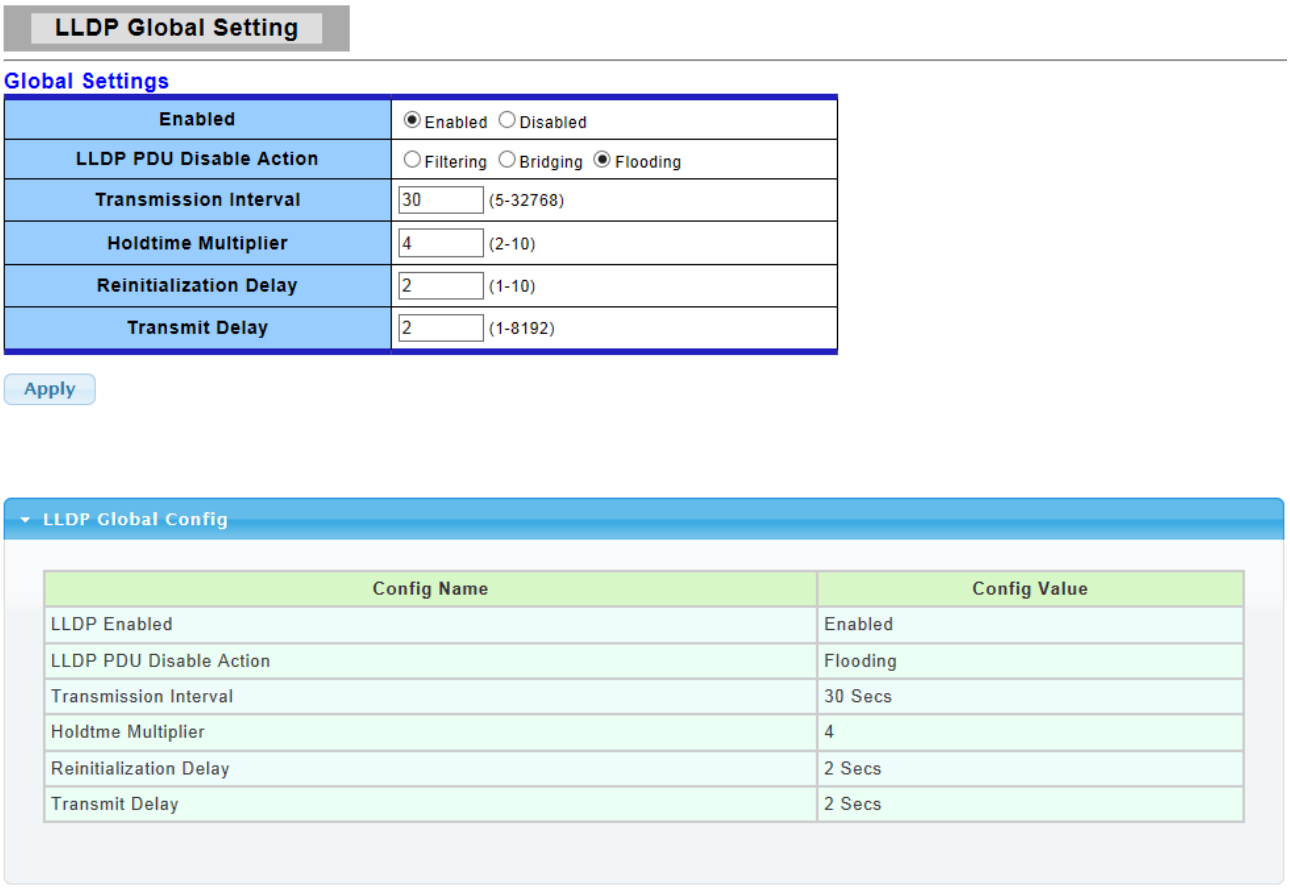
Use the Network pages to configure settings for the switch network interface and how the switch connects to a remote server to get services.

3.7.1 LLDP

LLDP is a one-way protocol; there are no request/response sequences. Information is advertised by stations implementing the transmit function, and is received and processed by stations implementing the receive function. The LLDP category contains LLDP and LLDP-MED pages.

3.7.1.1 LLDP Global Setting

Click **Management** > **LLDP** > **LLDP Global Setting** to display the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Enabled	Enable/ Disable LLDP protocol on this switch.
LLDP PDU Disable Action	Select LLDP PDU handling action to be filtered, bridging or flooded when LLDP is globally disabled.
Transmission Interval	Select the interval at which frames are transmitted. The default is 30 seconds, and the valid range is 5–32768 seconds.
Holdtime Multiplier	Select the multiplier on the transmit interval to assign to TTL (range 2–10, default = 4).
Reinitialization Delay	Select the delay before a re-initialization (range 1–10 seconds, default = 2).
Transmit Delay	Select the delay after an LLDP frame is sent (range 1–8192 seconds, default = 3).
Apply	Click **Apply** to save your changes to the switch.

3.7.1.2 LLDP Port Setting

Click **Management** > **LLDP** > **LLDP Port Setting** to display the screen as shown next.

LLDP Port Setting

LLDP Port Configuration

Port Select	State
Select Ports	Disable

Apply

Optional TLVs Selection

Port Select	Optional TLV Select
Select Ports	Select Optional TLVs

Apply

LLDP Port Status

Port	State	Selected Optional TLVs
GE1	TX&RX	802.1 PVID
GE2	TX&RX	802.1 PVID
GE3	TX&RX	802.1 PVID
GE4	TX&RX	802.1 PVID
GE5	TX&RX	802.1 PVID
GE6	TX&RX	802.1 PVID
GE7	TX&RX	802.1 PVID
GE8	TX&RX	802.1 PVID
GE9	TX&RX	802.1 PVID
GE10	TX&RX	802.1 PVID
GE11	TX&RX	802.1 PVID
GE12	TX&RX	802.1 PVID
GE13	TX&RX	802.1 PVID
GE14	TX&RX	802.1 PVID
GE15	TX&RX	802.1 PVID

VLAN Name TLV VLAN Selection

Port Select	VLAN Select
Select Ports	Select VLANs

Apply

LLDP Port VLAN TLV Status

Port	Selected VLAN
GE1	
GE2	
GE3	
GE4	
GE5	
GE6	
GE7	
GE8	
GE9	
GE10	

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port Select	Select specified port or all ports to configure LLDP state.
State	Select the transmission state of LLDP port interface. ■ **Disable**: Disable the transmission of LLDP PDUs. ■ **RX Only**: Receive LLDP PDUs only. ■ **TX Only**: Transmit LLDP PDUs only. ■ **TX And RX**: Transmit and receive LLDP PDUs both.
Apply	Click **Apply** to save your changes to the switch.
Port Select	Select specified port or all ports to configure optional TLVs.
Optional TLV Select	Select the LLDP optional TLVs to be carried (multiple selection is allowed). ■ **System Name** ■ **Port Description** ■ **System Description** ■ **System Capability** ■ **802.3 MAC-PHY** ■ **802.3 Link Aggregation** ■ **802.3 Maximum Frame Size** ■ **Management Address** ■ **802.1 PVID**
Apply	Click **Apply** to save your changes to the switch.
Port Select	Select specified port or all ports to configure VLAN Name.
VLAN Select	Select the VLAN Name ID to be carried (multiple selection is allowed).
Apply	Click **Apply** to save your changes to the switch.

3.7.1.3 LLDP Local Device

Use the LLDP Local Device page to view LLDP local device information. Click “detail” button on the page to view detail information of the selected port.

Click **Management** > **LLDP** > **LLDP Local Device** to display the screen as shown next.

LLDP Local Device

Local Device Summary

Chassis ID Subtype	MAC Address
Chassis ID	00:E0:4C:00:00:00
System Name	Switch
System Description	switch
Capabilities Supported	Bridge
Capabilities Enabled	Bridge
Port ID Subtype	Interface name

Port Status

Detail

	Interface	LLDP Status
○	GE1	TX & RX
○	GE2	TX & RX
○	GE3	TX & RX
○	GE4	TX & RX
○	GE5	TX & RX
○	GE6	TX & RX
○	GE7	TX & RX
○	GE8	TX & RX
○	GE9	TX & RX
○	GE10	TX & RX
○	GE11	TX & RX
○	GE12	TX & RX
○	GE13	TX & RX
○	GE14	TX & RX

LLDP Port Detail Local Information

Back

Global	
Chassis ID Subtype	MAC address
Chassis ID	00:E0:4C:00:00:00
System Name	Switch
System Description	switch
Supported System Capabilities	Bridge
Enabled System Capabilities	Bridge
Port ID Subtype	Interface name
Port ID	gi1
Port Description	
Management Address	192.168.1.1

MAC/PHY Details	
Auto-Negotiation Supported	N/A
Auto-Negotiation Enabled	N/A
Auto-Negotiation Advertised Capabilities	N/A
Operational MAU Type	N/A

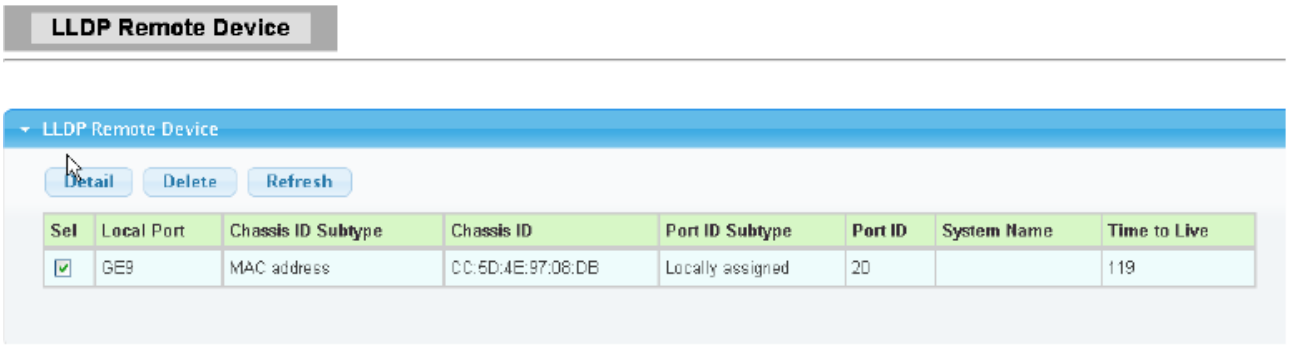
802.3 Details	
802.3 Maximum Frame Size	N/A

802.3 Link Aggregation	
Aggregation Capability	N/A
Aggregation Status	N/A
Aggregation Port ID	N/A

802.1 VLAN and Protocol	
PVID	1
VLAN Names	N/A

3.7.1.4 LLDP Remote Device

Click **Management** > **LLDP** > **LLDP Remote Device** to display the screen as shown next.



Use the LLDP Remote Device page to view LLDP neighbors information. Click “detail” to view selected neighbor detail information.

LLDP Remote Device Detail Information

LLDP Port Detail Remote Information

Back

Port Details	
Local Port	GE9
Entry Index	0

Basic Details	
Chassis ID Subtype	MAC address
Chassis ID	CC:5D:4E:87:08:DB
Port ID Subtype	Locally assigned
Port ID	20
Port Description	Port#20
System Name	
System Description	V1.00(AAAX.2) 2012-11-08T08:52:00+01:00
Supported System Capabilities	Bridge
Enabled System Capabilities	Bridge
Management Address	192.168.1.1

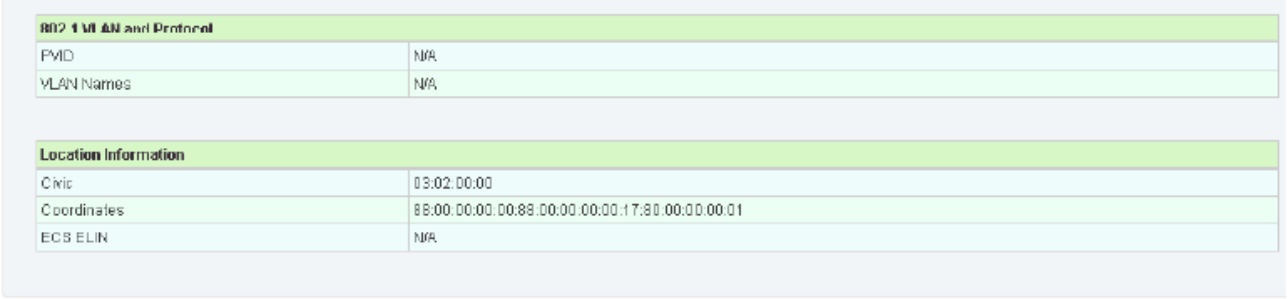
MAC/PHY Details	
Auto-Negotiation Supported	TRUE
Auto-Negotiation Enabled	TRUE
Auto-Negotiation Advertised Capabilities	10BASE-T half duplex, 10BASE-T full duplex, 100BASE-TX half duplex, 100BASE-TX full duplex, 1000BASE-T full duplex
Operational MAU Type	1000BASE-T full duplex mode

802.3 Power via MDI	
MDI Power Support Port Class	N/A
PSE MDI Power Support	N/A
PSE MDI Power State	N/A
PSE Power Pair Control Ability	N/A
PSE Power Pair	N/A
PSE Power Class	N/A

802.3 Details	
802.3 Maximum Frame Size	N/A

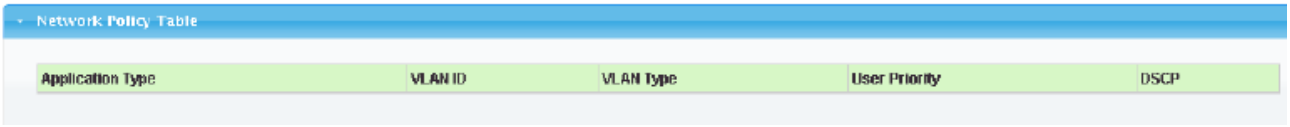
802.3 Link Aggregation	
Aggregation Capability	N/A
Aggregation Status	N/A
Aggregation Port ID	N/A

MED Details	
Capabilities Supported	Capabilities, Network Policy, Location
Current Capabilities	Capabilities, Network Policy, Location
Device Class	Network Connectivity
PoE Device Type	N/A
PoE Power Source	N/A
PoE Power Priority	N/A
PoE Power Value	N/A
Hardware Revision	N/A
Firmware Revision	N/A
Software Revision	N/A
Serial Number	N/A
Manufacturer Name	N/A
Model Name	N/A
Asset ID	N/A



802.1 VLAN and Protocol	
PVID	N/A
VLAN Names	N/A

Location Information	
Civic	03:02:00:00
Coordinates	88:00:00:00:00:88:00:00:00:00:17:80:00:00:00:01
ECS ELIN	N/A

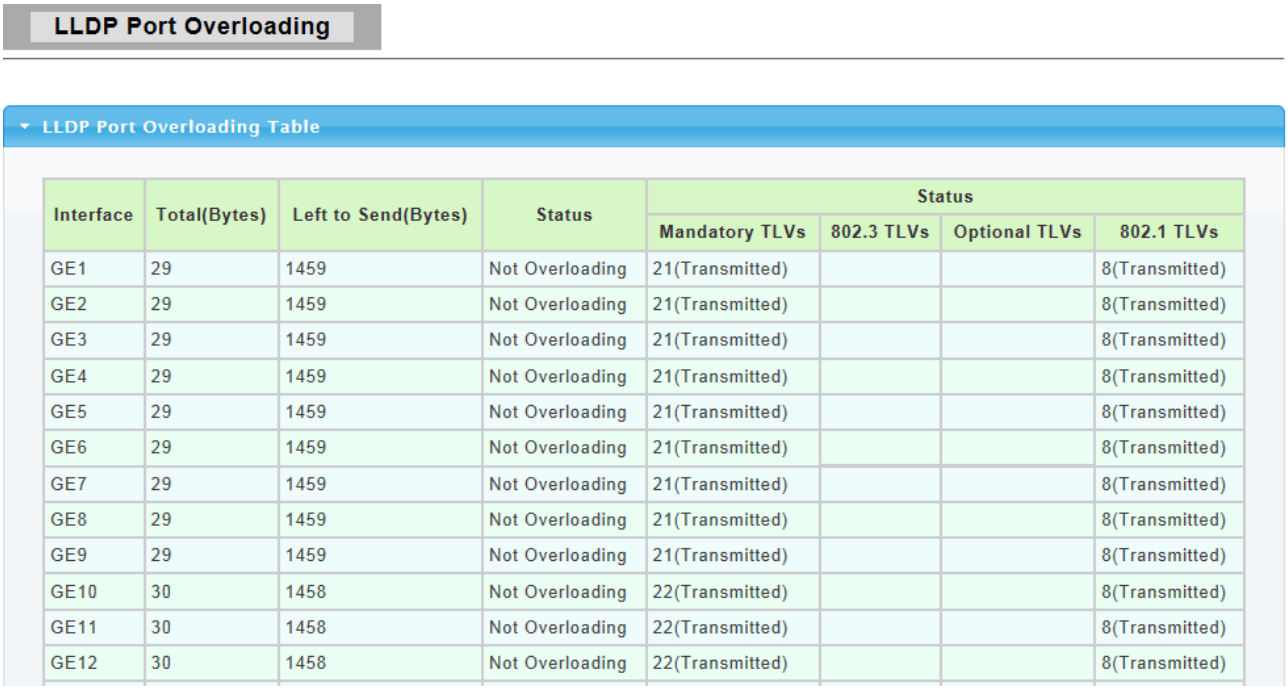


Network Policy Table

Application Type	VLAN ID	VLAN Type	User Priority	DSCP

3.7.1.5 LLDP Overloading

Click **Management** > **LLDP** > **LLDP Overloading** to display the screen as shown next.



LLDP Port Overloading

LLDP Port Overloading Table

Interface	Total(Bytes)	Left to Send(Bytes)	Status	Status			
				Mandatory TLVs	802.3 TLVs	Optional TLVs	802.1 TLVs
GE1	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE2	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE3	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE4	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE5	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE6	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE7	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE8	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE9	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE10	30	1458	Not Overloading	22(Transmitted)			8(Transmitted)
GE11	30	1458	Not Overloading	22(Transmitted)			8(Transmitted)
GE12	30	1458	Not Overloading	22(Transmitted)			8(Transmitted)

The following table describes the labels in this screen.

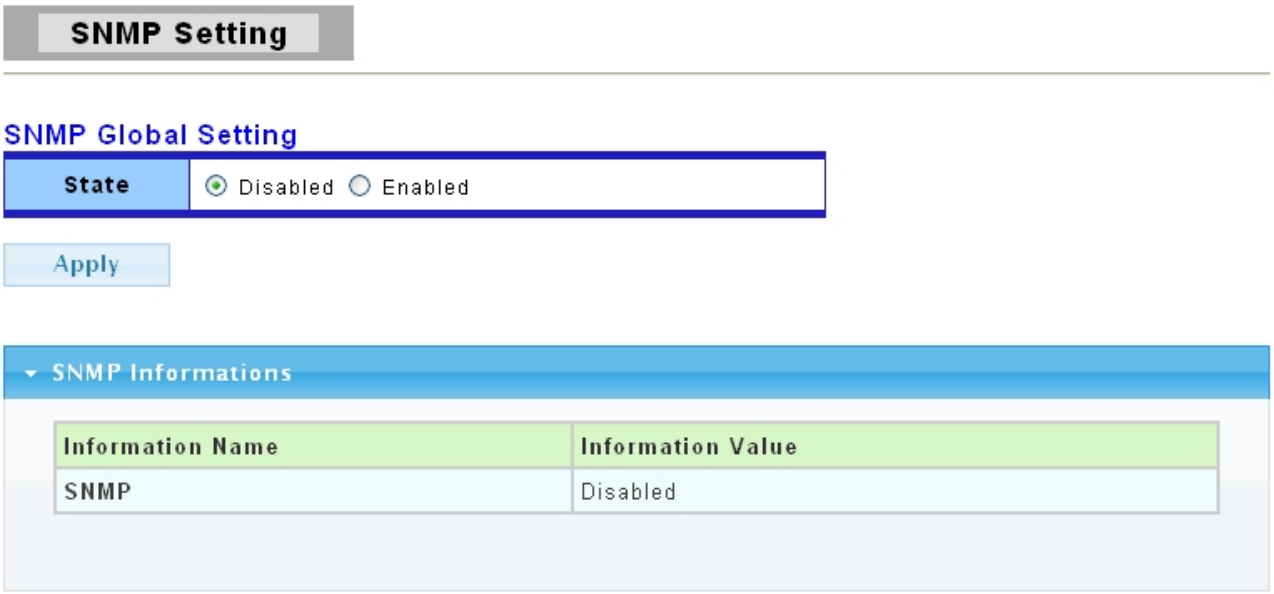
LABEL	DESCRIPTION
Interface	This label shows the port you are viewing.
Total (Bytes)	This field displays the total in bytes.
Left to Send (Bytes)	This field displays what is left to send in bytes.
Status	This field displays whether the Switch is overloading or not.

Mandatory TLVs	This field displays how many bytes used by mandatory TLVs.
802.3 TLVs	This field displays how many bytes used by 802.3 TLVs.
Optional TLVs	This field displays how many bytes used by optional TLVs.
802.1 TLVs	This field displays how many bytes used by 802.1 TLVs.

3.7.2 SNMP

3.7.2.1 SNMP Setting

Click **Management** > **SNMP**->**SNMP Setting** to display the screen as shown next.

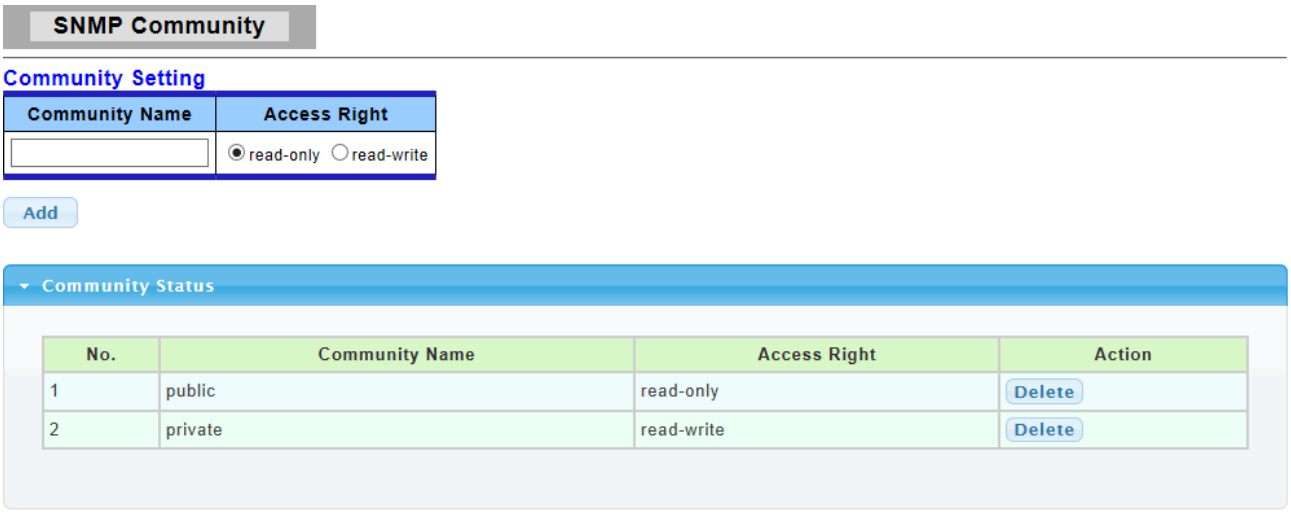


The following table describes the labels in this screen.

LABEL	DESCRIPTION
State	SNMP daemon state: Select **Enabled** to activate SNMP daemon. Select **Disabled** to not use SNMP daemon.
Apply	Click **Apply** to save your changes to the switch.

3.7.2.2 SNMP Community

Click **Management** > **SNMP**->**SNMP Community** to display the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Community Name	Enter a Community string, this will act as a password for requests from the management station.
Access Right	SNMP community type: ■ **Read-Only:** Read all objects only, it can allow the SNMP manager using this string to collect information from the switch. ■ **Read-Write:** Read and write all objects, it can allow the SNMP manager using this string to create or edit MIBs (configure settings on the switch).
Add	Click **Add** to add any other community.
No	It displays the port number which in the community.
Community Name	This field displays the community strings.
Access Right	This field displays the community string's type. This will either be read-only or read-write.
Delete	Click **Delete** to remove any selected community strings.

3.7.2.3 SNMP Trap Host

This page allow user to add or delete SNMP trap receiver IP address and community name.

Click **Management** > **SNMP**->**SNMP Trap Host** to display the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
IP Address	Enter the IP addresses to send your SNMP traps to.
Community Name	Enter a Community string, which is the password sent with each trap to the SNMP manager.
Add	Click **Add** to add any trap receiver.
IP Address	This field displays the IP address where the traps from the switch are sent.
Community Name	This field displays the password which is sent with each trap to the SNMP manager.
Version	Indicates the SNMP trap supported version. Possible versions are: ■ **v1**: Set SNMP trap supported version 1. ■ **v2c**: Set SNMP trap supported version 2c.
Delete	Click **Delete** to remove any selected trap receiver entries.

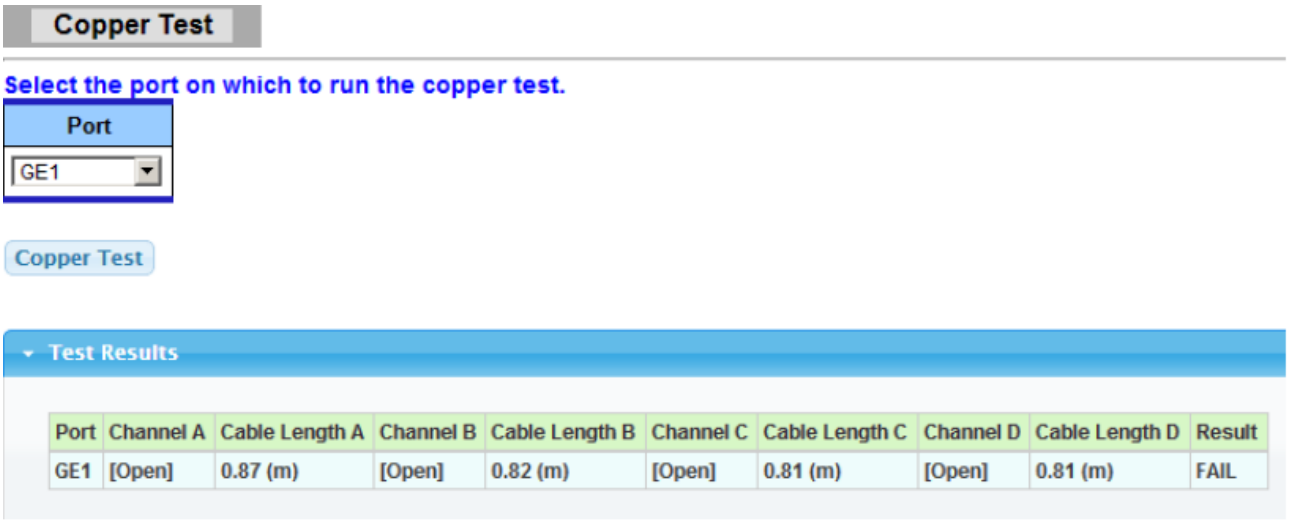
3.8 Diagnostics

Use the Diagnostics pages to configure settings for the switch diagnostics feature or operating diagnostic utilities.

3.8.1 Cable Diagnostics

3.8.1.1 Copper Test

Click **Diagnostics** > **Cable Diagnostics** > **Copper Test** to view the screen as shown next.

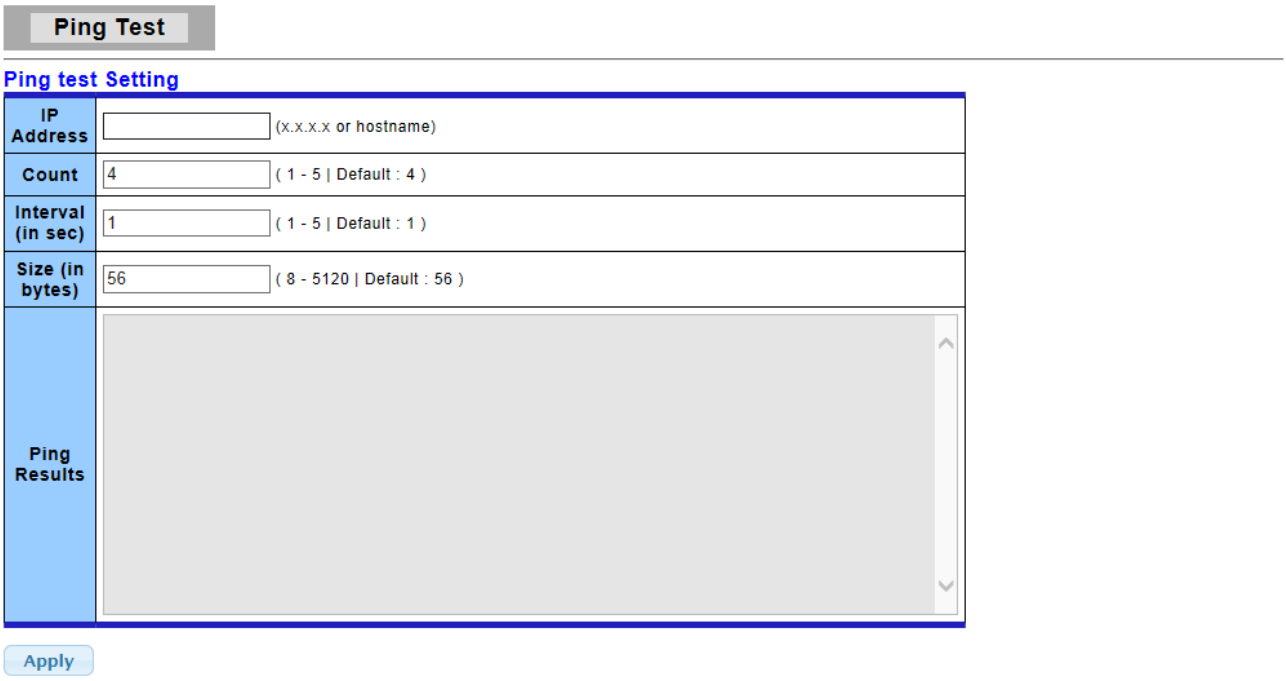


The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	The Selected Port ID.
Copper Test	Click **Copper** to start the test.

3.8.2 Ping Test

Click **Diagnostics** > **Ping Test** to view the screen as shown next.

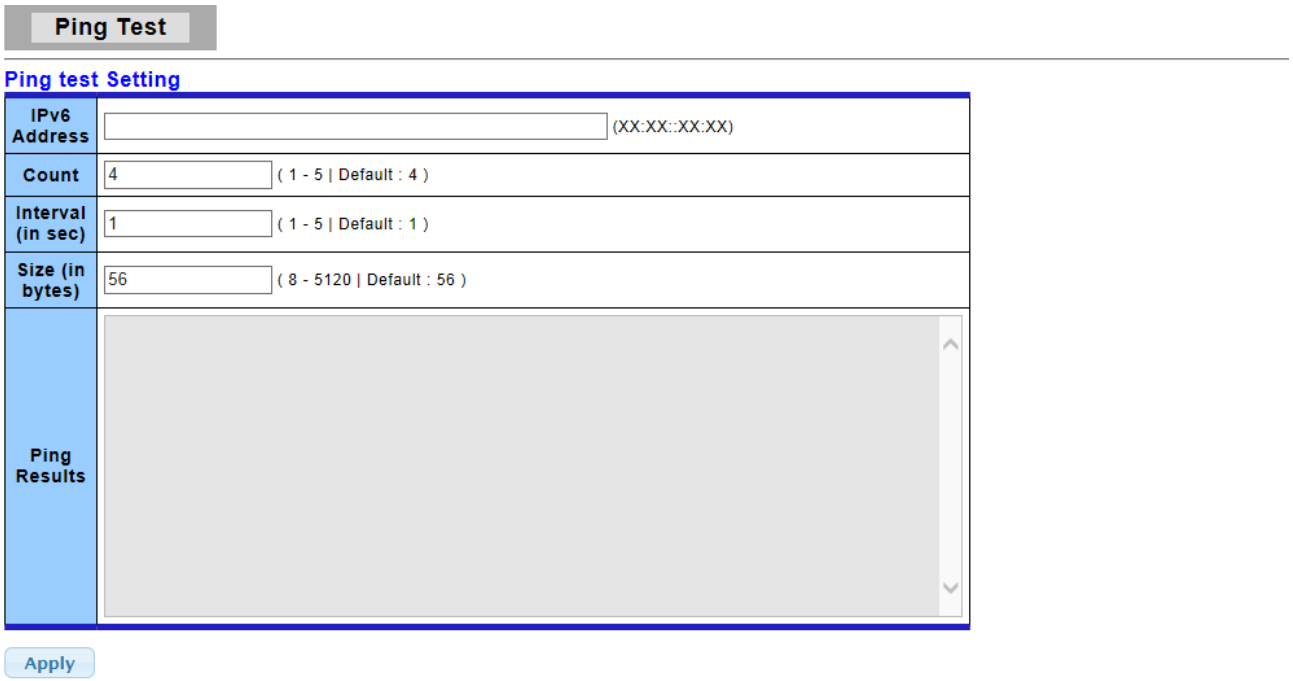


The following table describes the labels in this screen.

LABEL	DESCRIPTION
IP Address	Enter the IP addresses of the test destination.
Count	It displays how many times to send ping request packet. Enter a number between 1 and 5 as the count and the default configuration is 4.
Interval	It displays time interval between each ping request packet. Enter a number between 1 and 5 as the interval and the default configuration is 1.
Size	It displays the size of ping packet. Enter a number between 0 and 5120 as the size and the default configuration is 56.
Ping Results	After ping finished, results will show in this field.
Apply	Click **Apply** to save your changes to the switch.

3.8.3 IPv6 Ping Test

Click **Diagnostics** > **IPv6 Ping Test** to view the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
IPv6 Address	Enter the IPv6 addresses of the test destination.
Count	It displays how many times to send ping request packet. Enter a number between 1 and 5 as the count and the default configuration is 4.
Interval	It displays time interval between each ping request packet.

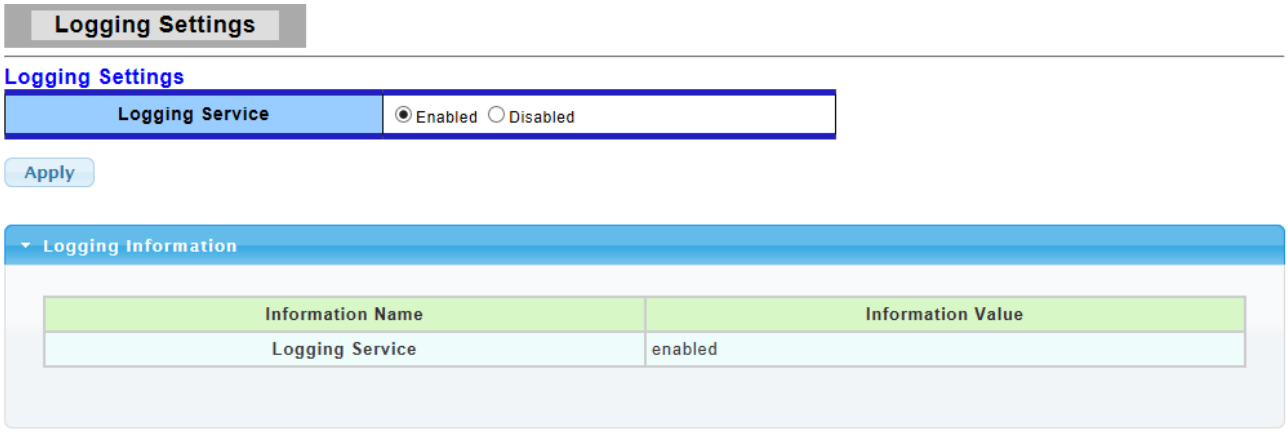
	Enter a number between 1 and 5 as the interval and the default configuration is 1.
Size	It displays the size of ping packet. Enter a number between 0 and 5120 as the size and the default configuration is 56.
Ping Results	After ping finished, results will show in this field.
Apply	Click **Apply** to save your changes to the switch.

3.8.4 Logging Setting

3.8.4.1 Logging Service

Use this screen to display the switch logs.

Click **Diagnostics** > **Logging Setting** > **Logging Service** to view the screen as shown next.



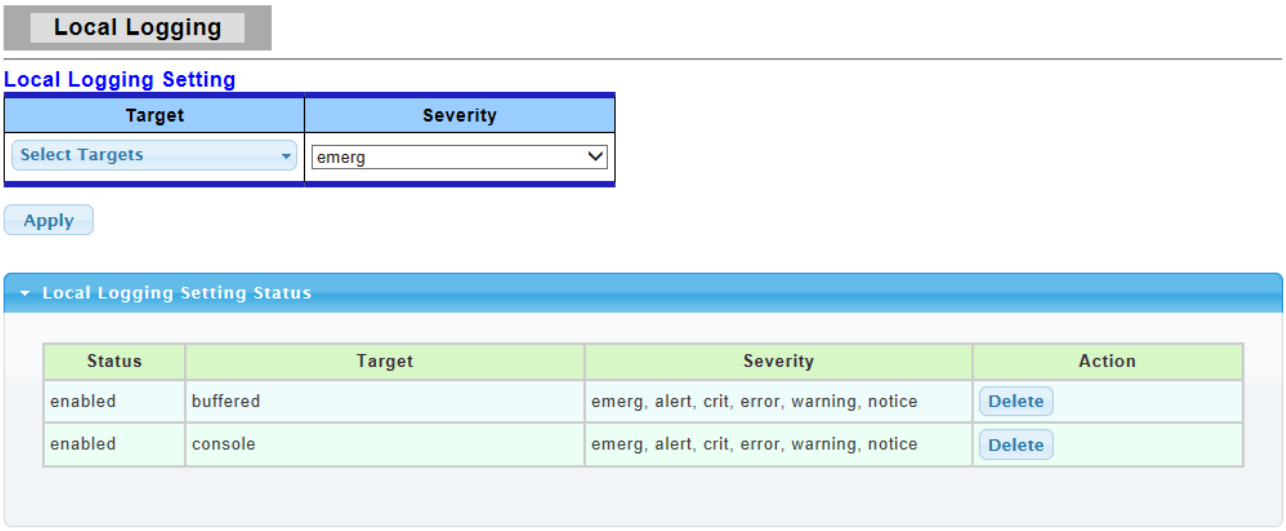
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Logging Service	Enable / disable logging system
Apply	Click **Apply** to save your changes to the switch.

3.8.4.2 Local Logging

Use this screen to display the switch logs.

Click **Diagnostics** > **Logging Setting** > **Local Logging** to view the screen as shown next.



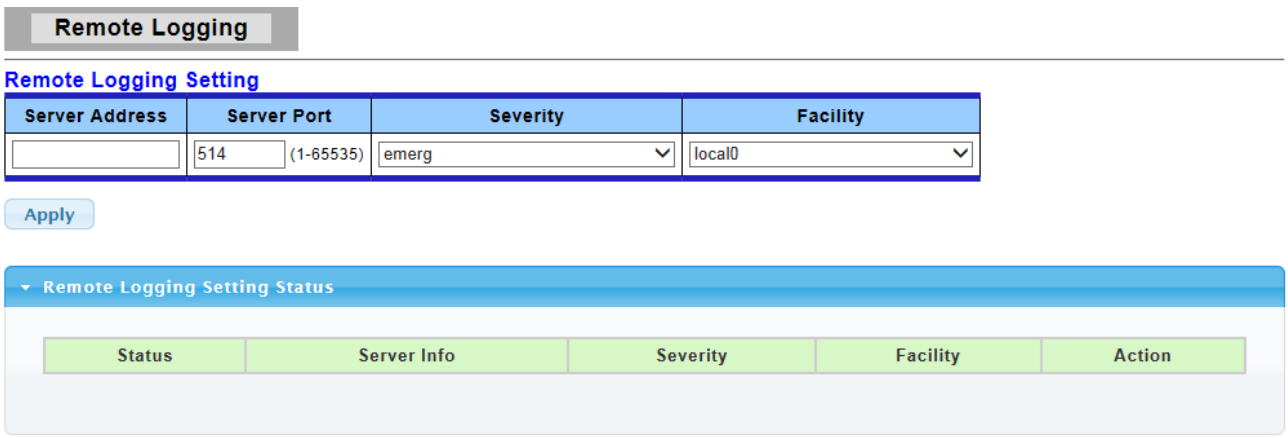
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Target	Select the target to store log message **Buffered**: Store log messages in device buffer. All log messages will disappear after system reboot. **FLASH**: Store log messages in FLASH. All log messages will not disappear after system reboot.
Severity	Select severity of log messages which will be stored.
Apply	Click **Apply** to save your changes to the switch.
Status	It displays the status of local log settings.
Target	It displays the target you've chose.
Severity	It displays the severity status.
Delete	Click **Delete** to delete the target chose.

3.8.4.3 Remote Logging

This page allow user to configure remote logging server information

Click **Diagnostics** > **Logging Setting** > **Remote Logging** to view the screen as shown next.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Server IP	The IP address of remote log server.
Server Port	Enter a number between 1 and 65535 as the server port.
Severity	Select severity of log messages which will be sent.
Facility	Select facility of log messages which will be sent.
Apply	Click **Apply** to save your changes to the switch.
Status	It displays the status of local log settings.
Server Info	It displays the server information.
Severity	It displays the severity status.
Facility	It displays the facility chose.
Action	It displays the action status.

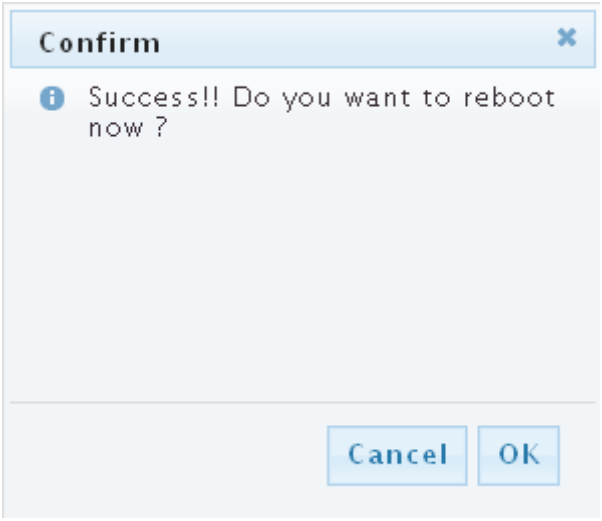
3.8.5 Factory Default

Follow the steps below to restore the switch back to the factory defaults.

1. Click **Diagnostics**->**Factory Default** to view the screen as shown next.



2. Click the **Restore** button, then the **confirm** interface pops up.



3. Click **OK** to restore all switch configurations to the factory defaults and the switch will reboot.

3.8.6 Reboot Switch

Reboot allows you to restart the switch without physically turning the power off.

Follow the steps below to reboot the switch.

1. Click **Diagnostics**->**Reboot Switch** to view the screen as shown next.



2. Click **Reboot** button, then the following interface pops up.



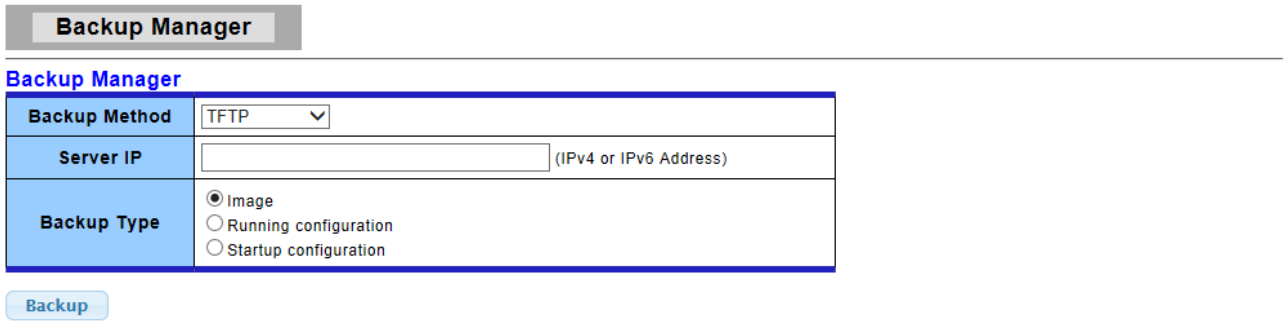
3. When it finished, the switch has been restarted.

3.9 Maintenance

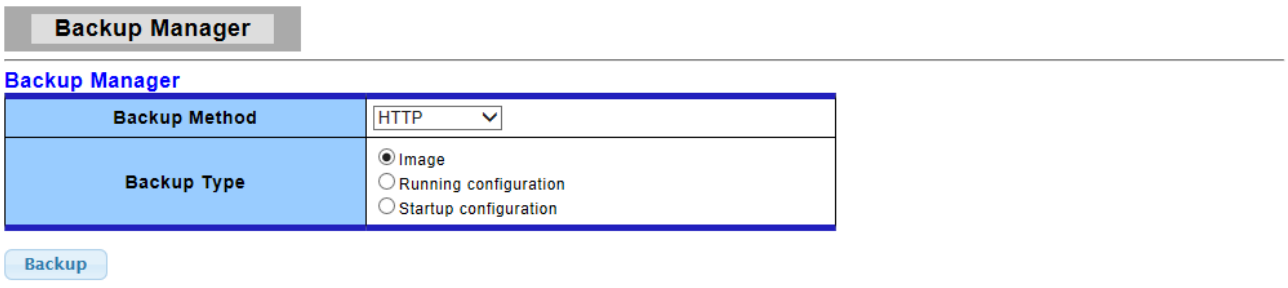
3.9.1 Backup Manager

This page allows user to backup the firmware image or configuration file on the switch to remote TFTP server or host file system through HTTP protocol.

Click **Maintenance** > **Backup Manager** to view the screen as shown next.



Backup files with TFTP Page



Backup files with HTTP Page

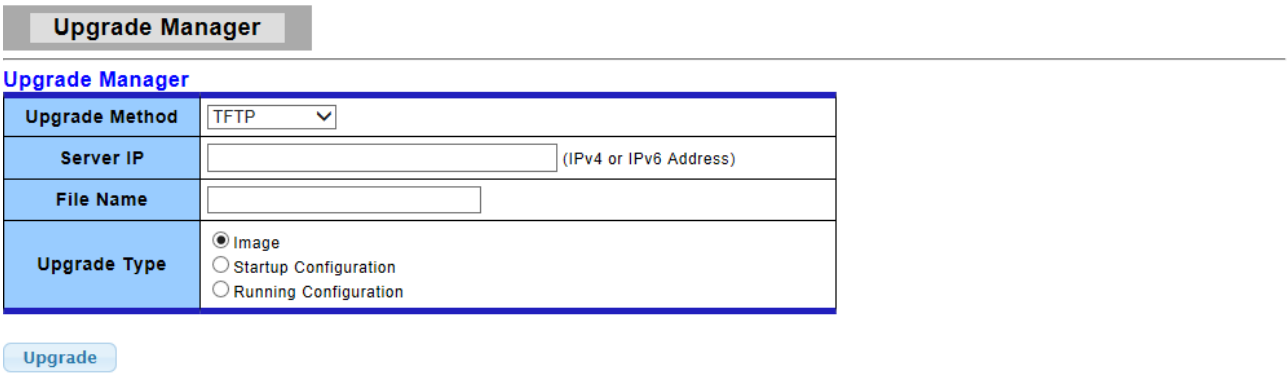
The following table describes the labels in this screen.

LABEL	DESCRIPTION
Backup Method	Select backup method: ■ **TFTP**: Use TFTP to backup. ■ **HTTP**: Use HTTP to backup.
Server IP	IP address of the TFTP server. If the TFTP backup method is selected, the IP address of the TFTP server must be assigned.
Backup Type	Select backup type: ■ **Image**: Firmware image of current system. ■ **Running Configuration**: Running Configuration file. ■ **Startup Configuration**: Startup Configuration file.
Backup	Click Backup to save the switch configuration/image to the local address specified.

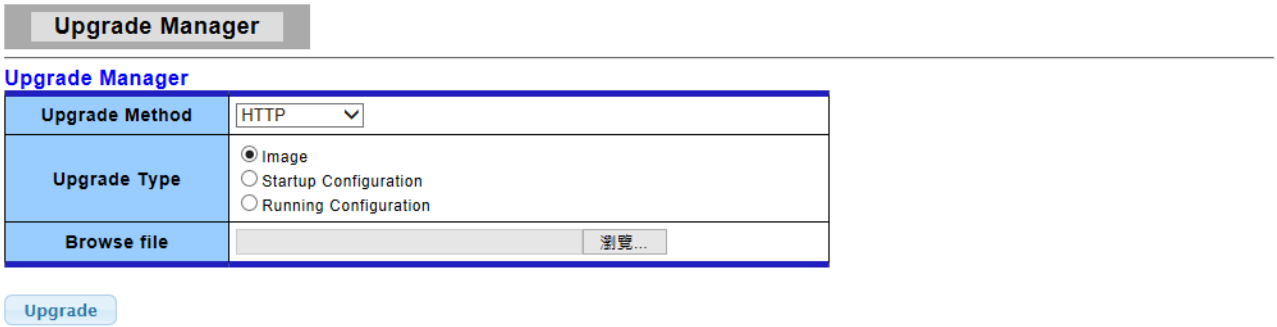
3.9.2 Upgrade Manager

This page allows user to upgrade new firmware image or configuration file to the switch from remote TFTP server or select file from web browser.

Click **Maintenance**->**Upgrade Manager** to view the screen as shown next.



Upgrade with TFTP Page



Upgrade with HTTP Page

The following table describes the labels in this screen.

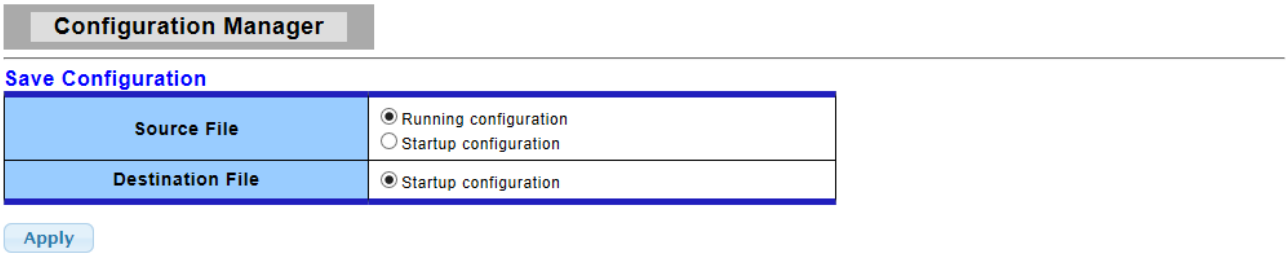
LABEL	DESCRIPTION

Upgrade Method	Select upgrade method: ■ **TFTP:** Use TFTP to upgrade. ■ **HTTP:** Use HTTP to upgrade**.**
Server IP	IP address of the TFTP server. If the TFTP upgrade method is selected, the IP address of the TFTP server must be assigned.
File Name	Firmware image or configuration file name on remote TFTP server. If the TFTP upgrade method is selected, the file name must be specified.
Browse File	If the HTTP upgrade method is selected, the browse file field allows you to select any file on host operating system.
Upgrade Type	Select upgrade type: ■ **Image:** Firmware image of current system. ■ **Configuration:** Configuration file.
Upgrade	Click **Upgrade** to update the file specified above and install the new firmware.

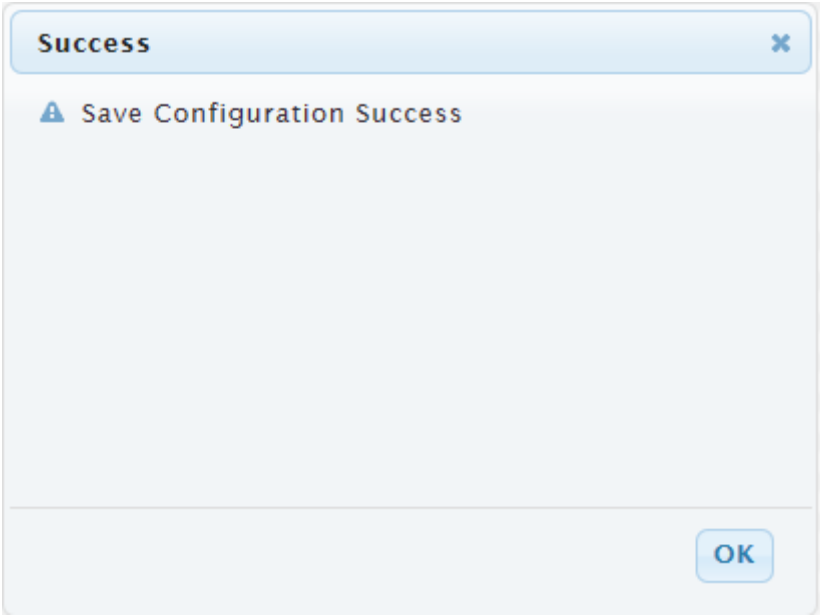
3.9.3 Configuration Manager

This page allows user to save either the running configuration or the startup configuration to the existing configuration file as the startup configuration.

Click **Maintenance**-> **Configuration Manager** to view the screen as shown next.



Configuration Manager Page



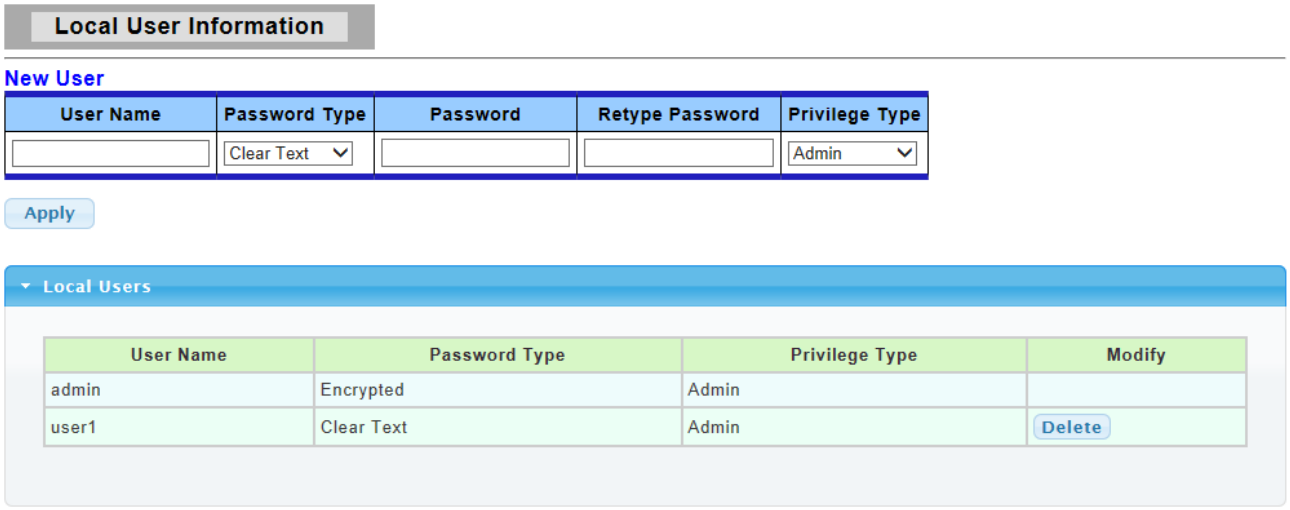
Configuration Manager Success Page

LABEL	DESCRIPTION
Source File	Select upgrade method ■ **Running configuration**: Running configuration file ■ **Startup configuration**: Startup configuration file
Destination File	Select Upgrade Type ■ **Startup Configuration**: Startup configuration file
Apply	Click **Apply** to save the running or the startup configuration to the startup configuration file.

3.9.4 Account Manager

This page allows user to add or delete switch local user database for authentication. The default user is “admin”.

Click **Maintenance** > **Account Manager** in the navigation panel to display the screen as shown below.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
User name	Enter your user name for new account.
Password Type	Select password type for new account: ■ **Clear Text:** Password without encryption. ■ **Encrypted:** Password with encryption. ■ **No Password:** No password for new account.
Password	If the password type is not “No Password”, the password must be specified.
Retype Password	Retype password to make sure the password is exactly you typed before in “Password” field.
Privilege Type	Select privilege level for new account: ■ **Admin:** Allow to change switch settings. ■ **User:** See switch settings only. Not allow to change it.
Apply	Click **Apply** to save your changes to the switch.
Modify	Click **Delete** to delete the added users.

Product Specifications

Standard	IEEE802.3, IEEE802.3u, and IEEE802.3ab IEEE 802.3x flow control IEEE 802.1D spanning tree protocol IEEE 802.1p class of service, priority protocols IEEE 802.1Q VLAN tagging IEEE 802.3ad LACP aggregation IEEE 802.3az Energy Efficient Ethernet(EEE)
Interface	24* 10/100/1000Mbps ports
Transmission Mode	10/100Mbps: Full-duplex, Half-duplex 1000Mbps: Full-duplex
Memory	Flash: 16MB DDR2: 128MB
MAC Address Table	8K
Jumbo Frame	10K Bytes
Buffer Memory	524.8K Bytes
Temperature	Operating: 0°C ~ 50°C (32°F ~122°F) Storage: -40°C ~ 70°C (-40°F ~158°F)
Humidity	Operating: 10% ~ 90% RH, non-condensing
LED Indications	1*Power LED(Green) 1*System LED(Green) 24*Gigabit port LEDs(Link/Act: Green)
Power Supply	Internal power supply 12V/1.67A
Dimensions	267*162*42 mm
Case Material	Metal
Certification	EMC/FCC, CE Class A; Safety/LVD EN60950-1

LONGSHINE Technologie GmbH
Post Address: P.O.Box 1460 D-22 904 Ahrensburg Tel: ++49-(0)-4102-4922-0
House Address: An der Strusbek 9 D-22 926 Ahrensburg Fax: ++49-(0)-4102-40109
WEB: http://www.longshine.de E-MAIL: sales@longshine.de

DECLARATION OF CONFORMITY

In accordance to

EUROPEAN COUNCIL DIRECTIVE 2004/108/EC & 2006/95/EC & 2011/65/EU

CE = European Community Conformity Mark

We, Manufacturer/Importer

Longshine Technologie (Europe) GmbH
An der Strusbek 9
22926 Ahrensburg
Germany

Declare That The Product

LCS-GS8424
24 Port 10/100/1000Mbps Managed Ethernet Switch

Is In Conformity With:

Standards	Results
EN 55022:2010 / AC:2011 Class A	Pass
EN 61000-3-2:2006+A1:2009+A2, Class A	Pass
EN 61000-3-3:2013	Pass
EN 55024:2010	Pass
IEC 61000-4-2:2008	Pass
IEC 61000-4-3:2010	Pass
IEC 61000-4-4:2012	Pass
IEC 61000-4-5:2005	Pass
IEC 61000-4-6:2008	Pass
IEC 61000-4-8:2009	Pass
IEC 61000-4-11:2004	Pass
EN 60950-1:2006+A1:2010+A12:2011	Pass
IEC 60950-1:2005+A1:2009	Pass

Identification of signatory empowered to bind the manufacturer or his authorized representative.
Signature
Manufacturer/Importer



Date: 21.09.2014