

8-Port Gigabit Web Smart Switch  
with 1 Mini-GBIC slot

# **User Manual**

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## **FCC WARNING**

This equipment has been tested and found to comply with the limits for a class A device, pursuant to part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user will be required to correct the interference at the user's own expense.



## **CE**

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.



Take special care to read and understand all the content in the warning boxes.

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## **Unpacking Information**

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Congratulations on purchasing this 8-Port Gigabit Web Smart Switch with 1 Mini-GBIC Combo slot. Before you start, please verify that your package contains the following items:

1. One 8-Port Gigabit Web Smart Switch with 1 SFP slot
2. One power cord
3. Rack-mounting brackets and screws (optional)
4. User Manual CD

## **Introduction**

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### **General Description**

This Switch will instantly boost your networking throughput because it provides you with 8 Gigabit ports that enable true Gigabit connectivity. Users are now able to transfer large and bandwidth-hungry files faster and hence get a real efficiency improvement. This efficiency is further enhanced by the user-friendly Web-based management interface. In addition to the 8 copper ports, the Switch offers 1 fiber port that can be used in the place of the nr. 8 copper port (these are interchangeable or 'combo' ports). This mini-GBIC slot offers the option of a long-distance, fiber-based connection. Use of the mini-GBIC port automatically disables its corresponding copper port.

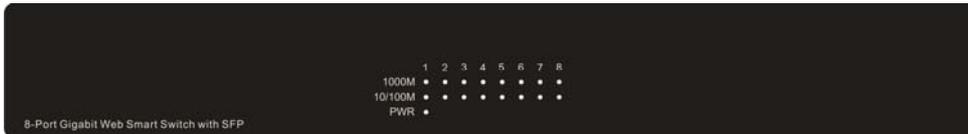
The management functions enable efficient network usage. VLAN reduces the collisions caused by broadcasting. Port Aggregation enlarges the bandwidth of the backbone connection. QoS secures the bandwidth for some bandwidth-hungry applications like VoIP and video conferencing. The Switch also supports 802.3x and backpressure flow control mechanisms to ensure the correctness of data transmission.

## Key Features

- 8 (eight) 10/100/1000Mbps Gigabit Ethernet ports.
- 1 (one) SFP slot for optional fiber connection.
- Auto-discovery Function for easy Network management.
- 8K MAC address entries and 8 groups VLAN table
- Supports Port Mirroring.
- Supports up to 7 ports and 4 groups port aggregation.
- Supports QoS for better communication quality.
- Supports full-duplex flow control and half-duplex backpressure
- Store-and-forward forwarding scheme
- Error packet filtering
- Supports Jumbo frame 9K bytes
- Supports 180K bytes buffer Memory
- Supports Web-based management interface.
- FCC Class A, CE, VCCI. RoHS-compliant

## The Front Panel

The front panel features all the LED indicators:



### Device LED:

LED	Status	Operation
Power (PWR)	Steady Green	The switch is powered on
	Off	The switch is powered off

### Port LEDs:

LED	Status	Operation
1000M	Green	The port is connected at 1000 Mbps
	Blinking Green	A valid link is established, and there is data transmitting/receiving.
	Off	No valid link on this port or the Port is connected at 10/100 Mbps
10/100M	Steady Green	A valid link is established, and there is no data transmitting/receiving.
	Blinking Green	A valid link is established, and there is data transmitting/receiving.
	Off	No valid link on this port or the port is connected at 1000 Mbps

**Attention :** The mini-GBIC (SFP) slot shares its LED indicators with its interchangeable Gigabit RJ-45 (copper) combo port (the last copper port). Use of the mini-GBIC slot automatically disables this corresponding copper port.

### The Rear Panel

The rear panel features all 8 the ports, the 1 SFP slot, the power receptacle and the restore button:



### Port Operation

The auto-negotiation feature allows ports to run in one of the following operation modes:

Media	Speed	Duplex Mode
10/100/1000Mbps(copper)	10Mbps	Full Duplex
		Half Duplex
	100Mbps	Full Duplex
1000Mbps	1000Mbps	Half Duplex
		Full Duplex
1000Mbps(Fiber) (mini GBIC required)	1000Mbps	Full Duplex

**Note:** For the interchangeable (combo) ports (the last RJ-45 ports and the fiber slot), if both the fiber and copper interfaces of the interchangeable pair (combo) are connected (incorrect set-up), the system automatically accepts the fiber interface and disables the copper port.

### Restore Default Button

You can use this button to reset the switch or restore it to its factory default settings. To reset the switch, press the button once. To restore factory default settings, press and hold the button for three seconds.

### Power Receptacle

To be compatible with electricity standards around the world, the Switch is designed

to work with voltages between 100 and 240V AC and 50/60Hz. Please make sure that your region's electricity supply is within this range.

To power on the Switch, please plug the female end of the power cord firmly into the receptacle of the Switch and the other (male) end into an electricity outlet (usually a wall plug). After plugging in the power cord, check if the power LED is lit to indicate normal power status.

## Installation

---

This Switch can be placed on your desktop or mounted in a rack. Installation is very easy. Users can use all the features of the Switch by simply attaching the cables and turning the power on.

Before installing the Switch, we strongly recommend that ...

1. ... the Switch must be placed in an environment that is well ventilated – a minimum space around the unit of 25mm is recommended.
2. ... the Switch and relevant components are far from sources of electrical noise, such as radios, transmitters and broadband amplifiers
3. ... the Switch's environment is protected from high levels of humidity.

### Desktop Installation

1. Install the Switch on a level surface that can support the weight of the unit and the relevant components.
2. Plug the Switch's power cord into the power outlet.

### Rack Installation

Rack mounting enables orderly installation in cases where many networking devices have to be installed in the same area. The Switch is supplied with brackets and screws for rack-mounting purposes.

1. Disconnect all cables from the Switch before mounting it.
2. Place the unit the right way up on a hard, flat surface with the front facing you.
3. Locate a mounting bracket over the mounting holes on one side of the unit.
4. Insert the screws and tighten them with a suitable screwdriver.
5. Repeat this for the other side of the unit.
6. Slide the unit into the rack and secure it with suitable screws.
7. Reconnect all the cables.

### Installing Network Cables

1. **Crossover or straight-through cable:** All the ports on the Switch support Auto-MDI/MDI-X functionality. Both straight-through and crossover cables can

be used to connect the Switch with PCs and other devices like switches, hubs or router.

2. **Category 3,4,5 or 5eUTP/STP cable:** To make a valid connection and obtain optimal performance, it is vital to use the appropriate cables that correspond to the different transmitting/receiving speeds. To choose a suitable cable, please refer to the following table:

Media	Speed	Wiring
10/100/1000Mbps copper	10Mbps	Category 3,4,5 Utp/STP
	100Mbps	Category 5 UTP/STP
	1000Mbps	Category 5,5e UTP/STP
1000Mbps Fiber (Mini-GBIC required)	1000Mbps	The cable type differs according to the mini-GBIC you choose. Please refer to the instructions that came with your mini-GBIC

## **Description of Switch Functions**

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### **Jumbo Frame**

The Switch supports Jumbo Frames, which means that it can transmit the same data in fewer frames. This helps to ensure fewer overheads, shorter processing time, and fewer interruptions.

**NOTE:** To enable Jumbo Frame, Flow Control should be enabled in advance.

### **Flow Control and Backpressure**

Flow Control and Backpressure both help devices with different processing speeds to communicate with each other. This ensures the correctness of data transmissions. The 802.3x Flow Control and Backpressure mechanisms work respectively for full- and half-duplex modes. Flow Control can be enabled or disabled on a per-port basis.

### **Mirror**

The Mirror function enables network administrators to monitor all traffic. By forwarding a copy of the packets that are transferred by the monitored port, the sniffer port receives all the packets and hence is able to monitor the traffic through the specified port.

### **VLAN**

This Switch supports Virtual LAN, which means the network can be segmented into groups to reduce collisions caused by wide broadcasting. The Switch supports both port-based VLAN and 802.1q tag-based VLAN. Port-based VLAN directs incoming packets to VLANs according to their ingress ports. 802.1q-based VLAN adds a tag to the header of the packet to direct the packet to the right VLAN.

### **Trunk (Aggregation)**

The Trunk function groups several ports into one combined transmission channel. This increases the bandwidth, which helps to boost backbone connectivity. The Switch allows a maximum of 4 groups and 8 members for each group.

### **Quality of Service (QoS)**

QoS classifies packets into different precedence classes. The packets are transmitted and received according to their classified priorities. This mechanism helps high-bandwidth demanding applications such as VoIP to get an unobstructed connection.

### **SNMP**

The Switch supports SNMP (Simple Network Management Protocol). It allows the product to be monitored by an SNMP management station.

## Management guide

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### Access the Switch

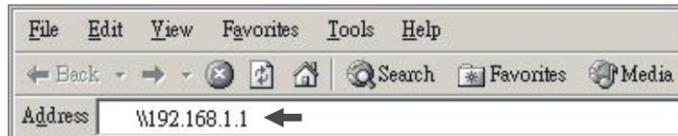
This section shows you how to access and use the Switch's advanced management capability, which can be accessed via Internet Browser over the network (in-band).

To access the Web-based management interface, you should configure the management station with an IP address and subnet mask that is compatible with your switch.

The factory defaults of the Switch:

**IP :** 192.168.1.1  
**Subnet Mask :** 255.255.255.0

1. Run your Web Browser and enter the appropriate IP address in the Address field:



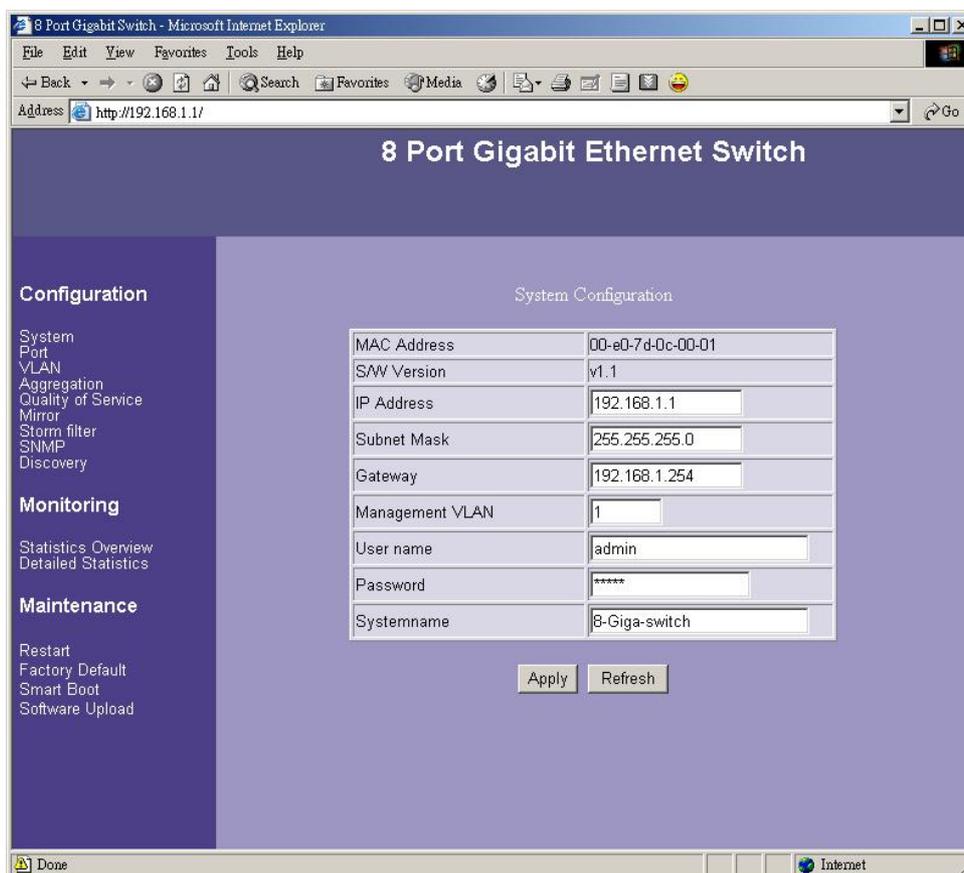
2. Key in the user name and password. The factory default value of User Name and Password is "admin".



### Homepage

After successful log-in, the "SYSTEM Configuration" page appears (this is also the Homepage). You can click on the hyperlinks on the left side of each page to get

access to each management function.



## System

The System window provides the Switch's system information and allows users to configure most of these properties (see table under screenshot for details).

The screenshot shows a 'System Configuration' window with the following fields and values:

Item	Value
MAC Address	00-e0-7d-0c-00-01
S/W Version	v1.1
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.254
Management VLAN	1
User name	admin
Password	*****
Systemname	8-Giga-switch

At the bottom of the window are two buttons: 'Apply' and 'Refresh'.

Items	Functions
MAC Address:	The MAC address of this device..
S/W Version:	The software version of this device.
IP Address:	Set up the IP address of the switch
Subnet Mask:	Set up the Subnet Mask of the switch
Gateway:	Set up the Gateway of the switch
Management VLAN:	The VLAN group that is allowed to access the WEB-based management interface.
User Name:	The Log-in name. (Default: admin)
Password:	The Log-in password. (Default: admin)
System Name:	The name of the device.

To save the configuration of the system, click **“Apply”**.

**Note:**

After applying a new IP address, a new log-in page will appear automatically. Please log in again to proceed to other configurations.

## Port

This **Port Configuration** page shows the link status of each port and allows users to configure speed, flow control and maximum frame size for each port.

Port Configuration

Port	Link	Mode	Flow Control	MaxFrame
1	Down	Auto Speed	<input type="checkbox"/>	1518
2	Down	Auto Speed	<input type="checkbox"/>	1518
3	Down	Auto Speed	<input type="checkbox"/>	1518
4	100FDX	Auto Speed	<input type="checkbox"/>	1518
5	Down	Auto Speed	<input type="checkbox"/>	1518
6	Down	Auto Speed	<input type="checkbox"/>	1518
7	Down	Auto Speed	<input type="checkbox"/>	1518
8	Down	Auto Speed	<input type="checkbox"/>	1518

Items	Functions
Link	Shows the link status of each port. The column lights green and shows the link speed if there is valid connection on the port.
Mode	Select a speed for this port. <b>Auto Speed</b> enables auto-negotiation. <b>Disable</b> stops the port from functioning.
Flow Control	Mark the checkbox to enable the FDX Flow Control, or unmark to disable.
Max Frame length	Adjust the size of Jumbo Frames. The default is 1518 bytes. The Maximum value can be up to 9k bytes.

To save the configuration of the system, click **Apply**. You can also click the **Refresh** button to show the updated statuses of the ports.

## VLAN

VLAN divides the network members into groups to reduce packet collisions and improve the network efficiency. The switch supports 802.1q tag-based VLAN. Please follow the instructions to configure.

- To add new VLAN groups,
  1. Fill in a VLAN ID, from 2 to 4094, in the “**VLAN/Port**” column.
  2. Select the ports for each VLAN group.
  3. Click the “**Apply**” button to execute.
- To delete a VLAN group
  1. Remove the members of the VLAN group by unmarking their marked checkboxes.
  2. Clear the VLAN ID of the VLAN you want to remove in the “**VLAN/Port**” column. (Don't type N/A. Just leave it blank)
  3. Click the “**Apply**” button to execute.

Port Segmentation (VLAN) Configuration

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

PVID setting   Apply   Refresh

**Note:**

1. When a port is configured to a specific VLAN group, a P(ort)V(lan)ID that corresponds to the VLAN ID will be assigned automatically to this port. (Ex, when you make port 3 of a VLAN part of VLAN ID “2”, the PVID “2 ” will be assigned automatically to port 3.)
2. Settings in VLAN, Port Aggregation, and Mirror are co-dependent. Please make sure that the settings won't influence one another.

## PVID

When the VLAN-enabled Switch receives a tagged packet, the packet will be sent to the port's default VLAN according to the PVID (port VLAN ID) of the receiving port.

Items	Functions																				
<b>Port</b>	Port Number 1~8																				
<b>Egress</b>	Select " <b>tagged</b> " in the drop menu to enable the PVID checking and tag inserting of one port, and select " <b>untagged</b> " to cancel. For example, if an Egress-tagged port receives an untagged frame, it will be transmitted as a PVID tagged frame. For the detail tagging status, please refer to the following table. <table border="1" data-bbox="523 790 1227 965"> <thead> <tr> <th colspan="2">Untagged</th> <th colspan="2">Tagged</th> </tr> <tr> <th>Packet Frames In</th> <th>Packet Frames Out</th> <th>Packet Frames In</th> <th>Packet Frames Out</th> </tr> </thead> <tbody> <tr> <td>Untagged</td> <td>Untagged</td> <td>Untagged</td> <td>Tagged (PVID)</td> </tr> <tr> <td>Tagged</td> <td>Untagged</td> <td>Tagged (VID)</td> <td>Tagged (VID)</td> </tr> <tr> <td>Pri-tagged</td> <td>Untagged</td> <td>Pri-tagged</td> <td>Tagged (PVID)</td> </tr> </tbody> </table>	Untagged		Tagged		Packet Frames In	Packet Frames Out	Packet Frames In	Packet Frames Out	Untagged	Untagged	Untagged	Tagged (PVID)	Tagged	Untagged	Tagged (VID)	Tagged (VID)	Pri-tagged	Untagged	Pri-tagged	Tagged (PVID)
Untagged		Tagged																			
Packet Frames In	Packet Frames Out	Packet Frames In	Packet Frames Out																		
Untagged	Untagged	Untagged	Tagged (PVID)																		
Tagged	Untagged	Tagged (VID)	Tagged (VID)																		
Pri-tagged	Untagged	Pri-tagged	Tagged (PVID)																		
<b>PVID</b>	Port VLAN ID(1~4094)																				
<b>Only tagged</b>	<b>Enable:</b> block all untagged packets from accessing this port. <b>Disable:</b> All packets are allowed to access this port.																				

PVID Configuration

Port	Egress	PVID	Only tagged
1	Untagged ▼	1	Disable ▼
2	Untagged ▼	1	Disable ▼
3	Untagged ▼	1	Disable ▼
4	Untagged ▼	1	Disable ▼
5	Untagged ▼	1	Disable ▼
6	Untagged ▼	1	Disable ▼
7	Untagged ▼	1	Disable ▼
8	Untagged ▼	1	Disable ▼

## Aggregation/ Trunk Configuration

To set up the port trunk groups, put the selected ports' numbers into the same Aggregation group. You can choose up to eight groups. Don't forget to click "Apply" to save the settings.

There are three aggregation modes for you to set up, SMAC, DMAC, and XOR. SMAC mode selects the path of packets according to Source MAC while DMAC mode selects path according to Destination MAC. XOR mode calculates the result of the DMAC and SMAC modes to decide the path of the packets.

Aggregation/Trunking Configuration

Mode	xor							
Group\Port	1	2	3	4	5	6	7	8
Normal	<input checked="" type="radio"/>							
Group 1	<input type="radio"/>							
Group 2	<input type="radio"/>							
Group 3	<input type="radio"/>							
Group 4	<input type="radio"/>							

## Quality of Service

QoS enhances communication quality by giving precedence to certain classes of packets. This switch provides port-based, tag-based and DSCP QoS modes:

The image shows a web-based configuration interface titled "QoS Configuration". It features a table with two columns: "Port" and "Mode". The "Port" column lists ports 1 through 8. The "Mode" column contains a dropdown menu for each port, all of which are currently set to "Port". Below the table are three buttons: "Port priority", "Tag priority", and "DSCP priority". At the bottom of the interface are two buttons: "Apply" and "Refresh".

Port	Mode
1	Port
2	Port
3	Port
4	Port
5	Port
6	Port
7	Port
8	Port

Port priority    Tag priority    DSCP priority

Apply    Refresh

### Port-based mode QoS:

Port-based QoS allows users to configure each port as having a high or low priority. To assign a priority level to each port:

1. Select "**Port**" in the "**Mode**" column for those ports that are going to function as part of port-based QoS. Click the "**Apply**" button.
2. Click the "**Port priority**" button. The "**Port Priority Setting**" appears.
3. Click on the drop menu to specify priority levels.
4. Click "**Apply**" to execute.

Port priority setting

1	low
2	low
3	low
4	low
5	low
6	low
7	low
8	low

### Tag-based QoS:

Tag-based QoS assigns packet priority according to the tags on the packets.

To configure Tag-based QoS:

1. Select **"Tagged"** in the **"Mode"** column for those ports that are going to perform tag-based QoS. Click the **"Apply"** button.
2. Click the **"Tag priority"** button. The **"Tag Priority Setting"** page shows up.
3. Select the port that you are going to configure from the drop menu.
4. Set the priorities as high or low for each Priority Tag type.
5. Click the **"Apply"** button again to execute your configuration.

Tag priority setting

Port	Bit 0	Bit 1	Bit 2	Priority
All	0	0	0	low
	0	0	1	low
	0	1	0	low
	0	1	1	low
	1	0	0	low
	1	0	1	low
	1	1	0	low
	1	1	1	low

**DSCP-mode QoS:**

DSCP-mode QoS assigns packet priority according to the types of the incoming packets. It distinguishes packets according to the “Delay”, “Throughput” and “Reliability” information attached to the packet. The types are listed as the following:

Bit 0 (Delay)	Bit 1 (Throughput)	Bit 3 (Reliability)
0 (Normal)	0 (Normal)	0 (Normal)
1 (Low)	1 (High)	1 (High)

**Note:** The Switch distinguishes packets with DSCP precedence “000(routine)” only.

To configure DSCP-based QoS configuration:

1. Select “**DSCP**” in the “**Mode**” column for those ports that are going to perform DSCP-based QoS. Click the “**Apply**” button.
2. Click the “**DSCP priority**” button. The “**DSCP Priority Setting**” page shows up.
3. Set the priorities as high or low for each precedence type.
4. Click the “**Apply**” button again to execute your configuration.

DSCP priority setting

Bit 0	Bit 1	Bit 2	Priority
0	0	0	low
0	0	1	low
0	1	0	low
0	1	1	low
1	0	0	low
1	0	1	low
1	1	0	low
1	1	1	low

## Mirror

The **Mirror** function copies all the packets that are transmitted by the source port to the destination port. It allows administrators to analyze and monitor the traffic of the monitored ports.

### Mirror Configuration:

1. Select those ports that are going to be monitored by marking the checkboxes in the “**Monitor Port**” column.
2. Click the drop menu in the “**Sniffer Port**” column. Select a port as the administration port for monitoring those source ports.
3. Click “**Apply**” to activate.

Mirror Configuration

**Sniffer port**

port1 ▼

**Monitor port**

<input type="checkbox"/> port1	<input type="checkbox"/> port2	<input type="checkbox"/> port3	<input type="checkbox"/> port4
<input type="checkbox"/> port5	<input type="checkbox"/> port6	<input type="checkbox"/> port7	<input type="checkbox"/> port8

Apply Refresh

## Storm Filter

This “**storm filter**” page allows users to configure the rules for Storm Control, which limits the flow of broadcast and multicast

To perform storm control:

1. Click on each drop menu to specify a speed for each frame type.
2. Click the “**Apply**” button to execute your configuration.



Storm filter Configuration

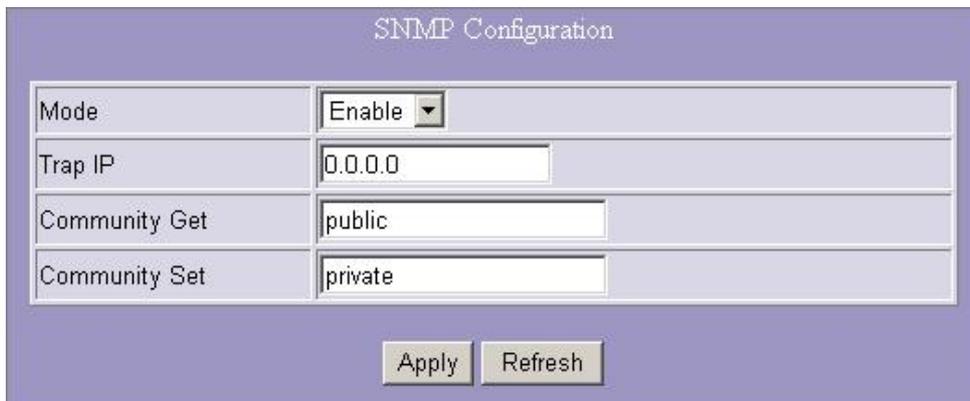
Storm Control Number of frames per second	
Broadcast Rate	No Limit ▼
Multicast Rate	No Limit ▼

Apply Refresh

## SNMP

This device supports SNMP-management, which allows network administrators to monitor and configure this device with SNMP software. To allow this device to be managed via SNMP:

1. Select “**enable**” in the drop menu.
2. Specify a trap IP. A trap IP is the destination port for sending trap information, which is usually the IP address of network administrators.
3. Fill in a name in the “**Community Get**” column, which is the password for accessing MIB with read-only authority.
4. Fill in a name in the “**Community Set**” column, which is the password for accessing MIB with read-and-write authority.



The image shows a web-based configuration form titled "SNMP Configuration". It contains four rows of input fields:

SNMP Configuration	
Mode	Enable ▾
Trap IP	0.0.0.0
Community Get	public
Community Set	private

At the bottom of the form are two buttons: "Apply" and "Refresh".

## Discovery

After installing a series of our switches, the discovery management tool helps users to search and get access to those switches within the LAN.

**Note: The discovery tool lists a maximum of 16 devices respectively for auto and manual modes.**

### Auto Search

1. Click the "Apply" button to start.
2. The devices being found are listed below.
3. Click the IP address hyperlink to get access to the device.



Discovery

Auto Search

---

Manual Add

IP Address:  Name:

### Manual Add

#### Add

1. Enter the IP address & name in the text box
2. Click "Add" to add the new IP address on the table

#### Delete

1. Click the check box of the one you want to remove
2. Click "Delete" to remove.

## Statistics Overview

The Statistics Overview is provided for users to see the general transmitting and receiving status of each port. You may click the **“Clear”** button to clean all statistics or click the **“Refresh”** button to renew the statistics.

Statistics Overview for all ports						
<input type="button" value="Clear"/> <input type="button" value="Refresh"/>						
Port	Tx Bytes	Tx Frames	Rx Bytes	Rx Frames	Tx Errors	Rx Errors
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	173832	367	804824	6988	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0

## Detailed Statistics

The Detailed Statistics is provided for users to see the detailed transmitting and receiving status of each port. Please click the hyperlinks above to select a port. You may also click the **“Clear”** button to clean all statistics or click the **“Refresh”** button to renew the statistics.

Statistics for Port 1					
<input type="button" value="Clear"/> <input type="button" value="Refresh"/>		<a href="#">Port 1</a> <a href="#">Port 2</a> <a href="#">Port 3</a> <a href="#">Port 4</a> <a href="#">Port 5</a> <a href="#">Port 6</a> <a href="#">Port 7</a> <a href="#">Port 8</a>			
Receive Total			Transmit Total		
Rx Packets		0	Tx Packets		0
Rx Octets		0	Tx Octets		0
Rx Broad- and Multicast		0	Tx Broad- and Multicast		0
Rx Error Packets		0	Tx Error Packets		0

## Restart

### Restart:

To restart the system, click the “**Yes**” button. The system restarts and shows the authentication window. Please fill in the username and password to continue.



Restart

Are you sure you want to perform a Restart?

## Factory Default

### Restore Factory Default:

To restore the factory default settings, click the **Yes** button.

**Note:** The IP address of the device will also be reconfigured to the factory default setting, which is 192.168.0.254.



Factory Default

Are you sure you want to perform a Factory Default?

## Smart Boot

This Smart Boot page allows users to select the booting flash of the device.

”**Active image number**” shows the current flash for booting the device. To change the booting flash, click on the appropriate flash in the “**Boot image number**” column and click the “**Apply**” button to execute.



Booting flash Configuration

Active image number:	Version 1.1
Boot image number:	<input checked="" type="radio"/> Auto detect <input type="radio"/> Version 1.1 <input type="radio"/> Version 1.1

## Software Upload

This “Software Upload” page allows users to upgrade firmware for this Switch.

To perform firmware upgrade:

1. Click the **“Browse”** button
2. Locate the firmware file
3. Click the **“Upload”** button to execute.

**Note:** This new firmware is going to be applied on the remaining flash that you have NOT selected in **“Smart Boot”**, that is, the new firmware is going to be applied on the flash that is **NOT** chosen as the booting flash. Please ensure that you boot this device with the correct flash before performing a firmware upgrade.



The image shows a dialog box titled "Software Upload" with a purple background. It contains a text input field, a "Browse..." button to its right, and an "Upload" button centered below the input field.

## Product Specifications

<b>Standard</b>	IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX IEEE802.3x full-duplex operation and flow control IEEE802.3ab/z 1000BASE-T IEEE802.1Q VLAN interoperability IEEE802.1p Priority Operation
<b>Interface</b>	8* 10/100/1000Mbps auto MDI/MDI-X RJ-45 switching ports 1* SFP( mini-GBIC) port 1 * Restore Default Button
<b>Cable Connections</b>	RJ-45 (10BASE-T): Category 3,4,5 UTP/STP RJ-45 (100BASE-TX): Category 5 UTP/STP RJ-45 (1000BASE-T): Category 5,5e or enhanced UTP/STP Fiber: depends on Mini-GBIC types
<b>Network Data Rate</b>	10/100/1000Mbps Auto-negotiation
<b>Transmission Mode</b>	10/100Mbps Full-duplex, Half-duplex 1000Mbps Full-duplex
<b>LED indications</b>	System: Power RJ-45 Port 1000M, 10/100M
<b>Memory</b>	8K MAC entries 180K Buffer Memory 9K Byte Jumbo Frame
<b>Emission</b>	FCC Class A, CE, VCCI, RoHS
<b>Operating Temperature</b>	0 <sup>o</sup> ~ 40 <sup>o</sup> C (32 <sup>o</sup> ~ 104 <sup>o</sup> F)
<b>Operating Humidity</b>	10% - 90% (non-condensing)
<b>Power Supply</b>	Internal power supply 100-240V/ 50-60Hz universal input