



# Managed Fast Ethernet PoE Switch

16-port/24-port RJ45, 2-port Combo TP/SFP



## User Manual

DN-95312-1 • DN-95313-1

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# Package Contents

**Check the following contents of your package:**

- PoE Switch x 1
- User's Manual x 1
- Power Cord x 1
- Accessories (Rack Mount Accessory Kit x2, Rubber Feet x4, Screw)

If any part is lost and damaged, please contact your local agent immediately.

## 1. Introduction

The Web Smart PoE Switch provide wire-speed performance and abundant layer 2 management features. It provides a variety of service features and multiple powerful functions with high security. They are also Power Sourcing Equipment. All the 10/100Mbps RJ45 ports on the switch support Power over Ethernet function, which can automatically detect and supply power with those powered devices complying with IEEE 802.3af and IEEE 802.3at.

The Web Smart switch integrates multiple functions with excellent performance, and is friendly to manage, which can fully meet the need of the users demanding higher networking performance. include Administrator, PoE, Port Management, VLAN Setting, QoS Setting, Security, Spanning Tree, Trunking, DHCP Relay Agent, Backup/Recovery, SNMP settings and so on.

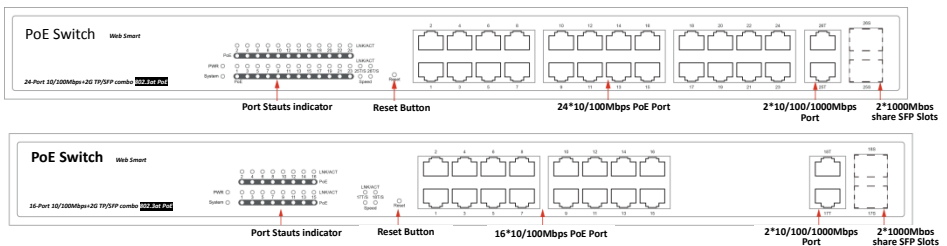
## Port Feature

Model	10/100Mbps RJ45 Port	Gigabit Combo Port	PSE Port
16F+2G TP/SFP Combo Web Smart PoE Switch	Port1~16	Port17~18	Port1~16
24F+2G TP/SFP Combo Web Smart PoE Switch	Port1~24	Port25~26	Port1~24

## 2. Hardware Description

### 2.1 Front Panel

The Front Panel of the PoE Ethernet Switch Consists of Ethernet Ports and SFP Slot. The LED indicators are also located on the panel.



### LED indicator

LED	Color	Function
PWR	Green	<b>Off:</b> No Power supply <b>Light:</b> Indicates the switch has power
LNK/ACT	Green	<b>Off:</b> No device is connected to the corresponding port <b>Light:</b> Indicates the link through that port is successfully established at 10/100/1000Mbps. <b>Blink:</b> Indicates that the Switch is actively sending or receiving data over that port.

Speed	Green	<p><b>Off:</b> Indicates the link through established at 10Mbps.</p> <p><b>Blink:</b> Indicates the link through established at 100Mbps.</p> <p><b>Light:</b> Indicates the link through established at 1000Mbps.</p>
PoE	Orange	<p><b>Off:</b> No PoE powered device (PD) connected</p> <p><b>Light:</b> There is a PoE PD connected to be port, which supply power successfully.</p> <p><b>Blink:</b> Indicates port abnormal power supply</p>

## 2.2 Rear Panel

The rear panel indicates an AC inlet power socket, which accepts input power from 100 to 240V AC, 50/60HZ.



## 3. Installation the Switch

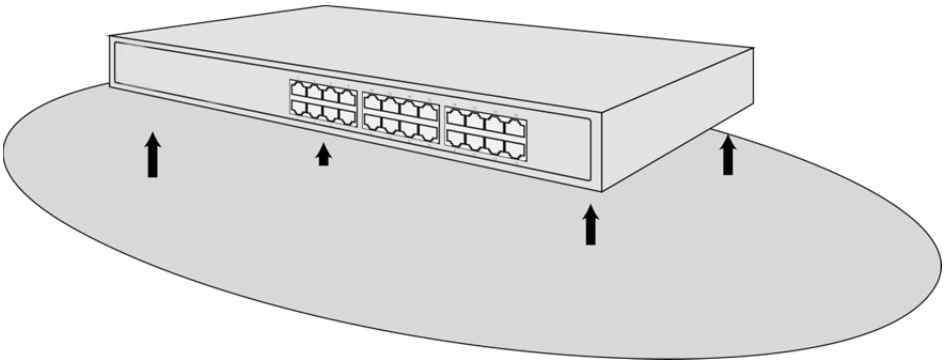
This part describes how to install your Ethernet Switch and make connections to it. Please follow the following instructions in avoid of incorrect installation causing device damage and security threat.

- Before cleaning the switch, unplug the power plug of the switch first. Do not clean the switch with wet cloth or liquid
- Do not place the switch near water or any damp area. Prevent water or moisture from entering the switch chassis

- Do not place the switch on an unstable case or desk. The switch might be damaged severely in case of a fall
- Ensure proper ventilation of the equipment room and keep the ventilation vents of the switch free of obstruction
- Make sure that the operating voltage is the same one labeled on the switch
- Do not open the chassis while the switch is operating or when electrical hazards are present to avoid electrical shocks

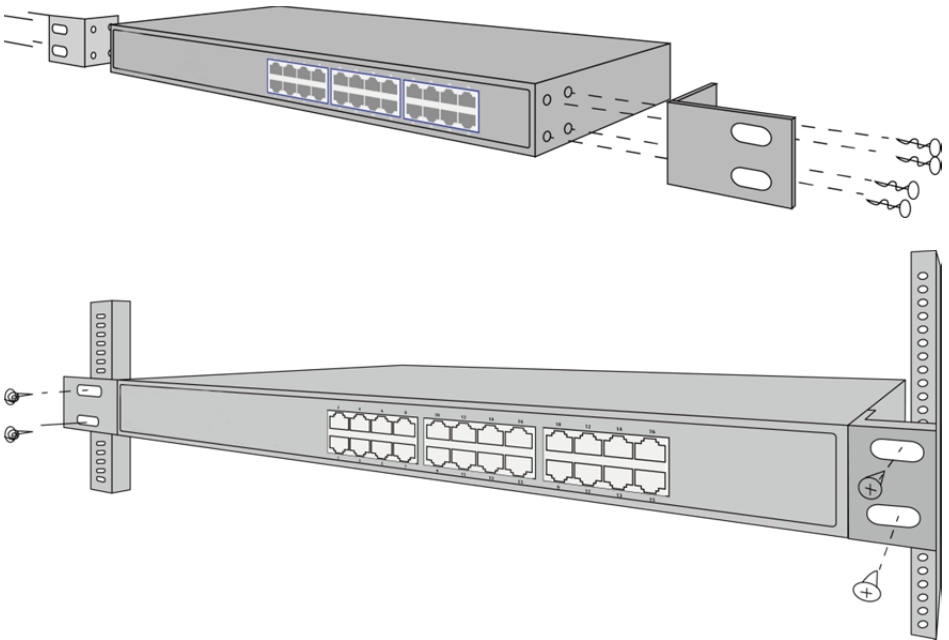
### 3.1 Desktop Installation

Install the Switch on a desktop, please attach these cushioning rubber feet provided on the bottom at each corner of the Switch in case of the external vibration. Allow adequate space for ventilation between the device and the objects around it.



### 3.2 Rack-mountable Installation

The switch is rack-mountable and can be installed on an EIA-19 inch equipment rack. To do this, first, please install the mounting brackets on the switch's side panels (one on each side), secure them with the included screws, and then use the screws provided with the equipment rack to mount the switch on the 19 inch rack.



### 3.3 Turn on the switch

Please connect the AC power cord into the rear of the switch and to an electrical outlet (preferably one that is grounded). When the switch is power on, the LED indicators flash momentarily for one second, it represents a resetting of the system. The Power LED indicator turns on green.

Note: Please confirm the voltage is correct before power on; otherwise the switch will be damaged.

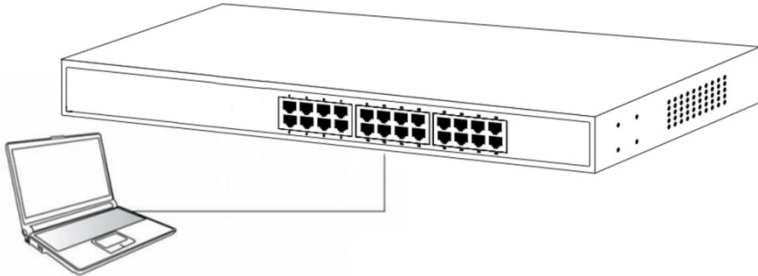
(The power input is: 100V-240Vac, 50/60Hz.)



# 4. How to Login the Switch

## 4.1 Switch to End Node

Use standard Cat.5/5e Ethernet cable (UTP/STP) to connect the Switch to end nodes as described below. The Web Smart PoE Switch ports will automatically adjust to the characteristics (MDI/MDI-X, speed, duplex) of the device to which is connected.



Please refer to the **LED Indicator** Specification. The Link/Act LED for each port lights green when the link is available.

## 4.2 Logging on the Switch

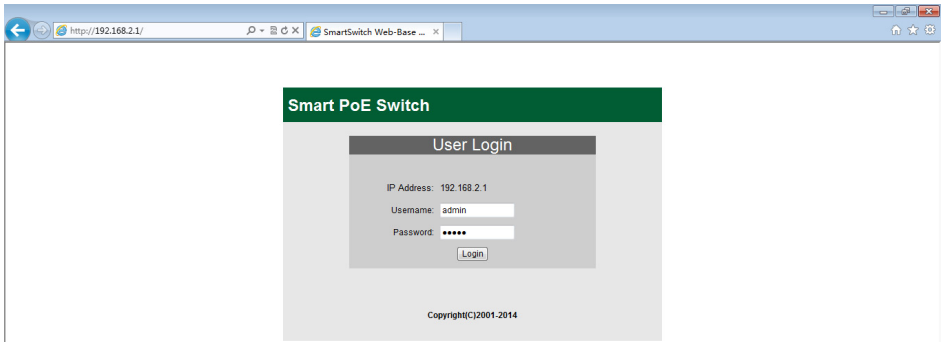
As the Web Smart PoE Switch provides Web-based management login, you can configure your computer’s IP address manually to log on to the Web Smart PoE Switch. The default settings of the Web Smart PoE Switch are shown below.

Parameter	Default Value
Default IP address	192.168.2.1
Default user name	admin
Default password	admin

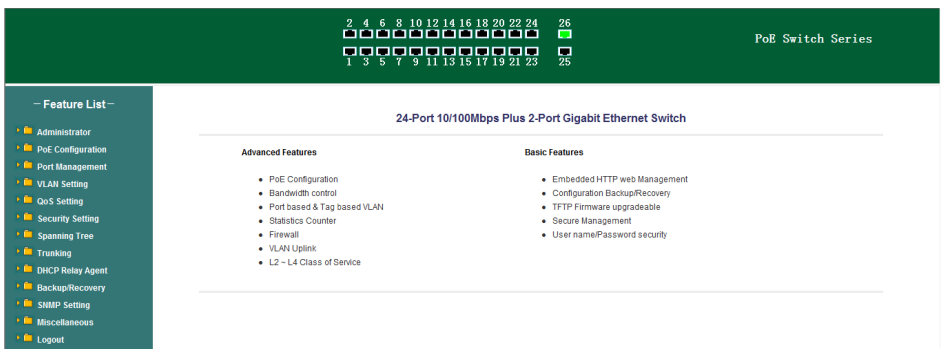
You can log on to the welcome window of the Web Smart PoE Switch through following steps:

1. Connect the Web Smart PoE Switch with the computer NIC interface.
2. Power on the Web Smart PoE Switch.

3. Check whether the IP address of the computer is within this network segment: 192.168.2.xxx (“xxx” ranges 2~254), for example, 192.168.2.100.
4. Open the browser, and enter http://192.168.2.1 and then press “Enter”. The Web Smart PoE Switch login window appears, as shown below.



5. Enter the user name and password (The factory default login username and password is admin), and then click “OK” to log in to the Switch configuration window as below.



# 5. Management the Switch

## 5.1 Administrator

### 5.1.1 System status

This page is used to check the status of Web Smart PoE Switch, including Switch MAC address and software version.

— Feature List —

- Administrator
  - System Status
  - System IP Configuration
  - Authentication Configuration
  - Load Default Setting
  - Firmware Update
  - Reboot Device
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### System Status

MAC Address	10:10:13:00:18:26
Number of Port	24+2
Comment	<input type="text" value="switch"/> (Max:15)
System Version	viP1826D_PoEPD69100_108.6
	Idle Time: <input type="text" value="0"/> (1-30 Minutes)
<input type="checkbox"/> Idle Time Security	<input type="radio"/> Auto Logout(Default). <input type="radio"/> Back to the last display.
<input type="button" value="Update"/>	

Notice:  
Comment name can use only "a-z","A-Z","0-9","\_","+", "-", "=",

The MAC address and version of the switch will be shown at system status diagram box. Comment field can accept “Aa~Zz”, “0-9”, “\_”, “+”, “-”, “=”, excluding special character.

### 5.1.2 System IP Configuration

This page shows system configuration including the current IP address and subnet mask, Gateway, and IP configure.

- Feature List -
- Administrator
  - System Status
  - System IP Configuration
  - Authentication Configuration
  - Load Default Setting
  - Firmware Update
  - Reboot Device
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## System IP Configuration

Setting	Value			
IP Address	192	168	2	1
Subnet Mask	255	255	255	0
Gateway	192	168	2	254
IP Configure	<input checked="" type="radio"/> Static <input type="radio"/> DHCP			
<input type="button" value="Update"/>				

IP address, Subnet Mask, and Gateway at system IP Configuration diagram box can be configured by user. The Web Smart PoE Switch also supports DHCP methods to get IP address from DHCP server.

### 5.1.3 Authentication Configuration

Authentication Configuration diagram box allows user to modify username and password, and then enter new username and password. After completing, press update button to take effect.

- Feature List -
- Administrator
  - System Status
  - System IP Configuration
  - Authentication Configuration
  - Load Default Setting
  - Firmware Update
  - Reboot Device
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## Authentication Configuration

Setting	Value	
Username:	admin	Max:15
Password:	*****	Max:15
Confirm:	*****	
<input type="button" value="Update"/>		

**Notice:**  
Username & Password can use only "a-z","A-Z","0-9","\_","-",".".

## 5.1.4 Load default setting

Clicking the “load” button will make the Web Smart PoE Switch being set to the original configuration. When Load Default is executed, the all settings will be restored to default setting. Press load button at load default setting page, and then the process of the load default setting will be executed. Press reboot button to take effect.

After completing load default procedure, IP address will keep original setting.

The screenshot shows the 'Load Default Setting' page. On the left is a 'Feature List' sidebar with a tree view containing categories like Administrator, PoE Configuration, Port Management, VLAN Setting, QoS Setting, Security Setting, Spanning Tree, Trunking, DHCP Relay Agent, Backup/Recovery, SNMP Setting, Miscellaneous, and Logout. The main content area is titled 'Load Default Setting' and contains a sub-header 'Load Default Setting' with the instruction 'Recover switch default setting excluding the IP address, User name and Password.' Below this instruction is a single 'Load' button.

## 5.1.5 Firmware update

After pressing firmware update button, the Web Smart PoE Switch will erase the older version flash code first. Then enter file name at specific path, and the update will be completed.

Using default IP to execute firmware update process

The screenshot shows the 'Firmware Update' page. On the left is the same 'Feature List' sidebar as in the previous screenshot. The main content area is titled 'Firmware Update' and contains a sub-header 'Firmware Update' with the instruction 'Please input the password to continue the Firmware Update process.' Below this instruction are two input fields labeled 'Password:' and 'Confirm:', followed by an 'Update' button.

**Notice:**  
After clicking the "UPDATE" button, if the firmware update webpage is not redirected correctly or is shown as "Webpage not found",  
Please connect to <http://192.168.2.1>

Enter password to execute firmware update process. After pressing update button, the old web code will be erased. After completing, select the image file and enter update button to take effect.

### 5.1.6 Reboot device

This page is used to reboot device.

Press Confirm button to take effect for rebooting device.



## 5.2 PoE

### 5.2.1 PoE Status

This page is used to check PoE Status; you can set Max Available Power and the PD type (1. IEEE802.3AF/AT PD 2: Legacy PD).

- Feature List —
- Administrator
- PoE Configuration
  - PoE Status
  - PoE Setting
  - PoE Power Delay
  - PoE Scheduling
  - NTP Setting
- Port Management
  - VLAN Setting
  - QoS Setting
  - Security Setting
  - Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
  - SNMP Setting
  - Miscellaneous
  - Logout

## PoE Status

Max available Power	300 W
PD type	<input checked="" type="radio"/> 1: IEEE802.3AF/AT PD <input type="radio"/> 2: Legacy PD
<a href="#">Update</a>	

System operation status	On
PoE Power Voltage	51 V
Main Power consumption	0 W
Device Temperature	
PoE 1# Device	38 (C)
PoE 2# Device	32 (C)
PoE 3# Device	36 (C)

### 5.2.2 PoE Setting

This page is for PoE Port setting.

- Feature List —
- Administrator
- PoE Configuration
  - PoE Status
  - PoE Setting
  - PoE Power Delay
  - PoE Scheduling
  - NTP Setting
- Port Management
  - VLAN Setting
  - QoS Setting
  - Security Setting
  - Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
  - SNMP Setting
  - Miscellaneous
  - Logout

## PoE Setting

Function	Status	Priority	Power Budget
	---	(1-Critical, 2-High, 3-Low)	(Max: 32W)
Port No.	<input type="checkbox"/> 02 <input type="checkbox"/> 04 <input type="checkbox"/> 06 <input type="checkbox"/> 08 <input type="checkbox"/> 10 <input type="checkbox"/> 12 <input type="checkbox"/> 14 <input type="checkbox"/> 16 <input type="checkbox"/> 18 <input type="checkbox"/> 20 <input type="checkbox"/> 22 <input type="checkbox"/> 24 <input type="checkbox"/> 01 <input type="checkbox"/> 03 <input type="checkbox"/> 05 <input type="checkbox"/> 07 <input type="checkbox"/> 09 <input type="checkbox"/> 11 <input type="checkbox"/> 13 <input type="checkbox"/> 15 <input type="checkbox"/> 17 <input type="checkbox"/> 19 <input type="checkbox"/> 21 <input type="checkbox"/> 23 <input type="checkbox"/> All		
<a href="#">Update</a>			

Port Status <a href="#">Refresh</a>					
Port	Status	Class	Priority	Power Consumption (W)	Power Budget (W)
1	Enable	---	3	0.00	30
2	Enable	---	3	0.00	30
3	Enable	---	3	0.00	30
4	Enable	---	3	0.00	30
5	Enable	---	3	0.00	30
6	Enable	---	3	0.00	30
7	Enable	---	3	0.00	30
8	Enable	---	3	0.00	30
9	Enable	---	3	0.00	30
10	Enable	---	3	0.00	30
11	Enable	---	3	0.00	30

**Status:** Enable, disable and Force the specified function.

**Priority:** Setting the priority of PoE.

### 5.2.3 PoE Power Delay

This page is for setting PoE Power Delay.

— Feature List —

- Administrator
- PoE Configuration
  - PoE Status
  - PoE Setting
  - PoE Power Delay
  - PoE Scheduling
  - NTP Setting
- Port Management
  - VLAN Setting
  - QoS Setting
  - Security Setting
  - Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
  - SNMP Setting
  - Miscellaneous
  - Logout

## PoE Power Delay

Function	Delay Mode		Delay Time(0-300)										
	----		second										
Port No.	02 <input type="checkbox"/>	04 <input type="checkbox"/>	06 <input type="checkbox"/>	08 <input type="checkbox"/>	10 <input type="checkbox"/>	12 <input type="checkbox"/>	14 <input type="checkbox"/>	16 <input type="checkbox"/>	18 <input type="checkbox"/>	20 <input type="checkbox"/>	22 <input type="checkbox"/>	24 <input type="checkbox"/>	All <input type="checkbox"/>
	01 <input type="checkbox"/>	03 <input type="checkbox"/>	05 <input type="checkbox"/>	07 <input type="checkbox"/>	09 <input type="checkbox"/>	11 <input type="checkbox"/>	13 <input type="checkbox"/>	15 <input type="checkbox"/>	17 <input type="checkbox"/>	19 <input type="checkbox"/>	21 <input type="checkbox"/>	23 <input type="checkbox"/>	
<a href="#">Update</a>													

Port	Delay Mode	Delay Time (second)
1	Disable	0
2	Disable	0
3	Disable	0
4	Disable	0
5	Disable	0
6	Disable	0
7	Disable	0
8	Disable	0
9	Disable	0
10	Disable	0
11	Disable	0
12	Disable	0
13	Disable	0

## 5.2.4 PoE Scheduling

This page is for setting PoE Scheduling; it starts PoE function at a specified time.

— Feature List —

- Administrator
- PoE Configuration
  - PoE Status
  - PoE Setting
  - PoE Power Delay
  - PoE Scheduling
  - NTP Setting
- Port Management
  - VLAN Setting
  - QoS Setting
  - Security Setting
  - Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
  - SNMP Setting
  - Miscellaneous
  - Logout

## PoE Scheduling

Schedule on Port	01 <input type="checkbox"/>
Schedule Mode	Disable <input type="checkbox"/>
Schedule AM/PM	AM <input type="checkbox"/>

Select all

Hour	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
03	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
04	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
05	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
06	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
07	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
08	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
09	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Update](#)



## 5.2.5 NTP Setting

This page is for NTP setting.

- Feature List -

- Administrator
- PoE Configuration
  - PoE Status
  - PoE Setting
  - PoE Power Delay
  - PoE Scheduling
  - NTP Setting
- Port Management
  - VLAN Setting
  - QoS Setting
  - Security Setting
  - Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
  - SNMP Setting
  - Miscellaneous
  - Logout

### NTP Setting

System Time	11:20:56
NTP Server	#1 210.0.235.14
	#2 59.124.196.85
Time Zone	UTC+0:00 ▾
<input type="button" value="Update"/>	

**NTP Server:** This is the IP address of the NTP information will be taken from.

**Time Zone:** Select your local time zone from this pull down list.

## 5.3 Port Management

### 5.3.1 Port configuration

This page allows the user to configure operating mode of the physical port.

- Feature List -

- Administrator
- PoE Configuration
- Port Management
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
  - Port Counter
  - VLAN Setting
  - QoS Setting
  - Security Setting
  - Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
  - SNMP Setting
  - Miscellaneous
  - Logout

### Port Configuration

Function	Tx/Rx Ability	Auto-Negotiation	Speed	Duplex	Pause	Backpressure	Addr. Learning
Port No.	02 <input type="checkbox"/> 04 <input type="checkbox"/> 06 <input type="checkbox"/> 08 <input type="checkbox"/> 10 <input type="checkbox"/> 12 <input type="checkbox"/> 14 <input type="checkbox"/> 16 <input type="checkbox"/> 18 <input type="checkbox"/> 20 <input type="checkbox"/> 22 <input type="checkbox"/> 24 <input type="checkbox"/> 26 <input type="checkbox"/> 01 <input type="checkbox"/> 03 <input type="checkbox"/> 05 <input type="checkbox"/> 07 <input type="checkbox"/> 09 <input type="checkbox"/> 11 <input type="checkbox"/> 13 <input type="checkbox"/> 15 <input type="checkbox"/> 17 <input type="checkbox"/> 19 <input type="checkbox"/> 21 <input type="checkbox"/> 23 <input type="checkbox"/> 25 <input type="checkbox"/> All <input type="checkbox"/>						
<input type="button" value="Update"/>							

Port	Current Status				Setting Status						
	Link	Speed	Duplex	FlowCtrl	Tx/Rx Ability	Auto-Nego	Speed	Duplex	Pause	Backpressure	Addr. Learning
1	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF
2	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF
3	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF
4	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF
5	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF
6	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF
7	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF
8	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF

After completing the settings, press update button to take effect. The setting will be reflected at current status window.

### 5.3.2 Port mirroring

The port mirroring function is accomplished by setting the following items.

**(a) Destination port:** Theoretically it's possible to set more than one destination port in a network. Actually the port mirroring function will lower the network throughput, and therefore it's recommended to set "only one" destination port in a network.

**(b) Monitored packets:**

1. Disable: means this function is disabled.
2. RX: means copy the incoming packets of the selected source port to the selected destination port.
3. TX: means copy the outgoing packets of the selected source port to the selected destination port.
4. Rx & Tx: means the combination of Rx and Tx.

**(c) Source port:** the traffic source that will be copied to the destination port.

— Feature List —

- Administrator
- PoE Configuration
- Port Management
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
  - Port Counter
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

#### Port Mirroring

Dest Port	1	2	3	4	5	6	7	8	9	10	11	12	13
	14	15	16	17	18	19	20	21	22	23	24	25	26
Monitored Packets	Disable ▾												
Source Port	1	2	3	4	5	6	7	8	9	10	11	12	13
	14	15	16	17	18	19	20	21	22	23	24	25	26
<input type="button" value="Update"/>													

### 5.3.3 Bandwidth Control

This page allows the setting of the bandwidth for each port. The TX rate and Rx rate can be filled with the number ranging 1 to 255. This number will be multiplied by the selected bandwidth resolution and the result is the real bandwidth.

- Feature List –
- Administrator
- PoE Configuration
- Port Management
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
  - Port Counter
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## Bandwidth Control

Port No.	Tx Rate	Rx Rate
01	<input type="text" value=""/> (0~255, 0:Full Speed)	<input type="text" value=""/> (0~255, 0:Full Speed)
Speed Base	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>Low</span> <span>▼</span> </div> <p style="font-size: 0.8em; margin: 0;">           Low            (1)32Kbps Tx/Rx bandwidth resolution for port 1~ port 25.            Actual Tx/Rx bandwidth =Rate value x 32 kbps. The rate value is 1~255.         </p> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>High</span> <span>▲</span> </div> <p style="font-size: 0.8em; margin: 0;">           High            (1) 256Kbps Tx/Rx bandwidth resolution for port 1~ port 24.            Actual Tx/Rx bandwidth=Rate value x 256Kbps. The rate value is 1~255.            When link speed is 10Mbps. The rate value is 1~39.            (2) the bandwidth resolution is 2048Kbps for port 25, port 26.            Actual Tx/Rx bandwidth=Rate value x 2048Kbps. The rate value is 1~255.            When link speed is 100Mbps. The rate value is 1~4.            When link speed is 100Mbps. The rate value is 1~48.         </p> </div>	
<input type="button" value="Update"/> <input type="button" value="LoadDefault"/>		
If the link speed of selected port is lower than the rate that you setting, this system will use the value of link speed as your setting rate.		

Port No.	Tx Rate	Rx Rate	Link Speed	Port No.	Tx Rate	Rx Rate	Link Speed
1	Full Speed	Full Speed	---	14	Full Speed	Full Speed	---

### 5.3.4 Broadcast Storm Control

The broadcast storm control is used to block the excessive broadcast packets, the number ranging from 1 to 63.

**For example:** The broadcast storm of the port1~6 are enabled and threshold is set to 10. The broadcast packets will be dropped when broadcast packets are more than threshold setting (packet length is 64 bytes).

- Feature List –
- Administrator
- PoE Configuration
- Port Management
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
  - Port Counter
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## Broadcast Storm Control

Threshold	63 (1~63)												
Enable	1	2	3	4	5	6	7	8	9	10	11	12	13
	14	15	16	17	18	19	20	21	22	23	24	25	26
<input type="button" value="Update"/>													
This value indicates the number of broadcast packet which is allowed to enter each port in one time unit. One time unit is 50us for Gigabit speed, 500 us for 100Mbps speed and 6000us for 10Mbps speed.													
<b>Note:</b> This effect may be not significant for long broadcast packet, since the broadcast packet count passing through the switch in a time unit is probably less than the specified number.													

## 5.3.5 Port Counter

This page provides port counter for each port. There are 4 groups of statistics in total.

— Feature List —

- Administrator
- PoE Configuration
- Port Management
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
  - Port Counter
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### Counter Category

Counter Mode Selection:
Transmit Packet & Receive Packet
Update

Port	Transmit	Transmit Packet & Receive Packet	
		Collision Count & Transmit Packet	Receive Packet
01		Drop packet & Receive Packet	0
02		CRC error packet & Receive Packet	0
03			0
04			0
05			0
06			0
07			0
08			0
09			0
10			0
11			0
12			0
...			...

## 5.4 VLAN Setting

### 5.4.1 VLAN mode

The switch supports two VLAN modes, tag based and port based. When the port based VLAN is selected, the tag setting will be useless. When the tag based VLAN is selected, the user can define the handling method of a VLAN tag to the specified port, including “add a VLAN tag”, “remove a VLAN tag” or “don’t care” about VLAN tag.

— Feature List —

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
  - VLAN Mode
  - VLAN Member
  - Multi to 1 Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### VLAN Mode

VLAN Mode
Port based VLAN
Change VLAN mode

When click the “Change VLAN mode” button, the mode will change to Tag Base VLAN.

– Feature List –

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
  - VLAN Mode
  - VLAN Member
  - Multi to 1 Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SMP Setting
- Miscellaneous
- Logout

### VLAN Mode

VLAN Mode	Change VLAN mode							
Tag based VLAN	Port 01 AddTag Ignore RemoveTag	Port 02 AddTag Ignore RemoveTag	Port 03 AddTag Ignore RemoveTag	Port 04 AddTag Ignore RemoveTag	Port 05 AddTag Ignore RemoveTag	Port 06 AddTag Ignore RemoveTag	Port 07 AddTag Ignore RemoveTag	Port 08 AddTag Ignore RemoveTag
	Port 09 AddTag Ignore RemoveTag	Port 10 AddTag Ignore RemoveTag	Port 11 AddTag Ignore RemoveTag	Port 12 AddTag Ignore RemoveTag	Port 13 AddTag Ignore RemoveTag	Port 14 AddTag Ignore RemoveTag	Port 15 AddTag Ignore RemoveTag	Port 16 AddTag Ignore RemoveTag
Tag Mode	Port 17 AddTag Ignore RemoveTag	Port 18 AddTag Ignore RemoveTag	Port 19 AddTag Ignore RemoveTag	Port 20 AddTag Ignore RemoveTag	Port 21 AddTag Ignore RemoveTag	Port 22 AddTag Ignore RemoveTag	Port 23 AddTag Ignore RemoveTag	Port 24 AddTag Ignore RemoveTag
	Port 25 AddTag Ignore RemoveTag	Port 26 AddTag Ignore RemoveTag						

[Update](#)

**Note:**  
If the link partner is a network interface card, it probably cannot recognize the VLAN tag.  
In this case, it is strongly recommended the network administrator to remove the VLAN tag of the corresponding port.

The egress packets of the output port will be added tag if add tag option is selected. The egress packets of the output will be stripped tag if remove tag option is selected. Don't care means the egress packets of the output port only forward to destination without adding or removing tag.

## 5.4.2 VLAN Member Setting

This page is used to set the VLAN ID. The VLAN ID is valid only when the tag based VLAN is enabled. In port based VLAN mode, the VLAN ID is useless.

### Port based VLAN

Port1~3 is set to same VLAN group and port4~5 is set to another VLAN group.

– Feature List –

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
  - VLAN Mode
  - VLAN Member
  - Multi to 1 Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SMP Setting
- Miscellaneous
- Logout

### VLAN Member Setting (Port Based)

Port	05 ▾ <a href="#">Read</a>												
DestPort	01	02	03	04	05	06	07	08	09	10	11	12	13
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DestPort	14	15	16	17	18	19	20	21	22	23	24	25	26
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Update](#) [Load Default](#)

VLAN Member																										
Port	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	V	V	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	V	V	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	V	V	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	V	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	V	V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
7	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V

## Tag based VLAN

The following figure shows: 12345678 port in the same VLAN group. The 3-port tag VID number is 123.

— Feature List —

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
  - VLAN Mode
  - VLAN Member
  - Multi to 1 Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### VLAN Member Setting (Tag Based)

VID:   123

Add: Enter a VID, select the VLAN member for this entry and then press this button to add a VLAN entry to the table.  
 Del: Select a VID in the table and then press this button to remove a VID entry from the table.  
 Update/Modify the existing VID entry, select VID and then press the button.

VLAN Member Port	01	02	03	04	05	06	07	08
Select	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VLAN Member Port	09	10	11	12	13	14	15	16
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VLAN Member Port	17	18	19	20	21	22	23	24
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VLAN Member Port	25	26	--	--	--	--	--	--
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: If you do not select any port, this VID will be treated as a VID embedded in a 802.1Q tag.

VID Source port	01	02	03	04	05	06	07	08
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VID Source port	09	10	11	12	13	14	15	16
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VID Source port	17	18	19	20	21	22	23	24
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VID Source port	25	26	--	--	--	--	--	--
Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Port VID Map								
Port	01	02	03	04	05	06	07	08
VID	--	--	123	--	--	--	--	--
Port	09	10	11	12	13	14	15	16
VID	--	--	--	--	--	--	--	--
Port	17	18	19	20	21	22	23	24
VID	--	--	--	--	--	--	--	--
Port	25	26	--	--	--	--	--	--
VID	--	--	--	--	--	--	--	--

VLAN Member																										
VID \ Port	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
123	v	v	v	v	v	v	v	v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

### 5.4.3 Multi-to-1 Setting

This setting is exclusive to VLAN setting on “VLAN member setting”. When VLAN member setting is updated, multi-to-1 setting will be void and vice versa. The “disable port” means the port is excluded in this setting. All ports excluded in this setting are treated as the same VLAN group.

- Feature List -
- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
  - VLAN Mode
  - VLAN Member
  - Multi to 1 Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SIMP Setting
- Miscellaneous
- Logout

## Multi to 1 Setting

Destination PortNo.	01 ▾												
Current Setting	Port -												
Disable Port	01 <input checked="" type="checkbox"/>	02 <input checked="" type="checkbox"/>	03 <input checked="" type="checkbox"/>	04 <input checked="" type="checkbox"/>	05 <input checked="" type="checkbox"/>	06 <input checked="" type="checkbox"/>	07 <input checked="" type="checkbox"/>	08 <input checked="" type="checkbox"/>	09 <input checked="" type="checkbox"/>	10 <input checked="" type="checkbox"/>	11 <input checked="" type="checkbox"/>	12 <input checked="" type="checkbox"/>	13 <input checked="" type="checkbox"/>
	14 <input type="checkbox"/>	15 <input type="checkbox"/>	16 <input type="checkbox"/>	17 <input type="checkbox"/>	18 <input type="checkbox"/>	19 <input type="checkbox"/>	20 <input type="checkbox"/>	21 <input type="checkbox"/>	22 <input type="checkbox"/>	23 <input type="checkbox"/>	24 <input type="checkbox"/>	25 <input type="checkbox"/>	26 <input type="checkbox"/>

Note: "Disabled port" defines the switch physical port which is disabled.

1. A example for Multi-to-1 structure

Destination Port/  
Current Setting

(N)

**Ports**

01

02

⋮

⋮

**VLAN Groups**

1

2

⋮

⋮

**Note:** If the VLAN mode changes from port base to tag base, the setting of the port base will be cleared. Similarly, if the VLAN mode changes from tag base to port base, the setting of the tag base will be cleared.

**WARNING!**

Current Tag-base VLAN Setting will be reset to default setting, if you click on "Continue" button to change to Port-base VLAN mode. Otherwise, click on "Back" button to cancel.

In tag base mode, adding or removing tag doesn't affect the source port connected with the web.

## 5.5 QoS Setting

### 5.5.1 Priority mode

This page allows the user to set the scheduling mode for the TX packets priority. When the queue weight is set to "0", it will be treated as "8". The "low weight" and "high weight" means the ratio of the packet in the transmit queue. For example, If "low weight" and "high weight" are set to "3" and "5", the ratio of the transmit packet for the low priority to high priority is 3/5.

- Feature List -
- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
  - Priority Mode
  - Port 802.1p/IP/DS Based
  - TCP/UDP Port Based
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## Priority Mode

Priority Mode

Mode

First-In-First-Out  
 All-High-before-Low  
 Weight-Round-Robin

Low weight: 0    High weight: 0

[Update](#)

**Note:**  
 When the queue weight is set to "0", it will be treated as "8".  
 The "low weight" and "high weight" means the ratio of the packet in the transmit queue. For example,  
 if "low weight" and "high weight" are set to "3" and "5", the ratio of the transmit packet for the low priority to high priority is 3:5.

### 5.5.2 Port, 802.1p, IP/DS based

There are three QoS types for this setting. The user can select more than one item for each port.

- Feature List -
- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
  - Priority Mode
  - Port 802.1p/IP/DS Based
  - TCP/UDP Port Based
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## Class of Service Configuration

☑=Enable High Priority								
Port No. \ Mode	PortBase	VLAN Tag	IP / DS	Port No. \ Mode	PortBase	VLAN Tag	IP / DS	
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

As long as any of three QoS schemes (802.1p, IP TOS/DS or Port Base) is mapped to "high", the data packet will be treated as the high priority.

### 5.5.3 TCP/UDP Port Based

This page allows the network administrator to assign the specific application to a priority queue. When the TCP/UDP port QoS function "override" item is selected, the Port\_based, Tag\_based, IP TOS\_based, QoS listed above will be ignored.



— Feature List —

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
  - Priority Mode
  - Port802.1p/IPDS Based
  - TCP/UDP Port Based
- Security Setting
  - Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
  - SNMP Setting
  - Miscellaneous
  - Logout

## Class of Service Configuration

Protocol	Option
FTP(20,21)	selected-F-I-F-O
SSH(22)	selected-F-I-F-O
TELNET(23)	selected-F-I-F-O
SMTP(25)	selected-F-I-F-O
DNS(53)	selected-F-I-F-O
TFTP(69)	selected-F-I-F-O
HTTP(80,8080)	selected-F-I-F-O
POP3(110)	selected-F-I-F-O
NEWS(119)	selected-F-I-F-O
SNTP(123)	selected-F-I-F-O
NMBIOS(137-139)	selected-F-I-F-O
IMAP(143,220)	selected-F-I-F-O
SNMP(161,162)	selected-F-I-F-O

## 5.6 Security Setting

### 5.6.1 MAC Address Binding

This is a port binding feature. This function provides a method for the administrator to specify the relationship between the physical port and the MAC address. By specifying the MAC address to each port, the switch can only forward the packets with source specified in the table. Each port can correspond to up to 3 MAC addresses.

— Feature List —

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
  - MAC Address Binding
  - TCP/UDP Filter
- Spanning Tree
  - Trunking
  - DHCP Relay Agent
  - Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## MAC Address Binding

Port No.	MAC Address																		
5	<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 20px;">00</td><td style="width: 20px;">00</td><td style="width: 20px;">00</td><td style="width: 20px;">00</td><td style="width: 20px;">00</td><td style="width: 20px;">00</td> </tr> <tr> <td>00</td><td>00</td><td>00</td><td>00</td><td>00</td><td>00</td> </tr> <tr> <td>00</td><td>00</td><td>00</td><td>00</td><td>00</td><td>00</td> </tr> </table>	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00														
00	00	00	00	00	00														
00	00	00	00	00	00														
Select Port 05 Binding Disable Update																			

Note:  
If you enable the MAC address binding function, the address learning function will be disabled automatically.

Port No.	Binding Status	Port No.	Binding Status
1	Disable	14	Disable
2	Disable	15	Disable
3	Disable	16	Disable
4	Disable	17	Disable
5	Disable	18	Disable
6	Disable	19	Disable
7	Disable	20	Disable

## 5.6.2 TCP/UDP Filter

By selecting the TCP/UDP port, the user can optionally block some specific applications. There are two kinds of protocol lists. The positive list makes the switch to forward the selected protocol and drop other protocols. The negative list makes the switch drop the selected protocol and forward other protocol. The protocol is checked at the selected secure WAN port.

- Feature List -

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
  - MAC Address Binding
  - TCP/UDP Filter
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### TCP\_UDP Filter Configuration

Function Enable	Disable							
Port Filtering Rule	Negative							
Protocol	<small>Note:</small> <small>(1) The outgoing packet with selected protocol will be either forwarded or dropped at secure WAN port as the figure shown below.</small> <small>(2) 'negative' means the selected protocol will be dropped and other protocols will be forwarded.</small> <small>'positive' means the selected protocol will be forwarded and other protocol will be dropped.</small>							
	<input type="checkbox"/> FTP(20,21)	<input type="checkbox"/> SSH(22)	<input type="checkbox"/> TELNET(23)	<input type="checkbox"/> SMTP(25)	<input type="checkbox"/> DNS(53)	<input type="checkbox"/> TFTP(69)	<input type="checkbox"/> HTTP(80,8080)	<input type="checkbox"/> POP3(110)
	<input type="checkbox"/> NEWS(119)	<input type="checkbox"/> SNTMP(123)	<input type="checkbox"/> NetBIOS(137-139)	<input type="checkbox"/> IMAP(143,220)	<input type="checkbox"/> SNMP(161,162)	<input type="checkbox"/> HTTPS(443)	<input type="checkbox"/> XRD_RDP(3389)	<input type="checkbox"/> BOOTP_DHCP(67,68)
	<input type="checkbox"/> User-defined_a		<input type="checkbox"/> User-defined_b		<input type="checkbox"/> User-defined_c		<input type="checkbox"/> User-defined_d	
Secure WAN port	<small>Note: These User-defined ABC TCP/UDP settings use the same port number settings as the Users-defined ABC Port number settings in QoS's Class of Service webpage.</small>							
	<input type="checkbox"/> Port01	<input type="checkbox"/> Port02	<input type="checkbox"/> Port03	<input type="checkbox"/> Port04	<input type="checkbox"/> Port05	<input type="checkbox"/> Port06	<input type="checkbox"/> Port07	<input type="checkbox"/> Port08
	<input type="checkbox"/> Port09	<input type="checkbox"/> Port10	<input type="checkbox"/> Port11	<input type="checkbox"/> Port12	<input type="checkbox"/> Port13	<input type="checkbox"/> Port14	<input type="checkbox"/> Port15	<input type="checkbox"/> Port16
	<input type="checkbox"/> Port17	<input type="checkbox"/> Port18	<input type="checkbox"/> Port19	<input type="checkbox"/> Port20	<input type="checkbox"/> Port21	<input type="checkbox"/> Port22	<input type="checkbox"/> Port23	<input type="checkbox"/> Port24
	<input type="checkbox"/> Port25	<input type="checkbox"/> Port26						
	<input type="button" value="Update"/>							
	<small>Note: The description of Secure WAN port is shown below.</small>							

The switch supports two methods to filter TCP/UDP protocol. Allow means that when the port number of the selected port matches the port number of the filter setting, the packets will be forwarded to destination port. Deny means that when the port number of the selected port doesn't match port number of the filter setting, the packets will be forwarded to destination port.

## 5.7 Spanning Tree

### 5.7.1 STP Bridge Settings

STP (Spanning Tree Protocol) is the abbreviation of spanning tree protocol. The protocol can be applied for establishing of tree topology on the network, eliminating the loop on the network, and avoiding the problems of broadcast storm which caused by the existence of loop. STP protocol will continue to 50s, this is the PC is turned on and some 50s before they can access, for data transfer. RSTP STP improved algorithm, within the agreement time to 1s.

– Feature List –

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
  - STP Bridge Setting
  - STP Port Setting
  - Loopback Detection
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## STP Bridge Settings

Spanning Tree Settings				
STP Mode	Bridge Priority (0-61440)	Hello Time (1-10 Sec)	Max Age (6-40 Sec)	Forward Delay (4-30 Sec)
▼	0	2	20	15
<input type="button" value="Submit"/>				
Note: 2*(Forward Delay-1) >= Max Age. Max Age >= 2*(Hello Time+1) Bridge Priority must be multiples of 4096				

**Note:**  
If you enable the MAC address binding function, the address learning function will be disabled automatically. Then both RSTP/STP and address learning will be affected.

Bridge Status				
STP Mode	Bridge ID	Hello Time	Max Age	Forward Delay
RSTP	32768:10 F0 13 F0 18 26	2	20	15

Root Status			
Root ID	Hello Time	Max Age	Forward Delay
I'm the root bridge!	2	20	15

### 5.7.2 STP Port Settings

This feature is available to you to switch the priority of each port and RPC set, usually set according to the following priority rules, and RPC can remain the default.

**RPC:** Root Path Cost. The value range is 0 ~ 200000000, used to determine the port to the root path cost, often with the speed, so when set to Auto, its value is inversely proportional to speed.

Election root port, in accordance with the following principles. COST - Port ID, compare the COST value, that is, the cost of the port to the root bridge. COST lower the value the more the priority.

[COST VALUE]

Bandwidth	COST
10Gps	2
1Gps	4
100M	19
10M	100

— Feature List —

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
  - STP Bridge Setting
  - STP Port Setting
  - Loopback Detection
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## STP Port Settings

STP Port Settings		
Port No.	Priority (0-240)	RPC (1-200000000) Default: AUTO
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Submit"/>		

Priority should be a multiple of 16

STP Port Status						
Port No.	RPC	Priority	State	Status	Designated Bridge	Designated Port
1	Auto:0	0x80	--	Disable	--	--
2	Auto:0	0x80	--	Disable	--	--
3	Auto:0	0x80	--	Disable	--	--
4	Auto:0	0x80	--	Disable	--	--
5	Auto:0	0x80	--	Disable	--	--
6	Auto:0	0x80	--	Disable	--	--
7	Auto:0	0x80	--	Disable	--	--
8	Auto:0	0x80	--	Disable	--	--
9	Auto:0	0x80	--	Disable	--	--
10	Auto:0	0x80	--	Disable	--	--
11	Auto:0	0x80	--	Disable	--	--
12	Auto:0	0x80	--	Disable	--	--

### 5.7.3 Loopback Detection

The features available to you under the loop test set, the "**Loopback Detect Function**", set to "Enable". When you produce the lower loop switch when the switch will automatically block out the port connecting to ensure other ports work.

When you set the "**Auto Wake Up**" and "**Wake-Up Time Interval**" option, and the network loop appears when the intervals, the switch port will wake up trying to loop until the fault discharged.

**"Reset All Ports"**: This button provides a key to force you to reset the port function.

**"Status"**: Display the current status of all ports.

– Feature List –

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
  - STP Bridge Setting
  - STP Port Setting
  - Loopback Detection
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## Loopback Detection Settings

Loopback Detect Function	Disable ▾
Auto Wake Up	Disable ▾
Wake-Up Time Interval	10 sec ▾
<input type="button" value="Submit"/>	

Port No.	Status
1	--
2	--
3	--
4	--
5	--
6	--
7	--
8	--
9	--
10	--
11	--
12	--
13	--

## 5.8 Trunking

Port aggregation is to bring together multiple ports together to form a group to achieve entry/exit load in the aggregation group, all members of the port-sharing, while also providing higher connection reliability.

**Note:** Note the following settings. According to LACP specifications, the same group for each Member port Trunk connection speed and Duplex must be consistent, otherwise not work properly.

– Feature List –

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
  - Link Aggregation Setting
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

## Trunking

System Priority	1 (1-65535)
Link Aggregation Algorithm	MAC Src&Dst ▾
<input type="button" value="Submit"/>	

	Link Group 1			Link Group 2			Link Group 3			
Member	P1	P2	P3	P4	P5	P6	P7	P8	P25	P26
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
State	Disable ▾			Disable ▾			Disable ▾			
Type	LACP ▾			LACP ▾			LACP ▾			
Operation Key	1 (1-65535)			2 (1-65535)			3 (1-65535)			
Time Out	short time out ▾			short time out ▾			short time out ▾			
Activity	Passive ▾			Passive ▾			Passive ▾			
<input type="button" value="Submit"/>										

**Note:**  
If you enable LACP on some specified ports and their link partners are normal port without LACP, these specified ports cannot transmit packet or receive packet from the link partner.

**System Priority:** Set the Switch System Priority, a value of 1 to 65535.

**Link Aggregation Algorithm:** MAC Src on behalf of Source MAC address. MAC Dst on behalf of Destination MAC address.



## 5.9.3 VLAN MAP Relay Agent

Enter the VLAN ID value within 1-4094.

**Feature List**

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
  - DHCP Relay Agent
  - Relay Server
  - VLAN MAP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### DHCP Relay Agent

VLAN ID  (1-4094) Map Server IP:

#### MAP List

VLAN ID	Server IP	Action
---------	-----------	--------

## 5.10 Backup/Recovery

This function provides the user with a method to backup/recovery the switch configuration. The user can save configuration file to specified path. If the user wants to recover the original configuration, which is saved at the specified path, entering the password and then pressing the “upload” button could recover the original configuration.

**Feature List**

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
  - DHCP Relay Agent
  - Relay Server
  - VLAN MAP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### Configuration Backup/Recovery

#### Backup(Switch → PC)

Please check "Download" to download EEPROM contents.

#### Recovery(PC → Switch)

Password:

Select the image file:

The contents of the EEPROM can be saved to specific path, and the default name is down.bin.

## 5.11 SNMP Settings

SNMP (Simple Network Management Protocol), used to manage the communication line. You can Enable or Disable SNMP Settings here.

– Feature List –

- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### SNMP Settings

Community Settings	
Community Name	Access Right
public	Read Only ▾
	Read Only ▾

SNMP Settings	
System Description	IP1826
System Contact	
System Location	

SNMP Trap Settings	
Trap State	Enable ▾
Enable Trap Server	Disable ▾
Trap Server Address	

## 5.12 Miscellaneous

Miscellaneous is used to configure output queue aging time, VLAN stride, IGMP snooping, and VLAN uplink function setting.

### Output Queue Aging Time

This function is enabled for avoiding poor utilization of switch while pause packets is received, The normal packets from transmitted port (port1) can be forwarded to other port if port2 continues to assert pause frame.

### VLAN Striding

By selecting this function, the Switch will forward unicast packets to destination port, no matter whether destination port is in the same VLAN.

### IGMP Snooping V1 & V2

This function is enabled for supporting IGMPv1, IPMPv2 protocol to create IGMP group.



## VLAN Uplink Setting

This function allows different VLAN use their individual uplink port to forward packets. In a normal application, “only one “uplink port can be selected in a switch.

— Feature List —

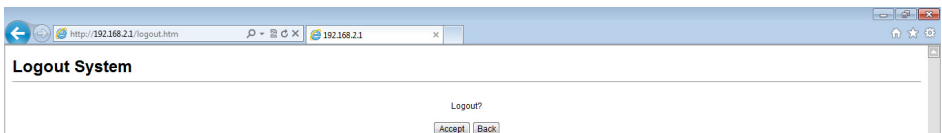
- Administrator
- PoE Configuration
- Port Management
- VLAN Setting
- QoS Setting
- Security Setting
- Spanning Tree
- Trunking
- DHCP Relay Agent
  - DHCP Relay Agent
  - Relay Server
  - VLAN MAP Relay Agent
- Backup/Recovery
- SNMP Setting
- Miscellaneous
- Logout

### Miscellaneous Setting

Output Queue Aging Time												
Aging time Disable ▾ ms	The output queue aging function allows the administrator to select the aging time of a packet stored in the output queue. A packet stored in the output queue for a long time will lower the free packetbuffer,resulting in the poor utilization of the buffer and the poor switch performance.											
VLAN Striding												
VLAN Striding Disable ▾	When this function is enabled, the switch will forward a uni-cast packet to the destination port, no matter whether the destination port is in the same VLAN group.											
IGMP Snooping V1 & V2												
IGMP Snooping Disable ▾	IGMP Snooping V1 & V2 function enable											
IGMP Leave Packet Disable ▾	Leave packet will be forwarded to IGMP router ports.											
VLAN Uplink Setting												
Port 01 ● Uplink1 ● Uplink2	Port 02 ● Uplink1 ● Uplink2	Port 03 ● Uplink1 ● Uplink2	Port 04 ● Uplink1 ● Uplink2	Port 05 ● Uplink1 ● Uplink2	Port 06 ● Uplink1 ● Uplink2	Port 07 ● Uplink1 ● Uplink2	Port 08 ● Uplink1 ● Uplink2	Port 09 ● Uplink1 ● Uplink2	Port 10 ● Uplink1 ● Uplink2	Port 11 ● Uplink1 ● Uplink2	Port 12 ● Uplink1 ● Uplink2	Port 13 ● Uplink1 ● Uplink2
Port 14 ● Uplink1 ● Uplink2	Port 15 ● Uplink1 ● Uplink2	Port 16 ● Uplink1 ● Uplink2	Port 17 ● Uplink1 ● Uplink2	Port 18 ● Uplink1 ● Uplink2	Port 19 ● Uplink1 ● Uplink2	Port 20 ● Uplink1 ● Uplink2	Port 21 ● Uplink1 ● Uplink2	Port 22 ● Uplink1 ● Uplink2	Port 23 ● Uplink1 ● Uplink2	Port 24 ● Uplink1 ● Uplink2	Port 25 ● Uplink1 ● Uplink2	Port 26 ● Uplink1 ● Uplink2

## 5.13 Logout

The page provides the user to logout web page.



# Hardware Specifications

Model	16F+2G TP/SFP Combo Web Smart PoE Switch	24F+2G TP/SFP Combo Web Smart PoE Switch
<b>Standard</b>	IEEE802.3, IEEE802.3u, IEEE802.3z, IEEE802.3ab, IEEE802.3x, IEEE802.3af, IEEE802.3at	
<b>Network Media (Cable)</b>	10BASE-T: UTP category 3,4,5 cable (≤100m) 100BASE-TX: UTP category 5 cable (≤100m) 1000BASE-T: UTP category 5e,6 cable (≤100m) 1000Base-X: MMF or SMF SFP Module (Optional)	
<b>MAC Address Table</b>	4K, Auto-learning, Auto-aging	
<b>Transfer mode</b>	Store-and-Forward	
<b>Frame Forward Rate</b>	10Base-T: 14881pps/Port 100Base-TX: 148810pps/Port 1000Base-T/X: 1488095pps/Port	
<b>Switching Capacity</b>	7.2G	8.8G
<b>Dimensions (L*W*H)</b>	440*232*45 mm	
<b>Fan</b>	Fan	
<b>Power supply</b>	55V/4.5A, 55V/6.7A AC/DC Adapter(Optional)	
<b>PoE Port</b>	Port1~16	Port1~24
<b>PoE Power on RJ45</b>	Mode A 1/2(+), 3/6(-)	
<b>PoE Power Output</b>	Voltage: 55V DC Power: 30W(Max)	
<b>PoE Power Budget</b>	DN-95312-1: 250W DN-95313-1: 370W (According to the Adapter power)	
<b>Temperature</b>	Operating Temperature: 0°C ~ 40 °C (32°F ~ 104°F) Storage Temperature: -40°C ~ 70°C (-40°F ~ 158°F)	
<b>Humidity</b>	Operating Humidity: 10% ~ 90% non-condensing Storage Humidity: 5% ~ 90% non-condensing	

This is a Class A product. In home environment, this product may cause radio interference. In this case, the user may be required to take appropriate measures.

Hereby Assmann Electronic GmbH, declares that the Declaration of Conformity is part of the shipping content. If the Declaration of Conformity is missing, you can request it by post under the below mentioned manufacturer address.

**[www.assmann.com](http://www.assmann.com)**

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