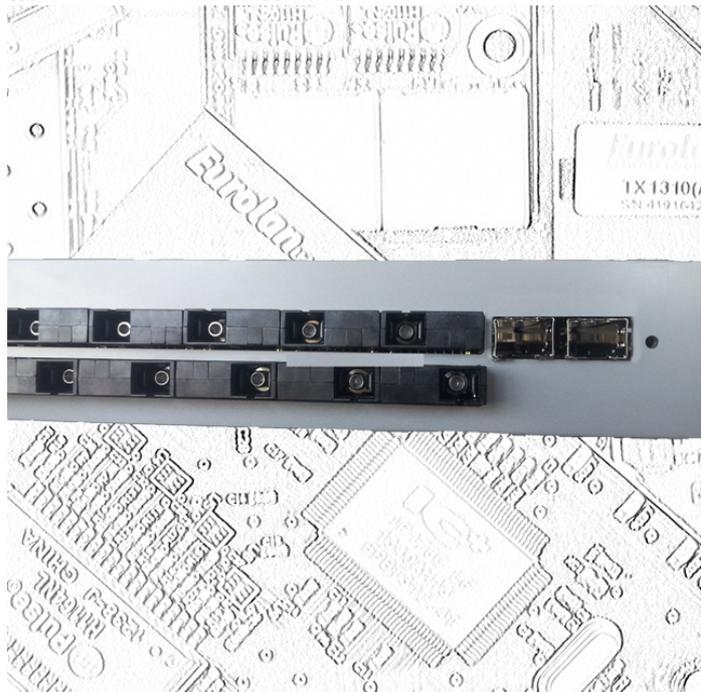


ES-2402-M **24- FO PORT 100M + 2-SFP PORT 1000M** **ETHERNET SWITCH**

Fiber ports: BIDI TX1310/RX1550
TX1550/RX1310



The **ES-2402-M** is a WEB- Smart switch that integrates 2.75Mbits RAM, an 8K-entry MAC address lookup table, 24 SM, SC Fiber ports and two Gigabit SFP Ports. The ES-2402-M supports Port Based and Tag Based VLAN. For diagnostics/analysis, TX Packet/RX Packet, Collision Count/Transmit packet, Drop Packet/Receive Packet and CRC error packet/Receive Packet. Supports IGMP snooping v. 1 and v.2. Provides 4K MAC address entries, with configurable MAC address table and optional MAC address learning. Maximum packet length can be up to 1536 bytes. Broadcast storm filtering prevents network crashes caused by abnormal broadcast activity. WDM Technology- single fiber saves the Installation cost of expensive fiber cable. ES-2402-M switches are ideal for any premises FTTx, LAN-to-LAN or LAN-to-WAN fiber networking applications.

1. KEY FEATURES

- Built-in 2.75Mb RAM
- Support packet length up to 1536 Bytes
- Store & forward, share memory, non-blocking architecture
- Supports flow control
802.3x in full duplex
Collision/carrier_sense based backpressure in half duplex
- Provides up to 4K MAC address entries
CRC/ direct hashing algorithm
Programmable aging timer (55s~15.7hr) error < 4 %
Configurable MAC address table
Optional MAC address learning
- Supports porting mirroring function (Tx, Rx, Tx&Rx)
- Supports IGMP snooping function Version 1 and Version 2
- Supports flexible 3 trunking groups
(Port 0 ~ port 3, port 4~ port 7, Gigabit port 1 ~ port 2)



Load balance based on (physical port, Destinationn MAC Address, Source MAC Address, Destination MAC Address/Source MAC Address)

- Link failure recovery
- Supports VLAN
 - Port based VLAN
 - Tag based VLAN
 - Add/ remove/ modify tag based on VID or physical port
- Support Class of Service
 - Port based CoS
 - 802.1Q priority tag based
 - IP TOS/DSCP based (IPv4/IPv6)
 - TCP/UDP port based
 - 2 level of priority per port
 - WRR/ First-Come-First-serve/ Strict priority
- Broadcast storm control support
 - Broadcast rate control per port
 - Block broadcast packet that does not belong to ARP or IP packet forwarded to
- Supports port security
 - MAC address based
 - IP address based
 - TCP/UDP port based
- Supports Bandwidth control with/without flow control
 - 480 configurable levels for port 1~port 24 and (from 32kbps to 63.75 Mbps)
 - 508 configurable levels for Port 25 and port 26 (from 32kbps to 510 Mbps)
- Supports 5 port state for Spanning Tree protocol
 - Blocking/ listening/ learning/ forwarding/disabled
 - Forward BPDU to CPU port
- Status counters for each port
 - RX/TX packet count
 - CRC error packet count
 - Dropped packet count
 - Collision count

2. TECHNICAL SPECIFICATION

Standard: 802.3z and 802.3ab

Wavelength: BIDI TX1310nm/RX1550nm; TX1550nm/RX1310nm

Fiber Ports Distance: 25km

Fiber Cable: 8.3/125, 8.7/125, 9/125 or 10/125single-mode

Connectors: 2x RJ-45 Jack and 24 SC connectors

Power Supply:110 - 240VAC

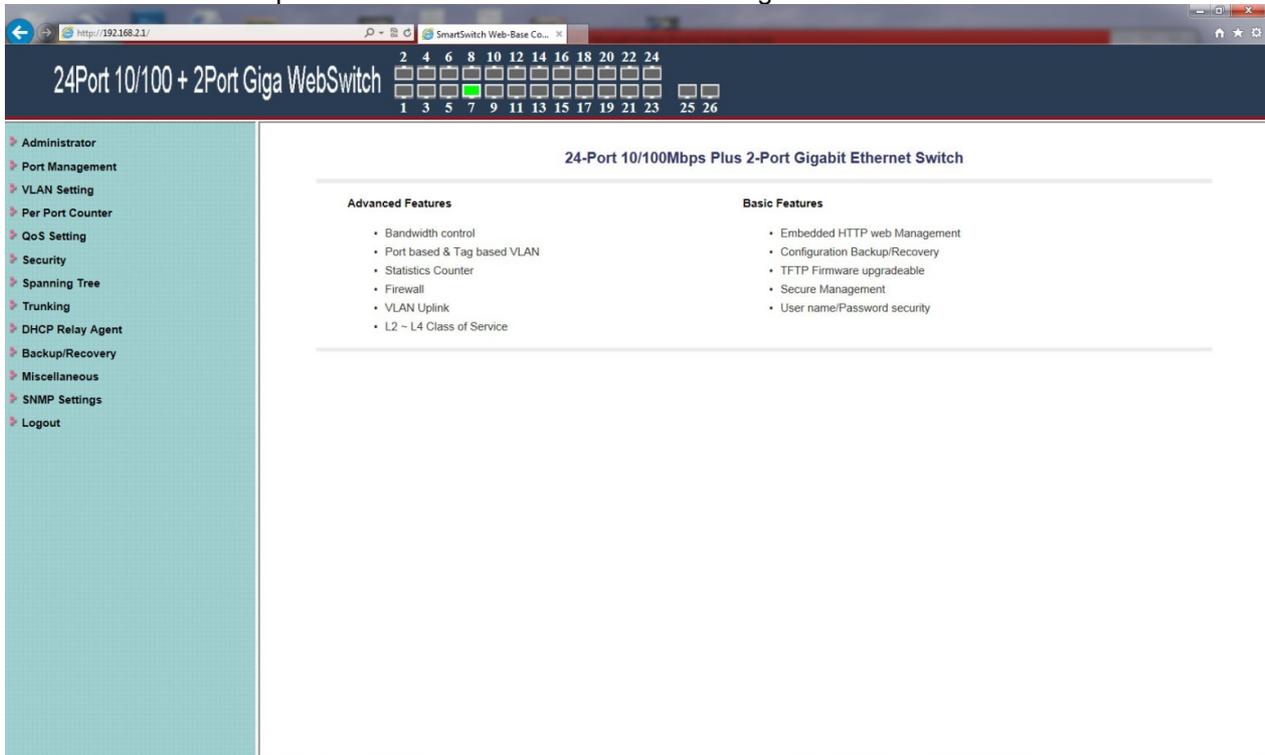
Power Consumption: MAX 30W

Operating temperature: 0 to 40C

Storage temperature : -20 to 70C

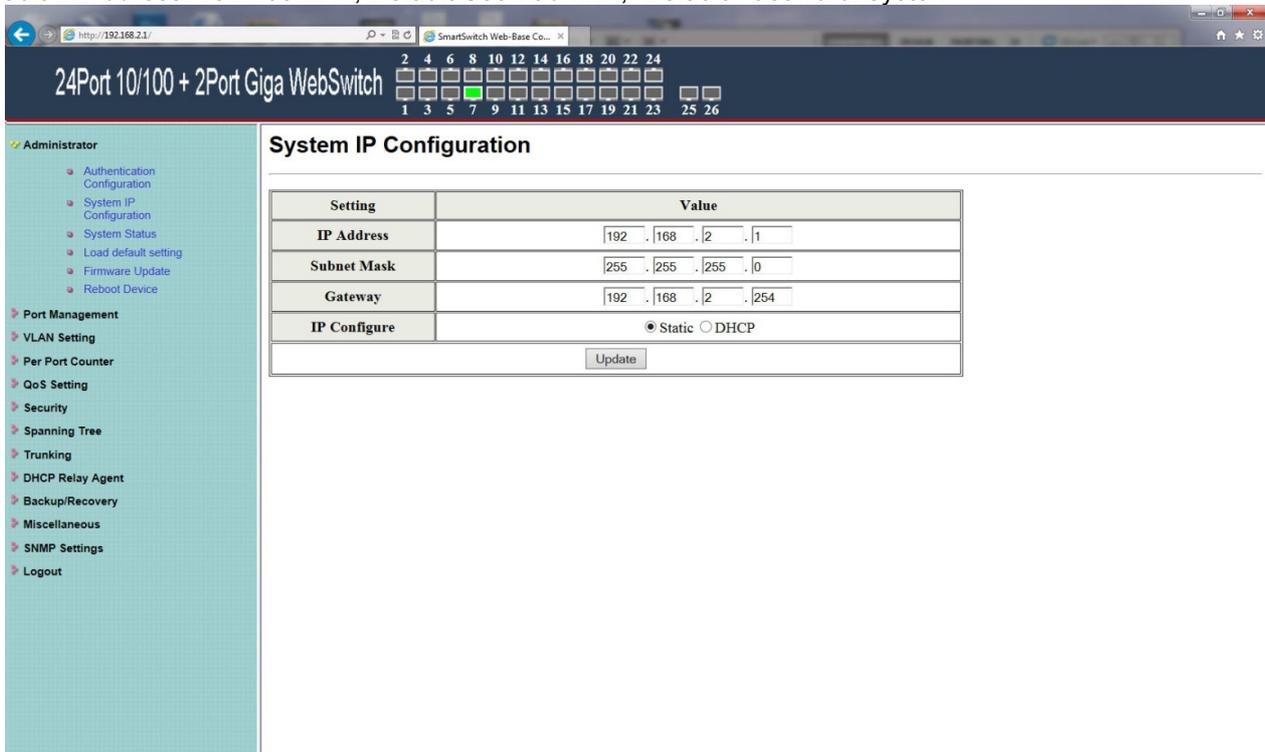
4. WEB Interface

The WEB-based interface provides full switch control and monitoring.



4.1 Default Settings

Default IP Address: 192.168.2.1 ; Default User: admin ; Default Password: system



4.2 Port Configuration

- TX/RX Ability – Enable/Disable a port
 - Auto-Negotiation - Enable/Disable Auto-Negotiation for a specific port
 - Speed – Force 10, 100 or 1000Mbps for a specific port
 - Duplex – Force Full/Half Duplex for a specific port.
 - Pause – Enable/Disable for a specific port
- When operating in full duplex mode, ES-2402-M supports IEEE802.3x flow control, both symmetric pause and asymmetric pause function. Each port's flow control function can be enabled individually. When the packets in buffer reach the threshold, ES-2402-M generates a "Xoff" pause packet immediately or right after the current packet has been transmitted. When receiving a pause packet, the link partner stops transmission for a period of time defined in the pause packet. This prevents the buffer of ES-2402-M from overrun. When the packets in buffer lower than threshold, ES-2402-M generates a "Xon" pause packet to notify the link partner the receive buffer is available.
- Backpressure – Enable/Disable
- When operating in half duplex mode, the ES-2402-M supports backpressure flow control. Each port's backpressure function can be enabled individually. When the packets in buffer reach the threshold, ES-2402-M generates a jam pattern to back off the link partner. ES-2402-M supports the collision based and carrier-based backpressure. When the collision based backpressure is enabled, register, ES-2402-M generates a jam pattern only when the link partner is transmitting data and the receive buffer in ES-2402-M is not available. When detecting a collision on line, the link partner stops transmission until a back off time expires. When the carrier based backpressure is enabled, ES-2402-M transmits null packets continuously to prevent link partner's transmission when the buffer is not available.

Address Learning – Enable/Disable

ES-2402-M can handle up to 4096 MAC address entries. And it provides two kinds of hash method to maintain the MAC address table; one is the direct mapping and the other is the CRC algorithm. When the direct mapping method is selected, ES-2402-M recognizes the least significant 12 bits of the MAC address. When the CRC algorithm is used, ES-2402-M uses 48-bit MAC address to hash. The address learning function for each port can be either enabled or disabled.

Port Configuration

Function	Tx/Rx Ability	Auto-Negotiation	Speed	Duplex	Pause	Backpressure	Addr. Learning
Select Port No.	<input type="checkbox"/> 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"/> 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"/> 25 <input type="checkbox"/> 26						
<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	●	100M	FULL	ON	ON	AUTO	100M	FULL	ON	ON	ON	
8	---	---	---	---	ON	AUTO	100M	FULL	ON	ON	OFF	
9	---	---	---	---	OFF	AUTO	100M	FULL	ON	ON	OFF	
10	---	---	---	---	OFF	AUTO	100M	FULL	ON	ON	OFF	
11	---	---	---	---	OFF	AUTO	100M	FULL	ON	ON	OFF	
12	---	---	---	---	OFF	AUTO	100M	FULL	ON	ON	OFF	

4.3 Port Mirroring

In some circumstances, the network administrator requires to monitor the network status. The port mirroring function helps the network administrator diagnose the network. A port mirroring function is accomplished by assigning monitored ports (source ports), snooping ports (destination ports) and snooping method. ES-2402-M will copy the traffic of monitored ports to all snooping ports. That is, the snooped packets for all snooping ports are the same. The ES-2402-M supports three kinds of mirroring methods: the ingress, the egress and ingress plus egress.

4.4. Bandwidth Control

ES-2402-M implements a sophisticated data rate control mechanism, which is very useful for the bandwidth-limited network. By controlling both the ingress and the egress data rate, ES-2402-M provides a variety of bandwidth configurations. It limits the maximum byte counts, by which a port can send or receive in a period of time. If the transmit byte counts or receive byte counts of a port reaches a pre-defined threshold, it will stop transmitting or receiving data.

Each port's egress/ingress data rate can be programmed individually.

Bandwidth Control

Port No	Tx Rate	Rx Rate
01	(0~255) [] (0:Full Speed)	(0~255) [] (0:Full Speed)

Speed Base

Low:
 (1) 32Kbps Tx/Rx bandwidth resolution for port 1~ port 26.
 Actual Tx/Rx bandwidth = Rate value x 32 kbps. The rate value is 1~255.

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 10MB. 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 100MB. The rate value is 1~48.

[Update] [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	---
2	Full Speed	Full Speed	---	15	Full Speed	Full Speed	---
3	Full Speed	Full Speed	---	16	Full Speed	Full Speed	---
4	Full Speed	Full Speed	---	17	Full Speed	Full Speed	---

4.5 Broadcast storm control

To prevent the broadcast storm, the ES-2402-M implements a broadcast storm control mechanism. When this function is enabled, a port begins to drop the incoming broadcast packets if the received broadcast packet counts reach the defined threshold. Each port's broadcast storm protection function can be enabled individually.

4.6. VLAN Mode

Port Based VLAN - Each port based LAN entry defines the broadcast domain of the ingress port. The overall number of port based VLAN groups that the ES-2402-M can support is 27.

TAG Based VLAN - The ES-2402-M provides a tag based VLAN table with 32 entries; i.e. VID table entry 0~31. ES-2402-M can add, remove or modify the VLAN tag.

24Port 10/100 + 2Port Giga WebSwitch

24681012141618202224
13579111315171921232526

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

VLAN Mode

VLAN Mode
Tag Based VLAN Change VLAN mode

	Port 01	Port 02	Port 03	Port 04	Port 05	Port 06	Port 07	Port 08	
Tag Mode	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag
	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag
	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag
	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag			<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> RemoveTag	<input type="radio"/> AddTag <input checked="" type="radio"/> don't care <input type="radio"/> 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.

4.7. Port Counter

24Port 10/100 + 2Port Giga WebSwitch

24681012141618202224
13579111315171921232526

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

Counter Category

Counter Mode Selection:

Transmit Packet & Receive Packet
 Collision Count & Transmit Packet
 Drop packet & Receive Packet
 CRC error packet & Receive Packet

Update

Port			
01	0		0
02	0		0
03	0		0
04	0		0
05	0		0
06	0		0
07	1317		1730
08	0		0
09	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

4.8 QoS

Class of Service Configuration

=Enable High Priority

Port No.\Mode	Port Base	VLAN Tag	IP / DS	Port No.\Mode	Port Base	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 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"/>
13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Class of Service Configuration

Protocol	Option
FTP(20,21)	F-I-F-O
SSH(22)	Discard
TELNET(23)	Low
SMTP(25)	High
DNS(53)	F-I-F-O
TFTP(69)	F-I-F-O
HTTP(80,8080)	F-I-F-O
POP3(110)	F-I-F-O
NEWS(119)	F-I-F-O
SNTP(123)	F-I-F-O
NetBIOS(137~139)	F-I-F-O
IMAP(143,220)	F-I-F-O
SNMP(161,162)	F-I-F-O
HTTPS(443)	F-I-F-O
MSN(1863)	F-I-F-O
XRD_RDP(3389)	F-I-F-O
QQ(4000,8000)	F-I-F-O
ICQ(5190)	F-I-F-O
Yakuza(5050)	F-I-F-O

4.9 MAC Address Binding

The screenshot shows the 'MAC Address Binding' configuration page. At the top, there is a port status bar for '24Port 10/100 + 2Port Giga WebSwitch' with ports 1-26. A sidebar on the left contains a navigation menu with 'Security' expanded to show 'MAC Address Binding' and 'TCP/UDP Filter'. The main content area has a title 'MAC Address Binding' and a table for configuration. Below the table is a note and a summary table.

Port No.	MAC Address
1	<input type="text"/> : <input type="text"/> <input type="text"/> : <input type="text"/> <input type="text"/> : <input type="text"/>

Select Port Binding

Note: If you enable the MAC address binding function, the address leaning 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
8	Disable	21	Disable
9	Disable	22	Disable
10	Disable	23	Disable
11	Disable	24	Disable
12	Disable	25	Disable

4.10 TCP/UDP Filter

The screenshot shows the 'TCP_UDP Filter Configuration' page. It includes a sidebar with 'Security' expanded to 'TCP/UDP Filter'. The main area has a title 'TCP_UDP Filter Configuration' and a form for configuration. Below the form is a note and a traffic path diagram.

Function Enable:

Port Filtering Rule:

Note:
 (1) The outgoing packet with selected protocol will be either forwarded or dropped at secure WAN port as the figure shown below.
 (2) "negative" means the selected protocol will be dropped and other protocols will be forwarded.
 "positive" means the selected protocol will be forwarded and other protocol will be dropped.

Protocol	FTP(20,21)	SSH(22)	TELNET(23)	SMTP(25)	DNS(53)	TFTP(69)	HTTP(80,8080)	POP3(110)
	<input type="checkbox"/>							
	<input type="checkbox"/>							
	<input type="checkbox"/>							

Secure WAN port:

<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							
<input type="checkbox"/>							

Note: The description of Secure WAN port is shown below.

```

    graph LR
      Ingress --> Check[Check TCP/UDP Port]
      Check --> Egress
      subgraph WAN_Port [Secure WAN port]
        direction TB
        Drop[The packet will be either dropped or forwarded. This is the secure WAN port.]
      end
      Check -.-> Drop
  
```

4.11 Spanning Tree

STP Bridge Settings

24Port 10/100 + 2Port Giga WebSwitch

Administrator

- Port Management
- VLAN Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
 - STP Bridge Settings
 - STP Port Settings
 - Loopback Detection
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- 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)
Disable STP				
RSTP				

Submit

Note: $2 * (Forward Delay - 1) \geq Max Age$
 $Max Age \geq 2 * (Hello Time + 1)$
 Bridge Priority must be multiples of 4096

Note: If you enable the MAC address binding function, the address leaning 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	32768:20 13 02 07 15 7F	2	20	15

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

STP Port Settings

24Port 10/100 + 2Port Giga WebSwitch

Administrator

- Port Management
- VLAN Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
 - STP Bridge Settings
 - STP Port Settings
 - Loopback Detection
- Trunking
- DHCP Relay Agent
- Backup/Recovery
- Miscellaneous
- SNMP Settings
- Logout

STP Port Settings

STP Port Settings		
Port No.	Priority (0~240)	RPC (1~200000000) 0=AUTO
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

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:200000	0x80	Designated Port	Forwarding	--	--
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	--	--

4.12 Trunking

The screenshot shows the configuration page for Trunking on a SmartSwitch. The page title is "24Port 10/100 + 2Port Giga WebSwitch". The left sidebar contains a navigation menu with "Trunking" selected. The main content area is titled "Trunking" and contains the following configuration fields:

- System Priority:** 1 (range 1-65535)
- Link Aggregation Algorithm:** MAC Source (dropdown menu also showing MAC Src&Dst)

Below these fields is a "Submit" button and a "Refresh" button. The main configuration is a table with three link groups:

Member	Link Group 1				Link Group 2				Link Group 3	
	P1	P2	P3	P4	P5	P6	P7	P8	P25	P26
	<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	

Below the table is a "Submit" button. A note at the bottom states: "Note: If you enable LACP on some specified ports and their link partners are normal port without LACP, these specified ports cannot transmit packet to/receive packet from the link partner."

4.13 DHCP Relay Agent

The screenshot shows the configuration page for the DHCP Relay Agent on a SmartSwitch. The page title is "24Port 10/100 + 2Port Giga WebSwitch". The left sidebar contains a navigation menu with "DHCP Relay Agent" selected. The main content area is titled "DHCP Relay Agent" and contains the following configuration fields:

- DHCP Relay State:** Disable (dropdown menu)
- DHCP Relay Hops Count Limit (1-16):** 16 (text input field)
- DHCP Relay Option 82 State:** Disable (dropdown menu)

Below these fields is an "Update" button.

4.14 Miscellaneous

The screenshot shows the 'Miscellaneous Setting' page in the SmartSwitch Web-Base Configuration interface. The page title is '24Port 10/100 + 2Port Giga WebSwitch'. The left sidebar contains a navigation menu with items: Administrator, Port Management, VLAN Setting, Per Port Counter, QoS Setting, Security, Spanning Tree, Trunking, DHCP Relay Agent, Backup/Recovery, Miscellaneous (selected), SNMP Settings, and Logout.

The main content area is titled 'Miscellaneous Setting' and contains several sections:

- Output Queue Aging Time:**
 - Aging time:** A dropdown menu set to 'Disable' and a text input field containing 'ms'. Description: 'The output queue aging function allows the administrator to select the aging time of a packet stored in the output queue. A packet store output queue for a long time will lower the free packet buffer, resulting in the poor utilization of the buffer and the poor switch performan'.
- VLAN Striding:**
 - VLAN Striding:** A dropdown menu set to 'Disable'. Description: 'When this function is enabled, the switch will forward a uni-cast packet to the destination port. No matter whether the destination port is VLAN group.'
- IGMP Snooping V1 & V2:**
 - IGMP Snooping:** A dropdown menu set to 'Disable'. Description: 'IGMP Snooping V1 & V2 function enable'.
 - IGMP Leave Packet:** A dropdown menu set to 'Disable'. Description: 'Leave packet will be forwarded to IGMP router ports.'
- VLAN Uplink Setting:** A table with 25 columns representing ports 01 to 25. Each column has two radio buttons: 'Uplink1' and 'Uplink2'. Below the table are two radio buttons: 'Clear Uplink1' and 'Clear Uplink2'.

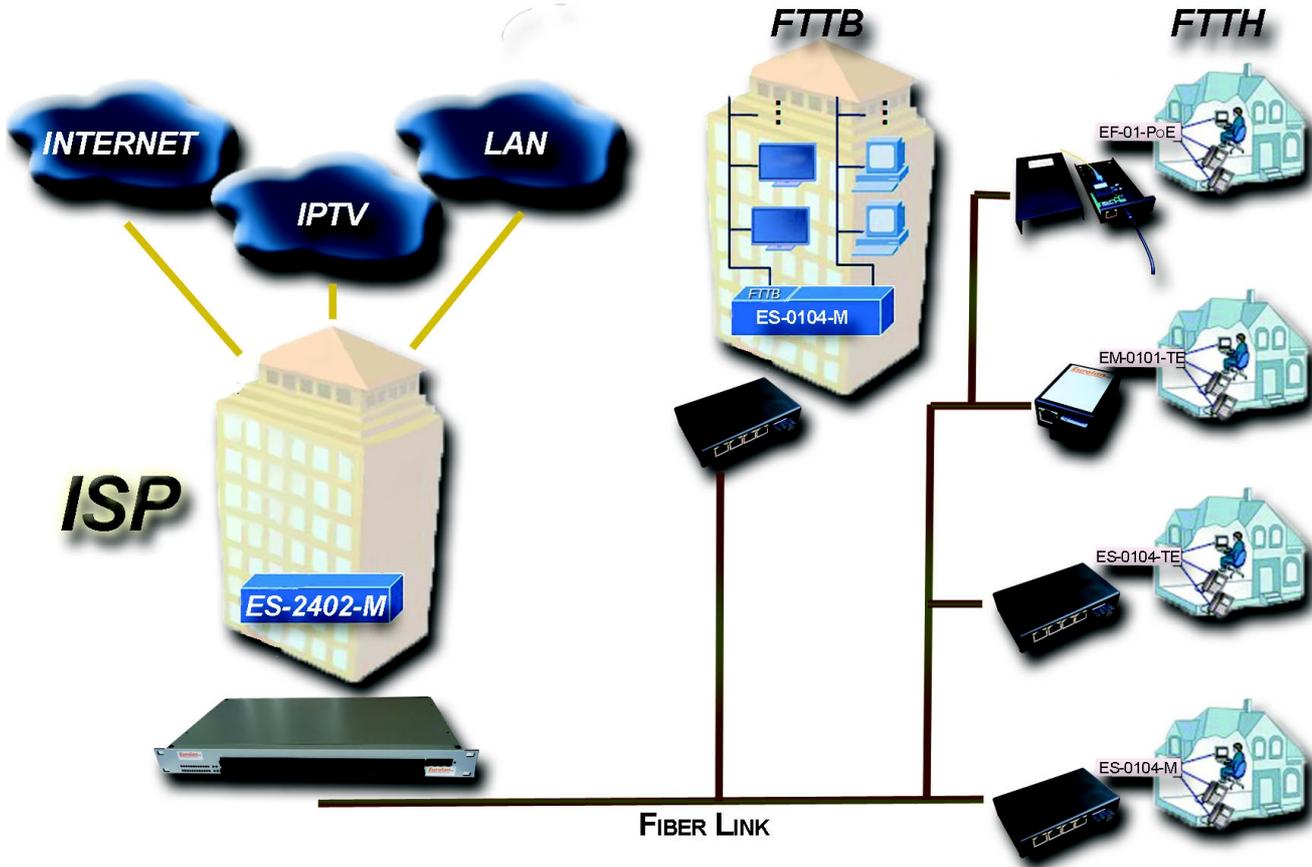
4.15 SNMP Settings

The screenshot shows the 'SNMP Settings' page in the SmartSwitch Web-Base Configuration interface. The page title is '24Port 10/100 + 2Port Giga WebSwitch'. The left sidebar contains a navigation menu with items: Administrator, Port Management, VLAN Setting, Per Port Counter, QoS Setting, Security, Spanning Tree, Trunking, DHCP Relay Agent, Backup/Recovery, Miscellaneous, SNMP Settings (selected), and Logout.

The main content area is titled 'SNMP Settings' and contains several sections:

- Community Settings:**
 - Community Name:** A text input field containing 'public'.
 - Access Right:** A dropdown menu set to 'Read Only'.
 - Update:** A button.
- SNMP Settings:**
 - System Description:** A text input field containing 'IP1826'.
 - System Contact:** A text input field containing 'ICPlus'.
 - System Location:** A text input field containing 'ICPlus'.
 - Update:** A button.
- SNMP Trap Settings:**
 - Trap State:** A dropdown menu set to 'Enable'.
 - Enable Trap Server:** A dropdown menu set to 'Disable'.
 - Trap Server Address:** A text input field.
 - Trap Server Status:** A text input field containing '--'.
 - Refresh:** A button.
 - Upadte:** A button.

5. APPLICATION



4. ORDERING INFORMATION

There are available two options regarding the fiber ports wavelengths:

1. ES-2402-M TX1550/RX1310
2. ES-2402-M TX1310/RX1550

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