

**1FX+4TP/2FX+4TP/2FX+6TP/1FX+7TP**

**Web-Management**

**User's Manual**

**Ver 1.0**

# Catalog

<b>Chapter 1 Product Introduction .....</b>	<b>- 2 -</b>
1.1 Items List.....	- 2 -
1.2 Front Panel Instructions .....	- 2 -
1.3 Back Panel Instructions .....	- 2 -
1.4 Side Panel Instructions .....	- 2 -
1.5 LED Instructions.....	- 3 -
1.6 Main Features .....	- 3 -
1.7 Technical Standard .....	- 3 -
<b>Chapter 2 Installation.....</b>	<b>- 4 -</b>
2.1 Cautions .....	- 4 -
2.2 Switch Connect to Terminal Network.....	- 4 -
<b>Chapter 3 Management .....</b>	<b>- 4 -</b>
3.1 Software Introduction .....	- 4 -
3.2 Administrator.....	- 5 -
3.2.1 User name and password .....	- 5 -
3.2.2 System IP setup.....	- 5 -
3.2.3 System status.....	- 6 -
3.2.4 Load default setting .....	- 6 -
3.2.5 Update version.....	- 7 -
3.3 Port management .....	- 7 -
3.3.1 Port Configuration .....	- 7 -
3.3.2 Bandwidth control .....	- 8 -
3.3.3 Broadcast storm control.....	- 8 -
3.3.5 Max Packet Length control .....	- 9 -
3.4 VLAN setting.....	- 9 -
3.4.1 VLAN Groups setting .....	- 9 -
3.4.2 VLAN Multi to One Mode.....	- 10 -
3.5 QoS setting .....	- 10 -
3.5.1 Class of Service Configuration .....	- 10 -
3.5.2 High Priority Queue Configuration .....	- 11 -
3.5.3 Customization differentiate serving setting .....	- 11 -
3.6 Port security setting .....	- 12 -
3.7 Logout.....	- 13 -
<b>Chapter 4 Annex .....</b>	<b>- 13 -</b>
4.1 RJ-45 Pin Norm.....	- 13 -
4.2 Straight-through cable .....	- 14 -
4.3 Crossover cable .....	- 14 -

## Chapter 1 Product Introduction

### 1.1 Items List

Please make sure the following items included in the packing box.

- Web-management 1FX+4TP/2FX+4TP/2FX+6TP/1FX+7TP ethernet -----1
- AC/DC Power Adapter -----1
- User's Manual -----1

Please notify your local distributor for a replacement if any aforementioned item is missing or damaged,

### 1.2 Front Panel Instructions

#### 1.21 1FX+4TP ethernet switch

There are four 10/100Mbps ports and one fiber port on the front panel . See Fig.1.2.1 below:



#### 1.22 2FX+4TP ethernet switch

There are four 10/100Mbps ports and two fiber port on the front panel . See Fig.1.2.2 below:



#### 1.23 2FX+6TP ethernet switch

There are six 10/100Mbps ports and two fiber port on the front panel . See Fig.1.2.3 below:



Fig.1.2.3

#### 1.24 1FX+7TP ethernet switch

There are seven 10/100Mbps ports and one fiber port on the front panel . See Fig.1.2.4 below:

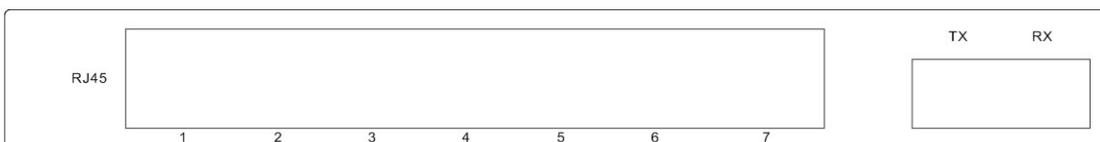


Fig.1.2.1

### 1.3 Back Panel Instructions

There are 9 sets of LEDs on the back panel. See fig.1.3.1

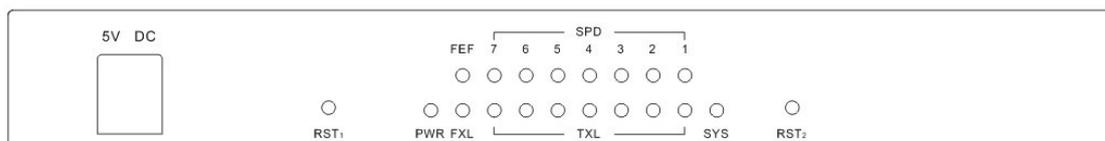


Fig.1.3.1

### 1.4 Side Panel Instructions

There is one DC power interface on the side. See Fig.1.4.1

5V DC



Fig.1.4.1

### 1.5 LED Instructions

The LEDs include one LED for power and 8 sets LEDs for seven RJ45 ports and one fiber port. The LEDs on the back panel make it easy to monitor any operation of the switch and diagnose any failures status, please refer to the following table:

LED	Color	Status	Description
PWR	Green	On	When the switch powers on
	—	Off	When the switch powers off
FXL/TXL	Green	On	When device is connected to the switch properly.
	Green	Blink	When the data transmission is active.
SPD/FEF	Green	On	When the 100Mbps device connected to the ports or Uplink.
	—	Off	When the 10Mbps device connected to ports or Uplink.

### 1.6 Main Features

- Each port support Web-management on the basic of IP address.
- Complies IEEE 802.3, IEEE 802.3u, IEEE 802.3x and IEEE802.1p standard
- Four 10/100M ports and one 100M fiber port/four 10/100M ports and two 100M fiber port/six 10/100M ports and two 100M fiber port/seven 10/100M ports and one 100M fiber port.
- Support four VLAN groups .
- Support flow control (802.3X), ports' security, broad cast storm control, ports monitoring.
- Support bandwidth control.
- All ports can auto-sense the connection speed (10/100M) and working mode (Full-Duplex/ Half-Duplex)
- Support IEEE802.1p Priority Protocol.

### 1.7 Technical Standard

Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x
Port Number	Four 10/100M TP ports +one fiber port Four 10/100M TP ports +two fiber port Six 10/100M TP ports +two fiber port Seven 10/100M TP ports +one fiber port
Network Cable	<u>10BASE-T:</u> Category 3,4 or 5 UTP/STP (Max:100m) EIA/TIA- 568 100Ω STP (Max:100m) <u>100BASE-TX:</u> 2pairs of category 5 UTP (Max:100m) EIA/TIA- 568 100Ω STP (Max:100m) <u>100BASE-FX:</u> MMF (maximum 2000m) SMF (maximum 20~60Km)
Dimension	180mm (L) *212mm (W) *30mm (H)
Storage/Operation Condition	Operation Temperature: 0° C-70° C; Storage Temperature: -40° C-85° C Humidity: 15%~95%
Power	Input: DC5V/2A

## Chapter 2 Installation

### 2.1 Cautions

Please install the switch in a proper operation environment with adequate space. Pay attention to all the following installation requirements:

- Power supply: DC5V/2A.
- Switch shall work in a ventilating and dry environment. Keep 10cm or more space in the front and back of the switch.
- Make sure adequate ventilating ports are left around for heat diffusion. No object is allowed to be placed on the switch.

### 2.2 Switch Connect to Terminal Network

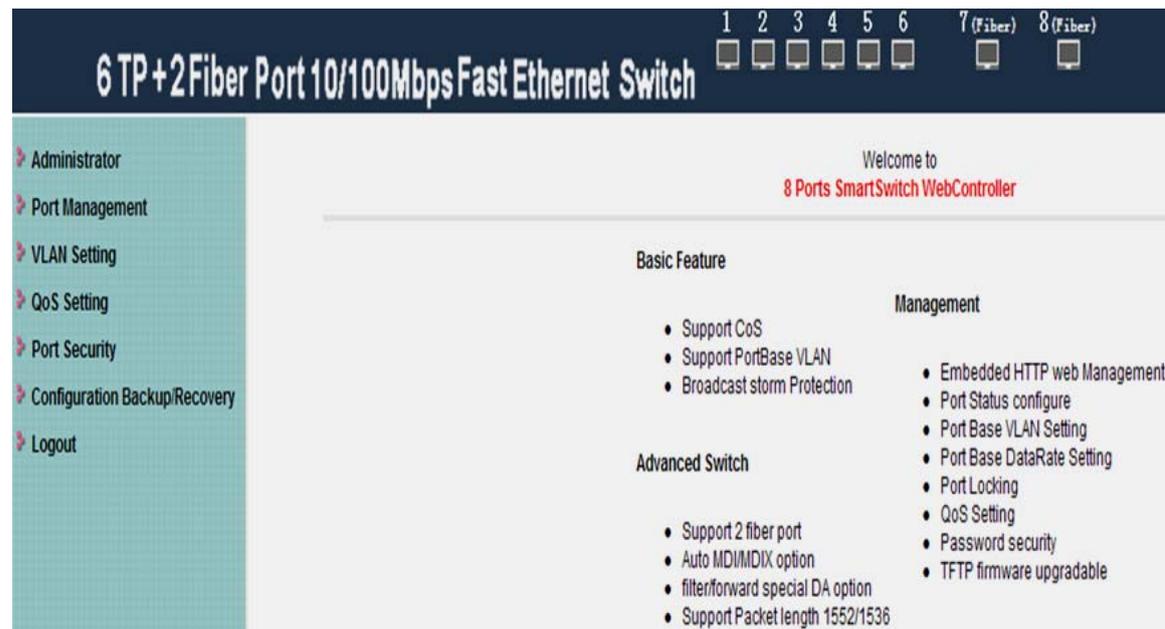
Terminal Network included the connected 10/100Mbps Network Interface Card of computer, server, router, or fiber connection, etc. The Switch port can connect to all these kind of terminal network.

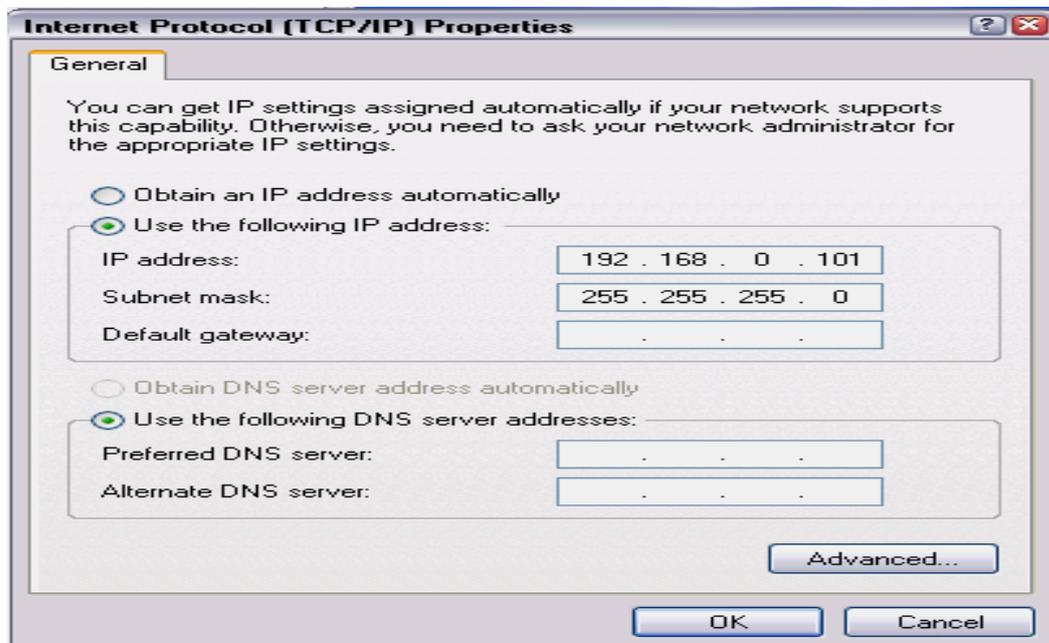
## Chapter 3 Management

Here, take the Six 10/100M TP ports +two fiber port ethernet switch as an example, all other kinds of ethernet switch operate at the same way.

### 3.1 Software Introduction

The switch is Web based management basic on IP address. Firstly, Please set an IP address for PC according to switch's default IP address, and make sure the switch and PC must be in the same gateway. Please open web browser, input the switch IP address, for example: <http://192.168.2.1>, and input the user's name and password (default user's name is "admin", Password is "system"), then you might enter into the management interface.





### 3.2 Administrator

The master should login on the user login page. Only after entered the management page, the master can manage IP setup, browse system conditions, reset origin setup and update it's version.

#### 3.2.1 User name and password

The master must use the exact user name and password to login. The master can amend the User name and password after login.

The image shows a web form titled "USER LOG IN" in a blue header. Below the header, there are three input fields. The first is labeled "Site:" and contains the text "192.168.2.1". The second is labeled "ID:" and contains the text "admin". The third is labeled "Password:" and contains a series of dots, indicating a masked password. To the right of the password field is a small icon of a keyboard. Below the password field is an "OK" button.

#### 3.2.2 System IP setup

It includes the setup of IP address, subnet mask, and gateway. The master may manage the switch after you set the same gateway of PC and the switch.

1 2 3 4 5 6 7 (Fiber)

## 6 TP+2Fiber Port 10/100Mbps Fast Ethernet Switch

Administrator

- Authentication Configuration
- System IP Configuration**
- System Status
- Load default setting
- Firmware Update
- Reset Device
- Port Management
- VLAN Setting
- QoS Setting

### System IP Configuration

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

### 3.2.3 System status

System includes MAC address, number of ports, comment and system Version. You may check the system condition when you enter into the page.

Administrator

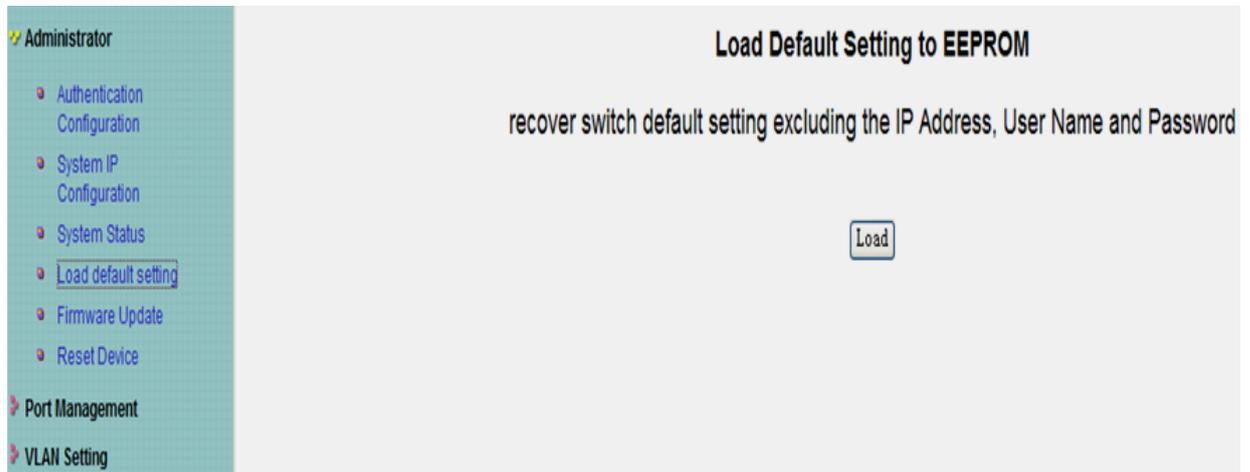
- Authentication Configuration
- System IP Configuration
- System Status**
- Load default setting
- Firmware Update
- Reset Device
- Port Management
- VLAN Setting
- QoS Setting
- Port Security
- Configuration Backup/Recovery
- Logout

### System Status

MAC Address	50:80:17:80:13:F0
Number of Ports	8
Comment	<input type="text" value="Switch"/>
System Version	IP210SDK2_L2.23_ICPlus_IP178_V5.2.6_6T2F
<input type="checkbox"/> Idle Time Security	Idle Time: <input type="text" value=""/> (1~30 Minutes)
	<input type="radio"/> Auto Logout (Default). <input type="radio"/> Back to the last display.

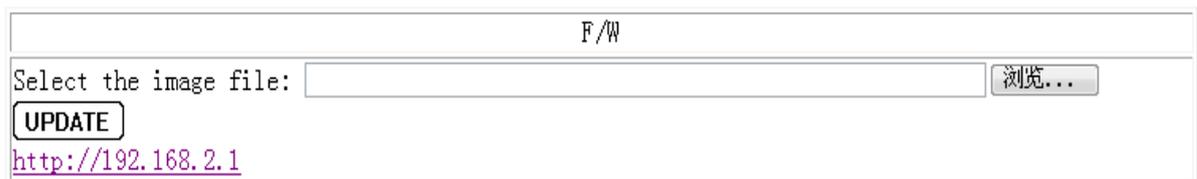
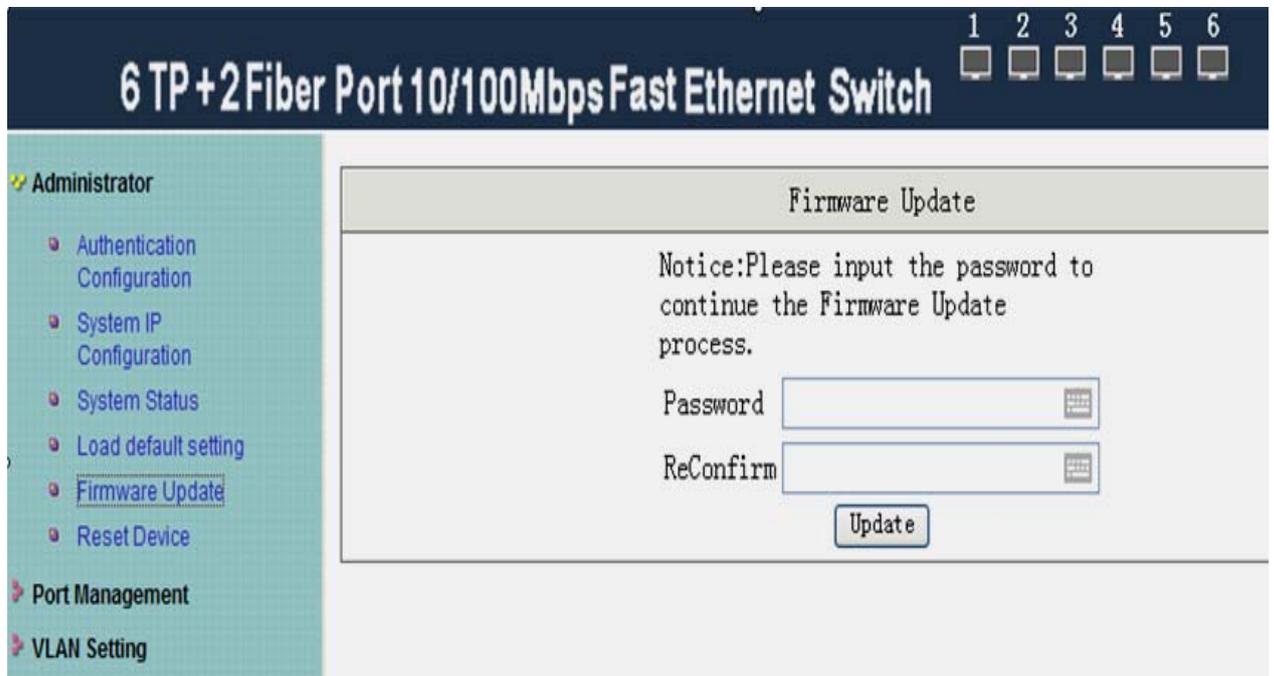
### 3.2.4 Load default setting

The user may reset the switch original setup if it is required. The switch is with original setup on the first using.



### 3.2.5 Update version

This function is to update the firmware. The system may update the system software. Please operate exactly like the menu when you update the firmware. the password is "system".



### 3.3 Port management

#### 3.3.1 Port Configuration

This function is to set port rate, full/half duplex, auto-negotiation and data-communication

### 6 TP + 2 Fiber Port 10/100Mbps Fast Ethernet Switch

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

- Administrator
- Port Management
  - Port Configuration
  - Bandwidth Control
  - Broadcast Storm Control
  - Max. Packet Length
- VLAN Setting
- QoS Setting
- Port Security
- Configuration Backup/Recovery
- Logout

## Port Control Configuration

Port No.	Name	Link Capability	Duplex	Port Tx/Rx Ability
1	<input type="text"/>	Auto-Nego.(All Capabilities)	Full	Enable

**Note:** Port name can only use "a-z", "A-Z", "0-9", "\_", "+", "-", "=".

Port	Name	Current Status			Setting Status		
		Link	Speed	Duplex	Capability	Duplex	Port Tx/Rx Ability
1		---	---	---	Auto	---	enable
2		---	---	---	Auto	---	enable
3		---	---	---	Auto	---	enable
4		---	---	---	Auto	---	enable
5		●	100Mb	FULL	Auto	---	enable

### 3.3.2 Bandwidth control

### 6 TP + 2 Fiber Port 10/100Mbps Fast Ethernet Switch

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

- Administrator
- Port Management
  - Port Configuration
  - Bandwidth Control
  - Broadcast Storm Control
  - Max. Packet Length
- VLAN Setting
- QoS Setting
- Port Security
- Configuration Backup/Recovery
- Logout

## Bandwidth Control

Port No	TX Rate	Rx Rate
1	Full	Full

If the link speed of selected port is lower than the rate set by user, this system will use the link speed as user's setting.

Port No	TX Rate	Rx Rate
1	Full	Full
2	Full	Full
3	Full	Full
4	Full	Full
5	Full	Full

### 3.3.3 Broadcast storm control

It can leach the internet Broadcast Storm. When the function is on, the ports will abandon the broadcast frame when it reqach the maximum rate. If the function is off or the broadcast storm dose not reach the maximum rate, the broadcast frame will be broadcast to the switch ports.

6 TP+2Fiber Port 10/100Mbps Fast Ethernet Switch

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

### Broadcast Storm Control

Item	Setting
Broadcast storm protection	<input type="checkbox"/> Enable

Update

### 3.3.5 Max Packet Length control

This function is for setup max. data packet length, which default rate is 1536 byte.

6 TP+2Fiber Port 10/100Mbps Fast Ethernet Switch

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

### Max Packet Length

Item	Setting
Packet Length (Bytes)	<input checked="" type="radio"/> 1536 (default) <input type="radio"/> 1552

Update

## 3.4 VLAN setting

### 3.4.1 VLAN Groups setting

You can set max. four VLAN groups in one 2008SFW Switch. There are max. 8 member ports in one VLAN group. The member ports of the same VLAN group can be communicated each other.

6 TP + 2 Fiber Port 10/100Mbps Fast Ethernet Switch

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

- Multi to 1 Setting
- Tag Based VLAN
- Port Based VLAN

QoS Setting

Port Security

Configuration Backup/Recovery

Logout

### Port Based VLAN

Port NO	VLAN Member
1	Port 1 <input checked="" type="checkbox"/> Port 2 <input checked="" type="checkbox"/> Port 3 <input checked="" type="checkbox"/> Port 4 <input checked="" type="checkbox"/> Port 5 <input checked="" type="checkbox"/> Port 6 <input checked="" type="checkbox"/> Port 7 <input checked="" type="checkbox"/> Port 8 <input checked="" type="checkbox"/>

Update LoadDefault

Port	VLAN Member							
	1	2	3	4	5	6	7	8
1	V	V	V	V	V	V	V	V
2	V	V	V	V	V	V	V	V
3	V	V	V	V	V	V	V	V

#### 3.4.2 VLAN Multi to One Mode

This function regards ports as target VLAN, other ports can add into this target VLAN port as a VLAN group. But after this function is active, the original setup of the VLAN group may be replaced or cleared.

6 TP + 2 Fiber Port 10/100Mbps Fast Ethernet Switch

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

- Multi to 1 Setting
- Tag Based VLAN
- Port Based VLAN

QoS Setting

Port Security

Configuration Backup/Recovery

Logout

### VLAN Multi to 1 Mode

Destination PortNo	01
Current Setting	Port:-

Update Restore (Restore the previous VLAN configuration)

1. A example for Multi-to-1 structure

```

graph TD
    01((01)) --> 08((08))
    02((02)) --> 08
    07((07)) --> 08
  
```

Destination Port/  
Current Setting

#### 3.5 QoS setting

##### 3.5.1 Class of Service Configuration

You may setup the priority of data packet forwarding by port base. The high priority

port might forward the data packet first.

**6 TP+2Fiber Port 10/100Mbps Fast Ethernet Switch**

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

- Multi to 1 Setting
- Tag Based VLAN
- Port Based VLAN

QoS Setting

- Class of Service Configuration
- High Priority Queue Configuration
- Customization

### Class of Service Configuration

Mode\Port	1	2	3	4	5	6	7	8
PortBase	<input type="checkbox"/>							
VLAN Tag/IP/DS	<input type="checkbox"/>							

Update

**Note:**

means Enable High Priority

When both PortBase mode and VLAN Tag/IP/DS mode are chosen, packets of VLAN Tag/IP/DS mode have high priority .

### 3.5.2 High Priority Queue Configuration

This function is for priority queue configuration of switch for Weight-Round-Robin low weight 1/4 and 1/8.

**6 TP+2Fiber Port 10/100Mbps Fast Ethernet Switch**

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

- Multi to 1 Setting
- Tag Based VLAN
- Port Based VLAN

QoS Setting

- Class of Service Configuration
- High Priority Queue Configuration
- Customization

### High Priority Queue Configuration

Weight-Round-Robin Low weight

Mode	<input checked="" type="radio"/> Weight-Round-Robin Low weight 1/4 <input type="radio"/> Weight-Round-Robin Low weight 1/8
------	---

Update

### 3.5.3 Customization differentiate serving setting

Activating this function may differentiate PRI through some certain bits of package received. After activating a certain serial number, the switch will distinguish each received data package with this serial number to see if this data package is high priority package, if yes, it will be switched as priority.

**6 TP+2Fiber Port 10/100Mbps Fast Ethernet Switch**

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

- Multi to 1 Setting
- Tag Based VLAN
- Port Based VLAN

QoS Setting

- Class of Service Configuration
- High Priority Queue Configuration
- Customization Diffserv

Port Security

### Customization Diffserv

Index: 00 [Enable] [Disable]

V: Enable, ---: Disable

0	---	8	---	16	---	24	---	32	---	40	---	48	V	56	V
1	---	9	---	17	---	25	---	33	---	41	---	49	---	57	---
2	---	10	V	18	V	26	V	34	V	42	---	50	---	58	---
3	---	11	---	19	---	27	---	35	---	43	---	51	---	59	---
4	---	12	---	20	---	28	---	36	---	44	---	52	---	60	---
5	---	13	---	21	---	29	---	37	---	45	---	53	---	61	---
6	---	14	---	22	---	30	---	38	---	46	V	54	---	62	---
7	---	15	---	23	---	31	---	39	---	47	---	55	---	63	---

### 3.6 Port security setting

After power on reset,, each port will record the first receiving data packet's source MAC address as "security MAC address". A security port only allows that data packet which has the "security MAC address" to active on.

1 2 3 4 5 6 7 (Fiber) 8 (Fiber)

## 6 TP+2 Fiber Port 10/100Mbps Fast Ethernet Switch

Administrator

Port Management

- Port Configuration
- Bandwidth Control
- Broadcast Storm Control
- Max. Packet Length

VLAN Setting

- Multi to 1 Setting
- Tag Based VLAN
- Port Based VLAN

QoS Setting

- Class of Service Configuration
- High Priority Queue Configuration
- Customization Diffserv

Port Security

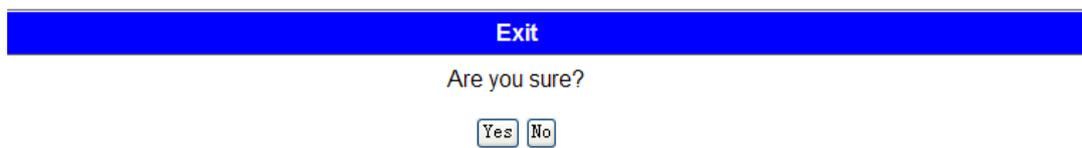
### Port Security

Port	1	2	3	4	5	6	7	8
Enable	<input type="checkbox"/>							

After power on reset, each port will record the first receiving packet's source MAC address as a "Security MAC address".  
A security port only allows that packet which has the "Security MAC address" to active on.  
**Note:**Please don't enable port security on your Control port.

### 3.7 Logout

By "Logout" function, you can exit the software management. Once re-login required, you should open the IE explore and enter the management by IP address again.



## Chapter 4 Annex

### 4.1 RJ-45 Pin Norm

For the definition of standard RJ-45 socket/ connector and pin, please refer to the following table:

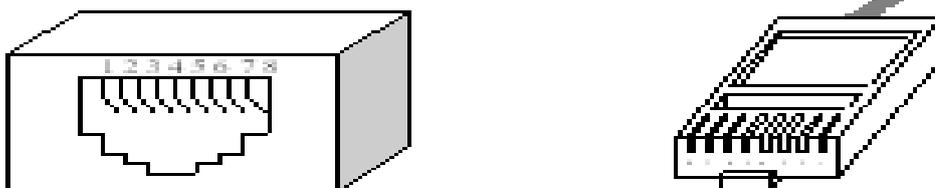


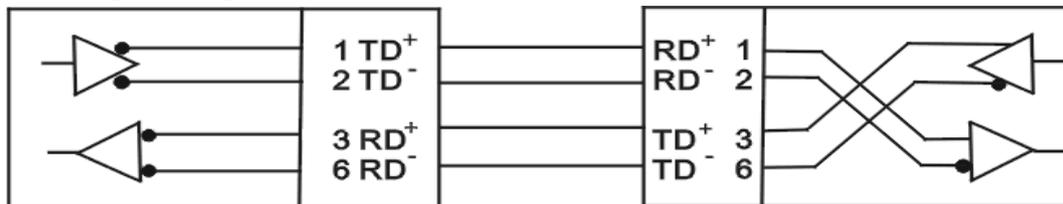
Fig. 4.1 Standard RJ-45 Socket/ Connector

Straight-through TP Pin
-------------------------

Pin	MDI-X signal	MDI-II signal
1	Rx + (Receive)	Tx + (Transmission)
2	Rx - (Receive)	Tx - (Transmission)
3	Tx + (Transmission)	Rx + (Receive)
6	Tx - (Transmission)	Rx - (Receive)
4,5,7,8	Null	Null

Tab. 3.2 Definition of Category 5 UTP, RJ-45 Pin

#### 4.2 Straight-through cable



#### 4.3 Crossover cable

