

# **8-Port Gigabit Easy Smart Switch**

# **User Manual**

## **FCC Certifications**



This Equipment has been tested and found to comply with the limits for a Class B 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

## 1.1 General Description

The device is high-performance Gigabit Ethernet switch, with all 8 ports capable of 10/100/1000Mbps auto-negotiation operation (NWay) which means the switch could automatically negotiate with the connected partners on the network speed and duplex mode.

This switch supports the Web GUI to control each port status and bandwidth control by port rate limiting. It's easy to set the VLAN & QoS function, the VLAN includes MTU VLAN, Port Base VLAN & 802.1Q VLAN. The QoS has 4 priority queues QoS which can set the Storm Filter for Broadcast Storm, Multicast Storm & Unicast Storm. Loop detection and prevention functions are supported for detecting/resolving the cable loopback connection issue more easily. Support DHCP snooping function to prevent untrusted DHCP server installed for easily maintaining network management.

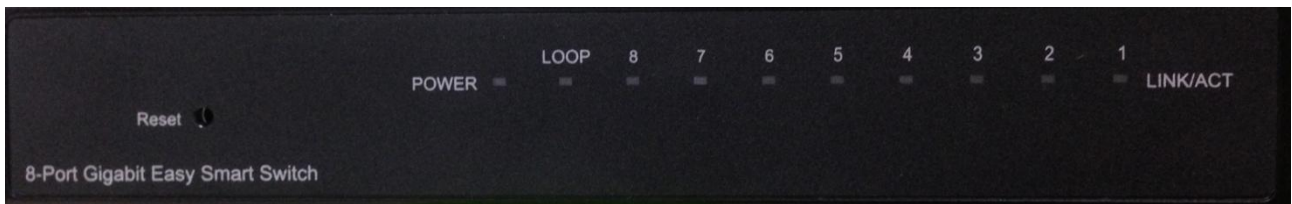
The switch complies with IEEE802.3az Energy Efficient Ethernet to save power consumption, Supports IGMP Snooping function to improve traffic performance. Moreover, the rich diagnostic LEDs on the front-panel provide the operating status of individual port and whole system.

## 1.2 Key Features

- 8 \* RJ-45 ports for 10/100/1000Mbps connectivity
- Supports MDI/MDI-X auto crossover
- Supports NWay protocol for speed (10/100/1000Mbps) and duplex mode (Half/Full) auto-detection
- Complies with IEEE802.3, 802.3u, 802.3ab Ethernet standards
- Complies with IEEE802.3az Energy Efficient Ethernet
- Supports IEEE802.3x Flow Control
- Supports Storm Filter (Broadcast, Multicast, Unicast)
- The QoS Supports 802.1p QoS and port rate limiting
- The VLAN includes MTU, Port Based & 802.1Q Tag Based
- Supports 4 groups of Port Based VLAN
- Provides Port trunk by one group two ports
- Provides Port Mirroring by one group two ports
- Supports IGMP Snooping v1/v2/v3
- Supports Loop detection and Loop prevention
- Supports EEE enable and disable
- Provides Cable testing function
- Supports DHCP Client
- Supports DHCP snooping
- Supports Firmware upgrade
- Supports Configuration backup & restore
- Full Range of Internal universal switching power supply
- Supports Reset to factory default button

### 1.3 The Front Panel

The following figure shows the front panel of the switch.



#### 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
POWER	Steady Green	The switch is powered on.
	Off	The switch is powered off.
LOOP	Steady Red	The switch is detected the network loopback.
	Off	The Loop is not detected.
Link/ACT	Steady Green	Valid port connection;.
	Blinking Green	Valid port connection and there is data transmitting/receiving
	Off	Port disconnected.

#### The Reset Button

Reset the switch to its factory default configuration via the RESET button. Press the RESET button for more than two seconds to enable reset to default function. 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 socket

The power socket located at the right side of the rear panel, is where you should connect the power

adapter. Please use the +5V/1A power adapter provided with the Easy Smart GbE Switch. After the switch powered on, the power LED is lit for a normal power status.

## 1.5 Installation

### Desktop Installation

1. Place the switch on a flat desk.
2. Inspect the Power Adapter carefully and make sure that it is properly connected to a power source.
3. Ensure adequate ventilation space around the switch for dissipating heat and air.
4. Power on the switch and it will automatically initialize and power LED turn on.

### Installing Network Cables

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
Network Media(Cable)	10 Mbps	10Base-T: UTP category 3, 4, 5 cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m)
	100 Mbps	100Base-TX: UTP category 5, 5e cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m)
	1000 Mbps	1000Base-T: UTP category 5e, 6 cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m)

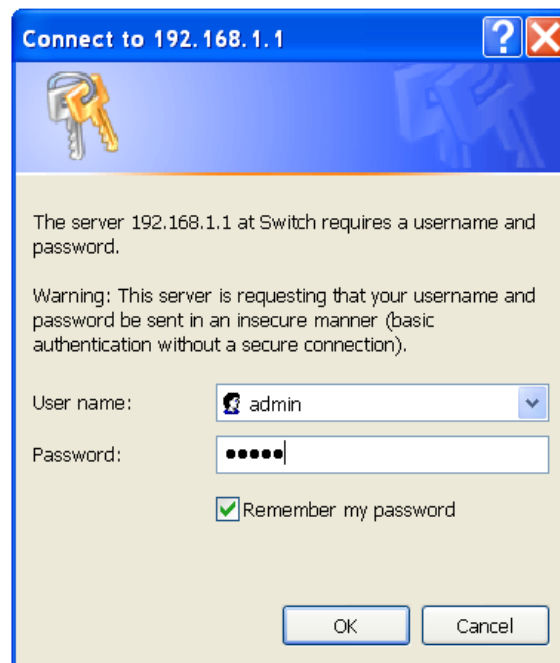
## Chapter 2 Getting Started

### 2.1 Connect to switch Web Pages

1. To connect to the web server, input the IP of switch in the URL field of the browser.
2. The default IP is 192.168.1.1 and default Subnet mask is 255.255.255.0
3. 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**.



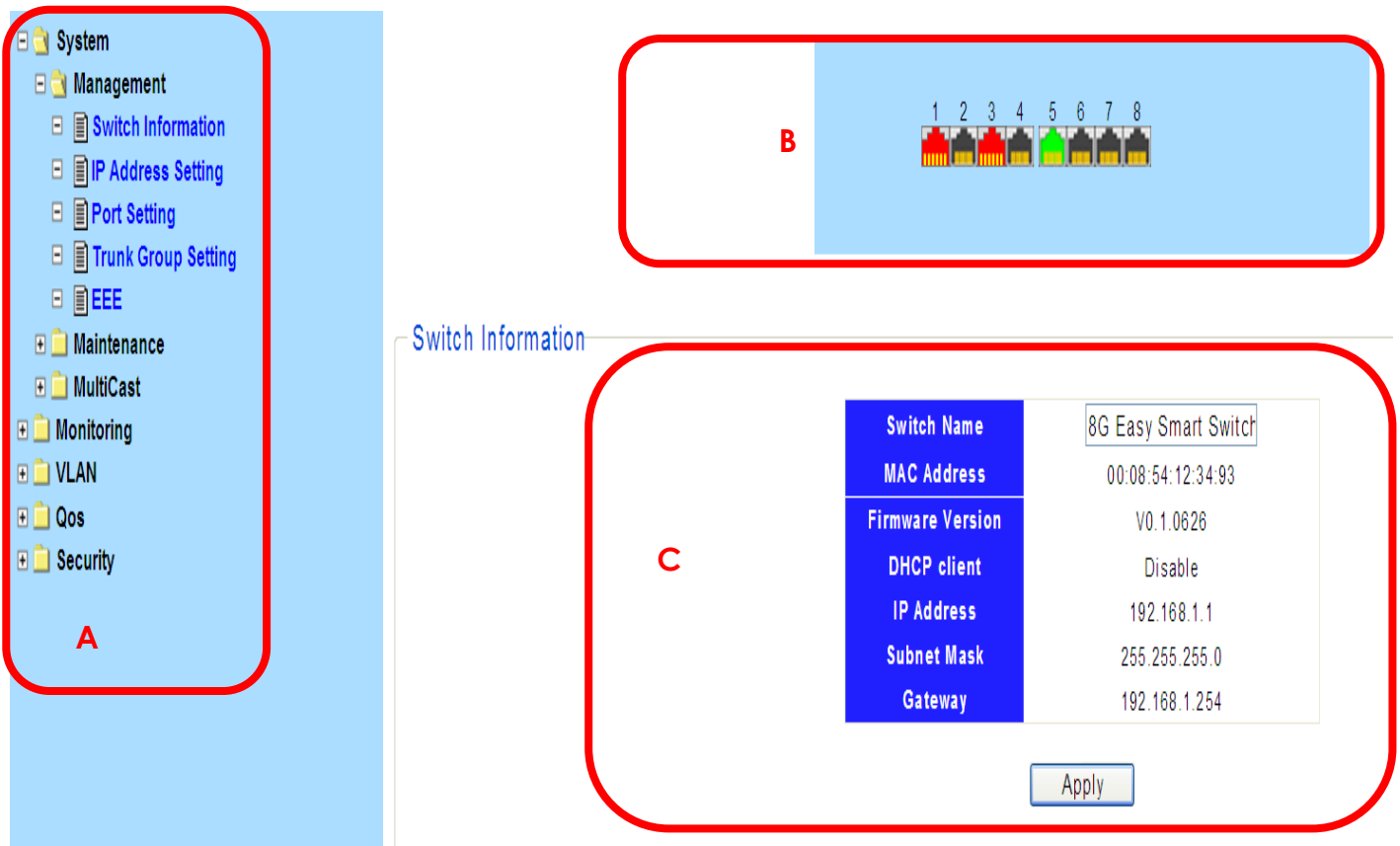
4. The login screen appears. Enter the User Name and Password to login the configuration interface. They are both **admin** by default. You can select **Remember my password** to remember the User Name and Password.



### 2.2 Graphic User Interface Overview

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. Red squares indicate the port on network loop status.

**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:

System	Monitoring	VLAN
<ul style="list-style-type: none"> <li>System <ul style="list-style-type: none"> <li>Management <ul style="list-style-type: none"> <li>Switch Information</li> <li>IP Address Setting</li> <li>Port Setting</li> <li>Trunk Group Setting</li> <li>EEE</li> </ul> </li> <li>Maintenance <ul style="list-style-type: none"> <li>User Account</li> <li>Firmware Upgrade</li> <li>Config Backup and Restore</li> <li>Reset to Default Config</li> <li>Config Save</li> <li>Reboot</li> </ul> </li> <li>MultiCast <ul style="list-style-type: none"> <li>IGMP Snooping</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Monitoring <ul style="list-style-type: none"> <li>Port Statistics</li> <li>Cable Diagnostic</li> <li>Port Mirroring</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>VLAN <ul style="list-style-type: none"> <li>Port Base VLAN</li> <li>MTU VLAN</li> <li>802.1Q VLAN <ul style="list-style-type: none"> <li>802.1Q Static VLAN</li> <li>802.1Q VLAN Port</li> </ul> </li> </ul> </li> </ul>
Qos	Security	
<ul style="list-style-type: none"> <li>Qos <ul style="list-style-type: none"> <li>Port-based Priority</li> <li>Bandwidth Control</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Security <ul style="list-style-type: none"> <li>Storm Filter</li> <li>Loop Prevention</li> <li>DHCP Snooping</li> </ul> </li> </ul>	

The following table describes the links in the navigation panel.

LINKS	DESCRIPTION
<b>System-Management</b>	
Switch Information	This link takes you to a screen that changes/displays general information of the switch including switch name, MAC address, firmware version, DHCP mode, IP address, subnet mask and gateway address.
IP Address Setting	This link takes you to a screen where you can set and view the IP address, subnet mask and gateway values of the switch.
Port Setting	This link takes you to a screen where you can configure and view the basic parameters of each port, including the port status, speed, duplex mode and flow control.
Trunk Group Setting	This link takes you to a screen where you can configure settings for the trunk group.

## Easy Smart GbE Switch

EEE	This link takes you to enable or disable port EEE(Energy Efficient Ethernet) function.
<b>System-Maintenance</b>	
User Account	This link takes you to a screen where you can change the web configuration login account and password.
Firmware Upgrade	This link takes you to a screen where you can upgrade the firmware.
Config. Backup and Restore	This link takes you to a screen where you can save the current configuration file to your computer or download a backup configuration file to your switch.
Reset to Default Config	This link takes you back to default factory settings and restart the system.
Config Save	This link takes you to a screen where you can save all the configurations you have made to the switch effectively, so that you can use the same configurations next time.
Reboot	This link takes you to a screen where you can reboot the switch.
<b>System-Multi Cast</b>	
IGMP Snooping	This link takes you to a screen where you can configure the IGMP snooping setting.
<b>Monitoring</b>	
Port Statistics	This link displays port network traffic for the switch.
Cable Diagnostic	This link takes you to a screen where you can diagnose the connection status of the cable connected to the switch and the distance to the problem location.
Port Mirroring	This link takes you to a screen where you can monitor and mirror network traffic by forwarding copies of incoming and outgoing packets from one/multiple ports(mirrored port) to a specific port(mirroring port).
<b>VLAN</b>	
Port Base VLAN	This link takes you to a screen where you can set the Port-Based VLAN mode.
MTU VLAN	This link takes you to a screen where you can set the MTU VLAN mode.
<b>VLAN-802.1Q VLAN</b>	
802.1Q Static VLAN	This link takes you to a screen where you can set the 802.1Q Tag VLAN mode.
802.1Q VLAN Port	This link takes you to a screen where you can configure the 802.1Q PVID value.
<b>Qos</b>	
Port-based Priority	This link takes you to a screen where you can set the priority queue for the ports to determine the priority of ports' receiving and transmitting data.
Bandwidth Control	This link takes you to a screen where you can configure and view the bandwidth control function information.
<b>Security</b>	

## Easy Smart GbE Switch

Storm Filter	This link takes you to a screen where you can filter or limit broadcast, multicast, unknown unicast and unknown multicast frame in the network.
Loop Prevention	This link takes you to a screen where you can setup loop prevention and loop detection features.
DHCP Snooping	This link takes you to a screen where you can configure the DHCP snooping settings.

## Chapter 3 System

The System page is mainly for system configuration of the switch, including management , maintenance and multicast setting for the switch.

### 3.1 Management

Use the Management pages to view switch information and configure some settings for ports, trunk group and EEE.

#### 3.1.1 Switch Information

Click **System > Management > Switch Information**

On this page user can configure and browse some switch information such as Switch name, MAC address, IP address, Gateway and Firmware Version and so on.

##### Switch Information

Switch Name	8G Easy Smart Switch
MAC Address	00:08:54:12:34:93
Firmware Version	V0.1.0626
DHCP client	Disable
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.254

Apply

With editable textbox in the table , user could configure the field value.

LABEL	DESCRIPTION
Switch Name	Name of the switch, can be modified for identifying other different switches.
MAC Address	Displays the MAC address of the switch.
Firmware Version	Displays the installed software version number.
DHCP Client	Displays the status of the DHCP function for the switch.
IP Address	Displays the system IP address of the switch
Subnet Mask	Displays the subnet mask of the switch.
Gateway	Displays the gateway IP Address of the switch.
Apply	Click <b>Apply</b> to make the settings take effect.

#### 3.1.2 IP Address Setting

Click **System > Management > IP Address Setting**

On this page user can get and modify the network parameters of the switch.

## IP Address Setting

DHCP client	Disable
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.254

Apply

With editable textbox in the table , user could configure the field value.

LABEL	DESCRIPTION
DHCP Client	<b>Enable</b> or <b>Disable</b> the DHCP function. If DHCP setting is enabled, the switch will obtain the IP address, subnet Mask and default gateway from the DHCP Server automatically; otherwise, these three items should be configured manually.
IP Address	Enter the system IP address of the switch. The default system IP is 192.168.1.1 and you can change it appropriately to your needs.
Subnet Mask	Enter the subnet mask of the switch. By default, the switch uses 255.255.255.0 as the subnet mask.
Gateway	Enter the gateway IP Address of the switch.
Apply	Click <b>Apply</b> to make the settings take effect.

## 3.1.3 Port Setting

Click **System > Management > Port Setting**

This page shows link status, speed, duplex, and flow control ability of all ports. User can change port ability of switch in this page.,

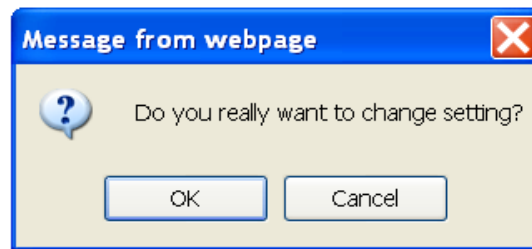
1. Hold “**Ctrl**” and the left button of the mouse to select the ports you need, and select the state, speed/duplex, flow control of the ports.

## Port Setting

Port	State	Speed/Duplex	Flow Control
Port 1			
Port 2			
Port 3			
Port 4	Enable	10M/Half	Off
Port 5			
Port 6			

Apply

2. Click **Apply**, then the remind view pops up.



3. Press **OK**, and wait for several seconds to make the setting of ports take effect, then you'll see the page as below.

Port	State	Speed/Duplex		Flow Control	
		Config	Actual	Config	Actual
Port 1	Enable	10 Half	Link Down	Off	Off
Port 2	Enable	10 Half	Link Down	Off	Off
Port 3	Enable	10 Half	Link Down	Off	Off
Port 4	Enable	10 Half	Link Down	Off	Off
Port 5	Enable	10 Half	Link Down	Off	Off
Port 6	Enable	Auto	Link Down	On	Off
Port 7	Enable	Auto	100Full	On	Off
Port 8	Enable	Auto	Link Down	On	Off

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Port Config</b>	
<b>Port</b>	Select the desire port for configuration from the list box.
<b>State</b>	Allows you to Enable/Disable the port. When Enable is selected, the port can forward the packets normally.
<b>Speed/Duplex</b>	Select the Port speed/duplex capabilities for the ports you need: <ul style="list-style-type: none"> <li>• <b>Auto:</b> Auto-negotiation speed/ duplex with all capabilities.</li> <li>• <b>10M/Half:</b> Set speed with 10M half-duplex ability only.</li> <li>• <b>10M/Full:</b> Set speed with 10M full-duplex ability only.</li> <li>• <b>100M/Half:</b> Set speed with 100M half-duplex ability only.</li> <li>• <b>100M/Full:</b> Set speed with 100M full-duplex ability only.</li> </ul>
<b>Flow Control</b>	Select <b>on/off</b> to enable/disable the flow control ability of the selected ports.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.
<b>Port Status Table</b>	
<b>Port</b>	Displays the port number.
<b>State</b>	Displays the actual state of the ports.
<b>Speed/Duplex</b>	<b>Config:</b> Displays the configuration of Speed and Duplex mode for the port. <b>Actual:</b> Displays the actual working state of the port.

<b>Flow Control</b>	<b>Config:</b> Displays the configuration of the Flow Control for the port. <b>Actual:</b> Displays the actual working state of the port.
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## Note:

1. The switch can't be managed through the disable port.
2. The switch might lose connection temporarily for the specific port (which connect to the management PC) setting. If it happens, refresh WEB GUI can recover the connection.

### 3.1.4 Trunk Group Setting

Click **System >Management> Trunk Group Setting**

Trunk group is used to combine a number of ports together to make a single high-bandwidth data path, which can highly extend the bandwidth. The bandwidth of the trunk is the sum of bandwidth of its member ports. Provides Port trunk by one group two ports

Trunk Group Setting (The trunk group setting only can set port 1-4.)

Group ID	Ports
Trunk	Port 1 Port 2 Port 3 Port 4

Add / Modify

Group ID	Ports	Select
		<input type="button" value="Delete"/> <input type="button" value="Select All"/>

Hold "Ctrl" and the left button of the mouse to select two ports for trunk group setting, click **Add / Modify**, and then you can view the port parameters as shown below.

Trunk Group Setting (The trunk group setting only can set port 1-4.)

Group ID	Ports
Trunk	Port 1 Port 2 Port 3 Port 4

Add / Modify

Group ID	Ports	Select
Trunk1	1-2	<input type="checkbox"/>
		<input type="button" value="Delete"/> <input type="button" value="Select All"/>



The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Trunk Group Config</b>	
<b>Group ID</b>	Displays the Trunk Group ID.
<b>Ports</b>	Select the ports as the trunk group member.
<b>Add/Modify</b>	Click to select the action of operation, to add/modify Trunk Group to the switch.
<b>Trunk Group Table</b>	
<b>Group ID</b>	Displays the Trunk Group as Trunk1.
<b>Ports</b>	Displays the Trunk member ports.
<b>Select</b>	<b>Select</b> and enable the Trunk Group.
<b>Select All</b>	Click <b>Select All</b> to select and enable the Trunk Group
<b>Delete</b>	Click <b>Delete</b> to delete the Trunk Group.



### Note:

1. Only supports one group (Trunk 1) and two ports from port 1 to port4.
2. For the member ports in a trunk group, their configuration of port setting & QoS must be the same

### 3.1.5 EEE

Click **System >Management> EEE**

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

1. In the EEE setting list, select **Enable** or **Disable** EEE.
2. Click **Apply** to set up this function.

EEE

EEE Setting

Enable

▼

Apply

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>EEE function</b>	Port EEE function. ■ <b>Enabled</b> : Enable EEE function ■ <b>Disabled</b> : Disable EEE function
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.

## 3.2 Maintenance

The Maintenance pages are doing the switch user account, Firmware upgrade, Configuration Backup/Restore, Reset to default configuration, Configuration Save and Reboot functions.

### 3.2.1 User Account

Click **System > Maintenance > User Account**

This page user can change the administrator's username and password in order to refuse illegal users.

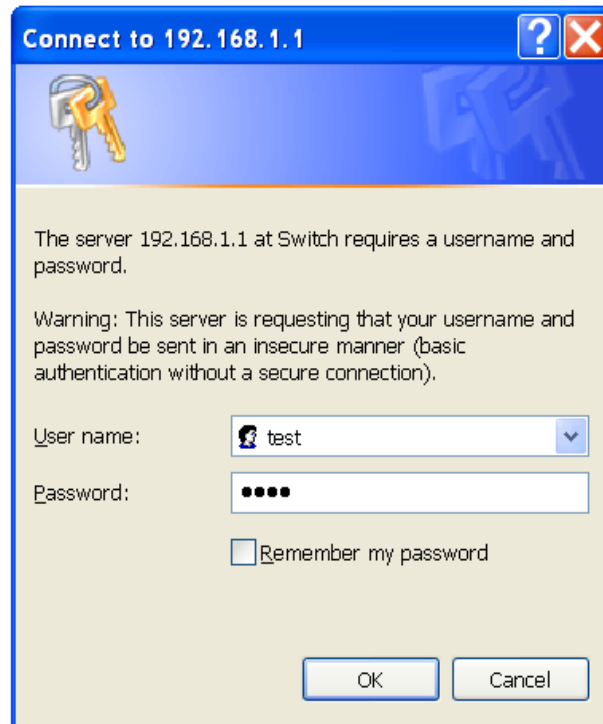
User Account Setting

New Username	<input type="text" value="admin"/>
New Password	<input type="password"/>
Retype Password	<input type="password"/>

1. Enter the new username and password, click **Apply**.

New Username	<input type="text" value="test"/>
New Password	<input type="password" value="••••"/>
Retype Password	<input type="password" value="••••"/>

2. Then the login screen appears, enter the new username and password , click **OK** to login the configuration interface of User Account again.



The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>New Username</b>	Create a name for administrator's login.
<b>New Password</b>	Type in a new password for administrator's login.
<b>Retype Password</b>	Retype password to make sure the password is exactly you typed before in "New Password" field.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.



### Note:

1. Only digits, letters and underlines can be used for creating the user name and password. The length of user name should not be more than 20 characters and the password should not be more than 17 characters.
2. The default user name/password is admin/admin.

### 3.2.2 Firmware Upgrade

To upgrade switch firmware, first download a firmware upgrade file to your computer. User can select to upgrade firmware through TFTP or HTTP.

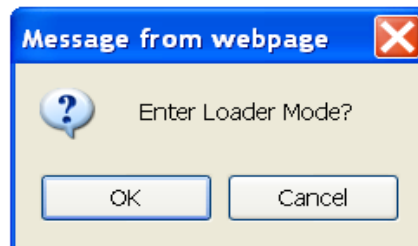
Click **System > Maintenance > Firmware Upgrade**. The switch system can be upgraded via this management page.

### Firmware Upgrade

Enter loader mode to upgrade firmware. After entering loader mode, configuration will be saved.

Enter Loader Mode

1. Enter the **Enter Loader Mode** button, then the confirm interface pops up.



2. Press **OK**, then the switch will save the configuration and switch to loader mode after 6 seconds. The firmware upgrade screen displays as shown below.

### Loader Mode

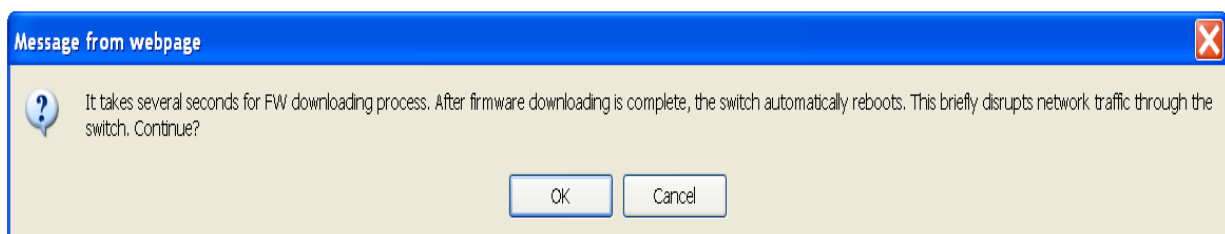
Firmware upgrade mode. Please upload your image by TFTP or HTTP

3. If you select to upgrade firmware through TFTP, click **Firmware Upgrade < TFTP Firmware Upgrade** to view the screen as shown below.

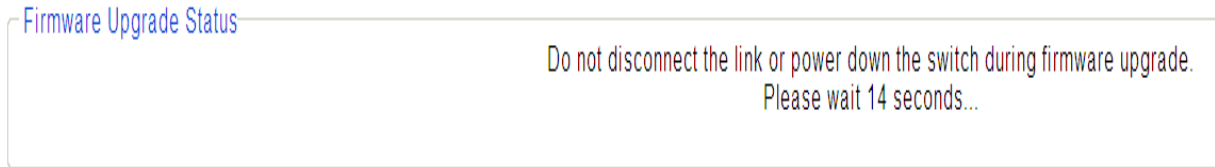
### TFTP Firmware Upgrade

TFTP Server IP Address	192.168.1.2
Image File Name	8G_upgrade firmware.bin
<input type="button" value="Download Image"/>	

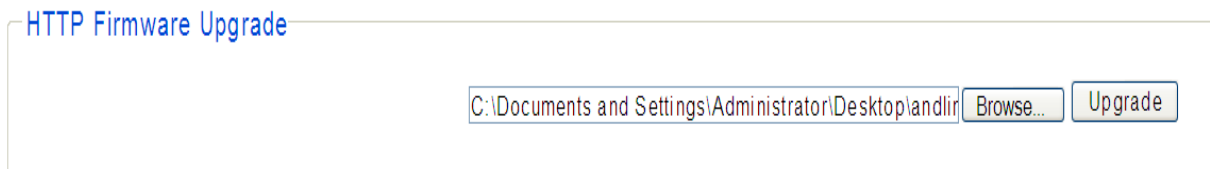
4. Enter the **Image File Name** and click **Download Image**, then a remind interface pops up.



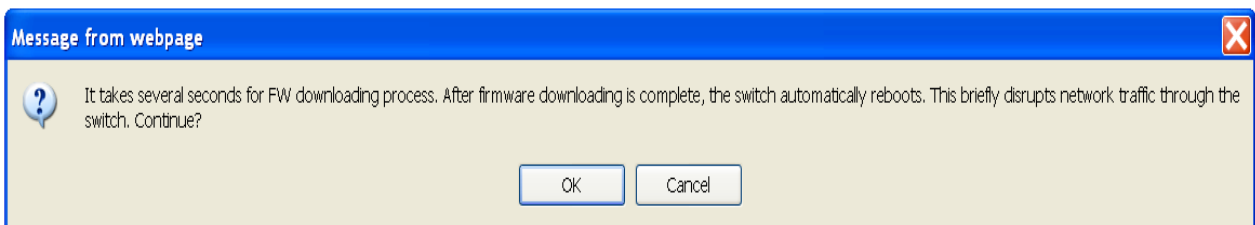
- Click **OK** and wait for several seconds to download the firmware, then you'll see the upgrade status interface as shown below. After finishing the TFTP upgrade procedure, switch will reboot automatically.



- If you select to upgrade firmware through HTTP, click **Firmware Upgrade < HTTP Firmware Upgrade** to view the screen as shown below.
- Click the **Browse** button to the location on your computer containing the firmware upgrade file and select the upgrade file.



- Click **Upgrade**, then the remind interface pops up, press **OK** to operate the upgrade procedure.



- After finishing the HTTP upgrade procedure, switch will reboot automatically.

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>TFTP Server IP Address</b>	IP address of the TFTP server.
<b>Image File Name</b>	Firmware image or configuration file name on remote TFTP server.
<b>Download Image</b>	Download Image file from TFTP server to switch.
<b>Browse</b>	Browse the image file on your computer.
<b>Upgrade</b>	Click <b>Upgrade</b> to update the specified file selected from browse file and install the new firmware after selecting the HTTP upgrade method.
<b>Reboot</b>	Press Reboot button, can reboot switch.

**Note:**

1. Don't turn-off the switch and disconnect the link while firmware upgrading.
2. You are suggested to backup the configuration before upgrading.

### 3.2.3 Config. Backup and Restore

Click **System > Maintenance > Config. Backup and Restore**

On this page user can download the current configuration and save it as a file to your computer, or upload a backup configuration file to restore your switch to this previous configuration.

[HTTP Backup Configuration](#)

[HTTP Restore Configuration](#)

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Backup</b>	Click the <b>Backup</b> button to save the current configuration as a file to your computer. You are suggested to take this measure before upgrading
<b>Restore</b>	Click the <b>Browse</b> button to select the backup configuration file, and then click the <b>Restore</b> button. It will take effect after the switch reboots.

### 3.2.4 Reset to Default Config

Click **System > Maintenance > Reset to Default Config**

On this page user can reset the switch to the factory default configuration. All the settings will be cleared after the switch is reset. Follow the steps below to reset the switch back to the factory defaults.

[Reset Configuration](#)

Reset to default factory settings and restart the system.

1. Click **Factory Default** to reset all switch configurations to the factory defaults and the switch will restart automatically.

### 3.2.5 Config Save

Click **System>Maintenance>Config Save**

You can save the current configuration easily by clicking the Config Save menu without any function button and you'll see the successful page directly.

Save configurations

The configuration has been saved successfully.

#### Config Save Page



#### Note:

1. To avoid damage, please don't turn off the device before the configuration saved successfully.
2. Only by clicking the Config Save menu can you save the current configuration of the switch effectively, so that the configuration you made this time will remain in effect next time you start it.

### 3.2.6 Reboot

Click **System>Maintenance> Reboot**

Allow you to restart the switch without physically turning the power off.

Follow the steps below to reboot the switch.

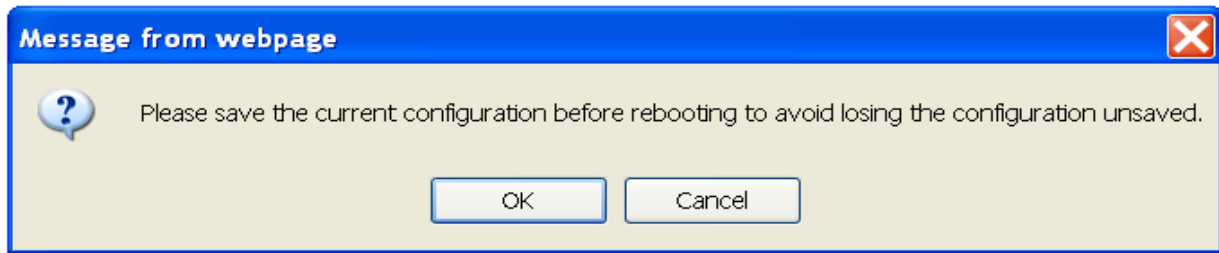
1. Click **Reboot** to view the screen as shown next.

Reboot

Reboot the switch.

Reboot

2. Click **Reboot** button, then the following remind view pops up, Click **OK**.



3. The switch will be restarted directly in about 20 seconds without any successful page.

Reboot

Please wait 19 seconds...

### 3.3 MultiCast

Internet Group Management Protocol (IGMP) snooping is a multicast control mechanism, which can be used on the switch for dynamic registration of the multicast group.

Internet Group Management Protocol (IGMP) snooping allows a switch to forward multicast traffic intelligently on the switch. This feature prevents the switch from broadcasting the traffic to all ports and possibly affecting network performance.

#### 3.3.1 IGMP Snooping

Click **System > MultiCast > IGMP Snooping**

On this page user can enable or disable IGMP snooping feature.

IGMP Snooping

IGMP snooping

Disable

Apply

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>IGMP Snooping</b>	Enable or Disable IGMP snooping function globally on the switch.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.



## Chapter 4 Monitoring

The Monitoring page monitors port statistics information, perform cable diagnostic and allows you to configure port mirroring.

### 4.1 Port Statistics

Click **Monitoring > Port Statistics**

On this page user can view the statistic information of each port, which facilitates you to monitor the traffic and locate faults promptly.

#### 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 Up	432	0	431	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

Clear

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Port</b>	Displays the port number of the switch.
<b>State</b>	Displays whether the port is enabled or disabled.
<b>Link Status</b>	Displays the link state of the port.
<b>TxGoodPkt</b>	Displays the number of good packets transmitted on the port. The error packets are not counted in.
<b>TxBadPkt</b>	Displays the number of error packets transmitted on the port.
<b>RxGoodPkt</b>	Displays the number of good packets received on the port. The error packets are not counted in.
<b>RxBadPkt</b>	Displays the number of error packets received on the port.
<b>Clear</b>	Click to reset content of screen

### 4.2 Cable Diagnostic

Click **Monitoring> Cable Diagnostics**

This switch provides cable diagnostic to check the connection status of the cable connected to the

switch and the distance to the problem location, which facilitates you to locate and diagnose the trouble spot of the network.

Select the ports to be diagnosed and click **Apply**.

#### Cable Diagnostic

Check	Port	Test Result	Cable Fault Distance
<input checked="" type="checkbox"/>	Port 1	Open	PairA:1(M), PairB:1(M), PairC:1(M), PairD:2(M)
<input checked="" type="checkbox"/>	Port 2	Open	PairA:1(M), PairB:1(M), PairC:2(M), PairD:1(M)
<input type="checkbox"/>	Port 3	-	-
<input type="checkbox"/>	Port 4	-	-
<input checked="" type="checkbox"/>	Port 5	Normal	PairA:0(M), PairB:0(M), PairC:0(M), PairD:0(M)
<input type="checkbox"/>	Port 6	-	-
<input type="checkbox"/>	Port 7	-	-
<input type="checkbox"/>	Port 8	-	-

Apply

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Check</b>	Click the checkbox to select the port to be diagnosed.
<b>Port</b>	Displays the port number of the switch.
<b>Test Result</b>	Displays the cable connection status : <ul style="list-style-type: none"> <li>■ <b>Open:</b> The cable is broken or no cable connection. Get the cable broken distance by “Cable Fault Distance” field.</li> <li>■ <b>Normal:</b> The cable is good without broken, the “Cable Fault Distance” field is meaningless.</li> </ul>
<b>Cable Fault Distance</b>	Displays the error length of the cable.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.

## 4.3 Port Mirroring

Click **Monitoring > Port Mirroring**

Port mirror function is to monitor and mirror network traffic by forwarding copies of incoming and outgoing packets from one port (mirrored port) to a specific port (mirroring port).

1. Select mirror direction to select “disable/rx/tx/both” forwarding packets
2. Select a port as the mirroring port.

3. Select a port as the mirrored port
4. Click Apply

## Port Mirroring

Mirror Direction	Mirroring Port	Mirrored Port List
Disable	Port 1	Port 1

Mirror Direction	Mirroring Port	Mirrored Port List
Tx	1	2

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Mirror Direction</b>	Select mirror direction: user can select disable/rx/tx/both four items to mirror selected port
<b>Mirroring Port</b>	Select mirror session port to operate monitoring function
<b>Mirrored Port List</b>	Select mirrored port to be monitored.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.
<b>Delete</b>	Click <b>Delete</b> to remove port mirror setting.

## Chapter 5 VLAN

A VLAN is a group of end stations with a common set of requirements, independent of physical location. VLANs have the same attributes as a physical LAN but allow you to group end stations even if they are not located physically on the same LAN segment.

You can group ports on a switch to create a virtual network made up of the devices connected to the ports. VLANs can be grouped using port-based or 802.1Q criteria.

The VLAN configuration includes Port Base VLAN, MTU VLAN & 802.1Q VLAN.

### 5.1 Port Base VLAN

Click **VLAN > Port Base VLAN**

Allow you to assign ports to virtual networks. Data from a port that is a member of a VLAN group is restricted to other members of that VLAN group. This feature provides an easy way to partition a network into private sub networks

1. Select **Enable** to enable port Based VLAN mode.
2. Enter **the VLAN ID** and **VLAN Name**
3. Select the port of VLAN **Member**.

#### Port Base VLAN

Port Base VLAN Enable ▼

VLAN ID		(1-4)				VLAN Name			
Port	Select All	1	2	3	4	5	6	7	8
Not Member	All	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Member	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Apply

VLAN ID	VLAN Name	Member Ports	Delete
1	Default_VLAN	1-8	<input type="checkbox"/>

Delete

Select All

The following table describes the related labels in this screen.

LABEL	DESCRIPTION
<b>Port-based VLAN Config</b>	
<b>Port-based VLAN</b>	<b>Enable</b> or <b>Disable</b> Port-based VLAN mode.
<b>VLAN ID</b>	Enter the ID number of VLAN. It ranges from 1 to 4.
<b>VLAN Name</b>	Specify the <b>VLAN Name</b> for new created VLANs.
<b>Port</b>	Displays the port number of the switch
<b>Select All</b>	Click <b>All</b> to configure all ports setting.
<b>Not Member</b>	Click <b>All</b> or any one port to set for not member of VLAN group.
<b>Member</b>	Click <b>All</b> or any one port to set for member of VLAN group.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.
<b>Port-based VLAN Table</b>	
<b>VLAN ID</b>	Displays the ID number of VLAN.
<b>VLAN Name</b>	Displays the name of VLAN.
<b>Member Ports</b>	Displays the port member in the VLAN.
<b>Delete</b>	Click <b>Delete</b> to remove some VLAN ID you selected before.
<b>Select ALL</b>	This helps to select all VLAN ID to be deleted at one time.



### Note:

1. To ensure the normal communication of the factory switch, the default VLAN of all ports is set to VLAN1. VLAN 1 cannot be deleted.
2. You can only set the valid VLAN ID between figure 1 to 4.

## 5.2 MTU VLAN

Click **VLAN > MTU VLAN**

MTU VLAN (Multi-Tenant Unit VLAN) defines an uplink port which will build up several VLANs with each of the other ports. Each VLAN contains two ports, the uplink port and one of the other ports in the switch, so the uplink port can communicate with any other port but other ports cannot communicate with each other.

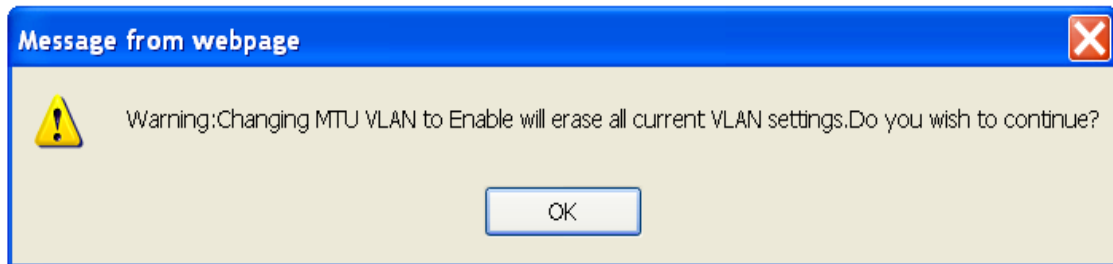
On this page you can choose to enable MTU VLAN mode and configure VLANs.

### MTU VLAN

MTU VLAN

Apply

1. Click **Enable** and **Apply** to operate the MTU VLAN Setting, then pops up “Warning Message” to remind that VLAN configuration setting will be change to MTU VLAN mode.



2. Click **OK** to view the MTU VLAN configuration screen.

MTU VLAN Enable

VLAN ID	1	2	3	4	5	6	7	8
1	<input checked="" type="radio"/>	<input checked="" type="radio"/>						
2	<input checked="" type="radio"/>		<input checked="" type="radio"/>					
3	<input checked="" type="radio"/>			<input checked="" type="radio"/>				
4	<input checked="" type="radio"/>				<input checked="" type="radio"/>			
5	<input checked="" type="radio"/>					<input checked="" type="radio"/>		
6	<input checked="" type="radio"/>						<input checked="" type="radio"/>	
7	<input checked="" type="radio"/>							<input checked="" type="radio"/>

Apply

3. Select **Enable** and **Apply** to enable MTU VLAN mode.

MTU VLAN Enable

VLAN ID	1	2	3	4	5	6	7	8
1	<input checked="" type="radio"/>	<input checked="" type="radio"/>						
2	<input checked="" type="radio"/>		<input checked="" type="radio"/>					
3	<input checked="" type="radio"/>			<input checked="" type="radio"/>				
4	<input checked="" type="radio"/>				<input checked="" type="radio"/>			
5	<input checked="" type="radio"/>					<input checked="" type="radio"/>		
6	<input checked="" type="radio"/>						<input checked="" type="radio"/>	
7	<input checked="" type="radio"/>							<input checked="" type="radio"/>

Apply

VLAN ID	VLAN Name	Member Ports
1	Vlan	1-2
2	Vlan	1,3
3	Vlan	1,4
4	Vlan	1,5
5	Vlan	1,6
6	Vlan	1,7
7	Vlan	1,8

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>MTU VLAN</b>	<b>Enable</b> or <b>Disable</b> MTU VLAN mode.
<b>VLAN ID</b>	The factory default for VLAD ID is 1.
<b>VLAN Name</b>	Display the name of VLAN you set.
<b>Member Ports</b>	Display the member ports set for MTU VLAN.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.

## 5.3 802.1Q VLAN

Allow you to create virtual networks using 802.1Q criteria. When using 802.1Q VLAN configuration, you configure ports to be a part of a VLAN group. When a port receives data tagged for a VLAN group, the data is discarded unless the port is a member of the VLAN group. This technique is useful for communicating with devices outside of your local network as well as still receiving data from other ports not in your VLAN group. It requires that you know the VLAN group IDs used.

### 5.3.1 802.1Q Static VLAN

Click **VLAN > 802.1Q VLAN > 802.1Q Static VLAN**

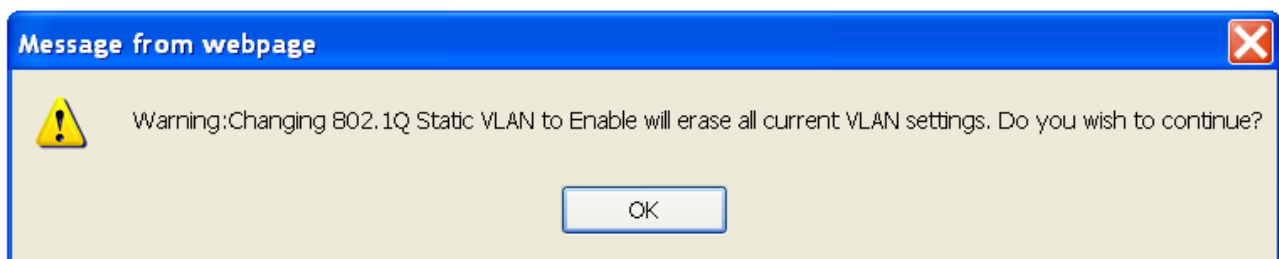
On this page user can configure 802.1Q Static VLAN feature and view the related settings.

## 802.1Q Static VLAN

802.1Q Static VLAN Disable

**Apply**

1. Click **Enable** and **Apply** to operate the 802.1Q Static VLAN Setting, then pops up “Warning Message” to remind that VLAN configuration setting will be change to 802.1Q Static VLAN mode.



2. Click **OK** to view the 802.1Q Static VLAN configuration screen as shown below.
3. Enter **the VLAN ID** and **VLAN Name**
4. Select the Untagged or Tagged port of VLAN **Member**.

## 802.1Q Static VLAN

802.1Q Static VLAN Enable

VLAN ID			(1-4094)		VLAN Name				
Port	Select All	1	2	3	4	5	6	7	8
Untagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tagged	All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not Member	All	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

**Apply**

VLAN ID	VLAN Name	Member Ports	Tagged Ports	Untagged Ports	Delete
<u>1</u>	Default_VLAN	1-8	-	1-8	<input type="checkbox"/>

**Delete**

**Select All**



The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>802.1Q Static VLAN Config</b>	
<b>802.1Q Static VLAN</b>	<b>Enable</b> or <b>Disable</b> the 802.1Q Static VLAN mode.
<b>VLAN ID</b>	Enter the ID number of VLAN. It ranges from 1 to 4094.
<b>VLAN Name</b>	Specify the <b>VLAN Name</b> for new created 802.1Q Static VLANs.
<b>Port</b>	Displays the port number of the switch.
<b>Select All</b>	Click <b>All</b> to configure all ports setting.
<b>Untagged</b>	Configure the egress rule of the traffic on the port as untagged. The switch drops the tag header before sending the packet.
<b>Tagged</b>	Configure the egress rule of the traffic on the port as tagged. The switch adds the tag header before sending the packet.
<b>Not Member</b>	Click <b>All</b> or any one port to set for not member of VLAN group.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.
<b>802.1Q Static VLAN Table</b>	
<b>VLAN ID</b>	Displays the ID number of VLAN.
<b>VLAN Name</b>	Displays the name of VLAN.
<b>Member Ports</b>	Displays the port member in the VLAN.
<b>Tagged Ports</b>	Displays the tagged port members in the VLAN.
<b>Untagged Ports</b>	Displays the untagged port members in the VLAN.
<b>Delete</b>	Click <b>Delete</b> to remove some VLAN ID you selected before.
<b>Select ALL</b>	This helps to select all VLAN ID to be deleted at one time.



### Note:

1. The default VLAN with VID being 1 cannot be removed but can modify untagged/tagged set and member ports.
2. The VLAN ID only can be set from 1 to 4094.

### 5.3.2 802.1Q VLAN Port

Click **VLAN > 802.1Q VLAN > 802.1Q VLAN Port**

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. If you have one unit/PC that you only want to use in VLAN4, then you set the connection port to VLAN4, and only that traffic will be send to that specific port.

This page shows VLAN port information. User can assign PVID, tag egress mode, accepted frame type of each port.

## 802.1Q Static VLAN

802.1Q Static VLAN Enable

Apply

1. Click **Enable** and **Apply** to operate the 802.1Q VLAN Port Setting, then pops up “Warning Message” to remind that VLAN configuration setting will be change to 802.1Q VLAN Port mode.

### Message from webpage



Warning: Changing 802.1Q Static VLAN to Enable will erase all current VLAN settings. Do you wish to continue?

OK

2. Click **OK** to view the 802.1Q VLAN Port configuration screen as shown below.
3. Hold “**Ctrl**” and the left button of the mouse to select the ports you need, and enter the PVID, select the Accepted Frame Type, then click **Apply**.

802.1Q VLAN Port Enable

Port	PVID	Accepted Frame Type
Port 1	4094	<div> <div>All</div> <div>All</div> <div>Tag-only</div> <div>Untag-only</div> </div>
Port 2		
Port 3		
Port 4		
Port 5		
Port 6		

Apply

Port	PVID	Accepted Frame Type
Port 1	1	All
Port 2	4094	Tag-only
Port 3	4094	Tag-only
Port 4	4094	Tag-only
Port 5	4094	Tag-only
Port 6	1	All
Port 7	1	All
Port 8	1	All

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>802.1Q VLAN Port Config</b>	
<b>802.1Q VLAN Port</b>	<b>Enable</b> or <b>Disable</b> the 802.1Q VLAN Port mode.
<b>Port</b>	Select the desire port for configuration.
<b>PVID</b>	Enter a PVID number of the ports. It ranges from 1 to 4094. When adding the tag header to the received untagged packet, the switch will automatically uses this PVID value as the VLAN ID of the added tag.
<b>Accepted Frame Type</b>	Select <b>All/Tag-only/Untag-only</b> from the drop-down box to configure the accepted frame type of the selected port.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.
<b>802.1Q VLAN Port Table</b>	
<b>Port</b>	Displays the port number selected for configuration.
<b>PVID</b>	Displays the PVID number of the ports.
<b>Accepted Frame Type</b>	Displays the accepted frame type of the selected port.



**Note:**

The PVID only can be set from 1 to 4094 and default PVID of all ports is 1..

## Chapter 6 QoS

QoS (Quality of Service) functions to provide different quality of service for various network applications and requirements and optimize the bandwidth resource distribution so as to provide a network service experience of a better quality. The QoS configuration includes Port-based Priority and Bandwidth Control.

### 6.1 Port-based Priority

Click **QoS > Port-based Priority**

The Port-based priority QoS can manually map the ingress packets of the port to four different priority queues. A higher priority transmits data with a minimum of delays. This switch allows user to select among four levels (lowest, medium, normal, highest).

#### Port-based Priority

Port	Priority Queue
Port 1	1(lowest) ▼
Port 2	
Port 3	
Port 4	
Port 5	
Port 6	

Apply

Port	Priority Queue
Port 1	1
Port 2	1
Port 3	1
Port 4	1
Port 5	1
Port 6	1
Port 7	1
Port 8	1

1. Hold "Ctrl" and the left button of the mouse to select the ports that you want to have a particular priority.
2. Select the priority level that you want to assign from the list, then click **Apply**.

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Port-based Priority Config</b>	
<b>Port</b>	Select the desired port for configuration. It is multi-optional, you can choose eight ports at most at a time.
<b>Priority Queue</b>	Specify the priority queue the packets from the port are mapped to. The priorities are labeled as 1~4 and among them the bigger the value, the higher the priority.
<b>Port-based Priority Table</b>	
<b>Port</b>	Displays the port number of the switch.
<b>Priority Queue</b>	Displays the priority queue of all ports.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.



### Note:

1. By default, the Priority Queue of all ports is 1.
2. Lowest Priority (background data)
3. Normal Priority (business-critical data, email, internet, etc)
4. Medium Priority (stream multimedia, etc)
5. Highest Priority (interactive voice, video, and delay sensitive data)

## 6.2 Bandwidth Control

Click **QoS > Bandwidth Control**

Bandwidth control functions to control the ingress/egress traffic rate on each port via configuring the available bandwidth of each port. In this way, the network bandwidth can be reasonably distributed and utilized.

On this page you can configure and view the bandwidth control function information.

### Bandwidth Control

Port	Type	State	Rate(Kbit/sec)
Port 1			
Port 2			
Port 3			
Port 4	Ingress	Disable	No Limit(default)
Port 5			
Port 6			

Hold “**Ctrl**” and the left button of the mouse to select the port, and select the type, state and rate of the selected port for bandwidth control, then click **Apply**.

## Bandwidth Control

Port	Type	State	Rate(Kbit/sec)
Port 1			
Port 2			
Port 3			
Port 4	Ingress	Disable	No Limit(default)
Port 5			
Port 6			

Apply

Port	Ingress Rate (Kbit/sec)	Egress Rate (Kbit/sec)
Port 1	Unlimited	64000
Port 2	Unlimited	64000
Port 3	Unlimited	64000
Port 4	Unlimited	64000
Port 5	Unlimited	64000
Port 6	Unlimited	Unlimited
Port 7	Unlimited	Unlimited
Port 8	Unlimited	Unlimited

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Bandwidth Control Config</b>	
<b>Port</b>	Select the desired port for rate configuration. It is multi-optional, you can choose eight ports at most at a time.
<b>Type</b>	Select <b>Ingress</b> or <b>Egress</b> from the drop-down box.
<b>State</b>	<b>Enable</b> or <b>Disable</b> bandwidth control for the selected port.
<b>Rate</b>	Select the Rate for receiving packets or sending packets on the select port. You can choose the rate as below: ■ No Limit(default), 1M bps, 64M bps, 256M bps, 512M bps, 1G bps
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.
<b>Bandwidth Control Table</b>	
<b>Port</b>	Displays the port number of the switch
<b>Ingress Rate</b>	Displays the ingress rate of all ports.
<b>Egress Rate</b>	Displays the egress rate of all ports.



## Note:

- When egress bandwidth control feature is enabled for one or more ports, you are suggested to disable the flow control on each port to ensure the switch works normally.

## Chapter 7 Security

Use the Security pages to configure settings for the switch security features. It includes Storm Filter, Loop Prevention and DHCP Snooping.

### 7.1 Storm Filter

Click **Security > Storm Filter**

Storm Filter function allows the switch to filter broadcast, multicast, unknown unicast and unknown multicast frame in the network. If the transmission rate of the three kind packets exceeds the set bandwidth, the packets will be automatically discarded to avoid network broadcast storm.

1. Select the Storm Type from the drop-down list.
2. Hold “**Ctrl**” and the left button of the mouse to select the ports you need, select **Enable** from the State drop-down box to enable the setting, and then choose the rate from the checkbox.
3. Click **Apply**, then the Storm Filter information will be displayed as below.

#### Bandwidth Control

Port	Type	State	Rate(Kbit/sec)
Port 1			
Port 2			
Port 3	Ingress	Disable	No Limit(default)
Port 4			
Port 5			
Port 6			

Apply

Port	Ingress Rate (Kbit/sec)	Egress Rate (Kbit/sec)
Port 1	Unlimited	64000
Port 2	Unlimited	64000
Port 3	Unlimited	64000
Port 4	Unlimited	64000
Port 5	Unlimited	64000
Port 6	Unlimited	Unlimited
Port 7	Unlimited	Unlimited
Port 8	Unlimited	Unlimited

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Storm Filter Config</b>	
<b>Storm Type</b>	Select the type of storm control ■ <b>Broadcast:</b> Broadcast packet ■ <b>Multicast:</b> Multicast packet ■ <b>Unknown Unicast:</b> Unknown unicast packet ■ <b>Unknown Multicast:</b> Unknown multicast packet

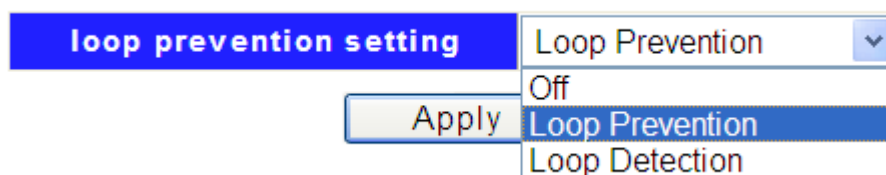
<b>Port</b>	Select the desired port for Storm Filter configuration. It is multi-optional, you can select 8 ports at a time at most.
<b>State</b>	Select the state of setting ■ <b>Disable</b> : Disable the storm filter function. ■ <b>Enable</b> : Enable the storm filter function.
<b>Rate</b>	Select the bandwidth for receiving the specified packet on the port. The packet traffic exceeding the bandwidth will be discarded. You can choose the rate as below: ■ No Limit, 1M bps, 64M bps, 256M bps, 512M bps, 1G bps
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.
<b>Storm Filter Table</b>	
<b>Storm Type</b>	Displays the storm type of each port.
<b>Port</b>	Displays the port number of the switch.
<b>Broadcast</b>	Displays broadcast control states or rate for the port.
<b>Multicast</b>	Displays multicast control states or rate for the port.
<b>Unknown Unicast</b>	Displays unknown unicast control states or rate for the port.
<b>Unknown Multicast</b>	Displays unknown multicast control states or rate for the port.

## 7.2 Loop Prevention

Click **Security> Loop Prevention**

The switch can detect loops using loop detection packets. Supports Loop Prevention and Loop Detection functions, The Loop detection will detect the cable loopback and provide the loop LED to display. The Loop prevention will detect the cable loopback and block the corresponding port automatically.

1. There are three modes for you to choose: Off, Loop Prevention, Loop Detection.



2. Select Loop Prevention from the drop-down box to enable the function and then click **Apply**.
3. Hold “**Ctrl**” and the left button of the mouse to select the ports you need, and then select **Enable** to enable the Loop Prevention for the selected port.
4. Click **Apply**, you can view a screen about Loop State of all ports as below.



## Loop Prevention

Port	State
Port 1	Disable
Port 2	
Port 3	
Port 4	
Port 5	
Port 6	

Port	Loop State	Loop Status
Port 1	Enabled	FORWARDING
Port 2	Enabled	FORWARDING
Port 3	Enabled	FORWARDING
Port 4	Enabled	FORWARDING
Port 5	Disabled	FORWARDING
Port 6	Disabled	FORWARDING
Port 7	Disabled	FORWARDING
Port 8	Disabled	FORWARDING

5. The Loop Detection function will operate automatically to detect looping ports, the link state will be showed as below when some ports on net work loop status if you have set this function.



## Loop Prevention

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Loop Prevention Setting</b>	
<b>Loop Function</b>	Select the state of Loop Function setting ■ <b>Off:</b> Disable the Loop Detection/Prevention Function. ■ <b>Loop Prevention:</b> Enable the Loop Prevention Function. ■ <b>Loop Detection:</b> Enable the Loop Detection Function.
<b>Loop Prevention Config</b>	
<b>Port</b>	Select the desire port for Loop Prevention setting.

<b>State</b>	Disable or Enable the loop prevention function of the selected port.
<b>Loop Prevention Table</b>	
<b>Port</b>	Displays the port number of the switch.
<b>Loop State</b>	Displays the loop state of all ports.
<b>Loop Status</b>	Displays the loop status of all ports. The default factory of all ports is <b>FORWARDING</b> for the switch.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.



## Note:

Enable Loop prevention function for default setting.

## 7.3 DHCP Snooping

Click **Security>DHCP Snooping**

DHCP snooping is a security feature that acts like a firewall between untrusted hosts and trusted DHCP servers. The DHCP servers are allocating IP addresses to the clients on the LAN, DHCP snooping can be configured on LAN switches to harden the security on the LAN to allow only clients with specific IP/MAC addresses to have access to the network. Set the DHCP server port for trusted port to connect the DHCP server.

1. Select **Enable** to enable DHCP Snooping.

DHCP Snooping

DHCP Snooping Setting

Disable

Apply

2. Click **Apply**, and then you will see the configuration screen as shown below.

DHCP Snooping

DHCP Snooping Setting

Enable

DHCP Server Port

Port 1

Apply

3. Select a DHCP sever port from the drop-down box.
4. Click **Apply** to make the setting take effect.

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>DHCP Snooping Setting</b>	<b>Enable</b> or <b>Disable</b> the DHCP Snooping Setting.
<b>DHCP Server Port</b>	Select the port to specify which port should connect to DHCP server.
<b>Apply</b>	Click <b>Apply</b> to make the settings take effect immediately.

## Product Specifications

<b>Standard</b>	IEEE802.3, IEEE802.3u, and IEEE802.3ab IEEE 802.3x flow control IEEE 802.1p class of service, priority protocols IEEE 802.3az Energy Efficient Ethernet(EEE)
<b>Interface</b>	8* 10/100/1000Mbps ports RJ-45 NWay ports 1* Reset button
<b>Transmission Mode</b>	10/100Mbps: Full-duplex, Half-duplex 1000Mbps: Full-duplex
<b>Memory</b>	Flash: 16M-BIT
<b>MAC Address Table</b>	8K
<b>Jumbo Frame</b>	9K Bytes
<b>Buffer Memory</b>	256 Bytes
<b>Temperature</b>	Operating: 0°C ~ 40°C (32°F ~104°F)
<b>Humidity</b>	Operating: 10% ~ 90% RH, non-condensing
<b>LED Indications</b>	1*Power LED(Green) 8*Gigabit port LEDs(Link/Act: Green) 1*Loop LED(Red)
<b>Power Supply</b>	External Power Adaptor 5V/1A
<b>Dimensions</b>	155*85*26 mm
<b>Case Material</b>	Metal
<b>Certification</b>	EMC/FCC, CE Class B; Safety/LVD EN60950-1