

**16-Port 10/100Base Fast Ethernet
Web-Smart PoE Ethernet Switch**

User's Manual

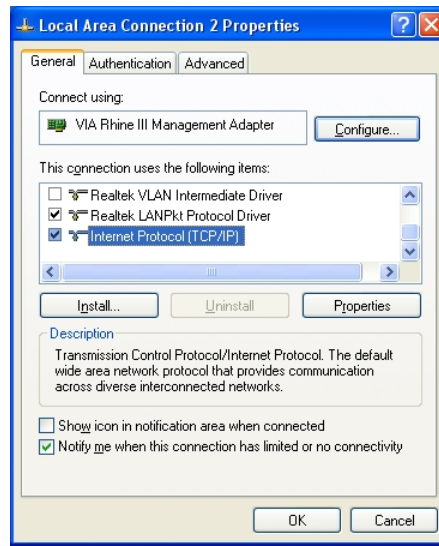
<Note> The ITE is to be connected only to PoE networks without routing to the outside plant.

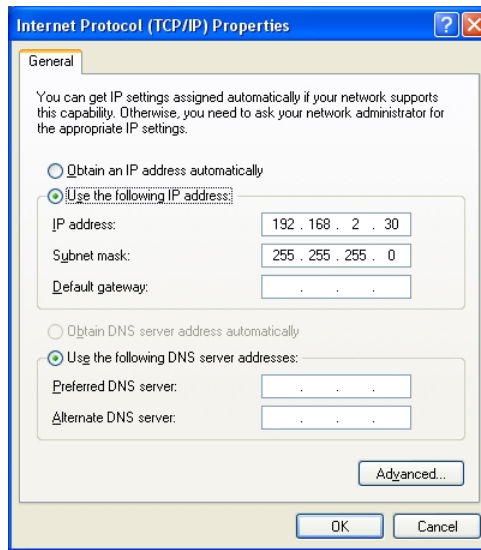
Web Smart Switch Configure

Please follow the steps to configure this Web Smart switch.

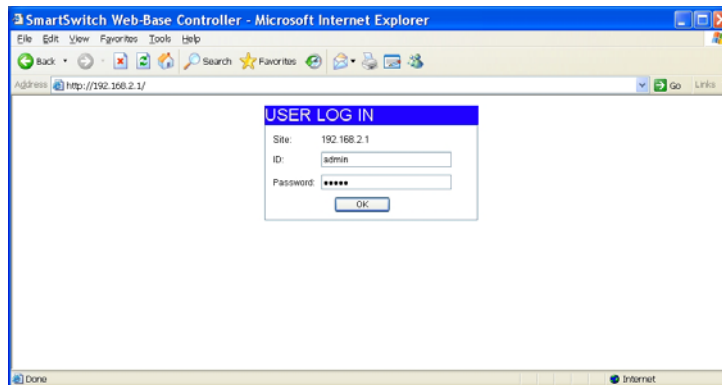
Step 1: Use a twisted pair cable to connect this switch to your PC.

Step 2: Set your PC's IP to 192.168.2.xx.





Step 3: Open the web browser (like IE...), and go to 192.168.2.1 Then you will see the login screen.

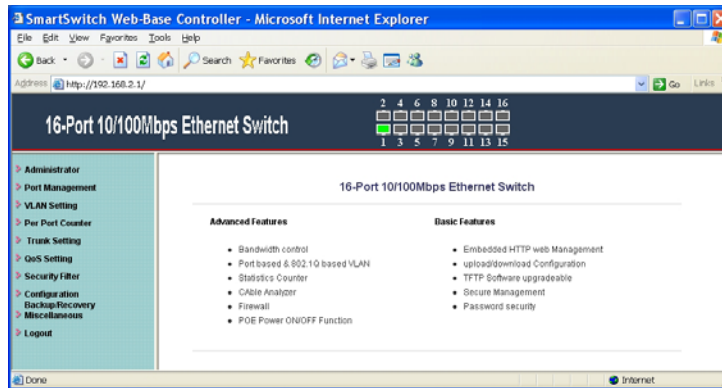


ID and the password: admin

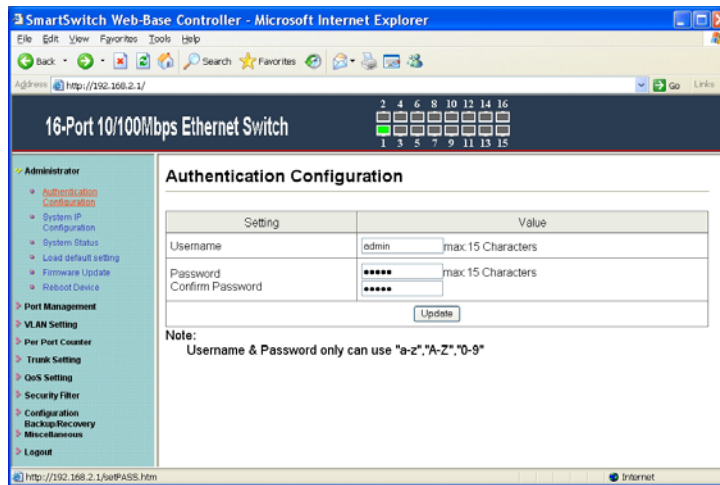
Step 4: After the authentication procedure, the home page shows up. Select one of the configurations by

clicking the icon.

- Administrator
- Port Management
- VLAN Setting
- Per Port Counter
- Trunk Setting
- QoS Setting
- Security Filter
- Configuration Backup/Recovery
- Miscellaneous
- Logout



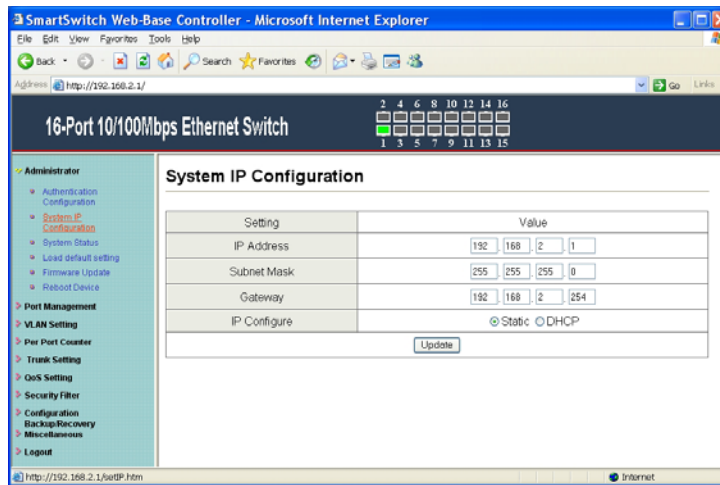
Administrator: Authentication Configuration



1. Change the user name and the password.
2. Click "Update" to confirm the new change.
3. Turn off the power and reset this switch.
4. After resetting, turn on the switch for the new change.

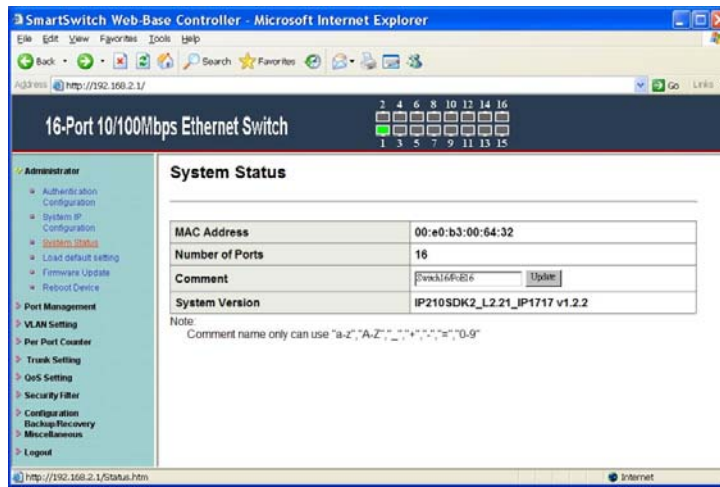
Now, you can use the new user name and the password.

Administrator: System IP Configuration



1. Change the IP address: type the new IP address or select DHCP IP configuration.
 2. Click "Update" to confirm the new change. "Setting Process OK!!" will be shown on the screen.
 3. Turn off the power and reset this switch.
 4. After resetting, turn on the switch for the new change.
- Now, the setting of "System IP Configuration" is finished.

Administrator: System Status



The screenshot shows the SmartSwitch Web-Base Controller interface in Microsoft Internet Explorer. The browser address bar shows `http://192.168.2.1/`. The page title is "16-Port 10/100Mbps Ethernet Switch". A port status grid is visible at the top right, showing ports 1 through 16. The main content area is titled "System Status" and contains the following information:

MAC Address	00:e0:b3:00:64:32
Number of Ports	16
Comment	<input type="text" value="Pwv3t66-826"/> <input type="button" value="Update"/>
System Version	IP210SDK2_L2.21_IP1717 v1.2.2

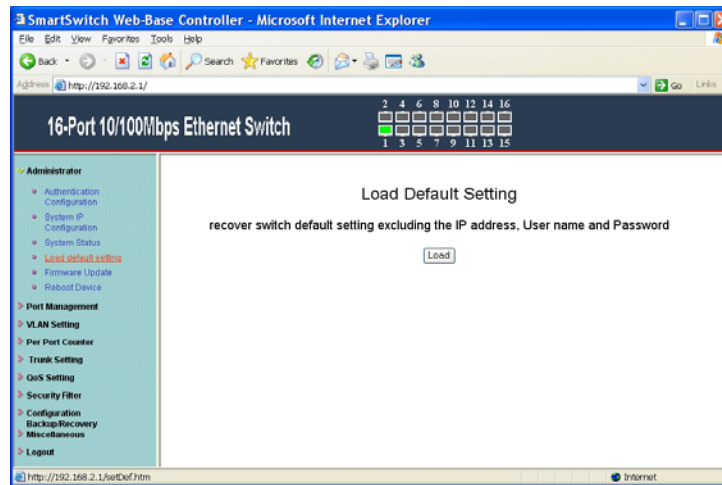
Note: Comment name only can use "a-z","A-Z","_","-",".","/","=","0-9"

The left sidebar contains a navigation menu with the following items: Administrator (selected), Authentication Configuration, System IP Configuration, System Status (highlighted in red), Load default setting, Firmware Update, Reboot Device, Port Management, VLAN Setting, Port Counter, Trunk Setting, QoS Setting, Security Filter, Configuration Backup-Recovery, Miscellaneous, and Legend.

MAC address and system version will be shown on the screen.

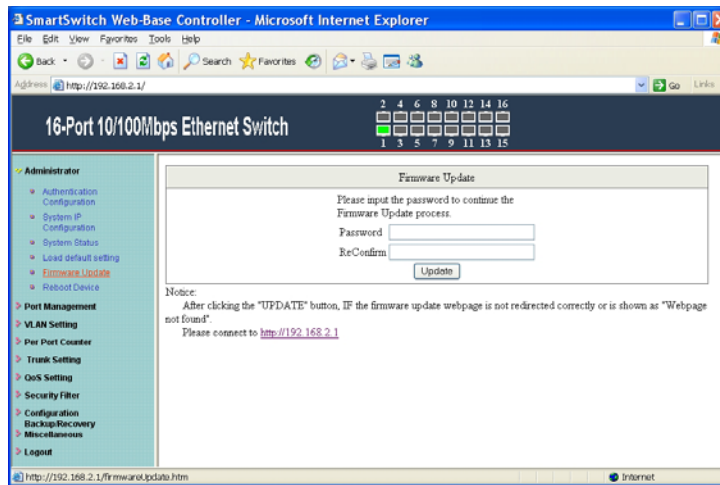
1. Change the new comment of this switch by typing the new comment.
 2. Click "Update" to confirm the new change.
- Now, the setting of "System Status" is finished.

Administrator: Load Default Setting



1. Click "Load" to back to the factory default setting.
 2. Turn off the power and reset this switch.
 3. After resetting, turn on the switch for the new change.
- Now, the default is loaded.

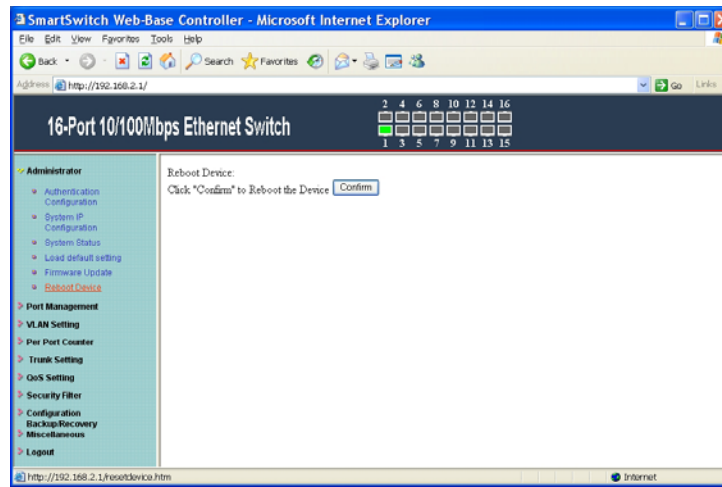
Administrator: Firmware Update



Follow the instruction on the screen to update the new firmware.

Please contact with your sales agents to get the latest firmware information.

Administrator: Reboot Device



1. Click "Confirm" to reboot the device.
Now, the setting of "Reboot Device" is finished.

Port Management: Port Configuration

The screenshot shows the 'Port Configuration' page in a web browser. The browser title is 'SmartSwitch Web-Base Controller - Microsoft Internet Explorer'. The address bar shows 'http://192.168.2.1/'. The page title is '16-Port 10/100Mbps Ethernet Switch'. The navigation menu on the left includes: Administrator, Port Management (selected), Port Configuration, Port Mirroring, Bandwidth Control, Broadcast Storm Control, POE, VLAN Setting, Per Port Counter, Trunk Setting, QoS Setting, Security Filter, Configuration Backup/Recovery, Miscellaneous, and Logout.

The 'Port Configuration' section has a 'Function' table with columns: Auto, Speed, Duplex, Pause, Backpressure, Tx Capability, and Addr. Learning. Below this is a 'Select Port No.' field with checkboxes for ports 01 through 16 and an 'Update' button.

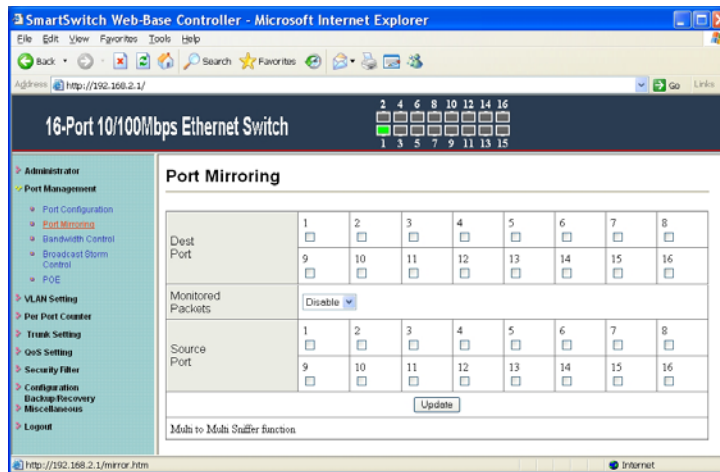
The main 'Port' table is divided into 'Current Status' and 'Setting Status' columns. The 'Current Status' columns are Link, Speed, Duplex, and FlowCtrl. The 'Setting Status' columns are Auto-Nego, Speed, Duplex, Pause, Backpressure, Tx Cap, and Addr. Learning.

Port	Current Status				Setting Status						
	Link	Speed	Duplex	FlowCtrl	Auto-Nego	Speed	Duplex	Pause	Backpressure	Tx Cap	Addr. Learning
1	●	100M	Full	off	Auto	100M	full	on	on	on	on
2	---	---	---	---	Auto	100M	full	on	on	on	on
3	---	---	---	---	Auto	100M	full	on	on	on	on
4	---	---	---	---	Auto	100M	full	on	on	on	on
5	---	---	---	---	Auto	100M	full	on	on	on	on
6	---	---	---	---	Auto	100M	full	on	on	on	on
7	---	---	---	---	Auto	100M	full	on	on	on	on
8	---	---	---	---	Auto	100M	full	on	on	on	on
9	---	---	---	---	Auto	100M	full	on	on	on	on
10	---	---	---	---	Auto	100M	full	on	on	on	on
11	---	---	---	---	Auto	100M	full	on	on	on	on
12	---	---	---	---	Auto	100M	full	on	on	on	on
13	---	---	---	---	Auto	100M	full	on	on	on	on
14	---	---	---	---	Auto	100M	full	on	on	on	on

Select the "Port No." - configure the mode below:

1. "Auto": enable/disable Auto-Negotiation function of the port.
2. "Speed": select the 10M or 100M mode of the port.
3. "Duplex": select the port is full or half-duplex mode.
4. "Pause": enable/disable the port.
5. "Backpressure": enable/disable the backpressure of the port.
6. "Tx Capability": enable/disable TX capability of the port.
7. "Addr. Learning": enable/disable this function of the port.

Port Management: Port Mirroring



Port Mirroring is used to mirror traffic, RX, TX or TX&RX, from Source port to Destination port for analysis.

1. Select the Destination port: you can choose port 1 to port 16.
2. Select the Source port: by clicking the checking box of the port.
3. Click "Update" to save the setting.

Now, the setting of "Port Mirroring" is finished.

Port Management: Bandwidth Control

The screenshot shows the 'Bandwidth Control' configuration page. The 'Port No.' is set to 01. The 'Tx Rate' and 'Rx Rate' are both set to 0-255 (0 full speed). The 'Speed Base' is set to 'Low' (32Kbps). The 'Update' button is visible.

Below the configuration form is a table showing the status of all 16 ports:

Port No	Tx Rate(Kbps)	Rx Rate(Kbps)	Link Speed	Port No	Tx Rate(kbps)	Rx Rate(kbps)	Link Speed
1	Full Speed	Full Speed	100M	9	Full Speed	Full Speed	---
2	Full Speed	Full Speed	---	10	Full Speed	Full Speed	---
3	Full Speed	Full Speed	---	11	Full Speed	Full Speed	---
4	Full Speed	Full Speed	---	12	Full Speed	Full Speed	---
5	Full Speed	Full Speed	---	13	Full Speed	Full Speed	---
6	Full Speed	Full Speed	---	14	Full Speed	Full Speed	---
7	Full Speed	Full Speed	---	15	Full Speed	Full Speed	---
8	Full Speed	Full Speed	---	16	Full Speed	Full Speed	---

1. Select the "Port No.": you can choose port 1 to port 16.
 2. "Tx Rate": set the different transmission rate of this selected port and choose the speed from 0~255 based on two speed levels.
 3. "Rx Rate": set the different receiving rate of this selected port and choose the speed from 0~255 based on two speed levels.
 4. Click "Update" to confirm the setting.
- Now, the setting of "Bandwidth Control" is finished.

Port Management: Broadcast Storm Control

The screenshot shows the SmartSwitch Web-Base Controller interface in Microsoft Internet Explorer. The browser title is "SmartSwitch Web-Base Controller - Microsoft Internet Explorer" and the address bar shows "http://192.168.2.1/". The page header displays "16-Port 10/100Mbps Ethernet Switch" and a status bar with port indicators (2, 4, 6, 8, 10, 12, 14, 16 and 1, 3, 5, 7, 9, 11, 13, 15). The left sidebar contains a navigation menu with categories: Administrator, Port Management (selected), VLAN Setting, Per Port Counter, Trunk Setting, QoS Setting, Security Filter, Configuration Backup/Recovery, Miscellaneous, and Logout. Under Port Management, the following options are listed: Port Configuration, Port Mirroring, Bandwidth Control, Broadcast Storm Control (selected), and POE. The main content area is titled "Broadcast Storm Control" and features a form with a "Threshold" input field set to "63" (range 1-63) and an "Enable Port" grid. The grid has 16 columns (ports 1-16) and 2 rows (Enable Port). All "Enable Port" checkboxes are currently unchecked. An "Update" button is located below the grid. A note at the bottom of the form states: "This value indicates the number of broadcast packet which is allowed to enter each port in one time unit. One time unit is 500 us for 100Mbps speed and 5000us for 10Mbps speed." The browser status bar at the bottom shows "http://192.168.2.1/broadcast.htm" and "Internet".

1. Set the threshold of per port to define the status of broadcast packets.
 2. Click "Update" to confirm the setting.
- Now, the setting of "Broadcast Storm Control" is finished.

Port Management: PoE

SmartSwitch Web-Base Controller - Microsoft Internet Explorer

Address: http://192.168.2.1/

16-Port 10/100Mbps Ethernet Switch

Administrator

Port Management

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

VLAN Setting

Port Port Coender

Trunk Setting

QoS Setting

Security Filter

Configuration Backup/Recovery Miscellaneous

Logout

POE Configuration

Port	01	02	03	04	05	06	07	08
Enable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PSE Current	No Load	No Load	No Load	No Load	No Load	No Load	No Load	No Load
Minimum Output Power	---	---	---	---	---	---	---	---
POE Class	---	---	---	---	---	---	---	---
Port	9	10	11	12	13	14	15	16
Enable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PSE Current	No Load	No Load	No Load	No Load	No Load	No Load	No Load	No Load
Minimum Output Power	---	---	---	---	---	---	---	---
POE Class	---	---	---	---	---	---	---	---

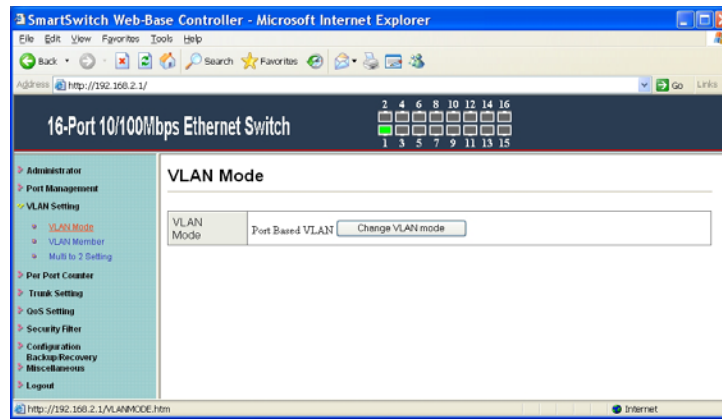
Update

Update: Update the power control function.
 Enable : Power On
 Enable : Power Off

Remote access and monitor the attached PD (Powered Device) status by using Enable/Disable function.

1. “Enable”: POE of the port is able to supply power to the attached PD (Powered Device).
2. “PSE Current & Minimum Output Power”: The status of the port current and minimum output power.
3. “POE class”: each POE port will detect the class of the attached PD (Powered Device).
4. Click “Update” to confirm and finish the setting.

VLAN Setting: VLAN Mode (Port Based VLAN)



There are two VLAN modes: Port Based VLAN and Tagged VLAN.

1. Click "Change VLAN mode" to select the mode. Now, the setting of "VLAN Mode" is finished.

VLAN Setting: VLAN Member (Port Based VLAN)

The screenshot shows the 'VLAN Member Setting (Port Based)' configuration page. The main configuration area contains a table with columns for 'Port' and 'Dest PORT'. The 'Dest PORT' column is divided into two groups: 01-08 and 09-16. Each group has a 'select' row with checkboxes. The 'Update' and 'LoadDefault' buttons are visible below the table.

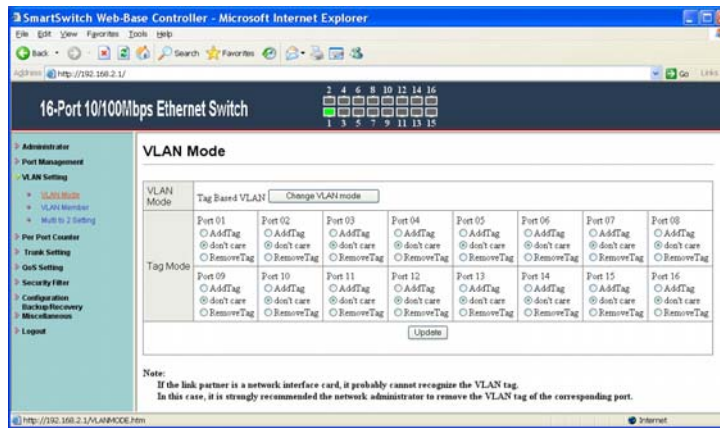
The 'VLAN MEMBER' table at the bottom is a 12x16 grid. The columns are labeled 'Port' and '1' through '16'. The rows are labeled '1' through '12'. Each cell in the grid contains a 'v' character, indicating that all ports are currently assigned to the selected VLAN.

You can select a port group.

1. Click the port numbers: which you want to put them into the selected VLAN group.
2. Click "Update" to confirm and finish the setting.
3. Click "LoadDefault" to back to the original factory setting.

Now, the setting of "VLAN Member" is finished.

VLAN Setting: VLAN Mode (Tag Based VLAN)



There are two VLAN modes: Port Based VLAN and Tagged VLAN.

1. Click "Change VLAN mode" to select the mode.
2. Choose "AddTag", "don't care", or "RemoveTag" for each port.

Now, the setting of "VLAN Mode" is finished.

VLAN Setting: VLAN Member (Tag Based VLAN)

The screenshot shows the 'VLAN Member Setting (Tag Based)' configuration page in the SmartSwitch Web-Base Controller. The interface includes a navigation menu on the left and a main configuration area. The main area contains several tables and form elements for configuring VLAN members.

VLAN Member Setting (Tag Based)

VLAN No. VID [Read]

Dest PORT	01	02	03	04	05	06	07	08
select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dest PORT	09	10	11	12	13	14	15	16
select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PVID index PVID index value is 0-19

Port/ PVID Index	01	02	03	04	05	06	07	08
Port/ PVID Index	<input type="text" value="02"/>	<input type="text" value="01"/>	<input type="text" value="02"/>	<input type="text" value="03"/>	<input type="text" value="04"/>	<input type="text" value="05"/>	<input type="text" value="06"/>	<input type="text" value="07"/>
Port/ PVID Index	09	10	11	12	13	14	15	16
Port/ PVID Index	<input type="text" value="08"/>	<input type="text" value="09"/>	<input type="text" value="10"/>	<input type="text" value="11"/>	<input type="text" value="12"/>	<input type="text" value="13"/>	<input type="text" value="14"/>	<input type="text" value="15"/>

[Update] [LoadDefault]

VLAN MEMBER

VLAN No.	VID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
2	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
3	3	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	5	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
6	6	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
7	7	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
8	8	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v

You can select a port group.

1. Click the port numbers: which you want to put them into the selected VLAN group.
2. Input PVID Index for each port.
3. Click "Update" to confirm and finish the setting.
4. Click "LoadDefault" to back to the original factory setting.

Now, the setting of "VLAN Member" is finished.

VLAN Setting: Multi to 2 Setting

SmartSwitch Web-Base Controller - Microsoft Internet Explorer

16-Port 10/100Mbps Ethernet Switch

Multi to 2 Setting

Destination PortNo: Port 1: 01

Current Setting: Port 2: 01

Disable Port: Port - & -

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

Update

1. A example for Multi-to-2 structure

VLAN Configuration

2. The 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 newest setting.

This is a special design for easily setting the switch VLAN into “VLAN Per Port“.

1. Choose “Destination Port No”.
 2. Choose “Disable Port”.
 3. Click “Update” to confirm and finish the setting.
- After this setting, all ports can only connect to the destination port.

Per Port Counter: Port Counter

SmartSwitch Web-Base Controller - Microsoft Internet Explorer

16-Port 10/100Mbps Ethernet Switch

Counter Category

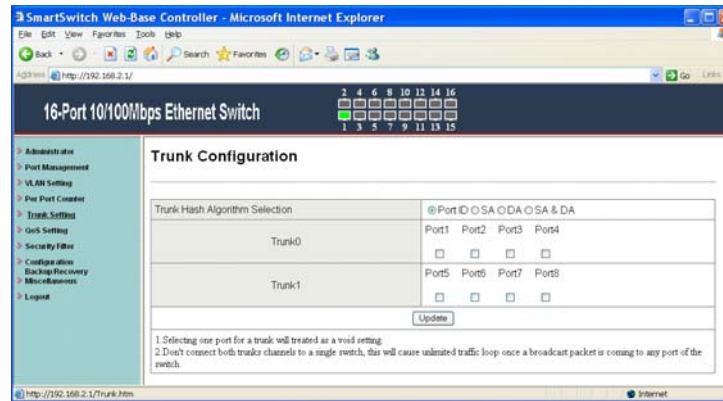
Counter Mode Selection: Receive Packet & Transmit Packet

Port	Receive Packet	Transmit Packet
01	16880	10594
02	0	0
03	0	0
04	0	0
05	0	0
06	0	0
07	0	0
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

Refresh Clear

You can read the transmitting and receiving packet of the connecting port.
Click “Refresh” or “Clear” the data.

Trunk Setting

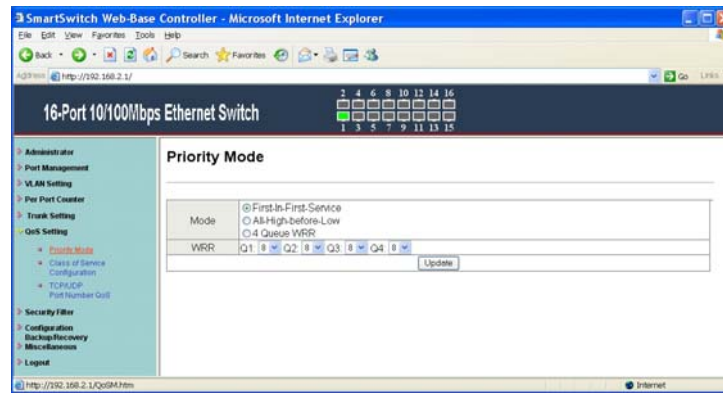


There are two groups to choose and max. for each group is 4 ports.

Set up port trunk group mode as below:

1. "Port ID": you can select port number you want to include into the same group.
2. "SA": you can select Source Address of the port you want to include into the same group.
3. "DA": you can select Destination Address of the port you want to include into the same group.
4. "SA & DA": you can select both Source Address and Destination Address of the port you want to include into the same group.
5. Click "Update" to confirm and finish the setting.

QoS Setting: Priority Mode



There are three Priority Modes to select.

1. "First-In-First-Service": the first receiving packet will be firstly transmitted.
2. "All-High-before-Low": packets set in high priority mode will be firstly transmitted before packets set in low priority mode.
3. "4 Queue WRR": WRR (Weight-Round-Robin), you can set the ratio of the transmitting packet for the low priority to high priority.
4. Click "Update" to confirm and finish the setting.

QoS Setting: Class of Service Configuration

The screenshot shows the SmartSwitch Web-Base Controller interface in Microsoft Internet Explorer. The page title is "16-Port 10/100Mbps Ethernet Switch". The main content area is titled "Class of Service Configuration". A checkbox labeled "Enable High Priority" is checked. Below this is a table with columns: Port No/Mode, Port Base, VLAN Tag, IP / DS, Port No/Mode, Port Base, VLAN Tag, and IP / DS. The table contains 8 rows of configuration data. Below the table is an "Update" button. At the bottom, there are four numbered notes explaining the priority mapping and settings.

Port No/Mode	Port Base	VLAN Tag	IP / DS	Port No/Mode	Port Base	VLAN Tag	IP / DS
1	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	9	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>
2	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	10	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>
3	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	11	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>
4	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	12	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>
5	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	13	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>
6	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	14	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>
7	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	15	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>
8	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>	16	Low Priority	<input type="checkbox"/>	<input type="checkbox"/>

(1) The switch treats TCP/UDP, IP TOS/DS, 802.1p and physical port CoS scheme in the following priority:
TCP/UDP > IP DS/TOS > 802.1p > Physical port.

(2) TCP/UDP CoS will override all other settings.

(3) For 802.1p priority field, the switch utilizes the following priority mapping table.
6 and 7 are mapped to the "highest" priority queue.
4 and 5 are mapped to the "medium high" priority queue.
0 and 3 are mapped to the "medium low" priority queue.
1 and 2 are mapped to the "lowest" priority queue.

(4) For IP TOS/DS traffic class, the packet priority can be assigned by setting IP TOS/DS priority field.

You can set QoS mode of per port by different bases.

1. "Port Base": you can select the port which you want to configure as high priority. It means the packet of the port will be firstly transmitted.
2. "VLAN Tag": you can select the port which you want to configure as packets. It means the packet with special Tag will be firstly transmitted.
3. "IP/DS": you can select the port which you want to configure as packets. It means the packets with special IP will be firstly transmitted.
4. Click "Update" to confirm and finish the setting.

QoS Setting: TCP/UDP Port Number QoS

The screenshot displays the SmartSwitch Web-Base Controller interface in Microsoft Internet Explorer. The browser title is "SmartSwitch Web-Base Controller - Microsoft Internet Explorer" and the address bar shows "http://192.168.2.17". The main content area is titled "16-Port 10/100Mbps Ethernet Switch" and "TCP/UDP Port Based QoS".

On the left side, there is a navigation menu with the following items:

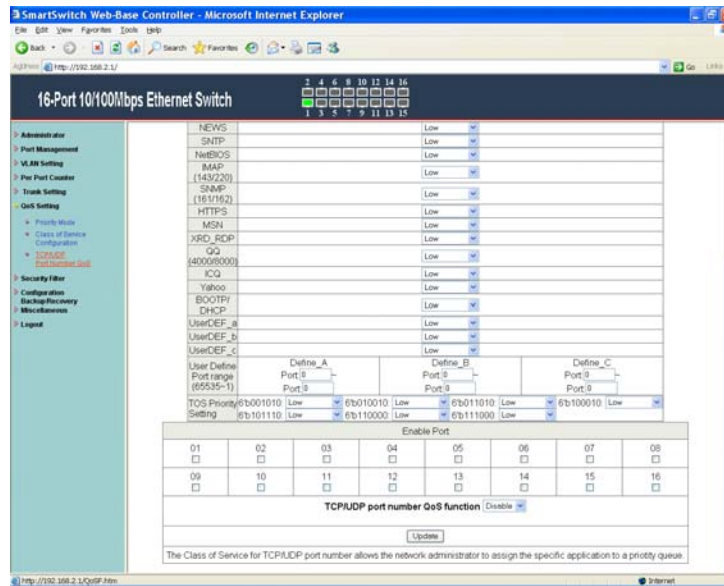
- Administrator
- Port Management
- VLAN Setting
- Port Port Counter
- Trunk Setting
- QoS Setting
 - Priority Mode
 - Class of Service Configuration
 - TCP/UDP Port Number QoS**
- Security Filter
- Configuration
 - Backup/Recovery
 - Miscellaneous
- Legend

The main configuration area contains a table with two columns: "Protocol" and "Option".

Protocol	Option
FTP	Low
SSH	Low
TELNET	Low
SMTP	Low
DNS	Low
TFTP	Low
HTTP (80/8080)	Low
POP3	Low
NEWS	Low
SNTP	Low
NetBIOS	Low
MAP (1432/20)	Low
SNMP (161/162)	Low
HTTPS	Low
MSN	Low
XRD_RDP	Low
QQ (4000/8000)	Low
ICQ	Low
Yahoo	Low
BOOTP/DHCP	Low
UserDEF_a	Low
UserDEF_b	Low
UserDEF_c	Low

At the bottom of the page, there are three "User Define" sections:

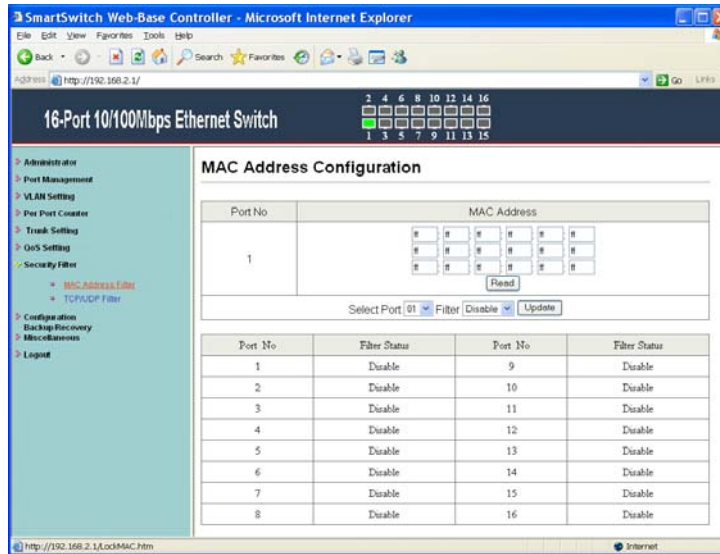
- User Define**
Port range: #5535-11
- Define_A**
Port: 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
- Define_B**
Port: 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
- Define_C**
Port: 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15



There are four modes of TCP/UDP priority to select.

1. "F-I-F-O": First-In-First-Out, the first receiving packet will be firstly transmitted.
2. "Discard": packets will be discarded.
3. "Low": the packets of low priority will be transmitted after the packets of high priority.
4. "High": the packets of high priority will be firstly transmitted.

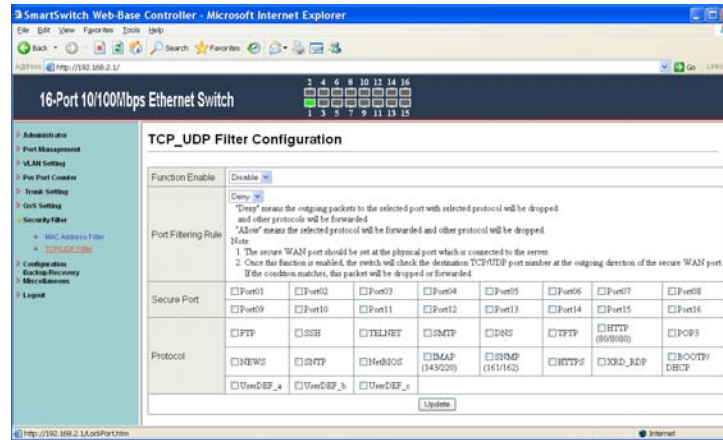
Security Filter: MAC Address Filter



Set special MAC address to activate on the selected port.

1. Enable: allow the packet which has this MAC address to activate on the port. The port will record the first receiving source MAC address as the security MAC address.
2. Click "Update" to confirm and finish the setting.

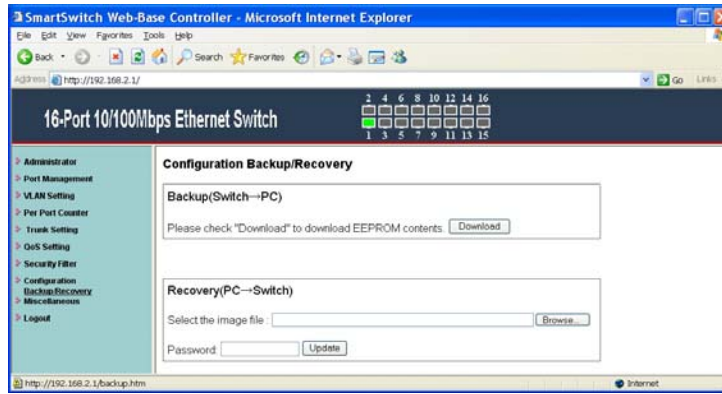
Security Filter: TCP/UDP Filter



You can enable or disable this function of per port.
If you enable this function, there are two modes as below,

1. “Negative Filter Mode”: packets compliant with protocol will be dropped.
2. “Positive Filter Mode”: packets compliant with protocol will be forwarded.
3. Click “Update” to confirm and finish the setting.

Configuration Backup/Recovery

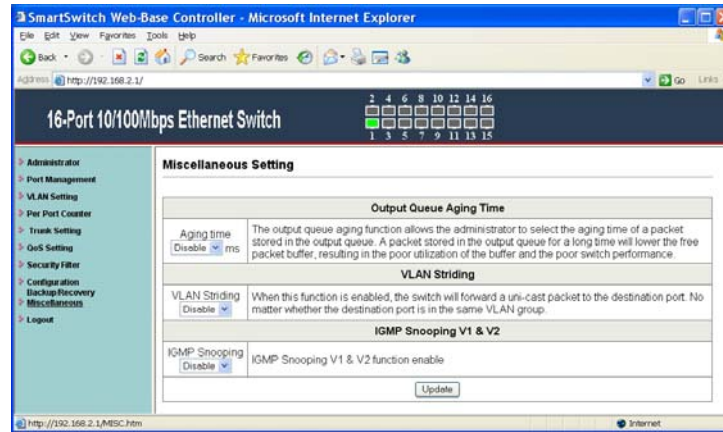


Follow the instruction on the screen to update the original setting.

“Backup”: Click “Download” to confirm the setting.

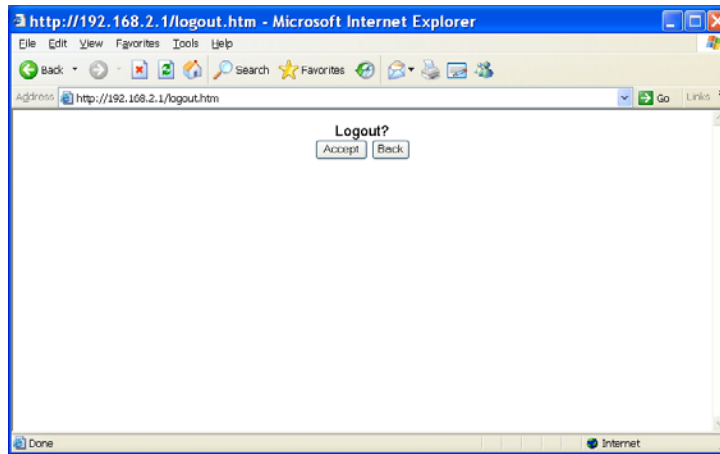
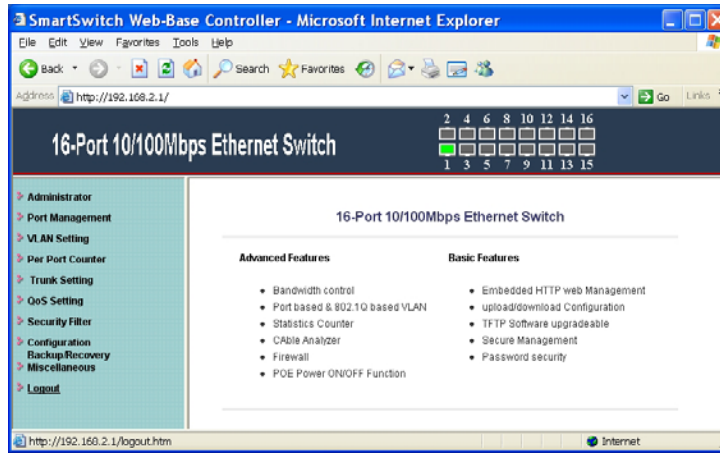
“Recovery”: Click “Update” to confirm the setting.

Miscellaneous



1. "Aging Time": You can set queue aging time into different milliseconds or disable this function.
2. "VLAN Striding": You can enable/disable this function.
3. "IGMP Snooping": You can enable/disable this function.
4. Click "Update" to confirm and finish the setting.

Logout



You can click "Accept" to logout.