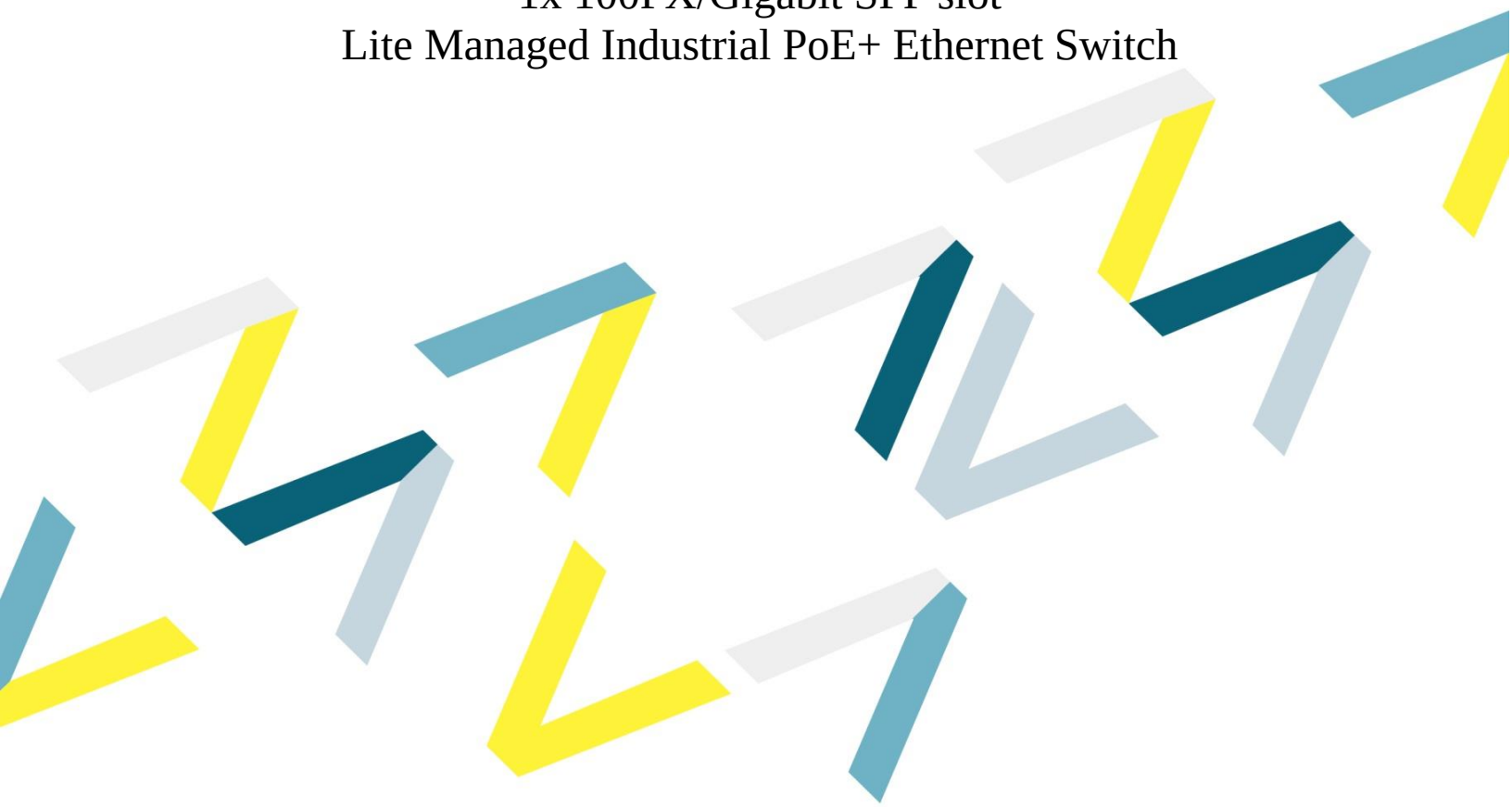
VOLKTEK

User Manual

SEN-8415PL

5x 10/100/1000Base-T(4PSE) ports +
1x 100FX/Gigabit SFP slot
Lite Managed Industrial PoE+ Ethernet Switch



Version 7.1 26th Dec 2024

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FCC WARNING

This equipment has been tested and found to comply with the limits for a class A device, pursuant to part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user will be required to correct the interference at the user's own expense.

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Warning

Take special care to read and understand all the content in the warning boxes.

Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity.

Warning

Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat

up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.



Do not stack the chassis on any other equipment. If the chassis falls, it can cause severe bodily injury and equipment damage.



An exposed wire lead from a DC-input power source can conduct harmful levels of electricity. Be sure that no exposed portion of the DC-input power source wire extends from the terminal block plug.



Ethernet cables must be shielded when used in a central office environment.



If a redundant power system (RPS) is not connected to the switch, install an RPS connector cover on the back of the switch.



Read the wall-mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation to people and damage to the system.



Before performing any of the following procedures, ensure that power is removed from the DC circuit.



Read the installation instructions before connecting the system to the power source.



To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The

following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.



This unit might have more than one power supply connection. All connections must be removed to de-energize the unit.



Only trained and qualified personnel should be allowed to install, replace, or service this equipment.



When installing or replacing the unit, the ground connection must always be made first and disconnected last.



Voltages that present a shock hazard may exist on Power over Ethernet (PoE) circuits if interconnections are made using uninsulated exposed metal contacts, conductors, or terminals. Avoid using such interconnection methods, unless the exposed metal parts are located within a restricted access location and users and service people who are authorized within the restricted access location are made aware of the hazard. A restricted access area can be accessed only through the use of a special tool, lock and key or other means of security.



No user-serviceable parts inside. Do not open.



This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

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1. About this Manual

1.1 Welcome

The SEN-8415PL is a Lite Managed Industrial PoE+ Ethernet Switch perfectly suited for harsh environments and an ideal solution to deploy surveillance systems. The switch is designed to meet the requirements of both power and data transmission over single Ethernet cable to PoE appliances and devices without the need for power outlets, eliminating additional cost of electrical cabling and circuits. The switch's rugged case and hardened components withstand high degree of vibration, shock and wide operating temperatures from -10℃ to 60℃.

Switch features 5 10/100/1000Base-T ports and one 100FX/Gigabit SFP slot to satisfy new and evolving network demands. With 4 IEEE 802.3at compliant ports, the switch provides up to 30W per port to meet the growing demand of higher power consuming network devices such as wireless access points, IP cameras, and other powered devices (PDs).

1.2 Purpose

This manual discusses how to install and configure your Lite Managed PoE+ Switch.

1.3 Terms/ Usage

In this manual, the term "Switch" (first letter upper case) refers to the SEN-8415PL Switch, and "switch" (first letter lower case) refers to other switches.

2. About the SEN-8415PL

2.1 Features

Configuration

SNMP v1/v2c

Remote System log

Firmware Upgradable

Configuration Upload/Download

Storm control

Loop detection

Port priority

Ethernet Interface (10/100/1000Base-T interfaces**)**

Auto-negotiation

Auto-MDI/MDI-X

Flow control of half duplex back pressure

Flow control of full duplex

Diagnostic

LED status

SNMP trap

Port mirroring

Simple Network Time Protocol

Others

Topology map

Link Layer Discovery Protocol

ONVIF for camera detection

Alarm threshold of port utilization

Alarm threshold of storm control

Flow control by default

PoE function

Per port PoE function enable/disable

PD Alive check

2.2 Specifications

IEEE Standards

IEEE 802.3	10Base-T
IEEE 802.3u	100Base-TX/FX
EEE 802.3ab	1000Base-T
IEEE 802.3z	1000Base-SX/LX
IEEE 802.3x	Flow Control
IEEE 802.3	Nway Auto-negotiation
IEEE 802.3af	Power over Ethernet
IEEE 802.3at	Power over Ethernet plus
IEEE 802.3az	EEE, Energy Efficient Ethernet

IEEE 802.1ab	Link Layer Discovery Protocol
IEEE 802.1p	Class of Service, priority protocols

Performance

Switching fabric	12Gbps
L2 forwarding	8.93Mpps
Packet buffer size	4.1Mbit
MAC table size	8K
Jumbo Frame Size	10K

Physical ports

10/100/1000Base-T (PSE)	4
10/100/1000Base-T (RJ45)	1
100FX/Gigabit SFP Slot	1

Power

Input Voltage:

- Primary input	48~57VDC at a maximum of 2.6A
- Redundant input	48~57VDC at a maximum of 2.6A

Connection:

- 6-pin terminal block	One
- 4-pin Mini-DIN connector	One
Overload current protection	Support
Power Reverse Polarity Protection	Support
Relay output	One with current carrying capacity of 1A @ 24VDC
Power Consumption	10W (system)

Mechanical

Dimension (WxHxD)	31mmx136mmx110mm (1.22x5.36x4.31 inch)
Weight	290gms
Mounting	DIN rail or wall mount (optional) installation kit.

Operating Requirement

Operating Temperature	-10 to 60℃

Storage Temperature	-40 to 75℃
Operating Humidity	10 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Altitude	Up to 2000m
IEC	Indoor use and pollution degree II

3. Hardware Description

3.1 Connectors

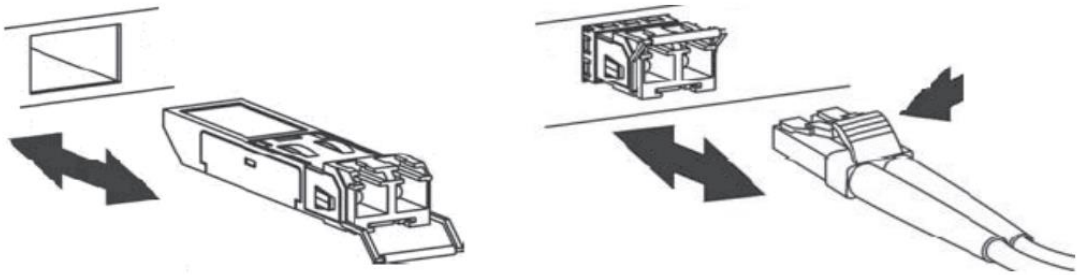
The Switch utilizes ports with copper and SFP fiber port connectors functioning under Ethernet/Fast Ethernet/Gigabit Ethernet standards.

10/100/1000Base-T Ports
The 10/100/1000Base-T ports support network speeds of 10Mbps, 100Mbps or 1000Mbps, and can operate in half- and full-duplex transfer modes. These ports also offer automatic MDI/MDI-X crossover detection that gives true "plug-n-play" capability – just plug the network cables into the ports and the ports will adjust according to the end-node devices. The following are recommended cabling for the RJ45 connectors: (1) 10Mbps – Cat 3 or better; (2) 100/1000Mbps – Cat 5e or better.

SFP Slots for SFP modules
The one SFP slots are designed to Gigabit SFP modules that support network speed of 100/1000Mbps.

Installing the SFP modules and Fiber Cable

1. Slide the selected SFP module into the selected SFP slot (Make sure the SFP module is aligned correctly with the inside of the slot)
2. Insert and slide the module into the SFP slot until it clicks into place
3. Remove any rubber plugs that may be present in the SFP module's mouth
4. Align the fiber cable's connector with the SFP module's mouth and insert the connector
5. Slide the connector in until a click is heard
6. If you want to pull the connector out, first push down the release clip on top of the connector to release the connector from the SFP module.



To properly connect fiber cabling*:* Check that the fiber terminators are clean. You can clean the cable plugs by wiping them gently with a clean tissue or cotton ball moistened with a little ethanol. Dirty fiber terminators on fiber optic cables will impair the quality of the light transmitted through the cable and lead to degraded performance on the port.

Note: When inserting the cable, be sure the tab on the plug clicks into position to ensure that it is properly seated.

Check the corresponding port LED on the Switch to be sure that the connection is valid. (Refer to the LED chart).

3.2 Installation

The location chosen for installing the Switch may greatly affect its performance. When selecting a site, we recommend considering the following rules:

- ✓ Install the Switch in an appropriate place. See Technical Specifications for the acceptable temperature and humidity ranges.
- ✓ Install the Switch in a location that is not affected by strong electromagnetic field generators (such as motors), vibration, dust, and direct sunlight.
- ✓ Leave at least 10cm of space at the front and rear of the unit for ventilation.

Attention:



The SEN-8425PL-24V is an open type device and SEN-8425PL-24V shall be DIN-Rail mounted or wall mounted (optional) in cabinet or enclosure

Hardware Installation

- ✓ **Step 1**: Unpack the device and other contents of the package.
- ✓ **Step 2**: Fasten DIN-Rail or Wall-mount kit on the rear of the SEN-8415PL
- ✓ **Step 3:** Connect the 48~57V DC power supply to the PWR & RPS terminal block or 4-pin power adapter to 4-pin Mini-DIN connector on the top of the Switch (Refer to "**Wiring Redundant Power Inputs**")
- ✓ **Step 4**: Connect the Ethernet (RJ45) port to the networking device and check the LED status to confirm the connection is established.

DIN rail Installation

The SEN-8415PL has a DIN rail bracket on the back of the Switch to satisfy the mounting installation.

Location: The SEN-8415PL can be DIN-Rail-mounted in cabinet or enclosure.

Mounting the switch

Place the SEN-8415PL on the DIN rail from above using the slot. Push the front of the switch toward the mounting surface until it snaps into place with a click sound.

Dismounting the switch

Pull out the lower edge of the switch and then remove the switch from the DIN rail.

Wall mount Installation

Location: The SEN-8415PL can be placed on a horizontal surface through wall-mounted kit

Place the switch by using mounting holes on the wall at the appropriate place

Ground the Switch: Before powering on the switch, ground the switch to earth.

Ensure the rack on which the switch is to be mounted is properly grounded and incompliance with ETSI ETS 300 253. Verify that there is a good electrical connection to the grounding point on the rack (no paint or isolating surface treatment).

Attention



This product is intended to be mounted to a well-grounded mounting surface such as a metal panel.

Caution:



The earth connection must not be removed unless all power supply connection has been disconnected.

Caution: The device is installed in a restricted-access location it has a separate protective earthing terminal on the chassis that must be permanently connected to earth ground to adequately ground the chassis and protect the operator from electrical hazards.

Attention



The product should be mounted in an Industrial Control Panel and the ambient temperature should not exceed 75℃.

Attention



A corrosion-free mounting rail is advisable.
When installing, make sure to allow for enough space to properly install the cabling.

3.3 Wiring Power Inputs

You can use either “4-pin Mini-DIN” or “Terminal Block (PWR)” for primary power and “Terminal Block (RPS)” for secondary power source, to be a Redundant Power Input.

Warning



- Use **copper** conductors only, **60/75˚C**, tighten to **5lb**
- The wire gauge for the terminal block should range between **12~24 AWG**.

Redundant Power Input: Choose either “4-pin Mini-DIN” or “Terminal Block (PWR)” as primary power. If you choose “Terminal Block (PWR)”, please refer to option 1, unless follow option 2.

- ✓ **Option 1:** Insert the terminal block connector which includes “PWR” and “RPS” into the terminal block receptor.
- ✓ **Option 2:** Insert the “4-pin Mini-DIN” connector into “4-pin Mini-DIN” receiver and “Terminal Block (RPS)” into terminal block receptor.

Connect power cables to terminal block: *Use your finger to press the orange plug on top of terminal block connector to insert power cables*

WARNING



Safety measures should be taken before connecting the power cable.Turn off the power before connecting modules or wires. The correct power supply voltage is listed on the product label. Check the voltage of your power source to make sure that you are using the correct voltage. DO NOT use a voltage greater than what is specified on the product label. Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size. If current exceeds the maximum rating, the wiring can overheat causing serious damage to your equipment.

Please read and follow these guidelines:

- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.
  NOTE: Do not run signal or communications wiring and power wiring through the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.
- You can use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together
- You should separate input wiring from output wiring
- We advise that you label the wiring to all devices in the system.

Wiring the Alarm Contact:

The Alarm Contact consists of the two middle contacts of the terminal block on switch's top panel.

FAULT: The two middle contacts of the 6-contact terminal block connector are used to detect both power faults and port faults. The two wires attached to the Fault contacts form an open circuit when:

1. The Switch has lost power from one of the DC power inputs.

OR

2. One of the ports for which the corresponding PORT ALARM DIP Switch is set to ON is not properly connected.

If neither of these two conditions is satisfied, the Fault circuit will be closed.

Warning



- Use **copper** conductors only, **60/75˚C**, tighten to **5lb**

- The wire gauge for the terminal block should range between **12~24 AWG**.

Power on the Unit
The Switch accepts the power input voltage from 48~57V DC.

- ✓ Wiring appropriate power source as above guideline before turn on the power.
- ✓ Check the front-panel LEDs as the device is powered on to verify that the Power LED is lit. If not, check that the power cable is correctly and securely plugged in.

Notice: Turn off the power before connecting modules or wires.

- *The correct power supply voltage is listed on the product label. Check the voltage of your power source to make sure that you are using the correct voltage. Do NOT use a voltage greater than what is specified on the product label.*
- *Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size. If current go above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.*

Manual Reboot / Reset Switch
Switch contains "Reset" button through which you can manually reboot or reload to factory default settings.

- ✓ Press the "Reset" button for **more** than 2 seconds to reboot the switch.
- ✓ Press the "Reset" button for **more** than 5 seconds to reload the factory default settings to the switch.

3.4 LED Indicators

This Switch is equipped with Unit LEDs to enable you to determine the status of the Switch, as well as Port LEDs to display what is happening in all your connections. They are as follows:

System LEDs		
PWR	Illuminated	Primary Power on
	Off	Primary Power off or failure
RPS	Illuminated	Redundant (secondary) Power on
	Off	Redundant Power off or failure
ALM	Illuminated	Alarm for following conditions(when the DIP switches are turned on) ✓ Primary Power lost ✓ Secondary Power lost ✓ Any function crosses its treshold
	Off	Normal operation
Interface LED		
SFP	Illuminated	Ethernet link-up
	Blinking	Activity (receiving or transmitting data)

	Off	Port disconnected or link failed
PoE (1-4 Copper Port)	Illuminated	Supplying power to PD
	Off	No any power supply to PD
Port Number 1-5 Copper port LED (1000Mbps)		
1000	Illuminated	Link speed at 1000Mbps
	Off	Link speed at 10/100Mbps
LNK/ACT	Illuminated	Ethernet link-up
	Blinking	Activity (receiving or transmitting data)
	Off	Port disconnected or link failed

Notice:

- ✓ ***PWR****: Primary Power*
- ✓ ***RPS****: Redundant Power Supply*
- ✓ ***ALM****: Alarm*

DIP Switches

1. PWR – Primary power input from terminal block
   ON Primary power alarm reporting is enabled
   OFF Primary power alarm reporting is disabled

2. RPS – Redundant power input from terminal block
   ON Redundant power alarm reporting is enabled
   OFF Redundant power alarm reporting is disabled

Warning



Do not block air ventilation holes, as heat dissipated pass through it..

ATTENTION



This device complies with Part 15 of the FCC rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

ATTENTION

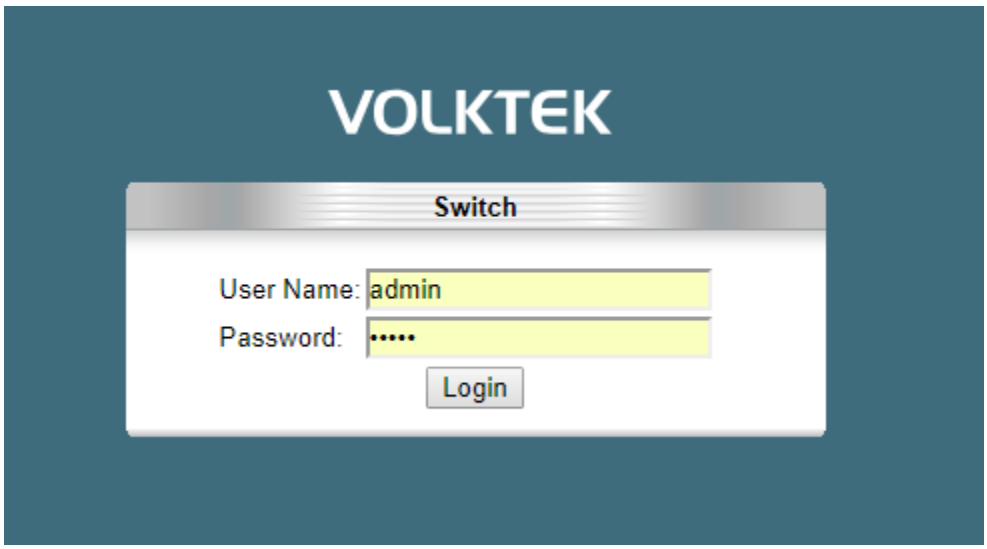


If the equipment is used in a manner not specified by the VOLKTEK, the protection provided by the equipment may be impaired.

4. System Configuration

4.1 GUI Login

- Enter IP address 192.168.0.254 in your browser for configuring the switch



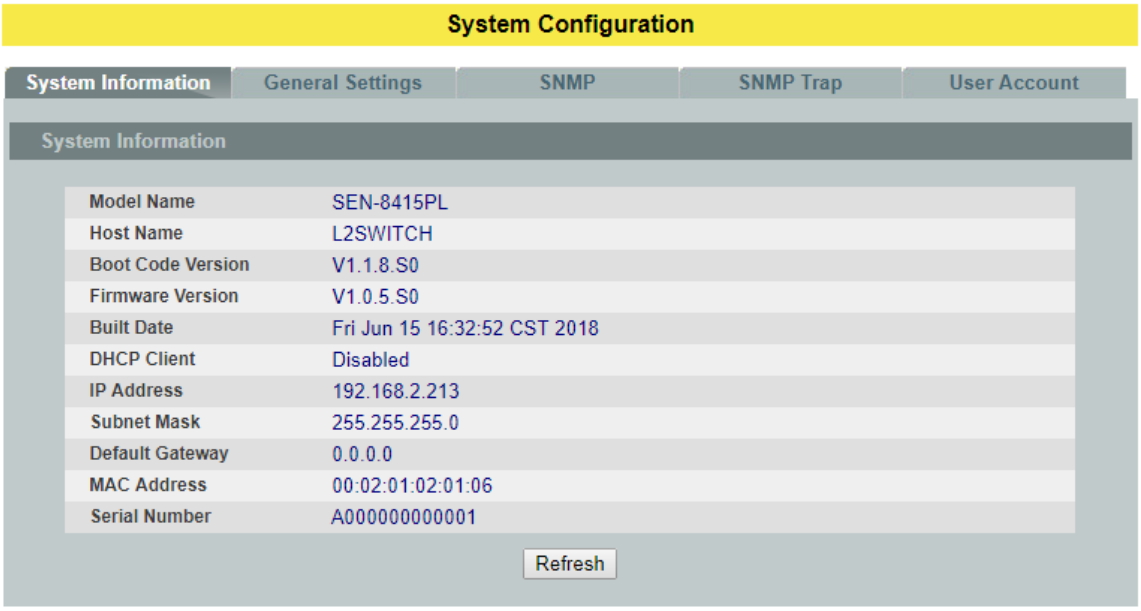
Parameter	Description
User ID	Enter the user name.
Password	Enter the password.

Default:

User name: admin
Password: admin

4.2 System Information

The System Information window appears each time you log into the program. Alternatively, this window can be accessed by clicking System Information.



Parameter	Description
System Information	
Model Name	This field displays the model name of the Switch.
Host name	This field displays the host name of the Switch.
Boot Code Version	This field displays the boot code version.
Firmware Version	This field displays the firmware version.
Built Date	This field displays the built date of the firmware.
DHCP Client	This field displays whether the DHCP client is enabled on the Switch.
IP Address	This field indicates the IP address of the Switch.
Subnet Mask	This field indicates the subnet mask of the Switch.
Default Gateway	This field indicates the default gateway of the Switch.
MAC Address	This field displays the MAC (Media Access Control) address of the Switch.
Serial Number	The serial number assigned by manufacture for identification of the unit.
Refresh	Click **Refresh** to begin configuring this screen afresh.

4.2 General Settings

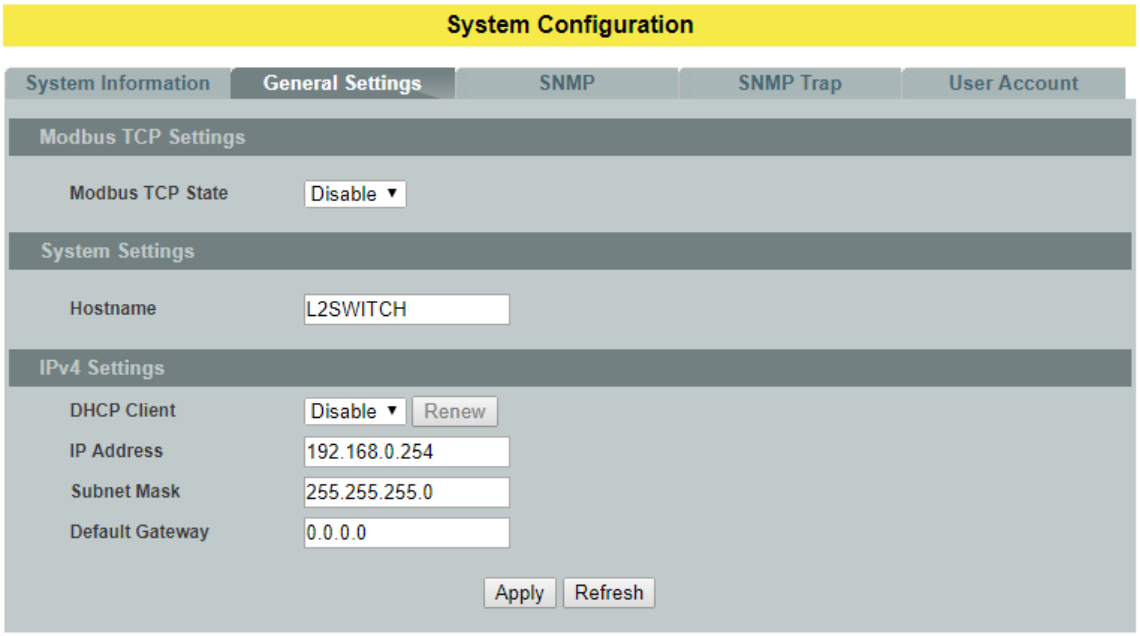
4.2.1 Introduction

Host Name
The **hostname** is same as the SNMP system name. Its length is up to 64 characters.
The first 16 characters of the hostname will be configured as the CLI prompt.

Default Settings

The default Hostname is L2SWITCH
The default DHCP client is disabled.
The default Static IP is 192.168.0.254
Subnet Mask is 255.255.255.0
Default Gateway is 0.0.0.0

4.2.2 Web Configuration



Parameter	Description
Modbus TCP Settings	
Modbus TCP State	Select option to enable / disable the Modbus TCP on the Switch.
System Settings	
Hostname	Enter up to 64 alphanumeric characters for the name of your Switch. The hostname should be the combination of the digit or the alphabet or hyphens (-) or underscores (_).
IPv4 Settings	

DHCP Client	Select **Enable** to allow the Switch to automatically get an IP address from a DHCP server. Click **Renew** to have the Switch re-get an IP address from the DHCP server. Select **Disable** if you want to configure the Switch's IP address manually.
IP Address	Configures an IPv4 address for your Switch in dotted decimal notation. For example, 192.168.0.254.
Subnet Mask	Enter the IP subnet mask of your Switch in dotted decimal notation for example 255.255.255.0.
Default Gateway	Enter the IP address of the default outgoing gateway in dotted decimal notation, for example 192.168.1.1.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

4.3 SNMP

4.3.1 Introduction

Simple Network Management Protocol (SNMP) is used in network management systems to monitor network-attached devices for conditions that warrant administrative attention. SNMP is a component of the Internet Protocol Suite as defined by the Internet Engineering Task Force (IETF). It consists of a set of standards for network management, including an application layer protocol, a database schema, and a set of data objects.

SNMP exposes management data in the form of variables on the managed systems, which describe the system configuration. These variables can then be queried (and sometimes set) by managing applications.

SNMP community act like passwords and are used to define the security parameters of SNMP clients in an SNMP v1 and SNMP v2c environments. The default SNMP community is "public" for both SNMP v1 and SNMP v2c.

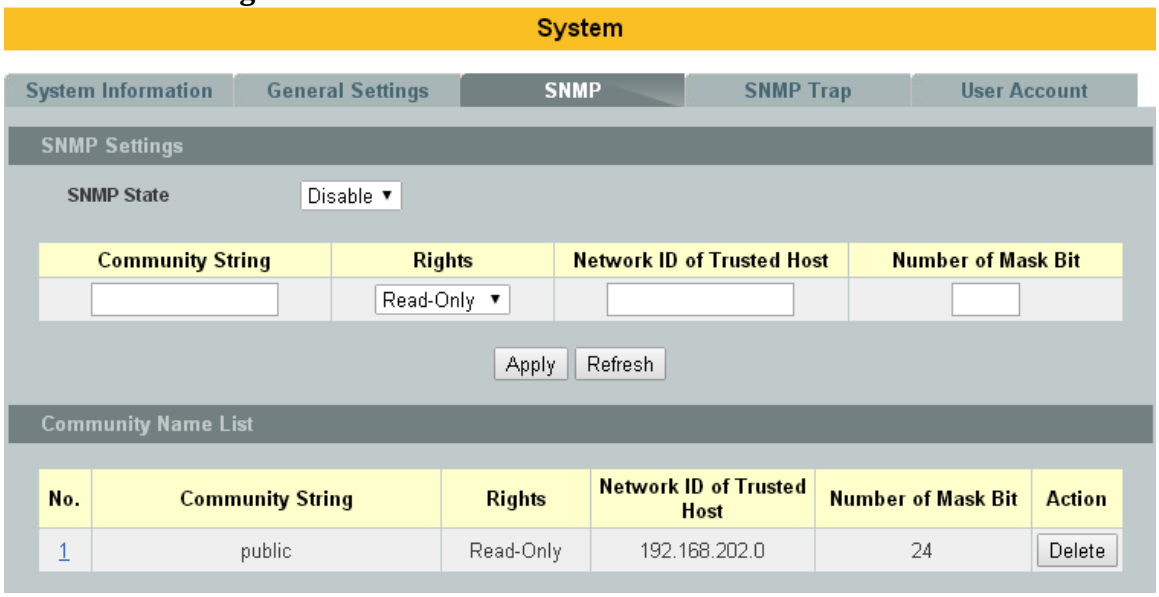
Network ID of Trusted Host:

The IP address is a combination of the Network ID and the Host ID.

Network ID = (Host IP & Mask).

User need only input the network ID and leave the host ID to 0. If user has input the host ID, such as 192.168.1.102, the system will reset the host ID, such as 192.168.1.0

4.3.2 Web configuration

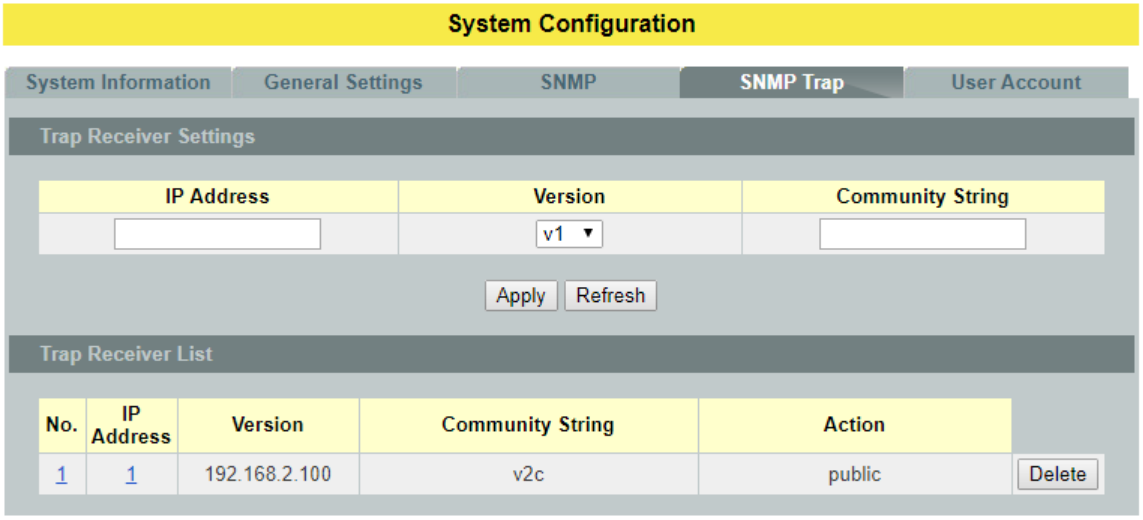


Parameter	Description
SNMP Settings	
SNMP State	Select option to enable / disable the SNMP on the Switch.
Community String	Enter a Community string, this will act as a password for requests from the management station. An SNMP community string is a text string that acts as a password. It is used to authenticate messages that are sent between the management station (the SNMP manager) and the device (the SNMP agent). The community string is included in every packet that is transmitted between the SNMP manager and the SNMP agent.
Rights	Select Read-Only to allow the SNMP manager using this string to collect information from the Switch. Select Read-Write to allow the SNMP manager using this string to create or edit MIBs (configure settings on the Switch).
Network ID of Trusted Host	Type the IP address of the remote SNMP management station in dotted decimal notation, for example 192.168.1.0.
Number of Mask Bit	Type the length of the subnet mask bits.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

Community Name List	
No.	This field displays the index number of an entry.
Community String	This field displays the community string of an entry.
Rights	This field displays the right of an entry.
Network ID of Trusted Host	This field displays the network ID of trusted host of an entry.
Number of Mask Bit	This field displays the length of the subnet mask bits of an entry.
Action	Click the **Delete** button to remove the entry.

4.4 SNMP Trap

4.4.1 Web configuration



Parameter	Description
IP Address	Enter the IP address of the remote trap station in dotted decimal notation.
Version	Select the version of the Simple Network Management Protocol to use. **v1** or **v2c**.
Community String	Specify the community string used with this remote trap station.
Apply	Click **Apply** to configure the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

Trap Receiver List	
No.	This field displays the index number of the trap receiver entry. Click the number to modify the entry.
IP Address	This field displays the IP address of the remote trap station.
Version	This field displays the version of Simple Network Management Protocol in use. **v1** or **v2c**.
Community String	This field displays the community string used with this remote trap station.
Action	Click **Delete** to remove a configured trap receiver station.

4.5 User Account

4.5.1 Introduction

The Switch allows users to create up to 6 user account. The user name and the password should be the combination of the digit or the alphabet. The last admin user account cannot be deleted. Users should input a valid user account to login the CLI or web management.

User Authority:

The Switch supports two types of the user account, admin and normal. The **default** users account is **username (admin) / password(admin)**.

- Admin - read / write.
- Normal - read only.
  ; Cannot apply any configurations in web.

The Switch also supports backdoor user account. In case of that user forgot their user name or password, the Switch can generate a backdoor account with the system's MAC. Users can use the new user account to enter the Switch and then create a new user account.

Default Settings

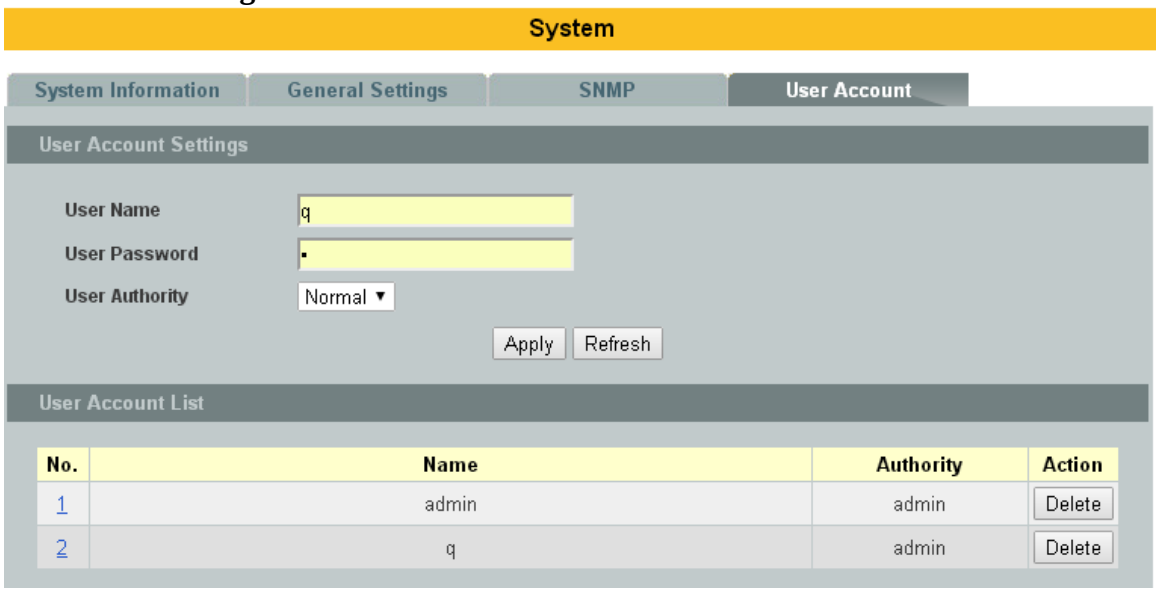
- Maximum user account : 6.
- Maximum user name length : 32.
- Maximum password length : 32.
- Default user account for privileged mode : admin / admin.

Notices

- The Switch allows users to create up to 6 user account.
- The user name and the password should be the combination of the digit or the alphabet.
- The last admin user account cannot be deleted.

- The maximum length of the username and password is 32 characters.

4.5.2 Web configuration



Parameter	Description
User Account Settings	
User Name	Type a new username or modify an existing one.
User Password	Type a new password or modify an existing one. Enter up to 32 alphanumeric or digit characters.
User Authority	Select with which group the user associates.**admin** (read and write) or **normal** (read only) for this user account.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
User Account List	
No.	This field displays the index number of an entry.
Name	This field displays the name of a user account.
Authority	This field displays the associated group.
Action	Click the **Delete** button to remove the user account. Note: You cannot delete the last admin accounts.

5. PoE Configuration

5.1.1 Introduction

Power over Ethernet or **PoE** technology describes a system to pass electrical power safely, along with data, on Ethernet cabling. PoE requires category 5 cable or higher for high power levels, but can operate with category 3 cable for low power levels. Power can come from a power supply within a PoE-enabled networking device such as an Ethernet switch or can be injected into a cable run with a mid-span power supply.

The original **IEEE 802.3af-2003**PoE standard provides up to 15.4 W of DC power (minimum 44 V DC and 350 mA) to each device. Only 12.95 W is assured to be available at the powered device as some power is dissipated in the cable.

The updated **IEEE 802.3at-2009**PoE standard also known as **PoE+** or **PoE plus**, provides up to 25.5 W of power. Some vendors have announced products that claim to comply with the 802.3at standard and offer up to 51 W of power over a single cable by utilizing all four pairs in the Cat.5 cable. Numerous non-standard schemes had been used prior to PoE standardization to provide power over Ethernet cabling. Some are still in active use.

PSE: Power sourcing equipment (PSE) is a device such as a switch that provides ("sources") power on the Ethernet cable.

PD: A powered device (PD) is a device such as an access point or a switch, that supports PoE(Power over Ethernet) so that it can receive power from another device through a 10/100 Mbps Ethernet port.

Standard PoE parameters and comparison

Property	**802.3af (802.3at Type 1)**	**802.3at Type 2**
Power available at PD	12.95 W	25.50 W per mode
Maximum power delivered by PSE	15.40 W	30.00 W per mode
Voltage range (at PSE)	44.0 - 57.0 V	50.0 - 57.0 V
Voltage range (at PD)	37.0 - 57.0 V	42.5 - 57.0 V
Maximum current	350 mA	600 mA per mode
Maximum cable resistance	20 Ω (Category 3)	12.5 Ω (Category 5)
Power management	Three power class levels negotiated at initial connection	Four power class levels negotiated at initial connection or 0.1 W steps negotiated continuously
Dreading of maximum cable	None	5℃ with one mode (two pairs) active, 10℃ with two modes (four

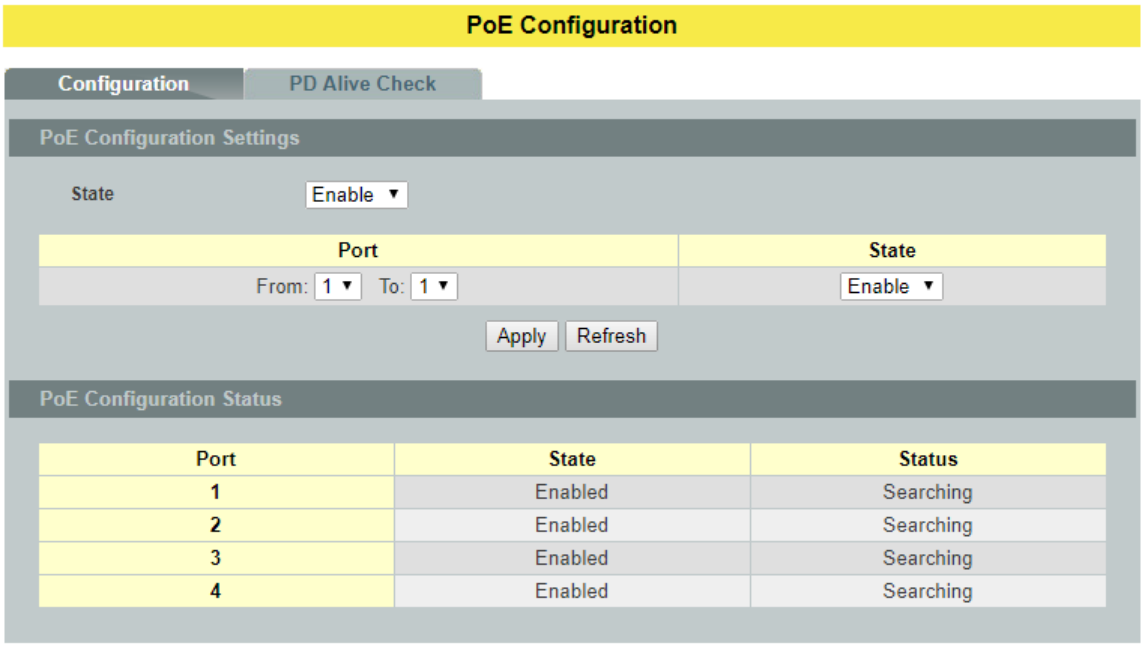
ambient operating temperature		pairs) simultaneously active
Supported cabling	Category 3 and Category 5	Category 5
Supported modes	Mode A (end span), Mode B (mid-span)	Mode A, Mode B, Mode A and Mode B operating simultaneously

Power Devices

Power levels available				
Class	**Usage**	**Classification current [mA]**	**Power range [Watt]**	**Class description**
0	Default	0 - 4	0.44 - 12.94	Classification unimplemented
1	Optional	9 - 12	0.44 - 3.84	Very Low power
2	Optional	17 - 20	3.84 - 6.49	Low power
3	Optional	26 - 30	6.49 - 12.95	Mid power
4	Reserved	36 - 44	12.95 - 25.50	High power

For IEEE 802.3at (type 2) devices class 4 instead of Reserved has a power range of 12.95 - 25.5 W.

5.1.2 Web Configuration



Parameter	Description
PoE Configuration Settings	
State	Selects **Enable** to enable the PoE function on the Switch. Selects **Disable** to disable the PoE function on the Switch.

Port	Select a port or a range of ports which to configure PoE function.
State	Selects **Enable** to enable the PoE function on selected port(s). Selects **Disable** to disable the PoE function on selected port(s).
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

5.2 PD Alive Check

5.2.1 Introduction

The function has a global *state* configuration. If the global state configuration is enabled. The Switch will check the configurations of every port.

If the port's *state* is enabled, the Switch will send keep-a-live probe packet every *interval* time. If the host cannot respond when the keep-a-live probe packet count is over the *retry times*, the Switch performs the *action, reboot/alarm/all* to the Power Device, depending on the port's configuration.

Power OFF Time (sec):

When PD has been rebooted, the PoE port restored power after the specified time.

Default:15, range: 3-120 sec.

Start up Time (sec):

When PD has been start up, the Switch will wait Start up time to do PoE Auto Checking. Default: 60, range: 30-600 sec.

Interval Time (sec):

Device will send checking message to PD each interval time.

Default: 30, range: 10-120sec.

Action:

The action when the failure detection.

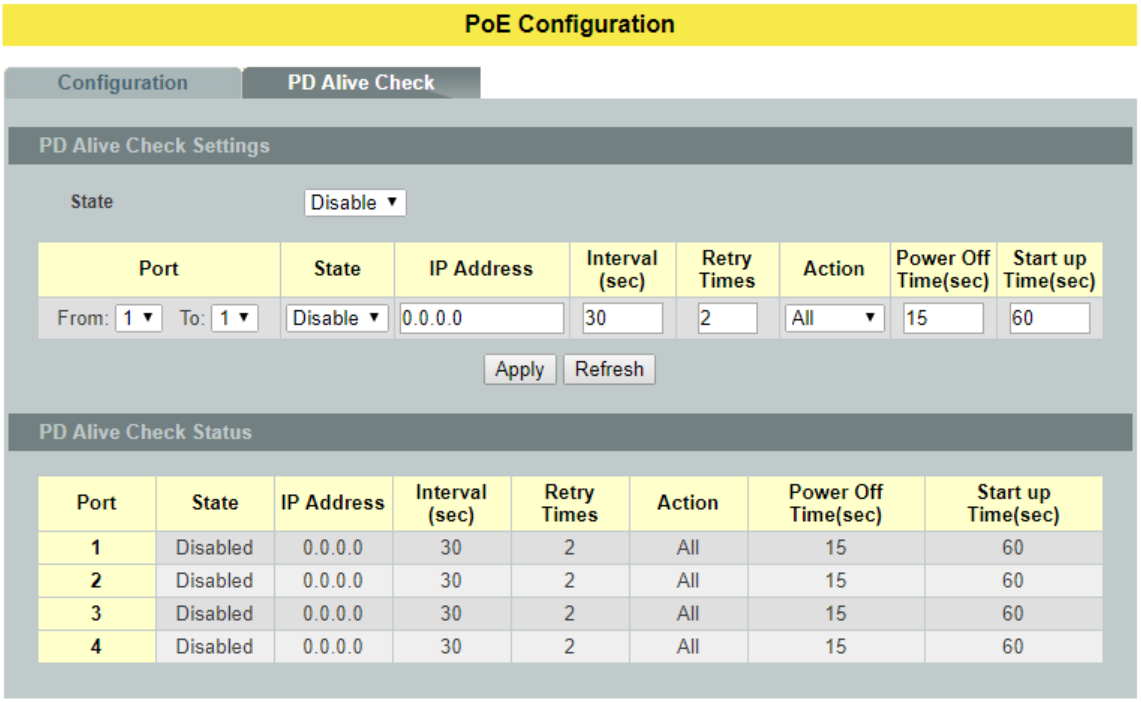
All: Send an alarm message to inform the administrator and then reboot the PD.

Alarm: Just send an alarm message to inform the administrator.

None: Keep Ping the remote PD but does nothing further.

Reboot: Cut off the power of the PoE port, make PD rebooted.

5.1.1 Web Configuration



Parameter	Description
State	Enables/Disables the PD Alive Check.
Port	Selects a port or a range of ports which you want to configure.
State	Enables/Disables the PD Alive Check for the specific port(s).
IP Address	Specifies the Host IP address which connects to the port.
Interval	The interval to send the packet probes to check if the host is still alive.
Retry Time	The retry times when no response from the host for the keep-a-live probe packet.
Action	The action to the Power Device when the system detects that the Power Device cannot respond the keep-a-live probe packet. The options have Reboot / Alarm / All /None.
Power Off Time	When PD has been rebooted, the PoE port restored power after the Power Off Time.
Start Up Time	The Switch waits the Start Up Time to do PoE Auto Checking when the PD is rebooting.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

6 Port Configuration

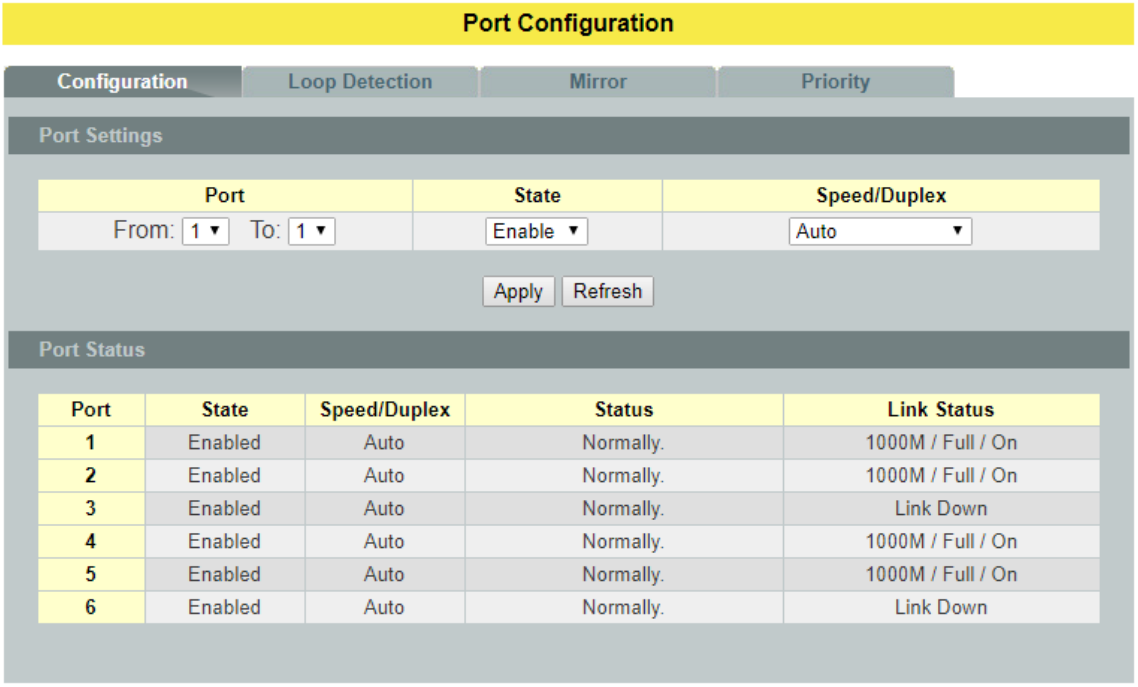
6.1 Port Configuration

6.1.1 Introduction

State In port configuration you can enable or disable the port. If the port is disabled the port remains off without any operation. To keep it operating, place the port in enable state.

Speed It defines in which speed the port should operate. The speeds that it can operate are 10/100/1000Mbps. And also u can specify whether the port should operate in what mode. The operating modes are half duplex and full duplex.

6.1.2 Web Configuration



Parameter	Description
Port Settings	
Port	Selects a port or a range of ports on which to configure the port.
State	Select option to enable / disable the port.
Speed/duplex	Select a speed/duplex for port(s).
Apply	Click **Apply** to take effect the settings.

Refresh	Click **Refresh** to begin configuring this screen afresh.
Port Status	
Port	This field displays the index number of a port.
State	This field displays the state of a port.
Speed/Duplex	This field displays the speed/duplex of a port.
Link Status	This field displays the link status of a port.

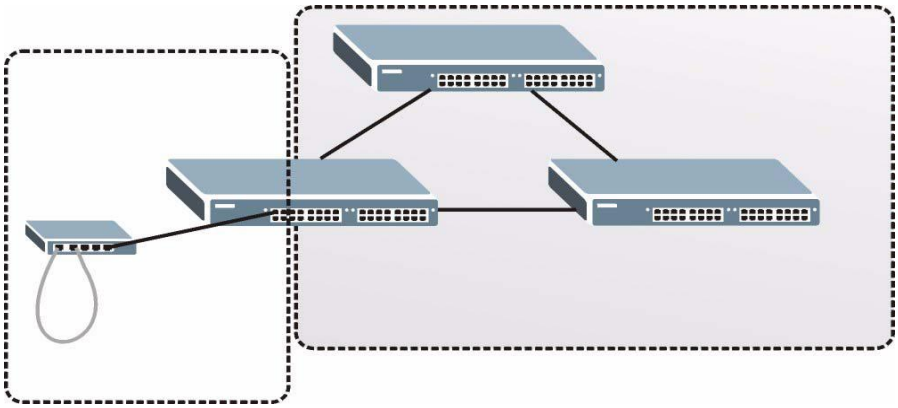
6.2 Loop Detection Configuration

6.2.1 Introduction

Loop detection is designed to handle loop problems on the edge of your network. This can occur when a port is connected to a Switch that is in a loop state. Loop state occurs as a result of human error. It happens when two ports on a switch are connected with the same cable. When a switch in loop state sends out broadcast messages the messages loop back to the switch and are re-broadcast again and again causing a broadcast storm.

The difference between the Loop Detection and STP:

Loop Detection **STP**



The loop detection function sends probe packets periodically to detect if the port connect to a network in loop state. The Switch shuts down a port if the Switch detects that **probe packets loop back to the same port of the Switch.**

Loop Recovery:

When the loop detection is enabled, the Switch will send one probe packets every two seconds and then wait for this packet. If it receives the packet at the same port, the

Switch will disable this port. After the time period, ***recovery time,*** the Switch will enable this port and do loop detection again.

The Switch generates syslog, internal log messages as well as SNMP traps when it shuts down a port via the loop detection feature.

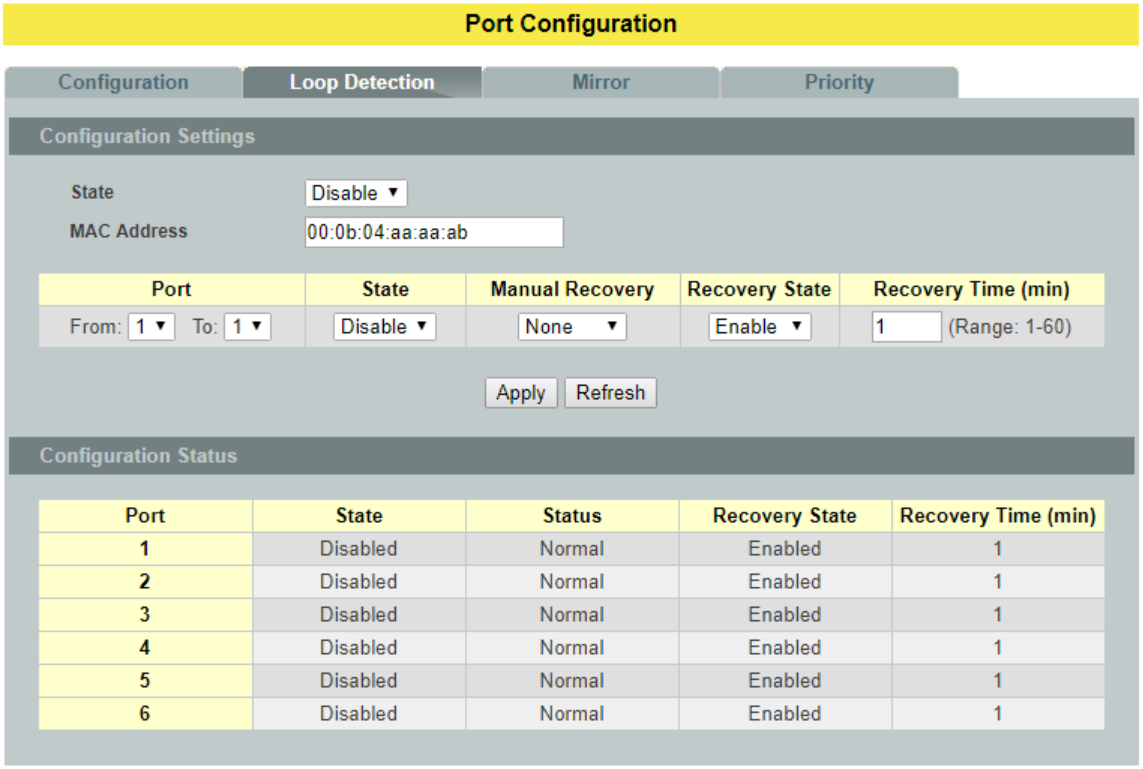
For the access Switch, it may not enable the STP function. To guarantee the network topology is loop free, the Loop detection function also need detect below scenario.

If port 1 and 2 are loop, and port 1's loop detection is enabled, the port 1 will be disabled. If both of port 1's and port 2's loop detection is enabled, both of port 1 and port 2 will be disabled.

Default Settings

- The default global Loop-Detection state is disabled.
- The default Loop Detection Destination MAC is **00:0b:04:AA:AA:AB**
- The default Port Loop-Detection state is disabled for all ports.

6.2.2 Web Configuration



Parameter	Description
Loop Detection Settings	
State	Select this option to enable / disable loop detection on the Switch.
Port	Select a port or a range of ports which to configure loop

	detection.
State	Select option to enable/disable the loop detection feature on selected port(s).
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Loop Detection Status	
Port	This field displays a port number.
State	This field displays if the loop detection feature is enabled.
Status	This field displays if the port is blocked by loop detection.

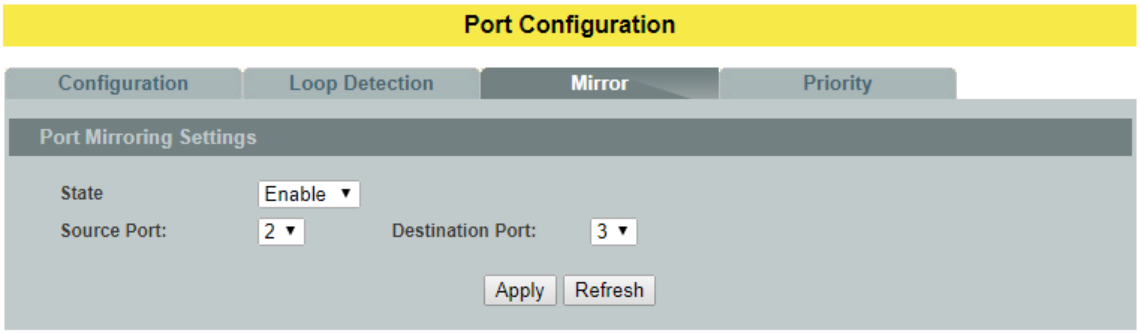
6.3 Port Mirror

6.3.1 Introduction

The Port-Based Mirroring is used on a network switch to send a copy of network packets sent/received on one switch ports to a network monitoring connection on another switch port (Destination Port). This is commonly used for network appliances that require monitoring of network traffic, such as an intrusion-detection system.

Port Mirroring, together with a network traffic analyzer, helps to monitor network traffic.

6.3.2 Web Configuration



Parameter	Description
Port Mirror Settings	
State	Select option to enable / disable the port mirroring feature on the Switch.
Source Port	Selects a port which packets received and transmitted by this port will be copied to the destination port.
Destination Port	Select a port which connects to a network traffic analyzer.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

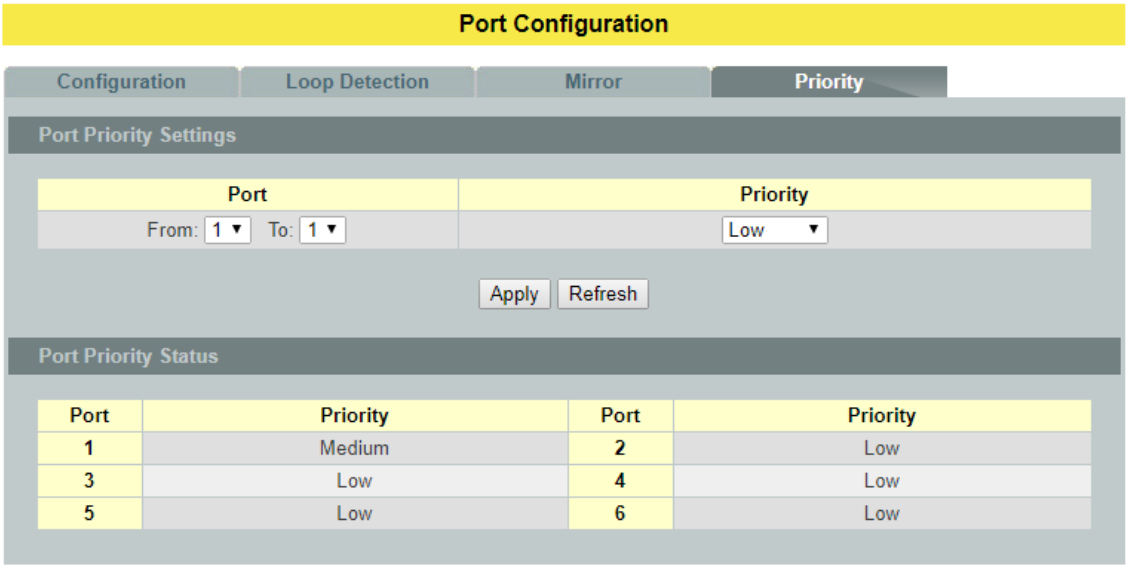
6.4 Port Priority

6.4.1 Introduction

Typically, networks operate on a best-effort delivery basis, which means that all traffic has equal priority and an equal chance of being delivered in a timely manner. When congestion occurs, all traffic has an equal chance of being dropped.

Using Port Priority feature, you can select specific network traffic, and prioritize it according to its relative importance. Implementing Port Priority in your network makes network performance more predictable and bandwidth utilization more effective.

6.4.2 Web Configuration



Parameter	Description
Port Priority Settings	
Port	Selects a port or a range of ports on which to configure the priority.
Priority	Selects Low / Medium / High priority for selected port(s).
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Port Priority Status	
Port	This field displays a port number.
Priority	This field displays the priority for a port.

7 Storm Control

7.1 Storm Control Configuration

7.1.1 Introduction

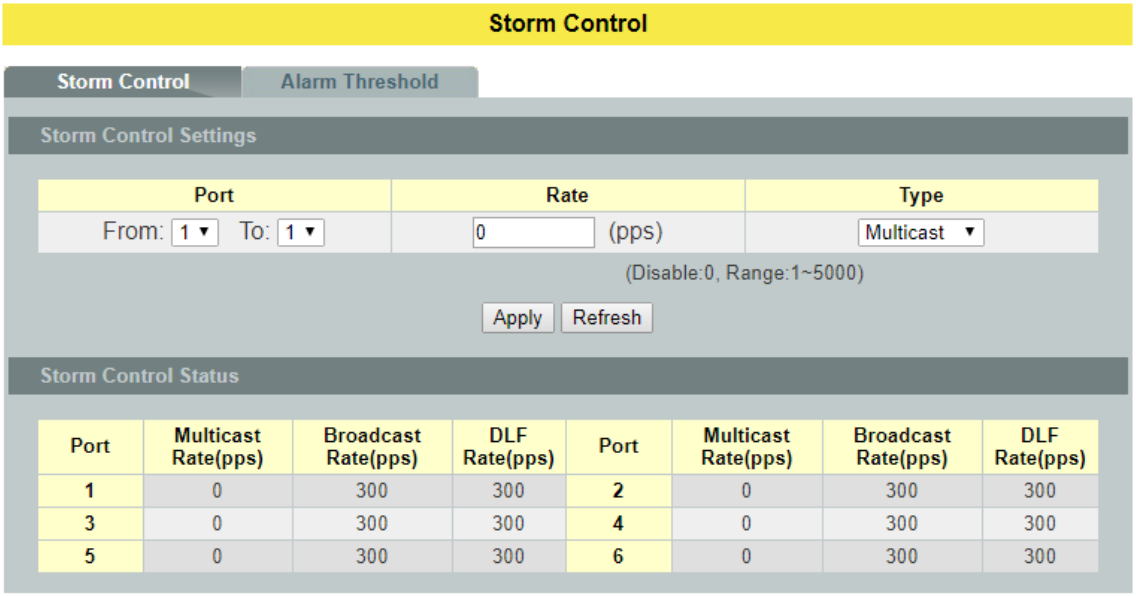
A broadcast storm means that your network is overwhelmed with constant broadcast or multicast traffic. Broadcast storms can eventually lead to a complete loss of network connectivity as the packets proliferate.

Storm Control protects the Switch bandwidth from flooding packets, including broadcast packets, multicast packets, and destination lookup failure (DLF).

Broadcast storm control limits the number of broadcast, multicast and unknown unicast (also referred to as Destination Lookup Failure or DLF) packets the Switch receives per second on the ports. When the maximum number of allowable broadcast, multicast and unknown unicast packets is reached per second, the subsequent packets are discarded. Enable this feature to reduce broadcast, multicast and unknown unicast packets in your network.

The default rate is 300pps for Broadcast and DLF. You can set to maximum rate of 5000pps for multicast, broadcast or DLF.

7.1.2 Web Configuration



Parameter	Description
Storm Control Settings	
Port	Select the port number for which you want to configure storm control settings.
Rate	Input a rate for the Multicast / Broadcast / DLF storm control.

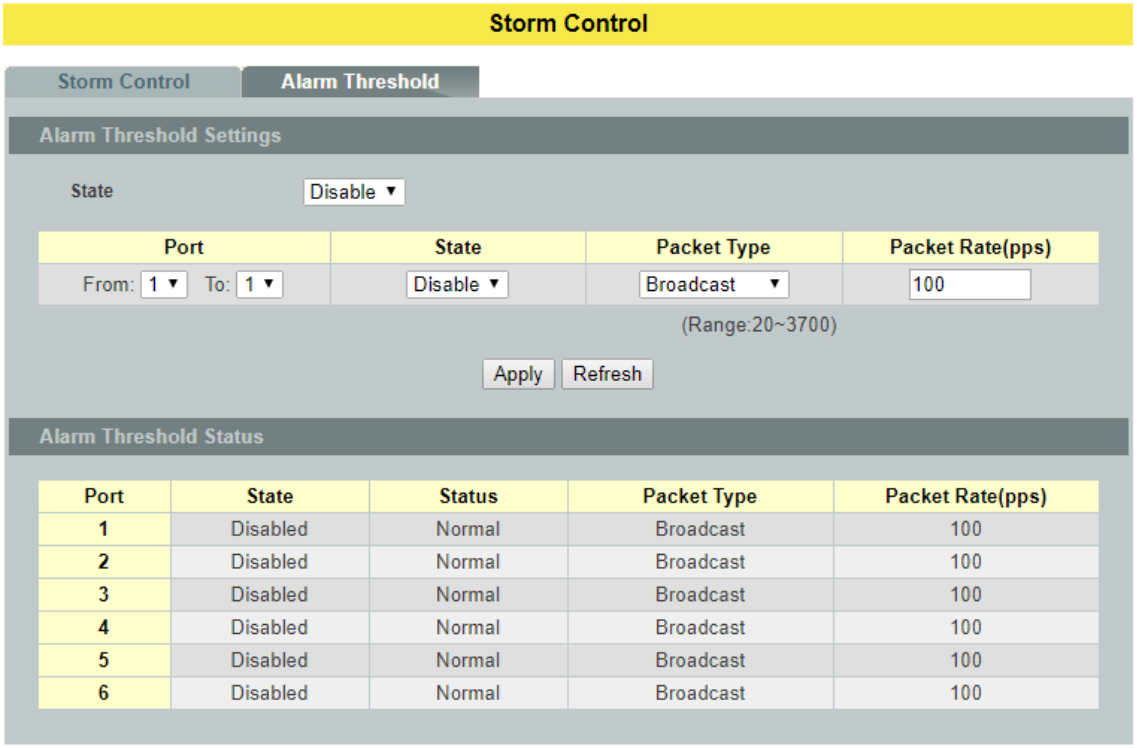
	0 – for disable.
Type	Selects a type of Multicast / Broadcast / DLF for the storm control.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Storm Control Status	
Port	This field displays a port number.
Multicast	This field displays the rate of the multicast storm control on the port.
Broadcast	This field displays the rate of the broadcast storm control on the port.
DLF	This field displays the rate of the DLF storm control on the port.

7.2 Alarm Threshold

7.2.1 Introduction

The alarm Threshold of storm control will send an alarm to system log server when the packet rate is above the user specified threshold packet rate. Types of packets can be either Broadcast or Multicast or both.

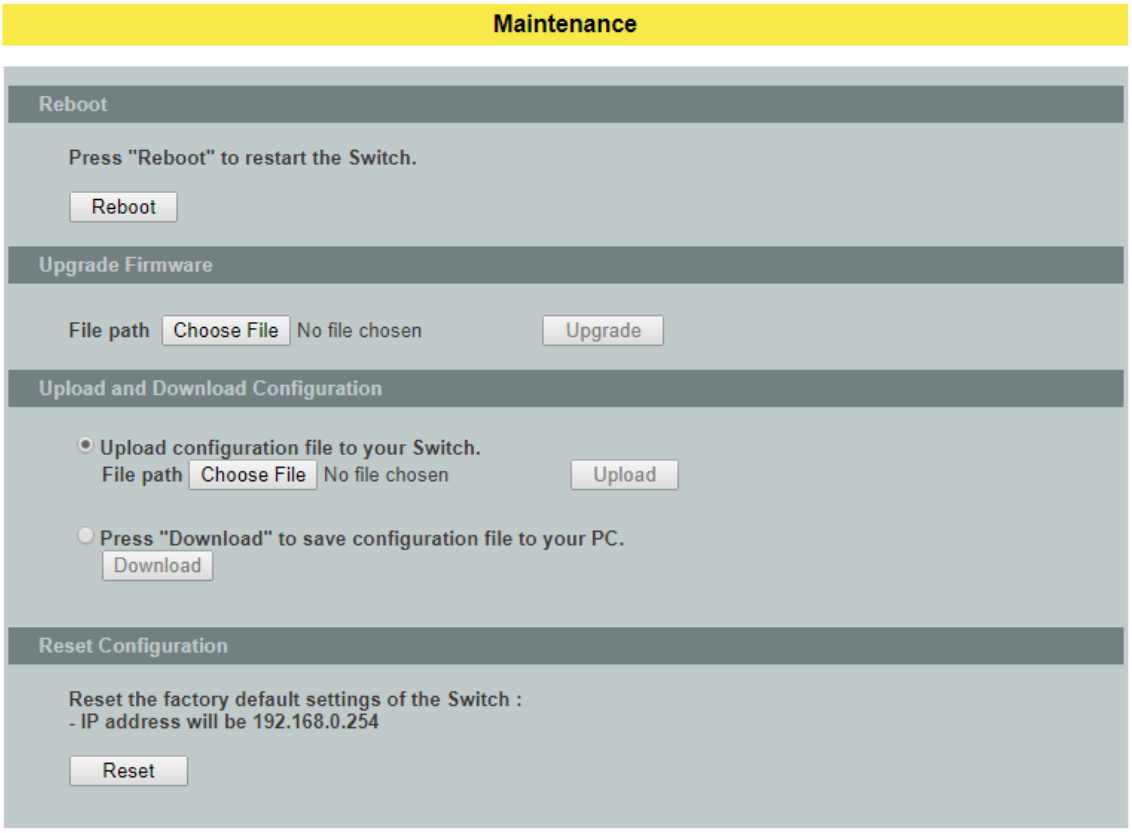
7.2.2 Web Configuration



Parameter	Description
Storm Control Settings	
Port	Select the port number for which you want to configure storm threshold settings.
State	Selects enable / disable to enables / disables the storm alarm threshold.
Type	Selects a type of the Multicast / Broadcast for the storm threshold.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Storm Control Status	
Port	This field displays a port number.
Status	This field displays the multicast storm control state on the port.
Packet Type	This field displays the packet type for the storm alarm threshold.
Packet Rate	This field displays the packet rate for the storm alarm threshold.

8 Maintenance

8.1 Web configuration



8.1.1 Reboot

Click the "**Reboot**" button to restart the Switch.

8.1.2 Upgrade Firmware

Click the "**Choose File**" button to select the new firmware which you want to upgrade it to the Switch.
Click the "**Upgrade**" button to start the upgrade procedures.

8.1.3 Upload and Download Configuration

Click the "**Choose File**" button to select the new configuration file which you want to upgrade it to the Switch.
Click the "**Upload**" button to start the upgrade procedures.
Click the "**Download**" button to download the current configurations to local host.

8.1.4 Reset Configuration

Click the "**Reset**" button to reset the system configurations to default values.

9 Monitor

9.1 Alarm Information

9.1.1 Introduction

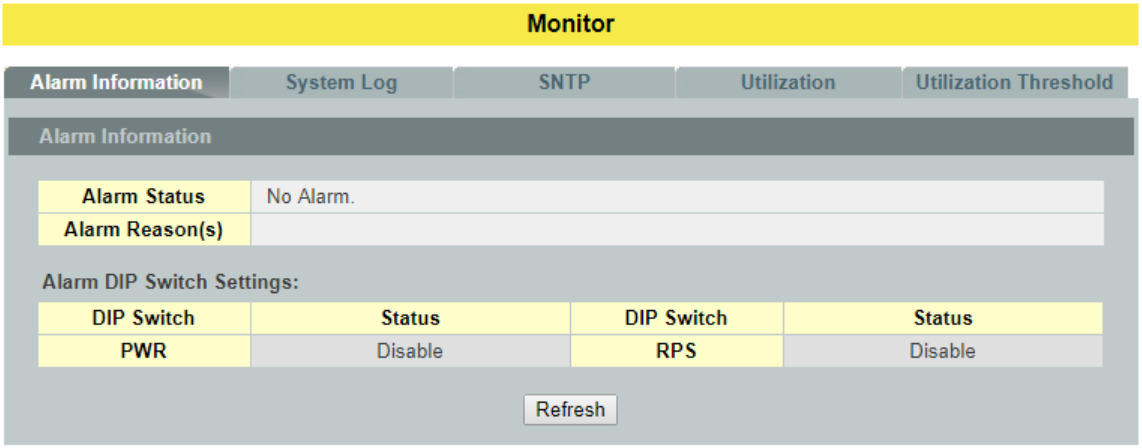
The feature displays if there are any abnormal situation need process immediately.
Alarm LED: On - When any alarm events happen.

Alarm Event List:

- Broadcast / Multicast packet rate is over the threshold.
- Port Utilization is over the threshold.
- Loop Detection.
- No AC Power.
- No Redundant Power.
- PD no response.

The web pages show you the detail alarm reason.

9.1.2 Web Configuration



Parameter	Description
Alarm Information	
Alarm Status	This field indicates if there is any alarm events.
Alarm Reason(s)	This field displays all of the detail alarm events.
Function DIP Switch Settings:	
PWR	The field display the current PWR DIP settings.
RPS	The field display the current RPS DIP settings.

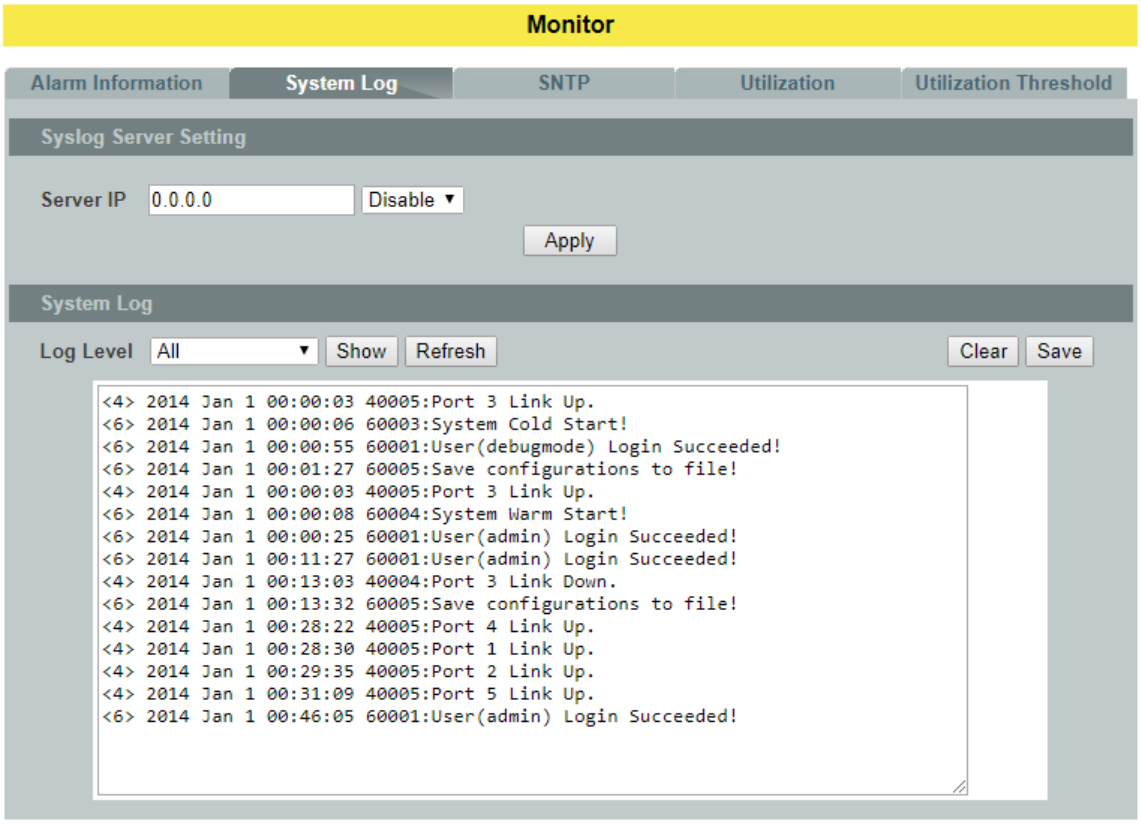
9.2 System log

9.2.1 Introduction

The syslog function records some of system information for debugging purpose. Each log message recorded with one of these levels, **Alert / Critical / Error / Warning / Notice / Information.** The syslog function can be enabled or disabled. The default setting is disabled. The log message is recorded in the Switch file system. If the syslog server's IP address has been configured, the Switch will send a copy to the syslog server.

The log message file is limited in 2000 entries. If the file is full, the oldest one will be replaced.

9.2.2 Web Configuration



Parameter	Description
Server IP	Enter the Syslog server IP address. Select **Enable** to activate switch sent log message to Syslog server when any new log message occurred.
Apply	Click **Apply** to add/modify the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Log Level	Select **Alert/Critical/Error/Warning/Notice/Information** to

	choose which log message to want to see.
Clear	Click Clear to clear all of log message.
Save	Click Save to save all of log message into NV-RAM.

9.3 SNTP

9.3.1 Introduction

The Network Time Protocol (NTP) is a protocol for synchronizing the clocks of computer systems over packet-switched, variable latency data networks. A less complex implementation of NTP, using the same protocol but without requiring the storage of state over extended periods of time is known as the **Simple Network Time Protocol** (**SNTP**). NTP provides Coordinated Universal Time (UTC). No information about time zones or daylight saving time is transmitted; this information is outside its scope and must be obtained separately.

UDP Port: 123.

Daylight saving is a period from late spring to early fall when many countries set their clocks ahead of normal local time by one hour to give more daytime light in the evening.

Note:

1. The SNTP server always replies the UTC current time.
2. When the Switch receives the SNTP reply time, the Switch will adjust the time with the time zone configuration and then configure the time to the Switch.
3. If the time server's IP address is not configured, the Switch will not send any SNTP request packets.
4. If no SNTP reply packets, the Switch will retry every 10 seconds forever.
5. If the Switch has received SNTP reply, the Switch will re-get the time from NTP server every 24 hours.
6. If the time zone and time NTP server have been changed, the Switch will repeat the query process.
7. No default SNTP server.

Default Settings

Current Time:

Time: 0:3:51 (UTC)
Date: 1970-1-1

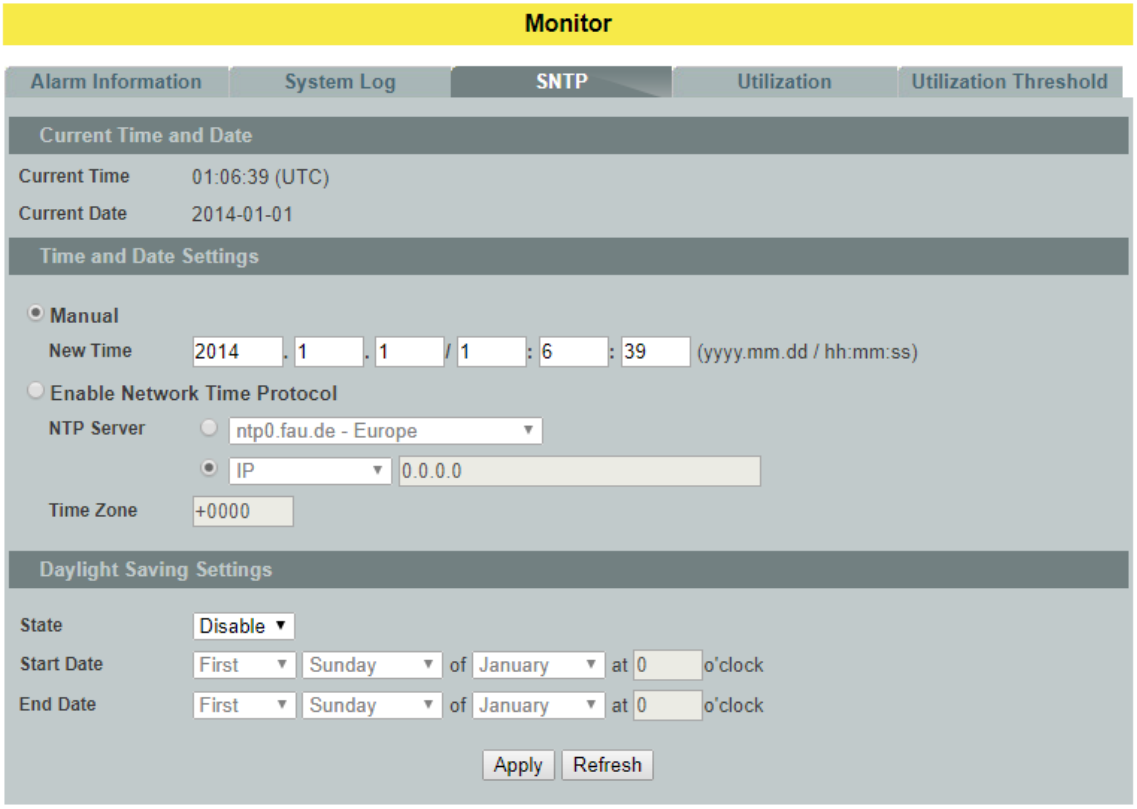
Time Server Configuration:

Time Zone : +00:00
IP Address: 0.0.0.0

Daylight Saving Time Configuration:

State : disabled
Start Date: None.
End Date : None.

9.3.2 Web Configuration



Parameter	Description
Current Time and Date	
Current Time	This field displays the time you open / refresh this menu.
Current Date	This field displays the date you open / refresh this menu.
Time and Date Setting	
Manual	Select this option if you want to enter the system date and time manually.
New Time	Enter the new date in year, month and day format and time in hour, minute and second format. The new date and time then appear in the **Current Date** and **Current Time** fields after you click **Apply**.
Enable Network Time Protocol	Select this option to use Network Time Protocol (NTP) for the time service.
NTP Server	Select a pre-designated time server or type the IP address or type

	the domain name of your time server. The Switch searches for the timeserver for up to 60 seconds.
Time Zone	Select the time difference between UTC (Universal Time Coordinated, formerly known as GMT, Greenwich Mean Time) and your time zone.
Daylight Saving Settings	
State	Select **Enable** if you want to use Daylight Saving Time. Otherwise, select **Disable** to turn it off.
Start Date	Configure the day and time when Daylight Saving Time starts if you enabled Daylight Saving Time. The time is displayed in the 24 hour format. Here are a couple of examples: Daylight Saving Time starts in most parts of the United States on the second Sunday of March. Each time zone in the United States starts using Daylight Saving Time at 2 A.M. local time. So in the United States you would select **Second**, **Sunday**, 3(**March)** and **2:00**. Daylight Saving Time starts in the European Union on the last Sunday of March. All of the time zones in the European Union start using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select **Last**, **Sunday**, 3(**March)** and the last field depends on your time zone. In Germany for instance, you would select **2:00** because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).
End Date	Configure the day and time when Daylight Saving Time ends if you enabled Daylight Saving Time. The time field uses the 24 hour format. Here are a couple of examples: Daylight Saving Time ends in the United States on the last Sunday of October. Each time zone in the United States stops using Daylight Saving Time at 2 A.M. local time. So in the United States you would select **First**, **Sunday**, 11(**November)** and **2:00**. Daylight Saving Time ends in the European Union on the last Sunday of October. All of the time zones in the European Union stop using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select **Last**, **Sunday**, 10(**October)** and the last field depends on your time zone. In Germany for instance, you would select **2:00** because

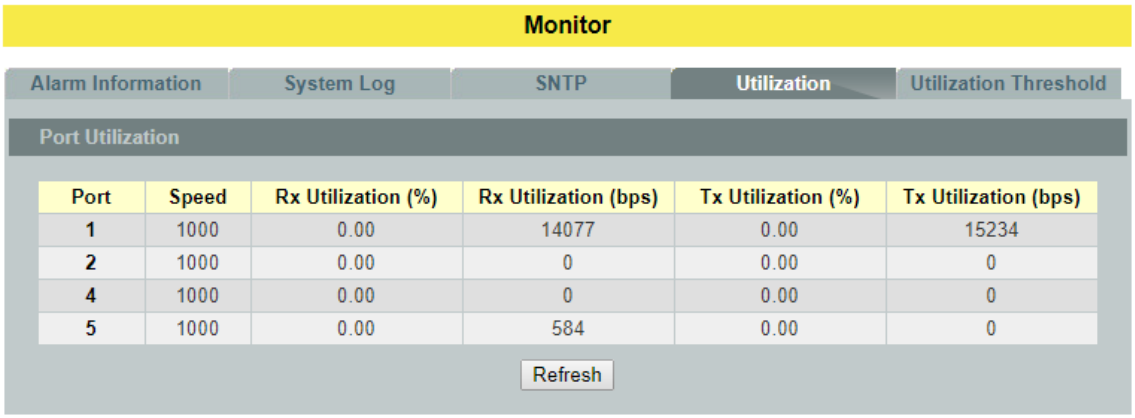
	Germany's time zone is one hour ahead of GMT or UTC (GMT+1).
Apply	Click this button to take effect the settings.
Refresh	Click this button to reset the fields to the last setting.

9.4 Port Utilization

9.4.1 Introduction

This feature helps users to monitor the ports' traffic utilization, to display the link up ports' traffic utilization only.

9.4.2 Web Configuration



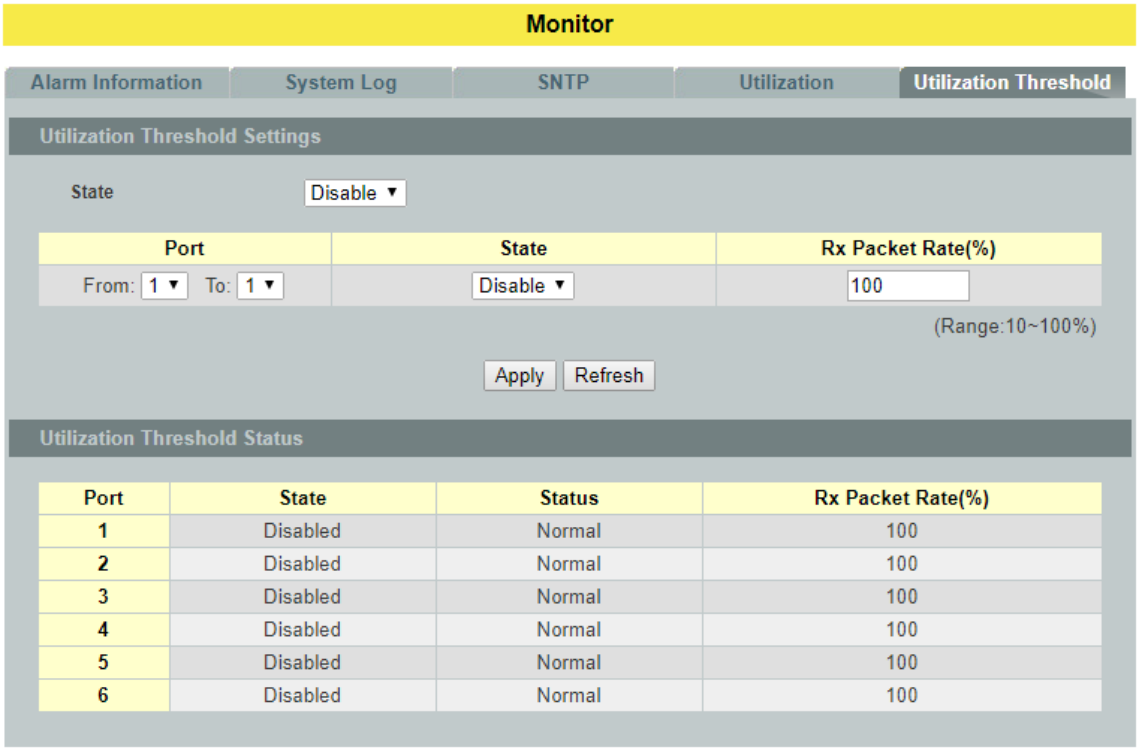
Parameter	Description
Port Utilization	
Port	The field displays the port ID.
Speed	The field displays the port's speed.
Rx Utilization (%)	The field display Rx utilization in percentage.
Rx Utilization (bps)	The field display Rx utilization in bps.
Tx Utilization (%)	The field display Tx utilization in percentage.
Tx Utilization (bps)	The field display Tx utilization in bps.

9.5 Port Utilization Threshold

9.5.1 Introduction

This feature alerts the user when the packet rate in the particular port is above the required rate.

9.5.2 Web Configuration



Parameter	Description
Alarm Threshold Settings	
State	Select option to enable / disable the alarm threshold feature on the Switch.
Port	Selects a port or a range of ports on which to configure the alarm threshold.
State	Selects **Enable** / **Disable** the alarm threshold for the port(s).
Packet Rate	Configures the threshold rate. When the port packet rate over the threshold, the Switch will send trap and syslog.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

Alarm Threshold Status	
Port	This field displays a port number.
State	This field displays the current alarm threshold state for the port.
Status	This field displays if alarm threshold has happened on the port.
Packet Rate	This field displays the current threshold.

10 Device Management

The Topology Map uses the LLDP, ONVIF and Manual Registration data to draw the map.

10.1 LLDP

10.1.1 Introduction

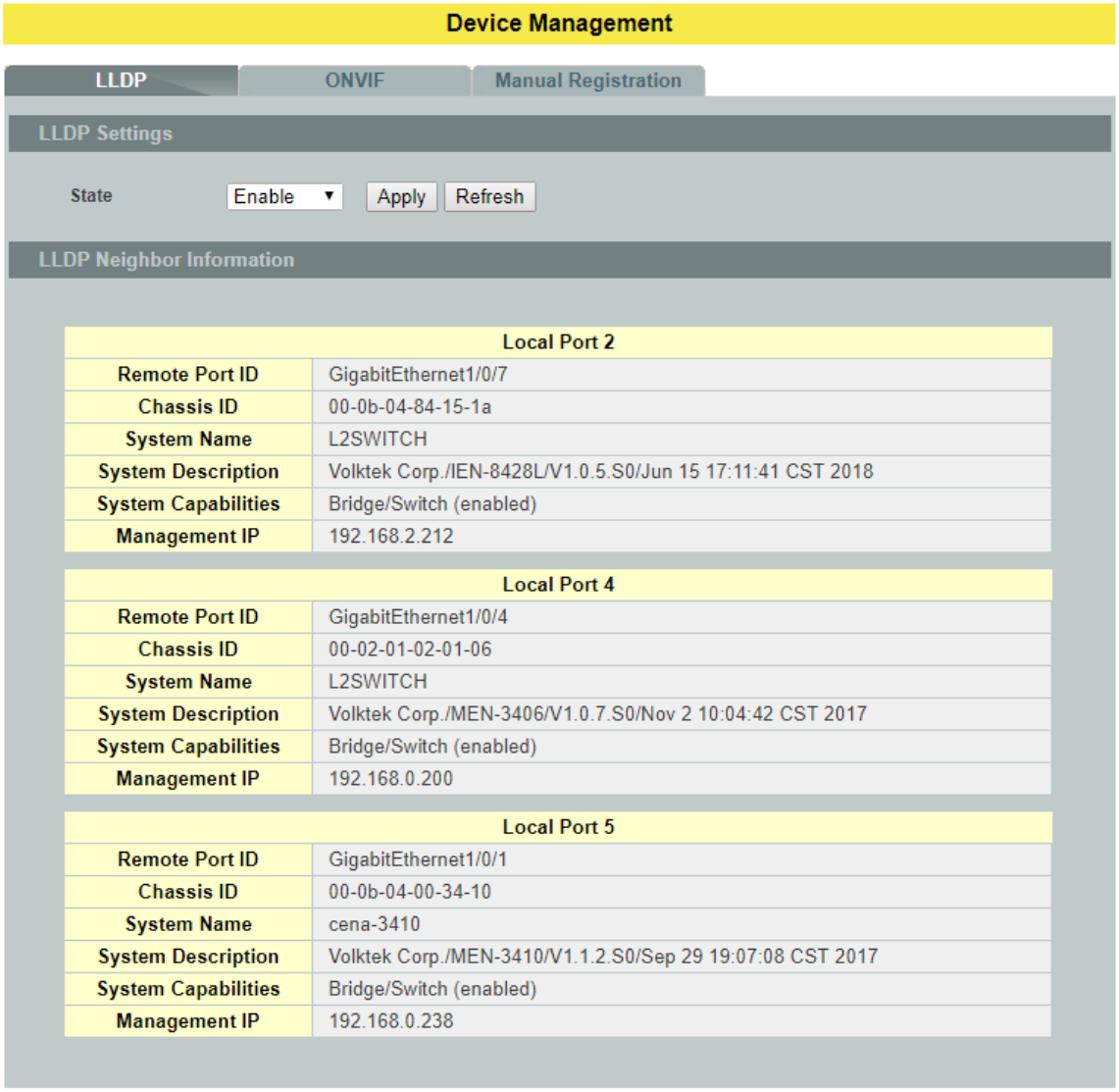
The Link Layer Discovery Protocol (LLDP) specified in this standard allows stations attached to an IEEE 802 LAN to advertise, to other stations attached to the same IEEE 802 LAN, the major capabilities provided by the system incorporating that station, the management address or addresses of the entity or entities that provide management of those capabilities, and the identification of the station's point of attachment to the IEEE 802 LAN required by those management entity or entities.

The information distributed via this protocol is stored by its recipients in a standard Management Information Base (MIB), making it possible for the information to be accessed by a Network Management System (NMS) using a management protocol such as the Simple Network Management Protocol (SNMP).

Default Settings

The LLDP on the Switch is enabled.

10.1.2 Web configuration



Parameter	Description
LLDP Settings	
State	Globally enables / disables the LLDP on the Switch.
Apply	Click **Apply** to take effect the settings.
LLDP Neighbor Information	
Local Port	The local port ID.
Remote Port ID	The connected port ID.
Chassis ID	The neighbor's chassis ID.

System Name	The neighbor's system name.
System Description	The neighbor's system description.
System Capabilities	The neighbor's capability.
Management IP	The neighbor's management address.

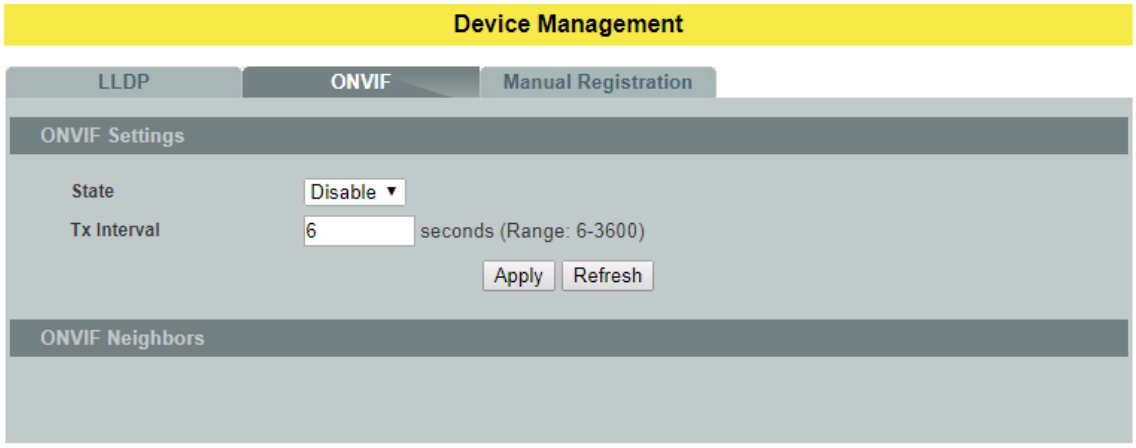
10.2 ONVIF

10.2.1 Introduction

ONVIF is an open industry forum that provides and promotes standardized interfaces for effective interoperability of IP-based physical security products.
The Switch use ONVIF to discovery if there is ONVIF device connected to the Switch.

10.2.2 ONVIF settings and ONVIF Neighbor

The page show the detail information about ONVIF settings and ONVIF devices connected to the Switch. The Switch displays ONVIF devices up to total port count, IEN-8428PL shows upto 10 ONVIF devices connected to it. If one or more ONVIF devices are connected to the same port it displays the last ONVIF device gets connect to it.



Parameter	Description
ONVIF Settings	
State	Select option to enable / disable the ONVIF feature on the Switch.
Tx Interval	Configures the sending ONVIF discovery packet interval. Valid range is 6 ~ 3600 seconds.

Apply	Click Apply to take effect the settings.
Refresh	Click Refresh to begin configuring this screen afresh.
ONVIF Neighbor Information	
Port	The connected port of the ONVIF device.
IP Address	The IP address of the ONVIF device.
MAC Address	The MAC address on the ONVIF device.
VLAN ID	The VLAN ID of the ONVIF device join.
Product Name	Name of the product added
Product Type	What kind of product that is added
Model	Model of the product
Location	Location where it is placed
Web Service Address	Address of the web service of that camera

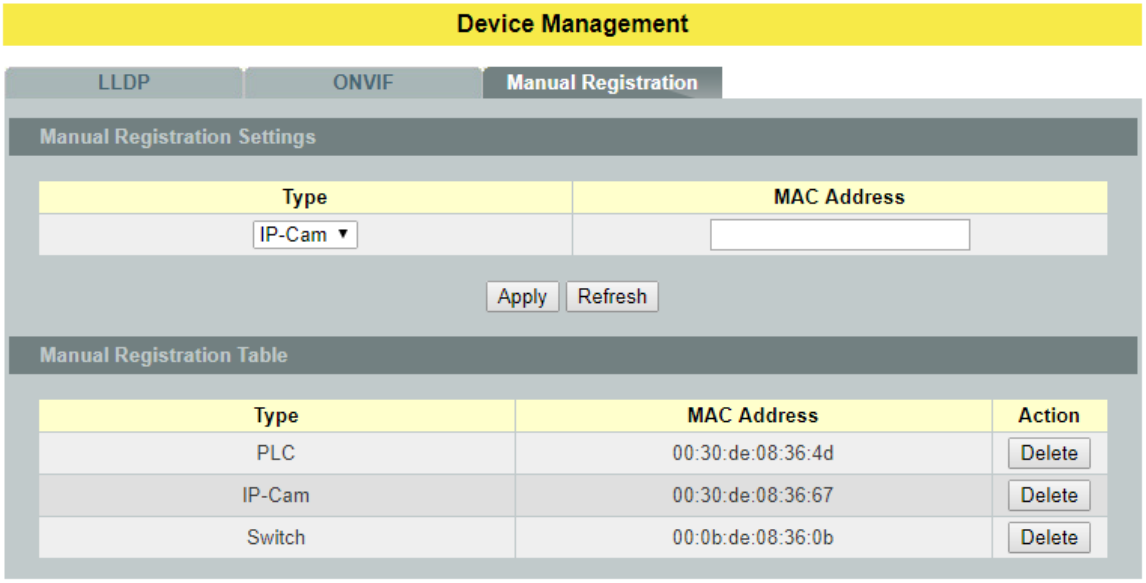
10.3 Manual Registration

10.3.1 Introduction

If devices do not support LLDP and ONVIF, user has to enter the details of it by manually under manual registration. The function support three type, IP-Cam, PLC and Switch.

10.3.2 Web Configuration

For devices which do not support ONVIF or LLDP, User can input the device's MAC address and then the Switch will discover the device and display it on the Lamungan Map.



Parameter	Description
Manual Registration Settings	
Type	The kind of devices connected to switch.
MAC Address	The MAC address on the ONVIF device.
Apply	Click Apply to take effect the settings.
Refresh	Click Refresh to begin configuring this screen afresh.
Manual Registration Table	
Type	The kind of devices connected to switch.
MAC Address	The MAC address on the ONVIF device.
Action	Whether to delete entered device or not.

11 Topology Map

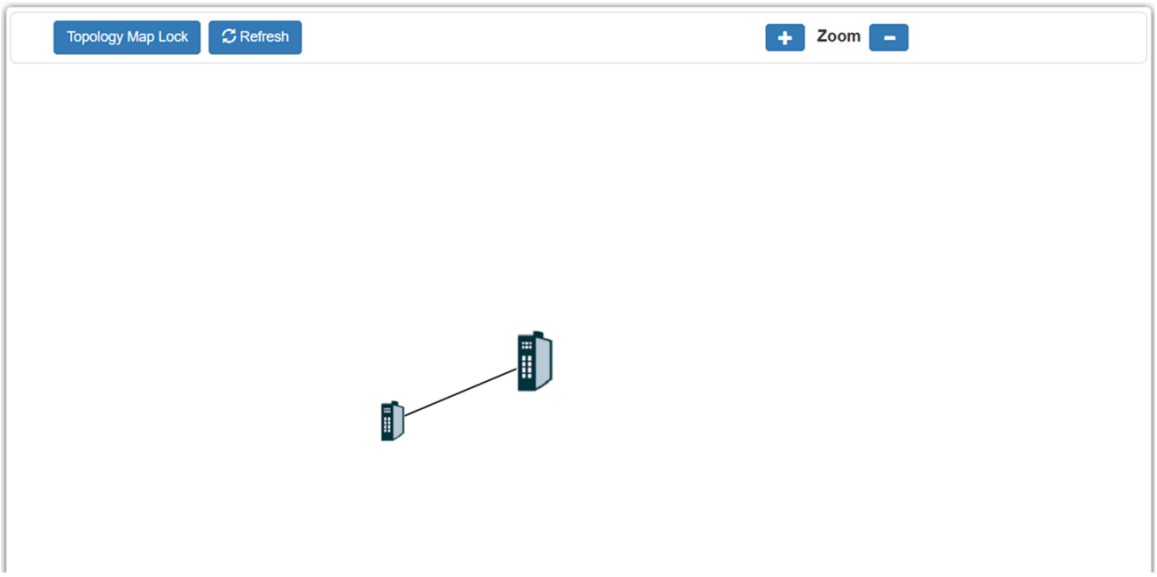
11.1 Introduction

The Topology Map is a feature to check neighbor devices' information or to configure them easily. Click the Topology Map, the system will display topology as below.

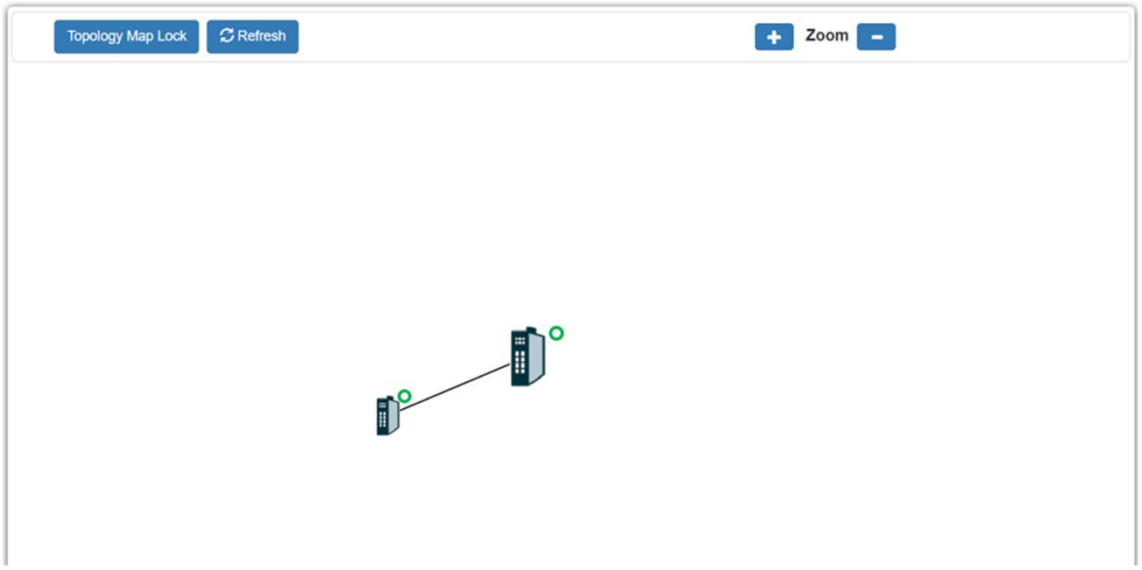
All devices connect to the Switch directly and support LLDP will be displayed on the screen. Such as below figure, the MEN-5410 is its neighbor device. When move the mouse indicator on the MEN-5410 icon, it will display a few information about the MEN-5410. If the neighbor device is a Switch which supports Lamungan server function, click the right key of the mouse. The menu will be displayed on the screen. And then you can click an item which you want to configure the Switch.

NOTE: Topology map can be viewed only on Google or Firefox browsers.

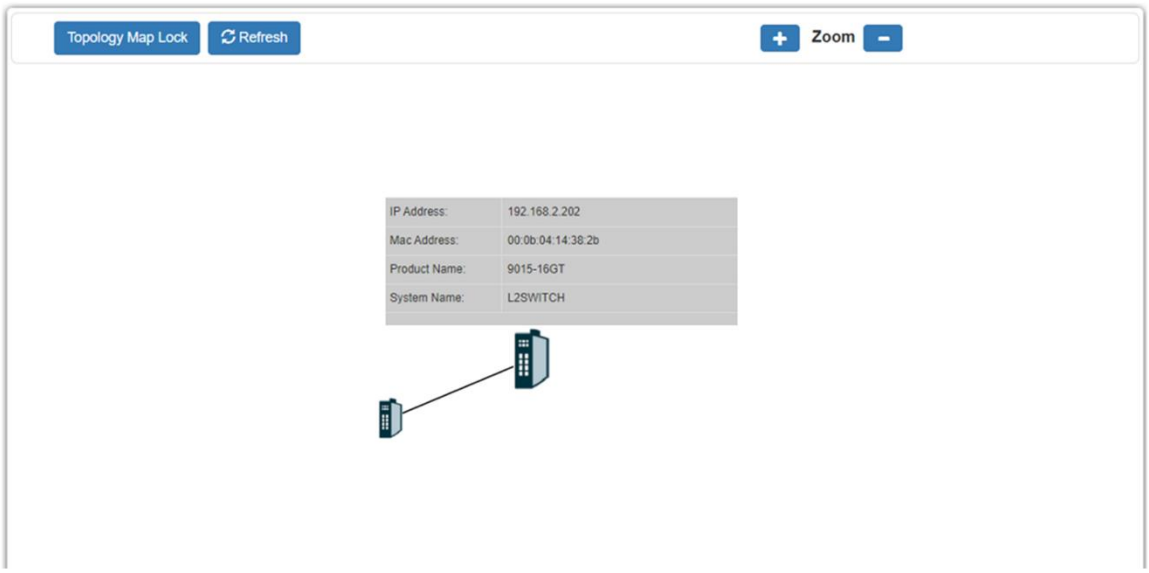
11.2 Map



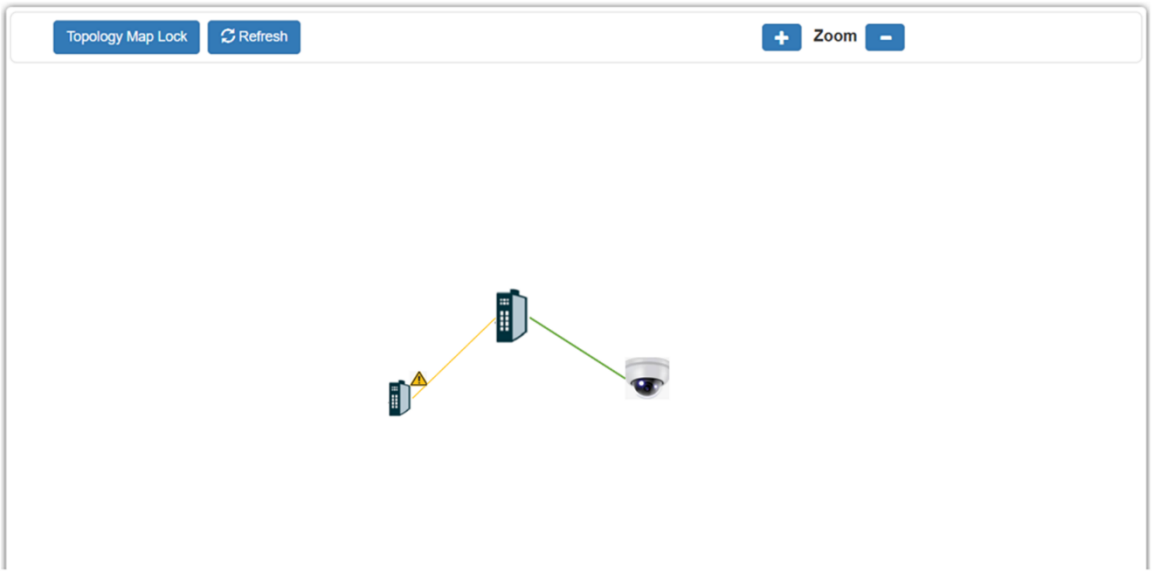
When you click the “Topology Map Lock”, the screen will appear as below:
The green circle on the devices indicates they are working normally.



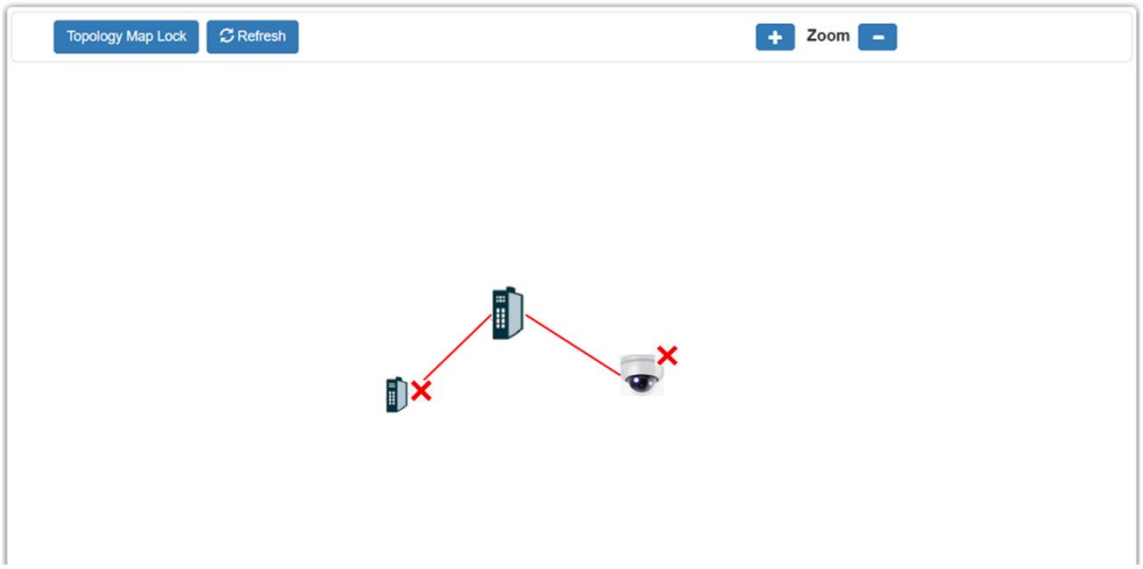
You can view the basic details of the devices connected to the host, by placing the cursor on it.



When there is something wrong with the device (SEN-8428PL), the screen will appear as below. So that you can find the details of events that have gone wrong, and correct it.

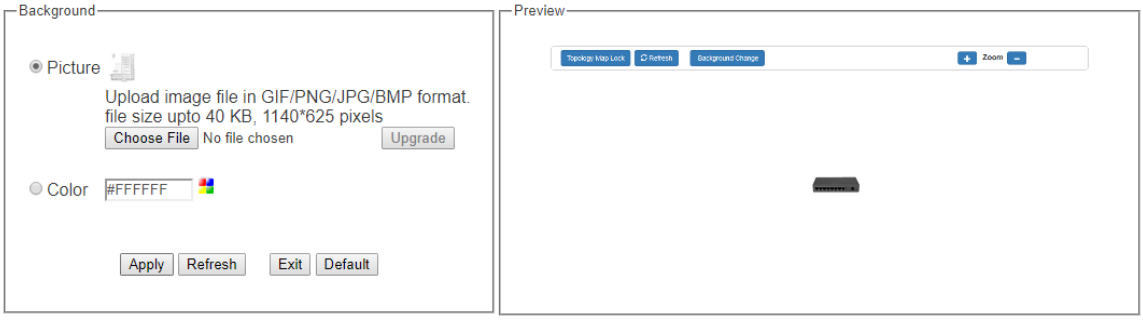


The red ‘X’ indicates that connection is lost with the host.



11.3 Background Configuration

You can upload your company floor layout plan picture in to the background image so that you can identify easily where the switch has been placed.



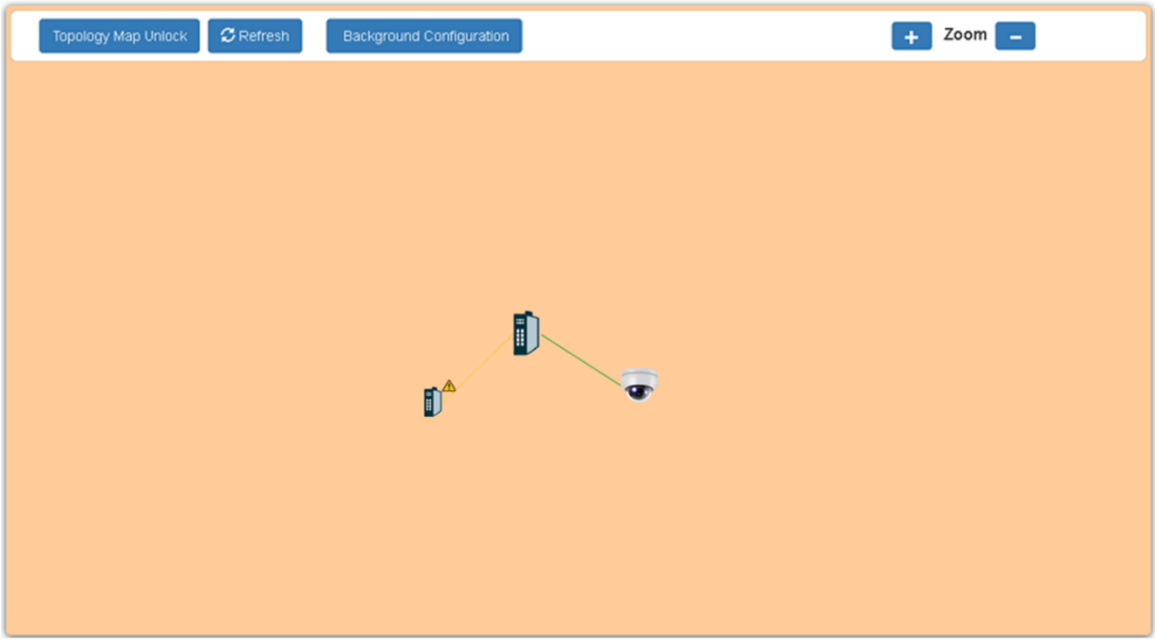
- **Picture**

  To choice a file which you want to display it in the background and the Preview window will display your select immediately. If you click the “Upgrade” button, the file will be download to the Switch and it will be applied on next reboot.



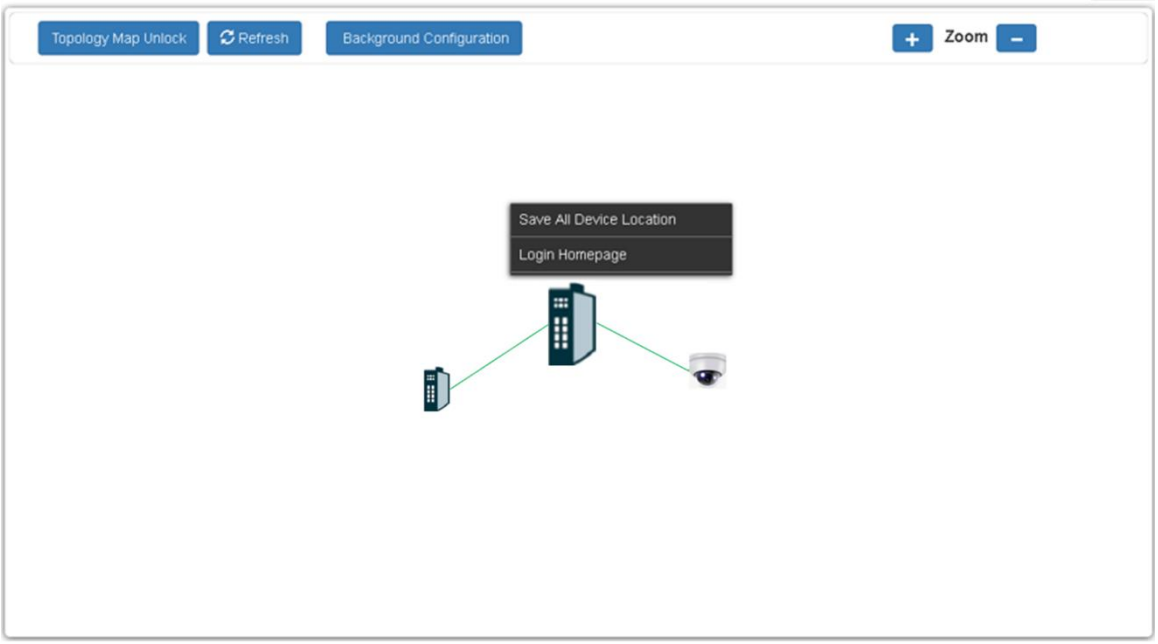
- **Color**

  Allow user to select standard color for the background and the Preview window will display your select immediately.



11.4 Client Switch Management

By Right clicking on the neighbor non-lite switch (MEN-5410) you get this menu and you can configure as shown below.



Non-lite Switch menu:

- Save All Device Location
  To fix the location of all devices on the map, so that it restores its places after refresh.

- Login Web GUI

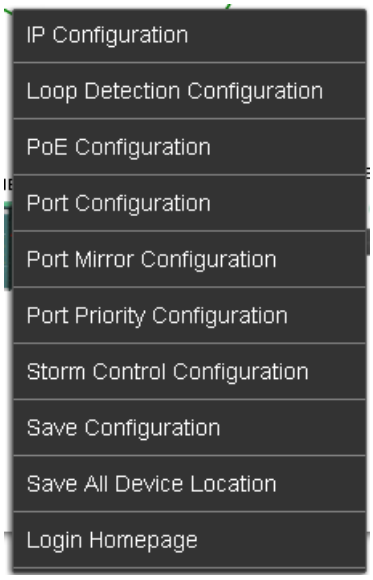
To log in to the client device web GUI, and make necessary changes.

By Right clicking on the neighbor lite switch(SEN-8428PL) you get this menu, and you can configure as shown below.

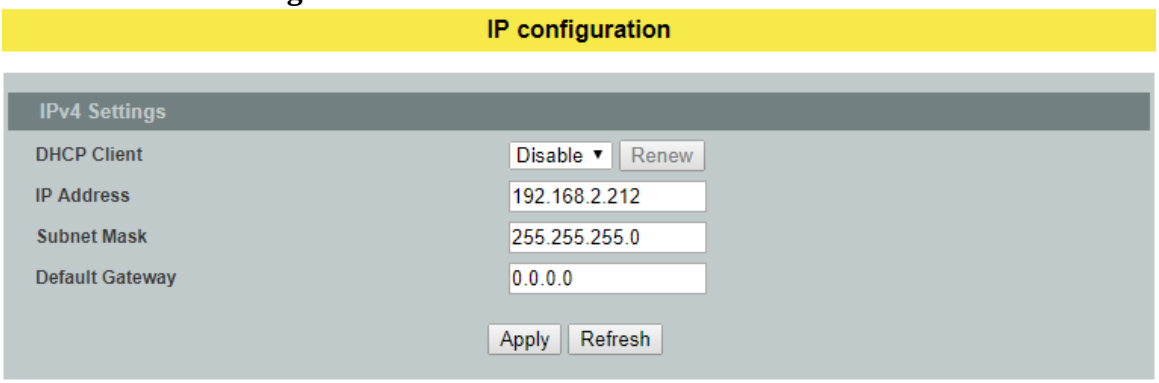


11.5 Lamungan Menu

By Right clicking on the neighbor lite switch you get this menu, and you can configure as shown below.

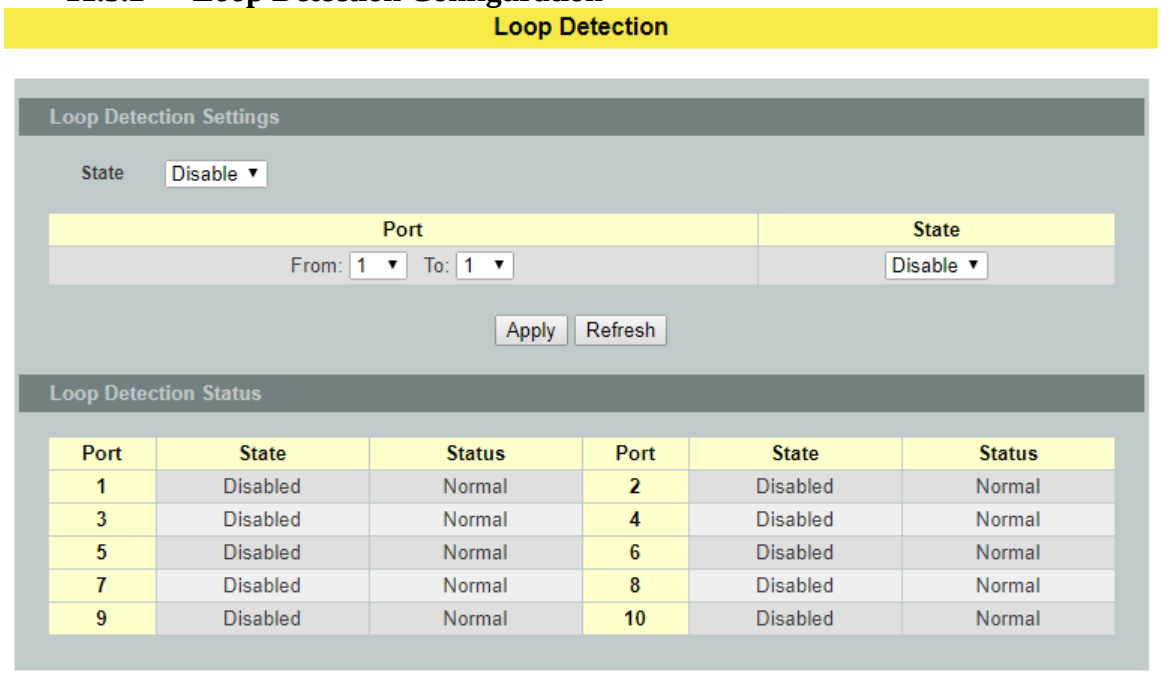


11.5.1 IP Configuration



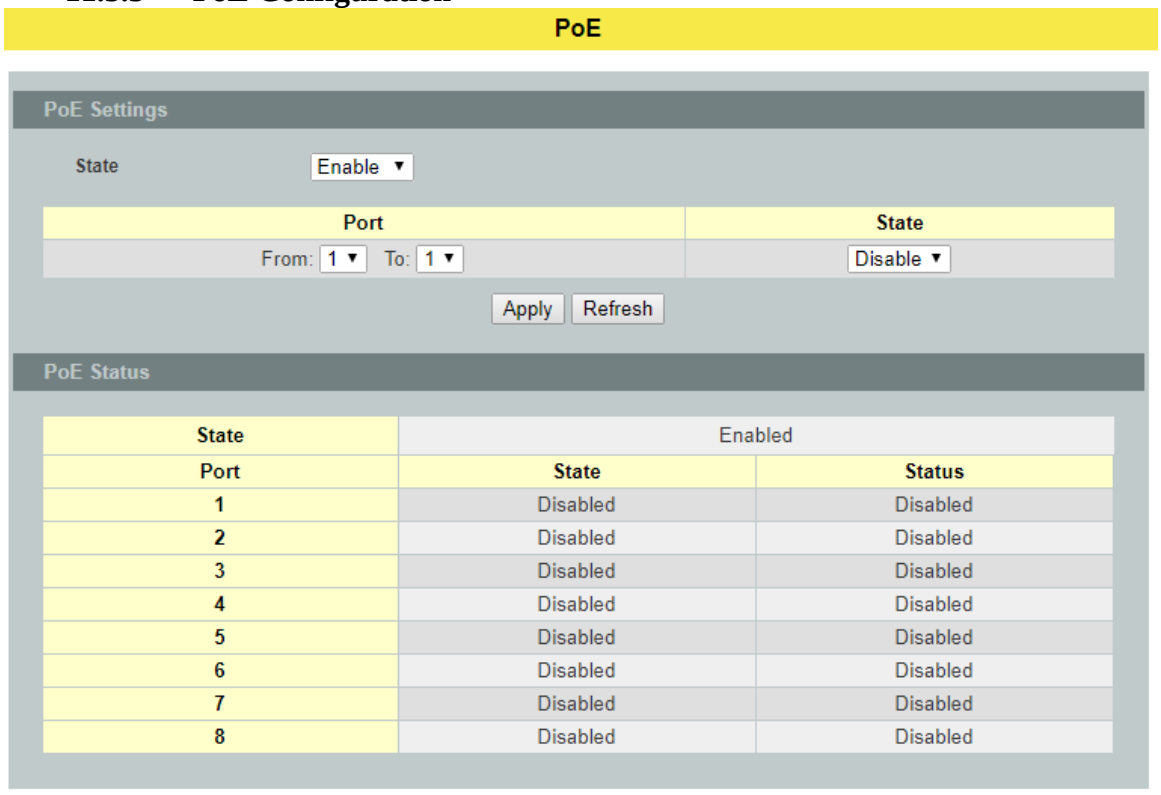
Parameter	Description
IPv4 Settings	
DHCP Client	Configures the DHCP client function for your Switch. Enable means the Switch get an IP address from a DHCP server.
IP Address	Configures a static IPv4 address for your Switch in dotted decimal notation. For example, 192.168.0.254.
Subnet Mask	Configures a IP subnet mask of your Switch in dotted decimal notation for example 255.255.255.0.
Default Gateway	Configures an IP address of the default outgoing gateway in dotted decimal notation, for example 192.168.1.1.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

11.5.2 Loop Detection Configuration



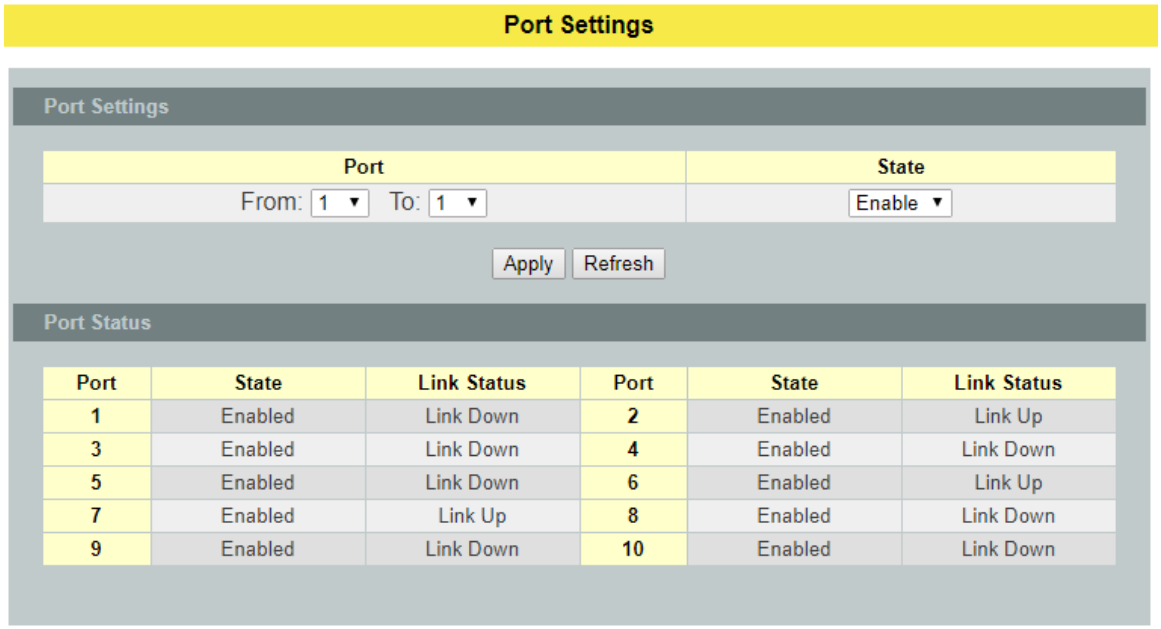
Parameter	Description
Loop Detection Settings	
State	Select this option to enable / disable loop detection on the Switch.
Port	Select a port or a range of ports which to configure loop detection.
State	Select option to enable/disable the loop detection feature on port(s).
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Loop Detection Status	
Port	This field displays a port number.
State	This field displays if the loop detection feature is enabled.
Status	This field displays if the port is blocked by loop detection.

11.5.3 PoE Configuration



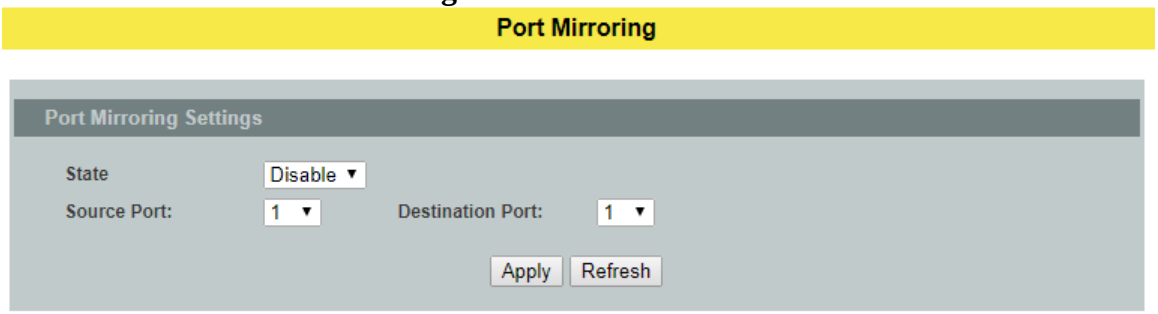
Parameter	Description
PoE Settings	
State	Select this option to enable / disable PoE on the Switch.
Port	Select a port or a range of ports which to configure PoE.
State	Select option to enable/disable the PoE feature on port(s).
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

11.5.4 Port Configuration



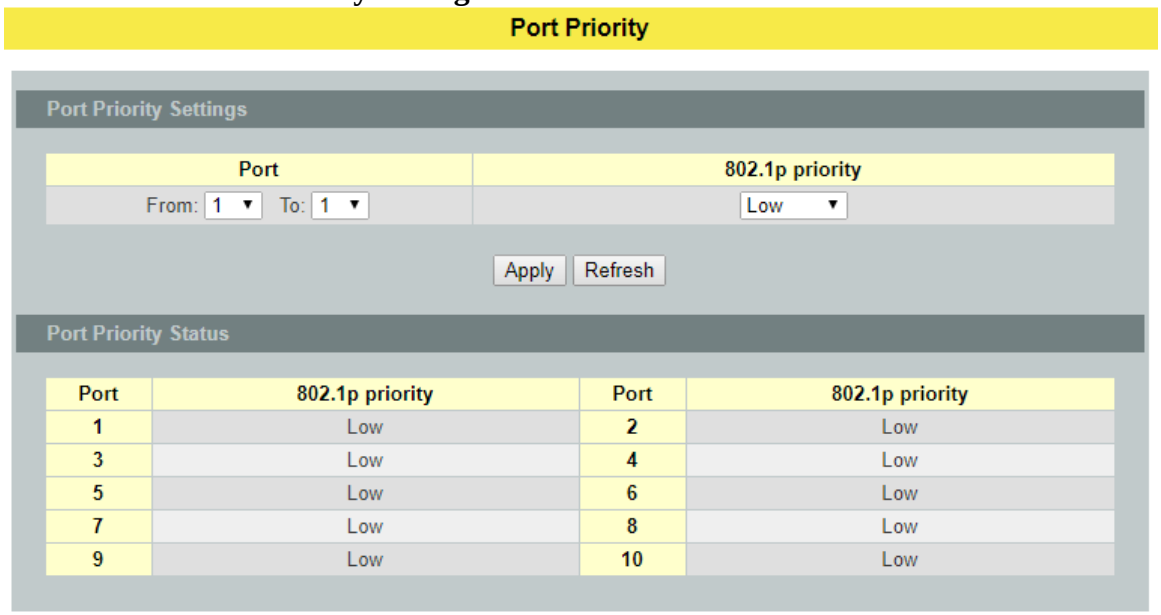
Parameter	Description
Port Settings	
Port	Selects a port or a range of ports on which to configure the port.
State	Select option to enable / disable the port.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Port Status	
Port	This field displays the index number of a port.
State	This field displays the state of a port.
Link Status	This field displays the link status of a port.

11.5.5 Port Mirror Configuration



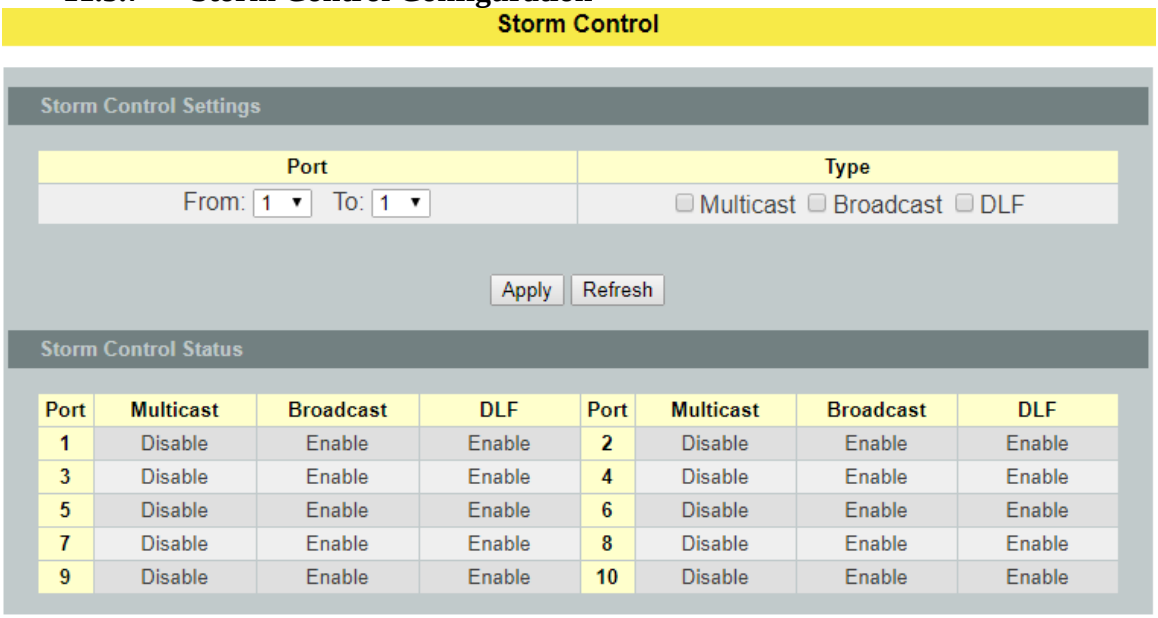
Parameter	Description
Port Mirror Settings	
State	Select option to enable / disable the port mirroring feature on the Switch.
Source Port	Selects a port which packets received and transmitted by this port will be copied to the destination port.
Destination Port	Select a port which connects to a network traffic analyzer.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.

11.5.6 Port Priority Configuration



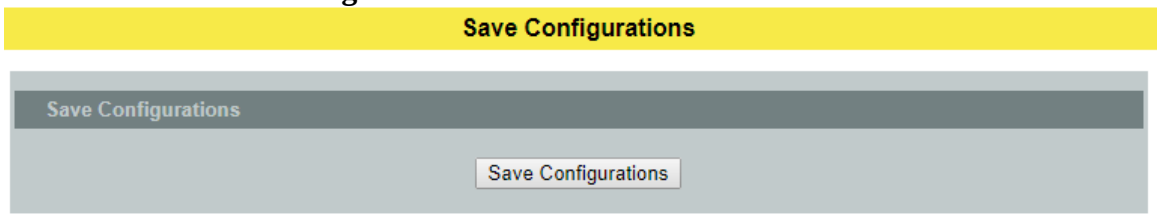
Parameter	Description
Port Priority Settings	
Port	Selects a port or a range of ports on which to configure the priority.
Priority	Selects “Low”, “Medium” and “High” priority for the port(s).
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Port Priority Status	
Port	This field displays a port number.
Priority	This field displays the priority for a port.

11.5.7 Storm Control Configuration



Parameter	Description
Storm Control Settings	
Port	Select the port number for which you want to configure storm control settings.
Type	Click the check box to enable / disable the Multicast / Broadcast / DLF storm control.
Apply	Click **Apply** to take effect the settings.
Refresh	Click **Refresh** to begin configuring this screen afresh.
Storm Control Status	
Port	This field displays a port number.
Multicast	This field displays the multicast storm control state on the port.
Broadcast	This field displays the broadcast storm control state on the port.
DLF	This field displays the DLF storm control state on the port.

11.5.8 Save Configuration



Parameter	Description
Save Configuration	
Save Configuration	Click **Save Configuration** to save the current running configuration to the NVRAM.

11.5.9 Save All Device Location

To fix the location of all devices on the map, so that it restores its places after refresh.

11.5.10 Login Homepage

To log in to the client device web GUI, and make necessary changes.