

**850G-12I**

**Industrial 12-Port GbE  
Managed Switch with 4 GbE SFP Uplinks**

**User Manual**

Version 1.00

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# 1 Introduction

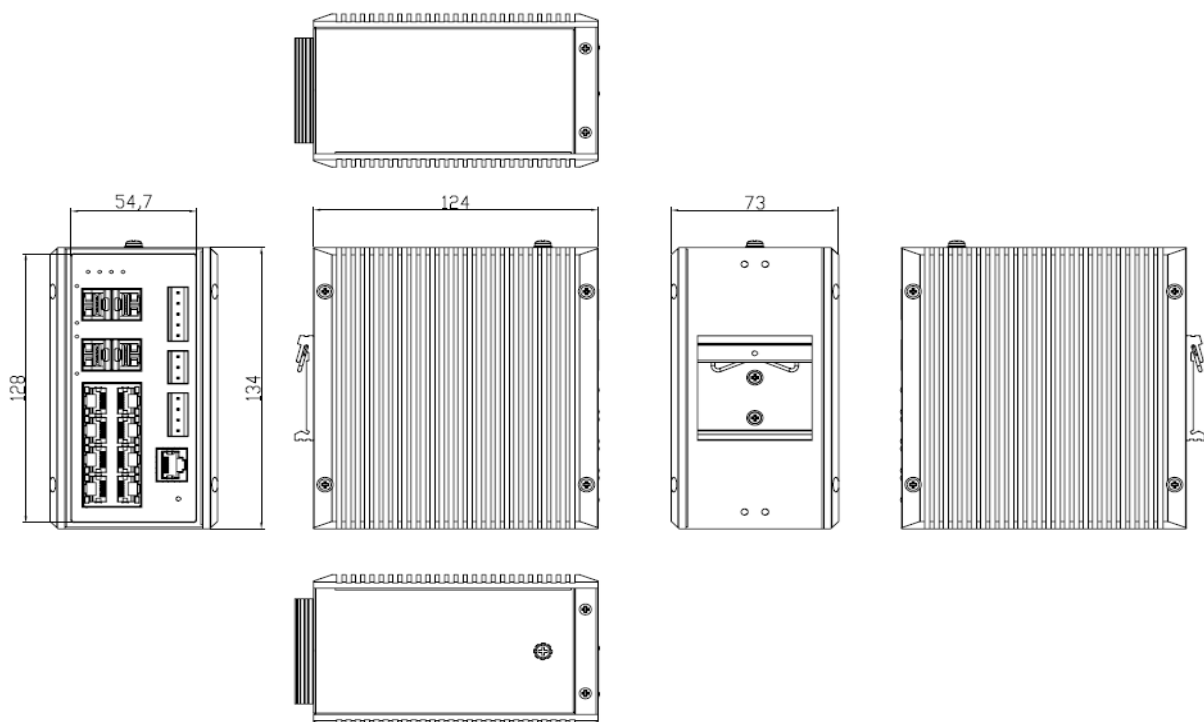
Proscend 850G-12I Industrial Ethernet Switch features friendly manageability in full Gigabit Ethernet networks, as well as 1000Mbps Ethernet speed over copper and fiber for enabling quality of services, network security, and resilience. The 850G-12I is the perfect solution for reducing network response time for mission-critical applications such as video security, transportation, energy, etc.

The 850G-12I supports 8 10/100/1000Base-T ports and 4 SFP slots working with SFP (Small form-factor pluggable) fiber transceivers to scale out modern industrial networks with the ring, daisy chain, or tree topologies.

## 1.1 Features

- Operating temperature  $-40^{\circ}\text{C} \sim 75^{\circ}\text{C}$
- Support ERPS Ring failover protection
- Support Spanning Tree Protocol STP/RSTP/MSTP.
- Support IPv6 manageable
- Support Jumbo frames
- DIN-rail mounted

## 1.2 Dimensions



## 1.3 Specifications

<p><b>Interfaces</b></p> <ul style="list-style-type: none"><li>■ 8 x 10/100/1000BASE-T (RJ45)</li><li>■ 4 x 100FX/GbE SFP</li><li>■ 1 x RJ45 console port</li><li>■ 1 x Reset button</li><li>■ 1 x 5-pin Terminal Block for Power in</li><li>■ 1 x 3-pin Terminal Block for DO</li><li>■ 1 x 4-pin Terminal Block for DI</li></ul> <p><b>Network Resilience</b></p> <ul style="list-style-type: none"><li>■ IEEE 802.1D STP, IEEE 802.1w RSTP, IEEE 802.1s MSTP</li><li>■ LACP: Static trunk</li></ul> <p><b>Protocols &amp; Security</b></p> <ul style="list-style-type: none"><li>■ Port-based VLAN</li><li>■ IEEE 802.1ab Link Layer Discovery Protocol (LLDP)</li><li>■ IEEE 802.1p QoS, IGMP snooping, Port-based traffic shaping</li><li>■ IP and MAC-based access control</li><li>■ IEEE 802.1X authentication Network Access Control</li><li>■ Multicast, Broadcast, Flooding Storm Control</li><li>■ DoS, Dynamic ARP Inspection, DHCP Snooping, IP Source Guard</li></ul> <p><b>Mechanical</b></p> <ul style="list-style-type: none"><li>■ Dimension (H x D x W): 134 x 124 x 73 mm</li><li>■ Weight: 950g</li><li>■ DIN-rail and Wall mounted</li><li>■ Aluminum &amp; Metal: IP40</li></ul>	<p><b>Management</b></p> <ul style="list-style-type: none"><li>■ Web-based Management, HTTP/HTTPS, Console, CLI, Telnet, SSH</li><li>■ SNMP v1, v2c, v3, Syslog</li><li>■ HTTP/TFTP firmware upgrade</li><li>■ SNTp</li></ul> <p><b>Power</b></p> <ul style="list-style-type: none"><li>■ Input: 12V~57VDC, 0.8A (Max)</li><li>■ System power consumption: 13 W</li></ul> <p><b>LED Indicators</b></p> <ul style="list-style-type: none"><li>■ Power input, System Alarm</li><li>■ Ethernet LAN Port Link &amp; Speed, SFP Port Link</li></ul> <p><b>Environment &amp; Regulatory Compliance</b></p> <ul style="list-style-type: none"><li>■ Operation temperature: -40 to +75°C</li><li>■ Storage temperature: -40 to +85 °C</li><li>■ Humidity (non-condensing): 10 to 95% RH EMC Class A</li><li>■ Emission (EMI/EMS): CE/FCC class A,</li><li>■ EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8</li><li>■ Safety: ETL EN62368</li><li>■ Shock: IEC60068-2-27</li><li>■ Freefall: IEC60068-2-32</li><li>■ Vibration: IEC60068-2-6</li><li>■ MTBF: &gt; 1,000,000 hours@25 degree C</li></ul> <p><b>Standards and Certifications</b></p> <ul style="list-style-type: none"><li>■ CE&amp;UKCA</li><li>■ FCC</li></ul>
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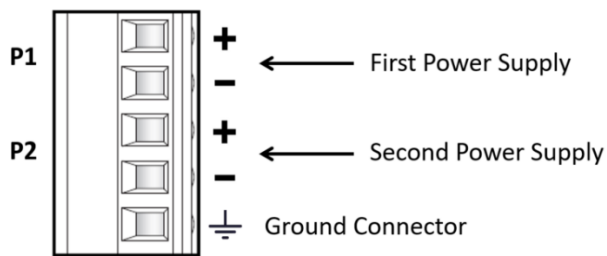
## 2 Hardware Installation

This chapter introduces how to install and connect the hardware.

### 2.1 Connecting Power

The 850G-12I Industrial Ethernet Switch can be powered from two power supplies (input range 12~57 VDC). Two power supplies are in front of the switch.

Insert the positive and negative wires (AWG 20-28) into V+ and V- contacts on the terminal block respectively and use a flat-head screwdriver to push in and open the wire clamp.

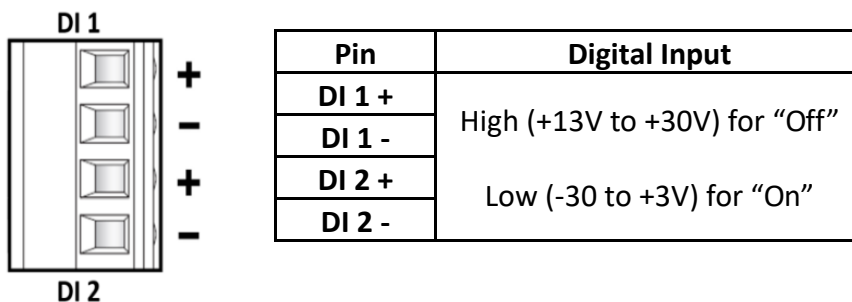


#### ⚠ WARNING

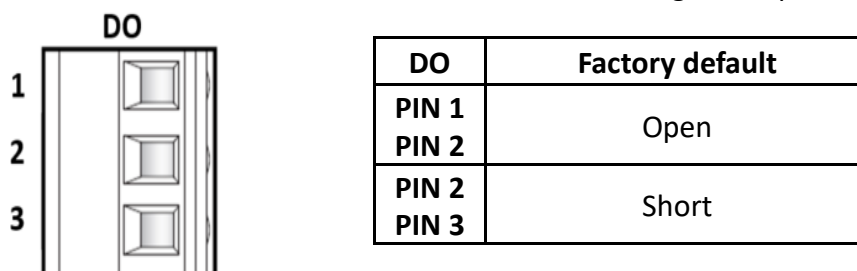
The DC power should be connected to a well-fused power supply.

### 2.2 Connecting I/O Ports

There are four terminals on the terminal block for digital inputs.




There are three terminals on the terminal block for digital output.



**NOTE:** DO configuration (Open/Short) can be reversed (Short/Open) from the UI.

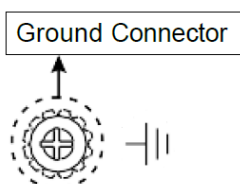
## 2.3 Reset Button

RESET 

Function	Operation
Reset	Press the button for 3second.
Reset to default setting	Press the button for more than 6 seconds.

## 2.4 Ground Connector

The switch must be properly grounded for optimum system performance.



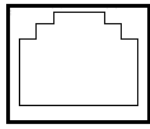
## 2.5 LED Indicators

The following table explains the LED indicators on the front panel.

LED	Color	Description
P1	On: Green	Power on.
	Off	Power off.
P2	On: Green	Power on.
	Off	Power off.
ALM	On: Red	One of the two powers is abnormal
	Off	The system is operating normally.
SYS	On: Green	System is ready.
	Blinking	System is booting up.
	Off	No power
1~8 LAN Port Link/Act	On: Green	Ethernet LINK UP at 1000Mbps.
	On: Amber	Ethernet LINK UP at 10/100Mbps.
	Blinking	Ethernet traffic detected.
	Off	Ethernet LINK DOWN.
9~12 SFP Port UPLINK	On: Green	LINK UP at 100/1000Mbps.
	Blinking	Traffic detected.
	Off	LINK DOWN.

## 2.6 Console Connection

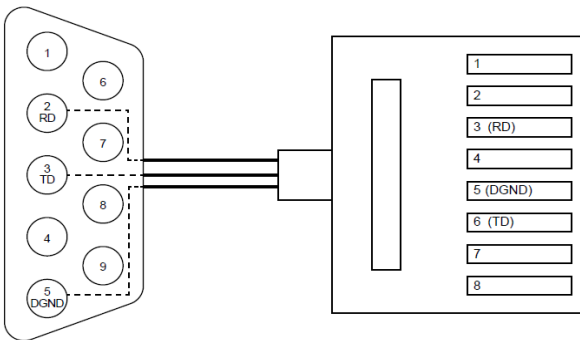
The console port on the front panel is for local management by using a terminal emulator or a computer with terminal emulation software.



CONSOLE

- DB9 connector connect to computer COM port
- Baud rate: 115200bps
- 8 data bits, 1 stop bit
- None Priority
- None flow control

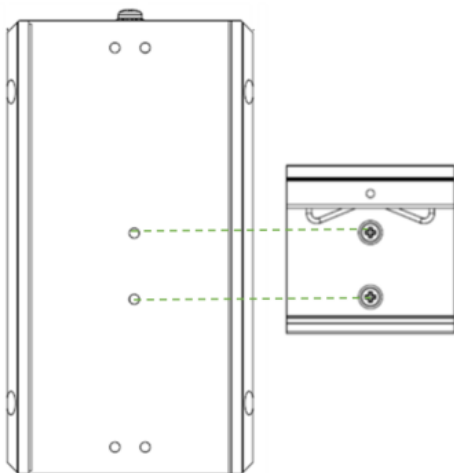
To connect the host PC to the console port, a RJ45 (male) connector-to-RS232 DB9 (female) connector cable is used. The RJ45 connector of the cable is connected to the console port of the switch, the DB9 connector of the cable is connected to the PC COM port. The pin assignment of the console cable is shown below:



NOTE: The console cable is not included in the package.

## 2.7 DIN-rail Mounting

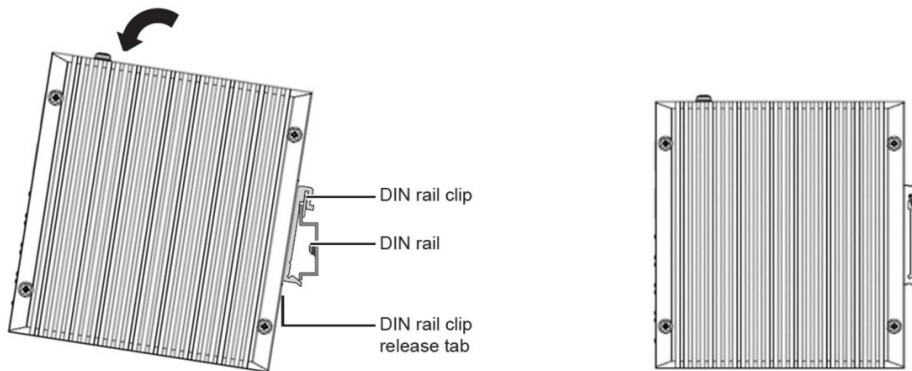
**STEP 1:** Use the screws to install the DIN-rail kit to attach at the rear side of the switch.



**NOTE:** The type of screw is flat head M3 x 6mm.

**STEP 2:** Hook the unit onto the DIN-rail.

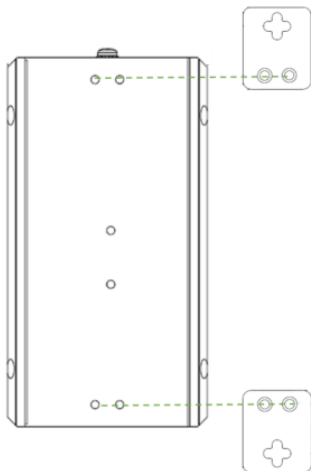
STEP 3: Push the bottom of the unit towards the DIN-rail until it locks in place.



**NOTE:** The DIN-rail-mounting screws are not included in the package.

## 2.8 Wall Mounting

Use the screws to install the wall-mounting kit to attach at the rear side of the switch.



**NOTE:** For all switches (Non-PoE and PoE Series), the operation of wall mounting is the same

The type of screw is flat head M3 x 6mm.

## 2.9 Web Interface Connect & Login

1. Factory default IP: 192.168.1.1
2. Login with default account and password.

- **Username: root**
- **Password: 2wsx#EDC**

## 2.10 CLI Initialization and Configuration

1. Key-in the command under Telnet: telnet **192.168.1.1**
2. Login with default account and password.

**Username: root**

**Password: 2wsx#EDC**

3. Change the IP with commands listed below:

```
config
```

```
ip address xxx.xxx.xxx.xxx mask xxx.xxx.xxx.xxx exit
```



## 3 Using the Web

### 3.1 Using the Web Interface

The object of this document “Web Configuration Tool Guide” is to address the web feature, design layout and describe how to use the web interface.

#### 3.1.1 Web Browser Support

IE 7 (or newer version) with the following default settings is recommended:

Language script	Latin based
Web page font	Times New Roman
Plain text font	Courier New
Encoding	Unicode (UTF-8)
Text size	Medium

Firefox with the following default settings is recommended:

Web page font	Times New Roman
Encoding	Unicode (UTF-8)
Text size	16

Google Chrome with the following default settings is recommended:

Web page font	Times New Roman
Encoding	Unicode (UTF-8)
Text size	Medium

#### 3.1.2 Navigation

All main screens of the web interface can be reached by clicking on hyperlinks in the four menu boxes on the left side of the screen:

- **Status**
- **Network**
- **Port**
- **VLAN**
- **MAC Address Table**
- **Spanning Tree**
- **Discovery**
- **Multicast**
- **Security**
- **ACL**

- **QoS**
- **Diagnostics**
- **Management**

### 3.1.3 Title Bar Links



#### Save

If any unsaved change has been made to the *configuration* (by you during this or a prior session, or by any other administrator using the web interface or the Command Line Interface), a Save icon appears in the title line. To save the running configuration to the startup configuration:

1. Click on the Save link. The Message box appears.
2. Click on OK to save the running configuration to the startup configuration.

#### Logout

Disconnect your current session and need to enter the username/password to login again.

#### Reboot

Reboot the system and unsaved change in the configuration will be lost.

## 3.2 Login

This section provide instruction to login

<b>Operation</b>	<ol style="list-style-type: none"> <li>1. Open Browser and enter default IP address http://192.168.1.1.</li> <li>2. Fill Username and Password.</li> <li>3. Click "LOGIN"</li> </ol>
<b>Field</b>	<b>Description</b>
<b>Username</b>	Login user name. The maximum length is 32. Default: root
<b>Password</b>	Login user password. The maximum length is 32. Default: 2wsx#EDC

A screenshot of a login interface on a light blue background. At the top center is the word "Login" in a large, bold, black font. Below it, there are two input fields: the first is labeled "Username:" and the second is labeled "Password:". Both labels are in a small, black font. Below the input fields is a button with the word "LOGIN" in a small, black font. The button has a light blue gradient and a thin black border.

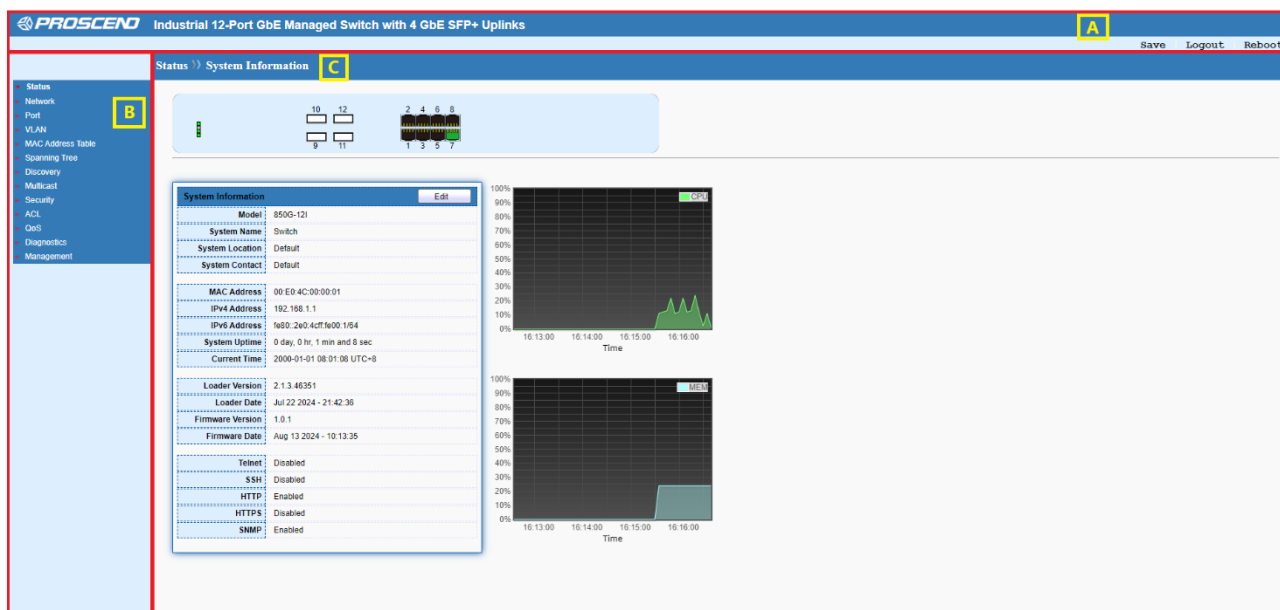
Item	Description
<b>Username</b>	Login username. The maximum length is 32. Default: root
<b>Password</b>	Login user password. The maximum length is 32. Default: 2wsx#EDC

### 3.3 Navigation

The main screen is divided into three parts as below.

 - Title Bar,  - Navigation Panel and  - Main Window.

The menu items are divided into main and sub menu to configure the settings and get the status of connectivity on the navigation panel.



(1) **A** : Title Bar

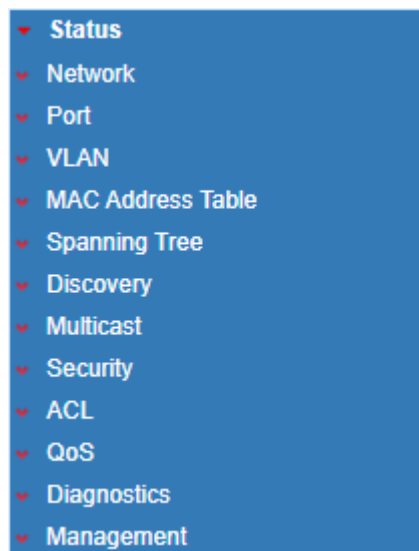
The title bar provides Save, Logout and reboot.



Item	Description
Save	All configuration should be saved in order to prevent reset after switch reboot.
Logout	Logout from the switch.
Reboot	Reboot the system and unsaved change in the configuration will be lost.

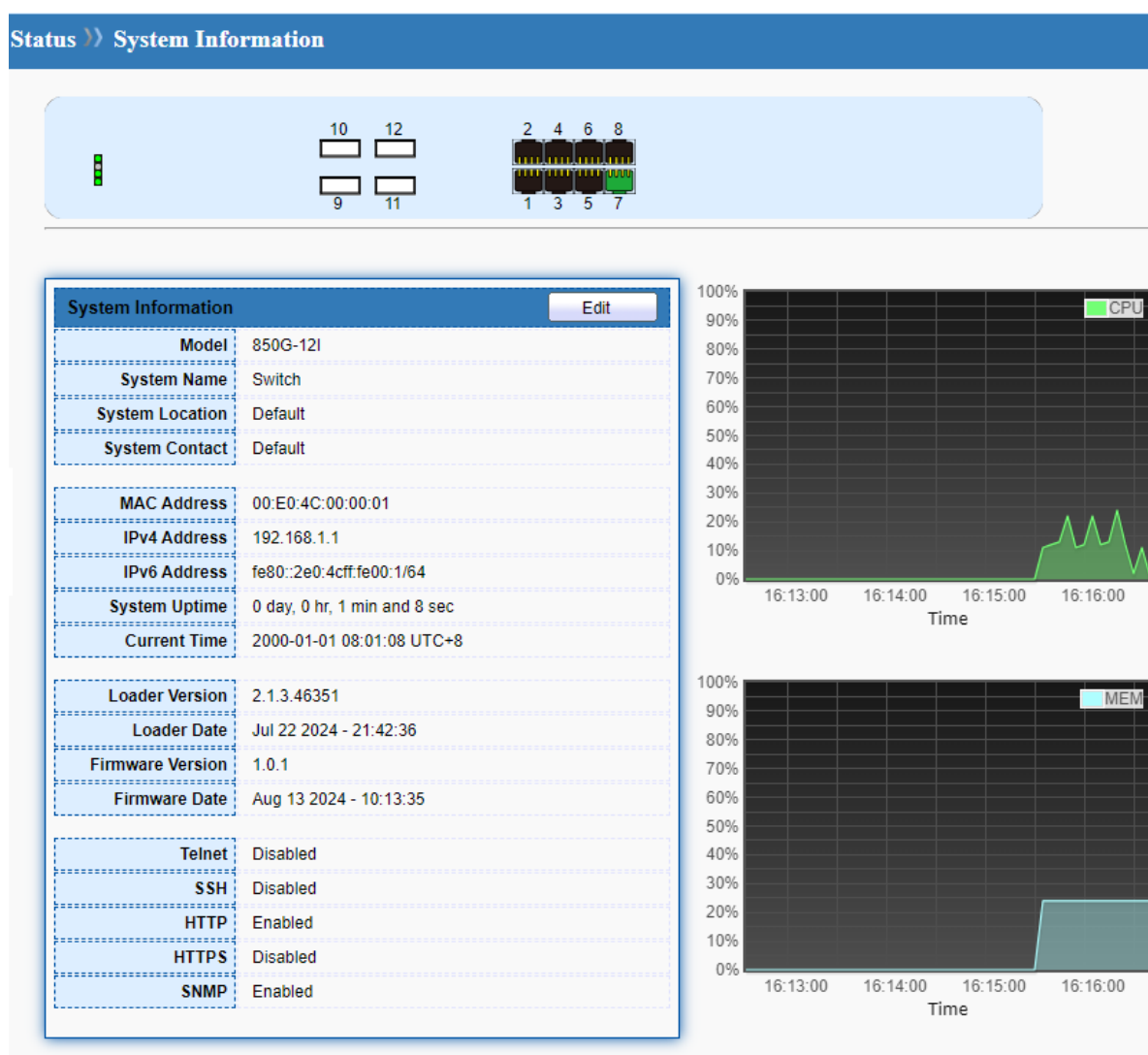
(2) **B** : Navigation Panel-Main Menu and Sub Menu

The menu items are divided into main and sub menu to configure the settings and get the status of connectivity on the navigation panel.



(3) C : Main Window

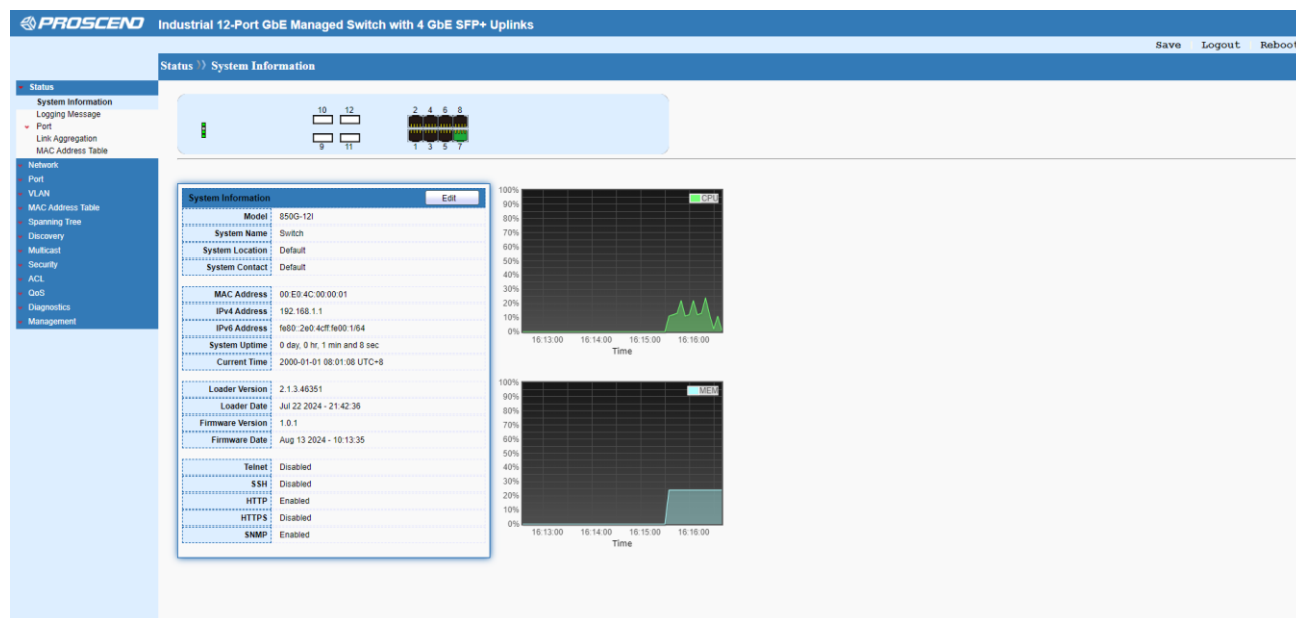
This section shows the information or setting fields from main menu and sub menu.



## 4 Status


### 4.1 System Information

This page displays detailed information of system, port status and CPU/Memory utilization.



### 4.2 Logging Message

This page provides the system log for all events.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

**Status >> Logging Message**

Status

System Information

**Logging Message**

Port

Link Aggregation

MAC Address Table

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

**Logging Message Table**

Viewing RAM

Showing All entries      Showing 1 to 9 of 9 entries

Log ID	Time	Severity	Description
1	Jan 03 2000 23:49:50	notice	New http connection for user root, source 192.168.1.10 ACCEPTED
2	Jan 03 2000 23:47:39	notice	GigabitEthernet6 link up
3	Jan 03 2000 23:47:29	notice	GigabitEthernet8 link down
4	Jan 03 2000 23:47:25	notice	GigabitEthernet8 link up
5	Jan 01 2000 01:08:44	notice	GigabitEthernet8 link down
6	Jan 01 2000 00:01:38	notice	New http connection for user root, source 192.168.1.11 ACCEPTED
7	Jan 01 2000 00:00:24	notice	GigabitEthernet8 link up
8	Jan 01 2000 00:00:21	notice	RESTART: System restarted - Warm Start
9	Jan 01 2000 00:00:21	notice	Logging is enabled

Clear
Refresh

First
Previous
1
Next
Last

## 4.3 Port

### 4.3.1 Statistics

This page displays statistics for GE/10GE/LAG ports.

## Status &gt;&gt; Port &gt;&gt; Statistics

- ▼ Status
  - System Information
  - Logging Message
  - ▲ Port
    - Statistics**
    - Error Disabled
    - Bandwidth Utilization
    - Link Aggregation
    - MAC Address Table
- ▼ Network
  - ▼ Port
  - ▼ VLAN
  - ▼ MAC Address Table
  - ▼ Spanning Tree
  - ▼ Discovery
  - ▼ Multicast
  - ▼ Security
  - ▼ ACL
  - ▼ QoS
  - ▼ Diagnostics
  - ▼ Management

Port	GE1 ▼
MIB Counter	<input checked="" type="radio"/> All <input type="radio"/> Interface <input type="radio"/> Etherlike <input type="radio"/> RMON
Refresh Rate	<input type="radio"/> None <input type="radio"/> 5 sec <input checked="" type="radio"/> 10 sec <input type="radio"/> 30 sec

[Clear](#)

Interface	
ifInOctets	0
ifInUcastPkts	0
ifInNUcastPkts	0
ifInDiscards	0
ifOutOctets	0
ifOutUcastPkts	0
ifOutNUcastPkts	0
ifOutDiscards	0
ifInMulticastPkts	0
ifInBroadcastPkts	0
ifOutMulticastPkts	0
ifOutBroadcastPkts	0
Etherlike	
dot3StatsAlignmentErrors	0
dot3StatsFCSErrors	0
dot3StatsSingleCollisionFrames	0
dot3StatsMultipleCollisionFrames	0
dot3StatsDeferredTransmissions	0
dot3StatsLateCollisions	0
dot3StatsExcessiveCollisions	0



## Status &gt;&gt; Port &gt;&gt; Statistics

- ▼ Status
  - System Information
  - Logging Message
  - ▲ Port
    - Statistics**
    - Error Disabled
    - Bandwidth Utilization
    - Link Aggregation
    - MAC Address Table
- ▼ Network
  - ▼ Port
  - ▼ VLAN
  - ▼ MAC Address Table
  - ▼ Spanning Tree
  - ▼ Discovery
  - ▼ Multicast
  - ▼ Security
  - ▼ ACL
  - ▼ QoS
  - ▼ Diagnostics
  - ▼ Management

## Etherlike

dot3StatsAlignmentErrors	0
dot3StatsFCSErrors	0
dot3StatsSingleCollisionFrames	0
dot3StatsMultipleCollisionFrames	0
dot3StatsDeferredTransmissions	0
dot3StatsLateCollisions	0
dot3StatsExcessiveCollisions	0
dot3StatsFrameTooLongs	0
dot3StatsSymbolErrors	0
dot3ControlInUnknownOpCodes	0
dot3InPauseFrames	0
dot3OutPauseFrames	0

## RMON

etherStatsDropEvents	0
etherStatsOctets	0
etherStatsPkts	0
etherStatsBroadcastPkts	0
etherStatsMulticastPkts	0
etherStatsCRCAlignErrors	0
etherStatsUnderSizePkts	0
etherStatsOverSizePkts	0
etherStatsFragments	0
etherStatsJabbers	0
etherStatsCollisions	0
etherStatsPkts64Octets	0
etherStatsPkts65to127Octets	0
etherStatsPkts128to255Octets	0
etherStatsPkts256to511Octets	0
etherStatsPkts512to1023Octets	0
etherStatsPkts1024to1518Octets	0

### 4.3.2 Error Disabled

This page displays “Error Disabled” status of port and can recover it on this page, too.

## Status

System Information

Logging Message

## Port

Statistics

Error Disabled

Bandwidth Utilization

Link Aggregation

MAC Address Table

## Network

## Port

## VLAN

## MAC Address Table

## Spanning Tree

## Discovery

## Multicast

## Security

## ACL

## QoS

## Diagnostics

## Management

## Error Disabled Table



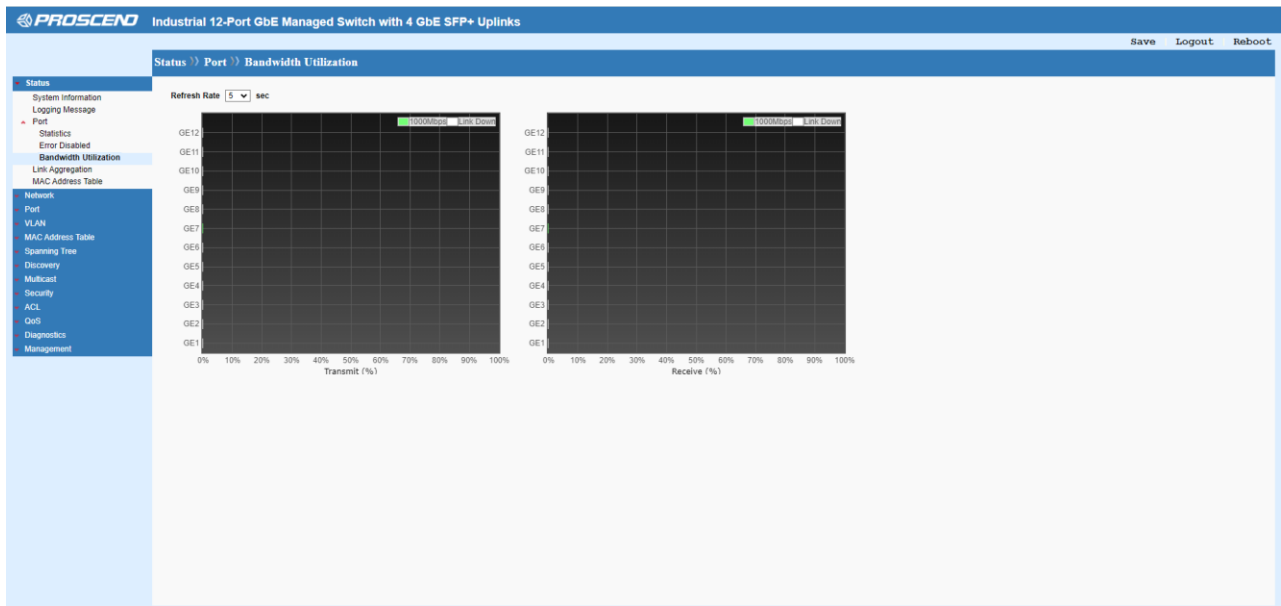
<input type="checkbox"/>	Port	Reason	Time Left (sec)
<input type="checkbox"/>	GE1	---	---
<input type="checkbox"/>	GE2	---	---
<input type="checkbox"/>	GE3	---	---
<input type="checkbox"/>	GE4	---	---
<input type="checkbox"/>	GE5	---	---
<input type="checkbox"/>	GE6	---	---
<input type="checkbox"/>	GE7	---	---
<input type="checkbox"/>	GE8	---	---
<input type="checkbox"/>	GE9	---	---
<input type="checkbox"/>	GE10	---	---
<input type="checkbox"/>	GE11	---	---
<input type="checkbox"/>	GE12	---	---
<input type="checkbox"/>	LAG1	---	---
<input type="checkbox"/>	LAG2	---	---
<input type="checkbox"/>	LAG3	---	---
<input type="checkbox"/>	LAG4	---	---
<input type="checkbox"/>	LAG5	---	---
<input type="checkbox"/>	LAG6	---	---
<input type="checkbox"/>	LAG7	---	---
<input type="checkbox"/>	LAG8	---	---

Refresh

Recover

### 4.3.3 Bandwidth Utilization

This page displays bandwidth utilization for both transmitting and receiving.



## 4.4 Link Aggregation

This page displays status of each Link Aggregation port.

LAG	Name	Type	Link Status	Active Member	Inactive Member
LAG 1		---	---		
LAG 2		---	---		
LAG 3		---	---		
LAG 4		---	---		
LAG 5		---	---		
LAG 6		---	---		
LAG 7		---	---		
LAG 8		---	---		

## 4.5 MAC Address Table

This page displays all MAC addresses that through the Switch.

## Status &gt;&gt; MAC Address Table

## Status

- System Information
- Logging Message
- Port
  - Statistics
  - Error Disabled
  - Bandwidth Utilization
  - Link Aggregation
- MAC Address Table

## Network

- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

## MAC Address Table

Showing All entries

Showing 1 to 2 of 2 entries




VLAN	MAC Address	Type	Port
1	00:E0:4D:00:00:00	Management	CPU
1	F4:28:53:10:57:A1	Dynamic	GE6

[First](#) [Previous](#) [1](#) [Next](#) [Last](#)
[Clear](#)
[Refresh](#)

## 5 Network

This section allows you to setup map settings, neighbor devices and topology map.

### 5.1 IP Address

The switch needs an IP address for it to be managed over the network. The factory default IP address is 192.168.1.1/24. This page allows to configure IP basic settings.

The screenshot displays the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The page title is "Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks". In the top right corner, there are links for "Save", "Logout", and "Reboot". A left sidebar contains a navigation menu with items: Status, Network (selected), IP Address (selected), System Time, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, ACL, QoS, Diagnostics, and Management. The main content area is titled "Network >> IP Address". It contains three sections: "IPv4 Address", "IPv6 Address", and "Operational Status". The "IPv4 Address" section has radio buttons for "Static" (selected) and "Dynamic", and input fields for IP Address (192.168.1.1), Subnet Mask (255.255.255.0), Default Gateway (192.168.1.254), DNS Server 1 (168.95.1.1), and DNS Server 2 (168.95.192.1). The "IPv6 Address" section has a checked "Auto Configuration" checkbox, an unchecked "DHCPv6 Client" checkbox, and input fields for IPv6 Address, Prefix Length (0, with a note "(0 - 128)", IPv6 Gateway, DNS Server 1, and DNS Server 2. The "Operational Status" section shows the current values: IPv4 Address (192.168.1.1), IPv4 Default Gateway (192.168.1.254), IPv6 Address (fe80::2e0:4dff:fe00:0/64), IPv6 Gateway (::), and Link Local Address (fe80::2e0:4dff:fe00:0/64). An "Apply" button is located at the bottom of the configuration area.

Item	Description
IPv4 Address	
Address Type	Select the type of network connection.

	<b>Static:</b> Use static IPv4 address. <b>Dynamic:</b> Use DHCP provisioned IP address and Gateway if feasible.
IP Address	Fill in the IPv4 address.
Subnet Mask	Fill in the IPv4 mask.
Default Gateway	Fill in the IPv4 Gateway address.
DNS Server 1	Enter primary IPv4 DNS server address in this field.
DNS Server 2	Enter second IPv4 DNS server address in this field.
IPv6 Address	
Auto Configuration	The option to let switch automatically configure IPv6 address.
DHCPv6 Client	Enable this feature if there is a DHCPv6 server on your network for assigning IPv6 Address, instead of using Router Advertisement.
IPv6 Address	Fill in the IPv6 address
Prefix Length	Specify the prefix length of the IPv6 address.
IPv6 Gateway	Fill in the IPv6 Gateway address.
DNS Server 1	Enter primary IPv6 DNS server address in this field.
DNS Server 2	Enter second IPv6 DNS server address in this field.
Operational Status	
IPv4 Address	Current IPv4 address.
IPv4 Default Gateway	Current IPv4 Default Gateway address.
IPv6 Address	Current IPv6 address.
IPv6 Gateway	Current IPv6 Gateway address.
Link Local Address	Current Link Local address.

## 5.2 System Time

This page allows a user to specify where the time of Switch should be inquired from.

## Network &gt;&gt; System Time

- Status
- Network
  - IP Address
  - System Time**
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

**Source**

☐ SNTP

☐ From Computer

☒ Manual Time

**Time Zone** UTC +8:00 ▼

**SNTP**

**Address Type** ☒ Hostname ☐ IPv4

**Server Address**

**Server Port**  (1 - 65535, default 123)

**Manual Time**

**Date**  YYYY-MM-DD

**Time**  HH:MM:SS

**Daylight Saving Time**

**Type** ☒ None ☐ Recurring ☐ Non-recurring

**Offset**  Min (1 - 1440, default 60)

**Recurring**

From: Day Sun ▼ Week First ▼ Month Jan ▼ Time

To: Day Sun ▼ Week First ▼ Month Jan ▼ Time

**Non-recurring**

From:  YYYY-MM-DD  HH:MM

To:  YYYY-MM-DD  HH:MM

**Operational Status**

**Current Time** 2000-01-04 07:52:46 UTC+8

[Apply](#)

## Network &gt; IP Address

Item	Description
Source	<b>SNTP:</b> Click it to get time and date from SNTP Server <b>From Computer:</b> Click it to get time and date from connected PC. <b>Manual Time:</b> Specify static time and date manually.
Time Zone	Specify the time zone of your area.
<b>SNTP</b>	
Address Type	Specify the address type of SNTP server.
Server Address	Enter the SNTP server IP address or hostname.
Server Port	Specify the service port of SNTP server.

Manual Time	
Date	Enter the date.
Time	Enter the time.
Daylight Saving Time	
Type	<p>Select the type of daylight saving time.</p> <p><b>None:</b> Disable daylight saving time.</p> <p><b>Recurring:</b> Using recurring mode of daylight saving time.</p> <p><b>Non-Recurring:</b> Using non-recurring mode of daylight saving time.</p> <p><b>USA:</b> Using daylight saving time in the United States that starts on the second Sunday of March and ends on the first Sunday of November.</p> <p><b>European:</b> Using daylight saving time in the Europe that starts on the last Sunday.</p>
Offset	Specify the adjust offset of daylight saving time.
Recurring	<p><b>From:</b> Specify the starting time of recurring daylight saving time.</p> <p><b>To:</b> Specify the ending time of recurring daylight saving time.</p>
Non-recurring	<p><b>From:</b> Specify the starting time of non-recurring daylight saving time.</p> <p><b>To:</b> Specify the ending time of non-recurring daylight saving time.</p>
Operational Status	
Current Time	Display the current time and date of Switch.



## 6 Port

Port Setting is used to configure settings for the switch ports, trunk, Layer 2 protocols and other switch features.

### 6.1 Port Setting

Available settings are explained as follows.

PROSCEND Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save Logout Reboot

Port >> Port Setting

Port Setting Table

Entry	Port	Type	Description	State	Link Status	Speed	Duplex	Flow Control
<input type="checkbox"/>	1	GE1	1000M Copper	Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	2	GE2	1000M Copper	Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	3	GE3	1000M Copper	Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	4	GE4	1000M Copper	Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	5	GE5	1000M Copper	Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	6	GE6	1000M Copper	Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	7	GE7	1000M Copper	Enabled	Up	Auto (1000M)	Auto (Full)	Disabled (Disabled)
<input type="checkbox"/>	8	GE8	1000M Copper	Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	9	GE9	1000M Fiber	Enabled	Down	Auto	Full	Disabled
<input type="checkbox"/>	10	GE10	1000M Fiber	Enabled	Down	Auto	Full	Disabled
<input type="checkbox"/>	11	GE11	1000M Fiber	Enabled	Down	Auto	Full	Disabled
<input type="checkbox"/>	12	GE12	1000M Fiber	Enabled	Down	Auto	Full	Disabled

Edit

#### Edit Port Setting

Port	GE1
Description	<input type="text"/>
State	<input checked="" type="checkbox"/> Enable
Speed	<input checked="" type="radio"/> Auto <input type="radio"/> 10M <input type="radio"/> Auto - 10M <input type="radio"/> 100M <input type="radio"/> Auto - 100M <input type="radio"/> 1000M <input type="radio"/> Auto - 1000M <input type="radio"/> Auto - 10M/100M
Duplex	<input checked="" type="radio"/> Auto <input type="radio"/> Full <input type="radio"/> Half
Flow Control	<input type="radio"/> Auto <input type="radio"/> Enable <input checked="" type="radio"/> Disable

Apply

Close

Item	Description
Edit	Edit specified port settings.
Port	The port number that you are doing setting now.
Description	Enter the description of this port.
State	Click it to enable/disable the port.
Speed	Specify the port speed, default is Auto. For SFP fiber module, you might need to manually configure the speed to match fiber module speed.
Duplex	Port duplex capabilities: <b>Auto:</b> Auto duplex with all capabilities. <b>Full:</b> Auto speed with 10/100/1000M ability only. <b>Half:</b> Auto speed with 10/100M ability only.
Flow Control	Flow Control is used to regulate transmission of signals to match the bandwidth of the receiving port. Click it to enable/disable Flow Control.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 6.2 Error Disabled

## Port &gt;&gt; Error Disabled

- Status
- Network
- Port
  - Port Setting
  - Error Disabled**
  - Link Aggregation
  - EEE
  - Jumbo Frame
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

Recovery Interval	<input type="text" value="300"/>	Sec (30 - 86400)
BPDU Guard	<input type="checkbox"/> Enable	
UDLD	<input type="checkbox"/> Enable	
Self Loop	<input type="checkbox"/> Enable	
Broadcast Flood	<input type="checkbox"/> Enable	
Unknown Multicast Flood	<input type="checkbox"/> Enable	
Unicast Flood	<input type="checkbox"/> Enable	
ACL	<input type="checkbox"/> Enable	
Port Security	<input type="checkbox"/> Enable	
DHCP Rate Limit	<input type="checkbox"/> Enable	
ARP Rate Limit	<input type="checkbox"/> Enable	

[Apply](#)

Item	Description
Recovery Interval	The port being blocked will be able to receive and send traffic after the time period configured here.
BPDU Guard	Recover the port being blocked by BPDU Guard after the time set in Recovery Interval.
UDLD	Check it to enable UniDirectional Link Detection (UDLD) function.
Self Loop	Recover the port being blocked by self loop Guard after the time set in Recovery Interval.
Broadcast Flood	Recover the port being blocked by broadcast flood after the time set in Recovery Interval.
Unknown Multicast Flood	Recover the port being blocked by unknown multicast flood after the time set in Recovery Interval.
Unicast Flood	Recover the port being blocked by unicast flood after the time set in Recovery Interval.
ACL	Recover the port being blocked by ACL after the time set in Recovery Interval.
Port Security	Recover the port being blocked by port security after the time set in Recovery Interval.
DHCP Rate Limit	Recover the port being blocked by DHCP rate limit after the time set in Recovery Interval.
ARP Rate Limit	Recover the port being blocked by ARP rate limit after the time set in

	Recovery Interval.
Apply	Apply the settings to the switch.

## 6.3 Link Aggregation

### 6.3.1 Group

Link Aggregation Group which groups some physical ports together to make a single high-bandwidth data path. Thus, it can implement traffic load sharing among the member ports in a group to enhance the connection reliability.

The screenshot shows the Proscend web interface for an Industrial 12-Port GbE Managed Switch. The breadcrumb trail is 'Port >> Link Aggregation >> Group'. In the 'Load Balance Algorithm' section, 'MAC Address' is selected with a radio button, and 'IP-MAC Address' is unselected. An 'Apply' button is below. The 'Link Aggregation Table' has a search bar and a table with columns: LAG, Name, Type, Link Status, Active Member, and Inactive Member. The table lists LAG 1 through LAG 8, each with a radio button in the LAG column and dashes in the others. An 'Edit' button is at the bottom of the table.

Item	Description
Load Balance Algorithm	<p>Select Load balance algorithm.</p> <p><b>MAC address:</b> Aggregated group will balance the traffic based on different MAC addresses. Therefore, the packets from different MAC addresses will be sent to different links.</p> <p><b>IP-MAC Address:</b> Aggregated group will balance the traffic based on MAC addresses and IP addresses. Therefore, the packets from same MAC addresses but different IP addresses will be sent to different links.</p>
Apply	Apply the settings to the switch.

Edit	<p>Edit the profile of Link Aggregation group.</p> <p>There are eight LAG profiles allowed to group different physical ports. The system will assign certain port(s) as Active Member and Standby Member according to the port selections.</p>
------	--

Item	Description
LAG	The index number of LAG group.
Name	Enter the name of the current LAG group.
Type	<p>Select the type for current LAG group.</p> <p><b>Static:</b> The static aggregated port sends packets over active member without detecting or negotiating with remote aggregated port.</p> <p><b>Active:</b> The interface is in an active negotiating state. LACP runs on any link that is configured to be in the active state. The port in an active mode also automatically initiates negotiations with other ports by initiating LACP packets.</p> <p><b>Passive:</b> The interface is not in an active negotiating state. LACP runs on any link that is configured in a passive mode. The port in a passive mode responds to negotiations requests from other ports that are in an active mode. Ports in passive mode respond to LACP packets.</p>

Member	Select the member of the current LAG group.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 6.3.2 Port Setting

This page defines port setting for each LAG profile (LAG1 to LAG8), including data speed and enabling/disabling the flow control.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is **Port >> Link Aggregation >> Port Setting**. The left sidebar contains a menu with the following items: Status, Network, Port (expanded), Port Setting, Error Disabled, Link Aggregation Group, Port Setting (selected), LACP, IEEE, Jumbo Frame, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, ACL, QoS, Diagnostics, and Management. The main content area is titled **Port Setting Table** and features a search bar. Below the search bar is a table with the following data:

<input type="checkbox"/>	LAG	Type	Description	State	Link Status	Speed	Duplex	Flow Control
<input type="checkbox"/>	LAG 1			Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	LAG 2			Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	LAG 3			Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	LAG 4			Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	LAG 5			Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	LAG 6			Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	LAG 7			Enabled	Down	Auto	Auto	Disabled
<input type="checkbox"/>	LAG 8			Enabled	Down	Auto	Auto	Disabled

Below the table is an **Edit** button.

Item	Description
Edit	Edit the settings of LAG port.

## Edit Port Setting

Port	LAG1	
Description	<input type="text"/>	
State	<input checked="" type="checkbox"/> Enable	
Speed	<input checked="" type="radio"/> Auto	<input type="radio"/> 10M
	<input type="radio"/> Auto - 10M	<input type="radio"/> 100M
	<input type="radio"/> Auto - 100M	<input type="radio"/> 1000M
	<input type="radio"/> Auto - 1000M	
	<input type="radio"/> Auto - 10M/100M	
Flow Control	<input type="radio"/> Auto <input type="radio"/> Enable <input checked="" type="radio"/> Disable	
Apply		Close

Item	Description
Port	The index number of current LAG port.
Description	Enter the description of the current LAG port.
State	Enable or disable the LAG port.
Speed	Select the specified speed for LAG port.
Flow Control	<p>Select the mode of Flow Control for current LAG port.</p> <p>Flow Control is used to regulate transmission of signals to match the bandwidth of the receiving port. The switch uses IEEE802.3x flow control in full duplex mode and backpressure flow control in half duplex mode. IEEE802.3x flow control is used in full duplex mode to send a pause signal to the sending port, causing it to temporarily stop sending signals when the receiving port memory buffers fill. Back Pressure flow control is typically used in half duplex mode to send a "collision" signal to the sending port (mimicking a state of packet collision) causing the sending port to temporarily stop sending signals and resend later.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 6.3.3 LACP

This page allows the network administrator to change system priority of the LACP function.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Port >> Link Aggregation >> LACP**

- Status
- Network
- Port
  - Port Setting
  - Error Disabled
  - Link Aggregation
    - Group
    - Port Setting
  - LACP
  - EEE
  - Jumbo Frame
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

**System Priority**

(1 - 65535, default 32768)

[Apply](#)

**LACP Port Setting Table**

<input type="checkbox"/>	Entry	Port	Port Priority	Timeout
<input type="checkbox"/>	1	GE1	1	Long
<input type="checkbox"/>	2	GE2	1	Long
<input type="checkbox"/>	3	GE3	1	Long
<input type="checkbox"/>	4	GE4	1	Long
<input type="checkbox"/>	5	GE5	1	Long
<input type="checkbox"/>	6	GE6	1	Long
<input type="checkbox"/>	7	GE7	1	Long
<input type="checkbox"/>	8	GE8	1	Long
<input type="checkbox"/>	9	GE9	1	Long
<input type="checkbox"/>	10	GE10	1	Long
<input type="checkbox"/>	11	GE11	1	Long
<input type="checkbox"/>	12	GE12	1	Long

[Edit](#)

Item	Description
System Priority	The priority is used to determine which switch (local or remote) on the LAG connection is able to decide LACP activities.
Apply	Apply the settings to the switch.
Edit	Edit the settings of LACP port.

**Port >> Link Aggregation >> LACP**

**Edit LACP Port Setting**

**Port**

**Port Priority**

(1 - 65535, default 1)

**Timeout**

☒ Long
☐ Short

[Apply](#)
[Close](#)



Item	Description
Port	The index number of LACP port.
Port Priority	Enter the priority number for the port.
Timeout	<p>The timeout option decides how local switch of LAG connection determines connection to be lost. Switch would also notify the remote switch about this setting value, so that remote switch can send LACP PDU in correct timing.</p> <p><b>Long:</b> LACP PDU will be sent every 30 seconds. If port member is not seen over 90 seconds, it will cause port member timeout.</p> <p><b>Short:</b> LACP PDU will be sent per second. If port member is not seen over 3 seconds, it will cause port member timeout.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 6.4 EEE

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

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Port >> EEE

EEE Setting Table

<input type="checkbox"/>	Entry	Port	State	Operational Status
<input type="checkbox"/>	1	GE1	Disabled	Disabled
<input type="checkbox"/>	2	GE2	Disabled	Disabled
<input type="checkbox"/>	3	GE3	Disabled	Disabled
<input type="checkbox"/>	4	GE4	Disabled	Disabled
<input type="checkbox"/>	5	GE5	Disabled	Disabled
<input type="checkbox"/>	6	GE6	Disabled	Disabled
<input type="checkbox"/>	7	GE7	Disabled	Disabled
<input type="checkbox"/>	8	GE8	Disabled	Disabled

Edit

Port >> EEE

Edit EEE Setting

Port

GE1

State

☐ Enable

Apply

Close

Item	Description
Edit	Edit the settings of the EEE.
Port	The index number of the port
State	Enable or disable the EEE function of the port.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 6.5 Jumbo Frame

This page allows a user to configure switch port jumbo frame settings.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

Save | Logout | Reboot

Port >> Jumbo Frame

- Status
- Network
- Port
  - Port Setting
  - Error Disabled
  - Link Aggregation
    - Group
    - Port Setting
    - LACP
  - EEE
  - Jumbo Frame
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

Jumbo Frame

☒ Enable

1522

Byte (1518 - 10000, default 1522)

Apply

Item	Description
Jumbo Frame	Enable or disable the Jumbo Frame setting.
Apply	Apply the settings to the switch.

## 7 VLAN

This section allows for controlling VLAN configuration on the switch

### 7.1 VLAN

#### 7.1.1 Create VLAN

This page allows to add, edit or delete VLAN settings.

The screenshot displays the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the switch model name, and links for Save, Logout, and Reboot. The left sidebar contains a menu with categories like Status, Network, Port, and VLAN. The main content area is titled 'VLAN >> VLAN >> Create VLAN'. It features two lists: 'Available VLAN' (VLAN 2 through 9) and 'Created VLAN' (VLAN 1). An 'Apply' button is located below these lists. Below the button is a 'VLAN Table' with a search bar and a table showing one entry: VLAN 1, default, Default. The table has columns for VLAN, Name, and Type. Navigation buttons (First, Previous, 1, Next, Last) are at the bottom of the table.

Item	Description
VLAN	Select available VLAN ID and move to created VLAN for creating VLAN settings.
Apply	Apply the settings to the switch.
Edit	Edit selected VLAN ID.
Delete	Delete selected VLAN ID.

## VLAN >> VLAN >> Create VLAN


Edit VLAN Name

Name	VLAN0002
------	----------

Item	Description
Name	Modify the name of the specified VLAN ID.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 7.1.2 VLAN Configuration

This page allows to configure interface setting related to VLAN.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

## VLAN >> VLAN >> VLAN Configuration

- Status
- Network
- Port
- VLAN
  - ▲ VLAN
    - Create VLAN
    - VLAN Configuration
    - Membership
    - Port Setting
  - Voice VLAN
  - Protocol VLAN
  - MAC VLAN
  - Surveillance VLAN
  - GVRP
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

### VLAN Configuration Table

VLAN default


Entry	Port	Mode	Membership				PVID	
1	GE1	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
2	GE2	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
3	GE3	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
4	GE4	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
5	GE5	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
6	GE6	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
7	GE7	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
8	GE8	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
9	GE9	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
10	GE10	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
11	GE11	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
12	GE12	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
13	LAG1	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
14	LAG2	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
15	LAG3	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
16	LAG4	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
17	LAG5	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
18	LAG6	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
19	LAG7	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	
20	LAG8	Trunk	<input type="radio"/> Excluded	<input type="radio"/> Forbidden	<input type="radio"/> Tagged	<input checked="" type="radio"/> Untagged	<input checked="" type="checkbox"/>	

Item	Description
------	-------------

VLAN	Configure the VLAN settings of selected VLAN ID.
Membership	<p><b>Excluded:</b> Specify the VLAN profile excluded in the VLAN.</p> <p><b>Forbidden:</b> Specify the VLAN profile forbidden in the VLAN.</p> <p><b>Tagged:</b> Specify the VLAN profile tagged in the VLAN.</p> <p><b>Untagged:</b> Specify the VLAN profile untagged in the VLAN.</p>
PVID	A PVID (Port VLAN ID) is a tag that adds to incoming untagged frames received on a port so that the frames are forwarded to the VLAN group that the tag defines.
Apply	Apply the settings to the switch.

### 7.1.3 Membership

This page allows to configure the settings of membership on each port.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**VLAN >> VLAN >> Membership**

- Status
- Network
- Port
- VLAN
  - ^ VLAN
  - Create VLAN
  - VLAN Configuration
  - Membership**
  - Port Setting
  - Voice VLAN
  - Protocol VLAN
  - MAC VLAN
  - Surveillance VLAN
  - GVRP
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

#### Membership Table

	Entry	Port	Mode	Administrative VLAN	Operational VLAN
<input type="radio"/>	1	GE1	Trunk	1UP	1UP
<input type="radio"/>	2	GE2	Trunk	1UP	1UP
<input type="radio"/>	3	GE3	Trunk	1UP	1UP
<input type="radio"/>	4	GE4	Trunk	1UP	1UP
<input type="radio"/>	5	GE5	Trunk	1UP	1UP
<input type="radio"/>	6	GE6	Trunk	1UP	1UP
<input type="radio"/>	7	GE7	Trunk	1UP	1UP
<input type="radio"/>	8	GE8	Trunk	1UP	1UP
<input type="radio"/>	9	GE9	Trunk	1UP	1UP
<input type="radio"/>	10	GE10	Trunk	1UP	1UP
<input type="radio"/>	11	GE11	Trunk	1UP	1UP
<input type="radio"/>	12	GE12	Trunk	1UP	1UP
<input type="radio"/>	13	LAG1	Trunk	1UP	1UP
<input type="radio"/>	14	LAG2	Trunk	1UP	1UP
<input type="radio"/>	15	LAG3	Trunk	1UP	1UP
<input type="radio"/>	16	LAG4	Trunk	1UP	1UP
<input type="radio"/>	17	LAG5	Trunk	1UP	1UP
<input type="radio"/>	18	LAG6	Trunk	1UP	1UP
<input type="radio"/>	19	LAG7	Trunk	1UP	1UP
<input type="radio"/>	20	LAG8	Trunk	1UP	1UP

Edit

## Edit Port Setting


Port	GE2	
Mode	Trunk	
Membership	2	1UP
	<input type="radio"/> Forbidden <input type="radio"/> Excluded <input checked="" type="radio"/> Tagged <input type="radio"/> Untagged <input type="checkbox"/> PVID	

Apply Close

Item	Description
Edit	Edit the settings of the selected port.
Port	The index number of the selected port.
Mode	The mode of the selected port.
Membership	<b>Forbidden:</b> Specify the VLAN profile forbidden in the VLAN. <b>Excluded:</b> Specify the VLAN profile excluded in the VLAN. <b>Tagged:</b> Specify the VLAN profile tagged in the VLAN. <b>Untagged:</b> Specify the VLAN profile untagged in the VLAN.
PVID	A PVID (Port VLAN ID) is a tag that adds to incoming untagged frames received on a port so that the frames are forwarded to the VLAN group that the tag defines.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 7.1.4 Port Setting

This page allows to configure more port settings of the VLAN.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**VLAN >> VLAN >> Port Setting**

- Status
- Network
- Port
- VLAN
  - VLAN
  - Create VLAN
  - VLAN Configuration
  - Membership
  - Port Setting**
  - Voice VLAN
  - Protocol VLAN
  - MAC VLAN
  - Surveillance VLAN
  - GVRP
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

**Port Setting Table**

<input type="checkbox"/>	Entry	Port	Mode	PVID	Accept Frame Type	Ingress Filtering	Uplink	TPID
<input type="checkbox"/>	1	GE1	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	2	GE2	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	3	GE3	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	4	GE4	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	5	GE5	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	6	GE6	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	7	GE7	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	8	GE8	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	9	GE9	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	10	GE10	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	11	GE11	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	12	GE12	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	13	LAG1	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	14	LAG2	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	15	LAG3	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	16	LAG4	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	17	LAG5	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	18	LAG6	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	19	LAG7	Trunk	1	All	Enabled	Disabled	0x8100
<input type="checkbox"/>	20	LAG8	Trunk	1	All	Enabled	Disabled	0x8100

[Edit](#)

Item	Description
Edit	Edit the settings of the selected port.
Port	The index number of the selected port.
Mode	<p>Select the VLAN mode of the port.</p> <p><b>Hybrid:</b> Support all functions as defined in IEEE 802.1Q specification.</p> <p><b>Access:</b> Accept only untagged frames and join an untagged VLAN.</p> <p><b>Trunk:</b> An untagged member of one VLAN at most, and is a tagged member of zero or more VLANs.</p> <p><b>Tunnel:</b> Accept packets with tag stacking (double tagging) by following the 802.1Q-in-Q tunneling.</p>
PVID	<p>A PVID (Port VLAN ID) is a tag that adds to incoming untagged frames received on a port so that the frames are forwarded to the VLAN group that the tag defines.</p> <p>For port under Access Mode, VLAN ID provided as PVID would</p>



	automatically be selected as the untagged VLAN.
Accept Frame Type	<p>Specify the acceptable-frame-type of the specified interfaces. It's only available with Hybrid mode.</p> <p><b>All:</b> Accept frames regardless it's tagged with 802.1q or not.</p> <p><b>Tag Only:</b> Accept frames only with 802.1q tagged.</p> <p><b>Untag Only:</b> Accept frames untagged.</p>
Ingress Filtering	<p>Enable or disable the Ingress Filtering function.</p> <p>Enable the ingress filtering to filter out any packets not belong to any VLAN members of this port. It is enabled automatically while operating in Access and Trunk mode.</p>
Uplink	Configure the selected port as the role of trunk. It can recognize double tagging on the interface.
TPID	Specify the TPID of the port.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 7.2 Voice VLAN

With such feature, a VLAN will be created temporarily and when the specified OUI device delivers protocol packets related to "VoIP", the Switch will guide these packets into the specified Voice LAN with specified priority tag to speed up the packet transmission. Such voice VLAN is only active inside VigorSwitch for packet transmission. After these packets leave VigorSwitch, the Voice VLAN tag will be removed immediately.

### 7.2.1 Property

This page allows to configure global and per interface setting of voice VLAN.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

VLAN >> Voice VLAN >> Property

- Status
- Network
- Port
- VLAN
  - VLAN
  - Voice VLAN
    - Property
    - Voice OUI
    - Protocol VLAN
    - MAC VLAN
    - Surveillance VLAN
    - GVRP
  - MAC Address Table
  - Spanning Tree
  - Discovery
  - Multicast
  - Security
  - ACL
  - QoS
  - Diagnostics
  - Management

State

☐ Enable

VLAN

None

CoS / 802.1p  
Remarking

☐ Enable

Port Aging Time

1440

Min (30 - 65536, default 1440)

Note: Aging Time = Port Aging Time + OUI Aging Time(30 mins)

Apply

Port Setting Table

Q

<input type="checkbox"/>	Entry	Port	State	Mode	QoS Policy
<input type="checkbox"/>	1	GE1	Disabled	Auto	Voice Packet
<input type="checkbox"/>	2	GE2	Disabled	Auto	Voice Packet
<input type="checkbox"/>	3	GE3	Disabled	Auto	Voice Packet
<input type="checkbox"/>	4	GE4	Disabled	Auto	Voice Packet
<input type="checkbox"/>	5	GE5	Disabled	Auto	Voice Packet
<input type="checkbox"/>	6	GE6	Disabled	Auto	Voice Packet
<input type="checkbox"/>	7	GE7	Disabled	Auto	Voice Packet
<input type="checkbox"/>	8	GE8	Disabled	Auto	Voice Packet
<input type="checkbox"/>	9	GE9	Disabled	Auto	Voice Packet
<input type="checkbox"/>	10	GE10	Disabled	Auto	Voice Packet
<input type="checkbox"/>	11	GE11	Disabled	Auto	Voice Packet
<input type="checkbox"/>	12	GE12	Disabled	Auto	Voice Packet
<input type="checkbox"/>	13	LAG1	Disabled	Auto	Voice Packet
<input type="checkbox"/>	14	LAG2	Disabled	Auto	Voice Packet
<input type="checkbox"/>	15	LAG3	Disabled	Auto	Voice Packet
<input type="checkbox"/>	16	LAG4	Disabled	Auto	Voice Packet
<input type="checkbox"/>	17	LAG5	Disabled	Auto	Voice Packet
<input type="checkbox"/>	18	LAG6	Disabled	Auto	Voice Packet
<input type="checkbox"/>	19	LAG7	Disabled	Auto	Voice Packet
<input type="checkbox"/>	20	LAG8	Disabled	Auto	Voice Packet

Edit

Item	Description
State	Enable or disable the Voice VLAN function.
VLAN	Select the VLAN ID which will be applied for Voice VLAN.
CoS / 802.1p Remarking	Enable or disable 802.1p remarking. If enabled, qualified packets will be remarked by specified value.
Port Aging Time	Enter the value of aging time (30~65536 min).  Default is 1440 minutes. A voice VLAN entry will be age out after this time if without any packet pass through.
Apply	Apply the settings to the switch.
Edit	Edit the settings of the selected port.

## 7.2.2 Voice OUI

This page allows to add, edit or delete OUI MAC addresses. Default has 8 pre-defined OUI MAC.

The screenshot shows the Proscend web interface for an Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is VLAN >> Voice VLAN >> Voice OUI. The left sidebar contains a menu with options like Status, Network, Port, VLAN, and MAC Address Table. The main content area is titled 'Voice OUI Table' and displays a table with 8 pre-defined entries. Each entry has a checkbox, an OUI address, and a description. Below the table are buttons for 'Add', 'Edit', and 'Delete'. At the bottom right of the table are pagination controls: 'First', 'Previous', '1', 'Next', and 'Last'.

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

The screenshot shows the 'Add Voice OUI' form. It has two input fields: 'OUI' and 'Description'. The 'OUI' field is pre-filled with '00:00:00:00:00:00'. Below the form is a note: 'NOTE:16 maximum user defined OUI allowed.' At the bottom are 'Apply' and 'Close' buttons.

Item	Description
Add	Add a new OUI entry.
Edit	Edit the existing OUI entry.
Delete	Delete the existing OUI entry.
OUI	Type OUI address.
Description	Enter a description of the specified MAC address to the voice VLAN

	OUI table.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 7.3 Protocol VLAN

The Switch offers protocol VLANs which allows Network Administrator to filter out untagged traffic of certain protocol and then assign them a specific VLAN ID.

### 7.3.1 Protocol Group

Up to eight protocol groups can be defined, each of them can have a unique filtering criteria such as frame type and protocol value.

**VLAN >> Protocol VLAN >> Protocol Group**

**Add Protocol Group**

Group ID

1

Frame Type

Ethernet\_II

Protocol Value

0x

(0x600 ~ 0xFFFE)

Apply

Close

Item	Description
Add	Add a new Protocol VLAN entry.
Edit	Edit the existing Protocol VLAN entry.
Delete	Delete the existing Protocol VLAN entry.
Group ID	It is a number for identification while bounding with VLAN/Port.
Frame Type	<p>Use the drop-down list to specify the frame type which you would like to filter.</p> <p><b>Ethernet_II</b>: Packet will be mapped based on Ethernet version 2.</p> <p><b>IEEE802.3_LL_C_Other</b>: Packet will be mapped based on 802.3 packet with LLC other header.</p> <p><b>RFC_1042</b>: Packet will be mapped based on RFC 1042.</p>
Protocol Value	Input a value (ranging from 0x600 ~0xFFFE). Packets match with such value will be classified into this group.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 7.3.2 Group Binding

This page is for setting up the ports and protocol group that we would like to filter, and the VLAN ID we would like to assign.

The screenshot displays the web management interface for a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The left sidebar shows a tree view of configuration options, with 'VLAN' expanded to show 'Protocol VLAN' and 'Group Binding'. The main content area is titled 'VLAN >> Protocol VLAN >> Group Binding' and contains a 'Group Binding Table'. The table has columns for Port, Group ID, and VLAN. It shows 0 results found. Below the table are buttons for Add, Edit, and Delete, and pagination controls (First, Previous, 1, Next, Last).

## Add Group Binding

Port

Available Port

Selected Port

Note: Only VLAN Hybrid port can be set Protocol VLAN

Group ID None ▾

VLAN (1 - 4094)

Apply Close

Item	Description
Add	Add a new entry.
Edit	Edit the VLAN number of existing entry.
Delete	Delete the existing entry.
Port	Select one or more ports for applying protocol-based VLAN. Note that protocol-based VLAN can only be applied to the ports of which Interface VLAN Mode is set to “Hybrid”.
Group ID	Select the protocol group defined in Protocol Group setup.
VLAN	Enter the VLAN number.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 7.4 MAC VLAN

The MAC VLAN allows you to statically assign a VLAN ID to a host with specific MAC address(es). The Switch allows you configure multiple groups with configured MAC address and mask to be active on ports and to be bound with VLAN ID.

### 7.4.1 MAC Group

This page allows to define groups with specific MAC addresses for later binding with VLAN and Port.

The screenshot shows the Proscend web interface for an Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is VLAN >> MAC VLAN >> MAC Group. The left sidebar contains a menu with options like Status, Network, Port, VLAN, MAC VLAN, MAC Group, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, ACL, QoS, Diagnostics, and Management. The main content area is titled 'MAC Group Table' and shows a table with columns for Group ID, MAC Address, and Mask. The table is currently empty, displaying '0 results found.' There are buttons for 'Add', 'Edit', and 'Delete' at the bottom of the table. A search bar is located at the top right of the table area.

The screenshot shows the 'Add MAC Group' dialog box. It contains three input fields: 'Group ID' with a range of (1 - 2147483647), 'MAC Address', and 'Mask' with a range of (9 - 48). Below the input fields are 'Apply' and 'Close' buttons.

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the existing entry.
Group ID	It is a number for identification later, while chosen to be bound with VLAN/Port.
MAC Address	Enter the MAC address you wish to be classified in this group.
Mask	The mask is the length of matching prefix you wish to have on MAC address.

	For example, configure mask in 10. It means a host with beginning of the 10-digit of MAC address will be checked, and classified into this group if matched.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 7.4.2 Group Binding

This page allows to bind the group of specified MAC addresses with VLAN and Port.

The screenshot shows the Proscend web interface for an Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is VLAN >> MAC VLAN >> Group Binding. The left sidebar contains a menu with options like Status, Network, Port, VLAN, Voice VLAN, Protocol VLAN, MAC VLAN, MAC Group, Group Binding (selected), Surveillance VLAN, GVRP, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, ACL, QoS, Diagnostics, and Management. The main content area is titled 'Group Binding Table' and shows a table with columns Port, Group ID, and VLAN. The table is currently empty, displaying '0 results found.' and navigation buttons (First, Previous, 1, Next, Last). Above the table, there are buttons for Add, Edit, and Delete, and a search bar.

The screenshot shows the 'Add Group Binding' dialog box. It features two list boxes: 'Available Port' and 'Selected Port', with arrows between them for moving items. Below the list boxes, there is a 'Note: Only VLAN Hybrid port can be set MAC VLAN'. At the bottom, there are fields for 'Group ID' (set to 'None') and 'VLAN' (set to '(1 - 4094)'). The dialog box has 'Apply' and 'Close' buttons at the bottom.



Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the existing entry.
Port	Select the ports you wish to be bound with specified MAC address group.
Group ID	Choose the group ID you have created in section MAC VLAN → MAC Group.
VLAN	Enter the VLAN ID that you wish to be bound with.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 7.5 Surveillance VLAN

Surveillance VLAN can be configured for the Switch to identify the packets coming from an IP camera automatically and assign those traffics to a specific VLAN ID and CoS/802.1p value, this helps you to prioritize those traffics and improve video quality.

### 7.5.1 Property

This page is for setting up the VLAN to which the video traffic should be assigned and to enable/disable Surveillance VLAN on each port.

## VLAN &gt;&gt; Surveillance VLAN &gt;&gt; Property

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
  - ▼ VLAN
  - ▼ Voice VLAN
  - ▼ Protocol VLAN
  - ▼ MAC VLAN
  - ▼ Surveillance VLAN

- Property
  - Surveillance OUI
  - ▼ GVRP

- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

State	<input type="checkbox"/> Enable
VLAN	None
CoS / 802.1p Remarking	<input type="checkbox"/> Enable 6
Port Aging Time	1440 <small>Min (30 - 65536, default 1440) Note: Aging Time = Port Aging Time + OUI Aging Time(30 mins)</small>

[Apply](#)

## Port Setting Table

<input type="checkbox"/>	Entry	Port	State	Mode	QoS Policy
<input type="checkbox"/>	1	GE1	Disabled	Auto	Video Packet
<input type="checkbox"/>	2	GE2	Disabled	Auto	Video Packet
<input type="checkbox"/>	3	GE3	Disabled	Auto	Video Packet
<input type="checkbox"/>	4	GE4	Disabled	Auto	Video Packet
<input type="checkbox"/>	5	GE5	Disabled	Auto	Video Packet
<input type="checkbox"/>	6	GE6	Disabled	Auto	Video Packet
<input type="checkbox"/>	7	GE7	Disabled	Auto	Video Packet
<input type="checkbox"/>	8	GE8	Disabled	Auto	Video Packet
<input type="checkbox"/>	9	GE9	Disabled	Auto	Video Packet
<input type="checkbox"/>	10	GE10	Disabled	Auto	Video Packet
<input type="checkbox"/>	11	GE11	Disabled	Auto	Video Packet
<input type="checkbox"/>	12	GE12	Disabled	Auto	Video Packet
<input type="checkbox"/>	13	LAG1	Disabled	Auto	Video Packet
<input type="checkbox"/>	14	LAG2	Disabled	Auto	Video Packet
<input type="checkbox"/>	15	LAG3	Disabled	Auto	Video Packet
<input type="checkbox"/>	16	LAG4	Disabled	Auto	Video Packet
<input type="checkbox"/>	17	LAG5	Disabled	Auto	Video Packet
<input type="checkbox"/>	18	LAG6	Disabled	Auto	Video Packet
<input type="checkbox"/>	19	LAG7	Disabled	Auto	Video Packet
<input type="checkbox"/>	20	LAG8	Disabled	Auto	Video Packet

[Edit](#)

## VLAN &gt;&gt; Surveillance VLAN &gt;&gt; Property

## Edit Port Setting


Port	GE5
State	<input type="checkbox"/> Enable
Mode	<input checked="" type="radio"/> Auto <input type="radio"/> Manual
QoS Policy	<input checked="" type="radio"/> Video Packet <input type="radio"/> All

[Apply](#)
[Close](#)

Item	Description
State	Enable or disable the port settings for this function.
VLAN	Choose a VLAN profile (created in VLAN → Create VLAN) as Surveillance VLAN.
CoS / 802.1p Remarking	Specify the CoS/802.1p number you wish ingress packets be tagged with, so that QoS can prioritize it correctly. If enabled, the qualified packets will be remarked by this value.
Port Aging Time	Default is 1440. VLAN entry will be aged out after this time if no packet passes through.
Apply	Apply the settings to the switch.
Edit	Edit the existing entry.
Port	The index number of selected port.
State	Enable or disable surveillance VLAN function of the port.
Mode	<p>Select surveillance VLAN mode of the port.</p> <p><b>Auto:</b> Surveillance VLAN auto detect packets that match OUI table and add received port into surveillance VLAN ID tagged member.</p> <p><b>Manual:</b> User need add interface to VLAN ID tagged member manually.</p>
QoS Policy	<p>Select QoS Policy mode of the port.</p> <p><b>Video Packet:</b> QoS attributes are applied to packets with OUI in the source MAC address.</p> <p><b>All:</b> QoS attributes are applied to packets that are classified to the Surveillance VLAN.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 7.5.2 Surveillance OUI

Filtering Surveillance traffic is based on the OUI of the IP cameras. Users can add, edit, and delete OUI on this page.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

**VLAN » Surveillance VLAN » Surveillance OUI**

- Status
- Network
- Port
- VLAN
  - VLAN
  - Voice VLAN
  - Protocol VLAN
  - MAC VLAN
  - Surveillance VLAN
    - Property
    - Surveillance OUI**
  - GVRP
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

### Surveillance OUI Table

Showing All entries Showing 0 to 0 of 0 entries

<input type="checkbox"/>	OUI	Description
0 results found.		

Add
Edit
Delete

First
Previous
1
Next
Last

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the existing entry.
OUI	Enter OUI MAC address of monitored IP camera. It can't be edited in edit dialog.
Description	Enter a description of the specified MAC address to the surveillance VLAN OUI table.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 7.6 GVRP

### 7.6.1 Property

This page allows to enable or disable the GVRP function.

PROSCEND

Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

VLAN >> GVRP >> Property

Status

Network

Port

VLAN

VLAN

Voice VLAN

Protocol VLAN

MAC VLAN

Surveillance VLAN

GVRP

Property

Membership

Statistics

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

State ☐ Enable

Operational Timeout

Join 20 ms

Leave 60 ms

LeaveAll 1000 ms

Apply

Port Setting Table

Q

<input type="checkbox"/>	Entry	Port	State	VLAN Creation	Registration
<input type="checkbox"/>	1	GE1	Disabled	Enabled	Normal
<input type="checkbox"/>	2	GE2	Disabled	Enabled	Normal
<input type="checkbox"/>	3	GE3	Disabled	Enabled	Normal
<input type="checkbox"/>	4	GE4	Disabled	Enabled	Normal
<input type="checkbox"/>	5	GE5	Disabled	Enabled	Normal
<input type="checkbox"/>	6	GE6	Disabled	Enabled	Normal
<input type="checkbox"/>	7	GE7	Disabled	Enabled	Normal
<input type="checkbox"/>	8	GE8	Disabled	Enabled	Normal
<input type="checkbox"/>	9	GE9	Disabled	Enabled	Normal
<input type="checkbox"/>	10	GE10	Disabled	Enabled	Normal
<input type="checkbox"/>	11	GE11	Disabled	Enabled	Normal
<input type="checkbox"/>	12	GE12	Disabled	Enabled	Normal
<input type="checkbox"/>	13	LAG1	Disabled	Enabled	Normal
<input type="checkbox"/>	14	LAG2	Disabled	Enabled	Normal
<input type="checkbox"/>	15	LAG3	Disabled	Enabled	Normal
<input type="checkbox"/>	16	LAG4	Disabled	Enabled	Normal
<input type="checkbox"/>	17	LAG5	Disabled	Enabled	Normal
<input type="checkbox"/>	18	LAG6	Disabled	Enabled	Normal
<input type="checkbox"/>	19	LAG7	Disabled	Enabled	Normal
<input type="checkbox"/>	20	LAG8	Disabled	Enabled	Normal

Edit

Item	Description
State	Enable or disable the GVRP setting for such VLAN.
Operational Timeout	Display the current time status for GVRP.
Apply	Apply the settings to the switch.
Edit	Edit the existing entry.

## Edit Port Setting

Port	GE23
State	<input type="checkbox"/> Enable
VLAN Creation	<input checked="" type="checkbox"/> Enable
Registration	<input checked="" type="radio"/> Normal <input type="radio"/> Fixed <input type="radio"/> Forbidden

Apply

Close

Item	Description
Port	The index number of selected port.
State	Enable or disable the port settings for such VLAN.
VLAN Creation	Select Enable or disable.
Registration	<p><b>Normal:</b> Default setting. All packets can pass through the selected port.</p> <p><b>Fixed:</b> The selected port only sends static VLAN information to neighboring device and allows static VLAN packet to pass through.</p> <p><b>Forbidden:</b> The selected port only allows default VLAN packet to pass through.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 7.6.2 Membership

This page displays information about membership of GVRP.

## VLAN &gt;&gt; GVRP &gt;&gt; Membership

- Status
- Network
- Port
- VLAN
  - VLAN
  - Voice VLAN
  - Protocol VLAN
  - MAC VLAN
  - Surveillance VLAN
  - GVRP
    - Property
    - Membership**
    - Statistics
  - MAC Address Table
  - Spanning Tree
  - Discovery
  - Multicast
  - Security
  - ACL
  - QoS
  - Diagnostics
  - Management

### Membership Table

Showing All entries

Showing 0 to 0 of 0 entries

VLAN	Member	Dynamic Member	Type
0 results found.			

[First](#) | [Previous](#) | [1](#) | [Next](#) | [Last](#)

### 7.6.3 Statistics

This page displays detailed statistics of each port.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

VLAN >> GVRP >> Statistics

Status

Network

Port

VLAN

VLAN

- VLAN
- Voice VLAN
- Protocol VLAN
- MAC VLAN
- Surveillance VLAN
- GVRP
  - Property
  - Membership
  - Statistics

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

Port: GE1

Statistics

- All
- Receive
- Transmit
- Error

Refresh Rate

- None
- 5 sec
- 10 sec
- 30 sec

Clear

Receive

Join empty	0
Empty	0
Leave Empty	0
Join In	0
Leave In	0
Leave All	0

Transmit

Join empty	0
Empty	0
Leave Empty	0
Join In	0
Leave In	0
Leave All	0

Error

Invalid Protocol ID	0
Invalid Attribute Type	0
Invalid Attribute Value	0
Invalid Attribute Length	0
Invalid Event	0



## 8 MAC Address Table

This section allows user to view the dynamic MAC address entries in the MAC table, change related setting and assign MAC address into MAC table.

### 8.1 Dynamic Address

This page allows to configure aging time for dynamic MAC address.

The screenshot displays the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The page title is "Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks". The navigation menu on the left includes: Status, Network, Port, VLAN, MAC Address Table (selected), Dynamic Address, Static Address, Filtering Address, Spanning Tree, Discovery, Multicast, Security, ACL, QoS, Diagnostics, and Management. The main content area is titled "MAC Address Table >> Dynamic Address". It features a "Save", "Logout", and "Reboot" link at the top right. The "Aging Time" is set to 300 seconds, with a note "Sec (10 - 630, default 300)". An "Apply" button is present. Below this is the "Dynamic Address Table" section, which shows "Showing 1 to 1 of 1 entries". The table has columns for "VLAN", "MAC Address", and "Port". The entry shown is: VLAN 1, MAC Address F4:28:53:10:57:A1, Port GE6. At the bottom of the table are buttons for "Clear", "Refresh", and "Add Static Address". Navigation controls at the bottom right include "First", "Previous", "1" (current page), "Next", and "Last".

Item	Description
Apply	Apply the settings to the switch.
Aging Time	Enter the aging out value for the dynamic MAC address.
Clear	Clear the entry that is still not out of aging time.
Refresh	Refresh the Dynamic address table.
Add Static Address	Add selected dynamic MAC address into the static MAC address table.

### 8.2 Static Address

This page allows user to manually assign MAC address into MAC table.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

**MAC Address Table >> Static Address**

- Status
- Network
- Port
- VLAN
- MAC Address Table**
  - Dynamic Address
  - Static Address**
  - Filtering Address
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

### Static Address Table

Showing All entries      Showing 0 to 0 of 0 entries     

<input type="checkbox"/>	VLAN	MAC Address	Port
0 results found.			

[Add](#)
[Edit](#)
[Delete](#)

[First](#)
[Previous](#)
[1](#)
[Next](#)
[Last](#)

Item	Description
Add	Add a new MAC address into MAC address table.
Edit	Edit existing entry of MAC address.
Delete	Delete selected entry of MAC address.

**MAC Address Table >> Static Address**

### Add Static Address

<b>MAC Address</b>	<input type="text" value="00:00:00:00:00:00"/>
<b>VLAN</b>	<input type="text" value=""/> (1 - 4094)
<b>Port</b>	<input type="text" value="GE1"/> ▼

[Apply](#)
[Close](#)

Item	Description
MAC Address	Enter the MAC address that will be forwarded.
VLAN	This is the VLAN group to which the MAC address belongs.
Port	Select the port where received frame of matched destination MAC address will be forwarded to.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## MAC Address Table >> Static Address

### Edit Static Address

MAC Address	C0:3F:D5:BB:BA:29
VLAN	1 (1 - 4094)
Port	GE5 ▼

Apply

Close

Item	Description
MAC Address	The MAC address that will be forwarded.
VLAN	This is the VLAN group to which the MAC address belongs.
Port	Select the port where received frame of matched destination MAC address will be forwarded to.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 8.3 Filtering Address

Filtering addresses are manually added and determine the packets with specific source or destination MAC addresses that will should dropped by the switch.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**MAC Address Table >> Filtering Address**

**Filtering Address Table**

Showing All entries      Showing 0 to 0 of 0 entries

<input type="checkbox"/>	VLAN	MAC Address
0 results found.		

[First](#)
[Previous](#)
[1](#)
[Next](#)
[Last](#)

- Status
- Network
- Port
- VLAN
- MAC Address Table
  - Dynamic Address
  - Static Address
  - Filtering Address
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

Item	Description
Add	Add a new MAC address into MAC address table.
Edit	Edit existing entry of MAC address.
Delete	Delete selected entry of MAC address.

## MAC Address Table >> Filtering Address

### Add Filtering Address

MAC Address	<input type="text" value="00:00:00:00:00:00"/>
VLAN	<input type="text" value=""/> (1 - 4094)

Item	Description
MAC Address	Enter the MAC address that will be dropped.
VLAN	This is the VLAN group to which the MAC address belongs.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## MAC Address Table >> Filtering Address

### Edit Filtering Address

MAC Address	<input type="text" value="00:00:00:00:00:12"/>
VLAN	<input type="text" value="2"/> (1 - 4094)

Item	Description
MAC Address	The MAC address that will be dropped.
VLAN	This is the VLAN group to which the MAC address belongs.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 9 Spanning Tree

The Spanning Tree Protocol (STP) is a network protocol that ensures a loop-free topology for any bridged Ethernet local area network.

### 9.1 Property

This page allows to configure and display Spanning Tree Protocol (STP) property configuration.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save Logout Reboot

Spanning Tree >> Property

▼ Status

▼ Network

▼ Port

▼ VLAN

▼ MAC Address Table

▼ Spanning Tree

▼ Discovery

▼ Multicast

▼ Security

▼ ACL

▼ QoS

▼ Diagnostics

▼ Management

Property

Port Setting

MST Instance

MST Port Setting

Statistics

State

Operation Mode

Path Cost

BPDU Handling

Priority

Hello Time

Max Age

Forward Delay

Tx Hold Count

Region Name

Revision

Max Hop

☐ Enable

☐ STP  
☒ RSTP  
☐ MSTP

☒ Long  
☐ Short

☐ Filtering  
☒ Flooding

(0 - 61440, default 32768)

Sec (1 - 10, default 2)

Sec (6 - 40, default 20)

Sec (4 - 30, default 15)

(1 - 10, default 6)

(0 - 65535, default 0)

(1 - 40, default 20)

Operational Status

Bridge Identifier

Designated Root Bridge

Root Port

Root Path Cost

Topology Change Count

Last Topology Change

32768-00:E0:4D:00:00:00

0-00:00:00:00:00:00

N/A

0

0

0D/0H/0M/0S

Apply

Item	Description
State	Enable or disable the STP operation.
Operation Mode	<b>STP</b> : Enable the Spanning Tree (STP) operation. <b>RSTP</b> : Enable the Rapid Spanning Tree (RSTP) operation. <b>MSTP</b> : Enable the Multiple Spanning Tree Protocol (MSTP)
Path Cost	Specify the path cost method.

	<p><b>Long:</b> Specifies that the default port path costs are within the range: 1~200,000,000.</p> <p><b>Short:</b> Specifies that the default port path costs are within the range: 1~65,535.</p>
BPDU Handling	<p>Specify the BPDU forward method when the STP is disabled.</p> <p><b>Filtering:</b> Filter the BPDU when STP is disabled.</p> <p><b>Flooding:</b> Flood the BPDU when STP is disabled.</p>
Priority	Specify a priority value for the switch. The smaller the priority value, the higher the priority and greater chance of becoming the root.
Hello Time	Specify the STP hello time in second to broadcast its hello message to other bridge by Designated Ports. Its valid range is from 1 to 10 seconds.
Max Age	Specify the time interval in seconds for a switch to wait the configuration messages, without attempting to redefine its own configuration.
Forward Delay	Specify the STP forward delay time, which is the amount of time that a port remains in the Listening and Learning states before it enters the Forwarding state. Its valid range is from 4 to 30 seconds.
Tx Hold Count	Specify the tx-hold-count used to limit the maximum numbers of packets transmission per second. The valid range is from 1 to 10.
Region Name	The default region name of the device is its MAC address.
Revision	Enter the revision number.
Max Hop	Set the number of hops for BPDU packets to be forwarded in the MSTP region.
Operational Status	Display the current STP operational status.
Apply	Apply the settings to the switch.

## 9.2 Port Setting

This page allows to configure and display Spanning Tree Protocol (STP) port settings.

PROSCENO

Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save Logout Reboot

Spanning Tree >> Port Setting

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Property

Port Setting

MST Instance

MST Port Setting

Statistics

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

Port Setting Table

1

GE1

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-1

20000

2

GE2

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-2

20000

3

GE3

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-3

20000

4

GE4

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-4

20000

5

GE5

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-5

20000

6

GE6

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-6

20000

7

GE7

Enabled

20000

128

Disabled

Disabled

Disabled

Enabled

Disabled

Forwarding

0-00:00:00:00:00:00

128-7

20000

8

GE8

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-8

20000

9

GE9

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-9

20000

10

GE10

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-10

20000

11

GE11

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-11

20000

12

GE12

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-12

20000

13

LAG1

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-13

20000

14

LAG2

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-14

20000

15

LAG3

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-15

20000

16

LAG4

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-16

20000

17

LAG5

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-17

20000

18

LAG6

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-18

20000

19

LAG7

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-19

20000

20

LAG8

Enabled

20000

128

Disabled

Disabled

Disabled

Disabled

Disabled

Disabled

0-00:00:00:00:00:00

128-20

20000

Item	Description
Edit	Edit the selected port settings.
Protocol Migration Check	Run protocol migration check on selected port.

Spanning Tree >> Port Setting

Edit Port Setting

Port

GE20

State

☒ Enable

Path Cost

0

(0 - 200000000) (0 = Auto)

Priority

128

Edge Port

☐ Enable

BPDU Filter

☐ Enable

BPDU Guard

☐ Enable

Point-to-Point

☒ Auto
☐ Enable
☐ Disable

Port State

Disabled

Designated Bridge

0-00:00:00:00:00:00

Designated Port ID

128-20

Designated Cost

20000

Operational Edge

False

Operational Point-to-Point

False

Apply

Close



Item	Description
Port	The index number of selected port.
State	Enable or disable the port settings.
Path Cost	Path cost is the cost of transmitting a frame on to a LAN through that port. It is recommended to assign this value according to the speed of the bridge. The slower the media, the higher the cost. Entering 0 means the switch will automatically assign a value.
Priority	Specify a priority value for the switch. The smaller the priority value, the higher the priority and greater chance of becoming the root.
Edge Port	Enable or disable the edge mode. In the edge mode, the interface would be put into the Forwarding state immediately upon link up. If the edge mode is enabled for the interface and there are BPDUs received on the interface, the loop might be occurred in the short time before the STP state change.
BPDU Filter	Checked means drop all BPDU packets and no BPDU will be sent.
BPDU Guard	When it is checked that BPDU Guard further protects your switch by turning this port into error state and shutdown if any BPDU received from this port.
Point-to-Point	<p><b>Auto:</b> Switch determines the STP of link type for this port automatically.</p> <p><b>Enable:</b> It means the STP of link type on this port is full-duplex and directly connect to another switch or host.</p> <p><b>Disable:</b> It means the STP of link type on this port is “not” full-duplex and “does not” directly connect to another switch or host.</p>
Port State	Display current port status.
Designated Bridge	Display designated bridge information.
Designated Port ID	Display designated port ID information.
Designated Cost	Display designated cost information.
Operational Edge	Display current state of edge port.
Operational Point-to-Point	Display current state of Point-to-Point.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 9.3 MST Instance

MSTP allows traffic of different VLAN to be mapped into different MST Instances, the supports up to 16 independent MST instances (0~15) with which the VLAN can be associated.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Spanning Tree >> MST Instance

Save Logout Reboot

Status  
Network  
Port  
VLAN  
MAC Address Table  
Spanning Tree  
Property  
Port Setting  
MST Instance  
MST Port Setting  
Statistics  
Discovery  
Multicast  
Security  
ACL  
QoS  
Diagnostics  
Management

**MST Instance Table**

MSTI	Priority	Bridge Identifier	Designated Root Bridge	Root Port	Root Path Cost	Remaining Hop	VLAN
0	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	1-4094
1	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
2	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
3	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
4	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
5	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
6	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
7	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
8	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
9	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
10	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
11	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
12	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
13	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
14	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	
15	32768	32768-00-E0-4C-00-00-01	0-00-00-00-00-00-00	N/A	0	0	

Edit

### Spanning Tree >> MST Instance

#### Edit MST Instance Setting

**MSTI** 3

**VLAN**

Available VLAN: 1, 2, 3, 4, 5, 6, 7, 8

Selected VLAN:

**Priority** 32768 (0 - 61440, default 32768)

**Bridge Identifier** 32768-FC:8F:C4:0D:BD:C6

**Designated Root Bridge** 0-00:00:00:00:00:00

**Root Port**

**Root Path Cost** 0

**Remaining Hop** 0

Apply Close

Item	Description
Edit	Edit the settings of selected instance.
MSTI	The index number of selected MST instance.

VLAN	Enter the ID of the VLAN which should be associated with this MSTI.
Priority	The switch priority for this MST instance. A lower number gives the switch higher chance to be chosen as the root bridge.
Bridge Identifier	Display the priority of MSTI instance number + MAC address of the switch.
Designated Root Bridge	Display the Bridge Identifier of the root bridge.
Root Port	Display the port toward the root.
Root Path Cost	Display the path cost toward the root.
Remaining Hop	Display the remaining hop count in BPDU.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 9.4 MST Port Setting

MST Port Settings is used to configure the GE port / LAG group settings for each MST instance. The table displays the MST parameters for each port.

24 GbE Switch with 4 10G SFP+ Up Links

Spanning Tree >> MST Port Setting

MST Port Setting Table

MSTI 0

Entry	Port	Path Cost	Priority	Port Role	Port State	Mode	Type	Designated Bridge	Designated Port ID	Designated Cost	Remaining Hop
<input type="checkbox"/>	1 GE1	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-1	20000	20
<input type="checkbox"/>	2 GE2	20000	128	Disabled	Forwarding	RSTP	Boundary	0-00:00:00:00:00:00	128-2	20000	20
<input type="checkbox"/>	3 GE3	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-3	20000	20
<input type="checkbox"/>	4 GE4	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-4	20000	20
<input type="checkbox"/>	5 GE5	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-5	20000	20
<input type="checkbox"/>	6 GE6	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-6	20000	20
<input type="checkbox"/>	7 GE7	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-7	20000	20
<input type="checkbox"/>	8 GE8	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-8	20000	20
<input type="checkbox"/>	9 GE9	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-9	20000	20
<input type="checkbox"/>	10 GE10	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-10	20000	20
<input type="checkbox"/>	11 GE11	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-11	20000	20
<input type="checkbox"/>	12 GE12	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-12	20000	20
<input type="checkbox"/>	13 GE13	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-13	20000	20
<input type="checkbox"/>	14 GE14	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-14	20000	20
<input type="checkbox"/>	15 GE15	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-15	20000	20
<input type="checkbox"/>	16 GE16	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-16	20000	20
<input type="checkbox"/>	17 GE17	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-17	20000	20
<input type="checkbox"/>	18 GE18	20000	128	Disabled	Disabled	RSTP	Boundary	0-00:00:00:00:00:00	128-18	20000	20
<input type="checkbox"/>	19 25G-19	20000	4096	Priority 4096	Discarding	RSTP	Boundary	0-00:00:00:00:00:00	4096-19	20000	20

## Edit MST Port Setting

<b>MSTI</b>	0
<b>Port</b>	GE5
<b>Path Cost</b>	0 (0 - 200000000) (0 = Auto)
<b>Priority</b>	128
<b>Port Role</b>	Disabled
<b>Port State</b>	Disabled
<b>Mode</b>	RSTP
<b>Type</b>	Boundary
<b>Designated Bridge</b>	0-00:00:00:00:00:00
<b>Designated Port ID</b>	128-5
<b>Designated Cost</b>	20000
<b>Remaining Hop</b>	20

Apply

Close

Item	Description
MSTI	Select one of the MST instances.
Edit	Edit the settings of selected port.
MSTI	Display the selected MST instance.
Port	Display the selected port number.
Path Cost	Set path cost value for the port. A port with lowest value will be used as the forwarding port by spanning tree. Default value was set according to the bandwidth of the port.
Priority	Among the ports with same path cost, port with lower priority will have higher chance to be used as the forwarding port by spanning tree. Use the drop down list to choose desired priority value.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 9.5 Statistics

This page displays the statistics of BPDU on each port.

## Spanning Tree &gt;&gt; Statistics

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree

Property  
Port Setting  
MST Instance  
MST Port Setting

**Statistics**

- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

**Statistics Table**

Refresh Rate  sec

	Entry	Port	Receive BPDU			Transmit BPDU			
			Config	TCN	MSTP	Config	TCN	MSTP	
<input type="checkbox"/>	1	GE1	0	0	0	0	0	0	
<input type="checkbox"/>	2	GE2	0	0	0	0	0	0	
<input type="checkbox"/>	3	GE3	0	0	0	0	0	0	
<input type="checkbox"/>	4	GE4	0	0	0	0	0	0	
<input type="checkbox"/>	5	GE5	0	0	0	0	0	0	
<input type="checkbox"/>	6	GE6	0	0	0	0	0	0	
<input type="checkbox"/>	7	GE7	0	0	0	0	0	0	
<input type="checkbox"/>	8	GE8	0	0	0	0	0	0	
<input type="checkbox"/>	9	GE9	0	0	0	0	0	0	
<input type="checkbox"/>	10	GE10	0	0	0	0	0	0	
<input type="checkbox"/>	11	GE11	0	0	0	0	0	0	
<input type="checkbox"/>	12	GE12	0	0	0	0	0	0	
<input type="checkbox"/>	13	LAG1	0	0	0	0	0	0	
<input type="checkbox"/>	14	LAG2	0	0	0	0	0	0	
<input type="checkbox"/>	15	LAG3	0	0	0	0	0	0	
<input type="checkbox"/>	16	LAG4	0	0	0	0	0	0	
<input type="checkbox"/>	17	LAG5	0	0	0	0	0	0	
<input type="checkbox"/>	18	LAG6	0	0	0	0	0	0	
<input type="checkbox"/>	19	LAG7	0	0	0	0	0	0	
<input type="checkbox"/>	20	LAG8	0	0	0	0	0	0	

## 10 Discovery

### 10.1 LLDP

LLDP is a one-way protocol; there are no request/response sequences. Information is advertised by stations implementing the transmit function, and is received and processed by stations implementing the receive function. The LLDP category contains LLDP and LLDP-MED pages.

#### 10.1.1 Property

This page allows to configure general settings of LLDP.


The screenshot shows the configuration interface for a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb trail is "Discovery >> LLDP >> Property". The left sidebar contains a tree view with categories: Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery (expanded), LLDP (selected), Multicast, Security, ACL, QoS, Diagnostics, and Management. Under the LLDP category, the sub-items are: Property, Port Setting, MED Network Policy, MED Port Setting, Packet View, Local Information, Neighbor, and Statistics. The main content area displays the "LLDP" configuration page. It includes a "State" section with a checked "Enable" checkbox. Below this is the "LLDP Handling" section with three radio buttons: "Filtering", "Bridging", and "Flooding" (which is selected). The "LLDP" section also contains four input fields: "TLV Advertise Interval" (30, range 5-32767, default 30), "Hold Multiplier" (4, range 2-10, default 4), "Reinitializing Delay" (2, range 1-10, default 2), and "Transmit Delay" (2, range 1-8191, default 2). Below these is the "LLDP-MED" section with a "Fast Start Repeat Count" input field (3, range 1-10, default 3). An "Apply" button is located at the bottom of the configuration area.

Item	Description
State	Enable or disable the LLDP protocol on this switch.
LLDP Handling	Select the handling mode for LLDP protocol.
TLV Advertise Interval	Select the interval at which frames are transmitted. The default is 30 seconds, and the valid range is 5–32768seconds.
Hold Multiplier	Select the multiplier on the transmit interval to assign to TTL (range 2–10, default = 4).
Reinitializing Delay	Select the delay before a re-initialization (range 1–10 seconds, default = 2).
Transmit Delay	Select the delay after an LLDP frame is sent (range 1–8191 seconds, default = 2).

Fast Start Repeat Count	Select the number of LLDP packets that will be sent during LLDP-MED Fast Start period. The default is 3. Available range is from 1 to 10.
Apply	Apply the settings to the switch.

### 10.1.2 Port Setting

This page allows to select specified port or all ports to configure LLDP state.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

[Discovery](#) >> [LLDP](#) >> **Port Setting**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
  - LLDP
    - Property
    - Port Setting**
    - MED Network Policy
    - MED Port Setting
    - Packet View
    - Local Information
    - Neighbor
    - Statistics
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

#### Port Setting Table

<input type="checkbox"/>	Entry	Port	Mode	Selected TLV
<input type="checkbox"/>	1	GE1	Normal	802.1 PVID
<input type="checkbox"/>	2	GE2	Normal	802.1 PVID
<input type="checkbox"/>	3	GE3	Normal	802.1 PVID
<input type="checkbox"/>	4	GE4	Normal	802.1 PVID
<input type="checkbox"/>	5	GE5	Normal	802.1 PVID
<input type="checkbox"/>	6	GE6	Normal	802.1 PVID
<input type="checkbox"/>	7	GE7	Normal	802.1 PVID
<input type="checkbox"/>	8	GE8	Normal	802.1 PVID
<input type="checkbox"/>	9	GE9	Normal	802.1 PVID
<input type="checkbox"/>	10	GE10	Normal	802.1 PVID
<input type="checkbox"/>	11	GE11	Normal	802.1 PVID
<input type="checkbox"/>	12	GE12	Normal	802.1 PVID

[Edit](#)

## Edit Port Setting

<b>Port</b>	GE2,GE5	
<b>Mode</b>	<input type="radio"/> Transmit <input type="radio"/> Receive <input checked="" type="radio"/> Normal <input type="radio"/> Disable	
<b>Optional TLV</b>	Available TLV Port Description System Name System Description System Capabilities 802.3 MAC-PHY	Selected TLV 802.1 PVID
<b>802.1 VLAN Name</b>	Available VLAN VLAN 1	Selected VLAN

Item	Description
Edit	Edit the settings of selected port.
Port	Display the selected port.
Mode	Transmit: Transmit LLDP PDUs only. Receive: Receive LLDP PDUs only. Normal: Transmit and receive LLDP PDUs. Disable: Disable the transmission of LLDP PDUs.
Optional TLV	Within data communication protocols, optional information may be encoded as a type-length-value or TLV element inside a protocol. TLV is also known as tag-length value. The type and length are fixed in size (typically 1-4 bytes), and the value field is of variable size. Select the LLDP optional TLVs to be carried (multiple selection is allowed). Available items include System Name, Port Description, System Description, System Capability, 802.3 MAC-PHY, 802.3 Link Aggregation, 802.3 Maximum Frame Size, Management Address and 802.1 PVID.
802.1 VLAN Name	Select the VLAN ID number to be performed (multiple selections are allowed).
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.



### 10.1.3 MED Network Policy

This page allows to set MED (Media Endpoint Discovery) network policy.

The screenshot shows the Proscendo Industrial 12-Port GbE Managed Switch web interface. The top navigation bar includes the Proscendo logo, the device name, and links for Save, Logout, and Reboot. The left sidebar contains a menu with categories like Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, and Discovery. The Discovery category is expanded, showing sub-items like LLDP, MED Network Policy, and others. The main content area is titled 'Discovery >> LLDP >> MED Network Policy'. It features a 'MED Network Policy Voice Auto Mode' section with an 'Enable' checkbox. Below this is a 'MED Network Policy Table' with columns for Policy ID, Application, VLAN, VLAN Tag, Priority, and DSCP. The table currently shows 0 results. Navigation buttons like Add, Edit, and Delete are present.

Item	Description
Add	Add a new MED network policy.
Edit	Edit existing entry of MED network policy.
Delete	Delete selected entry of MED network policy.

The screenshot shows the 'Add MED Network Policy' dialog box. It contains the following fields and options:


- Policy ID:** A dropdown menu with the value '1' selected.
- Application:** A dropdown menu with the value 'Voice' selected.
- VLAN:** A text input field with a range indicator '(1 - 4094)'.
- VLAN Tag:** Radio buttons for 'Tagged' (selected) and 'Untagged'.
- Priority:** A dropdown menu with the value '0' selected.
- DSCP:** A dropdown menu with the value '0' selected.

At the bottom of the dialog are 'Apply' and 'Close' buttons.

Item	Description
Policy ID	Choose a number for configuring the policy profile. Available selections include 1 to 32.
Application	There are several applications which can be used for MED network. Selections include Voice, Voice Signaling, Guest Voice, Guest Voice Signaling, Softphone Voice, Video Conferencing, Stream Video and Video Signaling.
VLAN	Set a VLAN ID (ranging from 1 to 4095) for such profile.
VLAN Tag	Specify if the outgoing packets will be tagged or not.  Tagged: Packets will be sent out with a number tagged.  Untagged: Packets will be sent out without any tag.
Priority	Set Layer2 priority (range from 0 to 7).
DSCP	Set DSCP value (range from 0 to 63).
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 10.1.4 MED Port Setting

This page allows to configure TLV (Type / Length / Value) settings for each port.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

[Discovery](#) >> [LLDP](#) >> **MED Port Setting**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
  - LLDP
    - Property
    - Port Setting
    - MED Network Policy
    - MED Port Setting**
    - Packet View
    - Local Information
    - Neighbor
    - Statistics
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

#### MED Port Setting Table

<input type="checkbox"/>	Entry	Port	State	Network Policy		Location	Inventory	
				Active	Application			
<input type="checkbox"/>	1	GE1	Enabled	Yes		No	No	
<input type="checkbox"/>	2	GE2	Enabled	Yes		No	No	
<input type="checkbox"/>	3	GE3	Enabled	Yes		No	No	
<input type="checkbox"/>	4	GE4	Enabled	Yes		No	No	
<input type="checkbox"/>	5	GE5	Enabled	Yes		No	No	
<input type="checkbox"/>	6	GE6	Enabled	Yes		No	No	
<input type="checkbox"/>	7	GE7	Enabled	Yes		No	No	
<input type="checkbox"/>	8	GE8	Enabled	Yes		No	No	
<input type="checkbox"/>	9	GE9	Enabled	Yes		No	No	
<input type="checkbox"/>	10	GE10	Enabled	Yes		No	No	
<input type="checkbox"/>	11	GE11	Enabled	Yes		No	No	
<input type="checkbox"/>	12	GE12	Enabled	Yes		No	No	

Edit

## Edit MED Port Setting

**Port** GE2

**State** ☐ Enable

**Optional TLV**

Available TLV: Location, Inventory

Selected TLV: Network Policy

**Network policy**

Available Policy: 1 (Voice)

Selected Policy:

**Location**

Coordinate: (16 pairs of hexadecimal characters)

Civic: (6-160 pairs of hexadecimal characters)

ECS ELIN: (10-25 pairs of hexadecimal characters)

Apply Close

Item	Description
Edit	Edit the settings of selected port.
Port	The index number of selected port.
State	Enable or disable the LLDP MED on the selected port.
Optional TLV	Available TLV items will be shown in this field of “Available TLV”. Choose the one(s) you want and click the >> arrow to transfer the selection(s) to the field of “Selected TLV”.
Network policy	Available policy will be shown in this field of “Available Policy”. Choose the one(s) you want and click the >> arrow to transfer the selection(s) to the field of “Selected Policy”.
Coordinate	Enter the coordinate location in 16 pairs of hexadecimal characters.
Civic	Enter the civic address in 6 ~ 160 pairs of hexadecimal characters.
ECS ELIN	Enter the ECS (Emergency Call Service) ELIN (Emergency Location Identification Number) in 10 ~ 25 pairs of hexadecimal characters.
Apply	Apply the settings to the switch.

Close	Close the setting page and back to previous page.
-------	---

### 10.1.5 Packet View

This page provides packet view detail of each port.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Discovery >> LLDP >> Packet View

**Packet View Table**

	Entry	Port	In-Use (Bytes)	Available (Bytes)	Operational Status
<input type="radio"/>	1	GE1	48	1440	Not Overloading
<input type="radio"/>	2	GE2	48	1440	Not Overloading
<input type="radio"/>	3	GE3	48	1440	Not Overloading
<input type="radio"/>	4	GE4	48	1440	Not Overloading
<input type="radio"/>	5	GE5	48	1440	Not Overloading
<input type="radio"/>	6	GE6	48	1440	Not Overloading
<input type="radio"/>	7	GE7	48	1440	Not Overloading
<input type="radio"/>	8	GE8	48	1440	Not Overloading
<input type="radio"/>	9	GE9	48	1440	Not Overloading
<input type="radio"/>	10	GE10	49	1439	Not Overloading
<input type="radio"/>	11	GE11	49	1439	Not Overloading
<input type="radio"/>	12	GE12	49	1439	Not Overloading

Detail

### 10.1.6 Local Information

This page shows detailed local information of LLDP.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

**Discovery >> LLDP >> Local Information**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
  - LLDP
    - Property
    - Port Setting
    - MED Network Policy
    - MED Port Setting
    - Packet View
    - Local Information**
    - Neighbor
    - Statistics
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

### Device Summary

Chassis ID Subtype	MAC address
Chassis ID	00:E0:4D:00:00:00
System Name	Switch
System Description	850G-12I
Supported Capabilities	Bridge
Enabled Capabilities	Bridge
Port ID Subtype	Local

### Port Status Table

	Entry	Port	LLDP State	LLDP-MED State
<input type="radio"/>	1	GE1	Normal	Enabled
<input type="radio"/>	2	GE2	Normal	Enabled
<input type="radio"/>	3	GE3	Normal	Enabled
<input type="radio"/>	4	GE4	Normal	Enabled
<input type="radio"/>	5	GE5	Normal	Enabled
<input type="radio"/>	6	GE6	Normal	Enabled
<input type="radio"/>	7	GE7	Normal	Enabled
<input type="radio"/>	8	GE8	Normal	Enabled
<input type="radio"/>	9	GE9	Normal	Enabled
<input type="radio"/>	10	GE10	Normal	Enabled
<input type="radio"/>	11	GE11	Normal	Enabled
<input type="radio"/>	12	GE12	Normal	Enabled

[Detail](#)

## 10.1.7 Neighbor

This page allows to view the information sent from neighboring devices by LLDP protocol.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

**Discovery >> LLDP >> Neighbor**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
  - LLDP
    - Property
    - Port Setting
    - MED Network Policy
    - MED Port Setting
    - Packet View
    - Local Information
    - Neighbor**
    - Statistics
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management

### Neighbor Table

Showing  entries
Showing 1 to 1 of 1 entries

<input type="checkbox"/>	Local Port	Chassis ID Subtype	Chassis ID	Port ID Subtype	Port ID	System Name	Time to Live
<input type="checkbox"/>	GE7	Local	PC-HT-JASON	MAC address	00:13:3B:0C:24:01		3411

[Clear](#)
[Refresh](#)
[Detail](#)

[First](#)
[Previous](#)
[Next](#)
[Last](#)

## 10.1.8 Statistics

This page shows global statistics and statistics of each port.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Discovery >> LLDP >> Statistics

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

LLDP

- Property
- Port Setting
- MED Network Policy
- MED Port Setting
- Packet View
- Local Information
- Neighbor
- Statistics

Multicast

Security

ACL

QoS

Diagnostics

Management

Global Statistics

Insertions3

Deletions2

Drops0

AgeOuts0

ClearRefresh

Statistics Table

	Entry	Port	Transmit Frame	Receive Frame			Receive TLV		Neighbor Timeout
			Total	Total	Discard	Error	Discard	Unrecognized	
<input type="checkbox"/>	1	GE1	0	0	0	0	0	0	0
<input type="checkbox"/>	2	GE2	0	0	0	0	0	0	0
<input type="checkbox"/>	3	GE3	0	0	0	0	0	0	0
<input type="checkbox"/>	4	GE4	0	0	0	0	0	0	0
<input type="checkbox"/>	5	GE5	0	0	0	0	0	0	0
<input type="checkbox"/>	6	GE6	47	6	0	0	0	0	0
<input type="checkbox"/>	7	GE7	0	0	0	0	0	0	0
<input type="checkbox"/>	8	GE8	142	13	0	0	0	0	0
<input type="checkbox"/>	9	GE9	0	0	0	0	0	0	0
<input type="checkbox"/>	10	GE10	0	0	0	0	0	0	0
<input type="checkbox"/>	11	GE11	0	0	0	0	0	0	0
<input type="checkbox"/>	12	GE12	0	0	0	0	0	0	0

ClearRefresh

## 11 Multicast

IP multicast is a technique for one-to-many communication over an IP infrastructure in a network. To avoid the incoming data broadcasting to all GE ports, multicast is useful to transfer the data/message to specified GE ports for IGMP snooping. When Switch receives a message “subscribed” by the client, it must decide to transfer the data to specified GE ports according to the location of the client (subscribed member).

### 11.1 General

#### 11.1.1 Property

For the multicast packets, this page allows the network administrator to choose actions for processing the unknown multicast packets and for handling known packets with MAC address, IP address and VLAN ID.

The screenshot displays the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The left sidebar contains a tree view of configuration categories: Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, General, Security, ACL, QoS, Diagnostics, and Management. The 'Multicast' category is expanded, showing 'General' and 'Property' sub-items. The 'Property' sub-item is selected, displaying the configuration page. The page title is 'Multicast >> General >> Property'. The main content area has two sections: 'Unknown Multicast Action' and 'Multicast Forward Method'. The 'Unknown Multicast Action' section has three radio buttons: 'Flood' (selected), 'Drop', and 'Forward to Router Port'. The 'Multicast Forward Method' section has two sub-sections: 'IPv4' and 'IPv6'. Each sub-section has two radio buttons: 'DMAC-VID' (selected) and 'DIP-VID'. An 'Apply' button is located at the bottom of the configuration area.

Item	Description
Unknown Multicast Action	Select an action for switch to handle with unknown multicast packet. <b>Flood:</b> Flood the unknown multicast data. <b>Drop:</b> Drop the unknown multicast data. <b>Forward to Router port:</b> Forward the unknown multicast data to router port.
IPv4	Set the IPv4 multicast forward method.

	DMAC-VID: Forward using destination multicast MAC address and VLAN IDs.  DIP-VID: Forward using destination multicast IP address and VLAN ID.
IPv6	Set the IPv6 multicast forward method.  DMAC-VID: Forward using destination multicast MAC address and VLAN IDs.  DIP-VID: Forward using destination multicast IPv6 address and VLAN ID.
Apply	Apply the settings to the switch.

### 11.1.2 Group Address

The page allows to assign a VLAN/port as a specific IPv4/IPv6 multicast member. Every IPv4/IPv6 multicast stream that belongs to the specified group IP address will be forwarded to the specified port/VLAN member.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Multicast >> General >> Group Address

**Group Address Table**

IP Version: IPv4

Showing All entries Showing 0 to 0 of 0 entries

Search: [ ]

<input type="checkbox"/>	VLAN	Group Address	Member	Type	Life (Sec)
0 results found.					

First Previous 1 Next Last

Add Edit Delete Refresh

Item	Description
IP Version	Select the IP version which will be displayed on this page.
Add	Add a new group address.



Edit	Edit the existing group address.
Delete	Delete the selected group address.
Refresh	Refresh the current page.

**Multicast >> General >> Group Address**

Add Group Address

VLAN
1
IP Version
IPv4
Group Address

Member

Available Port
GE1  
GE2  
GE3  
GE4  
GE5  
GE6  
GE7  
GE8
Selected Port

Apply Close

Item	Description
VLAN	Use the drop down list to specify a VLAN profile as IGMP Static Group.
IP Version	Select the IP Version.
Group Address	It is an identifier for the group member. Packets sent to such address will be transferred to all interfaces defined in Member Ports.  Specify the IPv4/IPv6 multicast address you wish to assign for the static group (defined in VLAN).
Member	Specify the port(s) that static group with given IPv4/IPv6 multicast address shall include.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 11.1.3 Router Port

This page shows the IGMP queried router known to this switch.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Multicast >> General >> Router Port

**Router Port Table**

IP Version: IPv4

Showing All entries Showing 0 to 0 of 0 entries

Search: [ ]

<input type="checkbox"/>	VLAN	Member	Static Port	Forbidden Port	Life (Sec)
0 results found.					

First Previous 1 Next Last

Add Edit Refresh

Item	Description
IP Version	Select the IP version which will be displayed on this page.
Add	Add a new entry.
Edit	Edit the existing entry.
Refresh	Refresh the current page.

## Add Router Port

The screenshot shows the 'Add Router Port' configuration interface. It includes three main configuration areas: VLAN, IP Version, and Port. The VLAN section features an 'Available VLAN' list with '1' selected and an empty 'Selected VLAN' list, connected by right and left arrows. The IP Version section has a dropdown menu currently set to 'IPv4'. The Type section contains two radio buttons: 'Static' (which is selected) and 'Forbidden'. The Port section has an 'Available Port' list showing ports GE1 through GE8, and an empty 'Selected Port' list, also connected by right and left arrows. At the bottom of the window are 'Apply' and 'Close' buttons.

Item	Description
VLAN	Available VLAN will be shown in this field of “Available VLAN”. Choose the one(s) you want and click the >> arrow to transfer the selection(s) to the field of “Selected VLAN”.
IP Version	Select the IP Version.
Type	<b>Static:</b> Specify LAN Port (GE/LAG) to send out query to remote host. <b>Forbidden:</b> Use the drop down list to specify forbidden LAN Port (GE/LAG).
Port	Available port will be shown in this field of “Available Port”. Choose the one(s) you want and click the >> arrow to transfer the selection(s) to the field of “Selected Port”.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

#### 11.1.4 Forward All

This page is allowed to determine which port(s) would like to receive the data (multicast packets) that forwarded by Switch.

## Multicast &gt;&gt; General &gt;&gt; Forward All

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast

- ▲ General
  - Property
  - Group Address
  - Router Port
  - Forward All
  - Throttling
  - Filtering Profile
  - Filtering Binding
- ▼ IGMP Snooping
- ▼ MLD Snooping
- ▼ MVR
- ▼ Security
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

### Forward All Table

IP Version IPv4 ▼

Showing All ▼ entries

Showing 0 to 0 of 0 entries




<input type="checkbox"/>	VLAN	Static Port	Forbidden Port
0 results found.			

[Add](#) [Edit](#) [Delete](#)
[First](#) [Previous](#) [1](#) [Next](#) [Last](#)

Item	Description
IP Version	Select the IP version which will be displayed on this page.
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

Add Forward All

VLAN	Available VLAN	Selected VLAN
	<div>1</div>	
IP Version	IPv4	
Type	<input checked="" type="radio"/> Static <input type="radio"/> Forbidden	
Port	Available Port	Selected Port
	<div>GE1 GE2 GE3 GE4 GE5 GE6 GE7 GE8</div>	

Apply Close

Item	Description
VLAN	Available VLAN will be shown in this field of “Available VLAN”. Choose the one(s) you want and click the >> arrow to transfer the selection(s) to the field of “Selected VLAN”.
IP Version	Select the IP Version.
Type	<b>Static:</b> The multicast packets will be delivered to the network device connected by these ports. <b>Forbidden:</b> the multicast packets will not be delivered to the network device connected by these ports.
Port	Available port will be shown in this field of “Available Port”. Choose the one(s) you want and click the >> arrow to transfer the selection(s) to the field of “Selected Port”.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## Throttling

The Throttling page is used for configuring the maximum number (0~256) of IGMP group that a user on a switch port can join. After defined the maximum number, each switch port interface can be set to deny the IGMP join report or set to replace randomly selected multicast interface with received IGMP join report.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Multicast >> General >> Throttling

Throttling Table

IP Version: IPv4

<input type="checkbox"/>	Entry	Port	Max Group	Exceed Action
<input type="checkbox"/>	1	GE1	256	Deny
<input type="checkbox"/>	2	GE2	256	Deny
<input type="checkbox"/>	3	GE3	256	Deny
<input type="checkbox"/>	4	GE4	256	Deny
<input type="checkbox"/>	5	GE5	256	Deny
<input type="checkbox"/>	6	GE6	256	Deny
<input type="checkbox"/>	7	GE7	256	Deny
<input type="checkbox"/>	8	GE8	256	Deny
<input type="checkbox"/>	9	GE9	256	Deny
<input type="checkbox"/>	10	GE10	256	Deny
<input type="checkbox"/>	11	GE11	256	Deny
<input type="checkbox"/>	12	GE12	256	Deny
<input type="checkbox"/>	13	LAG1	256	Deny
<input type="checkbox"/>	14	LAG2	256	Deny
<input type="checkbox"/>	15	LAG3	256	Deny
<input type="checkbox"/>	16	LAG4	256	Deny
<input type="checkbox"/>	17	LAG5	256	Deny
<input type="checkbox"/>	18	LAG6	256	Deny
<input type="checkbox"/>	19	LAG7	256	Deny
<input type="checkbox"/>	20	LAG8	256	Deny

Edit

Item	Description
IP Version	Select the IP version which will be displayed on this page.
Edit	Edit the selected entry.

Multicast >> General >> Throttling

Edit Throttling

Port
GE5

IP Version
IPv4

Max Group

256

(0 - 256)

Exceed Action

☒ Deny  
☐ Replace

Apply

Close

Item	Description
Port	The index number of selected port.
IP Version	The selected IP Version.
Max Group	Define the maximum number of IGMP group profile that a user on the switch can join. If "0" is entered, then such interface (port) can join all of the IGMP group profiles.
Exceed Action	<p><b>Deny:</b> It is default setting. The IGMP join report (for multicast service) received by such interface will be discarded.</p> <p><b>Replace:</b> When it is selected, a new group with IGMP report received will replace the existing group.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 11.1.5 Filtering Profile

The filtering profile page allows to configure up to 128 IP-group (for multicast service) profiles (starting and ending point within an IP range shall be specified). Each IP group profile can be set for permission of / denial of network service respectively.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
  - General
    - Property
    - Group Address
    - Router Port
    - Forward All
    - Throttling
    - Filtering Profile
    - Filtering Binding
  - IGMP Snooping
  - MLD Snooping
  - MVR
- Security
- ACL
- QoS
- Diagnostics
- Management

**Multicast >> General >> Filtering Profile**

### Filtering Profile Table

IP Version IPv4

Showing All entries Showing 0 to 0 of 0 entries

<input type="checkbox"/>	Profile ID	Start Address	End Address	Action
0 results found.				

Add Edit Delete

First Previous 1 Next Last

Item	Description
IP Version	Select the IP version which will be displayed on this page.
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

**Multicast >> General >> Filtering Profile**

#### Add Profile

Profile ID
 (1 - 128)

IP Version
IPv4

Start Address

End Address

Action

☒ Allow
 ☐ Deny


Apply Close



Item	Description
Profile ID	Enter the profile ID for IGMP snooping.
IP Version	Select the IP Version.
Start Address	Enter an IP address as the starting point for the IP range.
End Address	Enter an IP address as the ending point for the IP range.
Action	<p><b>Allow:</b> When it is selected, the request for multicast traffic will be forwarded to the multicast group normally.</p> <p><b>Deny:</b> It is default setting. The forwarding request of multicast traffic will be discarded.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 11.1.6 Filtering Binding

This page allows to select a filtering profile for GE/LAG port to process multicast traffic.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

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**Multicast >> General >> Filtering Binding**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
  - General
    - Property
    - Group Address
    - Router Port
    - Forward All
    - Throttling
    - Filtering Profile
    - Filtering Binding**
  - IGMP Snooping
  - MLD Snooping
  - MVR
- Security
- ACL
- QoS
- Diagnostics
- Management

#### Filtering Binding Table

IP Version IPv4 ▼

<input type="checkbox"/>	Entry	Port	Profile ID
<input type="checkbox"/>	1	GE1	
<input type="checkbox"/>	2	GE2	
<input type="checkbox"/>	3	GE3	
<input type="checkbox"/>	4	GE4	
<input type="checkbox"/>	5	GE5	
<input type="checkbox"/>	6	GE6	
<input type="checkbox"/>	7	GE7	
<input type="checkbox"/>	8	GE8	
<input type="checkbox"/>	9	GE9	
<input type="checkbox"/>	10	GE10	
<input type="checkbox"/>	11	GE11	
<input type="checkbox"/>	12	GE12	
<input type="checkbox"/>	13	LAG1	
<input type="checkbox"/>	14	LAG2	
<input type="checkbox"/>	15	LAG3	
<input type="checkbox"/>	16	LAG4	
<input type="checkbox"/>	17	LAG5	
<input type="checkbox"/>	18	LAG6	
<input type="checkbox"/>	19	LAG7	
<input type="checkbox"/>	20	LAG8	

Edit

Item	Description
IP Version	Select the IP version which will be displayed on this page.
Edit	Edit the selected entry.

**Multicast >> General >> Filtering Binding**

Edit Filtering Binding

Port

GE9

IP Version

IPv4

Profile ID

☐ Enable

Apply

Close

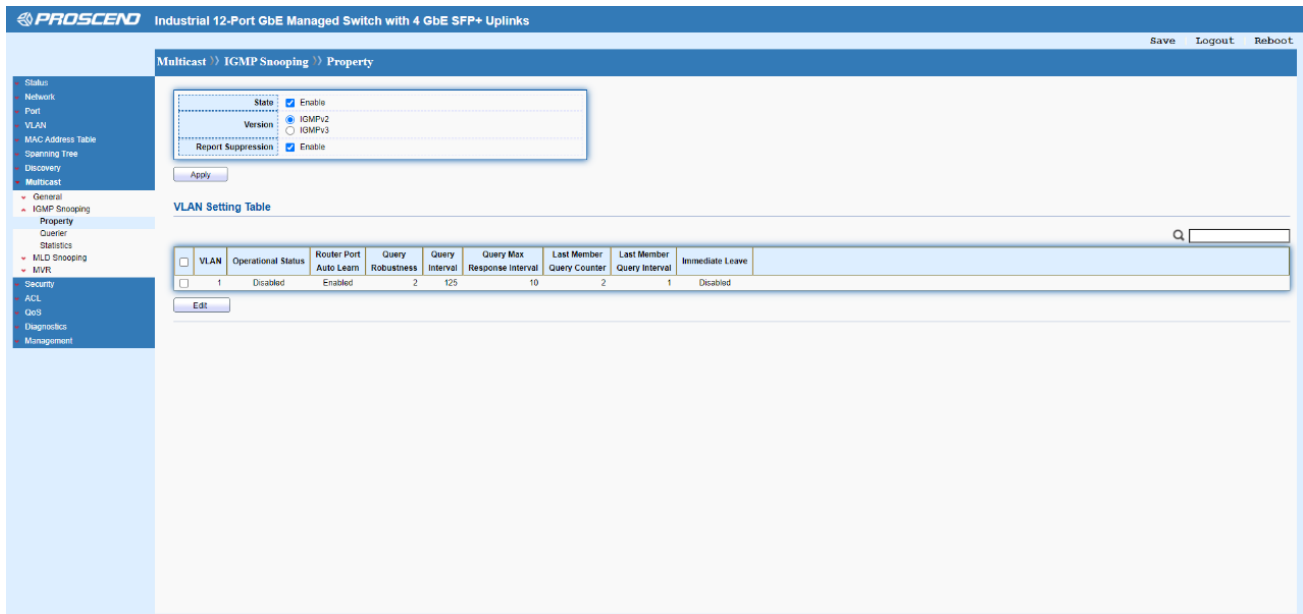
Item	Description
Port	The index number of selected port.
IP Version	The selected IP Version.
Profile ID	Enable of disable selected filtering profile for the selected port/interface.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 11.2 IGMP Snooping

IGMP snooping is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to listen in on the IGMP conversation between hosts and routers. By listening to these conversations, the switch maintains a map of which links need which IP multicast streams. Multicasts may be filtered from the links which do not need them and thus controls which ports receive specific multicast traffic.

### 11.2.1 Property

This page allows to enable/disable IGMP function, select snooping version, and enable/disable snooping report suppression.



Item	Description
State	Enable or disable the IGMP snooping.
Version	Set the IGMP snooping Version. <b>IGMPv2:</b> Only support IGMP v2 packet. <b>IGMPv3:</b> Support v3 basic and v2.
Report Suppression	Enable to allow the switch to handle IGMP reports between router and host, suppressing bandwidth used by IGMP.
Apply	Apply the settings to the switch.
Edit	Edit the selected entry.

Multicast >> IGMP Snooping >> Property

Edit VLAN Setting

VLAN

1

State

☐ Enable

Router Port Auto Learn

☒ Enable

Immediate leave

☐ Enable

Query Robustness

2 (1 - 7, default 2)

Query Interval

125 Sec (30 - 18000, default 125)

Query Max Response Interval

10 Sec (5 - 20, default 10)

Last Member Query Counter

2 (1 - 7, default 2)

Last Member Query Interval

1 Sec (1 - 25, default 1)

Operational Status

Status

Disabled

Query Robustness

2

Query Interval

125 (Sec)

Query Max Response Interval

10 (Sec)

Last Member Query Counter

2

Last Member Query Interval

1 (Sec)

Item	Description
VLAN	The index number of selected VLAN ID.
State	Enable or disable the IGMP snooping function
Router Port Auto Learn	Set the enabling status of IGMP router port learning. Choose Enable to learn router port by IGMP query.
Immediate leave	Leave the multicast group immediately on the port & VLAN where leave message is sent from, regardless there is still a subscribed member or not. Click Enable to enable Fast leave function.
Query Robustness	Set a number which allows tuning for the expected packet loss on a subnet.
Query Interval	Set the interval for sending general query.
Query Max Response Interval	It specifies the maximum allowed time before sending a responding report in units of 1/10 second.
Last Member Query Counter	After querying for specified times (defined here) and still not receiving any response from the subscribed member, Switch will stop transmitting data to the related GE port(s).
Last Member Query Interval	The maximum time interval between counting each member query message with no responses from any subscribed member.
Operational Status	Display the current operation status of IGMP snooping.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 11.2.2 Querier

This page allows to configure querier settings on specific VLAN of IGMP Snooping.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is "Multicast >> IGMP Snooping >> Querier". The left sidebar contains a tree view with categories: Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast (expanded), Security, ACL, QoS, Diagnostics, and Management. Under "Multicast", the sub-items are General, IGMP Snooping (expanded), Querier (selected), Statistics, MLD Snooping, and MVR. The main content area is titled "Querier Table" and features a search bar. Below the search bar is a table with columns: ☐ (checkbox), VLAN, State, Operational Status, Version, and Querier Address. The table contains one entry for VLAN 1 with State "Disabled" and Operational Status "Disabled". An "Edit" button is located below the table.

The screenshot shows the "Edit Querier" dialog box. It has a title bar "Edit Querier" and a dashed border. Inside, there are three fields: "VLAN" with the value "1", "State" with a checked "Enable" checkbox, and "Version" with radio buttons for "IGMPv2" (selected) and "IGMPv3". At the bottom are "Apply" and "Close" buttons.

Item	Description
Edit	Edit the selected entry.
VLAN	The index number of selected VLAN ID.
State	Enable or disable the IGMP Querier on the chosen VLAN profile.
Version	Set the query version of IGMP Querier Election on the chosen VLANs. <b>IGMPv2:</b> Querier version 2. <b>IGMPv3:</b> Querier version 3.
Apply	Apply the settings to the switch.

Close	Close the setting page and back to previous page.
-------	---

### 11.2.3 Statistics

This page displays the statistics of IGMP snooping.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is Multicast >> IGMP Snooping >> Statistics. The left sidebar contains a tree view with categories like Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, General, IGMP Snooping (with sub-items Property, Querier, Statistics), MLD Snooping, MVR, Security, ACL, QoS, Diagnostics, and Management. The main content area displays two tables of statistics.

Receive Packet	
Total	34
Valid	4
InValid	30
Other	0
Leave	0
Report	0
General Query	0
Special Group Query	0
Source-specific Group Query	0

Transmit Packet	
Leave	0
Report	0
General Query	0
Special Group Query	0
Source-specific Group Query	0

At the bottom of the statistics section are two buttons: Clear and Refresh.

## 11.3 MLD Snooping

MLD snooping acts on IPv6 packets. MLD snooping is the process of listening to Multicast Listener Discovery network traffic. It can examine IPv6 packets and forward these packets to designate location via VLAN port members.

### 11.3.1 Property

This page allows to enable/disable MLD Snooping function, select snooping version, and enable/disable snooping report suppression.

**PROSCENO** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks Save Logout Reboot

Multicast >> MLD Snooping >> Property

State ☐ Enable

Version ☒ MLDv1 ☐ MLDv2

Report Suppression ☒ Enable

Apply

VLAN Setting Table

VLAN	Operational Status	Router Port Auto Learn	Query Robustness	Query Interval	Query Max Response Interval	Last Member Query Counter	Last Member Query Interval	Immediate Leave
1	Disabled	Enabled	2	125	10	2	1	Disabled

Edit

Item	Description
State	Enable or disable the MLD snooping function.
Version	<p><b>MLDv1:</b> When it is selected, Switch will detect packets controlled by MLDv1 and bridge the traffic to IPv6 destination defined with multicast address(es).</p> <p><b>MLDv2:</b> When it is selected, Switch will detect packets controlled by MLDv2 and forward the traffic to destination defined with multicast address(es).</p>
Report Suppression	Enable or disable the function to handle MLD reports between router and host, suppressing bandwidth used by MLD.
Apply	Apply the settings to the switch.
Edit	Edit the selected entry.

## Edit VLAN Setting

VLAN	1
State	<input type="checkbox"/> Enable
Router Port Auto Learn	<input checked="" type="checkbox"/> Enable
Immediate leave	<input type="checkbox"/> Enable
Query Robustness	2 (1 - 7, default 2)
Query Interval	125 Sec (30 - 18000, default 125)
Query Max Response Interval	10 Sec (5 - 20, default 10)
Last Member Query Counter	2 (1 - 7, default 2)
Last Member Query Interval	1 Sec (1 - 25, default 1)
<b>Operational Status</b>	
Status	Disabled
Query Robustness	2
Query Interval	125 (Sec)
Query Max Response Interval	10 (Sec)
Last Member Query Counter	2
Last Member Query Interval	1 (Sec)

Item	Description
VLAN	The index number of VLAN entry.
State	Enable or disable the MLD snooping function for the selected VLAN ID.
Router Port Auto Learn	Enable or disable the function to handle MLD reports between router and host, suppressing bandwidth used by MLD.
Immediate Leave	Enable or disable the function of immediate leave. When the GE/LAG port receives the leave message, it will be removed from multicast group to speed up leave latency.
Query Robustness	Set a number which allows tuning for the expected packet loss on a subnet.
Query Interval	Specify the time interval for Switch to send out general MLD query to the host (responsible for responding).
Query Max Response Interval	Specify the maximum time interval for Switch to receive the query response from the host. If time is up and no response received, the packets will be blocked and discarded.
Last Member Query Counter	After querying for specified times (defined here) and still not receiving any response from the subscribed member, Switch will stop transmitting data to the related GE port(s).



Last Member Query Interval	The maximum time interval between counting each member query message with no responses from any subscribed member.
Operational Status	Display the current operational status.
Apply	Apply the settings to the switch.
Edit	Edit the selected entry.

### 11.3.2 Statistics

This page displays the statistics of MLD snooping.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is Multicast >> MLD Snooping >> Statistics. The left sidebar shows the configuration tree with 'Multicast' expanded and 'Statistics' selected. The main content area displays two tables of statistics.

Receive Packet	
Total	0
Valid	0
InValid	0
Other	0
Leave	0
Report	0
General Query	0
Special Group Query	0
Source-specific Group Query	0

Transmit Packet	
Leave	0
Report	0
General Query	0
Special Group Query	0
Source-specific Group Query	0

At the bottom of the statistics section are 'Clear' and 'Refresh' buttons.

## 11.4 MVR

Multicast VLAN Registration (MVR) can route packets received in a multicast source VLAN to one or more destination VLANs. LAN users are in the destination VLANs and the multicast server is in the source VLAN. MVR can continuously send multicast stream for traffic in the multicast VLAN, but isolate the streams from the source VLANs for bandwidth and security reasons.

### 11.4.1 Property

This page allows the network administrator to configure general settings for MVR, such as enabling function, selecting VLAN ID (as source VLAN) and specify IP address(es) for receiver/LAN users.

## Multicast &gt;&gt; MVR &gt;&gt; Property

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
  - ▼ General
  - ▼ IGMP Snooping
  - ▼ MLD Snooping
  - ▼ MVR
    - Property
    - Port Setting
    - Group Address
- ▼ Security
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

State	<input type="checkbox"/> Enable
VLAN	1
Mode	<input checked="" type="radio"/> Compatible <input type="radio"/> Dynamic
Group Start	0.0.0.0
Group Count	1 (1 - 128)
Query Time	1 Sec (1 - 10)
<b>Operational Group</b>	
Maximum	128
Current	0

[Apply](#)

Item	Description
State	Enable or disable the MVR function.
VLAN	Choose one VLAN profile from the drop down list as multicast source VLAN which will receive multicast data. The default is VLAN 1.
Mode	<b>Compatible:</b> Multicast data received by MVR hosts (multicast server) will be forwarded to all MVR receiver ports.  <b>Dynamic:</b> Multicast data received by MVR hosts (multicast server) on Switch will be forwarded from those MVR data and client ports grouped under MVR server.
Group Start	Enter an IP address. Any multicast data sent to this IP address will be sent to all source ports on Switch; and all receiver ports will accept /receive data from that multicast address.
Group Count	Select a number to configure a contiguous series of MVR group addresses (the range for count is 1 to 128; the default is 1).
Query Time	Enter the value of the maximum time (1 – 10 seconds) to wait for IGMP report members on a receiver port before the port is removed from multicast group.
Operational Group	Display the current operational group.
Apply	Apply the settings to the switch.

## 11.4.2 Port Setting

It is necessary to specify destination port and source port (GE/LAG) for system to perform MVR operation.

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Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Multicast >> MVR >> Port Setting

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multicast

General

IGMP Snooping

MLD Snooping

MVR

Property

Port Setting

Group Address

Security

ACL

QoS

Diagnostics

Management

Port Setting Table

Q

<input type="checkbox"/>	Entry	Port	Role	Immediate Leave
<input type="checkbox"/>	1	GE1	None	Disabled
<input type="checkbox"/>	2	GE2	None	Disabled
<input type="checkbox"/>	3	GE3	None	Disabled
<input type="checkbox"/>	4	GE4	None	Disabled
<input type="checkbox"/>	5	GE5	None	Disabled
<input type="checkbox"/>	6	GE6	None	Disabled
<input type="checkbox"/>	7	GE7	None	Disabled
<input type="checkbox"/>	8	GE8	None	Disabled
<input type="checkbox"/>	9	GE9	None	Disabled
<input type="checkbox"/>	10	GE10	None	Disabled
<input type="checkbox"/>	11	GE11	None	Disabled
<input type="checkbox"/>	12	GE12	None	Disabled
<input type="checkbox"/>	13	LAG1	None	Disabled
<input type="checkbox"/>	14	LAG2	None	Disabled
<input type="checkbox"/>	15	LAG3	None	Disabled
<input type="checkbox"/>	16	LAG4	None	Disabled
<input type="checkbox"/>	17	LAG5	None	Disabled
<input type="checkbox"/>	18	LAG6	None	Disabled
<input type="checkbox"/>	19	LAG7	None	Disabled
<input type="checkbox"/>	20	LAG8	None	Disabled

Edit

Item	Description
Edit	Edit the selected entry.

Multicast >> MVR >> Port Setting

Edit Port Setting

Port

GE2,GE6

Role

☒ None

☐ Receiver

☐ Source

Immediate Leave

☐ Enable

Apply

Close

Item	Description
Port	The index number of selected port.
Role	<p><b>None:</b> Nothing will be happened to the selected LAN port in MVR operation.</p> <p><b>Receiver:</b> The selected port will be treated as destination port which will receive multicast data from the multicast server.</p> <p><b>Source:</b> The selected port will be treated as source port which will send multicast data to the receiver port.</p>
Immediate Leave	Enable or disable the function of immediate leave.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 11.4.3 Group Address

This page allows to configure IP address and specify port member for VLAN selected in **MVR** ➔ **Property** page.

The screenshot displays the Proscend web management interface for an Industrial 12-Port GbE Managed Switch. The breadcrumb navigation indicates the path: Multicast >> MVR >> Group Address. The left sidebar contains a tree view of configuration categories. The main panel, titled 'Group Address Table', features a search input and a table with columns: VLAN, Group Address, Member, Type, and Life (Sec). Below the table, there are buttons for 'Add', 'Edit', 'Delete', and 'Refresh'. The status indicates 'Showing 0 to 0 of 0 entries' and '0 results found.'.

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

Refresh	Refresh the MVR Group Address table.
---------	--------------------------------------

**Multicast >> MVR >> Group Address**

Add Group Address

VLAN

1

Group Address

(0.0.0.0 - 0.0.0.0)

Member

Available Port

Selected Port

>

<

Apply

Close

Item	Description
VLAN	The index number of selected VLAN ID.
Group Address	Define a range of IP address(es) with the format of “xxx.xxx.xxx.xxx – xxx.xxx.xxx.xxx”.
Member	Choose GE/LAG port to be grouped under the selected VLAN.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12 Security

### 12.1 RADIUS

This page allows to add and configure multiple RADIUS servers.

The screenshot shows the configuration interface for a Proscend Industrial 12-Port GbE Managed Switch. The page title is "Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks". The navigation menu on the left includes Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, RADIUS, TACACS+, AAA, Management Access, Authentication Manager, Port Security, Protected Port, Storm Control, DoS, Dynamic ARP Inspection, DHCP Snooping, IP Source Guard, ACL, QoS, Diagnostics, and Management. The "Security" section is expanded, showing "RADIUS" as the selected option. The "RADIUS" configuration area includes a "Use Default Parameter" section with fields for "Retry" (3), "Timeout" (3), and "Key String". Below this is an "Apply" button. The "RADIUS Table" section shows a table with columns: Server Address, Server Port, Priority, Retry, Timeout, and Usage. The table is currently empty, displaying "0 results found." Below the table are buttons for "Add", "Edit", and "Delete". The page also includes "Save", "Logout", and "Reboot" links in the top right corner.

Item	Description
Retry	The retry time before the server being considered not reachable.
Timeout	Set the time (in seconds) before the server being considered lost connection.
Key String	Enter the string used to encrypt and authenticate with RADIUS server.
Apply	Apply the settings to the switch.
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Add RADIUS Server

Address Type	<input checked="" type="radio"/> Hostname <input type="radio"/> IPv4 <input type="radio"/> IPv6	
Server Address	<input type="text"/>	
Server Port	<input type="text" value="1812"/>	(0 - 65535, default 1812)
Priority	<input type="text"/>	(0 - 65535)
Key String	<input checked="" type="checkbox"/> Use Default <input type="text"/>	
Retry	<input checked="" type="checkbox"/> Use Default <input type="text" value="3"/> (1 - 10, default 3)	
Timeout	<input checked="" type="checkbox"/> Use Default <input type="text" value="3"/> Sec (1 - 30, default 3)	
Usage	<input type="radio"/> Login <input type="radio"/> 802.1X <input checked="" type="radio"/> All	

Item	Description
Address Type	Specify whether switch uses a hostname to resolve address by DNS to connect to server, or directly connect using IPv4 address.
Server Address	Enter the server's address corresponding with address type given.
Server Port	Enter the port number used by RADIUS server.
Priority	Specify the priority that switch uses this server. The higher number, the lower priority. Switch will start with lowest priority.
Key String	Enter the key string used for encrypting and authenticating with server.
Retry	The retry time before the server being considered not reachable.
Timeout	Set the time (in seconds) before the server being considered lost connection.
Usage	Specify whether you would like to use this server for switch login authentication or 802.1x access port authentication, or both.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12.2 TACACS+

This page allows to add and configure multiple TACACS+ server.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The left sidebar contains a tree view of configuration categories: Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security (selected), RADIUS, TACACS+ (selected), AAA, Management Access, Authentication Manager, Port Security, Protected Port, Storm Control, DoS, Dynamic ARP Inspection, DHCP Snooping, IP Source Guard, ACL, QoS, Diagnostics, and Management. The main content area is titled 'Security >> TACACS+'. It features a 'Use Default Parameter' section with a 'Timeout' field set to 5 (with a note 'Sec (1 - 30, default 5)') and an empty 'Key String' field, followed by an 'Apply' button. Below this is a 'TACACS+ Table' section with a search bar and a table showing 0 results. The table has columns for Server Address, Server Port, Priority, and Timeout. At the bottom of the table are 'Add', 'Edit', and 'Delete' buttons, and navigation links for 'First', 'Previous', '1', 'Next', and 'Last'.

Item	Description
Timeout	Set the time (in seconds) before the server being considered lost connection.
Key String	Enter the string used to encrypt and authenticate with RADIUS server.
Apply	Apply the settings to the switch.
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.



## Add TACACS+ Server

Address Type	<input checked="" type="radio"/> Hostname <input type="radio"/> IPv4 <input type="radio"/> IPv6	
Server Address	<input type="text"/>	
Server Port	<input type="text" value="49"/>	(0 - 65535, default 49)
Priority	<input type="text"/>	(0 - 65535)
Key String	<input checked="" type="checkbox"/> Use Default <input type="text"/>	
Timeout	<input checked="" type="checkbox"/> Use Default <input type="text" value="5"/> Sec (1 - 30, default 5)	

Item	Description
Address Type	Specify whether switch uses a hostname to resolve address by DNS to connect to server, or directly connect using IPv4 address.
Server Address	Enter the server's address corresponding with address type given.
Server Port	Enter the port number used by TACACS+ server.
Priority	Specify the priority that switch uses this server. The higher number, the lower priority. Switch will start with lowest priority.
Key String	Enter the key string used for encrypting and authenticating with server.
Timeout	Set the time (in seconds) before the server being considered lost connection.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12.3 AAA

### 12.3.1 Method List

This page allows to create method list for applying on management service.

## Security &gt;&gt; AAA &gt;&gt; Method List

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
  - RADIUS
  - TACACS+
  - ▲ AAA
    - Method List**
    - Login Authentication
    - Management Access
    - Authentication Manager
    - Port Security
    - Protected Port
    - Storm Control
  - ▼ DoS
  - ▼ Dynamic ARP Inspection
  - ▼ DHCP Snooping
  - ▼ IP Source Guard
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

## Method List Table

Showing All entries

Showing 1 to 1 of 1 entries



<input type="checkbox"/>	Name	Sequence
<input type="checkbox"/>	default	(1) Local

[Add](#) [Edit](#) [Delete](#)
[First](#) [Previous](#) [1](#) [Next](#) [Last](#)

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

Security >> AAA >> Method List

Add Method List

Name

Method 1

☒ Empty  
☐ None  
☐ Local  
☐ Enable  
☐ RADIUS  
☐ TACACS+

Method 2

☒ Empty  
☐ None  
☐ Local  
☐ Enable  
☐ RADIUS  
☐ TACACS+

Method 3

☒ Empty  
☐ None  
☐ Local  
☐ Enable  
☐ RADIUS  
☐ TACACS+

Method 4

☒ Empty  
☐ None  
☐ Local  
☐ Enable  
☐ RADIUS  
☐ TACACS+

Apply

Close

Item	Description
Name	Enter a name for creating a method.
Method Profile	Available methods include Local, RADIUS and TACACS+.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 12.3.2 Login Authentication

This page allows to select created method profile for each management service.

## Security &gt;&gt; AAA &gt;&gt; Login Authentication


- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
  - RADIUS
  - TACACS+
  - ▲ AAA
    - Method List
    - Login Authentication
  - ▼ Management Access
  - ▼ Authentication Manager
    - Port Security
    - Protected Port
    - Storm Control
  - ▼ DoS
  - ▼ Dynamic ARP Inspection
  - ▼ DHCP Snooping
  - ▼ IP Source Guard
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

Console:	default ▼	(1) Local
Telnet:	default ▼	(1) Local
SSH:	default ▼	(1) Local
HTTP:	default ▼	(1) Local
HTTPS:	default ▼	(1) Local

Apply

## 12.4 Management Access

### 12.4.1 Management VLAN


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Security >> Management Access >> Management VLAN**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
  - RADIUS
  - TACACS+
  - AAA
  - Management Access
    - Management VLAN**
    - Management Service
    - Management ACL
    - Management ACE
  - Authentication Manager
  - Port Security
  - Protected Port
  - Storm Control
  - DoS
  - Dynamic ARP Inspection
  - DHCP Snooping
  - IP Source Guard
- ACL
- QoS
- Diagnostics
- Management

**Management VLAN**
1 - default ▼

Note: Change Management VLAN may cause connection interrupted

Apply

Item	Description
Management VLAN	Select the VLAN ID that will be used for management.
Apply	Apply the settings to the switch.

### 12.4.2 Management Service

This page allows to enable or disable the management service of Switch.

## Security &gt;&gt; Management Access &gt;&gt; Management Service

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
  - RADIUS
  - TACACS+
  - ▼ AAA
    - ▲ Management Access
      - Management VLAN
      - Management Service
      - Management ACL
      - Management ACE
  - ▼ Authentication Manager
    - Port Security
    - Protected Port
    - Storm Control
  - ▼ DoS
    - ▼ Dynamic ARP Inspection
    - ▼ DHCP Snooping
    - ▼ IP Source Guard
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

Management Service	
Telnet	<input type="checkbox"/> Enable
SSH	<input type="checkbox"/> Enable
HTTP	<input checked="" type="checkbox"/> Enable
HTTPS	<input type="checkbox"/> Enable
SNMP	<input checked="" type="checkbox"/> Enable

Session Timeout	
Console	<input type="text" value="10"/> Min (0 - 65535, default 10)
Telnet	<input type="text" value="10"/> Min (0 - 65535, default 10)
SSH	<input type="text" value="10"/> Min (0 - 65535, default 10)
HTTP	<input type="text" value="10"/> Min (0 - 65535, default 10)
HTTPS	<input type="text" value="10"/> Min (0 - 65535, default 10)

Password Retry Count	
Console	<input type="text" value="3"/> (0 - 120, default 3)
Telnet	<input type="text" value="3"/> (0 - 120, default 3)
SSH	<input type="text" value="3"/> (0 - 120, default 3)

Silent Time	
Console	<input type="text" value="0"/> Sec (0 - 65535, default 0)
Telnet	<input type="text" value="0"/> Sec (0 - 65535, default 0)
SSH	<input type="text" value="0"/> Sec (0 - 65535, default 0)

[Apply](#)

### 12.4.3 Management ACL

This page allows to add, edit, and delete Management Access Control profiles.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Security >> Management Access >> Management ACL**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
  - RADIUS
  - TACACS+
  - AAA
  - Management Access
    - Management VLAN
    - Management Service
    - Management ACL**
      - Management ACE
  - Authentication Manager
  - Port Security
  - Protected Port
  - Storm Control
  - DoS
  - Dynamic ARP Inspection
  - DHCP Snooping
  - IP Source Guard
- ACL
- QoS
- Diagnostics
- Management

**ACL Name**

**Management ACL Table**


Showing All entries      Showing 0 to 0 of 0 entries

<input type="checkbox"/>	ACL Name	State	Rule
0 results found.			

Item	Description
ACL Name	Enter a name to create a profile for ACL.
Apply	Apply the settings to the switch.
Active	Activate the selected entry.
Deactive	Deactivate the selected entry.
Delete	Delete the selected entry.

#### 12.4.4 Management ACE

This page allows to add, edit, or remove Access Control Entries (ACE) of the Management Access Control profiles. However, only the ACE of inactive profiles can be modified, and before configuring ACE, at least one ACL profile should be created.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Security >> Management Access >> Management ACE**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security**
  - RADIUS
  - TACACS+
  - AAA
  - Management Access
    - Management VLAN
    - Management Service
    - Management ACL
    - Management ACE**
  - Authentication Manager
  - Port Security
  - Protected Port
  - Storm Control
  - DoS
  - Dynamic ARP Inspection
  - DHCP Snooping
  - IP Source Guard
- ACL
- QoS
- Diagnostics
- Management

### Management ACE Table

ACL Name None ▾

Showing All ▾ entries      Showing 0 to 0 of 0 entries

<input type="checkbox"/>	Priority	Action	Service	Port	Address / Mask
0 results found.					

[First](#)
[Previous](#)
[1](#)
[Next](#)
[Last](#)

Item	Description
ACL Name	Use the drop-down list to select the inactive ACL profile you would like to modify.
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.



Add Management ACE

ACL Name	ACL	
Priority	1 (1 - 65535)	
Service	<input type="radio"/> All <input type="radio"/> Http <input type="radio"/> Https <input checked="" type="radio"/> Snmp <input type="radio"/> SSH <input type="radio"/> Telnet	
Action	<input type="radio"/> Permit <input checked="" type="radio"/> Deny	
Port	Available Port GE1 GE2 GE3 GE4 GE5 GE6 GE7 GE8	Selected Port [Empty]
IP Version	<input checked="" type="radio"/> All <input type="radio"/> IPv4 <input type="radio"/> IPv6	
IPv4	[Empty] / 255.255.255.255	
IPv6	[Empty] / 128 (1 - 128)	

Apply Close

Item	Description
ACL Name	The name of selected profile.
Priority	Specify a priority number (1 to 65535) for such rule. The lower the number, the higher the priority.
Service	Choose the service type you would like to control the access.
Action	<b>Permit:</b> Incoming / outgoing data which meets ACE rule is allowed to pass through.  <b>Deny:</b> Incoming / outgoing data which meets ACE rules will be blocked.
Port	Select the ports to which the ACL should be applied.
IP Version	<b>All:</b> All the IP address should be applied. <b>IPv4:</b> Specify the IPv4 address / subnet. <b>IPv6:</b> Specify the IPv6 address / subnet.
IPv4	Enter the IPv4 address / subnet to which the ACE rule should apply.
IPv6	Enter the IPv6 address / subnet to which the ACE rule should apply.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12.5 Authentication Manager

The authentication manager allows you to configure securely access from any host connected to physical ports. You may apply multiple ways of authentication to each port.

### 12.5.1 Property

The switch supports 802.1x and MAC-based authentication methods. In Global Settings page, you can specify authentication type, enable Guest VLAN function, specify a VID and select format for MAC address entry.

The screenshot displays the 'Authentication Manager' configuration page for a ProScend switch. The 'Property' tab is active, showing a 'Port Mode Table' with 12 entries. Each entry lists a port (GE1-GE12) and its configuration for 802.1x, MAC-Based, and WEB-Based authentication. The 'Authentication Type' section at the top allows selecting one or more methods. The 'Guest VLAN' section has a dropdown menu, and the 'MAC-Based User ID Format' section has a dropdown menu showing 'XXXXXXXXXXXX'. An 'Apply' button is present below these settings.

Item	Description
Authentication Type	Specify the type that will be used for authentication.
Guest VLAN	Check to enable a Guest VLAN for those have not successfully authenticated with any given methods. Choose one of the VLAN ID as a Guest VLAN.
MAC-Based User ID Format	Specify how the MAC-based user ID should be expressed in EAP message between AAA server and switch.
Apply	Apply the settings to the switch.
Edit	Edit the selected port(s).

## Edit Port Mode

Port	GE1	
Authentication Type	<input type="checkbox"/> 802.1x <input type="checkbox"/> MAC-Based <input type="checkbox"/> WEB-Based	
Host Mode	<input checked="" type="radio"/> Multiple Authentication <input type="radio"/> Multiple Hosts <input type="radio"/> Single Host	
Order	Available Type MAC-Based WEB-Based	Select Type 802.1x
Method	Available Method Local	Select Method RADIUS
Guest VLAN	<input type="checkbox"/> Enable <input type="radio"/> Disable <input type="radio"/> Reject	
VLAN Assign Mode	<input checked="" type="radio"/> Static	
<input type="button" value="Apply"/> <input type="button" value="Close"/>		

Item	Description
Port	The index number of selected port.
Authentication Type	Specify the type that will be used for authentication.
Host Mode	<p><b>Multiple Authentication:</b> Each host are authenticated individually.</p> <p><b>Multiple Hosts:</b> Authentication is done on port basis, only one authenticated host is required; other hosts connected to this port can access freely as authenticated host.</p> <p><b>Single Host:</b> Only one host can be authenticated, and access the port.</p>
Order	Specify available authentication types of AAA server (or local) you wish to have on this port.
Method	Specify available methods of AAA server (or local) you wish to have on this port.
Guest VLAN	Check Enable to enable Guest VLAN on this port for those unauthenticated traffic.

VLAN Assign Mode	<p><b>Disable:</b> Switch will ignore the VLAN assignment from the RADIUS server and keep the original VLAN of the host.</p> <p><b>Reject:</b> Switch will reject the host if it does not receive the VLAN information from RADIUS server.</p> <p><b>Static:</b> Switch will use the VLAN assignment from the RADIUS server if it receives the information. If there is no VLAN information, it will keep the original VLAN of the host.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12.5.2 Port Setting

This page allows to controls port setting, based on 802.1X, for Ethernet port authentication.

The screenshot shows the 'Port Setting' page in the Proscend web interface. The page title is 'Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks'. The breadcrumb navigation is 'Security > Authentication Manager > Port Setting'. The main content area is titled 'Port Setting Table' and contains a table with 12 rows, one for each port (GE1 to GE12). Each row has a checkbox in the 'Entry' column. The table columns are: Entry, Port, Port Control, Reauthentication, Max Hosts, Common Timer (Reauthentication, Inactive, Quiet, TX Period), 802.1x Parameters (Supplicant Timeout, Server Timeout, Max Request, Max Login), and Web-Based Parameters. All ports are currently disabled for authentication. There is an 'Edit' button below the table.

Item	Description
Edit	Edit the selected port(s).

## Edit Port Setting

Port	GE1	
Port Control	<input checked="" type="radio"/> Disabled <input type="radio"/> Force Authorized <input type="radio"/> Force Unauthorized <input type="radio"/> Auto	
Reauthentication	<input type="checkbox"/> Enable	
Max Hosts	256	(1 - 256, default 256)
<b>Common Timer</b>		
Reauthentication	3600	Sec (300 - 4294967294, default 3600)
Inactive	60	Sec (60 - 65535, default 60)
Quiet	60	Sec (0 - 65535, default 60)
<b>802.1x Parameters</b>		
TX Period	30	Sec (1 - 65535, default 30)
Supplicant Timeout	30	Sec (1 - 65535, default 30)
Server Timeout	30	Sec (1 - 65535, default 30)
Max Request	2	(1 - 10, default 2)
<b>Web-Based Parameters</b>		
Max Login	<input type="checkbox"/> Infinite 3	(3 - 10, default 3)
<input type="button" value="Apply"/> <input type="button" value="Close"/>		

Item	Description
Port	The index number of selected port.
Port Control	<p><b>Disabled:</b> Disable any authentication requirement for port access. All clients are allowed to access the network.</p> <p><b>Force Authorized:</b> Port will be considered authorized. All clients are allowed to access the network.</p> <p><b>Force Unauthorized:</b> Port will be considered un-authorized. All clients are NOT allowed to access the network.</p> <p><b>Auto:</b> Port will be considered authorized or unauthorized based on the authentication results of the host.</p>
Reauthentication	The hosts via the selected GE port will be re-authenticated periodically once it is enabled.
Max Hosts	If Multiple Authentication mode is selected as Host Mode, the total number of hosts cannot exceed the maximum number of hosts configured here.
<b>Common Timer</b>	
Reauthentication	Enter a time period. When the time is up, the host shall return to initial state and prepare to pass authentication procedure again. Default is 3600 seconds.

Inactive	When there is no packet coming from the authenticated host, the system will start the inactive timer. After inactive timeout, the host will be unauthorized and corresponding session will be deleted. In Multiple Hosts mode, the packet is counted on the authorized host only and not all packets on the port.
Quiet	When a GE port is disabled just because authentication fails several times, the host connected to that port will be blocked for a period of time configured in quiet period. Later, after the time period set in this field, the host will be allowed to perform authentication again.
802.1x Parameters	
TX Period	Set the period for host to re-send EAP (Ethernet Automatic Protection) requests. Default value is 30 (seconds).
Supplicant Timeout	Set a period of time for the maximum number of EAP requests will be sent. If a response from the host is not received by Switch after the defined period (supplicant timeout), the authentication process will be started again.
Server Timeout	Set a period of time for the server. The EAP requests shall be resent to the supplicant within the time; otherwise, the time setting will lapse and the requests won't be sent out.
Max Request	Set the maximum time interval for EAP request sent out.
Web-Based Parameters	
Max Login	Set the maximum login request.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 12.5.3 MAC-Based Local Account

This page allows to create profiles by entering MAC address of the hosts to be authenticated.

## Security &gt;&gt; Authentication Manager &gt;&gt; MAC-Based Local Account

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security

- RADIUS
- TACACS+
- ▼ AAA
- ▼ Management Access
- ▲ Authentication Manager
  - Property
  - Port Setting
  - MAC-Based Local Account**
  - WEB-Based Local Account
  - Sessions
  - Port Security
  - Protected Port
  - Storm Control
- ▼ DoS
- ▼ Dynamic ARP Inspection
- ▼ DHCP Snooping
- ▼ IP Source Guard
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

## MAC-Based Local Account Table

Showing  entries

Showing 0 to 0 of 0 entries

<input type="checkbox"/>	MAC Address	Control	VLAN	Timeout (Sec)	
				Reauthentication	Inactive

0 results found.

[Add](#) [Edit](#) [Delete](#)
[First](#) [Previous](#) [1](#) [Next](#) [Last](#)

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Security &gt;&gt; Authentication Manager &gt;&gt; MAC-Based Local Account

## Add MAC-Based Local Account

MAC Address

Port Control

☐ Force Authorized  
☒ Force Unauthorized

VLAN

☐ User Defined  
 (1 - 4094)

Assigned Timer

Reauthentication

☐ User Defined  
 Sec (300 - 4294967294)

Inactive

☐ User Defined  
 Sec (60 - 65535)

[Apply](#) [Close](#)

Item	Description
MAC Address	Enter the MAC address of the host.
Port Control	Specify a control type for the host.  <b>Force Authorized:</b> Click it to forcefully authenticate the host specified above.  <b>Force Unauthorized:</b> The host specified above will not be authenticated by Switch.
VLAN	Check it to specify which VLAN will be assigned by the host of this account.
Assigned Timer	
Reauthentication	Check it to specify the time this account required to be authenticated again after authentication taken place.
Inactive	Check it to specify the time of inactive this account becoming log-off.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

#### 12.5.4 WEB-Based Local Account

This page allows to create profiles by entering user account of the hosts to be authenticated.



**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Security >> Authentication Manager >> WEB-Based Local Account**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security**
  - RADIUS
  - TACACS+
  - AAA
  - Management Access
  - Authentication Manager
    - Property
    - Port Setting
    - MAC-Based Local Account
    - WEB-Based Local Account**
    - Sessions
    - Port Security
    - Protected Port
    - Storm Control
  - DoS
  - Dynamic ARP Inspection
  - DHCP Snooping
  - IP Source Guard
- ACL
- QoS
- Diagnostics
- Management

### WEB-Based Local Account Table

Showing All entries      Showing 0 to 0 of 0 entries     

<input type="checkbox"/>	Username	VLAN	Timeout (Sec)	
			Reauthentication	Inactive
0 results found.				

[Add](#)
[Edit](#)
[Delete](#)

[First](#)
[Previous](#)
[1](#)
[Next](#)
[Last](#)

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Add WEB-Based Local Account

Username	<input type="text"/>
Password	<input type="password"/>
Confirm Password	<input type="password"/>
VLAN	<input type="checkbox"/> User Defined 1 (1 - 4094)
<b>Assigned Timer</b>	
Reauthentication	<input type="checkbox"/> User Defined 3600 Sec (300 - 4294967294)
Inactive	<input type="checkbox"/> User Defined 60 Sec (60 - 65535)
<input type="button" value="Apply"/> <input type="button" value="Close"/>	

Item	Description
Username	Enter the username of the host.
Password	Enter the password.
Confirm Password	Enter the password again.
VLAN	Check it to specify which VLAN will be assigned by the host of this account.
<b>Assigned Timer</b>	
Reauthentication	Check it to specify the time this account required to be authenticated again after authentication taken place.
Inactive	Check it to specify the time of inactive this account becoming log-off.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 12.5.5 Sessions

This page displays information related to the host authenticated by Switch.

PROSCEND

Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

SaveLogoutReboot

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multiport

Security

RADIUS

TACACS+

AAA

Management Access

Authentication Manager

Property

Port Setting

MAC-Based Local Account

WEB-Based Local Account

Sessions

Port Security

Protected Port

Storm Control

DoS

Dynamic ARP Inspection

DHCP Snooping

IP Source Guard

ACL

QoS

Diagnostics

Management

Security > Authentication Manager > Sessions

Sessions Table

Showing 0 to 0 of 0 entries

Showing 0 to 0 of 0 entries

Session ID

Port

MAC Address

Current Type

Status

VLAN

Session Time

Inactive Time

Quiet Time

VLAN

Reauthentication Period

Inactive Timeout

0 results found

FirstPrevious1NextLast

ClearRefresh

## 12.6 Port Security

This page allows to configure security settings for each port interface (GE port /LAG group). When port security is enabled for each interface, related action will be performed once detecting that the number of MAC address exceeds the limit.

## Security &gt;&gt; Port Security

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security

- RADIUS
- TACACS+
- ▼ AAA
- ▼ Management Access
- ▼ Authentication Manager
- Port Security
- Protected Port
- Storm Control
- ▼ DoS
- ▼ Dynamic ARP Inspection
- ▼ DHCP Snooping
- ▼ IP Source Guard

- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

State

☐ Enable

## Port Security Table

<input type="checkbox"/>	Entry	Port	State	MAC Address	Action
<input type="checkbox"/>	1	GE1	Disabled	1	Discard
<input type="checkbox"/>	2	GE2	Disabled	1	Discard
<input type="checkbox"/>	3	GE3	Disabled	1	Discard
<input type="checkbox"/>	4	GE4	Disabled	1	Discard
<input type="checkbox"/>	5	GE5	Disabled	1	Discard
<input type="checkbox"/>	6	GE6	Disabled	1	Discard
<input type="checkbox"/>	7	GE7	Disabled	1	Discard
<input type="checkbox"/>	8	GE8	Disabled	1	Discard
<input type="checkbox"/>	9	GE9	Disabled	1	Discard
<input type="checkbox"/>	10	GE10	Disabled	1	Discard
<input type="checkbox"/>	11	GE11	Disabled	1	Discard
<input type="checkbox"/>	12	GE12	Disabled	1	Discard
<input type="checkbox"/>	13	LAG1	Disabled	1	Discard
<input type="checkbox"/>	14	LAG2	Disabled	1	Discard
<input type="checkbox"/>	15	LAG3	Disabled	1	Discard
<input type="checkbox"/>	16	LAG4	Disabled	1	Discard
<input type="checkbox"/>	17	LAG5	Disabled	1	Discard
<input type="checkbox"/>	18	LAG6	Disabled	1	Discard
<input type="checkbox"/>	19	LAG7	Disabled	1	Discard
<input type="checkbox"/>	20	LAG8	Disabled	1	Discard

Item	Description
State	Enable or disable port security function on the switch.
Apply	Apply the settings to the switch.
Edit	Delete the selected port.

## Security >> Port Security

### Edit Port Security

Port	GE1
State	<input type="checkbox"/> Enable
MAC Address	<input type="text" value="1"/> (0 - 255, default 1)
Action	<input type="radio"/> Forward <input checked="" type="radio"/> Discard <input type="radio"/> Shutdown

Item	Description
Port	The index number of selected port.
State	Enable or disable port security function on the selected port(s)
MAC Address	Enter the maximum number of MAC addresses that the port is allowed to learn.
Action	<p>Select an action to perform when there is an unknown MAC address on the port.</p> <p><b>Forward:</b> Forward a packet whose source MAC is unknown to the switch.</p> <p><b>Discard:</b> Discard a packet whose source MAC is unknown to the switch.</p> <p><b>Shutdown:</b> Shutdown this port when a packet with unknown source MAC is received.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12.7 Protected Port

This page allows to enable port protection.

## Security &gt;&gt; Protected Port

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security

- RADIUS
- TACACS+
- ▼ AAA
- ▼ Management Access
- ▼ Authentication Manager
- Port Security
- Protected Port**
- Storm Control
- ▼ DoS
- ▼ Dynamic ARP Inspection
- ▼ DHCP Snooping
- ▼ IP Source Guard

- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

## Protected Port Table



<input type="checkbox"/>	Entry	Port	State
<input type="checkbox"/>	1	GE1	Unprotected
<input type="checkbox"/>	2	GE2	Unprotected
<input type="checkbox"/>	3	GE3	Unprotected
<input type="checkbox"/>	4	GE4	Unprotected
<input type="checkbox"/>	5	GE5	Unprotected
<input type="checkbox"/>	6	GE6	Unprotected
<input type="checkbox"/>	7	GE7	Unprotected
<input type="checkbox"/>	8	GE8	Unprotected
<input type="checkbox"/>	9	GE9	Unprotected
<input type="checkbox"/>	10	GE10	Unprotected
<input type="checkbox"/>	11	GE11	Unprotected
<input type="checkbox"/>	12	GE12	Unprotected

[Edit](#)

## 12.8 Storm Control

This page allows to configure general settings for Storm Control.

## Security &gt;&gt; Storm Control

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security

- RADIUS
- TACACS+
- ▼ AAA
- ▼ Management Access
- ▼ Authentication Manager
- Port Security
- Protected Port
- Storm Control**
- ▼ DoS
- ▼ Dynamic ARP Inspection
- ▼ DHCP Snooping
- ▼ IP Source Guard

- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

Mode

☐ Packet / Sec  
☒ Kbits / Sec

IFG

☒ Exclude  
☐ Include

[Apply](#)

## Port Setting Table

	Entry	Port	State	Broadcast		Unknown Multicast		Unknown Unicast		Action
				State	Rate (Kbps)	State	Rate (Kbps)	State	Rate (Kbps)	
<input type="checkbox"/>	1	GE1	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	2	GE2	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	3	GE3	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	4	GE4	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	5	GE5	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	6	GE6	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	7	GE7	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	8	GE8	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	9	GE9	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	10	GE10	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	11	GE11	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop
<input type="checkbox"/>	12	GE12	Disabled	Disabled	10000	Disabled	10000	Disabled	10000	Drop

[Edit](#)

Item	Description
Mode	Select the mode of storm control.  Packet/sec: Storm control rate will be calculated by packet-based.  Kbits/sec: Storm control rate will be calculated by octet-based.
IFG	Select the rate calculation with/without preamble & IFG (20 bytes).  Excluded: Exclude preamble & IFG (20 bytes) when count ingress storm control rate.  Included: Include preamble & IFG (20 bytes) when count ingress storm control rate.
Apply	Apply the settings to the switch.
Edit	Edit the settings of selected port.

## Edit Port Setting

Port	GE1	
State	<input type="checkbox"/> Enable	
Broadcast	<input type="checkbox"/> Enable	
	<input type="text" value="10000"/>	Kbps (16 - 1000000, default 10000)
Unknown Multicast	<input type="checkbox"/> Enable	
	<input type="text" value="10000"/>	Kbps (16 - 1000000, default 10000)
Unknown Unicast	<input type="checkbox"/> Enable	
	<input type="text" value="10000"/>	Kbps (16 - 1000000, default 10000)
Action	<input checked="" type="radio"/> Drop <input type="radio"/> Shutdown	
<input type="button" value="Apply"/> <input type="button" value="Close"/>		

Item	Description
Port	The index number of selected port.
State	Enable or disable the storm control function on the selected port(s)
Broadcast	Specify the storm control rate for Broadcast packet. Value of storm control rate, Unit: Kbps (Kbits per-second). The range is from 16 to 1000000.
Unknown Multicast	Specify the storm control rate for unknown multicast packet. Value of storm control rate, Unit: Kbps (Kbits per-second). The range is from 16 to 1000000.
Unknown Unicast	Specify the storm control rate for unknown multicast packet. Value of storm control rate, Unit: Kbps (Kbits per-second). The range is from 16 to 1000000.
Action	Select the state of setting.  <b>Drop:</b> Packets exceed storm control rate will be dropped.  <b>Shutdown:</b> Port exceeds storm control rate will be shutdown.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.



## 12.9 DoS

A Denial of Service (DoS) attack is a hacker attempt to make a device unavailable to its users. DoS attacks saturate the device with external communication requests, so that it cannot respond to legitimate traffic. These attacks usually lead to a device CPU overload.

The DoS protection feature is a set of predefined rules that protect the network from malicious attacks. The DoS Security Suite Setting enables activating the security suite.

### 12.9.1 Property

This page allows to configure DoS setting to enable/disable DoS function for global setting.

The screenshot shows the configuration interface for a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is Security >> DoS >> Property. The left sidebar lists various configuration categories, with 'Security' expanded to show 'DoS' and 'Property'. The 'Property' section is selected, showing a list of sub-items including 'Port Setting', 'Dynamic ARP Inspection', 'DHCP Snooping', 'IP Source Guard', 'ACL', 'QoS', 'Diagnostics', and 'Management'. The main content area displays the 'DoS Property' configuration page. It features a table of settings, each with a checkbox to enable or disable the feature. The settings are: POD (checked), Land (checked), UDP Blat (checked), TCP Blat (checked), DMAC = SMAC (checked), Null Scan Attack (checked), X-Mas Scan Attack (checked), TCP SYN-FIN Attack (checked), TCP SYN-RST Attack (checked), ICMP Fragment (checked), TCP-SYN (checked, with a note: Source Port < 1024), TCP Fragment (checked, with a note: Offset = 1), Ping Max Size (checked, with a value of 512 and a range of 0 to 65535, default 512), TCP Min Hdr size (checked, with a value of 20 and a range of 0 to 31, default 20), IPv6 Min Fragment (checked, with a value of 1240 and a range of 0 to 65535, default 1240), and Smurf Attack (checked, with a value of 0 and a range of 0 to 32, default 0). An 'Apply' button is located at the bottom of the configuration area.

Item	Description
POD	Avoid ping of death attack. Ping packets that length is larger than 65536 bytes.
Land	Drop the packets if the source IP address is equal to the destination IP address.

Item	Description
POD	Avoid ping of death attack. Ping packets that length is larger than 65536 bytes.
Land	Drop the packets if the source IP address is equal to the destination IP address.

UDP Blat	Drop the packets if the UDP source port equals to the UDP destination port.
TCP Blat	Drop the packages if the TCP source port is equal to the TCP destination port.
DMAC = SMAC	Drop the packets if the destination MAC address is equal to the source MAC address.
Null Scan Attack	Drop the packets with NULL scan.
X-Mas Scan Attack	Drop the packets if the sequence number is zero, and the FIN, URG and PSH bits are set.
TCP SYN-FIN Attack	Drop the packets with SYN and FIN bits set.
TCP SYN-RST Attack	Drop the packets with SYN and RST bits set.
ICMP Fragment	Drop the fragmented ICMP packets.
Ping Max Size	Determine the IPv4/IPv6 PING packet with the length.  Determine the IPv4/IPv6 PING packet with the length. Specify the maximum size of the ICMPv4/ICMPv6 ping packets. The valid range is from 0 to 65535 bytes, and the default value is 512 bytes.
TCP Min Hdr size	Check the minimum TCP header and drops the TCP packets with the header smaller than the minimum size. The length range is from 0 to 31 bytes, and default length is 20 bytes.
IPv6 Min Fragment	Check the minimum size of IPv6 fragments, and drop the packets smaller than the minimum size. The valid range is from 0 to 65535 bytes, and default value is 1240 bytes.
Smurf Attack	Avoid smurf attack. The length range of the net mask is from 0 to 323 bytes, and default length is 0 byte.
Apply	Apply the settings to the switch.

### 12.9.2 Port Setting

This page allows to configure and display the state of DoS protection for interfaces.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

**Security >> DoS >> Port Setting**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
  - RADIUS
  - TACACS+
  - AAA
  - Management Access
  - Authentication Manager
  - Port Security
  - Protected Port
  - Storm Control
  - DoS
    - Property
    - Port Setting**
    - Dynamic ARP Inspection
    - DHCP Snooping
    - IP Source Guard
- ACL
- QoS
- Diagnostics
- Management

**Port Setting Table**

<input type="checkbox"/>	Entry	Port	State
<input type="checkbox"/>	1	GE1	Disabled
<input type="checkbox"/>	2	GE2	Disabled
<input type="checkbox"/>	3	GE3	Disabled
<input type="checkbox"/>	4	GE4	Disabled
<input type="checkbox"/>	5	GE5	Disabled
<input type="checkbox"/>	6	GE6	Disabled
<input type="checkbox"/>	7	GE7	Disabled
<input type="checkbox"/>	8	GE8	Disabled
<input type="checkbox"/>	9	GE9	Disabled
<input type="checkbox"/>	10	GE10	Disabled
<input type="checkbox"/>	11	GE11	Disabled
<input type="checkbox"/>	12	GE12	Disabled

[Edit](#)

Item	Description
Edit	Edit the settings of selected port.

**Security >> DoS >> Port Setting**

**Edit Port Setting**

Port

GE1

State

☐ Enable

[Apply](#)
[Close](#)

Item	Description
Port	The index number of selected port.
State	Enable or disable the DoS protection on the selected port(s)
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12.10 Dynamic ARP Inspection

Dynamic ARP inspection (DAI) can prevent ARP spoofing attacks by validating ARP packet in a network. It can intercept, record, and discard ARP packets with invalid IP-to-MAC address bindings; and then protect the network against malicious attacks.

### 12.10.1 Property

This page allows to configure global property settings for the function of Dynamic ARP Inspection.

The screenshot shows the configuration page for Dynamic ARP Inspection (DAI) on a Proscend Industrial 12-Port GbE Managed Switch. The page title is "Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks". The navigation menu on the left includes Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, RADIUS, TACACS+, AAA, Management Access, Authentication Manager, Port Security, Protected Port, Storm Control, DoS, Dynamic ARP Inspection, Property, Statistics, DHCP Snooping, IP Source Guard, ACL, QoS, Diagnostics, and Management. The main content area is titled "Security >> Dynamic ARP Inspection >> Property". It features a "State" section with an "Enable" checkbox and a "VLAN" section with "Available VLAN" and "Selected VLAN" lists. Below these is an "Apply" button. The "Port Setting Table" is a table with columns: Entry, Port, Trust, Source MAC Address, Destination MAC Address, IP Address, and Rate Limit. It lists 20 ports (GE1-GE12 and LAG1-LAG8) with their respective settings. An "Edit" button is at the bottom of the table.

Entry	Port	Trust	Source MAC Address	Destination MAC Address	IP Address	Rate Limit
1	GE1	Disabled	Disabled	Disabled	Disabled	Unlimited
2	GE2	Disabled	Disabled	Disabled	Disabled	Unlimited
3	GE3	Disabled	Disabled	Disabled	Disabled	Unlimited
4	GE4	Disabled	Disabled	Disabled	Disabled	Unlimited
5	GE5	Disabled	Disabled	Disabled	Disabled	Unlimited
6	GE6	Disabled	Disabled	Disabled	Disabled	Unlimited
7	GE7	Disabled	Disabled	Disabled	Disabled	Unlimited
8	GE8	Disabled	Disabled	Disabled	Disabled	Unlimited
9	GE9	Disabled	Disabled	Disabled	Disabled	Unlimited
10	GE10	Disabled	Disabled	Disabled	Disabled	Unlimited
11	GE11	Disabled	Disabled	Disabled	Disabled	Unlimited
12	GE12	Disabled	Disabled	Disabled	Disabled	Unlimited
13	LAG1	Disabled	Disabled	Disabled	Disabled	Unlimited
14	LAG2	Disabled	Disabled	Disabled	Disabled	Unlimited
15	LAG3	Disabled	Disabled	Disabled	Disabled	Unlimited
16	LAG4	Disabled	Disabled	Disabled	Disabled	Unlimited
17	LAG5	Disabled	Disabled	Disabled	Disabled	Unlimited
18	LAG6	Disabled	Disabled	Disabled	Disabled	Unlimited
19	LAG7	Disabled	Disabled	Disabled	Disabled	Unlimited
20	LAG8	Disabled	Disabled	Disabled	Disabled	Unlimited

Item	Description
State	Check the box to enable global property settings.
VLAN	Select VLAN profile(s) to apply the function of Dynamic ARP Inspection.

Apply	Apply the settings to the switch.
Edit	Edit the settings of selected port.

Security >> Dynamic ARP Inspection >> Property

Edit Port Setting

Port	GE1
Trust	<input type="checkbox"/> Enable
Source MAC Address	<input type="checkbox"/> Enable
Destination MAC Address	<input type="checkbox"/> Enable
IP Address	<input type="checkbox"/> Enable
	<input type="checkbox"/> Allow Zero (0.0.0.0)
Rate Limit	0 pps (0 - 50, default 0), 0 is Unlimited

Apply Close

Item	Description
Port	The index number of selected port.
Trust	Enable the function of DAI for the port(s) selected above.
Source MAC Address	Check it to enable the function of source MAC address validation mechanism for the selected port(s).
Destination MAC Address	Check it to enable the function of destination MAC address validation mechanism for the selected port(s).
IP Address	Check it to enable the function of IP address validation mechanism for the selected port(s).  Allow Zero – The IP address of “0.0.0.0” can be applied to the selected port(s) if it is enabled.
Rate Limit	Use the drop down list to choose a rate limitation value (0~50) for the selected port(s).
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 12.10.2 Statistics

This page displays all statistics recorded by Dynamic ARP Inspection function.

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Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

SaveLogoutReboot

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

RADIUS

TACACS+

AAA

Management Access

Authentication Manager

Port Security

Protected Port

Storm Control

DoS

Dynamic ARP Inspection

Property

Statistics

DHCP Snooping

IP Source Guard

ACL

QoS

Diagnostics

Management

Statistics Table

Q

<input type="checkbox"/>	Entry	Port	Forward	Source MAC Failure	Destination MAC Failure	Source IP Validation Failure	Destination IP Validation Failure	IP-MAC Mismatch Failure
<input type="checkbox"/>	1	GE1	0	0	0	0	0	0
<input type="checkbox"/>	2	GE2	0	0	0	0	0	0
<input type="checkbox"/>	3	GE3	0	0	0	0	0	0
<input type="checkbox"/>	4	GE4	0	0	0	0	0	0
<input type="checkbox"/>	5	GE5	0	0	0	0	0	0
<input type="checkbox"/>	6	GE6	0	0	0	0	0	0
<input type="checkbox"/>	7	GE7	0	0	0	0	0	0
<input type="checkbox"/>	8	GE8	0	0	0	0	0	0
<input type="checkbox"/>	9	GE9	0	0	0	0	0	0
<input type="checkbox"/>	10	GE10	0	0	0	0	0	0
<input type="checkbox"/>	11	GE11	0	0	0	0	0	0
<input type="checkbox"/>	12	GE12	0	0	0	0	0	0
<input type="checkbox"/>	13	LAG1	0	0	0	0	0	0
<input type="checkbox"/>	14	LAG2	0	0	0	0	0	0
<input type="checkbox"/>	15	LAG3	0	0	0	0	0	0
<input type="checkbox"/>	16	LAG4	0	0	0	0	0	0
<input type="checkbox"/>	17	LAG5	0	0	0	0	0	0
<input type="checkbox"/>	18	LAG6	0	0	0	0	0	0
<input type="checkbox"/>	19	LAG7	0	0	0	0	0	0
<input type="checkbox"/>	20	LAG8	0	0	0	0	0	0

Clear

Refresh

## 12.11 DHCP Snooping

DHCP snooping is able to validate DHCP messages obtained from untrusted sources and filter out invalid message. For DHCP snooping to function properly, it is suggested to connect DHCP servers to Switch through trusted interfaces; because untrusted DHCP messages will be forwarded to trusted interfaces only.

### 12.11.1 Property

This page allows to configure global property settings for the function of DHCP snooping Inspection. In default, DHCP snooping is inactive on all VLANs. You can enable such feature on a single VLAN or a range of VLANs.

## Security &gt;&gt; DHCP Snooping &gt;&gt; Property

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
  - RADIUS
  - TACACS+
  - ▼ AAA
  - ▼ Management Access
  - ▼ Authentication Manager
  - Port Security
  - Protected Port
  - Storm Control
  - ▼ DoS
  - ▼ Dynamic ARP Inspection
  - ▼ DHCP Snooping
    - Property
    - Statistics
    - Option82 Property
    - Option82 Circuit ID
  - ▼ IP Source Guard
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

☐
Enable

VLAN

VLAN 1

➤

➤

[Apply](#)

Port Setting Table

<input type="checkbox"/>	Entry	Port	Trust	Verify Chaddr	Rate Limit	
<input type="checkbox"/>	1	GE1	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	2	GE2	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	3	GE3	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	4	GE4	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	5	GE5	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	6	GE6	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	7	GE7	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	8	GE8	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	9	GE9	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	10	GE10	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	11	GE11	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	12	GE12	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	13	LAG1	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	14	LAG2	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	15	LAG3	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	16	LAG4	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	17	LAG5	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	18	LAG6	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	19	LAG7	Disabled	Disabled	Unlimited	
<input type="checkbox"/>	20	LAG8	Disabled	Disabled	Unlimited	

[Edit](#)

Item	Description
State	Check the box to enable global property settings.
VLAN	Select VLAN profile(s) to apply the function of DHCP Snooping Inspection.
Apply	Apply the settings to the switch.
Edit	Edit the settings of selected port.

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Security >> DHCP Snooping >> Property

Edit Port Setting

Port	GE1
Trust	<input type="checkbox"/> Enable
Verify Chaddr	<input type="checkbox"/> Enable
Rate Limit	0 pps (0 - 300, default 0), 0 is Unlimited

Apply Close

Item	Description
Port	The index number of selected port.
Trust	Check it to make the port(s) selected above as trusted interface.
Verify Chaddr	Check it to enable chaddr (client hardware address) validation of GE/LAG port. All DHCP packets will be checked if the client hardware MAC address is the same as source MAC in Ethernet header or not. Default is disabled.
Rate Limit	Input rate limitation (0~300) of DHCP packets. The unit is "pps". "0" means unlimited. Default is unlimited.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 12.11.2 Statistics

This page displays all statistics recorded by DHCP snooping function.



## Security &gt;&gt; DHCP Snooping &gt;&gt; Statistics

Statistics Table

<input type="checkbox"/>	Entry	Port	Forward	Chaddr Check Drop	Untrust Port Drop	Untrust Port with Option82 Drop	Invalid Drop	
<input type="checkbox"/>	1	GE1	0	0	0	0	0	
<input type="checkbox"/>	2	GE2	0	0	0	0	0	
<input type="checkbox"/>	3	GE3	0	0	0	0	0	
<input type="checkbox"/>	4	GE4	0	0	0	0	0	
<input type="checkbox"/>	5	GE5	0	0	0	0	0	
<input type="checkbox"/>	6	GE6	0	0	0	0	0	
<input type="checkbox"/>	7	GE7	0	0	0	0	0	
<input type="checkbox"/>	8	GE8	0	0	0	0	0	
<input type="checkbox"/>	9	GE9	0	0	0	0	0	
<input type="checkbox"/>	10	GE10	0	0	0	0	0	
<input type="checkbox"/>	11	GE11	0	0	0	0	0	
<input type="checkbox"/>	12	GE12	0	0	0	0	0	
<input type="checkbox"/>	13	LAG1	0	0	0	0	0	
<input type="checkbox"/>	14	LAG2	0	0	0	0	0	
<input type="checkbox"/>	15	LAG3	0	0	0	0	0	
<input type="checkbox"/>	16	LAG4	0	0	0	0	0	
<input type="checkbox"/>	17	LAG5	0	0	0	0	0	
<input type="checkbox"/>	18	LAG6	0	0	0	0	0	
<input type="checkbox"/>	19	LAG7	0	0	0	0	0	
<input type="checkbox"/>	20	LAG8	0	0	0	0	0	

[Clear](#)
[Refresh](#)

### 12.11.3 Option82 Property

You can use information settings including Remote ID and Circuit ID for Option82 Property, also known as the DHCP relay agent, to protect Switch against spoofing attacks

## Security &gt;&gt; DHCP Snooping &gt;&gt; Option82 Property

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security

- RADIUS
- TACACS+
- ▼ AAA
- ▼ Management Access
- ▼ Authentication Manager
- Port Security
- Protected Port
- Storm Control
- ▼ DoS
- ▼ Dynamic ARP Inspection
- ▼ DHCP Snooping
  - Property
  - Statistics
  - Option82 Property
  - Option82 Circuit ID
- ▼ IP Source Guard

- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

☐ User Defined

Remote ID

**Operational Status**  
Remote ID : 00:e0:4d:00:00:00 (Switch Mac in Byte Order)

[Apply](#)

## Port Setting Table

<input type="checkbox"/>	Entry	Port	State	Allow Untrust
<input type="checkbox"/>	1	GE1	Disabled	Drop
<input type="checkbox"/>	2	GE2	Disabled	Drop
<input type="checkbox"/>	3	GE3	Disabled	Drop
<input type="checkbox"/>	4	GE4	Disabled	Drop
<input type="checkbox"/>	5	GE5	Disabled	Drop
<input type="checkbox"/>	6	GE6	Disabled	Drop
<input type="checkbox"/>	7	GE7	Disabled	Drop
<input type="checkbox"/>	8	GE8	Disabled	Drop
<input type="checkbox"/>	9	GE9	Disabled	Drop
<input type="checkbox"/>	10	GE10	Disabled	Drop
<input type="checkbox"/>	11	GE11	Disabled	Drop
<input type="checkbox"/>	12	GE12	Disabled	Drop
<input type="checkbox"/>	13	LAG1	Disabled	Drop
<input type="checkbox"/>	14	LAG2	Disabled	Drop
<input type="checkbox"/>	15	LAG3	Disabled	Drop
<input type="checkbox"/>	16	LAG4	Disabled	Drop
<input type="checkbox"/>	17	LAG5	Disabled	Drop
<input type="checkbox"/>	18	LAG6	Disabled	Drop
<input type="checkbox"/>	19	LAG7	Disabled	Drop
<input type="checkbox"/>	20	LAG8	Disabled	Drop

[Edit](#)

Item	Description
Remote ID	The string specified here is used to identify the remote host. User Defined – Check it and manually enter ASCII text string in the entry box.
Apply	Apply the settings to the switch.
Edit	Edit the settings of selected port.

Security >> DHCP Snooping >> Option82 Property

Edit Port Setting

Port

GE1

State

☐ Enable

☐ Keep

☒ Drop

☐ Replace

Allow Untrust

Apply

Close

Item	Description
Port	The index number of selected port.
State	Check it to make the port(s) selected above apply the settings configured in this page.
Allow Untrust	Untrusted packets detected by Switch will be performed by the action determined here.  <b>Keep:</b> Packets are allowed to pass through.  <b>Drop:</b> Packets are blocked and discarded.  <b>Replace:</b> Packets will be replaced.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

#### 12.11.4 Option82 Circuit ID

This page allows to setup string as circuit ID for DHCP option82 setting. Circuit ID shall be combined with VLAN name (or VLAN ID number) and interface name (GE/LAG port).

## Security &gt;&gt; DHCP Snooping &gt;&gt; Option82 Circuit ID

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
  - RADIUS
  - TACACS+
  - ▼ AAA
  - ▼ Management Access
  - ▼ Authentication Manager
    - Port Security
    - Protected Port
    - Storm Control
  - ▼ DoS
  - ▼ Dynamic ARP Inspection
  - ▼ DHCP Snooping
    - Property
    - Statistics
    - Option82 Property
    - Option82 Circuit ID
  - ▼ IP Source Guard
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics
- ▼ Management

## Option82 Circuit ID Table

Showing  entries

Showing 0 to 0 of 0 entries

<input type="checkbox"/>	Port	VLAN	Circuit ID
0 results found.			

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Security &gt;&gt; DHCP Snooping &gt;&gt; Option82 Circuit ID

## Add Option82 Circuit ID

Port	<input type="text" value="GE1"/>
VLAN	<input type="text"/> (1 - 4094) (Keep empty to set without VLAN)
Circuit ID	<input type="text"/>

Item	Description
Port	Use the drop down list to select the port for applying DHCP


	snooping, Option82 Property function.
VLAN	Choose a number as VLAN ID which is easy to be identified for a packet containing with it. It is optional setting.
Circuit ID	Enter ASCII text string in the entry box. Later, any packet passes through the specified interface will be inserted with such information.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 12.12 IP Source Guard

By using the source IP address filtering function, IP source guard can prevent a malicious host from feigning a legal host with its IP address and performing malicious attack.

### 12.12.1 Port Setting

IP source guard is a port-based feature. Therefore, it is necessary to configure detailed settings for each GE/LAG port interface separately.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Security >> IP Source Guard >> Port Setting**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
  - RADIUS
  - TACACS+
  - AAA
  - Management Access
  - Authentication Manager
  - Port Security
  - Protected Port
  - Storm Control
  - DoS
  - Dynamic ARP Inspection
  - DHCP Snooping
  - IP Source Guard
    - Port Setting**
    - IMPV Binding
    - Save Database
  - ACL
  - QoS
  - Diagnostics
  - Management

### Port Setting Table

<input type="checkbox"/>	Entry	Port	State	Verify Source	Current Entry	Max Entry
<input type="checkbox"/>	1	GE1	Disabled	IP	0	Unlimited
<input type="checkbox"/>	2	GE2	Disabled	IP	0	Unlimited
<input type="checkbox"/>	3	GE3	Disabled	IP	0	Unlimited
<input type="checkbox"/>	4	GE4	Disabled	IP	0	Unlimited
<input type="checkbox"/>	5	GE5	Disabled	IP	0	Unlimited
<input type="checkbox"/>	6	GE6	Disabled	IP	0	Unlimited
<input type="checkbox"/>	7	GE7	Disabled	IP	0	Unlimited
<input type="checkbox"/>	8	GE8	Disabled	IP	0	Unlimited
<input type="checkbox"/>	9	GE9	Disabled	IP	0	Unlimited
<input type="checkbox"/>	10	GE10	Disabled	IP	0	Unlimited
<input type="checkbox"/>	11	GE11	Disabled	IP	0	Unlimited
<input type="checkbox"/>	12	GE12	Disabled	IP	0	Unlimited
<input type="checkbox"/>	13	LAG1	Disabled	IP	0	Unlimited
<input type="checkbox"/>	14	LAG2	Disabled	IP	0	Unlimited
<input type="checkbox"/>	15	LAG3	Disabled	IP	0	Unlimited
<input type="checkbox"/>	16	LAG4	Disabled	IP	0	Unlimited
<input type="checkbox"/>	17	LAG5	Disabled	IP	0	Unlimited
<input type="checkbox"/>	18	LAG6	Disabled	IP	0	Unlimited
<input type="checkbox"/>	19	LAG7	Disabled	IP	0	Unlimited
<input type="checkbox"/>	20	LAG8	Disabled	IP	0	Unlimited

Edit

Item	Description
Edit	Edit the settings of selected port.

**Security >> IP Source Guard >> Port Setting**

**Edit Port Setting**

Port

GE1

State

☐ Enable

Verify Source

☒ IP  
☐ IP-MAC

Max Entry

(0 - 50, default 0), 0 is Unlimited

Apply

Close

Item	Description
Port	The index number of selected port.
State	Check it to make the port(s) selected above apply the settings configured in this page.
Verify Source	Specify the type of source IP for the packet coming from.  <b>IP:</b> Only the packet with specified IP address will be verified.  <b>IP-MAC:</b> Only the packet with specified IP address and MAC address will be verified.
Max Entry	Define the number (0~50) for the port. The default is 0 (no limit).
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 12.12.2 IMPV Binding

This page allows to set the filtering conditions (binding type, MAC address, IPv4 address) for packets through the specified LAN port.

## Security &gt;&gt; IP Source Guard &gt;&gt; IMPV Binding

## IP-MAC-Port-VLAN Binding Table

Showing  entries

Showing 0 to 0 of 0 entries



<input type="checkbox"/>	Port	VLAN	MAC Address	IP Address	Binding	Type	Lease Time
--------------------------	------	------	-------------	------------	---------	------	------------

0 results found.

[Add](#) [Edit](#) [Delete](#)
[First](#) [Previous](#) [1](#) [Next](#) [Last](#)

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
  - RADIUS
  - TACACS+
  - ▼ AAA
  - ▼ Management Access
  - ▼ Authentication Manager
    - Port Security
    - Protected Port
    - Storm Control
  - ▼ DoS
  - ▼ Dynamic ARP Inspection
  - ▼ DHCP Snooping
  - ▼ IP Source Guard
    - Port Setting
    - IMPV Binding**
    - Save Database
  - ▼ ACL
  - ▼ QoS
  - ▼ Diagnostics
  - ▼ Management

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Security &gt;&gt; IP Source Guard &gt;&gt; IMPV Binding

## Add IP-MAC-Port-VLAN Binding

Port	<input type="text" value="GE1"/>
VLAN	<input type="text" value=""/> (1 - 4094)
Binding	<input checked="" type="radio"/> IP-MAC-Port-VLAN <input type="radio"/> IP-Port-VLAN
MAC Address	<input type="text"/>
IP Address	<input type="text" value=""/> / <input type="text" value="255.255.255.255"/>

[Apply](#) [Close](#)

Item	Description
Port	Use the drop down list to select the port for applying IMPV Binding function.
VLAN	Choose a number as VLAN ID which is easy to be identified for a packet containing with it. It is optional setting.
Binding	<p>Select the binding type for such feature.</p> <p><b>IP-MAC-Port-VLAN:</b> Packets will be allowed to pass through the port interface if they meet the conditions specified by IP address, MAC address, Port setting and VLAN ID setting.</p> <p><b>IP-Port-VLAN:</b> Packets will be allowed to pass through the port interface if they meet the conditions specified by IP address, Port setting and VLAN ID setting.</p>
MAC Address	Enter the MAC address of the device connecting to the port interface selected above.
IP Address	Enter the IP address with mask address of the device connecting to the port interface selected above.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 12.12.3 Save Database

This page allows to write the database to FLASH or remote TFTP server. Set timeout interval for abortion. Set delay timer for writing to URL.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is 'Security >> IP Source Guard >> Save Database'. The left sidebar contains a tree view with categories like Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, and others. Under 'Security', 'Save Database' is selected. The main content area contains the following fields:

- Type:** Radio buttons for None (selected), Flash, and TFTP.
- Filename:** A text input field.
- Address Type:** Radio buttons for Hostname (selected) and IPv4.
- Server Address:** A text input field.
- Write Delay:** A text input field with '300' and a label 'Sec (15 - 86400, default 300)'.
- Timeout:** A text input field with '300' and a label 'Sec (0 - 86400, default 300)'.

An 'Apply' button is located at the bottom of the configuration area.



## 13 ACL

The Access Control List (ACL) is a sequential list of permits or deny conditions that apply to IP addresses, MAC addresses, or other more specific criteria. This switch tests ingress packets against the conditions in an ACL one by one. A packet will be accepted as soon as it matches a permit rule, or dropped as soon as it matches a deny rule. If no rule match, the frame is accepted.

### 13.1 MAC ACL

The function is used to show the Access Control List (ACL) based on Layer 2 filtering, the MAC layer. The ACL is composed by many Access Control Element (ACE) rules. You can create a new ACL here; then add multiple ACEs.

The screenshot displays the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the switch model name, and links for Save, Logout, and Reboot. A left sidebar contains a menu with categories like Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, and ACL. The ACL category is expanded, showing sub-items: MAC ACL, MAC ACE, IPv4 ACL, IPv4 ACE, IPv6 ACL, IPv6 ACE, and ACL Binding. The main content area is titled 'ACL >> MAC ACL'. It features a form for creating a new ACL with an 'ACL Name' input field and an 'Apply' button. Below this is an 'ACL Table' section with a search bar and a table showing 0 results. The table has columns for ACL Name, Rule, and Port. A 'Delete' button is located below the table. Navigation controls (First, Previous, 1, Next, Last) are at the bottom right of the table area.

Item	Description
ACL Name	Enter the name for creating ACL profile.
Apply	Apply the settings to the switch.
Delete	Delete the selected entry.

### 13.2 MAC ACE

This page shows ACE based on MAC address. You may choose ACL, permit, and deny particular packet or frame, even shutdown the port.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

MAC ACL

**MAC ACE**

IPv4 ACL

IPv4 ACE

IPv6 ACL

IPv6 ACE

ACL Binding

**ACL >> MAC ACE**

**ACE Table**

ACL Name None ▾

Showing All ▾ entries      Showing 0 to 0 of 0 entries

	Sequence	Action	Source MAC		Destination MAC		Ethertype	VLAN	802.1p		
			Address	Mask	Address	Mask			Value	Mask	
0 results found.											

[First](#)
[Previous](#)
[1](#)
[Next](#)
[Last](#)

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Add ACE

ACL Name	ACL	
Sequence	<input type="text"/> (1 - 2147483647)	
Action	<input checked="" type="radio"/> Permit <input type="radio"/> Deny <input type="radio"/> Shutdown	
Source MAC	<input checked="" type="checkbox"/> Any <input type="text"/> / <input type="text"/> (Address / Mask)	
Destination MAC	<input checked="" type="checkbox"/> Any <input type="text"/> / <input type="text"/> (Address / Mask)	
Ethertype	<input checked="" type="checkbox"/> Any 0x <input type="text"/> (0x600 ~ 0xFFFF)	
VLAN	<input checked="" type="checkbox"/> Any <input type="text"/> (1 - 4094)	
802.1p	<input checked="" type="checkbox"/> Any <input type="text"/> / <input type="text"/> (Value / Mask) (0 - 7)	
<input type="button" value="Apply"/> <input type="button" value="Close"/>		

Item	Description
ACL Name	The name of selected ACL profile.
Sequence	Assign a sequence number to this ACE. The sequence is used to identify which one of ACEs in an ACL is firstly used to match ingress packets. The switch port bound with an ACL use the contained ACE rules, start with the one with lower sequence number to match the packet first.
Action	Select the action applied to the packet matched this ACE. Permit or deny the packets into switch core, or shutdown the port for stopping further transmission.
Source MAC	Specify the source MAC address for filtering.  <b>Any:</b> All packets will be filtered.  Or, enter the IP address to filter the packets coming from that address.
Destination MAC	Specify the destination MAC address for filtering.  <b>Any:</b> All packets will be filtered.  Or, enter the IP address to filter the packets coming from that address.

Ethertype	Specify Ethernet type for filtering. Select Any. Or, enter the value with the format of "0x600 ~ 0xFFFF".
VLAN	Specify VLAN profile for filtering. Select Any. Or, enter a VLAN number. The packets coming from the VLAN specified here will be filtered by Vigor device.
802.1p	Specify the 802.1p priority value for filtering. Select Any, or a number from 0 to 7.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 13.3 IPv4 ACL

This page shows ACE based on IPv4 address. You may choose ACL, permit, and deny particular packet or frame, even shutdown the port.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save Logout Reboot

**ACL >> IPv4 ACL**

ACL Name

Apply

**ACL Table**

Showing All entries Showing 0 to 0 of 0 entries

☐ ACL Name Rule Port

0 results found.

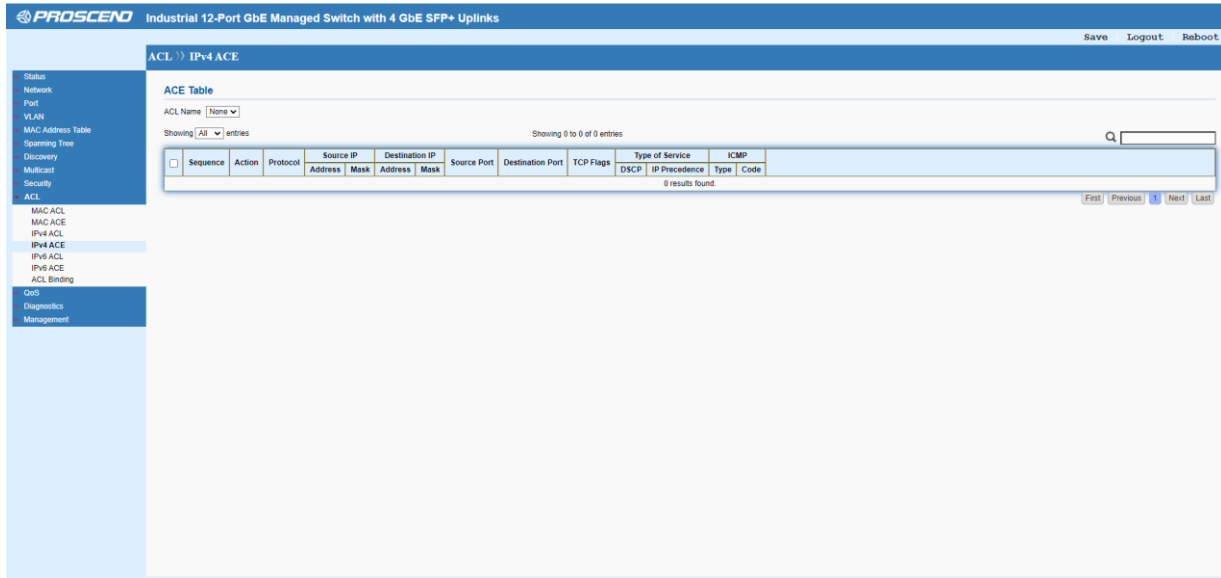
Delete

First Previous 1 Next Last

Item	Description
ACL Name	Enter the name for creating ACL profile.
Apply	Apply the settings to the switch.
Delete	Delete the selected entry.

## 13.4 IPv4 ACE

You may provide filtering/matching criteria for one or more of following packet characteristic (such as Protocol over the IP layer, Source/Destination IPv4 address, Type of Service, Source/Destination port number, TCP flags, ICMP Type, if chosen protocol contains ICMP), for this ACE to identify the packet.



Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Add ACE

ACL Name	ACL
Sequence	<input type="text" value="1"/> (1 - 2147483647)
Action	<input checked="" type="radio"/> Permit <input type="radio"/> Deny <input type="radio"/> Shutdown
Protocol	<input checked="" type="radio"/> Any <input type="radio"/> Select <input type="text" value="ICMP"/> <input type="radio"/> Define <input type="text" value=""/> (0 - 255)
Source IP	<input checked="" type="checkbox"/> Any <input type="text" value=""/> / <input type="text" value=""/> (Address / Mask)
Destination IP	<input checked="" type="checkbox"/> Any <input type="text" value=""/> / <input type="text" value=""/> (Address / Mask)
Type of Service	<input checked="" type="radio"/> Any <input type="radio"/> DSCP <input type="text" value=""/> (0 - 63) <input type="radio"/> IP Precedence <input type="text" value=""/> (0 - 7)
Source Port	<input checked="" type="radio"/> Any <input type="radio"/> Single <input type="text" value=""/> (0 - 65535) <input type="radio"/> Range <input type="text" value=""/> - <input type="text" value=""/> (0 - 65535)
Destination Port	<input checked="" type="radio"/> Any <input type="radio"/> Single <input type="text" value=""/> (0 - 65535) <input type="radio"/> Range <input type="text" value=""/> - <input type="text" value=""/> (0 - 65535)
TCP Flags	Urg: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Ack: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Psh: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Rst: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Syn: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Fin: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care
ICMP Type	<input checked="" type="radio"/> Any <input type="radio"/> Select <input type="text" value="Echo Reply"/> <input type="radio"/> Define <input type="text" value=""/> (0 - 255)
ICMP Code	<input checked="" type="radio"/> Any <input type="radio"/> Define <input type="text" value=""/> (0 - 255)

Item	Description
ACL Name	The name of selected ACL profile.
Sequence	Assign a sequence number to this ACE. The sequence is used to identify which one of ACEs in an ACL is firstly used to match ingress packets. The switch port bound with an ACL use the contained ACE rules, start with the one with lower sequence number to match the packet first.
Action	Select the action applied to the packet matched this ACE. Permit or deny the packets into switch core, or shutdown the port for stopping further transmission.

Protocol	<p>Specify the protocol for filtering.</p> <p><b>Any:</b> All packets will be filtered.</p> <p><b>Select:</b> Choose one of the protocol (e.g., ICMP, IP in IP, TCP, EGP, IGP...) from the drop down list. Packets passing through the selected protocol will be filtered.</p> <p><b>Define:</b> Specify a protocol number (0-255). For example, 6 for TCP, 17 for UDP...,etc.</p>
Source IP	<p>Specify the source IPv4 address for filtering.</p> <p><b>Any:</b> All packets will be filtered.</p> <p>Or, enter the IP address to filter the packets coming from that address.</p>
Destination IP	<p>Specify the destination IPv4 address for filtering.</p> <p><b>Any:</b> All packets will be filtered.</p> <p>Or, enter the IP address to filter the packets coming from that address.</p>
Type of Service	<p><b>Any:</b> All packets will be filtered.</p> <p><b>DSCP:</b> All IP traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP traffic, it is mapped to the lowest priority queue.</p> <p><b>IP Precedence:</b> All IP traffic is mapped to queues based on the IP Precedence field in the IP header. If traffic is not IP traffic, it is mapped to the lowest priority queue.</p>
Source Port	<p>Specify the source port number for filtering the packets.</p> <p><b>Any:</b> All packets will be filtered.</p> <p><b>Single:</b> Only the packets passing through the number defined here will be filtered.</p> <p><b>Range:</b> Only the packets passing through the port range defined here will be filtered.</p>
Destination Port	<p>Specify the destination port number for filtering the packets.</p> <p><b>Any:</b> All packets will be filtered.</p> <p><b>Single:</b> Only the packets passing through the number defined here will be filtered.</p> <p><b>Range:</b> Only the packets passing through the port range defined here will be filtered.</p>

TCP Flags	Specify the TCP Flag (control bit) options.
ICMP Type	<p><b>Any:</b> All packets will be filtered.</p> <p><b>Select:</b> Choose one of the type (e.g., Destination Unreachable Echo Reply, MLD Query....) from the drop down list.</p> <p><b>Define:</b> Specify a type number (0 – 255) for ICMP code. For example, 0 means “Echo Reply”; 254 means “RFC3692-style Experiment 2”.</p>
ICMP Code	<p>Each ICMP type can be defined with different codes. For example, if you define ICMP Type as “3”, then the available codes for Type 3 will be 0-15.</p> <p><b>Any:</b> All packets will be filtered.</p> <p>Or, enter 0 to 255 based on the ICMP type specified.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 13.5 IPv6 ACL

This page shows ACE based on Ipv6 address. You may choose ACL, permit, and deny particular packet or frame, even shutdown the port.

The screenshot displays the Proscend Industrial 12-Port GbE Managed Switch web interface. The top navigation bar includes the Proscend logo and the product name. The sidebar menu on the left lists various configuration options, with 'ACL' highlighted. The main content area is titled 'ACL >> IPv6 ACL'. It contains an 'ACL Name' input field, an 'Apply' button, and an 'ACL Table' section. The 'ACL Table' shows a table with columns for 'ACL Name', 'Rule', and 'Port', and a search bar. Below the table, it indicates '0 results found' and includes 'First', 'Previous', '1', 'Next', and 'Last' navigation buttons. A 'Delete' button is also present.

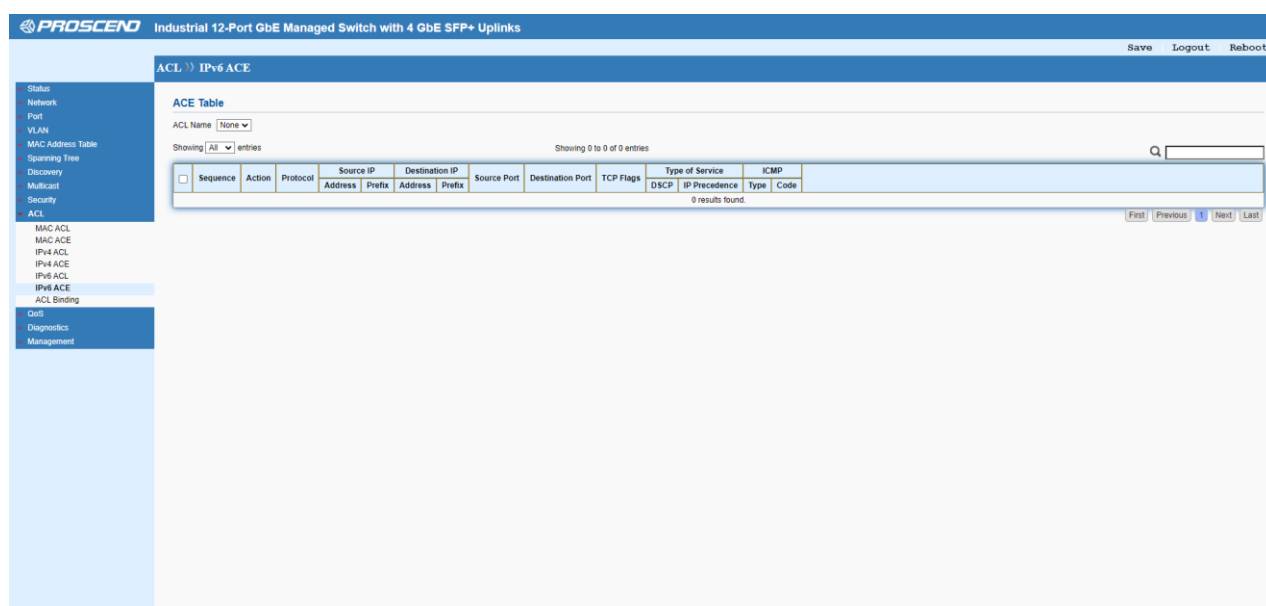
Item	Description
------	-------------



ACL Name	Enter the name for creating ACL profile.
Apply	Apply the settings to the switch.
Delete	Delete the selected entry.

## 13.6 IPv6 ACE

This page allows to create ACE based on IPv6 address.



Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Add ACE

ACL Name	ACL
Sequence	<input type="text" value="1"/> (1 - 2147483647)
Action	<input checked="" type="radio"/> Permit <input type="radio"/> Deny <input type="radio"/> Shutdown
Protocol	<input checked="" type="radio"/> Any <input type="radio"/> Select <input type="text" value="TCP"/> <input type="radio"/> Define <input type="text" value=""/> (0 - 255)
Source IP	<input checked="" type="radio"/> Any <input type="radio"/> <input type="text" value=""/> / <input type="text" value=""/> (Address / Prefix (0 - 128))
Destination IP	<input checked="" type="radio"/> Any <input type="radio"/> <input type="text" value=""/> / <input type="text" value=""/> (Address / Prefix (0 - 128))
Type of Service	<input checked="" type="radio"/> Any <input type="radio"/> DSCP <input type="text" value=""/> (0 - 63) <input type="radio"/> IP Precedence <input type="text" value=""/> (0 - 7)
Source Port	<input checked="" type="radio"/> Any <input type="radio"/> Single <input type="text" value=""/> (0 - 65535) <input type="radio"/> Range <input type="text" value=""/> - <input type="text" value=""/> (0 - 65535)
Destination Port	<input checked="" type="radio"/> Any <input type="radio"/> Single <input type="text" value=""/> (0 - 65535) <input type="radio"/> Range <input type="text" value=""/> - <input type="text" value=""/> (0 - 65535)
TCP Flags	Urg: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Ack: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Psh: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Rst: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Syn: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care Fin: <input type="radio"/> Set <input type="radio"/> Unset <input checked="" type="radio"/> Don't care
ICMP Type	<input checked="" type="radio"/> Any <input type="radio"/> Select <input type="text" value="Destination Unreachable"/> <input type="radio"/> Define <input type="text" value=""/> (0 - 255)
ICMP Code	<input checked="" type="radio"/> Any <input type="radio"/> Define <input type="text" value=""/> (0 - 255)

Item	Description
ACL Name	The name of selected ACL profile.
Sequence	Assign a sequence number to this ACE. The sequence is used to identify which one of ACEs in an ACL is firstly used to match ingress packets. The switch port bound with an ACL use the contained ACE rules, start with the one with lower sequence number to match the packet first.
Action	Select the action applied to the packet matched this ACE. Permit or deny the packets into switch core, or shutdown the port for stopping further transmission.

Protocol	<p>Specify the protocol for filtering.</p> <p><b>Any:</b> All packets will be filtered.</p> <p><b>Select:</b> Choose one of the protocol (e.g., ICMP, IP in IP, TCP, EGP, IGP...) from the drop down list. Packets passing through the selected protocol will be filtered.</p> <p><b>Define:</b> Specify a protocol number (0-255). For example, 6 for TCP, 17 for UDP...,etc.</p>
Source IP	<p>Specify the source IPv4 address for filtering.</p> <p><b>Any:</b> All packets will be filtered.</p> <p>Or, enter the IP address to filter the packets coming from that address.</p>
Destination IP	<p>Specify the destination IPv4 address for filtering.</p> <p><b>Any:</b> All packets will be filtered.</p> <p>Or, enter the IP address to filter the packets coming from that address.</p>
Type of Service	<p><b>Any:</b> All packets will be filtered.</p> <p><b>DSCP:</b> All IP traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP traffic, it is mapped to the lowest priority queue.</p> <p><b>IP Precedence:</b> All IP traffic is mapped to queues based on the IP Precedence field in the IP header. If traffic is not IP traffic, it is mapped to the lowest priority queue.</p>
Source Port	<p>Specify the source port number for filtering the packets.</p> <p><b>Any:</b> All packets will be filtered.</p> <p><b>Single:</b> Only the packets passing through the number defined here will be filtered.</p> <p><b>Range:</b> Only the packets passing through the port range defined here will be filtered.</p>
Destination Port	<p>Specify the destination port number for filtering the packets.</p> <p><b>Any:</b> All packets will be filtered.</p> <p><b>Single:</b> Only the packets passing through the number defined here will be filtered.</p> <p><b>Range:</b> Only the packets passing through the port range defined here will be filtered.</p>

TCP Flags	Specify the TCP Flag (control bit) options.
ICMP Type	<p><b>Any:</b> All packets will be filtered.</p> <p><b>Select:</b> Choose one of the type (e.g., Destination Unreachable Echo Reply, MLD Query....) from the drop down list.</p> <p><b>Define:</b> Specify a type number (0 – 255) for ICMP code. For example, 0 means “Echo Reply”; 254 means “RFC3692-style Experiment 2”.</p>
ICMP Code	<p>Each ICMP type can be defined with different codes. For example, if you define ICMP Type as “3”, then the available codes for Type 3 will be 0-15.</p> <p><b>Any:</b> All packets will be filtered.</p> <p>Or, enter 0 to 255 based on the ICMP type specified.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 13.7 ACL Binding

This section allows to bind Access Control Lists created in previous section to an interface (physical port or aggregation). A physical port can only be bound with one of the IPv4 and IPv6 ACL, not both.

## ACL >> ACL Binding

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- **ACL**

MAC ACL

MAC ACE

IPv4 ACL

IPv4 ACE

IPv6 ACL

IPv6 ACE

**ACL Binding**

- QoS
- Diagnostics
- Management

### ACL Binding Table



<input type="checkbox"/>	Entry	Port	MAC ACL	IPv4 ACL	IPv6 ACL
<input type="checkbox"/>	1	GE1			
<input type="checkbox"/>	2	GE2			
<input type="checkbox"/>	3	GE3			
<input type="checkbox"/>	4	GE4			
<input type="checkbox"/>	5	GE5			
<input type="checkbox"/>	6	GE6			
<input type="checkbox"/>	7	GE7			
<input type="checkbox"/>	8	GE8			
<input type="checkbox"/>	9	GE9			
<input type="checkbox"/>	10	GE10			
<input type="checkbox"/>	11	GE11			
<input type="checkbox"/>	12	GE12			
<input type="checkbox"/>	13	LAG1			
<input type="checkbox"/>	14	LAG2			
<input type="checkbox"/>	15	LAG3			
<input type="checkbox"/>	16	LAG4			
<input type="checkbox"/>	17	LAG5			
<input type="checkbox"/>	18	LAG6			
<input type="checkbox"/>	19	LAG7			
<input type="checkbox"/>	20	LAG8			

Bind

Unbind

Edit

Item		Description
Bind		Edit the settings of specified port(s).
Unbind		Unbind all existing ACL rules on specified port(s).
Edit		Edit the existing entry.

## ACL >> ACL Binding

### Add ACL Binding

Port

GE1

Note: ACL without any rules cannot be bound

MAC ACL

None

IPv4 ACL

None

IPv6 ACL

None

Apply

Close

Item	Description
Port	The index number of selected port.
MAC ACL	Select MAC ACLs to be bound on this port, so Switch may filter packets by using it.
IPv4 ACL	Select IPv4 ACLs to be bound on this port, so Switch may filter packets by using it.
IPv6 ACL	Select IPv6 ACLs to be bound on this port, so Switch may filter packets by using it.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 14 QoS

QoS (Quality of Service) functions to provide different quality of service for various network applications and requirements and optimize the bandwidth resource distribution so as to provide a network service experience of a better quality.

### 14.1 General

#### 14.1.1 Property

This page allows to specify Ingress Trust Mode for basic QoS mode.

**PROSCEND** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

QoS >> General >> Property

State

Trust Mode

☐ Enable  
☒ CoS  
☐ DSCP  
☐ CoS-DSCP  
☐ IP Precedence

Apply

Port Setting Table

	Entry	Port	CoS	Trust	Remarking		
					CoS	DSCP	IP Precedence
<input type="checkbox"/>	1	GE1	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	2	GE2	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	3	GE3	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	4	GE4	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	5	GE5	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	6	GE6	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	7	GE7	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	8	GE8	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	9	GE9	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	10	GE10	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	11	GE11	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	12	GE12	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	13	LAG1	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	14	LAG2	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	15	LAG3	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	16	LAG4	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	17	LAG5	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	18	LAG6	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	19	LAG7	0	Enabled	Disabled	Disabled	Disabled
<input type="checkbox"/>	20	LAG8	0	Enabled	Disabled	Disabled	Disabled

Edit

Item	Description
State	Enable or disable the function of QoS mode.

Trust Mode	<p>Select the QoS operation mode.</p> <p><b>CoS:</b> Traffic is mapped to queues based on the CoS field in the VLAN tag, or based on the per-port default CoS value if there is no VLAN tag on the incoming packet.</p> <p><b>DSCP:</b> All IP traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP traffic, it is mapped to the lowest priority queue.</p> <p><b>CoS-DSCP:</b> All IP traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP but has VLAN tag, mapped to queues based on the CoS value in the VLAN tag.</p> <p><b>IP Precedence:</b> All IP traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP but has VLAN tag, mapped to queues based on the CoS value in the VLAN</p>
Apply	Apply the settings to the switch.
Edit	Edit the selected port(s).

QoS >> General >> Property

Edit Port Setting

Port	GE1
CoS	0 (0 - 7)
Trust	<input checked="" type="checkbox"/> Enable

Remarking

CoS	<input type="checkbox"/> Enable
DSCP	<input type="checkbox"/> Enable
IP Precedence	<input type="checkbox"/> Enable

Apply

Close

Item	Description
Port	The index number of selected port.
CoS	Specify the default CoS priority value for those ingress frames without given trust QoS tag (802.1q/DSCP/IP Precedence, depending on configuration).
Trust	<b>Enable:</b> Traffic will follow trust mode in general setting.



	<b>Disable:</b> No QoS service for this port.
Remarking	
CoS	<b>Enable:</b> Egress traffic will be marked with CoS value according to the Queue to CoS mapping table. <b>Disable:</b> Disable CoS remarking function for outgoing packets.
DSCP	Egress traffic will be marked with DSCP value according to the Queue to DSCP mapping table once it is enabled.
IP Precedence	Egress traffic will be marked with IP Precedence value according to the Queue to IP Precedence mapping table once it is enabled.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 14.1.2 Queue Scheduling

The Switch supports multiple queues for each interface. The higher numbered queue represents the higher priority.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is "QoS >> General >> Queue Scheduling". The left sidebar lists various configuration categories, with "QoS" expanded to show "General", "Property", "Queue Scheduling", "CoS Mapping", "DSCP Mapping", and "IP Precedence Mapping". The "Queue Scheduling" section is active, displaying a "Queue Scheduling Table".

Queue	Method			
	Strict Priority	WRR	Weight	WRR Bandwidth (%)
1	<input checked="" type="radio"/>	<input type="radio"/>	1	
2	<input checked="" type="radio"/>	<input type="radio"/>	2	
3	<input checked="" type="radio"/>	<input type="radio"/>	3	
4	<input checked="" type="radio"/>	<input type="radio"/>	4	
5	<input checked="" type="radio"/>	<input type="radio"/>	5	
6	<input checked="" type="radio"/>	<input type="radio"/>	9	
7	<input checked="" type="radio"/>	<input type="radio"/>	13	
8	<input checked="" type="radio"/>	<input type="radio"/>	15	

Below the table is an "Apply" button.

Item	Description
Queue	There are eight queue ID numbers allowed to be configured.
Strict Priority	Egress traffic from the higher priority queue will be transmitted first, lower priority queue shall wait until all traffic in SP queue is transmitted.

WRR	The number of packets sent from the queue is proportional to the weight of the queue.
Weight	If the queue type is WRR, set the queue weight for the queue.
WRR Bandwidth (%)	Display the percentage of traffic which can be sent by current queue compared to total WRR queues.
Apply	Apply the settings to the switch.

### 14.1.3 CoS Mapping

This section allows to configure how ingress frames with CoS/802.1p tag map to QoS queues, and QoS queues to CoS/802.1p on egress frames. Actual effectiveness is based on how QoS is configured in previous QoS section. This page provides settings for user to configure mapping only.

**PROSCEND Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

Save Logout Reboot

**QoS >> General >> CoS Mapping**

**CoS to Queue Mapping**

CoS	Queue
0	2
1	1
2	3
3	4
4	5
5	6
6	7
7	8

Apply

**Queue to CoS Mapping**

Queue	CoS
1	1
2	0
3	2
4	3
5	4
6	5
7	6
8	7

Apply

Item	Description
CoS to Queue Mapping	
CoS	Display the class of service value (0 to 7).

Queue	Define the queue ID (level 1 to 8) for different CoS values.
Apply	Apply the settings to the switch.
Queue to CoS Mapping	
Queue	Display the queue ID (level 1 to 8) for different CoS values.
CoS	Display the class of service value (0 to 7).
Apply	Apply the settings to the switch.

#### 14.1.4 DSCP Mapping

This section allows to configure how ingress packets with DSCP tag map to QoS queues, and QoS queues to DSCP on egress packets. Actual effectiveness is based on how QoS is configured in previous QoS section. This page provides settings for user to configure mapping only.

## QoS &gt;&gt; General &gt;&gt; DSCP Mapping

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
- ▼ ACL
- ▼ QoS
  - ▲ General
    - Property
    - Queue Scheduling
    - CoS Mapping
    - DSCP Mapping**
    - IP Precedence Mapping
  - ▼ Rate Limit
- ▼ Diagnostics
- ▼ Management

## DSCP to Queue Mapping

DSCP	Queue	DSCP	Queue	DSCP	Queue	DSCP	Queue
0 [CS0]	1 ▼	16 [CS2]	3 ▼	32 [CS4]	5 ▼	48 [CS6]	7 ▼
1	1 ▼	17	3 ▼	33	5 ▼	49	7 ▼
2	1 ▼	18 [AF21]	3 ▼	34 [AF41]	5 ▼	50	7 ▼
3	1 ▼	19	3 ▼	35	5 ▼	51	7 ▼
4	1 ▼	20 [AF22]	3 ▼	36 [AF42]	5 ▼	52	7 ▼
5	1 ▼	21	3 ▼	37	5 ▼	53	7 ▼
6	1 ▼	22 [AF23]	3 ▼	38 [AF43]	5 ▼	54	7 ▼
7	1 ▼	23	3 ▼	39	5 ▼	55	7 ▼
8 [CS1]	2 ▼	24 [CS3]	4 ▼	40 [CS5]	6 ▼	56 [CS7]	8 ▼
9	2 ▼	25	4 ▼	41	6 ▼	57	8 ▼
10 [AF11]	2 ▼	26 [AF31]	4 ▼	42	6 ▼	58	8 ▼
11	2 ▼	27	4 ▼	43	6 ▼	59	8 ▼
12 [AF12]	2 ▼	28 [AF32]	4 ▼	44	6 ▼	60	8 ▼
13	2 ▼	29	4 ▼	45	6 ▼	61	8 ▼
14 [AF13]	2 ▼	30 [AF33]	4 ▼	46 [EF]	6 ▼	62	8 ▼
15	2 ▼	31	4 ▼	47	6 ▼	63	8 ▼

## Queue to DSCP Mapping

Queue	DSCP
1	0 [CS0] ▼
2	8 [CS1] ▼
3	16 [CS2] ▼
4	24 [CS3] ▼
5	32 [CS4] ▼
6	40 [CS5] ▼
7	48 [CS6] ▼
8	56 [CS7] ▼

Item	Description
DSCP to Queue Mapping	
DSCP	Display the DSCP value (0 to 63).
Queue	Define the queue ID (level 1 to 8) for different DSCP values.
Apply	Apply the settings to the switch.
Queue to DSCP Mapping	
Queue	Display the queue ID (level 1 to 8) for different DSCP values.
DSCP	Display the DSCP value (0 to 63).
Apply	Apply the settings to the switch.

### 14.1.5 IP Precedence Mapping

This section allows to configure how ingress packets with IP Precedence tag map to QoS queues, and QoS queues to IP Precedence on egress packets. Actual effectiveness is based on how QoS is configured in previous QoS section. This page provides settings for user to configure mapping only.

The screenshot shows the configuration page for an Industrial 12-Port GbE Managed Switch. The breadcrumb trail is QoS >> General >> IP Precedence Mapping. The left sidebar lists various configuration categories, with QoS > General > IP Precedence Mapping selected. The main content area has two sections: 'IP Precedence to Queue Mapping' and 'Queue to IP Precedence Mapping'. Each section contains a table with dropdown menus and an 'Apply' button.

**IP Precedence to Queue Mapping**

IP Precedence	Queue
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8

**Queue to IP Precedence Mapping**

Queue	IP Precedence
1	0
2	1
3	2
4	3
5	4
6	5
7	6
8	7

Item	Description
IP Precedence to Queue Mapping	
IP Precedence	Display the IP Precedence value (0 to 7).
Queue	Define the queue ID (level 1 to 8) for different IP Precedence values.
Apply	Apply the settings to the switch.
Queue to IP Precedence Mapping	
Queue	Display the queue ID (level 1 to 8) for different IP Precedence values.
IP Precedence	Display the IP Precedence value (0 to 7).
Apply	Apply the settings to the switch.

## 14.2 Rate Limit

Use the Rate Limit setting pages to define values that determine how much traffic the switch can receive and send on specific port or queue.

### 14.2.1 Ingress/Egress Port

This page allows to configure ingress/egress port rate limit. The ingress/egress rate limit is the number of bits per second that can be received from the ingress interface. Excess bandwidth above this limit is discarded. The configuration result for each port will be displayed on the table listed on the lower side of this web page.

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is "QoS >> Rate Limit >> Ingress / Egress Port". The left sidebar contains a menu with "QoS" expanded, showing "General", "Rate Limit", "Ingress / Egress Port", "Egress Queue", "Diagnostics", and "Management". The main content area is titled "Ingress / Egress Port Table" and features a search bar. Below the search bar is a table with 12 rows, each representing a port (GE1 to GE12). Each row has a checkbox, an "Entry" column, a "Port" column, and two columns for "Ingress" and "Egress" (each with "State" and "Rate (Kbps)" sub-columns). All ports are currently "Disabled" with a rate of "10000000". An "Edit" button is located at the bottom of the table.

	Entry	Port	Ingress		Egress	
			State	Rate (Kbps)	State	Rate (Kbps)
<input type="checkbox"/>	1	GE1	Disabled		Disabled	
<input type="checkbox"/>	2	GE2	Disabled		Disabled	
<input type="checkbox"/>	3	GE3	Disabled		Disabled	
<input type="checkbox"/>	4	GE4	Disabled		Disabled	
<input type="checkbox"/>	5	GE5	Disabled		Disabled	
<input type="checkbox"/>	6	GE6	Disabled		Disabled	
<input type="checkbox"/>	7	GE7	Disabled		Disabled	
<input type="checkbox"/>	8	GE8	Disabled		Disabled	
<input type="checkbox"/>	9	GE9	Disabled		Disabled	
<input type="checkbox"/>	10	GE10	Disabled		Disabled	
<input type="checkbox"/>	11	GE11	Disabled		Disabled	
<input type="checkbox"/>	12	GE12	Disabled		Disabled	

Item	Description
Edit	Edit the selected port(s).

The screenshot shows the "Edit Ingress / Egress Port" configuration dialog. It has a "Port" field set to "GE1". Below it are two sections: "Ingress" and "Egress". Each section has an "Enable" checkbox (currently unchecked) and a text input field for the rate in Kbps, both set to "10000000". A range "(16 - 10000000)" is shown next to the input fields. At the bottom are "Apply" and "Close" buttons.

Item	Description
Port	The index number of selected port.
Ingress	Enable or disable ingress bandwidth control. Enter the rate value,<16-1000000>, unit:16 Kbps.
Egress	Enable or disable Egress bandwidth control. Enter the rate value,<16-1000000>, unit:16 Kbps.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 14.2.2 Egress Queue

Item	Description
Edit	Edit the selected port(s).

## Edit Egress Queue

Port	GE1	
Queue 1	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)
Queue 2	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)
Queue 3	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)
Queue 4	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)
Queue 5	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)
Queue 6	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)
Queue 7	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)
Queue 8	<input type="checkbox"/> Enable	<input type="text" value="1000000"/> Kbps (16 - 1000000)

Item	Description
Port	The index number of selected port.
Queue (1~8)	<p>Total eight queue rules.</p> <p>Enable or disable egress bandwidth control.</p> <p>Enter the rate value,&lt;16-1000000&gt;, unit:16 Kbps.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.



## 15 Diagnostics

### 15.1 Logging

This section allows enable system logging into local syslog and specific remote syslog server for storage.

#### 15.1.1 Property

The screenshot shows the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The breadcrumb navigation is "Diagnostics >> Logging >> Property". The left sidebar lists various system functions, with "Diagnostics" expanded to show "Logging". Under "Logging", "Property" is selected. The main content area displays three logging configuration sections: "Console Logging", "RAM Logging", and "Flash Logging". Each section has a "State" checkbox and a "Minimum Severity" dropdown menu. The "State" for Console and RAM logging is checked (Enabled), while for Flash logging it is unchecked (Disabled). All severity dropdowns are set to "Notice". A note below each severity dropdown lists the available levels: Emergency, Alert, Critical, Error, Warning, Notice. An "Apply" button is at the bottom of the configuration area.

Item	Description
State	Enable or disable the function of syslog.
Console Logging	
State	Enable or disable to write log into console.
Minimum Severity	Select severity (Emergency, Alert, Critical, Error, Warning, Notice, informational and debug) of log messages which you wish to filter out for review.
RAM Logging	
State	Enable or disable to write log into RAM.
Minimum Severity	Select severity (Emergency, Alert, Critical, Error, Warning, Notice, informational and debug) of log messages which you wish to filter

Item	Description
State	Enable or disable the function of syslog.
Console Logging	
State	Enable or disable to write log into console.
Minimum Severity	Select severity (Emergency, Alert, Critical, Error, Warning, Notice, informational and debug) of log messages which you wish to filter out for review.
RAM Logging	
State	Enable or disable to write log into RAM.
Minimum Severity	Select severity (Emergency, Alert, Critical, Error, Warning, Notice, informational and debug) of log messages which you wish to filter

	out for review.
Flash Logging	
State	Enable or disable to write log into Flash.
Minimum Severity	Select severity (Emergency, Alert, Critical, Error, Warning, Notice, informational and debug) of log messages which you wish to filter out for review.
Apply	Apply the settings to the switch.

### 15.1.2 Remote Server

This page allows to enable system logging into specific remote syslog server for storage.

The screenshot displays the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The breadcrumb trail shows the path: Diagnostics >> Logging >> Remote Server. On the left, a sidebar menu lists various system functions, with 'Diagnostics' expanded to show 'Logging', 'Remote Server', 'Mirroring', 'Ping', 'Traceroute', 'Digital Input Detect', 'Copper Test', 'Fiber Module', 'UDLD', and 'Management'. The main content area is titled 'Remote Server Table' and features a search bar. Below the search bar is a table with columns: Entry (with a checkbox), Server Address, Server Port, Facility, and Minimum Severity. The table currently shows '0 results found.' At the bottom of the table are three buttons: Add, Edit, and Delete.

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

## Add Remote Server

Address Type	<input checked="" type="radio"/> Hostname <input type="radio"/> IPv4 <input type="radio"/> IPv6	
Server Address	<input type="text"/>	
Server Port	<input type="text" value="514"/>	(1 - 65535, default 514)
Facility	<input type="text" value="Local 7"/>	
Minimum Severity	<input type="text" value="Notice"/>	
Note: Emergency, Alert, Critical, Error, Warning, Notice		

Item	Description
Address Type	Select the address type or remote server.
Server Address	Enter the Hostname/IPv4/IPv6 address of Syslog server.
Server Port	Specify the port that syslog should be sent to.
Facility	One device supports multiple facilities (represented with facility ID, local0 to local7) of remote Syslog server. For each facility ID contains different syslog server configuration, please choose a facility ID for such Syslog server.
Minimum Severity	Select severity (Emergency, Alert, Critical, Error, Warning, Notice, informational and debug) of log messages which you wish to filter out for review.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 15.2 Mirroring

This section provides ability to mirror packets coming in or going out on any port to a destination port. Through the packet duplication in the destination port, this feature is convenient for system administrator to monitor / understand the traffic operation. Session ID 1 to 4 can be enabled simultaneously and operate independently.

## Diagnostics &gt;&gt; Mirroring

- ▼ Status
- ▼ Network
- ▼ Port
- ▼ VLAN
- ▼ MAC Address Table
- ▼ Spanning Tree
- ▼ Discovery
- ▼ Multicast
- ▼ Security
- ▼ ACL
- ▼ QoS
- ▼ Diagnostics

- ▼ Logging
- ▼ Mirroring
- ▼ Ping
- ▼ Traceroute
- ▼ Digital Input Detect
- ▼ Copper Test
- ▼ Fiber Module
- ▼ UDLD
- ▼ Management

## Mirroring Table

	Session ID	State	Monitor Port	Ingress Port	Egress Port
<input type="radio"/>	1	Disabled	---	---	---
<input type="radio"/>	2	Disabled	---	---	---
<input type="radio"/>	3	Disabled	---	---	---
<input type="radio"/>	4	Disabled	---	---	---

Edit

NOTE Allow the monitor port to send or receive normal packets

Item	Description
Edit	Edit the selected port(s).

## Diagnostics &gt;&gt; Mirroring

## Edit Mirroring

Session ID

1

State

☐ Enable

Monitor Port

GE1

☐ Send or Receive Normal Packet

Ingress Port

Available Port

GE1  
GE2  
GE3  
GE4  
GE5  
GE6  
GE7  
GE8

Selected Port

Egress Port

Available Port

GE1  
GE2  
GE3  
GE4  
GE5  
GE6  
GE7  
GE8

Selected Port


Apply

Close

Item	Description
Session ID	The index number of selected session ID.
State	Enable or disable the specified mirror session.
Monitor Port	Specify the port where you wish to observe the mirrored packets.  <b>Enable:</b> The destination port is able to function as a port connecting to network, communicating with other network devices.  <b>Disable:</b> Only observe the mirrored packets.
Ingress Port	Select the port(s) which you wish to mirror the traffic, ingress for mirror the packets into the port going out from the port.
Egress Port	Select the port(s) which you wish to mirror the traffic, egress for mirror the packets going out from the port.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 15.3 Ping

After finished the Ping test, the results will be shown on the lower side of this page.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Diagnostics >> Ping**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
  - Logging
  - Mirroring
  - Ping**
  - Traceroute
  - Digital Input Detect
  - Copper Test
  - Fiber Module
  - UDLD
- Management

Address Type

☒ Hostname  
☐ IPv4  
☐ IPv6

Server Address

☐ User Defined

Count

(1 - 65535)

**Ping Result**

**Packet Status**

Status	N/A
Transmit Packet	0
Receive Packet	0
Packet Lost	0%

**Round Trip Time**

Min	0.0 ms
Max	0.0 ms
Average	0.0 ms

Item	Description
Address Type	Select the address type or remote server.
Server Address	Enter the Hostname/IPv4/IPv6 address.
Count	It means how many times to send ping request packet. Enter a number between 1 and 65535 as the count and the default configuration is 4.
Ping	Start the Ping process.
Stop	Stop the Ping process.

## 15.4 Traceroute

After finished the trace route test, the results will be shown on the lower side of this page.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Diagnostics >> Traceroute**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
  - Logging
  - Mirroring
  - Ping
  - Traceroute**
  - Digital Input Detect
  - Copper Test
  - Fiber Module
  - UDLD
- Management

Address Type

☒ Hostname  
☐ IPv4

Server Address

Time to Live

☐ User Defined  

30 (2 - 255, default 30)

Apply

Stop

**Traceroute Result**

Item	Description
Address Type	Select the address type or remote server.
Server Address	Enter the Hostname/IPv4 address.
Time to Live	Enter the value of “Time to Live” for trace route process. The default configuration is 30.
Apply	Start the trace route process.
Stop	Stop the trace route process.

## 15.5 Digital Input Detect

This page allows to check the status of digital input.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics**
  - Logging
  - Mirroring
  - Ping
  - Traceroute
  - Digital Input Detect**
  - Copper Test
  - Fiber Module
  - UDLD
- Management

**Diagnostics >> Digital Input Detect**

Digital Input

Disable ▼

Note: triggering conditions

Apply

Digital Input Status

DI1	Off
DI2	Off

## 15.6 Copper Test

After finished copper test, the results will be shown on the lower side of this page.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics**
  - Logging
  - Mirroring
  - Ping
  - Traceroute
  - Digital Input Detect
  - Copper Test**
  - Fiber Module
  - UDLD
- Management

**Diagnostics >> Copper Test**

Port

GE1 ▼

Copper Test

Copper Test Result

Cable Status	
Port	N/A
Result	N/A
Length	N/A

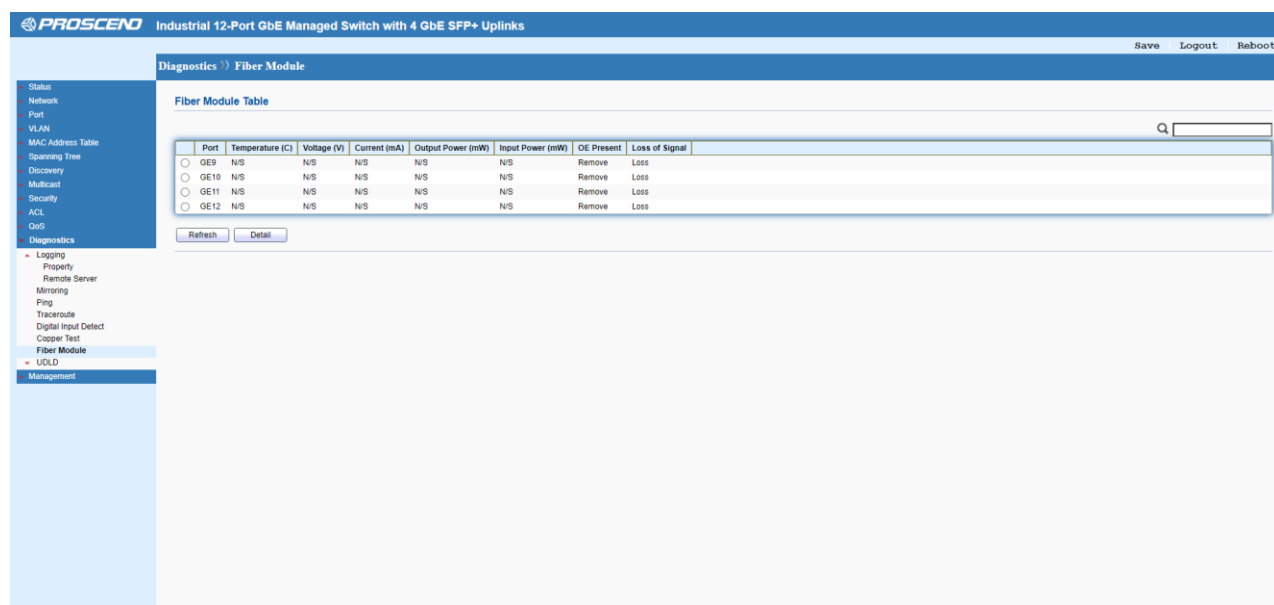
Item	Description
Port	Select the port for testing copper.



Copper Test	Start copper test process.
-------------	----------------------------

## 15.7 Fiber Module

This page allows to check the detailed information of SFP module.



Item	Description
Refresh	Refresh the page to see new status of SFP.
Detail	Get details of SFP module.

## 15.8 UDLD

Unidirectional Link Detection (UDLD) is a layer 2 protocol used to determine the physical status of a link. The purpose of Unidirectional Link Detection (UDLD) is to detect and deter issues that arise from Unidirectional Links. UDLD helps to prevent forwarding loops and blackholing of traffic by identifying and acting on logical one-way links that would otherwise go undetected.

### 15.8.1 Property

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#)
[Logout](#)
[Reboot](#)

**Diagnostics >> UDLD >> Property**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
  - Logging
  - Mirroring
  - Ping
  - Traceroute
  - Digital Input Detect
  - Copper Test
  - Fiber Module
  - UDLD
    - Property
    - Neighbor
- Management

**Message Time**

Sec (1 - 90, default 15)

**Port Setting Table**

<input type="checkbox"/>	Entry	Port	Mode	Bidirectional State	Operational Status	Neighbor
<input type="checkbox"/>	1	GE1	Disabled	Unknown		0
<input type="checkbox"/>	2	GE2	Disabled	Unknown		0
<input type="checkbox"/>	3	GE3	Disabled	Unknown		0
<input type="checkbox"/>	4	GE4	Disabled	Unknown		0
<input type="checkbox"/>	5	GE5	Disabled	Unknown		0
<input type="checkbox"/>	6	GE6	Disabled	Unknown		0
<input type="checkbox"/>	7	GE7	Disabled	Unknown		0
<input type="checkbox"/>	8	GE8	Disabled	Unknown		0
<input type="checkbox"/>	9	GE9	Disabled	Unknown		0
<input type="checkbox"/>	10	GE10	Disabled	Unknown		0
<input type="checkbox"/>	11	GE11	Disabled	Unknown		0
<input type="checkbox"/>	12	GE12	Disabled	Unknown		0

Item	Description
Message Time	Enter the message interval in aggressive mode, default is 15.
Apply	Apply the settings to the switch.
Edit	Edit the selected port.

**Diagnostics >> UDLD >> Property**

**Edit Port Setting**

**Port**

**Mode**


☒ Disabled
☐ Normal
☐ Aggressive

Item	Description
Port	The index number of selected port.
Mode	<b>Disabled:</b> Disable the UDLD on selected port.

	<p><b>Normal:</b> Port state is marked as undetermined and behaves according to STP state.</p> <p><b>Aggressive:</b> UDLD attempts to re-establish the state of the port and put into the error-disable state if unable to re-establish port state.</p>
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 15.8.2 Neighbor

This page displays information of the neighboring devices.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

Diagnostics >> UDLD >> Neighbor

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
  - Logging
  - Mirroring
  - Ping
  - Traceroute
  - Digital Input Detect
  - Copper Test
  - Fiber Module
  - UDLD
    - Property
    - Neighbor**
- Management

### Neighbor Table

Entry	Expiration Time	Current Neighbor State	Device ID	Device Name	Port ID	Message Interval	Timeout Interval	
0 results found.								

Refresh

## 16 Management

### 16.1 User Account

This page allows to Add/Edit/Delete the user account for device management.

The screenshot displays the web interface for a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The left sidebar shows a tree view of management options, with 'User Account' selected under the 'Management' category. The main content area is titled 'Management >> User Account' and contains a 'User Account' section. This section includes a search bar, a table with columns for 'Username' and 'Privilege', and buttons for 'Add', 'Edit', and 'Delete'. The table shows one entry: 'root' with 'Admin' privileges. Pagination controls at the bottom of the table show 'First', 'Previous', '1', 'Next', and 'Last'.

Username	Privilege
root	Admin

### 16.2 Firmware

#### 16.2.1 Upgrade / Backup

This page allows to upgrade the current image in the flash partition or backup the firmware from selected flash image partition 0 / 1.

The screenshot displays the web interface for a Proscend Industrial 12-Port GbE Managed Switch, specifically the 'Firmware Upgrade / Backup' page. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The left sidebar shows a tree view of management options, with 'Firmware Upgrade / Backup' selected under the 'Firmware' category. The main content area is titled 'Management >> Firmware >> Upgrade / Backup' and contains a form for selecting the action and method. The 'Action' section has radio buttons for 'Upgrade' (selected) and 'Backup'. The 'Method' section has radio buttons for 'TFTP' and 'HTTP' (selected). The 'Filename' field is empty, with a placeholder text '選擇檔案 未選擇任何檔案'. An 'Apply' button is located below the form.

# Active Image

This page allows to boot the system from flash image partition 0 / 1.

PROSCEND

Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Management >> Firmware >> Active Image

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

User Account

Firmware

Upgrade / Backup

Active Image

Configuration

SNMP

RMON

Active Image

Image0

Image1

Note: the image was selected for the next boot

Active Image

Firmware

Image1

Version

1.0.1\_6ae7d

Name

Proscend\_850G-12I\_1.0.1\_6ae7d\_vmlinux\_web.bix

Size

6549080 Bytes

Created

2024-08-28 15:59:49

Backup Image

Firmware

Image0

Version

1.0.1

Name

Size

6619969 Bytes

Created

2024-08-13 10:37:33

Apply

## 16.3 Configuration

### 16.3.1 Upgrade / Backup

This page allows to upgrade the Running/Startup/Backup configuration or backup the Running/Startup/Backup configuration and RAM/Flash log via TFTP or HTTP.

PROSCEND

Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Management >> Configuration >> Upgrade / Backup

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

User Account

Firmware

Configuration

Upgrade / Backup

Save Configuration

SNMP

RMON

Action

Upgrade

Backup

Method

TFTP

HTTP

Configuration

Running Configuration

Startup Configuration

Backup Configuration

RAM Log

Flash Log

Filename

選擇檔案

未選擇任何檔案

Apply

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### 16.3.2 Save Configuration

This page allows to save confirmation from different source to specified destination file or reset to factory default.

The screenshot displays the web interface of a Proscend Industrial 12-Port GbE Managed Switch. The top header includes the Proscend logo and the device name. Navigation links for 'Save', 'Logout', and 'Reboot' are in the top right. A breadcrumb trail shows 'Management >> Configuration >> Save Configuration'. On the left, a sidebar menu lists various system functions, with 'Management' expanded to show 'Save Configuration' as the active option. The main content area contains two sections: 'Source File' and 'Destination File'. The 'Source File' section has three radio buttons: 'Running Configuration' (selected), 'Startup Configuration', and 'Backup Configuration'. The 'Destination File' section has two radio buttons: 'Startup Configuration' (selected) and 'Backup Configuration'. At the bottom of the form are two buttons: 'Apply' and 'Restore Factory Default'.

## 16.4 SNMP

Simple Network Management Protocol (SNMP) is an "Internet-standard protocol for managing devices on IP networks".

### 16.4.1 View

This page allows to create MIB views (Management information base) and then include or exclude OID (Object Identifier) in a view.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Management >> SNMP >> View**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management**
  - User Account
  - Firmware
  - Configuration
  - SNMP**
    - View**
    - Group
    - Community
    - User
    - Engine ID
    - Trap Event
    - Notification
  - RMON

### View Table

Showing All entries Showing 1 to 1 of 1 entries

<input type="checkbox"/>	View	OID Subtree	Type
<input type="checkbox"/>	all	.1	Included

[Add](#)
[Delete](#)
[First](#)
[Previous](#)
[1](#)
[Next](#)
[Last](#)

Item	Description
Add	Add a new OID string.
Delete	Delete the existing OID string.

**Management >> SNMP >> View**

### Add View

View

OID Subtree

Type

☒ Included
 ☐ Excluded

[Apply](#)
[Close](#)

Item	Description
View	Enter a name of the MIB view.
OID Subtree	Enter an OID string to be included or excluded from the MIB view.
Type	Determine to include or exclude the selected MIBs.

Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 16.4.2 Group

This page allows to group SNMP users and assign different authorization and access privileges.

The screenshot displays the Proscend web management interface for an Industrial 12-Port GbE Managed Switch. The breadcrumb navigation shows 'Management >> SNMP >> Group'. The left sidebar contains a tree view with categories like Status, Network, Port, VLAN, MAC Address Table, Spanning Tree, Discovery, Multicast, Security, ACL, QoS, Diagnostics, and Management. Under Management, options include User Account, Firmware, Configuration, SNMP (expanded), View, Group (selected), Community, User, Engine ID, Trap Event, Notification, and RMON. The main content area is titled 'Group Table' and shows a table with columns: Group, Version, Security Level, and View (sub-columns: Read, Write, Notify). The table is currently empty, displaying 'Showing 0 to 0 of 0 entries' and '0 results found.' Below the table, there are 'Add', 'Edit', and 'Delete' buttons. A note at the bottom states: 'Configure SNMP View to associate a non-default view with a group.'

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.



Management >> SNMP >> Group

Add Group

Group

Version

☒ SNMPv1  
☐ SNMPv2  
☐ SNMPv3

Security Level

☒ No Security  
☐ Authentication  
☐ Authentication and Privacy

View

☒ Read  

all ▾

☐ Write  

all ▾

☐ Notify  

all ▾

Apply

Close

Item	Description
Group	Enter a name for the group.
Version	Specify SNMP version.
Security Level	Specify SNMP security level for the group. It is available when SNMPv3 is selected.  <b>No Security:</b> No authentication and no encryption. <b>Authentication:</b> Requires authentication but no encryption. <b>Authentication and Privacy:</b> Requires authentication and encryption.
View	Users of this group have the right to Read/Write/Notify the selected MIB view.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 16.4.3 Community

This page allows to add/remove multiple communities of SNMP.

**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Management >> SNMP >> Community**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management
  - User Account
  - Firmware
  - Configuration
  - SNMP
    - View
    - Group
    - Community
    - User
    - Engine ID
    - Trap Event
    - Notification
  - RMON

### Community Table

Showing All entries      Showing 1 to 1 of 1 entries     

<input type="checkbox"/>	Community	Group	View	Access
<input type="checkbox"/>	public		all	Read-Write

[First](#)
[Previous](#)
[1](#)
[Next](#)
[Last](#)

The access right of a community is defined by a group under advanced mode.  
 Configure [SNMP Group](#) to associate a group with a community.

[Add](#)   [Edit](#)   [Delete](#)

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

**Management >> SNMP >> Community**

#### Add Community

Community

Type

☒ Basic  
☐ Advanced

View

all

Access

☒ Read-Only  
☐ Read-Write

Group

[Apply](#)   [Close](#)

Item	Description
Community	Enter a name as community name.

Type	<p><b>Basic:</b> View and access right can be specified for such SNMP community profile.</p> <p><b>Advanced:</b> Specify one of the SNMP groups for such SNMP community profile.</p>
View	Simply specify one of the view profiles (created in SNMP→View) from the drop down list.
Access	<p><b>Read Only:</b> It allows unidirectional access to node-specific information.</p> <p><b>Read &amp; Write:</b> It allows bidirectional access to node-specific information.</p>
Group	Specify the SNMP group configured by user (SNMP→Group) to define the object available to the community.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

#### 16.4.4 User

This page allows to configure SNMP user profile.

The screenshot displays the web management interface for a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The left sidebar shows a tree view of configuration options, with 'Management' expanded and 'User' selected. The main content area is titled 'Management >> SNMP >> User' and contains a 'User Table' section. The table shows 0 results found. Below the table, there is a message: 'Configure SNMP Group to associate an SNMPv3 group with an SNMPv3 user.' and buttons for Add, Edit, and Delete.

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

Management >> SNMP >> User

Add User

User

Group

Security Level

☐ No Security  
☐ Authentication  
☒ Authentication and Privacy

Authentication

Method

☐ None  
☒ MD5  
☐ SHA

Password

Privacy

Method

☐ None  
☒ DES

Password

Apply Close

Item	Description
User	Enter a name for creating new SNMP user.
Group	Choose one of the SNMP group from the drop down list. Then, this user profile will be grouped under the selected SNMP group.
Security Level	Specify SNMP security level for the group. It is available when SNMPv3 is selected.  <b>No Security:</b> No authentication and no encryption. <b>Authentication:</b> Requires authentication but no encryption. <b>Authentication and Privacy:</b> Requires authentication and encryption.
Authentication	
Method	At present, available methods include None, MD5 and SHA.
Password	Enter a password for the selected method.

Privacy	
Method	At present, available methods include DES and None.
Password	Enter a password for the selected method.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 16.4.5 Engine ID

This page allows to configure and display SNMP Local/Remote engine ID.

Item	Description
Engine ID	<p>The user defined engine ID is range 10 to 64 hexadecimal characters, and the hexadecimal number must be divided by “2”.</p> <p><b>User Defined:</b> If it is checked, the local engine ID will be configured manually. If not, the default Engine ID which is made up of MAC and Enterprise ID will be used instead.</p>
Apply	Apply the settings to the switch.
Add	Add a new entry.

Edit	Edit the existing entry.
Delete	Delete the selected entry.

**Management >> SNMP >> Engine ID**

Add Remote Engine ID


**Address Type**  
**Server Address**  
**Engine ID**

☒ Hostname  
☐ IPv4  
☐ IPv6  
  
 (10 - 64 Hexadecimal Characters)

Item	Description
Address Type	Specify the address type for entering hostname or IPv4/IPv6 address.
Server Address	Enter the IP address or the host name of the SNMP server.
Engine ID	Specify the engine ID for remote SNMP server.  The engine ID is range 10 to 64 hexadecimal characters, and the hexadecimal number must be divided by 2.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 16.4.6 Trap Event

This page allows to add or delete SNMP trap receiver IP address and community name.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Management >> SNMP >> Trap Event**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management**
  - User Account
  - Firmware
  - Configuration
  - SNMP**
    - View
    - Group
    - Community
    - User
    - Engine ID
    - Trap Event**
    - Notification
  - RMON

Authentication Failure	<input checked="" type="checkbox"/> Enable
Link Up / Down	<input checked="" type="checkbox"/> Enable
Cold Start	<input checked="" type="checkbox"/> Enable
Warm Start	<input checked="" type="checkbox"/> Enable

## 16.4.7 Notification

This page allows to configure a host to receive SNMPv1/v2/v3 notification.


**Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks**

[Save](#) | [Logout](#) | [Reboot](#)

**Management >> SNMP >> Notification**

- Status
- Network
- Port
- VLAN
- MAC Address Table
- Spanning Tree
- Discovery
- Multicast
- Security
- ACL
- QoS
- Diagnostics
- Management**
  - User Account
  - Firmware
  - Configuration
  - SNMP**
    - View
    - Group
    - Community
    - User
    - Engine ID
    - Trap Event
    - Notification**
  - RMON

### Notification Table

Showing All entries      Showing 0 to 0 of 0 entries     

<input type="checkbox"/>	Server Address	Server Port	Timeout	Retry	Version	Type	Community / User	Security Level
0 results found.								

For SNMPv1,2 Notification, [SNMP Community](#) needs to be defined.  
 For SNMPv3 Notification, [SNMP User](#) must be created.

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

Management >> SNMP >> Notification

Add Notification

Address Type	<input checked="" type="radio"/> Hostname <input type="radio"/> IPv4 <input type="radio"/> IPv6
Server Address	<input type="text"/>
Version	<input checked="" type="radio"/> SNMPv1 <input type="radio"/> SNMPv2 <input type="radio"/> SNMPv3
Type	<input checked="" type="radio"/> Trap <input type="radio"/> Inform
Community / User	<input type="text" value="public"/>
Security Level	<input checked="" type="radio"/> No Security <input type="radio"/> Authentication <input type="radio"/> Authentication and Privacy
Server Port	<input checked="" type="checkbox"/> Use Default <input type="text" value="162"/> (1 - 65535, default 162)
Timeout	<input checked="" type="checkbox"/> Use Default <input type="text" value="15"/> Sec (1 - 300, default 15)
Retry	<input checked="" type="checkbox"/> Use Default <input type="text" value="3"/> (1 - 255, default 3)

Apply Close

Item	Description
Address Type	Specify the address type for entering hostname or IPv4/IPv6 address.
Server Address	Enter the IP address or the host name of the SNMP server.
Version	Specify SNMP version.
Type	Specify Notification Type.  <b>Trap:</b> Send SNMP traps to the host.  <b>Inform:</b> Send SNMP informs to the host. If it is used, Timeout and Retry also shall be defined.
Community/User	Use the drop down list to choose one of the community profiles.
Security Level	Specify SNMP security level for the group. It is available when SNMPv3 is selected.  <b>No Security:</b> No authentication and no encryption.



	<b>Authentication:</b> Requires authentication but no encryption. <b>Authentication and Privacy:</b> Requires authentication and encryption.
Server Port	Specify the UDP port number for the recipient's server. <b>Use Default:</b> If it is checked, the default number (162) will be used automatically.
Timeout	Specify the SNMP informs timeout. It is available when Inform is selected as Type. <b>Use Default:</b> If it is checked, the default number (15) will be used automatically.
Retry	Specify the SNMP informs retry count. It is available when Inform is selected as Type. <b>Use Default:</b> If it is checked, the default number (3) will be used automatically.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

## 16.5 RMON

Remote Network Monitoring (RMON) was developed by the Internet Engineering Task Force (IETF) to support monitoring and protocol analysis of Local Area Networks (LANs).

### 16.5.1 Statistics

This page shows the RMON statistics table.

Entry	Port	Bytes Received	Drop Events	Packets Received	Broadcast Packets	Multicast Packets	CRC & Align Errors	Undersize Packets	Oversize Packets	Fragments	Jabbers	Collisions	Frames of 64 Bytes	Frames of 65 to 127 Bytes	Frames of 128 to 255 Bytes	Frames of 256 to 511 Bytes	Frames of 512 to 1023 Bytes	Frames Greater than 1024 Bytes
1	GE1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	GE2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	GE3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	GE4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	GE5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	GE6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	GE7	1893239	0	7567	53	754	0	0	0	0	0	0	3851	1060	211	745	2180	0
8	GE8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	GE9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	GE10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	GE11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	GE12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	LAG1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	LAG2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	LAG3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	LAG4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	LAG5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	LAG6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	LAG7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	LAG8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

16.5.2 History

This page allows to configure RMON history table.

PROSCEND

Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save | Logout | Reboot

Management >> RMON >> History

Status

Network

Port

VLAN

MAC Address Table

Spanning Tree

Discovery

Multicast

Security

ACL

QoS

Diagnostics

Management

User Account

Firmware

Configuration

SNMP

RMON

Statistics

History

Event

Alarm

History Table

Showing All entries Showing 0 to 0 of 0 entries

Entry

Port

Interval

Owner

Sample

Maximum

Current

0 results found.

Add

Edit

Delete

View

First

Previous

1

Next

Last

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.
View	View the statistics of selected entry.

Management >> RMON >> History

Add History

Entry

1

Port

GE1

Max Sample

50

(1 - 50, default 50)

Interval

1800

(1 - 3600, default 1800)

Owner

Test

Apply

Close

Item	Description
------	-------------

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Entry	The index number of entry.
Port	Select the port which wants to be monitored.
Max Sample	Indicates the maximum data entries associated this History control entry stored in RMON. The range is from 1 to 50, default value is 50.
Interval	Indicates the interval in seconds for sampling the history statistics data. The range is from 1 to 3600, default value is 1800 seconds.
Owner	Enter the name of owner.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

### 16.5.3 Event

This page allows to configure RMON Event table.

The screenshot displays the web management interface for a Proscend Industrial 12-Port GbE Managed Switch. The top navigation bar includes the Proscend logo, the device name, and links for Save, Logout, and Reboot. The left sidebar shows a tree view of configuration options, with 'Management' expanded to show 'Event' selected. The main content area is titled 'Management >> RMON >> Event' and contains an 'Event Table' section. This section includes a search bar, a table with columns for Entry, Community, Description, Notification, Time, and Owner, and buttons for Add, Edit, Delete, and View. The table currently shows 0 results.

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.
View	View the statistics of selected entry.

## Add Event

Entry	1
Notification	<input checked="" type="radio"/> None <input type="radio"/> Event Log <input type="radio"/> Trap <input type="radio"/> Event Log and Trap
Community	Default Community
Description	Default Description
Owner	Test

Item	Description
Entry	The index number of entry.
Notification	<p>Indicates the notification of the event, the possible types are:</p> <p><b>None:</b> No SNMP log is created; no SNMP trap is sent.</p> <p><b>Event Log:</b> Create SNMP log entry when the event is triggered.</p> <p><b>Trap:</b> Send SNMP trap when the event is triggered.</p> <p><b>Event Log and Trap:</b> Create SNMP log entry and sent SNMP trap when the event is triggered.</p>
Community	Specify the community when trap is sent.
Description	Indication of this event.
Owner	Enter the name of owner.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.

#### 16.5.4 Alarm

This page allows to configure RMON Event table.

**PROSCENO** Industrial 12-Port GbE Managed Switch with 4 GbE SFP+ Uplinks

Save Logout Reboot

Management >> RMON >> Alarm

**Alarm Table**

Showing All entries Showing 0 to 0 of 0 entries

<input type="checkbox"/>	Entry	Port	Name	Value	Sampling	Interval	Owner	Trigger	Rising Threshold	Event	Falling Threshold	Event
0 results found.												

Add Edit Delete

First Previous 1 Next Last

Item	Description
Add	Add a new entry.
Edit	Edit the existing entry.
Delete	Delete the selected entry.

Management >> RMON >> Alarm

**Add Alarm**

Entry

1

Port

GE1

Counter

Drop Events

Sampling

☒ Absolute
 ☐ Delta

Interval

100

Sec (1 - 2147483647, default 100)

Owner

Trigger

☒ Rising
 ☐ Falling
 ☐ Rising and Falling

Rising

Threshold

100

(0 - 2147483647, default 100)

Event

1 - Default Description

Falling

Threshold

20

(0 - 2147483647, default 20)

Event

1 - Default Description

Apply

Close

Item	Description
------	-------------

Entry	The index number of entry.
Port	Select the port which wants to be monitored.
Counter	Indicates the particular variable to be sampled.
Sampling	<p>The method of sampling the selected variable and calculating the value to be compared against the thresholds, possible sample types are:</p> <p><b>Absolute:</b> Get the sample directly.</p> <p><b>Delta:</b> Calculate the difference between samples (default).</p>
Interval	Indicates the interval in seconds for sampling and comparing the rising and falling threshold. The range is from 1 to $2^{31}-1$ . Default is 100.
Owner	Enter the name of owner.
Trigger	<p>The method of sampling the selected variable and calculating the value to be compared against the thresholds, possible sample types are:</p> <p><b>Rising:</b> Trigger alarm when the first value is larger than the rising threshold.</p> <p><b>Falling:</b> Trigger alarm when the first value is less than the falling threshold.</p> <p><b>Rising and Falling:</b> Trigger alarm when the first value is larger than the rising threshold or less than the falling threshold.</p>
Rising	
Threshold	Rising threshold value (-2147483648-2147483647).
Event	Rising event index.
Falling	
Threshold	Falling threshold value (-2147483648-2147483647)
Event	Falling event index.
Apply	Apply the settings to the switch.
Close	Close the setting page and back to previous page.