24-Port 10/100/1000M
POE Web Smart Ethernet Switch

User Manual

POE NETWORKING SOLUTIONS

Ver 1.0

Table of Content

Congratulations on your purchasing of the Gigabit POE Web Smart Ethernet Switch. This Switch provides a simple, economical, standard and high performance solution for you. Please read the entire user manual before using the product and save it for future reference.

Chapter 1 Product Introduction

1.1 Product Overview

The 24-port 10/100/1000M POE Web Smart Ethernet Switch provides the seamless network connection. It integrates 10/100/1000Mbps Ethernet network capabilities. These POE ports can automatically detect and supply power with those IEEE 802.3at compliant Powered Devices (PDs). In this situation, the electrical power is transmitted along with data in one single cable allowing you to expand your network where there are no power lines or outlets, where you wish to fix devices such as APs, IP Cameras or IP Phones, etc.

The Switch is web smart switch, and can be configured by web based interface. Including System, Configuration, Security, Monitoring, Tools and so on.

1.2 Features

- Complies with IEEE802.3, IEEE 802.3u, IEEE 802.3ab standards
- 24 x 10/100/1000Mbps Auto-Negotiation RJ45 ports supporting Auto-MDI/MDIX
- Supports PoE power up to 30W for each PoE port
- Supports PoE power up to 260W for all PoE ports
- Supports PoE IEEE802.3at compliant PDs
- Supports IEEE802.3x flow control for Full-duplex Mode and backpressure for Half-duplex Mode
- 16K entry MAC address table of the Switch with auto-learning and auto-aging
- Supports WEB management interface
- LED indicators for monitoring power, link, activity, speed and POE

1.3 External Component Description

1.3.1 Front Panel

The front panel of the Switch consists of 24 x 10/100/1000Mbps RJ-45 ports and a series of LED indicators shown as below.

1~24: 24 x RJ-45 Ethernet interfaces, 10 M/100M/1000M self-adaptive.
Reset: Keep the device powered on and push a paper clip into the hole. Press down the button for about 5 seconds. The system restores the factory default settings.

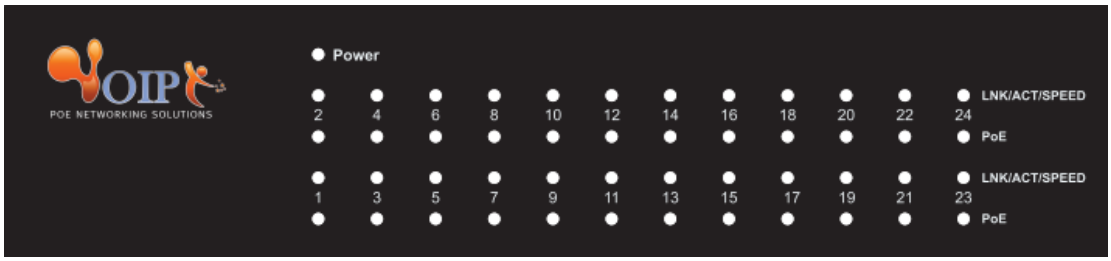
1.3.2 Rear Panel

The rear panel of the Switch contains AC power connector and one marker shown as below.

AC Power Connector: Supports AC 100~240V, 50~60Hz.

1.3.3 LED Indicator Specification

The LED indicators of the Switch contain one Power, 24 LINK/ACT/SPEED and 24 PoE status. You can see their operating situation through these LED indicators.



The following chart shows the LED indicators of the Switch along with explanation of each indicator.

LED	COLOR	STATUS	STATUS DESCRIPTION
Power	Red	On	Power On
		Off	Power off
LINK/ACT /SPEED	Orange (10/100M)	On	Connect to the port
		Off	Disconnect to the port
	Green (1000M)	Flashing	Sending or receiving data
POE	Orange	On	Detect the PD
		Off	The PD is not connected to or detected
		Flashing	When the power which output to PDs has exceeded the maximum power budget

1.4 Environment

- Operating Temperature: 0℃~40℃
- Storage Temperature: -10℃~70℃
- Operating Humidity: 10%~90% non-condensing
- Storage humidity: 5%~90% non-condensing

1.5 Package Contents

- One Gigabit POE Web Smart Ethernet Switch
- Four rubber feet, two mounting ears and eights screws
- One AC power cord
- One User Manual

Chapter 2 Hardware Installation

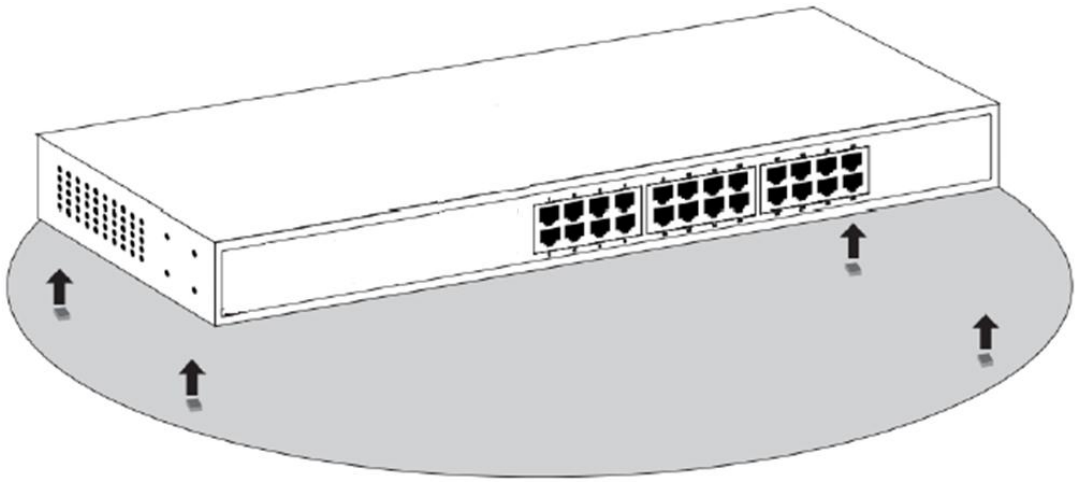
2.1 Installation

Please follow the following instructions in avoid of incorrect installation causing device damage and security threat.

- Put the Switch on stable place or desktop in case of falling damage.
- Make sure the Switch works in the proper AC input range and matches the voltage labeled on the Switch.
- To keep the Switch free from lightning, do not open the Switch's shell even in power failure.
- Make sure that there is proper heat dissipation from and adequate ventilation around the Switch.
- Make sure the cabinet to enough back up the weight of the Switch and its accessories.

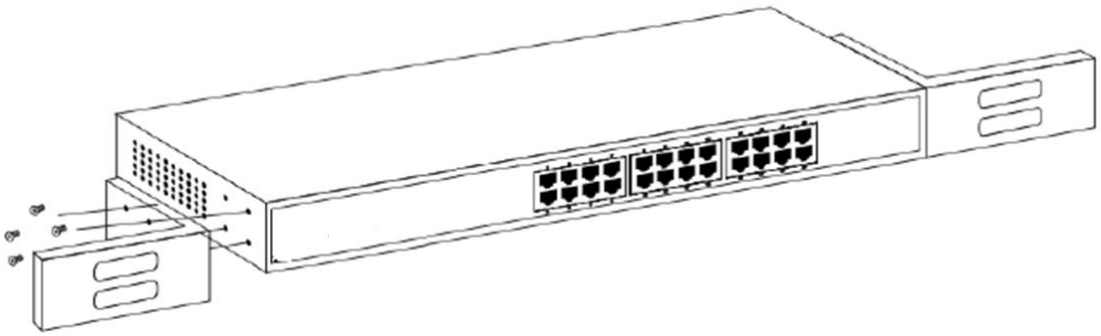
2.1.1 Desktop/Horizontal Installation

Sometimes users are not equipped with the 19-inch standard cabinet. So when installing the Switch on a desktop, please attach these cushioning rubber feet provided on the bottom at each corner of the Switch in case of the external vibration. Allow adequate space for ventilation between the device and the objects around it. Please refer to the following figure:

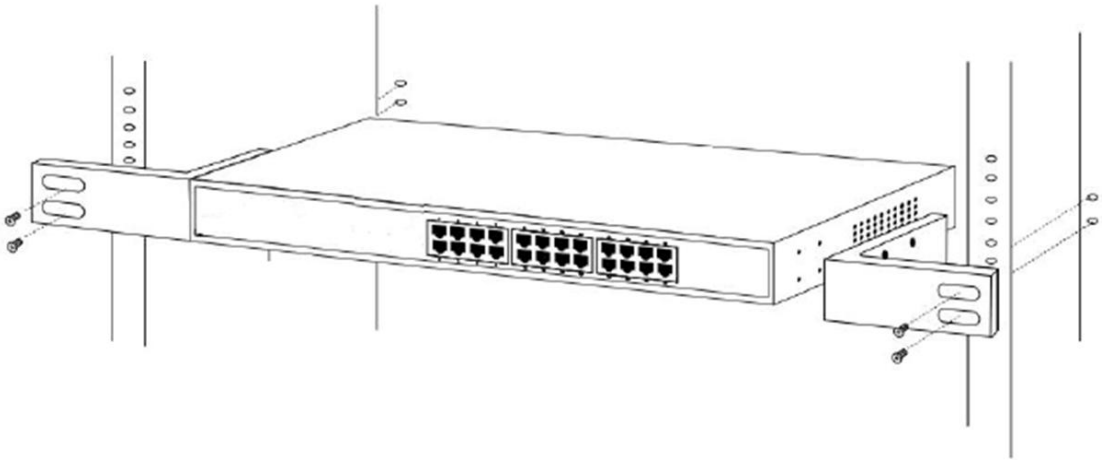


2.1.2 Rack-mountable Installation in 19-inch Cabinet

The Switch can be mounted in an EIA standard-sized, 19-inch rack, which can be placed in a wiring closet with other equipment. To install, attach the mounting brackets on the Switch's side panels (one on each side) and secure them with the screws provided.



Then, use the screws provided with the equipment rack to mount the Switch on the rack and tighten it.



2.1.3 Power on the Switch

The Switch is powered on by the AC 100-240V 50/60Hz internal high-performance power supply. Please follow the next tips to connect:

AC Electrical Outlet

It is recommended to use single-phase three-wire receptacle with neutral outlet or multifunctional computer professional receptacle. Please make sure to connect the metal ground connector to the grounding source on the outlet.

AC Power Cord Connection

Step 1: Connect the AC power connector in the back panel of the Switch to external receptacle with the included power cord.

Step 2: To check the power indicator is ON or not. When it is ON, it indicates the power connection is OK.

2.2 Connect Computer (NIC) to the Switch

Please insert the NIC into the computer, after installing network card driver, please connect one end of the twisted pair to RJ-45 jack of your computer, the other end will be connected to any RJ-45 port of Switch, the distance between Switch and computer is around 100 meters. Once the connection is OK and the devices are power on normally, the LINK/ACT status indicator lights corresponding ports of the Switch.

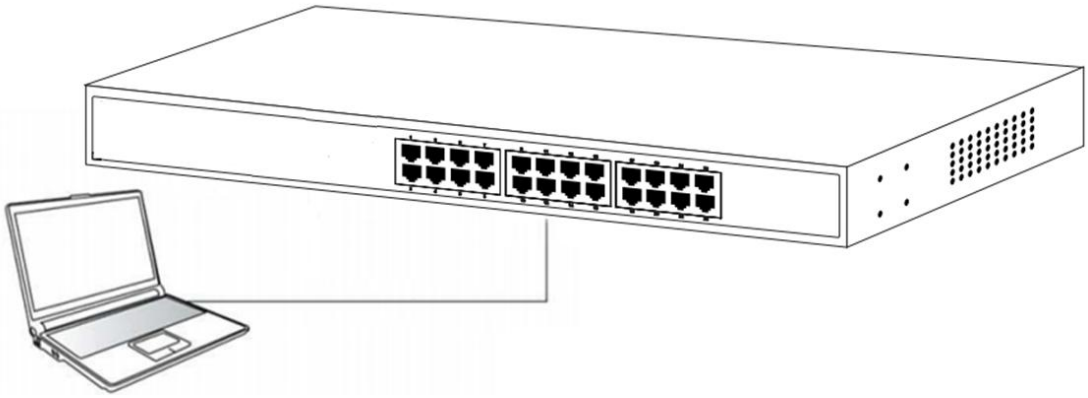
2.3 Switch connection to the PD

1-24 ports of Switch have POE power supply function, the maximum output power up to 30W each port, it can make PD devices, such as internet phone, network camera, wireless access point work. You only need to connect the Switch POE port directly connected to the PD port by network cable.

Chapter 3 How to Login the Switch

3.1 Switch to End Node

Use standard Cat.5/5e Ethernet cable (UTP/STP) to connect the Switch to end nodes as described below. Switch ports will automatically adjust to the characteristics (MDI/MDI-X, speed, duplex) of the device to which is connected.



Please refer to the ***LED Indicator Specification***. The LINK/ACT LEDs for each port lights when the link is available.

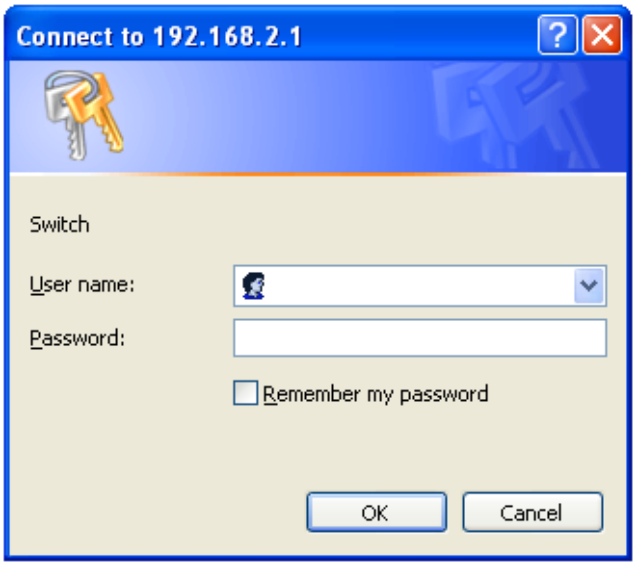
3.2 How to Login the Switch

As the Switch provides Web-based management login, you can configure your computer's IP address manually to log on to the Switch. The default settings of the Switch are shown below.

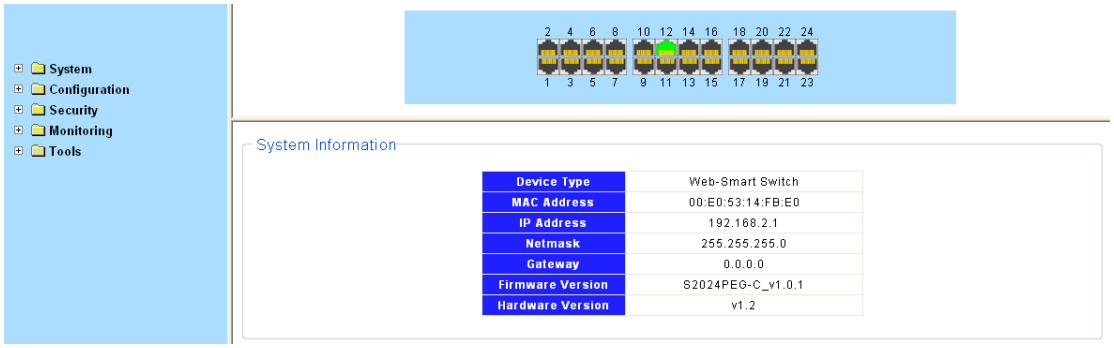
Parameter	Default Value
Default IP address	192.168.2.1
Default user name	admin
Default password	admin

You can log on to the welcome window of the Switch through following steps:

1. Connect the Switch with the computer NIC interface.
2. Power on the Switch.
3. Check whether the IP address of the computer is within this network segment: 192.168.2.xxx ("xxx" ranges 2~254), for example, 192.168.2.100.
4. Open the browser, and enter ***http://192.168.2.1*** and then press "Enter". The Switch login window appears, as shown below.



5. Enter the user name and password (The factory default login username and password is **admin**), and then click “OK” to log in to the Switch configuration window as below.

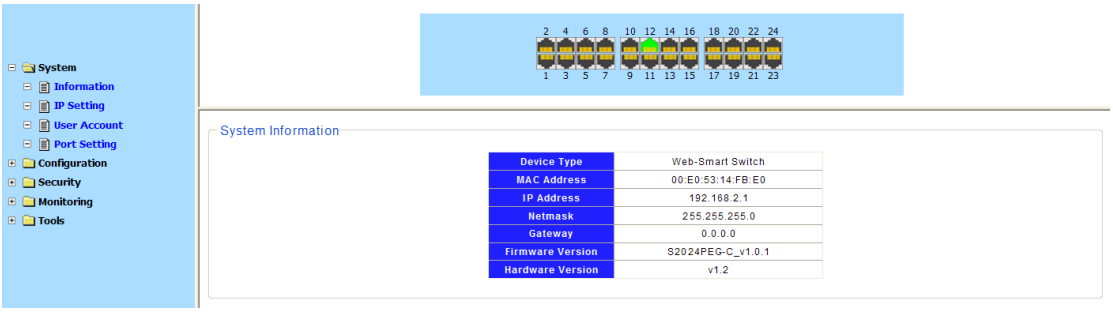


In the Web GUI, the left column shows the configuration menu and the rest of the screen area displays the configuration settings.

Chapter 4 Switch Configuration

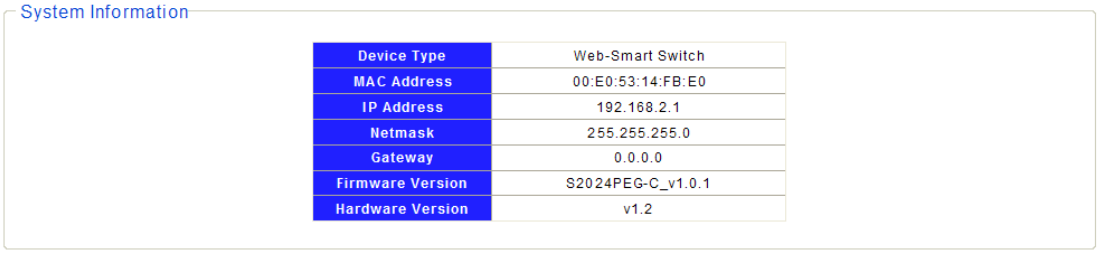
4.1 System Configuration

There are "Information", "IP Setting", "User Account", "Port Setting" configuration web pages in this section.



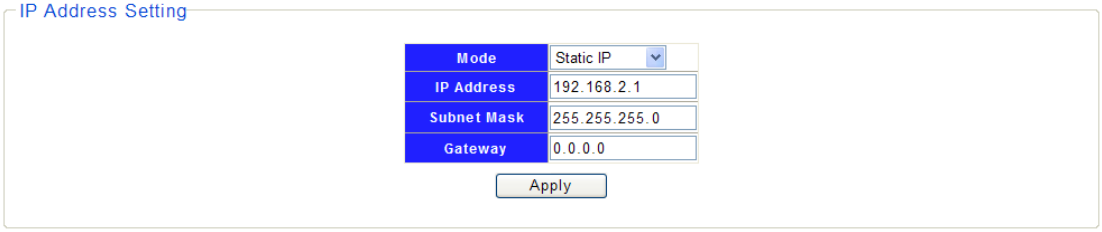
4.1.1 Information

Display basic information, includes Device Type, MAC Address, IP Address, Netmask, Gateway, Firmware Version and Hardware Version.



4.1.2 IP Setting

Set IP address, subnet mask, and default gateway.



Parameters:

Mode specifies static IP or DHCP.

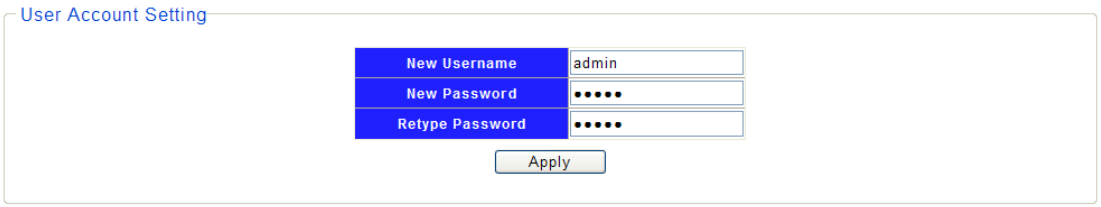
IP Address specifies the IP address of the system.

Subnet Mask specifies the subnet mask.

Gateway specifies the IP address of default gateway.

4.1.3 User Account

Set new user name, and password.



Parameters:

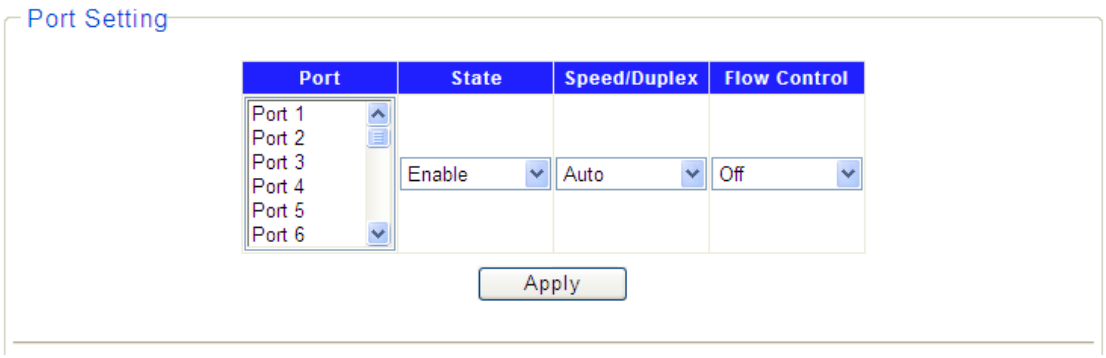
New Username specifies the new user name.

New Password specifies the password for the username.

Retype Password reconfirms the password.

4.1.4 Port Setting

Set state, speed/duplex and flow control ability to specified ports.



Parameters:

Port specifies the ports to set.

State enable or disable the port state.

Speed/Duplex specifies port speed and duplex.

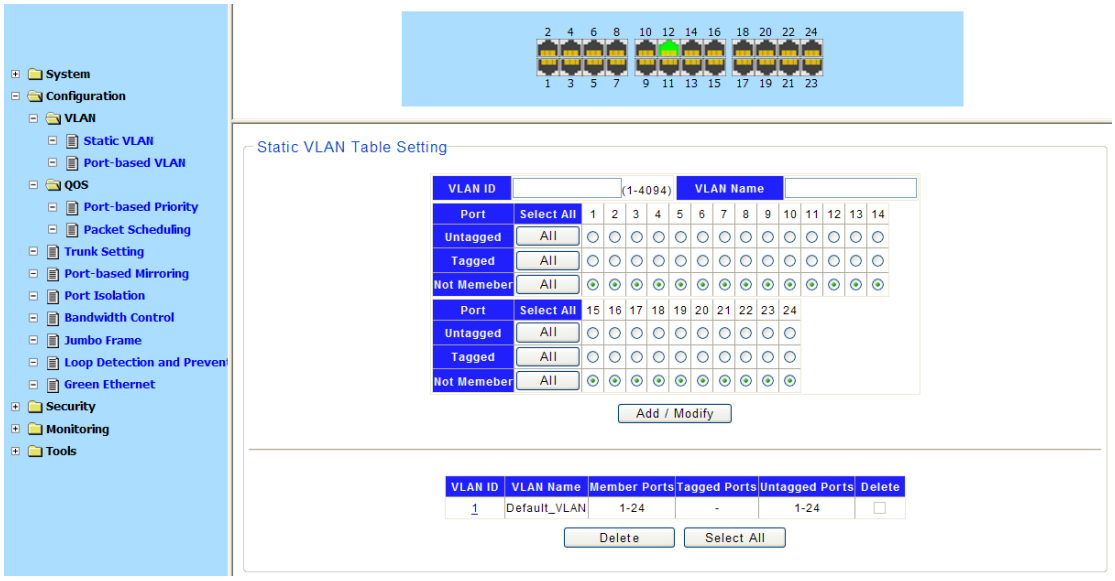
Flow Control specifies flow control ability.

Display the port configuration.

Port	State	Speed/Duplex		Flow Control	
		Config	Actual	Config	Actual
Port 1	Enabled	Auto	Link Down	On	Link Down
Port 2	Enabled	Auto	Link Down	On	Link Down
Port 3	Enabled	Auto	Link Down	On	Link Down
Port 4	Enabled	Auto	Link Down	On	Link Down
Port 5	Enabled	Auto	Link Down	On	Link Down
Port 6	Enabled	Auto	Link Down	On	Link Down
Port 7	Enabled	Auto	Link Down	On	Link Down
Port 8	Enabled	Auto	Link Down	On	Link Down
Port 9	Enabled	Auto	Link Down	On	Link Down
Port 10	Enabled	Auto	Link Down	On	Link Down
Port 11	Enabled	Auto	Link Down	On	Link Down
Port 12	Enabled	Auto	100Full	On	On
Port 13	Enabled	Auto	Link Down	On	Link Down
Port 14	Enabled	Auto	Link Down	On	Link Down
Port 15	Enabled	Auto	Link Down	On	Link Down
Port 16	Enabled	Auto	Link Down	On	Link Down
Port 17	Enabled	Auto	Link Down	On	Link Down
Port 18	Enabled	Auto	Link Down	On	Link Down
Port 19	Enabled	Auto	Link Down	On	Link Down
Port 20	Enabled	Auto	Link Down	On	Link Down
Port 21	Enabled	Auto	Link Down	On	Link Down
Port 22	Enabled	Auto	Link Down	On	Link Down
Port 23	Enabled	Auto	Link Down	On	Link Down
Port 24	Enabled	Auto	Link Down	On	Link Down

4.2 Configuration

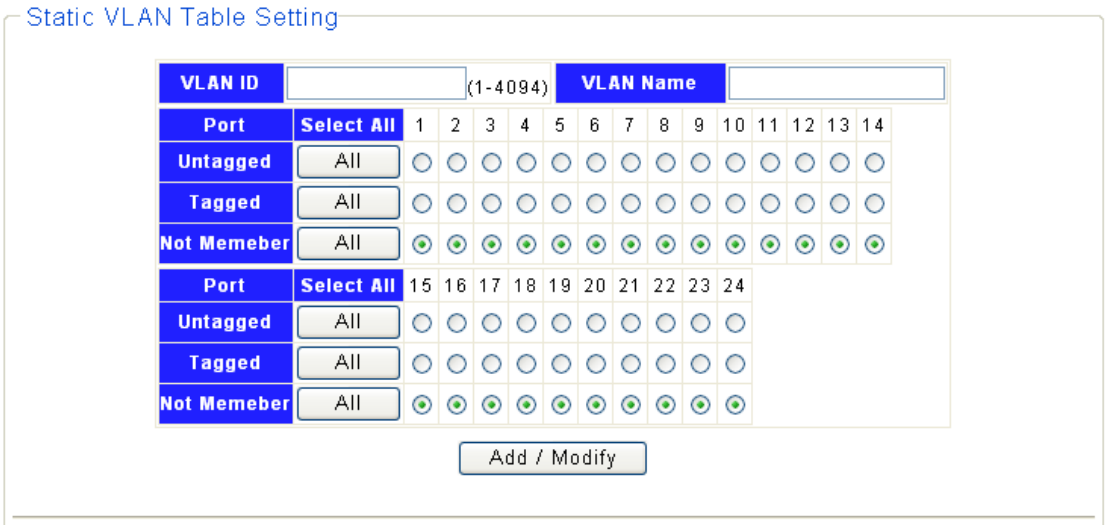
There are "VLAN", "QoS" and "Others" configuration web pages in this section.



4.2.1 VLAN

4.2.1.1 Static VLAN

Static VLAN configuration.



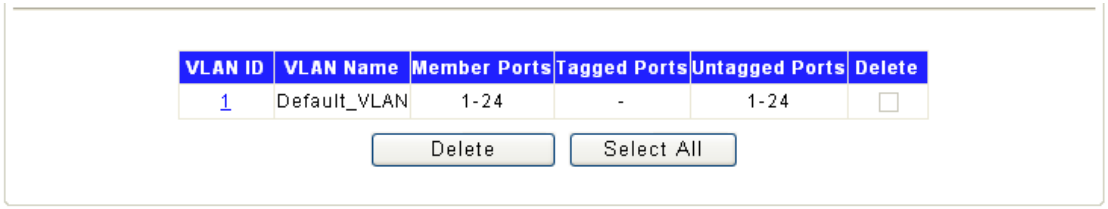
Parameters:

VLAN ID specifies VLAN ID, in the range 1 ~ 4094.

VLAN Name specifies the VLAN name, up to 16 characters.

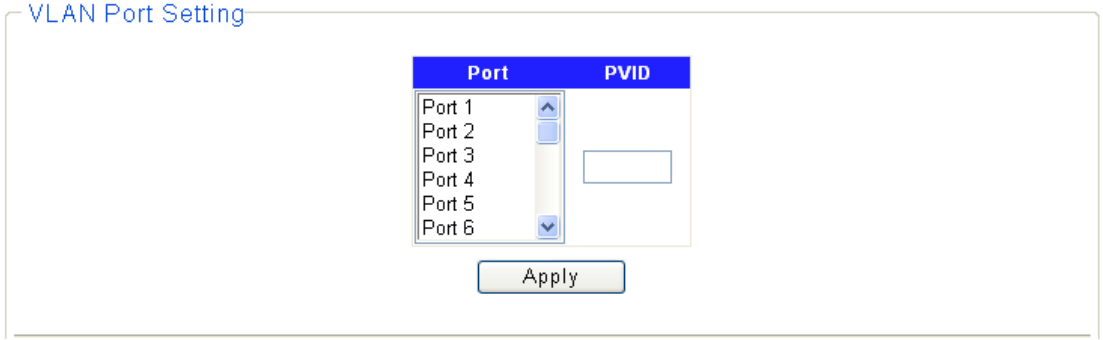
UnTagged/Tagged/Not Member specifies the member ports and port type.

Display the VLAN configuration.



4.2.1.2 Port based VLAN

Port-based VLAN configuration.



Parameters:

PVID specifies the Port VLAN ID.

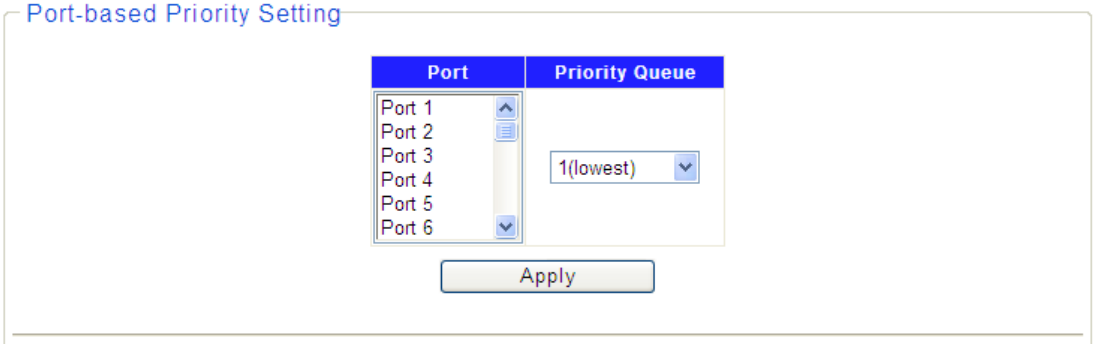
Display the VLAN configuration.

Port	PVID
Port 1	1
Port 2	1
Port 3	1
Port 4	1
Port 5	1
Port 6	1
Port 7	1
Port 8	1
Port 9	1
Port 10	1
Port 11	1
Port 12	1
Port 13	1
Port 14	1
Port 15	1
Port 16	1
Port 17	1
Port 18	1
Port 19	1
Port 20	1
Port 21	1
Port 22	1
Port 23	1
Port 24	1

4.2.2 Qos

4.2.2.1 Port-based Priority

Port-based(802.1p default) priority configuration.



Parameters:

Port specifies the ports to set.

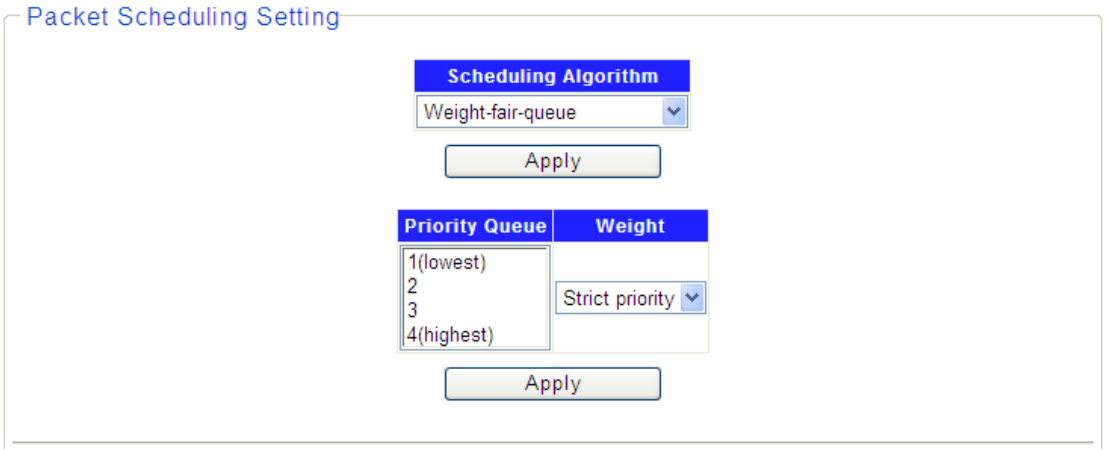
Priority Queue specifies the 802.1p priority value.

Display the port-based priority information.

Port	Priority Queue
Port 1	2
Port 2	2
Port 3	2
Port 4	2
Port 5	2
Port 6	2
Port 7	2
Port 8	2
Port 9	2
Port 10	2
Port 11	2
Port 12	2
Port 13	2
Port 14	2
Port 15	2
Port 16	2
Port 17	2
Port 18	2
Port 19	2
Port 20	2
Port 21	2
Port 22	2
Port 23	2
Port 24	2

4.2.2.2 Packet Scheduling

Packet scheduling configuration.



Scheduling Algorithm specifies the Weight-fair-queue or Weight-round-robin of scheduling algorithm.

Priority Queue specifies queue ID.

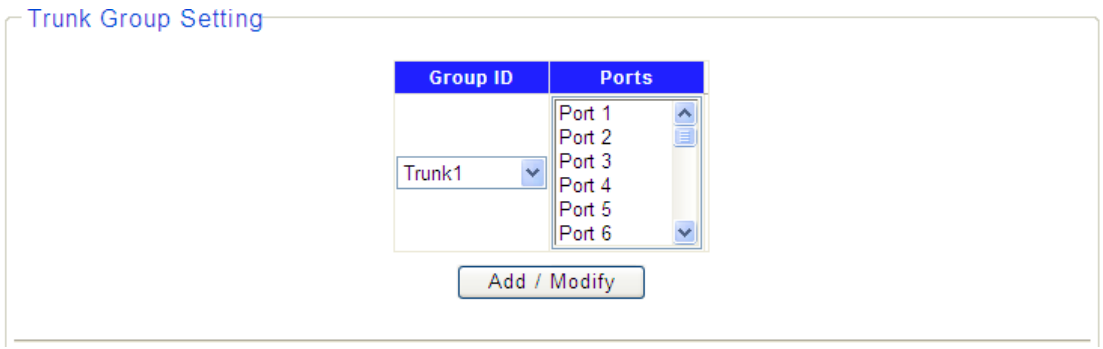
Weight specifies the weight of queue, the value could be strict priority or 1~15.

Display the packet scheduling information.

Priority Queue	Scheduling Algorithm	Weight
1	Weight-fair-queue	1
2	Weight-fair-queue	2
3	Weight-fair-queue	3
4	Weight-fair-queue	4

4.2.3 Trunk Setting

Trunk group configuration.

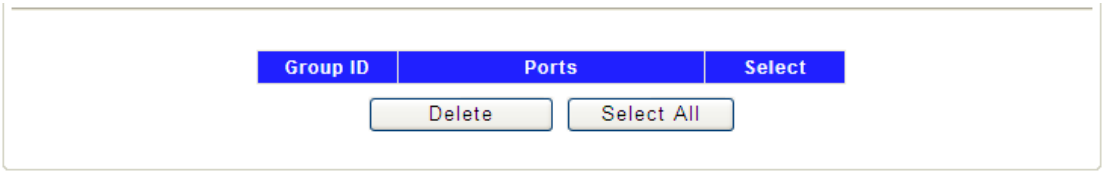


Parameters:

Group ID specifies trunk group.

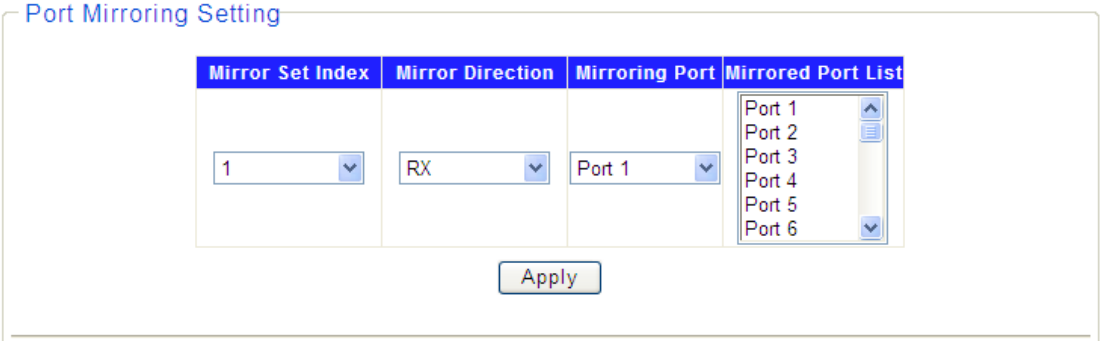
Port specifies the trunk member port.

Display the information of trunks.



4.2.4 Port-based Mirroring

Port-based mirror configuration.



Parameters:

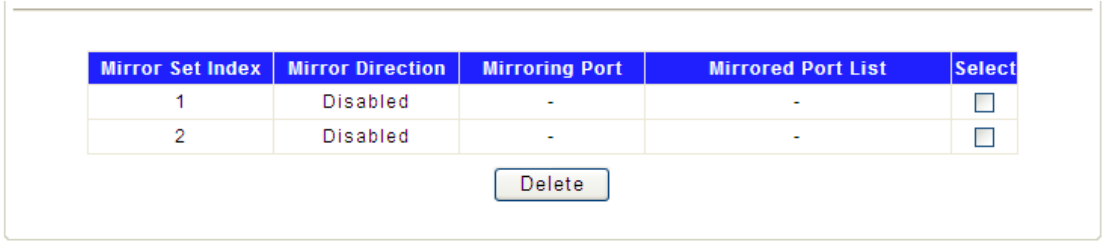
Mirror Set Index specifies mirror set 1 or 2.

Mirror Direction specifies to monitor RX(Ingress) or TX(Egress).

Mirroring Port specifies analysis port on which traffic would be forwarded for analysis.

Mirrored Port List specifies monitored ports. The traffic of these ports would be mirrored to mirroring port.

Display the information of port mirror.

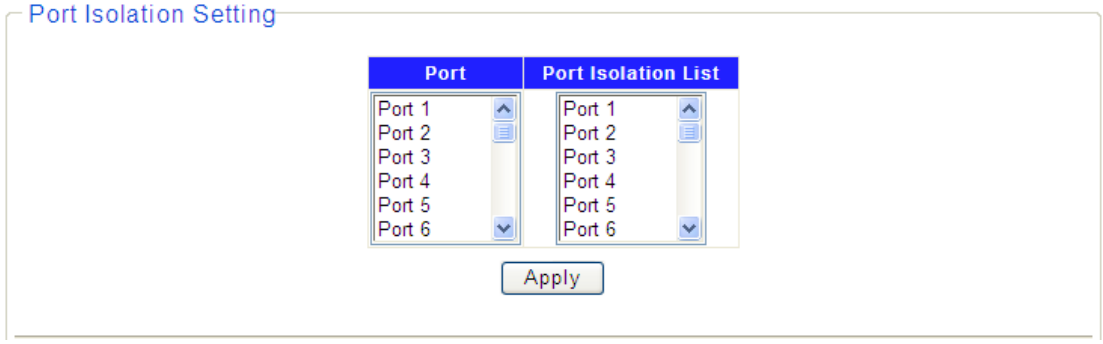


Mirror Set Index	Mirror Direction	Mirroring Port	Mirrored Port List	Select
1	Disabled	-	-	☐
2	Disabled	-	-	☐

Delete

4.2.5 Port Isolation

Port-based mirror configuration.



Parameters:

Port specifies Isolation Port.

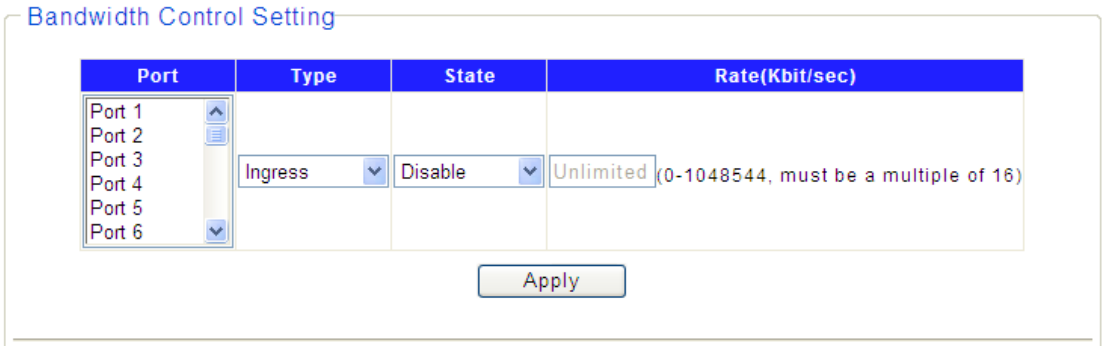
Port Isolation List specifies Port Isolation List.

Display the configuration of Port Isolation.

Port	Port Isolation List
Port 1	1-24
Port 2	1-24
Port 3	1-24
Port 4	1-24
Port 5	1-24
Port 6	1-24
Port 7	1-24
Port 8	1-24
Port 9	1-24
Port 10	1-24
Port 11	1-24
Port 12	1-24
Port 13	1-24
Port 14	1-24
Port 15	1-24
Port 16	1-24
Port 17	1-24
Port 18	1-24
Port 19	1-24
Port 20	1-24
Port 21	1-24
Port 22	1-24
Port 23	1-24
Port 24	1-24

4.2.6 Bandwidth Control

Bandwidth control configuration.



Parameters:

Port specifies the port to set.

Type specifies ingress or egress rate to set.

State enable or disable bandwidth control.

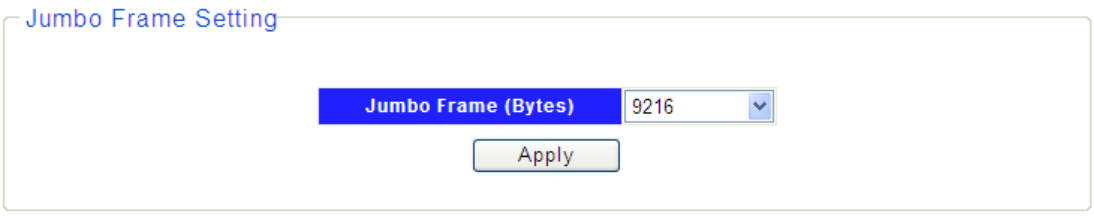
Rate specifies the rate, in range 0-1048544 kbps and must be a multiple of 16.

Display the configuration of bandwidth control.

Port	Ingress Rate (Kbit/sec)	Egress Rate (Kbit/sec)
Port 1	Unlimited	Unlimited
Port 2	Unlimited	Unlimited
Port 3	Unlimited	Unlimited
Port 4	Unlimited	Unlimited
Port 5	Unlimited	Unlimited
Port 6	Unlimited	Unlimited
Port 7	Unlimited	Unlimited
Port 8	Unlimited	Unlimited
Port 9	Unlimited	Unlimited
Port 10	Unlimited	Unlimited
Port 11	Unlimited	Unlimited
Port 12	Unlimited	Unlimited
Port 13	Unlimited	Unlimited
Port 14	Unlimited	Unlimited
Port 15	Unlimited	Unlimited
Port 16	Unlimited	Unlimited
Port 17	Unlimited	Unlimited
Port 18	Unlimited	Unlimited
Port 19	Unlimited	Unlimited
Port 20	Unlimited	Unlimited
Port 21	Unlimited	Unlimited
Port 22	Unlimited	Unlimited
Port 23	Unlimited	Unlimited
Port 24	Unlimited	Unlimited

4.2.7 Jumbo Frame

Jumbo frame configuration.

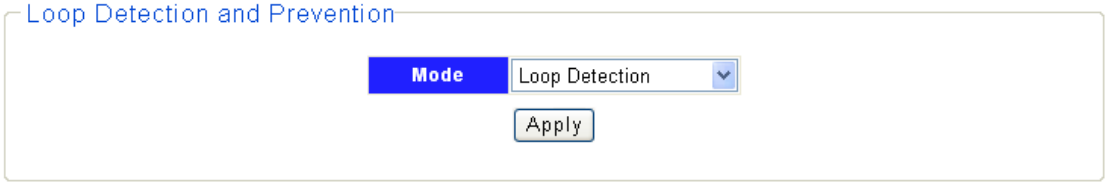


Parameters:

Jumbo Frame (Bytes) specifies the maximum frame size. Maximum frame size could be 1522, 1536, 1552 or 9216 bytes.

4.2.8 Loop Detection and Prevention

Loop Detection and Prevention configuration.



Parameters:

Mode specifies the Loop Prevention or Loop Detection. The feature can be disabled by selecting ‘Disable’.

4.2.9 Green Ethernet

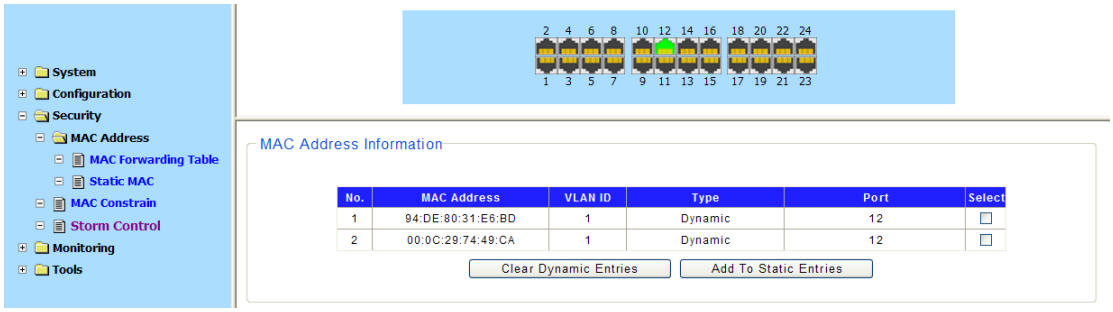
Green Ethernet configuration.

Parameters:

Green Ethernet specifies the Green Ethernet. The feature can be disabled by selecting ‘Disable’.

4.3 Security

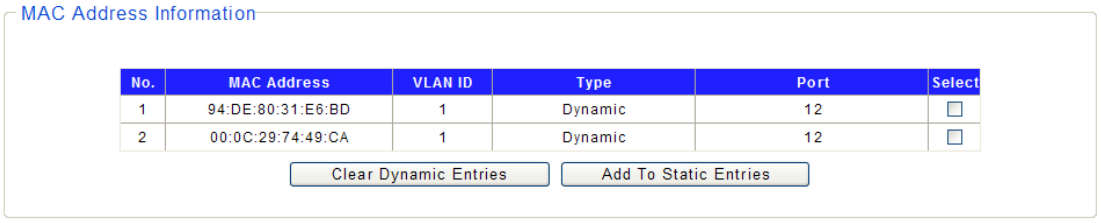
There are "MAC Address", "MAC Constrain" and "Storm Control" configuration web pages in this section.



4.3.1 MAC Address

4.3.1.1 MAC Forwarding Table

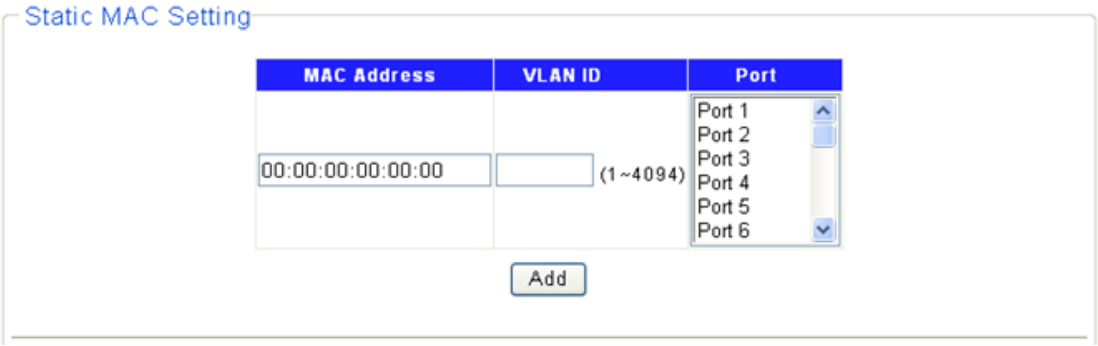
Display of MAC Forwarding Table.



A dynamic entry can be made static by selecting the same and clicking on ‘Add To Static Entries’.

4.3.1.2 Static MAC

Static MAC entries configuration.



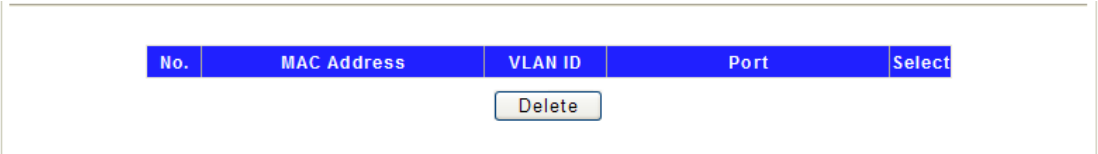
Parameters:

MAC Address specifies the MAC address.

VLAN ID specifies the VLAN ID.

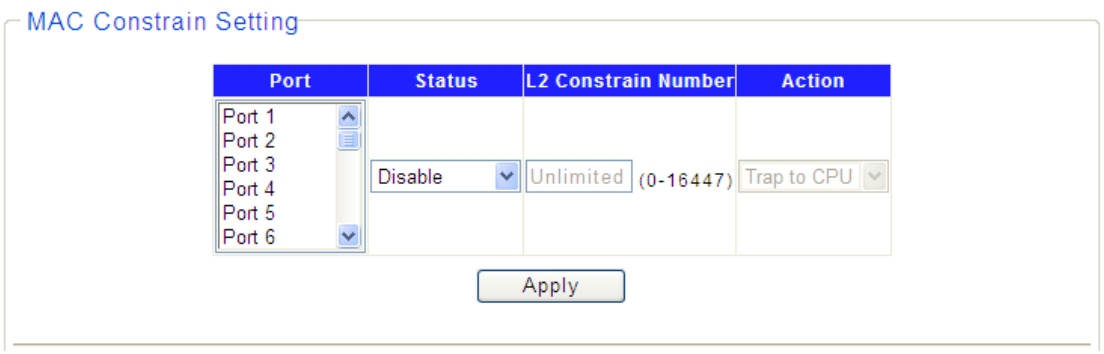
Port specifies the port that the MAC is belongs to.

Display the information of static MAC entries.



4.3.2 MAC Constrain

MAC Constrain configuration.



Parameters:

Port specifies the port number on which MAC Constrain would be applied.

Status specifies the feature to be enabled or disabled.

L2 Constrain Number specifies the maximum number of MAC entries can be learn.

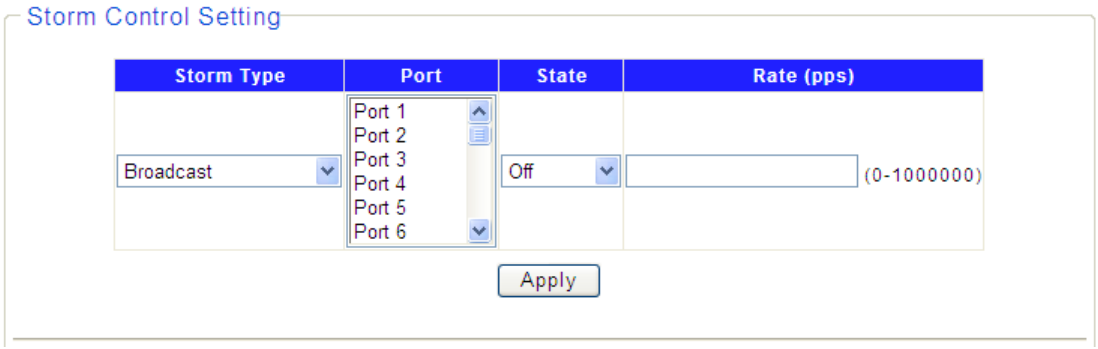
Action specifies the measure to be taken if a port reaches the 'L2 Constrain Number' of entries.

Display the configuration of MAC Constrain.

Port	Status	L2 Constrain Number	Action
Port 1	Disabled	-	-
Port 2	Disabled	-	-
Port 3	Disabled	-	-
Port 4	Disabled	-	-
Port 5	Disabled	-	-
Port 6	Disabled	-	-
Port 7	Disabled	-	-
Port 8	Disabled	-	-
Port 9	Disabled	-	-
Port 10	Disabled	-	-
Port 11	Disabled	-	-
Port 12	Disabled	-	-
Port 13	Disabled	-	-
Port 14	Disabled	-	-
Port 15	Disabled	-	-
Port 16	Disabled	-	-
Port 17	Disabled	-	-
Port 18	Disabled	-	-
Port 19	Disabled	-	-
Port 20	Disabled	-	-
Port 21	Disabled	-	-
Port 22	Disabled	-	-
Port 23	Disabled	-	-
Port 24	Disabled	-	-

4.3.3 Storm Control

Storm control configuration.



Parameters:

Storm Type specifies type to set. Type could be **Broadcast**, **Multicast**, **Unknown Unicast** or **Unknown Multicast.**

Port specifies the port to set.

State turn on or turn off storm control.

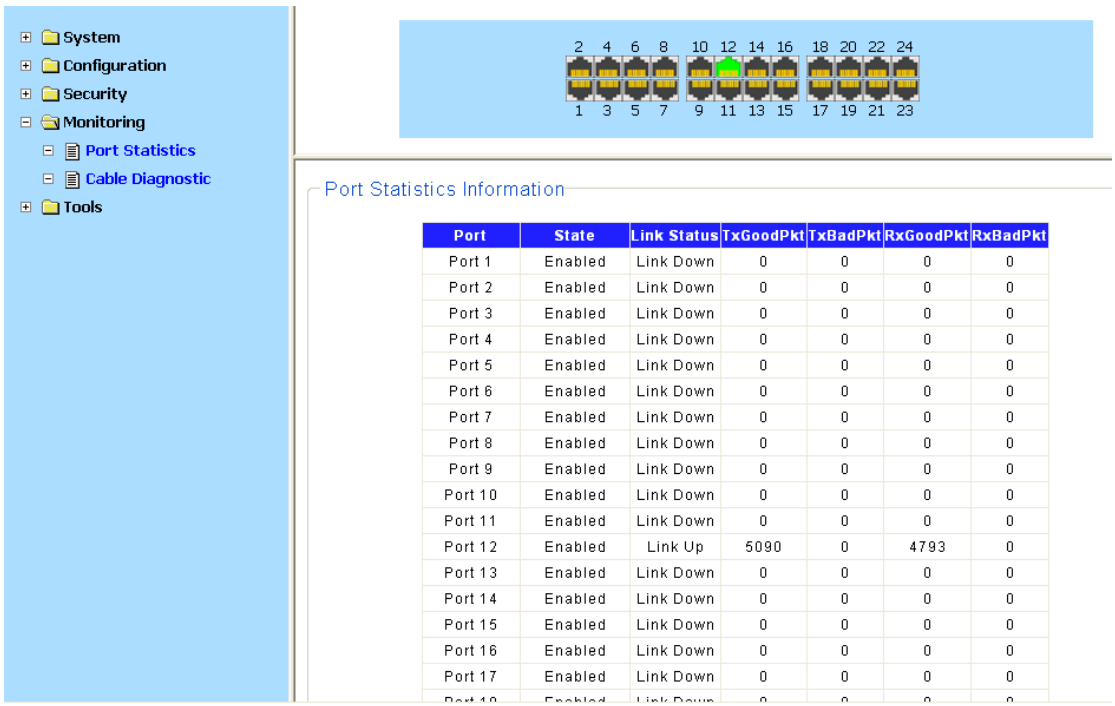
Rate (pps) specifies storm control rate, in range 0-1000000 pps (packet-per-second).

Display the configuration of Storm Control.

Port	Broadcast (pps)	Multicast (pps)	Unknown Unicast (pps)	Unknown Multicast (pps)
Port 1	Off	Off	Off	Off
Port 2	Off	Off	Off	Off
Port 3	Off	Off	Off	Off
Port 4	Off	Off	Off	Off
Port 5	Off	Off	Off	Off
Port 6	Off	Off	Off	Off
Port 7	Off	Off	Off	Off
Port 8	Off	Off	Off	Off
Port 9	Off	Off	Off	Off
Port 10	Off	Off	Off	Off
Port 11	Off	Off	Off	Off
Port 12	Off	Off	Off	Off
Port 13	Off	Off	Off	Off
Port 14	Off	Off	Off	Off
Port 15	Off	Off	Off	Off
Port 16	Off	Off	Off	Off
Port 17	Off	Off	Off	Off
Port 18	Off	Off	Off	Off
Port 19	Off	Off	Off	Off
Port 20	Off	Off	Off	Off
Port 21	Off	Off	Off	Off
Port 22	Off	Off	Off	Off
Port 23	Off	Off	Off	Off
Port 24	Off	Off	Off	Off

4.4 Monitoring

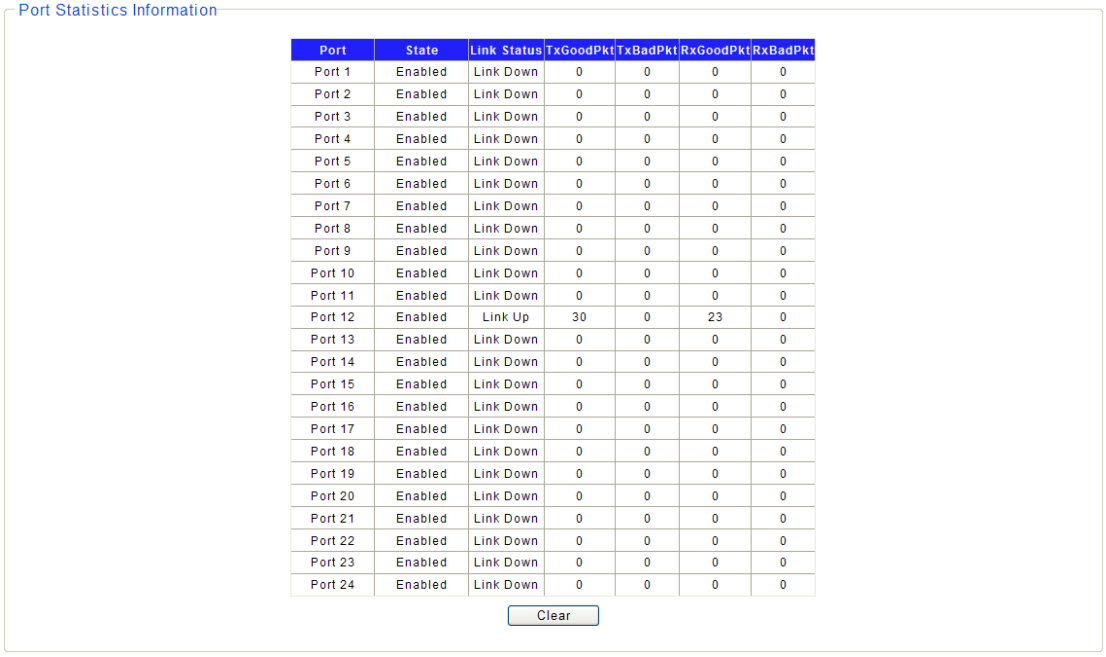
There are "Port Statistics" and "Cable Diagnostic" configuration web pages in this section.



Port	State	Link Status	TxGoodPkt	TxBadPkt	RxGoodPkt	RxBadPkt
Port 1	Enabled	Link Down	0	0	0	0
Port 2	Enabled	Link Down	0	0	0	0
Port 3	Enabled	Link Down	0	0	0	0
Port 4	Enabled	Link Down	0	0	0	0
Port 5	Enabled	Link Down	0	0	0	0
Port 6	Enabled	Link Down	0	0	0	0
Port 7	Enabled	Link Down	0	0	0	0
Port 8	Enabled	Link Down	0	0	0	0
Port 9	Enabled	Link Down	0	0	0	0
Port 10	Enabled	Link Down	0	0	0	0
Port 11	Enabled	Link Down	0	0	0	0
Port 12	Enabled	Link Up	5090	0	4793	0
Port 13	Enabled	Link Down	0	0	0	0
Port 14	Enabled	Link Down	0	0	0	0
Port 15	Enabled	Link Down	0	0	0	0
Port 16	Enabled	Link Down	0	0	0	0
Port 17	Enabled	Link Down	0	0	0	0

4.4.1 Port Statistics

Display information of port statistics.



Port	State	Link Status	TxGoodPkt	TxBadPkt	RxGoodPkt	RxBadPkt
Port 1	Enabled	Link Down	0	0	0	0
Port 2	Enabled	Link Down	0	0	0	0
Port 3	Enabled	Link Down	0	0	0	0
Port 4	Enabled	Link Down	0	0	0	0
Port 5	Enabled	Link Down	0	0	0	0
Port 6	Enabled	Link Down	0	0	0	0
Port 7	Enabled	Link Down	0	0	0	0
Port 8	Enabled	Link Down	0	0	0	0
Port 9	Enabled	Link Down	0	0	0	0
Port 10	Enabled	Link Down	0	0	0	0
Port 11	Enabled	Link Down	0	0	0	0
Port 12	Enabled	Link Up	30	0	23	0
Port 13	Enabled	Link Down	0	0	0	0
Port 14	Enabled	Link Down	0	0	0	0
Port 15	Enabled	Link Down	0	0	0	0
Port 16	Enabled	Link Down	0	0	0	0
Port 17	Enabled	Link Down	0	0	0	0
Port 18	Enabled	Link Down	0	0	0	0
Port 19	Enabled	Link Down	0	0	0	0
Port 20	Enabled	Link Down	0	0	0	0
Port 21	Enabled	Link Down	0	0	0	0
Port 22	Enabled	Link Down	0	0	0	0
Port 23	Enabled	Link Down	0	0	0	0
Port 24	Enabled	Link Down	0	0	0	0

Clear

Clear button clears the Port statistics.

4.4.2 Cable Diagnostic

Cable diagnostic information.

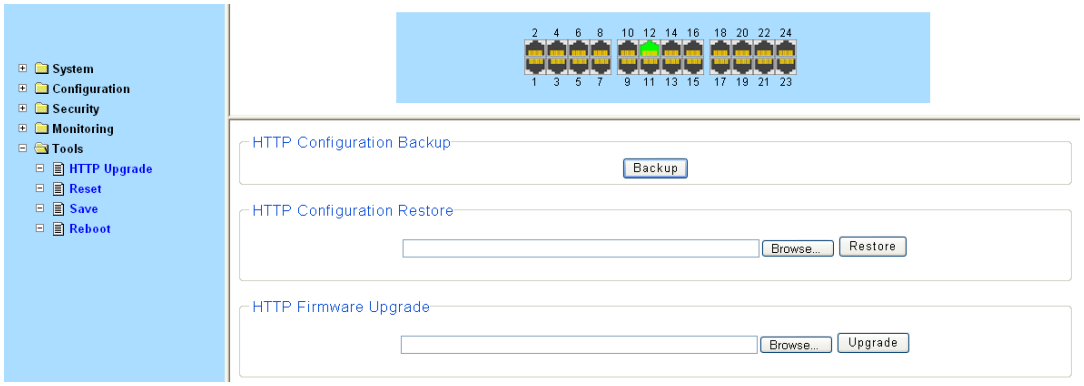
Cable Diagnostic

Check	Port	Test Result	Cable Fault Distance
☐	Port 1	-	-
☐	Port 2	-	-
☐	Port 3	-	-
☐	Port 4	-	-
☐	Port 5	-	-
☐	Port 6	-	-
☐	Port 7	-	-
☐	Port 8	-	-
☐	Port 9	-	-
☐	Port 10	-	-
☐	Port 11	-	-
☐	Port 12	-	-
☐	Port 13	-	-
☐	Port 14	-	-
☐	Port 15	-	-
☐	Port 16	-	-
☐	Port 17	-	-
☐	Port 18	-	-
☐	Port 19	-	-
☐	Port 20	-	-
☐	Port 21	-	-
☐	Port 22	-	-
☐	Port 23	-	-
☐	Port 24	-	-

Apply

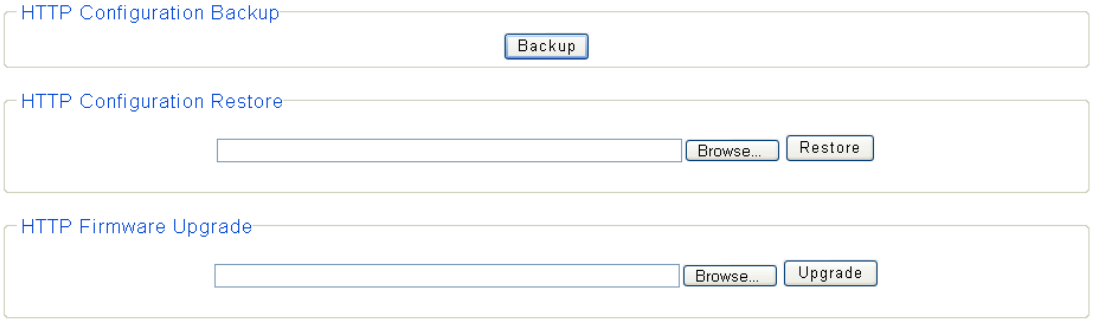
4.5 Tools

There are "HTTP Upgrade", "Reset", "Save" and "Reboot" configuration web pages in this section.



4.5.1 HTTP Upgrade

HTTP Upgrade configuration.



Parameters:

HTTP Configuration Backup creates the backup of configuration file.

HTTP Configuration Restore restores configuration file.

HTTP Firmware Upgrade upgrades the firmware image.

4.5.2 Reset

Display the reset function. It can reset the Switch to factory default configuration.

4.5.3 Save

Once the 'Save' is clicked the configuration is saved and above message will be displayed.

4.5.4 Reboot

Display the reboot function. It can reboot the Switch.