



IP1829A 24+4G
Web User Manual

Introduction

IP1829A Web User Manual provides features such as Administrator, Basic Configuration, VLAN Configuration, QoS Configuration, ACL Configuration, Security, Advanced Features and Monitoring. IP1829A Smart Switch support IE, Firefox, and Chrome.

Login IP1829A Smart Switch

Upon displaying Login Page, please input both default Username and Password.

Default IP address : 192.168.2.1

Default Username : admin

Default Password : admin



Note : Characters are case-sensitive. All Username and Password are in lower case.

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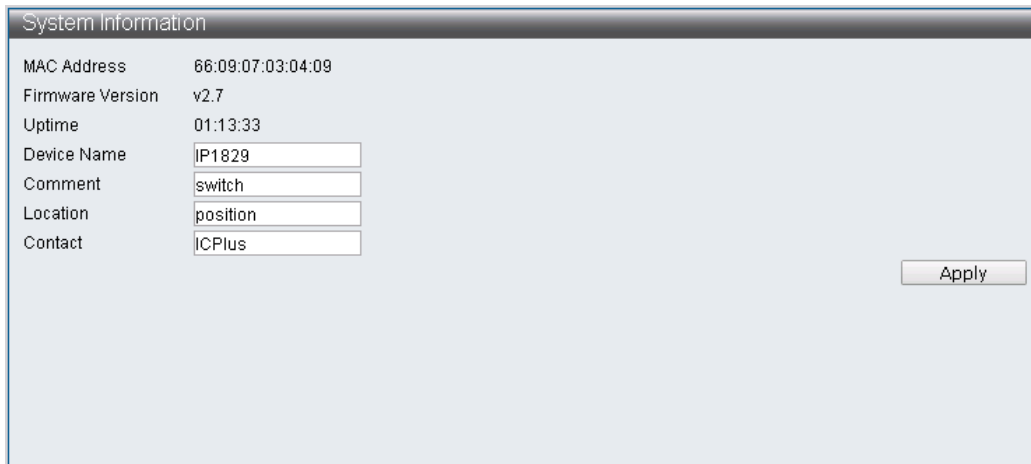
1 Administrator

1.1 System Information

System Information displays Ethernet Switch MAC Address, Firmware Version, Uptime, Device Name, Comment, Location and Contact Information.

System Information Configuration

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 : Space is limited to 15 letters.

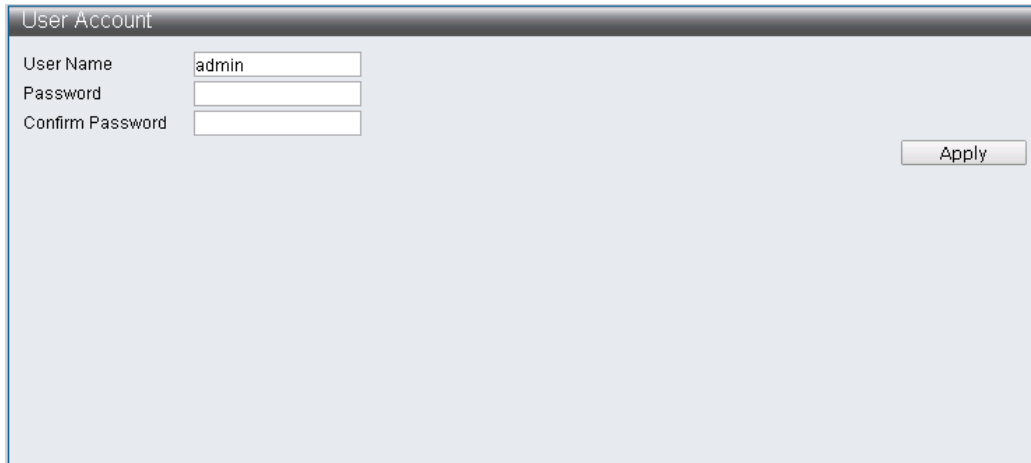
| Parameter | Description |
|------------------|------------------------------|
| MAC Address | Display Ethernet MAC Address |
| Firmware Version | Software Version |
| Uptime | Machine-On Duration |
| Device Name | Name of the Device |
| Comment | Device Description |
| Location | Location Description |
| Contact | Receiver Description |

1.2 Account/ Password

Users are required to input User Name and Passport.

Account/ Password Configuration

Administrator -> Account/ Password



Note : Space is limited to 15 letters.

| Parameter | Description |
|------------------|------------------|
| User Name | Change Username |
| Password | Change Password |
| Confirm Password | Confirm Password |

1.3 IP Configuration

IP Configuration allows users to configure IPv4 Address and IPv6 Address or allocated random value by DHCP Server.

1.3.1 IPv4

IPv4 Configuration

Administrator -> IP Configuration -> IPv4



The screenshot shows the IPv4 configuration interface. It has a title bar 'IPv4'. Below it is a section 'Static IPv4 Address' with four input fields: 'IPv4 Address' (192.168.2.1), 'Subnet Mask' (255.255.255.0), 'Default Gateway' (192.168.2.254), and 'DNS Server' (empty). Below this is a section 'DHCPv4' with a checkbox 'DHCPv4 Enable' which is unchecked. An 'Apply' button is at the bottom right.

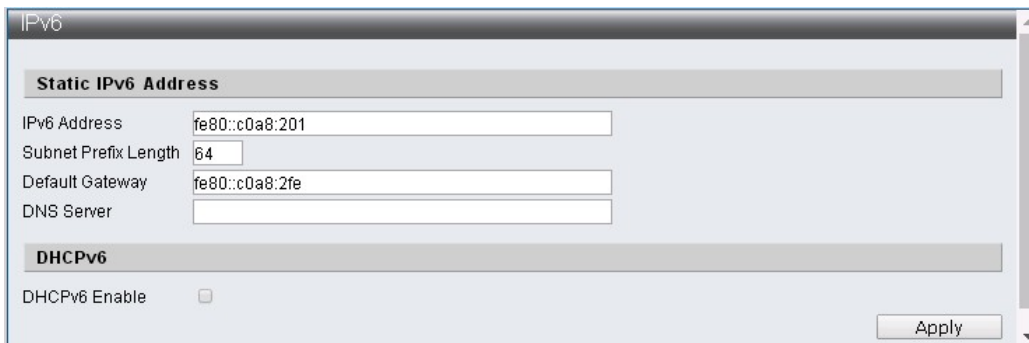
Note : Only numerical letters ranging from 0~9 are allowed.

| Parameter | Description |
|-----------------|--------------------------------|
| IPv4 Address | Configure IPv4 Address |
| Subnet Mask | Configure IPv4 Subnet Mask |
| Default Gateway | Configure IPv4 Default Gateway |
| DNS Server | Configure IPv4 DNS Server |
| DHCPv4 Enable | Enable IPv4 DHCP Server |

1.3.2 IPv6

IPv6 Configuration

Administrator -> IP Configuration -> IPv6



The screenshot shows the IPv6 configuration interface. It has a title bar 'IPv6'. Below it is a section 'Static IPv6 Address' with four input fields: 'IPv6 Address' (fe80::c0a8:201), 'Subnet Prefix Length' (64), 'Default Gateway' (fe80::c0a8:2fe), and 'DNS Server' (empty). Below this is a section 'DHCPv6' with a checkbox 'DHCPv6 Enable' which is unchecked. An 'Apply' button is at the bottom right.

Note : Only numerical ranging from 0~9 and syllabus ranging from a~f are allowed.

| Parameter | Description |
|----------------------|-------------------------------------|
| IPv6 Address | Configure IPv6 Address |
| Subnet Prefix Length | Configure IPv6 Subnet Prefix Length |
| Default Gateway | Configure IPv6 Default Gateway |
| DNS Server | Configure IPv6 DNS Server |
| DHCPv6 Enable | Enable IPv6 DHCP Server |

1.4 SNMP Settings

SNMP

Simple Network Management Protocol (SNMP) is an Internet Standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior. Devices that typically support SNMP include cable modems, routers, switches, servers, workstations, printers, and more. SNMP is widely used in network management for network monitoring. SNMP exposes management data in the form of variables on the managed systems organized in a management information base (MIB) · which describe the system status and configuration. These variables can then be remotely queried (and, in some circumstances, manipulated) by managing applications. Three significant versions of SNMP have been developed and deployed. SNMPv1 is the original version of the protocol. More recent versions, SNMPv2c and SNMPv3, feature improvements in performance, flexibility and security. SNMP is a component of the Internet Protocol Suite as defined by the Internet Engineering Task Force(IETF). It consists of a set of standards for network management, including an application layer protocol, a database schema, and a set of data objects.

1.4.1 SNMP View Table

SNMP View Table Configuration

Administrator -> SNMP Settings -> SNMP View Table

SNMP View Settings

View Name

Subtree OID

View Type Included ▾

| View Name | Subtree | Type | Action |
|------------|---------------|----------|---------------------------------------|
| systemview | 1.3.6.1.2.1.1 | included | <input type="button" value="Delete"/> |

| Parameter | Description |
|-------------|---|
| View Name | Create New View Name, limited to 20 letters |
| Subtree OID | Configure MIB Parameter |
| View Type | Define MIB Parameter of <i>included</i> and <i>excluded</i> |
| Delete | Delete existing View |

1.4.2 SNMP Group Table

SNMP Group Table Configuration

Administrator -> SNMP Settings -> SNMP Group Table

SNMP Group Settings

Group Name:

Read View:

Write View:

Notify View:

Security Model:

Security Level:

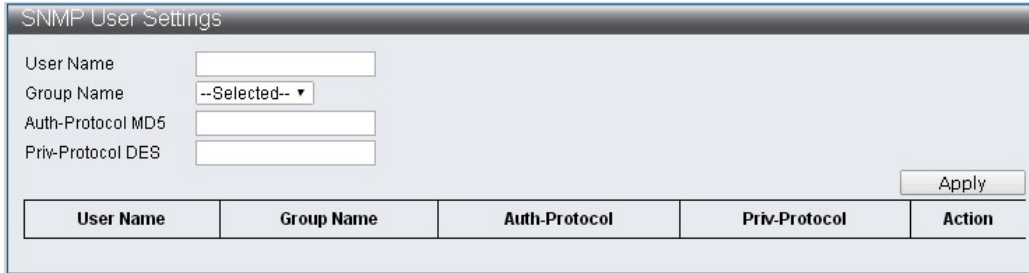
| Group Name | Read View | Write View | Notify View | Security Model | Security Level | Action |
|------------|------------|------------|-------------|----------------|----------------|---------------------------------------|
| public | systemview | none | systemview | v1 | noauth | <input type="button"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

| Parameter | Description |
|----------------|--|
| Group Name | Create New Group Name, limited to 20 letters |
| Read View | Configure Read View Authorization |
| Write View | Configure Write View Authorization |
| Notify View | Assign Trap View |
| Security Model | Assign SNMP |
| Security Level | Assign Security · support only SNMPv3 NoAuthNoPriv – Unlimited Access and No Encryption AuthNoPriv – Limited Access and No Encryption AuthPriv – Limited Access and Encrypted Packets |
| Delete | Delete existing Group |

1.4.3 SNMP User Table

SNMP User Table Configuration

Administrator -> SNMP Settings -> SNMP User Table



The screenshot shows the 'SNMP User Settings' configuration window. It contains four input fields: 'User Name' (text), 'Group Name' (dropdown menu with '--Selected--'), 'Auth-Protocol MD5' (text), and 'Priv-Protocol DES' (text). An 'Apply' button is located at the bottom right. Below the form is a table with the following structure:

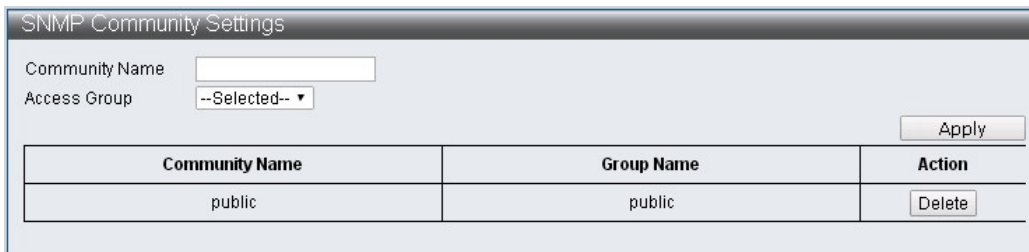
| User Name | Group Name | Auth-Protocol | Priv-Protocol | Action |
|-----------|------------|---------------|---------------|--------|
| | | | | |

| Parameter | Description |
|-------------------|---|
| User Name | Configure New SNMPv3 Name, limited to 20 letters. |
| Group View | Configure New Group View |
| Auth-Protocol MD5 | Configure Authentication using MD5 Protocol |
| Priv-Protocol DES | Configure Encryption using DES 56 Standard |

1.4.4 SNMP Community Table

SNMP Community Table Configuration

Administrator -> SNMP Settings -> SNMP Community Table



The screenshot shows the 'SNMP Community Settings' configuration window. It contains two input fields: 'Community Name' (text) and 'Access Group' (dropdown menu with '--Selected--'). An 'Apply' button is located at the bottom right. Below the form is a table with the following structure:

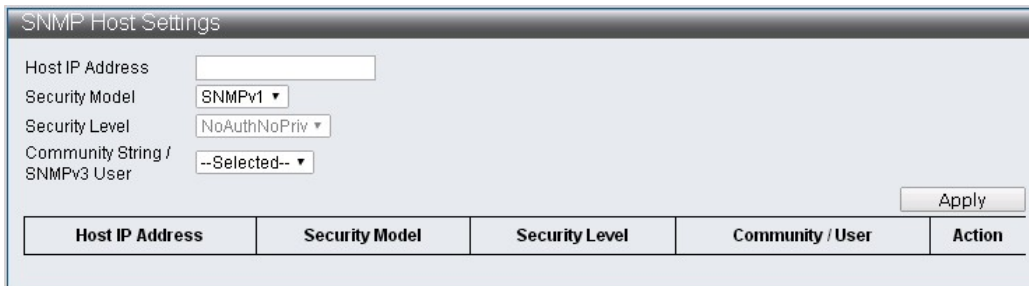
| Community Name | Group Name | Action |
|----------------|------------|--------|
| public | public | Delete |

| Parameter | Description |
|----------------|--|
| Community Name | Create New SNMPv1 / SNMPv2 Community Name, limited to 20 letters |
| Access Group | Configure New Access Group |

1.4.5 SNMP Host Table

SNMP Host Table Configuration

Administrator -> SNMP Settings -> SNMP Host Table



The screenshot shows the 'SNMP Host Settings' configuration window. It includes the following fields:

- Host IP Address:
- Security Model:
- Security Level:
- Community String / SNMPv3 User:

An 'Apply' button is located at the bottom right. Below the form is a table with the following columns:

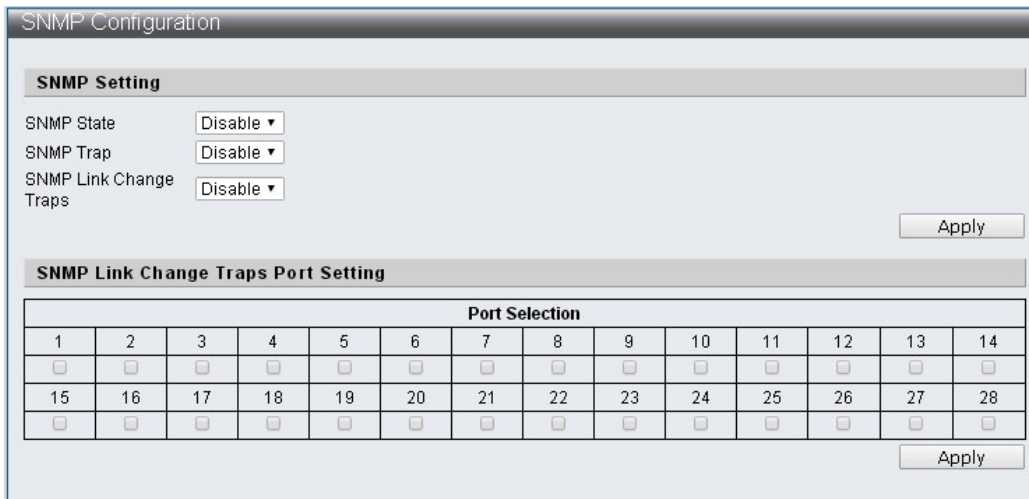
| Host IP Address | Security Model | Security Level | Community / User | Action |
|-----------------|----------------|----------------|------------------|--------|
|-----------------|----------------|----------------|------------------|--------|

| Parameter | Description |
|------------------------------|---|
| Host IP Address | Configure SNMP Trap Host IP Address |
| Security Model | Configure SNMP Version |
| Security Level | Assign Security, support only SNMPv3 NoAuthNoPriv – Unlimited Access and No Encryption AuthNoPriv – Limited Access and No Encryption AuthPriv – Limited Access and Encrypted Packets |
| Community String/SNMPv3 User | Input Community String or SNMPv3 Username Authentication |

1.4.6 SNMP Configuration

SNMP Configuration

Administrator -> SNMP Settings -> SNMP Configuration



The screenshot shows the 'SNMP Configuration' window. It includes the following sections:

- 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"/> |

'Apply' buttons are present at the bottom right of each section.


| Parameter | Description |
|------------------------|---|
| SNMP State | Enable / Disable SNMP Function |
| SNMP Trap | Enable / Disable SNMP Trap Function |
| SNMP Link Change Traps | Enable / Disable SNMP Link Change Traps |
| Port Selection | Configure Port Link Control |

1.5 NTP Settings

NTP, Network Time Protocol, enables time calibration.

NTP Configuration

Administrator -> NTP Settings



| Parameter | Description |
|---------------------|-------------------------------|
| System Time | Display System Time |
| State | Enable / Disable NTP Function |
| Time Zone | Configure Time Zone |
| Primary Server IP | Configure Primary Server IP |
| Secondary Server IP | Configure Secondary Server IP |

1.6 Syslog Settings

This page allows to Configure Syslog.

NTP Configuration

Administrator -> Syslog Settings

Syslog Settings

Global Setting

Syslog state Apply

Facility Setting

| Name | State | Facility |
|-------------------|-------------------------------------|----------|
| dhcpd | <input checked="" type="checkbox"/> | local1 ▾ |
| gvrp | <input checked="" type="checkbox"/> | local2 ▾ |
| stp_lacp_d | <input checked="" type="checkbox"/> | local3 ▾ |
| multicast_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

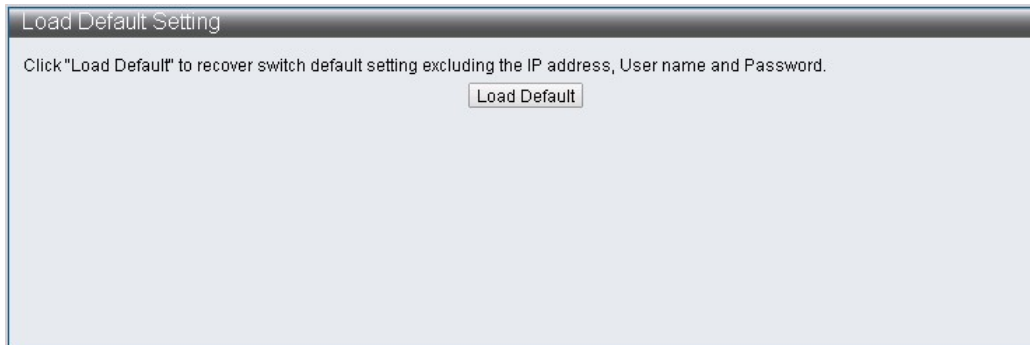
| Parameter | Description |
|--------------|--------------------------------------|
| Syslog state | Enable Syslog |
| Name | Protocol |
| State | Enable / Disable Protocol |
| Facility | Configure Local Number |
| Server Info. | Configure IP Address and Port Number |
| Priority | Local Port Prioritize |

1.7 Load Factory Default

This page allows the switch to return to original configuration.

Load Factory Default Configuration

Administrator -> Load Factory Default



Note : Loading Factory Default Setting will only reset IP1829A Functions. It will not affect Username, Password, and IP Address.

| Parameter | Description |
|--------------|---------------------------|
| Load Default | Return to Factory Default |

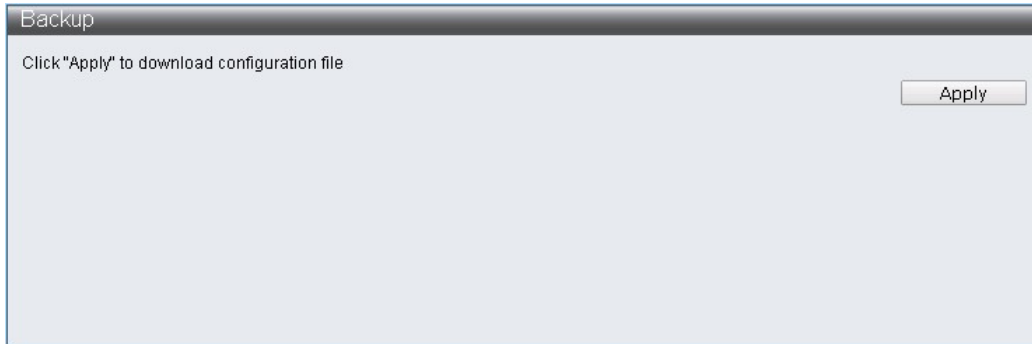
1.8 Configuration

This page provides the administrator with a method to backup or recover the switch configuration. User may use Backup Feature to create a file call current.tar.gz. When user is in need of Restoring to previous setting, user may upload current.tar.gz in the Restore Feature.

1.8.1 Backup

Backup Configuration

Administrator -> Configuration -> Backup



Note : To proceed with Backup configuration, please apply and download file called current.tar.gz. This file is used when initiate Restore Configuration in the future.

1.8.2 Restore

Restore Configuration

Administrator -> Configuration -> Restore



Note : Applying current.tar.gz file will not effect IP Address.

| Parameter | Description |
|-------------|---------------------------|
| Select File | Apply current.tar.gz file |

1.9 Firmware Update

This page allows user to update the latest version of IP1829A Firmware. Locate the name of the firmware file then click "Apply" to proceed with Firmware Update.

Firmware Update Configuration

Administrator -> Firmware Update

Firmware Update

Current Firmware Version :

Firmware Date :

Enter the path and name of the upgrade file then click the "Apply" button below.

未選擇任何檔案

| Parameter | Description |
|-------------|-------------------------------|
| Select File | Apply Latest Version Firmware |

2 Port Management

2.1 Port Configuration

This page allows to configure individual port such as Power up / down, Speed, Duplex, Auto-Negotiation, Flow Control, Address Learning, and Port Name.

Port Configuration

Basic Configuration -> Port Configuration

Port Link 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"/> |
| 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 | Selecting Corresponding Port |
| Settings | Display Port Selection |
| Status | Display Link Status |
| State | Power up/down |
| Speed/Duplex | Select Port Speed and Duplex |
| Auto Negotiation | Enable / Disable Auto-Negotiation |
| Flow Control | Enable / Disable Flow Control |
| Address Learning | Enable / Disable Address Learning |
| Name | Port Description |
| Refresh | Update Name |

2.2 Port Mirror Function

Port Mirror Function is operated utilizing features such as Source Ports and Destination Ports to monitor and manage streaming bandwidth.

Port Mirror Function Configuration

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: Method:

| Parameter | Description |
|----------------------------|---|
| Source Port Selection | Selecting Corresponding Port |
| Destination Port Selection | Select Corresponding Destination Port |
| State | Enable / Disable Port Mirror Function |
| Method | Configure Full / Half Duplex Port Mirror Function |

2.3 Broadcast Storm Protection

This page allows user to manage individual port by configuring Broadcast, Multicast, ARP, ICMP. The threshold is valid up to 255.

Broadcast Storm Protection Configuration

Basic Configuration -> Broadcast Storm Protection

| Parameter | Description |
|--------------------------|---|
| Type | The type of storm control Broadcast Multicast DLF ARP ICMP |
| Threshold | Configure the threshold of transmitting packet |
| Period for (Giga/100/10) | Configure the period |
| Port Selection | Selecting Corresponding Port |
| Broadcast | Enable / Disable Broadcast control |
| Multicast | Enable / Disable Multicast control |
| DLF | Enable / Disable DLF control |
| ARP | Enable / Disable ARP control |
| ICMP | Enable / Disable ICMP control |

2.4 Bandwidth Control

This page allows user to configure the bandwidth for each port. Factory Default is configured to Highest Bandwidth.

Bandwidth Control Configuration

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)

| 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 |

| Parameter | Description |
|----------------|---------------------------------|
| Port Selection | Selecting Corresponding Port |
| Ingress Rate | Configure Ingress Rate |
| Egress Rate | Configure Egress Rate |
| Refresh | Update Bandwidth Control Status |

3 VLAN Configuration

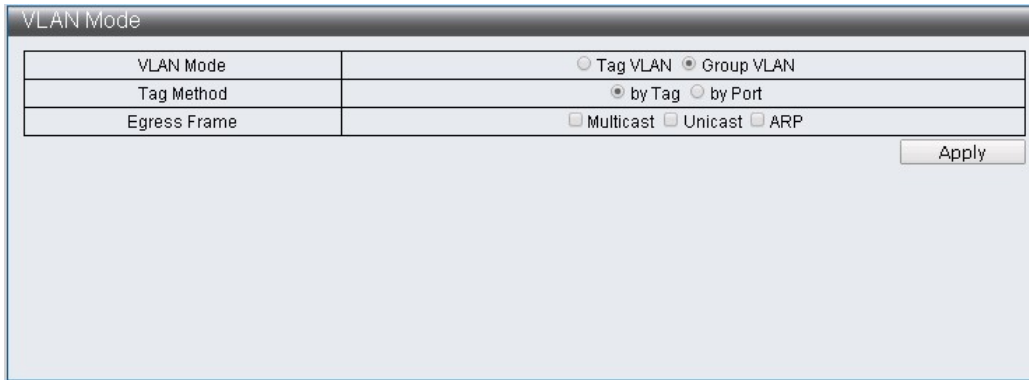
3.1 VLAN Mode

Virtual LAN allows user to configure the ports as a group to save switch bandwidth and increase network performance.

IP1829A support both IEEE 802.1Q and Port-Based VLAN, untag function can remove 802.1Q tag form the packet to make sure the compatibility with devices which not support 802.1Q.

VLAN Mode Configuration

VLAN Configuration -> VLAN Mode



| Parameter | Description |
|--------------|--|
| VLAN Mode | Tag VLAN: base on Tag-based Entry to define the VID and members of each entry. Group Vlan : base on Group-based Entry to define VLANmembers. |
| Tag Method | Active only in Tag VLAN mode By Tag : add/remove tag base on Tag-based Entry setting By Port : add/remove tag base on port tagging setting in VLAN port config page. |
| Egress Frame | Selected packet (Muticast 、Unicast and ARP) will be forwarded base on egress rule. |

3.2 VLAN Group-based Entry Configuration

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 | <input type="button"/> Edit | <input type="button"/> Delete |
| aaa | 1,6,8 | <input type="button"/> Edit | <input type="button"/> Delete |

| 參數 | 說明 |
|-------------------|-------------------------------|
| Group Name | Configure Group VLAN Name |
| Group Member Port | Configure Group VLAN Member |
| Add | Create New Group VLAN |
| Edit | Editing Group VLAN |
| Modify | Modify Group VLAN information |
| Delete | Delete selected Group VLAN |

3.3 VLAN Tag-based Entry Configuration

VLAN Tag-based Entry Configuration

VLAN Configuration -> VLAN Tag-based Entry Configuration

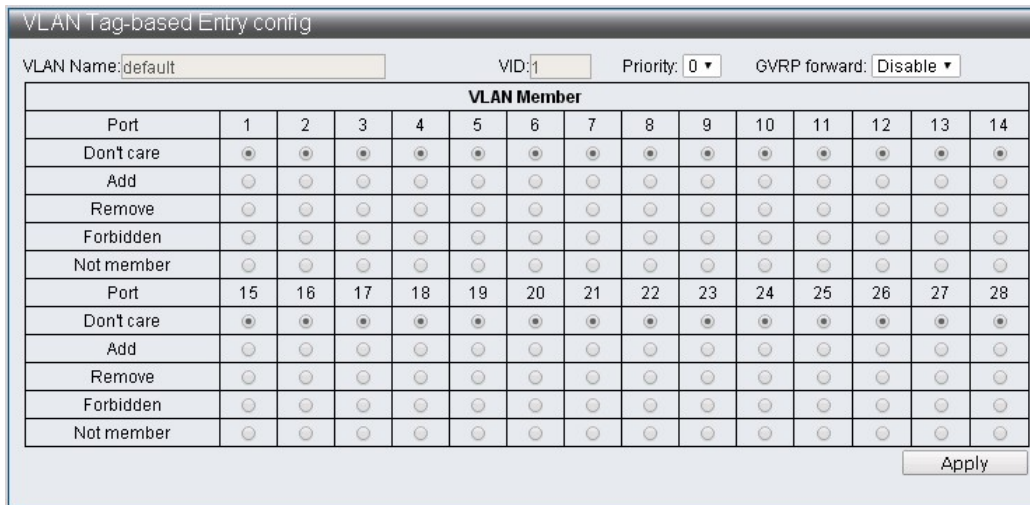
VLAN Tag-based Entry config

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 | <input type="button"/> Edit | <input type="button"/> Delete |
| protocol_vlan1 | static | 4081 | 1-28 | 0 | 0 | 0 | 0 | Deny | <input type="button"/> Edit | <input type="button"/> Delete |
| protocol_vlan2 | static | 4082 | 1-28 | 0 | 0 | 0 | 0 | Deny | <input type="button"/> Edit | <input type="button"/> Delete |
| protocol_vlan3 | static | 4083 | 1-28 | 0 | 0 | 0 | 0 | Deny | <input type="button"/> Edit | <input type="button"/> Delete |
| protocol_vlan4 | static | 4084 | 1-28 | 0 | 0 | 0 | 0 | Deny | <input type="button"/> Edit | <input type="button"/> Delete |

| Parameter | Description |
|-----------|---|
| Add | Add Tag VLAN entry and follow instruction to set Tag VLAN name and VID. |
| Edit | Edit selected Tag VLAN |
| Delete | Delete selected Tag VLAN |

Tag VLAN webpage



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 | Name of Tag VLAN |
| VID | Tag VLAN VID |
| Priority | Configure Tag VLAN Priority |
| GVRP forward | GVRP enable, define if Tag VLAN transmit through GVRP |
| VLAN Member | Configure Tag VLAN member |
| Don't care | Not change tag information for date transmit from this port |
| Add | Add tag for date transmit from this port |
| Remove | Remove tag for date transmit from this port |
| Forbidden | Forbid individual port from configuring Tag VLAN through GVRP. |
| Not member | Not VLAN member |

3.4 VLAN Port Configuration

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

| 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 corresponding port |
| PVID | Configure Port VID |
| Tagging | Configure the selected Port to add or remove VLAN Tag for transmit packet |
| Force VLAN Group | Define if follow Group VLAN setting first. |
| Uplink | Define uplink port ; when destination port is not in the same group, the packet will be forwarded from uplink port. |
| Exclusive | Define exclusive port: there is no data communication between selected exclusive ports. |
| Egress | define egress port ; when destination port is not in the same group, the packet will be forwarded base on egress rule |
| Ingress Check | Enable ingress check ; Check if the port is VLAN member through VID. |
| GVRP | Enable / Disable Port GVRP Feature |
| Ingress Frame | Allow to forward specific frame. |

3.5 Protocol VLAN Configuration

Protocol VLAN Configuration

VLAN Configuration -> Protocol VLAN Configuration

Protocol VLAN config

Protocol VLAN enable

| 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 ▾ |

| Parameter | Description |
|----------------------|--|
| Protocol VLAN enable | Protocol VLAN On / Off |
| Enable check box | Select entry |
| VID | Configure VID · when the packet meet selected Protocol, will base on this VID to check VLAN Member |
| Protocol type | Configure Protocol type |
| Protocol Select | Ether Type : When configuring Ether Type, Protocol type settings must be greater than 0x0600 · refer to the following format DA + SA + Protocol type LLC : Refer to the following format DA + SA + Length + Protocol type RFC 1042 : Refer to the following format DA + SA + Length + AAAA03 + 000000 + Protocol type |

3.6 QinQ Port Configuration

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 corresponding port |
| Index | Select Index , the Service tag of this Index can be set in QinQ Index Config webpage. |
| Tagging | Add : Add Service Tag on the packet, if the Service Tag already exist on packet, will base on Rx detect status to modify or replace Service tag. RMV : Remove Service tag when Rx detect enable. |
| Rx detect | Enable/Disable Service tag checking. |
| Keep PCP/DEI | Define if keep original PCP and DEI when modifying Service tag. |

3.7 QinQ Index Configuration

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 |

| Parameter | Description |
|-----------|---|
| Type | Configure Service Tag Type |
| Index | Configure Service Tag that is correlated to Index |

4 QoS(Quality of Service) Configuration

QoS is IEEE 802.1p, it allows user to define priority of specific packet to ensure the performance and bandwidth

4.1 QoS Group Member

QoS Group Member Configuration

QoS Configuration -> QoS Group Member

| 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"/> |
| <input type="button" value="Apply"/> | | | | | | | | | | | | | | |
| Group | Member Port | | | | | | | | | | | | | |
| A | 1-28 | | | | | | | | | | | | | |
| B | 0 | | | | | | | | | | | | | |

| Parameter | Description |
|-----------|----------------------|
| Group A | Select Group A Ports |
| Group B | Select Group B Ports |

4.2 QoS Mode Set

QoS Mode Set Configuration

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 Q1:0 Q2:0 Q3:0 Q4:0 Q5:0 Q6:0 Q7:0 | Q0:0 Q1:0 Q2:0 Q3:0 Q4:0 Q5:0 Q6:0 Q7:0 | 64Kbps / 51.2ms |
| B | First-In-First-Out | WRR | Q0:0 Q1:0 Q2:0 Q3:0 Q4:0 Q5:0 Q6:0 Q7:0 | Q0:0 Q1:0 Q2:0 Q3:0 Q4:0 Q5:0 Q6:0 Q7:0 | 64Kbps / 51.2ms |

Apply

| Parameter | Description |
|--|---|
| Queue Mode | Select QoS mode of each group 1. First-In-First-Out 2. SPx1+WRR/WFQ/BW/TWRRx7 3. SPx2+WRR/WFQ/BW/TWRRx6 4. SPx4+WRR/WFQ/BW/TWRRx4 5. SPx8 |
| Queue Method | Select Queue method : 1. WRR: Weighted Round Robin 2. WFQ: Weighted Fair Queue 3. Bwasure Dynamic Bandwidth Management 4. Bwlimit Static Bandwidth Management 5. TWRR: Time Weighted Rate Return |
| Queue Ratio | Configure the weights of each mode. |
| Queue Max Bandwidth | Configure the max. bandwidth in Bwasure. |
| Unit (BW throttle period / TWRR tickle unit) | Configure the unit of weights in each mode. |

4.3 QoS Out Queue Aging

QoS Out Queue Aging Configuration

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 | Configure Queue Aging Time |
| Fast Aging Time Enable | Aging Time Unit Conversion , from 100ms to 1.638ms |
| Port Select | Select corresponding Ports |
| Q0 ~ Q7 | Select the queue to enable Out Queue Aging Time |

4.4 QoS Remap

QoS Remap Configuration

QoS Configuration -> QoS Remap

| Parameter | Description |
|----------------|--|
| Port Selection | Select corresponding Ports |
| Mode | Mode select , Tx , Rx or Tx&Rx |
| Q0 ~ Q7 | Select the queue to remap Queue Number |

4.5 Class of Service

Class of Service Configuration

QoS Configuration -> Class of Service

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 ports which enable weights of specific packet. |
| ACL | Enable / Disable ACL |
| IGMP | Enable / Disable IGMP |
| IP Addr | Enable / Disable IP Addr(Port-MAC-IP Entry) |
| MAC Addr | Enable / Disable MAC Addr (LUT Priority) |
| VID | Enable / Disable VLAN Tag |
| TCP/UDP Port | Enable / Disable TCP/UDP Port number |
| DSCP | Enable / Disable IPv4 TOS /IPv6 DSCP |
| 802.1q | Enable / Disable 802.1q |
| Physical Port | Select weight of each Ports, Q0 ~ 7 |

4.6 802.1q Base

802.1q Base Configuration

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 |

| Parameter | Description |
|-----------------------|------------------------|
| Earlier Edition | Select earlier version |
| 2005 Edition | Select 2005 version |
| Exchange the priority | exchange the weights |

4.7 DSCP Base

DSCP Base Configuration

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:
 Value(0-63):
 Priority:

| 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 action when DSCP not match |
| DSCP List | Select DSCP List |
| Value | Configure DSCP |
| Priority | configure the queue of DSCP. |

4.8 TCP/UDP Port Base

TCP/UDP Port Base Configuration

QoS Configuration -> TCP/UDP Port Base

TCP/UDP Port Base

TCP/UDP Port Base Priority

NOTE:

(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

NOTE:

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 style="width: 50px;" type="text"/> | Port:1 <input style="width: 50px;" type="text"/> | From Port:1 <input style="width: 50px;" type="text"/> To Port:1 <input style="width: 50px;" type="text"/> | From Port:1 <input style="width: 50px;" type="text"/> To Port:1 <input style="width: 50px;" type="text"/> |

| Parameter | Description |
|----------------|---|
| Protocol | TCP/UDP protocol |
| Priority | Select the queue of each TCP/UDP protocol |
| User defined A | Configure TCP/UDP Port number |
| User defined B | Configure TCP/UDP Port number |
| User defined C | Configure TCP/UDP Port Range |
| User defined D | Configure TCP/UDP Port Range |

5 ACL Configuration

IP1829A has 128 ACL Entry, which allows users to configure base of preference.

ACL Profile List

ACL Ctag Settings

ACL Stag Settings

ACL VLAN Settings

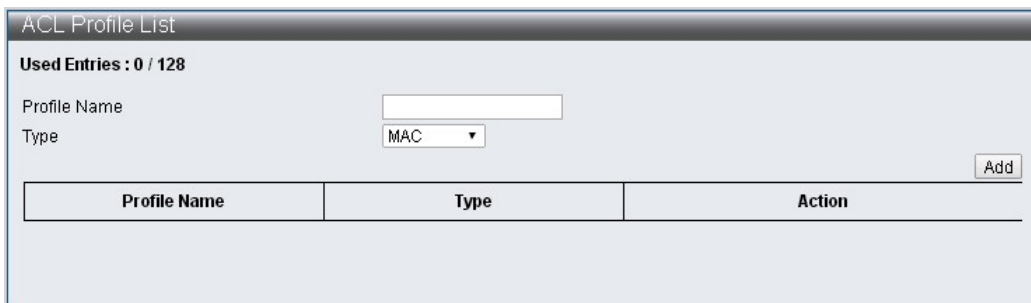
ACL Bandwidth Settings

ACL DSCP Settings

5.1 ACL Profile List

ACL Profile List Configuration

ACL Configuration -> ACL Profile List



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

| Parameter | Default | Description |
|--------------|---------|---|
| Used Entries | 0/128 | Display used entry number. Please note the rule or setting may used more than one entry. |
| Profile Name | | Profile name |
| Type | | Type : MAC, IP, IP_Ext, IPv6, Advanced |

Please follow procedure below to set rule.

Step1 : Input Profile Name , select Type , click “Add”

Step2 : click “edit” which user wants to modify.

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

ACL Profile Configuration - IP

ACL Profile Configuration - IP

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

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: (0 ~ 65535) |
| | Low: (0 ~ 65535) High: (0 ~ 65535) |
| <input type="checkbox"/> | Destination Port: (0 ~ 65535) |
| | Low: (0 ~ 65535) High: (0 ~ 65535) |
| <input type="checkbox"/> | VID: (1 ~ 4094) |
| <input type="checkbox"/> | CoS: (0 ~ 7, VID should be 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: testIP6 | |
| <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 | |

| Parameter | Description |
|-------------------------|---|
| Source MAC Address | Input Source MAC Address |
| Source MAC Mask | Select Source MAC Mask , Select FF:FF:FF:FF:FF:FF 、 FF:FF:FF:00:00:00 and FF:FF:00:00:00:00 |
| Destination MAC Address | Input Destination MAC Address |
| Destination MAC Mask | Select Destination MAC Mask , Select FF:FF:FF:FF:FF:FF 、 FF:FF:FF:00:00:00and FF:FF:00:00:00:00 |
| Source IP Address | Select Source IP Address |
| Source IP Mask | Select Source IP Mask , Select 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 | Input Destination IP Address |
| Destination IP Mask | Select Destination IP Mask , Select 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 | Input Source Port , can be specific number or a range |
| Destination Port | Input Destination Port , can be specific number or a range |

| | |
|--------------------------|--|
| VID | Input VID , from 1~4094 |
| CoS | Configure CoS , must be set with VID to take effect Range: 0~7 |
| Ethernet Type | Input Ethernet Type , Parameter limited to 0000~FFFF |
| TCP Flag | Select TCP Flag |
| DSCP | Input DSCP , Parameter limited to 0~63 |
| IP Protocol | Input IP Protocol , Parameter limited to 00~FF |
| Source IPv6 Address | Input Source IPv6 Address |
| Source IPv6 Mask | Select Source IPv6 Mask 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 | Input Destination IPv6 Address |
| Destination IPv6 Mask | Select Destination IPv6 Mask 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 | Select source Port |

Action Drop

| | |
|---------------|--|
| Action Drop ▾ | |
|---------------|--|

Action Type1

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

Action Type4

| | | |
|---|---|---|
| Action <input type="text" value="Type4"/> | <input type="checkbox"/> Insert Ctag | <input type="text" value="(1 ~ 24, index select)"/> |
| | <input type="checkbox"/> Ctag Vlan Enable | |
| | <input type="checkbox"/> Insert Stag | <input type="text" value="(1 ~ 24, index select)"/> |
| | <input type="checkbox"/> Stag Vlan Enable | |
| <input type="checkbox"/> Mirror Enable | | |

| Parameter | Description |
|------------------|--|
| Redirect | Configure redirecting to another Port |
| Priority | Configure Priority , Parameter limited to 0~7 |
| DSCP | Configure DSCP Index , Transmit DSCP value base on ACL DSCP Settings Configuration. |
| Bandwidth | Configure Bandwidth Index , Limit packet bandwidth base on the configuration of ACL Bandwidth Settings. |
| Copy to CPU | Copy to CPU |
| PTP Enable | Enable PTP function |
| Mirror Enable | Enable Mirror Feature , Transmit packet to Destination Port base on the Basic Configuration -> Port Mirror Function Configuration. |
| Sflow Enable | Enable Sflow function. |
| Insert Ctag | Configure Insert Ctag Index, base on ACL Ctag Settings to insert Ctag |
| Ctag Vlan Enable | Enable Insert Ctag Index to select ACL VLAN Settings to forward packet. |
| Insert Stag | Configure Insert Stag Index , base on ACL Stag Settings to insert Ctag |
| Stag Vlan Enable | Enable Insert Stag Index to select ACL VLAN Settings to forward packet. |

5.2 ACL Ctag Settings

ACL Ctag Settings Configuration

ACL Configuration -> ACL Ctag Settings

ACL Ctag Settings

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

| 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)

| 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)

| 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, through source IP/MAC check to improve security and filtering.

6.1.1 Port-MAC-IP Port Setting

Port-MAC-IP Port Setting Configuration

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

Port-MAC-IP Port Setting

IMP Ports Configure

| 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"/> |

Status: Disable ▾ All clear

Max learning entry: 1 ▾

Recovery learning entry: Disable ▾ Apply

Port Status

| 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 corresponding Ports |
| All | Select all Ports |
| Clear | Delete all selected Ports |
| Status | Enable / Disable Port-MAC-IP Binding Feature |
| Max learning entry | Configure each Port's maximum learning entry |
| Recover learning entry | When learning entry reach max. number, automatically recover first entry. |

6.1.2 Port-MAC-IP Entry Setting

Port-MAC-IP Entry Setting Configuration

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

Port-MAC-IP Table

Create IMP Entry

IPv4 ▾ Apply

IMP Entry Management

IP

check port

Port 1 ▾

check MAC

MAC

Action Priority ▾

Priority Disable ▾ Apply

IP Table Monitor

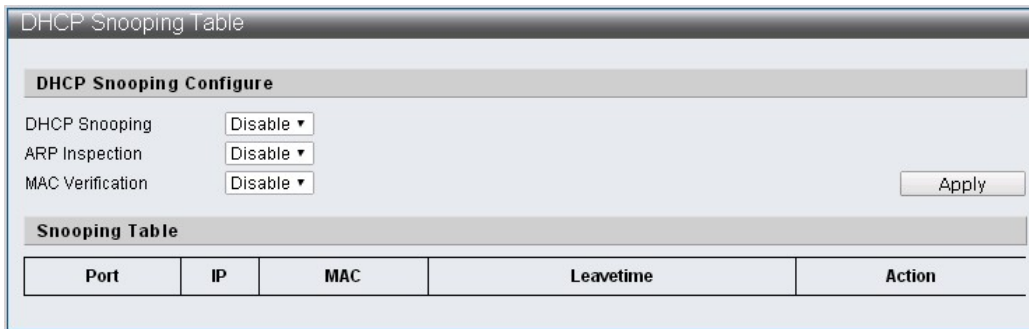
| IP | Type | port | MAC | Rule | Priority | Action |
|--------------|--------|---|-----|--------|----------|---|
| 192.168.2.10 | static | <input type="checkbox"/> 0 <input type="checkbox"/> | | filter | disable | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |

| Parameter | Description |
|----------------------|--|
| IPv4/IPv6 | Select IPv4 or IPv6 and in put IP Address |
| IMP Entry Management | Click “edit” icon to modify IMP entry in IP Table Monitor |
| IP | IMP Entry IP Address |
| Check port | Enable/Disable source port checking |
| Port | Configure IP Address corresponding Port |
| Check MAC | Enable/Disable source MAC checking. |
| MAC | Configure source MAC of IP Address. |
| Action | Configure action when matching, Filter/Priority |
| Priority | Configure IMP Entry Queue when selected action is priority |

6.1.3 DHCP Snooping Entry Setting

DHCP Snooping Entry Setting Configuration

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



The screenshot shows a web interface titled "DHCP Snooping Table". It contains a "DHCP Snooping Configure" section with three dropdown menus: "DHCP Snooping" (set to "Disable"), "ARP Inspection" (set to "Disable"), and "MAC Verification" (set to "Disable"). An "Apply" button is located to the right of these settings. Below this is a "Snooping Table" section with a table header containing columns for "Port", "IP", "MAC", "Leavetime", and "Action".

| Parameter | Description |
|------------------|---|
| DHCP Snooping | Enable / Disable DHCP Snooping Feature |
| ARP Inspection | Enable / Disable ARP Inspection Feature |
| MAC Verification | Enable / Disable MAC Verification Feature |

6.2 MAC Address Binding

This feature allows to drop, Mirror and forward packets to CPU port when source MAC is not match MAC binding list.

Please note MAC address learning disable is requested to stop unknown MAC(the MAC not exist in MAC table) or this function just can stop the packet with the MAC which learned in MAC table.

MAC Address Binding Configuration

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

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

Create MAC Entry

MAC Address

Port

MAC Entry Management

MAC

port

Drop

Sniffer

Sflow

Priority

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 | <input type="button" value="Edit"/> | <input type="button" value="Delete"/> |

| Parameter | Description |
|----------------------|--|
| Port Selection | Select corresponding port and disable address learning |
| Binding Enable | Enable / Disable MAC Binding Feature |
| Aging Time | Configure MAC Binding Aging Time from 1~1800000sec |
| MAC Address | Create Binding MAC Address |
| Port | Select MAC Address Binding Port |
| MAC Entry Management | Click "edit" icon in MAC table to modify or delete setting. |
| MAC | Display MAC Address Information |
| Port | Configure Binding MAC Address Port |
| Drop | When source MAC of received packet match Mac entry. The packet will be dropped. |
| Sniffer1 | When source MAC of received packet match Mac entry. The packet will be forwarded to Destination Port which defined in Port Mirror. |
| Sflow | When source MAC of received packet match Mac entry. The packet will be forwarded to CPU Port. |

| | |
|----------|--|
| Priority | When source MAC of received packet match Mac entry. The packet will be assign to corresponding queue. |
|----------|--|

7 Advanced Features

7.1 Spanning Tree Protocol

STP

STP (Spanning Tree Protocol) is a layer 2 protocol base on OSI model, this feature ensure loop free Ethernet Network to avoid broadcast storm, prevent repeated packet and MAC address table trashing. Spanning tree also allows a network design to include backup links to provide fault tolerance if an active link fails.

BPDU

BPDU (Bridge Protocol Data Unit) is a special packet which used to exchange information about bridge IDs and root path costs between each bridge.

7.1.1 STP Global Settings Configuration

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

STP Global Settings

STP State: ▾

STP Version: ▾

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 | Default | Description |
|-----------------------------|---------|--|
| STP State | Enable | Enable / Disable STP Feature |
| STP Version | MSTP | Configure STP version , support STP 、RSTP 、MSTP |
| Bridge Max Age (6-40) | 20 | Configure the max bridge age when this switch is defined as root bridge. When any of Bridge Port in this tree (except Designated Port) did not receive BPDU within this period, that Bridge Port will start to send BPDU to re-create spanning tree |
| Bridge Hello Time (1-10) | 2 | Configure the BPDU sending time interval when this switch is defined as root bridge. |
| Bridge Forward Delay (4-30) | 15 | Configure time interval which switch port state turns to Forwarding when this switch is defined as root bridge. |
| Max Hops (6-40) | 20 | When operating in MSTP mode, configure the Max hops when this switch is defined as root bridge. This setting defining the Max. node of BPDU, when switch receive BPDU, it will minus 1 of Remaining Hops, the it becomes 0, will not send BPDU. |

7.1.2 STP Port Settings

STP Port Settings Configuration

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"/> |

| Parameter | Default | Description |
|------------------|---------|----------------------------------|
| STP Port Enabled | Enabled | Enable STP of corresponding Port |

7.1.3 MST Configuration Identification

MST Configuration Identification Configuration

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

MST Configuration Identification Settings

Configuration Name:
Revision Level(0-65535):

Instance ID Settings

MSTI ID (1-4094):
Action:
VID List (1-4094):

| MSTI ID | VID List | Action |
|---------|----------|---|
| CIST | 1-4094 | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |

| Parameter | Default | Description |
|-------------------------|---------|---|
| Configuration Name | IP1829 | Configure name, it' s MSTI (Multiple Spanning Tree Instance) only ID. |
| Revision Level(0-65535) | 0 | Configure revision level to identify if in the same MSTP region |
| MSTI ID (1-4094) | | Configure MSTI entry ID |
| Action | Add VID | MSTI VID List method Add VID : add VID List to MSTI Remove VID : remove VID List from MSTI. |

| | | |
|-------------------|--|--------------------|
| VID List (1-4094) | | Edit MSTI VID List |
|-------------------|--|--------------------|

7.1.4 STP Instance Settings

STP Instance Settings Configuration

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

MSTP Port Information Configuration

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 | Default | Description |
|--|---------|--|
| Port | 1 | Configure displayed Port no. |
| Instance ID | | Configure MSTI entry ID no. |
| Internal Path Cost (0-200000000,0=Auto) | | Configure MSTI internal cost of the Port. When Region is a independent network, this cost means root cost of this bridge. |
| Priority (0-240) | | Configure MSTI priority of the Port. |

7.2 Trunk & Link Aggregation

Trunk Group combine several specific ports and use load balance design to achieve higher bandwidth and performance. IP1829A supports four FE groups and two Gigabit Ethernet groups,

Each FE trunk group included max. four members, Gigabit group included 2 members. Also can combine two FE group to one trunk group or four gigabit port as one group.

Trunk & Link Aggregation Configuration

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"/> | | | | <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 ▾ | | | | | | | |
| Trunk Type | LACP ▾ | | | | LACP ▾ | | | | LACP ▾ | | | | LACP ▾ | | | | LACP ▾ | | | | | | | |
| Mode | Passive ▾ | | | | Passive ▾ | | | | Passive ▾ | | | | Passive ▾ | | | | Passive ▾ | | | | | | | |
| Time Out | Short ▾ | | | | Short ▾ | | | | Short ▾ | | | | Short ▾ | | | | Short ▾ | | | | | | | |

| Parameter | Default | 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 as one |
| Port Select | | Select group member |
| Status | | Display member statud, "A" means setting accomplished. |
| State | Disable | Enable / Disable Status |
| Trunk Type | LACP | Select Trunk type, LACP or Static |
| Mode | Passive | Mode selection, Passive or Active |
| Time Out | Short | Time Outselection, support Short and Long , Short means one packet per second , Time Outis 3 sec. , Long means one packet per 30 sec. and Time Out is 90 sec. |

7.3 IGMP Snooping

Internet Group Management Protocol (IGMP) Snooping

IGMP Snooping Settings

IGMP Snooping Router Ports Settings

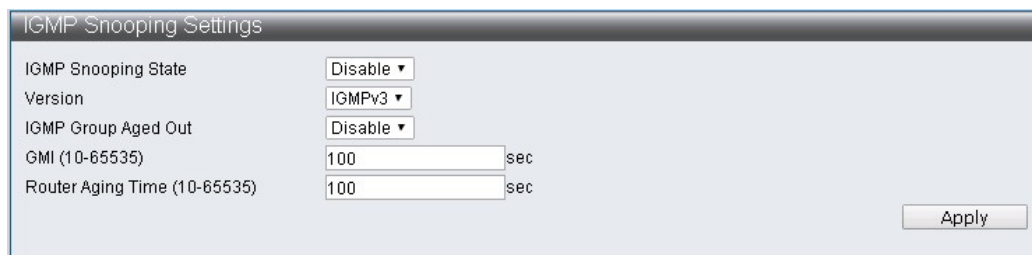
IGMP Snooping Groups

IGMP Snooping Ports

7.3.1 IGMP Snooping Settings

IGMP Snooping Settings Configuration

Advanced Features -> IGMP Snooping -> IGMP Snooping Settings



The screenshot shows a configuration window titled "IGMP Snooping Settings". It contains the following fields and controls:

- IGMP Snooping State: (dropdown menu)
- Version: (dropdown menu)
- IGMP Group Aged Out: (dropdown menu)
- GMI (10-65535): sec
- Router Aging Time (10-65535): sec
- button

| Parameter | Default | Description |
|---------------------|----------|---|
| IGMP Snooping State | Disable | IGMP Snooping Enable / Disable |
| Version | IGMPv3 | Select version from IGMPv1 、IGMPv2 、IGMPv3 |
| IGMP Group Aged Out | Disable | Enable/Disable dynamic group age out follow GMI Configuration. |
| GMI | 100(sec) | Group Member Interval 、dynamic Group will base on this setting to query if member still exist. |
| Router Aging Time | 100(sec) | Dynamic Router Port aging time, if no Query received continuously, dynamic Router Port will be removed. |

7.3.2 IGMP Snooping Router Ports Settings

IGMP Snooping Router Ports Settings Configuration

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 | Configure static Router Ports |
| IGMP Snooping Dynamic Router Ports | Display static Router Ports |

7.3.3 IGMP Snooping Groups

IGMP Snooping Groups Configuration

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 | Configure static group and members. |
| IGMP Snooping Group Information | Display current Group status |

7.3.4 IGMP Snooping Ports

IGMP Snooping Ports Configuration

Advanced Features -> IGMP Snooping -> IGMP Snooping Ports

IGMP Snooping Ports

IGMP Snooping Port Information

Port 1 ▾

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

| Parameter | Description |
|--------------------------------|---|
| IGMP Snooping Port Information | Display Group information of selected port. |

7.4 MLD Snooping

MLD Snooping

Multicast Listener Discovery (MLD) Snooping

MLD Snooping Settings

MLD Snooping Router Ports Settings

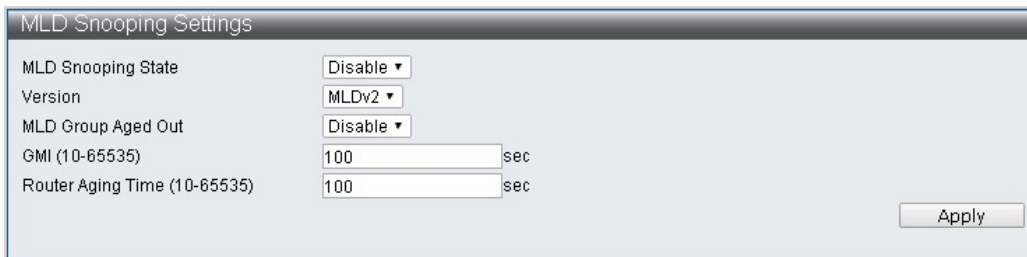
MLD Snooping Groups

MLD Snooping Ports

7.4.1 MLD Snooping Settings

MLD Snooping Settings Configuration

Advanced Features -> MLD Snooping -> MLD Snooping Settings



| Parameter | Default | Description |
|--------------------|----------|---|
| MLD Snooping State | Disable | Enable / Disable MLD Snooping |
| Version | IGMPv3 | Version selection , choose between MLDv1 & MLDv2 |
| MLD Group Aged Out | Disable | Enable/Disable dynamic group age out follow GMI Configuration. |
| GMI | 100(sec) | Group Member Interval , dynamic Group will base on this setting to query if member still exist |
| Router Aging Time | 100(sec) | Dynamic Router Port aging time, if no Query received continuously, dynamic Router Port will be removed. |

7.4.2 MLD Snooping Router Ports Settings

MLD Snooping Router Ports Settings Configuration

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

MLD Snooping Router Ports Settings

| MLD 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"/> |

| MLD 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 |
|-----------------------------------|--------------------------------------|
| MLD Snooping Static Router Ports | Configure static Router Ports |
| MLD Snooping Dynamic Router Ports | Display learned dynamic Router Ports |

7.4.3 MLD Snooping Groups

MLD Snooping Groups Configuration

Advanced Features -> MLD Snooping -> MLD Snooping Groups

MLD Snooping Groups

MLD 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"/> |

MLD Snooping Group Information

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

| Parameter | Description |
|---|------------------------------------|
| MLD Snooping Static Group Configuration | Configure static Group and members |
| MLD Snooping Group Information | Display current Group status |

7.4.4 MLD Snooping Ports

MLD Snooping Ports Configuration

Advanced Features -> MLD Snooping -> MLD Snooping Ports

MLD Snooping Ports

MLD Snooping Port Information

Port 1 ▾

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

| Parameter | Description |
|-------------------------------|---|
| MLD Snooping Port Information | Display Group information of selected port. |

7.5 DHCP Relay Agent

DHCP Relay Agent Configuration

Advanced Features -> DHCP Relay Agent

DHCP RelayAgent

Global Setting

DHCP relay-agent state Apply

DHCPv4 Setting

Hops Limit

| 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 | Default | Description |
|------------------------|---------|--|
| DHCP relay-agent state | | Enable/Disable DHCP Relay-Agent |
| Hops Limit | 4 | Hops limit of DHCP packet forwarding. |
| DHCPv4 Server Setting | | DHCPv4 Server › configure up to 5 sets |
| DHCPv6 Server Setting | | DHCPv6 Server, configure up to 5 sets |

7.6 Loop Detect

Loop Detect is the ability to detect when a loop occurs within a switch. When loop detection is activated, the port that is causing loop will be blocked in order to prevent from crashing the network.

Loop Detection Configuration

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 | Enable / Disable Loop Detect |
| LDP Interval Time | Configure LDP time interval |
| Block Release Time | Configure release time for blocked Port |
| LDP MAC Destination Address | Configure DA of LDP |
| Loop Detect Port Enabled | Enable Loop Detect on corresponding Port |
| Refresh | Refresh Loop Detect Status |

7.7 GVRP

GVRP (Generic VLAN Registration Protocol) is a protocol that facilitates control of VLANs, through several messages (Join, Leave and LeaveAll) exchanging, this allows network devices to dynamically exchange VLAN configuration information with other devices.

Join : When device received the Join message from other device or VLAN established in the device, it will send out Join message, Join message including JoinEmpty and JoinIn ◦

Leave : When device received the Join message from other device or VLAN removed from the device. It will send out Leave message, it including LeaveEmpty and LeaveIn ◦

LeaveAll : When Port enable GVRP function, it will activate LeaveAll timer in the mean time ◦ once time Out occurred, it will send out LeaveAll message.

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

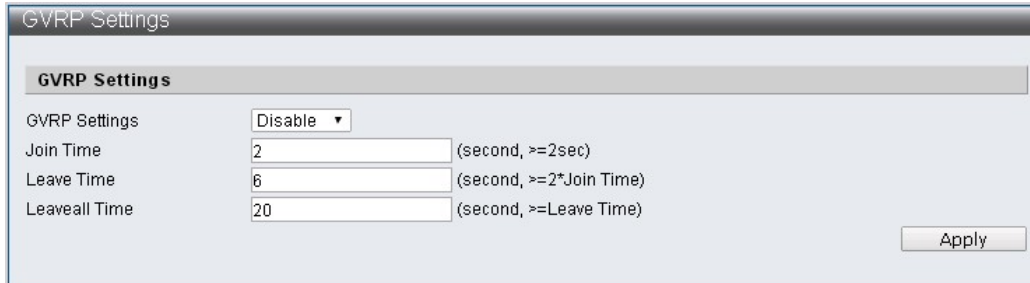
Join timer : Using to control transmission of Join message to ensure Join message well received by other device ◦

Leave timer : Using to control transmission of Leave message, when Leave or LeaveAll received, it will activate Leave timer.

LeaveAll timer : When Port enable GVRP function ◦ it will activate LeaveAll timer, once time Out occurred, it will send out LeaveAll message. when LeaveAll received, LeaveAll timer will be reset to avoid unnecessary packet.

GVRP Configuration

Advanced Features -> GVRP Settings



The screenshot shows the 'GVRP Settings' configuration window. It includes a title bar 'GVRP Settings' and a sub-header 'GVRP Settings'. The configuration options are:

- GVRP Settings: Disable (dropdown menu)
- Join Time: 2 (text input) (second, >=2sec)
- Leave Time: 6 (text input) (second, >=2*Join Time)
- Leaveall Time: 20 (text input) (second, >=Leave Time)

An 'Apply' button is located at the bottom right of the form.

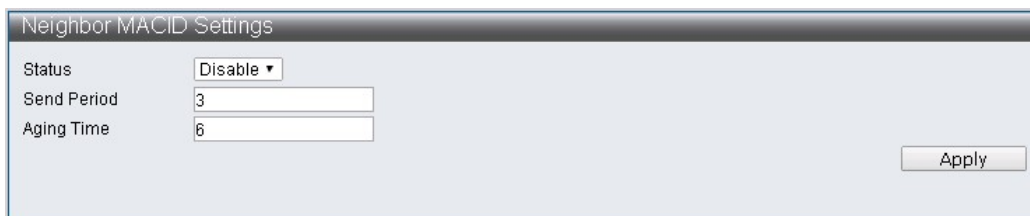
| Parameter | Description |
|---------------|---|
| GVRP Settings | Enable or Disable GVRP Feature |
| Join Time | Configure Join Time · Must be 2 seconds or greater |
| Leave Time | Configure Leave Time · Must be greater than 2*Join Time |
| Leaveall Time | Configure Leaveall Time · Must be greater than Leave Time |

7.8 Neighbor MACID

Neighbor MACID is to find out Neighbor switch's MAC ID, base on select send period to transmit Neighbor Info packet, when switch receive Neighbor Info packet, will save and update MAC ID and Aging time, by using UDP NetCmd, can get Switch Neighbor MAC ID information.

Neighbor MACID Configuration

Advanced Features -> Neighbor MACID Settings



The screenshot shows the 'Neighbor MACID Settings' configuration window. It includes a title bar 'Neighbor MACID Settings' and the following configuration options:

- Status: Disable (dropdown menu)
- Send Period: 3 (text input)
- Aging Time: 6 (text input)

An 'Apply' button is located at the bottom right of the form.

| Parameter | Description |
|-------------|---|
| Status | Enable or Disable Neighbor MACID Feature |
| Send Period | Configure the duration in between every packet. |
| Aging Time | Configure aging time of each MAC. |

8 Monitoring

8.1 MIB Counter

MIB Counter provides the calculated data of packet number & bytes of each port, it can be narrow down to 28 of received packet type and 14 of transmitted packet type.

MIB Counter Configuration

Monitoring -> MIB Counter

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

Refresh Clear

| Parameter | Description |
|-----------|---|
| Port No. | Port Number |
| Receive | The data of received Packets and Bytes |
| Transmit | The data of transmitted Packets and Bytes |
| Action | Port Detail Information |
| Refresh | Refresh packet counter |
| Clear | Clear packet counter |

Monitoring -> MIB Counter -> Detail

Mib Counter

Port NO: 1 ▾ Apply

| 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 |
| Mcst | 0 | 0 |
| Ucst | 0 | 0 |
| Pause | 0 | 0 |
| Pkts | 0 | 0 |

[<<<Back](#)
Refresh Clear

| Parameter | Description |
|-----------|---------------------------------|
| Type | Packet Type |
| Receive | The data of received Packets |
| Transmit | The data of transmitted Packets |
| Refresh | Refresh packet counter |
| Clear | Clear packet counter |

8.2 Scan MACID Lookup Table

Scan MACID Lookup Table provides MAC Address for every port. Also, user is able to delete Lookup Table's MAC Address.

Scan MACID Lookup Table Configuration

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"/> |

MAC Table Monitor

Entry number: 1

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

| Parameter | Description |
|----------------|---------------------------------|
| Port Selection | Select corresponding port |
| All | Select all port |
| Clear | Clear MAC address |
| Apply | Clear selected port's MAC Table |
| Refresh | Refresh MAC Table |

8.3 Syslog

Syslog provides the configuration history of switch manager.

Syslog Configuration

Monitoring -> Syslog

| Syslog Messages | |
|-----------------|---|
| 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 | Update system history |