

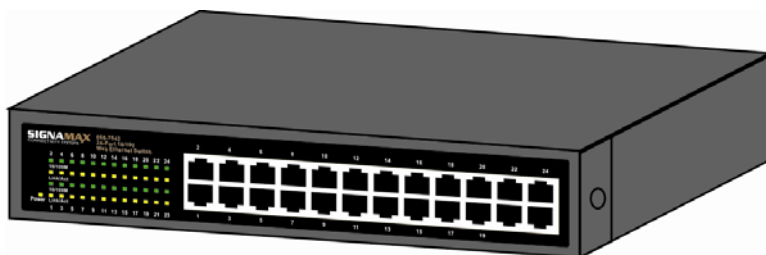


**Signamax™ Connectivity Systems**

## **24 Port Nway Fast Ethernet Web Smart Switch**

**Model: 065-7542**

**User's Manual**



## **FCC Warning**

This device has been tested and found to comply with limits for a Class B digital device, pursuant to Part 2 and 15 of the 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, uses and can 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 the interference at their own expense.

## **CE Mark Warning**

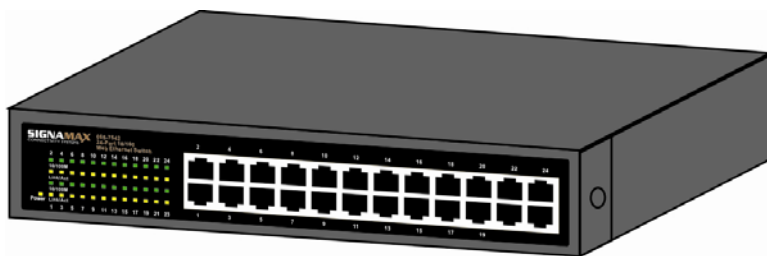
This is a Class B product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

## 24 Ports Nway Fast Ethernet Web Smart Switch

### Introduction

065-7542 Switch provides 24 10/100Mbps ports. 065-7542 Switch was designed for easy installation and high performance in an environment where traffic on the network and the number of user increase continuously.

The compact rigid desktop size was specifically designed for ROBO (Remote Office & Branch Office) and medium to large workgroups. 065-7542 Switch can be installed where space is limited; moreover it provides smooth network migration and easy upgrade to network capacity.



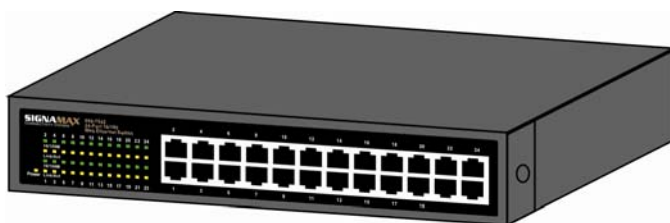
## Key Features

- 24 Port 10/100Base-T/TX Nway (Auto-negotiation) Switch with RJ-45 connectors
- All Ports Auto-MDI/MDIX
- Desktop size with compact rigid design
- Auto-detect of Full/Half-duplex modes in all ports
- Dedicated Full-duplex 200Mbps bandwidth on each port
- Broadcast storm control
- Store & Forward switching methods
- IEEE 802.3x flow control for Full-duplex
- Zero-Packet Loss Back-pressure flow control for Half-duplex
- Non-blocking & Non-head-of-line blocking full wire speed forwarding
- Auto-learning of networking configurations
- Status LEDs: Power, 10/100M, Link/Activity
- Smart plug & play

## Package Contents

Before you start to install 065-7542 Switch, please verify your package that contains the following items:

- One 065-7542 Fast Ethernet Switch
- One Power Cord
- One CD with User's Manual



24 Ports Switch



Power Cord



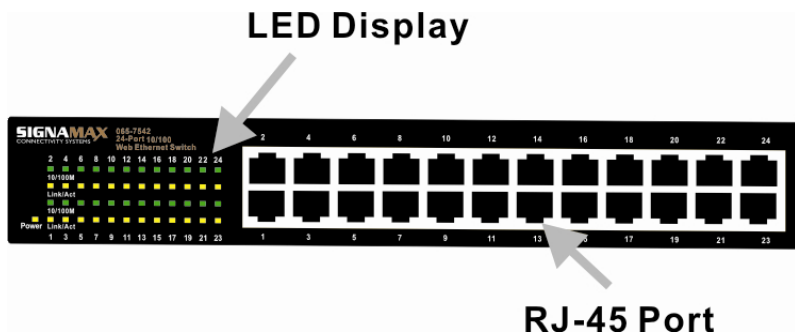
CD with  
User's Manual

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

## Front Panel Layout

### I . 24 RJ-45 10/100Mbps Switch Ports

There are 1~24 RJ-45 connectors on the front panel for connecting to servers, workstation or other devices. 065-7542 Switch provides 24 10/100Mbps switching ports that could sense the 10/100M speed and negotiate Full/Half-duplex mode automatically. These switching ports allow users to connect 065-7542 Switch to 10Base-T and 100Base-TX devices.



## II. LED Indicators of 24 Port 10/100Mbps Switch

LED	Status	Description	No. Of LED
Power	On	Power on	Power
10/100M	On	Port is on the 100M status	24 (1~24)
	Off	Port is on the 10M status	24 (1~24)
LINK/ACT.	On	10/100Mbps port for connection	24 (1~24)
	Flashing	10/100Mbps for data activating	24 (1~24)

## III. LED Definitions

### Power LED

On : The unit is powered on and ready for use.

Off : The unit is powered off.

### 10/100M LED

On : The port is on the 100Mbps status.

Off : The port is on the 10Mbps status.

### LINK/ACT LED

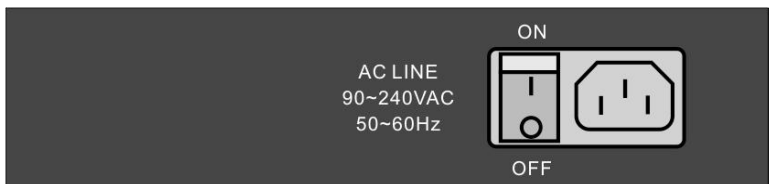
On : The port is ready for 10/100Mbps connection.

Flashing : The data is transmitted or received on the port.

## Rear Panel Layout

### AC input

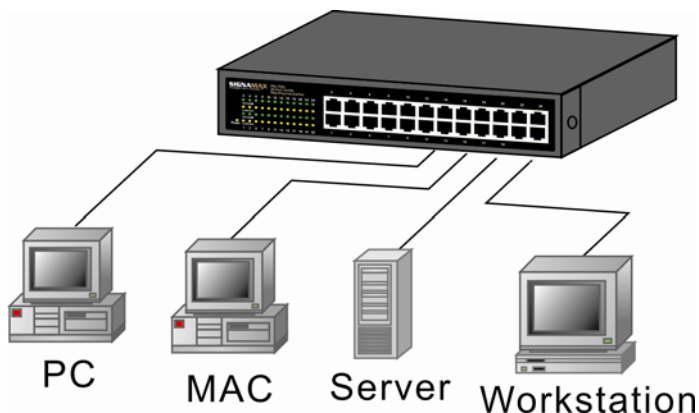
AC input (90-240V/AC, 50-60Hz) UL Safety



## Installation

### I. To connect 065-7542 Switch to PCs, servers, and other network devices

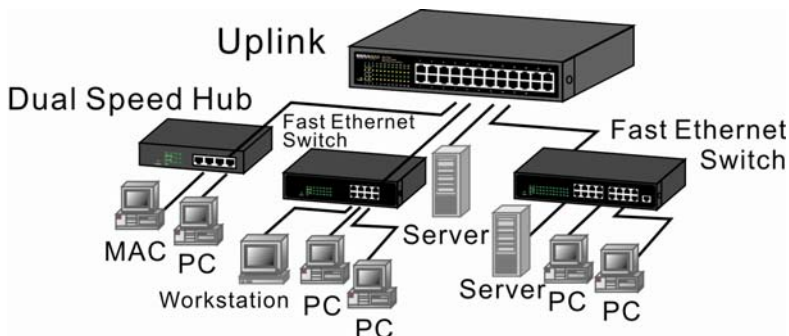
Use straight-through twisted-pair cable (Cat. 5) to connect 065-7542 Switch to PCs, servers and other network devices. Networks can be built as figure shown.





## II . To connect 065-7542 Switch to a Switch or a Hub

Use straight-through twisted pair cable to connect 065-7542 Switch to another Switch or Hub on uplink port. If you connect 065-7542 Switches on port 1 to port 24, the cable should be changed to crossover cable.



### Technical Specification

1. Standards Compliance
  - IEEE 802.3 10BASE-T
  - IEEE 802.3u 100BASE-TX
2. Number of Ports
  - 24 integrated ports (10/100Mbps N-Way port)
3. Fully Flow Control Supported
  - Half-duplex mode: Backpressure
  - Full-duplex mode: IEEE 802.3x
4. Network Transmission Media
  - 10Base-T Cat. 3, 4, 5 UTP/STP
  - 100Base-TX Cat. 5 UTP/STP
5. Network Status Monitoring LEDs
  - Per port: LINK/ACT, 10/100M
  - System: POWER

6. Buffer Memory
  - RAM: 1.5Mbits per device
  - RAM buffer dynamically allocated for each port
7. Filter/Forward Rate
  - 100Mbps port - 148,800pps
  - 10Mbps port - 14,880pps
8. MAC Address
  - Up to 4K per device
9. Power
  - AC input (90-240V/AC, 50-60Hz) UL Safety
10. Power Consumption
  - 9.2 Watts (Max)
11. Operating Temperature
  - 0°C ~ 60°C
12. Store Temperature
  - -20°C ~ 90°C
13. Humidity
  - 10% ~90% RH (Non-condensing)
14. Dimension (L x W x H)
  - 266mm x 160mm x 44mm
15. Weight
  - 1.6Kg
16. Safety & EMI Certificates
  - CE & FCC-B

## Web Smart Switch

### I . Features Overview

- Supports real-time status (link, speed, duplex) of each port
- Supports port setting for enable or disable operation (the 1st port can't be disabled)
- Supports port setting for N-Way or force mode operation
- Supports Bandwidth Control on transmission and reception
- Supports Broadcast Storm Protection
- Supports Maximum Packet Length 1536 or 1552.
- Supports Port-bases VLAN
- Supports two priority queues for CoS
- Supports weighted round robin scheduling for queues.
- Supports Port-bases / 802.1p / DiffServ. priority three types of CoS

### II . Configure

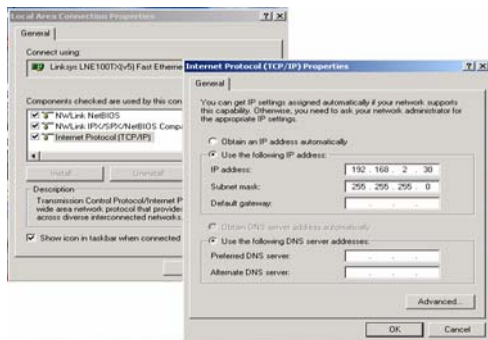
Please follow the steps to configure 065-7542 Switch.

#### Step 1:

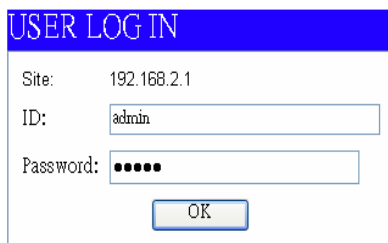
Use a twisted pair cable to connect 065-7542 Switch to your PC and power on the Switch

**Step 2:**

Set your PC's IP to 192.168.2.xx

**Step 3:**

Open the web browser (like IE...), and then go to the 192.168.2.1 site, and you will see the login screen.



Key in the user name and the password to pass the authentication, and the user ID and the password is “admin”.

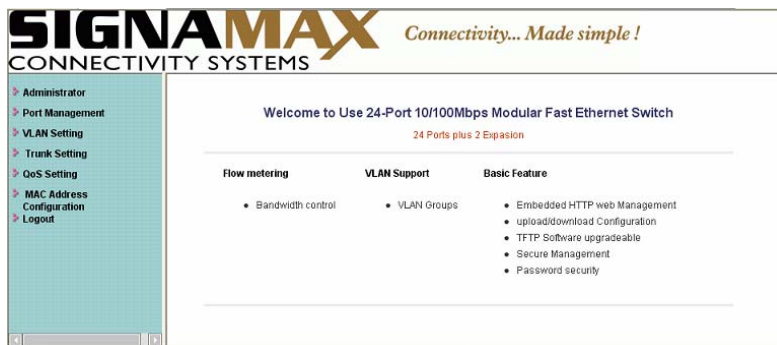
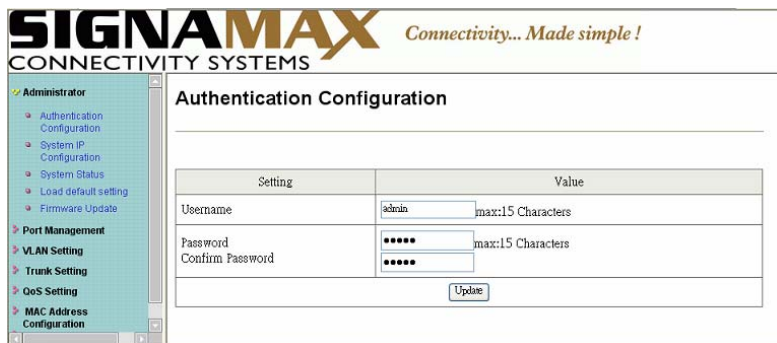
IP: 192.168.2.1  
ID: admin  
Password: admin

After the authentication procedure, the home page shows up.

**Step 4:**

On the following home page, select the configuration by clicking the icon. It includes,

- Administrator
- Port Management
- VLAN Setting
- QoS Setting
- Port Security
- Logout

**Administrator: Authentication Configuration**

Change the password, or use a new user ID and the password.

Click “Update” to confirm the new change, and then power off/on the Switch to take the new ID and the password effectively.

Administrator: System IP Configuration

The screenshot shows the SIGNAMAX web interface with the 'System IP Configuration' page selected. The left sidebar contains a tree view with options: Administrator, Authentication Configuration, System IP Configuration (selected), System Status, Load default setting, and Firmware Update. Under Administrator, there are sub-options: Port Management, VLAN Setting, Trunk Setting, QoS Setting, and MAC Address Configuration. The main content area displays the 'System IP Configuration' table with the following data:

Setting	Value
IP Address	192.168.2.1
Subnet Mask	255.255.255.0
Gateway	192.168.2.254

An 'Update' button is located at the bottom right of the table.

Change the IP address by typing the new IP and press “Update” to complete the change.

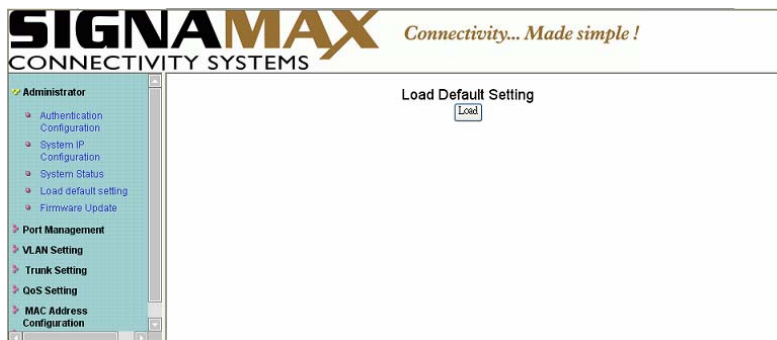
Administrator: System Status

The screenshot shows the SIGNAMAX web interface with the 'System Status' page selected. The left sidebar is identical to the previous screenshot. The main content area displays the 'System Status' table with the following data:

MAC Address	00:1d:79:17:00:00
Number of Ports	24
Comment	switch <input type="button" value="Update"/>
System Version	IP1726_ETEN_ENG24 v283.3.070829

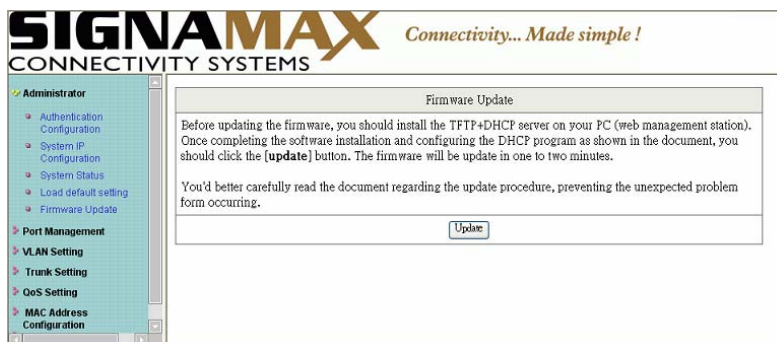
It shows the switch MAC address, and you can select “Back to the last display” or “Logout” when the time’s out.

## Administrator: Load Default Setting to EEPROM



Click “Load” to load the factory default setting change, and then reset the switch by power off/on to take it effectively.

## Administrator: Firmware Update



Follow the instruction on the screen to update the new firmware. The firmware is the latest version, please contact with your sales agents to get the new firmware information.

## Port Management: Port Control Configuration

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**Port Configuration**

Port No.	Forced-Off	Link Capability	Duplex	Pause	Backpressure
01	Disable	Auto-Nego.	Full	Enable	Enable

Update

Port	Current Status				Setting Status				
	Link	Speed	Duplex	FlowCtrl	F-off	Capability	Duplex	Pause	Backpressure
1	---	---	---	---	Disable	Auto	full	on	on
2	●	100M	Full	ON	Disable	Auto	full	on	on

“Port No.” is meant to the port number you want to configure it.

“Link Capability” is meant you can choose the port is Auto-Nego. mode or Force mode on 100M or 10M.

“Duplex” is meant you can select the port is full or half duplex or enable/disable the port.

## Port Management: Port Mirroring

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**Port Mirroring**

Destination Port: 01

Monitored Packets: Disable

Source Port	1	2	3	4	5	6	7	8	9	10	11	12
13	<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"/>
14	<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"/>
15	<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"/>
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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	<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"/>
18	<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"/>
19	<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"/>
20	<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"/>
21	<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"/>
22	<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"/>
23	<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"/>
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"/>

Update

1. Only one destination port is active all the time.

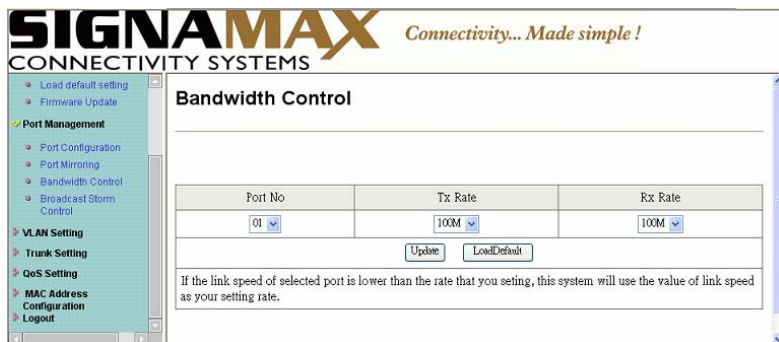
Port mirroring is used to mirror traffic from Source port to a



Destination port for analysis.

Select the Destination port from port 1 to port 24, and select the source port by click the check box of the port.

### Port Management: Bandwidth Control



Port No	Tx Rate	Rx Rate
01	100M	100M

Update LoadDefault

If the link speed of selected port is lower than the rate that you seting, this system will use the value of link speed as your setting rate.

“Port No.” is meant to the port number you want to configure it.

“TX Rate” is meant you can set the maximum transmission rate of the selected port and choose the full speed or 128K/256K/512K/1M/2M/4M/8M speed.

“RX Rate” is meant you can set the maximum receiving rate of the selected port and choose full speed or 128K/256K/512K/1M/2M/4M/8M speed.

## Port Management: Broadcast Storm Control

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- Load default setting
- Firmware Update
- Port Management**
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
- VLAN Setting
- Trunk Setting
- QoS Setting
- MAC Address Configuration
- Logout

### Broadcast Storm Control

Enable	<input type="checkbox"/>
Threshold	<input type="text" value="127"/> 1~127

This value indicates the number of broadcast packet which is allowed to enter each port in one time unit. One time unit is 10 ms for 100Mbps speed and 100 ms for 10Mbps speed

Enable or disable the broadcast storm protection feature.

## VLAN Setting: Group VLAN Setting

**SIGNAMAX** Connectivity... Made simple!  
CONNECTIVITY SYSTEMS

- Load default setting
- Firmware Update
- Port Management**
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
- VLAN Setting**
  - Group VLAN Setting
  - Multi to 1 Setting
- Trunk Setting
- QoS Setting

### Group VLAN Setting

Group No	<input type="text" value="01"/>											
Member Port	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"/>
Comment	<input type="text"/>											

There are 12 VLAN groups, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12 can be used

Select a group, and then click the port number which you want to put it into the selected VLAN group

## VLAN Setting: Multi to 1 Setting

**SIGNAMAX** Connectivity... Made simple !  
CONNECTIVITY SYSTEMS

- Load default setting
- Firmware Update
- Port Management**
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
- VLAN Setting**
  - Group VLAN Setting
  - Multi to 1 Setting
- Trunk Setting
- QoS Setting

### Multi to 1 Setting

Destination PortNo:

Current Setting

	01	02	03	04	05	06	07	08	09	10	11	12
Disable 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"/>
	<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. A example for Multi-to-1 structure

This is special designed for easily setting the Switch VLAN into “VLAN Per Port “. After this setting, all ports can only connect to the destination port.

## Trunk Setting: Trunk Configuration

**SIGNAMAX** Connectivity... Made simple !  
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- Load default setting
- Firmware Update
- Port Management**
  - Port Configuration
  - Port Mirroring
  - Bandwidth Control
  - Broadcast Storm Control
- VLAN Setting**
  - Group VLAN Setting
  - Multi to 1 Setting
- Trunk Setting
- QoS Setting

### Trunk Configuration

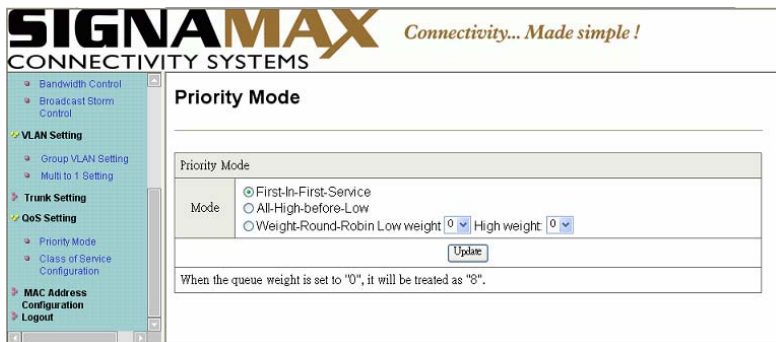
Trunk Hash Algorithm Selection: ☒ Port ID ☐ SA ☐ DA ☐ SA & DA

Trunk0	Port1	Port2	Port3	Port4
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trunk1	Port5	Port6	Port7	Port8
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. Selecting one port for a trunk will treated as a void setting.

Set up Port trunk groups, and click the port number you want to include it into the same group. There are two groups to choose, and the maximum of ports for one group is 4.

## QoS Setting: Priority Mode



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**Priority Mode**

Priority Mode

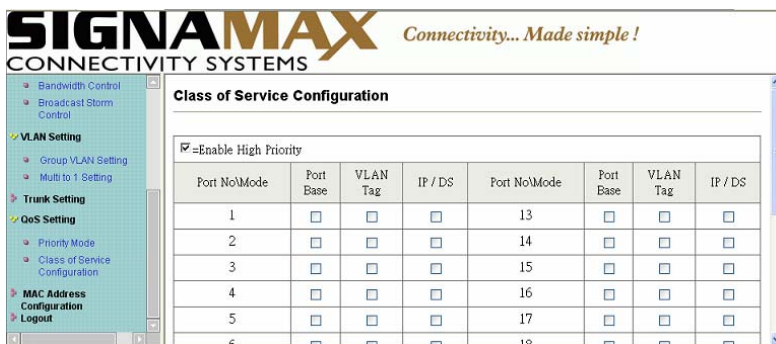
Mode

☒ First-In-First-Serve  
☐ All-High-before-Low  
☐ Weight-Round-Robin Low weight  High weight

When the queue weight is set to "0", it will be treated as "8".

Click the priority mode you want, there are three priority mode for choosing.

## QoS Setting: Class of Service Configuration



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**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"/>	13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select the class of service for each port.

## MAC Address Configuration: MAC Address Configuration

The screenshot shows the Signamax web interface for MAC Address Configuration. The left sidebar contains a navigation menu with the following items: Bandwidth Control, Broadcast Storm Control, VLAN Setting (selected), Trunk Setting, QoS Setting, MAC Address Configuration, and Logout. The main content area is titled "MAC Address Configuration" and contains a table for configuring MAC addresses. The table has two columns: "Port No" and "MAC Address". The first row shows Port No 1 and a MAC Address field with a "Read" button. Below the table is a "Select Port" dropdown menu set to "01", a "Filter" dropdown menu set to "Disable", and an "Update" button. At the bottom, there is a summary table with four columns: "Port No", "Filter Status", "Port No", and "Filter Status". The first row of the summary table shows Port No 1 and Filter Status Disable. The second row shows Port No 13 and Filter Status Disable.

Port No	MAC Address
1	<input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="text" value="ff"/> <input type="button" value="Read"/>

Select Port  Filter

Port No	Filter Status	Port No	Filter Status
1	Disable	13	Disable

Select the port number which you want to enable/disable the Mac address. For Filter function of the port, please click "Update " to take the setting effectively.

Logout: Click to logout

The screenshot shows a "Logout?" confirmation dialog box. It contains two buttons: "Accept" and "Back".

Logout?