

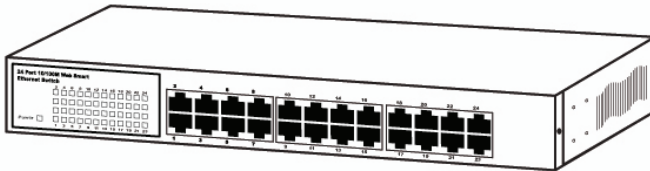


SW-0024F2

User's Manual

24 Port Nway Fast Ethernet Switch

Quick Installation Guide



FCC Warning

This device has been tested and found to comply with limits for a Class A digital device, pursuant to Part 2 and 15 of 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 and radiates radio frequency energy and, if not installed and used in accordance with the user's manual, it may cause interference in which case users will be required to correct interference at their own expenses.

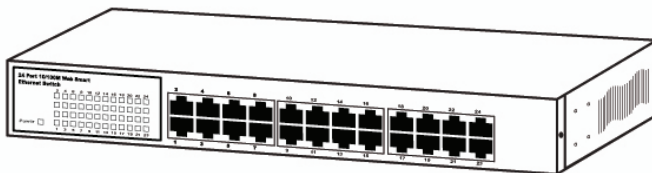
CE Warning

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

Introduction

This switch provides 16 10/100M ports. It was designed for easy installation and high performance in an environment where traffic is on the network and the number of users increases continuously.

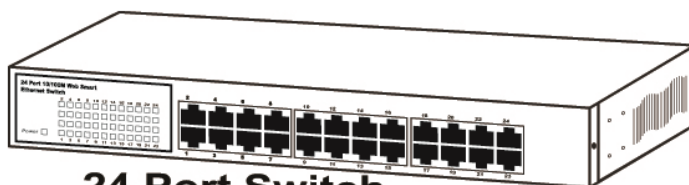
The compact rigid desktop size was specifically designed for small to medium workgroups. It can be installed where space is limited; moreover, it provides smooth network migration and easy upgrade to network capacity.



Package Contents

Before you start to install this switch, please verify your package that contains the following items:

- One Fast Ethernet Switch
- One Power Cord
- One Safety Warranty
- One pair Rack-mount kit + 8 Screws

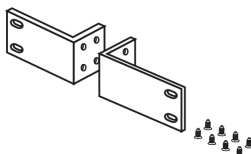


24 Port Switch

Safety Warranty



POWER CORD



Note: If any of these items is found missing or damaged, please contact your local supplier for replacement.

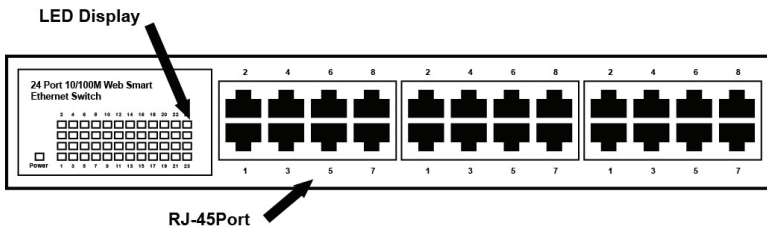
Key Features

- 24 Port 10/100M Nway (Auto-negotiation) Switch
- 11" Desktop size with metal case
- Can be installed in a 19" cabinet by rack-mount kits
- Auto-learn of networking configurations
- Auto-detect full/half-duplex modes for any port
- Dedicated full-duplex 200Mbps bandwidth
- Store-and-Forward switching methods
- IEEE 802.3x flow control for full-duplex and back-pressure flow control for half-duplex
- Non-blocking & Non-head-of-line blocking full wire speed forwarding
- Auto-MDI/MDI-X function for any port
- Smart plug & play

Front Panel (LEDs)

LED Indicators of 24 Port 10/100M Switch

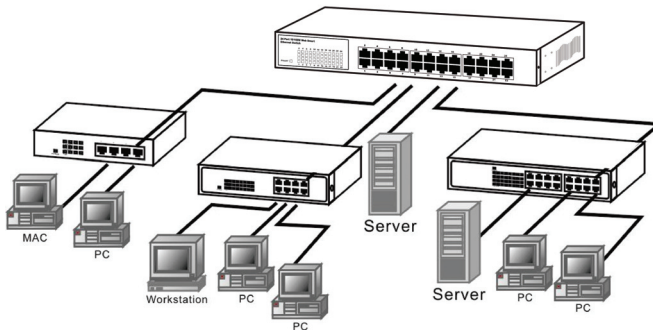
LED	Status	Description
Power	On	Power is on.
	Off	Power is off.
LINK/ACT	On	Port is for connection.
	Off	No connection.
	Flashing	Data is transmitting or receiving
10/100M	On	Port is on 100M status
	Off	Port is on 10M status.



Connections

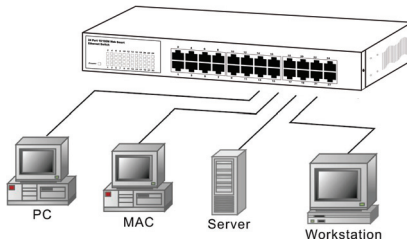
Switch/Hub to this 24 Port Fast Ethernet Switch

This switch provides automatic crossover detection functionality for any port. It is simple and friendly to up-link to another switch without crossover cable.



PC/Other devices to this 24 Port Fast Ethernet Switch

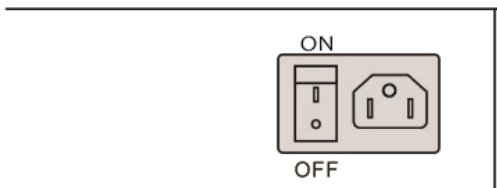
Via a twisted pair cable straight through, this switch can be connected to PCs, servers and other network devices.



Rear Panel (Power)

AC input

AC input (100~240V/AC, 50~60Hz) UL Safety



Technical Specifications

Standards	IEEE 802.3 10BaseT IEEE 802.3u 100BaseTX IEEE 802.3x Flow control
Features	Number of Ports: 24 MAC Address: 8K Buffer Memory: 1.625Mb Method: Store and Forward
Filtering/ Forwarding Rates	100Mbps port – 148,809pps 10Mbps – 14,880pps
Transmission Media	10BaseT Cat. 3, 4, 5 UTP/STP 100BaseTX Cat. 5 UTP/STP
LED Indicators	Per Port: LINK/ACT, 10/100M Per Unit: Power
Power Requirement	100~240V/AC, 50~60Hz
Power Consumption	10 Watts (Max)
Dimensions	44 x 266 x 160 mm (H x W x D)
Net Weight	1.40 kg
Operating Temperature	0 to 55°C
Storage Temperature	-20 to 90□
Humidity	10 to 90% RH (non-condensing)
Certifications	FCC Class A, CE

24 Port Nway Fast Ethernet Web Smart Switch

User's Manual

User Log In

This part instructs user how to set up and manage the switch through the web user interface. Please follow the description to understand the procedure.

At the first, open the web browser, and go to 192.168.2.1 site then the user will see the login screen. Key in the password to pass the authentication then clicks the OK. The log in process is completed and comes out the sign “Password successfully entered”.

Log in

ID: admin

Password: admin



The screenshot shows a web interface titled "USER LOG IN" in a blue header. Below the header, there are three input fields: "Site" with the value "192.168.2.1", "ID:" with the value "admin", and "Password:" with five dots. Below these fields is a grey "OK" button.

※Note: It will show error message if you key in wrong user name or password.



Main Page

- Administrator

- Authentication Configuration
- System IP Configuration
- System Status
- Load Default Setting to EEPROM
- Firmware Update
- Reboot Device

- Port Management

- Port Configuration
- Port Mirroring
- Bandwidth Control
- Broadcast Storm Control

- VLAN Setting

- VLAN Mode
- VLAN Member Setting (Port Based)
- VLAN Member Setting (Tag Based)
- Multi to 1 setting

- Per Port Counter

- Counter Category

- QoS Setting

- Priority Mode
- Class of Service

- Security

- MAC Address Binding
- MAC Address Scan (Scan MAC)
- TCP/UDP Filter Configuration
- IP Address Configuration

- Spanning Tree

- STP Bridge Settings
- STP Port Settings
- Loopback Detection

- Trunking

- Link Aggregation Settings

- Backup/Recovery

- Miscellaneous

- Miscellaneous Settings
- IGMP Static Router Setting

- SNMP Settings

- Save Settings

- Logout



- Administrator
- Port Management
- VLAN Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- Save Settings
- Logout

10/100Mbps Ethernet Switch

Advanced Features

- Bandwidth control
- Port based & 802.1Q based VLAN
- Statistics Counter
- Firewall
- VLAN Uplink

Basic Features

- Embedded HTTP web Management
- Backup/Recovery Configuration
- TFTP Software upgradable
- Secure Management
- Password security

Administrator: Authentication Configuration

This page shows authentication configuration information. User can set new username and Password in this page.

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 2324-Port 10/100Mbps Modular Fast Ethernet Switch

- Administrator
- Authentication Configuration
- System IP Configuration
- System Status
- Load default setting
- Firmware Update
- Reboot Device
- Port Management
- VLAN Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- Save Settings
- Logout

Authentication Configuration

Setting	Value
Username	admin max:15
Password	***** max:15
Confirm	*****

Note:
Username & Password can only use "a-z","A-Z","0-9","_","-",".",",","=".

Administrator: System IP Configuration

This page shows system configuration including the the current IP address and sub-net mask and gateway.

24-Port 10/100Mbps Modular Fast Ethernet Switch

System IP Configuration

Setting	Value
IP Address	192 . 168 . 2 . 1
Subnet Mask	255 . 255 . 255 . 0
Gateway	192 . 168 . 2 . 254

IP Configure Static DHCP

User can configure the IP settings, Subnet Mask, Gateway as below:

- IP address: Manually assign the IP address that the network is using. The default IP is 192.168.2.1
- Subnet Mask: Assign the subnet mask to the IP address.
- Gateway: Assign the network gateway for industrial switch. The default gateway is 192.168.2.254

If you change the IP address of this switch and then press **Update**. It will show "**update successfully**" then press **Reboot** button. It will enter user login screen automatically

Administrator: System Status

This page displays the information about the switch of MAC address, how many ports it has, system version and. Besides, users can also fill in up to 15 characters in the Comment, Contact and Location field for note.

24-Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24			
1 3 5 7 9 11 13 15 17 19 21 23			

- Administrator
 - Authentication Configuration
 - System IP Configuration
 - System Status
 - Load default setting
 - Firmware Update
 - Reboot Device
 - Port Management
 - VLAN Setting
 - Per Port Counter
 - QoS Setting
 - Security
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 - Trunking
 - Backup/Recovery
 - Miscellaneous
 - SNMP Settings
 - Save Settings
 - Logout

System Status

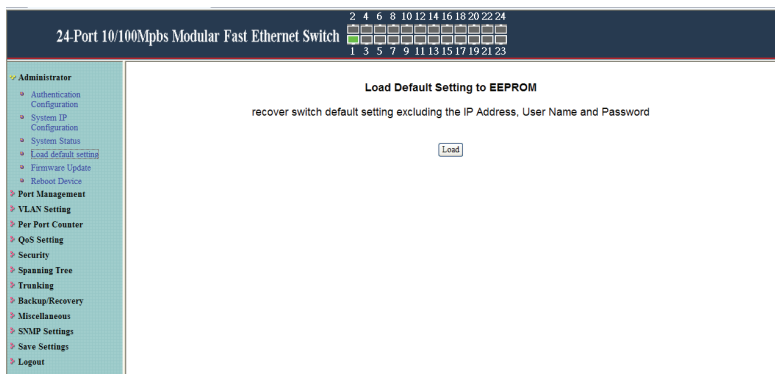
MAC Address	SF5013F013F0
Number of Ports	24
Comment	Switch
System Version	V110111
Idle Time Security	Idle Time: <input type="text" value="5"/> (1-30 Minutes)
	<input checked="" type="checkbox"/> Idle Time Security
	<input type="radio"/> Auto Logout(Default).
	<input type="radio"/> Back to the last display.
	<input type="button" value="Update"/>

Note:
Comment name can only use "a-z","A-Z","0-9","_"," ","-",":",",",";".

- **MAC Address:** Displays the unique hardware address assigned by manufacturer (default).
- **Number of Ports:** Displays number of ports in the switch.
- **Comment:** Users can fill in up to 15 characters in this field.
- **System Version:** Displays the switch’s firmware version.
- **Idle Time Security:** User can set the time security. When user leave the computer for a moment, the software will auto logout or back to the last display.
- And then click **Update** button.

Administrator: Load Default Setting to EEPROM

Clicking the **Load** button will make the switch being set to the original configuration.



❖ Note: It exclude to change user name, password and IP configuration. If you want to restore default setting including IP and user name password, then you can press the reset button for hardware base reset.

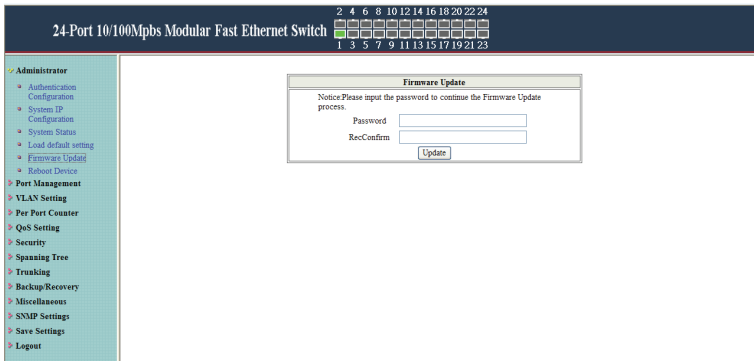
More detail information about Load Default Setting - Hardware Base is described as following.

The purpose of this function is to provide a method for the network administrator to restore all configurations to the default value.

- (1) To activate this function, the user should follow the following procedures. Press the “Load default” button for 3 seconds until you see the LED blinking.
- (2) When LED starts blinking, it means the CPU is executing the “load default” procedure. You can release the button now. After completing this procedure, all the factory default value will be restored. It includes the IP address, the user name, the password and all switch configurations.

Administrator: Firmware Update

Before the firmware update procedure is executed, you should enter the password twice and then press **Update** button. The smart switch will erase the flash memory. There is a self-protection mechanism in the Boot Loader, so the Boot Loader will keep intact. Even though the power is turned off or the cable link fails during the firmware update procedure, the Boot loader will restore the code to firmware update page.



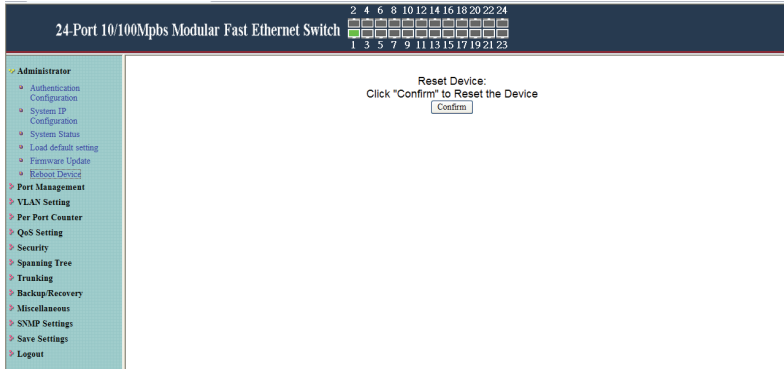
After pressing Update button, the old web code will be erased. Then you can select the image file and press “update” button to update the firmware you need.

Firmware Update by Web	
Select the image file:	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="UPDATE"/>
If the update process somehow goes wrong(Ex: power failure), please connect to http://192.168.2.1 to restart.(If possible, reset device first.)	

Firmware Update by TFTP
(TFTP client)Use MS Windows' Command Prompt window to run tftp client program. Syntax: c:\mftp -i 192.168.2.1 put FILE_DIRECTORY\FILENAME.bin

Administrator: Reboot Device

Click Confirm button to reboot the device.



The screenshot shows the web interface of a 24-Port 10/100Mbps Modular Fast Ethernet Switch. At the top, there is a status bar with a grid of 24 port indicators, numbered 2 through 24. The first two ports (2 and 3) are highlighted in green. Below the status bar is a navigation menu on the left with the following items: Administrator (expanded), Authentication Configuration, System IP Configuration, System Status, Load default setting, Firmware Update, Erase Device, Port Management, VLAN Setting, Per Port Counter, QoS Setting, Security, Spanning Tree, Trunking, Backup/Recovery, Miscellaneous, SNMP Settings, Save Settings, and Logout. The main content area displays a 'Reset Device' dialog box with the text 'Click "Confirm" to Reset the Device' and a 'Confirm' button.

Note: The reboot is for software base instead of hardware base.

Port Management: Port Configuration

In Port Configuration, you can set and view the operation mode for each port.

24-Port 10/100Mbps Modular Fast Ethernet Switch

3 4 6 8 10 12 14 16 18 20 22 24
01 02 03 04 05 06 07 08 09 10 11 12
1 3 5 7 9 11 13 15 17 19 21 23

- Administrator
- Port Management
 - Port Configuration
 - Port Mirroring
 - Standstill Control
 - Trunkless Items Control
- VLAN Setting
- Port Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- Save Settings
- Logout

Port Configuration

Function	Enable	Auto-Nego	Speed	Duplex	Symmetric Pause	Asymmetric Pause	Backpressure	Addr. Learning
	----	----	----	----	----	----	----	----
Select Port No	01 02 03 04 05 06 07 08 09 10 11 12							
	13 14 15 16 17 18 19 20 21 22 23 24							
	Update							

Port	Current Status					Setting Status							
	Link	Speed	Duplex	Pause	Pause	Enable	Auto-Nego	Speed	Duplex	Symmetric Pause	Asymmetric Pause	Backpressure	Addr. Learning
1	●	100M	Full	On	On	Enable	Auto	100M	Full	On	On	On	On
2	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
3	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
4	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
5	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
6	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
7	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
8	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
9	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
10	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
11	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
12	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
13	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
14	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
15	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
16	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
17	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
18	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
19	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
20	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
21	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
22	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
23	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On
24	●	●	●	●	●	Enable	Auto	100M	Full	On	On	On	On

- **TX/RX Capability:** When the Auto-Negotiation column is set as Disable, users have to set this column as Enable or Disable.
- **Auto-Negotiation:** Enable and Disable. Being set as 'Enable', the Speed, Duplex mode, Pause, Backpressure, TX Capability and Address Learning are negotiated automatically. When you set it as 'Disable', you have to assign those items manually.
- **Speed:** When the Auto-Negotiation column is set as Disable, users have to set the connection speed to the ports ticked.
- **Duplex:** When the Auto-Negotiation column is set as Disable, users have to set the connection mode in Half/Full to the ports ticked.

- Pause: Flow Control for connection at speed of 10/100Mbps in Full-duplex mode.
- Backpressure: Flow Control for connection at speed of 10/100Mbps in Half-duplex mode.
- Addr. Learning: When the Auto-Negotiation column is set as Disable, users have to set this column as Enable or Disable.
- Select Port No.: Tick the check boxes beside the port numbers being set.
- Click Update to have the configuration take effect.
- Current Status: Displays current port status.
- Setting Status: Displays current status.

Click **Update** to make the configuration effective.

Port Management: Port Mirroring

The Port mirroring is a method for monitoring traffic in switched networks. That Traffic through ports can be monitored by any of the ports means traffic goes in or out monitored (source) ports will be duplicated into mirroring (destination) port.

24-Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

Administrator
Port Management
 Port Configuration
 Port Mirroring
 Bandwidth Control
 Broadcast Storm Control
VLAN Setting
 Port Filter Counter
 QoS Setting
 Security
 Spanning Tree
 Trunking
 Backup/Recovery
 Miscellaneous
 SNMP Settings
 Save Settings
 Logout

Port Mirroring

Destination	1	2	3	4	5	6	7	8	9	10	11	12
Port	<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"/>

Monitored: 13 14 15 16 17 18 19 20 21 22 23 24

Packets: 1 2 3 4 5 6 7 8 9 10 11 12

Source	1	2	3	4	5	6	7	8	9	10	11	12
Port	<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"/>
Port	<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

- Destination (mirroring) port for monitoring Rx only, Tx only or both RX and TX traffic which come from the source port. Users can connect the mirroring port to LAN analyzer or Netxray.
- Monitored Packets: Pull down the selection menu to choose what kind of packet is to be monitored.
- Source Port: The ports that the user wants to monitor. All monitored port traffic will be copied to mirroring (destination) port. Users can select multiple source ports by ticking the check boxes beneath the port number label to be monitored.

And then, click **Update** to have the configuration take effect.

Port Management: 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 from 1 to 255. This number should be multiplied by the selected bandwidth resolution to get the actual bandwidth.

2 4 6 8 10 12 14 16 18 20 22 24
(24 ports) (24 ports) (24 ports) (24 ports) (24 ports)
1 3 5 7 9 11 13 15 17 19 21 23

- Administrator
- Port Management
 - Port Configuration
 - Port Information
 - Speed/Bandwidth Control
 - Broadcast Storm Control
- VLAN Setting
- Per-Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- Save Settings
- Logout

Bandwidth Control

Port No.	Tx Rate	Rx Rate
01	<input type="text" value=""/>	<input type="text" value=""/>
(0-255.0 for full speed)		(0-255.0 for full speed)
Speed Base	<input type="text" value="Low-32Kbps"/>	
1. All ports use the same speed base. 2. When setting the speed base to "High", the rate value must be 0-195. 3. When changing the speed base, the rate value of all ports will be set to 0/full speed.		
<input type="button" value="Update"/>		

Port	Link Speed	Tx Rate(Kbps)	Rx Rate(Kbps)
1	100M	Full Speed	Full Speed
2	--	Full Speed	Full Speed
3	--	Full Speed	Full Speed
4	--	Full Speed	Full Speed
5	--	Full Speed	Full Speed
6	--	Full Speed	Full Speed
7	--	Full Speed	Full Speed
8	--	Full Speed	Full Speed
9	--	Full Speed	Full Speed
10	--	Full Speed	Full Speed
11	--	Full Speed	Full Speed
12	--	Full Speed	Full Speed
13	--	Full Speed	Full Speed
14	--	Full Speed	Full Speed
15	--	Full Speed	Full Speed
16	--	Full Speed	Full Speed
17	--	Full Speed	Full Speed
18	--	Full Speed	Full Speed
19	--	Full Speed	Full Speed
20	--	Full Speed	Full Speed
21	--	Full Speed	Full Speed
22	--	Full Speed	Full Speed
23	--	Full Speed	Full Speed
24	--	Full Speed	Full Speed

Port Management: Broadcast Storm Control

The switch implements a broadcast storm control mechanism. Tick the check boxes to have them beginning to drop incoming broadcast packets if the received broadcast packet counts reach the threshold defined. Each port's broadcast storm protection function can be enabled individually by ticking the check boxes.

24-Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

Administrator
Port Management
 Port Configuration
 Port Mirroring
 Broadcast Control
 Broadcast Storm
 Control
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
Backup/Recovery
Miscellaneous
SNMP Settings
Save Settings
Logout

Broadcast Storm Control

Threshold: 63 (1-63)

Timer Unit: 1000.10ms and 100.100ms

Enable 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
	<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"/>	<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

The broadcast packet is only checked at the selected port and the number of broadcast packets is counted in every time unit. One time unit is 500 us for 10Mbps speed and 5ms for 100Mbps. The excessive broadcast packet will be discarded. For those broadcast packets incoming from the un-selected port, the switch treats it as the normal traffic.

- **Threshold:** Type in the threshold in the range between 1 and 63 to limit the maximum byte counts, which a port can send or receive in a period of time.
- **Enable Port:** Having ticked the boxes, the port will stop transmitting or receiving data when their sending byte counts or receiving byte counts reach the defined threshold.

Click **Update** to have the configuration take effect.

VLAN Setting: VLAN Mode

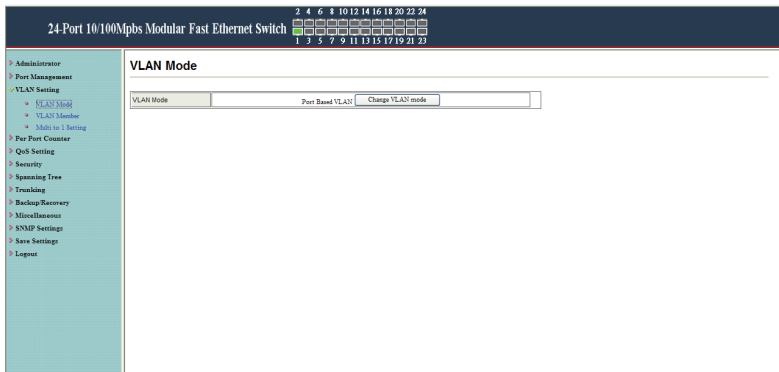
You may select the VLAN Mode of the switch.

Port-Based Mode

Port-based VLAN is for separating traffic only on this single switch. There is no handover of network traffic within VLAN groups to other switches.

Tag Based Mode

For the handover to other switches use Tag Based VLAN. In VLAN Mode you can switch from Tag to Port Based VLAN. Port Based VLAN is the default mode.



The screenshot shows the configuration page for a 24-Port 10/100Mbps Modular Fast Ethernet Switch. The page title is "VLAN Mode". At the top, there is a header with the switch model and a grid of port status indicators (24 ports in total, arranged in two rows of 12). The main content area shows the "VLAN Mode" configuration. There are three tabs: "VLAN Mode" (selected), "Port Based VLAN", and "Change VLAN mode". The "VLAN Mode" tab is active, and the "Port Based VLAN" tab is also visible. The "Change VLAN mode" tab is currently disabled. On the left side, there is a navigation menu with the following items: Administrator, Port Management, VLAN Setting (selected), VLAN Mode (selected), VLAN Member, VLAN to 3 Setting, Port Port Counter, QoS Setting, Security, Spanning Tree, Trunking, Backup/Recovery, Miscellaneous, SNMP Settings, Save Settings, and Logout.

VLAN Setting: VLAN Member in Tag Based Mode

24 Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

- Administrator
- Port Management
- VLAN Setting
 - VLAN Mode
 - VLAN Member
 - Multi to 1 Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- Save Settings
- Logout

VLAN Mode

Tag Based VLAN

VLAN Tag Mode	Tag/Untag base on Port					
AddTag Type (Add VLAN Tag to output frames according to the vid of selected port)	Port 01 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 02 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 03 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 04 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 05 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 06 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag
	Port 07 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 08 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 09 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 10 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 11 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 12 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag
	Port 13 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 14 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 15 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 16 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 17 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 18 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag
	Port 19 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 20 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 21 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 22 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 23 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag	Port 24 <input type="radio"/> Add Tag <input type="radio"/> Don't Care <input type="radio"/> Remove Tag

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.

Add a VLAN: Enter a VID, select the VLAN member and click the VID source port and then enter a group name. Finally press “add” button to send this command. The VLAN will be added to the list.

Delete a VLAN: Select a VID and press “Delete” to remove a VLAN.

Modify a VLAN: Select a VID which you want to modify. After the web page shows up, select the VLAN member and VID source port and then press “update”.

Add a VLAN Group

Step 1: Select / De-Select the VLAN ID

Step 2: Select / De-Select VID source corresponding to this VID

Step 3: Press “ Update “

VLAN Setting: Multi to 1 Setting

Multi to 1 VLAN is used in CPE side of Ethernet-to-the-Home and 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 which will be excluded in this setting. All ports excluded in this setting are treated as the same VLAN group. In a normal Tag Based VLAN network you will not need this configuration option.

24-Port 10/100Mbps Modular Fast Ethernet Switch

2	4	6	8	10	12	14	16	18	20	22	24
[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]
1	3	5	7	9	11	13	15	17	19	21	23
[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]

Administrator

Port Management

VLAN Setting

- VLAN Mode
- VLAN Member
- Multi to 1 Setting**

Per Port Counter

QoS Setting

Security

Spanning Tree

Trunking

Backup/Recovery

Miscellaneous

SNMP Settings

Save Settings

Logout

Multi to 1 Setting

Enable	<input type="checkbox"/>	Disable	<input type="checkbox"/>
Destination Port No.	Port: [0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24]		
Current Setting	Port: [0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24]		
Disable Port	[0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24]	<input type="button" value="Update"/>	

1.A example for Multi-to-1 structure

Ports	VLAN Groups
01	1
02	2
:	:
:	:
M	M

Destination Port/
Current Setting

N

1.²The original setting of the "VLAN" Group will be cleared and replaced by this special structure if you enable this function.
On the other hand, if you set the "VLAN" Group again, this special structure will be cleared and replaced by your current setting.

Per Port Counter: Counter Category

This page provides port counter of each port. There are 4 categories: Receive Packet & Transmit Packet/ Transmit & Collision / Receive Packet & Drop /Receive & CRC error. Once you change the counter category, the counter will be cleared automatically.

24-Port 10/100Mbps Modular Fast Ethernet Switch

Counter Category

Counter Mode Selection: **Receive Packet & Transmit Packet**

Note: The counters will be **Transmit Packet & Collision** if mode.

Port	Receive Packet & Transmit Packet	Transmit Packet	Receive Packet & Drop
1	2427	2425	
2	0	0	
3	0	0	
4	0	0	
5	0	0	
6	0	0	
7	0	0	
8	0	0	
9	0	0	
10	0	0	
11	0	0	
12	0	0	
13	0	0	
14	0	0	
15	0	0	
16	0	0	
17	0	0	
18	0	0	
19	0	0	
20	0	0	
21	0	0	
22	0	0	
23	0	0	
24	0	0	

Refresh Clear

- **Transmit packet & Receive packet:**
This category shows both the received packet count (excluding the incorrect packet) and the transmitted packet count.
- **Collision Count & Transmit packet:**
This category shows the packets outgoing from the switch and the count of collision.
- **Drop packet & Receive packet:**
This category shows the number of received valid packet and the number of dropped packet.
- **CRC packet & Receive packet:**
This category shows the received correct packet and received CRC error.
- **Clear:** Press “clear” will clear all counters.
- **Refresh:** Press “Refresh” button will aggregate the number of the counter for all ports.

QoS Setting: Priority Mode

24-Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

➤ Administrator
➤ Port Management
➤ VLAN Setting
➤ Per Port Counter
➤ QoS Setting
 ➤ Priority Mode
 ➤ Class of Service
➤ Security
➤ Spanning Tree
➤ Trunking
➤ Backup/Recovery
➤ Miscellaneous
➤ SNMP Settings
➤ Save Settings
➤ Logout

Priority Mode

Mode

First-In-First-Out

All-High-before-Low(Strict Priority): All packets will be assigned to either Q1, Q2(high) priority queue or Q3, Q4(low) priority queue.

4 Queue WRR Q1: 16 Q2: 16 Q3: 16 Q4: 16

Update

There are three priority modes available to specify the priority of packets being serviced. Those include First-in-First-out, All-High-Before-Low, and-Weight-Round-Robin.

- First-In-First-Out: Packets are placed into the queue and serviced in the order they were received.
- All-high-before-low(Strict priority) :
All packets will be assigned to either high priority queue (Queue 2) or low priority queue (Queue 1). The packet on the low priority queue will not be forwarded until the high priority queue is empty.

WRR mode: There are 4 priority queues for

Weighted-and-round-robin (WRR) mode:

When this mode is selected, the traffic will be forwarded according to the member set in each queue.

QoS Setting : Class of Service

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

24-Port 10/100Mbps Modular Fast Ethernet Switch

- Administrator
- Port Management
- VLAN Setting
- Port Port Config
- QoS Setting
 - Priority Mode
 - Class of Service
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- Save Settings
- Logout

Class of Service

The switch treats TCP/UDP, IP TOS/DS, 802.1p and physical port Cell scheme in the following priority.
 TCP/UDP > IP TOS/DS > 802.1p > Physical port.
 This means TCP/UDP Cell will override all other settings.

(1) TCP/UDP port

Note:
 (1) Q1 ~ Q4 options are effective for the selected physical port only.
 (2) "Drop" option is the global setting for all physical ports.

FTP	Q4	SSH	Q4	TELNET	Q4
SMTP	Q4	DNS	Q4	TFTP	Q4
HTTP	Q4	POP3	Q4	NEWS	Q4
SNTP	Q4	NvBIOS	Q4	IMAP	Q4
SNMP	Q4	HTTP8	Q4	MEN	Q4
XRD_RDP	Q4	ICQ	Q4	BOOTP/DHCP	Q1
User-defined A TCP/UDP	Q4	User-defined B TCP/UDP	Q4	User-defined C TCP/UDP	Q4

Note: These user-defined TCP/UDP port are the same as that used in TCP/UDP filter.

User-defined A		User-defined B		User-defined C	
Port	Port	Port	Port	Port	Port

The TCP/UDP port will be checked on the following physical port

01	02	03	04	05	06	07	08
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
09	10	11	12	13	14	15	16
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	18	19	20	21	22	23	24
<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](#)

The Class of Service for TCP/UDP port number allows the network administrator to assign the specific application to a priority queue.

(2) IP TOS/DS

IP TOS/DS Priority Setting
 #b01010: Q1 #b01010: Q1 #b011010: Q1 #b100010: Q1
 #b10110: Q1 #b110000: Q1 #b111000: Q1 Other Values: Q4

IP TOS/DS Port Setting

01	02	03	04	05	06	07	08
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
09	10	11	12	13	14	15	16
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	18	19	20	21	22	23	24
<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](#)

(3) 802.1p

For 802.1p priority field, the switch utilizes the following priority mapping table.
 6 and 7 are mapped to the "Q1" priority queue.
 4 and 5 are mapped to the "Q2" priority queue.
 2 and 3 are mapped to the "Q3" priority queue.
 0 and 1 are mapped to the "Q4" priority queue.

Select Port

01	02	03	04	05	06	07	08
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
09	10	11	12	13	14	15	16
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	18	19	20	21	22	23	24
<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](#)

(4) Physical port

1	2	3	4	5	6	7	8
Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4
9	10	11	12	13	14	15	16
Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4
17	18	19	20	21	22	23	24
Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4

[Update](#)

There are 4 types of CoS for this setting; ie, TCP/UDP port, TOS/DS, 802.1p and physical port. The user can select more than one item for each port.

Please note that if more than one type of CoS is selected, the switch will arrange the packet to the assigned queue according the following priority: TCP/UDP port the first, ToS/DS the second, 802.1p the third and physical port the last.

For 802.1p priority, the following table is used to map the 802.1p field to the priority queue.

Priority Field	Priority Queue
6, 7	Q4
4, 5	Q3
0, 3	Q2
1, 2	Q1

For TOS/DS priority, there are 7 kinds of TOS field can be assigned to 4 different queues. i.e; 6'b001010, 6'b010010, 6'b01110, 6'b100010, 6'b101110, 6'b110000 and 6'b111000.

TCP/UDP port based COS

The user can select the protocol that will be forwarded as the specified mode. There are 3 user-defined UDP/TCP port groups and many well-known TCP/UDP ports. The user-defined port number may be a range or a specific number, depending on the mask.

The operating theory for all 4 CoS types can be illustrated by the following figure and table.

TCP/UDP CoS is a global setting for all ports and has no connection with the physical port. Other CoS types have a connection with the physical port.

- (a) **Priority Mode:** WRR. Q1=4; Q2=2; Q3=8; Q4=1
- (b) **TCP/UDP CoS:** P2 FTP =>Q3; P5 SMTP => Q2; other protocols=Q1
- (c) **TOS/DS setting:** P5 TOS 6'b010010=Q1; P2 TOS 6'b100010=Q3; other TOS=Q4
- (d) **802.1p:** P5 802.1p = 6; P2 802.1p =1
- (e) **Physical port:** P2=Q4; P2=Q3

According to the rule described above, the CoS will be executed in the following sequence.

TCP/UDP > TOS/DS > 802.1p > Physical port.

The actual CoS will behave like this table.

Switch Behavior Observed on P 3	Comment
8 packets coming from P2; 2 packets coming from P5; 8 packets coming from P2;	If TCP/UDP CoS is enabled, the other CoS setting will be ignored.
8 packets coming from P2; 4 packets coming from P5; 8 packets coming from P2;	If TCP/UDP CoS is disabled, the switch will check TOS/DS CoS.
1 packet coming from P2; 4 packets coming from P5; 1 packets coming from P2;	If TOS/DS CoS is disabled, the switch will check the 802.1p field.
1 packet coming from P2; 8 packets coming from P5; 1 packet coming from P2;	If only physical port CoS is enabled, the switch only check the physical port CoS.

Security: MAC Address Binding

24-Port 10/100Mbps Modular Fast Ethernet Switch

Administrator

Port Management

VLAN Settings

Port Port Config

QoS Setting

Security

- MAC Address Binding
- MAC Address Storm
- TCPC/UDP Flood
- IP Address Filter

Spanning Tree

Trunking

Backup/Recovery

Miscellaneous

SNMP Settings

Save Settings

Logout

MAC Address Binding

Port No.	MAC Address
1	

Read

Select Port: 01 Binding Disable Update

Port No.	Filter Status	Port No.	Filter Status
1	Disable	13	Disable
2	Disable	14	Disable
3	Disable	15	Disable
4	Disable	16	Disable
5	Disable	17	Disable
6	Disable	18	Disable
7	Disable	19	Disable
8	Disable	20	Disable
9	Disable	21	Disable
10	Disable	22	Disable
11	Disable	23	Disable
12	Disable	24	Disable

- Port No: Displays the port number being assigned the MAC addresses.
- MAC Address: Users can assign up to 3 MAC addresses to the port.
- Read: Pull down the selection bar to choose a port number and click the read button to show the MAC addresses bound with the port or modify the MAC addresses.
- Select Port: Pull down the selection menu bar to choose a port number to be set.
- Binding: Enable or disable the binding function.

Click **Update** to have the configuration take effect.

Security : Scan MAC

24-Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

- Administrator
- Port Management
- VLAN Setting
- Per-Port Counter
- QoS Setting
- Security
 - MAC Address
 - Binding
 - MAC Address Scan
 - TCP/UDP Filter
 - IP Address Filter
 - Spanning Tree
 - Trunking
 - Backup/Recovery
 - Miscellaneous
 - SNMP Settings
 - Save Settings
 - Logout

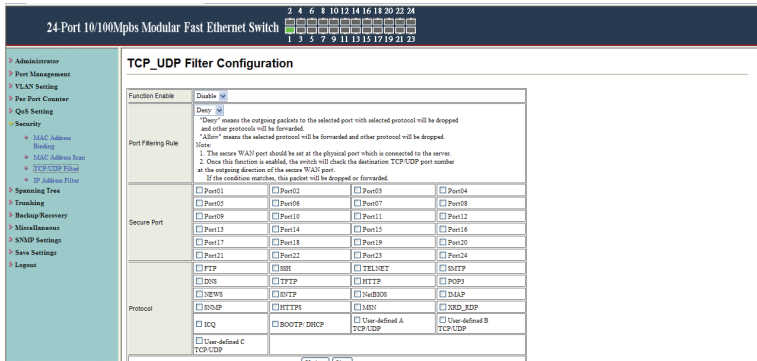
Scan MAC

Port Select: 01

MAC Address	Entry Status
00:1D:7D:29:E8:3D	dynamic

Scan MAC shows the MAC address learned by the switch, To add a MAC address to the Static MAC address list, select the port no and it will show the MAC address of the identified address.

Security: TCP/UDP Filter Configuration



By selecting the TCP/UDP port, the network administrator can optionally block some specific applications. There are two kinds of protocol filter functions.

Allow Mode

The "forward" function makes the switch forward the selected protocol and drop other protocols.

Deny Mode

The "deny" function makes the switch drop the selected protocol and forward other protocols. The protocol is checked at the selected secure WAN port. And it should be set at the server side.

The figure shown above illustrates how this function is applied to the real environment.

Note: The TCP/UDP Filter's user-defined Port-Range is in QoS Setting's Class of Service

Security: IP Address Configuration

The screenshot shows the 'IP Address Configuration' page. At the top, it displays '24-Port 10/100Mbps Modular Fast Ethernet Switch' and a status bar with numbers 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24. Below this is a navigation menu with options like Administrator, Port Management, VLAN Setting, etc. The main configuration area has a 'Set No.' dropdown set to '01', an 'IP Address' field, and a 'Switch Port' dropdown. There are 'Add' and 'Delete' buttons. Below this is a 'Global Setting' section with a 'Check-Sense IP Addr.' checkbox checked and an 'IP mismatch can pass' checkbox checked. A table below shows 'Set No.' (01-32) and 'Port No.' (01-24) with checkboxes for 'Enable Port'. At the bottom, there is a table with columns 'Set No.', 'IP Setting', and 'Port No.'.

Set No.	IP Setting	Port No.
01	192.168.1.1/24	01
02	192.168.1.2/24	02
03	192.168.1.3/24	03
04	192.168.1.4/24	04
05	192.168.1.5/24	05
06	192.168.1.6/24	06
07	192.168.1.7/24	07
08	192.168.1.8/24	08
09	192.168.1.9/24	09
10	192.168.1.10/24	10
11	192.168.1.11/24	11
12	192.168.1.12/24	12
13	192.168.1.13/24	13
14	192.168.1.14/24	14
15	192.168.1.15/24	15
16	192.168.1.16/24	16
17	192.168.1.17/24	17
18	192.168.1.18/24	18
19	192.168.1.19/24	19
20	192.168.1.20/24	20
21	192.168.1.21/24	21
22	192.168.1.22/24	22
23	192.168.1.23/24	23
24	192.168.1.24/24	24
25	192.168.1.25/24	25
26	192.168.1.26/24	26
27	192.168.1.27/24	27
28	192.168.1.28/24	28
29	192.168.1.29/24	29
30	192.168.1.30/24	30
31	192.168.1.31/24	31
32	192.168.1.32/24	32

IP Address Configuration is a feature to manage the switch from a remote station . You can enter up to 30 designed management station networks by defining the IP address.

To define a management station IP setting. Selet the certain Set No. (Range 1 – 32) and apply the IP address to the certain define port and click “ Add” you man complete the setting.

Global Setting

There are 2 range that you may choice from the Globle Setting :

Check Source IP adder or Destin IP adder as

Also, there are 4 **Rule** that you can define the setting :

IP mismatch can pass

IP match can pass

IP match and port match pass

IP match and port mismatch can pass

Spanning Tree: STP Bridge Setting

The screenshot shows the 'STP Bridge Settings' configuration page. The left sidebar contains a navigation menu with options like Administrator, Port Management, VLAN Setting, and Spanning Tree. The main content area is titled 'STP Bridge Settings' and contains three tables:

Bridge Status Setting

STP Mode	Bridge Priority (0-61440)	Hello Time (1-10 Sec)	Max Age (6-40 Sec)	Forward Delay (4-30 Sec)
<input checked="" type="checkbox"/>				
<input type="button" value="Submit"/>				

Below the table, there are two lines of text: $Max\ Age \geq 2 * (Hello\ Time - 1) \geq Min\ Age$ and $Bridge\ Priority\ must\ be\ a\ multiple\ of\ 4096$.

Bridge Status

STP Mode	Bridge ID	Hello Time	Max Age	Forward Delay
RTTP	32768-3030 13 P0 13 P0	2	20	15

Root Status

Root ID	Hello Time	Max Age	Forward Delay
From the root bridge	2	20	15

- **Bridge Priority:** This parameter configures the spanning tree priority globally for this switch. The device with the highest priority becomes the STP root device. However, if all devices have the same priority, the device with the lowest MAC address will then become the root device. Number between 0 - 61440 in increments of 4096. Therefore, there are 16 distinct values.
- **Hello Time:** Interval (in seconds) at which the root device transmits a configuration message (BPDU frame). Number between 1-10 (default is 2).
- **Max Age:** The maximum time (in seconds) a device can wait without receiving a configuration message before attempting to reconfigure. That also means the maximum life time for a BPDU frame. Number between 6-40 (default is 20).
- **Forward Delay:** The maximum time (in seconds) the root device will wait before changing states (i.e., discarding to learning to forwarding). Number between 4 – 30 (default is 15)

Spanning Tree: STP Port Settings

24-Port 10/100Mbps Modular Fast Ethernet Switch

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

1 3 5 7 9 11 13 15 17 19 21 23

- Administrator
- Port Management
- VLAN Setting
- Port Port Counter
- QoS Setting
- Security
- Spanning Tree
 - STP Bridge Settings
 - STP Port Settings
 - Loopback Detection
- Trunking
- Backup Recovery
- Management
- SNMP Settings
- Save Settings
- Logout

STP Port Settings

Port No.	Priority (0-240)	RPC (1-20000000)
1	Auto	0x80
2	Auto	0x80
3	Auto	0x80
4	Auto	0x80
5	Auto	0x80
6	Auto	0x80
7	Auto	0x80
8	Auto	0x80
9	Auto	0x80
10	Auto	0x80
11	Auto	0x80
12	Auto	0x80
13	Auto	0x80
14	Auto	0x80
15	Auto	0x80
16	Auto	0x80
17	Auto	0x80
18	Auto	0x80
19	Auto	0x80
20	Auto	0x80
21	Auto	0x80
22	Auto	0x80
23	Auto	0x80
24	Auto	0x80

Priority must be a multiple of 16

STP Port Status

Port No.	RPC	Priority	State	Status	Designated Bridge	Designated Port
1	Auto 200000	0x80	Designated Port	Forwarding	--	--
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	--	--
13	Auto 0	0x80	--	Disable	--	--
14	Auto 0	0x80	--	Disable	--	--
15	Auto 0	0x80	--	Disable	--	--
16	Auto 0	0x80	--	Disable	--	--
17	Auto 0	0x80	--	Disable	--	--
18	Auto 0	0x80	--	Disable	--	--
19	Auto 0	0x80	--	Disable	--	--
20	Auto 0	0x80	--	Disable	--	--
21	Auto 0	0x80	--	Disable	--	--
22	Auto 0	0x80	--	Disable	--	--
23	Auto 0	0x80	--	Disable	--	--
24	Auto 0	0x80	--	Disable	--	--

- **Port No:** The port ID. It cannot be changed. Aggregations mean any configured trunk group.
- **Root Path Cost:** This parameter is used by the STP to determine the best path between devices. Therefore, lower values should be assigned to ports attached to faster media, and higher values assigned to ports with slower media. Set the RSTP path cost on the port. Number between 0 - 200000000. 0 means auto generated path cost.
- **State:** Show the current port state includes designated port, root port or blocked port.
- **Status:** Show the current port status includes forwarding, disable etc.

Spanning Tree: Loopback Detection Settings

24-Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

Loopback Detection Settings

Loopback Detect Function	<input checked="" type="checkbox"/> Enable [X]
Auto Wake Up	<input checked="" type="checkbox"/> Disable [X]
Wake-Up Time Interval	5 (5-250 sec)

Port No.	Status
1	--
2	--
3	--
4	--
5	--
6	--
7	--
8	--
9	--
10	--
11	--
12	--
13	--
14	--
15	--
16	--
17	--
18	--
19	--
20	--
21	--
22	--
23	--
24	--

This feature is to detect each port, to see any cable loop occurred on a single port. When Transmit a data packet from one port and also Receive same data packet from the same port, it is caused by the cable which connect to the port has a loop (i.e. TX lines tie together with RX lines), This switch will disable the port.

Trunking

24 Port 10/100Mbps Modular Fast Ethernet Switch

2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23

Administrator
 Port Management
 VLAN Setting
 Port Port Counter
 QoS Setting
 Security
 Spanning Tree
 Trunking
 Link Aggregation Settings
 Backup/Recovery
 Miscellaneous
 SNMP Settings
 Save Settings
 Logout

Trunking

System Priority: (1-65535)

Link Aggregation Algorithm:

Member	Link Group 1				Link Group 2					
	Index 1/Port1-Port4	M1	M2	M3	M4	Index 2/Port5-Port8	M1	M2	M3	M4
	<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"/>
State	<input type="text" value="Disable"/>				<input type="text" value="Disable"/>					
Type	<input type="text" value="LACP"/>				<input type="text" value="LACP"/>					
Operation Key	<input type="text" value="1"/> (1-65535)				<input type="text" value="2"/> (1-65535)					
Time Out	<input type="text" value="Short Time Out"/>				<input type="text" value="Short Time Out"/>					
Activity	<input type="text" value="Passive"/>				<input type="text" value="Passive"/>					
	<input type="button" value="Submit"/>									

Notice: If any trunk group is set to LACP type, each port in the trunk group will not be enabled(can't Forward/Receive) until the port can finish LACP procedure with its link partner port.

This page is used to set trunk group for load balance and auto-backup.

The smart switch supports two trunk group, each trunk consists of 2~4 ports. Trunk hash algorithm can be selected according to 4 different methods.

- Port ID:** Among the trunk member ports, the packet will be distributed based on the port ID.
- SA:** Among the trunk member ports, the packet will be distributed based on the source MAC address.
- DA:** Among the trunk member ports, the packet will be distributed based on the destination MAC address.
- DA&SA:** Among the trunk member ports, the packet will be distributed based on the XOR calculation result of the source MAC address and the destination MAC address.

Backup/Recovery

This function provides the user with a method to backup/recovery the switch configuration. The user can save configuration file to a specified file. If the user wants to recover the original configuration, which is saved at the specified path, just enter the password and then press the “upload” button. Finally the original configuration of the switch will be recovered.

The screenshot shows a web interface for a 24-Port 10/100Mbps Modular Fast Ethernet Switch. The top navigation bar includes a status indicator (2 4 6 8 10 12 14 16 18 20 22 24) and a grid of 24 ports (1-24). A left sidebar contains a menu with items: Administrator, Port Management, VLAN Setting, Per Port Config, QoS Setting, Security, Spanning Tree, Trunking, Backup/Recovery (highlighted), Miscellaneous, SNMP Settings, Save Settings, and Logout. The main content area is titled "Configuration Backup/Recovery" and contains two sections: "Backup(Switch-PC)" with a "Download" button and a note to check "Download" for EEPROM contents, and "Recovery(PC-Switch)" with a file selection field (USB...), a "Password:" field, and an "Update" button.

Miscellaneous: Miscellaneous Settings

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

The screenshot shows the configuration interface for a 24-Port 10/100Mbps Modular Fast Ethernet Switch. The main title is "Miscellaneous Setting". The left sidebar contains a navigation menu with the following items: Administrator, Port Management, VLAN Setting, Fast Port Coaxial, QoS Setting, Security, Spanning Tree, Trunking, Backup/Recovery, Miscellaneous (expanded), Temp Basic Restore Settings, SNMP Settings, Save Settings, and Logout. The "Miscellaneous" section is expanded, showing the following settings:

- Output Queue Aging Time:** A "Disable" button and a text box containing: "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 be lower the free packet buffer, resulting in the poor utilization of the buffer and the poor switch performance."
- VLAN Striding:** A "Disable" button and a text box containing: "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:** A "Disable" button and a text box containing: "IGMP Snooping V1&V2 function enable."
- VLAN Uplink Setting:** A "Disable" button and a text box containing: "Leave packet will be forwarded to 802D router ports." Below this are two rows of checkboxes for ports P01 through P24. The first row includes P01, P02, P03, P04, P05, P06, P07, P08, P09, P10, P11, P12. The second row includes P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24. A "Submit" button is located at the bottom right of the form.

- **Output queue aging:** This function is used to avoid the poor utilization of the switch. When a packet is stored in a switch for a long time, it will expire from the allowable time defined by the protocol and become a useless packet. To prevent these packets from wasting the bandwidth, this switch provide an option for the administrator to enable the queue aging function.
- **VLAN Striding:** By selecting this function, the switch will forward uni-cast packets to the destination port, no matter whether destination port is in the same VLAN.
- **IGMP Snooping:** When this function is enabled, the switch will execute IGMP snooping version 1 and version 2 without the intervention of CPU. The IGMP report and leave packets are automatically handled by the switch.

Miscellaneous: IGMP Static Router Setting

24-Port 10/100Mbps Modular Fast Ethernet Switch

2	4	6	8	10	12	14	16	18	20	22	24
<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"/>
1	3	5	7	9	11	13	15	17	19	21	23

IGMP Static Router Setting

Select	01 <input type="checkbox"/>	02 <input type="checkbox"/>	03 <input type="checkbox"/>	04 <input type="checkbox"/>	05 <input type="checkbox"/>	06 <input type="checkbox"/>	07 <input type="checkbox"/>	08 <input type="checkbox"/>	09 <input type="checkbox"/>	10 <input type="checkbox"/>	11 <input type="checkbox"/>	12 <input type="checkbox"/>
Port No.	13 <input 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"/>
	<input type="button" value="Refresh"/> <input type="button" value="Update"/>											

Navigation Menu:

- Administrator
- Port Management
- VLAN Setting
- Port Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
 - Miscellaneous Settings
 - IGMP Static Router Setting**
- SNMP Settings
- Save Settings
- Logout

To enable IGMP snooping for a given VLAN, select enable on Then press the “ Update” button under Router Port Setting, and select the ports to be assigned as router ports for IGMP snooping for the VLAN. A router port configured manually is a Static Router Port, and a Dynamic Router Port is dynamically configured by the Switch when a query control message is received.

SNMP Settings

The screenshot shows the 'SNMP Settings' page of a '24-Port 10/100Mbps Modular Fast Ethernet Switch'. The page is divided into three main sections: 'Community Settings', 'SNMP Settings', and 'SNMP Trap Settings'. The 'Community Settings' section includes a table with columns for 'Community Name' and 'Access Right'. The 'SNMP Settings' section includes fields for 'System Description', 'System Contact', and 'System Location'. The 'SNMP Trap Settings' section includes a 'Trap State' dropdown menu (set to 'Disable'), and fields for 'Enable Trap Server', 'Trap Server Address', and 'Trap Server Status'. A sidebar on the left contains a navigation menu with items like 'Administrator', 'Port Management', 'VLAN Setting', 'Port Port Counter', 'QoS Setting', 'Security', 'Spanning Tree', 'Trunking', 'Backup/Recovery', 'Miscellaneous', 'SNMP Settings', 'Save Settings', and 'Logout'. The top of the page features a status bar with a grid of 24 ports and a row of 24 LEDs.

The SNMP Setting allows you to quick enable/ disable the SNMP function and configure the SNMP Community name. The default SNMP setting is disabled. Click Enabled, enter community names to configure community Settings.

Community Settings

Community Name: A community name that acts like a password and permints access to the SNMP protocol.

Public: Read-Only privilege allows authorized management stations to retrieve MIB objects.

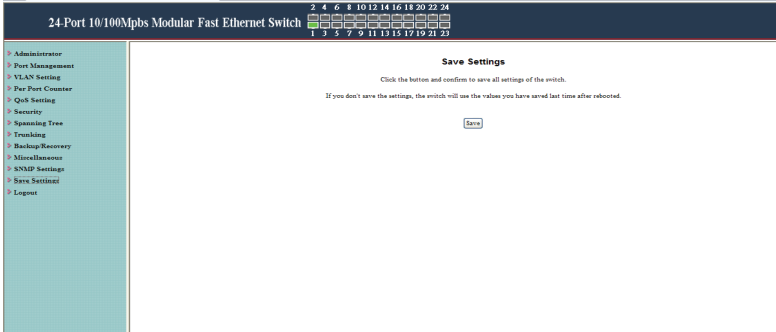
Private : Read /write privilege allows authorized management stations to retrieve and modify MIB OBJECTS.

SNMP Setting: In support of SNMP version 1, the Web-Smart Switch accomplishes user authentication by using Community Settings that function as passwords. The remote user SNMP application and the Switch SNMP must use the same community string. SNMP packets from a station that are not authenticated are ignored.

System Description: A Description assigned to the switch system

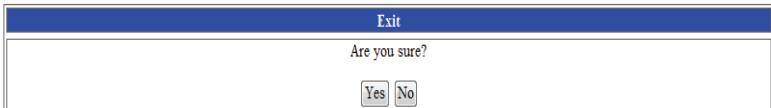
System Contact: Specifies the system Contact

System Location: Specifies the system Location



Logout

The administrator has write access for all parameters governing the onboard agent. User should therefore assign a new administrator password as soon as possible, and store it in a safe place.



When you forgot your IP or password, please use the reset button for the factory default setting?

Please take the following steps to reset the Web Smart Switch back to the original default:

Step 1:


Turn on the Web Smart Switch

Step 2:

Press and hold the reset button continuously for 5 seconds and release the reset button.

Step 3:

The switch will reboot for 20 seconds and the configuration of switch will back to the default setting.



USER LOG IN	
Site:	192.168.2.1
ID:	admin
Password:	*****
<input type="button" value="OK"/>	

Key in the user ID and the password to pass the authentication; the user ID and the password are “admin”

IP: 192.168.2.1
ID: admin
Password: admin