

# 24-Port Gigabit Ethernet Web Managed Switch

**English User's Manual** 





# **FCC Certifications**



This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

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 his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

# **CE Mark Warning**

# CE

This equipment complies with the requirements relating to the EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and the RoHS Directive 2011/65/EU.

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# I. Introduction to the Web Smart Switch

### **1.1 General Description**

#### **High Performance**

The device is a powerful, high-performance Gigabit Ethernet switch with 24 10/100/1000 Mbps ports, providing you a cost-effective, space-saving solution for expanding your network. The gigabit ports can lead you to a real gigabit connection, making you be able to transfer high bandwidth-needed files higher and faster in an easy way.

This device provides the easy management function through the Ethernet Web. The network administrator can configure the status and the port function setting of the device through the Web-Based UI. When installing the auto-discovery management tool helps network managers to search and access those switches on LAN easily. Therefore, network managers can access switches that support auto-discovery on LAN without memorizing IP address.

#### **Smart Features**

The device provides rich features including Link Aggregation, VLANs, IGMP Snooping, Port Trunking, Spanning Tree, Security and other network management to meet the requirements evolving medium and small-sized enterprises. QoS secures the bandwidth for some bandwidth-demanded applications including VoIP or video conference. Additionally, IEEE 802.3az Energy Efficient Ethernet ability is supported to promise operation in Low Power Idle Mode and save power consumption.

#### **Easy Installation and Management**

This switch is plug & play and hassle-free in installation. Auto-MDI/MDI-X crossover on all ports eliminates the need for crossover cables for connection to another switch or hub. Auto-Negotiation on each port senses the link speed of a network device and intelligently adjusts for compatibility and optimal performance. This switch also features diagnostic LEDs, which display the status and activities of the network.



# 1.2 The Front Panel

The following figure shows the front panel of the switch.

GNO	2 4 6 8	10 12 14 18	18 20 22 24
LN0/ 0 1 1 1 1 1 0 1 0 1 1 0 1 1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0			
SYS @ P B B B B B B B B B B B B B B B B B B	<b>┖╷╨╷╨╷╨╷</b> ┛	┖ <sub>᠈</sub> ┻ <sub>᠃</sub> ┻ <sub>᠃</sub> ┹	┺ <sub>╗</sub> ┻ <sub>╗</sub> ┻ <sub>╗</sub> ┛

The following table describes the port labels on the front panel.

LABEL	DESCRIPTON
24 10/100/1000 RJ-45 Ethernet Ports	Connect these ports to a computer, a hub, an Ethernet switch or router

# **1.3 LEDs Definition**

This device provides extensive leds to show the activities on power, system and ports. See the following description for your reference:

LED	Status	Operation
DW/P	Steady Green	The switch is powered on.
	Off	The switch is powered off.
	Steady Green	The switch is on and functioning properly.
SYS	Blinking Green	The switch is rebooting and performing self-diagnostic tests.
	Off	The power is off or the system is not ready/malfunctioning.
	Steady Green	The link to a 1000 Mbps Ethernet network is up.
Link/ACT	Blinking Green	The system is transmitting/receiving to/from a 1000 Mbps Ethernet network.
	Off	Port disconnected.

#### The RESET Button

Reset the switch to its factory default configuration via the RESET button. Press the RESET button for three seconds and release. The switch automatically reboots and reloads its factory configuration file. The RESET button is on the front panel of the switch.



### 1.4 The Rear Panel

The following figure shows the rear panel of the switch:



#### **Power Receptacle**

To be compatible with the electric service standards around the world, the switch is designed to afford the power supply in the range from 100 to 240 VAC, 50/60 Hz. Please make sure that your outlet standard to be within this range.

To power on the switch, please plug the female end of the power cord firmly into the receptacle of the switch, the other end into an electric service outlet, and use the **POWER ON/OFF** switch to have the Switch power on or off. After the switch powered on, please check if the power LED is lit for a normal power status.



#### 1.5 Installation

This switch can be placed on your desktop directly, or mounted in a rack. Please refer to the instructions for installation.

Before installing the switch, we recommend:

- 1. The switch is placed with appropriate ventilation environment. A minimum 25 mm space around the unit is recommended.
- 2. The switch and the relevant components are away from sources of electrical noise such as radios, transmitters and broadband amplifiers
- 3. The switch is away from environments beyond recommend moisture

#### **Desktop Installation**

- 1. Install the switch on a level surface that can support the weight of the unit and the relevant components.
- 2. Plug the switch with the female end of the provided power cord and plug the male end to the power outlet.

#### **Rack-mount Installation**

The switch may be standalone, or mounted in a rack. Rack mounting facilitate to an orderly installation when you are going to install series of networking devices.

Procedures to Rack-mount the switch:

- 1. Disconnect all the cables from the switch before continuing.
- 2. Place the unit the right way up on a hard, flat surface with the front facing you.
- 3. Locate a mounting bracket over the mounting holes on one side of the unit.
- 4. Insert the screws and fully tighten with a suitable screwdriver.
- 5. Repeat the two previous steps for the other side of the unit.
- 6. Insert the unit into the rack and secure with suitable screws.
- 7. Reconnect all the cables.

#### **Installing Network Cables**

1. Crossover or straight-through cable: All the ports on the switch support Auto-MDI/MDI-X



functionality. Both straight-through or crossover cables can be used as the media to connect the switch with PCs as well as other devices like switches, hubs or router.

2. Category 3, 4, 5 or 5e, 6 UTP/STP cable: To make a valid connection and obtain the optimal performance, an appropriate cable that corresponds to different transmitting/receiving speed is required. To choose a suitable cable, please refer to the following table.

Media	Speed	Wiring
	10 Mbps	Category 3,4,5 UTP/STP
10/100/1000 Mbps copper	100 Mbps	Category 5 UTP/STP
	1000 Mbps	Category 5e, 6 UTP/STP

# **II. Basic Web Management Information**

# 2.1 System login

- 1. Start your web browser.
- 2. Type "http://"and the IP address of the switch (for example, the default management IP address is 192.168.1.254) in the Location or Address field. Press [ENTER].



3. The login screen appears. The default username and password are "**admin**", so you can click **LOGIN** and go to the web configuration screen directly.





### 2.2 The Graphic User Interface

After the password authorization, the information page shows up. You may click on each folder on the left column of each page to get access to each configuration page. The Graphic User Interface is as follows:



SAVE   LOGOUT   REBOOT		
Status     ▼       Network     ▼       Switching     ▼       MAC Address Table     ▼       Security     ▼	System Information B	0 22 24
QoS Management Diagnostics Maintenance	System Information	C
A	Information Name	Information Value
	System Name	Edit Switch
	System Location	Edit Default Location
	System Contact	Edit Default Contact
	MAC Address	00:08:54:71:6A:13
	IP Address	192.168.1.254
	Subnet Mask	255.255.255.0
	Gateway	192.168.1.254
	Loader Version	1.0.0.48161
	Loader Date	Dec 31 2014 - 11:02:47
	Firmware Version	1.2.0.1
	Firmware Date	Dec 31 2015 - 11:02:59
	System Object ID	1.3.6.1.4.1.27282.3.2.10
	System Up Time	0 days, 0 hours, 10 mins, 12 secs
	PCB/HW Version	switch

- A –Click the menu items to open submenu links, and then click on a submenu link to open the screen in the main window.
- **B** –It shows the switch's current link status. Green squares indicate the port link is up, while black squares indicate the port link is down.
- **C** –Displays system information such as MAC address and firmware version.



In the navigation panel, click a main link to reveal a list of submenu links shown as the following:

Status		Network		Switching	
Status	$\bigtriangledown$	Network	$\bigtriangledown$	Switching	$\nabla$
System Information Logging Message Port Link Aggregation LLDP Statistics IGMP Snooping Statisti	¢ cs	IP Address IPv6 Address Management VLAN Time Settings	C	Port Setting Mirror Link Aggregation VLAN Management EEE Multicast Jumbo Frame STP	
MAC Address Table		Security		QoS	
MAC Address Table	$\bigtriangledown$	Security	$\nabla$	QoS	$\nabla$
Static MAC Setting Dynamic Address Settin Dynamic Learned	ng	Storm Control Protected Ports DoS	0	General QoS Basic Mode Rate Limit	0 0 0
		Access	C		
Management		Diagnostics		Maintenance	
Management	$\bigtriangledown$	Diagnostics	$\overline{\nabla}$	Maintenance	▽
LLDP SNMP	0	Cable Diagnostics Ping Test IPv6 Ping Test Logging Setting Factory Default Reboot Switch	0	Backup Manager Upgrade Manager Configuration Manage Account Manager	r

The following table describes the links in the navigation panel.

LINKS	DESCRIPTION
Status	
System Information	This link takes you to a screen that displays general system information.



Logging Message	This sub-menu takes you to screens where you can view and setup system logs.
Port	This link takes you to a screen where you can configure the port information.
Link Aggregation	This link takes you to a screen where you review the LAG Status and the LACP Information.
LLDP Statistics	This link takes you to view the summary and per-port information for LLDP frames transmitted and received on the switch.
IGMP Snooping Statistics	This link takes you to see the statistics information of IGMP.
Network	
IP Address	This link takes you to a screen where you can configure the IP information.
IPv6 Address	This link takes you to a screen where you can configure the IPv6 information.
Management VLAN	This link takes you to view the entry of a VLAN from which a management station will be allowed to manage the device using TCP/IP (in-band via web manager or Telnet).
Time Settings	This link takes you to a screen where you can configure the switch's time settings.
Switching	
Port Setting	This link takes you to a screen where you can configure settings for individual switch ports.
Mirror	This sub-menu takes you to screens where you can copy traffic from one port or ports to another port in order that you can examine the traffic from the first port without interference.
Link Aggregation	This link takes you to a screen where you can configure the trunk settings on a port.
VLAN Management	This link takes you to a screen where you can configure the VLAN (IEEE 802.1Q) settings on a port.
EEE	This link takes you to enable or disable port EEE(Energy Efficient Ethernet) function.
Multicast	This link takes you to set multicast filtering and unknown multicast action.
Jumbo Frame	This link takes you to a screen where you can configure the Jumbo Frame size.
STP	This sub-menu takes you to screens where you can configure the STP to prevent network loops.
MAC Address Table	
Static MAC Setting	This link takes you to display and configure the Static MAC



	settings.
Dynamic Address Setting	This link takes you to configure the Dynamic Address settings.
Dynamic Learned	This link takes you to a screen where you can to view the Dynamic Address settings information.
Security	
Storm Control	This link takes you to a screen where you can limit the number of broadcast, multicast and unknown unicast and multicast packets the Switch receives per second on the ports.
Protected Ports	This link takes you to a screen to setting and revising the protected ports.
DoS	This link takes you to configure DoS setting to enable/disable DoS function and all others related in the sub-menu.
Access	This link takes you a way to access the switch.
QoS	
General	This link takes you to a screen where you can configure QoS through the sub-menu, including QoS Priorities, Port Settings, Queue Settings, CoS Mapping, DSCP Mapping, and IP Precedence Mapping.
QoS Basic Mode	This link takes you to a screen where you can configure the QoS Basic Mode through the sub-menu, including the Global Settings and the Port Settings.
Rate Limit	This link takes you to a screen where you can configure the QoS Rate Limit through the sub-menu, including Ingress Bandwidth Control, Egress Bandwidth Control, and Egress Queue.
Management	
LLDP	This link takes you to a screen where you can set and revise the LLDP.
SNMP	This link takes you to a screen where you can set and revise the SNMP.
Diagnostics	
Cable Diagnostics	This link takes you to a screen where you can do Copper test on each port.
Ping Test	This link takes you to a screen where you can do Ping test.
Ping6 Test	This link takes you to a screen where you can do Ping6 test.
Logging Setting	This link takes you to a screen where you can configure log settings.
Factory Default	This link takes you back to the factory default configuration.
Reboot Switch	This link takes you to a screen where you can reboot the switch.



Maintenance	
Backup Manager	This link takes you to a screen where you can backup the settings you have made.
Upgrade Manager	This link takes you to a screen where you can upgrade the switch settings.
Configuration Manager	This link takes you to a screen where you can save all the configurations you have made to the switch.
Account Manager	This link takes you to a screen where you can change the web configuration login account.



# 2.3 SAVE LOGOUT REBOOT2.3.1 SAVE2.3.1.1 Saving running configurations

Click SAVE  $\rightarrow$  Save Configuration to FLASH to view the screen as shown next. This page allow user to copy running configuration, startup configuration or backup configuration to startup configuration or backup configuration.

# **Configuration Manager**

Save Configuration							
Source File	<ul> <li>Running configuration</li> <li>Startup configuration</li> </ul>						
Destination File	• Startup configuration						

Apply

#### **Configuration Manager Page**

#### **Configuration Manager Fields**

LABEL	DESCRIPTION
Source File	<ul> <li>Select upgrade method</li> <li>Running configuration: Running configuration file</li> <li>Startup configuration: Startup configuration file</li> </ul>
Destination File	<ul> <li>Select Upgrade Type</li> <li>Startup Configuration: Startup configuration file</li> </ul>

### 2.3.2 LOGOUT

Click **Logout** to exit the web configurator. You have to log in with your password again after you log out, if there is any. This is recommended after you finish a management session for security reasons.





# 2.3.3 **REBOOT**

**Reboot** allows you to restart the switch without physically turning the power off. Follow the steps below to reboot the switch.

1. Click **REBOOT** to view the screen as shown next.



3. When it finished, the switch has been restarted.



# **III. Web Management Configuration**

### 3.1 Status

Use the Status pages to view system information and status.

# 3.1.1 System Information

In the navigation panel, click Status  $\rightarrow$  System Information to display the screen as shown below.

This page allow user to configure and browse some system information such as MAC address, IP address, loader version and firmware version and so on.

 System Information

 2
 4
 6
 8
 10
 12
 14
 16
 18
 20
 22
 24

<ul> <li>System Information</li> </ul>	
Information Name	Information Value
System Name	Edit Switch
System Location	Edit Default Location
System Contact	Edit Default Contact
MAC Address	00:08:54:71:6A:13
IP Address	192.168.1.254
Subnet Mask	255.255.255.0
Gateway	192.168.1.254
Loader Version	1.0.0.48161
Loader Date	Dec 31 2014 - 11:02:47
Firmware Version	1.2.0.1
Firmware Date	Dec 31 2015 - 11:02:59
System Object ID	1.3.6.1.4.1.27282.3.2.10
System Up Time	0 days, 0 hours, 10 mins, 12 secs
PCB/HW Version	switch

With "Edit" button in the table, user could configure the field value.

LABEL	DESCRIPTION
System Name	System name of the switch. This name will also use as CLI prefix of each line. ("Switch>" or "Switch#")
System Location	System location of the switch.
System Contact	System contact of the switch.



# 3.1.2 Logging Message

Use this screen to display the switch logs. Click Status  $\rightarrow$  Logging Message in the navigation panel to display the screen as shown below.

arget	Seve	erity	Category	
ared 🔽 🤇	Select Levels	•	Select Categories	
ogging In	formation			
ogging In Information	formation n Name	Information	√alue	
ogging In Informatio Target	formation n Name	Information buffered	Value	
ogging In Information Target Severity	formation n Name	Information buffered error, warning	Value , notice, info	
ogging In Informatio Target Severity Category	formation n Name	Information buffered error, warning AAA, ACL, D Rate, RLDP,	Value , notice, info Al, DHCP_SNOOPING, Dot1X, GYRP, IGMP, L2, LLDP, SNMP, STP, System, Trunk, UDLD, YLAN	Mirror, Platform, Port, QoS, QinQ,

Loggir	ig Message	5							
Clear buffered messages Refresh									
	1								
No.	Severity	Category	Timestamp	Message					
1	notice	Port	Jan 01 00:00:18	Port 6 link up					
2	notice	Port	Jan 01 00:00:18	Port 7 link up					
з	notice	Port	Jan 01 00:00:18	Port 8 link up					
4	info	STP	Jan 01 00:00:18	Port 6 STP port state is set to Blocking					
5	info	STP	Jan 01 00:00:18	Port 7 STP port state is set to Blocking					

LABEL	DESCRIPTION
Target	<ul> <li>Select the log message source to show on the table</li> <li>Buffered: Logs store in the device buffer.</li> <li>FLASH: Logs store in the device flash.</li> </ul>
Severity	Select severity to filter log messages.
Category	Select category to filter log messages.



# 3.1.3 Port

The Port configuration page displays port summary and status information.

# 3.1.3.1 Port Counters

Use this screen to display the Switch port statistics. Click Status  $\rightarrow$  Port  $\rightarrow$  Port Counters to view the screen as shown next.

Port Counters		
MIB Counters Settings		
Clear		
Rmon mib Counter Name	mib Counter Value	
etherStatsDropEvents	0	
etherStatsOctets	0	
etherStatsPkts	0	
etherStatsBroadcastPkts	0	
etherStatsMulticastPkts	0	
etherStatsCRCAlignErrors	0	
etherStatsUn derSizePkts	0	
etherStatsOverSizePkts	0	
etherStatsFragments	0	
etherStatsJabbers	0	
etherStatsCollisions	0	
etherStatsPkts64Octets	0	
etherStatsPkts65to127Octets	0	
etherStatsPkts128to255Octets	0	
etherStatsPkts256to511Octets	0	
etherStatsPkts512to1023Octets	0	
etherStatsPkts 1024to1518Octets	0	

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	This identifies the Ethernet port.

#### 3.1.3.2 Bandwidth Utilization



Gops		100	Nbps		10M	bps	l	ink D	own							Refres	sh peri	od: 5	T	sec		IFG: Ena	ble '
														Тх									
																				_			
GE2 G	E3 G	E4 GE	5 GE 6	GE7	GE8	GE9	GE10	GE11	GE12	GE13	GE14	GE15	GE16	GE17	GE18	GE19	GE20	GE21	GE22	GE23	GE24		
0% 0	1% (	0% 09	6 0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
														Rx									

The following table describes the labels in this screen.

LABEL	DESCRIPTION
<b>Refresh Period</b>	Refresh the web page every period of seconds
IFG	<ul> <li>Inter-Frame Gap in bandwidth calculation</li> <li>Enable: Add inter frame gap to bandwidth calculation</li> <li>Disable: Remove inter frame gap to bandwidth calculation</li> </ul>

### 3.1.4 Link Aggregation

Click Status  $\rightarrow$  Link Aggregation in the navigation panel to view the screen as shown below.



#### LAG Status

_		

LAG	Name	Туре	Link State	Active Member	Standby Member	
LAG1		LACP	UP	GE1,GE4	GE2-3,GE5-8	
LAG2		3157	Not Present	-	-	
LAG3			Not Present			
LAG4			Not Present		1.	
LAG5		1225	Not Present			
LAGE			Not Present		-	
LAG7			Not Present			
LAGE			Not Present		-	

#### - LACP Information

LAG	Port	PartnerSysId	PnKey	AtKey	Sel	Mux	Receiv	PrdTx	AtState	PnState
LAG1	OE1	00eD4cDf0e0d	03e8	D3e8	8	DSTRET	CRRNT	SIWPRD	A_GSCD	A_0SCD_
LAG1	GE2	000000000000	03e8	03e8	U	DETACH	DFLT	FstPRD	A_GF_	_TG_C_F_
LAG1	GE3	00000000000	03e8	03e8	U	DETACH	DFLT	FstPRD	A_GF_	_TG_C_F_
LAG1	GE4	00eD4cDf0e0d	03e8	03e8	8	DSTRET	CRRNT	SIWPRD	A_GSCD	A_0SCD_
LAG1	GE5	00000000000	03e8	03e8	U	DETACH	DFLT	FstP RD	A_GF_	_TG_C_F_
LAG1	GE6	00000000000	03e8	03e8	U	DETACH	DFLT	FstPRD	A_GF_	_TG_C_F_
LAG1	GE7	000000000000	03e0	03e8	U	DETACH	DFLT	FstPRD	A_GF_	_TG_C_F_
LAG1	GE8	00000000000	03e8	03e8	U	DETACH	DFLT	FstPRD	A_GF_	_TG_C_F_

The following table describes the labels in this screen.

#### LAG Status Field:

LABEL	DESCRIPTION	
LAG	LAG Name	
Name	LAG port description	
Туре	<ul> <li>The type of the LAG</li> <li>Static: The groups of ports assigned to a static LAG are always active members.</li> <li>LACP: The groups of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.</li> </ul>	
Link State	LAG port link status	
Active Member	Active member ports of the LAG	
Standby Member	Inactive or candidate member ports of the LAG	

#### LACP Status Field:

LABEL	DESCRIPTION
LAG	LAG Name



Port	Member port name.
PartnerSysId	The system ID of link partner. This field would be updated when the port receives LACP PDU from link partner.
PnKey	Port key of partner. This field would be updated when the port receives LACP PDU from link partner.
AtKey	Port key of actor. The key is designed to be the same as trunk ID.
Sel LACP selection logic status of the port. "S" means selected, "U" means unselected, and "D" means standby.	
Mux	LACP mux state machine status of the port. "DETACH" means the port is in detach state, "WAIT" means waiting state, "ATTACH" means attach state, "CLLCT"
Receiv	LACP receive state machine status of the port. "INIT" means the port is in initialize state, "PORTds" means port disabled state, "EXPR" means expired state, "LACPds" means LACP disabled state, "DFLT" means defaulted state, "CRRNT" means current state.
PrdTx	LACP periodic transmission state machine status of the port. "no PRD" means the port is in no periodic state, "FstPRD" means fast periodic state, "SlwPRD" means slow periodic state, "PrdTX" means periodic TX state.
AtState	The actor state field of LACP PDU description. The field from left to right describes: "LACP_Activity", "LACP_Timeout", "Aggregation", "Synchronization", "Collecting", "Distributing", "Defaulted", and "Expired". The contents could be true or false. If the contents are false, the web shows "_"; if the contents are true, the web shows "A", "T", "G", "S", "C", "D", "F" and "E" for each content respectively.
PnState	The partner state field of LACP PDU description. The field from left to right describes: "LACP_Activity", "LACP_Timeout", "Aggregation", "Synchronization", "Collecting", "Distributing", "Defaulted", and "Expired". The contents could be true or false. If the contents are false, the web shows "_"; if the contents are true, the web shows "A", "T", "G", "S", "C", "D", "F" and "E" for each content respectively.

# 3.1.5 LLCP Statistics

Click Status  $\rightarrow$  LLDP Statistics. The Link Layer Discovery Protocol (LLDP) Statistics page displays summary and per-port information for LLDP frames transmitted and received on the switch.



#### LLDP Statistics

LLDP Global Statistics					
Clear Refresh					
Insertions		5			
Deletions		5			
Drops		0			
Age Outs		0			

#### - LLDP Port Statistics

Port	TX Frames	Frames RX Frames			RX TLVs	RX TLVs		
	Total	Total	Discarded	Errors	Discarded	Unrecognized	Total	
GE1	0	0	0	0	0	0	0	
GE2	0	0	0	0	0	0	0	
GE3	0	0	0	0	0	0	0	
GE4	0	0	0	0	0	0	0	
GE5	0	0	0	0	0	0	0	
GE6	0	0	0	0	0	0	0	
GE7	0	0	0	0	0	0	0	
GE8	0	0	0	0	0	0	0	

LABEL	DESCRIPTION
Insertions	The number of times the complete set of information advertised by a particular MAC Service Access Point (MSAP) has been inserted into tables associated with the remote systems.
Deletions	The number of times the complete set of information advertised by MSAP has been deleted from tables associated with the remote systems.
Drops	The number of times the complete set of information advertised by MSAP could not be entered into tables associated with the remote systems because of insufficient resources.
Age Outs	The number of times the complete set of information advertised by MSAP has been deleted from tables associated with the remote systems because the information timeliness interval has expired.
Port	Interface or port number.
TX Frames Total	Number of LLDP frames transmitted on the corresponding port.
RX Frames Total	Number of LLDP frames received by this LLDP agent on the corresponding port, while the LLDP agent is enabled.
RX Frames Discarded	Number of LLDP frames discarded for any reason by the LLDP agent on the corresponding port.
RX Frames Errors	Number of invalid LLDP frames received by the LLDP agent on the corresponding port, while the LLDP agent is enabled.
RX TLVs	Number of TLVs of LLDP frames discarded for any reason by the LLDP



Discarded	agent on the corresponding port.
RX TLVs Unrecognized	Number of TLVs of LLDP frames that are unrecognized while the LLDP agent is enabled
RX Ageouts Total	Number of age out LLDP frames.

# 3.1.6 IGMP Snooping Statistics

Click Status  $\rightarrow$  IGMP Snooping Statistics in the navigation panel to view the screen as shown below.

IGMP Snooping Statistics

IGMP Snooping Statistics	
Clear Refresh	
Statistics Packets	Counter
Total RX	5015
Valid RX	4 16 9
Invalid RX	846
Other RX	0
Leave RX	0
Report RX	0
General Query RX	0
Specail Group Query RX	0
Specail Group & Source Query RX	0
Leave TX	0
Report TX	0
General Query TX	0
Specail Group Query TX	0
Specail Group & Source Query TX	0

LABEL	DESCRIPTION
Total RX	This field displays the total amount of RX
Valid RX	This field displays the total amount of valid RX.
Invalid RX	This field displays the total amount of invalid RX.
Other RX	This field displays the total amount of other RX.
Leave RX	This field displays the total amount of leave RX.
Report RX	This field displays the total amount of report RX.
General Query RX	This field displays the total amount of general query RX.
Special Group	This field displays the total amount of Special Group query RX.



Query RX	
Special Group & Source Query RX	This field displays the total amount of Special Group & Source query RX.
Leave TX	This field displays the total amount of leave TX.
Report TX	This field displays the total amount of report TX.
General Query TX	This field displays the total amount of general query TX.
Special Group Query TX	This field displays the total amount of Special Group query TX.
Special Group & Source Query TX	This field displays the total amount of Special Group & Source query TX.

# 3.2 Network

Use the Network pages to configure settings for the switch network interface and how the switch connects to a remote server to get services.

# 3.2.1 IP Address

Use the IP Setting screen to configure the switch IP address and the default gateway device. The gateway field specifies the IP address of the gateway (next hop) for outgoing traffic. The switch needs an IP address for it to be managed over the network. The factory default IP address is 192.168.1.254. The subnet mask specifies the network number portion of an IP address. The factory default subnet mask is 255.255.255.0.

Click Network  $\rightarrow$  IP Address in the navigation panel to display the screen as shown below.



IP Address		
Static ODHCP		
192.168.1.254		
255.255.255.0		
192.168.1.254		
168.95.1.1		
168.95.192.1		

Apply

#### ✓ IP Information

Information Name	Information Value
DHCP State	Disabled
Static IP Address	192.168.1.254
Static Subnet Mask	255.255.255.0
Static Gateway	192.168.1.254
Static DNS Server 1	168.95.1.1
Static DNS Server 2	168.95.192.1

LABEL	DESCRIPTION
Mode	<ul> <li>Select the mode of network connection</li> <li>Static: Enable static IP address.</li> <li>DHCP: Enable DHCP to obtain IP information from a DHCP server on the network.</li> </ul>
IP Address	Enter the IP address of your switch in dotted decimal notation for example 192.168.1.254. If static mode is enabled, enter IP address in this field.
Subnet Mask	Enter the IP subnet mask of your switch in dotted decimal notation for example 255.255.255.0. If static mode is enabled, enter subnet mask in this field.
Gateway	Enter the IP address of the gateway in dotted decimal notation. If static mode is enabled, enter gateway address in this field.
<b>DNS Server 1</b>	If static mode is enabled, enter primary DNS server address in this field.
DNS Server 2	If static mode is enabled, enter secondary DNS server address in this field.
Apply	Click <b>Apply</b> to save your changes to the switch.



# 3.2.2 IPv6 Address

Click Network  $\rightarrow$  IPv6 Address in the navigation panel to display the screen as shown below.

IPv6 Address		
IPv6 Address Setting		
Auto Configuration	O Disable      enable	
IPv6 Address	:: / 0	
Gateway	::	
DHCPv6 Client	Disable      Enable	

Apply

IPv6 Information		
Information Name	Information Value	
Auto Configuration	Enabled	
IPv6 In Use Address	fe80::2e0:4cff:fe00:0 / 64	
IPv6 In Use Router	::	
IPv6 Static Address	fe80::2e0:4cff:fe00:0 / 0	
IPv6 Static Router	::	
DHCPv6 Client	Disabled	

The following table describes the labels in this screen.

#### IPv6 Information Filed:

LABEL	DESCRIPTION
Auto Configuration	Select Enable or Disable this function.
IPv6 Address	Enter the IPv6 address of your switch. If auto configuration mode is disabled, enter IPv6 address in this field.
Gateway	Enter the IP address of the gateway in dotted decimal notation. If auto configuration mode is disabled, enter IPv6 gateway address in this field.
DHCPv6 Client	<ul> <li>DHCPv6 client state.</li> <li>Enable: Enable DHCPv6 client function.</li> <li>Disable: Disable DHCPv6 client function</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the switch.



#### IPv6 Address Setting Filed:

LABEL	DESCRIPTION
Auto Configuration	It displays whether the auto configuration function is opened or not.
IPv6 In Use Address	It displays the in use address information of IPv6.
IPv6 In Use Router	It displays the in use router information of IPv6.
IPv6 Static Address	It displays the static address of IPv6.
IPv6 Static router	It displays the static router of IPv6.
DHCPv6 Client	It displays the DHCPv6 Client Status.

# 3.2.3 Management VLAN

Click  $\textbf{Network} \rightarrow \textbf{Management VLAN}$  in the navigation panel to display the screen as shown below.

nagement VLAN Setting				
Management VLAN	default(1) V			
FE.1				
Management VLAN State				
Config	Name		Config Value	
		4		

LABEL	DESCRIPTION
Management VLAN	This allows the entry of a VLAN from which a management station will be allowed to manage the device using TCP/IP (in-band via web manager or Telnet). Management stations that are on VLANs other than the one selected here will not be able to manage the Switch. The default management VLAN is VLAN 1.



# 3.2.4 Time Settings

Click **Network**  $\rightarrow$  **Time Settings** in the navigation panel to display the screen as shown below.

System Time	
System Time Setti	ng
Enable SNTP	● Disable ○ Enable
Manual Time	Year 2000 V Month Jan V Day 1 V Hours 0 V Minutes 0 V Seconds 0 V
Time Zone	None
Daylight Saving Time	Disable V
Daylight Saving Time Offset	60 (1 - 1440) Minutes
Recurring From	Day Sun V Week 1 V Month Jan V Hours 0 V Minutes 0 V
Recurring To	Day Sun 🗸 Week 1 🗸 Month Jan 🗸 Hours 0 🗸 Minutes 0 🗸
Non-recurring From	Year 2000 V Month Jan V Date 1 V Hours 0 V Minutes 0 V
Non-recurring To	Year 2000 V Month Jan V Date 1 V Hours 0 V Minutes 0 V

Apply

System Time Informations		
Information Name	Information Value	
Current Date/Time	13:25:07 DFL(UTC+8) Jan 01 2000	
SNTP	Disabled	
Time zone	UTC+8	
Daylight Saving Time	Disabled	
Daylight Saving Time Offset		
From		
То		

LABEL	DESCRIPTION
Enable SNTP	Select the radio button to enable or disable using SNTP server.
Manual Time	Specify static time.
Time Zone	Select a time zone



Daylight Saving Time	<ul> <li>Select the mode of daylight saving time.</li> <li>Disable: Disable daylight saving time.</li> <li>Recurring: Using recurring mode of daylight saving time.</li> <li>Non-Recurring: Using non-recurring mode of daylight saving time.</li> <li>USA: Using daylight saving time in the United States that starts on the second Sunday of March and ends on the first Sunday of November</li> <li>European: Using daylight saving time in the Europe that starts on the last Sunday</li> </ul>		
Daylight Saving Time Offset	Specify the adjust offset of daylight saving time.		
Recurring From	Specify the starting time of recurring daylight saving time. This field available when selecting "Recurring" mode.		
Recurring To	Specify the ending time of recurring daylight saving time. This field available when selecting "Recurring" mode.		
Non-recurring From	Specify the starting time of non-recurring daylight saving time. This field available when selecting "Non-Recurring" mode.		
Non recurring To	Specify the ending time of recurring daylight saving time. This field available when selecting "Non-Recurring" mode.		
Apply	Click <b>Apply</b> to save your changes to the switch.		

# 3.2.5 SNTP Settings

Click **Network**  $\rightarrow$  **Time Settings** in the navigation panel to display the screen as shown below.

SNTP Server Settings			
SNTP/NTP Server Address		( X.X.X.X or Hostname)	]
Server Port	123	(1 - 65535   Default : 123 )	
Apply <ul> <li>SNTP Server Informations</li> </ul>			
Information Norm	e	Inform	ation Value
Information Name			
SNTP Server Addre	SS		
SNTP Server Addre	iss t	123	

LABEL	DESCRIPTION
SNTP/NTP Server Address	Input IP address or hostname of time server.



Server port	Input time server port number. Default is 123.
-------------	--

### 3.3 Switching

Use the Switching pages to configure settings for the switch ports, trunk, Layer 2 protocols and other switch features.

### 3.3.1 Port Setting

This page allow user to configure switch port settings and show port current status.

Click **Switching**  $\rightarrow$  **Port Setting** in the navigation panel to display the screen as shown below.

Port Setting				
Port settings				
Port Select	Enabled	Speed	Duplex	Flow Control
Select Ports -	● Enabled ○ Disabled	Auto 🗸	Auto 🗸	OEnabled  OEnabled

Apply

Port Status	5						
Port	Description	Enable State	Link Status	Speed	Duplex	FlowCtrl Config	FlowCtrl Status
GE1	Edit	Enabled	DOWN	Auto	Auto	Disabled	Disabled
GE2	Edit	Enabled	DOWN	Auto	Auto	Disabled	Disabled
GE3	Edit	Enabled	DOWN	Auto	Auto	Disabled	Disabled
GE4	Edit	Enabled	DOWN	Auto	Auto	Disabled	Disabled
GE5	Edit	Enabled	DOWN	Auto	Auto	Disabled	Disabled
GE6	Edit	Enabled	DOWN	Auto	Auto	Disabled	Disabled
GE7	Edit	Enabled	DOWN	Auto	Auto	Disabled	Disabled

LABEL	DESCRIPTION
Port Select	Select the port(s) from the list box that you will change the port settings for.
Enabled	Select <b>Enable</b> from the drop-down box to enable a port. The factory default for all ports is enabled. A port must be enabled for data transmission to occur. Select <b>Disable</b> to not use a port.
Speed	<ul> <li>Port speed capabilities:</li> <li>Auto: Auto speed with all capabilities.</li> <li>Auto-10M: Auto speed with 10M ability only.</li> </ul>



	Auto-100M: Auto speed with 100M ability only.
	• Auto-1000M: Auto speed with 1000M ability only.
	Auto-10/100W: Auto speed with 10/100W ability.
	10WI: Force speed with 100M ability.
	<b>100W:</b> Force speed with 1000M ability.
	Selecting Auto (outo pogotiation) allows one part to pogotiate with a poor
	Selecting Auto (auto-negotiation) allows one port to negotiate with a peer
	both and support When auto-negotiation is turned on a port on the
	switch negotiates with the neer automatically to determine the connection
	speed and dunley mode. If the peer port does not support auto-negotiation
	or turns off this feature, the switch determines the connection speed by
	detecting the signal on the cable and using half duplex mode. When the
	switch's auto-negotiation is turned off, a port uses the pre-configured
	speed and duplex mode when making a connection, thus requiring you to
	make sure that the settings of the peer port are the same in order to
	connect.
	Port duplex capabilities:
Duploy	Auto: Auto duplex with all capabilities.
Duplex	Half: Auto speed with 10/100M ability only.
	Full: Auto speed with 10/100/1000M ability only.
	A concentration of traffic on a port decreases port bandwidth and
	overflows buffer memory causing packet discards and frame losses. 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.
Flow Control	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 buriers fill. Back Pressure now control is typically
	(mimicking a state of packet collision) causing the sending port to
	temporarily stop sending signals and resend later
	Select " <b>Enabled</b> " to enable it. Or select " <b>Disabled</b> " to disable it.
Apply	Click <b>Apply</b> to save your changes to the switch.
Flow Control	The Config column displays if Flow Control has been configured to be
Config	turned On or Off for the port.
Flow Control Status	The column displays the port's current Flow Control status.

# 3.3.2 Port Mirroring

The Mirror function copies all the packets that are transmitted by the source port to the destination port. It allows administrators to analyze and monitor the traffic of the monitored ports.



The Mirror Configuration steps are as follows:

Click Switching  $\rightarrow$  Mirror  $\rightarrow$  Local Mirror Setting in the navigation panel to display the screen as shown below.

Mirror Setting	
Mirror Setting	
Session ID	Select Session
Monitor session state	Disable V
Destination Port	GE1 V
allow-ingress	Disable V
Sniffer RX Ports	Select RX Ports 🔹
Sniffer TX Ports	Select TX Ports 🔹

Apply

▼ Mirror Status

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

LABEL	DESCRIPTION
Session ID	Select mirror session ID
Monitor session state	Select mirror session state : port-base mirror or disable
<b>Destination Port</b>	Select mirror session destination port
Allow-ingress	Select destination port ingress state.
Sniffer Rx ports	Select mirror session source rx ports only select portbased-enabled state, this field is valid only when " <b>Monitor session state</b> " is port-base mirror
Sniffer Tx ports	Select mirror session source tx ports only select portbased-enabled state, this field is valid only when " <b>Monitor session state</b> " is port-base mirror
Apply	Click <b>Apply</b> to save your changes to the switch.



# 3.3.3 Link Aggregation

# 3.3.3.1 LAG Setting

Click Switching  $\rightarrow$  Link Aggregation  $\rightarrow$  LAG Setting in the navigation panel to view the screen as shown below.

LAG Setting						
LAG Setting						
Load Balance Algorithm	●MAC Address ○IP/MAC Address					
Apply						
▼ LAG Information						
Informat	ion Name		Information Value			
Load Balance Algorithm		src-dst-mac				

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
Load Balance Algorithm	<ul> <li>Select the LAG load balance distribution algorithm</li> <li>MAC Address: Based on source and destination MAC address for all packets</li> <li>IP/MAC Address: Based on source and destination IP addresses for IP packet, and source and destination MAC address for non-IP packets.</li> </ul>	
Apply	Click <b>Apply</b> to save your changes to the switch.	

# 3.3.3.2 LAG Management

Click Switching  $\rightarrow$  Link Aggregation  $\rightarrow$  LAG Management in the navigation panel to view the screen as shown below.



#### LAG Management

LAG	Mana	aeme	ent

LAG	Name	Туре	Ports
LAG1 🗸		● Static ○LACP	Select Ports 🗸

Apply

#### LAG Management Information

LAG	Name	Туре	Link State	Active Member	Standby Member	Modify
LAG1			Not Present	-	-	Edit
LAG2			Not Present	-	-	Edit
LAG3			Not Present	-	-	Edit
LAG4			Not Present	-	-	Edit
LAG5			Not Present	-	-	Edit
LAG6			Not Present	-	-	Edit
LAG7			Not Present	-	-	Edit
LAG8			Not Present	-	-	Edit

#### The following table describes the labels in this screen.

#### LAG Management Setting Field:

LABEL	DESCRIPTION		
LAG	Select the LAG to be configured.		
Name	LAG port description		
Туре	<ul> <li>Select the type of the LAG</li> <li>Static: The group of ports assigned to a static LAG are always active members.</li> <li>LACP: The group of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.</li> </ul>		
Ports	<ul> <li>Select the trunk member ports in this field. There are the following limitations for choosing the member ports:</li> <li>All ports in a LAG must be of the same media type.</li> <li>To add a port to the LAG, it cannot belong to any VLAN except the default VLAN.</li> <li>Ports in a LAG must not be assigned to another LAG.</li> <li>Ports in a LAG must not be a mirroring port.</li> <li>No more than eight ports are assigned to a LAG.</li> <li>When a port is added to a LAG, the configuration of the LAG is applied to the port. When the port is removed from the LAG, its original configuration is reapplied.</li> <li>There could be at most 8 member ports in a trunk.</li> </ul>		
Apply	Click <b>Apply</b> to save your changes to the switch.		


### LAG Management Information Field:

LABEL	DESCRIPTION
LAG	LAG Name
Name	LAG port description
Туре	<ul> <li>Select the type of the LAG</li> <li>Static: The group of ports assigned to a static LAG are always active members.</li> <li>LACP: The group of ports assigned to dynamic LAG are candidate ports. LACP determines which candidate ports are active member ports.</li> </ul>
Link State	LAG port link status
Active Member	Active member ports of the LAG
Standby Member	Inactive or candidate member ports of the LAG
Modify	Click "Edit" button to edit LAG.

# 3.3.3.3 LAG Port Settings

Click Switching  $\rightarrow$  Link Aggregation  $\rightarrow$  LAG Port settings in the navigation panel to view the screen as shown below.

		ing							
G Port setti	ngs t	Enabl	ed	Speed	Flow Co	ntrol			
elect LAGs	•	Enabled C	Disabled	Auto V	OEnabled @	Disabled			
pply									
LAG Port St	atus								
LAG	De	scription	Port Type	Enable State	Link Status	Speed	Duplex	FlowCtrl Config	FlowCtrl Status
				Enabled		Auto	Auto	Disabled	Dischied
LAG1						Auto	Auto	Disabled	Disabled
LAG1 LAG2				Enabled		Auto	Auto	Disabled	Disabled
LAG1 LAG2 LAG3				Enabled Enabled		Auto Auto Auto	Auto Auto	Disabled Disabled	Disabled Disabled Disabled
LAG1 LAG2 LAG3 LAG4				Enabled Enabled Enabled		Auto Auto Auto Auto Auto	Auto Auto Auto Auto Auto	Disabled Disabled Disabled Disabled	Disabled Disabled Disabled Disabled
LAG1 LAG2 LAG3 LAG4 LAG5				Enabled Enabled Enabled Enabled		Auto Auto Auto Auto Auto	Auto       Auto       Auto       Auto       Auto       Auto	Disabled Disabled Disabled Disabled Disabled	Disabled Disabled Disabled Disabled Disabled
LAG1 LAG2 LAG3 LAG4 LAG5 LAG6				Enabled Enabled Enabled Enabled Enabled		Auto Auto Auto Auto Auto Auto	Auto Auto Auto Auto Auto Auto Auto Auto	Disabled Disabled Disabled Disabled Disabled Disabled	Disabled Disabled Disabled Disabled Disabled Disabled



The following table describes the labels in this screen.

LAG Port Setting Field:

LABEL	DESCRIPTION
LAG	Select the LAG to be configured.
Name	LAG port description
Enabled	<ul> <li>Port admin state.</li> <li>■ Enabled: Enable the port.</li> <li>■ Disabled: Disable the port.</li> </ul>
Speed	<ul> <li>Port speed capabilities.</li> <li>Auto: Auto speed with all capabilities</li> <li>Auto-10M: Auto speed with 10M ability only</li> <li>Auto-100M: Auto speed with 100M ability only</li> <li>Auto-100M: Auto speed with 1000M ability only</li> <li>Auto-10M/100M: Auto speed with 10M/100M</li> <li>abilities</li> <li>10M: Force speed with 10M ability</li> <li>100M: Force speed with 100M ability</li> <li>1000M: Force speed with 100M ability</li> </ul>
Flow Control	<ul> <li>Port flow control.</li> <li>Enabled: Enable flow control ability.</li> <li>Disabled: Disable flow control ability.</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the switch.

### LAG Port Status Field:

LABEL	DESCRIPTION
LAG	LAG Name
Description	LAG port description
Port Type	Member port media type
Enable	LAG port admin state
Link Status	LAG port link status
Speed	Current LAG port speed
Duplex	Current LAG port duplex
Flow Control Config	LAG port flow control configuration
Flow Control Status	Current LAG port flow control state



# 3.3.3.4 LACP Setting

Click Switching  $\rightarrow$  Link Aggregation  $\rightarrow$  LACP Setting to display the screen shown next. LACP: Link Aggregation Control Protocol.

CP Setting		
System Priority	32768 (1-65535)	
		_
PPY		
LACP Information		
LACP Information		
LACP Information	tion Name	Information Value

The following table describes the labels in this screen.

LAG Setting Field:

LABEL	DESCRIPTION
System Priority	Configure the system priority of LACP. This decides the system priority field in LACP PDU.
Apply	Click <b>Apply</b> to save your changes to the Switch.

LAG Information Field:

LABEL	DESCRIPTION
System Priority	LACP system priority value

# 3.3.3.5 LACP Port Setting

Click Switching  $\rightarrow$  Link Aggregation  $\rightarrow$  LACP Port Setting to display the screen shown next.



LACR	Port	Softing	
LACE	FUL	Setting	

LACP Port Settings		
Port Select	Priority	Timeout
Select Ports 🔹	1 (1-65535)	●Long ○Short

Apply

#### - LACP Port Information

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

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port Select	Select one or multiple ports to configure
Priority	Enter the LACP priority value of the port
Timeout	<ul> <li>Select the periodic transmissions of LACP PDUs.</li> <li>Long: Transmit LACP PDU with slow periodic (30s).</li> <li>Short: Transmit LACPP DU with fast periodic (1s).</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the Switch.

## 3.3.4 VLAN Management

A virtual local area network, virtual LAN or VLAN, is a group of hosts with a common set of requirements that communicate as if they were attached to the same broadcast domain, regardless of their physical location. A VLAN has the same attributes as a physical local area network (LAN), but it allows for end stations to be grouped together even if they are not located on the same network switch. VLAN membership can be configured through software instead of physically relocating devices or connections.



# 3.3.4.1 Create VLAN

This page allow user to add, edit or delete VLAN settings.

Click Switching  $\rightarrow$  VLAN Management  $\rightarrow$  Create VLAN to access this screen below to configure and view VLAN parameters for the switch.

N Setting				
VLAN LIST	VLAN Action	VLAN Name Prefix		
	Add O Delete			
pply				
Apply VI AN Table				
VLAN Table	IEXT LAST			
VLAN Table	IDT LAST	VLAN Name	VLAN Typ	ie Mo

The following table describes the related labels in this screen.

LABEL	DESCRIPTION
VLAN LIST	Specify the VLAN list to apply the operation (add/delete/edit).
VLAN Action	Select the action of operation, To add/delete/edit the VLANs
VLAN Name Prefix	Specify the prefix string of the VLAN name for new created VLANs. This field is only available with add action.
Apply	Click <b>Apply</b> to save your changes to the Switch.

### 3.3.4.2 Interface Settings

This page allow user to configure VLAN Interface related settings.

Click Switching  $\rightarrow$  VLAN Management  $\rightarrow$  Interface Settings to access the screen below.

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.



#### Interface Settings

Edit Interface Setting				
Port Select	Interface VLAN Mode	PVID	Accepted Type	Ingress Filtering
Select Ports -	● Hybrid ○ Access ○ Trunk	1 (1 - 4094)	● All ○ Tag Only ○ Untag Only	●Enabled ○Disabled

Apply

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

The following table describes the labels in this screen.

LABEL	DESCRIPTION		
Port Select	Select specified port or all ports to configure Interface Settings.		
Interface VLAN Mode	<ul> <li>Select the VLAN mode of the interface.</li> <li>Hybrid: Support all functions as defined in IEEE 802.1Q specification.</li> <li>Access: Accepts only untagged frames and join an untagged VLAN.</li> <li>Trunk: An untagged member of one VLAN at most, and is a tagged member of zero or more VLANs.</li> </ul>		
PVID	Specify the port-based VLAN ID (1-4094). It's only available with Hybrid and Trunk mode.		
Accepted Type	Specify the acceptable-frame-type of the specified interfaces. It's only available with Hybrid mode.		
Ingress Filtering	Specify the status of ingress filtering. It's only available with Hybrid mode.		
Apply	Click Apply to save your changes to the Switch.		

## 3.3.4.3 Port to VLAN

This page allow user to configure VLAN port setting.

Click Switching  $\rightarrow$  VLAN Management  $\rightarrow$  Port to VLAN to access the screen below.



Port to VLAN

Port to VLAN Settings			
LAN ID	1 🗸		
Port	Interface VLAN Mode	Membership	PVID
GE1	Trunk	○ Forbidden ◎ Excluded ○ Tagged ◉ Untagged	×
GE2	Trunk	○ Forbidden ◎ Excluded ○ Tagged ◉ Untagged	<ul> <li>Image: A start of the start of</li></ul>
GE3	Trunk	○ Forbidden ◎ Excluded ○ Tagged ◉ Untagged	$\checkmark$
GE4	Trunk	○ Forbidden ○ Excluded ○ Tagged ● Untagged	<ul> <li>Image: A start of the start of</li></ul>
GE5	Trunk	○ Forbidden ◎ Excluded ○ Tagged ◉ Untagged	<ul> <li>Image: A start of the start of</li></ul>
GE6	Trunk	○ Forbidden ◎ Excluded ○ Tagged ◉ Untagged	
GE7	Trunk	○ Forbidden ◎ Excluded ○ Tagged ◉ Untagged	<b>V</b>
GE8	Trunk	○ Forbidden ○ Excluded ○ Tagged ◉ Untagged	$\checkmark$
GE9	Trunk	○ Forbidden ◎ Excluded ○ Tagged ◉ Untagged	<ul> <li>Image: A start of the start of</li></ul>
GE10	Trunk	○ Forbidden ○ Excluded ○ Tagged   Untagged	$\checkmark$
GE11	Trunk	○ Forbidden ◎ Excluded ○ Tagged ● Untagged	~

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
VLAN ID	Select specified VLAN ID to configure Port to VLAN Settings.	
Interface VLAN Mode	Display the interface VLAN mode of this port.	
Membership	<ul> <li>Select the membership for this port with the specified VLAN ID.</li> <li>Forbidden: Specify the port is forbidden in the VLAN.</li> <li>Excluded: Specify the port is excluded in the VLAN.</li> <li>Tagged: Specify the port is tagged in the VLAN.</li> <li>Untagged: Specify the port is untagged in the VLAN.</li> </ul>	
PVID	Check this checkbox to select the VLAN ID to be the port-based VLAN ID for this port.	

# 3.3.4.4 Port VLAN Membership

This page allow user to configure Port VLAN Membership setting.

Click Switching  $\rightarrow$  VLAN Management  $\rightarrow$  Port VLAN Membership to access the screen below.



Use the Port VLAN Membership page to view membership information. Click "**Edit**" to edit selected port to modify the membership.

#### Port VLAN Membership

ort VLAN	Membership T	able		
Port	Mode	Administrative VLANs	Operational VLANs	Modify
GE1	Trunk	1UP	1UP	Edit
GE2	Trunk	1UP	1UP	Edit
GE3	Trunk	1UP	1UP	Edit
GE4	Trunk	1UP	1UP	Edit
GE5	Trunk	1UP	1UP	Edit
GE6	Trunk	1UP	1UP	Edit
GE7	Trunk	1UP	1UP	Edit
GE8	Trunk	1UP	1UP	Edit
GE9	Trunk	1UP	1UP	Edit
GE10	Trunk	1UP	1UP	Edit
GE11	Trunk	1UP	1UP	Edit
GE12	Trunk	1UP	1UP	Edit

LABEL	DESCRIPTION
Port	Display the interface of this port entry.
Mode	Display the interface VLAN mode of this port.
Administrative VLANs	Display the administrative VLAN list of this port.
Operational VLANs	Display the operational VLAN list of this port.
Modify	Click the 'Edit' Button to edit the VLAN membership of this port.





The following table describes the labels in "Edit" screen.

LABEL	DESCRIPTION
Select VLAN	Select the left available VLANs to add or the right used VLANs to delete for this port.
Tagging	Select the VLAN membership of the specified left VLANs for this port.
PVID	Check this checkbox to select the VLAN ID to be the port-based VLAN ID for this port.

## 3.3.4.5 Voice VLAN

This page allow user to configure Voice VLAN Properties setting.

Click Switching  $\rightarrow$  VLAN Management  $\rightarrow$  Voice VLAN  $\rightarrow$  Properties to access the screen below.



Properties	Properties		
Properties			
Voice VLAN State	○ Enabled		
Voice VLAN Id	Enable		
Remark Cos/802.1p	6 🗸		
1p remark	○ Enabled		
Aging Time(30-65536 min)	1440		

Apply

#### ▼ Voice VLAN State

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

The following table describes the labels in this screen.

LABEL	DESCRIPTION
State	Select Voice VLAN state Enable –Voice VLAN is enabled Disable –Voice VLAN is disabled
Voice VLAN ID	Select Voice VLAN ID
Cos/802.1p	Select a value of vpt that will be advertised by LLDP-MED
1p remark	Select 1p remark state
Aging Time	Select value of aging time

# 3.3.4.6 Telephony OUI Mac setting

This page allow user to configure Voice VLAN Properties setting.

 $\label{eq:Click Switching} \rightarrow \text{VLAN Management} \rightarrow \text{Voice VLAN} \rightarrow \text{Telephony OUI Mac setting to} \\ \text{access the screen below.}$ 



Telephony OUI Mac setting	
Voice VLAN OUI Setting	
OUI Address	00:00:00
Description	
Add	

✓ Voice VLAN OUI Group			
	OUI Address	Description	Modify
	00:E0:BB	3COM	Edit Delete
	00:03:6B	Cisco	Edit Delete
	00:E0:75	Veritel	Edit Delete
	00:D0:1E	Pingtel	Edit Delete
	00:01:E3	Siemens	Edit Delete
	00:0F:E2	H3C	Edit Delete
	00:09:6E	Avaya	Edit Delete

The following table describes the labels in this screen.

LABEL	DESCRIPTION
OUI Address	Select oui address
Description	Description of the specified MAC address to the voice VLAN OUI table

# 3.3.4.7 Telephony OUI Port Setting

This page allow user to configure Voice VLAN Properties setting.

Click Switching  $\rightarrow$  VLAN Management  $\rightarrow$  Voice VLAN  $\rightarrow$  Telephony OUI Port Setting to access the screen below.



#### **Telephony OUI Port Setting**

Voice VLAN Port Setting			
Port	State	Cos Mode	
Select Ports -	○Enabled	⊖All ●Src	

Apply

•	• Voice VLAN Port State				
	Port	State	Cos Mode		
	GE1	Disabled	Src		
	GE2	Disabled	Src		
	GE3	Disabled	Src		
	GE4	Disabled	Src		
	GE5	Disabled	Src		
	GE6	Disabled	Src		
	GE7	Disabled	Src		
	GE8	Disabled	Src		

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	Ingress/Egress type value
Cos Mode	Select port cos mode Src QoS attributes are applied to packets with OUIs in the source MAC address. All QoS attributes are applied to packets that are classified to the Voice VLAN.

## 3.3.5 EEE

# 3.3.5.1 SVLAN Setting

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

Click  $\textbf{Switching} \rightarrow \textbf{EEE}$  to access the screen below.



EEE Setup			
EEE Port settings			
Port	Enable		
Select Ports 🔹	⊖Enabled		
Apply			
▼ EEE Enable Status			
	Port	EEE State	
GE9		Disabled	
GE10		Disabled	
GE11		Disabled	
GE12		Disabled	
GE13		Disabled	
GE14		Disabled	
GE15		Disabled	

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	<ul> <li>Port EEE function.</li> <li>Enabled: Enable EEE function</li> <li>Disabled: Disable EEE function</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.3.6 Multicast

# 3.3.6.1 Properties

Click Switching  $\rightarrow$  Multicast  $\rightarrow$  Properties in the navigation panel to bring up the screen as shown next.



Properties				
PropertiesSetting				
Unknown Multicast Action	○Drop ●Flood ○Router Port			
IPv4 Forward Method	●MAC ○Src-Dst-Ip			
Apply				
<ul> <li>Properties Informations</li> </ul>				
Information Name		Information Value		
Unknown Multicast Action		Flood		

MAC

The following table describes the labels in this screen.

Forwarding Method For IPv4

LABEL	DESCRIPTION
Unknown Multicast Action	<ul> <li>Set the unknown multicast action</li> <li>Drop: drop the unknown multicast data.</li> <li>Flood: flood the unknown multicast data.</li> <li>Router port: forward the unknown multicast data to router port.</li> </ul>
IPv4 Forward Method	<ul> <li>Set the ipv4 multicast forward method.</li> <li>MAC: forward method dmac+vid.</li> <li>Src-Dst-Ip: forward method dip+sip.</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the switch.

## 3.3.6.2 IGMP Snooping

Use the Switching pages to configure settings for the switch network interface and how the switch connects to a remote server to get services.

## 3.3.6.2.1 IGMP Setting

Click Switching  $\rightarrow$  Multicast  $\rightarrow$  IGMP Snooping  $\rightarrow$  IGMP Setting to access the screen below.



#### **IGMP Snooping**

CMD	Cnool	nina
GIVIE	31100	pilly

IGMP Snooping Status	● Enable ○ Disable
IGMP Snooping Version	⊙v2 ○v3
IGMP Snooping Report Suppression	$\odot$ Enable $\bigcirc$ Disable

Apply

# IGMP Snooping Informations

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

IGMP	Snoopin	g Table								
Entr No	y VLAN ID	IGMP Snooping Operation Status	Router Ports Auto Learn	Query Robustness	Query Interval (sec.)	Query Max Response Interval(sec.)	Last Member Query count	Last Member Query Interval (sec)	Immediate Leave	Modify
1	1	disabled	enabled	2	125	10	2	1	disabled	Edit

LABEL	DESCRIPTION
IGMP Snooping Status	<ul> <li>Set the enabling status of IGMP functionality</li> <li>Enable: Enable IGMP Snooping.</li> <li>Disable: Disable IGMP Snooping.</li> </ul>
IGMP Snooping Version	<ul> <li>Set the igmp snooping version</li> <li>v2: Only support process igmp v2 packet.</li> <li>v3: Support v3 basic and v2.</li> </ul>
IGMP Snooping Report Suppression	<ul> <li>Set the enabling status of IGMP v2 report suppression</li> <li>Enable: Enable IGMP Snooping v2 report suppression.</li> <li>Disable: Disable IGMP Snooping v2 report suppression.</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the switch.
Entry No	The IGMP entry number.
VLAN ID	The IGMP entry VLAN ID



IGMP Snooping Operation Status	<ul> <li>The enable status of IGMP VLAN functionality</li> <li>Enabled: when IGMP Snooping enable and IGMP VLAN enable and multicast filtering enable.</li> <li>Disabled: when IGMP Snooping disable or IGMP VLAN disable or multicast filtering disable.</li> </ul>
Router Ports Auto Learn	<ul> <li>Set the enabling status of IGMP router port learning</li> <li>Enable: Enable learning router port by query and PIM, DVRMP.</li> <li>Disable: Disable learning dynamic router port.</li> </ul>
Robustness Variable	The Robustness Variable allows tuning for the expected packet loss on a subnet.
Query Interval	The interval of querier send general query
Query Max Response Interval	In Membership Query Messages, it specifies the maximum allowed time before sending a responding report in units of 1/10 second.
Last Member Query count	The count that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.
Last Member Query Interval	The interval that Querier-switch sends Group-Specific Queries when it receives a Leave Group message for a group.
Immediate leave	<ul> <li>Leave the group when receive IGMP Leave message.</li> <li>Enable: Enable Fastleave.</li> <li>Disable: Disable Fastleave.</li> </ul>
Edit	Click Edit to edit the IGMP Snooping Table.



Edit		×
Edit IGMP Snooping		
VLAN ID	1	
IGMP Snooping Status	●Disable ○Enable	
Router Ports Auto Learn	⊖Disable	
Query Robustness	2 (1 - 7)	
Oper Query Robustness	2 sec	
Query Interval	125 (30 - 18000)	
Oper Query Interval	125 sec	
Query Max Response Interval	10 (5 - 20)	
Oper Query Max Response Interval	10 sec	
Last Member Query Counter	2 (1 - 7)	
Oper Last Member Query Counter	2	
Last Member Query Interval	1 (1 - 60)	
Oper Last Member Query Interval	1 sec	
Immediate Leave	●Disable ○Enable	
		Cancel Submit
		Subilit

The following table describes the labels in " $\ensuremath{\textbf{Edit}}$  " screen.

LABEL	DESCRIPTION
VLAN ID	The IGMP VLAN ID
IGMP Snooping Status	<ul> <li>The admin enable status of IGMP VLAN functionality</li> <li>Enable: IGMP VLAN enable.</li> <li>Disable: IGMP VLAN disable.</li> </ul>
Router Ports Auto Learn	<ul> <li>Set the enabling status of IGMP router port learning</li> <li>Enable: Enable learning router port by query and PIM, DVRMP.</li> <li>Disable: Disable learning dynamic router port.</li> </ul>
Robustness Variable	The Robustness Variable allows tuning for the expected packet loss on a subnet.
Query Interval	The admin query interval
Oper Query Interval	The operation query interval



Query Max Response Interval	The admin query max response interval
Oper Query Max Response Interval	The operating query max response interval
Last Member Query count	The admin last member query count
Oper Last Member Query count	The operating last member query count
Last Member Query Interval	The admin last member query interval.
Oper Last Member Query Interval	The operation last member query interval.
Immediate leave	<ul> <li>Leave the group when receive IGMP Leave message.</li> <li>Enable: Enable Fastleave.</li> <li>Disable: Disable Fastleave.</li> </ul>
Cancel	Click <b>Cancel</b> to cancel the change to switch.
Submit	Click <b>Submit</b> to submit the change to switch.

# 3.3.6.2.2 IGMP Querier Setting

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

Click Switching  $\rightarrow$  Multicast  $\rightarrow$  IGMP Snooping  $\rightarrow$  IGMP Querier Setting to access the screen below.



P Querier Setting	g		,				
VLAN ID		Querier State	Querier Version				
ect VLANs		● Disable ○ Enable	●v2 ○v3				
oply							
pply							
pply IGMP Querier Statu	IS						
pply IGMP Querier Statu	15						
oply IGMP Querier Statu VLAN ID	ıs Qu	erier State	Querier Stat	tus	Querier Versio	n	Querie

The following table describes the labels in this screen.

LABEL	DESCRIPTION
VLAN ID	Select the VLANs to configure.
Querier State	<ul> <li>Set the enabling status of IGMP Querier Election on the chose VLANs</li> <li>Enable: Enable IGMP Querier.</li> <li>Disable: Disable IGMP Querier.</li> </ul>
Snooping State	<ul> <li>Set the query version of IGMP Querier Election on the chose VLANs</li> <li>v2: Querier version 2.</li> <li>v3: Querier version 3.</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.3.6.2.3 IGMP Static Group

This page allow user to set static group for IGMP.

 $\label{eq:click} \mbox{Switching} \rightarrow \mbox{Multicast} \rightarrow \mbox{IGMP Snooping} \rightarrow \mbox{IGMP Static Group} \ \mbox{to access the screen} \ \mbox{below}.$ 



a ronn otatie oroup	) ,			
VLAN ID	Group IP Address	Member Ports		
elect VLANs	<b>•</b>	Select Ports -		
IGMP Static Groups				
VLAN ID	Group IP Addre	ss	Member Ports	Modify

The following table describes the labels in this screen.

LABEL	DESCRIPTION
VLAN ID	Select the VLANs to configure.
Group IP Address	The IP address of this group.
Member Ports	The member ports of this group.
Add	Click Add to add IGMP Group to the switch.
Edit	Click Edit to edit the IGMP Static Group.
Delete	Click Delete to edit the IGMP Static Group.

Edit		
Static Gr	oup Port Settin	ng
VLAN ID	Group Address	Include Ports Select
1	224.1.1.10	GE2, GE3

The following table describes the labels in " $\ensuremath{\textbf{Edit}}$  " screen.

LABEL	DESCRIPTION
VLAN ID	The VLAN ID of static group.
Group Address	The group address



Include Ports Select	The static member ports
Cancel	Click Cancel to cancel the change to switch.
Submit	Click Submit to submit the change to switch.

# 3.3.6.2.4 IGMP Group Table

This page allow user to browse IGMP group information of IGMP Snooping.

Click Switching  $\rightarrow$  Multicast  $\rightarrow$  IGMP Snooping  $\rightarrow$  IGMP Group Table to access the screen below.

 IGMP Group Table

 VLAN ID
 Group IP Address
 Member Ports
 Type
 Life(Sec)

 1
 224.1.1.10
 GE2-3
 Static
 - 

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
VLAN ID	The VLAN ID of this group.	
Group IP Address	The group IP address of this group.	
Member Port	The member ports of this group.	
Туре	The type of this group. Static or Dynamic.	
Life(Sec)	The life time of this group.	

## 3.3.6.2.4 IGMP Router Table

This page allow user to browse IGMP group information of IGMP Snooping.

Click Switching  $\rightarrow$  Multicast  $\rightarrow$  IGMP Snooping  $\rightarrow$  IGMP Router Table to access the screen below.



	IGMP Router Table			
•	Dynamic Router Table			
	VLAN ID	Port	Expiry Time (Sec)	

The following table describes the labels in this screen.

LABEL DESCRIPTION		
VLAN ID	The VLAN ID of this group.	
Port	The member ports of this group.	
Expiry Time (Sec)	The expiry time of this group.	

# 3.3.7 Jumbo Frame

This page allow user to configure switch port jumbo frame settings.

Click  $\textbf{Switching} \rightarrow \textbf{Jumbo Frame}$  in the navigation panel to bring up the screen as shown next.

umbo Frame Setting				
Jumbo Frame (Bytes)	1526 (1526-9216)			
Apply				
🕶 Jumbo Frame Config				
Information	n Name		Information Value	
Jumbo Frame (Bytes)		1526		

LABEL	DESCRIPTION
Jumbo Frame	Jumbo frame size. The valid range is 1526 bytes – 9216 bytes.



(Bytes)	
Apply	Click <b>Apply</b> to save any changes to the switch.

## 3.3.8 STP

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

# 3.3.8.1 STP Global Setting

Use the SPT Global Setting screen to activate one of the STP modes on the switch.

#### Click Switching $\rightarrow$ STP $\rightarrow$ STP Global Setting.

STP Global Setting		
Global Setting		
Enabled	Enabled      Disabled	
BPDU Forward	● flooding ○ filtering	
PathCost Method	⊖ short ● long	
Force Version	RSTP-Operation V	

Apply

▼ STI	• STP Informations		
	Information Name	Information Value	
	STP	Enabled	
	BPDU Forward	flooding	
	Cost Method	long	
	Force Version	RSTP-Operation	

LABEL	DESCRIPTION	
Enabled	Specify the STP status to be enabled/disabled on the switch.	
BPDU Forward	Specify the BPDU forwarding action when the global STP is disabled.	
Path Cost Method	Specify the Cost Method of STP.	
Force Version	<ul> <li>Set the operating mode of STP:</li> <li>STP-Compatible: IEEE 802.1D STP operation.</li> <li>RSTP-Operation: IEEE 802.1w operation.</li> </ul>	



GE5

GE6

GE7

GE8

Enable

Enable

Enable

Enable

Apply	Click Apply to save your changes to the switch.

# 3.3.8.2 STP Port Setting

This page allow user to configure general setting of STP port and browser CIST port status.

# $\label{eq:click} \textbf{Click Switching} \rightarrow \textbf{STP} \rightarrow \textbf{STP Port Setting}.$

TP Port Setting							
Port Select	Path Cost (0 = Auto)	Edge Port	P2P MAC	Migrate			
elect Ports	• 0	No 🗸	Yes 🗸				
CIST Port Status	Adm	in Enable		Path	Cost	Edge Port	P2P MAC
GE1	Enable		0			No	Yes
GE2	Enable		0			No	Yes
GE3	Enable		0			No	Yes

No

No

No

No

Yes

Yes

Yes

Yes

0

0

0

0

LABEL	DESCRIPTION				
Port Select	Select the port(s) to change spanning tree protocol settings for.				
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.				
Edge Port	<ul> <li>Set the edge port configuration:</li> <li>No: Force to false state ( as link to a bridge).</li> <li>Yes: Force to true state ( as link to a host).</li> </ul>				
P2P MAC	Set the Point-to-Point port configuration: No: Force to false state.				



	■ Yes: Force to true state.
Migrate	Force to try to use the new MST/RST BPDUs, and hence to test the hypothesis that all legacy systems that do not understand the new BPDU formats have been removed from the LAN segment on the port(s).
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.3.8.3 STP Bridge Setting

 $\label{eq:click} \textbf{Click Switching} \rightarrow \textbf{STP} \rightarrow \textbf{STP Bridge Setting}.$ 

STP Bridge Settin	g
-------------------	---

STP Bridge Setting	
Priority	32768 🗸
Max Hops	20 (1-40)
Forward Delay	15 (4-30)
Max Age	20 (6-40)
Tx Hold Count	6 (1-10)
Hello Time	2 (1-10)

Apply

#### STP Bridge Information

Information Name	Information Value	
Priority	32768	
Max Hops	20	
Forward Delay	15	
Max Age	20	
Tx Hold Count	6	
Hello Time	2	



#### STP Bridge Status Information Name Information Value Bridge Identifier 32768/ 0/00:E0:4C:00:00:00 Designated Root Bridge 32768/ 0/00:E0:4C:00:00:00 Root Path Cost 0 32768/ 0/00:E0:4C:00:00:00 **Designated Bridge** 0/0 Root Port Remainging Hops 20 Last Topology Change 6897

The following table describes the labels in this screen.

LABEL	DESCRIPTION			
Priority	Set the STP Bridge Priority in the instance.			
Max Hops	Set the value of the maximum number of hops in the region.			
Forward Delay	Set the delay time an interface takes to converge from blocking state to forwarding state.			
Max Age	Set the time any switch should wait before trying to change the STP topology after unhearing Hello BPUD.			
Tx Hold Count	Set the Transmit Hold Count used to limit BPDU transmission rate.			
Hello Time	Set the interval between periodic transmissions of BPDU by Designated Ports.			
Apply	Click Apply to save your changes to the switch.			

# 3.3.8.4 STP Port Advanced (CIST Port) Setting

This page allow user to configure gener setting of STP CIST port and browser CIST port status.

Click Switching  $\rightarrow$  STP  $\rightarrow$  STP Port Advanced Setting.



CIST Port Setting	
Port Select	Priority
Select Ports 🔹	128 🗸

Apply

STP Port Status									
Port	Indentifier (Priority / Port Id)	Path Cost Conf/Oper	Designated Root Bridge	Root Path Cost	Designated Bridge	Edge Port Conf/Oper	P2P MAC Conf/Oper	Port Role	Port State
GE1	128 / 1	0 / 20000	0 / 00:00:00:00:00:00	0	0 / 00:00:00:00:00:00	No / No	Auto / No	Disabed	Disabled
GE2	128 / 2	0 / 20000	0 / 00:00:00:00:00:00	0	0 / 00:00:00:00:00:00	No / No	Auto / No	Disabed	Disabled
GE3	128 / 3	0 / 20000	0 / 00:00:00:00:00:00	0	0 / 00:00:00:00:00:00	No / No	Auto / No	Disabed	Disabled
GE4	128 / 4	0 / 20000	0 / 00:00:00:00:00:00	0	0 / 00:00:00:00:00:00	No / No	Auto / No	Disabed	Disabled
GE5	128 / 5	0 / 20000	0 / 00:00:00:00:00:00	0	0 / 00:00:00:00:00:00	No / No	Auto / No	Disabed	Disabled
GE6	128 / 6	0 / 20000	0 / 00:00:00:00:00:00	0	0 / 00:00:00:00:00:00	No / No	Auto / No	Disabed	Disabled
GE7	128 / 7	0 / 20000	0 / 00:00:00:00:00:00	0	0 / 00:00:00:00:00:00	No / No	Auto / No	Disabed	Disabled

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port Select	Select the port list to specify which ports should apply this setting.
Priority	Set the Port Priority to the selected ports in the CIST instance.
Apply	Click Apply to save your changes to the switch.

# 3.3.8.5 STP Statistics

This page allow user to browser general statistics of STP.

### Click Switching $\rightarrow$ STP $\rightarrow$ STP Statistics.



#### STP Statistics

#### ▼ STP Statistics

Port	Configuration BDPUs Received	TCN BDPUs Received	Configuration BDPUs Transmitted	TCN BDPUs Transmitted
GE1	0	0	0	0
GE2	0	0	0	0
GE3	0	0	0	0
GE4	0	0	0	0
GE5	0	0	0	0
GE6	0	0	0	0
GE7	0	0	0	0
GE8	0	0	0	0
GE9	0	0	0	0
GE10	0	0	0	0
GE11	0	0	0	0
GE12	0	0	0	0

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	It displays the port number.
Configuration BDPUs Received	It displays the configuration BDPUs received.
TCN BDPUs Received	It displays the TCN BDPUs received.
Configuration BDPUs Transmitted	It displays the configuration BDPUs transmitted.
TCN BDPUs Transmitted	It displays the Multiple Spanning Tree Protocol (MSTP) BDPUs transmitted.

## 3.4 MAC Address Table

Use the MAC Address Table pages to show dynamic MAC table and configure settings for static MAC entries.



### 3.4.1 Static MAC Setting

Click Status  $\rightarrow$  MAC Address Table  $\rightarrow$  Static MAC Setting in the navigation panel to bring up the screen as shown next.

Static MAC		
Static MAC Setting		
MAC Address	VLAN	Port
00:00:00:00:00	default 🗸	GE1 V

Add

#### → Static MAC Status

N	lo.	MAC Address	VLAN	Port	Delete
1		00:E0:4C:00:00:00	default(1)	CPU	
2		00:00:00:00:11	default(1)	GE1	Delete

The following table describes the labels in this screen.

LABEL	DESCRIPTION
MAC Address	Enter the MAC address in valid MAC address format, that is, six hexadecimal character pairs. Static MAC addresses do not age out.
VLAN	Enter the VLAN identification number the MAC address belongs to.
Туре	<ul> <li>There are two types of MAC entry:</li> <li>Unicast: add a unicast MAC entry.</li> <li>Multicast: add a multicast MAC entry.</li> </ul>
Port	If Type is unicast, select the port number of the MAC entry; If Type is multicast, select the port list of the MAC entry.
Add	Click Add to add any port into the static MAC address table.
No.	This is the index number for the MAC address forwarding entries.
Delete	To delete any selected MAC address entries.

## 3.4.2 Dynamic Address Setting

Click Status  $\rightarrow$  MAC Address Table  $\rightarrow$  Dynamic Address Setting in the navigation panel to bring up the screen as shown next.



Dynamic Address Setting					
Dynamic Address Setting					
Aging Time 300 (Range: 10 - 630)					
Apply					
▼ Dynamic Address Status					
Information Name Information Value					
Aging time 300					

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Aging Time	(10 - 630) The Dynamic MAC address aging out value
Apply	Click Apply to save your changes to the switch.

# 3.4.3 Dynamic Learned

Click Status  $\rightarrow$  MAC Address Table  $\rightarrow$  Dynamic Learned in the navigation panel to bring up the screen as shown next.

Dynamic Learned						
Port         GE1           VLAN         default           MAC Address         00:00:00:00:00						
View Clear						
▼ MAC Address Information						
FIRST PREV 1 NEXT LAST						
MAC Address	VLAN	Туре	Port			
00:1F:16:2A:D2:98	default(1)	Dynamic	GE15	Add to Static MAC table		
Total Entries:1						



LABEL	DESCRIPTION
Port	Select the port number to show or clear dynamic MAC entries. If not select any port, VLAN and MAC address, the whole dynamic MAC table will be displayed or cleared.
VLAN	This is the VLAN group to which the MAC address belongs. Select the VLAN to show or clear dynamic MAC entries. If not select any port, VLAN and MAC address, the whole dynamic MAC table will be displayed or cleared.
MAC Address	This field displays the MAC address that will be forwarded. Select the MAC address to show or clear dynamic MAC entries. If not select any port, VLAN and MAC address, the whole dynamic MAC table will be displayed or cleared.
View	Click the View button to display the logs according the criteria specified in the fields above.
Clear	Click this button to remove any dynamically learned MAC address forwarding entries.
Туре	This shows whether the MAC address is <b>Dynamic</b> (learned by the Switch) or <b>Static Unicast</b> (manually entered in the <b>Static MAC Forwarding</b> screen).
Port	This field displays the port where the MAC address will be forwarded.
Add to Static MAC table	Click this button to add any port into the static MAC table.

# 3.5 Security

Use the Security pages to configure settings for the switch security features.

# 3.5.1 Storm Control

# 3.5.1.1 Global Setting

Click Security  $\rightarrow$  Storm Control  $\rightarrow$  Global Setting to display the configuration screen as shown.



Ľ	Storm Control Global			
Stor	rm Control Global Setting			
	Unit	⊖pps ⊛bps		
	Preamble & IFG			
Ap	pply Storm Control Global Information			
	Information	Name		Information Value
	Unit		bps	
	Preamble	& IFG	Excluded	

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Mode	<ul> <li>Select the mode of storm control</li> <li>pps: storm control rate calculates by packet-based</li> <li>bps: storm control rate calculates by octet-based</li> </ul>
Preamble & IFG	<ul> <li>Select the rate calculates w/o preamble &amp; IFG (20 bytes)</li> <li>Excluded: exclude preamble &amp; IFG (20 bytes) when count ingress storm control rate.</li> <li>Included: include preamble &amp; IFG (20 bytes) when count ingress storm control rate.</li> </ul>
Apply	Click Apply to save your changes to the Switch.

# 3.5.1.2 Port Setting

Click Security  $\rightarrow$  Storm Control  $\rightarrow$  Port Setting to display the configuration screen as shown.



#### Storm Control

C I	to rm	Contro	I Cotting
		CONLID	i aetunu

Port	Port State	Action	Type Enable	Rate (Kbps)
	<ul> <li>Disable</li> <li>Enable</li> </ul>	drop 🗸	Broadcast	10000
Select Ports -			Unknown Multicast	10000
			Unknown Unicast	10000

Apply

#### • Storm Control Information

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

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select the setting ports
State	<ul> <li>Select the state of setting</li> <li>Disable: Disable the storm control function.</li> <li>Enable: Enable the storm control function.</li> </ul>
Action	<ul> <li>Select the state of setting</li> <li>Drop: Packets exceed storm control rate will be dropped.</li> <li>Shutdown: Port exceed storm control rate will be shutdown.</li> </ul>
Storm Type	Select the type of storm control <b>Broadcast</b> : Broadcast packet <b>Unknown Unicast</b> : Unknown unicast packet <b>Unknown Multicast</b> : Unknown multicast packet
Rate	Value of storm control rate, Unit: pps (packet per-second) or Kbps (Kbits per-second) depends on global mode setting. The range is from 0 to 1000000.
Apply	Click Apply to save your changes to the Switch.

## **3.5.2 Protected Ports**

This page allow user to configure protected port setting to prevent the selected ports from communicate with each other.



### Click **Security** $\rightarrow$ **Protected Ports** to display the configuration screen as shown.

Protected Ports			
otected Ports Set	tings		
Port List	Port Type		
Select Protected Por-	Unprotected OProtected		
Apply Protected Ports St	atus		
	Protected	Port Li	
Protected Parts			
FIOLECLEU FOILS			

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
Port List	To select the port to be protected.	
Port Type	<ul> <li>Configure port protect type:</li> <li>Unprotected: Unprotected port can communicate with all ports.</li> <li>Protected: Prevent protected ports from communicate with each other.</li> </ul>	
Apply	Click Apply to save your changes to the Switch.	

# 3.5.3 DoS

# 3.5.3.1 DoS Global Setting

This page allow user to configure DoS setting to enable/disable DoS function for Global Setting.

Click **Security**  $\rightarrow$  **DoS**  $\rightarrow$  **DoS Global Setting** to display the configuration screen as shown.



#### **DoS Global Setting**

#### Global DoS Setting

DMAC = SMAC	● Enabled ○ Disabled
Land	● Enabled ○ Disabled
UDP Blat	● Enabled ○ Disabled
TCP Blat	● Enabled ○ Disabled
POD	● Enabled ○ Disabled
IPv6 Min Fragment	Enabled Obisabled Byte: 1240 (0-65535)
ICMP Fragments	● Enabled ○ Disabled
IPv4 Ping Max Size	● Enabled ○ Disabled
IPv6 Ping Max Size	● Enabled ○ Disabled
Ping Max Size Setting	Byte: 512 (0-65535)
Smurf Attack	Enabled Obisabled Netmask Length: 0 (0-32)
TCP Min Hdr Size	Enabled Obisabled Bytes: 20 (0-31)
TCP-SYN(SPORT<1024)	● Enabled ○ Disabled
Null Scan Attack	● Enabled ○ Disabled
X-Mas Scan Attack	● Enabled ○ Disabled
TCP SYN-FIN Attack	● Enabled ○ Disabled
TCP SYN-RST Attack	● Enabled ○ Disabled
TCP Fragment (Offset = 1)	Enabled      Disabled

Apply

#### • DoS Informations

Information Name	Information Value
DMAC = SMAC	Enabled
Land Attack	Enabled
UDP Blat	Enabled
TCP Blat	Ensbled
POD (Ping of Death)	Enabled
IPv6 Min Fragment Size	Enabled (1240 Bytes)
ICMP Fragment Packets	Enabled
IPv4 Ping Max Packet Size	Enabled (512 Bytes)
IPv6 Ping Max Packet Size	Enabled (512 Bytes)
Smurf Attack	Enabled (Netmask Length: 0)
TCP Min Header Length	Ensbled (20 Bytes)
TCP Syn (SPORT < 1024)	Enabled
Null Scan Attack	Enabled
X-Mas Scan Attack	Ensbled
TCP SYN-FIN Attack	Enabled
TCP SYN-RST Attack	Enabled
TCP Fragment (Offset = 1)	Enabled



LABEL	DESCRIPTION
	Both the source and the destination MAC addresses are the same
DMAC = SMAC	■ <b>Disabled</b> : Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
	Both the source and the destination IPv4/IPv6 addresses are the same.
Land	■ <b>Disabled</b> : Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
	Both the source and the destination UDP port are the same.
UDP Blat	Disabled: Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
	Both the source and the destination TCP port are the same.
TCP Blat	Disabled: Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
	Ping packets that length are larger than 65535 bytes.
POD	■ <b>Disabled</b> : Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
	IPv6 fragmented packets (not including the last one) that payload length
IPv6 Min	less than 1240 bytes, and the Min length can be configured if needed.
Fragment	Disabled: Disable the item DoS setting.
-	Enabled: Enable the item DoS setting.
	Fragmented ICMP packets.
ICMP Fragments	Disabled: Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
IDv/ Ding Max	IPv4 PING packet with the length.
Sizo	Disabled: Disable the item DoS setting.
5126	Enabled: Enable the item DoS setting.
Inv6 Ping Max	IPv6 PING packet with the length.
Size	Disabled: Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
Ping Max Size	Ping packet Max Size Setting. The default value is 512 Bytes, it can be
Setting	configured if needed.
	ICMP echo request packet that destination IPv4 address is broadcast
	address. The default Netmask length is 0, and it can be configured if
Smurf Attack	needed.
	■ <b>Disabled</b> : Disable the item DoS setting.
	Enabled: Enable the item DoS setting.
	TCP packet that header length is less than the configured value.
TCP Min Hdr Size	The default TCP Min Hdr Size is 20, it can be configured if needed.
	Disabled: Disable the item DoS setting.
	Enabled: Enable the Item DoS setting.
TCPSYN	Dischlade Dischla the item DeS setting
(SPORT<1024)	<ul> <li>Disabled: Disable the item DoS setting.</li> <li>Enchlad: Enchla the item DoS setting.</li> </ul>
. ,	Enabled: Enable the item DoS setting.
Null Soon Attack	Dischlad: Dischla the item DeS setting
NUII SCAILATTACK	Enabled: Enable the item DoS setting
Y-Mac Scan	TCD acquipped number in zero, and the EIN/UDC/DSU flags are set
Attack	■ <b>Disabled:</b> Disable the item DeS setting


	Enabled: Enable the item DoS setting.
TCP SYN-FIN Attack	<ul> <li>A TCP packet with the SYN and FIN flags set.</li> <li>Disabled: Disable the item DoS setting.</li> <li>Enabled: Enable the item DoS setting.</li> </ul>
TCP SYN-RST Attack	<ul> <li>A TCP packet with the SYN and RST flags set.</li> <li>Disabled: Disable the item DoS setting.</li> <li>Enabled: Enable the item DoS setting.</li> </ul>
TCP Fragment (Offset=1)	<ul> <li>Fragmented TCP packets.</li> <li>Disabled: Disable the item DoS setting.</li> <li>Enabled: Enable the item DoS setting.</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the Switch.

# 3.5.3.2 DoS Port Setting

Click  $\textbf{Security} \rightarrow \textbf{DoS} \rightarrow \textbf{DoS}$  Port Setting to display the configuration screen as shown.

DoS Port Sett	DoS Port Setting				
STP Port Setting					
Port Select	DoS Protection				
Select Ports 🔹	● Enabled ○ Disabled				
Apply    DoS Port Status					
Po	ort	DoS Protection			
GE1	Dis	able			
GE2	Dis	able			
GE3	Dis	able			
GE4	Dis	able			
GE5	Dis	able			
GE6	Dis	able			
GE7	Dis	able			
GE8	Dis	able			

LABEL	DESCRIPTION
Port Select	Select one or multiple ports to configure.
DoS Protection	<ul> <li>Configure port protect state</li> <li>Disabled: Disable port DoS Protection function.</li> </ul>



	Enabled: Enable port DoS Protection function.
Apply	Click <b>Apply</b> to save your changes to the Switch.

### 3.5.4 Access

### 3.5.4.1 Telnet

Telnet is the TCP/IP standard protocol for remote terminal service. TELNET allows a user at one site to interact with a remote timesharing system at another site as if the user's keyboard and display connected directly to the remote machine.

To display Telnet web page	e, click <b>Security</b> $\rightarrow$ <b>Ac</b>	cess  ightarrow Telnet	
Telnet Settings			
Telnet Settings			
Telnet Service	Disabled V		
Apply Disconnect  Telnet Information			
Inform	ation Name	Information Value	
Teln	et Service	Disabled	
Current Teln	et Sessions Count	0	

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Telnet Service	Set Enabled to access telnet service or Disabled not to access telnet service.
Disconnect	Click <b>Disconnect</b> to disconnect Telnet connection.
Apply	Click <b>Apply</b> to save your changes to the Switch.

### 3.5.4.2 HTTP

HTTP is the acronym of Hyper Text Transfer Protocol.



To display HTTP web page, click **Security**  $\rightarrow$  **Access**  $\rightarrow$  **HTTP** 

HTTP Settings			
TTP Settings	,		
HTTP Service	$\odot$ Enabled $\bigcirc$ Disabled		
Session Timeout	10 (0-86400) minutes		
Apply • HTTP Information			
Informat	on Name		Information Value
HTTP	Service	Enabled	
Session Timeout		40	

The following table describes the labels in this screen.

LABEL	DESCRIPTION
HTTP Service	Support HTTP service <b>Enable</b> : Enable HTTP service. <b>Disable</b> : Disable HTTP service.
Session Timeout	Set session timeout minutes for user access WEB from HTTP protocol. If user does not response after session timeout minute, WEBUI will logout automatically. 0 minutes means never timeout.
Apply	Click <b>Apply</b> to save your changes to the Switch.

## 3.5.4.3 HTTPS

HTTPS is the acronym of Hypertext Transfer Protocol over Secure Socket Layer.

To display HTTPS web page, click  $\textbf{Security} \rightarrow \textbf{Access} \rightarrow \textbf{HTTPS}$ 



TTPS Settings			_
HTTPS Service	Enabled      Disabled		
Session Timeout	10 (0-86400) minutes		
Apply • HTTPS Information			
Apply HTTPS Information	tion Name		Information Value
Apply • HTTPS Information Inform HTTP	tion Name S Service	Enabled	Information Value

The following table describes the labels in this screen.

LABEL	DESCRIPTION
HTTPS Service	Support HTTPS service <b>Enable</b> : Enable HTTPS service. <b>Disable</b> : Disable HTTPS service.
Session Timeout	Set session timeout minutes for user access WEB from HTTPS protocol. If user does not response after session timeout minute, WEBUI will logout automatically. 0 minutes means never timeout.
Apply	Click <b>Apply</b> to save your changes to the Switch.

## 3.6 QoS

Use the QoS pages to configure settings for the switch QoS interface and how the switch connects to a remote server to get services.

### 3.6.1 General

## 3.6.1.1 QoS Properties

Use the QoS general pages to configure settings for both basic and advanced modes.

Click  $QoS \rightarrow General \rightarrow QoS$  Properties in the navigation panel to display the screen as shown below.



Ľ	QoS Global Setting			
QoS	Global Setting			
	QoS Mode	● Disable ○ Basic		
Ар	pply			
•	QoS Informations			
	Inform	nation Name		Information Value
	Q	oS Mode	disable	

The following table describes the labels in this screen.

LABEL	DESCRIPTION
QoS Mode	<ul> <li>Select the QoS operation mode.</li> <li>■ Disable: Disable QoS</li> <li>■ Basic: Set QoS to basic mode</li> </ul>
Apply	Click Apply to save your changes to the switch.

# 3.6.1.2 Port Settings

Click  $QoS \rightarrow General \rightarrow Port Settings$  in the navigation panel to display the screen as shown below.



QoS Port Settings

Port Port Settings				
Port	CoS Value	Remark CoS	Remark DSCP	Remark IP Precedence
Select Ports -	0 🗸	●Disable ○Enable	● Disable ○ Enable	●Disable ○Enable

Apply

QoS Port St	atus			
Port	CoS value	Remark CoS	Remark DSCP	Remark IP Precedence
GE1	0	disabled	disabled	disabled
GE2	0	disabled	disabled	disabled
GE3	0	disabled	disabled	disabled
GE4	0	disabled	disabled	disabled
GE5	0	disabled	disabled	disabled
GE6	0	disabled	disabled	disabled
GE7	0	disabled	disabled	disabled
GE8	0	disabled	disabled	disabled

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
CoS Value	Set default CoS/802.1p priority value for the selected ports
Remark CoS	Enable/Disable CoS remark
Remark DSCP	Enable/Disable DSCP remark
Remark IP Precedence	Enable/Disable IP Precedence remark
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.6.1.3 Queue Settings

Click  $\textbf{QoS} \rightarrow \textbf{General} \rightarrow \textbf{Queue Settings}$  in the navigation panel to display the screen as shown below.



Queue	Table			
0		Sch	eduling M	ethod
Queue	Strict Priority	WRR	Weight	% of WRR Bandwidth
1	۲	0	1	
2	۲	0	2	
3	۲	0	3	
4	۲	0	4	
5	۲	0	5	
6	۲	0	9	
7	۲	0	13	
8	۲	0	15	

 Queue Information

 Information Name
 Information Value

 Strict Priority Queue Number
 8

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Queue	Queue ID to configure
Strict Priority	Set queue to strict priority type
WRR	Set queue to Weight round robin type
Weight	If the queue type is WRR, set the queue weight for the queue.
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.6.1.4 CoS Mapping

Click  $QoS \rightarrow General \rightarrow CoS Mapping$  in the navigation panel to display the screen as shown below.



CoS Mapp	ing																				
CoS to Queue M	lapp	oing				,															
Class of Service		0		1			2			3		4	ļ.		5			6		7	
Queue	2	~	1		~	3		~	4	~	•	5	~	6		~	7	~	8		~
Queue to CoS M	lapp	oing									ļ								ļ		
Queue		1		2			3			4		6	5		6			7		8	
Class of Service	1	~	0		~	2		~	3	~		4	~	5		~	6	~	] [7		~
			1																		

Apply

 CoS mapping CoS Mapping to Queue Queue Mapping to CoS 

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Class of service	Class of service value
Queue	Select queue ID for the CoS value
Apply	Click <b>Apply</b> to save your changes to the switch.
Queue	Queue ID
Class of service	Select CoS Value for the Queue ID

## 3.6.1.5 DSCP Mapping

Click  $QoS \rightarrow General \rightarrow DSCP$  Mapping in the navigation panel to display the screen as



shown below.

D	SCF	Ma	opiı	ng																	
DSCP t	o Q	ueue	Ма	ppin	g																
	DSC	P		Q	ueu	e															
Select	DSCI	>	-	1		~															
Queue	to D	SCP	Ма	ppin	g																
Queue		1		2			3			4		5			6			7			8
DSCP	0	~	/ 8		~	16		~	24	~	32		~	40		~	48		~	56	×

#### DSCP mapping

DSCP	Mapping to Queue
0	1
1	1
2	1
3	1
4	1

Queue	Mapping to DSCP
1	0
2	8
3	16
4	24
5	32
6	40
7	48
8	56

LABEL	DESCRIPTION
DSCP	Select the DSCP value to mapping to the priority and drop precedence. The DSCP range is 0 to 63.
Queue	Select queue ID for the DSCP value.
Apply	Click <b>Apply</b> to save your changes to the switch.
Queue	Queue ID
DSCP	Select DSCP Value for the Queue ID.



## 3.6.1.6 IP Precedence Mapping

Click  $QoS \rightarrow General \rightarrow IP$  Precedence Mapping in the navigation panel to display the screen as shown below.

**IP Precedence Mapping** IP Precedence to Queue Mapping IP Precedence Queue ✔ 2  $\mathbf{\sim}$ ~ ~ ~ ~ ~ V Queue to IP Precedence Mapping Queue IP Precedence ✓ 1 ~ ~ ~ ~ ~ ~ Apply • IP Precedence mapping **IP Precedence** Mapping to Queue Queue Mapping to IP Precedence 

The following table describes the labels in this screen.



LABEL	DESCRIPTION
IP Precedence	IP Precedence value.
Queue	Select queue ID for the IP Precedence value.
Apply	Click <b>Apply</b> to save your changes to the switch.
Queue	Queue ID
IP Precedence	Select IP Precedence value for the queue ID.

## 3.6.2 QoS Basic Mode

Use the QoS basic mode pages to configure settings for basic mode.

## 3.6.2.1 Global Settings

Click  $QoS \rightarrow QoS$  Basic Mode  $\rightarrow$  Global settings in the navigation panel to display the screen as shown below.

Globa	I Settings		
Basic Mode	Global Settings		
Trust Mode	● CoS/802.1p ○ DSCP ○ CoS/802.1p-DSCP ○ IP Preceden	ce ONone	
Apply			
▼ QoS Info	rmations		
	Information Name		Information Value
	Trust Mode	COS	

LABEL	DESCRIPTION
Trust Mode	<ul> <li>Select the QoS operation mode.</li> <li>CoS/802.1p: 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.</li> <li>DSCP: 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.</li> <li>CoS/802.1p-DSCP: All IP traffic is mapped to queues based on the DSCP field in the DSCP field in the IP header. If traffic is mapped to queues based on the DSCP field in the IP header. If traffic is mapped to queues based on the DSCP field in the IP header. If traffic is mapped to queues based on the DSCP field in the IP header. If traffic is not IP but has VLAN tag,</li> </ul>



	<ul> <li>mapped to queues based on the CoS value in the VLAN tag.</li> <li>IP Precedence: 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.</li> <li>None: All traffic is mapped to the lowest priority queue.</li> </ul>
Apply	Click Apply to save your changes to the switch.

# 3.6.2.2 Port Settings

Click  $QoS \rightarrow QoS$  Basic Mode  $\rightarrow$  Port settings in the navigation panel to display the screen as shown below.

QoS Port Setting		
QoS Port Setting		
Port	Trust	
Select Ports	Enabled Obisabled	
Apply		

•	QoS Port Status	
	Port	Trust Type
	GE1	enabled
	GE2	enabled
	GE3	enabled
	GE4	enabled
	GE5	enabled
	GE6	enabled
	GE7	enabled
	GE8	enabled

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
Apply	Click Apply to save your changes to the switch.
Trust	Select the port trust state. Enabled: Traffic from this port will follow the global trust type. Disabled: Traffic will always go to the lowest priority queue.



## 3.6.3 Rate Limit

Use the QoS basic mode pages to configure settings for basic mode.

# 3.6.3.1 Ingress Bandwidth Control Settings

Click  $QoS \rightarrow Rate Limit \rightarrow Ingress Bandwidth Control Settings$  in the navigation panel to display the screen as shown below.

Ingress Band	width Control		
ngress Bandwidth (	Control Settings		
Port	State	Rate(Kbps)	
Select Ports 🔹	$\odot$ Disable $\bigcirc$ Enable	(0-1000000, must a multiple of 16)	
Apply			
<u>Uhhi</u>			
<ul> <li>Ingress Bandwidth</li> </ul>	Control Status		
Port		Ingress RateLimit (Kbps)	
GE1	off		
GE2	off		
GE3	off		
GE4	off		
GE5	off		
GE6	off		
GE7	off		
GE8	off		

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	Enable/Disable ingress bandwidth control
Rate	Rate value (0 - 1000000), unit: 16 Kbps
Apply	Click <b>Apply</b> to save your changes to the switch.

## 3.6.3.2 Egress Bandwidth Control Settings

Click  $QoS \rightarrow Rate Limit \rightarrow Egress Bandwidth Control Settings$  in the navigation panel to display the screen as shown below.



#### Egress Bandwidth Control

Egress Bandwidth C	ontrol Settings	
Port	State	Rate(Kbps)
Select Ports 🔹	● Disable ○ Enable	(0-1000000, must a multiple of 16)

Apply

```
- Egress Bandwidth Control Status
```

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

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
State	Enable/Disable ingress bandwidth control
Rate	Rate value (0-1000000), unit:16 Kbps
Apply	Click <b>Apply</b> to save your changes to the switch.

## 3.6.3.3 Egress Queue

Click  $QoS \rightarrow Rate Limit \rightarrow Egress Queue$  in the navigation panel to display the screen as shown below.



Egress Queue Bandwidth Control			
Egress Queue Bandwidth Control Settings			
GE1 V	1 ~	Disable      Denable	(0-1000000, must a multiple of 16)
Apply			

• GET Egress Per Queue Status			
Queue Id	Rate Limit (Kbps)		
1	off		
2	off		
3	off		
4	off		
5	off		
6	off		
7	off		
8	off		

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	Select one or multiple ports to configure
Queue	Select one queue to configure
State	Enable/Disable ingress bandwidth control
Rate	Rate value (0 - 1000000), unit:16 Kbps
Apply	Click <b>Apply</b> to save your changes to the switch.

## 3.7 Management

Use the Network pages to configure settings for the switch network interface and how the switch connects to a remote server to get services.

### 3.7.1 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.



# 3.7.1.1 LLDP Global Setting

Click **Management**  $\rightarrow$  **LLDP**  $\rightarrow$  **LLDP Global Setting** to display the screen as shown next.

LLDP Global Setting		
Global Settings		
Enabled	● Enabled ○ Disabled	
LLDP PDU Disable Action	⊖Filtering ⊖Bridging ●Flooding	
Transmission Interval	30 (5-32768)	
Holdtime Multiplier	4 (2-10)	
Reinitialization Delay	2 (1-10)	
Transmit Delay	2 (1-8192)	

Apply

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

LABEL	DESCRIPTION
Enabled	Enable/ Disable LLDP protocol on this switch.
LLDP PDU Disable Action	Select LLDP PDU handling action to be filtered, bridging or flooded when LLDP is globally disabled.
Transmission Interval	Select the interval at which frames are transmitted. The default is 30 seconds, and the valid range is 5–32768 seconds.
Holdtime Multiplier	Select the multiplier on the transmit interval to assign to TTL (range $2-10$ , default = 4).
Reinitialization 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 1–8192 seconds, default = 3).	
Apply	Click <b>Apply</b> to save your changes to the switch.	

# 3.7.1.2 LLDP Port Setting

Click **Management**  $\rightarrow$  **LLDP**  $\rightarrow$  **LLDP Port Setting** to display the screen as shown next.

LLDP Port Se	tting		
LLDP Port Configure	LDP Port Configuration		
Select Ports	Disable V		
Apply			
Optional TLVs Selec	tion		
Port Select	Optiona		
Select Ports	Select Optional		

Apply

▼ LLDP Port Status			
	Port	State	Selected Optional TLVs
	GE1	TX&RX	802.1 PVID
	GE2	TX&RX	802.1 PVID
	GE3	TX&RX	802.1 PVID
	GE4	TX&RX	802.1 PVID
	GE5	TX&RX	802.1 PVID
	GE6	TX&RX	802.1 PVID
	GE7	TX&RX	802.1 PVID
	GE8	TX&RX	802.1 PVID
	GE9	TX&RX	802.1 PVID
	GE10	TX&RX	802.1 PVID
	GE11	TX&RX	802.1 PVID
	GE12	TX&RX	802.1 PVID
	GE13	TX&RX	802.1 PVID
	GE14	TX&RX	802.1 PVID
	GE15	TX&RX	802.1 PVID



#### VLAN Name TLV VLAN Selection

Port Select	VLAN Select
Select Ports -	Select VLANs -

Apply

▼ LLDP Port VLAN TLV Status

Port	Selected VLAN
GE1	
GE2	
GE3	
GE4	
GE5	
GE6	
GE7	
GE8	
GE9	
GE10	

LABEL	DESCRIPTION
Port Select	Select specified port or all ports to configure LLDP state.
State	<ul> <li>Select the transmission state of LLDP port interface.</li> <li>Disable: Disable the transmission of LLDP PDUs.</li> <li>RX Only: Receive LLDP PDUs only.</li> <li>TX Only: Transmit LLDP PDUs only.</li> <li>TX And RX: Transmit and receive LLDP PDUs both.</li> </ul>
ApplyClick Apply to save your changes to the switch.	
Port Select	Select specified port or all ports to configure optional TLVs.
Optional TLV Select	Select the LLDP optional TLVs to be carried (multiple selection is allowed). System Name Port Description System Description System Capability 802.3 MAC-PHY 802.3 Link Aggregation 802.3 Maximum Frame Size Management Address 802.1 PVID
Арріу	Click <b>Apply</b> to save your changes to the switch.
Port Select	Select specified port or all ports to configure VLAN Name.



VLAN Select	Select the VLAN Name ID to be carried (multiple selection is allowed).
Apply	Click <b>Apply</b> to save your changes to the switch.

## 3.7.1.3 LLDP Local Device

Use the LLDP Local Device page to view LLDP local device information. Click "detail" button on the page to view detail information of the selected port.

Click **Management**  $\rightarrow$  **LLDP**  $\rightarrow$  **LLDP** Local Device to display the screen as shown next.

LLDP Local Device

Local Device Summary			
Chassis ID Subtype	MAC Address		
Chassis ID	00:E0:4C:00:00		
System Name	Switch		
System Description	switch		
Capabilities Supported	Bridge		
Capabilities Enabled	Bridge		
Port ID Subtype	Interface name		



#### ▼ Port Status

Detail

Detail		
	Interface	LLDP Status
0	GE1	TX & RX
0	GE2	TX & RX
0	GE3	TX & RX
0	GE4	TX & RX
0	GE5	TX & RX
0	GE6	TX & RX
0	GE7	TX & RX
0	GE8	TX & RX
0	GE9	TX & RX
0	GE10	TX & RX
0	GE11	TX & RX
0	GE12	TX & RX
0	GE13	TX & RX
0	GE14	TX & RX

#### LLDP Port Detail Local Information

Back

Global			
Chassis ID Subtype	MAC address		
Chassis ID	00:E0:4C:00:00:00		
System Name	Switch		
System Description	switch		
Supported System Capabilities	Bridge		
Enabled System Capabilities	Bridge		
Port ID Subtype	Interface name		
Port ID	gi1		
Port Description			
Management Address	192.168.1.1		



MAC/PHY Details			
Auto-Negotiation Supported	N/A		
Auto-Negotiation Enabled	N/A		
Auto-Negotiation Advertised Capabilities	N/A		
Operational MAU Type	N/A		
	802.3 Details		
	802.3 Details		
802.3 Maximum Frame Size	N/A		
802.3 Maximum Frame Size	N/A 802.3 Link Aggregation		
802.3 Maximum Frame Size Aggregation Capability	802.3 Details N/A 802.3 Link Aggregation N/A		
802.3 Maximum Frame Size Aggregation Capability Aggregation Status	802.3 Details N/A 802.3 Link Aggregation N/A N/A		

802.1 VLAN and Protocol		
PVID	1	
VLAN Names	N/A	

# 3.7.1.4 LLDP Remote Device

Click **Management**  $\rightarrow$  **LLDP**  $\rightarrow$  **LLDP Remote Device** to display the screen as shown next.

LLC	DP Remote	Device					
LDP	Remote Devic	e					
-	tail Delate	Bafrach					
De		Kerreshi					
Sel	Local Port	Chassis ID Subtype	Chassis ID	Port ID Subtype	Port ID	System Name	Time to Live
		MAC address	00:60:4E:97:08:0B	Locally assigned	20		119
	GE9	MAC address	CC.0D.4E.01.00.DD	managed and an and the a			110

Use the LLDP Remote Device page to view LLDP neighbors information. Click "Detail" to view selected neighbor detail information.



#### LLDP Remote Device Detail Information

Rack	
Dest Destaile	
Port Details	050
Entry Index	U
Basic Details	
Chassis ID Subtype	MAC address
Chassis ID	CC:5D:4E:87:08:DB
Port ID Subtype	Locally assigned
PortID	20
Port Description	Port#20
System Name	
System Description	V1.00(AVAX 2) 2012-11-08T08:52:00+01:00
Supported System Capabilities	Bridge
Enabled System Capabilities	Bridge
Management Address	192.168.1.1
MAC/PHY Details	
Auto-Negotiation Supported	TRUE
Auto-Negotiation Enabled	TRUE
Auto-Negotiation Advertised Capabilities	10BASE-T half duplex, 10BASE-T full duplex, 100BASE-TX half duplex, 100BASE-TX full duplex, 1000BASE-T full duplex
Operational MAU Type	1000BASE-T full duplex mode



A REPORT OF A R				
MDI Power Support Port Class	144			
PSE MDI Powar Support	N/A			
PSE MDI Power State	N/A			
PSE Power Pair Control Ability	NKA			
PSE Power Pair	N/A			
PSE Power Class	DIG.			
000.0.0.1.7.				
802.3 Details				
8 D2.3 Maximum Frame Size	NA			
802.3 Link Aggregation				
Aggregation Capability	NK			
Aggregation Status	NK			
Aggregation Port ID	NiA			
MED Destaile				
NED Details				
Capabilities Supported	Capabilities, Network Policy, Location			
Capabilities Supported Current Capabilities	Capabilities, Network Policy, Location Capabilities, Network Policy, Location			
Capabilities Supported Current Capabilities Device Class	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity			
Capabilities Supported Current Capabilities Device Class PoE Device Type	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA			
Capabilities Supported Current Capabilities Device Class PoE Device Type PoE Power Source	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA NA			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Phority	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA NA NA			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Phority PoE Poewr Value	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity N/A N/A N/A N/A			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Phority PoE Poewr Value Hardware Revision	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity N/A N/A N/A N/A			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Source PaE Poewr Phority PoE Poewr Value Hardware Revision Firmware Revision	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA NA NA NA NA NA NA			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Source PaE Poewr Phority PoE Poewr Value Hardware Revision Firmware Revision Software Revision	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA NA NA NA NA NA NA NA			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Source PaE Power Phority PaE Poewr Value Hardware Revision Firmware Revision Software Revision Serial Number	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA NA NA NA NA NA NA NA NA NA			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Source PaE Poewr Phority PoE Poewr Value Hardware Revision Software Revision Serial Number Manufacturer Name	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA NA NA NA NA NA NA NA NA			
Capabilities Supported Current Capabilities Device Class PaE Device Type PaE Power Source PaE Power Source PaE Power Value Hardware Revision Firmware Revision Software Revision Serial Number Manufacturer Name Model Name	Capabilities, Network Policy, Location Capabilities, Network Policy, Location Network Connectivity NA NA NA NA NA NA NA NA NA NA NA NA			

802.4 M. Ani and Protocol				
PVID	N/A			
VLAN Names N/A				
Location Information				
Location Information	03.02.00.00			
Location Information Civic Coordinates	03:02:00:00 88:00:00:00:00:00:00:00:17:80:00:00:01			

	Network Policy Table				
Application type VLAN IV VLAN type User Priority USUP	Application Type	VLANID	VLAN Type	User Priority	DSCP



# 3.7.1.5 LLDP Overloading

Click **Management**  $\rightarrow$  **LLDP**  $\rightarrow$  **LLDP Overloading** to display the screen as shown next.

#### LLDP Port Overloading

LLDP Port Overloading Table							
In the former	Tatall		C to to a		Sta	atus	
Interface	i otal(Bytes)	Left to Send(Bytes)	Status	Mandatory TLVs	802.3 TLVs	Optional TLVs	802.1 TLVs
GE1	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE2	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE3	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE4	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE5	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE6	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE7	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE8	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE9	29	1459	Not Overloading	21(Transmitted)			8(Transmitted)
GE10	30	1458	Not Overloading	22(Transmitted)			8(Transmitted)
GE11	30	1458	Not Overloading	22(Transmitted)			8(Transmitted)
GE12	30	1458	Not Overloading	22(Transmitted)			8(Transmitted)

LABEL	DESCRIPTION
Interface	This label shows the port you are viewing.
Total (Bytes)This field displays the total in bytes.	
Left to Send (Bytes)	This field displays what is left to send in bytes.
Status	This field displays whether the Switch is overloading or not.
Mandatory TLVs	This field displays how many bytes used by mandatory TLVs.
802.3 TLVs	This field displays how many bytes used by 802.3 TLVs.
Optional TLVs	This field displays how many bytes used by optional TLVs.
802.1 TLVs	This field displays how many bytes used by 802.1 TLVs.



## 3.7.2 SNMP

# 3.7.2.1 SNMP Setting

Click Management  $\rightarrow$  SNMP  $\rightarrow$  SNMP Setting to display the screen as shown next.

### SNMP Setting

NMP Global Setting					
State	💿 Disabled 🔘 Enabled	💿 Disabled 🔘 Enabled			
Apply	Apply • SNMP Informations				
Informatio	n Name	Information Value			
SNMP	SNMP Disabled				

The following table describes the labels in this screen.

LABEL	DESCRIPTION
State	SNMP daemon state: Select <b>Enabled</b> to activate SNMP daemon. Select <b>Disabled</b> to not use SNMP daemon.
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.7.2.2 SNMP Community

Click **Management**  $\rightarrow$  **SNMP**  $\rightarrow$  **SNMP** Community to display the screen as shown next.



SNMP Community				
Community Setting				
Community Nar	ne Access Right			
	● read-only ○ read-write			
Add				
- Community S	atus			
No.	Community I			
No.	Community I			

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
Community Name	Enter a Community string, this will act as a password for requests from the management station.	
Access Right	<ul> <li>SNMP community type:</li> <li>Read-Only: Read all objects only, it can allow the SNMP manager using this string to collect information from the switch.</li> <li>Read-Write: Read and write all objects, it can allow the SNMP manager using this string to create or edit MIBs (configure settings on the switch)</li> </ul>	
Add	Click Add to add any other community.	
No	It displays the port number which in the community.	
Community Name	This field displays the community strings.	
Access Right	This field displays the community string's type. This will either be read-only or read-write.	
Delete	Click <b>Delete</b> to remove any selected community strings.	

### 3.7.2.3 SNMP Trap Host

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

Click Management  $\rightarrow$  SNMP  $\rightarrow$  SNMP Trap Host to display the screen as shown next.



ap Host Setting					
IP Addre	ss Community Na	me Version			
		v1 🗸			
d					
d	Statur				
d Trap Host	Status				
d Frap Host No.	Status IP Address	Cc	imunity Name	Version	Act

The following table describes the labels in this screen.

LABEL	DESCRIPTION
IP Address	Enter the IP addresses to send your SNMP traps to.
Community Name	Enter a Community string, which is the password sent with each trap to the SNMP manager.
Add	Click Add to add any trap receiver.
IP Address	This field displays the IP address where the traps from the switch are sent.
Community Name	This field displays the password which is sent with each trap to the SNMP manager.
Version	<ul> <li>Indicates the SNMP trap supported version. Possible versions are:</li> <li>v1: Set SNMP trap supported version 1.</li> <li>v2c: Set SNMP trap supported version 2c.</li> </ul>
Delete	Click <b>Delete</b> to remove any selected trap receiver entries.

# 3.8 Diagnostics

Use the Diagnostics pages to configure settings for the switch diagnostics feature or operating diagnostic utilities.

# 3.8.1 Cable Diagnostics

# 3.8.1.1 Copper Test



#### Click **Diagnostics** $\rightarrow$ **Cable Diagnostics** $\rightarrow$ **Copper Test** to view the screen as shown next.

	Cop	per Test								
Sel GE	Select the port on which to run the copper test.          Port         GE1									
Co	pper	Fest								
*										
	Port	Channel A	Cable Length A	Channel B	Cable Length B	Channel C	Cable Length C	Channel D	Cable Length D	Result
	GE1	[Open]	0.87 (m)	[Open]	0.82 (m)	[Open]	0.81 (m)	[Open]	0.81 (m)	FAIL

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	The Selected Port ID.
Copper Test	Click <b>Copper</b> to start the test.

# 3.8.2 Ping Test

Click **Diagnostics**  $\rightarrow$  **Ping Test** to view the screen as shown next.



Ping Test				
Ping test Setting				
IP Address	(X.X.X.X or hostname)			
Count	4 (1-5   Default : 4 )			
Interval (in sec)	1 (1-5   Default : 1 )			
Size (in bytes)	56 (8 - 5120   Default : 56 )			
Ping Results				

Apply

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
IP Address	Enter the IP addresses of the test destination.	
Count	It displays how many times to send ping request packet. Enter a number between 1 and 5 as the count and the default configuration is 4.	
Interval	It displays time interval between each ping request packet. Enter a number between 1 and 5 as the interval and the default configuration is 1.	
Size	It displays the size of ping packet. Enter a number between 0 and 5120 as the size and the default configuration is 56.	
Ping Results	After ping finished, results will show in this field.	
Apply	Click <b>Apply</b> to save your changes to the switch.	

# 3.8.3 IPv6 Ping Test

Click **Diagnostics**  $\rightarrow$  **IPv6 Ping Test** to view the screen as shown next.



Ping Test				
Ping test Setting				
IPv6 Address	(XX:XX::XX:XX)			
Count	4 (1-5   Default:4)			
Interval (in sec)	1 (1-5   Default : 1 )			
Size (in bytes)	56 (8 - 5120   Default : 56 )			
Ping Results				

Apply

The following table describes the labels in this screen.

LABEL	DESCRIPTION
IPv6 Address	Enter the IPv6 addresses of the test destination.
Count	It displays how many times to send ping request packet. Enter a number between 1 and 5 as the count and the default configuration is 4.
Interval	It displays time interval between each ping request packet. Enter a number between 1 and 5 as the interval and the default configuration is 1.
Size	It displays the size of ping packet. Enter a number between 0 and 5120 as the size and the default configuration is 56.
Ping Results	After ping finished, results will show in this field.
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.8.4 Logging Setting

# 3.8.4.1 Logging Service



Use this screen to display the switch logs.

Click **Diagnostics**  $\rightarrow$  **Logging Setting**  $\rightarrow$  **Logging Service** to view the screen as shown next.

Logging Settings	Logging Settings					
Logging Settings						
Logging Service	● Enabled ○ Disabled					
Apply						
<ul> <li>Logging Information</li> </ul>						
Information N	ame		Information Value			
Logging Service		enabled				
h						

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Logging Service	Enable / disable logging system
Apply	Click <b>Apply</b> to save your changes to the switch.

# 3.8.4.2 Local Logging

Use this screen to display the switch logs.

Click **Diagnostics**  $\rightarrow$  **Logging Setting**  $\rightarrow$  **Local Logging** to view the screen as shown next.

ogging	Setting				
Targ	et	Severity			
argets	•	emerg	~		
1					
l Logging	g Setting Statu	5			
al Logging	g Setting Statu	5			
Logging Status	g Setting Statu	s Target		Severity	Action
I Logging Status bled	g Setting Statu	s Target	emerg, alert, cr	Severity it, error, warning, notice	Action



The following table describes the labels in this screen.

LABEL	DESCRIPTION
Target	Select the target to store log message <b>Buffered</b> : Store log messages in device buffer. All log messages will disappear after system reboot. <b>FLASH</b> : Store log messages in FLASH. All log messages will not disappear after system reboot.
Severity	Select severity of log messages which will be stored.
Apply	Click <b>Apply</b> to save your changes to the switch.
Status	It displays the status of local log settings.
Target	It displays the target you've chose.
Severity	It displays the severity status.
Delete	Click <b>Delete</b> to delete the target chose.

# 3.8.4.3 Remote Logging

This page allow user to configure remote logging server information

Click **Diagnostics**  $\rightarrow$  **Logging Setting**  $\rightarrow$  **Remote Logging** to view the screen as shown next.

emote Logging	Setting				_
Server Address	Server Port	Severity		Facility	
	514 (1-65535)	emerg	✓ local0	×	✓
Apply					
Apply • Remote Loggin	g Setting Status				

LABEL	DESCRIPTION
Server IP	The IP address of remote log server.
Server Port	Enter a number between 1 and 65535 as the server port.
Severity	Select severity of log messages which will be sent.
Facility	Select facility of log messages which will be sent.



Apply	Click <b>Apply</b> to save your changes to the switch.
Status	It displays the status of local log settings.
Server Info	It displays the server information.
Severity	It displays the severity status.
Facility	It displays the facility chose.
Action	It displays the action status.

# 3.8.5 Factory Default

Follow the steps below to restore the switch back to the factory defaults.

1. Click **Diagnostics**  $\rightarrow$  **Factory Default** to view the screen as shown next.

Factory Default		
Restore		

2. Click the **Restore** button, then the **confirm** interface pops up.



3. Click **OK** to restore all switch configurations to the factory defaults and the switch will reboot.

## 3.8.6 Reboot Switch

**Reboot** allows you to restart the switch without physically turning the power off. Follow the steps below to reboot the switch.



1. Click **Diagnostics**  $\rightarrow$  **Reboot Switch** to view the screen as shown next.

Reboot Switch
Reboot

2. Click Reboot button, then the following interface pops up.



3. When it finished, the switch has been restarted.

## 3.9 Maintenance

## 3.9.1 Backup Manager

This page allows user to backup the firmware image or configuration file on the switch to remote TFTP server or host file system through HTTP protocol.

Click **Maintenance**  $\rightarrow$  **Backup Manager** to view the screen as shown next.

Backup Mar	nager
Backup Manager	
Backup Method	TFTP V
Server IP	(IPv4 or IPv6 Address)
Backup Type	Image     Running configuration     Startup configuration

Backup





Backup Manager	
Backup Manager	
Backup Method	HTTP V
Backup Type	Image     Running configuration     Startup configuration

Backup

#### **Backup files with HTTP Page**

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Backup Method	<ul> <li>Select backup method:</li> <li>TFTP: Use TFTP to backup.</li> <li>HTTP: Use HTTP to backup.</li> </ul>
Server IP	IP address of the TFTP server. If the TFTP backup method is selected, the IP address of the TFTP server must be assigned.
Backup Type	<ul> <li>Select backup type:</li> <li>Image: Firmware image of current system.</li> <li>Running Configuration: Running Configuration file.</li> <li>Startup Configuration: Startup Configuration file.</li> </ul>
Backup	Click Backup to save the switch configuration/image to the local address specified.

## 3.9.2 Upgrade Manager

This page allows user to upgrade new firmware image or configuration file to the switch from remote TFTP server or select file from web browser.

Click **Maintenance**  $\rightarrow$  **Upgrade Manager** to view the screen as shown next.



#### Upgrade Manager

Upgrade Manager	
Upgrade Method	TFTP V
Server IP	(IPv4 or IPv6 Address)
File Name	
Upgrade Type	<ul> <li>Image</li> <li>Startup Configuration</li> <li>Running Configuration</li> </ul>

Upgrade

## Upgrade with TFTP Page

### Upgrade Manager

Upgrade Manager	
Upgrade Method	HTTP V
Upgrade Type	Image     Startup Configuration     Running Configuration
Browse file	瀏覽

Upgrade

#### Upgrade with HTTP Page

LABEL	DESCRIPTION
Upgrade Method	<ul> <li>Select upgrade method:</li> <li>TFTP: Use TFTP to upgrade.</li> <li>HTTP: Use HTTP to upgrade.</li> </ul>
Server IP	IP address of the TFTP server. If the TFTP upgrade method is selected, the IP address of the TFTP server must be assigned.
File Name	Firmware image or configuration file name on remote TFTP server. If the TFTP upgrade method is selected, the file name must be specified.
Browse File	If the HTTP upgrade method is selected, the browse file field allows you to select any file on host operating system.
Upgrade Type	<ul> <li>Select upgrade type:</li> <li>Image: Firmware image of current system.</li> <li>Configuration: Configuration file.</li> </ul>
Upgrade	Click <b>Upgrade</b> to update the file specified above and install the new firmware.


## 3.9.3 Configuration Manager

This page allows user to save either the running configuration or the startup configuration to the existing configuration file as the startup configuration.

Click Maintenance  $\rightarrow$  Configuration Manager to view the screen as shown next.

Configuration Manager	
Save Configuration	
Source File	<ul> <li>Running configuration</li> <li>Startup configuration</li> </ul>
Destination File	Startup configuration
Apply	

#### **Configuration Manager Page**



#### **Configuration Manager Success Page**

LABEL	DESCRIPTION
Source File	<ul> <li>Select upgrade method</li> <li>Running configuration: Running configuration file</li> <li>Startup configuration: Startup configuration file</li> </ul>
Destination File	Select Upgrade Type <ul> <li>Startup Configuration: Startup configuration file</li> </ul>
Apply	Click <b>Apply</b> to save the running or the startup configuration to the startup configuration file.



### 3.9.4 Account Manager

This page allows user to add or delete switch local user database for authentication. The default user is "admin".

Click **Maintenance**  $\rightarrow$  **Account Manager** in the navigation panel to display the screen as shown below.

Local User Information									
v User									
User Name	Password Ty	pe	Password	Retype Pa	assword	Privilege T	ype		
	Clear Text	·				Admin	~		
Local Users									
Local Users User Na	ıme		Password Type			Privilege T	уре	N	lodify
Local Users User Na admin	ime Er	crypted	Password Type		Admin	Privilege T	уре	N	lodify

The following table describes the labels in this screen.

LABEL	DESCRIPTION
User name	Enter your user name for new account.
Password Type	<ul> <li>Select password type for new account:</li> <li>Clear Text: Password without encryption.</li> <li>Encrypted: Password with encryption.</li> <li>No Password: No password for new account.</li> </ul>
Password	If the password type is not "No Password", the password must be specified.
Retype Password	Retype password to make sure the password is exactly you typed before in "Password" field.
Privilege Type	<ul> <li>Select privilege level for new account:</li> <li>Admin: Allow to change switch settings.</li> <li>User: See switch settings only. Not allow to change it.</li> </ul>
Apply	Click <b>Apply</b> to save your changes to the switch.
Modify	Click <b>Delete</b> to delete the added users.



# **Product Specifications**

Standard	IEEE802.3, IEEE802.3u, and IEEE802.3ab IEEE 802.3x flow control IEEE 802.1D spanning tree protocol IEEE 802.1p class of service, priority protocols IEEE 802.1Q VLAN tagging IEEE 802.3ad LACP aggregation IEEE 802.3az Energy Efficient Ethernet(EEE)
Interface	24* 10/100/1000Mbps ports
Transmission Mode	10/100Mbps: Full-duplex, Half-duplex 1000Mbps: Full-duplex
Memory	Flash: 16MB DDR2: 128MB
MAC Address Table	8K
Jumbo Frame	10K Bytes
Buffer Memory	524.8K Bytes
Temperature	Operating: 0°C ~ 50°C (32°F ~122°F) Storage: -40°C ~ 70°C (-40°F ~158°F)
Humidity	Operating: 10% ~ 90% RH, non-condensing
LED Indications	1*Power LED(Green) 1*System LED(Green) 24*Gigabit port LEDs(Link/Act: Green)
Power Supply	Internal power supply 12V/1.67A
Dimensions	267*162*42 mm
Case Material	Metal
Certification	EMC/FCC, CE Class A; Safety/LVD EN60950-1