

# **S5916P-C2-W/ S5924P-C2-W Web User Manual**

## **FOREWORD**

The configuration method of the S5916P-C2-W/S5924P-C2-W Smart Switch has been provided by Web-Smart User Manual which is including Administrator, Basic Configuration, VLAN Configuration, QoS Configuration, ACL Configuration, Security, Advanced Features and Monitoring.

S5916P-C2-W/S5924P-C2-W Smart Switch supports the configuration function of S5916P-C2-W/S5924P-C2-W via the main internet-explorer like IE、Firefox and Chrome.

## How to login in S5916P-C2-W/S5924P-C2-W Smart Switch?

Input user's name & password in the landing webpage and then press "Login in"

Pre-setting IP address: 192.168.2.1

Pre-setting user's name: admin

Pre-setting password: admin



Note: There is a case sensitivity for user's name and password. For example, "ADMIN" and "admin" are two different word.

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# 1 Administrator

## 1.1 System Information

MAC Address, Firmware Version, Uptime, Device name, Comment, Location and Contact Information of the smart switch are presented at this page.

### Function Setting for System Information

Administrator -> System Information

System Information	
MAC Address	66:09:07:03:04:09
Firmware Version	v2.7
Uptime	01:13:33
Device Name	<input type="text" value="IP1829"/>
Comment	<input type="text" value="switch"/>
Location	<input type="text" value="position"/>
Contact	<input type="text" value="ICPlus"/>
<input type="button" value="Apply"/>	

Note: Content has to be no more than 15 characters for each item.

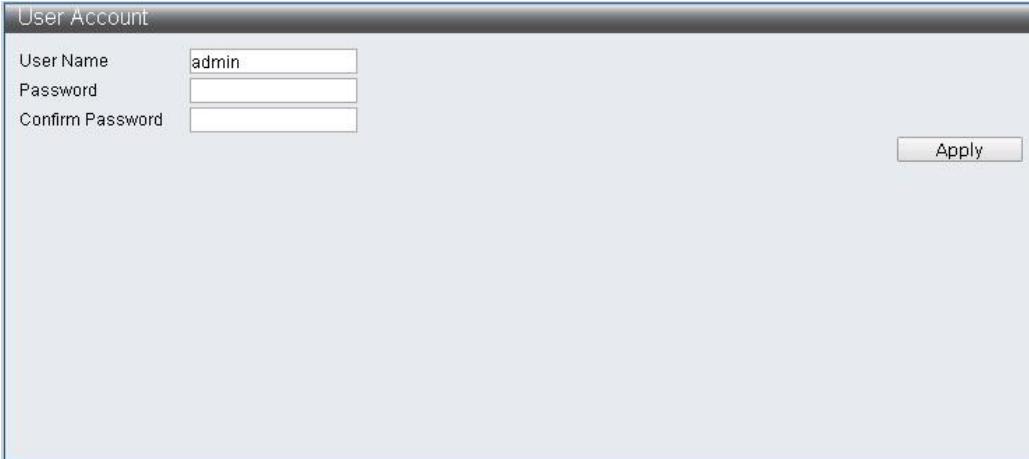
Parameters	Descriptions
MAC Address	Show MAC Address of smart switch
Firmware Version	Show the version of the software
Uptime	Show the starting time of the smart switch
Device Name	Input the name of the smart switch
Comment	Input the usage of the smart switch
Location	Input the position of the smart switch
Contact	Input the content of the smart switch

## 1.2 Account/ Password

User's name & password to be inputted at this page when login.

### Function Setting for Account / Password

Administrator -> Account/ Password



The screenshot shows a web browser window titled "User Account". Inside the window, there is a form with three input fields. The first field is labeled "User Name" and contains the text "admin". The second field is labeled "Password" and is empty. The third field is labeled "Confirm Password" and is also empty. To the right of these fields is a button labeled "Apply".

Note: Content has to be no more than 15 characters for each item.

Parameter	Description
User Name	Input user's name
Password	Input password
Confirm Password	Confirm revised password

## 1.3 IP Configuration

IP Configuration allows users set IPv4 Address & IPv6 Address by themselves, or IPv4 Address & IPv6 Address are set by DHCP Server automatically.

### 1.3.1 IPv4

#### Function Setting for IPv4

Administrator -> IP Configuration -> IPv4

Note: Only allowed "0-9" & "." character.

Parameter	Description
IPv4 Address	Input IPv4 Address
Subnet Mask	Input IPv4 Subnet Mask
Default Gateway	Input IPv4 Default Gateway
DNS Server	Input IPv4 DNS Server
DHCPv4 Enable	Turn on IPv4 DHCP Server

### 1.3.2 IPv6

#### Function Setting for IPv6

Administrator -> IP Configuration -> IPv6

**IPv6**

**Static IPv6 Address**

IPv6 Address: fe80::c0a8:201

Subnet Prefix Length: 64

Default Gateway: fe80::c0a8:2fe

DNS Server:

**DHCPv6**

DHCPv6 Enable ☐

Apply

Note: Only allowed "0-9", "a-f" & "." character.

Parameter	Description
IPv6 Address	Input IPv6 Address
Subnet Prefix Length	Input IPv6 Subnet Prefix Length
Default Gateway	Input IPv6 Default Gateway
DNS Server	Input IPv6 DNS Server
DHCPv6 Enable	Turn on IPv6 DHCP Server



## 1.4 SNMP Settings

### SNMP

SNMP (Simple Network Management Protocol, short for SNMP) which can manage the standard protocol of the each devices on the network. The Key of the SNMP like a progress which can operate simply and the management can monitor & support SNMP devices (short for agency). SNMP management can be made up by three parts: Management Information Base (MIB)、Structure of Management Information (SMI) and SNMP itself. SMI provides managed objects and their actions. MIB is information base which can store the related information about the managed objects (define the name and explain the meaning). Supporting SNMPv1, SNMPv2 and SNMPv3, you can choose different versions to monitor your device. The three different versions can provide three different security degrees upon the network management. The user's identification of SNMPv1 and SNMPv2 are formed by using the community string which has the same function as password. The management and agency will use the same community string to get the information together. The identification process of the SNMPv3 is much more difficult, you can use the extra security degree to encrypt the information. Traps is information which can notice the management what happened on the device such as device restarted or Port condition changed, the management can appoint the specific information by themselves.

#### 1.4.1 SNMP View Table

##### Function Setting for SNMP View Table

Administrator -> SNMP Settings -> SNMP View Table

View Name	Subtree	Type	Action
systemview	1.3.6.1.2.1.1	included	Delete

Parameter	Description
View Name	Set view name, no more than 20 characters
Subtree OID	Set MIB node range
View Type	Set the defined MIB node which can be included or excluded by the management
Delete	Delete the existed view

## Group Table

### Function Setting for SNMP Group Table

Administrator -> SNMP Settings -> SNMP Group Table

SNMP Group Settings

Group Name

Read View

Write View

Notify View

Security Model

Security Level

Group Name	Read View	Write View	Notify View	Security Model	Security Level	Action
public	systemview	none	systemview	v1	noauth	<input type="button" value="Delete"/>
public	systemview	none	systemview	v2c	noauth	<input type="button" value="Delete"/>

Parameter	Description
Group Name	Set group name, no more than 20 characters
Read View	Set read view authorization for the new group
Write View	Set write view authorization for the new group
Notify View	Set the specific Trap View for the new group
Security Model	Set the SNMP version for the new group
Security Level	Set the security level (Only supports SNMPv3) for the new group NoAuthNoPriv –No authorization and no privacy for the package AuthNoPriv –Need authorization, but no privacy for the package AuthPriv –Need authorization and need privacy for the package as well
Delete	Delete the existed group

### 1.4.3 SNMP User Table

#### Function Setting for SNMP User Table

Administrator -> SNMP Settings -> SNMP User Table

SNMP User Settings

User Name

Group Name

Auth-Protocol MD5

Priv-Protocol DES

User Name	Group Name	Auth-Protocol	Priv-Protocol	Action
-----------	------------	---------------	---------------	--------

Parameter	Description
User Name	Create SNMPv3 new user name, no more than 20 characters
Group View	Set the group view for the new user
Auth-Protocol MD5	Set the Auth-Protocol MD5 password
Priv-Protocol DES	Set encryption code, please use the protocol DES 56 Bits encryption

#### 1.4.4 SNMP Community Table

##### Function Setting for SNMP Community Table

Administrator -> SNMP Settings -> SNMP Community Table

SNMP Community Settings

Community Name

Access Group

Community Name	Group Name	Action
public	public	<input type="button" value="Delete"/>

參數	說明
Community Name	Create SNMPv1 / SNMPv2 community name, no more than 20 characters
Access Group	Set the specific access group for the user

#### 1.4.5 SNMP Host Table

##### Function Setting for SNMP Host Table

Administrator -> SNMP Settings -> SNMP Host Table

SNMP Host Settings

Host IP Address

Security Model

Security Level

Community String / SNMPv3 User

Host IP Address	Security Model	Security Level	Community / User	Action
-----------------	----------------	----------------	------------------	--------

Parameter	Description
Host IP Address	Set the host IP address which can accept SNMP Trap

Security Model	Set the security model for SNMP
Security Level	Set the security level (Only supports SNMPv3 ) NoAuthNoPriv –No authorization and no privacy for the package AuthNoPriv –Need authorization, but no privacy for the package AuthPriv –Need authorization and need privacy for the package as well
Community String/SNMPv3 User	Input community string SNMPv3 user name

### 1.4.6 SNMP Configuration

#### Function Setting for SNMP

Administrator -> SNMP Settings -> SNMP Configuration

**SNMP Configuration**

**SNMP Setting**

SNMP State:  ▼

SNMP Trap:  ▼

SNMP Link Change Traps:  ▼

**SNMP Link Change Traps Port Setting**

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameter	Description
SNMP State	Turn on/off SNMP function
SNMP Trap	Turn on/off SNMP Trap function
SNMP Link Change Traps	Turn on/off link-change status and send Trap to the appointed remote host
Port Selection	Select the port which you need to check the link status and send trap

## 1.5 NTP Settings

NTP (Network Time Protocol) Providing network time protocol service

### Function Setting for NTP

Administrator -> NTP Settings

NTP Settings

System Time 1970/01/01 Thursday, 08:30:03 UTC+0800

State

Time Zone UTC + 08 : 00

Primary Server IP

Secondary Server IP

Parameter	Description
System Time	Display the system time
State	Turn on/off NTP function
Time Zone	Set time zone
Primary Server IP	Primary Server IP
Secondary Server IP	Secondary Server IP

## 1.6 Syslog Settings

Provide Syslog Settings.

### Function Setting for Syslog

Administrator -> Syslog Settings

Syslog Settings

**Global Setting**

Syslog state ☒
Apply

**Facility Setting**

Name	State	Facility
dhcpcd	<input checked="" type="checkbox"/>	local1 ▼
gvrp	<input checked="" type="checkbox"/>	local2 ▼
stp_lacp_d	<input checked="" type="checkbox"/>	local3 ▼
mcast_table_d	<input checked="" type="checkbox"/>	local4 ▼
misc_app	<input checked="" type="checkbox"/>	local5 ▼

Apply

**Remote Server Setting**

Index	Server Info.		Priority							
	IP	port	Loacl0	Loacl1	Loacl2	Loacl3	Loacl4	Loacl5	Loacl6	Loacl7
1	192.168.2.99	514	7 ▼	7 ▼	7 ▼	7 ▼	7 ▼	7 ▼	7 ▼	7 ▼
2			--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼
3			--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼
4			--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼	--- ▼

Apply

Parameter	Description
Syslog state	Turn on Syslog
Name	Protocol
State	Turn on/off protocol
Facility	Select Local number
Server Info.	Set server IP Address and port number
Priority	select local priority

## 1.7 Load Factory Default

Provide initial value setting.

### Function Setting for Load Factory Default

Administrator -> Load Factory Default



Note : The setting of the Load Factory Default can only make the S5916P-C2-W/S5924P-C2-W become initial value and will not change the User Name, Password and IP Address.

Parameter	Description
Load Default	Reply initial value setting

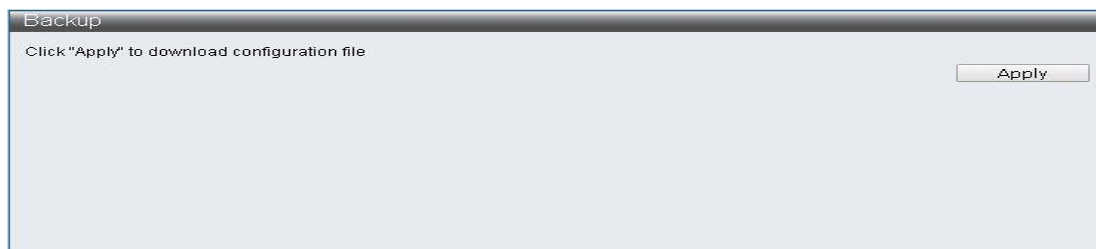
## 1.8 Configuration

This page provides the backup and restore configuration of the S5916P-C2-W/S5924P-C2-W web which the user can store the special configuration file "current.tar.gz" via Backup and the content includes the current S5916P-C2-W/S5924P-C2-W web configuration. When the user wants to restore the previous configuration, they can grab configuration file "current.tar.gz", and cover the original configuration.

### 1.8.1 Backup

#### Function Setting for Backup

Administrator -> Configuration -> Backup



The "current.tar.gz" configuration file will be downloaded itself after you clicked "Apply" and then store to the specialized catalog.

### 1.8.2 Restore

#### Function Setting for Restore

Administrator -> Configuration -> Restore



Note: current.tar.gz configuration file will not change the IP Address.

Parameter	Description
Select file	Select "current.tar.gz" configuration file to cover the current configuration file

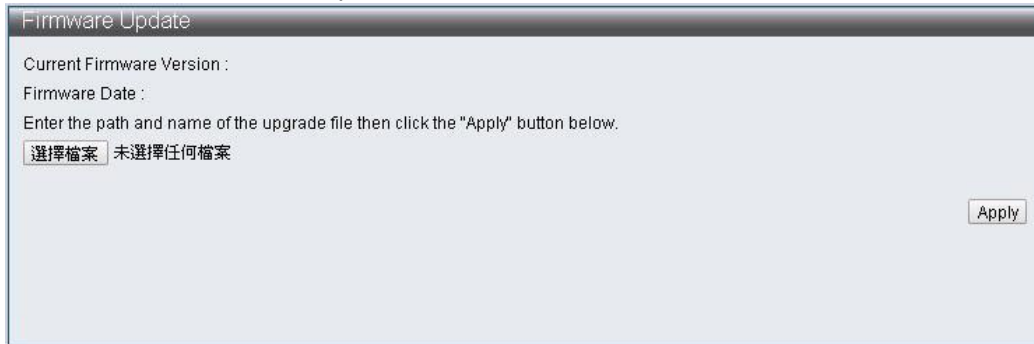


## 1.9 Firmware Update

This page provides that the user can update S5916P-C2-W/S5924P-C2-W Firmware version, and click "select file", select the storage location where you want to update, and then click "apply" to update firmware, and wait for updating completion.

### Function Setting for Firmware Update

Administrator -> Firmware Update



Parameter	Description
Select file	Select Firmware version to update

## 2 Port Management

### 2.1 Port Configuration

Port Configuration allows to configurate the ability for each port which is including Power up/down, Speed, Duplex, Auto-negotiation, Flow control, Address learning and Port name.

#### Function Setting for Port Configuration

Basic Configuration -> Port Configuration

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

State:  Speed/Duplex:  Auto Negotiation:  Flow Control:  Address Learning:  Name:

Port	Settings					Status		Name
	State	Speed/Duplex	Auto Nego.	Flow Control	Learning	Speed/Duplex	Flow Control	
01	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port1
02	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port2
03	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port3
04	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port4
05	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port5
06	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port6
07	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port7
08	Enabled	100M Full	Enabled	Enabled	Enabled	----	----	port8

Parameter	Description
Port Selection	Select pre-configuration por
Settings	Current configuration result
Status	Current link status
State	Power up/down
Speed/Duplex	Select the speed and duplex of the port
Auto Negotiation	Turn on/off Auto-negotiation
Flow Control	Turn on/off Flow control
Address Learning	Turn on/off address learning
Name	Revise the description of the port
Refresh	Refresh the status of the port

## 2.2 Port Mirror Function

Port Mirror Function is made up by Source Ports, Destination Ports, and monitoring way. The device will copy the packets of the source ports to the destination ports which can monitor the network to check, manage or other different usage requirements in some cases.

### Port Function Setting for Mirror

Basic Configuration -> Port Mirror Function

Port Mirror Function

Source Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Destination Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

State

Disable ▾

Method

Both ▾

Apply

Parameter	Description
Source Port Selection	Select pre-monitoring port
Destination Port Selection	Select the destination port which will transmit the source ports information
State	Turn on/off mirror function
Method	Appoint duplex or single monitoring method

## 2.3 Broadcast Storm Protection

This page Provides the Broadcast Storm controlling function for the broadcast packets, multicast packets, ARP packets and ICMP packets of each ports. The quantity of the packets is limited to 255 units (Maximum) within controlling period.

### Function Setting for Broadcast Storm Protection

Basic Configuration -> Broadcast Storm Protection

**Broadcast Storm Protection**

**Storm Control Settings**

Type	Threshold (0-255)	Period for (Giga/100/10)
Broadcast / Multicast / DLF	0	200us / 2ms / 20ms
ARP	0	200us / 2ms / 20ms
ICMP	0	200us / 2ms / 20ms

Apply

**Storm Control State**

**Port Selection**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Broadcast ☐ Multicast ☐ DLF ☐ ARP ☐ ICMP ☐

Apply

Port NO	Broadcast	Multicast	DLF	ARP	ICMP
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameter	Description
Type	<p>The type of each broadcast storm controlling</p> <p>Broadcast: Broadcast packets</p> <p>Multicast: Multicast packets, the No. 40 bit is "1" in MAC destination</p> <p>DLF: There is no MAC destination in MAC table</p> <p>ARP: ARP Packets</p> <p>ICMP: ICMP Packets</p>
Threshold	Set the packet modes and maximum reception quantity for the port within the reception period
Period for (Giga/100/10)	Set the reception period
Port Selection	Select the pre-setting port
Broadcast	Turn on/off the controlling of the broadcast packets
Multicast	Turn on/off the controlling of the multicast packets
DLF	Turn on/off the controlling of unknown destination MAC packets
ARP	Turn on/off the controlling of the ARP packets
ICMP	Turn on/off the controlling of the ICMP packets

## 2.4 Bandwidth Control

This page provides the data controlling for transmission and reception, the initial setting value is the maximum value of the link speed.

### Function Setting for Bandwidth Control

Basic Configuration -> Bandwidth Control

Bandwidth Control

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ingress Rate (kbps)

(1~1000000)

Egress Rate (kbps)

(1~1000000)

Apply

Port	Ingress Rate (kbps)	Egress Rate (kbps)
01	unlimited	unlimited
02	unlimited	unlimited
03	unlimited	unlimited
04	unlimited	unlimited
05	unlimited	unlimited
06	unlimited	unlimited
07	unlimited	unlimited
08	unlimited	unlimited
09	unlimited	unlimited
10	unlimited	unlimited

Refresh

Parameter	Description
Port Selection	Select the pre-setting port
Ingress Rate	Set the ingress rage
Egress Rate	Set the egress rage
Refresh	Refresh bandwidth controlling status

### 3 VLAN Configuration

#### 3.1 VLAN Mode

VLAN Mode which can make single port or multi-port be a independent network after compiling the configuration. Because the informations are not communicated with each ports, it can improve the capacity to provide a better security for the network by saving the bandwidth. The device supports IEEE 802.1Q and Port-Based VLAN, and the 802.1Q tag in packets can be removed by the untagging function of the port to keep the compatibility with the one which device doesn't support IEEE 802.1Q.

#### Function Setting for VLAN Mode

VLAN Configuration -> VLAN Mode

VLAN Mode	<input type="radio"/> Tag VLAN <input checked="" type="radio"/> Group VLAN
Tag Method	<input checked="" type="radio"/> by Tag <input type="radio"/> by Port
Egress Frame	<input checked="" type="checkbox"/> Multicast <input checked="" type="checkbox"/> Unicast <input checked="" type="checkbox"/> ARP

Apply

Parameter	Description
VLAN Mode	<p>Tag Vlan: Decide the VID for each entry and the VLAN members for the port by the setting of the Tag-based Entry</p> <p>Group Vlan: Decide the VID for each group and the VLAN members for the port by the setting of the Group-based Entry</p>
Tag Method	<p>It will be worked only by the Tag VLAN Mode By Tag:</p> <p>Judge egress packets port: add / remove tag , according to the port's value in the Tag-based Entry</p> <p>By Port: Judge egress packets port: add / remove tag , according to the port's tagging value in the VLAN port config website</p>
Egress Frame	Make the selected packets types (Multicast, Unicast and ARP) to achieve the transmission function in different VLAN via egress rule

## 3.2 VLAN Group-based Entry Configuration

### Function Setting for VLAN Group-based Entry Configuration

VLAN Configuration -> VLAN Group-based Entry Configuration

VLAN Group-based Entry config

Group Name:

GROUP Member Port

1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Add Modify

Group Table

Group Name	Group Member	Action	
test	1-5	Edit	Delete
aaa	1,6,8	Edit	Delete

Parameter	Description
Group Name	Set the name of the Group VLAN
Group Member Port	Set the member of the Group VLAN
Add	Add Group VLAN
Edit	Edit the selected Group VLAN
Modify	Modify the content for the selected Group VLAN
Delete	Delete the selected Group VLAN

### 3.3 VLAN Tag-based Entry Configuration

#### Function Setting for VLAN Tag-based Entry Configuration

VLAN Configuration -> VLAN Tag-based Entry Configuration

VLAN Tag-based Entry config

Add

Name	State	VID	Don't care	Add Tag	Remove Tag	Forbidden	Priority	GVRP forward	Action	
default	static	1	1-28	0	0	0	0	Deny	Edit	Delete
protocol_vlan1	static	4081	1-28	0	0	0	0	Deny	Edit	Delete
protocol_vlan2	static	4082	1-28	0	0	0	0	Deny	Edit	Delete
protocol_vlan3	static	4083	1-28	0	0	0	0	Deny	Edit	Delete
protocol_vlan4	static	4084	1-28	0	0	0	0	Deny	Edit	Delete

Parameter	Description
Add	Add Tag VLAN to input the name and VID value of the Tag VLAN
Edit	Edit the selected Tag VLAN
Delete	Delete the selected Tag VLAN

#### Tag VLAN Editing Page

VLAN Tag-based Entry config

VLAN Name: default VID: 1 Priority: 0 GVRP forward: Disable

VLAN Member														
Port	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Don't care	<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"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Add	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remove	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Forbidden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Port	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Don't care	<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"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Add	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remove	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Forbidden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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

Parameter	Description
VLAN Name	Tag VLAN name
VID	Means the VID value of the Tag VLAN
Priority	Set the priority for Tag VLAN
GVRP forward	Set the tag vlan if transmits by GVRP when GVRP function is starting
VLAN Member	Set the member of Tag VLAN



Don't care	It is VLAN member
Add	It is VLAN member that make the "add tag" action for the egress packets Port
Remove	It is VLAN member that make the "remove tag" action for the egress packets Port
Forbidden	Tag VLAN forbidden via GVRP
Not member	Not VLAN member

### 3.4 VLAN Port Configuration

#### Function Setting for VLAN Port Configuration

VLAN Configuration -> VLAN Port Configuration

VLAN port config

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PVID:  Tag:  Force:  Uplink:  Exclusive:  Egress:  Ingress-check:  GVRP:  Ingress-frame:

Apply

Port	PVID	Tagging	Force VLAN Group	Uplink	Exclusive	Egress	Ingress Check	GVRP	Ingress Frame
1	1	none					v		all
2	1	none					v		all
3	1	none					v		all
4	1	none					v		all
5	1	none					v		all
6	1	none					v		all
7	1	none					v		all
8	1	none					v		all

Parameter	Description
Port Selection	Select the pre-setting port
PVID	Set Port VID value
Tagging	Set add / remove VLAN Tag for the egress packet Port
Force VLAN Group	Set the priority for the Group VLAN
Uplink	Set uplink port, when the packet destination of the port is not in the VLAN, it will be transmitted by the uplink port automatically
Exclusive	Set exclusive port, it can't be transmitted between exclusive port each other
Egress	Set egress port, when the packet destination of the port is not in the VLAN, it will be transmitted by the egress rule automatically

Ingress Check	Turn on ingress check function to check the port if VLAN member via VID
GVRP	Turn on/off Port GVRP function
Ingress Frame	Set the appointed ingress frame to have the transmission action

### 3.5 Protocol VLAN Configuration

#### Function Setting for Protocol VLAN Configuration

VLAN Configuration -> Protocol VLAN Configuration

Enable	No.	VID	Protocol type	Protocol Select
<input type="checkbox"/>	1	4081	0x0	Ether_type ▼
<input type="checkbox"/>	2	4082	0x0	Ether_type ▼
<input type="checkbox"/>	3	4083	0x0	Ether_type ▼
<input type="checkbox"/>	4	4084	0x0	Ether_type ▼

Apply

Parameter	Description
Protocol VLAN enable	Protocol VLAN master switch
Enable check box	Choose the opened group
VID	Set VID value, when the packet is accord with the protocol, the VID will search the VLAN member
Protocol type	Set the protocol type value
Protocol Select	<p>Ether Type: When setting the "Ether Type", the value of the Protocol type has to be greater than 0x0600, the format is DA + SA + Protocol type</p> <p>LLC: The format is DA + SA + Length + Protocol type</p> <p>RFC 1042: The format is DA + SA + Length + AAAA03 + 000000 + Protocol type</p>

### 3.6 QinQ Port Configuration

#### Function Setting for QinQ Port Configuration

VLAN Configuration -> QinQ Port Configuration

QinQ Port Config

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Index   
 Tagging  Rx detect  Keep PCP/DEI

Apply

Port	index	Tagging	Rx detect	Keep PCP/DEI
1	1	none		
2	1	none		
3	1	none		
4	1	none		
5	1	none		
6	1	none		
7	1	none		
8	1	none		

Parameter	Description
Port Selection	Select the pre-setting port
Index	Select the used index and the service tag value of the index can be set at the QinQ Index Config website
Tagging	Add: Add the service tag for the egress & ingress packet port, if the packet port has the service tag, then it will revise or replace the service tag according to the function of Rx detect  RMV: Rx detect Removing the service tag only when the Rx detect is open
Rx detect	Turn on/off the ingress packets port to check the service tag
Keep PCP/DEI	Set if you want to keep the PCP/DEI value when revising the service tag of the ingress packets

### 3.7 QinQ Index Configuration

#### Function Setting for QinQ Index Configuration

VLAN Configuration -> QinQ Index Configuration

QinQ Index Config

Type: 88A8

Index															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Apply

Parameter	Description
Type	Set the type value of the Service Tag
Index	Set the corresponding service tag value for each Index

## 4 QoS (Quality of Service) Configuration

The QoS is a realization of the IEEE 802.1p, which can provide the function for the bigger bandwidth or top priority to dispose it first, and you can set up a bigger bandwidth and limit the unimportant data flow to save more bandwidth. Each port of the device can realize the applying of each packet.

### 4.1 QoS Group Member

#### Function Setting for QoS Group Member

QoS Configuration -> QoS Group Member

Port	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Group A	<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"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Group B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Port	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Group A	<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"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Group B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Group	Member Port
A	1-28
B	0

Parameter	Description
Group A	Select the ports for Group A member
Group B	Select the ports for Group B member

## 4.2 QoS Mode Set

### Function Setting for QoS Mode

QoS Configuration -> QoS Mode Set

QoS Mode Set					
Group	Queue Mode	Queue Method	Queue Ratio (0-255)	Queue Max Bandwidth (0-255)	Unit (BW throttle period / TWRR tickle unit)
A	First-In-First-Out ▼	WRR ▼	Q0:0	Q0:0	64Kbps / 51.2ms ▼
			Q1:0	Q1:0	
			Q2:0	Q2:0	
			Q3:0	Q3:0	
			Q4:0	Q4:0	
			Q5:0	Q5:0	
			Q6:0	Q6:0	
			Q7:0	Q7:0	
B	First-In-First-Out ▼	WRR ▼	Q0:0	Q0:0	64Kbps / 51.2ms ▼
			Q1:0	Q1:0	
			Q2:0	Q2:0	
			Q3:0	Q3:0	
			Q4:0	Q4:0	
			Q5:0	Q5:0	
			Q6:0	Q6:0	
			Q7:0	Q7:0	

Apply

Parameter	Description
Queue Mode	<p>Select the pre-using mold for each group, there are 5 modes:</p> <ol style="list-style-type: none"> <li>1. First-In-First-Out</li> <li>2. SPx1+WRR/WFQ/BW/TWRRx7</li> <li>3. SPx2+WRR/WFQ/BW/TWRRx6</li> <li>4. SPx4+WRR/WFQ/BW/TWRRx4</li> <li>5. SPx8</li> </ol>
Queue Method	<p>Set the pre-using schedule method of for Queue:</p> <ol style="list-style-type: none"> <li>1. WRR Set the priority ratio for each Queue, use packet quantity as unit</li> <li>2. WFQ Set the priority ratio for each Queue, use 4096 Bytes as unit</li> <li>3. Bwassurance Dynamic Bandwidth Management, Set the bandwidth for each Queue and its maximum value, the way of setting is Queue Ratio x BW throttle period, when the bandwidth of the queue achieved the set point, then the rest of the bandwidth will be improved to the maximum value</li> <li>4. Bwlimit Static Bandwidth Management, Set the top bandwidth for each Queue, and the way of setting is Queue Ratio x BW throttle period</li> <li>5. TWRR Set the transmission period for each Queue, and its period setting way is Queue Ratio x TWRR tickle unit</li> </ol>
Queue Ratio	Set the priority ratio for each mode
Queue Max Bandwidth	Set the maximum bandwidth for the Bwassurance action
Unit (BW throttle period / TWRR tickle unit)	Set the priority unit for each mode

### 4.3 QoS Out Queue Aging

#### Function Setting for QoS Out Queue Aging

QoS Configuration -> QoS Out Queue Aging

**QoS Out Queue Aging**

**Aging Time**

Out Queue Aging Time : (1~2)\*0 \*100ms. (the value range is 0-255)

☐ Fast Aging Time Enable (unit: 1.638ms) Apply

**QoS Out Queue Aging**

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7

-----

Apply

Port NO	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7
01								
02								
03								
04								
05								
06								
07								
08								

Parameter	Description
Out Queue Aging Time	Set the time of the Queue Aging Time
Fast Aging Time Enable	Set the exchangeable base for the Aging Time, change from 100ms to 1.638ms
Port Select	Select pre-setting ports
Q0 ~ Q7	Select the pre-open Out Queue Aging Time function of the Queue



## 4.4 QoS Remap

### Function Setting for QoS Remap

QoS Configuration -> QoS Remap

QoS Remap

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mode      Q0      Q1      Q2      Q3      Q4      Q5      Q6      Q7

Tx&Rx    --    --    --    --    --    --    --    --    Apply

Port NO	Tx Remap								Rx Remap							
	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7
01																

Parameter	Description
Port Selection	Select pre-setting ports
Mode	Select the mode: Tx, Rx or Tx&Rx
Q0 ~ Q7	Select the Queue Number which will re-map for each Queue

## 4.5 Class of Service

### Function Setting for Class of Service

QoS Configuration -> Class of Service

Class of Service

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ACL ☐ IGMP ☐ IP Addr ☐ MAC Addr ☐ VID ☐ TCP/UDP port ☐ DSCP ☐ 802.1p ☐ Physical port ☐

Apply

Port NO	ACL	IGMP	IP Addr	MAC Addr	VID	TCP/UDP port	DSCP	802.1p	Physical port
01									Queue
02									Queue
03									Queue
04									Queue
05									Queue
06									Queue
07									Queue
08									Queue

Class of Service Priority Level:

ACL > IGMP > IP Addr > MAC Addr > VID > TCP/UDP Port > DSCP > 802.1p > Physical Port

Parameter	Description
Port Selection	Select the pre-open port which has special packet priority function
ACL	Turn on/off ACL priority
IGMP	Turn on/off IGMP priority
IP Addr	Turn on/off IP Addr(Port-MAC-IP Entry) priority
MAC Addr	Turn on/off MAC Addr (LUT Priority) priority
VID	Turn on/off VLAN Tag weight
TCP/UDP Port	Turn on/off TCP/UDP Port number priority
DSCP	Turn on/off IPv4 TOS /IPv6 DSCP priority
802.1q	Turn on/off 802.1p priority
Physical Port	Select the priority for each Ports, Q0 ~ 7

## 4.6 802.1q Base

### Function Setting for 802.1q Base

QoS Configuration -> 802.1q Base

802.1p Base

☐ Earlier Edition
 ☒ 2005 Edition
 ☐ Exchange the priority of 3'b000 and 3'b001 for 2005 Edition

Priority Field	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Earlier Edition	2	0	1	3	4	5	6	7
2005 Edition	1	0	2	3	4	5	6	7

Apply

Parameter	Description
Earlier Edition	Select the previous version
2005 Edition	Select the version 2005
Exchange the priority	Exchange the priority

## 4.7 DSCP Base

### Function Setting for DSCP Base

QoS Configuration -> DSCP Base

**DSCP Base**

---

**Priority For DSCP Not Match**

☒ Regard as low priority (priority 0)  
☐ Ignore IP priority (priority will according to tag/port)

---

**IP ToS/DSCP CoS Base Priority**

DSCP List: DSCP1 ▼
 Value(0-63): 
 Priority: Q0 ▼

List	Value	Priority
DSCP1	0	Queue7
DSCP2	0	Queue7
DSCP3	0	Queue7
DSCP4	0	Queue7
DSCP5	0	Queue7
DSCP6	0	Queue7
DSCP7	0	Queue7
DSCP8	0	Queue7

Parameter	Description
Priority for DSCP Not Match	Select the current DSCP value and action which not in the DSCP List
DSCP List	Select the pre-setting DSCP group
Value	Set the DSCP value
Priority	Set the corresponding Queue for the DSCP group

## 4.8 TCP/UDP Port Base

### Function Setting for TCP/UDP Port Base

QoS Configuration -> TCP/UDP Port Base

TCP/UDP Port Base							
TCP/UDP Port Base Priority							
<b>NOTE:</b> (1)Q0~Q7 options are effective for the selected physical port only. (2)"Drop" option is the global setting for all physical ports. (3)"BOOTP/DHCP" is not effective when DHCP relay agent enabled.							
Protocol	Priority	Protocol	Priority	Protocol	Priority	Protocol	Priority
FTP	Q0 ▼	SSH	Q0 ▼	TELNET	Q0 ▼	SMTP	Q0 ▼
DNS	Q0 ▼	BOOTP/DHCP	Q0 ▼	TFTP	Q0 ▼	HTTP_0,1	Q0 ▼
POP3	Q0 ▼	NEWS	Q0 ▼	SNTP	Q0 ▼	NETBIOS_0,1,2	Q0 ▼
IMAP_0,1	Q0 ▼	SNMP_0,1	Q0 ▼	HTTPS	Q0 ▼	User defined A	Q0 ▼
User defined B	Q0 ▼	User defined C	Q0 ▼	User defined D	Q0 ▼		
User Define TCP/UDP Port Number							
<b>NOTE:</b> These user-defined TCP/UDP port are the same as that used in TCP/UDP filter.							
User defined A	User defined B	User defined C		User defined D			
Port: 1 <input type="text"/>	Port: 1 <input type="text"/>	From Port: 1 <input type="text"/>	To Port: 1 <input type="text"/>	From Port: 1 <input type="text"/>	To Port: 1 <input type="text"/>		
<input type="button" value="Apply"/>							

Parameters	Descriptions
Protocol	Various TCP/UDP Protocols
Priority	Select the Queue corresponding to each TCP/UDP protocol
User defined A	User-defined TCP/UDP Port number
User defined B	User-defined TCP/UDP Port number
User defined C	User-defined TCP/UDP Port Range
User defined D	User-defined TCP/UDP Port Range

## 5 ACL Configuration

This machine provides 128 sets of Entry rules that can be set freely. According to the complexity of the rules, one rule may occupy more than one Entry.

*ACL Profile List*

*ACL Ctag Settings*

*ACL Stag Settings*

*ACL VLAN Settings*

*ACL Bandwidth Settings*

*ACL DSCP Settings*

### 5.1 ACL Profile List

#### Function Setting for ACL Profile List

ACL Configuration -> ACL Profile List

Profile Name	Type	Action
--------------	------	--------

Parameters	Presets	Descriptions
Used Entries	0/128	Displays the number of entries occupied by the currently set rules and the upper limit is 128. Instead of a rule occupying an entry, the number of entries occupied by a rule is calculated automatically based on the Settings.
Profile Name		Rule name
Type		Provides the type of User Settings: MAC, IP, IP_Ext, IPv6, Advanced

Follow the steps below to enter the rule settings page:

Step 1: Enter the Profile Name, select Type, and press the “Add” button.

Step 2: Press the “Edit” button to Edit the rule.

**ACL Profile List**

Used Entries : 0 / 128

Profile Name

Type

Profile Name	Type	Action	
testMAC	mac	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
testIP	ip	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
testIPE	ip_ext	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
testIP6	ipv6	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
testAdv	advanced	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

### ACL Profile Configuration - MAC

**ACL Profile Configuration - MAC**

Name		testMAC	
<input type="checkbox"/>	Source MAC Address	<input type="text" value="22:55:66:AA:BB:cc"/>	(22:55:66:AA:BB:cc)
	Source MAC Mask	<input type="text" value="FF:FF:FF:FF:FF:FF"/>	FF:FF:FF:FF:FF:FF
<input type="checkbox"/>	Destination MAC Address	<input type="text" value="22:55:66:AA:BB:cc"/>	(22:55:66:AA:BB:cc)
	Destination MAC Mask	<input type="text" value="FF:FF:FF:FF:FF:FF"/>	FF:FF:FF:FF:FF:FF
<input type="checkbox"/>	VID	<input type="text" value="1"/>	(1 ~ 4094)
<input type="checkbox"/>	CoS	<input type="text" value="0"/>	(0 ~ 7, VID should enabled)
<input type="checkbox"/>	Ethernet Type	<input type="text" value="0x"/>	(0000 ~ FFFF, hexadecimal value)
<input type="checkbox"/>	Ingress Port	<input type="text" value="Port1"/>	Port1
Action		Drop	

### ACL Profile Configuration - IP

**ACL Profile Configuration - IP**

Name		testIP	
<input type="checkbox"/>	Source IP Address	<input type="text" value="192.168.0.1"/>	(192.168.0.1)
	Source IP Mask	<input type="text" value="255.255.255.255"/>	255.255.255.255
<input type="checkbox"/>	Source Port Range	Low: <input type="text" value="0"/> High: <input type="text" value="65535"/>	(0 ~ 65535)
<input type="checkbox"/>	Destination Port Range	Low: <input type="text" value="0"/> High: <input type="text" value="65535"/>	(0 ~ 65535)
<input type="checkbox"/>	Ingress Port	<input type="text" value="Port1"/>	Port1
Action		Drop	

### ACL Profile Configuration - IP Extension

ACL Profile Configuration - IP Extension		
Name		testIPE
<input type="checkbox"/>	Source IP Address	(192.168.0.1)
	Source IP Mask	255.255.255.255 ▼
<input type="checkbox"/>	Destination IP Address	(192.168.0.1)
	Destination IP Mask	255.255.255.255 ▼
<input type="checkbox"/>	Source Port	<input type="radio"/> (0 ~ 65535) <input type="radio"/> Low: (0 ~ 65535) High: (0 ~ 65535)
<input type="checkbox"/>	Destination Port	<input type="radio"/> (0 ~ 65535) <input type="radio"/> Low: (0 ~ 65535) High: (0 ~ 65535)
<input type="checkbox"/>	VID	(1 ~ 4094)
<input type="checkbox"/>	CoS	(0 ~ 7, VID should enabled)
<input type="checkbox"/>	TCP Flag	<input type="checkbox"/> URG <input type="checkbox"/> ACK <input type="checkbox"/> PSH <input type="checkbox"/> RST <input type="checkbox"/> SYN <input type="checkbox"/> FIN
<input type="checkbox"/>	DSCP	(0 ~ 63)
<input type="checkbox"/>	IP Protocol	0x (00 ~ FF)
<input type="checkbox"/>	Ingress Port	Port1 ▼
Action Drop ▼		
		Apply

### ACL Profile Configuration - IPv6

ACL Profile Configuration - IPv6		
Name		testIPv6
<input type="checkbox"/>	Source IPv6 Address	(AAAA:::DDDD)
	Source IPv6 Mask	FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF ▼
<input type="checkbox"/>	Destination IPv6 Address	(AAAA:::DDDD)
	Destination IPv6 Mask	FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF ▼
<input type="checkbox"/>	Ingress Port	Port1 ▼
Action Drop ▼		
		Apply



## ACL Profile Configuration - Advanced

ACL Profile Configuration - Advanced	
Name	testAdv
<input type="checkbox"/> Source MAC Address	(22:55:66:AA:BB:cc)
<input type="checkbox"/> Source MAC Mask	FF:FF:FF:FF:FF:FF ▼
<input type="checkbox"/> Destination MAC Address	(22:55:66:AA:BB:cc)
<input type="checkbox"/> Destination MAC Mask	FF:FF:FF:FF:FF:FF ▼
<input type="checkbox"/> Source IP Address	(192.168.0.1)
<input type="checkbox"/> Source IP Mask	255.255.255.255 ▼
<input type="checkbox"/> Destination IP Address	(192.168.0.1)
<input type="checkbox"/> Destination IP Mask	255.255.255.255 ▼
<input type="checkbox"/> Source Port	<input type="radio"/> (0 ~ 65535) <input type="radio"/> Low: (0 ~ 65535) High: (0 ~ 65535)
<input type="checkbox"/> Destination Port	<input type="radio"/> (0 ~ 65535) <input type="radio"/> Low: (0 ~ 65535) High: (0 ~ 65535)
<input type="checkbox"/> VID	(1 ~ 4094)
<input type="checkbox"/> CoS	(0 ~ 7, VID should enabled)
<input type="checkbox"/> Ethernet Type	0x (0000 ~ FFFF, hexadecimal value)
<input type="checkbox"/> TCP Flag	<input type="checkbox"/> URG <input type="checkbox"/> ACK <input type="checkbox"/> PSH <input type="checkbox"/> RST <input type="checkbox"/> SYN <input type="checkbox"/> FIN
<input type="checkbox"/> DSCP	(0 ~ 63)
<input type="checkbox"/> IP Protocol	0x (00 ~ FF)
<input type="checkbox"/> Ingress Port	Port1 ▼
Action Drop ▼	
Apply	

Parameters	Descriptions
Source MAC Address	Enter the Source MAC Address
Source MAC Mask	Select Source MAC Mask, and choose FF:FF:FF:FF:FF:FF, FF:FF:FF:00:00:00 and FF:FF:00:00:00:00
Destination MAC Address	Enter Destination MAC Address
Destination MAC Mask	Select Destination MAC Mask, and choose FF:FF:FF:FF:FF:FF, FF:FF:FF:00:00:00 and FF:FF:00:00:00:00
Source IP Address	Enter the Source IP Address
Source IP Mask	Select Source IP Mask, and choose 255.255.255.255, 255.255.255.240, 255.255.255.0, 255.255.240.0, 255.255.0.0, 255.0.0.0 and 240.0.0.0
Destination IP Address	Enter Destination IP Address
Destination IP Mask	Select Destination IP Mask, and choose 255.255.255.255, 255.255.255.240, 255.255.255.0, 255.255.240.0, 255.255.0.0, 255.0.0.0 and 240.0.0.0
Source Port	Enter Source Port to enter a single figure or to set a range of figure.
Destination Port	Enter Destination Port to enter a single figure or to set a range of figure.
VID	Enter VID and set the range to 1~4094

CoS	To set CoS, it must be set together with VID to take effect. And the setting range is 0~7.
Ethernet Type	Enter Ethernet Type and set the range to 0000~FFFF
TCP Flag	Select the TCP Flag to check
DSCP	Input DSCP and set the range to 0~63
IP Protocol	Enter the IP Protocol and set the range to 00~FF
Source IPv6 Address	Enter Source IPv6 Address
Source IPv6 Mask	Select Source IPv6 Mask , and choose FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF, FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:0000:0000, FFFF:FFFF:FFFF:0000:0000:0000:0000:0000 and FFFF:0000:0000:0000:0000:0000:0000:0000.
Destination IPv6 Address	Enter Destination IPv6 Address
Destination IPv6 Mask	Select Destination IPv6 Mask, and choose FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:0000:0000 FFFF:FFFF:FFFF:0000:0000:0000:0000:0000 and FFFF:0000:0000:0000:0000:0000:0000:0000.
Ingress Port	elect source port

## Action Drop

Action Drop ▼	
---------------	--

## Action Type 1

Action Type1 ▼	<input type="checkbox"/> Redirect	Port 1 ▼
	<input type="checkbox"/> Priority	(0 ~ 7)
	<input type="checkbox"/> DSCP	(1 ~ 8, index select)
	<input type="checkbox"/> Copy to CPU	
	<input type="checkbox"/> Mirror Enable	

## Action Type2

Action Type2 ▼	<input type="checkbox"/> Redirect	Port 1 ▼
	<input type="checkbox"/> Priority	(0 ~ 7)
	<input type="checkbox"/> Bandwidth	(1 ~ 15, index select)
	<input type="checkbox"/> Copy to CPU	
	<input type="checkbox"/> PTP Enable	
	<input type="checkbox"/> Sflow Enable	

## Action Type3

Action Type3 ▼	<input type="checkbox"/> Redirect	Port 1 ▼
	<input type="checkbox"/> Priority	(0 ~ 7)
	<input type="checkbox"/> Insert Ctag	(1 ~ 24, index select)
	<input type="checkbox"/> Ctag Vlan Enable	

## Action Type4

Action Type4 ▼	<input type="checkbox"/> Insert Ctag	(1 ~ 24, index select)
	<input type="checkbox"/> Ctag Vlan Enable	
	<input type="checkbox"/> Insert Sttag	(1 ~ 24, index select)
	<input type="checkbox"/> Sttag Vlan Enable	
	<input type="checkbox"/> Mirror Enable	

Parameters	Descriptions
Redirect	Set the forwarding to a port.
Priority	Set Priority with a range of 0~7.
DSCP	Set DSCP Index to modify the figure of the transmitted DSCP according to the figure set by ACL DSCP Settings.
Bandwidth	Set the Bandwidth Index according to the limited packet data set by ACL Bandwidth Settings.
Copy to CPU	Make a copy and transfer it to CPU.
PTP Enable	Set the time to start recording the packet.
Mirror Enable	Turn on the Mirror function according to Basic configuration-> Port Mirror Function setting to pass the packet to the Destination Port.
Sflow Enable	Set up starting the Sflow function.

Insert Ctag	Set Insert Ctag Index to insert the relative Ctag figure according to ACL Ctag Settings.
Ctag Vlan Enable	Turn on which set of ACL VLAN Settings to transfer packets based on Insert Stag Index
Insert Stag	Set Insert Stag Index to Insert the relative Ctag figure according to ACL Stag Settings.
Stag Vlan Enable	Turn on which set of ACL VLAN Settings to transfer packets based on Insert Stag Index

## 5.2 ACL Ctag Settings

### Function Setting for ACL Ctag Settings

ACL Configuration -> ACL Ctag Settings

ACL Ctag Settings

Index  (1 ~ 24)  
Value 0x  (0x0000~0x7FFF)

Apply

Index	Value	Index	Value
1	0x0000	13	0x0000
2	0x0000	14	0x0000
3	0x0000	15	0x0000
4	0x0000	16	0x0000
5	0x0000	17	0x0000
6	0x0000	18	0x0000
7	0x0000	19	0x0000
8	0x0000	20	0x0000
9	0x0000	21	0x0000
10	0x0000	22	0x0000
11	0x0000	23	0x0000
12	0x0000	24	0x0000

### ACL Stag Settings

ACL Configuration -> ACL Stag Settings

**ACL Stag Settings**

Index  (1 ~ 24)  
 Value 0x  (0x0000~0xFFFF)

Index	Value	Index	Value
1	0x0000	13	0x0000
2	0x0000	14	0x0000
3	0x0000	15	0x0000
4	0x0000	16	0x0000
5	0x0000	17	0x0000
6	0x0000	18	0x0000
7	0x0000	19	0x0000
8	0x0000	20	0x0000
9	0x0000	21	0x0000
10	0x0000	22	0x0000
11	0x0000	23	0x0000
12	0x0000	24	0x0000

## ACL VLAN Settings

ACL Configuration -> ACL VLAN Settings

**ACL VLAN Settings**

Index  1 ▾

**Member Port**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

## ACL Bandwidth Settings

ACL Configuration -> ACL Bandwidth Settings

ACL Bandwidth Settings

Index  (1 ~ 15)  
Value  (0~2540)(0.1Mbps)

Apply

Index	Value
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0

## ACL DSCP Settings

ACL Configuration -> ACL DSCP Settings

ACL DSCP Settings

Index  (1 ~ 8)  
Value 0x  (0x0~0x3F)

Apply

Index	Value
1	0x00
2	0x00
3	0x00
4	0x00
5	0x00
6	0x00
7	0x00
8	0x00

## 6 Security

### 6.1 Port-MAC-IP Binding

Support IPv4/IPv6 by checking the packet source IP address to achieve basic security protection and filtering; Each port can be configured through the page to check whether the source IP address, MAC address is matched with source port, and the matched packets can be further acted upon by selecting two filtering modes.

#### 6.1.1 Port-MAC-IP Port Setting

##### Function Setting for Port-MAC-IP Port Setting

Security -> Port-MAC-IP Binding -> Port-MAC-IP Port Setting

Port Selection																											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Status:

Max learning entry:

Recovery learning entry:

Port	State	Max learning entry	Recovery learning entry
01	Disabled	3	Disabled
02	Disabled	3	Disabled
03	Disabled	3	Disabled
04	Disabled	3	Disabled
05	Disabled	3	Disabled
06	Disabled	3	Disabled
07	Disabled	3	Disabled
08	Disabled	3	Disabled

Parameter	Description
Port Selection	Select preset Ports
All	Select all Ports
Clear	Clear all Ports
Status	Turn on/off Port-MAC-IP binding function
Max learning entry	Set the maximum number of dynamic binding groups for each Port.
Recover learning entry	Turn on/off automatically overriding the earliest binding group when the number of dynamically binding groups reaches the upper limit.

## 6.1.2 Port-MAC-IP Entry Setting

### Function Setting for Port-MAC-IP Entry Setting

Security -> Port-MAC-IP Binding -> Port-MAC-IP Entry Setting

Port-MAC-IP Table

**Create IMP Entry**

IPv4

**IMP Entry Management**

IP

check port ☐

Port

check MAC ☐

MAC

Action

Priority

**IP Table Monitor**

IP	Type	port	MAC	Rule	Priority	Action
192.168.2.10	static	<input type="checkbox"/> 0 <input type="checkbox"/>		filter	disable	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

Parameter	Description
IPv4/IPv6	Select the pre-established IMP Entry as IPv4 or IPv6 and enter its IP Address in the space to the right.
IMP Entry Management	Select pre-edited IMP Entry in the IP Table Monitor field to click "Edit" to edit.
IP	Corresponding to the selected IMP Entry IP Address.
Check port	Turn the source Port on/off to check if it matches or not.
Port	Set the Port corresponding to this IP Address.
Check MAC	Turn on/off the source MAC to check if it matches or not.
MAC	Set the source MAC corresponding to this IP Address.
Action	Set the corresponding action Filter/Priority when conditions are met.
Priority	Set the Queue corresponding to this IMP Entry when the selection action is Priority.



### 6.1.3 DHCP Snooping Entry Setting

#### Function Setting for DHCP Snooping Entry Setting

Security -> Port-MAC-IP Binding -> DHCP Snooping Entry Setting

DHCP Snooping Table				
DHCP Snooping Configure				
DHCP Snooping	Disable ▼			
ARP Inspection	Disable ▼			
MAC Verification	Disable ▼			
Apply				
Snooping Table				
Port	IP	MAC	Leavetime	Action

Parameter	Description
DHCP Snooping	Turn on/off DHCP Snooping function.
ARP Inspection	Turn on/off ARP detection function.
MAC Verification	Turn on/off MAC validation function.

## 6.2 MAC Address Binding

Supports MAC address-based security functions. Enable this function to set the action of discarding packets in the MAC table or setting the port to discard, mirror forward, and sample the specific MAC address to the CPU port.

The port learning function can be closed to prevent the MAC address in the non-MAC table from entering the device through the port which is bound. If the port learning function is not closed, it can only limit the bound port which exists in the MAC address enters the device, but can't limit the port which doesn't exist in the MAC table enters the device.

#### Function Setting for MAC Address Binding

Security -> MAC Address Binding

MAC Binding Table

MAC Table Binding

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Binding Enable

☐

All

clear

Aging Time

Range:1~1,800,000. (Unit: second)

Apply

Create MAC Entry

MAC Address

Port

1

Apply

MAC Entry Management

MAC

port

1

Drop

☐

Sniffer

☐

Sflow

☐

Priority

Disable

Apply

MAC Table Monitor

MAC	port	Drop	Sniffer	Sflow	Priority	Action
00:11:22:33:44:55	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	disable	<div>Edit</div> <div>Delete</div>

Parameter	Description
Port Selection	Select to close the port learning function.
Binding Enable	Turn on/off MAC binding function.
Aging Time	Set the MAC binding aging time range from 1 to 1800000, Unit: second.
MAC Address	Add a pre-bound MAC Address.
Port	Select the port which bound to the MAC Address .
MAC Entry Management	After adding the bound MAC Address: Click “Edit” in each MAC information of the table to edit it; Click “Delete” to delete the corresponding setting.
MAC	Displays the pre-edited MAC Address information.
port	Modify the port bound to MAC Address.
Drop	The packet will be discarded when the Source MAC of the packet received by the port matches the Settings.

Sniffer1	When the packet received by the port has its Source MAC matching the setting, then this packet will be forwarded to the Destination Port at the same time.
Sflow	Forward matching packet samples to the CPU port.
Priority	When the packet received by the port has its Source MAC matching the setting, then it will be stored in the corresponding Queue.

## 7 Advanced Features

### 7.1 Spanning Tree Protocol

The STP Spanning Tree Protocol (STP), also known as the Extended Tree Protocol, is a data link layer (layer 2) protocol based on the OSI network model to ensure a loop-free regional network environment.

The STP allows a network to be designed to contain alternate (repetitive) connections to avoid loops in operation and automatically enable alternate paths when a line fails, eliminating the need to manually start and close the alternate connections. Therefore, by using STP, three effects can be achieved: 1. Preventing broadcast storms; 2. Preventing the occurrence of duplicate packets; 3. Preventing inconsistency of MAC address databases. STP works as follows: first, the root bridge is selected based on the bridge ID generated by the combination of bridge priority and MAC address. The bridge with the smallest bridge ID will become the root bridge in the network. On this basis, the distance from each node to the root bridge is calculated, and the cost of each redundant link is obtained from these paths, and make the minimum one as communication path (the corresponding port state is changed to Forwarding), the others will become the backup path (the corresponding port state will become blocking). The communication tasks in the STP generation process are completed by BPDU (Bridge Protocol Data Unit).

BPDU (Bridge Protocol Data Unit) is a spanning tree protocol greeting packet that is sent out at configurable intervals for information exchange among bridges on the network.

Region (MSTP applies) The Switch in the same Region will only process BPDU information in the same Region to calculate Topology. To determine if you are in the same Region, Switch will compare the three parameters in the spanning-tree mst configuration. And only the three parameters are the same to be the same Region:

Configuration Name

Revision Number

VLAN and Instance correspondence table (instance 0 is used as CIST, communicates with STP/RSTP, and cannot be used as Region)

### 7.1.1 Function Setting for STP Global Settings

Advanced Features -> Spanning Tree Protocol -> STP Global Settings

**STP Global Settings**

STP State:  sec

STP Version:  sec

Bridge Max Age (6-40):  sec

Bridge Hello Time (1-10):  sec

Bridge Forward Delay (4-30):  sec

Max Hops (6-40):  sec

Note:

$2 \times (\text{Bridge\_Forward\_Delay} - 1.0 \text{ seconds}) \geq \text{Bridge\_Max\_Age}$

$\text{Bridge\_Max\_Age} \geq 2 \times (\text{Bridge\_Hello\_Time} + 1.0 \text{ seconds})$

Parameter	Presets	Description
STP State	Enable	Turn on/off STP function
STP Version	MSTP	Set the STP version used, support STP, RSTP, MSTP
Bridge Max Age (6-40)	20	Set the maximum lifetime of configuration information in the spanning tree when this Switch is taken as Root Bridge. If any Bridge Port in the spanning tree (except Designated Port) fails to receive BPDU within this time, the Bridge Port will start to issue BPDU and rebuild the spanning tree.
Bridge Hello Time (1-10)	2	Sets the interval among BPDU sent by each Bridge in the spanning tree when this Switch is the Root Bridge.
Bridge Forward Delay (4-30)	15	Set the interval among all Switch ports in the spanning tree to Forwarding when this Switch is used as Root Bridge.
Max Hops (6-40)	20	Sets the starting value of Remaining Hops when this Switch is used as the Root Bridge while operating in MSTP mode. This value limits the maximum number of nodes that BPDU can pass. When each switch receives a BPDU, it will reduce the value of Remaining Hops by 1. When it is reduced to 0, it will not send BPDU downstream.

## 7.1.2 STP Port Settings

### Function Setting for STP Port Settings

Advanced Features -> Spanning Tree Protocol -> STP Port Settings

STP Port Enabled													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Apply

Parameter	Presets	Description
STP Port Enabled	Enabled	Select the port to enable STP

## 7.1.3 MST Configuration Identification

### Function Setting for MST Configuration Identification

Advanced Features -> Spanning Tree Protocol -> MST Configuration Identification

**MST Configuration Identification Settings**

Configuration Name: IP1829  
Revision Level(0-65535): 0 Apply

**Instance ID Settings**

MSTI ID (1-4094):   
Action: Add VID ▼  
VID List (1-4094):  Apply

MSTI ID	VID List	Action
CIST	1-4094	<span>Edit</span> <span>Delete</span>

Parameter	Preset	Description
Configuration Name	IP1829	Set the configuration name, which is the unique identifier of MSTI ( Multiple Spanning Tree Instance).
Revision Level(0-65535)	0	Set the version number to identify whether it is in the same MSTP region
MSTI ID (1-4094)		To set the ID number of MSTI entry
Action	Add VID	Method to set the VID List of MSTI Add VID: Add the feature of VID List to this MSTI Remove VID: Remove the feature of the VID List from this MSTI
VID List (1-4094)		To change the contents of MSTI's VID List

## 7.1.4 STP Instance Settings

### Function Setting for STP Instance Settings

Advanced Features -> Spanning Tree Protocol -> STP Instance Settings

STP Instance Settings

MSTI ID  Priority (0-61440)

Instance Type	Instance Priority	Action	
CIST	32768	<input type="button" value="Edit"/>	<input type="button" value="View"/>

**STP Instance Operational Status**

MSTP ID	--	Designated Root Bridge	--
External Root Cost	--	Regional Root Bridge	--
Internal Root Cost	--	Designated Bridge	--
Root Port	--	Max Age	--
Forward Delay	--	Max Hops	--

## 7.1.5 MSTP Port Information

### Function Setting for MSTP Port Information

Advanced Features -> Spanning Tree Protocol -> MSTP Port Information

MSTP Port Information

Port

**MSTP Port Settings**

Instance ID  Internal Path Cost (0-200000000,0=Auto)  Priority (0-240)

**Port 1 Settings**

MSTI	Designated Bridge	Internal Path Cost	Priority	Status	Role	Action
0	32768/66-09-07-03-04-09	200000(Auto)	128	Forwarding	Designated Port	<input type="button" value="Edit"/>

Parameter	Preset	Description
Port	1	Port number to be displayed and set
Instance ID		To set the ID number of MSTI entry
Internal Path Cost (0-200000000,0=Auto)		Set the internal path cost of this port in the MSTI. When a Region is treated as a separate regional network, this feature represents the root path cost of the Bridge in this network.
Priority (0-240)		Set the priority of this port in the MSTI

## 7.2 Trunk & Link Aggregation

Trunk Group achieves faster network transmission speed by combining several ports and utilizing specific traffic distribution. This machine supports four 10/100MB groups and two 1G groups. Each of the four 10/100MB groups has four fixed ports and can be selected as its members. The two 1G groups have two fixed ports which can be chose to be their members, and can also max up to 8 10/100MB members to form a group by combining the two groups, and this group can form another group with 4 1G members.

### Function Setting for Trunk & Link Aggregation

Advanced Features -> Trunk & Link Aggregation

Trunk & Link Aggregation

Link Aggregation Algorithm
MAC Source

Group	Group1				Group2				Group3				Group4				Group5		Group6	
Combine Group	<input type="checkbox"/>								<input type="checkbox"/>								<input type="checkbox"/>			
Port Select	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	25	26	27	28
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Status																				
State	Disable ▾				Disable ▾				Disable ▾				Disable ▾				Disable ▾		Disable ▾	
Trunk Type	LACP ▾				LACP ▾				LACP ▾				LACP ▾				LACP ▾		LACP ▾	
Mode	Passive ▾				Passive ▾				Passive ▾				Passive ▾				Passive ▾		Passive ▾	
Time Out	Short ▾				Short ▾				Short ▾				Short ▾				Short ▾		Short ▾	

Apply

Parameter	Preset	Description
Link Aggregation Algorithm	MAC Source	Link Aggregation Algorithm, support Port. MAC Source. MAC Destination. IP Source. IP Destination. TCP/UDP Destination Port. TCP/UDP Source Port.
Group		Group index
Combine Group		Combine two groups
Port Select		Group member selection
Status		Member status display, display "A" indicates function setting to complete.
State	Disable	Turn on/off status of groups
Trunk Type	LACP	Trunk form selection, support LACP and Static.
Mode	Passive	Communication mode, support Passive and Active.
Time Out	Short	Time selection for time Out, support Short and Long. Short means 1 second to send a packet, Time for Time Out is 3 seconds; Long means 30 seconds to send a packet, Time for Time Out is 90 seconds.

## 7.3 IGMP Snooping

Internet Group Management Protocol (IGMP) Snooping

*IGMP Snooping Settings*

*IGMP Snooping Router Ports Settings*

*IGMP Snooping Groups*

*IGMP Snooping Ports*

### 7.3.1 IGMP Snooping Settings

#### Function Setting for IGMP Snooping Settings

Advanced Features -> IGMP Snooping -> IGMP Snooping Settings

IGMP Snooping Settings	
IGMP Snooping State	Disable ▼
Version	IGMPv3 ▼
IGMP Group Aged Out	Disable ▼
GMI (10-65535)	100 sec
Router Aging Time (10-65535)	100 sec
Apply	

Parameter	Preset	Description
IGMP Snooping State	Disable	IGMP Snooping function switch
Version	IGMPv3	Version selection, you can choose IGMPv1, IGMPv2 and IGMPv3
IGMP Group Aged Out	Disable	Whether the dynamically joined group should be cleared when does not receive the corresponding packet for a period of time, the time is set according to the following GMI.
GMI	100(秒)	Group Member Interval, the dynamic group will ask if there is any member based on this time.
Router Aging Time	100(秒)	The existing time for the dynamic Router Port. If the Query packet is not received continuously, the dynamic Router Port will be cleared.



### 7.3.2 IGMP Snooping Router Ports Settings

#### Function Setting for IGMP Snooping Router Ports Settings

Advanced Features -> IGMP Snooping -> IGMP Snooping Router Ports Settings

IGMP Snooping Router Ports Settings

IGMP Snooping Static Router Ports													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IGMP Snooping Dynamic Router Ports													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Parameter	Description
IGMP Snooping Static Router Ports	Set static Router Ports
IGMP Snooping Dynamic Router Ports	Display the dynamically learned Router Ports

### 7.3.3 IGMP Snooping Groups

#### Function Setting for IGMP Snooping Groups

Advanced Features -> IGMP Snooping -> IGMP Snooping Groups

IGMP Snooping Groups

**IGMP Snooping Static Group Configuration**

Group Address:

Member Port													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**IGMP Snooping Group Information**

Group	State	Member Port	Action

Parameter	Description
IGMP Snooping Static Group Configuration	Users can set static groups and their member ports.
IGMP Snooping Group Information	Display all existing groups and their status.

### 7.3.4 IGMP Snooping Ports

#### Function Setting for IGMP Snooping Ports

## Advanced Features -&gt; IGMP Snooping -&gt; IGMP Snooping Ports

Parameter	Description
IGMP Snooping Port Information	Display the selected port which has joined the group and its current status.

## 7.4 MLD Snooping

### MLD Snooping

Multicast Listener Discovery (MLD) Snooping

*MLD Snooping Settings*

*MLD Snooping Router Ports Settings*

*MLD Snooping Groups*

*MLD Snooping Ports*

### 7.4.1 MLD Snooping Settings

#### Function Setting for MLD Snooping Settings

Advanced Features -> MLD Snooping -> MLD Snooping Settings

Parameter	預設值	Description
MLD Snooping State	Disable	MLD Snooping function switch
Version	IGMPv3	Version selection, you can choose MLDv1 and MLDv2

MLD Group Aged Out	Disable	Whether the dynamically joined group should be cleared when does not receive the corresponding packet for a period of time, the time is set according to the following GMI.
GMI	100(秒)	Group Member Interval, the dynamic group will ask if there is any member based on this time.
Router Aging Time	100(秒)	The existing time for the dynamic Router Port. If the Query packet is not received continuously, the dynamic Router Port will be cleared.

## 7.4.2 MLD Snooping Router Ports Settings

### Function Setting for MLD Snooping Router Ports Settings

Advanced Features -> MLD Snooping -> MLD Snooping Router Ports Settings

Parameter	Description
MLD Snooping Static Router Ports	Set static Router Ports
MLD Snooping Dynamic Router Ports	Display the dynamically learned Router Ports

## 7.4.3 MLD Snooping Groups

### Function Setting for MLD Snooping Groups

Advanced Features -> MLD Snooping -> MLD Snooping Groups

**MLD Snooping Groups**

**MLD Snooping Static Group Configuration**

Group Address <input type="text"/>													
Member Port													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**MLD Snooping Group Information**

Group	State	Member Port	Action
-------	-------	-------------	--------

Parameter	Description
MLD Snooping Static Group Configuration	Users can set static groups and their member ports.
MLD Snooping Group Information	Display all existing groups and their status.

#### 7.4.4 MLD Snooping Ports

##### Function Setting for MLD Snooping Ports

Advanced Features -> MLD Snooping -> MLD Snooping Ports

**MLD Snooping Ports**

**MLD Snooping Port Information**

Port

Group	State	Mode	Uptime	Expires	Source List
-------	-------	------	--------	---------	-------------

Parameter	Description
MLD Snooping Port Information	Display the selected port which has joined the group and its current status.

#### 7.5 DHCP Relay Agent

##### Function Setting for DHCP Relay Agent

Advanced Features -> DHCP Relay Agent

DHCP RelayAgent

Global Setting

DHCP relay-agent state

☐

Apply

DHCPv4 Setting

Hops Limit

4

DHCPv4 Server Setting

Index	State	Address
1	<input checked="" type="checkbox"/>	192.168.2.111
2	<input type="checkbox"/>	
3	<input type="checkbox"/>	
4	<input type="checkbox"/>	
5	<input type="checkbox"/>	

Apply

DHCPv6 Setting

DHCPv6 Server Setting

Index	State	Address
1	<input checked="" type="checkbox"/>	2001:1000::1
2	<input type="checkbox"/>	
3	<input type="checkbox"/>	
4	<input type="checkbox"/>	
5	<input type="checkbox"/>	

Apply

Parameter	Preset	Description
DHCP relay-agent state		Function switch of the DHCP Relay-Agent.
Hops Limit	4	The number of times that a DHCP packet can be forwarded.
DHCPv4 Server Setting		DHCPv4 server settings, you can set five groups.
DHCPv6 Server Setting		DHCPv6 server settings, you can set five groups.

## 7.6 Loop Detect

Loop Detect can detect the connection loop generated by the Switch, and when it detects the loop, it will cause 1 Port be blocked between 2 ports of the loop, so that the packet cannot be imported into the Switch via the loop and avoid the network of the Switch can't be connected.

### Function Setting for Loop Detection

Advanced Features -> Loop Detect

Loop Detect Information

**Loop Detect Setting**

Loop Detection State Disable ▾  
LDP Interval Time 3 , unit:500ms  
Block Release Time 9 , unit:500ms  
LDP MAC Destination Address 01:90:C3:00:00:00
Apply

**Loop Detect Port Setting**

**Loop Detect Port Enabled**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Apply

**Loop Detect Port State**

Port	State
1	---
2	---
3	---
4	---
5	---
6	---
7	---
8	---

Refresh

Parameter	Description
Loop Detect State	Turn on/off the Loop Detect function
LDP Interval Time	Set the interval for sending detection loop packets
Block Release Time	Set blocked port and re-enable time
LDP MAC Destination Address	Set the DA to send the detection loop packet
Loop Detect Port Enabled	Select the Port that turned on the Loop Detect function.
Refresh	Update the status of Loop Detect

## 7.7 GVRP

GVRP can communicate the information with each port to realize the registering and cancelling VLAN functions for each port. The practical information is Join information, Leave information, and LeaveAll information.

Join information: When the device received other device's Join information or set the VLAN statically for its devices, it will send the Join information to outside, and the Join information is JoinEmpty and JoinIn. JoinEmpty states that there is no register property itself. JoinIn states that there is a register property itself.

Leave information: When the device received other device's Leave information or set the VLAN statically for its devices, it will send the Leave information to outside, and the Leave information is LeaveEmpty and LeaveIn. LeaveEmpty cancels the register property itself. LeaveIn cancels the cancelled register property

itself.

**LeaveAll information:** When port starts the GVRP function, and the LeaveAll timer will be started at the same time, and it will send the LeaveAll information to outside after the timer timeout. LeaveAll information is to cancel all of the dynamic register property, in this way, the unused property can be cancelled in the network.

GVRP timer are Join timer, Leave timer and LeaveAll timer.

**Join timer:** to control the transmission of the Join information, and the Join timer will be started after send the Join information, make sure if the Join information has been sent to the other device. It will re-send the Join information when the JoinIn information has not been received after the timer timeout.

**Leave timer:** to control the transmission of the Leave information, and the Leave timer will be started after receiving the Leave or LeaveAll information. If there is no JoinIn information sending by the other device after the timer timeout, then it means the property will not be used, so the register of the property can be cancelled.

**LeaveAll timer:** When the port opens the GVRP function, the LeaveAll timer will be started as the same time, and the LeaveAll information will be sent after timer timeout. If the LeaveAll information has been received by the device, then the LeaveAll timer will count again in case of any unnecessary packets volume.

## Function Setting for GVRP

Advanced Features -> GVRP Settings

參數	說明
GVRP Settings	Turn on/off GVRP function
Join Time	Setting the LDP Interval Time
Leave Time	Set the leave timer, not less than the double time of the join timer's time
Leaveall Time	Set the leaveall timer, not less than the leave timer's time

## 7.8 Neighbor MACID

Neighbor MACID's function is to look for the neighbor Switch MAC ID for each port and send the Neighbor Info packets in the sending period. And the switch will add the MAC ID or update aging time after receiving the Neighbor Info packets. You can get the Switch Neighbor MAC ID information by using the UDP NetCmd tool.

### Function Setting for Neighbor MACID

## Advanced Features -&gt; Neighbor MACID Settings

Neighbor MACID Settings	
Status	Disable ▾
Send Period	3
Aging Time	6
<input type="button" value="Apply"/>	

Parameter	Description
Status	Turn on/off the function of the Neighbor MACID
Send Period	Set the sending period of the Neighbor Info packets
Aging Time	Set the Aging time for each MAC ID data

## 8 Monitoring

### 8.1 MIB Counter

MIB Counter can counter the transmitting or receiving data volume for each ports. And the counting method for each ports can be divided into two method as 28 unit receiving packets format and 14 units transmitting packets format.

#### Function Setting for MIB Counter

Monitoring -> MIB Counter

Mib Counter						
Port NO	Receive		Transmit		Action	<input type="checkbox"/>
	Packets	Bytes	Packets	Bytes		
01	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
02	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
03	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
04	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
05	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
06	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
07	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
08	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
09	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
10	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
11	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
12	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
13	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>
14	0	0	0	0	<a href="#">Detail</a>	<input type="checkbox"/>

Parameter	Description
-----------	-------------



Port No.	Port Number
Receive	Display the receiving data for Packets and Bytes
Transmit	Display the transmitting data for Packets and Bytes
Action	Provide the detailed data for the data
Refresh	Refresh the port data
Clear	Clear the port data

## Monitoring -&gt; MIB Counter -&gt; Detail

Mib Counter

Port NO:

Type	Port 1 Counter	
	Receive	Transmit
64b	0	0
65-127b	0	0
128-255b	0	0
256-511b	0	0
512-1023b	0	0
1024-1518b	0	0
Oversize	0	0
Bcst	0	0
Mcast	0	0
Ucast	0	0
Pause	0	0
Pkts	0	0

[<<<Back](#)

Parameter	Description
Type	Packets type
Receive	Display the packets data which is received by different format separately
Transmit	Display the packets data which is transmitted by different format separately
Refresh	Refresh the port data
Clear	Clear the port data

## 8.2 Scan MACID Lookup Table

Scan MACID Lookup Table provides the MAC Address for each port, and the user can clear the MAC Address of the Lookup Table.

### Function Setting for Scan MACID Lookup Table

Monitoring -> Scan MACID Lookup Table

Scan MACID Lookup Table

MAC Table Clear

Port Selection													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	16	17	18	19	20	21	22	23	24	25	26	27	28
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All

clear

Apply

MAC Table Monitor

Entry number: 1

Refresh

Index	MAC Address	Port	Priority
1	00:05:5d:1a:38:6d	24	disable

Parameter	Description
Port Selection	Select the pre-setting ports
All	Select all of the ports
Clear	Clear the selected port
Apply	Clear the MAC Table of the pre-select port
Refresh	Refresh MAC Table

## 8.3 Syslog

Syslog provides the management's operated records.

### Function Setting for Syslog

Monitoring -> Syslog

Syslog Messages	
Refresh	
Index	Log Message
1	Jan 1 00:00:20 sshd[198]: Server listening on 0.0.0.0 port 22.
2	Jan 1 00:00:20 sshd[198]: Server listening on 0.0.0.0 port 22.
3	Jan 1 00:00:23 misc_app[164]: Port 1 link up
4	Jan 1 00:00:24 misc_app[164]: Port 2 link up
5	Jan 1 00:00:24 misc_app[164]: Port 5 link up
6	Jan 1 00:00:24 misc_app[164]: Port 6 link up
7	Jan 1 00:00:24 kernel: eth0: no IPv6 routers present
8	Jan 1 00:00:24 misc_app[164]: Port 24 link up
9	Jan 1 00:00:24 klish[199]: (admin) startup : 0
10	Jan 1 00:00:25 init: starting pid 247, tty "": "/bin/sh"
11	Jan 1 08:16:43 klish[199]: (admin) enable DHCP_snooping : 0
12	Jan 1 08:16:55 klish[199]: (admin) disable DHCP_snooping : 0
13	Jan 1 08:16:59 mac_table.cgi[1439]: call static_entry function failed
14	Jan 1 08:17:00 mac_table.cgi[1439]: call static_entry function failed
15	Jan 1 08:17:25 mac_table.cgi[1501]: call static_entry function failed

Parameter	Description
Refresh	Refresh the Syslog