



KGS-1602

**Web Smart 16-Port Gigabit Ethernet Switch
with SFP support**

Installation Guide

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For more information, contact:

United States KTI Networks Inc.
 P.O. BOX 631008
 Houston, Texas 77263-1008

Phone: 713-2663891
Fax: 713-2663893
E-mail: kti@ktinet.com
URL: <http://www.ktinet.com/>

International Fax: 886-2-26983873
 E-mail: kti@ktinet.com.tw
 URL: <http://www.ktinet.com.tw/>

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TRADEMARKS

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WARNING:

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 in which case the user will be required to correct the interference at his own expense.

NOTICE:

- (1) The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- (2) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.


CISPR A COMPLIANCE:

This device complies with EMC directive of the European Community and meets or exceeds the following technical standard.

EN 55022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment. This device complies with CISPR Class A.

WARNING: 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.

CE NOTICE

Marking by the symbol  indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards:

EN 55022: Limits and Methods of Measurement of Radio Interference characteristics of Information Technology Equipment.

EN 50082/1: Generic Immunity Standard -Part 1: Domestic Commercial and Light Industry.

EN 60555-2: Disturbances in supply systems caused by household appliances and similar electrical equipment - Part 2: Harmonics.

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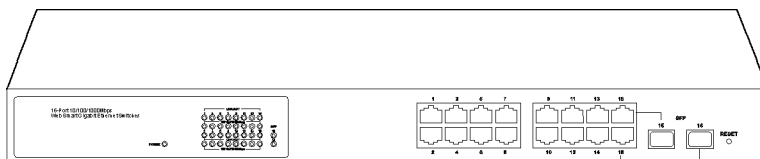
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1. Introduction

Before you start installing the switch, verify that the package contains the following:

- Web Smart 16-Port 10/100/1000 Gigabit Ethernet Switch unit
- 19" rack mounting brackets
- This User Manual in CD-ROM
- AC Power Cord



1.1 Features

- Non-blocking store-and-forward Web-Smart switched.
- 16 10/100/1000Mbps Auto-negotiation Gigabit Ethernet copper ports
- 2 1000Mbps Gigabit Ethernet fiber ports (support dual media types, fiber and copper)
- 400KB on-chip frame buffer
- Jumbo frame support
- Diversified classification supports for QoS (even L4 support)
- 8K MAC address and 4K VLAN support (IEEE802.1Q)
- Per-port bandwidth rate control and Broadcast Storm Control
- IEEE802.1Q VLAN support
- Full-duplex flow control (IEEE802.3x) and half-duplex backpressure
- Extensive front-panel diagnostic LEDs; System: Power, Copper Port1-16: LINK/ACT, 10/100/1000Mbps and SFP LINK/ACT

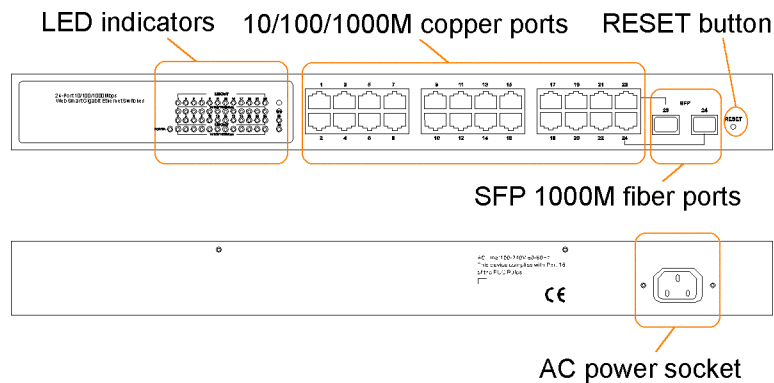
Management

- Supports concisely the status of port and easily port configuration
- Supports per port traffic monitoring counters
- Supports port mirror function
- Supports the static trunk function
- Supports 802.1Q VLAN
- Supports user management and limits one user to login
- Maximal packet length can be up to 9216 bytes for jumbo frame application
- Supports Broadcasting Suppression to avoid network suspended or crashed
- Supports to send the trap event while monitored events happened
- Supports default configuration which can be restored to overwrite the current configuration which is working on via Web UI and Reset button of the switch
- Supports on-line plug/unplug SFP modules
- Supports Quality of Service (QoS) for real time applications based on the information taken from Layer 2 to Layer 4, such as VoIP
- Built-in web-based management with convenient GUI for the user

1.2 View of Web Smart 16-Port Gigabit Switch

The major user interface components on the front panel and rear panel are:

- LED indicators LED Display for system power status and port status
- 10/100/1000M copper ports Gigabit copper ports (Port 1 - Port 16)
- 1000M SFP fiber ports Gigabit fiber ports with SFP connectors (Port 15, Port 16)
- RESET button Button for reboot the switch or reset the switch to factory defaults
- AC power socket Power socket for AC power cord



LED	Color	Function
System POWER	Green	ON - when +5V DC power is on and good
Port 1 to 16 LINK/ACT	Green	ON - when connection with remote device is good Blink - when any traffic is present Off - when cable connection is not good
Port 1 to 16 10/100/1000Mbps	Green/Ember	ON - green when 1000Mbps speed is active ON - ember when 100Mbps speed is active Off - when 10Mbps speed is active
Port 15, 16 SFP	Green	ON - when connection with remote device is good Blink - when any traffic is present Off - when cable connection is not good

1.3 Hardware Specifications

Standard Compliance: IEEE802.3/802.3ab / 802.3z / 802.3u / 802.3x

Network Interface:

<u>Configuration</u>	<u>Mode</u>	<u>Connector</u>	<u>Port</u>
10/100/1000Mbps Gigabit Copper	NWay	RJ-45	1 - 16
1000Base-X Gigabit Fiber	1000 FDX	SFP*	15, 16(Option)

*Port 15, 16 are RJ-45/SFP fiber dual media ports with auto detected function.

*Optional SFP modules support MMF, SMF LC or BiDi LC transceiver.

Transmission Mode: 10/100Mbps support full or half duplex, 1000Mbps support full duplex only

Transmission Speed: 10/100/1000Mbps for Gigabit copper ports, 1000Mbps for Gigabit Fiber ports

Full Forwarding Packet Rate: PPS (packets per second)

<u>Forwarding Rate</u>	<u>Speed</u>
1,488,000pps	1000Mbps
148,800pps	100Mbps
14,880pps	10Mbps

MAC Address and Self-learning: 8K MAC address

VLAN Table: 4K VLAN table entries

Buffer Memory: Embedded 400 KB frame buffer

Flow Control:

IEEE802.3x compliant for full duplex

Backpressure flow control for half duplex

Cable and Maximum Length:

Gigabit copper Cat. 5 UTP cable Cat.5e recommended, up to 100m

Gigabit fiber 50/125, 60/125 MMF, 9/125 SMF, distance (depending on the SFP transceiver)

Diagnostic LED:

System LED : Power

Port 1 - 16 10/100/1000M : Speed status

Port 1 - 16 LINK/ACT : Link status and activities

Port 15, 16 SFP : SFP fiber link status

Power Requirement: Voltage 100 - 240 VAC, Frequency 50/60 Hz, Consumption 30W

Ambient Temperature: Operating 0 to 50°C, Humidity 5% to 90%

Dimensions: 44(H) (442(W) (209(D) mm

Approval: Comply with FCC Part 15 Class A & CE Mark Approval

1.4 Management Software Specifications

Interface : Web Http browsing

System configuration: IP address settings, system name, password, Auto-logout timer

Port configuration: Port operating mode, flow control

VLAN configuration

VLAN mode : disable, Port-based, 802.1Q Tag-based, Metro (predefined Port-based)

VLAN groups : up to 24 active groups, Group ID, description, VID, member ports

VID value range : 1 - 4094

Port VID range (PVID) : 1 - 4094

Per Port Ingress Rules : Forward packets with VID=PVID, Drop untagged packets

Per Port Egress Rules : Port Tagging mode, Untagging specific VID packets

Link Aggregation (Trunking) Configuration

Trunks : up to 8 groups

Trunk port members : up to 8 ports

Mirroring Function

Sniffer mode : Ingress traffic of the source ports

Sniffer port : one port

Source ports : multiple ports are allowed

Quality of Service (QoS)

Priority class : High and low

Per port classification options : 802.1p, IP ToS, IP DSCP, IP TCP/UDP Port (L4 base)

Bandwidth Control

Per port basis control

Ingress Rate control : All traffic rate, Unicast rate, Broadcast/Multicast rate

Egress Rate control : All traffic rate

Trap Event Control

System events : Cold boot, Warm boot

Port events : Port link up, port link down, Invalid login, Tx error, Rx error

Event counters

Max. Packet Length Control:

Per port basis control

Option : 1518, 1532, 9216 (Jumbo frame support)

Statistics Monitoring : Per port basis control, Simplified port statistics, Detailed port statistics

Status Monitoring: All configuration current settings, All port link status

Maintenance:

Warn Restart (i.e. Reboot, Warn Boot)

Restore Factory default, Software update

Logout

2. Installation

2.1 Safety Cautions

To reduce the risk of bodily injury, electrical shock, fire, and damage to the equipment, observe the following precautions.

- Do not service any product except as explained in your system documentation.
- Opening or removing covers may expose you to electrical shock.
- Only a trained service technician should service components inside these compartments.
- If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your trained service provider:
 - The power cable, extension cable, or plug is damaged.
 - An object has fallen into the product.
 - The product has been exposed to water.
 - The product has been dropped or damaged.
 - The product does not operate correctly when you follow the operating instructions.
- Do not push any objects into the openings of your system. Doing so can cause fire or electric shock by shorting out interior components.
- Operate the product only from the type of external power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your service provider or local power company.

2.2 Desktop Mounting

The switch can be mounted on a desktop or shelf. Make sure that there is proper heat dissipation from and adequate ventilation around the device. Do not place heavy objects on the device.

2.3 Applying Power

One AC power cord which meets the specification of your country of origin was supplied with the switch unit. The switch supports wide range of AC power input specifications as follows:

Power Rating : 100 ~ 240VAC, 50/60Hz, 30W max.

Voltage Range : 90 ~ 264VAC

Frequency : 47 ~ 63 Hz

2.4 SFP Transceiver Installation

Verify the following Steps when installing an SFP transceiver into an empty SFP port:

1. Use the SFP transceivers qualified only by switch manufacturer.
2. The switch supports Hot-plug installation of the SFP transceiver even when the switch is on.
3. Make sure the transceiver is seated in the SFP port securely.
4. Install the fiber cable after the transceiver installation.

2.5 Port and Cable

Connection

10/100M copper connection

1000M copper connection

1000M fiber connection

Cables

Cat.3, 4, 5, Cat.5 is recommended

Cat. 5, 5e, Cat. 5e is recommended

MMF or SMF depending on the SFP transceiver used

2.6 Rack Mounting

Two 19-inch rack mounting brackets are supplied with the switch for 19-inch rack mounting.

The steps to mount the switch onto a 19-inch rack are:

1. Turn the power to the switch off.
2. Install two brackets with supplied screws onto the switch.
2. Mount the switch onto 19-inch rack with rack screws securely.
3. Turn the power to the switch on.

2.7 RESET Button

The reset button is located on the front panel. The button provides the following functions:

Operation

Press the button more than 3 second

Press the button less than 3 seconds

Function

Restore the switch back to factory default settings

Reboot the switch

2.8 Software Management

It will take about 30 seconds, after that, the switch will flash all the LED once and automatically performs self-test and is in ready state. The switch features an http server which can serve the management requests coming from any web browser software over internet or intranet network.

Web Browser

- Microsoft IE 6.0 above recommended, Netscape V7.1 above or FireFox V1.00 above
- Display resolution 1024x768.

Set IP Address for the switch unit

Before the switch can be managed from a web browser software, make sure a unique IP address is configured for the switch.

2.9 IP Address Settings and Changing Password

The switch is shipped with the following factory default settings:

- IP address of the switch : 192.168.1.1
- Subnet Mask of the switch : 255.255.255.0
- Default Gateway of the switch : 192.168.1.254
- Password : admin

For security reason, it is recommended to change the default settings for the switch before deploying it to your network:

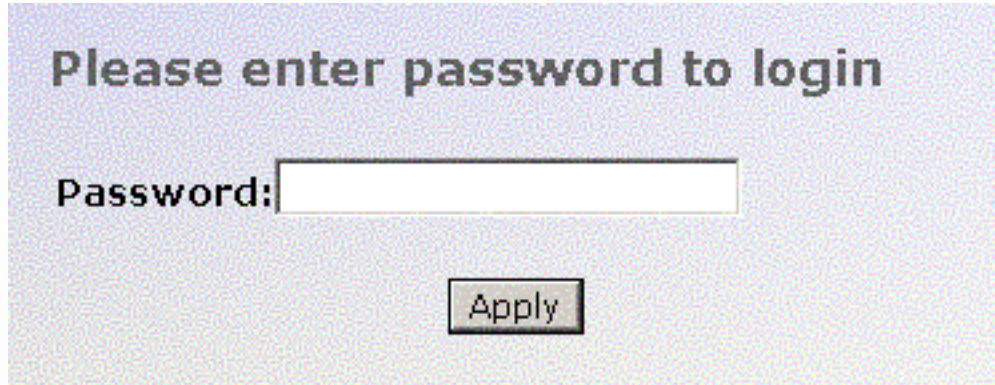
To change IP address Use Web System Configuration Menu

To change password Use Web System Configuration Menu

3. Operation of Web-based Management

The steps to start web management are:

1. Type http://192.168.1.1 in the address row in a browser.
2. Type password in order to login and access authentication. The default password is [admin].



Login

For the first time to use, please enter the default password, then click the <Apply> button. The login process now is completed.

In the switch, it supports a simple user management function allowing only one administrator to configure the system at the same time.

To optimize the display effect, it is recommended to use :

- Microsoft IE 6.0 above, Netscape V7.1 above or FireFox V1.00 above
- Display resolution 1024x768.

3.1 Web Management Home Overview

The Information of Page Layout



Configuration

[System](#)
[Ports](#)
[VLAN Mode](#)
[VLAN Group](#)
[PVID](#)
[Aggregation](#)
[Mirror](#)
[Quality of Service](#)
[Bandwidth Management](#)
[Trap Event](#)
[Max. Packet Length](#)

Monitoring

[Statistics Overview](#)
[Detailed Statistics](#)

Maintenance

[Status](#)
[Warm Restart](#)
[Factory Default](#)
[Software Update](#)
[Logout](#)

System Status

Product Name	16-Port 10/100/1000M Gigabit SW.
Firmware Version	v1.08
Hardware Version	v1.01
Serial Number	030901000841
IP Address	192.168.0.231
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
MAC Address	00-40-c7-e6-03-48
System Name	Giga Switch
Auto Logout Timer (mins)	0

TP Port Status

Port	Link Status	Speed	Flow Control	Port	Link Status	Speed	Flow Control
1	Down	Auto	Disabled	2	Down	Auto	Disabled
3	Down	Auto	Disabled	4	Down	Auto	Disabled
5	Down	Auto	Disabled	6	Down	Auto	Disabled
7	100Full	Auto	Enabled	8	Down	Auto	Disabled
9	Down	Auto	Disabled	10	Down	Auto	Disabled
11	Down	Auto	Disabled	12	Down	Auto	Disabled
13	Down	Auto	Disabled	14	Down	Auto	Disabled
15	Down	Auto	Disabled	16	Down	Auto	Disabled

Fiber Port Status

Top side

It shows the front panel of the switch. In the front panel, the linked ports will display green; as to the ports, which are link off, they will be dark. For the optional modules, the slot will show only a cover plate if no module exists and will show a module if a module is present. The image of module depends on the one you inserted. The same, if disconnected, the port will show just dark, if linked, green.

Left side

The main menu tree for web is listed in the page. According to the function name in boldface, all functions can be divided into three parts, including Configuration, Monitoring and Maintenance. The functions of each folder are described in its corresponded section respectively. As to the function names in normal type are the sub-functions. When clicking it, the function is performed.

Right side

This area is used for detailed configuration and status.

The following list is the main function tree for web user interface.

3.2 Configuration

Configuration

[System](#)

[Ports](#)

[VLAN Mode](#)

[VLAN Group](#)

[PVID](#)

[Aggregation](#)

[Mirror](#)

[Quality of Service](#)

[Bandwidth Management](#)

[Trap Event](#)

[Max. Packet Length](#)

Each of them will be described in detail orderly in the following sections.

3.2.1 System Configuration

The switch supports manual IP address setting. When IP address is changed, you must reboot the switch to have the setting taken effect and use the new IP to browse for web management.

System Configuration

MAC Address	00-40-c7-e5-00-0e
Firmware Version	v1.08
Hardware Version	v1.01
Serial Number	030801000015
IP Address	<input type="text" value="192.168.0.230"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Default Gateway	<input type="text" value="192.168.0.1"/>
System Name	<input type="text" value="Giga Switch"/>
Password	<input type="password" value="*****"/>
Auto Logout Timer (mins)	<input type="text" value="0"/>

Parameter description:

MAC Address	It is the Ethernet MAC address of the management agent in this switch.
Firmware Version	The firmware version of this switch.
Hardware Version	The hardware version of this switch.
Serial Number	The serial number is assigned by the manufacturer.
IP Address	Users can configure the IP settings and fill in new values. Default: 192.168.1.1
Subnet Mask	Subnet mask is used to set the subnet mask value. Default: 255.255.255.0
Default Gateway	Set an IP address for a gateway to handle those packets that do not meet the routing rules predefined in the device. Default: 192.168.1.254
System Name	Set a special name for this switch. Up to 16 characters are allowed in this parameter. Any alphanumeric character and null are acceptable. Default: Giga Switch
Password	Set a password for this switch. Up to 16 characters are allowed in this parameter. Any alphanumeric character is acceptable. Default: admin
Auto Logout Timer	Set the auto-logout timer. The valid value is 0 ~ 60 in the unit of minute and a decimal point is not allowed. The value 0 means auto-logout timer is disabled. Default: 0

3.2.2 Ports Configuration

Port Configuration

Port	Link	Mode	Flow Control	Port	Link	Mode	Flow Control
1	Down	Auto Speed	Enable	2	Down	Auto Speed	Enable
3	Down	Auto Speed	Enable	4	Down	Auto Speed	Enable
5	Down	Auto Speed	Enable	6	Down	Auto Speed	Enable
7	100Full	Auto Speed	Enable	8	Down	Auto Speed	Enable
9	Down	Auto Speed	Enable	10	Down	Auto Speed	Enable
11	Down	Auto Speed	Enable	12	Down	Auto Speed	Enable
13	Down	Auto Speed	Enable	14	Down	Auto Speed	Enable
15	Down	Auto Speed	Enable	16	Down	Auto Speed	Enable

Fiber Port

Port	Link	Mode	Flow Control	Port	Link	Mode	Flow Control
15	Down	Auto Speed	Enable	16	Down	Auto Speed	Enable

Parameter description:

Mode Set the speed and duplex of the port. Speed/Duplex is comprised of the combination of speed mode, 10/100/1000Mbps, and duplex mode, full duplex and half duplex. In Auto Speed mode, no default value. In Forced mode, default value depends on your setting.

Flow Control There are two modes to choose in flow control, including Enable and Disable. If flow control is set Enable, both parties can send PAUSE frame to the transmitting device(s) if the receiving port is too busy to handle. When it is set Disable, there will be no flow control in the port. It drops the packet if too much to handle. Default: Enable

3.2.3 VLAN Mode Configuration

The switch supports Port-based VLAN and 802.1Q Tag-based VLAN. Support 24 active VLANs and VLAN ID 1~4094.

VLAN Mode

VLAN Mode: Disable

Up-link Port: Disable, Port-based, Tag-based, Metro Mode

Management Interface

State: Disable

VID: 1

Apply

Parameter description:

VLAN Mode *Disable* - Stop VLAN function on the switch. In this mode, no VLAN is applied to the switch. This is the default setting.

Port-based - Port-based VLAN is defined by port. No filtering criterion applies in port-based VLAN. The only criterion is the physical port you connect to.

Tag-based - Tag-based VLAN identifies its member by VID. This is quite different from port-based VLAN. Each tag-based VLAN you built up must be assigned VLAN name and VLAN ID. Valid VLAN ID is 1-4094.

Metro Mode - The Metro Mode is a quick configuration VLAN environment method on Port-based VLAN. It will create 14 or 15 Port-based VLAN groups.

Up-link Port This function is enabled only when metro mode is chosen in VLAN mode.

15 - Except Port 15, each port of the switch cannot transmit packets with each other. Each port groups a VLAN with Port 15, thus, total 15 groups consisting of 2 members are formed.

16 - Except Port 16, each port of the switch cannot transmit packets with each other. Each port groups a VLAN with Port 16, thus, total 15 groups consisting of 2 members are formed.

15&16 - Except Port 15 and Port 16, each port of the switch cannot transmit packets with each other. Each port groups a VLAN with Port 15 and Port 16, thus, total 14 groups consisting of 3 members are formed.

This switch can support up to maximal 24 port-based VLAN groups or 24 Tag VLAN groups.

Management Interface:

State It works when the tag-based mode is chosen. When this function is enabled, only the tagged packets with this VID can manage the switch.

VID Valid range 1~4094.

3.2.4 VLAN Group Configuration

Port-based VLAN Configuration

	ID	Description	Member
<input type="checkbox"/>	<u>1</u>	Default	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

It shows the existed information of VLAN Groups List and maintains them, i.e. modify and delete one of them. You can easily create and delete a VLAN group by pressing <Add Group> and <Delete Group> function buttons, or click the Group ID directly to edit it.

Parameter description:

- ID (Group ID)** When you want to edit a VLAN group, you must select the Group ID field. Then, you will enter Tag-based VLAN Group Setting or Port-based VLAN Group Setting page, which depends on your VLAN mode selection.
- Description** The description defined by administrator is associated with a VLAN group.
- VID** VLAN identifier. Each tag-based VLAN group has a unique VID. It appears only in tag-based mode.
- Member** This is used to enable or disable if a port is a member of the new added VLAN, [Enable] means it is a member of the VLAN. Just tick the check box (t) beside the port x to enable it.
- <Add Group>** Create a new port-based VLAN or tag-based VLAN, which depends on the VLAN mode you choose in VLAN mode function.

Add VLAN Group

ID	2
Description	<input type="text"/>
Member	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <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"/>

Add a Port-based VLAN group

Add VLAN Group

ID	2
Description	accountin
VID	2
Member	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <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"/>

Add a Tag-based VLAN group

<Delete Group> Just tick the check box (t) beside the ID, then press the <Delete Group> button to delete the group.

Port-based VLAN Configuration

	ID	Description	Member
<input type="checkbox"/>	<u>1</u>	Default	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
<input checked="" type="checkbox"/>	<u>2</u>	accountin	9,10,11

Delete a Port-based VLAN group

Tag-based VLAN Configuration

	ID	Description	VID	Member
<input type="checkbox"/>	<u>1</u>	Default	1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
<input checked="" type="checkbox"/>	<u>2</u>	accountin	2	9,10,11

Delete a Tag-based VLAN group

3.2.5 PVID Configuration

This configuration is applied to Tag-based VLAN mode only.

PVID Configuration

Port	PVID	Rule1	Rule2	Tag	Untag State	Untag VID	Port	PVID	Rule1	Rule2	Tag	Untag State	Untag VID
1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	2	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1
3	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	4	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1
5	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	6	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1
7	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	8	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1
9	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	10	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1
11	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	12	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1
13	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	14	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1
15	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1	16	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable	1

Apply

Rule 1: Drop Frame from Nonmember Port

Rule 2: Drop Untagged Frame

Parameter description:

Port 1-16 Port number.

PVID This PVID range will be 1-4094. Before you set a number x as PVID, you have to create a Tag-based VLAN group with VID x.

Rule 1 Forward only packets with VID matching this port configured VID. You can apply Rule 1 as a way to a given port to filter unwanted traffic.

Rule 2 Drop untagged frame. You can configure a given port to accept all frames (Tagged and Untagged) or just receive tagged frame.

Note: If Rule 1 is enabled and port 1, for example, receives an untagged packet, the switch will apply the PVID of port 1 to tag this packet, the packet then will be forwarded. But if the PVID of port 1 is not 100, the packet will be dropped.

Tag This is an egress rule of the port. Here you can choose untag or tag. Tag means the outgoing packets must carry VLAN tag header, just click the check box. Untag means the outgoing packets carry no VLAN tag header.

Untag State If you checked this function for a Tag out port, the packet from this port may be tag out. But, the packet would be untag out if the VID of its tag is the same as the value of Untag VID while Untag VID state is Enable.

Untag VID Valid range is 0~4094.

3.2.6 Aggregation Configuration

The Aggregation (Port Trunking) Configuration is used to configure the settings of Link Aggregation. You can bundle more than one port with the same speed, full duplex and the same MAC to be a single logical port, thus the logical port aggregates the bandwidth of these ports.

Aggregation/Trunking Configuration

Group\Port	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Parameter description:

Normal Set up the ports that do not join any aggregation trunking group.

Group 1~8 Group the ports you choose together. Up to 12 ports can be selected for each group.

Note:

Check the following to avoid errors in configuration - When configuring the link aggregation function, you should check that whether the aggregated ports are in full-duplex mode as well as their speed is the same or not. The aggregated ports are in the same VLAN group.

3.2.7 Mirror Configuration

Mirror Configuration is to monitor the traffic of the network. For example, we assume that Port A and Port B are Sniffer Port and Source Port respectively, thus, the traffic passed by Port B will be copied to Port A for monitoring.

Mirror Setting

ID	1															
Sniffer Mode	Enable ▾															
Sniffer Port	1 ▾															
Source Port	1	2	3	4	5	6	7	8								
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
	9	10	11	12	13	14	15	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"/>								

Apply

Parameter description:

Sniffer Mode Used for the activation or deactivation of Port Mirror function, the switch port mirror supported Ingress traffic only. Default is disable.

Sniffer Port Set up the port for monitoring. Valid port is Port 1~16 and default is Port 1.

Source Port Set up the ports for being monitored. Just tick the check box (t) under the port x and valid port is Port 1~16.

Note:

When configuring the mirror function, you should avoid setting a port to be a sniffer port and aggregated port at the same time. It will cause something wrong.

3.2.8 Quality of Service Configuration

Quality of Service (QoS) Configuration

Default Class

VLAN Tag Priority [Configure](#)

IP ToS Classification [Configure](#)

IP TCP/UDP Port Classification [Configure](#)

IP Diffserv Classification [Configure](#)

Function description:

Default Class

Some packets which did not belong to the selected QoS classification method would be classified as Default Class.

[VLAN Tag Priority]

In VLAN-tagged packet, there are 3 bits belonging to priority. According to these 3 bits, we could arrange 8 traffics -0 0 0, 0 0 1, 0 1 0, 0 1 0, 1 0 0, 1 0 1, 1 1 0, 1 1 1. We can set High priority or Low priority for each traffic class.

[IP ToS Classification]

In a received IP packet, TOS field is used to classify the priority class to which the packet belongs.

[IP TCP/UDP Port Classification]

In a received TCP or UDP packet, the software Port number associated with the packet is checked and classified for the priority class. Eight Port numbers can be configured. This option also supports simple L4 configuration for some popular applications.

[IP Deffserv Classification]

In a received IP packet, DiffServ field is used to classify the priority class to which the packet belongs.

Click one of the QoS classification methods for the switch and click <Apply> to confirm the selection. Then, click [Configure] for further detailed configuration for the selected classification method.

3.2.8.1 Vlan Tag Configuration

VLAN Tag Priority

VLAN Tag Priority Classes				
Port	Bit 0	Bit 1	Bit 2	Class
Port 1	0	0	0	Low
All	0	0	1	Low
Port 1	0	1	0	Low
Port 2	0	1	1	Low
Port 3	0	1	1	Low
Port 4	1	0	0	High
Port 5	1	0	1	High
Port 6	1	0	1	High
Port 7	1	1	0	High
Port 8	1	1	0	High
Port 9	1	1	1	High
Port 10	1	1	1	High

Apply

Parameter description:

Port *Port 1 ~ Port 16* - User can set up the port (1~16) respectively to let Vlan Tag QoS function work on them. Multiple port selection is allowed.

All - select all ports (1~16) to simplify the procedure of configuration.

Class Each priority tag value is configured with a priority class.

High - High Priority

Low - Low priority

Note:

1. Bit 0 Bit 1 Bit 2 represent the 3-bit value in priority tag field.
2. Each port can be configured its own tag values and priority class mapping.
3. Untagged packets are classified with Default Class.

3.2.8.2 IP ToS Classification

Quality of Service (QoS) ToS Configuration

TCP/IP ToS Classes				
Port	Bit 0	Bit 1	Bit 2	Class
Port 1	0	0	0	High
All	0	0	1	High
Port 1	0	1	0	High
Port 2	0	1	1	High
Port 3	0	1	1	High
Port 4	1	0	0	High
Port 5	1	0	0	High
Port 6	1	0	1	High
Port 7	1	0	1	High
Port 8	1	1	0	High
Port 9	1	1	0	High
Port 10	1	1	1	High

Apply

Parameter description:

Port *Port 1 ~ Port 16* - User can set up the port (1~16) respectively to let IP ToS QoS Classification function work on them. Multiple port selection is allowed.

All - select all ports (1~16) to simplify the procedure of configuration.

Class Each ToS value is configured with a priority class.

High - High Priority

Low - Low priority

Note:

Bit 0, Bit 1, Bit 2 represent Bit 5 ~ Bit 7 in TOS Field of IP Header in an IP packet.

3.2.8.3 IP TCP/UDP Port Classification

Quality of Service (QoS) Layer-4 Configuration

- Disable IP TCP/UDP Port Classification
- Down prioritize web browsing, e-mail, FTP and news
- Prioritize IP Telephony (VoIP)
- Prioritize iSCSI
- Prioritize web browsing, e-mail, FTP transfers and news
- Prioritize Streaming Audio/Video
- Prioritize Databases (Oracle, IBM DB2, SQL, Microsoft)

Simple <<

TCP/IP Layer-4 TCP/UDP Classes					
Special TCP/UDP class:	Low	Default class (all other TCP/UDP ports):	Low		
Port	Special UDP/TCP Port Selection				
Port 1	Custom: 0	Custom: 0	Custom: 0	Custom: 0	Custom: 0
	Custom: 0	Custom: 0	Custom: 0	Custom: 0	Custom: 0

Apply

In L4 QoS Configuration, you can select one of these special network transmission events with the associated predefined configuration. Or, click <Advanced> to view the detailed configuration and make change for customizing. The L4 event options are:

- Disable IP TCP/UDP Port Classification
- Down prioritize web browsing, e-mail, FTP and news
- Prioritize IP Telephony (VoIP)
- Prioritize iSCSI
- Prioritize web browsing, e-mail, FTP transfers and news
- Prioritize Streaming Audio/Video
- Prioritize Databases (Oracle, IBM DB2, SQL, Microsoft)

Click one of the options.

<Advance>>> Click Advanced mode to view and modify detailed port number configuration.

<Simple<<< Click to disable display of the detailed port number configuration.

Advanced Mode:

Special TCP/UDP class:

Class assigned to the configured Custom Port numbers

High - High Priority

Low - Low priority

Default class (all other TCP/UDP ports):

The class assigned to the port numbers that are not in the Custom port list.

Port *Port 1 ~ Port 16* - User can set up the port (1~16) respectively to let L4 QoS Classification function work on them. Multiple port selection is allowed.

All - select all ports (1~16) to simplify the procedure of configuration.

Custom: TCP/UDP port number (Up to 10 custom port numbers can be configured.)

The following figure illustrates the predefined configuration when selecting option of [Down prioritize web browsing, e-mail, FTP and news] and the port numbers are 80,280,443,25,110,20,21,69,119,2009.

Quality of Service (QoS) Layer-4 Configuration

- Disable IP TCP/UDP Port Classification
- Down prioritize web browsing, e-mail, FTP and news
- Prioritize IP Telephony (VoIP)
- Prioritize iSCSI
- Prioritize web browsing, e-mail, FTP transfers and news
- Prioritize Streaming Audio/Video
- Prioritize Databases (Oracle, IBM DB2, SQL, Microsoft)

Simple <<

TCP/IP Layer-4 TCP/UDP Classes					
Special TCP/UDP class:	Low	Default class (all other TCP/UDP ports):	High		
Port	Special UDP/TCP Port Selection				
Port 1	Custom: 80	Custom: 280	Custom: 443	Custom: 25	Custom: 110
	Custom: 20	Custom: 21	Custom: 69	Custom: 119	Custom: 2009

Apply

3.2.8.4 IP Diffserv Classification

IP Diffserve Classification method uses 6-bit field of DSCP in an IP packet to classify the priority class of the received IP packet. Each DSCP (Diffserv value) can be configured a priority class.

IP Differentiated Services (DiffServ) Configuration

DiffServ	Class	DiffServ	Class	DiffServ	Class	DiffServ	Class
0	High	1	High	2	High	3	High
4	High	5	High	6	High	7	High
8	High	9	High	10	High	11	High
12	High	13	High	14	High	15	High
16	High	17	High	18	High	19	High
20	High	21	High	22	High	23	High
24	High	25	High	26	High	27	High
28	High	29	High	30	High	31	High
32	High	33	High	34	High	35	High
36	High	37	High	38	High	39	High
40	High	41	High	42	High	43	High
44	High	45	High	46	High	47	High
48	High	49	High	50	High	51	High
52	High	53	High	54	High	55	High
56	High	57	High	58	High	59	High
60	High	61	High	62	High	63	High

Apply

Parameter description:

Diffserv: Display 64 (0~63) DSCP items.

Class: Class assigned to the DSCP

High - High Priority

Low - Low priority

Note:

The classification function are applied to all ports and can not be configured for each port respectively..

3.2.9 Bandwidth Management

Bandwidth Management function is used to set up the limit of Ingress and Egress bandwidth for each port.

Note:

Each port of the switch owns 16KB packet buffer. The packet buffer size will be reduced when the bandwidth rate limitation is enabled, which may cause that jumbo frame cannot be forwarded. Avoid enabling jumbo frame and bandwidth rating functions at the same time.

Bandwidth Management Configuration

Port Number

Ingress Rate Limiting (Policing)

Traffic	State	Data Rate (Mbps)	Description
All Traffic	Disable	<input type="text" value="0"/>	Incoming traffic is discarded if rate is exceeded. Pause frames are generated if flow control is enabled.
Broadcast & Multicast	Disable	<input type="text" value="0"/>	Incoming traffic is discarded if rate is exceeded.

Egress Rate Limiting (Shaping)

Traffic	State	Data Rate (Mbps)	Description
All Traffic	Disable	<input type="text" value="0"/>	Packet transmission is delayed if rate is exceeded. Traffic may be lost if egress buffers run full.

Ingress Rate Limiting parameter description:

Port Number: Choose the port that you would like this function to work on it. Valid range of the port is 1~16. Multiple port selection is allowed. [All] means all ports (Port 1 ~ 16).

All Traffic: Set up the limit of Ingress bandwidth for the selected ports. Incoming traffic will be discarded if the rate exceeds the value you set up in Data Rate field. Pause frames are also generated if flow control is enabled. The format of the packet limits to Unicast, broadcast and multicast.

Data Rate (Mbps): Valid range is 0~1000.

Broadcast & Multicast: Set up the limit of Ingress bandwidth for the port you choose. Incoming traffic will be discarded if the rate exceeds the value you set up in Data Rate field. The format of the packet only limits to broadcast and multicast.

Data Rate (Mbps): Valid range is 0~1000.

Egress Rate Limiting parameter description:

All Traffic: Set up the limit of Egress bandwidth for the port you choose. Packet transmission will be delayed if the rate exceeds the value you set up in Data Rate field. Traffic may be lost if egress buffers run full. The format of the packet limits to Unicast, broadcast and multicast.

Data Rate (Mbps): Valid range is 0~1000.

3.2.10 Trap Event Configuration

The Trap Events Configuration function is used to enable the switch to send out the SNMP trap information while predefined trap events occurred.

Trap Events Configuration

Trap IP	<input type="text" value="0.0.0.0"/>
Trap IP	<input type="text" value="0.0.0.0"/>
System Event	<input type="checkbox"/> Warm Boot <input type="checkbox"/> Cold Boot <input type="checkbox"/> Illegal Login
TP and Fiber Port Event	<input type="checkbox"/> Link Up <input type="checkbox"/> Link Down <input type="checkbox"/> Rx error threshold <input type="checkbox"/> Tx error threshold
Error threshold	<input type="text" value="10"/> packets in 5 seconds.

Illegal Login Counter	0
Link Up Counter	0
Link Down Counter	0
Rx error threshold Counter	0
Tx error threshold Counter	0

Parameter description:

Trap IP: IP address of the SNMP trap manager who can receive the traps. Two trap managers are supported.

System Events:

Warm Boot Warm Start Management operation event

Cold Boot Power on event of the switch

Illegal Login Invalid login event

Port Events:

Link Up Port link up event

Link Down Port link down event

Rx error threshold Rx error over threshold event

Tx error threshold Tx error over threshold event

Error threshold The number of error packets in 5 seconds

This page also displays occurrence counters of some events.

3.2.11 Max. Packet Length

Maximum Packet Length

Port	Max. Frame Size	Port	Max. Frame Size
1	1532	2	1532
3	1532	4	1532
5	1532	6	1532
7	1532	8	1532
9	1532	10	1532
11	1532	12	1532
13	1532	14	1532
15	1532	16	1532
17	1532	18	1532
19	1532	20	1532
21	1532	22	1532
23	1532	24	1532

Apply

1518
1532
9216

This function is used to limit the maximum packet length accepted by each port.

Jumbo Frame(bytes) Set up the maximum length of the packet that each port can accept.
Options : 1518, 1532, 9216 bytes
The default is 1532 bytes.

3.3 Monitoring

Monitoring

[Statistics Overview](#)
[Detailed Statistics](#)

There are two functions contained in the monitoring section.

3.3.1 Statistics Overview

The function of Statistics Overview collects any information and provides the counting summary about the traffic of the port, no matter the packet is good or bad.

Statistics Overview for all ports

Port	Tx Bytes	Tx Frames	Rx Bytes	Rx Frames	Tx Errors	Rx Errors
1	12678287	101748	297196550	1307533	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	23533188	141177	13071346	107250	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0

If the counting is overflow, the counter will be reset and restart counting.

Parameters description:

- Tx Bytes** Total transmitted bytes.
- Tx Frames** The counting number of the packet transmitted.
- Rx Bytes** Total received bytes.
- Rx Frames** The counting number of the packet received.
- Tx Errors** Number of bad packets transmitted.
- Rx Errors** Number of bad packets received.

3.3.2 Detailed Statistics

Statistics for Port 1	
<input type="button" value="Clear"/>	<input type="button" value="Refresh"/>
Port 1	Port 2
Port 3	Port 4
Port 5	Port 6
Port 7	Port 8
Port 9	Port 10
Port 11	Port 12
Port 13	Port 14
Port 15	Port 16
Receive Total	
Rx Packets	0
RX Octets	0
Rx High Priority Packets	0
Rx Low Priority Packets	0
Rx Broadcast	0
RX Multicast	0
Receive Size Counters	
Rx 64 Bytes	0
RX 65-127 Bytes	0
Rx 128-255 Bytes	0
Rx 256-511 Bytes	0
Rx 512-1023 Bytes	0
Rx 1024- Bytes	0
Receive Error Counters	
Rx CRC / Aligment	0
Rx Undersize	0
Rx Oversize	0
Rx Fragments	0
Rx Jabber	0
Rx Drops	0
Transmit Total	
Tx Packets	0
TX Octets	0
Tx High Priority Packets	0
Tx Low Priority Packets	0
Tx Broadcast	0
TX Multicast	0
Transmit Size Counters	
Tx 64 Bytes	0
TX 65-127 Bytes	0
Tx 128-255 Bytes	0
Tx 256-511 Bytes	0
Tx 512-1023 Bytes	0
Tx 1024- Bytes	0
Transmit Error Counters	
Tx Collisions	0
Tx Drops	0
Tx FIFO Drops	0

Parameter description:

Rx Packets	The counting number of the packet received.
RX Octets	Total received bytes.
Rx High Priority Packets	Number of Rx packets classified as high priority.
Rx Low Priority Packets	Number of Rx packets classified as low priority.
Rx Broadcast	Show the counting number of the received broadcast packet.
Rx Multicast	Show the counting number of the received multicast packet.
Tx Packets	The counting number of the packet transmitted.
TX Octets	Total transmitted bytes.
Tx High Priority Packets	Number of Tx packets classified as high priority.
Tx Low Priority Packets	Number of Tx packets classified as low priority.
Tx Broadcast	Show the counting number of the transmitted broadcast packet.
Tx Multicast	Show the counting number of the transmitted multicast packet.
Rx 64 Bytes	Number of 64-byte frames in all packets received.

Rx 65-127 Bytes	Number of 65 ~ 126-byte frames in all packets received.
Rx 128-255 Bytes	Number of 127 ~ 255-byte frames in all packets received.
Rx 256-511 Bytes	Number of 256 ~ 511-byte frames in all packets received.
Rx 512-1023 Bytes	Number of 512 ~ 1023-byte frames in all packets received.
Rx 1024-Bytes	Number of 1024-max_length-byte frames in all packets received.
Tx 64 Bytes	Number of 64-byte frames in all packets transmitted.
Tx 65-127 Bytes	Number of 65 ~ 126-byte frames in all packets transmitted.
Tx 128-255 Bytes	Number of 127 ~ 255-byte frames in all packets transmitted.
Tx 256-511 Bytes	Number of 256 ~ 511-byte frames in all packets transmitted.
Tx 512-1023 Bytes	Number of 512 ~ 1023-byte frames in all packets transmitted.
Tx 1024-Bytes	Number of 1024-max_length-byte frames in all packets transmitted.
Rx CRC/Alignment	Number of Alignment errors and CRC error packets received.
Rx Undersize	Number of short frames (<64 Bytes) with valid CRC.
Rx Oversize	Number of long frames(according to max_length register) with valid CRC.
Rx Fragments	Number of short frames (< 64 bytes) with invalid CRC.
Rx Jabber	Number of long frames with invalid CRC.
Rx Drops	Frames dropped due to the lack of receiving buffer.
Tx Collisions	Number of collisions transmitting frames experienced.
Tx Drops	Number of frames dropped due to excessive collision, late collision, or frame aging.
Tx FIFO Drops	Number of frames dropped due to the lack of transmitting buffer.

3.4 Maintenance

Maintenance

[Status](#)

[Warm Restart](#)

[Factory Default](#)

[Software Update](#)

[Logout](#)

The functions are supported:

Status Display all configuration and status of the switch

Warm Start Perform a reboot for the switch

Factory Default Restore all settings back to factory default values

Software Update Perform an update to the management firmware of the switch

Logout Perform a logout from the switch

3.4.1 Status

The status including System Status, TP Port Status, Fiber Port Status, Aggregation, VLAN, Mirror, Trap Event and Maximum Packet Length are contained in this function folder for port monitor and management.

System Status

Product Name	24-Port 10/100/1000M Gigabit SW.
Firmware Version	v1.08
Hardware Version	v1.01
Serial Number	030801000015
IP Address	192.168.0.230
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
MAC Address	00-40-c7-e5-00-0e
System Name	Giga Switch
Auto Logout Timer (mins)	0

TP Port Status

Port	Link Status	Speed	Flow Control	Port	Link Status	Speed	Flow Control
1	100Full	Auto	Enabled	2	Down	Auto	Disabled
3	Down	Auto	Disabled	4	Down	Auto	Disabled
5	Down	Auto	Disabled	6	Down	Auto	Disabled
7	100Full	Auto	Enabled	8	Down	Auto	Disabled
9	Down	Auto	Disabled	10	Down	Auto	Disabled
11	Down	Auto	Disabled	12	Down	Auto	Disabled
13	Down	Auto	Disabled	14	Down	Auto	Disabled
15	Down	Auto	Disabled	16	Down	Auto	Disabled

Each of them will be described in detail orderly in the following sections.

System Status

Product Name:	To show the product name of this device.
Firmware Version:	To show the firmware version of this switch.
Hardware Version:	To show the hardware version of this switch.
Serial Number:	The serial number is assigned by the manufacturer.
IP Address:	To show the IP address of this switch.
Subnet Mask:	To show the subnet mask of this switch.
Default Gateway:	To show the default gateway of this switch.
MAC Address:	To show the Ethernet MAC address of this switch.
System Name:	To show the special name for this switch.
Auto Logout Timer:	To show the setting of auto-logout timer in the web UI.

Ports Status

Port:	Display the port number. The number is 1 - 16. Both port 15 and 16 are optional modules.
Link Status:	Link Status will show the current active link speed and duplex. Otherwise, it shows [Down].
Speed:	Display Auto or Forced the speed mode.
Flow Control:	Show each port flow control status.

Aggregation

Normal:	Display the ports that do not join any aggregation trunking group.
Group 1~8:	Display the members of the Group.

VLAN

VLAN Mode:	Display Port-based, Tag-based and metro mode, which depends on the setting in VLAN mode configuration function.
ID:	Display the Group ID.
Description:	Display the description defined by administrator is associated with a VLAN group.
VID:	Display VLAN identifier. Each tag-based VLAN group has a unique VID. It appears only in tag-based mode.
Member:	Display the port members belonging to each VLAN Group.

Management Interface

State	VLAN Tagging status of the switch management interface
VID	VID used by the switch management interface

Mirror

Sniffer Mode: Display the status the activation or deactivation of Port Mirror function.

Sniffer Port: Display the port for monitoring.

Source Port: Display the port for being monitored.

Trap Event

Trap IP The IP address of the first Trap manager

Trap IP The IP address of the second Trap manager

Warm Boot Trap event enable setting

Cold Boot Trap event enable setting

Illegal Login Trap event enable setting and counter

Link Up Trap event enable setting and counter

Link Down Trap event enable setting and counter

Rx error threshold Trap event enable setting and counter

Tx error threshold Trap event enable setting and counter

Error threshold Setting

Maximum Packet Length

Jumbo Frame(bytes): Display the settings about the maximum length of the packet that each port of the switch can accept.

<Refresh> Button to refresh all status

3.4.2 Warm Restart

Warm Start function allows to reboot the switch with the current settings and configuration. After upgrading software, then you must reboot to have the new configuration taken effect.

Warm Restart

Are you sure to perform a Warm Restart?

Yes

Press <Yes> button to confirm warm restart function, and it will take around thirty (30) seconds to complete the system boot.

3.4.3 Factory Default

Factory Default function can restore settings back to factory default values except the IP address settings.

Restore Default Configuration

Click Yes Button to Continue

Yes

Note: You will lose current setting after restoring to the default configuration!

Note:

<u>Function</u>	<u>Current IP Address settings</u>	<u>Other settings</u>
Factory Default web command	No change	Factory default values
Push RESET button less 3 seconds	No change	No change
Push RESET button for 3 seconds	Factory default values	Factory default values

3.4.4 Software Update

The switch supports the software update function for the user to upgrade the firmware of the switch to the latest software version.

Software Update

After pressing the "Yes" button, please wait while the update request is being processed.

Yes

Click this function and press the <Yes> button, then you will enter next two pages to complete the software updating procedures. You must complete the updating procedure.

Note:

After pressing <Yes>, if you encounter any problems or you want to quit the updating you must turn off the power to the switch for more than 5 seconds and turn it on to resume the management operation.

Software Update Processing now...

click " Go " to enter software update page. If not, please reboot again manually.

Go

Wait around 5 seconds and then click the <Go> button to enter software update page.

Software Update

Please select a file (~.bin) to update :

Update

(Updating software may take 1 min)

Update must NOT be interrupted !

Click the <Browse> button to search for the file on your management host.
Click the <Update> to start the updating.

3.4.5 Logout

Besides the Auto Logout Timer function described in the section of System Configuration, the switch also allows the user to logout manually by performing the Logout function.

Logout

Press Logout if you want to quit

Logout

If no action and no key is stroke as well in any function screen more than the minutes you set up in Auto Logout Timer, the switch will have you logout automatically. Or press the <Logout> button in Logout function to exit the system manually.