

QSW-3410

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Packaging list:

- › The L2 Managed Switch x1
- › Power Cord x1
- › User Guide/CD x1
- › Warranty card x1
- › tion accessories kit x1

Part One Hardware Installation Guide

Chapter 1 Product Instruction

1.1 Introduction

- 1) 3410-10T: 8*10/100/1000M Base-T ports;2*1000 Base-X SFP ; 1*Console port.
- 2) 3410-10T-POE: 8*10/100/1000M PoE ports,2*1000 Base-X SFP;1*Console port.

Please read through this User Guide before operating the QSW-3410.

1.2 Rear Panel



Picture 1.3.1 Rear Panel

Power Socket: Three-core power socket is adopted, please connect female head of power cord to the socket, and connect the AC power supply with male head.

Chapter 2 Preparations before Instruction

2.1 Precautions

Please read the following precautions carefully before operation, to avoid damaging the device or causing body injuries.

- 1). Please remove the power socket before cleaning the switch. Don't wipe the switch with wet cloth or wash the switch with liquid.
- 2). Don't stock the device in damp environment or near water, to avoid water or moisture penetrating into the inner device.
- 3). Don't put the device on a unstable box or desk, the device will get damaged from falling.
- 4). Please keep good ventilation indoor, and make sure the heat dissipation function of switch works well.
- 5). The switch only works normally in suitable voltage. Please check the working voltage first.
- 6). Please don't open the switch enclosure randomly, especially when the switch is powered on, there is risk of electric shock.
- 7). Please wear anti-static wrist strap when change the interface board, to avoid the static electricity damage the board.

2.2 Check Installation Environment

The switch is for indoor use only, please pay attention to the following problems when install the switch in a cabinet or put the device directly on the desktop.

- 1) The air vents of switch must have enough space to dissipate the heat inside enclosure.
- 2) A good heat dissipation system in the cabinet or on the desktop.
- 3) The cabinet or desktop strong enough to support the weight of switch and installation accessories.
- 4) Safe ground connection for the cabinet or desktop.

2.3 Installation Tools

- 1) Flathead screw driver
- 2) Cross screw driver

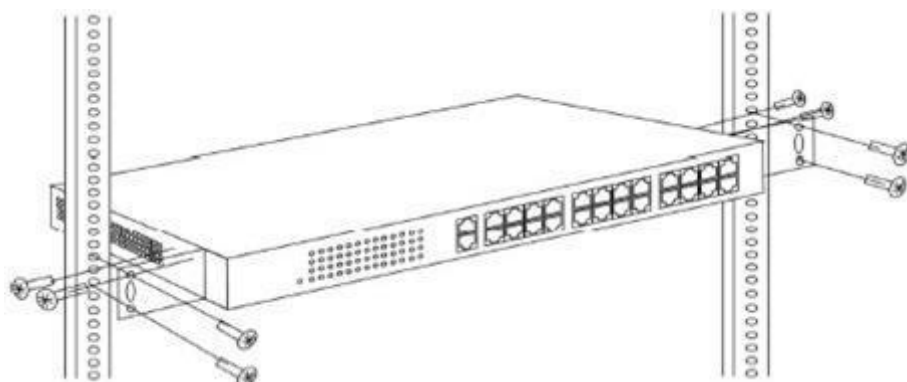
- 3) Anti-static wrist strap

Chapter 3 Installation

3.1 Install the Switch

3.1.1 Install the switch on a 19 inch standard cabinet

- 1) First fix the provided two L-shaped brackets on the two sides of switch.
- 2) Fix the switch on the rack with screws (screws are not provided).



Picture 3.1.1 Cabinet Installation

3.1.2 Install the switch on the desktop

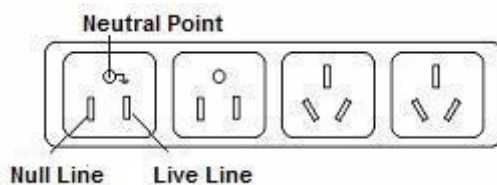
When there is no 19 inch standard cabinet, the switch is usually put on clean desktop. The operation is easier, please follow the below instructions:

- 1) Keep the desktop stable and safely grounded.
- 2) Set aside 10cm space around switch for heat dissipation.
- 3) Don't put any heavy device on the switch.

3.2 Connect the power cord and grounded cord

3.2.1 Select of AC Power Socket

The neutral one-phase 3-wire power socket is advised to adopt, or the multifunctional PC power socket. The neutral point of power supply must be well grounded, please check the grounded power supply before operation.



Picture 3.2.1 one-phase 3-wire power socket

3.2.2 Connection of AC power cord

Step one: please connect one end of power cord to the power jack on the switch rear panel,

Connect the other end to the AC power socket.

Step two: check the power indicator(PWR) on the front panel, if the LED is on, connection is Successful.

3.3 Test after Installation

Make sure the working voltage is the same with the rated voltage of switch. Check the connection of grounded cord.

Check the connection of configuration cable and power input cord.

If the interface cable is partly deployed outdoor, please check the connection of anti-thunder AC power strip and interface anti-thunder device.

PART TWO WEB CONFIGURATION GUIDE

Chapter 1 User Login

QSW-3410 smart switch adopt Web-based interface management, the default IP is 192.168.255.1. Please make sure the IP address of PC is in the same network segment with that of switch, or the PC can't access to manage the switch. After the setting of IP address, please input 192.168.255.1 in the browser to access the configuration interface of switch.

The Web management interface consists of five parts, which are switch status, basic configuration, advanced configuration, network security, system maintenance.



Picture 1.1.1 Login Page

Enter user password in the above login page, the default password is admin. The system only support single user login, other logins will be refused until the user logs out.

If IP address conflict occurs, it suggests the latest user didn't log out successfully. Please reboot the device or try to log in again 180s later.

It is advised to reset the IP address and password in first login, and make sure the switch is not configured in the same network segment with DHCP server or Internet Gateway device.

Chapter 2 Switch Status

2.1 System Information

| Information Name | Information Value |
|------------------|---------------------------------|
| Device ID | QSW-3410-10T |
| HW Version | V1.1.0 |
| MAC Address | 00:1F:CE:F5:79:41 |
| Series Number | C201031181630033 |
| Software Version | 3.0.1-R1-BETA2 |
| Compiling Time | Fri Apr 8 16:08:47 CST 2016 |
| Running Time | 0 days, 0 hours, 8 mins, 3 secs |

Picture 2.1.1 System Information

Device status can be checked in the above page, which contains: Device Model number(equipment type), PCB/HW Version, MAC Address, Serial Number(System Object ID), Firmware Version, Firmware Updated Date, System Running Time(System Up Time).

2.2 Logging Message

The screenshot shows a web interface for logging messages. At the top, there is a 'Logging Message' header. Below it, a 'Logging Filter Select' section contains a 'Target' dropdown menu set to 'buffered', a 'Severity' dropdown menu set to 'Select Levels', and a 'Category' dropdown menu set to 'Select Categories'. A 'View' button is located below the filters. The main content area is divided into two sections: 'Logging Information' and 'Logging Messages'. The 'Logging Information' section contains a table with the following data:

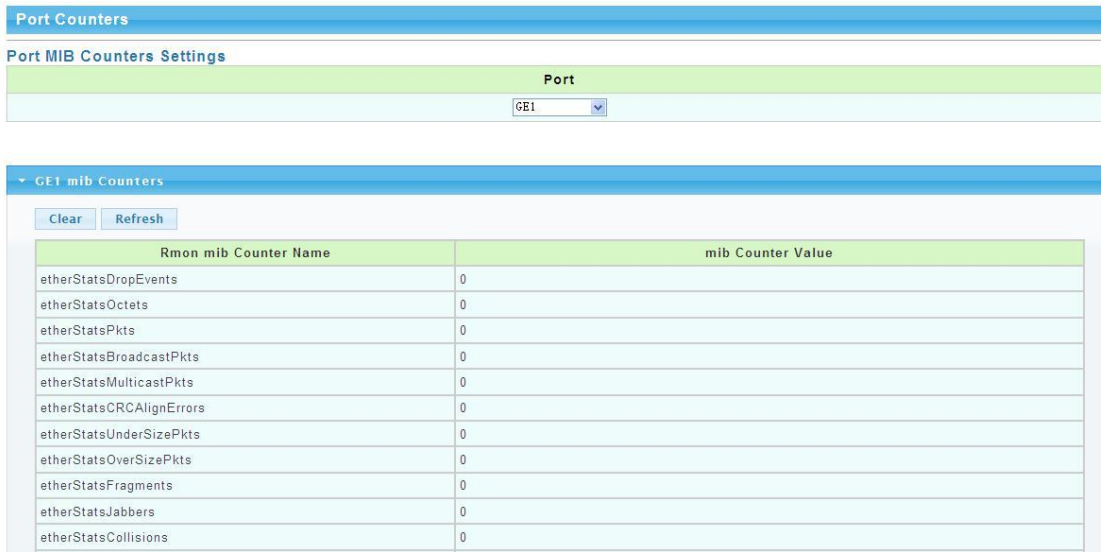
| Information Name | Information Value |
|------------------|---|
| Target | buffered |
| Severity | emerg, alert, crit, error, warning, notice |
| Category | ACL, CABLE_DIAG, IGMP_SNOOPING, L2, LLDP, Mirror, Platform, PM, Port, QoS, Rate, SNMP, STP, Security-suite, System, Trunk, VLAN |
| Total Entries | 0 |

The 'Logging Messages' section has buttons for 'Clear buffered messages' and 'Refresh'. Below these buttons is a table with the following columns: No., Timestamp, Category, Severity, and Message.

Picture 2.2.1 Logging Message

System log can be checked in above page. Maintenance technicians can check the history system log.

2.3 Port Counters

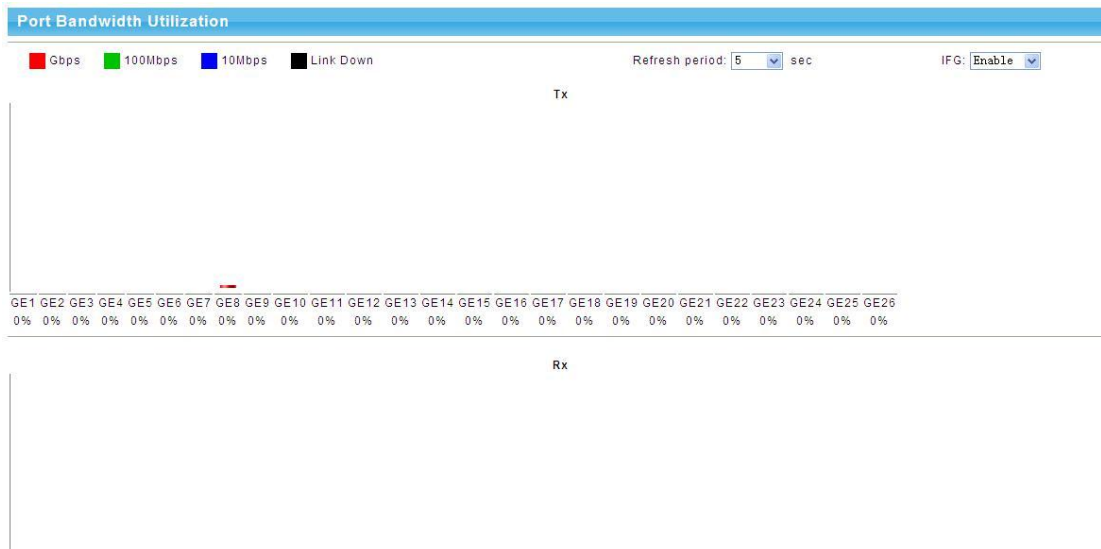


Picture 2.3.1 Port Counters

The above picture shows switch port statistics. Users can check the sent/received bytes, sent/received packets, wrongly sent/received packets. If there are too many wrong packets, it suggests the port has very poor working performance, the user need to examine the connection of network cable or the partner network card.

The current software version doesn't support real-time statistics refresh, please click "Refresh" button to get new statistics.

2.4 Port Status(Port Bandwidth Statistics)



Picture 2.4.1 Port Bandwidth Statistics

This page shows port bandwidth status. Users can check egress/ingress bandwidth in this page, including 1000Mbps, 100Mbps, 10Mbps.

2.5 Link Aggregation

| LAG Status | | | | | |
|--------------|--------|--------|-------------|---------------|----------------|
| ▼ LAG Status | | | | | |
| LAG | Name | Type | Link State | Active Member | Standby Member |
| LAG1 | test 1 | Static | DOWN | - | GE1-2 |
| LAG2 | test 2 | Static | DOWN | - | GE3-6 |
| LAG3 | | --- | Not Present | - | - |
| LAG4 | | --- | Not Present | - | - |
| LAG5 | | --- | Not Present | - | - |
| LAG6 | | --- | Not Present | - | - |
| LAG7 | | --- | Not Present | - | - |
| LAG8 | | --- | Not Present | - | - |

Picture 2.5.1 Link Aggregation

In above Link Aggregation page, user can check the port aggregation information. Like aggregator group(LAG), link state, aggregator group member state(active/standby).

2.6 LLDP Statistics

| LLDP Statistics | | | | | | | | |
|--------------------------------------|-----------|--|-----------|--------|-----------|--------------|-------|------------|
| ▼ LLDP Global Statistics | | | | | | | | |
| <input type="button" value="Clear"/> | | <input type="button" value="Refresh"/> | | | | | | |
| Insertions | | | | | | 0 | | |
| Deletions | | | | | | 0 | | |
| Drops | | | | | | 0 | | |
| Age Outs | | | | | | 0 | | |
| ▼ LLDP Port Statistics | | | | | | | | |
| Port | TX Frames | | RX Frames | | | RX TLVs | | RX Ageouts |
| | Total | Total | Discarded | Errors | Discarded | Unrecognized | Total | |
| GE1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| GE2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| GE3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| GE4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| GE5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Picture 2.6.1 LLDP Statistics

LLDP information can be checked in above page. When enable the LLDP(Link Layer Discovery Protocol) function, LLDP information of switch ports can be checked here.

2.7 IGMP Statistics

| IGMP Snooping Statistics | |
|---|---------|
| <div style="display: flex; justify-content: space-between;"> Clear Refresh </div> | |
| Statistics Packets | Counter |
| Total RX | 920 |
| Valid RX | 878 |
| Invalid RX | 42 |
| Other RX | 0 |
| Leave RX | 0 |
| Report RX | 0 |
| General Query RX | 0 |
| Specail Group Query RX | 0 |
| Specail Group & Source Query RX | 0 |
| Leave TX | 0 |
| Report TX | 0 |
| General Query TX | 0 |
| Specail Group Query TX | 0 |
| Specail Group & Source Query TX | 0 |

Picture 2.7.1 IGMP Statistics

When the IGMP snooping function is enabled, IGMP information can be checked in above page.

2.8 STP Statistics

| STP Statistics | | | | |
|----------------|------------------------------|--------------------|---------------------------------|-----------------------|
| Port | Configuration BDPUs Received | TCN BDPUs Received | Configuration BDPUs Transmitted | TCN BDPUs Transmitted |
| GE1 | 0 | 0 | 0 | 0 |
| GE2 | 0 | 0 | 0 | 0 |
| GE3 | 0 | 0 | 0 | 0 |
| GE4 | 0 | 0 | 0 | 0 |
| GE5 | 0 | 0 | 0 | 0 |
| GE6 | 0 | 0 | 0 | 0 |
| GE7 | 0 | 0 | 0 | 0 |
| GE8 | 0 | 0 | 0 | 0 |

Picture 2.8.1 STP Statistics

In above STP statistics page, users can check the BPDUs of every port and every link aggregation STP.

2.9 MAC Address Table

| Dynamic Learned | | | | |
|--------------------------------------|--------------------------------------|--|--|--|
| <input type="checkbox"/> Port | GE1 | | | |
| <input type="checkbox"/> VLAN | default | | | |
| <input type="checkbox"/> MAC Address | 00:00:00:00:00:00 | | | |
| <input type="button" value="View"/> | <input type="button" value="Clear"/> | | | |

| MAC Address Information | | | | |
|-------------------------|------------|---------|------|--|
| MAC Address | VLAN | Type | Port | |
| F0:DE:F1:50:75:3E | default(1) | Dynamic | GE2 | <input type="button" value="Add to Static MAC table"/> |

Total Entries:1

Picture 2.9.1 MAC Address Table

MAC address table and configuration can be checked in above page, users can add the showed dynamic MAC addresses to static MAC table.

Chapter 3 Basic Configuration

3.1 IP Configuration

The screenshot shows the IP configuration interface. The top section is titled "IP Address" and contains a sub-section "IP Address Setting". This section includes a "Mode" selector with "Static" selected and "DHCP" unselected. Below this are input fields for "IP Address" (192.168.255.1), "Subnet Mask" (255.255.255.0), "Gateway" (192.168.255.254), "DNS Server 1" (0.0.0.0), and "DNS Server 2" (0.0.0.0). An "Apply" button is located below these fields.

The bottom section is titled "IP Information" and displays a table of configuration details:

| Information Name | Information Value |
|---------------------|-------------------|
| DHCP State | Disabled |
| Static IP Address | 192.168.255.1 |
| Static Subnet Mask | 255.255.255.0 |
| Static Gateway | 192.168.255.254 |
| Static DNS Server 1 | 0.0.0.0 |
| Static DNS Server 2 | 0.0.0.0 |

Picture 3.1.1 IP configuration

The above IP address configuration page can be used to configure the IP address of device management interface "Interface Vlan 1". The default IP address, subnet mask and gateway will be showed in the page. When revise the configuration, please press "save" to confirm new configuration. Press "reset" to back to original configuration.

Above configuration need to be done under default "Static" state,if switch the IP address mode to DHCP, IP address will be get dynamically. Please record the new IP address for future login.

Notice: Don't modify the subnet mask unless exceptional case, login problem will be caused by improper modification.

3.2 Account Configuration

The screenshot shows the "Local User Information" interface. The top section is titled "New User" and contains a form with the following fields: "User Name" (text input), "Password Type" (dropdown menu with "Clear Text" selected), "Password" (text input), "Retype Password" (text input), and "Privilege Type" (dropdown menu with "Admin" selected). An "Apply" button is located below these fields.

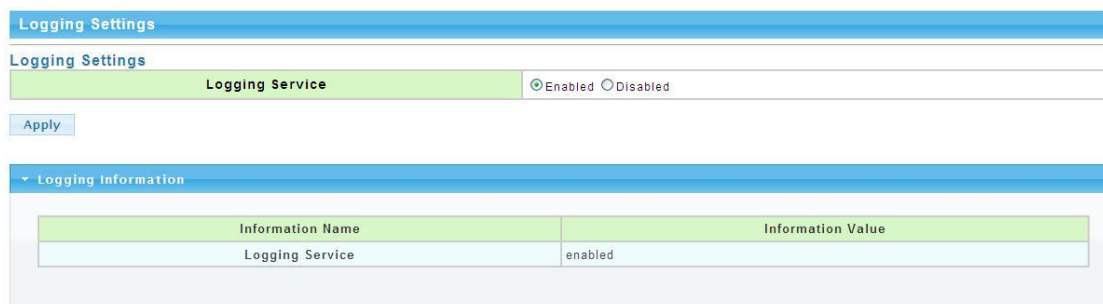
The bottom section is titled "Local Users" and displays a table of existing users:

| User Name | Password Type | Privilege Type | Modify |
|-----------|---------------|----------------|--------|
| admin | Encrypted | Admin | |

Picture 3.2.1 Account configuration

Login password can be revised in this page, please remember the new password for future login.

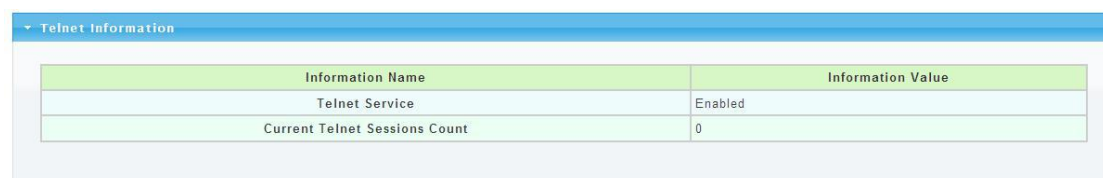
3.3 Logging Setting



Picture 3.3.1 Logging Setting

System log configuration is checked in above page. Remote log server can be configured, system log can be saved on the remote server as backup use. Enable or disable the remote backup function in this page, “server IP address” need to be entered manually.

3.4 Telnet Configuration



Picture 3.4.1 Telnet Information

Please enable Telnet function in this page. When Telnet function enabled, the switch can be remotely managed by Telnet.

3.5 Port Setting

Port Setting

Port settings

| Port Select | Enabled | Speed | Duplex | Flow Control |
|----------------|---|--------------|--------|---|
| Select Ports ▾ | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled | Auto ▾ | Auto ▾ | <input type="radio"/> Enabled <input checked="" type="radio"/> Disabled |
| Fiber Ports ▾ | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled | Auto-1000M ▾ | Full ▾ | <input type="radio"/> Enabled <input checked="" type="radio"/> Disabled |

Port Status

| Port | Description | Enable State | Link Status | Speed | Duplex | FlowCtrl Config | FlowCtrl Status |
|------|----------------------|--------------|-------------|---------|--------|-----------------|-----------------|
| GE1 | Edit | Enabled | DOWN | 1000M | Auto | Disabled | Disabled |
| GE2 | Edit | Enabled | DOWN | 1000M | Auto | Disabled | Disabled |
| GE3 | Edit | Enabled | DOWN | Auto | Auto | Disabled | Disabled |
| GE4 | Edit | Enabled | DOWN | Auto | Auto | Disabled | Disabled |
| GE5 | Edit | Enabled | DOWN | Auto | Auto | Disabled | Disabled |
| GE6 | Edit | Enabled | DOWN | Auto | Auto | Disabled | Disabled |
| GE7 | Edit | Enabled | DOWN | Auto | Auto | Disabled | Disabled |
| GE8 | Edit | Enabled | UP | A-1000M | A-Full | Disabled | Disabled |

Picture 3.5.1 Port Setting

Port Status: The user can enable or disable a port in this page. Click “Enable” to open the port, click “Disable” to close the port, the default setting is “Enable”.

Port Mode: 6 modes can be configured: Auto-negotiation, 10 Half, 10 Full, 100 Half, 100 Full and 1000 Full. Default mode is Auto-negotiation, can be changed in pull-down list.

Flow Control: This function is defaulted closed, open it when needed.

Loop Detection: The function is defaulted closed, open it when needed. A port will be blocked to cut the loop when loop is detected. (Notice: the port link indicator in front panel will be still on when the port is blocked, for the physical connection is existed; while the link indicator on the top of web management pages will be off.)

Chapter 4 Advanced Configuration

4.1 Port Mirror Configuration

Mirror Setting

Mirror Setting

| | |
|-----------------------|------------------|
| Session ID | Select Session |
| Monitor session state | portbase-enabled |
| Destination Port | GE1 |
| allow-ingress | Disable |
| Sniffer RX Ports | Select RX Ports |
| Sniffer TX Ports | Select TX Ports |

[Apply](#)

Mirror Status

| Session ID | Destination Port | Ingress State | Source TX Port | Source RX Port |
|------------|------------------|---------------|----------------|----------------|
| 1 | N/A | N/A | N/A | N/A |
| 2 | N/A | N/A | N/A | N/A |
| 3 | N/A | N/A | N/A | N/A |
| 4 | N/A | N/A | N/A | N/A |

Picture 4.1.1 Port Mirror Configuration

Users can do Port Mirror Configuration in above page. Port mirroring is used on a network switch to send a copy of network packets or data traffic from some ports (or an entire VLAN) to a network monitoring connection on specified switch port. The original port is called Source Port, and the specified port is Mirroring Port. This is commonly used for network appliances that require monitoring of network traffic without influencing the normal working of every port, it's a convenient online-monitoring function.

All ports have mirroring function, but only one port can be configured as Mirroring Port. In the same system, there is only one mirroring port, while more than one Source Ports can be existed. When a port is configured as mirroring port, its corresponding port can't be configured as source port.

4.2 Port Aggregation

4.2.1 Static Aggregation

LAG Management

LAG Management

| LAG | Name | Type | Ports |
|------|----------------------|--|--------------|
| LAG1 | <input type="text"/> | <input checked="" type="radio"/> Static <input type="radio"/> LACP | Select Ports |

[Apply](#)

(Tip: Select multiple ports polymerization, the rate of change of the port 1000M)

LAG Management Information

| LAG | Name | Type | Link State | Active Member | Standby Member | Modify |
|------|--------|--------|-------------|---------------|----------------|----------------------|
| LAG1 | test 1 | Static | DOWN | - | GE1-2 | Edit |
| LAG2 | test 2 | Static | DOWN | - | GE3-6 | Edit |
| LAG3 | --- | --- | Not Present | - | - | Edit |
| LAG4 | --- | --- | Not Present | - | - | Edit |
| LAG5 | --- | --- | Not Present | - | - | Edit |
| LAG6 | --- | --- | Not Present | - | - | Edit |
| LAG7 | --- | --- | Not Present | - | - | Edit |
| LAG8 | --- | --- | Not Present | - | - | Edit |

Picture 4.2.1 Static Aggregation

QSW-3410 switch support 8 aggregation groups, each group contains maximum 8 ports. The members in the same aggregation group should have same configuration for port forwarding rate mode and VLAN distribution.

If LACP function applied for some ports, then static aggregation can't be configured.

Notice: Static aggregation can't be configured when LACP function enabled.

4.2.2 LACP Setting

LACP Port Setting

LACP Port Settings

| Port Select | Priority | Timeout |
|--------------|-------------|---|
| Select Ports | 1 (1-65535) | <input checked="" type="radio"/> Long <input type="radio"/> Short |

LACP Port Information

| Port Name | Priority | Timeout |
|-----------|----------|---------|
| GE1 | 1 | Long |
| GE2 | 1 | Long |
| GE3 | 1 | Long |
| GE4 | 1 | Long |
| GE5 | 1 | Long |
| GE6 | 1 | Long |
| GE7 | 1 | Long |
| GE8 | 1 | Long |

Picture 4.2.2 LACP Setting

When the LACP protocol is on, the aggregated devices interactively gather information through LACP. According to the parameters and status of each device, automatically receive and dispatch Data of matchable link aggregation. When the Aggregation is formed, switches keep in an aggregation link status, switches automatically adjusts link aggregation or dissolve when configuration changes.

If the port is configured as static aggregation, the dynamic LACP will be not available.

Notice: Static aggregation LACP function can't be used together.

4.3 VLAN Management

4.3.1 VLAN Setting

Create VLAN

VLAN Setting

| VLAN LIST | VLAN Action | VLAN Name Prefix |
|----------------------|---|----------------------|
| <input type="text"/> | <input checked="" type="radio"/> Add <input type="radio"/> Delete | <input type="text"/> |

VLAN Table

| VLAN ID | VLAN Name | VLAN Type | Modify |
|---------|-----------|-----------|-------------------------------------|
| 1 | default | Default | <input type="button" value="Edit"/> |

Picture 4.3.1 VLAN Setting

VLAN can be created or deleted in above page. Users can create a new VLAN and give a name to the VLAN.

4.3.2 VLAN Port Status

Interface Settings

Edit Interface Setting

| Port Select | Interface VLAN Mode | PVID | Accepted Type | Ingress Filtering |
|--------------|--|--------------|--|---|
| Select Ports | <input checked="" type="radio"/> Hybrid <input type="radio"/> Access <input type="radio"/> Trunk | 1 (1 - 4094) | <input checked="" type="radio"/> All <input type="radio"/> Tag Only <input type="radio"/> Untag Only | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |

Port VLAN Status

| Port | Interface VLAN Mode | PVID | Accept Frame Type | Ingress Filtering |
|------|---------------------|------|-------------------|-------------------|
| GE1 | Trunk | 1 | ALL | Enabled |
| GE2 | Trunk | 1 | ALL | Enabled |
| GE3 | Trunk | 1 | ALL | Enabled |
| GE4 | Trunk | 1 | ALL | Enabled |
| GE5 | Trunk | 1 | ALL | Enabled |
| GE6 | Trunk | 1 | ALL | Enabled |
| GE7 | Trunk | 1 | ALL | Enabled |
| GE8 | Trunk | 1 | ALL | Enabled |

Picture 4.3.1 VLAN Port Status

Port features can be configured in above page. Users can create a VLAN and add ports to the VLAN list with specified mode. VLAN features and port parameters can be configured.

Ingress Filtering: enable ingress filtering function to abandon or forward unmatched VLAN packets. This function is default disable, the unmatched packet will be received.

Membership type: tag refers to the port will receive tagged packets(and the VLAN ID in for tagged packet is not “0”); untag refers to the port receive untagged packets only.

4.4 Voice VLAN

4.4.1 Voice VLAN

Properties

Properties

| | |
|--------------------------|---|
| Voice VLAN State | <input type="radio"/> Enabled <input checked="" type="radio"/> Disabled |
| Voice VLAN Id | [] Enable |
| Remark Cos/802.1p | 6 |
| 1p remark | <input type="radio"/> Enabled <input checked="" type="radio"/> Disabled |
| Aging Time(30-65536 min) | 1440 |

Voice VLAN State

| Information Name | Information Value |
|-------------------|-------------------|
| Voice VLAN State | disabled |
| Voice VLAN ID | none (disable) |
| Remark Cos/802.1p | 6 |
| 1p Remark State | disabled |
| Aging | 1440 |

Picture 4.4.1 Voice Vlan

Voice VLAN is the VLAN for voice data flow. Create a Voice VLAN and add the ports connected with voice devices to Voice VLAN, Voice data flow can be centrally transmitted in Voice VLAN. Users can configure special QoS(Quality of Service) for the

voice data flow, like configure a higher transmitting priority class to ensure a high quality connection.

4.4.2 Voice VLAN OUI

Telephony OUI Mac setting

Voice VLAN OUI Setting

| | |
|--------------------|---------------------------------------|
| OUI Address | <input type="text" value="00:00:00"/> |
| Description | <input type="text"/> |

▼ Voice VLAN OUI Group

| OUI Address | Description | Modify |
|-------------|-------------|---|
| 00:E0:BB | 3COM | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| 00:03:6B | Cisco | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| 00:E0:75 | Veritel | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| 00:D0:1E | Pingtel | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| 00:01:E3 | Siemens | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| 00:60:B9 | NEC/Philips | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| 00:0F:E2 | H3C | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| 00:09:6E | Avaya | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |

Picture 4.4.2 Voice Vlan OUI

Voice VLAN signify mode can be configured in this page, like Siemens AG phones, Cisco phones, H3C phones

4.5 Multicast Configuration

Properties

Properties Setting

| | |
|---------------------------------|---|
| Unknown Multicast Action | <input type="radio"/> Drop <input checked="" type="radio"/> Flood <input type="radio"/> Router Port |
| IPv4 Forward Method | <input checked="" type="radio"/> MAC <input type="radio"/> Src-Dst-Ip |

▼ Properties Informations

| Information Name | Information Value |
|----------------------------|-------------------|
| Unknown Multicast Action | Flood |
| Forwarding Method For IPv4 | MAC |

Picture 4.5.1 Multicast Configuration

MLD Snooping is short for Multicast Listener Discovery Snooping, which is IPv6 multicast control mechanism for Layer 2 devices. The function is used to manage and control IPv6 multicast.

Multicast snooping configuration can be made in above page, enable or disable multicast snooping and define multicast snooping address range.

4.6 IGMP Snooping Configuration

IGMP Snooping

IGMP Snooping

| | |
|----------------------------------|---|
| IGMP Snooping Status | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| IGMP Snooping Version | <input checked="" type="radio"/> v2 <input type="radio"/> v3 |
| IGMP Snooping Report Suppression | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |

IGMP Snooping Informations

| Information Name | Information Value |
|-------------------------------------|-------------------|
| IGMP Snooping Status | Enable |
| IGMP Snooping Version | v2 |
| IGMP Snooping V2 Report Suppression | Enable |

Picture 4.6.1 IGMP Snooping

IGMP snooping configuration can be made in above page, enable or disable IGMP snooping and define IGMP snooping address range.

4.7 Jumbo Frame Configuration

Jumbo Frame

Jumbo Frame Setting

| | |
|---------------------|---|
| Jumbo Frame (Bytes) | <input type="text" value="1522"/> (1522-9216) |
|---------------------|---|

Jumbo Frame Config

| Information Name | Information Value |
|---------------------|-------------------|
| Jumbo Frame (Bytes) | 1522 |

Picture 4.7.1 Jumbo Frame Configuration

Generally, the max frame size for packet is 1518 Bytes, when packet is larger than this size, it will be processed in batch, 1518 Bytes as a unit. And users can also set a Jumbo Frame limitation in this page(from 1522 to 9216 Bytes), enable Jumbo Frames transmitted smoothly, reduce the load.

4.8 Static MAC Address Table

Static MAC

Static MAC Setting

| MAC Address | VLAN | Port |
|--|---------|------|
| <input type="text" value="00:00:00:00:00:00"/> | default | GE1 |

Static MAC Status

| No. | MAC Address | VLAN | Port | Delete |
|-----|-------------------|------------|------|---------------------------------------|
| 1 | 00:1F:CE:F5:79:41 | default(1) | CPU | <input type="button" value="Delete"/> |

Picture 4.8.1 Static ARP Table

Static MAC address configuration can be manually made in this page. MAC items can be added according “port”, “VLAN ID”, “MAC address” and “IP address”.

4.9 Dynamic MAC Address Configuration

Dynamic Address Setting

Dynamic Address Setting

| | |
|-------------------|--|
| Aging Time | <input type="text" value="300"/> (Range: 10 - 630) |
|-------------------|--|

Dynamic Address Status

| Information Name | Information Value |
|------------------|-------------------|
| Aging time | 300 |

Picture 4.9.1 Dynamic MAC Address Configuration

In above dynamic address setting page, users can check the aging time of MAC address.

4.10 LLDP Configuration

LLDP Global Setting

Global Settings

| | |
|--------------------------------|--|
| Enabled | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| LLDP PDU Disable Action | <input type="radio"/> Filtering <input type="radio"/> Bridging <input checked="" type="radio"/> Flooding |
| Transmission Interval | <input type="text" value="30"/> (5-32768) |
| Holdtime Multiplier | <input type="text" value="4"/> (2-10) |
| Reinitialization Delay | <input type="text" value="2"/> (1-10) |
| Transmit Delay | <input type="text" value="2"/> (1-8192) |

LLDP Global Config

| Config Name | Config Value |
|-------------------------|--------------|
| LLDP Enabled | Enabled |
| LLDP PDU Disable Action | Flooding |
| Transmission Interval | 30 Secs |
| Holdtme Multiplier | 4 |
| Reinitialization Delay | 2 Secs |
| Transmit Delay | 2 Secs |

Picture 4.10.1 LLDP Configuration

QSW-3410 switch support LLDP(Link Layer Discovery Protocol), which can define switch capacity, management address, device tags and port tags as different(TLV(type/length/value) and save them in LLDPDU (Link Layer Discovery Protocol Data Unit). These information will be released to the direct-connected neighbor device, neighbor devices will save these information based on MIB(Management Information Base) . These information will be used for network management system examination or judge link communication condition.

LLDP information can be configured in above page, including transmission interval,hold time Multiplier,retransmission delay and transmission delay.

Enable LLDP or Disable LLDP can be configured. Users can also configure the information transmitted to neighbor devices, like port description, system name, system description, system property and management address.

4.11 SNMP Configuration

4.11.1 SNMP system configuration

The screenshot shows the 'SNMP Setting' configuration page. At the top, there is a 'SNMP Global Setting' section with a 'State' field containing radio buttons for 'Disabled' (selected) and 'Enabled'. Below this is an 'Apply' button. The main section is titled 'SNMP Informations' and contains a table with two columns: 'Information Name' and 'Information Value'. The table has one row with 'SNMP' in the first column and 'Disabled' in the second column.

Picture 4.11.1 SNMP System Configuration

SNMP(Simple Network Management Protocol) is Internet-standard protocol for managing devices on IP networks.It consists of a set of standards for network management, including anapplication layer protocol, a database schema, and a set of data objects. SNMP is used mostly in network management systems to monitor network-attached devices for conditions that warrant administrative attention.

4.11.2 SNMP Community configuration

The screenshot shows the 'SNMP Community' configuration page. It has a 'Community Setting' section with a table for adding new communities. The table has columns for 'Community Name' (with an input field) and 'Access Right' (with radio buttons for 'read-only' and 'read-write'). Below the table is an 'Add' button. The main section is titled 'Community Status' and contains a table with columns: 'No.', 'Community Name', 'Access Right', and 'Action'.

Picture 4.11.2 SNMP Community Configuration

Configure SNMP common identifiers, switches with same community identifier can make unified management.

4.11.3 Trap Configuration

The screenshot shows the 'SNMP Trap Host' configuration page. It has a 'Trap Host Setting' section with a table for adding trap hosts. The table has columns for 'IP Address' (with an input field), 'Community Name' (with an input field), and 'Version' (with a dropdown menu set to 'v1'). Below the table is an 'Add' button. The main section is titled 'Trap Host Status' and contains a table with columns: 'No.', 'IP Address', 'Community Name', 'Version', and 'Action'.

Picture 4.11.3 Trap Configuration

SNMP trap is a message used in SNMP protocol, the device can send a trap message to SNMP manager when they experience a problem, rather than waiting for the polling of SNMP manager.

Chapter 5 Network Security

5.1 Port Limit Configuration

Ingress Bandwidth Control

Ingress Bandwidth Control Settings

| Port | State | Rate(Kbps) |
|--------------|---|---|
| Select Ports | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | <input type="text"/> (0-1000000, must a multiple of 16) |

Apply

Ingress Bandwidth Control Status

| Port | Ingress RateLimit (Kbps) |
|------|--------------------------|
| GE1 | off |
| GE2 | off |
| GE3 | off |
| GE4 | off |
| GE5 | off |
| GE6 | off |
| GE7 | off |
| GE8 | off |

Picture 5.1.1 Ingress Bandwidth Control

Egress Bandwidth Control

Egress Bandwidth Control Settings

| Port | State | Rate(Kbps) |
|--------------|---|---|
| Select Ports | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | <input type="text"/> (0-1000000, must a multiple of 16) |

Apply

Egress Bandwidth Control Status

| Port | Egress RateLimit (Kbps) |
|------|-------------------------|
| GE1 | off |
| GE2 | off |
| GE3 | off |
| GE4 | off |
| GE5 | off |
| GE6 | off |
| GE7 | off |
| GE8 | off |

Picture 5.1.2 egress Bandwidth Control

Egress Queue Bandwidth Control

Egress Queue Bandwidth Control Settings

| Port | Queue | State | CIR(Kbps) |
|------|-------|---|---|
| GE1 | 1 | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | <input type="text"/> (0-1000000, must a multiple of 16) |

Apply

GE1 Egress Per Queue Status

| Queue Id | Rate Limit (Kbps) |
|----------|-------------------|
| 1 | off |
| 2 | off |
| 3 | off |
| 4 | off |
| 5 | off |
| 6 | off |
| 7 | off |
| 8 | off |

Picture 5.1.3 Egress Queue Bandwidth

Switch Bandwidth can be configured in above pages. Configurations include ingress/egress flow control, flow control priority class.

5.2 Storm Control

Storm Control Global

Storm Control Global Setting

| | |
|---------------------------|--|
| Unit | <input type="radio"/> pps <input checked="" type="radio"/> bps |
| Preamble & IFG | <input checked="" type="radio"/> Excluded <input type="radio"/> Included |

Storm Control Global Information

| Information Name | Information Value |
|------------------|-------------------|
| Unit | bps |
| Preamble & IFG | Excluded |

Picture 5.2.1 Storm control

Storm Control

Storm Control Setting

| Port | Port State | Action | Type Enable | Rate (Kbps) |
|----------------|--|--------|--|---|
| Select Ports ▼ | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | drop ▼ | <input type="checkbox"/> Broadcast <input type="checkbox"/> Unknown Multicast <input type="checkbox"/> Unknown Unicast | <input style="width: 50px;" type="text" value="10000"/> <input style="width: 50px;" type="text" value="10000"/> <input style="width: 50px;" type="text" value="10000"/> |

Storm Control Information

| Port | Port State | Broadcast (Kbps) | Unknown Multicast (Kbps) | Unknown Unicast (Kbps) | Action |
|------|------------|------------------|--------------------------|------------------------|--------|
| GE1 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |
| GE2 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |
| GE3 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |
| GE4 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |
| GE5 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |
| GE6 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |
| GE7 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |
| GE8 | disabled | Off (10000) | Off (10000) | Off (10000) | Drop |

Picture 5.2.2 Storm control Port Configuration

After enable the global situation storm control, please continue with function configuration. The switch supports multiple storm control modes, like broadcast storm control, unknown multicast storm control and unknown unitcast storm control.

5.3 Port Isolation

Ports Isolate

Ports Isolate Settings

| Port List | Port Type |
|--|--|
| <input type="button" value="Select isolate port"/> | <input checked="" type="radio"/> Unisolateed <input type="radio"/> Isolate |

Isolate ports Status

| Isolate Type | Port List |
|-----------------|-----------|
| Isolate Ports | |
| Unisolate Ports | all |

Picture 5.3.1 Port Isolation Configuration

In above port isolation page, isolated ports can be configured. Applying port isolation function to ensure port security.

5.4 DoS configuration

DoS Global Setting

Global DoS Setting

| | |
|-----------------------|---|
| DMAC = SMAC | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| Land | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| UDP Blat | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| TCP Blat | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| POD | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| IPv6 Min Fragment | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled Byte: <input type="text" value="1240"/> |
| ICMP Fragments | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| IPv4 Ping Max Size | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| IPv6 Ping Max Size | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |
| Ping Max Size Setting | Byte: <input type="text" value="512"/> |
| Smurf Attack | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled Netmask Length: <input type="text" value="0"/> |
| TCP Min Hdr Size | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled Bytes: <input type="text" value="20"/> |
| TCP-SYN(SPORT<1024) | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |

Picture 5.4.1 Global Dos Configuration

DoS Port Setting

DoS Port Setting

| Port Select | DoS Protection |
|---|---|
| <input type="button" value="Select Ports"/> | <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled |

DoS Port Status

| Port | DoS Protection |
|------|----------------|
| GE1 | Disable |
| GE2 | Disable |
| GE3 | Disable |
| GE4 | Disable |
| GE5 | Disable |
| GE6 | Disable |
| GE7 | Disable |
| GE8 | Disable |

Picture 5.4.2 Dos Port Configuration

Dos is short for Denial of Service, what causes DoS problem is DoS attacks, which will block the normal network service. The most common DoS attacks are computer network bandwidth attack and connectivity attack. Please configure DoS information in above pages.

5.5 STP Configuration

STP Global Setting

Global Setting

| | |
|------------------------|---|
| Enabled | <input type="radio"/> Enabled <input checked="" type="radio"/> Disabled |
| BPDU Forward | <input checked="" type="radio"/> flooding <input type="radio"/> filtering |
| PathCost Method | <input type="radio"/> short <input checked="" type="radio"/> long |
| Force Version | RSTP-Operation <input type="button" value="v"/> |

STP Informations

| Information Name | Information Value |
|------------------|-------------------|
| STP | Disabled |
| BPDU Forward | flooding |
| Cost Method | long |
| Force Version | RSTP-Operation |

Picture 5.5.1 STP Global configuration

STP Port Setting

STP Port Setting

| Port Select | Path Cost(0 = Auto) | Edge Port | P2P MAC | Migrate |
|---|------------------------|-------------------------------------|--------------------------------------|--------------------------|
| Select Ports <input type="button" value="v"/> | 0 <input type="text"/> | No <input type="button" value="v"/> | Yes <input type="button" value="v"/> | <input type="checkbox"/> |

CIST Port Status

| Port | Admin Enable | Path Cost | Edge Port | P2P MAC |
|------|--------------|-----------|-----------|---------|
| GE1 | Enable | 0 | No | Yes |
| GE2 | Enable | 0 | No | Yes |
| GE3 | Enable | 0 | No | Yes |
| GE4 | Enable | 0 | No | Yes |
| GE5 | Enable | 0 | No | Yes |
| GE6 | Enable | 0 | No | Yes |
| GE7 | Enable | 0 | No | Yes |
| GE8 | Enable | 0 | No | Yes |

Picture 5.5.2 STP Port configuration

STP Bridge Setting

STP Bridge Setting

| | |
|---------------|-----------|
| Priority | 32768 |
| Max Hops | 20 (1-40) |
| Forward Delay | 15 (4-30) |
| Max Age | 20 (6-40) |
| Tx Hold Count | 6 (1-10) |
| Hello Time | 1 (1-10) |

STP Bridge Information

| Information Name | Information Value |
|------------------|-------------------|
| Priority | 32768 |
| Max Hops | 20 |
| Forward Delay | 15 |
| Max Age | 20 |
| Tx Hold Count | 6 |
| Hello Time | 1 |

CIST Port Setting

CIST Port Setting

| | |
|--------------|----------|
| Port Select | Priority |
| Select Ports | 128 |

STP Port Status

| Port | Identifier (Priority / Port Id) | Path Cost Conf/Oper | Designated Root Bridge | Root Path Cost | Designated Bridge | Edge Port Conf/Oper | P2P MAC Conf/Oper | Port Role | Port State |
|------|---------------------------------|---------------------|------------------------|----------------|-----------------------|---------------------|-------------------|-----------|------------|
| GE1 | 128 / 1 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / No | Disabled | Disabled |
| GE2 | 128 / 2 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / No | Disabled | Disabled |
| GE3 | 128 / 3 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / No | Disabled | Disabled |
| GE4 | 128 / 4 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / No | Disabled | Disabled |
| GE5 | 128 / 5 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / No | Disabled | Disabled |
| GE6 | 128 / 6 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / No | Disabled | Disabled |
| GE7 | 128 / 7 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / No | Disabled | Disabled |
| GE8 | 128 / 8 | 0 / 20000 | 0 / 00:00:00:00:00:00 | 0 | 0 / 00:00:00:00:00:00 | No / No | Auto / Yes | Disabled | Forwarding |

Picture 5.5.3 STP Bridge Configuration

STP configurations can be made in above pages. Users can choose from STP and RSTP modes according to different network requirements.

Chapter 6 System Maintenance

6.1 Reboot Switch

Reboot Switch

Picture 6.1.1 Reboot Switch

Above page is used to reboot switch. When manage the switch, some configurations need to reboot the switch to take effect.

6.2 Factory Reset

Factory Default

Picture 6.2.1 Factory Reset

The switch support factory reset, press “restore” button to back factory default settings, including all configurations, IP address and management password.

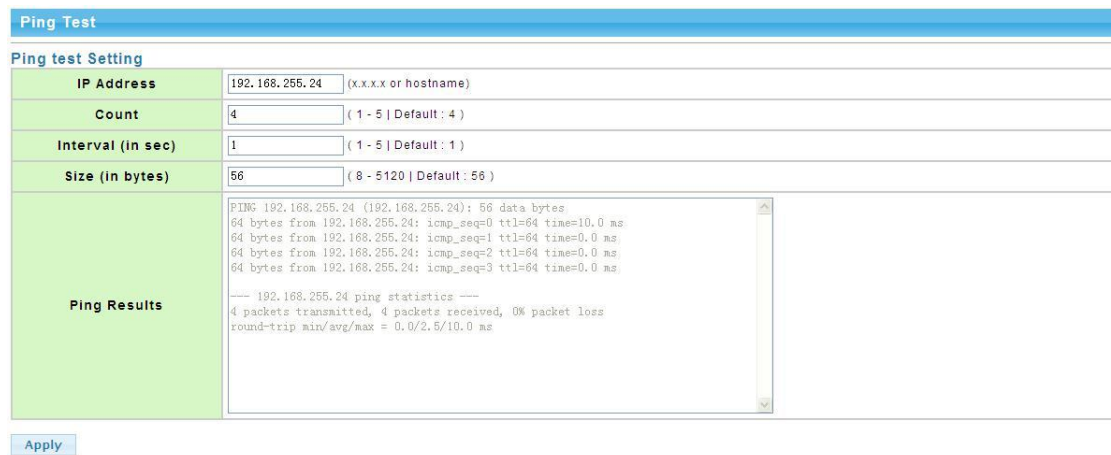
6.3 Firmware Upgrading



Picture 6.3.1 Firmware Upgrading

Current system software version can be checked in this page, and new software upgrade can be made.

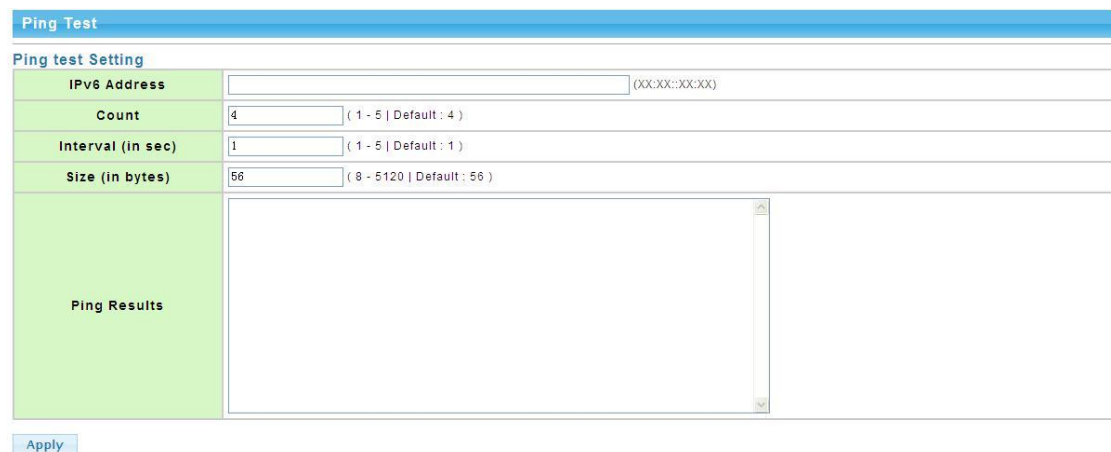
6.4 Ping Test



Picture 6.4.1 Ping Test Configuration

Ping test is to check if a specified Client can be reached, the function is the same with ping command under windows command lines. The IP addresses of switch and PC must be in same network segment.

6.5 IPv6 Ping Test



Picture 6.5.1 IPv6 Ping Test Configuration

Ping test is to check if a specified Client can be reached, the function is the same with ping command under windows command lines. The IP addresses of switch and PC must be in same network segment.

6.6 Network Cable Test

The screenshot displays a web interface for a network cable test. At the top, there is a blue header bar with the text "Copper Test". Below this, a light blue instruction reads "Select the port on which to run the copper test." A green bar labeled "Port" contains a dropdown menu with "GE1" selected. Below the dropdown is a button labeled "Copper Test". At the bottom, there is a blue bar with a dropdown arrow and the text "Test Results", which is currently expanded to show a white area.

Picture 6.6.1 Network Cable Test

Users can test the twisted pair cable working status. Please select test ports then press “cooper test” to check the working status.