



Longshine Technologie Europe GmbH

LCS-GS8208-A

**8-Port Gigabit Switch
Webmanaged**

www.longshine.de

FCC Certifications



This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 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 radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

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 his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE Mark Warning



This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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Unpacking Information

Thank you for purchasing the 8-port Gigabit Ethernet Web Smart Switch. Before you start, please verify that your package contains the following items:

1. One 8-port Gigabit Ethernet Web Smart Switch
2. One power cord
3. One RS-232 Cable (optional)
4. Rack-mount brackets and screws (optional)
5. User's Manual

Introduction

General Description

Easily boosting your networking throughput, the Gigabit Web smart switch provides you 8* 10/100/1000Mbps Gigabit ports that lead you to a real Gigabit connection. Users are now able to transfer high bandwidth-demanded files faster and hence get a real efficiency improvement with the user-friendly Web-based management interface.

The management functionalities provide efficient network usage. VLAN reduces the collisions in network. Port Aggregation enlarges the bandwidth of backbone connection. QoS is supported to secure the bandwidth for some bandwidth-demanded services including VoIP or videoconference. Flow control also contributes for ensuring the correctness of data transmitting. The 802.3x and backpressure flow control mechanisms work respectively for full and half duplex modes.

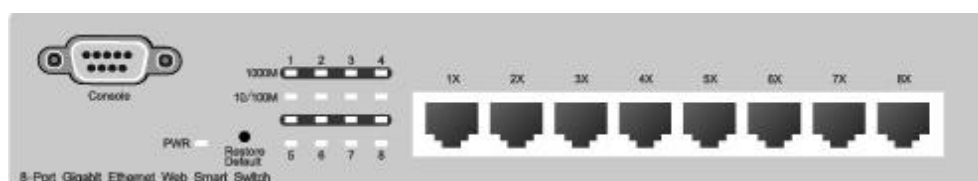
Sufficient compatibility enhances easy installation and maintenance. The switch supports Nway auto-negotiation protocol, which detects the networking speed (either 10/100/1000 Mbps) and the duplex modes (Full or Half duplex mode) automatically and do an immediately adjustment to advance the capability. Auto-MDI/MDI-X function alleviates the effort to use crossover cables. Users need not to prepare crossover cables for equipment connectivity. Also, rich diagnostic LEDs are provided for users to get real-time information of the connection status that helps to do quick response and correction.

Key Features

- 8* fixed 10/100/1000Mbps Gigabit Ethernet ports for easy network connecting application.
- Provide Auto-discovery Function for easy Network management.
- Provide 8K MAC address entries and 8 groups VLAN table
- Support up to 7 ports and 4 groups port aggregation.
- Support QoS for better communication quality.
- Support full duplex flow control and half duplex back pressure
- Store-and-forward forwarding scheme
- Error packet filtering
- Support Jumbo frame 9K bytes
- Supports 144K buffer Memory
- Support Web-based management interface.
- 100-240Vac/ 50-60Hz universal input
- FCC Class A, CE

The Front Panel

The front panel consists of LED indicators, a restore default button and 8* 10/100/1000 Mbps RJ-45 ports.



Port Operation

There are 8 * 10/100/1000Mbps RJ-45 (copper) ports on the front panel. The auto-negotiation feature of the switch allows each port on the device running with one of the following operation modes:

Speed	Duplex Mode
10Mbps	Full Duplex
	Half Duplex
100Mbps	Full Duplex
	Half Duplex
1000Mbps	Full Duplex

LED Definition

LED for the device:

The switch provides a power LED for the device.

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

LED for each port:

The switch provides one "1000M" LED and one "10/100M" LED for each port.

1000M LED: Shows the current transmitting/receiving speed of the port.

10/100M LED: Shows the link status and the activities on the port.

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

Restore Default Button

You can use this button to reset the switch or restore factory default settings.

To reset the switch, press the button once.

To restore factory default settings, press and hold the button for three seconds.

The Rear Panel

The rear panel of the switch:



Power Receptacle

To be compatible with the electric service standards around the world, the switch is designed to afford the power supply in the range from 100 to 240VAC, 50/60Hz. Please make sure that your outlet standard to be 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 end into an electric service outlet. After the power cord installation, please check if the power LED is lit for a normal power status.

Installation

This switch can be placed on your desktop directly, or mounted in a rack. Please refer to the instructions for installation.

Before installing the switch, we recommend:

1. The switch is placed with appropriate ventilation environment. A minimum 25mm space around the unit is recommended.
2. The switch and the relevant components are away from sources of electrical noise such as radios, transmitters and broadband amplifiers
3. The switch is away from environments beyond recommend moisture

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 with the female end of the provided power cord and plug the male end to the power outlet.

Rack-mount Installation

The switch may be standalone, or mounted in a rack. Rack mounting facilitate to an orderly installation when you are going to install series of networking devices.

Procedures to Rack-mount the Switch:

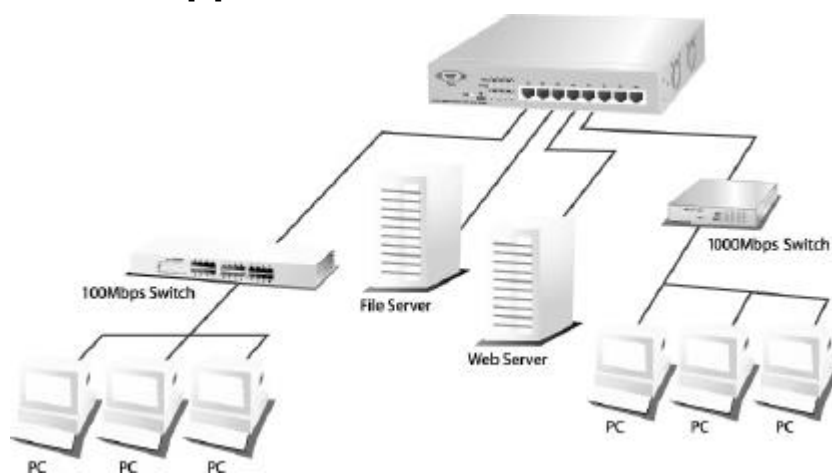
1. Disconnect all the cables from the switch before continuing.
2. Place the unit the right way up on a hard, flat surface with the front facing you.
3. Locate a mounting bracket over the mounting holes on one side of the unit.
4. Insert the screws and fully tighten with a suitable screwdriver.
5. Repeat the two previous steps for the other side of the unit.
6. Insert the unit into the rack and secure with suitable screws (optional).
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 or crossover cables can be used as the media to connect the switch with PCs as well as other devices like switches, hubs or router.
2. **Category 3,4,5 or 5eUTP/STP cable:** To make a valid connection and obtain the optimal performance. An appropriate cable that corresponds to different transmitting/receiving speed is required. 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

Network Application



Functional Description

Jumbo Frame

With Jumbo Frame supported, it is allowed for the switch to transport identical data in fewer frames. Hence helps to ensure fewer overheads, shorten processing time, and reduce interrupts.

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

Flow Control and Back Pressure

Flow control and Back Pressure both contributes for lower and higher speed devices to communicate to each other hence ensures the correctness of data transmitting. The 802.3x flow control and Back Pressure 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 provides network administrator to monitor the traffic. By forwarding a copy of the packets that transferred by the source port, the monitoring port received all the packets and hence is able to monitor the traffic of this specific port.

VLAN

With VLAN supported, the network can be segmented in groups to reduce the collisions from widely broadcasting. The device supports 802.1Q tag based VLAN, which add tags to the header of the packet to classify their VLANs.

Trunk (Aggregation)

The Trunk functionality integrates several ports to enlarge the bandwidth that helps to boost the backbone connectivity.

Quality of Service (QoS)

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

SNMP

This device is SNMP(Simple Network Management Protocol)-management supported. This allows this product to be monitored or inspected by a SNMP management station.

Management guide

Access the Switch

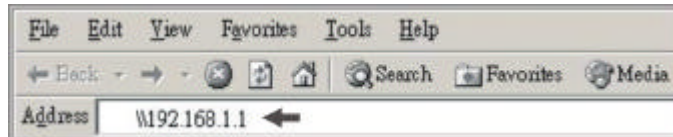
This section instructs you how to enter and proceed the advanced management capability, which can be accessed by Telnet session / Internet Browser over the network (in-band).

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

The factory default value of the switch:

IP:	192.168.1.1
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.1.254

1. Running your Web Browser and enter the IP address "192.168.1.1" in the Address field.

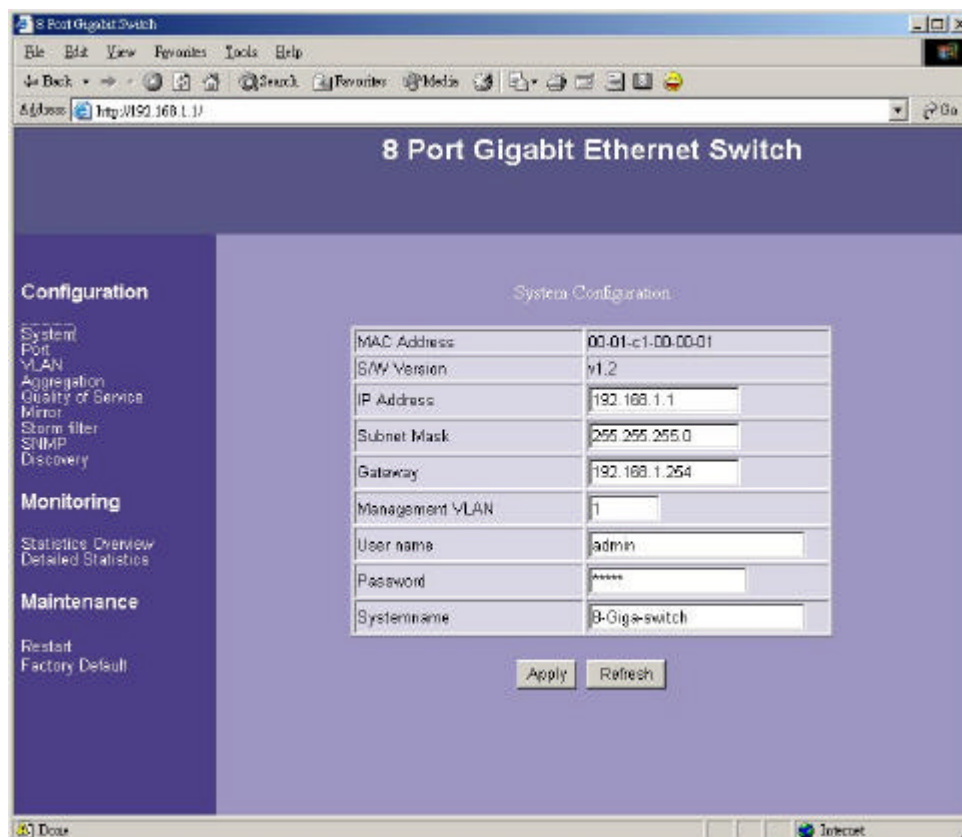


2. Key in the user name and password to pass the authentication. The factory default value of User Name and Password is "admin".



Homepage

After authentication procedure, the “**SYSTEM Configuration**” page shows up as the Homepage. You may click the hyperlinks on the left side of each page to get access to each management functions.



System

The System window provides the switch information and allows users to configure the switch properties.

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

Field	Value
MAC Address	00-01-c1-00-00-01
S/W Version	v1.2
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	B-Giga-switch

Buttons: Apply, Refresh

Items	Functions
MAC Address	The MAC address of this device..
S/W Version	The software version of this device.
IP Address	Setup the IP address of the switch
Subnet Mask	Setup the Subnet Mask of the switch
Gateway	Setup the Gateway of the switch
Management VLAN	The VLAN ID of one specific VLAN group that is allowed to manage this switch via WEB-based management interface. Please fill the VLAN id of the VLAN that is authorized to manage this switch.
User Name	The Login name. (Default: admin)
Password	The Login password. (Default: admin)
System Name	The name of the device.

To save the configuration of the system, click "**Apply**" to save

Note:

After applying your configuration, a new login page will be started automatically. Please login again to proceed other configurations.

Port

This **Port Configuration** page shows the link status of each port and allows users to configure speed, flow control and Max 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 with the link speed while there is valid connection on this port.
Mode	Select a speed for this port. "Auto Speed" enables auto-negotiation. "Disable" stop the port from functioning.
Flow Control	Mark the checkbox to enable the FDX Flow control, or unmark to disable.
Max Frame length	To adjust the size of Jumbo Frame. The length is 1518 bytes. The Maximum value can be up to 9600 bytes.

To save the configuration of the system, click **"Apply"** to save. You can also click the **"Refresh"** button to see the latest status of each port.

VLAN

VLAN divides the network members into groups to reduce packets 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 groups.
 3. Click the “**Apply**” button to execute.
- To delete a VLAN group
 1. Clear the members of this VLAN group by clicking those 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"/>	<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"/>
NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NA	<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 setting Apply Refresh

Note:

1. When a port is configured to a specific VLAN group, a PVID that corresponding to the VLAN id will be assigned automatically to this port. (Ex, when you make port 3 of a VLAN with VLAN id “2”, the PVID “ 2 ” will be assigned automatically to port 3)
2. Settings in VLAN, Port aggregation, and Mirror are correlative. Please make sure that the setting won't influence each other.

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																				
Port	Port Number 1 ~ 8																				
Egress	<p>Select "tagged" in the drop list to enable the PVID checking and tag inserting of one port, and select "untagged" to cancel.</p> <p>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.</p> <table border="1" data-bbox="518 891 1225 1077"> <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)																		
PVID	Port VLAN ID(1~4094)																				
Only tagged	<p>Enable: block all un-tagged packets from accessing this port.</p> <p>Disable: All packets are allowed to access this port.</p>																				

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 ports number into the same Aggregation group. There are eight groups to choose. Don't forget to click the "Apply" to save the setting.

There three aggregation modes for you to setup, SMAC (Source MAC), DMAC (Destination MAC), and XOR.

Aggregation/Trunking Configuration

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

Apply Refresh

Quality of Service

QoS enhances the communication quality by giving different precedence to classified packets. This switch provides port-based, tag-based and DSCP QoS modes:

The screenshot shows a web interface titled "QoS Configuration". It features a table with two columns: "Port" and "Mode". The "Port" column contains numbers 1 through 8. The "Mode" column contains a dropdown menu with "Port" selected. Below the table are three buttons: "Port priority", "Tag priority", and "DSCP priority". At the bottom 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:

The port-based QoS allows users to configure certain ports as high or low priority. To give priority level for each port:

1. Select **"Port"** in the **"Mode"** column for those ports that are going to perform port-based QoS. Click the **"Apply"** button.
2. Click the **"Port priority"** button. The **"Port Priority Setting"** page shows up.
3. Click on the drop list 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

Apply Refresh

Tag based QoS:

The Tag based QoS decides packet priority according to the tags that adding on the packets.

To configure Tag Based QoS configuration:

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 list.
4. Give the priorities as high or low for each Priority Tag types.
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

Apply Refresh

DSCP mode QoS:

The DSCP mode QoS gives packet priority by the DSCP information attaching on the incoming packets.

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. Give the priorities as high or low for each DSCP information types.
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

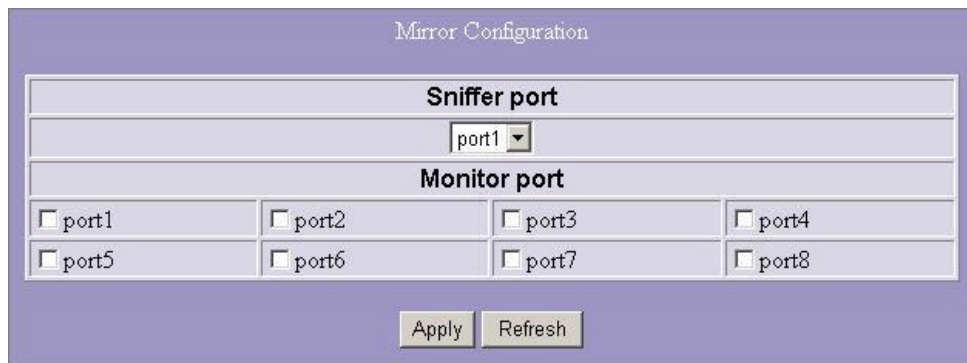
Apply Refresh

Mirror

The **Mirror** function copies all the packets that are transmitted by the source port. Those copied packets will be delivered to the destination port. It allows administrators to analyze the traffic of those ports that are monitored.

Mirror Configuration:

1. Select those ports that are going to be monitored by marking the checkboxes in "**Monitor Port**" column.
2. Click the drop list in "**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

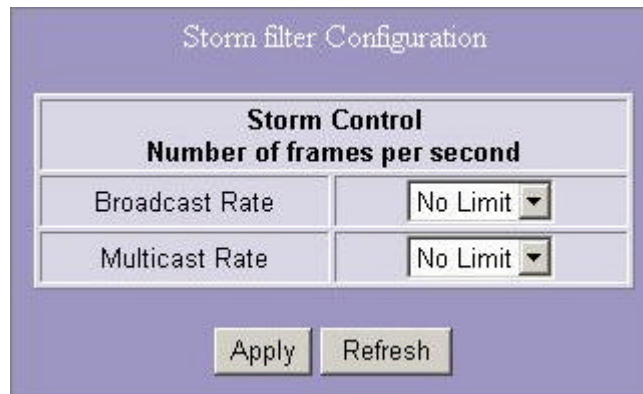
Apply Refresh

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



The screenshot shows a configuration window titled "Storm filter Configuration". Inside, there is a section titled "Storm Control" with the subtitle "Number of frames per second". Below this, there are two rows of controls: "Broadcast Rate" and "Multicast Rate". Each row has a text input field followed by a dropdown menu. Both dropdown menus are currently set to "No Limit". At the bottom of the configuration area, there are two buttons: "Apply" and "Refresh".

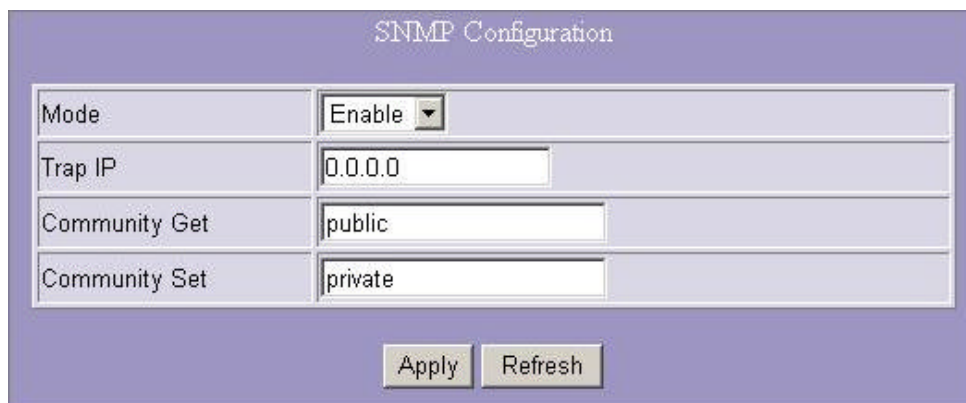
Storm Control Number of frames per second	
Broadcast Rate	No Limit ▼
Multicast Rate	No Limit ▼

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 list.
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 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 the Maximum 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

Clear 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	179892	967	904229	6088	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

Clear Refresh

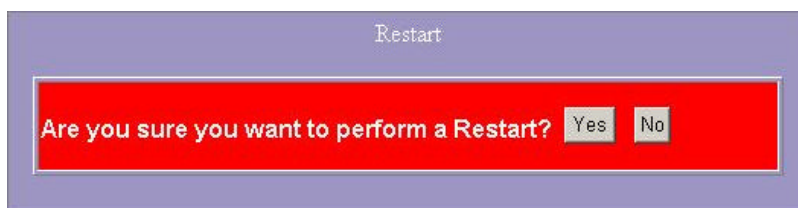
Port 1 Port 2 Port 3 Port 4 Port 5 Port 6 Port 7 Port 8

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.



Factory Default

Restore Factory Default:

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

Note: The IP address of the device will also be configured as factory-default setting, which is 192.168.1.1.



Product Specifications

Standard	IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX IEEE802.3x full-duplex operation and flow control IEEE802.3ab 1000BASE-T IEEE802.1Q VLAN interoperability IEEE802.1p Priority Operation
Interface	8 * 10/100/1000Mbps auto MDI/MDI-X RJ-45 switching ports 1 * Restore Default Button 1 * Console Port
Cable Connections	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
Network Data Rate	10/100/1000Mbps Auto-negotiation
Transmission Mode	10/100Mbps Full-duplex, Half-duplex 1000Mbps Full-duplex
LED indications	System Power RJ-45 Port 1000M, 10/100M
Memory	8K MAC entries 144K Buffer Memory 9K Byte Jumbo Frame
Emission	FCC Class A, CE
Operating Temperature	0° ~ 40°C (32° ~ 104°F)
Operating Humidity	10% - 90%
Power Supply	Internal power supply 3.3V 4A 100-240V/ 50-60Hz universal input

Appendix- Command Line Interface

Start-up and Terminal configuration

To start-up the command line interface, please connect a PC COM port to the RS-232 connector and activate a terminal emulation software (e.g. HyperTerminal of Windows.)

The terminal emulation software should be started as the following configuration:

1. Data rate: 115200 baud
2. Data format: 8 data bits, 1 stop bit and no parity
3. Flow control: none.
4. Click the property icon, select settings, make sure that:
5. "The Function, arrow, and ctrl keys act as": Terminal keys
"Emulation": VT100

Login/Logout Procedures

To get access to the CLI, you will have to get the username and password for login. The default username and password are admin/admin.

Note: We recommend users to configure a new username/password to prevent unauthorized users from accessing to the device.

```
Username: admin
Password: *****
```

Command Hierarchy

After logging in, press ? + <enter> to show the 9 command groups.

System	- System commands
Console	- Console commands
Port	- Port commands
VLAN	- VLAN commands
Aggr	- Aggregation commands
QoS	- QoS commands
Mirror	- Mirror commands
IP	- IP commands
SNMP	- SNMP commands

Press ? or help to get help. The help depends on the context:

- At top level, a list of command groups will be shown.
- At group level, a list of the command syntaxes will be shown.
- If given after a command, the syntax and a description of the command will be shown.

Entering Commands

To give any command, please key in your command and press enter.

EX,

1. Type "system" and press <enter> to get access to the system command group.
2. Type "Configuration" and press <enter> to perform "configuration"

```
System Configuration:
Systemname: 8-Giga-switch
Username: admin
Password: admin
S/W Version: v1.2
Username: admin
MAC address: 00-e0-7d-00-00-1a
```

You can type "up" and press <enter> to go back to upper level.

Command Description

The following session introduces the command structure of the command line interface.

Command groups:

System	- System commands
Console	- Console commands
Port	- Port commands
VLAN	- VLAN commands
Aggr	- Aggregation commands
QoS	- QoS commands
Mirror	- Mirror commands
IP	- IP commands
SNMP	- SNMP commands
Storm Control	- Storm Control commands
Exit	- Logout

System Commands

Commands at System level:

System Configuration [all]
System Restore Default [keepIP]
System UserName [<name>]
System Password [<password>]
System Systemname [<systemname>]
System Reboot

System Configuration [all]

Syntax:

System Configuration [all]

Description:

Show system name, software version and management MAC address. Optionally show the full configuration

[all]: Show the total switch configuration (default: System configuration only)

System Restore Default [keepIP]

Syntax:

System Restore Default [keepIP]

Description:

Restore factory default configuration.

[keepIP]: Preserve IP configuration (default: Not preserved).

UserName [<name>]

Description:

Set or show the user name.

[<name>]: String of up to 16 characters (default: Show user name).

System Password [<password>]

Description:

Set or show the password. The empty string ("") disables the password check.

[<password>]: Password string of up to 16 characters.

System Systemname [<systemname>]

Description:

Set or show the system name.

[<name>]: String of up to 16 characters (default: Show system name).

System Reboot

Description:

Reboot the switch.

Console Commands

Commands at Console level:

Console Configuration

Console Timeout [<timeout>]

Console Prompt [<prompt string>]

Console Configuration

Description:

Show configured console prompt and timeout

Console Timeout [<timeout>]

Description:

Set or show the console inactivity timeout in seconds. The value zero disables timeout.

[<timeout>]: Timeout value in seconds, 0,60-10000.

Console Prompt [<prompt_string>]

Description:

Set or show the console prompt string.

[<prompt_string>]: Command prompt string of up to 10 characters.

Port Commands

Commands at Port level:

Port Configuration [<portlist>]

Port Mode [<portlist>] [<mode>]

Port Flow Control [<portlist>] [enable|disable]

Port Admin [<portlist>] [enable|disable]

Port MaxFrame [<portlist>] [<framesize>|reset]

Port Statistics [<portlist>] [clear]

#Note: If you want to change maxframe bigger than 1518.

The [Flow Control] should be enabled!

Port Configuration [<portlist>]

Description:

Show the configured and current speed, duplex mode, flow control mode and admin for the port.

[<portlist>]: Port list (Default: All ports).

Port Mode [<portlist>] [<mode>]

Description:

Set or show the speed and duplex mode for the port.

[<portlist>]: Port list (Default: All ports).

[<mode>]: Port speed and duplex mode

(Default: Show configured and current mode).

10hdx : 10 Mbit/s, half duplex.

10fdx : 10 Mbit/s, full duplex.

100hdx : 100 Mbit/s, half duplex.

100fdx : 100 Mbit/s, full duplex.

1000fdx: 1 Gbit/s, full duplex.

auto : Auto negotiation of speed and duplex.

Port Flow Control [<portlist>] [enable|disable]

Description:

Set or show flow control mode for the port.

[<portlist>] : Port list (default: All ports).

[enable|disable]: Enable/disable flow control (default: Show flow control mode).

Port Admin [<portlist>] [enable|disable]

Description:

Set or show the Admin for the port.

[<portlist>] : Port list (default: All ports).

[enable|disable]: Enable or disable port administration (default: Show admin).

Port MaxFrame [<portlist>] [<framesize>|reset]

Description:

Set or show the maximum frame size in bytes (including FCS) for frames received on the port. Tagged frames are allowed to be 4 bytes longer than the

maximum frame size. Use the reset option to return to default setting.

[<portlist>] : Port list (default: All ports).

[<framesize>|reset] : Maximum frame size [1518-9216] or reset to 1518 bytes(default: Show maximum frame size).

Port Statistics [<portlist>] [clear]

Description:

Show or clear statistics for the port.

[<portlist>]: Port list (default: All ports).

[clear] : Clear port statistics (default: Show statistics).

VLAN Commands

Commands at VLAN level:

VLAN Configuration [<portlist>]

VLAN Add <vidlist> [<portlist>]

VLAN Delete <vidlist>

VLAN Lookup

VLAN Egress [<portlist>] [untagged|tagged]

VLAN PVID [<portlist>] [<vid>|none]

VLAN Onlytag [<portlist>] [enable|disable]

VLAN Configuration [<portlist>]

Description:

Show the VLAN egress mode, port VLAN ID and accepted frame type for the port and the permanently stored VLAN table.

[<portlist>]: Port list (default: All ports).

VLAN Add <vidlist> [<portlist>]

Description:

Add VLAN entry and include ports in member set.

<vidlist> : VLAN ID list.

[<portlist>]: Port list (default: All ports).

VLAN Delete <vidlist>

Description:

Delete VLAN entry (all ports excluded from member set).

<vidlist> : VLAN ID list.

VLAN Lookup

Description:

Lookup VLAN entry and show port list.

<vidlist> : VLAN ID list.

VLAN Egress [<portlist>] [untagged|tagged]

Description:

Set or show the VLAN egress mode setting for the port. Egress untagged ports will strip the VLAN tag from received frames. Egress tagged ports will not strip the tag from received frames

[<portlist>]: Port list (default: All ports).

[tagged|untagged]: (default: Show egress tag setting).

VLAN PVID [<portlist>] [<vid>|none]

Description:

Set or show the port VLAN ID. Untagged frames received on the port will be classified to this VLAN ID. Frames classified to this VLAN ID will be sent untagged on the port.

[<portlist>]: Port list (default: All ports).

[<vid>|none]: Port VLAN ID, 1-4094 (default: Show PVID).

The 'none' option can be used for trunk links.

VLAN Onlytag [<portlist>] [enable|disable]

Description:

Set or show the onlytag setting of this port.

[<portlist>]: Port list (default: All ports).

[enable|disable]: Only accept tagged frame or not (default: Show onlytag).

Aggregation Commands

Commands at Aggr level:
Aggr Configuration
Aggr Add <portlist>
Aggr Delete <portlist>
Aggr Lookup <portlist>
Aggr Mode [smac|dmac|xor]

Aggr Configuration

Description:

Shows the aggregation groups and the aggregation mode.

Aggr Delete <portlist>

Description:

Delete link aggregation group.

<portlist>: Port list. Aggregations including any of the ports will be deleted.

Aggr Lookup <portlist>

Description:

Lookup and display link aggregation group.

<portlist>: Port list. Aggregations including any of the ports will be shown.

Aggr Mode [smac|dmac|xor]

Description:

Set or show link aggregation traffic distribution mode.

[smac|dmac|xor]: Aggregation mode, SMAC, DMAC or XOR (default: Show mode).

QoS Commands

Commands at QoS level:

QoS Configuration [<portlist>]

QoS Mode [<portlist>] [tag|port|diffserv]

QoS Port [<portlist>] [<class>]

QoS Tagprio [<portlist>] [<tagpriolist>] [<class>]

QoS DiffServ [<dscpno>] [<class>]

<class> range: low|normal|medium|high

QoS Configuration [<portlist>]

Description:

Show the configured QoS mode, VLAN user priority mapping, default class, default VLAN user priority and DSCP mapping for the port.

[<portlist>]: Port list (default: All ports).

QoS Mode [<portlist>] [tag|port|diffserv]

Description:

Set or show the QoS mode for the port.

[<portlist>] : Port list (default: All ports).

[tag|port|diffserv]: Enable tag, port or IP differentiated services class of service for the port (default: Show mode).

QoS Port [<portlist>] [<class>]

Description:

Set or show the port class. In tag mode, the default class is used for untagged frames. In port mode, the default class is used as the port priority. In diffserv mode, the default class is used for non-IP frames.

[<portlist>]: Port list (default: All ports).

[<class>] : Internal class of service (default: Show default class).

QoS Tagprio [<portlist>] [<tagpriolist>] [<class>]

Description:

Set or show the VLAN user priority mapping.

[<portlist>] : Port list (default: All ports).

[<tagpriolist>]: VLAN user priority list, 0-7 (default: All user priorities).

[<class>] : Internal class of service (default: Show class).

QoS DiffServ [<dscpno>] [<class>]

Description:

Set or show the IP Differentiated Services mapping.

[<dscpno>]: IP DSCP number, 0-7.

[<class>] : range: low|normal|medium|high

Mirror Commands

Mirror Configuration

Mirror Port [<port>]

Mirror Source [<portlist>] [enable|disable]

Mirror Configuration

Description:

Show the mirror destination port and mirror mode for source ports.

Mirror Port [<port>]

Description:

Set or show the mirror destination port.

[<port>]: Mirror destination port (default: Show mirror port).

Mirror Source [<portlist>] [enable|disable]

Description:

Set or show the source port mirror mode.

[<portlist>] : Source port list (default: All ports).

[enable|disable]: Enable/disable mirroring of frames transmitted on port (default: Show mirror mode).

IP Commands

Commands at IP level:

IP Configuration

IP Setup [<ipaddress> [<ipmask> [<ipgateway>]] [<vid>]

IP Web management[enable|disable]

IP Configuration

Description:

Show IP configured IP address, mask, gateway, VLAN ID and mode.

IP Setup

Description:

Setup or show IP configuration.

[<ipaddress>]: IP address. (default: Show IP configuration)

[<ipmask>] : IP subnet mask (default: Subnet mask for address class).

[<ipgateway>]: Default IP gateway, (default: 0.0.0.0).

[<vid>] : VLAN ID, 1-4095 (default: 1).

IP Web management

Description:

Activate or deactivate the Web management.

[enable|disable]: Enable/disable Web management (default: Show Web management).

SNMP Commands

Commands at SNMP level:

SNMP Configuration

SNMP Community [<get>|<set>] [<community>]

SNMP Setup [enable|disable]

SNMP Trap [<IP Address>]

SNMP Configuration

Description:

Show the SNMP configuration.

SNMP Community [<get>|<set>] [<community>]

Description:

Set or show community setting for SNMP

[<get>|<set>]: Community for get or set

[community]: community string

SNMP Setup [enable|disable]

Description:
Activate or deactivate the SNMP.

[enable|disable]: Enable/disable SNMP (default: Show SNMP mode).

SNMP Trap [<IP Address>]

Description:
Set or show SNMP traps destination.

<IP Address>: IP address to send traps to. (default: Show trap configuration)

Storm Control Commands

Commands at Storm Control level:
Storm Control Configuration
Storm Control Setup <traffic type > <option>

Storm Control Configuration

Description:
Show the Storm Control setting.

Storm Control Setup <traffic type > <option>

Description:
Set or show the storm control configuration. The allowed frame rates for multicast and broadcasts are controlled using a central storm controller.

<traffic type>: Storm controller to set. Can be one of:
[Broadcast|Multicast]
(default: Show all).

[disable | <rate>]: Disable storm controller or set the rate in kiloframes
Allowed values are 2k, 4k, 8k, 16k, 32k, 64k